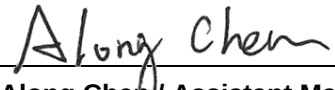


FCC Test Report

FCC ID : P27LORAAAREAV2
Equipment : MachineQ Area 8C V2 LoRaWAN Gateway
Model No. : GII-AD-B
Brand Name : Sercomm, Comcast, MachineQ
(For marketing purpose.)
Applicant : Sercomm Corporation
Address : 8F, No. 3-1, YuanQu St., NanKang, Taipei 115,
Taiwan, R.O.C.
Standard : 47 CFR FCC Part 27
Received Date : May 15, 2024
Tested Date : May 20 ~ May 28, 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:

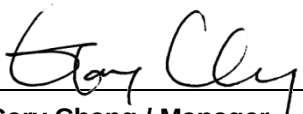

Gary Chang / Manager

Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Local Support Equipment List	7
1.3	Test Setup Chart	7
1.4	The Equipment List	9
1.5	Test Standards	10
1.6	Reference Guidance	10
1.7	Deviation from Test Standard and Measurement Procedure.....	10
1.8	Measurement Uncertainty	10
2	TEST CONFIGURATION.....	11
2.1	Testing Facility	11
2.2	The Worst Test Modes and Channel Details	12
3	TEST RESULTS	13
3.1	Equivalent Isotropically Radiated Power	13
3.2	Radiated Emissions.....	14
3.3	Out of Band Emissions& Band Edge	16
3.4	Occupied and 26 dB Bandwidth	17
3.5	Peak to Average Power Ratio	18
3.6	Frequency Stability.....	19
4	TEST LABORATORY INFORMATION	20
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
FG451502P27	Rev. 01	Initial issue	Jul. 19, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 27.50(d)(4)	Equivalent Isotropically Radiated Power	Power[dBm]: 26.28	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
Modulation	QPSK, 16QAM
UE Category	Cat. 1

1.1.2 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)	Remarks
Sercomm	6172000GWA/6 172000HWA	PIFA	UFL	3.1	-

1.1.3 Power Supply Type of Equipment under Test (EUT)

Supply Voltage	48Vdc from adapter 54Vdc from PoE				
Operational Climatic	☒ Thom (20°C)	☒ Tmax (50°C)	☒ Tmin (-30°C)		

Note: The above PoE power supply is not bundled in market.

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	Adapter	Brand: MASS POWER Model: S024-1E480050VU-H I/P: 100-240Vac, 50/60Hz, 0.6A O/P: 48.0Vdc, 0.5A Power Line: 2.95m non-shielded without core
2	RJ45 cable	3m non-shielded without core

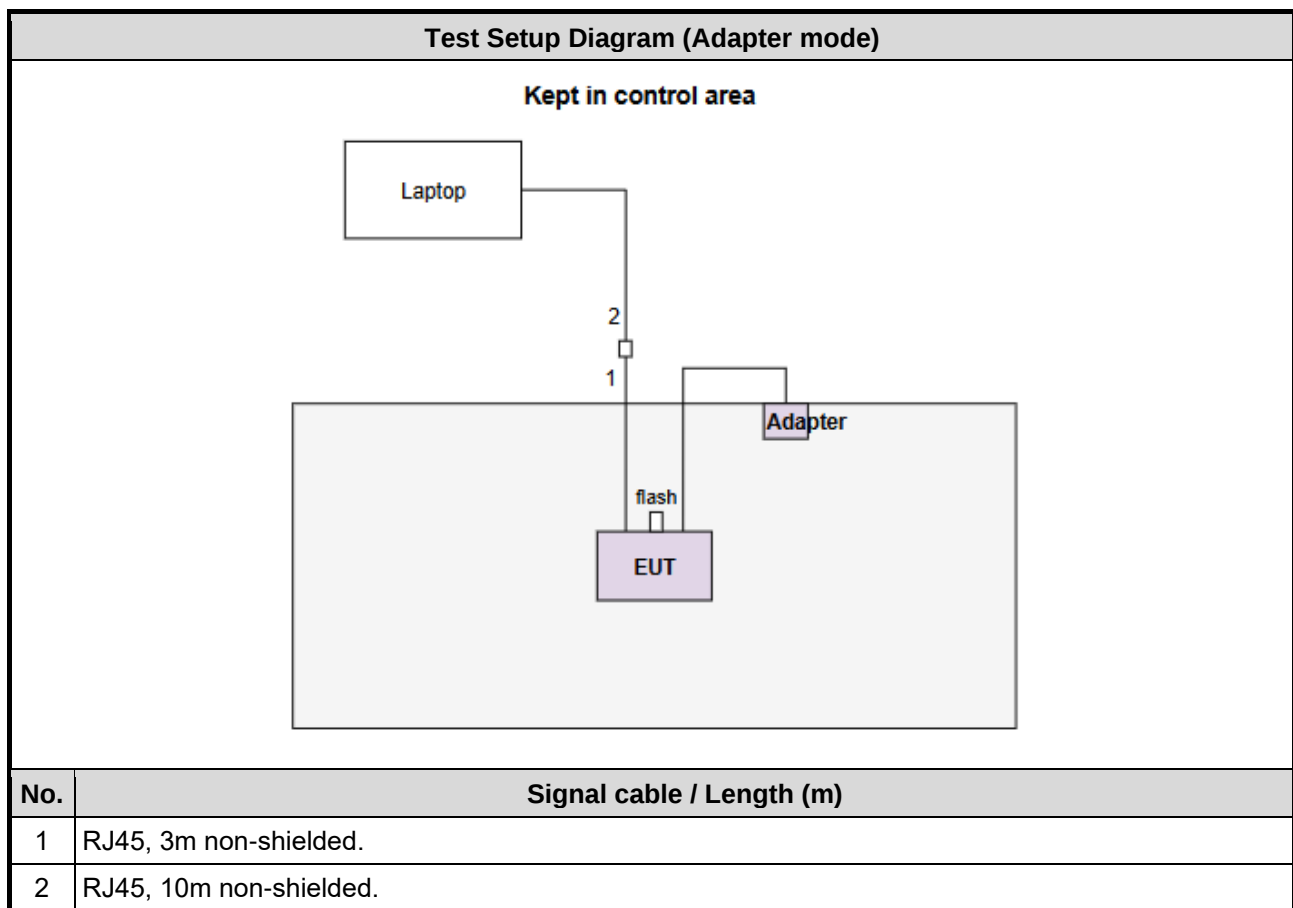
1.1.5 Maximum EIRP and Emission Designator

Channel Bandwidth	Modulation	Maximum EIRP (W)	Emission Designator
20 MHz	QPSK	0.419	17M8G7D
20 MHz	16QAM	0.344	4M90W7D
15 MHz	QPSK	0.422	13M4G7D
15 MHz	16QAM	0.344	4M87W7D
10 MHz	QPSK	0.425	8M92G7D
10 MHz	16QAM	0.359	4M86W7D
5 MHz	QPSK	0.409	4M47G7D
5 MHz	16QAM	0.318	4M45W7D
3 MHz	QPSK	0.403	2M69G7D
3 MHz	16QAM	0.353	2M69W7D
1.4 MHz	QPSK	0.420	1M08G7D
1.4 MHz	16QAM	0.336	1M09W7D

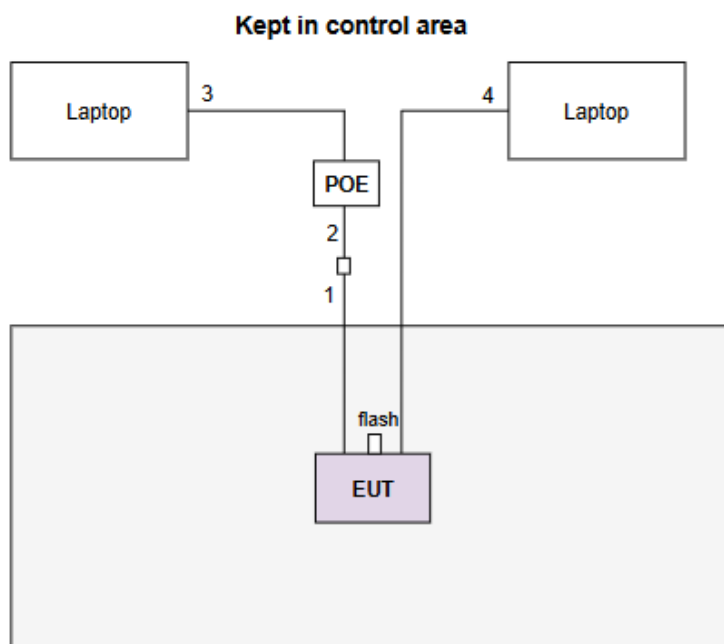
1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Laptop	DELL	Latitude 3440	DoC	---
2	Laptop	DELL	Latitude 5400	DoC	---
3	USB 3.1 Type-C OTG Flash	pqi	Connect 313	---	---
4	PoE	UBIQUITI	POE-54V-80W	---	Provided by applicant.

1.3 Test Setup Chart



Test Setup Diagram (PoE mode)



No.	Signal cable / Length (m)
1	RJ45, 3m non-shielded.
2	RJ45, 10m non-shielded.
3	RJ45, 1.3m non-shielded.
4	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	May 20 ~ May 28, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Wideband Radio Communication Tester	R&S	CMW500	106070	Mar. 26, 2024	Mar. 25, 2025
Receiver	R&S	ESR3	101657	Mar. 05, 2024	Mar. 04, 2025
Spectrum Analyzer	R&S	FSV40	101499	Apr. 02, 2024	Apr. 01, 2025
Loop Antenna	R&S	HFH2-Z2	100330	Oct. 31, 2023	Oct. 30, 2024
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jul. 04, 2023	Jul. 03, 2024
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 14, 2023	Dec. 13, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 30, 2023	Oct. 29, 2024
Preamplifier	EMC	EMC02325	980187	Jul. 10, 2023	Jul. 09, 2024
Preamplifier	EMC	EMC118A45SE	980897	Aug. 01, 2023	Jul. 31, 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-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 22, 2023	Sep. 21, 2024
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 22, 2023	Sep. 21, 2024
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 22, 2023	Sep. 21, 2024
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 22, 2023	Sep. 21, 2024
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 22, 2023	Sep. 21, 2024
LOWPASS FILTER	WI	WLKS1100-12SS	3	Sep. 27, 2023	Sep. 26, 2024
BANDREJECT FILTER	WI	WRCGV 698/716-688/726-50/ 10SS	SN3	Oct. 06, 2023	Oct. 05, 2024
BANDREJECT FILTER	WI	WRCGV 776/788-766/798-50/ 8SS	SN4	Oct. 06, 2023	Oct. 05, 2024
BANDREJECT FILTER	WI	WRCGV 824/849-810/863-60/ 8SS	SN5	Oct. 06, 2023	Oct. 05, 2024
LOWPASS FILTER	WI	WLKS1100-12SS	2	Oct. 05, 2023	Oct. 04, 2024
HIGHPASS FILTER 1.5-15G	WHK	WHK1.5/15G-10ST	21	Oct. 05, 2023	Oct. 04, 2024
HIGHPASS FILTER	WI	WHK3.1-18G-10SS	43	Sep. 27, 2023	Sep. 26, 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	May 21 ~ May 27, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241002	Nov. 21, 2023	Nov. 20, 2024
Power Sensor	Anritsu	MA2411B	1207366	Nov. 21, 2023	Nov. 20, 2024
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Jun. 21, 2023	Jun. 20, 2024
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 16, 2023	Dec. 15, 2024
Attenuator	woken	PE7013-20	20-2	Oct. 13, 2023	Oct. 12, 2024
Measurement Software	Sporton	SENSE-FCC_2G-4G	V6.1.6	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
Unwanted Emission ≤ 1 GHz	± 3.96 dB
Unwanted Emission > 1 GHz	± 4.51 dB
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corp.
Test Site	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.
Test Site	03CH03-WS
Address of Test Site	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 33381, Taiwan, R.O.C.

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

LTE Band 4			
Test item	Channel Bandwidth	Modulation	Test Frequency (MHz)
E.I.R.P.	20 MHz 15 MHz 10 MHz 5 MHz 3 MHz 1.4 MHz	QPSK / 16QAM	1720.0 / 1732.5 / 1745.0 1717.5 / 1732.5 / 1747.5 1715.0 / 1732.5 / 1750.0 1712.5 / 1732.5 / 1752.5 1711.5 / 1732.5 / 1753.5 1710.7 / 1732.5 / 1754.3
Radiated Emission	10 MHz	QPSK	1715.0 / 1732.5 / 1750.0
Out of Band Emissions	20 MHz 15 MHz 10 MHz 5 MHz 3 MHz 1.4 MHz	QPSK	1720.0 / 1732.5 / 1745.0 1717.5 / 1732.5 / 1747.5 1715.0 / 1732.5 / 1750.0 1712.5 / 1732.5 / 1752.5 1711.5 / 1732.5 / 1753.5 1710.7 / 1732.5 / 1754.3
Band Edge	20 MHz 15 MHz 10 MHz 5 MHz 3 MHz 1.4 MHz	QPSK / 16QAM	1720.0 / 1745.0 1717.5 / 1747.5 1715.0 / 1750.0 1712.5 / 1752.5 1711.5 / 1753.5 1710.7 / 1754.3
Occupied Bandwidth	20 MHz 15 MHz 10 MHz 5 MHz 3 MHz 1.4 MHz	QPSK / 16QAM	1732.5 1732.5 1732.5 1732.5 1732.5 1732.5
Peak to Average Ratio	20 MHz z	QPSK / 16QAM	1732.5
Frequency Stability	20 MHz 15 MHz 10 MHz 5 MHz 3 MHz 1.4 MHz	QPSK	1720.0 / 1745.0 1717.5 / 1747.5 1715.0 / 1750.0 1712.5 / 1752.5 1711.5 / 1753.5 1710.7 / 1754.3
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. - The EUT consumes power from adapter or PoE. Both options had been covered during the test and found that PoE was the worst case and was selected for final testing. - Max RB configuration for 16QAM in 10 MHz channel bandwidth is 27 RB.			

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.

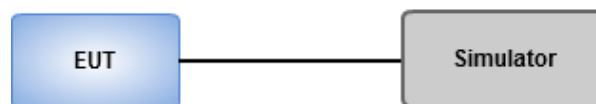
G_T = gain of the transmitting antenna, in dBi (EIRP).

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 / middel / high channel.
2. Measure the output power of low / middle / high channel of the EUT

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	22-24°C / 62-65%	Tested By	Roger Lu
-------------------	------------------	-----------	----------

Refer to Appendix A.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

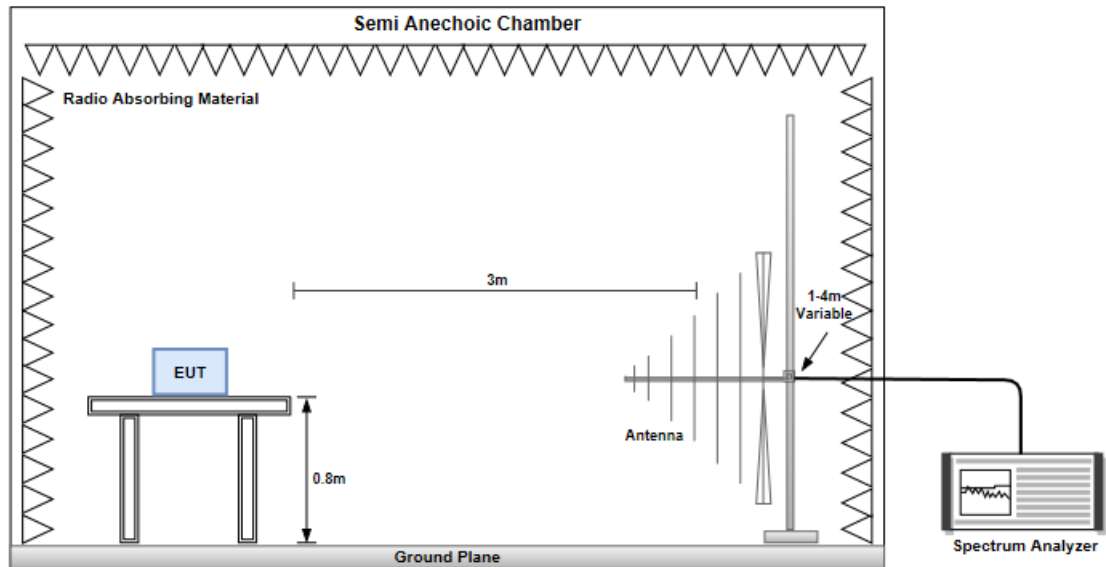
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13 dBm.

3.2.2 Test Procedures

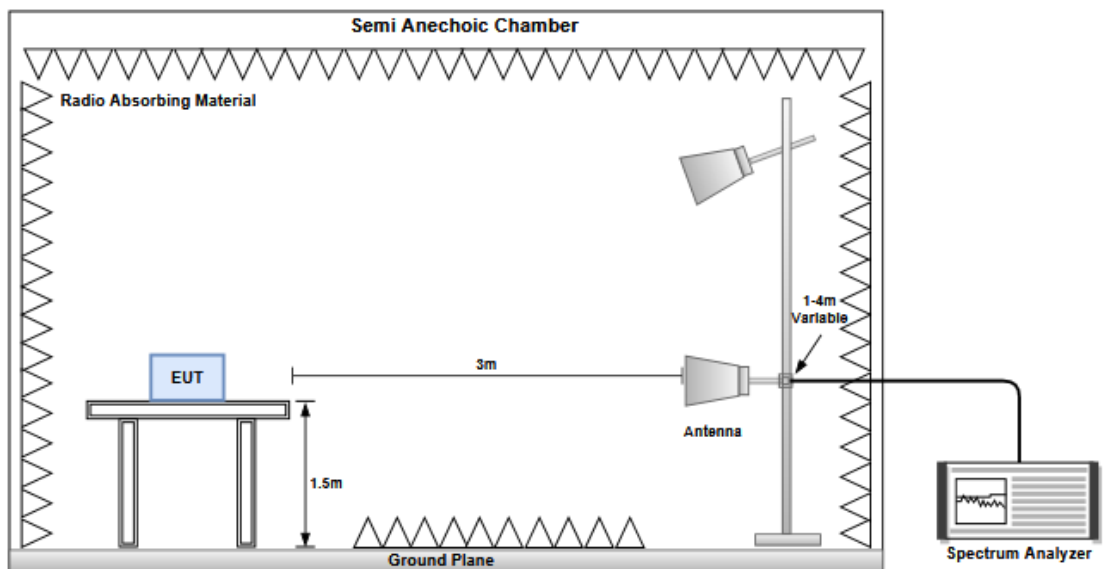
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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	22~24°C / 63~65%	Tested By	Brad Wu
-------------------	------------------	-----------	---------

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

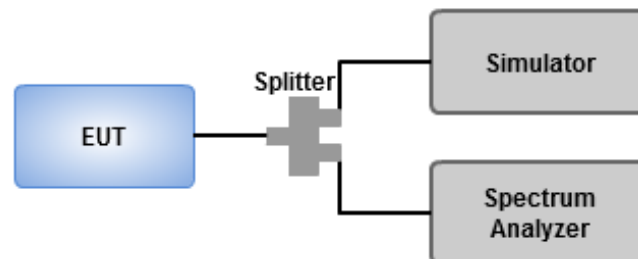
Out of band emission

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	22-24°C / 62-65%	Tested By	Roger Lu
-------------------	------------------	-----------	----------

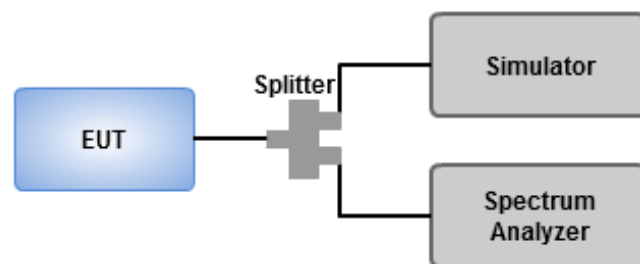
Refer to Appendix C.

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	22-24°C / 62-65%	Tested By	Roger Lu
-------------------	------------------	-----------	----------

Refer to Appendix D.

3.5 Peak to Average Power Ratio

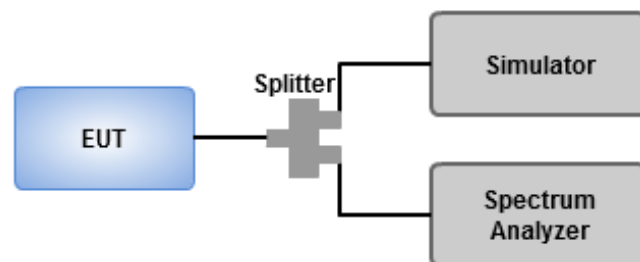
3.5.1 Limit of Peak to Average Power Ratio

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	22-24°C / 62-65%	Tested By	Roger Lu
-------------------	------------------	-----------	----------

Refer to Appendix E.

