

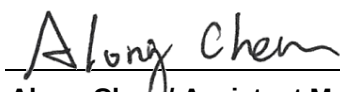
FCC Test Report

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

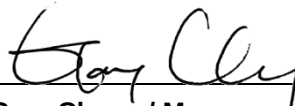
We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:



Along Chen / Assistant Manager



Gary Chang / Manager

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Appendix A. Effective Isotropically Radiated Power

Appendix B. Radiated Emissions

Appendix C. Out of Band Emissions & Band Edge

Appendix D. Occupied Bandwidth and 26dB Bandwidth

Appendix E. Peak to Average Power Ratio

Appendix F. Frequency Stability

Release Record

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

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 27.50(d)(4)	Equivalent Isotropically Radiated Power	Power[dBm]: 27.61	Pass
2.1053 / 27.53(h)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(h)	Conducted Emissions	Meet the requirement of limit	Pass
27.53(h)	Band Edge Measurement	Meet the requirement of limit	Pass
2.1049 / 27.53(h)	Occupied Bandwidth	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass

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 4: 1710 MHz – 1755 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 4			
Channel Bandwidth	Modulation	Maximum EIRP (W)	Emission Designator
20 MHz	QPSK	0.573	1M12G7D
20 MHz	16QAM	0.574	1M12W7D
15 MHz	QPSK	0.574	1M12G7D
15 MHz	16QAM	0.564	1M12W7D
10 MHz	QPSK	0.574	1M11G7D
10 MHz	16QAM	0.569	1M11W7D
5 MHz	QPSK	0.577	1M10G7D
5 MHz	16QAM	0.574	1M10W7D

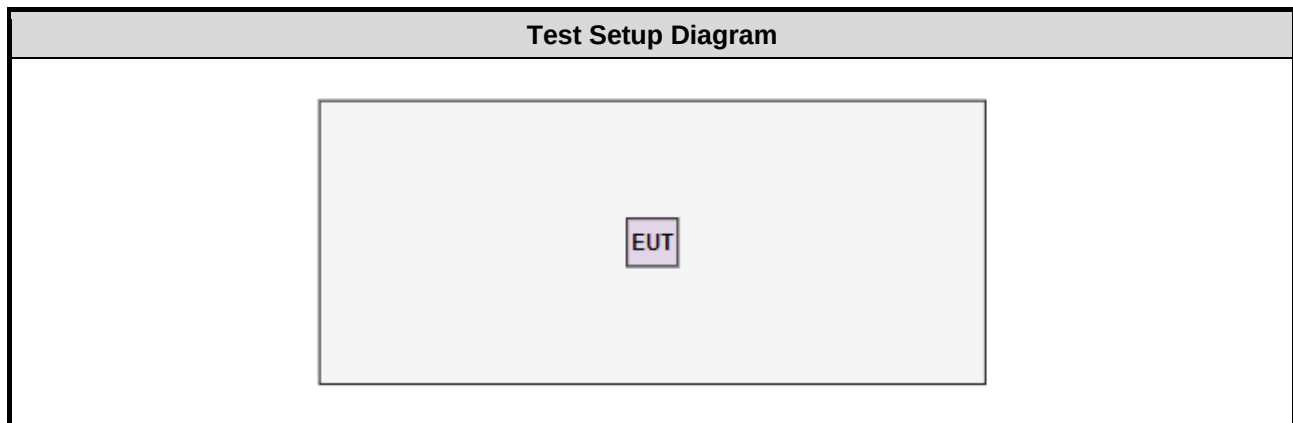
NB-IoT Band 4		
Modulation	Maximum EIRP (W)	Emission Designator
BPSK	0.530	128KG7D
QPSK	0.552	201KG7D

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 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 ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 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 4			
Test item	Channel Bandwidth	Modulation	Test Frequency (MHz)
E.I.R.P.	5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM	1712.5 / 1732.5 / 1752.5 1715.0 / 1732.5 / 1750.0 1717.5 / 1732.5 / 1747.5 1720.0 / 1732.5 / 1745.0
Radiated Emission ≤ 1GHz	5 MHz	QPSK	1752.5
Radiated Emission > 1GHz	5 MHz	QPSK	1712.5 / 1732.5 / 1752.5
Out of Band Emissions	5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK	1712.5 / 1732.5 / 1752.5 1715.0 / 1732.5 / 1750.0 1717.5 / 1732.5 / 1747.5 1720.0 / 1732.5 / 1745.0
Band Edge	5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM	1712.5 / 1752.5 1715.0 / 1750.0 1717.5 / 1747.5 1720.0 / 1745.0
Occupied Bandwidth Peak to Average Ratio	5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM QPSK / 16QAM	1732.5 1732.5 1732.5 1732.5
Frequency Stability	5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK	1712.5 / 1752.5 1715.0 / 1750.0 1717.5 / 1747.5 1720.0 / 1745.0
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 4			
Test item	Sub-carrier Spacing(kHz)	Modulation	Test Frequency (MHz)
E.I.R.P.	3.75kHz / 15kHz	BPSK / QPSK	1710.2 / 1732.5 / 1754.8
Radiated Emission $\leq$ 1GHz	15kHz	QPSK	1710.2
Radiated Emission $>$ 1GHz	15kHz	QPSK	1710.2 / 1732.5 / 1754.8
Out of Band Emissions	15kHz	QPSK	1710.2 / 1732.5 / 1754.8
Occupied Bandwidth Peak to Average Ratio	3.75kHz / 15kHz	BPSK / QPSK	1732.5
Band Edge	3.75kHz / 15kHz	BPSK / QPSK	1710.2 / 1754.8
Frequency Stability	3.75kHz / 15kHz	QPSK	1710.2 / 1754.8
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

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 Watt 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.

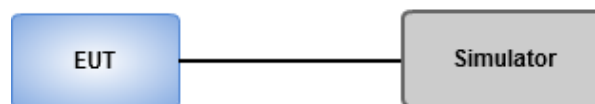
G_T = gain of the transmitting antenna, in dBi (EIRP).

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

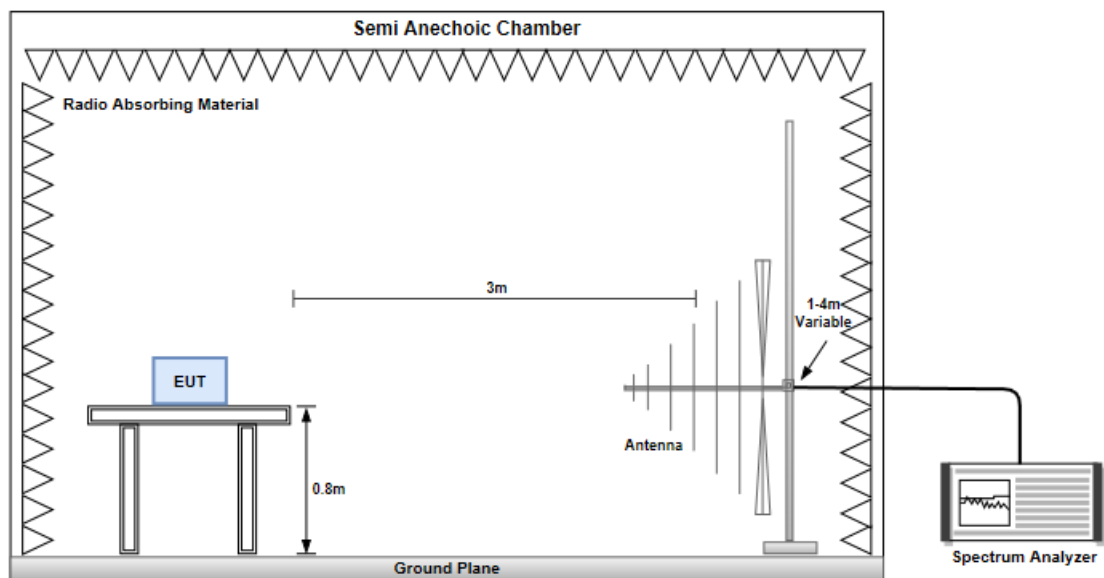
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13 dBm.

3.2.2 Test Procedures

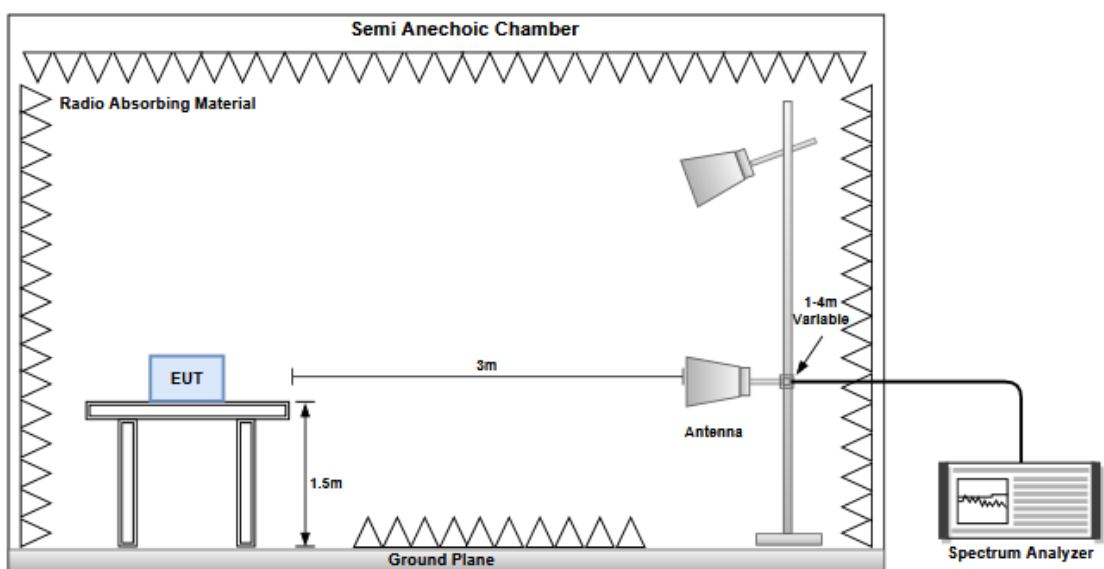
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. 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

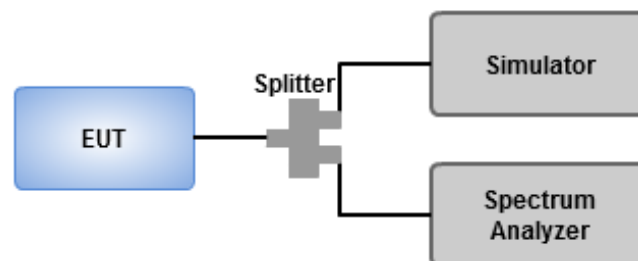
Out of band emission

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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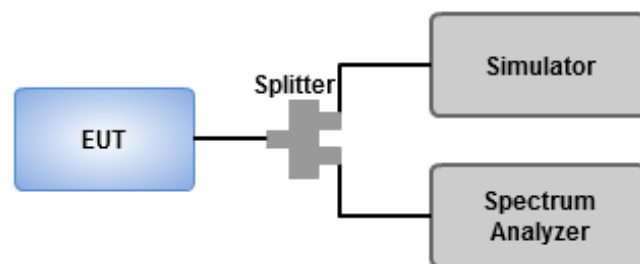
Refer to Appendix C.

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

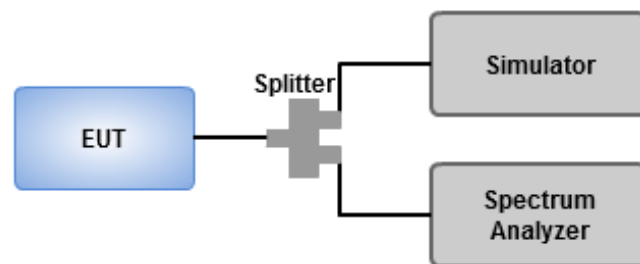
3.5.1 Limit of Peak to Average Power Ratio

The Peak-to-average ratio (PAR) 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

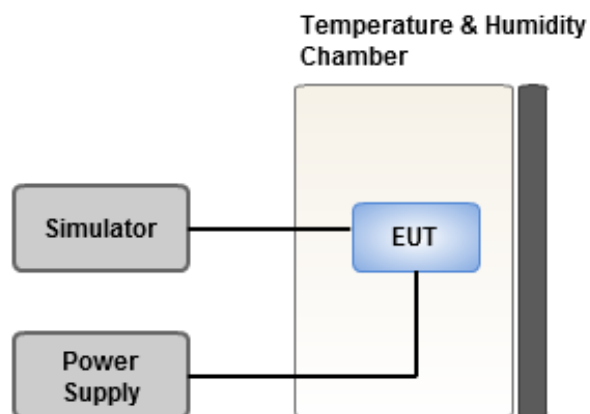
3.6.1 Limit of Frequency Stability

The frequency stability shall be sufficient to ensure that the fundamental 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
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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
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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 27L M1 Band 4 Maximum Average Power [dBm](GT-LC= 3.63 dB)								
BW (MHz)	Modulation	RB size#	RB Index	Lowest	Middle	Highest	-	
		RB start						
Channel				20050	20175	20300	EIRP (dBm)	EIRP (W)
Frequency				1720	1732.5	1745		
20	QPSK	1#0	0	23.92	23.88	23.95	27.58	0.573
20	QPSK	1#5	15	23.88	23.95	23.88		
20	QPSK	6#0	0	23.84	23.85	23.88		
20	QPSK	6#0	15	23.71	23.76	23.76		
20	16QAM	1#0	0	23.89	23.92	23.96	27.59	0.574
20	16QAM	1#5	15	23.81	23.87	23.87		
20	16QAM	6#0	0	23.79	23.72	23.81		
20	16QAM	6#0	15	23.66	23.65	23.69		
Channel				20025	20175	20325	EIRP (dBm)	EIRP (W)
Frequency				1717.5	1732.5	1747.5		
15	QPSK	1#0	0	23.88	23.93	23.89	27.59	0.574
15	QPSK	1#0	11	23.88	23.96	23.89		
15	QPSK	6#0	0	23.82	23.81	23.8		
15	QPSK	6#0	11	23.72	23.75	23.72		
15	16QAM	1#0	0	23.88	23.85	23.82	27.51	0.564
15	16QAM	1#0	11	23.87	23.84	23.78		
15	16QAM	6#0	0	23.68	23.78	23.74		
15	16QAM	6#0	11	23.62	23.72	23.69		

Channel				20000	20175	20350	EIRP (dBm)	EIRP (W)
Frequency				1715	1732.5	1750		
10	QPSK	1#0	0	23.93	23.93	23.91	27.59	0.574
10	QPSK	1#5	7	23.94	23.96	23.86		
10	QPSK	6#0	0	23.06	23.03	23.05		
10	QPSK	6#0	7	22.97	22.99	22.98		
10	16QAM	1#0	0	23.92	23.83	23.79	27.55	0.569
10	16QAM	1#5	7	23.92	23.88	23.84		
10	16QAM	6#0	0	22.12	22.25	22.21		
10	16QAM	6#0	7	22.05	22.18	22.13		
Channel				19975	20175	20375	EIRP (dBm)	EIRP (W)
Frequency				1712.5	1732.5	1752.5		
5	QPSK	1#0	0	23.88	23.89	23.88	27.61	0.577
5	QPSK	1#5	3	23.92	23.91	23.98		
5	QPSK	6#0	0	23.06	23.08	23.04		
5	QPSK	6#0	3	23.02	23.05	23.01		
5	16QAM	1#0	0	23.88	23.89	23.86	27.59	0.574
5	16QAM	1#5	3	23.91	23.96	23.92		
5	16QAM	6#0	0	22.28	22.28	22.22		
5	16QAM	6#0	3	22.22	22.21	22.19		
Limit	EIRP < 2 W			Result			Pass	

Part27L Band 4 Maximum Average Power [dBm](GT-LC= 3.63 dB)								
NB-IoT	Modulation	Sub-carrier Spacing(kHz)	Ntones	Lowest	Middle	Highest	-	
Channel				19952	20175	20398	EIRP	EIRP
Frequency				1710.2	1732.5	1754.8	(dBm)	(W)
Standalone	BPSK	3.75	1@0	23.4	23.41	23.39	27.24	0.530
			1@47	23.42	23.37	23.39		
		15	1@0	23.58	23.54	23.56		
			1@11	23.51	23.61	23.61		
	QPSK	3.75	1@0	23.36	23.33	23.36	27.42	0.552
			1@47	23.38	23.42	23.35		
		15	1@0	23.57	23.57	23.62		
			1@11	23.63	23.66	23.64		
		15	12@0	23.79	23.67	23.76		
	Limit	EIRP < 2 W			Result			Pass

Below 1GHz

Mode	LTE-M1 Band 4, QPSK, CB:5 MHz, Channel: 1752.5MHz						
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)
112.45	H	-42.89	-13.00	-29.89	-39.54	-40.01	-2.88
116.33	H	-42.92	-13.00	-29.92	-39.86	-39.93	-2.99
188.11	H	-39.50	-13.00	-26.50	-38.60	-40.39	0.89
195.87	H	-39.13	-13.00	-26.13	-38.02	-41.10	1.97
256.01	H	-36.82	-13.00	-23.82	-37.42	-39.60	2.78
259.89	H	-37.20	-13.00	-24.20	-37.80	-40.00	2.80
112.45	V	-37.52	-13.00	-24.52	-39.44	-34.64	-2.88
116.33	V	-37.56	-13.00	-24.56	-39.90	-34.57	-2.99
184.23	V	-40.58	-13.00	-27.58	-44.23	-40.94	0.36
188.11	V	-38.15	-13.00	-25.15	-41.38	-39.04	0.89
195.87	V	-40.55	-13.00	-27.55	-42.94	-42.52	1.97
256.01	V	-47.18	-13.00	-34.18	-47.26	-49.96	2.78

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

Above 1GHz

Mode	LTE-M1 Band 4, QPSK, CB:5 MHz, Channel: 1712.5MHz						
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)
3424.86	H	-50.63	-13.00	-37.63	-59.50	-68.75	18.12
5137.29	H	-51.72	-13.00	-38.72	-63.23	-71.66	19.94
6849.72	H	-58.22	-13.00	-45.22	-73.30	-78.69	20.47
3424.86	V	-51.05	-13.00	-38.05	-60.07	-69.17	18.12
5137.29	V	-47.23	-13.00	-34.23	-58.93	-67.17	19.94
6849.72	V	-56.88	-13.00	-43.88	-72.06	-77.35	20.47

Mode	LTE-M1 Band 4, QPSK, CB:5 MHz, Channel: 1732.5MHz						
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)
3464.86	H	-49.88	-13.00	-36.88	-58.90	-67.96	18.08
5197.29	H	-50.82	-13.00	-37.82	-62.26	-70.87	20.05
6929.72	H	-57.33	-13.00	-44.33	-71.88	-77.67	20.34
3464.86	V	-50.18	-13.00	-37.18	-59.35	-68.26	18.08
5197.29	V	-46.45	-13.00	-33.45	-58.11	-66.50	20.05
6929.72	V	-55.99	-13.00	-42.99	-71.11	-76.33	20.34

Mode	LTE-M1 Band 4, QPSK, CB:5 MHz, Channel: 1752.5MHz						
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)
3504.86	H	-50.72	-13.00	-37.72	-59.90	-68.75	18.03
5257.29	H	-51.66	-13.00	-38.66	-63.28	-71.88	20.22
7009.72	H	-58.15	-13.00	-45.15	-72.24	-78.34	20.19
3504.86	V	-51.05	-13.00	-38.05	-60.38	-69.08	18.03
5257.29	V	-47.39	-13.00	-34.39	-59.17	-67.61	20.22
7009.72	V	-56.87	-13.00	-43.87	-71.94	-77.06	20.19

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

Below 1GHz

Mode	NB-IoT Band 4, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1710.2MHz						
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)
182.55	H	-32.72	-13.00	-19.72	-31.96	-32.84	0.12
186.25	H	-30.63	-13.00	-17.63	-29.77	-31.27	0.64
194.77	H	-29.75	-13.00	-16.75	-28.67	-31.57	1.82
200.22	H	-29.33	-13.00	-16.33	-28.13	-31.87	2.54
206.55	H	-33.77	-13.00	-20.77	-32.80	-36.34	2.57
210.88	H	-35.72	-13.00	-22.72	-34.90	-38.31	2.59
102.58	V	-35.47	-13.00	-22.47	-36.31	-32.86	-2.61
110.58	V	-39.52	-13.00	-26.52	-41.23	-36.69	-2.83
125.63	V	-38.44	-13.00	-25.44	-41.74	-35.26	-3.18
126.52	V	-38.87	-13.00	-25.87	-42.26	-35.67	-3.20
186.33	V	-35.71	-13.00	-22.71	-39.14	-36.36	0.65
194.87	V	-35.75	-13.00	-22.75	-38.24	-37.58	1.83

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

Above 1GHz

Mode	NB-IoT Band 4, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1710.2MHz						
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)
3420.40	H	-49.82	-13.00	-36.82	-58.67	-67.95	18.13
5130.60	H	-50.84	-13.00	-37.84	-62.36	-70.77	19.93
6840.80	H	-54.72	-13.00	-41.72	-69.87	-75.20	20.48
3420.40	V	-50.64	-13.00	-37.64	-59.64	-68.77	18.13
5130.60	V	-47.02	-13.00	-34.02	-58.72	-66.95	19.93
6840.80	V	-55.53	-13.00	-42.53	-70.72	-76.01	20.48

Mode	NB-IoT Band 4, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1732.5MHz						
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)
3465.00	H	-48.70	-13.00	-35.70	-57.73	-66.78	18.08
5197.50	H	-50.00	-13.00	-37.00	-61.43	-70.05	20.05
6930.00	H	-54.76	-13.00	-41.76	-69.31	-75.10	20.34
3465.00	V	-49.37	-13.00	-36.37	-58.55	-67.45	18.08
5197.50	V	-46.22	-13.00	-33.22	-57.87	-66.27	20.05
6930.00	V	-55.73	-13.00	-42.73	-70.85	-76.07	20.34

Mode	NB-IoT Band 4, QPSK, Sub-Carrier spacing: 15kHz, Ntones: 12@0, Channel: 1754.8MHz						
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)
3509.60	H	-49.43	-13.00	-36.43	-58.63	-67.46	18.03
5264.40	H	-50.24	-13.00	-37.24	-61.88	-70.48	20.24
7019.20	H	-56.11	-13.00	-43.11	-70.20	-76.27	20.16
3509.60	V	-49.90	-13.00	-36.90	-59.25	-67.93	18.03
5264.40	V	-46.84	-13.00	-33.84	-58.64	-67.08	20.24
7019.20	V	-56.06	-13.00	-43.06	-71.13	-76.22	20.16

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

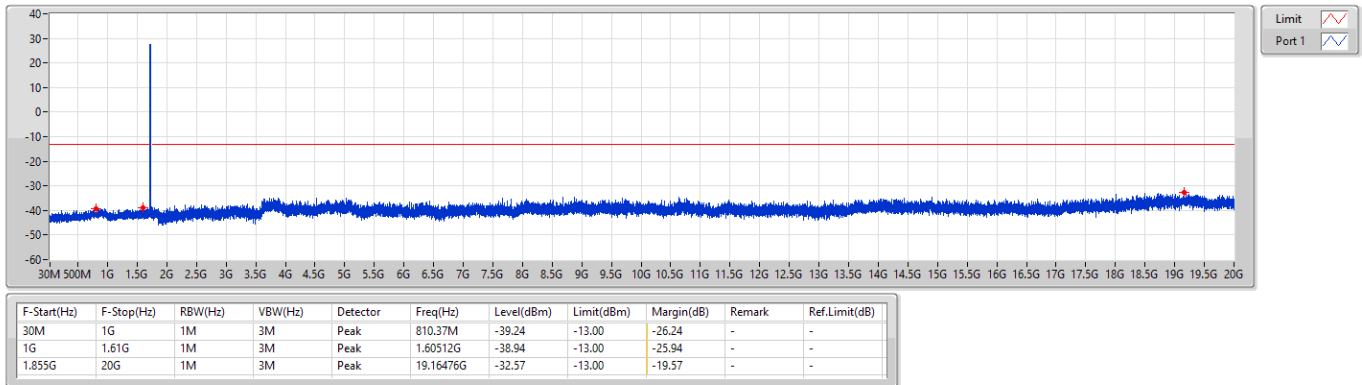


Summary

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 4	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	1.855G	20G	1M	3M	Peak	19.16476G	-32.57	-13.00	-19.57	-	-
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	1.855G	20G	1M	3M	Peak	19.21863G	-31.57	-13.00	-18.57	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1.855G	20G	1M	3M	Peak	19.46699G	-31.96	-13.00	-18.96	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1.855G	20G	1M	3M	Peak	19.38137G	-31.96	-13.00	-18.96	-	-