3.6 Frequency Stability

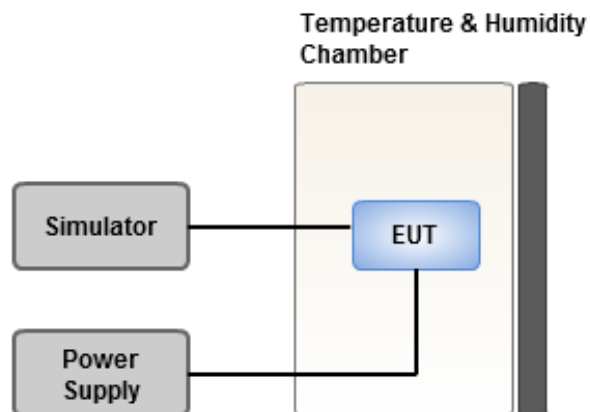
3.6.1 Limit of Frequency Stability

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	22-24°C / 62-65%	Tested By	Roger Lu
-------------------	------------------	-----------	----------

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 27L LTE Band 4 Maximum Average Power [dBm](GT-LC= 3.1 dB)								
BW (MHz)	Modulation	RB size	RB Offset	Lowest	Middle	Highest	-	
Channel				20050	20175	20300	EIRP (dBm)	EIRP (W)
Frequency				1720	1732.5	1745		
20	QPSK	1	0	23.06	22.78	23.12	26.22	0.4188
20	QPSK	1	99	22.91	22.48	22.96		
20	QPSK	100	0	22.02	22.05	22.12		
20	16QAM	1	0	21.66	22.27	22.24	25.37	0.3443
20	16QAM	27	0	21.25	21.17	20.97		
Channel				20025	20175	20325	EIRP (dBm)	EIRP (W)
Frequency				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.15	22.82	23.13	26.25	0.4217
15	QPSK	1	74	22.95	22.67	23.05		
15	QPSK	75	0	22.15	22.1	22.05		
15	16QAM	1	0	22.15	21.88	22.26	25.36	0.3436
15	16QAM	27	0	21.09	20.98	20.96		
Channel				20000	20175	20350	EIRP (dBm)	EIRP (W)
Frequency				1715	1732.5	1750		
10	QPSK	1	0	22.82	23.18	23.05	26.28	0.4246
10	QPSK	1	49	22.78	22.61	22.98		
10	QPSK	50	0	22.15	22.05	22.13		
10	16QAM	1	0	22.45	21.75	21.54	25.55	0.3589
10	16QAM	27	0	20.95	20.89	21.06		
Channel				19975	20175	20375	EIRP (dBm)	EIRP (W)
Frequency				1712.5	1732.5	1752.5		
5	QPSK	1	0	22.85	22.83	23.02	26.12	0.4093
5	QPSK	1	24	22.76	22.61	22.88		
5	QPSK	25	0	22.08	22.06	22.11		
5	16QAM	1	0	21.92	21.71	21.59	25.02	0.3177
Limit	EIRP < 2 W			Result			Pass	



Part 27L LTE Band 4 Maximum Average Power [dBm](GT-LC= 3.1 dB)								
BW (MHz)	Modulation	RB size	RB Offset	Lowest	Middle	Highest	-	
Channel				19965	20175	20385	EIRP (dBm)	EIRP (W)
Frequency				1711.5	1732.5	1753.5		
3	QPSK	1	0	22.95	22.84	22.88	26.05	0.4027
3	QPSK	1	14	22.89	22.7	22.78		
3	QPSK	15	0	22.16	22.06	22.02		
3	16QAM	1	0	22.15	22.38	22.08	25.48	0.3532
Channel				19957	20175	20393	EIRP (dBm)	EIRP (W)
Frequency				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	22.98	22.82	23.13	26.23	0.4198
1.4	QPSK	1	5	22.76	22.79	22.78		
1.4	QPSK	6	0	22.04	22.06	22.16		
1.4	16QAM	1	0	22.16	22.02	21.58	25.26	0.3357
Limit	EIRP < 2 W			Result			Pass	

Mode	LTE Band 4, QPSK, CB: 10 MHz, Channel: 20000						
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)
3430.00	H	-35.98	-13.00	-22.98	-44.08	-42.07	6.09
5145.00	H	-41.49	-13.00	-28.49	-53.05	-47.34	5.85
6860.00	H	-52.02	-13.00	-39.02	-67.23	-56.53	4.51
3430.00	V	-30.99	-13.00	-17.99	-39.95	-37.08	6.09
5145.00	V	-42.48	-13.00	-29.48	-54.45	-48.33	5.85
6860.00	V	-50.98	-13.00	-37.98	-66.73	-55.49	4.51

Mode	LTE Band 4, QPSK, CB: 10 MHz, Channel: 20175						
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	-36.82	-13.00	-23.82	-45.07	-42.85	6.03
5197.50	H	-42.34	-13.00	-29.34	-53.81	-48.20	5.86
6930.00	H	-52.54	-13.00	-39.54	-67.88	-56.81	4.27
3465.00	V	-33.65	-13.00	-20.65	-42.72	-39.68	6.03
5197.50	V	-42.89	-13.00	-29.89	-54.85	-48.75	5.86
6930.00	V	-51.28	-13.00	-38.28	-67.24	-55.55	4.27

Mode	LTE Band 4, QPSK, CB: 10 MHz, Channel: 20350						
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)
3500.00	H	-38.12	-13.00	-25.12	-46.52	-44.09	5.97
5250.00	H	-42.84	-13.00	-29.84	-54.36	-48.82	5.98
7000.00	H	-52.68	-13.00	-39.68	-68.14	-56.72	4.04
3500.00	V	-33.44	-13.00	-20.44	-42.63	-39.41	5.97
5250.00	V	-43.15	-13.00	-30.15	-55.15	-49.13	5.98
7000.00	V	-52.69	-13.00	-39.69	-68.87	-56.73	4.04

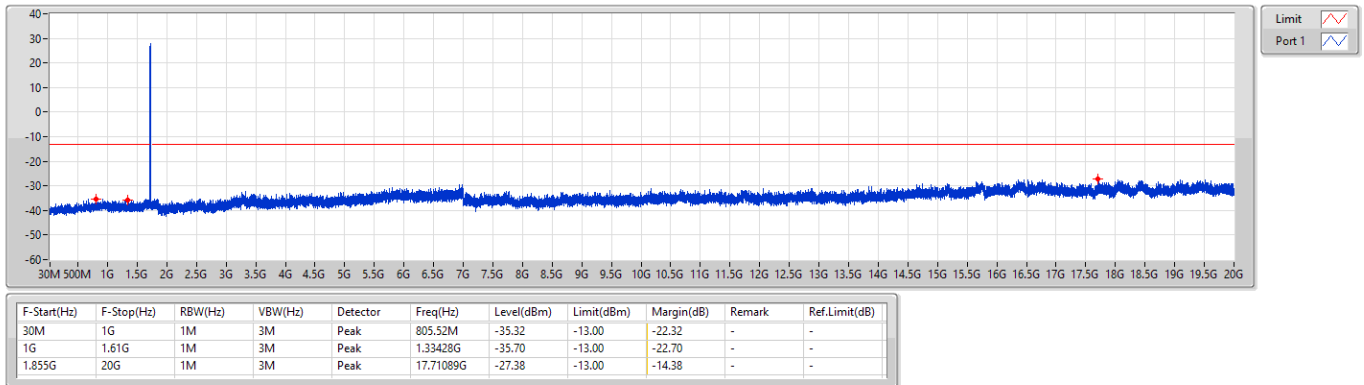
NOTE:

1. EIRP = S.G power value + correction factor
2. Spurious Emissions within 30-1000MHz were found more than 20dB below limit line.

Band 4_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

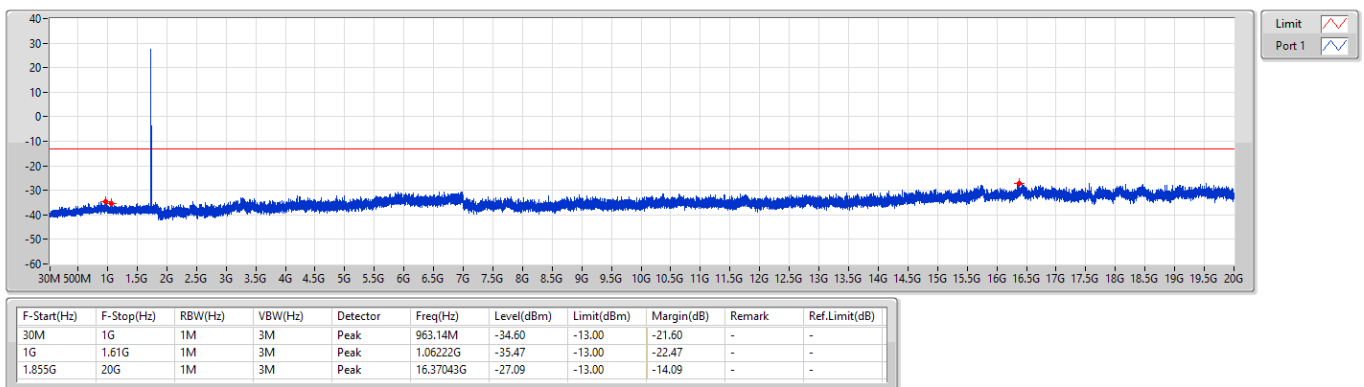
1720MHz_QPSK_RB 1



Band 4_LTE_20MHz_Nss1,QPSK_1TX

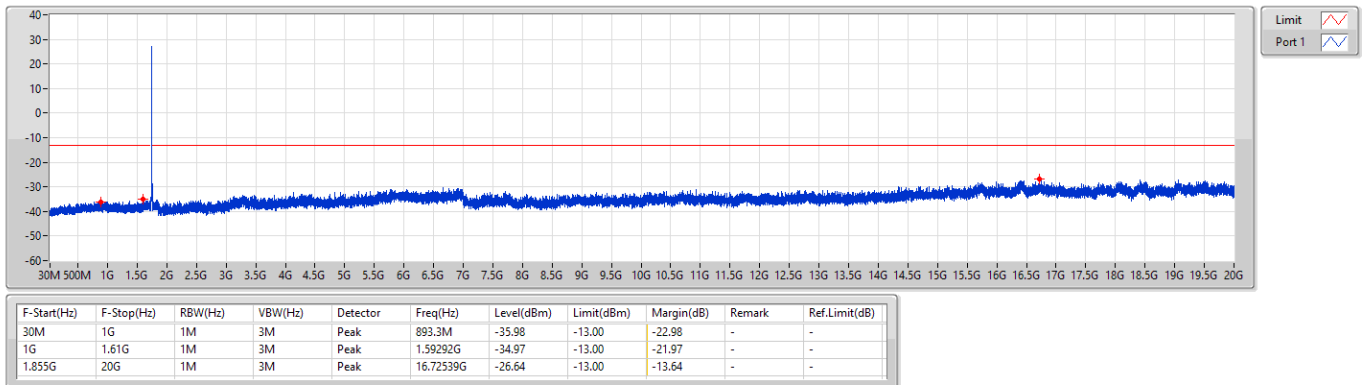
CSE-TX-Sum

1732.5MHz_QPSK_RB 1



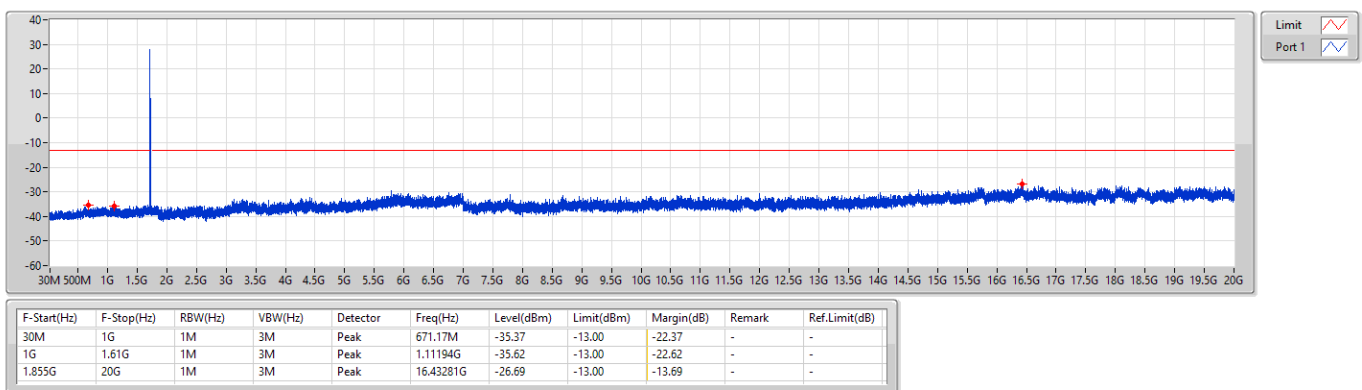
Band 4_LTE_20MHz_Nss1,QPSK_1TX 1745MHz_QPSK_RB 1

CSE-TX-Sum



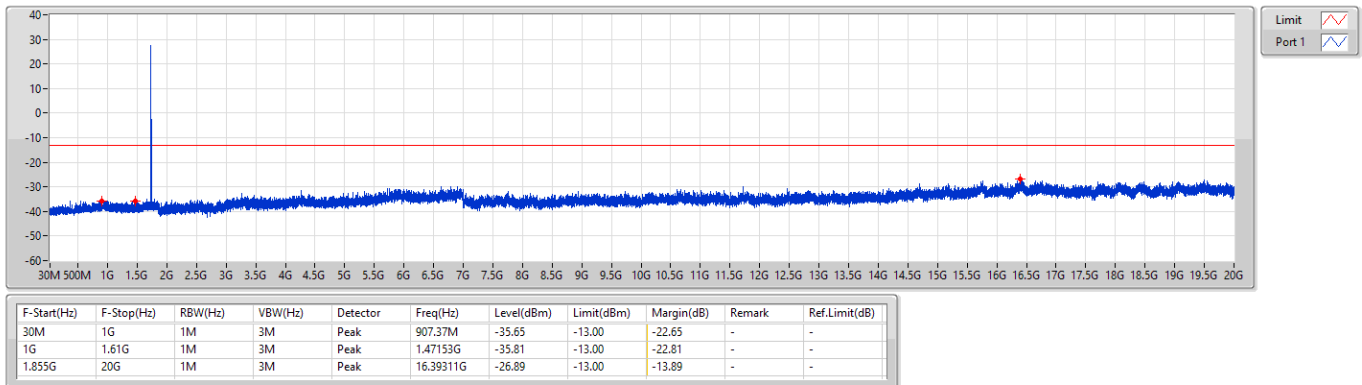
Band 4_LTE_15MHz_Nss1,QPSK_1TX 1717.5MHz_QPSK_RB 1

CSE-TX-Sum



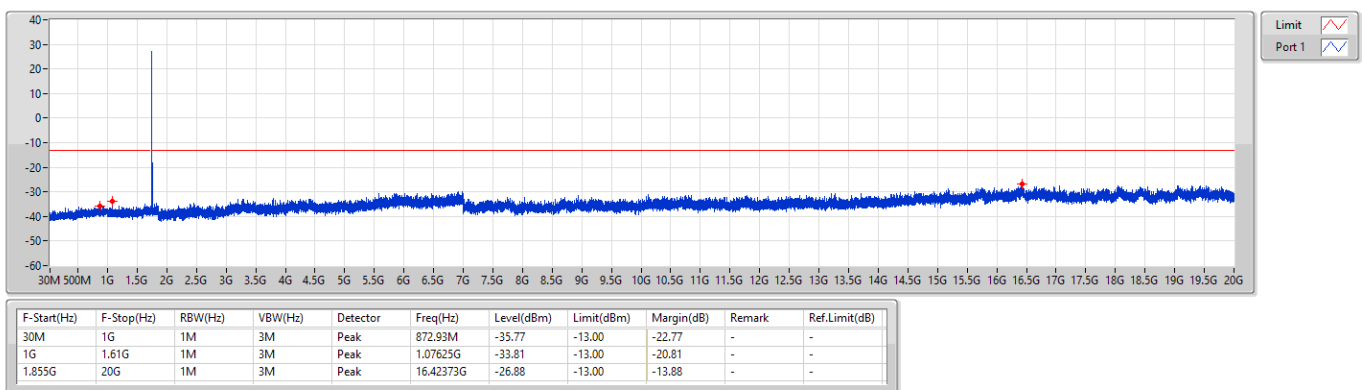
Band 4_LTE_15MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 1

CSE-TX-Sum



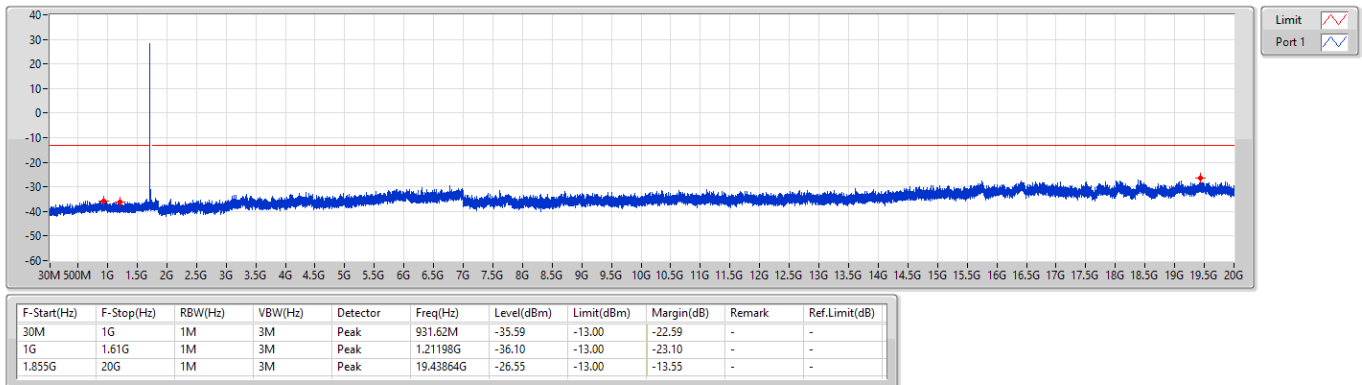
Band 4_LTE_15MHz_Nss1,QPSK_1TX
1747.5MHz_QPSK_RB 1

CSE-TX-Sum



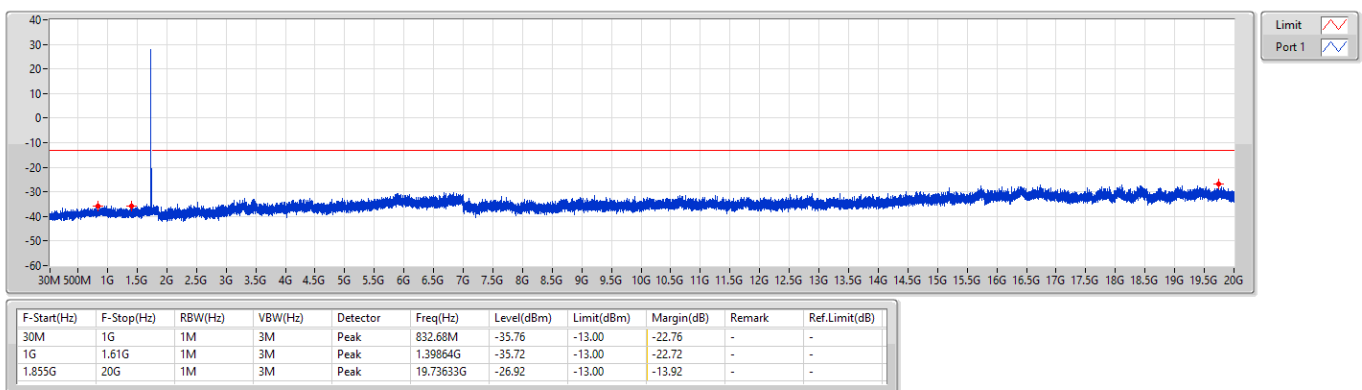
Band 4_LTE_10MHz_Nss1,QPSK_1TX
1715MHz_QPSK_RB 1

CSE-TX-Sum



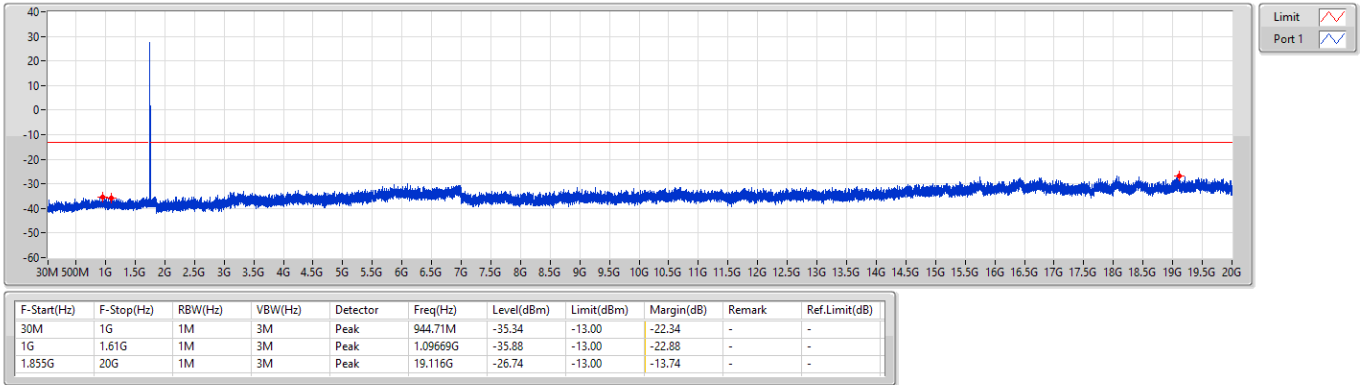
Band 4_LTE_10MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 1

CSE-TX-Sum



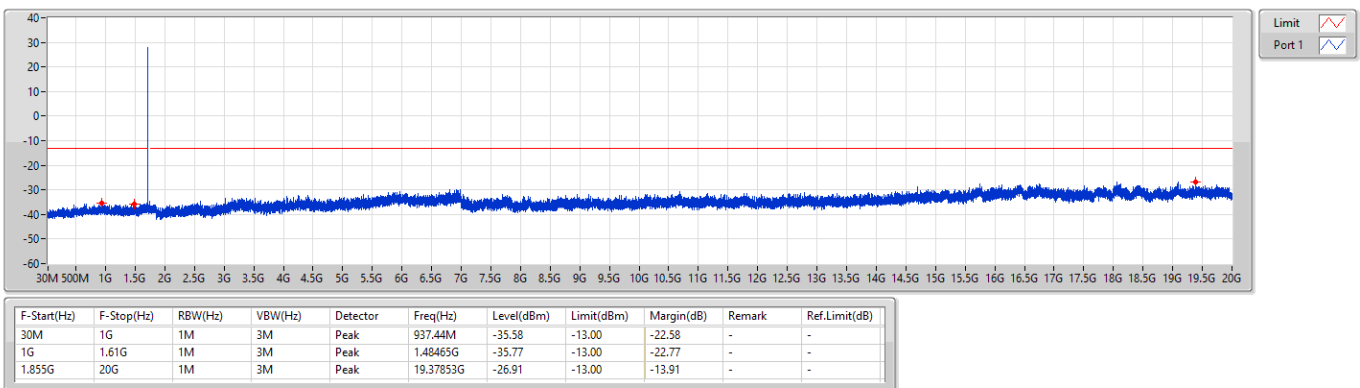
Band 4_LTE_10MHz_Nss1,QPSK_1TX 1750MHz_QPSK_RB 1

CSE-TX-Sum



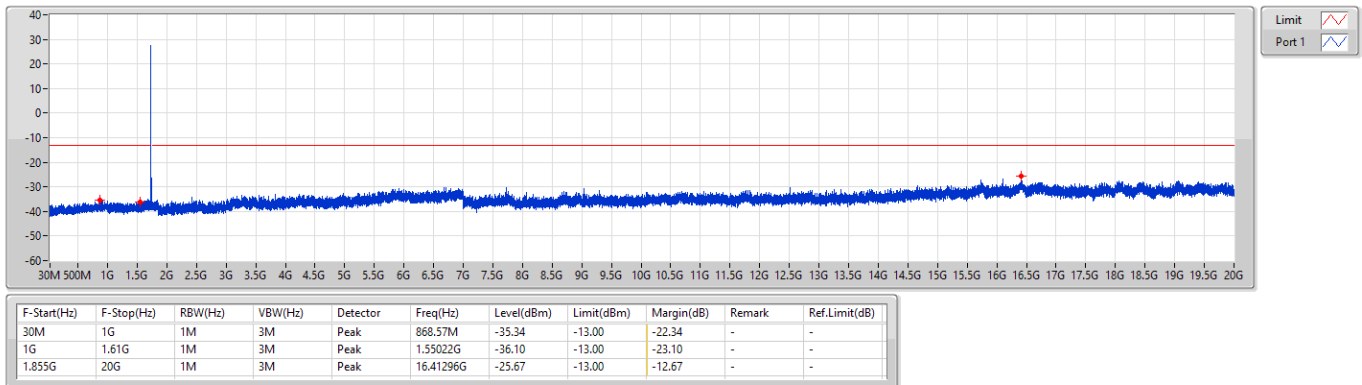
Band 4_LTE_5MHz_Nss1,QPSK_1TX 1712.5MHz_QPSK_RB 1

CSE-TX-Sum



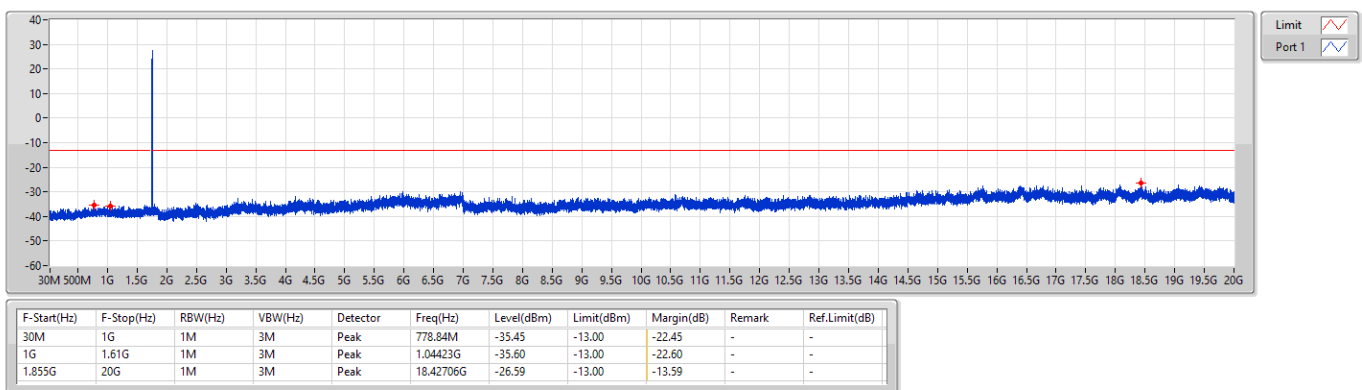
Band 4_LTE_5MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 1

CSE-TX-Sum



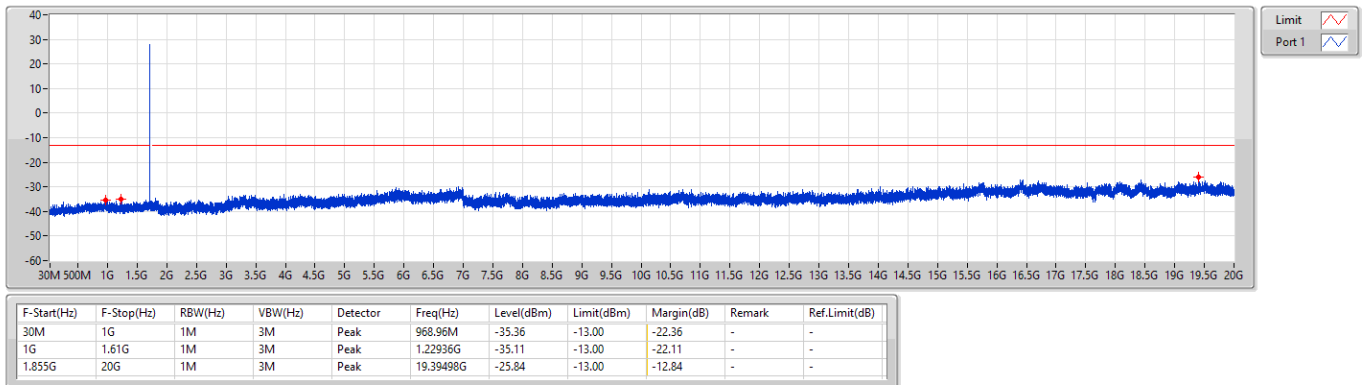
Band 4_LTE_5MHz_Nss1,QPSK_1TX
1752.5MHz_QPSK_RB 1

CSE-TX-Sum



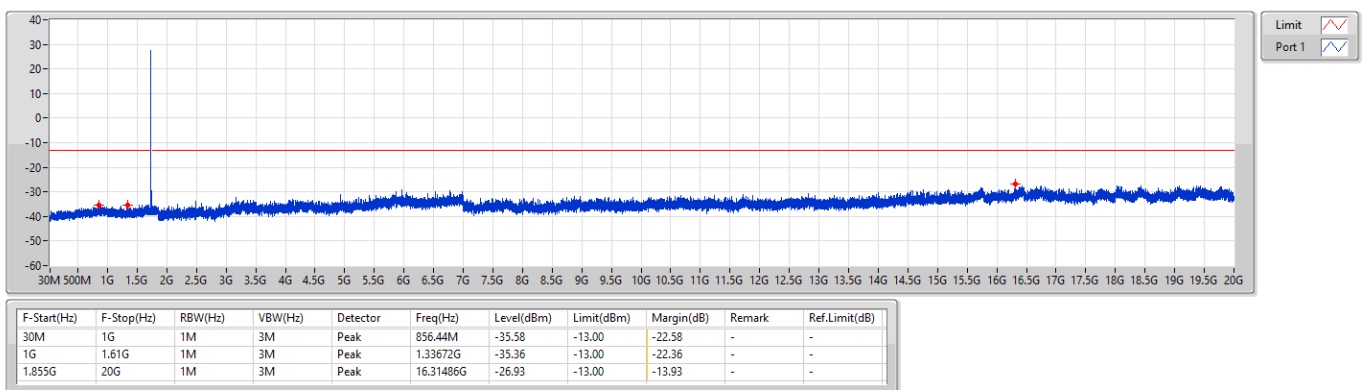
Band 4_LTE_3MHz_Nss1,QPSK_1TX
1711.5MHz_QPSK_RB 1

CSE-TX-Sum



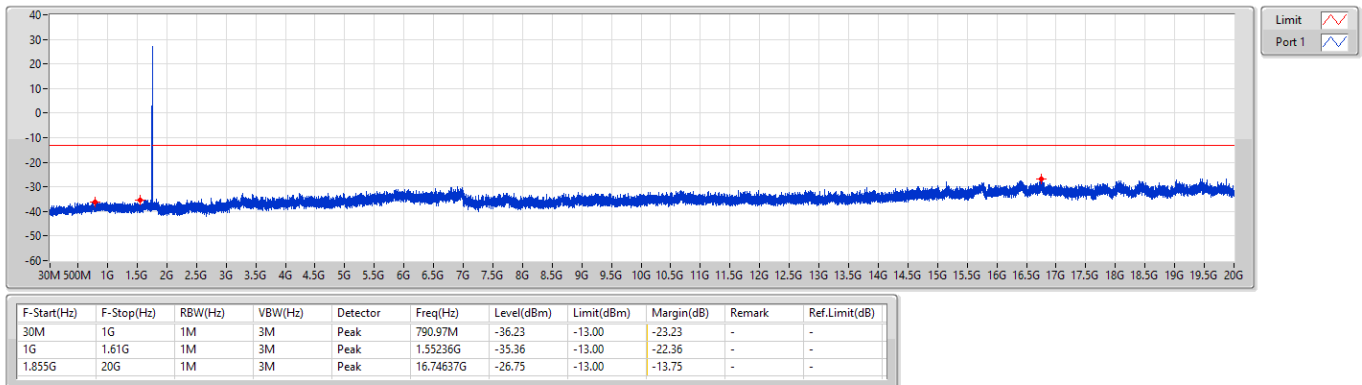
Band 4_LTE_3MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 1

CSE-TX-Sum



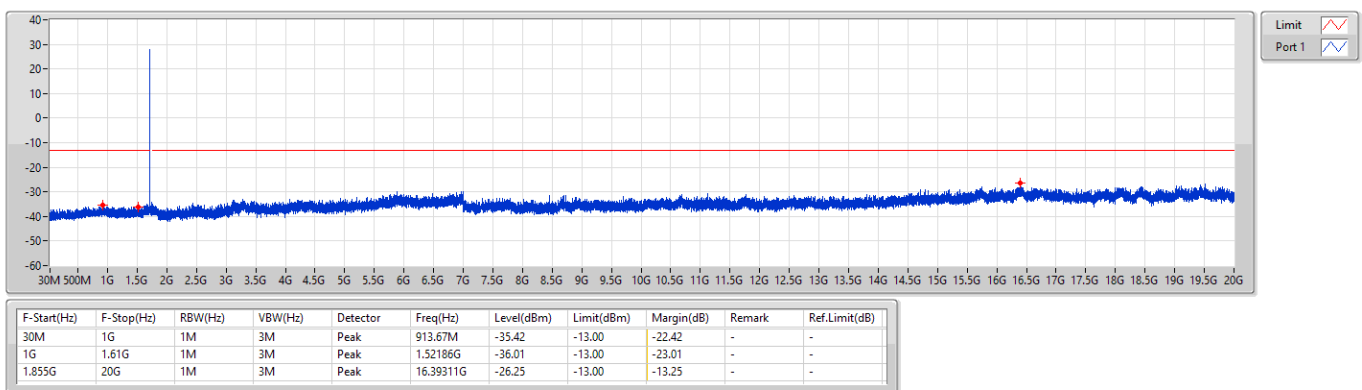
Band 4_LTE_3MHz_Nss1,QPSK_1TX 1753.5MHz_QPSK_RB 1

CSE-TX-Sum



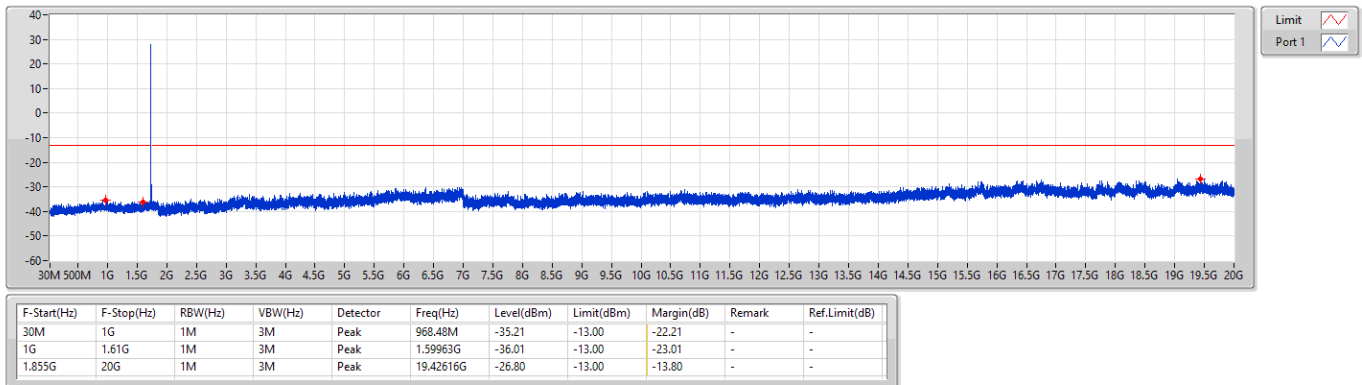
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX 1710.7MHz_QPSK_RB 1

CSE-TX-Sum



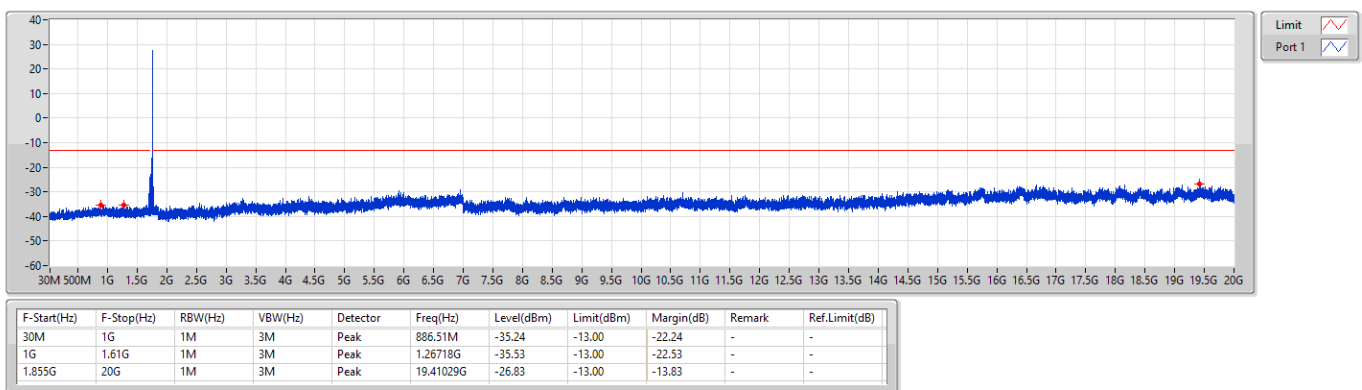
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX 1732.5MHz_QPSK_RB 1

CSE-TX-Sum



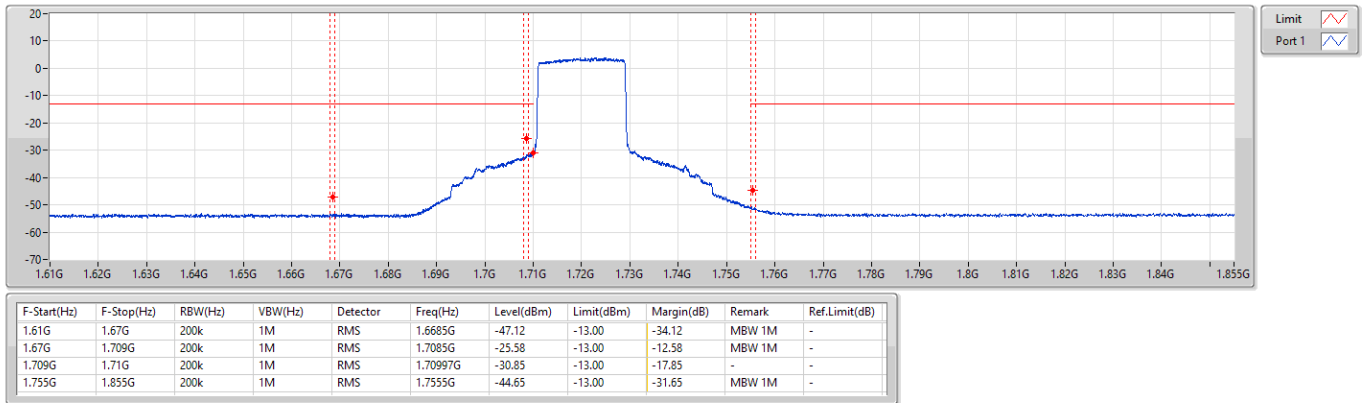
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX 1754.3MHz_QPSK_RB 1

CSE-TX-Sum



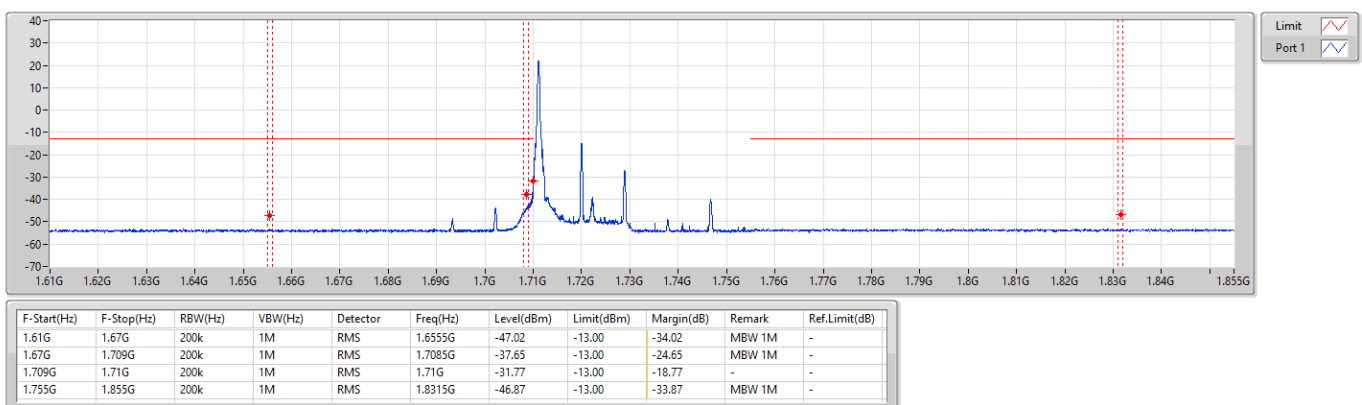
Band 4_LTE_20MHz_Nss1,QPSK_1TX 1720MHz_QPSK_RB 100

CSE-TX-Sum



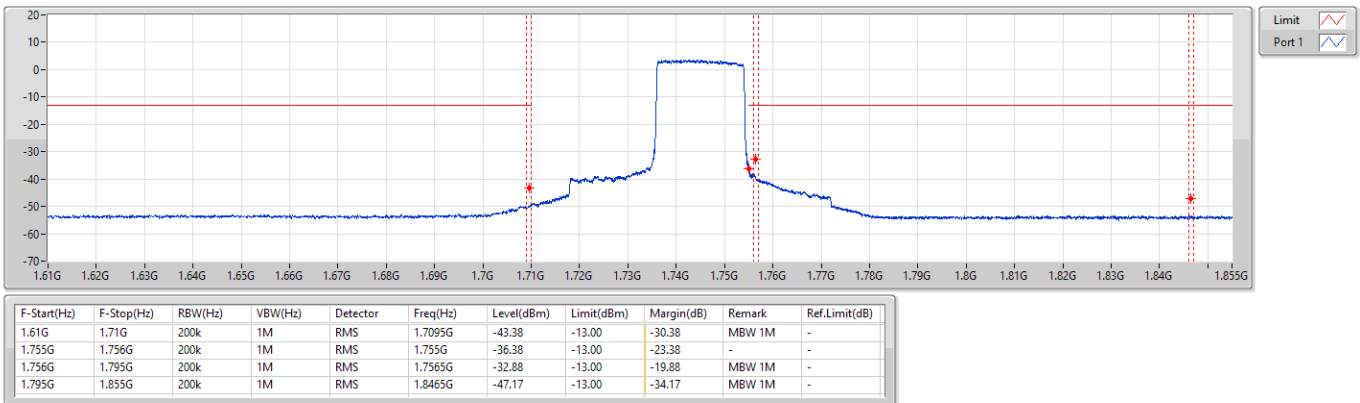
Band 4_LTE_20MHz_Nss1,QPSK_1TX 1720MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



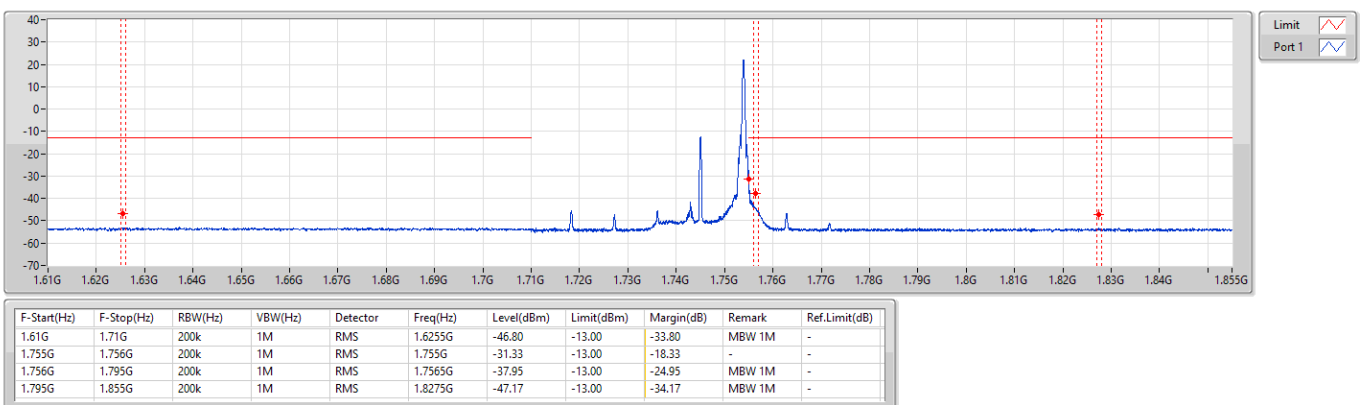
Band 4_LTE_20MHz_Nss1,QPSK_1TX 1745MHz_QPSK_RB 100

CSE-TX-Sum



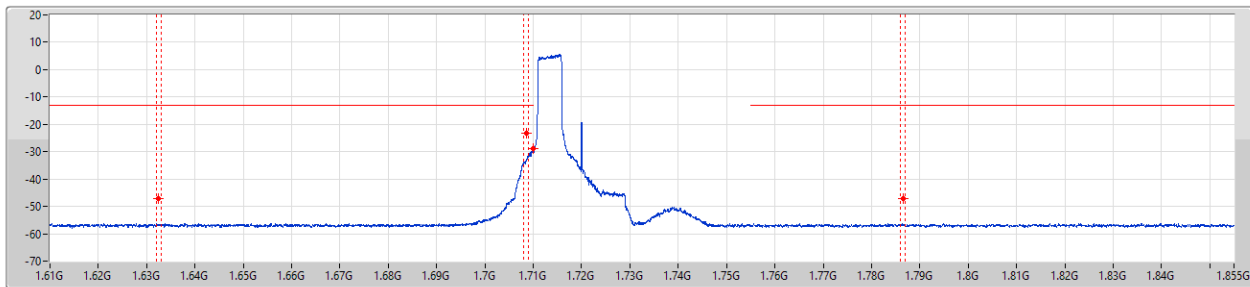
Band 4_LTE_20MHz_Nss1,QPSK_1TX 1745MHz_QPSK_RB 1,#RB R

CSE-TX-Sum



Band 4_LTE_20MHz_Nss1,16QAM_1TX 1720MHz_16QAM_RB 27,#RB L

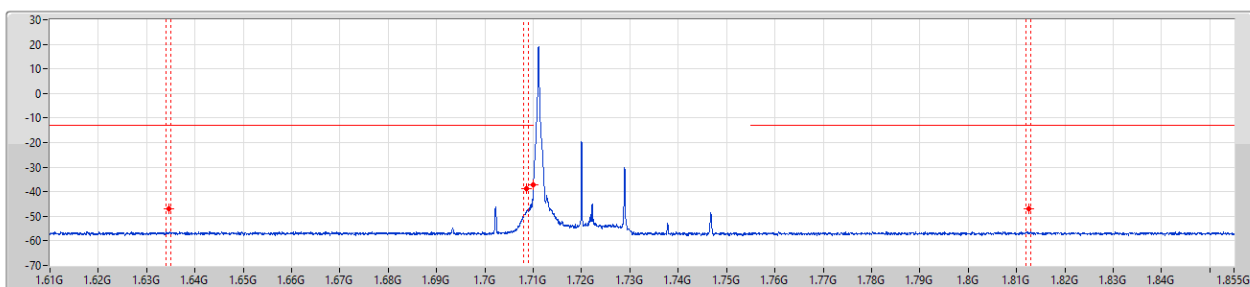
CSE-TX-Sum



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	1.67G	100k	300k	RMS	1.6325G	-47.04	-13.00	-34.04	MBW 1M	-
1.67G	1.709G	100k	300k	RMS	1.7085G	-23.34	-13.00	-10.34	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.70998G	-28.95	-13.00	-15.95	-	-
1.755G	1.855G	100k	300k	RMS	1.7865G	-47.03	-13.00	-34.03	MBW 1M	-