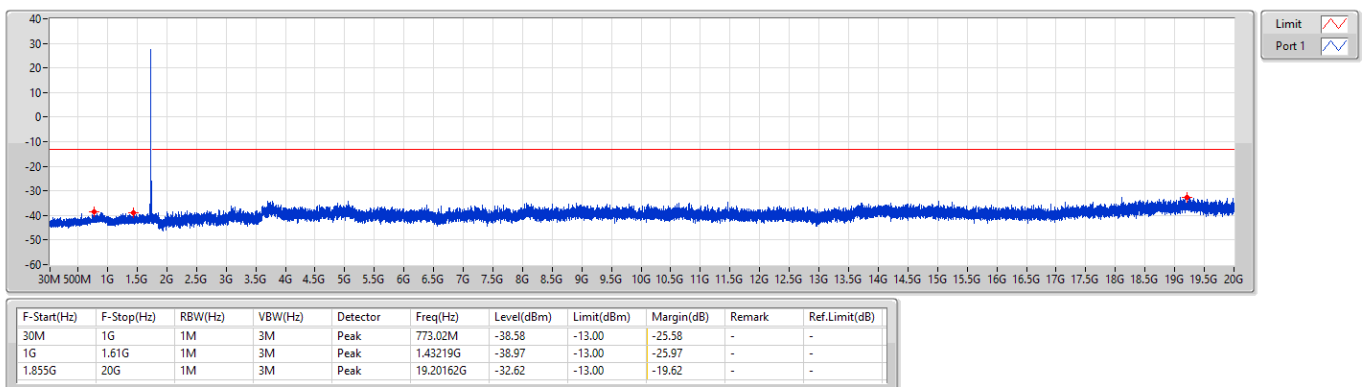
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CSE-TX-Sum



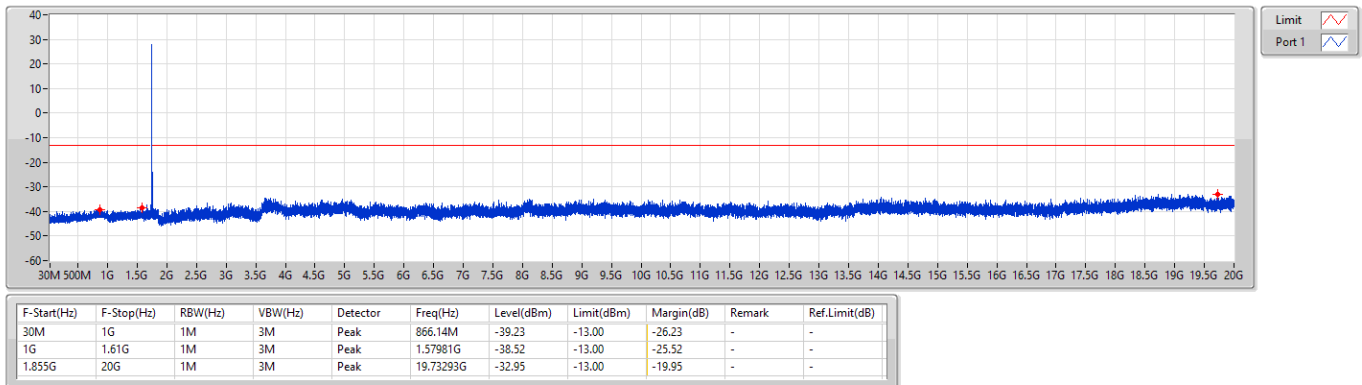
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CSE-TX-Sum



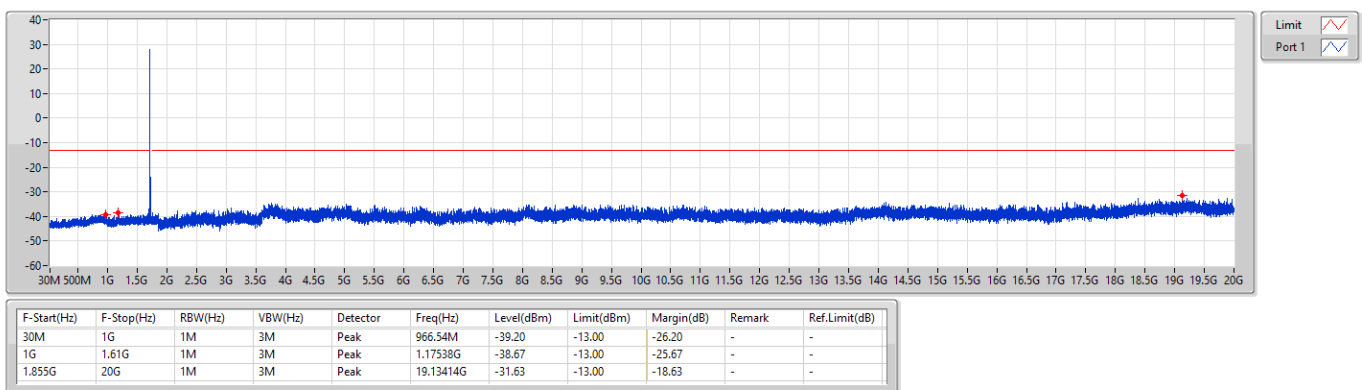
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CSE-TX-Sum



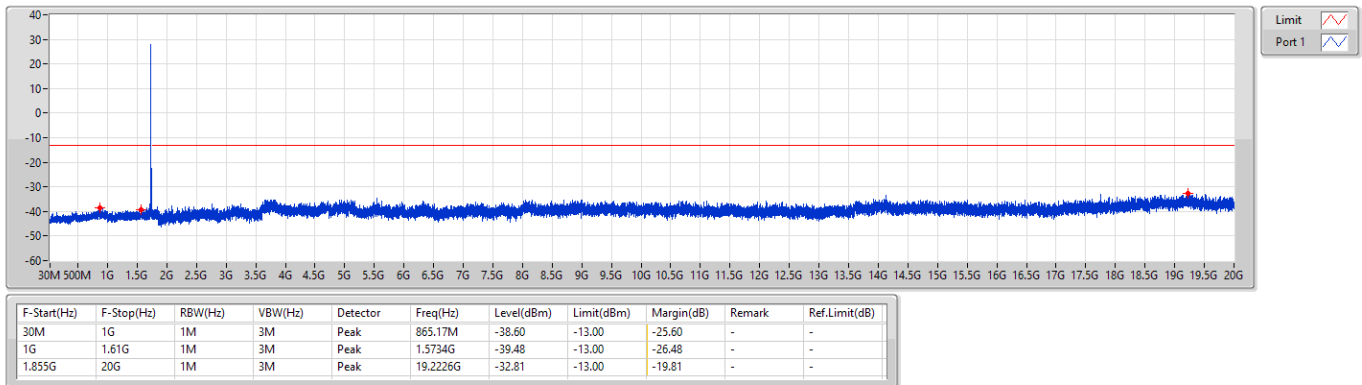
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CSE-TX-Sum



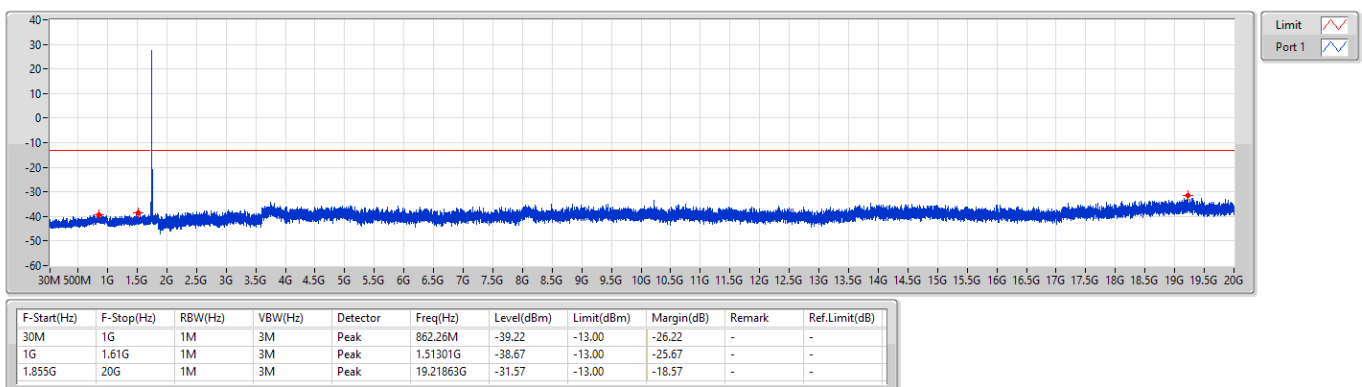
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CSE-TX-Sum



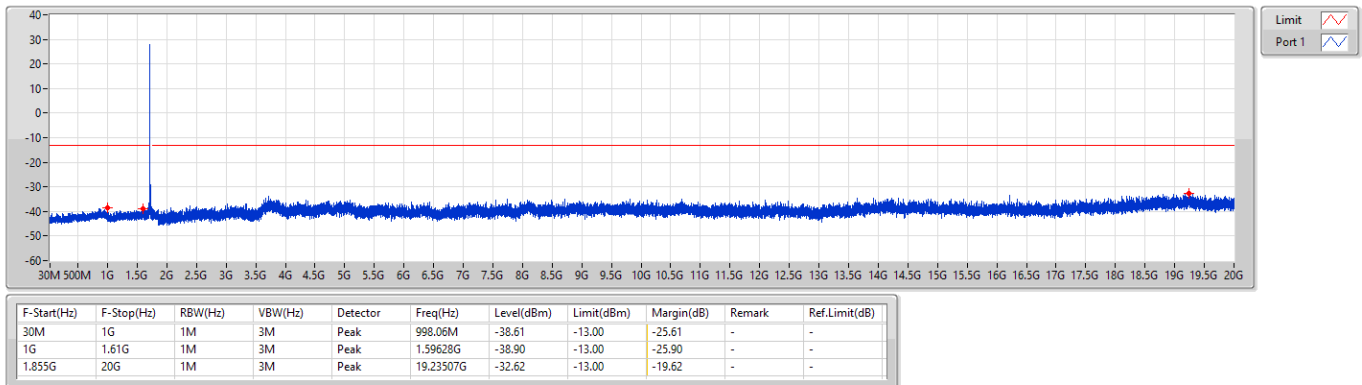
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CSE-TX-Sum



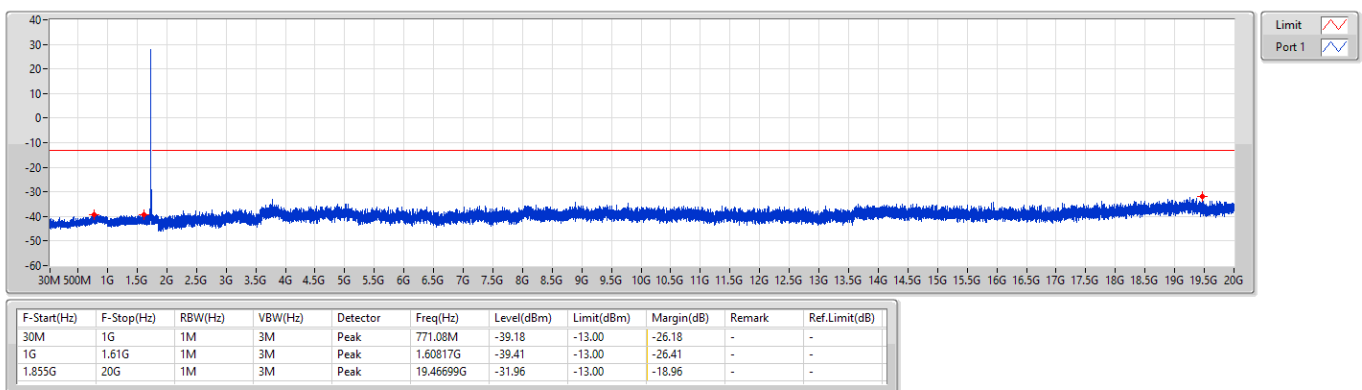
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CSE-TX-Sum



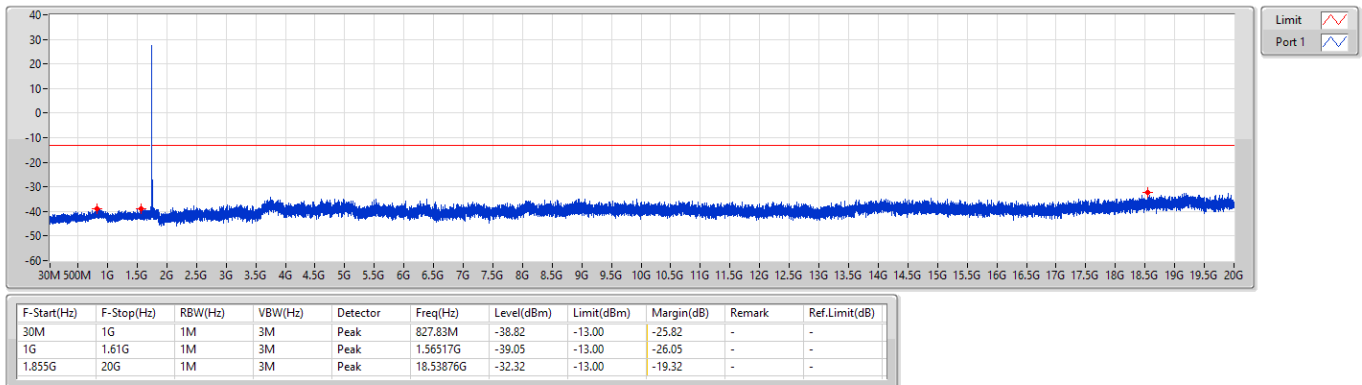
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CSE-TX-Sum



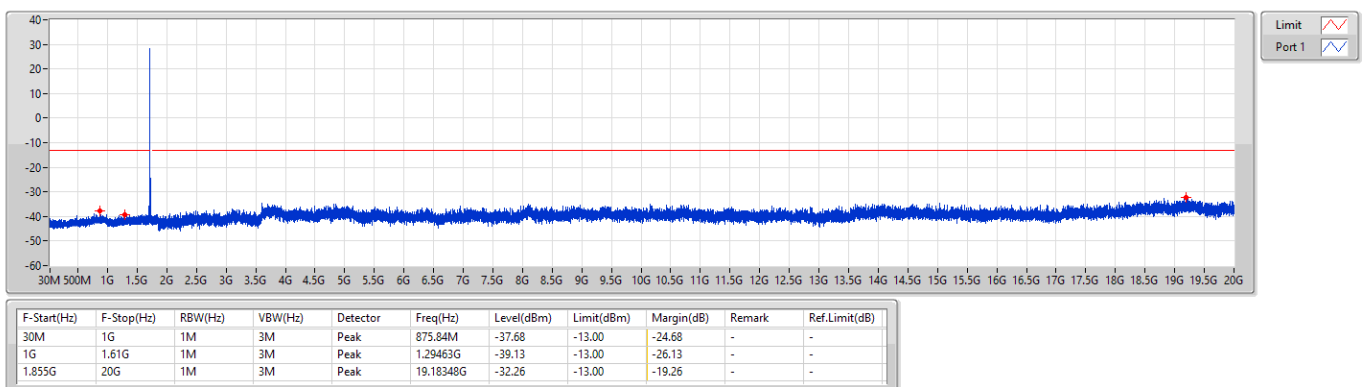
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CSE-TX-Sum



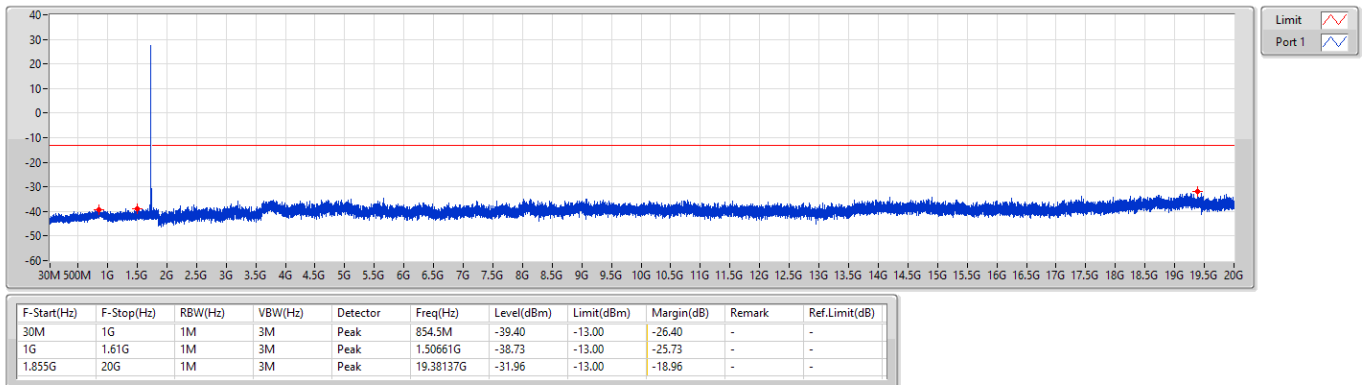
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CSE-TX-Sum



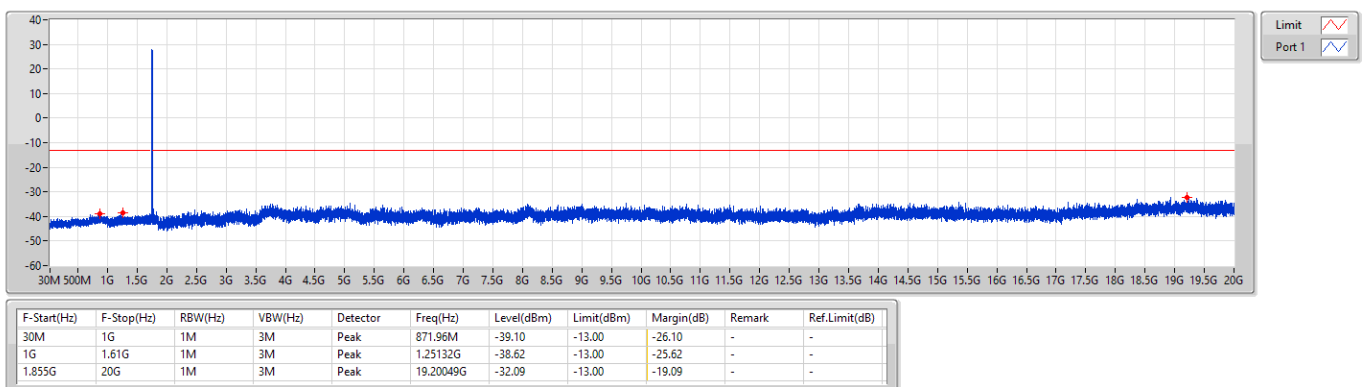
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1732.5MHz_QPSK_RB 1

CSE-TX-Sum



Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1752.5MHz_QPSK_RB 1

CSE-TX-Sum

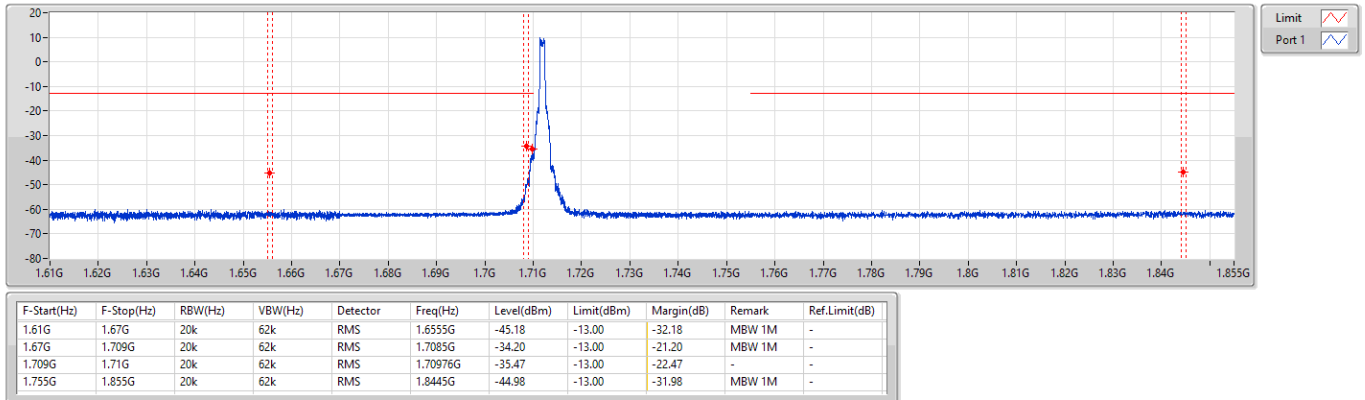


Summary

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 4	-	-	-	-	-	-	-	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	1.67G	1.709G	20k	62k	RMS	1.7085G	-34.20	-13.00	-21.20	MBW 1M	-
LTE-M1_20MHz_Nss1,16QAM_1TX	Pass	1.67G	1.709G	20k	62k	RMS	1.7085G	-31.35	-13.00	-18.35	MBW 1M	-
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	1.709G	1.71G	20k	62k	RMS	1.71G	-28.37	-13.00	-15.37	-	-
LTE-M1_15MHz_Nss1,16QAM_1TX	Pass	1.709G	1.71G	20k	62k	RMS	1.70997G	-27.06	-13.00	-14.06	-	-
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1.755G	1.756G	20k	62k	RMS	1.75502G	-27.74	-13.00	-14.74	-	-
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	1.755G	1.756G	20k	62k	RMS	1.755G	-27.79	-13.00	-14.79	-	-
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1.755G	1.756G	20k	62k	RMS	1.755G	-22.06	-13.00	-9.06	-	-
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	1.755G	1.756G	20k	62k	RMS	1.75502G	-22.58	-13.00	-9.58	-	-

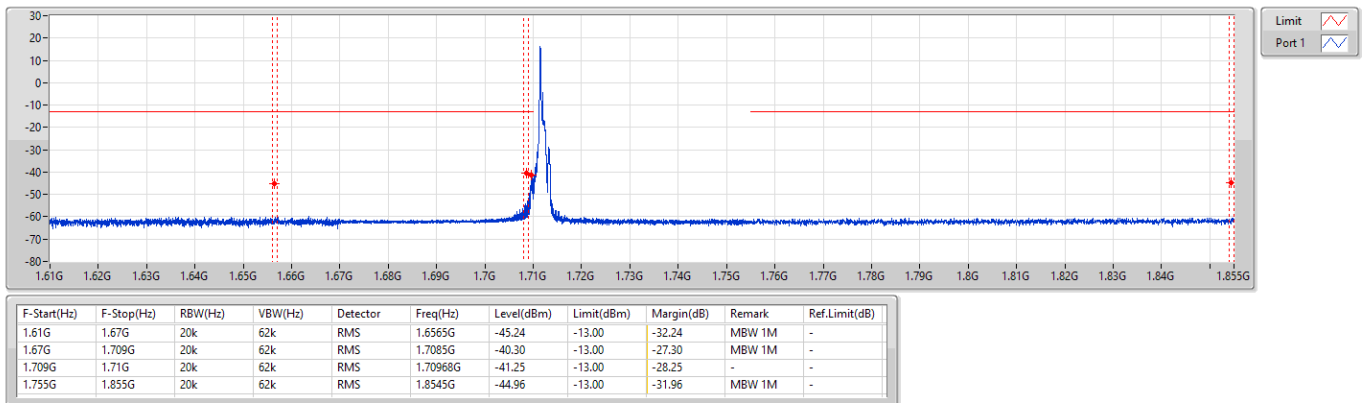
Band 4_LTE-M1_20MHz_Nss1,QPSK_1TX 1720MHz_QPSK_RB 6,#RB L,NB L