Band 4_LTE_20MHz_Nss1,16QAM_1TX 1720MHz_16QAM_RB 1,#RB L

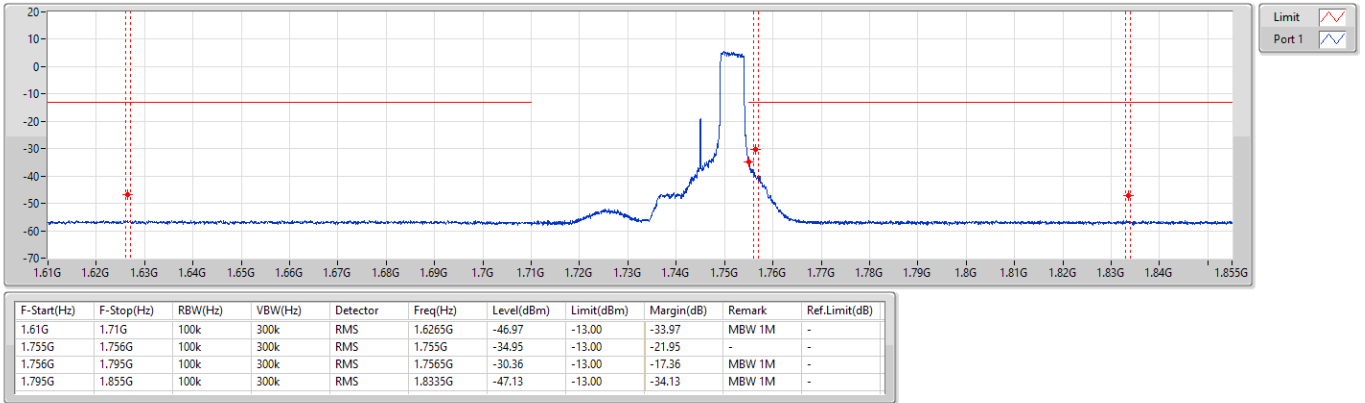
CSE-TX-Sum



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	1.67G	100k	300k	RMS	1.6345G	-47.09	-13.00	-34.09	MBW 1M	-
1.67G	1.709G	100k	300k	RMS	1.7085G	-38.64	-13.00	-25.64	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.71G	-37.21	-13.00	-24.21	-	-
1.755G	1.855G	100k	300k	RMS	1.8125G	-47.03	-13.00	-34.03	MBW 1M	-

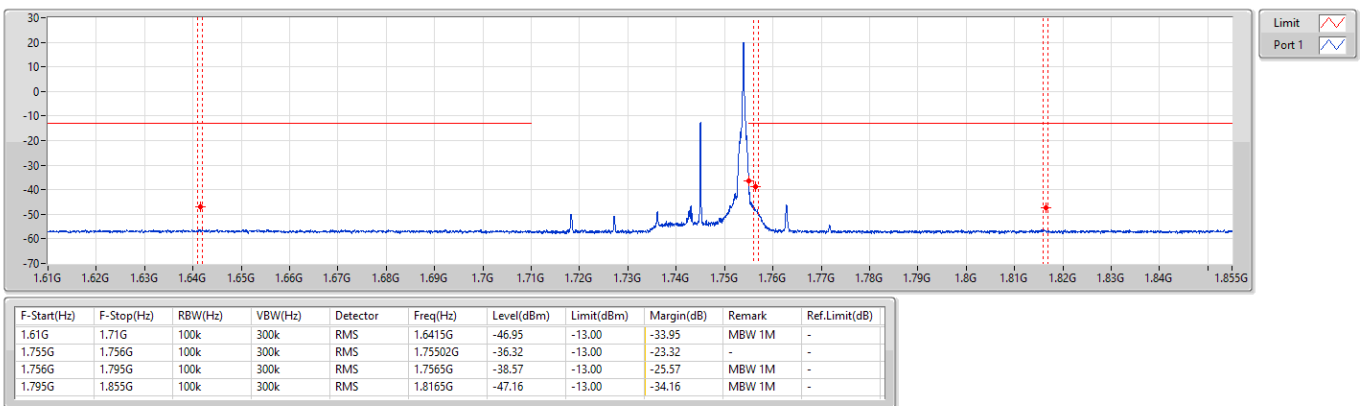
Band 4_LTE_20MHz_Nss1,16QAM_1TX 1745MHz_16QAM_RB 27,#RB R

CSE-TX-Sum



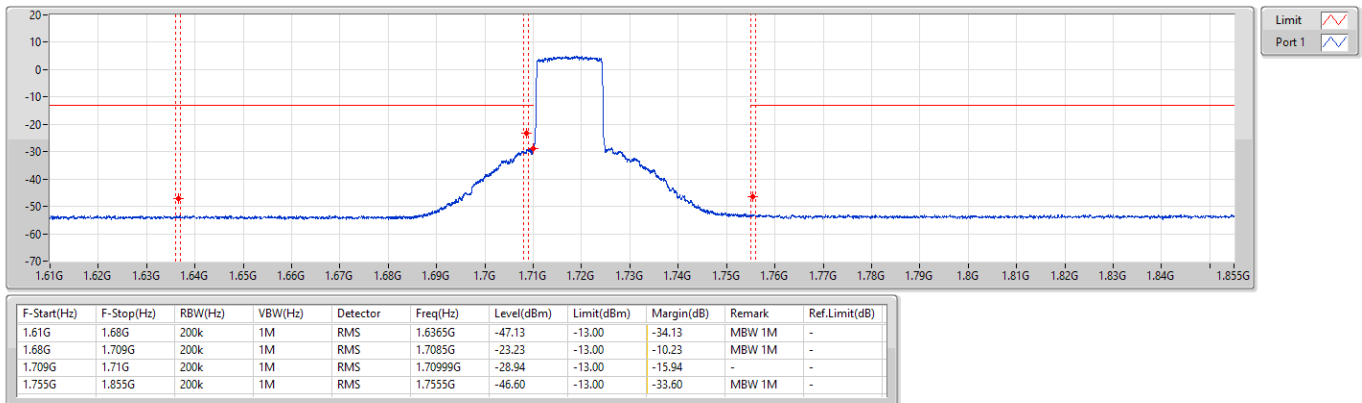
Band 4_LTE_20MHz_Nss1,16QAM_1TX 1745MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



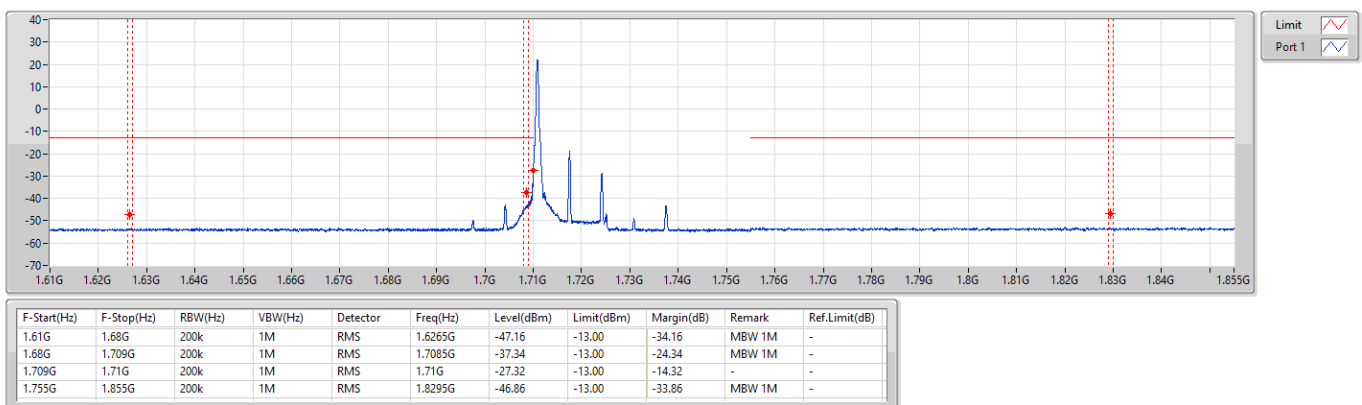
Band 4_LTE_15MHz_Nss1,QPSK_1TX 1717.5MHz_QPSK_RB 75

CSE-TX-Sum



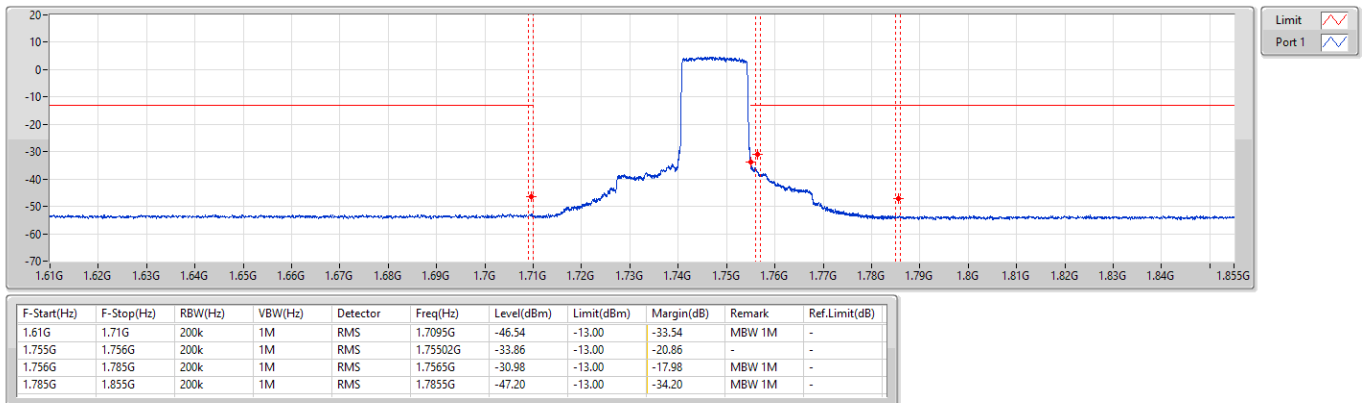
Band 4_LTE_15MHz_Nss1,QPSK_1TX 1717.5MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



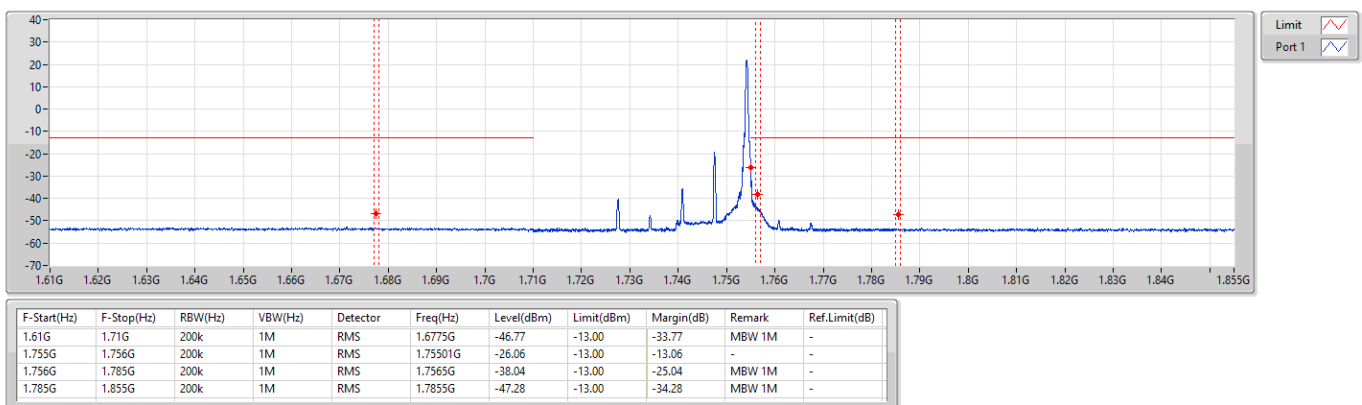
Band 4_LTE_15MHz_Nss1,QPSK_1TX 1747.5MHz_QPSK_RB 75

CSE-TX-Sum



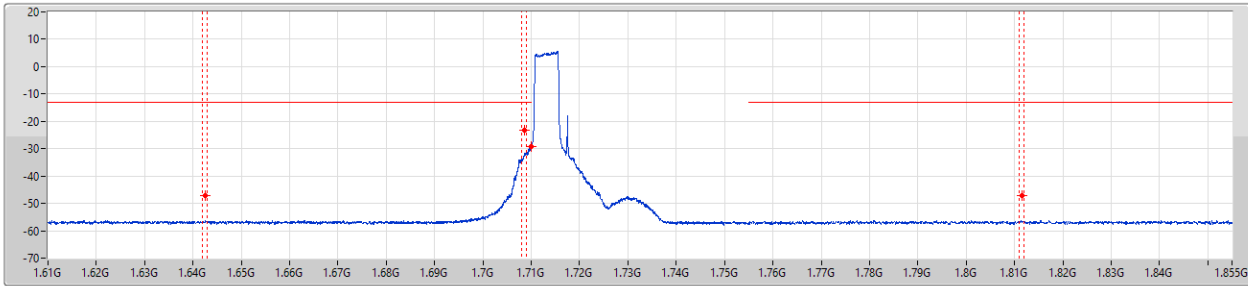
Band 4_LTE_15MHz_Nss1,QPSK_1TX 1747.5MHz_QPSK_RB 1,#RB R

CSE-TX-Sum



Band 4_LTE_15MHz_Nss1,16QAM_1TX
1717.5MHz_16QAM_RB 27,#RB L

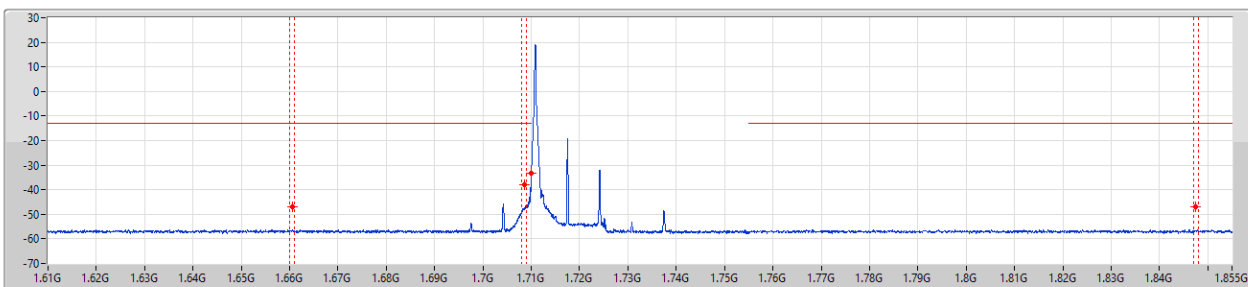
CSE-TX-Sum



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	100k	300k	RMS	1.6425G	-47.04	-13.00	-34.04	MBW 1M	-
1.68G	1.709G	100k	300k	RMS	1.7085G	-23.09	-13.00	-10.09	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.70999G	-29.32	-13.00	-16.32	-	-
1.755G	1.855G	100k	300k	RMS	1.8115G	-47.07	-13.00	-34.07	MBW 1M	-

Band 4_LTE_15MHz_Nss1,16QAM_1TX
1717.5MHz_16QAM_RB 1,#RB L

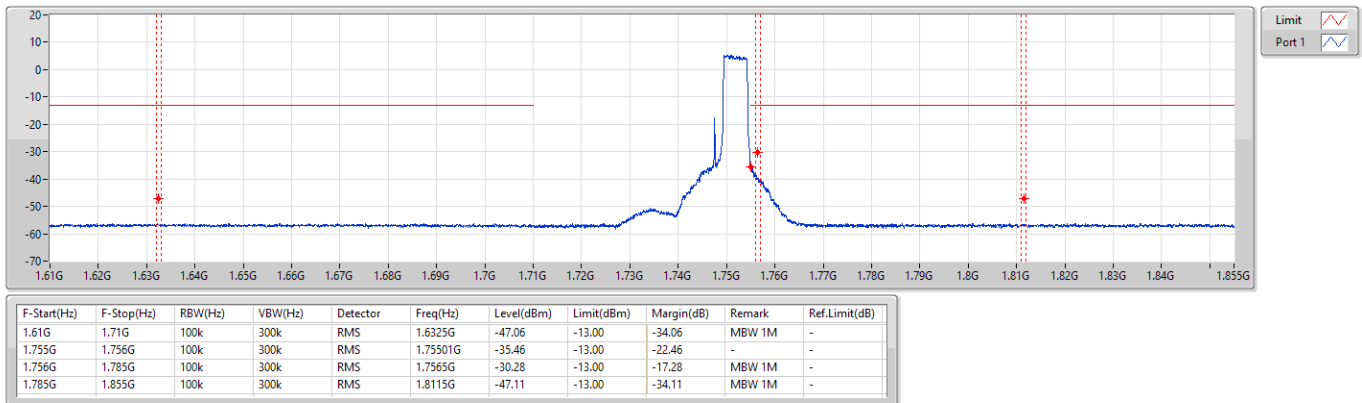
CSE-TX-Sum



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	100k	300k	RMS	1.6605G	-47.08	-13.00	-34.08	MBW 1M	-
1.68G	1.709G	100k	300k	RMS	1.7085G	-38.12	-13.00	-25.12	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.71G	-33.11	-13.00	-20.11	-	-
1.755G	1.855G	100k	300k	RMS	1.8475G	-47.06	-13.00	-34.06	MBW 1M	-

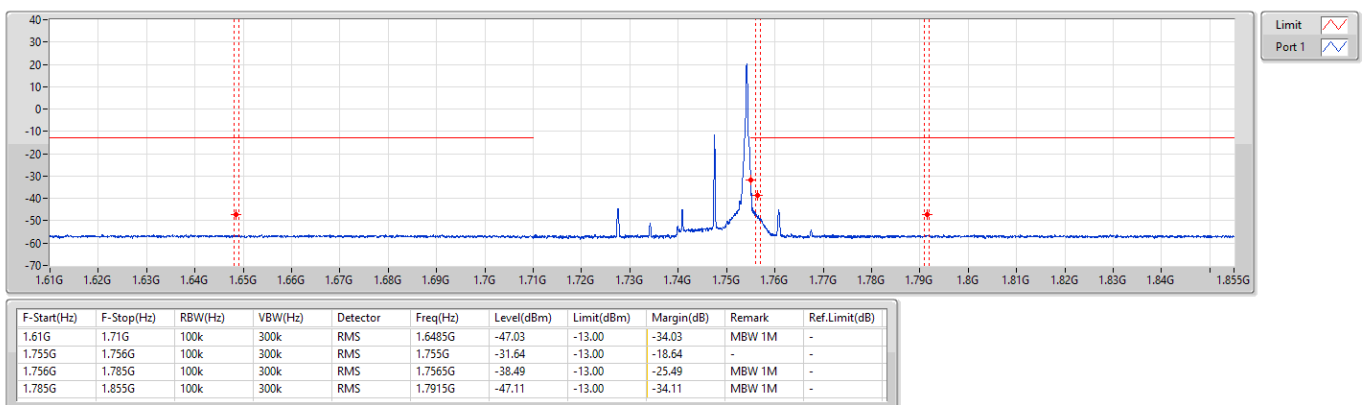
Band 4_LTE_15MHz_Nss1,16QAM_1TX 1747.5MHz_16QAM_RB 27,#RB R

CSE-TX-Sum



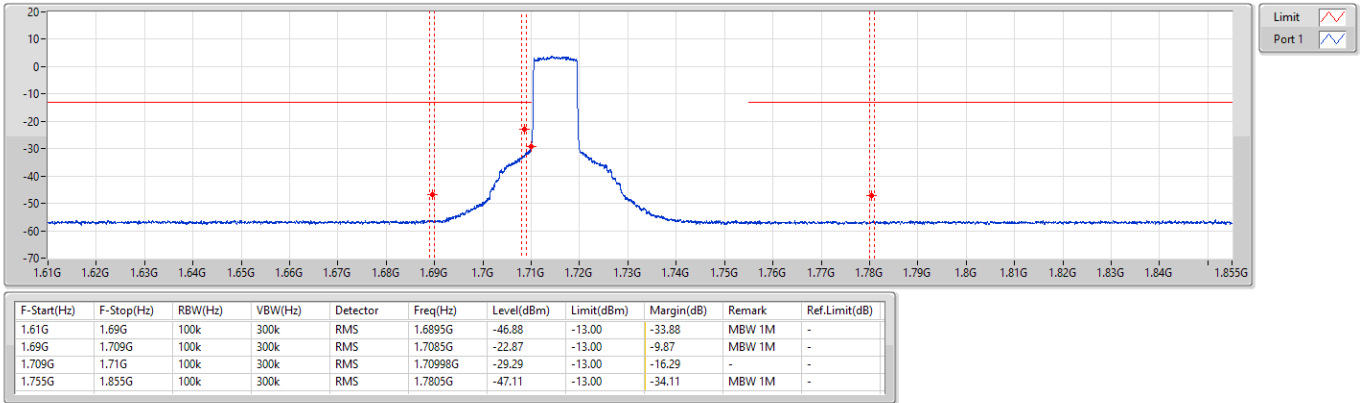
Band 4_LTE_15MHz_Nss1,16QAM_1TX 1747.5MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



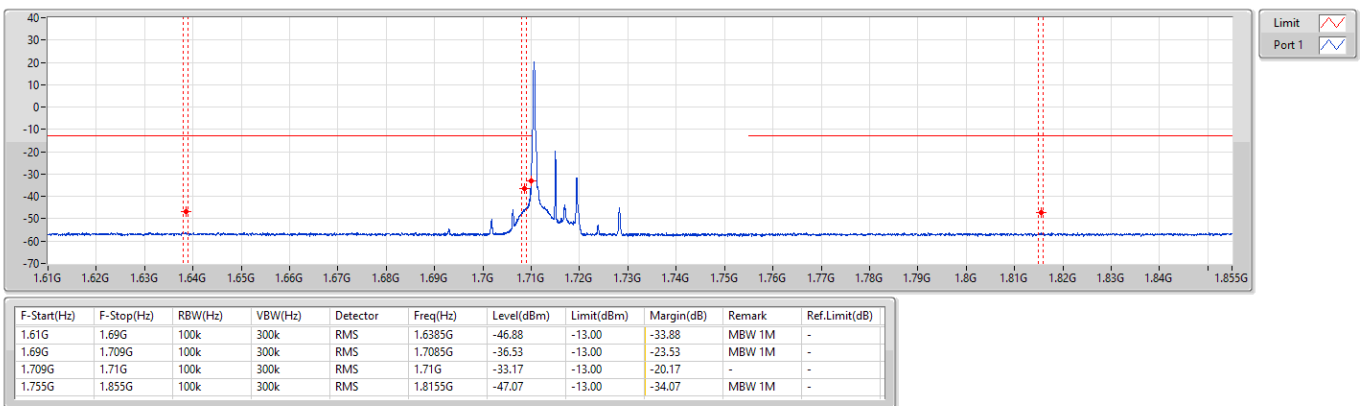
Band 4_LTE_10MHz_Nss1,QPSK_1TX 1715MHz_QPSK_RB 50

CSE-TX-Sum



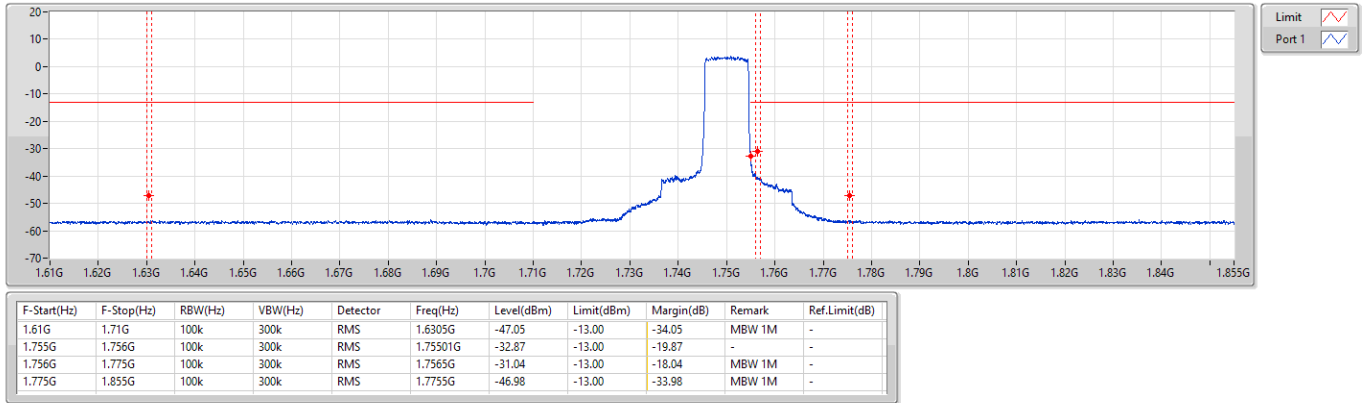
Band 4_LTE_10MHz_Nss1,QPSK_1TX 1715MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