CSE-TX-Sum



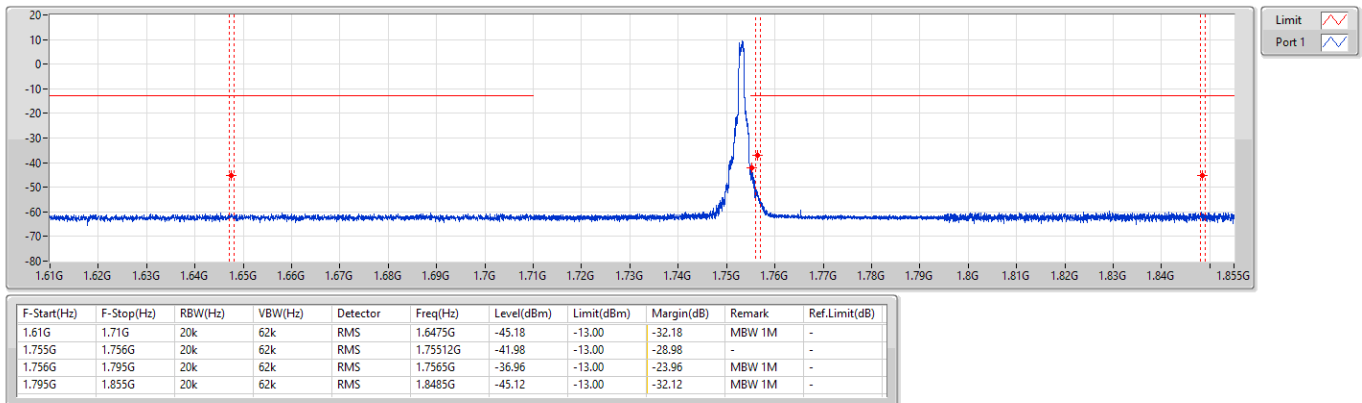
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CSE-TX-Sum



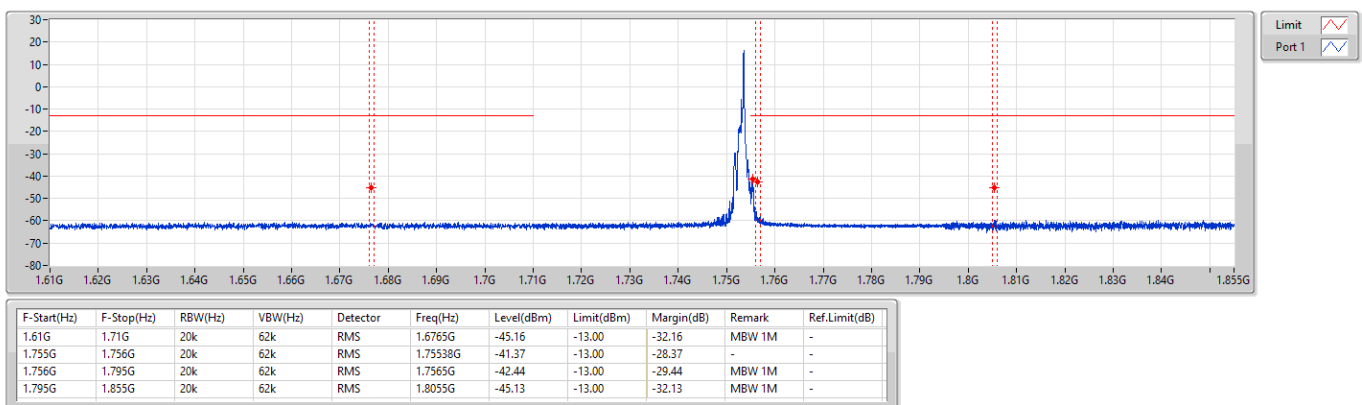
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CSE-TX-Sum



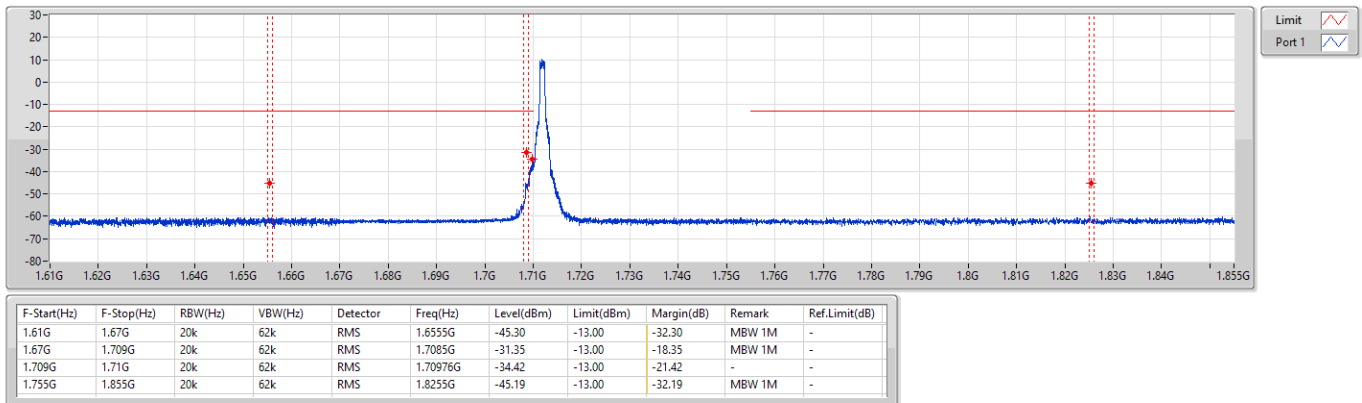
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CSE-TX-Sum



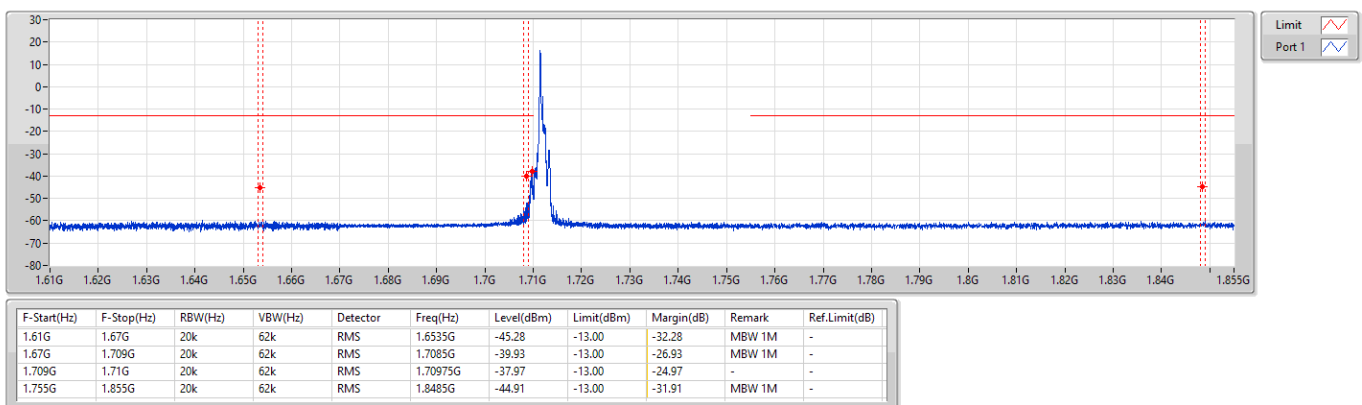
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CSE-TX-Sum



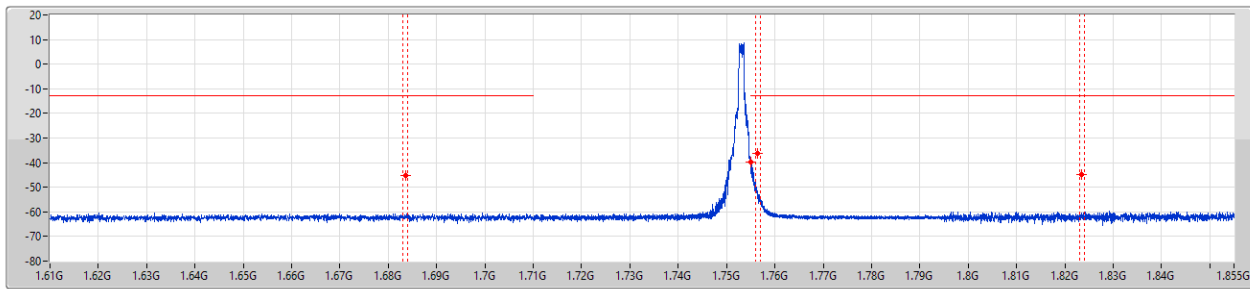
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CSE-TX-Sum



Band 4_LTE-M1_20MHz_Nss1,16QAM_1TX
1745MHz_16QAM_RB 6,#RB H,NB H

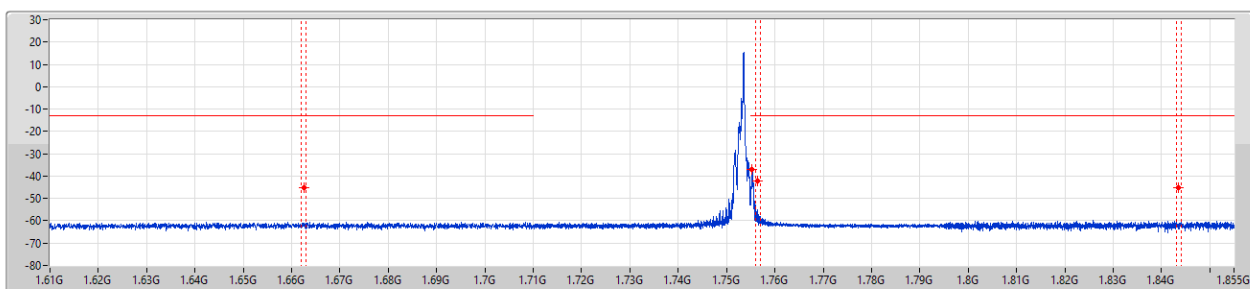
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6835G	-45.23	-13.00	-32.23	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75503G	-39.92	-13.00	-26.92	-	-
1.756G	1.795G	20k	62k	RMS	1.7565G	-36.32	-13.00	-23.32	MBW 1M	-
1.795G	1.855G	20k	62k	RMS	1.8235G	-44.99	-13.00	-31.99	MBW 1M	-

Band 4_LTE-M1_20MHz_Nss1,16QAM_1TX
1745MHz_16QAM_RB 1,#RB H,NB H

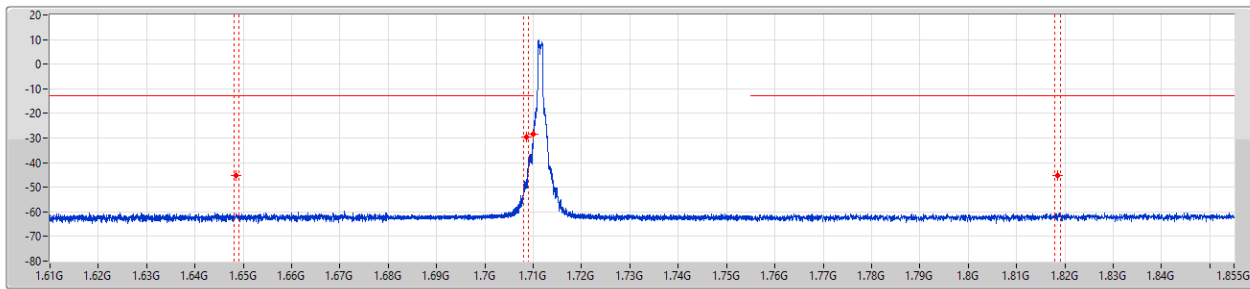
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6625G	-45.34	-13.00	-32.34	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.7553G	-37.14	-13.00	-24.14	-	-
1.756G	1.795G	20k	62k	RMS	1.7565G	-42.38	-13.00	-29.38	MBW 1M	-
1.795G	1.855G	20k	62k	RMS	1.8435G	-45.05	-13.00	-32.05	MBW 1M	-

Band 4_LTE-M1_15MHz_Nss1,QPSK_1TX
1717.5MHz_QPSK_RB 6,#RB L,NB L

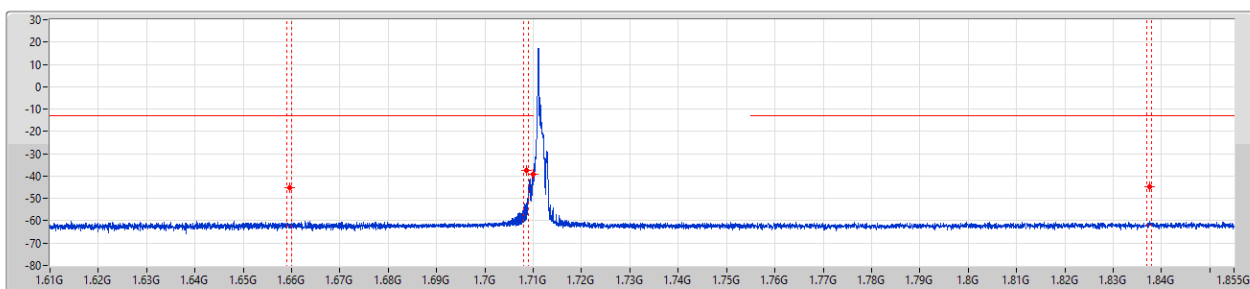
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.68G	20k	62k	RMS	1.6485G	-45.16	-13.00	-32.16	MBW 1M	-
1.68G	1.709G	20k	62k	RMS	1.7085G	-29.71	-13.00	-16.71	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-28.37	-13.00	-15.37	-	-
1.755G	1.855G	20k	62k	RMS	1.8185G	-45.13	-13.00	-32.13	MBW 1M	-

Band 4_LTE-M1_15MHz_Nss1,QPSK_1TX
1717.5MHz_QPSK_RB 1,#RB L,NB L

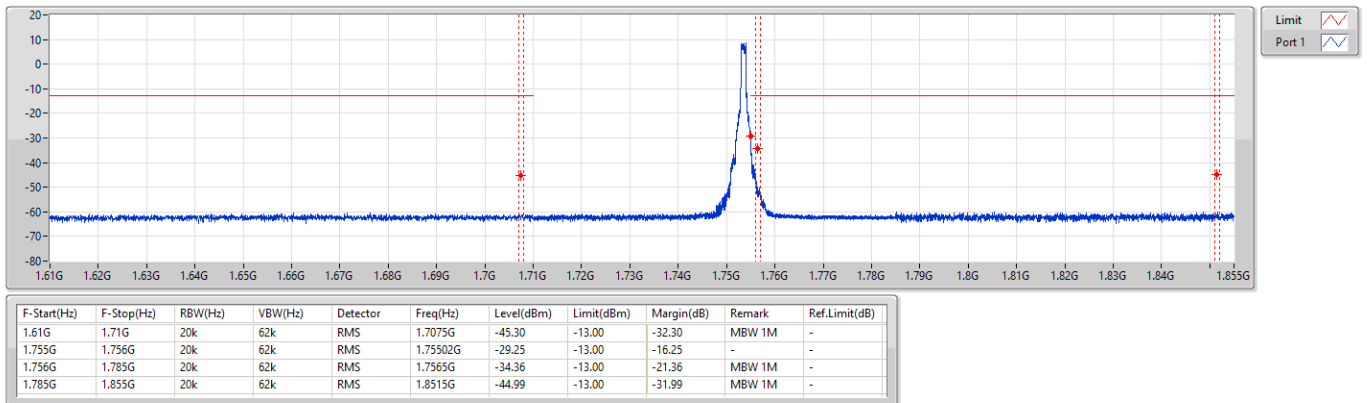
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.68G	20k	62k	RMS	1.6595G	-45.29	-13.00	-32.29	MBW 1M	-
1.68G	1.709G	20k	62k	RMS	1.7085G	-37.44	-13.00	-24.44	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-39.03	-13.00	-26.03	-	-
1.755G	1.855G	20k	62k	RMS	1.8375G	-44.98	-13.00	-31.98	MBW 1M	-

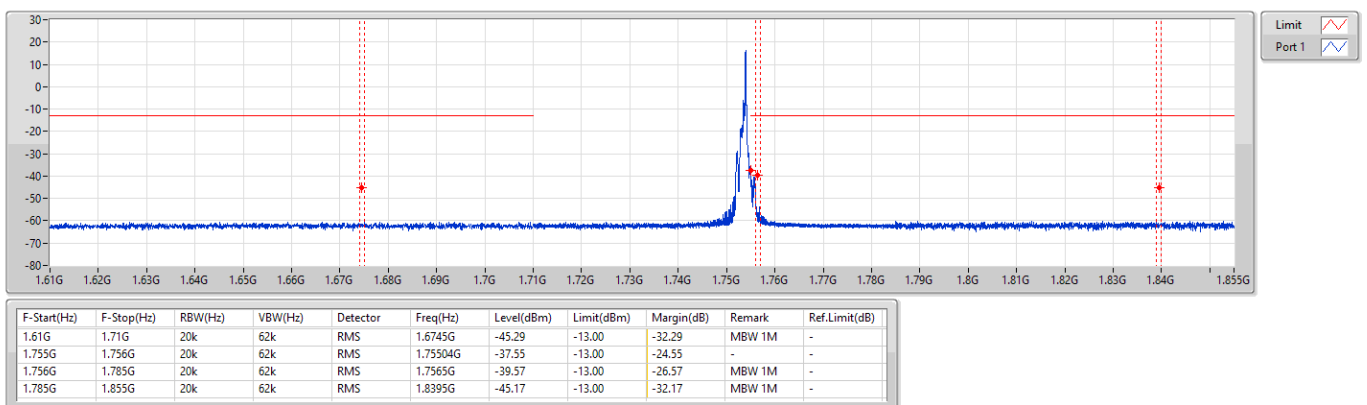
Band 4_LTE-M1_15MHz_Nss1,QPSK_1TX
1747.5MHz_QPSK_RB 6,#RB H,NB H

CSE-TX-Sum



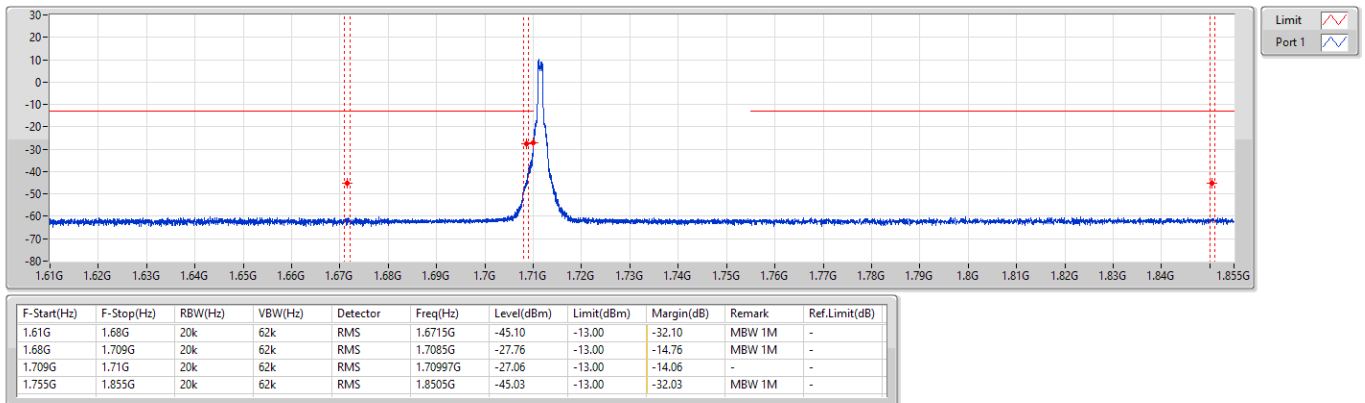
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1747.5MHz_QPSK_RB 1,#RB H,NB H

CSE-TX-Sum



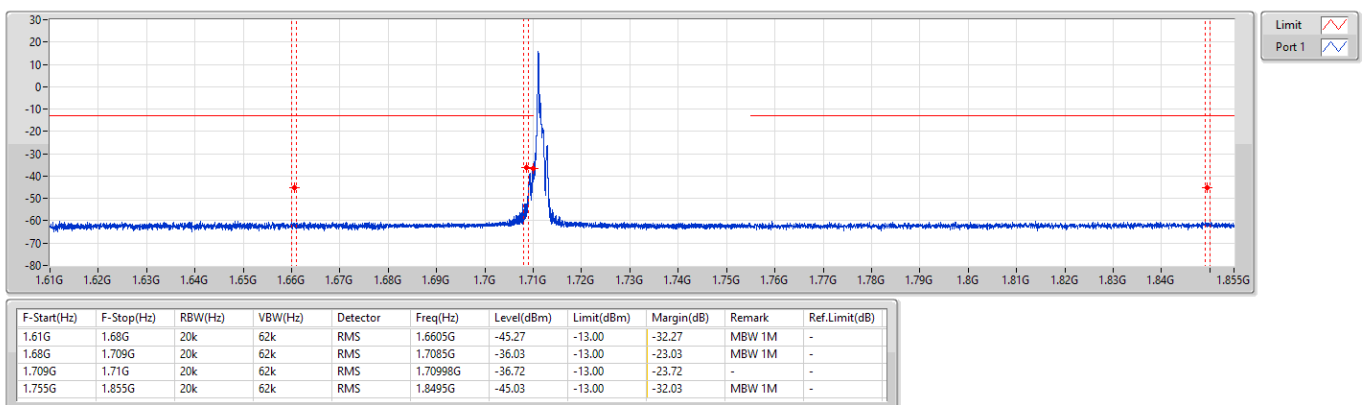
Band 4_LTE-M1_15MHz_Nss1,16QAM_1TX 1717.5MHz_16QAM_RB 6,#RB L,NB L

CSE-TX-Sum



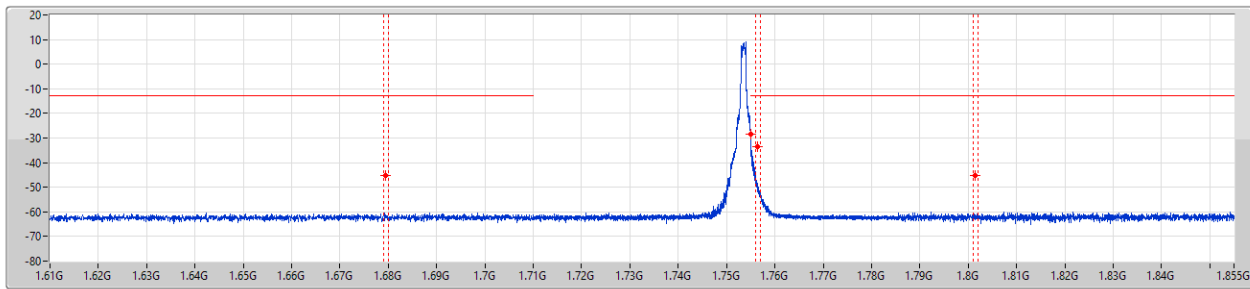
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CSE-TX-Sum



Band 4_LTE-M1_15MHz_Nss1,16QAM_1TX
1747.5MHz_16QAM_RB 6,#RB H,NB H

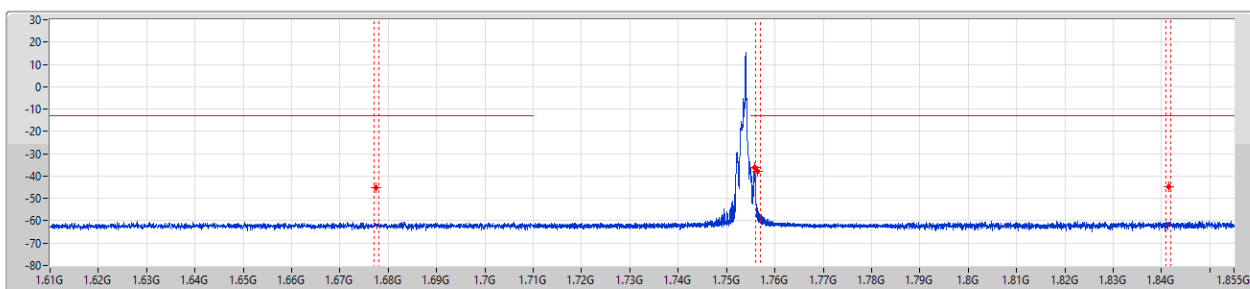
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6795G	-45.21	-13.00	-32.21	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75501G	-28.31	-13.00	-15.31	-	-
1.756G	1.785G	20k	62k	RMS	1.7565G	-33.60	-13.00	-20.60	MBW 1M	-
1.785G	1.855G	20k	62k	RMS	1.8015G	-45.12	-13.00	-32.12	MBW 1M	-