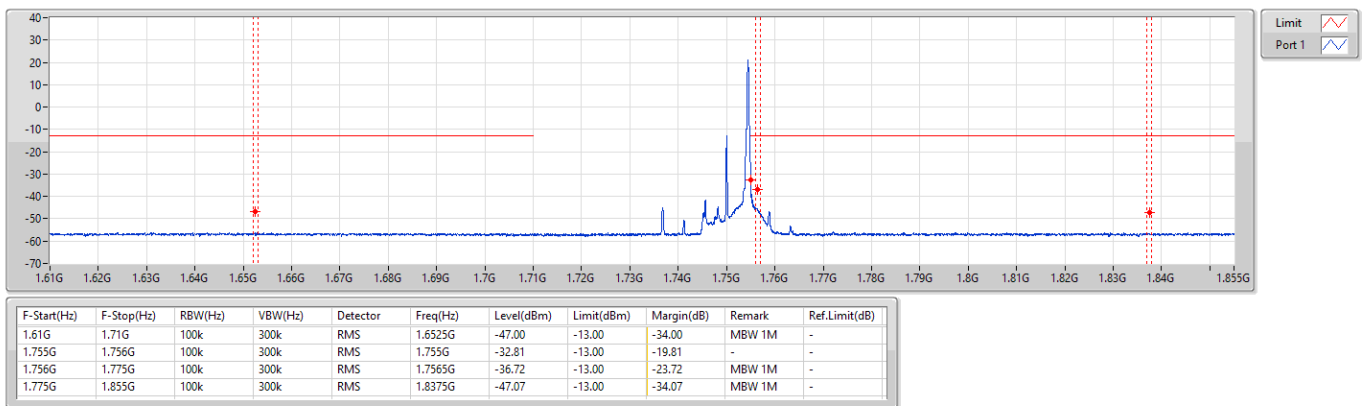
Band 4_LTE_10MHz_Nss1,QPSK_1TX 1750MHz_QPSK_RB 50

CSE-TX-Sum



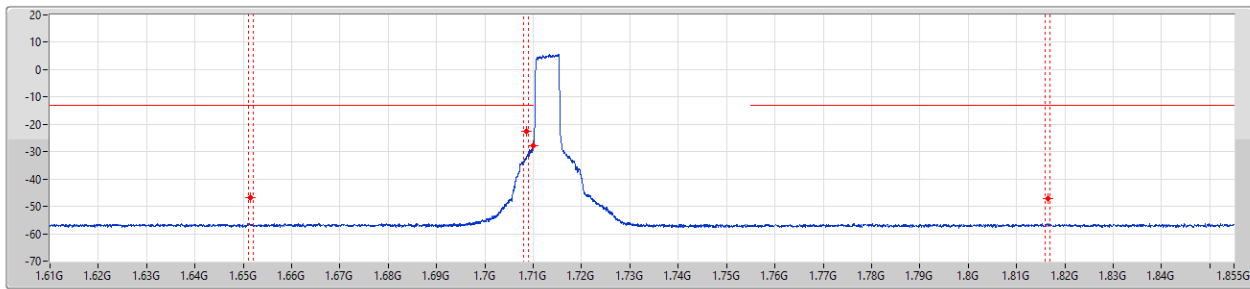
Band 4_LTE_10MHz_Nss1,QPSK_1TX 1750MHz_QPSK_RB 1,#RB R

CSE-TX-Sum



Band 4_LTE_10MHz_Nss1,16QAM_1TX 1715MHz_16QAM_RB 27,#RB L

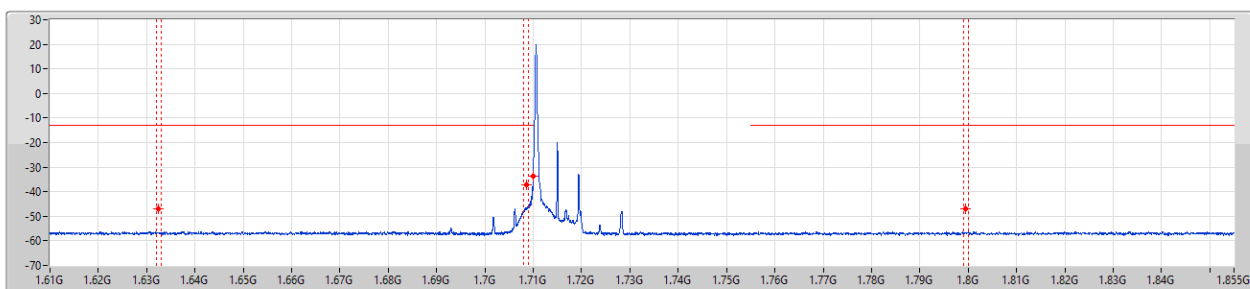
CSE-TX-Sum



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	100k	300k	RMS	1.6515G	-46.95	-13.00	-33.95	MBW 1M	-
1.69G	1.709G	100k	300k	RMS	1.7085G	-22.58	-13.00	-9.58	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.71G	-27.98	-13.00	-14.98	-	-
1.755G	1.855G	100k	300k	RMS	1.8165G	-47.08	-13.00	-34.08	MBW 1M	-

Band 4_LTE_10MHz_Nss1,16QAM_1TX 1715MHz_16QAM_RB 1,#RB L

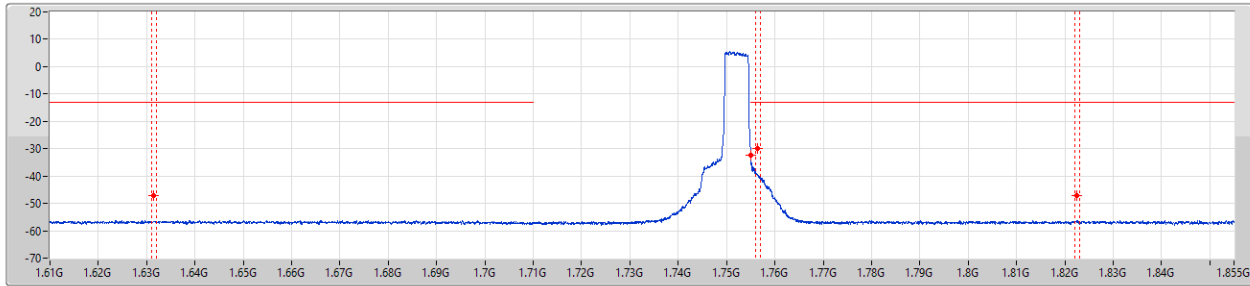
CSE-TX-Sum



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	100k	300k	RMS	1.6325G	-47.00	-13.00	-34.00	MBW 1M	-
1.69G	1.709G	100k	300k	RMS	1.7085G	-37.29	-13.00	-24.29	MBW 1M	-
1.709G	1.71G	100k	300k	RMS	1.71G	-33.72	-13.00	-20.72	-	-
1.755G	1.855G	100k	300k	RMS	1.7995G	-47.04	-13.00	-34.04	MBW 1M	-

Band 4_LTE_10MHz_Nss1,16QAM_1TX 1750MHz_16QAM_RB 27,#RB R

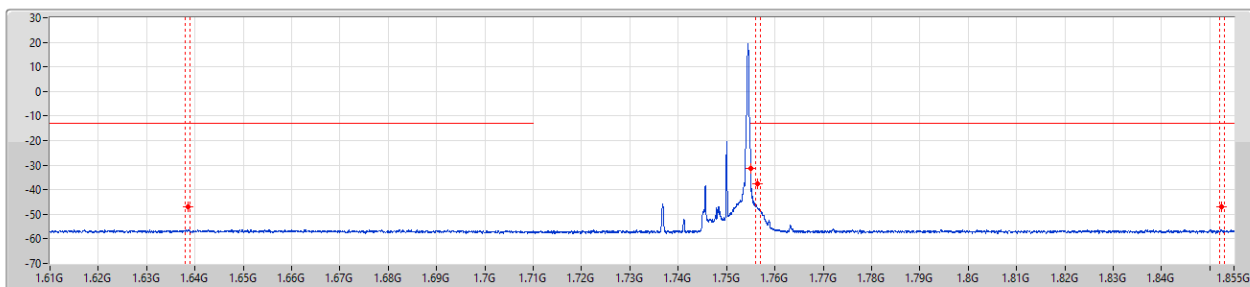
CSE-TX-Sum



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	100k	300k	RMS	1.6315G	-47.03	-13.00	-34.03	MBW 1M	-
1.755G	1.756G	100k	300k	RMS	1.755G	-32.49	-13.00	-19.49	-	-
1.756G	1.775G	100k	300k	RMS	1.7565G	-30.00	-13.00	-17.00	MBW 1M	-
1.775G	1.855G	100k	300k	RMS	1.8225G	-47.06	-13.00	-34.06	MBW 1M	-

Band 4_LTE_10MHz_Nss1,16QAM_1TX 1750MHz_16QAM_RB 1,#RB R

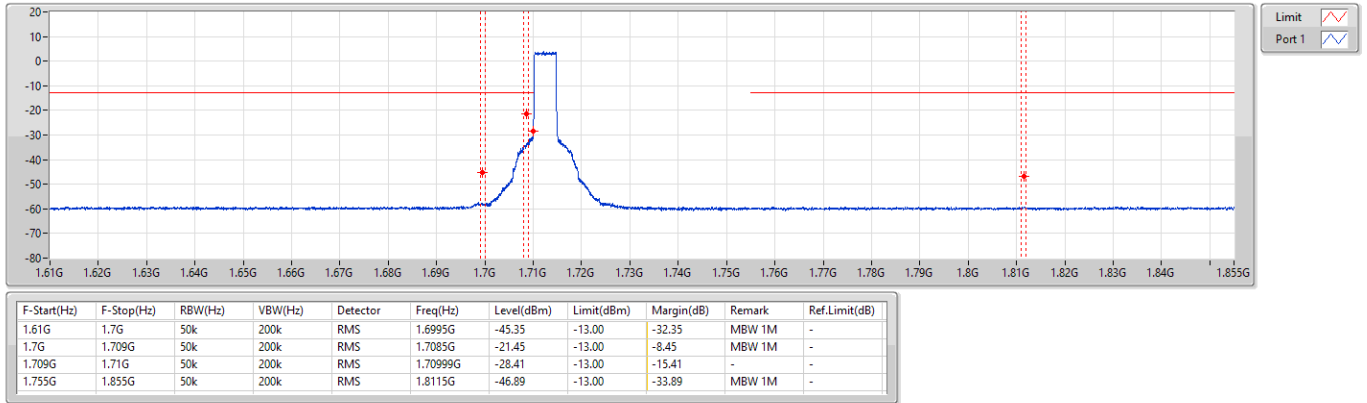
CSE-TX-Sum



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	100k	300k	RMS	1.6385G	-46.91	-13.00	-33.91	MBW 1M	-
1.755G	1.756G	100k	300k	RMS	1.75501G	-31.32	-13.00	-18.32	-	-
1.756G	1.775G	100k	300k	RMS	1.7565G	-37.71	-13.00	-24.71	MBW 1M	-
1.775G	1.855G	100k	300k	RMS	1.8525G	-47.06	-13.00	-34.06	MBW 1M	-

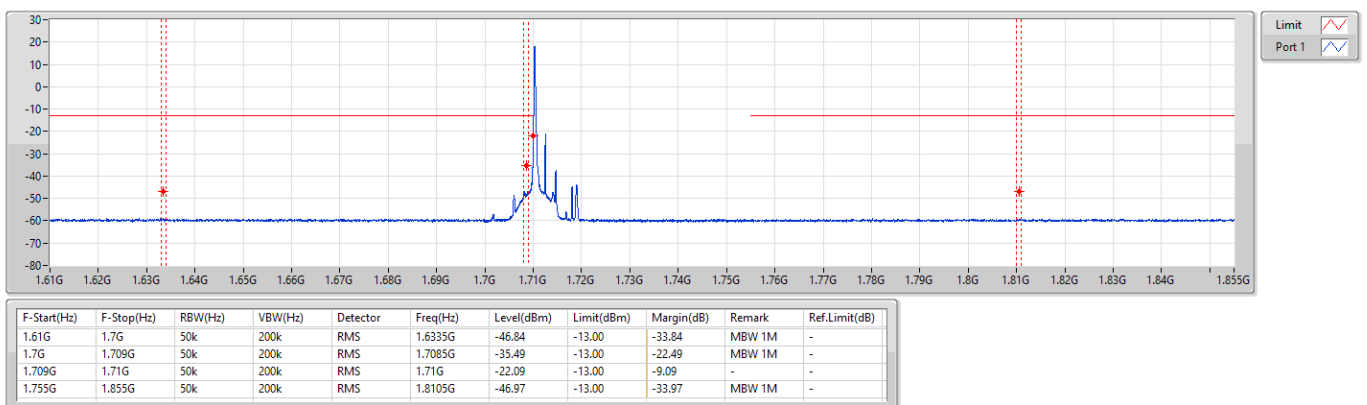
Band 4_LTE_5MHz_Nss1,QPSK_1TX
1712.5MHz_QPSK_RB 25

CSE-TX-Sum



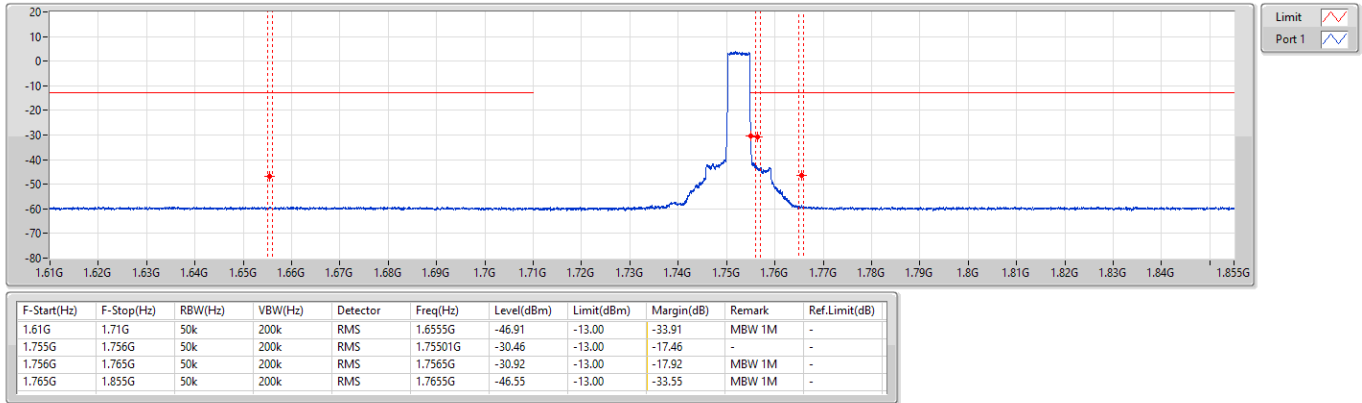
Band 4_LTE_5MHz_Nss1,QPSK_1TX
1712.5MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



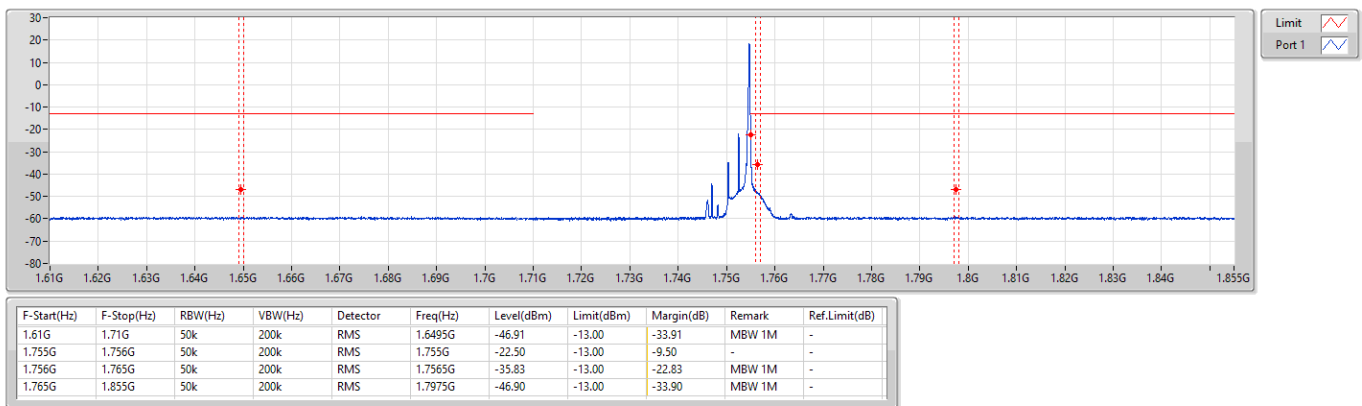
Band 4_LTE_5MHz_Nss1,QPSK_1TX 1752.5MHz_QPSK_RB 25

CSE-TX-Sum



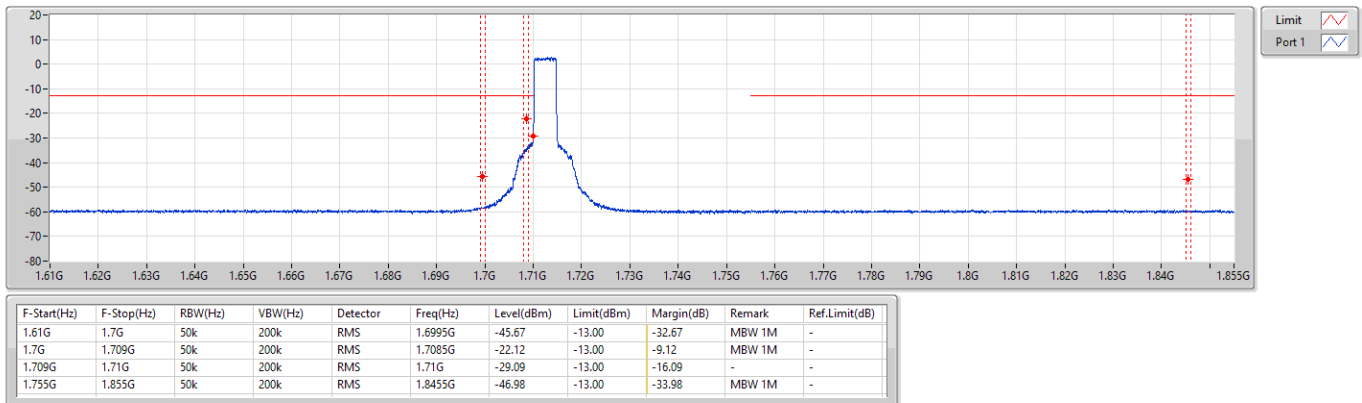
Band 4_LTE_5MHz_Nss1,QPSK_1TX 1752.5MHz_QPSK_RB 1,#RB R

CSE-TX-Sum



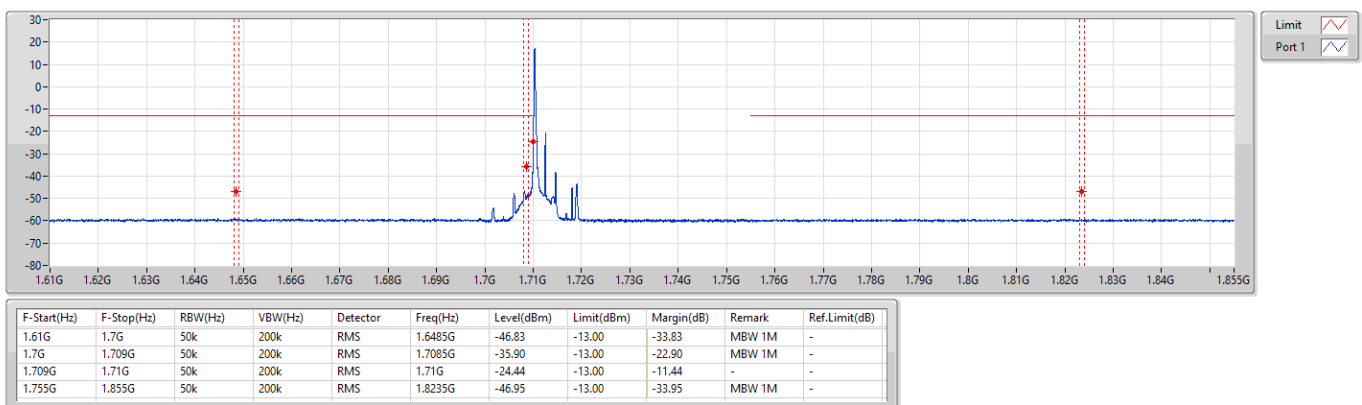
Band 4_LTE_5MHz_Nss1,16QAM_1TX 1712.5MHz_16QAM_RB 25

CSE-TX-Sum



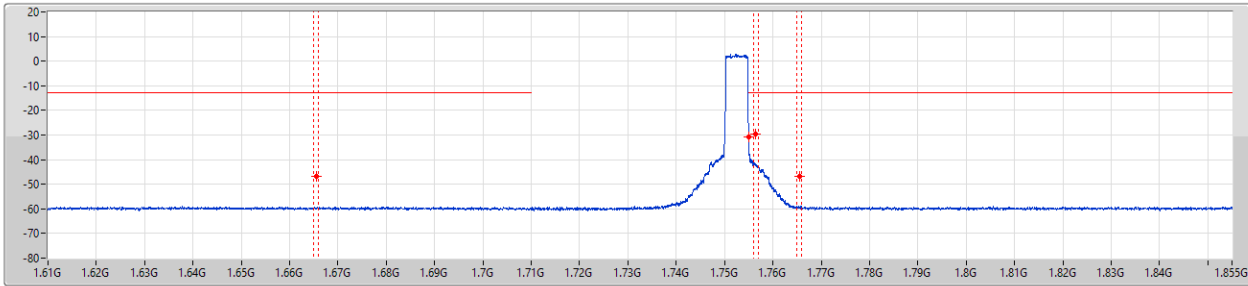
Band 4_LTE_5MHz_Nss1,16QAM_1TX 1712.5MHz_16QAM_RB 1,#RB L

CSE-TX-Sum



Band 4_LTE_5MHz_Nss1,16QAM_1TX 1752.5MHz_16QAM_RB 25

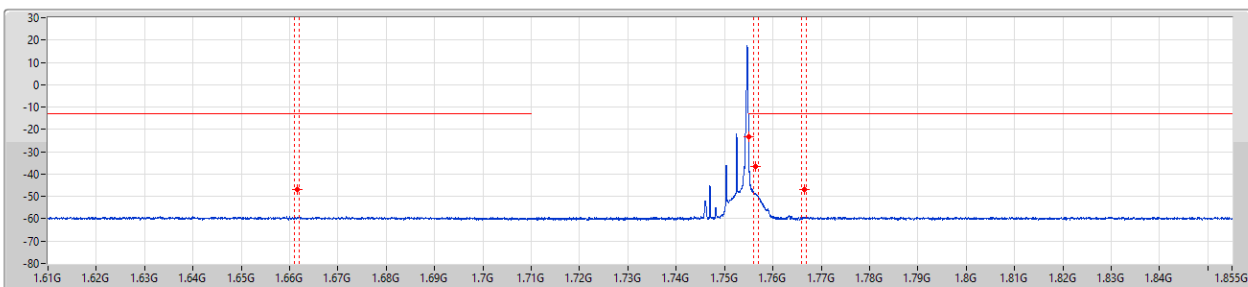
CSE-TX-Sum



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	50k	200k	RMS	1.6655G	-46.90	-13.00	-33.90	MBW 1M	-
1.755G	1.756G	50k	200k	RMS	1.755G	-30.88	-13.00	-17.88	-	-
1.756G	1.765G	50k	200k	RMS	1.7565G	-29.50	-13.00	-16.50	MBW 1M	-
1.765G	1.855G	50k	200k	RMS	1.7655G	-46.61	-13.00	-33.61	MBW 1M	-

Band 4_LTE_5MHz_Nss1,16QAM_1TX 1752.5MHz_16QAM_RB 1,#RB R

CSE-TX-Sum

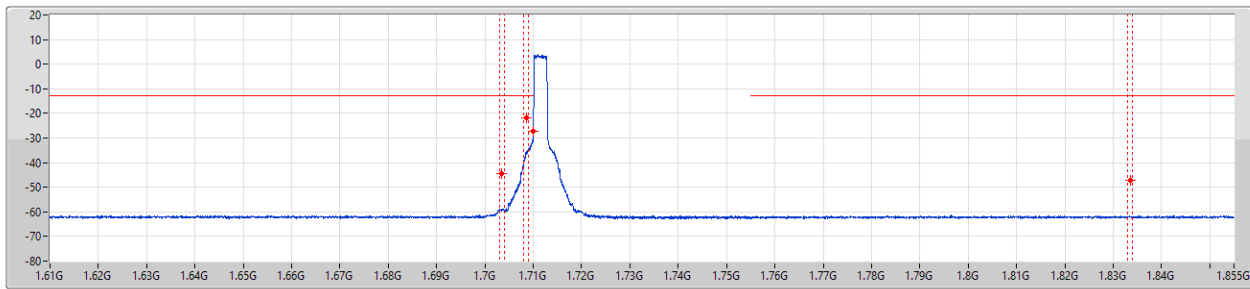


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
1.61G	1.71G	50k	200k	RMS	1.6615G	-46.85	-13.00	-33.85	MBW 1M	-
1.755G	1.756G	50k	200k	RMS	1.755G	-23.16	-13.00	-10.16	-	-
1.756G	1.765G	50k	200k	RMS	1.7565G	-36.39	-13.00	-23.39	MBW 1M	-
1.765G	1.855G	50k	200k	RMS	1.7665G	-46.97	-13.00	-33.97	MBW 1M	-



Band 4_LTE_3MHz_Nss1,QPSK_1TX
1711.5MHz_QPSK_RB 15

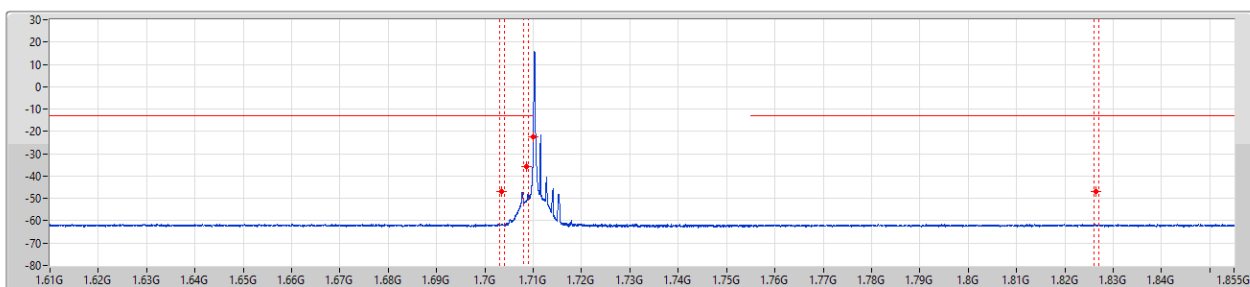
CSE-TX-Sum



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	1.704G	30k	100k	RMS	1.7035G	-44.27	-13.00	-31.27	MBW 1M	-
1.704G	1.709G	30k	100k	RMS	1.7085G	-21.72	-13.00	-8.72	MBW 1M	-
1.709G	1.71G	30k	100k	RMS	1.711G	-27.23	-13.00	-14.23	-	-
1.755G	1.855G	30k	100k	RMS	1.8335G	-47.06	-13.00	-34.06	MBW 1M	-

Band 4_LTE_3MHz_Nss1,QPSK_1TX
1711.5MHz_QPSK_RB 1,#RB L

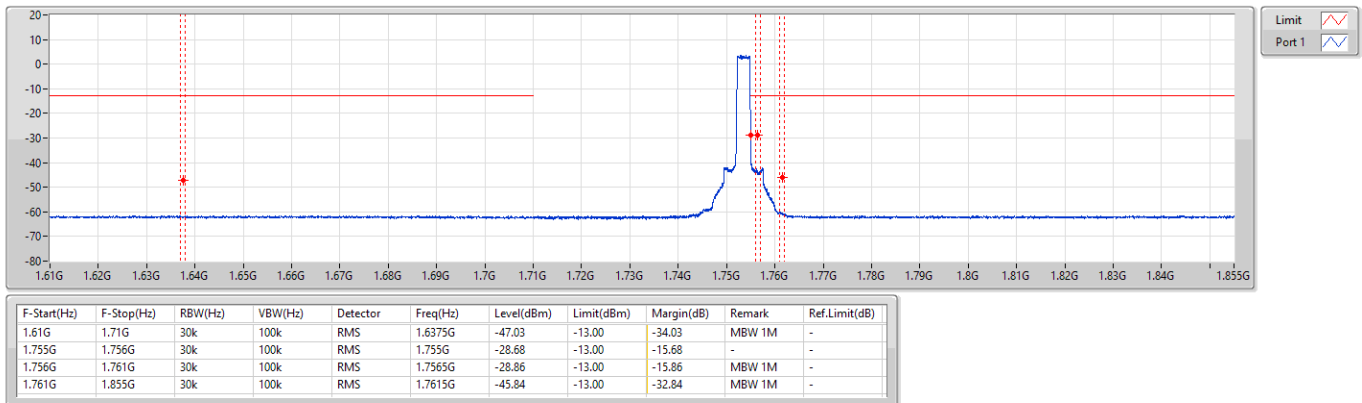
CSE-TX-Sum



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	1.704G	30k	100k	RMS	1.7035G	-46.92	-13.00	-33.92	MBW 1M	-
1.704G	1.709G	30k	100k	RMS	1.7085G	-35.67	-13.00	-22.67	MBW 1M	-
1.709G	1.71G	30k	100k	RMS	1.711G	-22.29	-13.00	-9.29	-	-
1.755G	1.855G	30k	100k	RMS	1.8265G	-47.08	-13.00	-34.08	MBW 1M	-

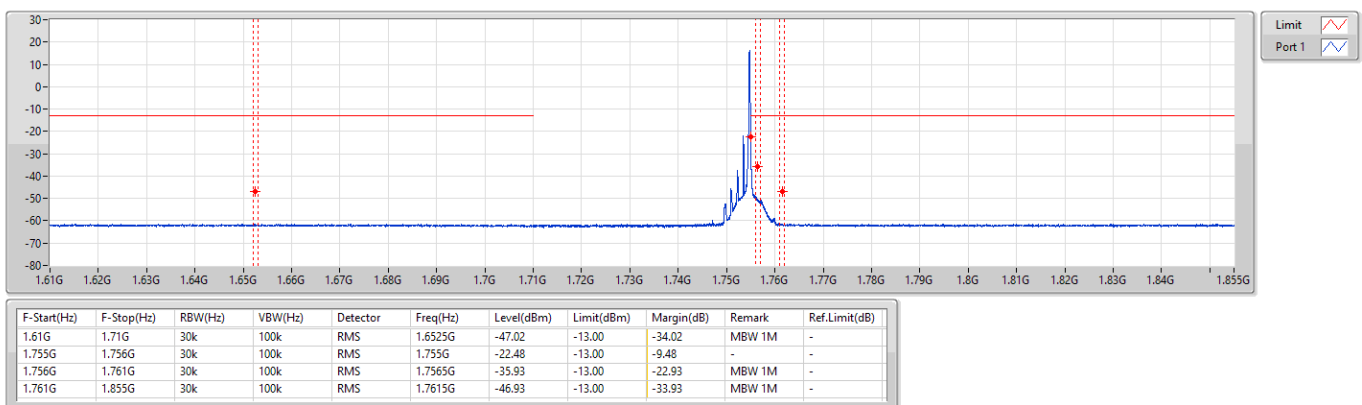
Band 4_LTE_3MHz_Nss1,QPSK_1TX 1753.5MHz_QPSK_RB 15

CSE-TX-Sum



Band 4_LTE_3MHz_Nss1,QPSK_1TX 1753.5MHz_QPSK_RB 1,#RB R

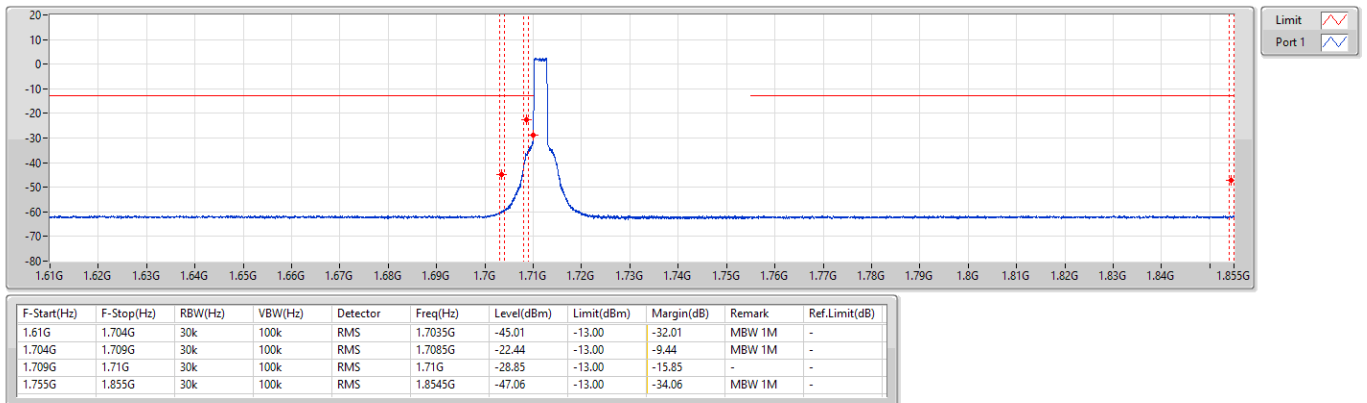
CSE-TX-Sum





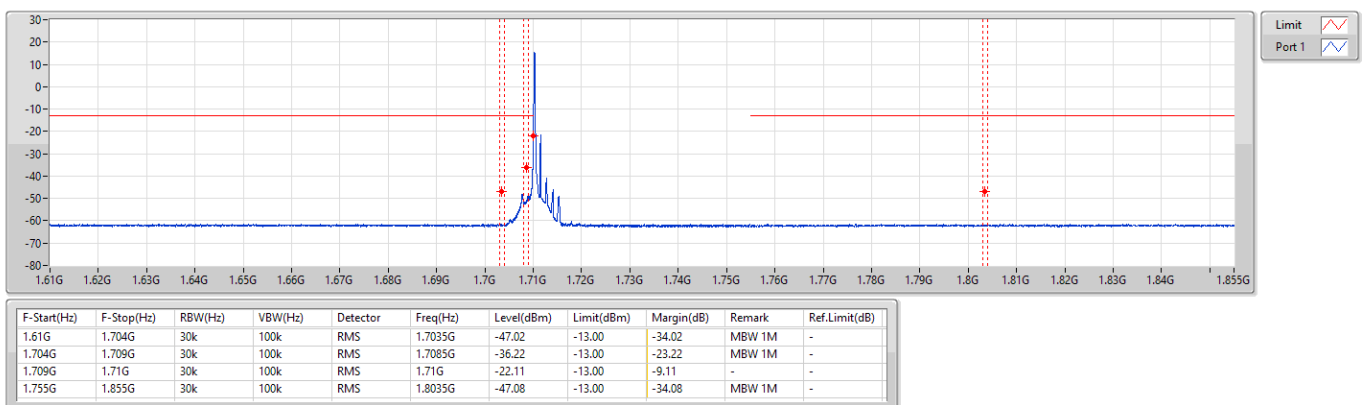
Band 4_LTE_3MHz_Nss1,16QAM_1TX
1711.5MHz_16QAM_RB 15

CSE-TX-Sum



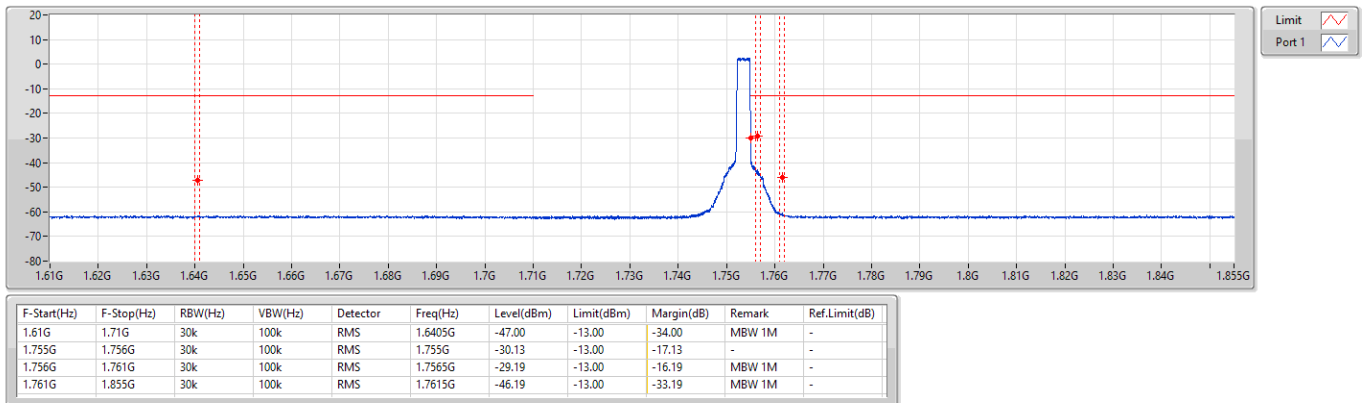
Band 4_LTE_3MHz_Nss1,16QAM_1TX
1711.5MHz_16QAM_RB 1,#RB L

CSE-TX-Sum



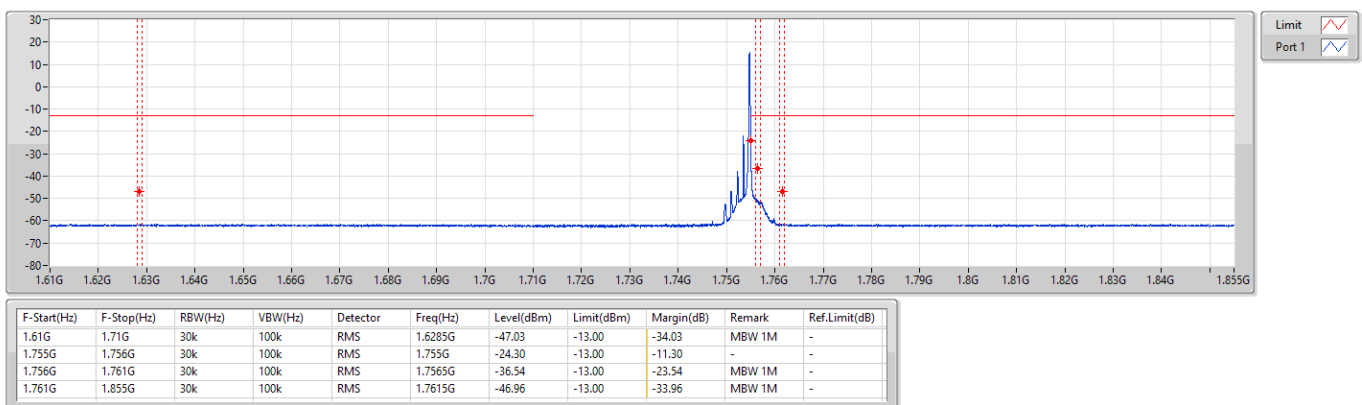
Band 4_LTE_3MHz_Nss1,16QAM_1TX 1753.5MHz_16QAM_RB 15

CSE-TX-Sum



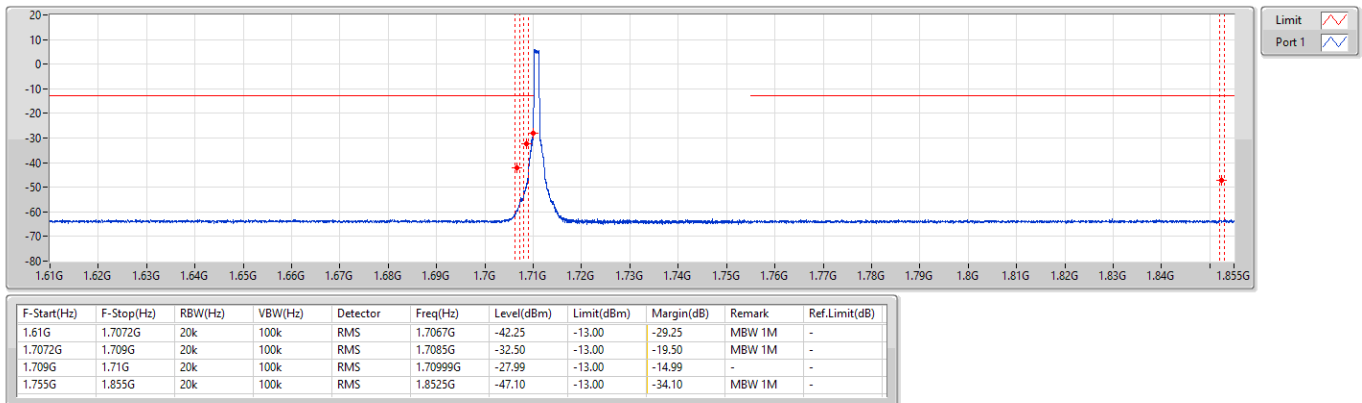
Band 4_LTE_3MHz_Nss1,16QAM_1TX 1753.5MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



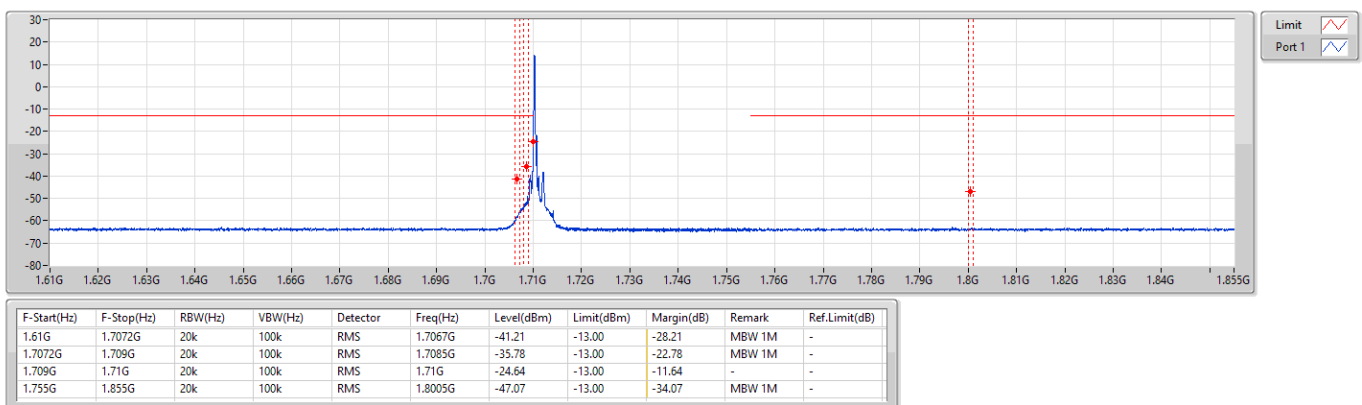
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX
1710.7MHz_QPSK_RB 6

CSE-TX-Sum



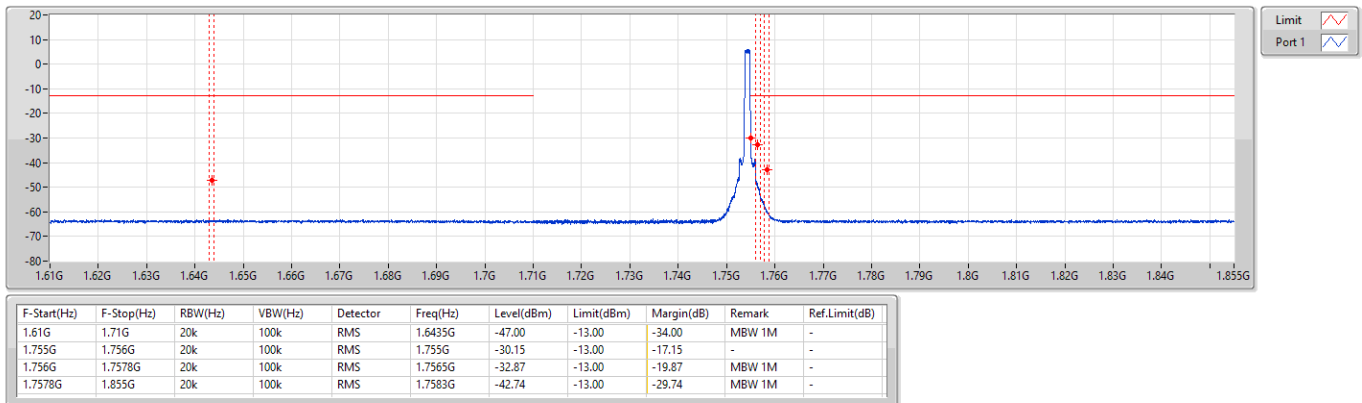
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX
1710.7MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



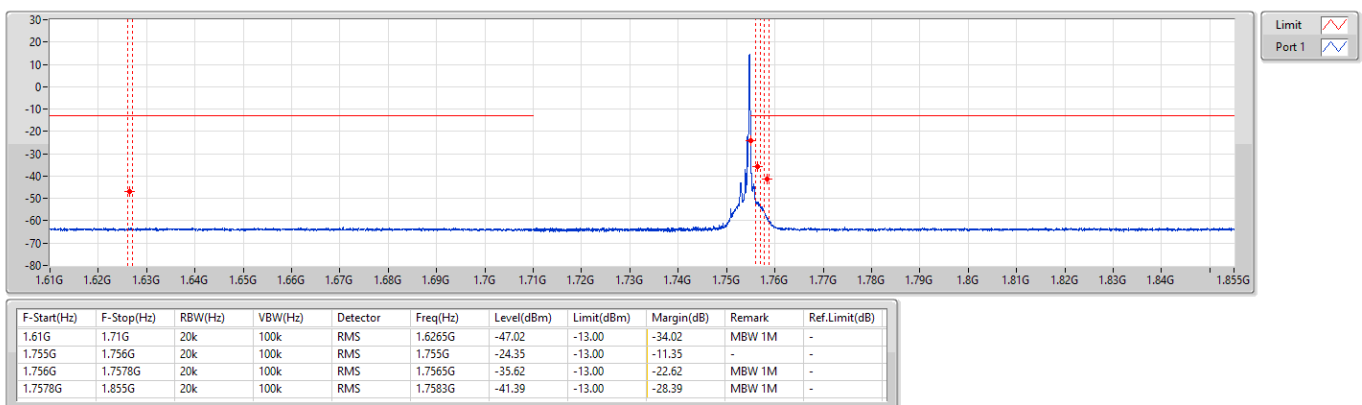
Band 4_LTE_1.4MHz_Nss1,QPSK_1TX
1754.3MHz_QPSK_RB 6