Band 4_LTE-M1_15MHz_Nss1,16QAM_1TX
1747.5MHz_16QAM_RB 1,#RB H,NB H

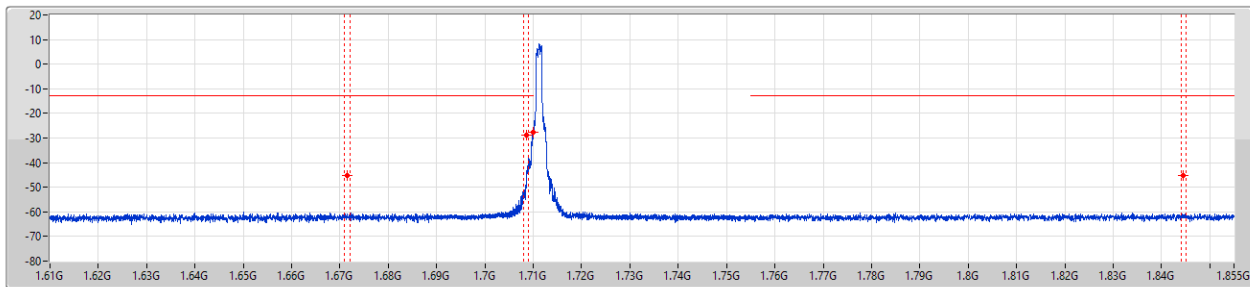
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6775G	-45.23	-13.00	-32.23	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75575G	-36.28	-13.00	-23.28	-	-
1.756G	1.785G	20k	62k	RMS	1.7565G	-37.85	-13.00	-24.85	MBW 1M	-
1.785G	1.855G	20k	62k	RMS	1.8415G	-44.92	-13.00	-31.92	MBW 1M	-

Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX
1715MHz_QPSK_RB 6,#RB L,NB L

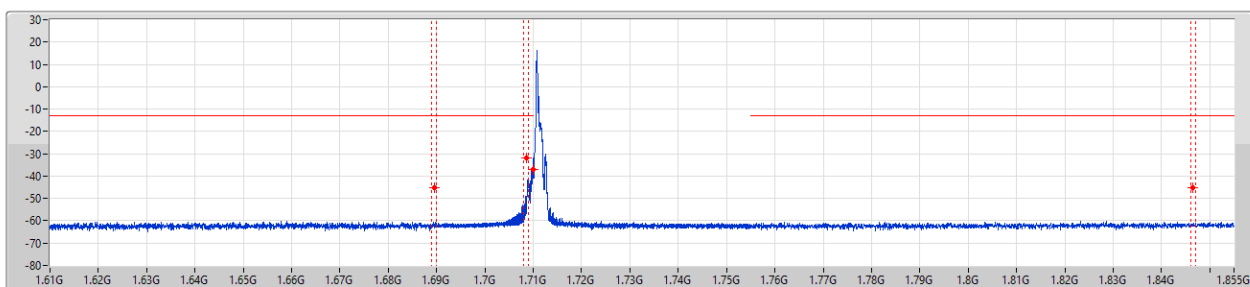
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.69G	20k	62k	RMS	1.6715G	-45.28	-13.00	-32.28	MBW 1M	-
1.69G	1.709G	20k	62k	RMS	1.7085G	-28.97	-13.00	-15.97	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-27.82	-13.00	-14.82	-	-
1.755G	1.855G	20k	62k	RMS	1.8445G	-45.06	-13.00	-32.06	MBW 1M	-

Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX
1715MHz_QPSK_RB 1,#RB L,NB L

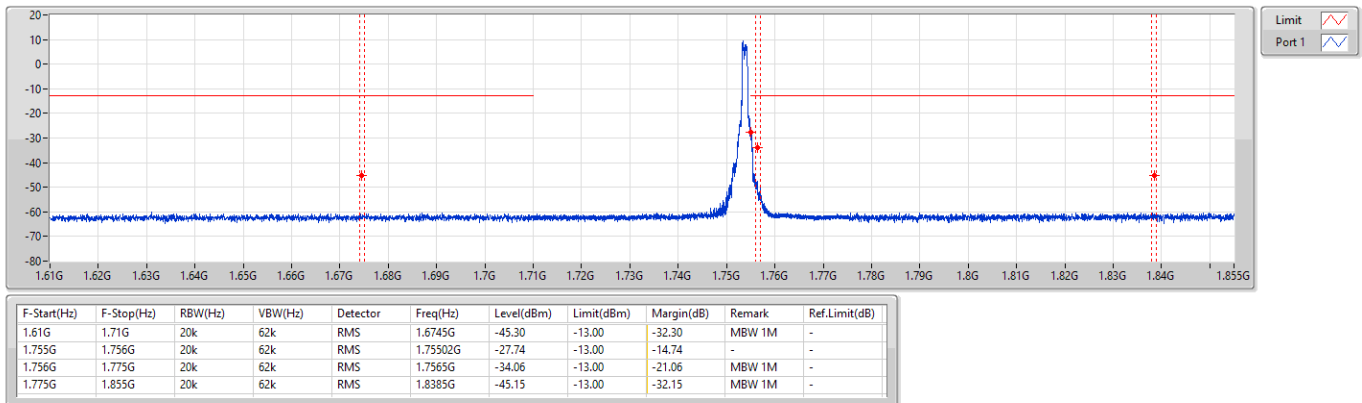
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.69G	20k	62k	RMS	1.6895G	-45.17	-13.00	-32.17	MBW 1M	-
1.69G	1.709G	20k	62k	RMS	1.7085G	-31.78	-13.00	-18.78	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.70989G	-36.96	-13.00	-23.96	-	-
1.755G	1.855G	20k	62k	RMS	1.8465G	-45.15	-13.00	-32.15	MBW 1M	-

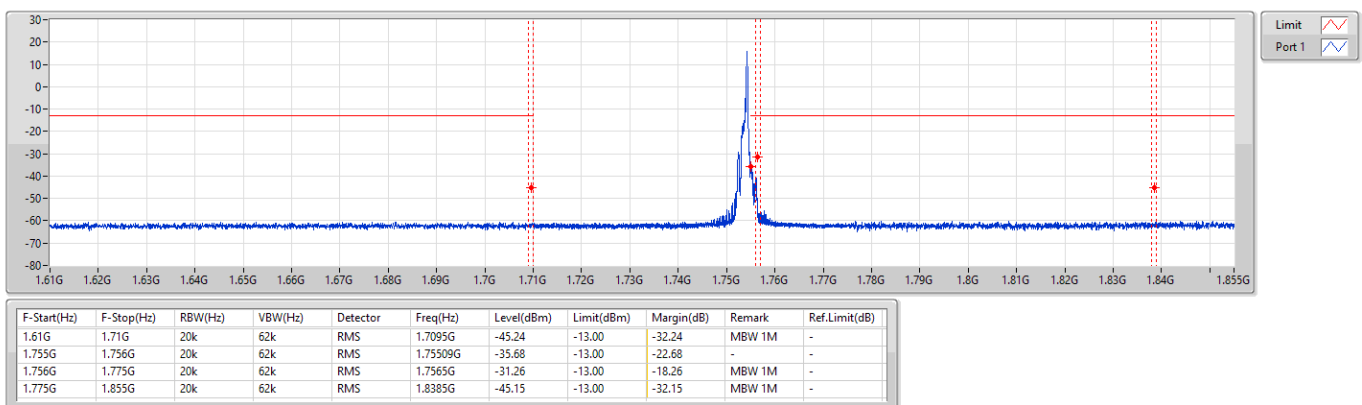
Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX 1750MHz_QPSK_RB 6,#RB H,NB H

CSE-TX-Sum



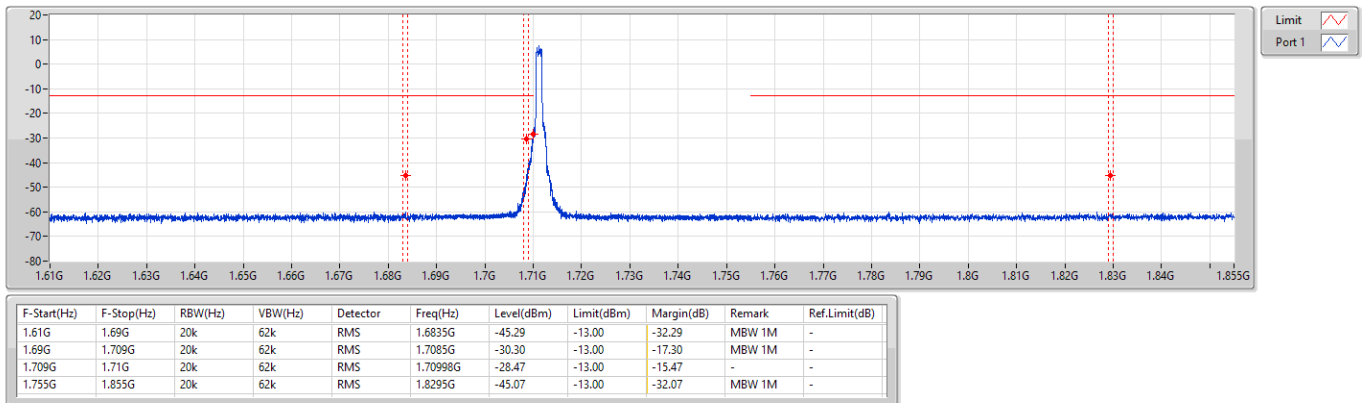
Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX 1750MHz_QPSK_RB 1,#RB H,NB H

CSE-TX-Sum



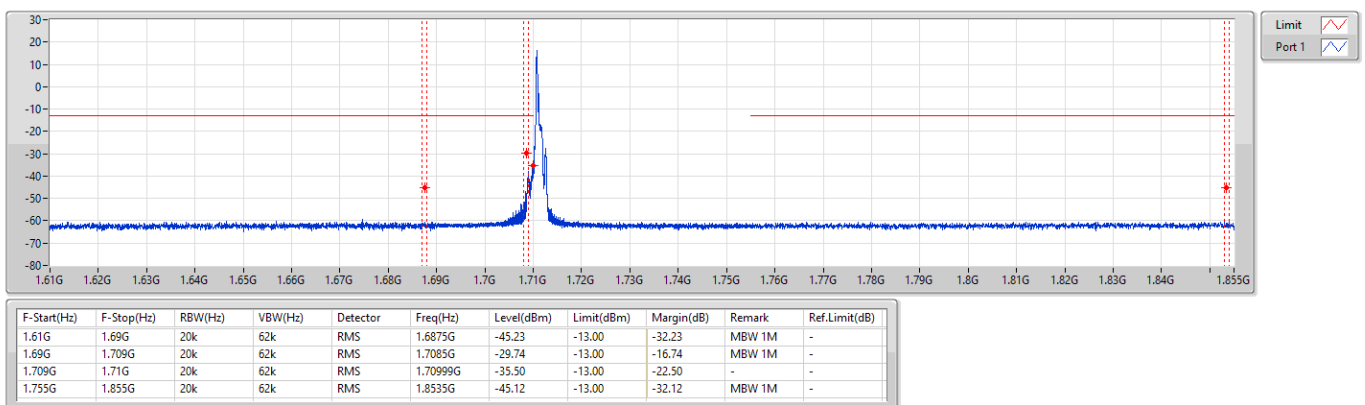
Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX
1715MHz_16QAM_RB 6,#RB L,NB L

CSE-TX-Sum



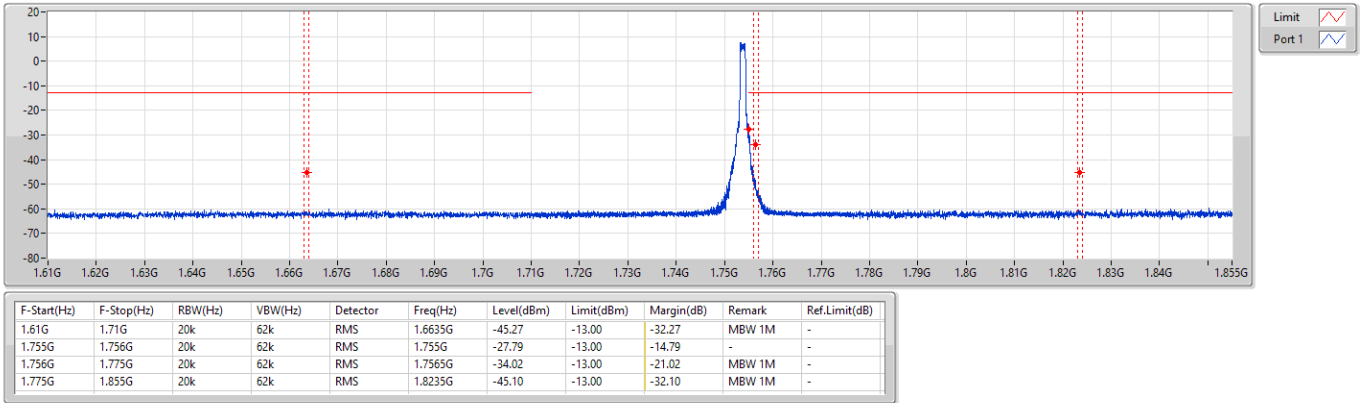
Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX
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CSE-TX-Sum



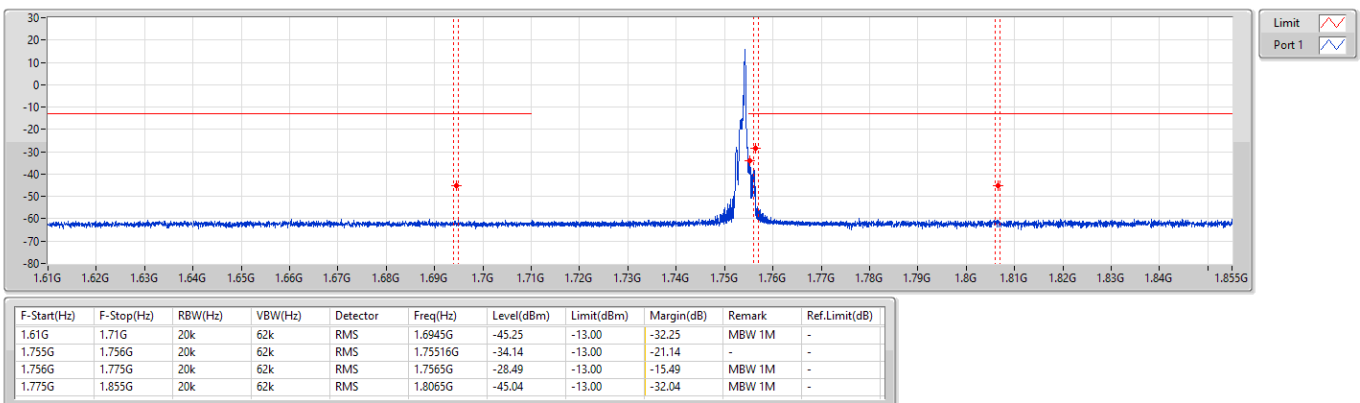
Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX 1750MHz_16QAM_RB 6,#RB H,NB H

CSE-TX-Sum



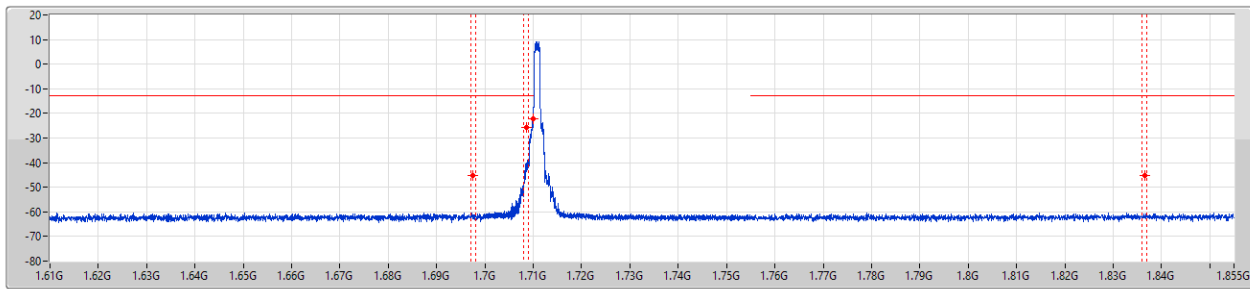
Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX 1750MHz_16QAM_RB 1,#RB H,NB H

CSE-TX-Sum



Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1712.5MHz_QPSK_RB 6,#RB L,NB L

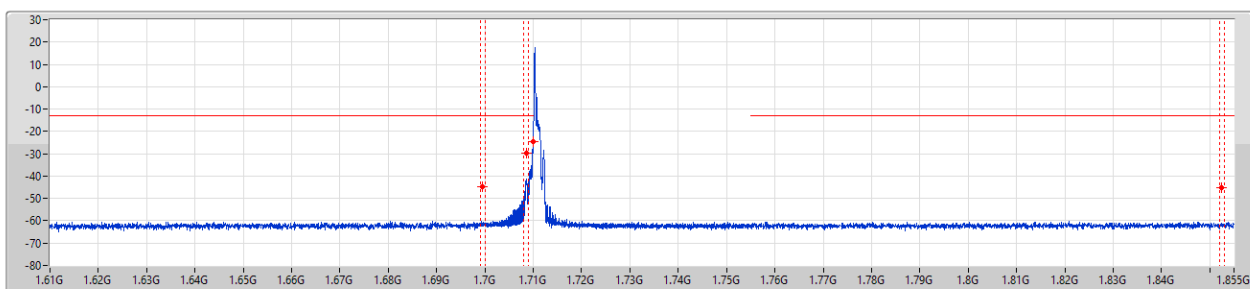
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6975G	-45.04	-13.00	-32.04	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-25.82	-13.00	-12.82	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-22.23	-13.00	-9.23	-	-
1.755G	1.855G	20k	62k	RMS	1.8365G	-45.05	-13.00	-32.05	MBW 1M	-

Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1712.5MHz_QPSK_RB 1,#RB L,NB L

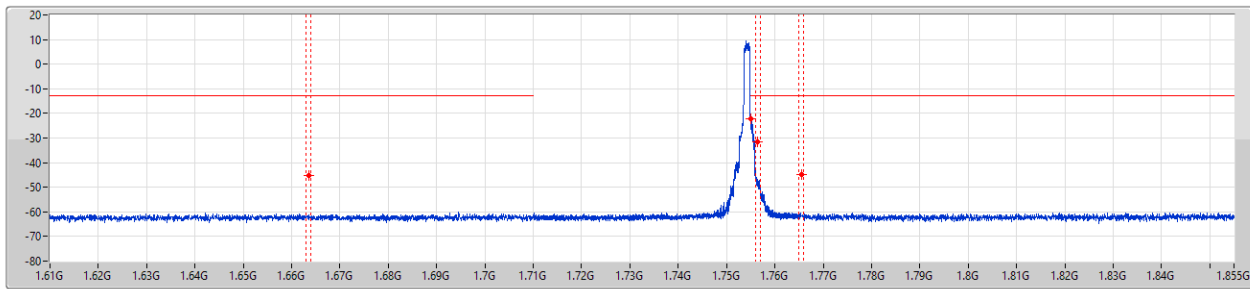
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6995G	-44.91	-13.00	-31.91	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-29.58	-13.00	-16.58	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.70997G	-24.76	-13.00	-11.76	-	-
1.755G	1.855G	20k	62k	RMS	1.8525G	-45.11	-13.00	-32.11	MBW 1M	-

Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1752.5MHz_QPSK_RB 6,#RB H,NB H

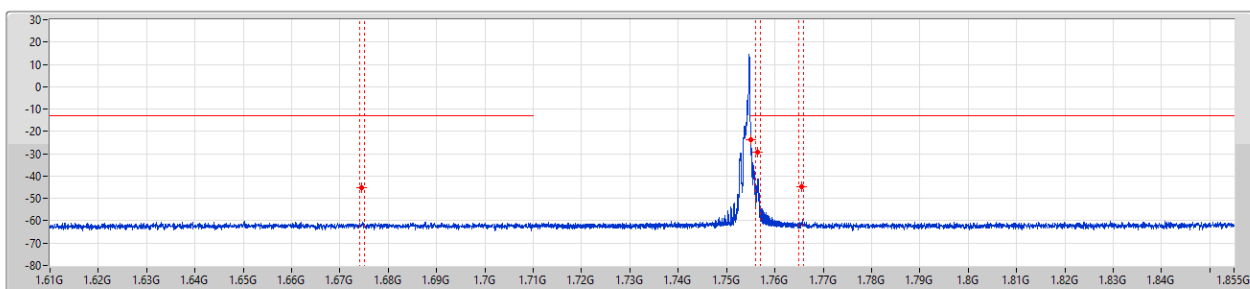
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6635G	-45.31	-13.00	-32.31	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.755G	-22.06	-13.00	-9.06	-	-
1.756G	1.765G	20k	62k	RMS	1.7565G	-31.47	-13.00	-18.47	MBW 1M	-
1.765G	1.855G	20k	62k	RMS	1.7655G	-45.00	-13.00	-32.00	MBW 1M	-

Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1752.5MHz_QPSK_RB 1,#RB H,NB H

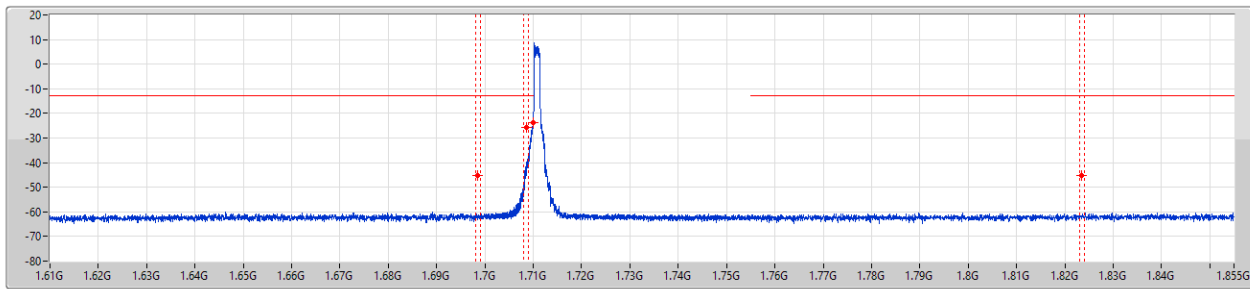
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6745G	-45.16	-13.00	-32.16	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75503G	-23.70	-13.00	-10.70	-	-
1.756G	1.765G	20k	62k	RMS	1.7565G	-29.29	-13.00	-16.29	MBW 1M	-
1.765G	1.855G	20k	62k	RMS	1.7655G	-44.76	-13.00	-31.76	MBW 1M	-

Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX
1712.5MHz_16QAM_RB 6,#RB L,NB L

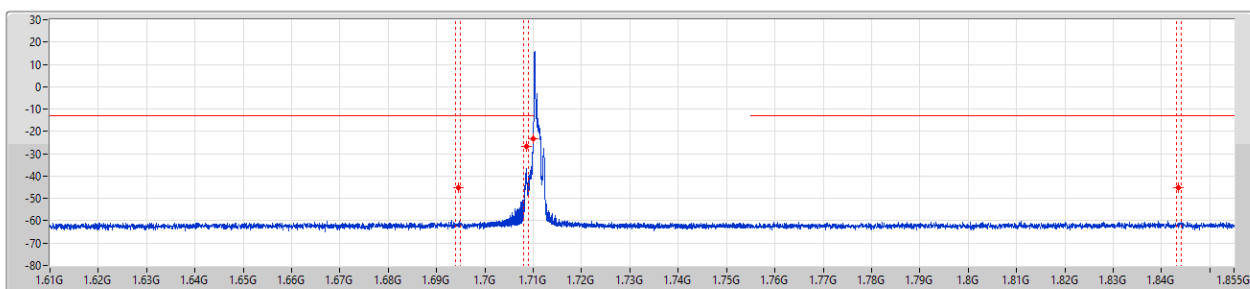
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6985G	-45.14	-13.00	-32.14	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-25.89	-13.00	-12.89	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-23.67	-13.00	-10.67	-	-
1.755G	1.855G	20k	62k	RMS	1.8235G	-45.17	-13.00	-32.17	MBW 1M	-

Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX
1712.5MHz_16QAM_RB 1,#RB L,NB L

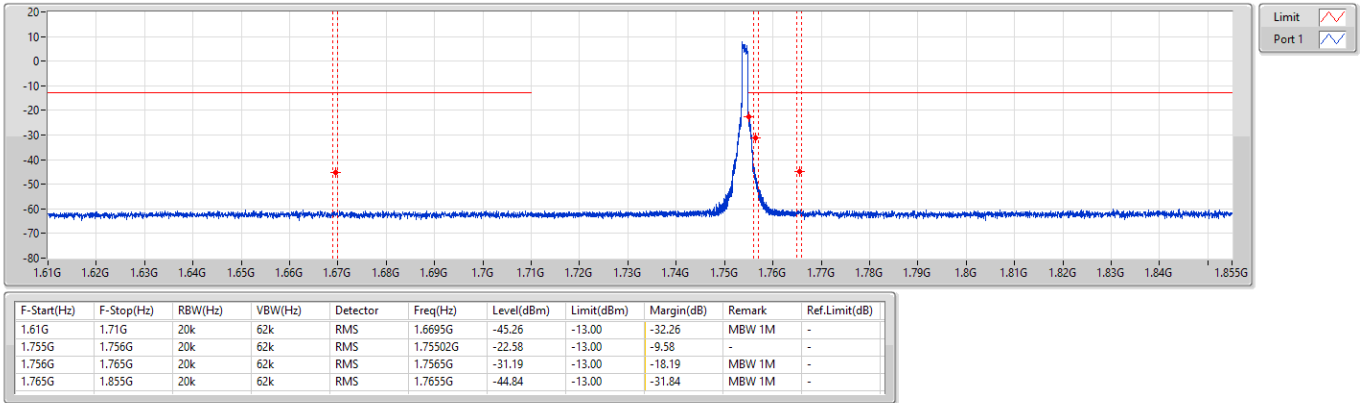
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6945G	-45.14	-13.00	-32.14	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-26.73	-13.00	-13.73	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.71G	-23.14	-13.00	-10.14	-	-
1.755G	1.855G	20k	62k	RMS	1.8435G	-45.04	-13.00	-32.04	MBW 1M	-

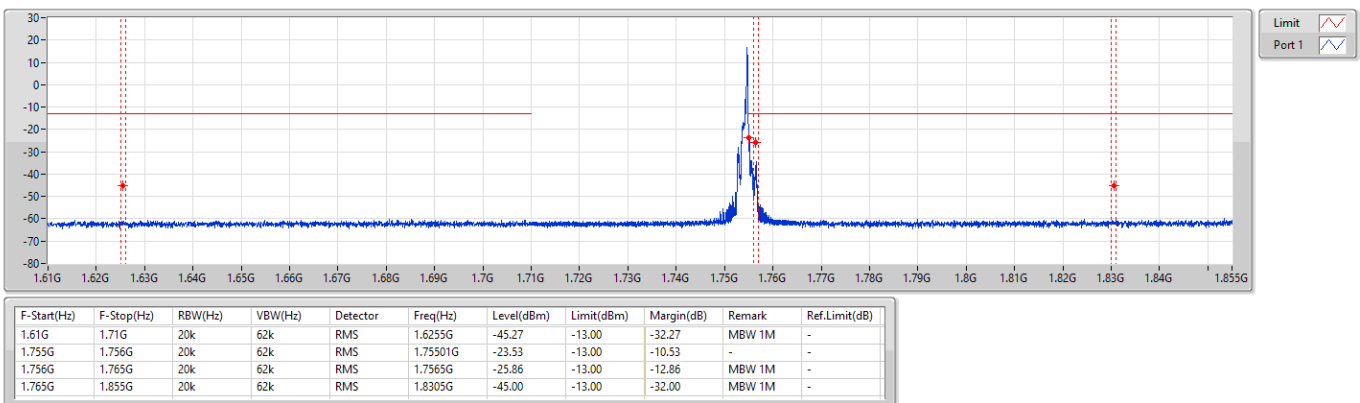
Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX
1752.5MHz_16QAM_RB 6,#RB H,NB H

CSE-TX-Sum



Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX
1752.5MHz_16QAM_RB 1,#RB H,NB H

CSE-TX-Sum



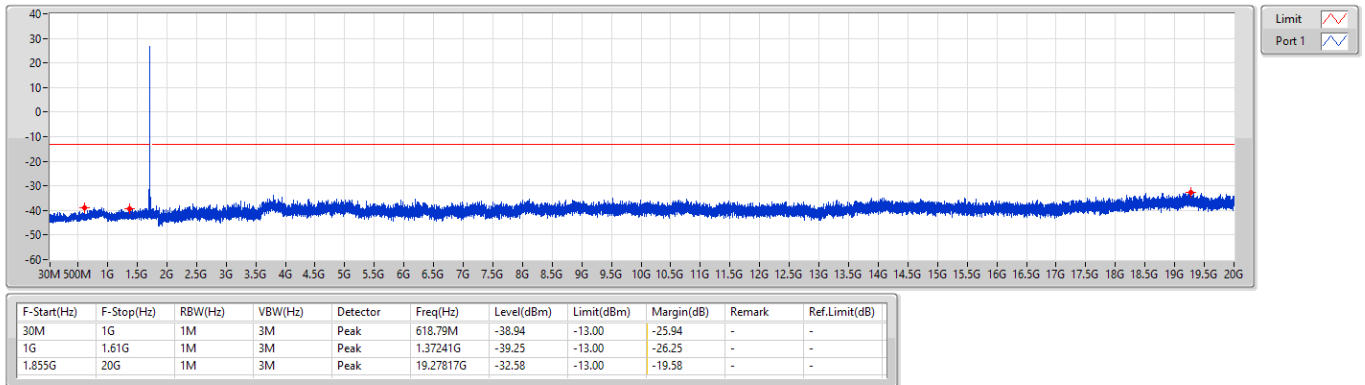


Summary

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 4	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1.855G	20G	1M	3M	Peak	19.22317G	-32.42	-13.00	-19.42	-	-

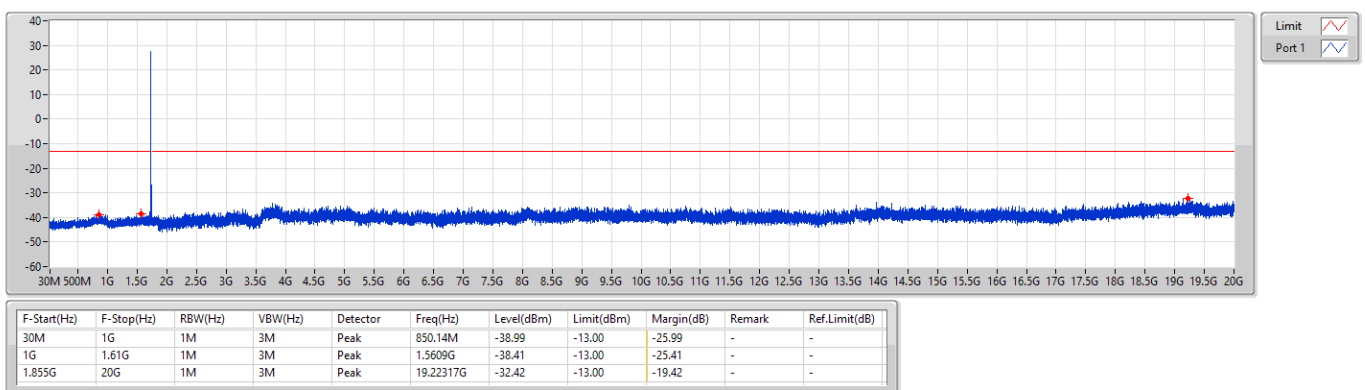
Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1710.2MHz_QPSK_Tone 12@0

CSE-TX-Sum



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1732.5MHz_QPSK_Tone 12@0

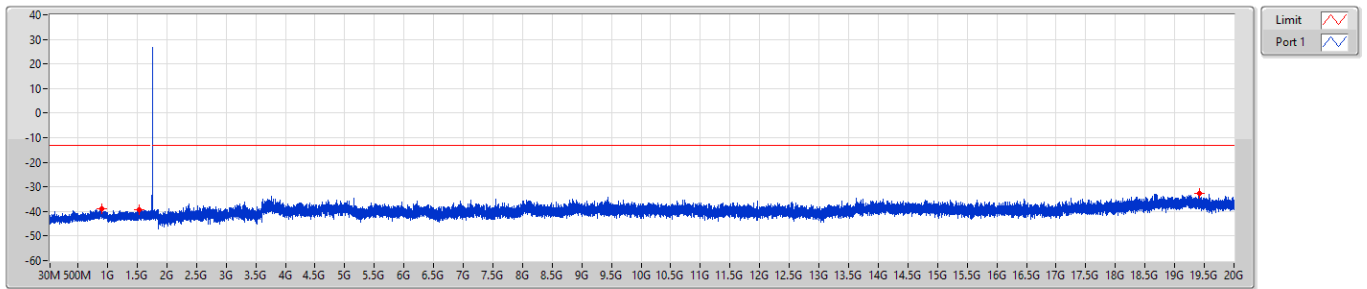
CSE-TX-Sum





Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX
1754.8MHz_QPSK_Tone 12@0

CSE-TX-Sum



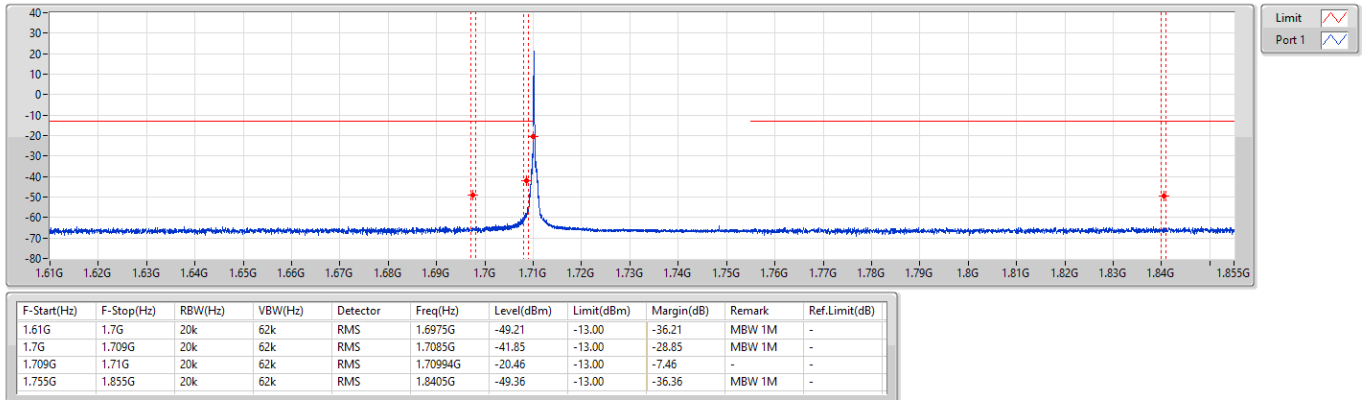
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	1G	1M	3M	Peak	908.82M	-38.98	-13.00	-25.98	-	-
1G	1.61G	1M	3M	Peak	1.53802G	-39.38	-13.00	-26.38	-	-
1.855G	20G	1M	3M	Peak	19.42503G	-32.80	-13.00	-19.80	-	-

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 4	-	-	-	-	-	-	-	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	1.709G	1.71G	20k	62k	RMS	1.70994G	-20.46	-13.00	-7.46	-	-
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	1.755G	1.756G	20k	62k	RMS	1.75503G	-18.97	-13.00	-5.97	-	-
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	1.709G	1.71G	20k	62k	RMS	1.70997G	-17.58	-13.00	-4.58	-	-
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1.709G	1.71G	20k	62k	RMS	1.71G	-15.97	-13.00	-2.97	-	-

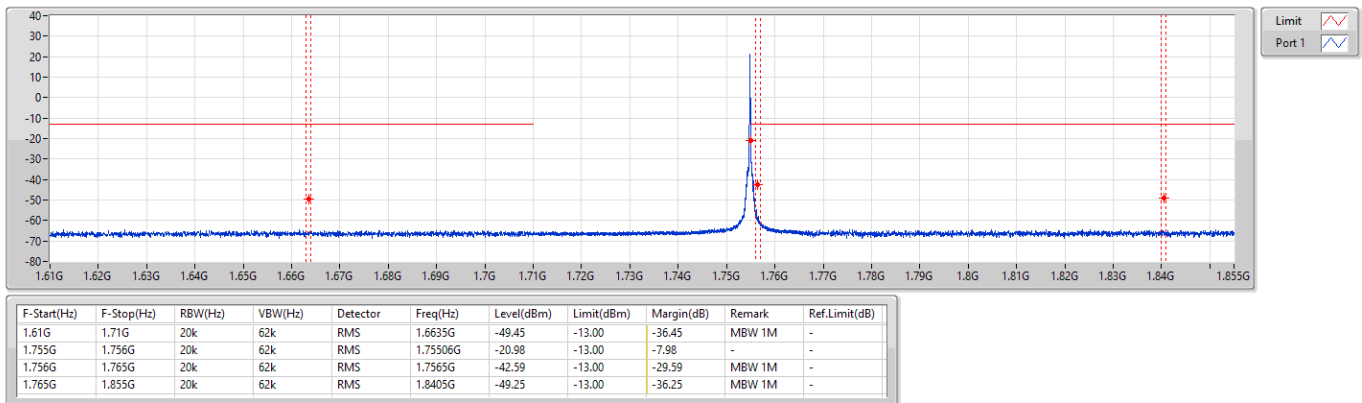
Band 4_NB-IoT_3.75kHz_Nss1,BPSK_1TX 1710.2MHz_BPSK_Tone 1@0

CSE-TX-Sum



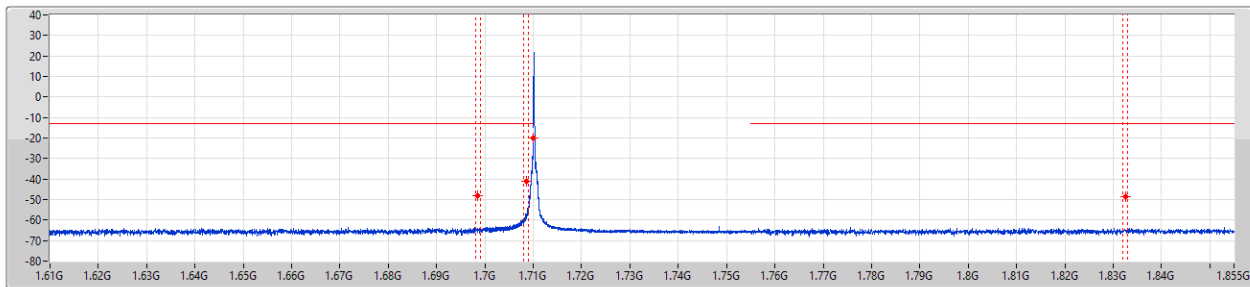
Band 4_NB-IoT_3.75kHz_Nss1,BPSK_1TX 1754.8MHz_BPSK_Tone 1@47

CSE-TX-Sum



Band 4_NB-IoT_3.75kHz_Nss1,QPSK_1TX 1710.2MHz_QPSK_Tone 1@0

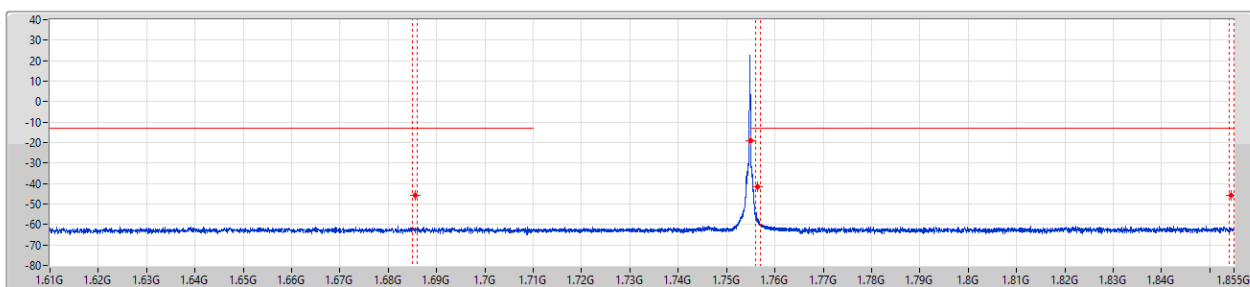
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6985G	-48.09	-13.00	-35.09	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-41.25	-13.00	-28.25	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.70994G	-19.82	-13.00	-6.82	-	-
1.755G	1.855G	20k	62k	RMS	1.8325G	-48.48	-13.00	-35.48	MBW 1M	-

Band 4_NB-IoT_3.75kHz_Nss1,QPSK_1TX 1754.8MHz_QPSK_Tone 1@47

CSE-TX-Sum

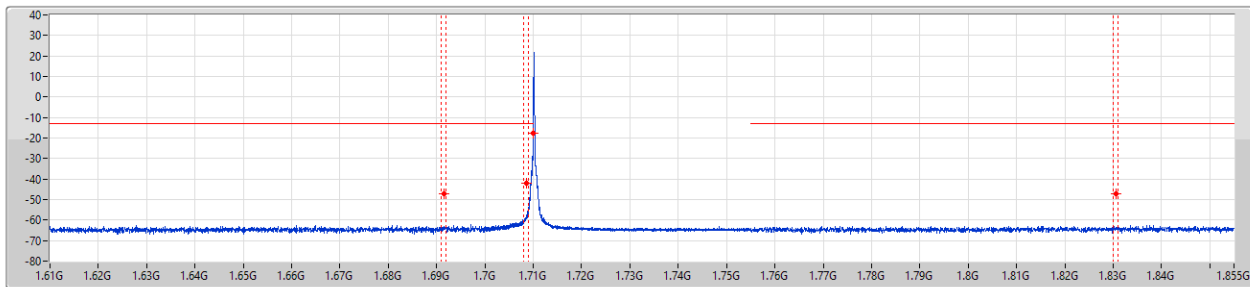


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6855G	-45.82	-13.00	-32.82	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75503G	-18.97	-13.00	-5.97	-	-
1.756G	1.765G	20k	62k	RMS	1.7565G	-41.34	-13.00	-28.34	MBW 1M	-
1.765G	1.855G	20k	62k	RMS	1.8545G	-45.66	-13.00	-32.66	MBW 1M	-

Band 4_NB-IoT_15kHz_Nss1,BPSK_1TX

CSE-TX-Sum

1710.2MHz_BPSK_Tone 1@0

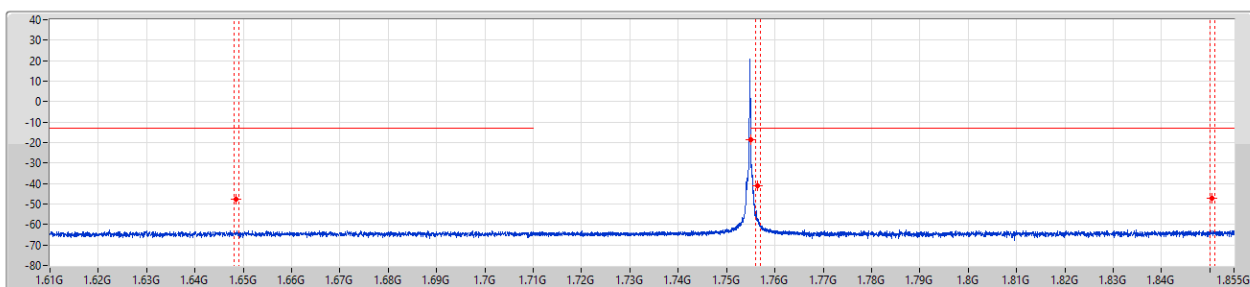


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.7G	20k	62k	RMS	1.6915G	-47.39	-13.00	-34.39	MBW 1M	-
1.7G	1.709G	20k	62k	RMS	1.7085G	-41.83	-13.00	-28.83	MBW 1M	-
1.709G	1.71G	20k	62k	RMS	1.70997G	-17.58	-13.00	-4.58	-	-
1.755G	1.855G	20k	62k	RMS	1.8305G	-47.42	-13.00	-34.42	MBW 1M	-

Band 4_NB-IoT_15kHz_Nss1,BPSK_1TX

CSE-TX-Sum

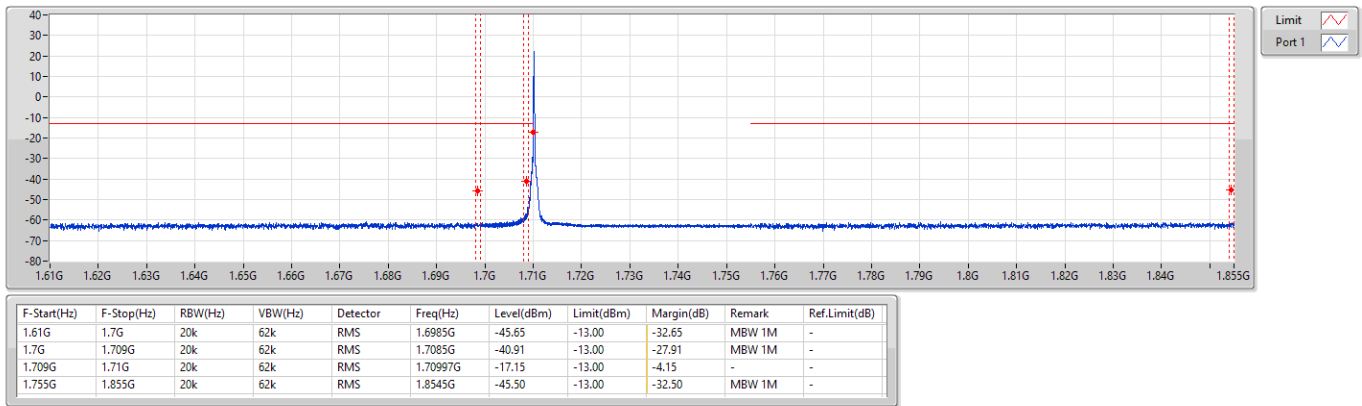
1754.8MHz_BPSK_Tone 1@11



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	20k	62k	RMS	1.6485G	-47.56	-13.00	-34.56	MBW 1M	-
1.755G	1.756G	20k	62k	RMS	1.75504G	-18.55	-13.00	-5.55	-	-
1.756G	1.765G	20k	62k	RMS	1.7565G	-41.16	-13.00	-28.16	MBW 1M	-
1.765G	1.855G	20k	62k	RMS	1.8505G	-47.37	-13.00	-34.37	MBW 1M	-