CSE-TX-Sum



Band 4_LTE_1.4MHz_Nss1,QPSK_1TX
1754.3MHz_QPSK_RB 1,#RB R

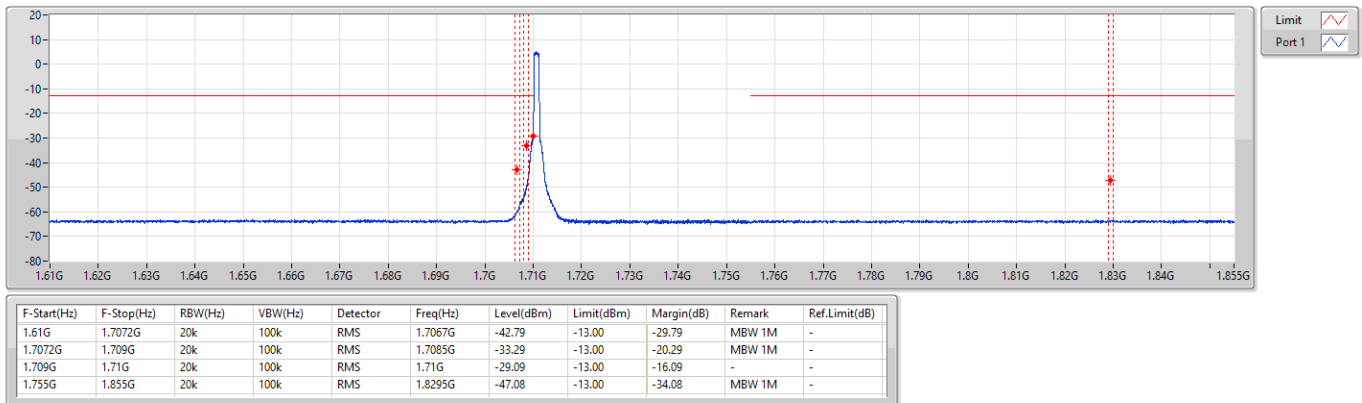
CSE-TX-Sum





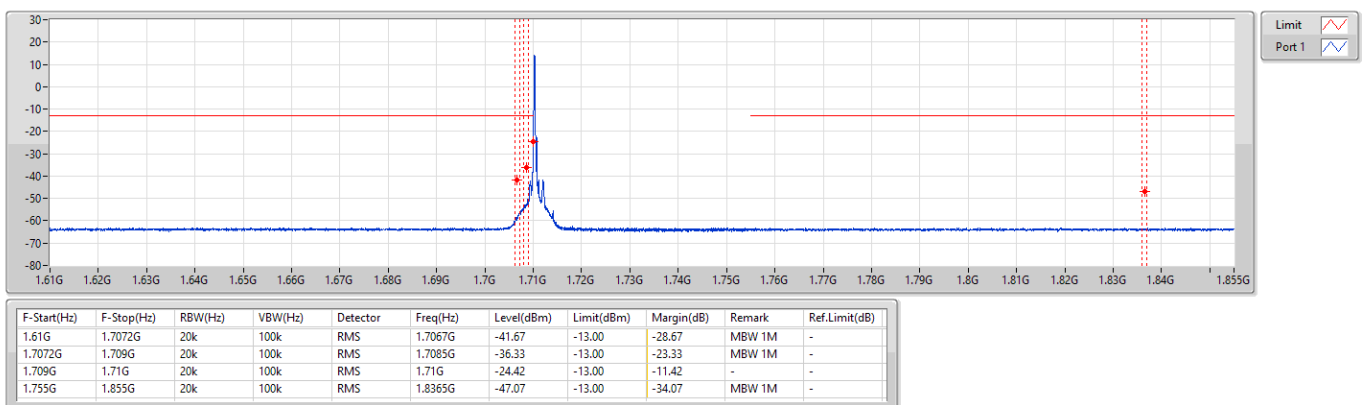
Band 4_LTE_1.4MHz_Nss1,16QAM_1TX
1710.7MHz_16QAM_RB 6

CSE-TX-Sum



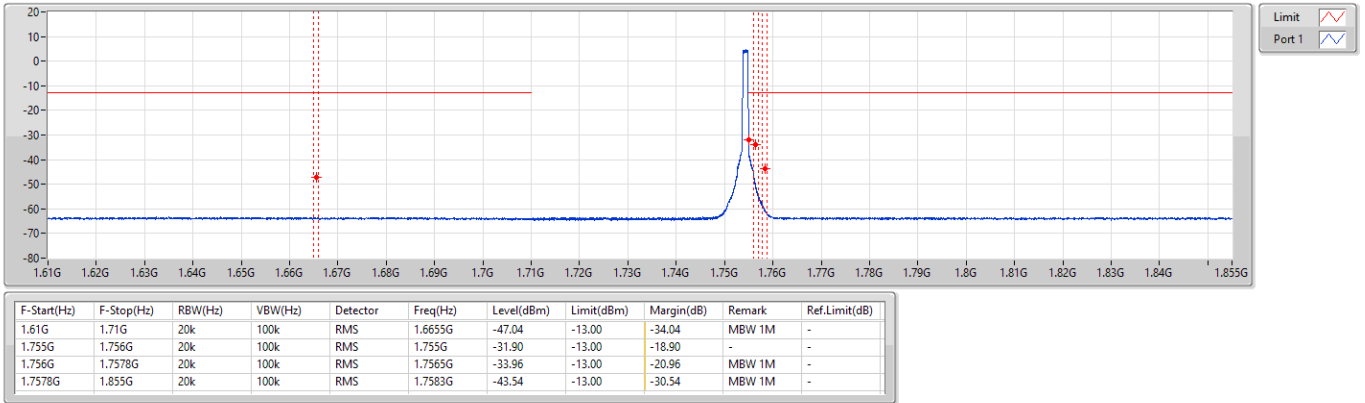
Band 4_LTE_1.4MHz_Nss1,16QAM_1TX
1710.7MHz_16QAM_RB 1,#RB L

CSE-TX-Sum



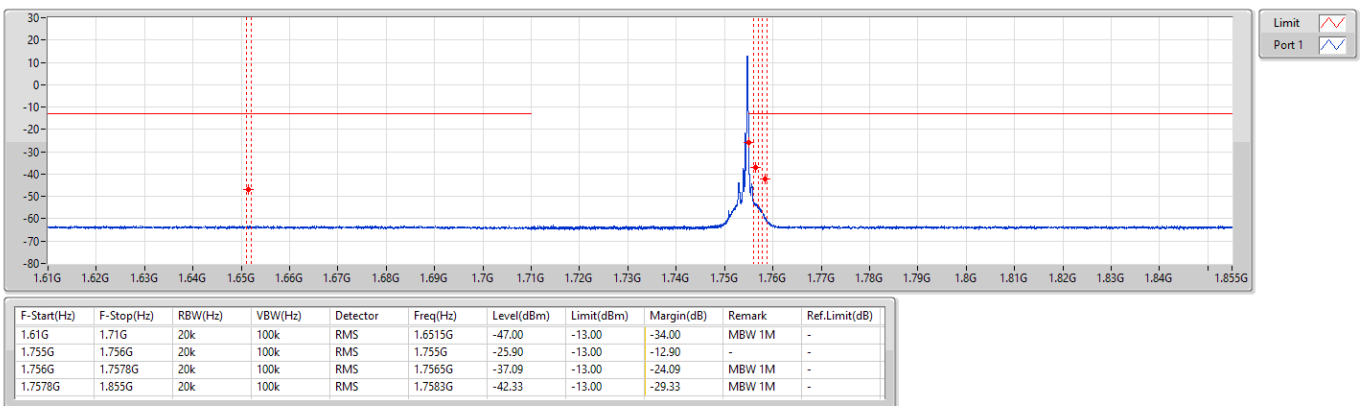
Band 4_LTE_1.4MHz_Nss1,16QAM_1TX
1754.3MHz_16QAM_RB 6

CSE-TX-Sum



Band 4_LTE_1.4MHz_Nss1,16QAM_1TX
1754.3MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 4	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	18.725M	17.791M	17M8G7D	18.725M	17.791M
LTE_20MHz_Nss1,16QAM_1TX	5.7M	4.898M	4M90W7D	5.7M	4.898M
LTE_15MHz_Nss1,QPSK_1TX	14.381M	13.381M	13M4G7D	14.381M	13.381M
LTE_15MHz_Nss1,16QAM_1TX	5.588M	4.873M	4M87W7D	5.588M	4.873M
LTE_10MHz_Nss1,QPSK_1TX	9.55M	8.921M	8M92G7D	9.55M	8.921M
LTE_10MHz_Nss1,16QAM_1TX	5.538M	4.86M	4M86W7D	5.538M	4.86M
LTE_5MHz_Nss1,QPSK_1TX	4.9M	4.473M	4M47G7D	4.9M	4.473M
LTE_5MHz_Nss1,16QAM_1TX	4.788M	4.454M	4M45W7D	4.788M	4.454M
LTE_3MHz_Nss1,QPSK_1TX	2.921M	2.687M	2M69G7D	2.921M	2.687M
LTE_3MHz_Nss1,16QAM_1TX	2.914M	2.687M	2M69W7D	2.914M	2.687M
LTE_1.4MHz_Nss1,QPSK_1TX	1.253M	1.084M	1M08G7D	1.253M	1.084M
LTE_1.4MHz_Nss1,16QAM_1TX	1.248M	1.086M	1M09W7D	1.248M	1.086M

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

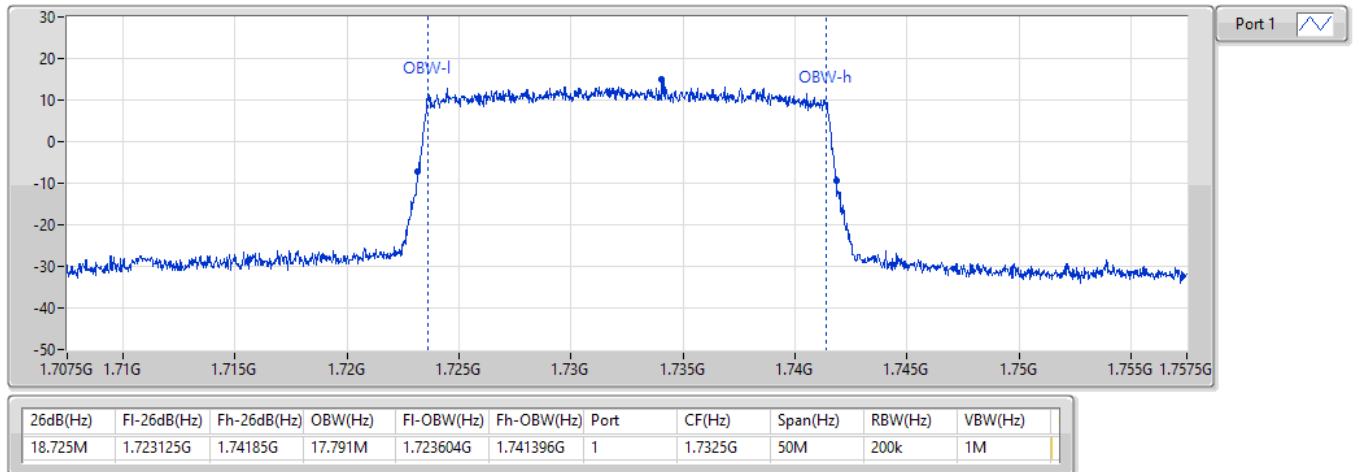
Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 4_LTE_20MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 100	Pass	18.725M	17.791M	Inf
1732.5MHz_16QAM_RB 27	Pass	5.7M	4.898M	Inf
Band 4_LTE_15MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 75	Pass	14.381M	13.381M	Inf
1732.5MHz_16QAM_RB 27	Pass	5.588M	4.873M	Inf
Band 4_LTE_10MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 50	Pass	9.55M	8.921M	Inf
1732.5MHz_16QAM_RB 27	Pass	5.538M	4.86M	Inf
Band 4_LTE_5MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 25	Pass	4.9M	4.473M	Inf
1732.5MHz_16QAM_RB 25	Pass	4.788M	4.454M	Inf
Band 4_LTE_3MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 15	Pass	2.921M	2.687M	Inf
1732.5MHz_16QAM_RB 15	Pass	2.914M	2.687M	Inf
Band 4_LTE_1.4MHz_Nss1_1TX	-	-	-	-
1732.5MHz_QPSK_RB 6	Pass	1.253M	1.084M	Inf
1732.5MHz_16QAM_RB 6	Pass	1.248M	1.086M	Inf

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

Port X-OBW = Port X 99% occupied bandwidth

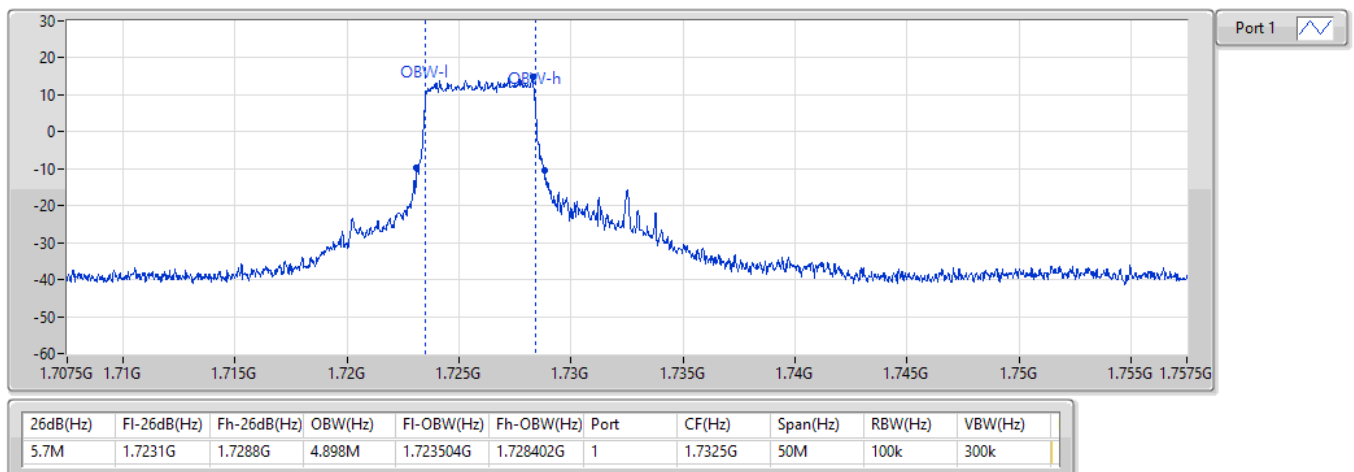
Band 4_LTE_20MHz_Nss1,QPSK_1TX
1732.5MHz_QPSK_RB 100