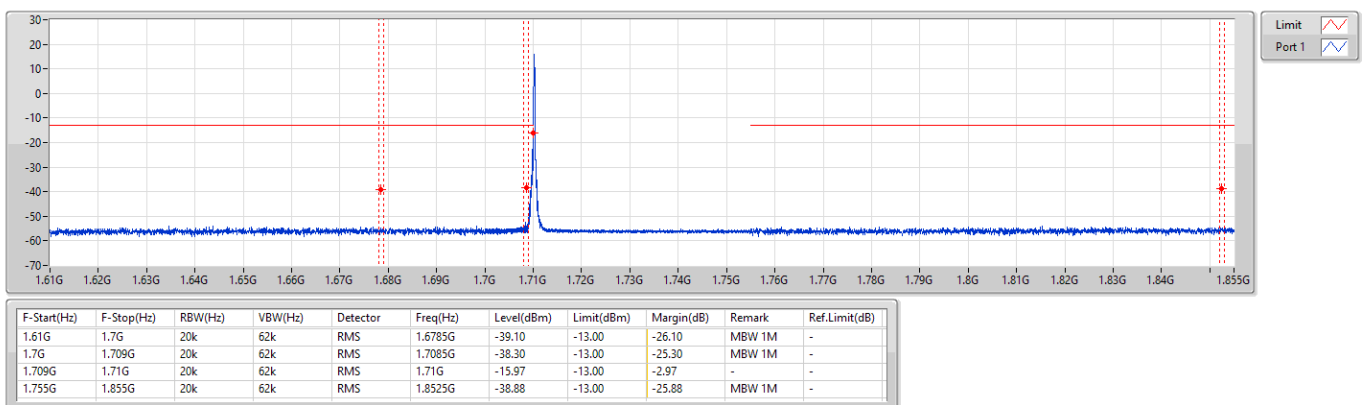
Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1710.2MHz_QPSK_Tone 1@0

CSE-TX-Sum



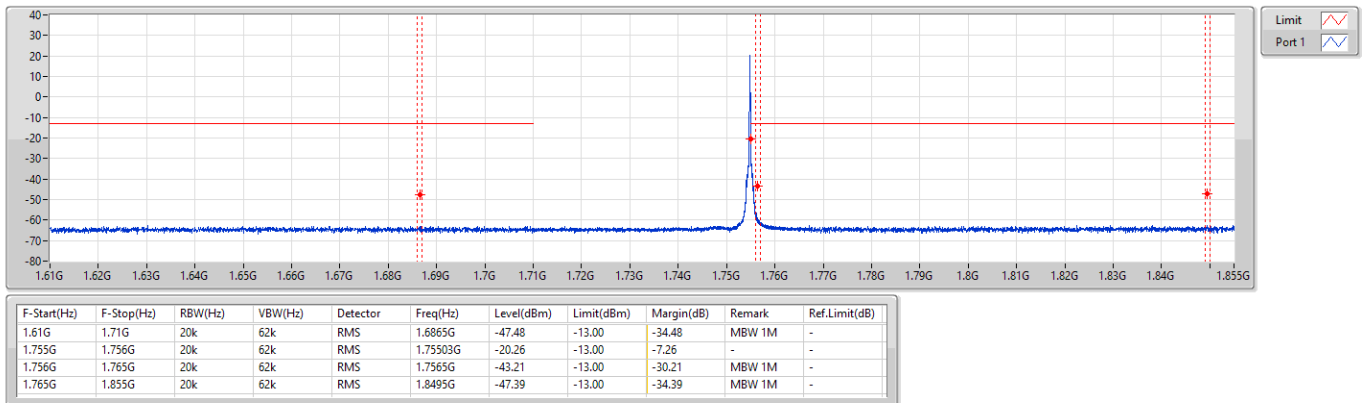
Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1710.2MHz_QPSK_Tone 12@0

CSE-TX-Sum



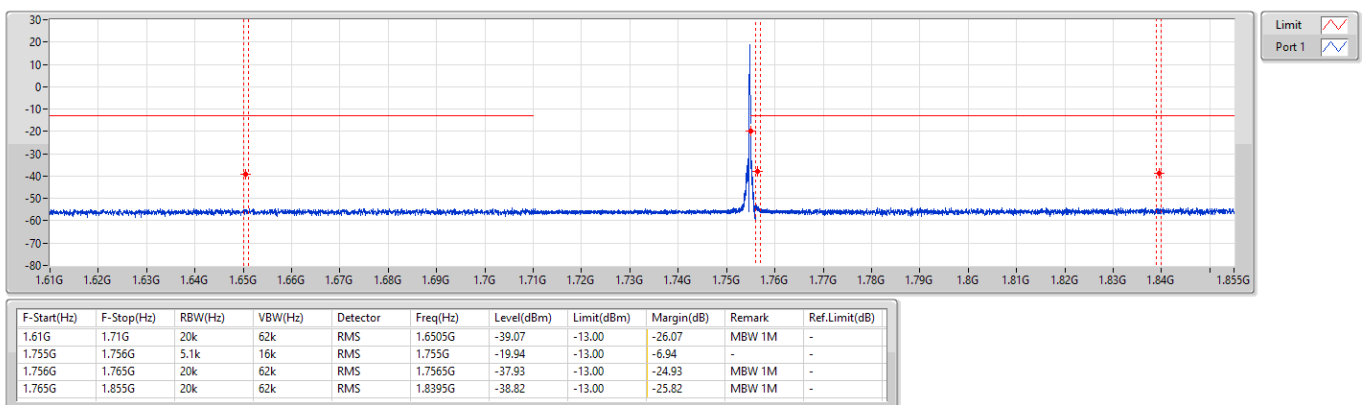
Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1754.8MHz_QPSK_Tone 1@11

CSE-TX-Sum



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX 1754.8MHz_QPSK_Tone 12@0

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 4	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	1.45M	1.115M	1M12G7D	1.45M	1.115M
LTE-M1_20MHz_Nss1,16QAM_1TX	1.4M	1.122M	1M12W7D	1.4M	1.122M
LTE-M1_15MHz_Nss1,QPSK_1TX	1.406M	1.118M	1M12G7D	1.406M	1.118M
LTE-M1_15MHz_Nss1,16QAM_1TX	1.688M	1.124M	1M12W7D	1.688M	1.124M
LTE-M1_10MHz_Nss1,QPSK_1TX	1.35M	1.105M	1M11G7D	1.35M	1.105M
LTE-M1_10MHz_Nss1,16QAM_1TX	1.413M	1.114M	1M11W7D	1.413M	1.114M
LTE-M1_5MHz_Nss1,QPSK_1TX	1.3M	1.096M	1M10G7D	1.3M	1.096M
LTE-M1_5MHz_Nss1,16QAM_1TX	1.4M	1.096M	1M10W7D	1.4M	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

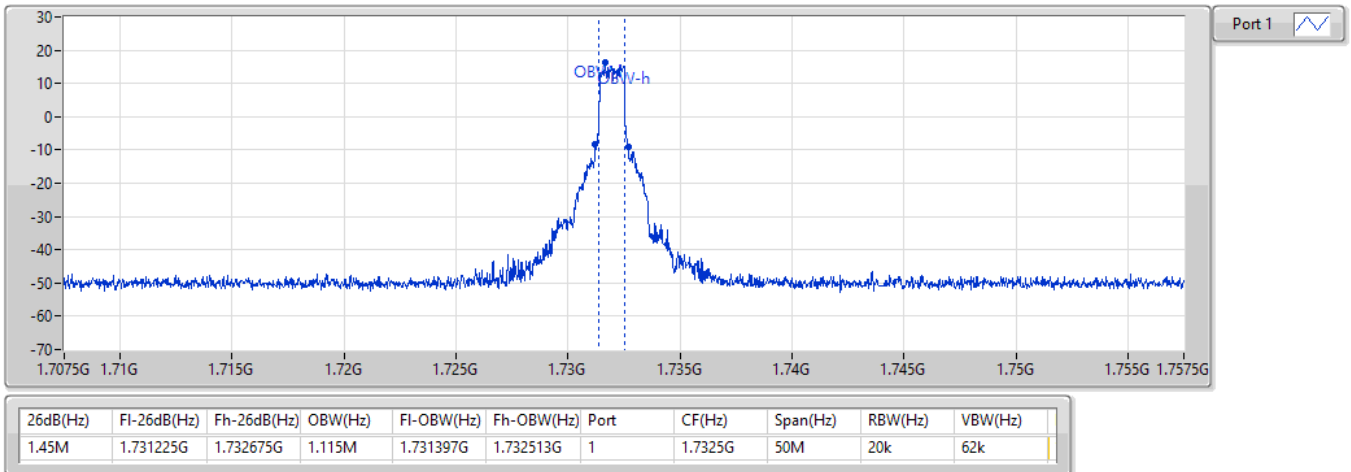
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 4_LTE-M1_20MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.45M	1.115M	Inf
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.4M	1.122M	Inf
Band 4_LTE-M1_15MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.406M	1.118M	Inf
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.688M	1.124M	Inf
Band 4_LTE-M1_10MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.35M	1.105M	Inf
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.413M	1.114M	Inf
Band 4_LTE-M1_5MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1.3M	1.096M	Inf
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1.4M	1.096M	Inf

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

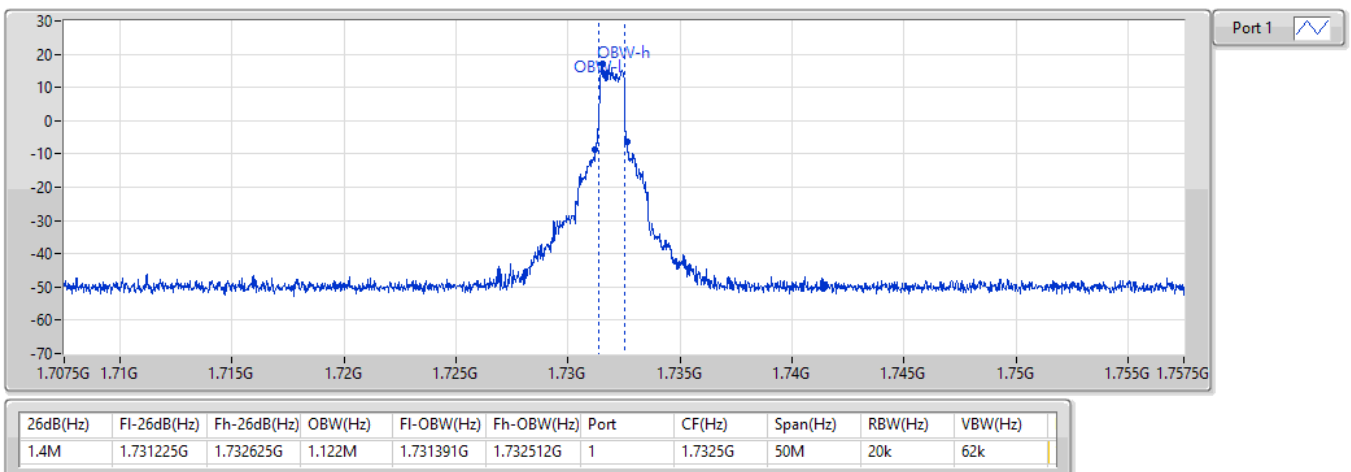
Band 4_LTE-M1_20MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 6,#RB 0,NB M

EBW



Band 4_LTE-M1_20MHz_Nss1,16QAM_1TX
1732.5MHz_16QAM_RB 6,#RB 0,NB M

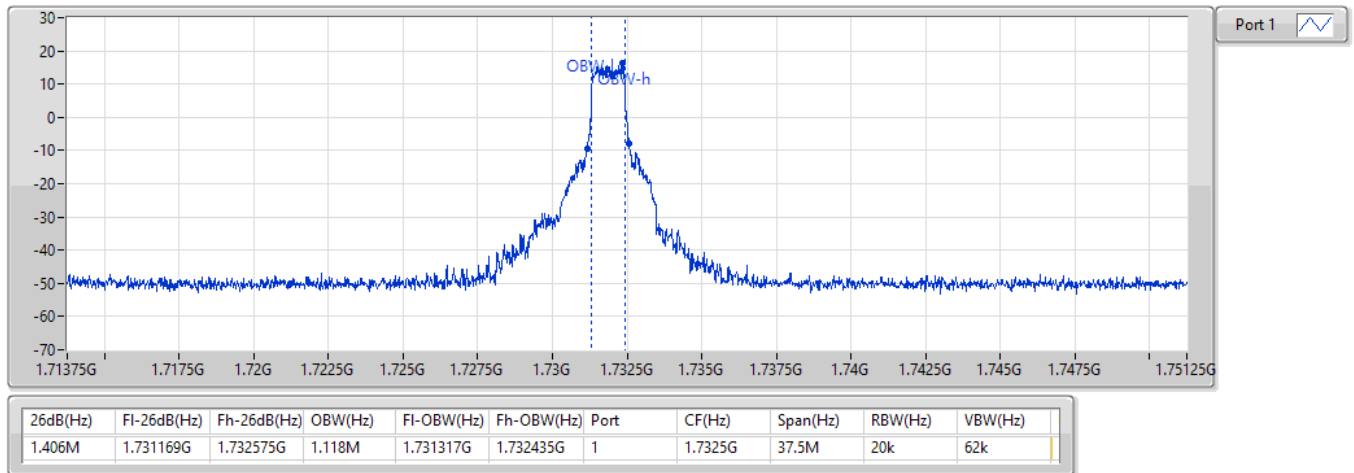
EBW



Band 4_LTE-M1_15MHz_Nss1,QPSK_1TX

EBW

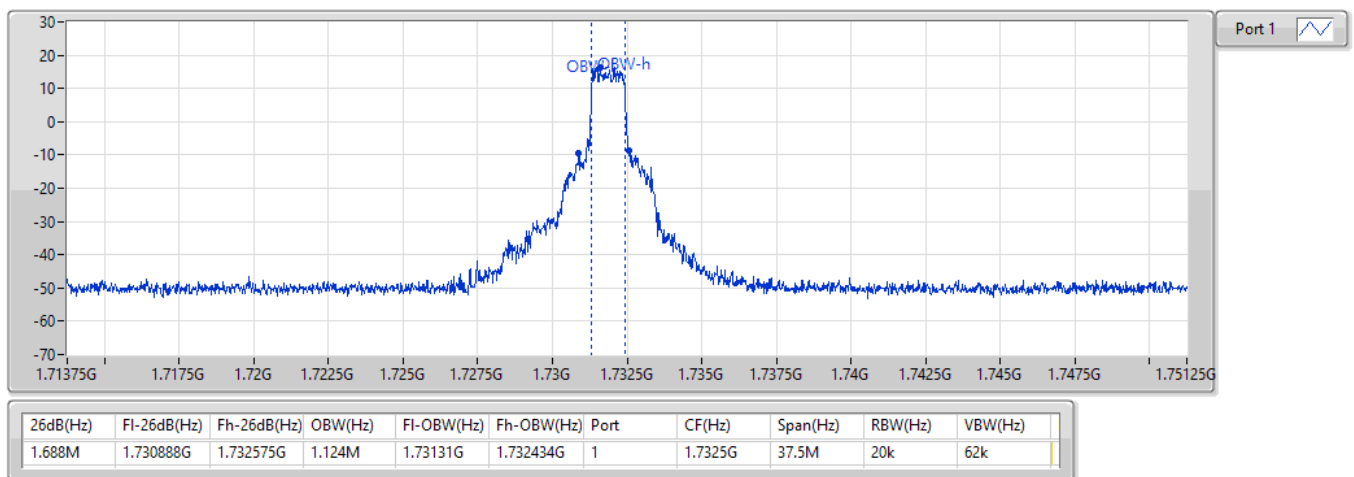
1732.5MHz_QPSK_RB 6,#RB 0,NB M



Band 4_LTE-M1_15MHz_Nss1,16QAM_1TX

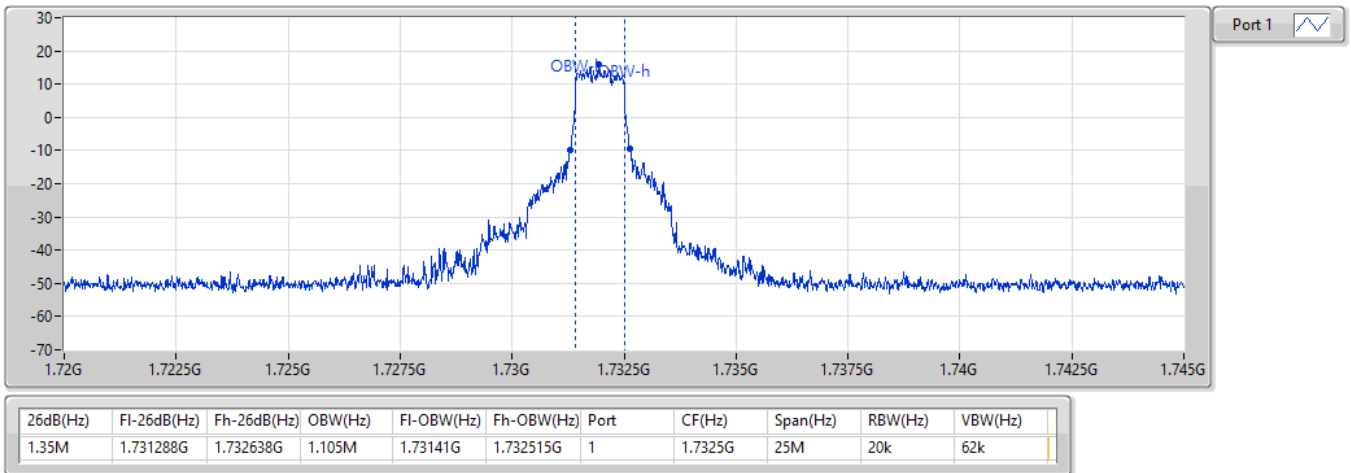
EBW

1732.5MHz_16QAM_RB 6,#RB 0,NB M



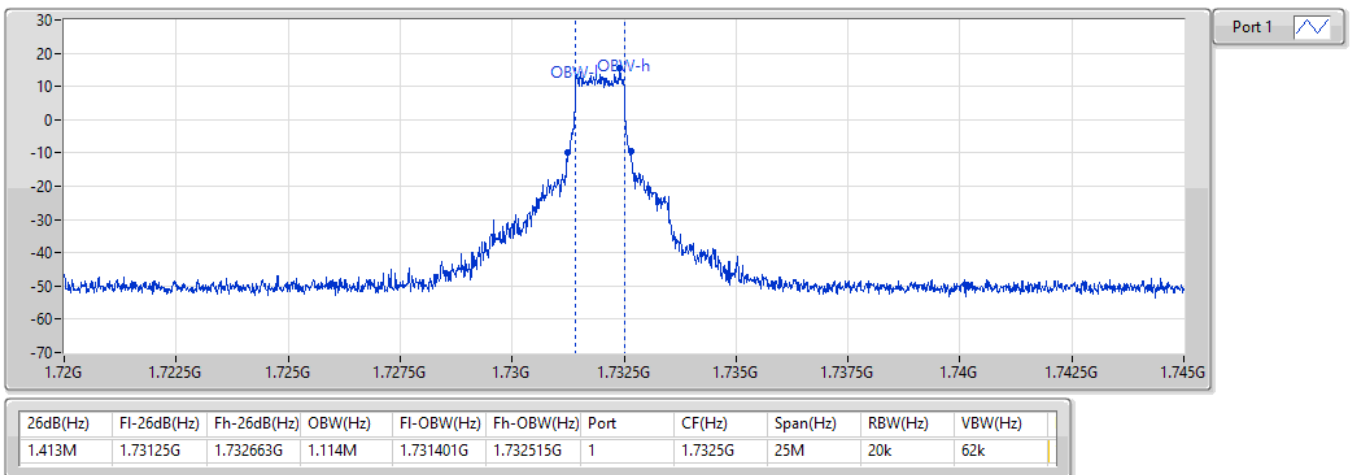
Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 6,#RB 0,NB M

EBW



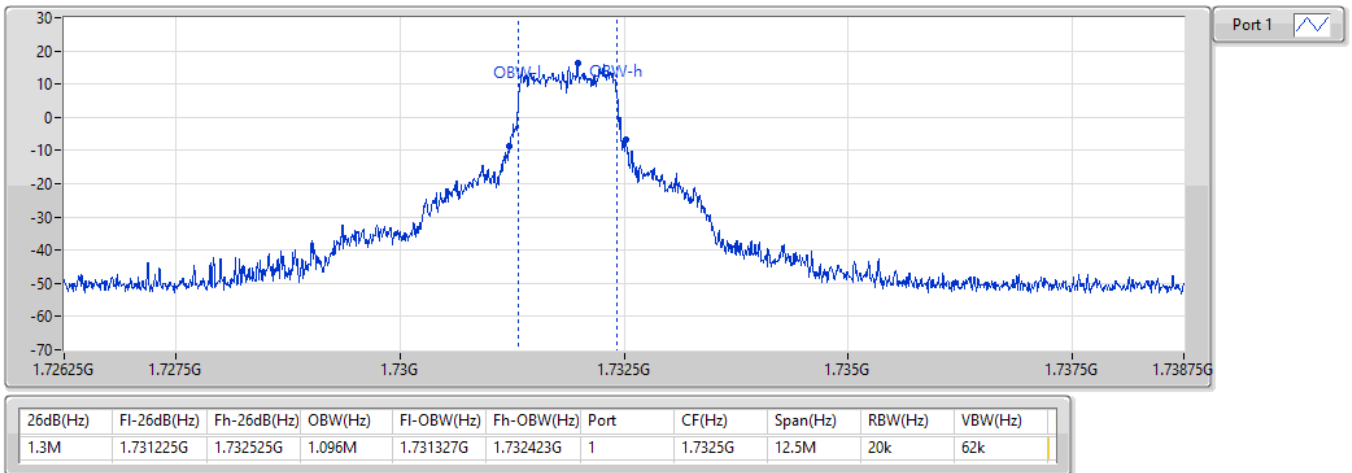
Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX
1732.5MHz_16QAM_RB 6,#RB 0,NB M

EBW



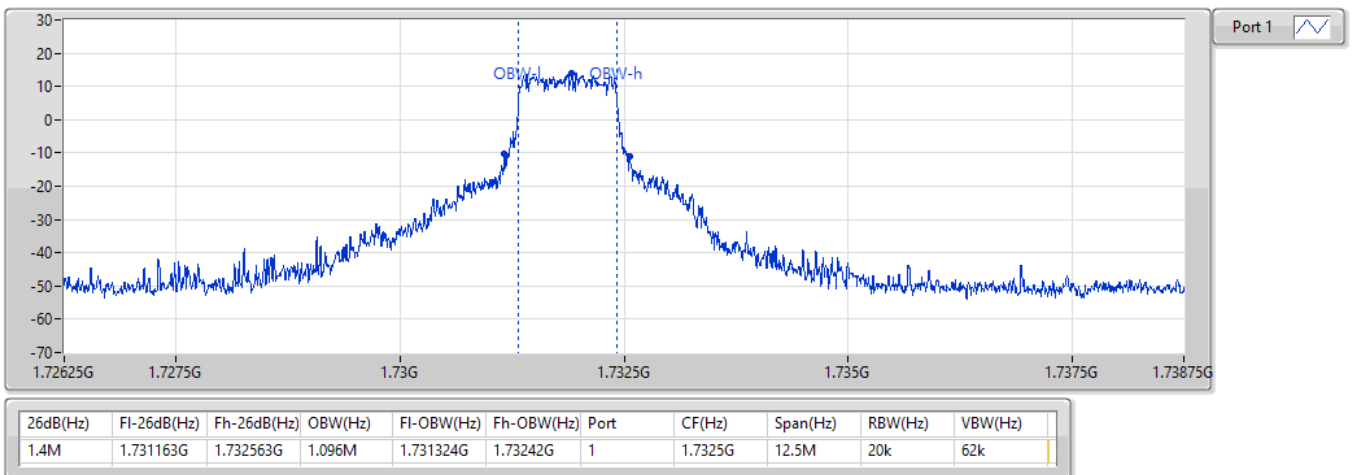
Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 6,#RB 0,NB M

EBW



Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX
1732.5MHz_16QAM_RB 6,#RB 0,NB M

EBW



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 4	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	35k	58.429k	58K5G7D	35k	58.429k
NB-IoT_3.75kHz_Nss1,QPSK_1TX	43.5k	63.019k	63K0G7D	43.5k	63.019k
NB-IoT_15kHz_Nss1,BPSK_1TX	127k	128.43k	128KG7D	127k	128.43k
NB-IoT_15kHz_Nss1,QPSK_1TX	320.5k	200.646k	201KG7D	154.5k	136.479k

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

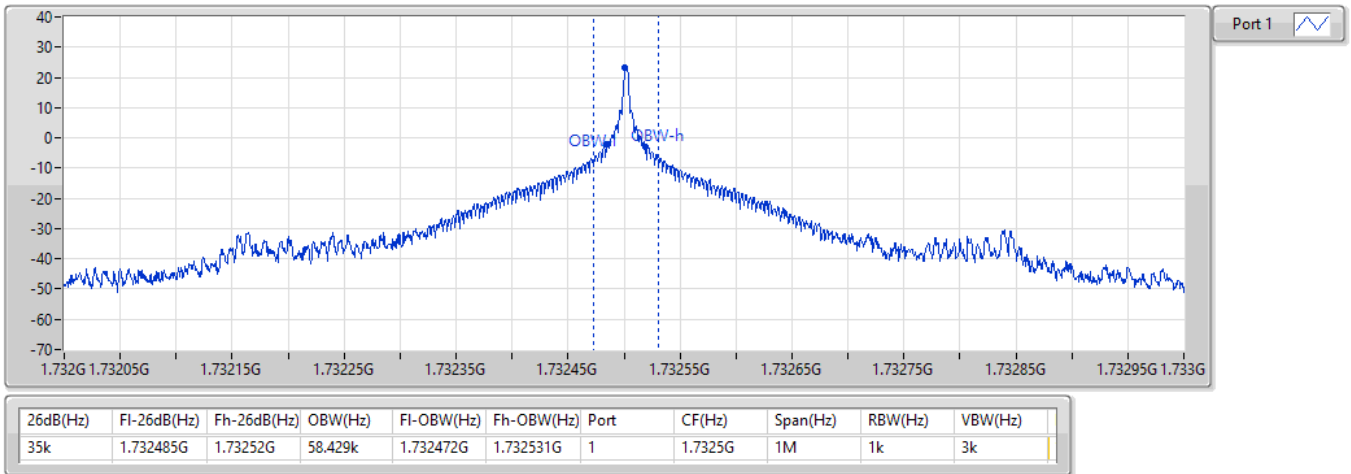
Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 4_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-
1732.5MHz_BPSK_Tone 1@M	Pass	35k	58.429k	Inf
1732.5MHz_QPSK_Tone 1@M	Pass	43.5k	63.019k	Inf
Band 4_NB-IoT_15kHz_Nss1_1TX	-	-	-	-
1732.5MHz_BPSK_Tone 1@M	Pass	127k	128.43k	Inf
1732.5MHz_QPSK_Tone 1@M	Pass	154.5k	136.479k	Inf
1732.5MHz_QPSK_Tone 12@0	Pass	320.5k	200.646k	Inf

Port X-N dB = Port X 26dB down bandwidth;

Port X-OBW = Port X 99% occupied bandwidth

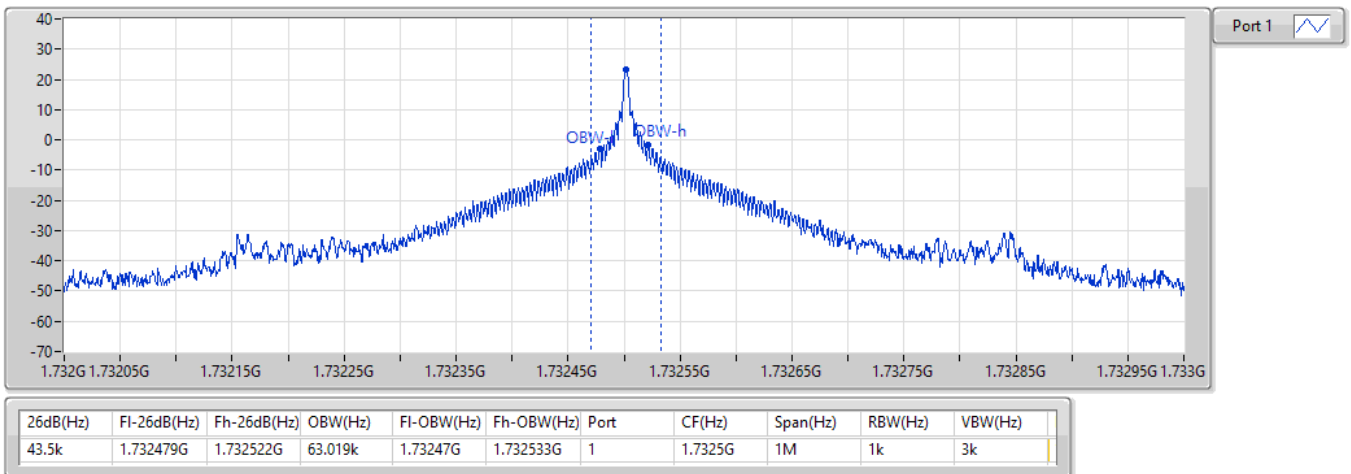
Band 4_NB-IoT_3.75kHz_Nss1,BPSK_1TX
1732.5MHz_BPSK_Tone 1@M

EBW



Band 4_NB-IoT_3.75kHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_Tone 1@M

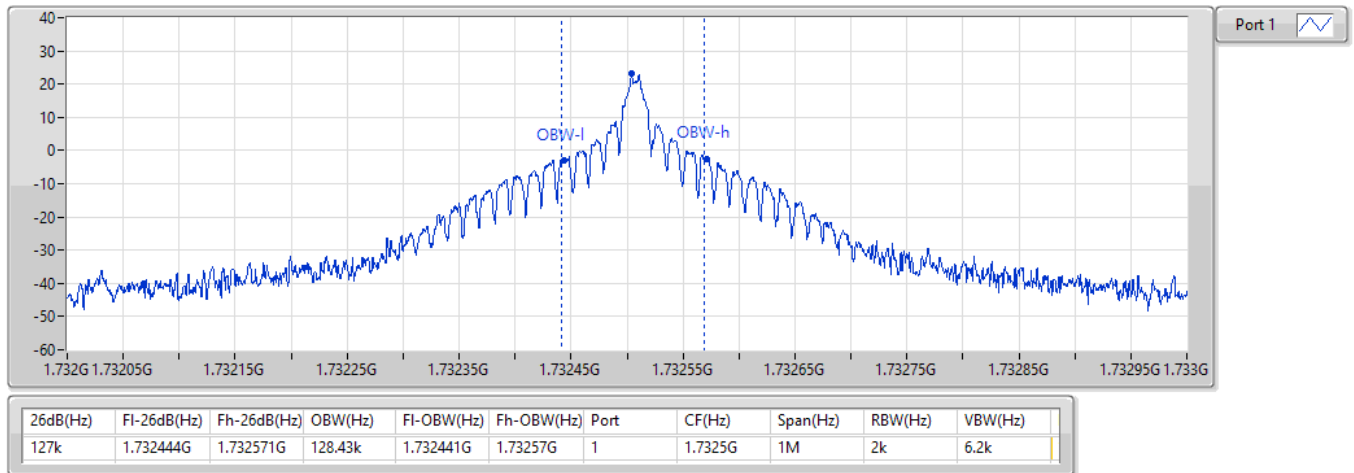
EBW



Band 4_NB-IoT_15kHz_Nss1,BPSK_1TX

EBW

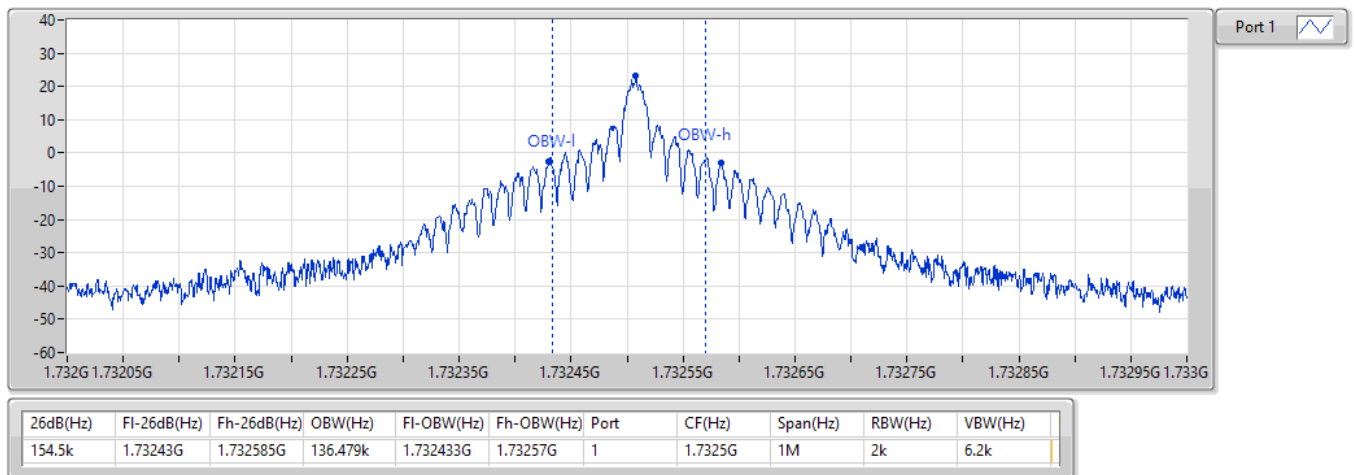
1732.5MHz_BPSK_Tone 1@M



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX

EBW

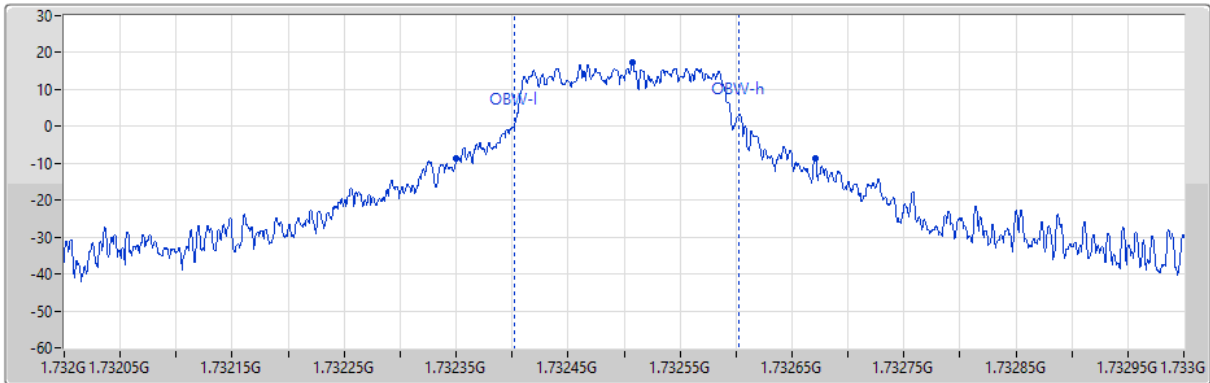
1732.5MHz_QPSK_Tone 1@M



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX

EBW

1732.5MHz_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)
320.5k	1.732351G	1.732671G	200.646k	1.732402G	1.732603G	1	1.7325G	1M	5.1k	16k

Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4	-	-	-	-	-
LTE-M1_20MHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	3.68	1
LTE-M1_20MHz_Nss1,16QAM_1TX	Pass	1732.5	13.00	3.88	1
LTE-M1_15MHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	3.75	1
LTE-M1_15MHz_Nss1,16QAM_1TX	Pass	1732.5	13.00	3.96	1
LTE-M1_10MHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	3.92	1
LTE-M1_10MHz_Nss1,16QAM_1TX	Pass	1732.5	13.00	4.72	1
LTE-M1_5MHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	3.96	1
LTE-M1_5MHz_Nss1,16QAM_1TX	Pass	1732.5	13.00	4.89	1

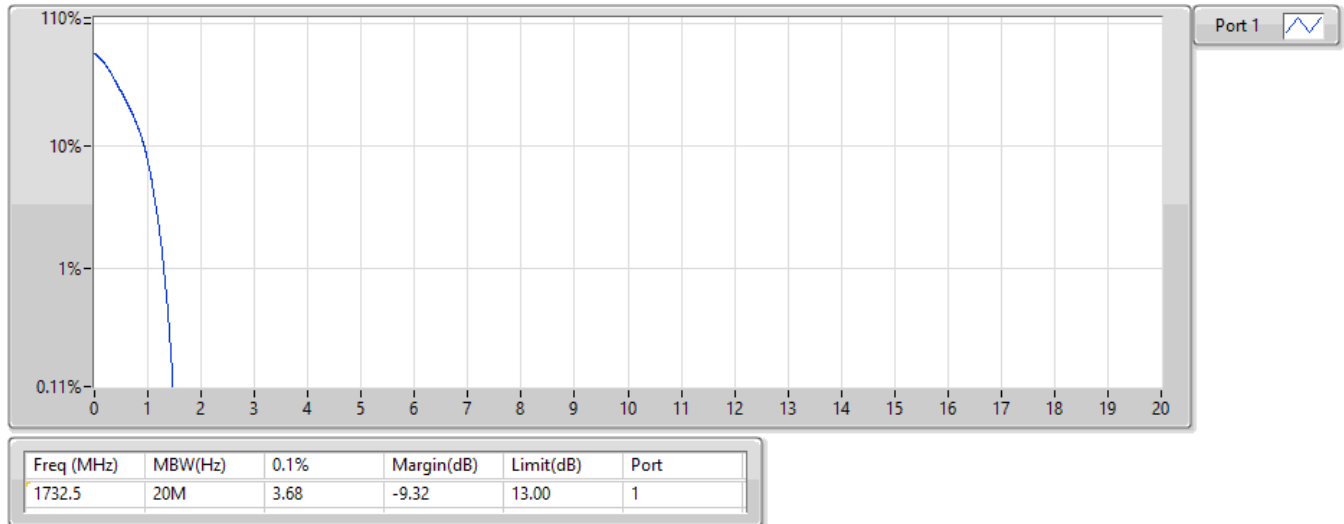
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4_LTE-M1_20MHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.68	1
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.88	1
Band 4_LTE-M1_15MHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.75	1
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.96	1
Band 4_LTE-M1_10MHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.92	1
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1732.5	13.00	4.72	1
Band 4_LTE-M1_5MHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_QPSK_RB 6,#RB 0,NB M	Pass	1732.5	13.00	3.96	1
1732.5MHz_16QAM_RB 6,#RB 0,NB M	Pass	1732.5	13.00	4.89	1

Band 4_LTE-M1_20MHz_Nss1,QPSK_1TX

PAPR

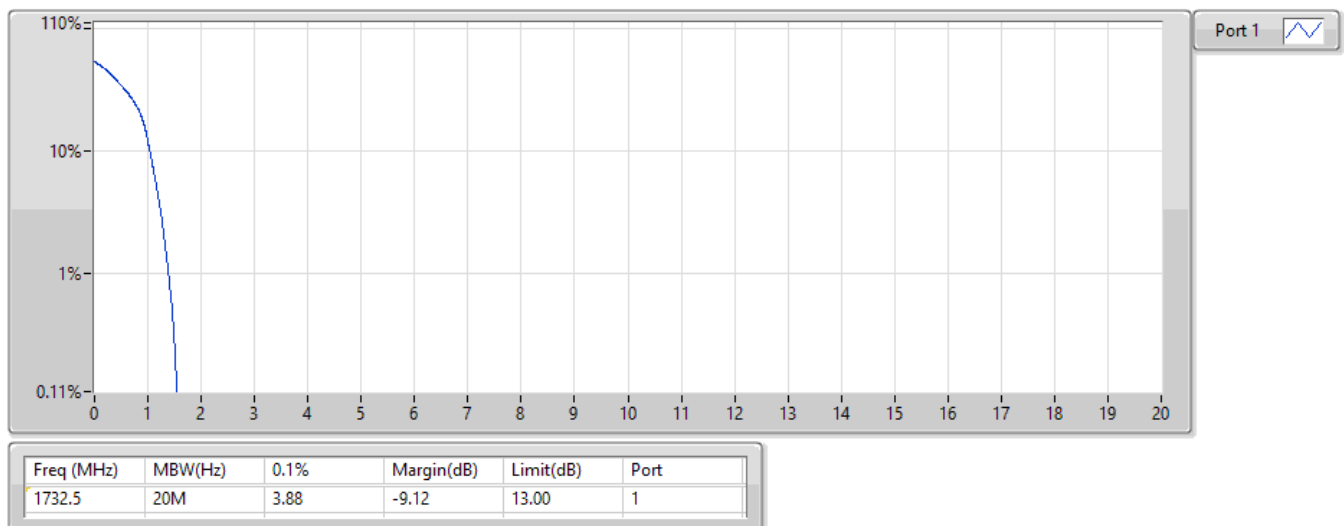
1732.5MHz_QPSK_RB 6,#RB 0,NB M



Band 4_LTE-M1_20MHz_Nss1,16QAM_1TX

PAPR

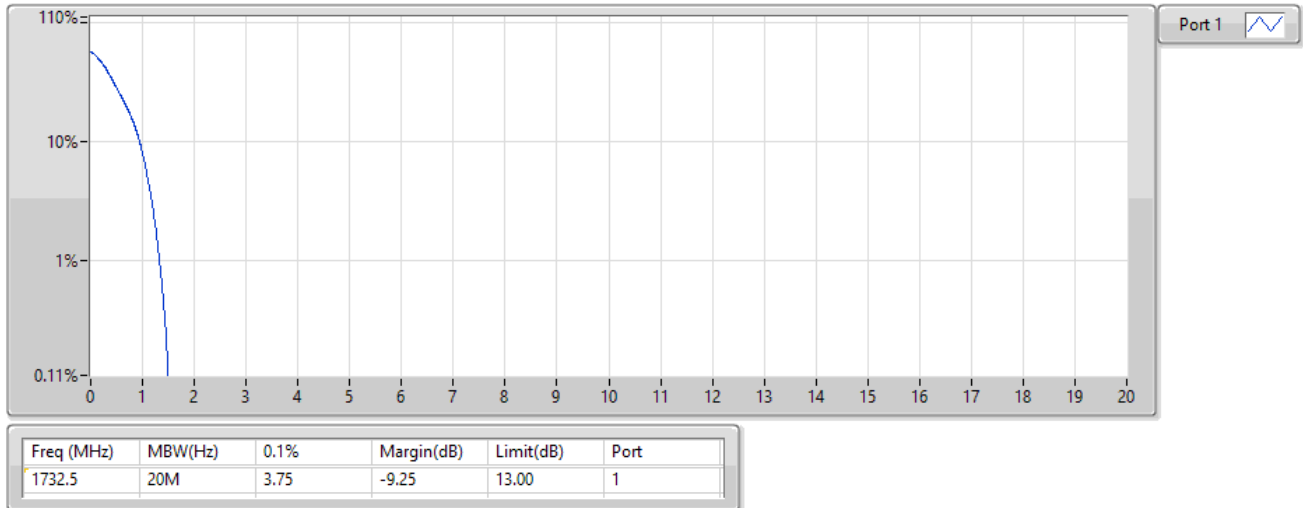
1732.5MHz_16QAM_RB 6,#RB 0,NB M



Band 4_LTE-M1_15MHz_Nss1,QPSK_1TX

PAPR

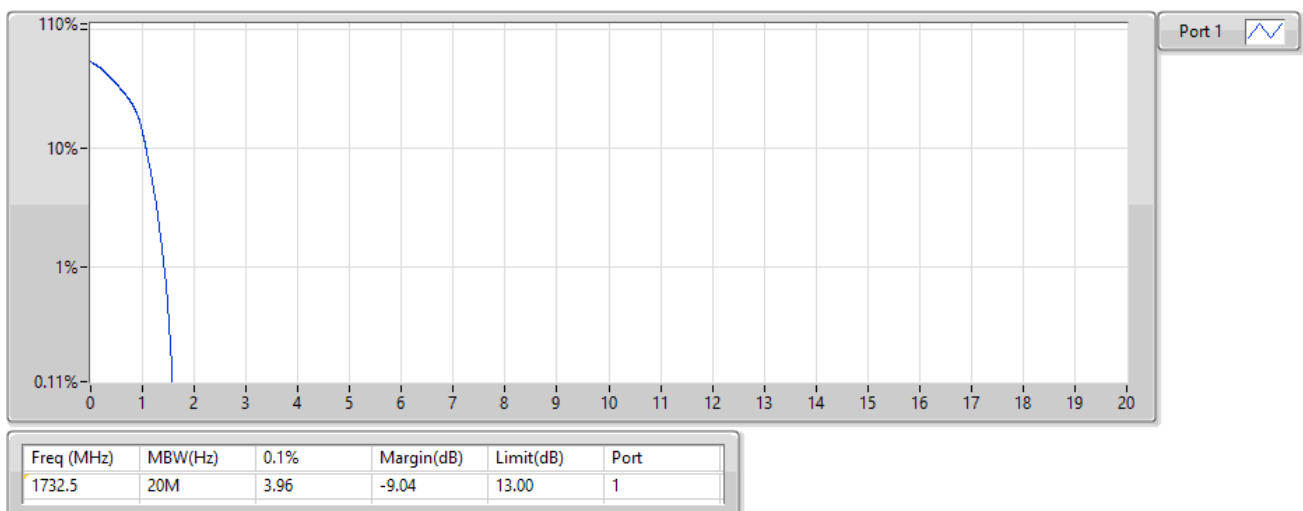
1732.5MHz_QPSK_RB 6,#RB 0,NB M



Band 4_LTE-M1_15MHz_Nss1,16QAM_1TX

PAPR

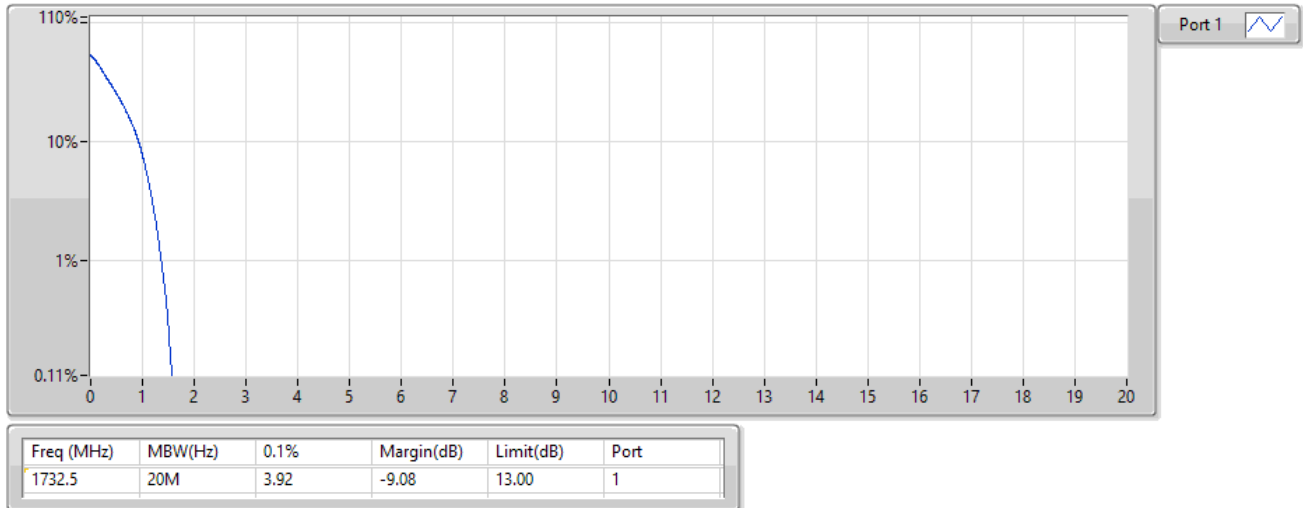
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Band 4_LTE-M1_10MHz_Nss1,QPSK_1TX