EBW



Band 4_LTE_20MHz_Nss1,16QAM_1TX
1732.5MHz_16QAM_RB 27

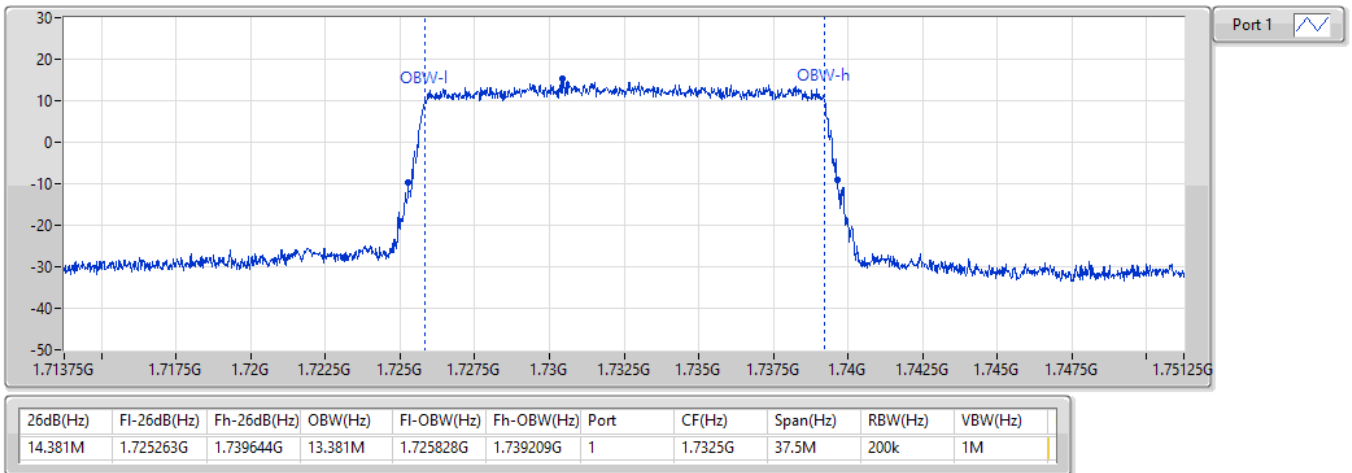
EBW



Band 4_LTE_15MHz_Nss1,QPSK_1TX

EBW

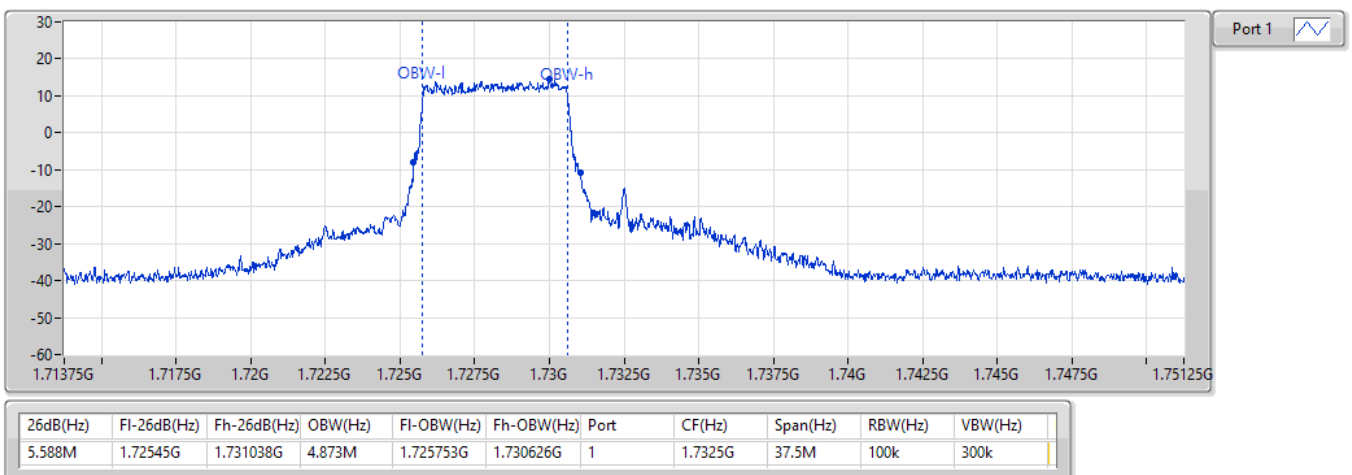
1732.5MHz_QPSK_RB 75



Band 4_LTE_15MHz_Nss1,16QAM_1TX

EBW

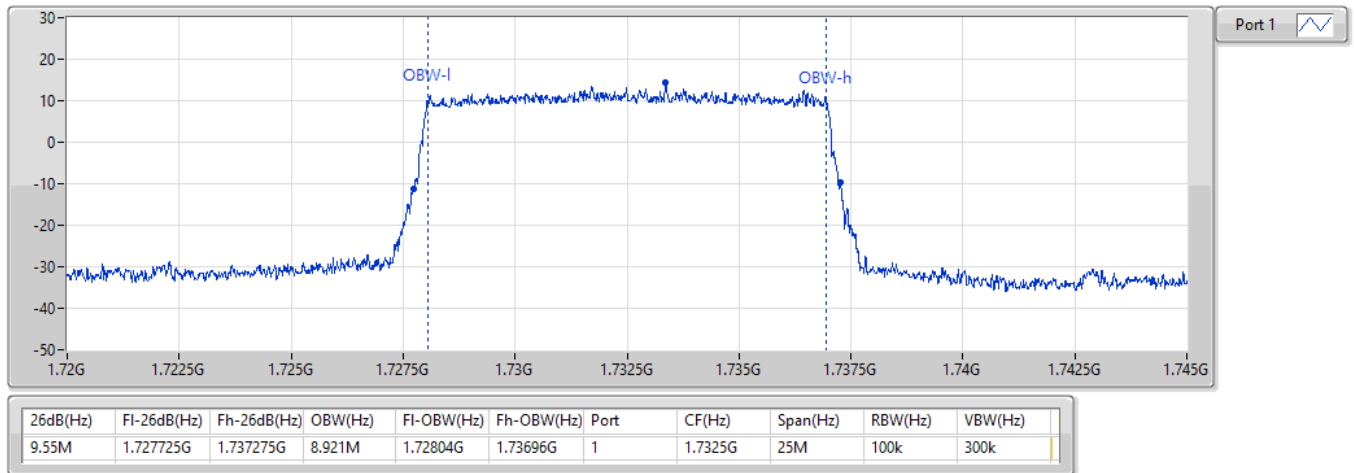
1732.5MHz_16QAM_RB 27



Band 4_LTE_10MHz_Nss1,QPSK_1TX

EBW

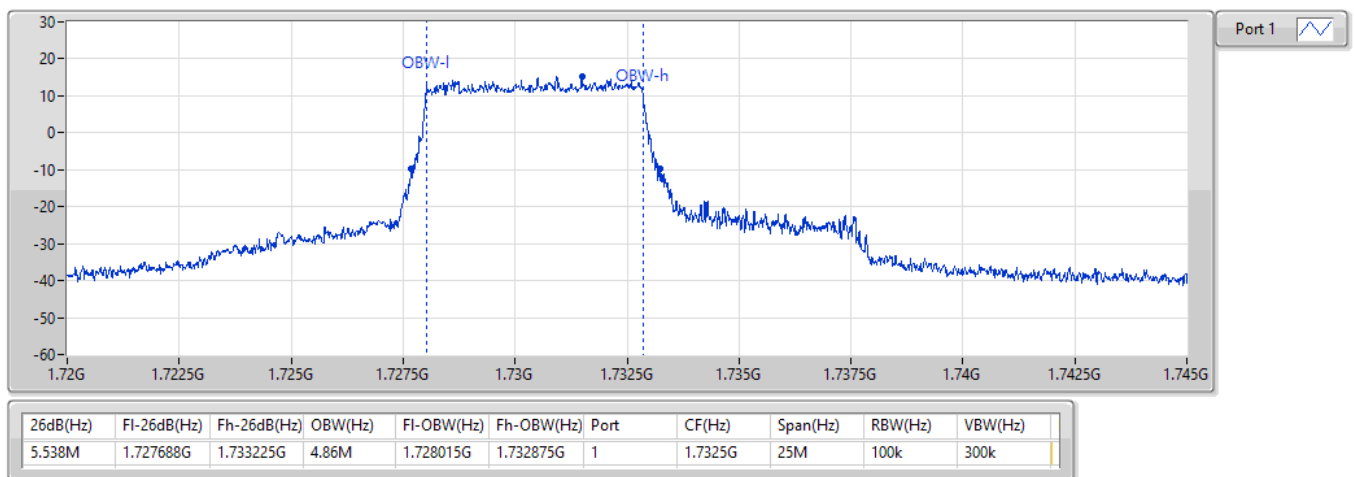
1732.5MHz_QPSK_RB 50



Band 4_LTE_10MHz_Nss1,16QAM_1TX

EBW

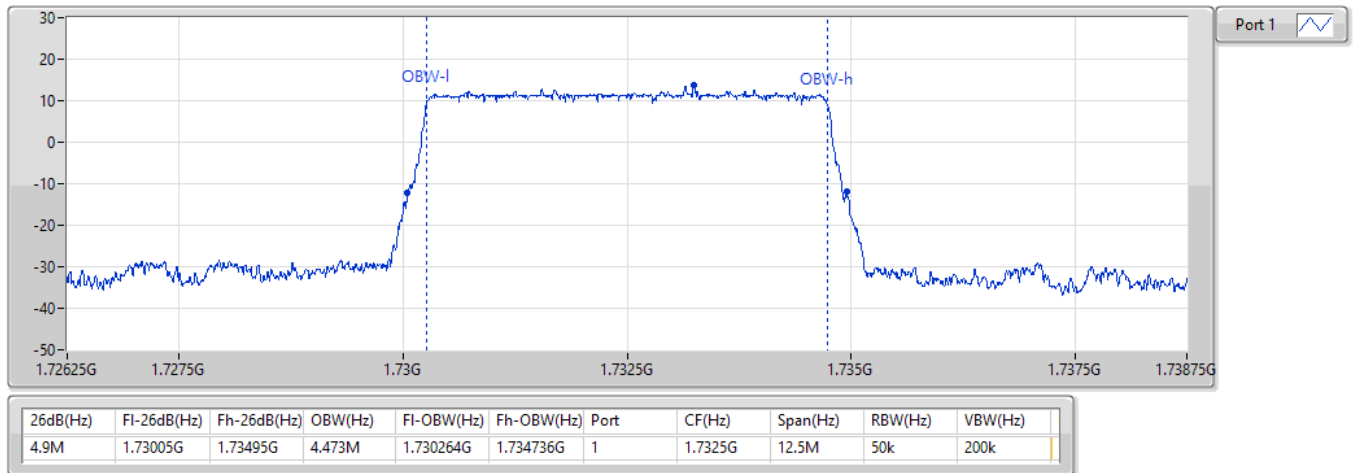
1732.5MHz_16QAM_RB 27



Band 4_LTE_5MHz_Nss1,QPSK_1TX

EBW

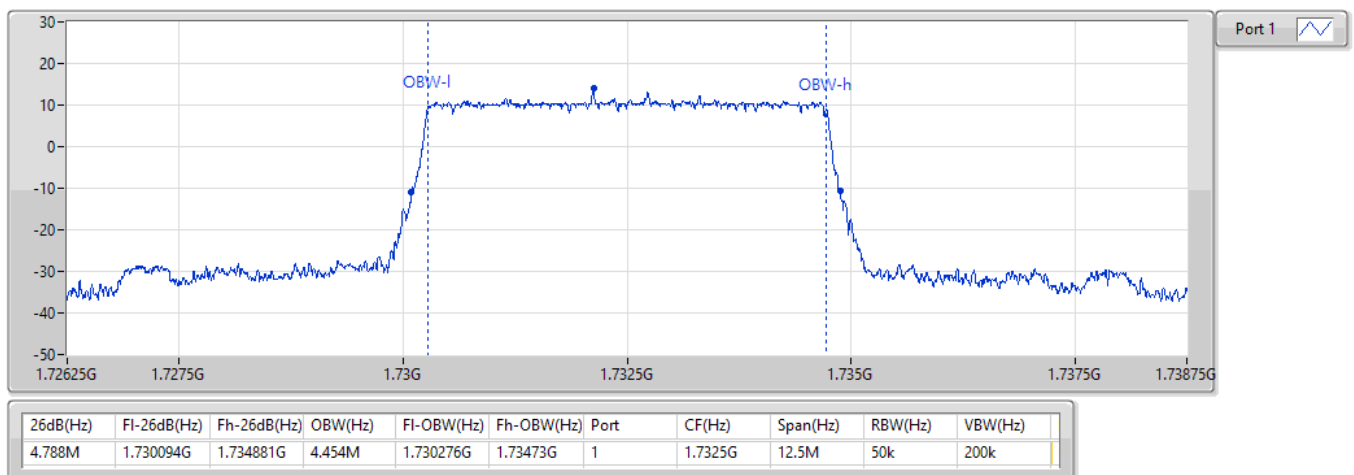
1732.5MHz_QPSK_RB 25



Band 4_LTE_5MHz_Nss1,16QAM_1TX

EBW

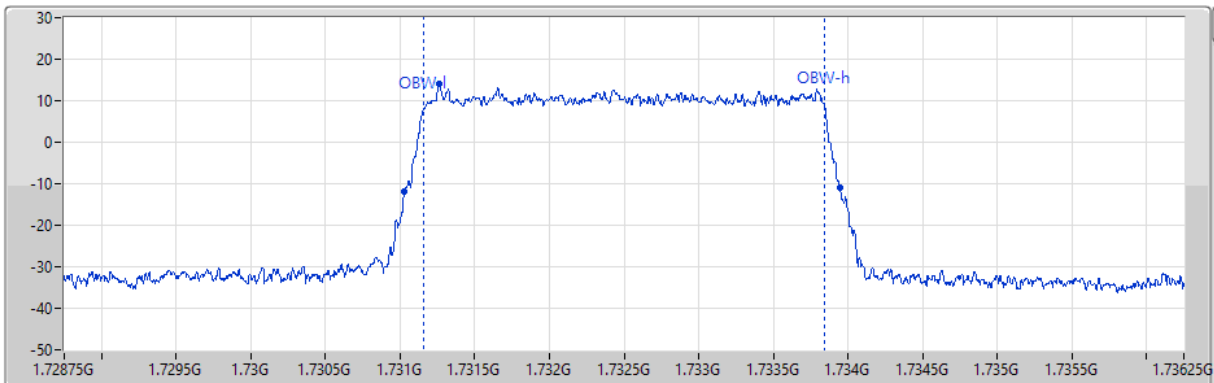
1732.5MHz_16QAM_RB 25



Band 4_LTE_3MHz_Nss1,QPSK_1TX

EBW

1732.5MHz_QPSK_RB 15

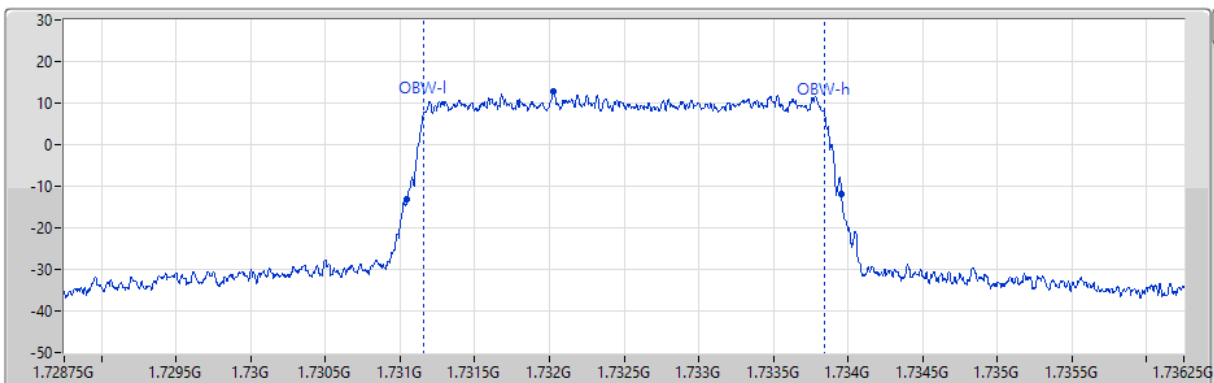


26dB(Hz)	FI-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
2.921M	1.73103G	1.733951G	2.687M	1.731154G	1.733842G	1	1.7325G	7.5M	30k	100k

Band 4_LTE_3MHz_Nss1,16QAM_1TX

EBW

1732.5MHz_16QAM_RB 15

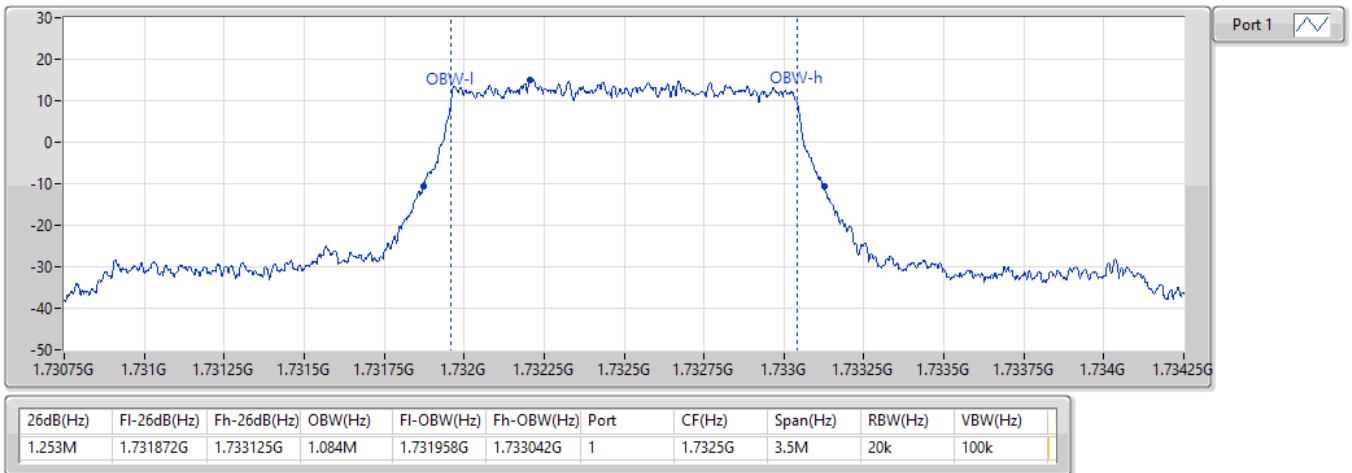


26dB(Hz)	FI-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
2.914M	1.731045G	1.733959G	2.687M	1.731158G	1.733846G	1	1.7325G	7.5M	30k	100k

Band 4_LTE_1.4MHz_Nss1,QPSK_1TX

EBW

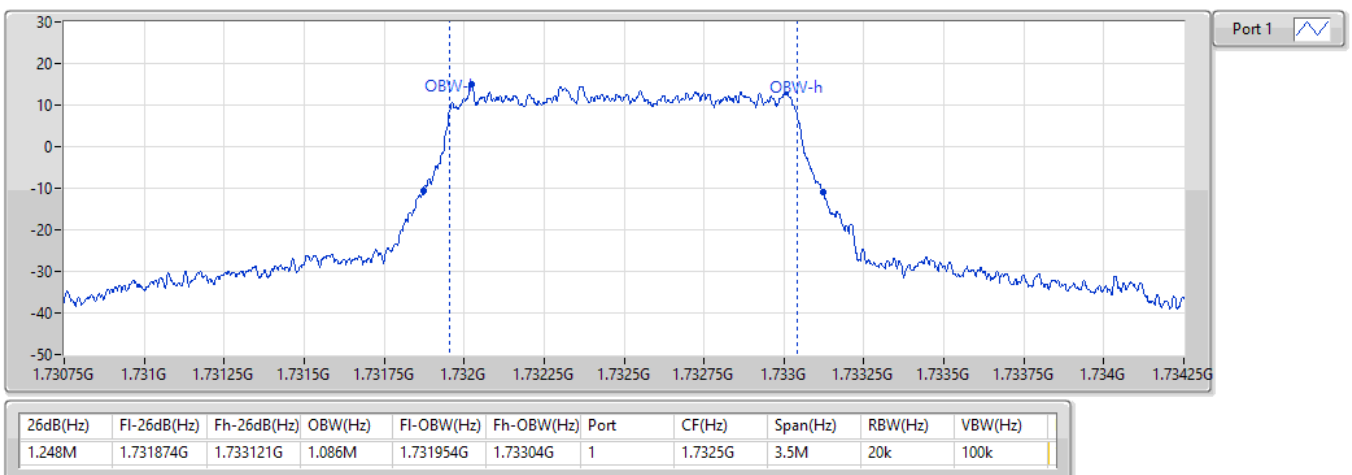
1732.5MHz_QPSK_RB 6



Band 4_LTE_1.4MHz_Nss1,16QAM_1TX

EBW

1732.5MHz_16QAM_RB 6



**Summary**

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	1732.5	13.00	4.87	1
LTE_20MHz_Nss1,16QAM_1TX	Pass	1732.5	13.00	6.09	1

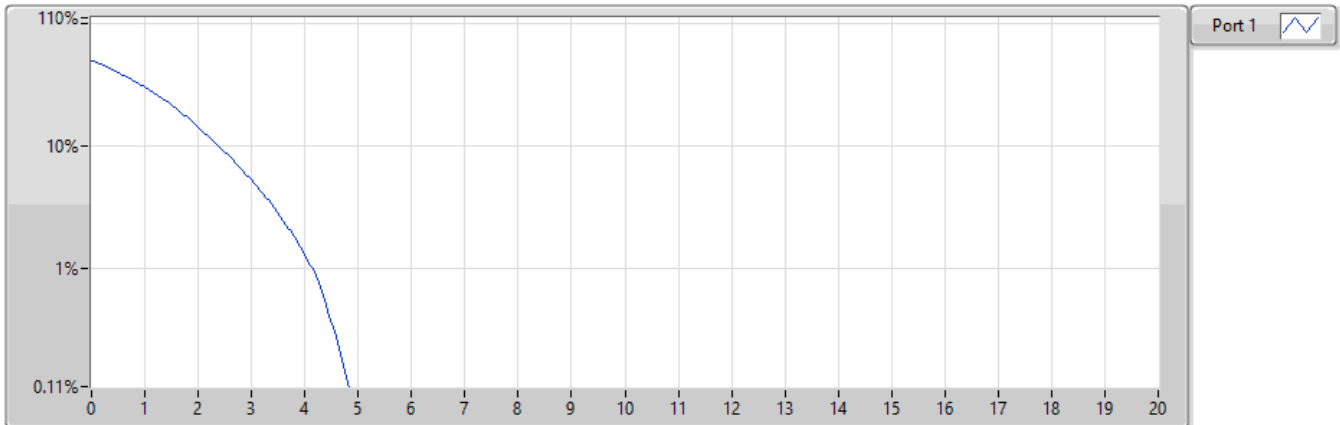
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 4_LTE_20MHz_Nss1_1TX	-	-	-	-	-
1732.5MHz_QPSK_RB 100	Pass	1732.5	13.00	4.87	1
1732.5MHz_16QAM_RB 27	Pass	1732.5	13.00	6.09	1

Band 4_LTE_20MHz_Nss1,QPSK_1TX

PAPR

1732.5MHz_QPSK_RB 100

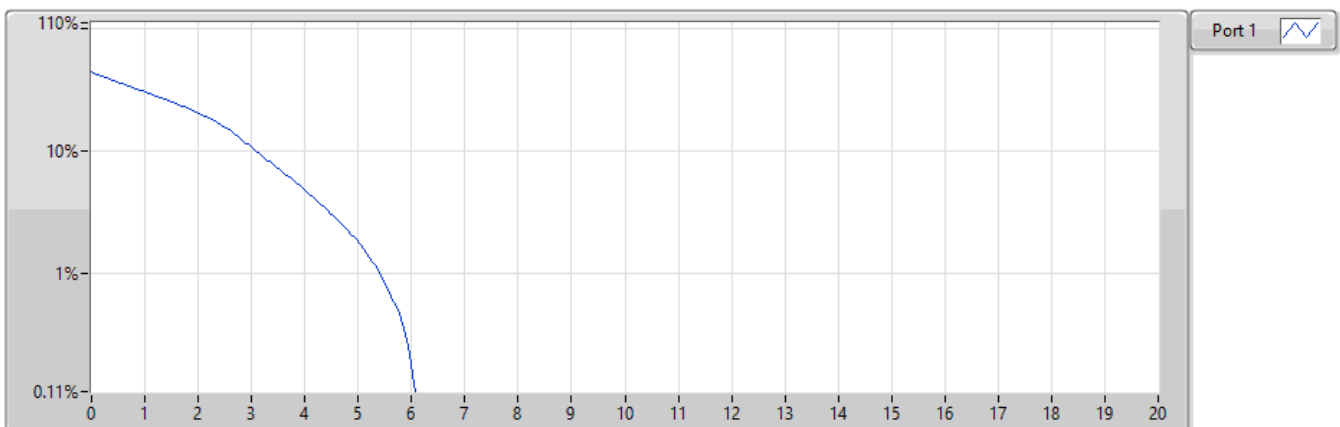


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
1732.5	20M	4.87	-8.13	13.00	1

Band 4_LTE_20MHz_Nss1,16QAM_1TX

PAPR

1732.5MHz_16QAM_RB 27



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
1732.5	20M	6.09	-6.91	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}	-0.003	1711.003994	-0.002	1753.995996
T20°C V _{min}	-0.002	1711.003996	-0.003	1753.995994
T50°C V _{nom}	-0.005	1711.003991	-0.007	1753.995988
T40°C V _{nom}	-0.006	1711.003989	-0.006	1753.995990
T30°C V _{nom}	-0.002	1711.003996	-0.002	1753.995997
T20°C V _{nom}	-0.003	1711.003995	-0.002	1753.995997
T10°C V _{nom}	-0.004	1711.003993	-0.001	1753.995998
T0°C V _{nom}	-0.003	1711.003995	-0.005	1753.995991
T-10°C V _{nom}	-0.004	1711.003993	-0.005	1753.995992
T-20°C V _{nom}	-0.006	1711.003989	-0.006	1753.995989
T-30°C V _{nom}	-0.008	1711.003986	-0.006	1753.995990
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		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}	-0.002	1710.752997	-0.002	1754.246997
T20°C V _{min}	-0.004	1710.752993	-0.003	1754.246994
T50°C V _{nom}	-0.007	1710.752988	-0.005	1754.246992
T40°C V _{nom}	-0.006	1710.752989	-0.006	1754.246989
T30°C V _{nom}	-0.004	1710.752993	-0.003	1754.246994
T20°C V _{nom}	-0.004	1710.752993	-0.002	1754.246997
T10°C V _{nom}	-0.004	1710.752993	-0.004	1754.246993
T0°C V _{nom}	-0.006	1710.752990	-0.003	1754.246995
T-10°C V _{nom}	-0.007	1710.752988	-0.007	1754.246988
T-20°C V _{nom}	-0.004	1710.752993	-0.003	1754.246994
T-30°C V _{nom}	-0.007	1710.752988	-0.005	1754.246991
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		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}	-0.002	1710.514996	-0.003	1754.497995
T20°C V _{min}	-0.004	1710.514993	-0.004	1754.497993
T50°C V _{nom}	-0.008	1710.514987	-0.006	1754.497989
T40°C V _{nom}	-0.003	1710.514994	-0.006	1754.497990
T30°C V _{nom}	-0.002	1710.514997	-0.001	1754.497998
T20°C V _{nom}	-0.002	1710.514996	-0.004	1754.497993
T10°C V _{nom}	-0.002	1710.514997	-0.001	1754.497998
T0°C V _{nom}	-0.003	1710.514994	-0.003	1754.497995
T-10°C V _{nom}	-0.005	1710.514992	-0.004	1754.497993
T-20°C V _{nom}	-0.005	1710.514992	-0.006	1754.497990
T-30°C V _{nom}	-0.006	1710.514990	-0.006	1754.497990
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		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}	-0.004	1710.263993	-0.003	1754.735994
T20°C V _{min}	-0.001	1710.263998	-0.004	1754.735993
T50°C V _{nom}	-0.005	1710.263991	-0.006	1754.735990
T40°C V _{nom}	-0.006	1710.263990	-0.003	1754.735994
T30°C V _{nom}	-0.004	1710.263994	-0.004	1754.735993
T20°C V _{nom}	-0.003	1710.263995	-0.002	1754.735996
T10°C V _{nom}	-0.002	1710.263996	-0.002	1754.735997
T0°C V _{nom}	-0.004	1710.263994	-0.003	1754.735994
T-10°C V _{nom}	-0.004	1710.263993	-0.005	1754.735991
T-20°C V _{nom}	-0.004	1710.263994	-0.005	1754.735991
T-30°C V _{nom}	-0.007	1710.263988	-0.008	1754.735986
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		T _{min} [°C]: -30	

LTE Band 4, CB: 3MHz				
Temperature (°C)	1711.5MHz		1753.5MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	-0.004	1710.153994	-0.001	1754.845998
T20°C V _{min}	-0.001	1710.153998	-0.002	1754.845996
T50°C V _{nom}	-0.008	1710.153987	-0.006	1754.845990
T40°C V _{nom}	-0.004	1710.153994	-0.006	1754.845989
T30°C V _{nom}	-0.003	1710.153995	-0.002	1754.845997
T20°C V _{nom}	-0.004	1710.153993	-0.003	1754.845995
T10°C V _{nom}	-0.004	1710.153994	-0.004	1754.845993
T0°C V _{nom}	-0.006	1710.153990	-0.003	1754.845995
T-10°C V _{nom}	-0.004	1710.153993	-0.005	1754.845991
T-20°C V _{nom}	-0.004	1710.153993	-0.006	1754.845990
T-30°C V _{nom}	-0.007	1710.153988	-0.008	1754.845986
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		T _{min} [°C]: -30	

LTE Band 4, CB: 1.4MHz				
Temperature (°C)	1710.7MHz		1754.3MHz	
	Frequency Drift (ppm)	F _L (MHz)	Frequency Drift (ppm)	F _H (MHz)
T20°C V _{max}	-0.002	1710.153997	-0.002	1754.841996
T20°C V _{min}	-0.002	1710.153996	-0.003	1754.841995
T50°C V _{nom}	-0.006	1710.153989	-0.006	1754.841989
T40°C V _{nom}	-0.004	1710.153993	-0.005	1754.841992
T30°C V _{nom}	-0.002	1710.153996	-0.001	1754.841998
T20°C V _{nom}	-0.004	1710.153993	-0.002	1754.841996
T10°C V _{nom}	-0.001	1710.153998	-0.001	1754.841998
T0°C V _{nom}	-0.004	1710.153993	-0.006	1754.841990
T-10°C V _{nom}	-0.006	1710.153990	-0.005	1754.841991
T-20°C V _{nom}	-0.005	1710.153992	-0.006	1754.841989
T-30°C V _{nom}	-0.006	1710.153989	-0.005	1754.841991
Limit		>1710MHz		<1755MHz
V _{nom} [V]: 120	V _{max} [V]: 138		V _{min} [V]: 102	
T _{nom} [°C]: 20	T _{max} [°C]: 50		T _{min} [°C]: -30	