PAPR

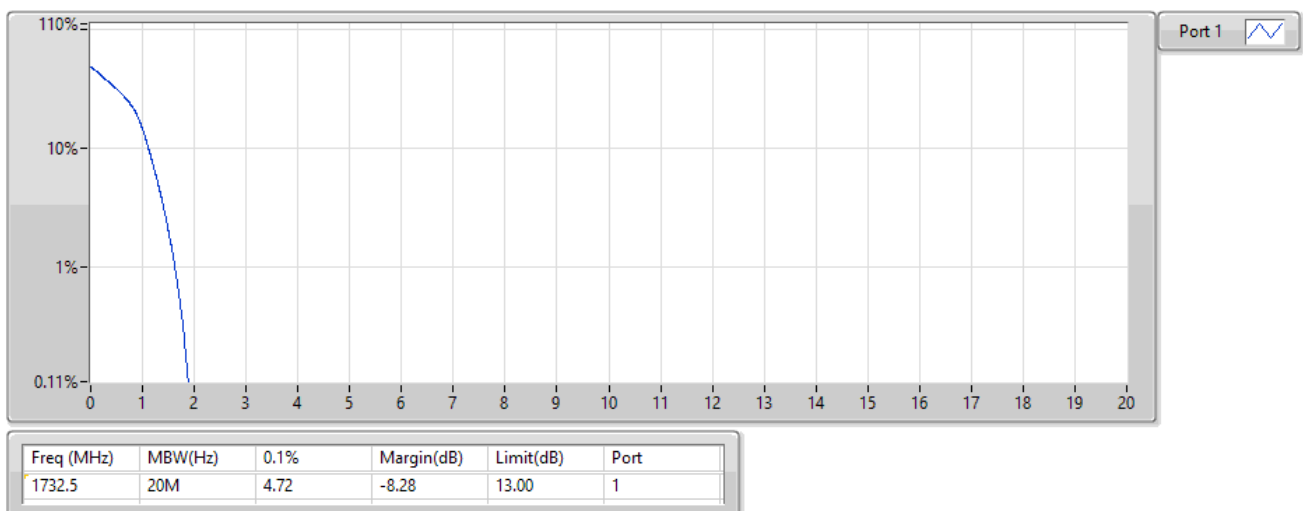
1732.5MHz_QPSK_RB 6,#RB 0,NB M



Band 4_LTE-M1_10MHz_Nss1,16QAM_1TX

PAPR

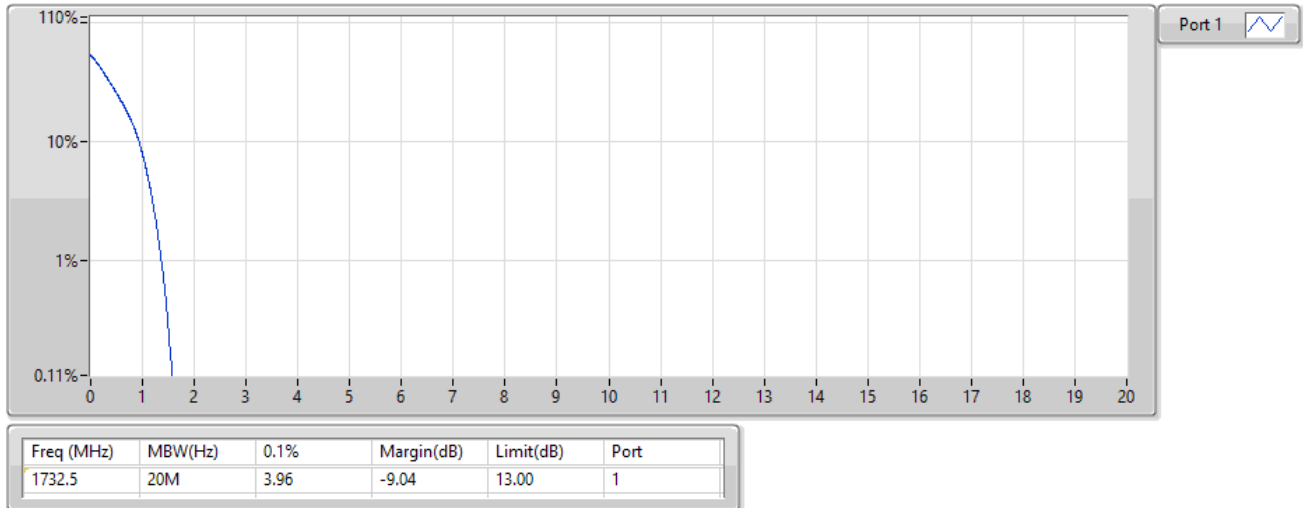
1732.5MHz_16QAM_RB 6,#RB 0,NB M



Band 4_LTE-M1_5MHz_Nss1,QPSK_1TX

PAPR

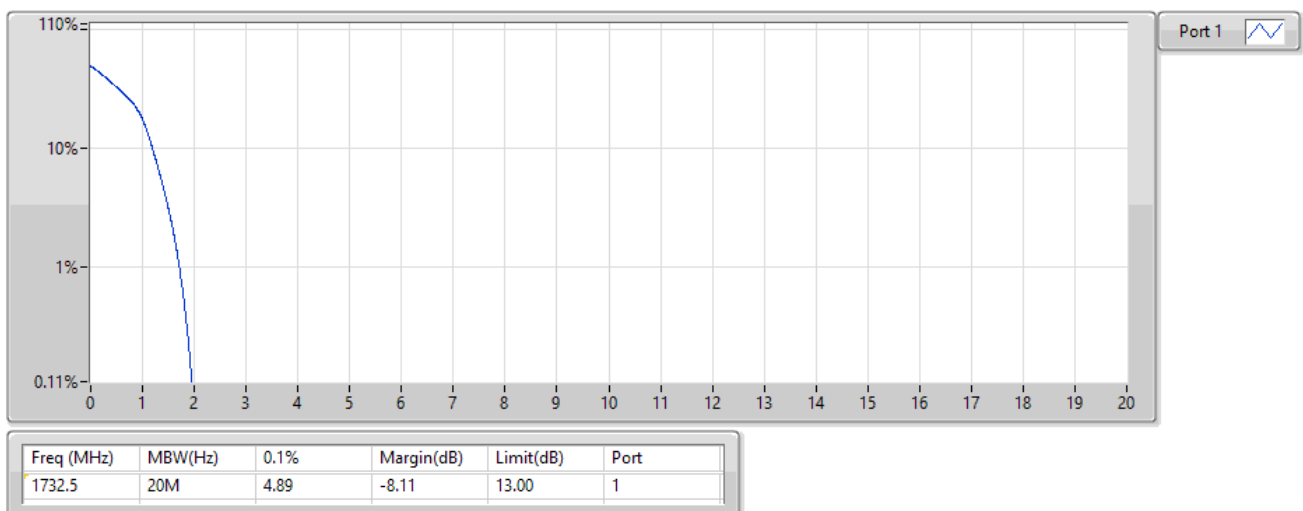
1732.5MHz_QPSK_RB 6,#RB 0,NB M



Band 4_LTE-M1_5MHz_Nss1,16QAM_1TX

PAPR

1732.5MHz_16QAM_RB 6,#RB 0,NB M



Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4	-	-	-	-	-
NB-IoT_3.75kHz_Nss1,BPSK_1TX	Pass	1732.5	13.00	0.77	1
NB-IoT_3.75kHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	1.10	1
NB-IoT_15kHz_Nss1,BPSK_1TX	Pass	1732.5	13.00	0.95	1
NB-IoT_15kHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	3.60	1

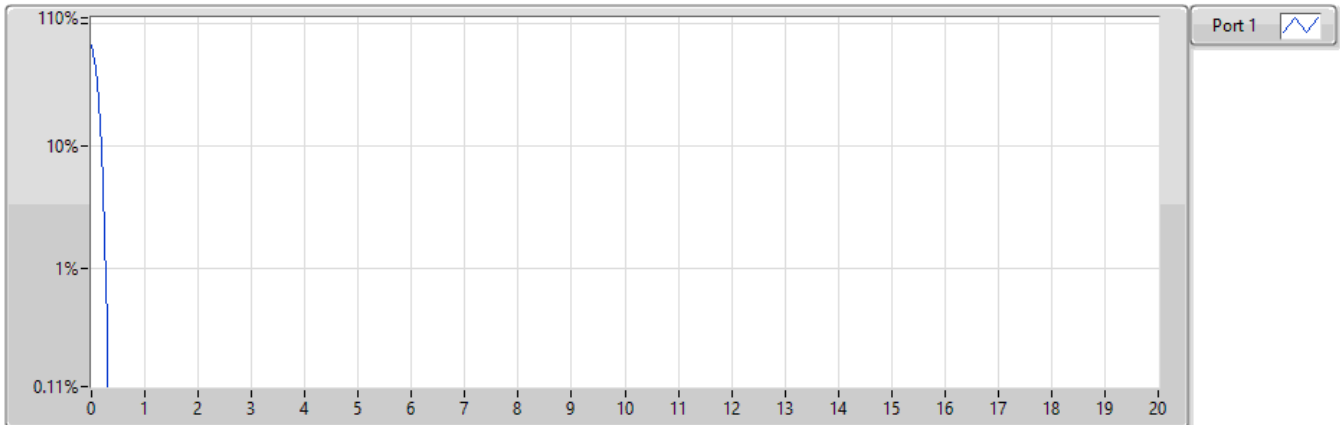
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4_NB-IoT_3.75kHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_BPSK_Tone 1@M	Pass	1732.5	13.00	0.77	1
1732.5MHz_QPSK_Tone 1@M	Pass	1732.5	13.00	1.10	1
Band 4_NB-IoT_15kHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_BPSK_Tone 1@M	Pass	1732.5	13.00	0.95	1
1732.5MHz_QPSK_Tone 1@M	Pass	1732.5	13.00	1.13	1
1732.5MHz_QPSK_Tone 12@0	Pass	1732.5	13.00	3.60	1

Band 4_NB-IoT_3.75kHz_Nss1,BPSK_1TX

PAPR

1732.5MHz_BPSK_Tone 1@M

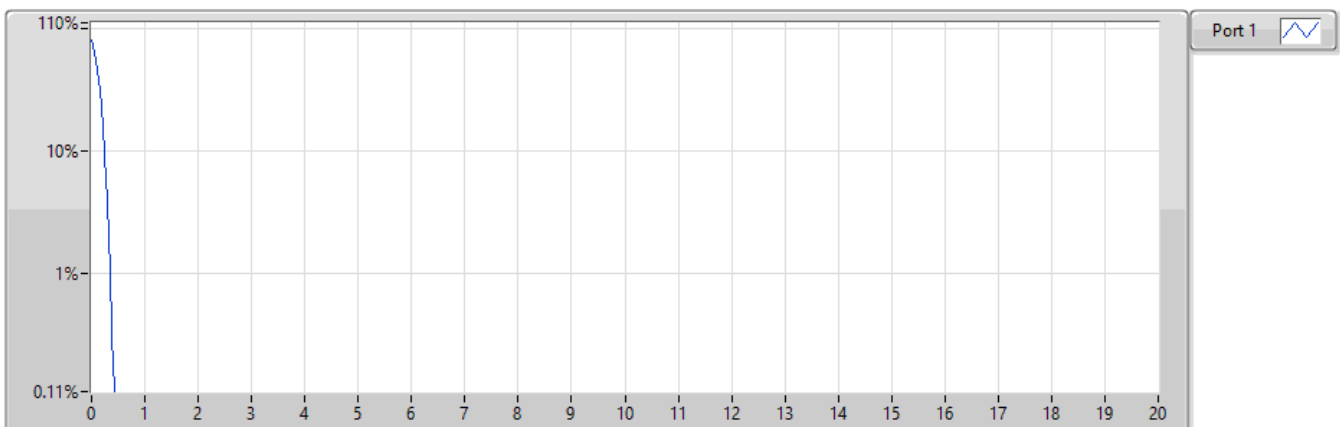


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
1732.5	20M	0.77	-12.23	13.00	1

Band 4_NB-IoT_3.75kHz_Nss1,QPSK_1TX

PAPR

1732.5MHz_QPSK_Tone 1@M

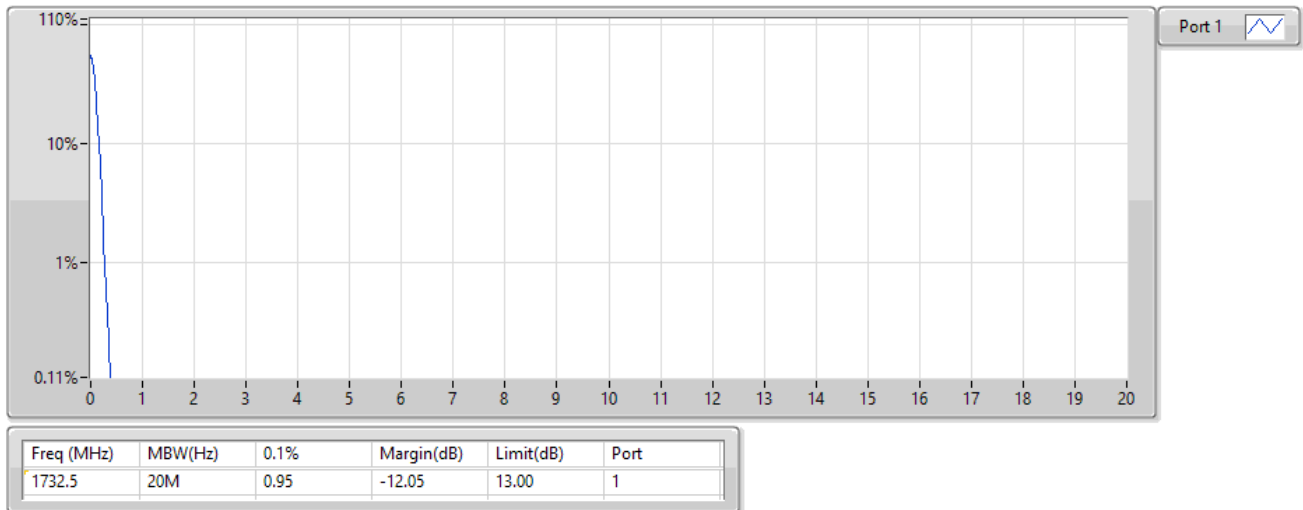


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
1732.5	20M	1.10	-11.90	13.00	1

Band 4_NB-IoT_15kHz_Nss1,BPSK_1TX

PAPR

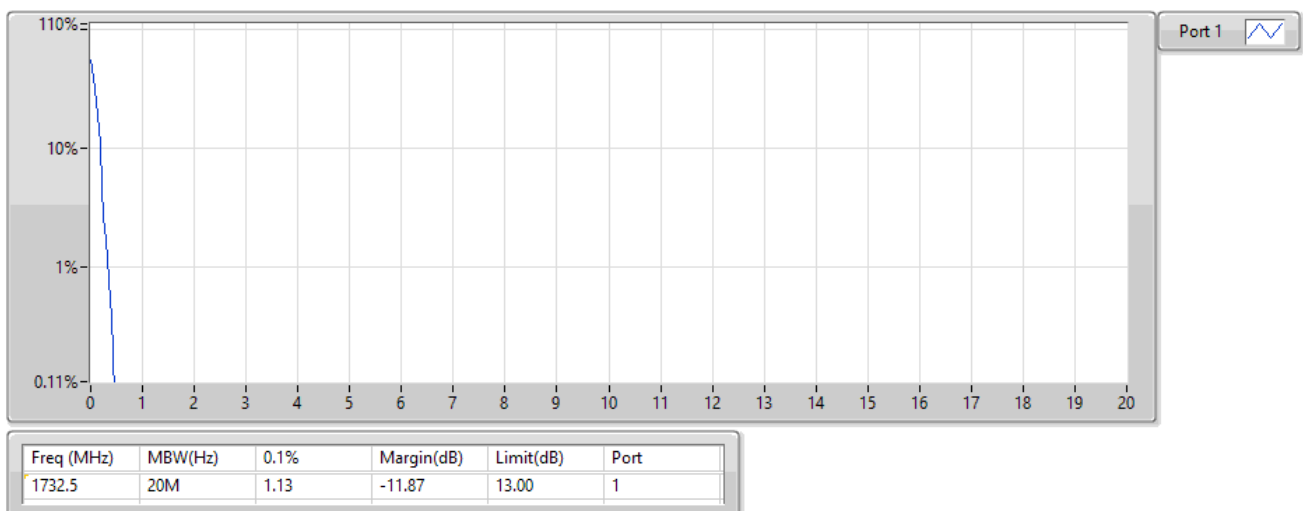
1732.5MHz_BPSK_Tone 1@M



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX

PAPR

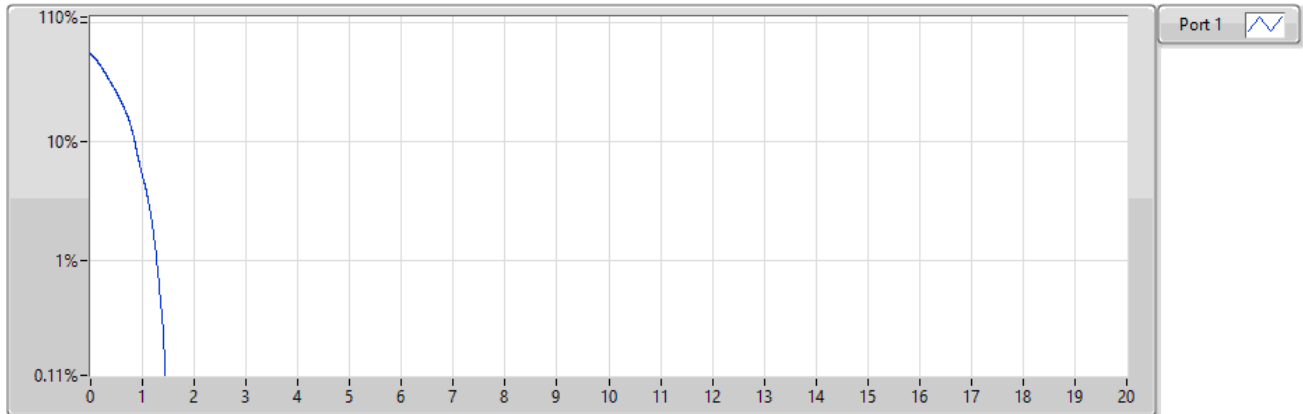
1732.5MHz_QPSK_Tone 1@M



Band 4_NB-IoT_15kHz_Nss1,QPSK_1TX

PAPR

1732.5MHz_QPSK_Tone 12@0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
1732.5	20M	3.60	-9.40	13.00	1



LTE Band 4, CB: 20MHz				
Temperature (°C)	1720MHz		1745MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1711.339016	0.010	1753.667017
T20°C V _{min}	0.010	1711.339017	0.010	1753.667018
T70°C V _{nom}	0.009	1711.339016	0.011	1753.667019
T60°C V _{nom}	0.010	1711.339017	0.010	1753.667017
T50°C V _{nom}	0.010	1711.339018	0.010	1753.667018
T40°C V _{nom}	0.009	1711.339016	0.009	1753.667016
T30°C V _{nom}	0.009	1711.339016	0.010	1753.667017
T20°C V _{nom}	0.010	1711.339017	0.010	1753.667018
T10°C V _{nom}	0.009	1711.339016	0.010	1753.667017
T0°C V _{nom}	0.010	1711.339017	0.010	1753.667018
T-10°C V _{nom}	0.009	1711.339016	0.009	1753.667016
T-20°C V _{nom}	0.009	1711.339016	0.010	1753.667017
T-30°C V _{nom}	0.010	1711.339018	0.010	1753.667017
Limit		>1710MHz		<1755MHz
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 4, CB: 15MHz				
Temperature (°C)	1717.5MHz		1747.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.010	1710.896017	0.009	1754.088016
T20°C V _{min}	0.009	1710.896016	0.010	1754.088017
T70°C V _{nom}	0.010	1710.896017	0.009	1754.088016
T60°C V _{nom}	0.009	1710.896016	0.010	1754.088018
T50°C V _{nom}	0.010	1710.896018	0.009	1754.088016
T40°C V _{nom}	0.010	1710.896017	0.010	1754.088017
T30°C V _{nom}	0.009	1710.896016	0.010	1754.088017
T20°C V _{nom}	0.009	1710.896015	0.009	1754.088016
T10°C V _{nom}	0.008	1710.896014	0.010	1754.088017
T0°C V _{nom}	0.009	1710.896016	0.010	1754.088018
T-10°C V _{nom}	0.010	1710.896018	0.010	1754.088018
T-20°C V _{nom}	0.010	1710.896017	0.010	1754.088017
T-30°C V _{nom}	0.009	1710.896016	0.009	1754.088016
Limit		>1710MHz		<1755MHz
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 4, CB: 10MHz				
Temperature (°C)	1715MHz		1750MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1710.663016	0.009	1754.338015
T20°C V _{min}	0.010	1710.663018	0.009	1754.338016
T70°C V _{nom}	0.010	1710.663017	0.010	1754.338017
T60°C V _{nom}	0.009	1710.663016	0.009	1754.338016
T50°C V _{nom}	0.009	1710.663016	0.009	1754.338015
T40°C V _{nom}	0.009	1710.663015	0.009	1754.338016
T30°C V _{nom}	0.010	1710.663017	0.008	1754.338014
T20°C V _{nom}	0.009	1710.663016	0.009	1754.338015
T10°C V _{nom}	0.010	1710.663018	0.009	1754.338016
T0°C V _{nom}	0.010	1710.663017	0.009	1754.338015
T-10°C V _{nom}	0.009	1710.663015	0.009	1754.338015
T-20°C V _{nom}	0.009	1710.663016	0.009	1754.338016
T-30°C V _{nom}	0.010	1710.663018	0.010	1754.338018
Limit		>1710MHz		<1755MHz
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 4, CB: 5MHz				
Temperature (°C)	1712.5MHz		1752.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.011	1710.241018	0.010	1754.757017
T20°C V _{min}	0.009	1710.241016	0.010	1754.757018
T70°C V _{nom}	0.010	1710.241017	0.009	1754.757016
T60°C V _{nom}	0.009	1710.241015	0.009	1754.757016
T50°C V _{nom}	0.009	1710.241016	0.010	1754.757017
T40°C V _{nom}	0.011	1710.241018	0.008	1754.757014
T30°C V _{nom}	0.010	1710.241017	0.010	1754.757018
T20°C V _{nom}	0.009	1710.241016	0.009	1754.757016
T10°C V _{nom}	0.011	1710.241018	0.009	1754.757015
T0°C V _{nom}	0.009	1710.241016	0.010	1754.757017
T-10°C V _{nom}	0.010	1710.241017	0.009	1754.757015
T-20°C V _{nom}	0.009	1710.241016	0.009	1754.757016
T-30°C V _{nom}	0.010	1710.241017	0.010	1754.757018
Limit		>1710MHz		<1755MHz
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 4_NB-IoT_3.75kHz				
Temperature (°C)	1710.2MHz		1754.8MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1710.170015	0.009	1754.833016
T20°C V _{min}	0.009	1710.170016	0.009	1754.833015
T70°C V _{nom}	0.009	1710.170015	0.009	1754.833016
T60°C V _{nom}	0.009	1710.170015	0.009	1754.833015
T50°C V _{nom}	0.009	1710.170015	0.009	1754.833016
T40°C V _{nom}	0.009	1710.170015	0.009	1754.833015
T30°C V _{nom}	0.009	1710.170015	0.009	1754.833016
T20°C V _{nom}	0.009	1710.170015	0.009	1754.833016
T10°C V _{nom}	0.009	1710.170016	0.009	1754.833016
T0°C V _{nom}	0.009	1710.170015	0.009	1754.833015
T-10°C V _{nom}	0.009	1710.170016	0.010	1754.833017
T-20°C V _{nom}	0.009	1710.170015	0.009	1754.833016
T-30°C V _{nom}	0.009	1710.170016	0.009	1754.833016
Limit		>1710MHz		<1755MHz
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 4_NB-IoT_15kHz				
Temperature (°C)	1710.2MHz		1754.8MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	0.009	1710.102016	0.009	1754.903015
T20°C V _{min}	0.009	1710.102015	0.009	1754.903016
T70°C V _{nom}	0.010	1710.102017	0.009	1754.903016
T60°C V _{nom}	0.009	1710.102015	0.008	1754.903014
T50°C V _{nom}	0.009	1710.102016	0.009	1754.903015
T40°C V _{nom}	0.009	1710.102016	0.009	1754.903016
T30°C V _{nom}	0.009	1710.102016	0.009	1754.903015
T20°C V _{nom}	0.010	1710.102017	0.009	1754.903016
T10°C V _{nom}	0.010	1710.102017	0.009	1754.903015
T0°C V _{nom}	0.009	1710.102016	0.009	1754.903016
T-10°C V _{nom}	0.010	1710.102017	0.009	1754.903016
T-20°C V _{nom}	0.009	1710.102016	0.009	1754.903015
T-30°C V _{nom}	0.009	1710.102016	0.010	1754.903017
Limit		>1710MHz		<1755MHz
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	