

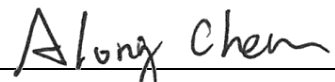
FCC Test Report

FCC ID : 2A7G3XS5G01
Equipment : 5G SOM
Model No. : XS5G01-GB0
(refer to item 1.1.1 for more details)
Brand Name : XSquare
Applicant : XSquare Communications Corporation
Address : NO.6 INNOVATION ROAD II, SCIENCE PARK,
HSINCHU 30076, TAIWAN, R.O.C
Standard : 47 CFR FCC Part 27
Received Date : Dec. 01, 2022
Tested Date : Dec. 23, 2022 ~ Feb. 09, 2023

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

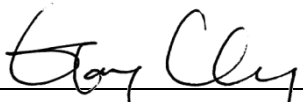

Gary Chang / Manager

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LTE BAND 41

APPENDIX A.1 TEST RESULTS FOR EQUIVALENT ISOTROPICALLY RADIATED POWER

APPENDIX B.1 TEST RESULTS FOR RADIATED EMISSIONS

APPENDIX C.1 TEST RESULTS FOR OUT OF BAND EMISSIONS

APPENDIX D.1 TEST RESULTS FOR CHANNEL EDGE

APPENDIX E.1 TEST RESULTS FOR EMISSION AND OCCUPIED BANDWIDTH

APPENDIX F.1 TEST RESULTS FOR FREQUENCY STABILITY

APPENDIX G.1 TEST RESULTS FOR PEAK TO AVERAGE RATIO

LTE BAND 38

APPENDIX A.2 TEST RESULTS FOR EQUIVALENT ISOTROPICALLY RADIATED POWER

Release Record

Report No.	Version	Description	Issued Date
FG132502-04P27M	Rev. 01	Initial issue	Apr. 18, 2023

Summary of Test Results

FCC Rules	Description of Test	Measured	Result
2.1046 / 27.50(h)(2)	Equivalent Isotropically Radiated Power	Maximum EIRP[dBm]: 22.88	Pass
2.1053 / 27.53(m)(4)(6)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(m)(4)(6)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(m)(4)(6)	Channel Edge Measurement	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Power Ratio	Meet the requirement of limit	Pass
2.1049(h) / 27.53(m)(6)	Emission Bandwidth	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 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
XSquare	XS5G01-GBO	5G SOM	With GPS Component
	XS5G01-GBI		Without GPS Component
✦ The above models, model XS5G01-GBO was selected as a representative one for the final test and only its data was recorded in this report.			

1.1.2 Specification of the Equipment under Test (EUT)

Operating Frequency	LTE Band 38: Channel Bandwidth: 5MHz: 2572.5 MHz ~ 2617.5 MHz Channel Bandwidth: 10MHz: 2575 MHz ~ 2615 MHz Channel Bandwidth: 15MHz: 2577.5 MHz ~ 2612.55 MHz Channel Bandwidth: 20MHz: 2580 MHz ~ 2610 MHz LTE Band 41: Channel Bandwidth: 5MHz: 2498.5 MHz ~ 2687.5 MHz Channel Bandwidth: 10MHz: 2501 MHz ~ 2685 MHz Channel Bandwidth: 15MHz: 2503.5 MHz ~ 2682.5 MHz Channel Bandwidth: 20MHz: 2506 MHz ~ 2680 MHz
Modulation	QPSK, 16QAM, 64QAM, 256QAM (Uplink) QPSK, 16QAM, 64QAM, 256QAM (Downlink)

1.1.3 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)
Anjie	AELQ2S-B066L	Dipole	SMA	-1.1

1.1.4 Power Supply Type of Equipment under Test (EUT)

Supply Voltage	4 Vdc		
Operational Voltage	☒ Vnom (4 V)	☒ Vmax (4.2 V)	☒ Vmin (3.8 V)
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (70°C)	☒ Tmin (-30°C)

1.1.5 Accessories

N/A

1.1.6 Maximum Conducted Power and Emission Designator

LTE Band 38			
Channel Bandwidth	Modulation	Maximum Conducted Power (W)	Emission Designator
5 MHz	QPSK	0.222	4M47G7D
5 MHz	16QAM	0.184	4M47W7D
5 MHz	64QAM	0.145	4M47W7D
5MHz	256QAM	0.073	4M46W7D
10 MHz	QPSK	0.224	8M93G7D
10 MHz	16QAM	0.185	8M93W7D
10 MHz	64QAM	0.143	8M94W7D
10MHz	256QAM	0.070	8M91W7D
15 MHz	QPSK	0.222	13M5G7D
15 MHz	16QAM	0.179	13M5W7D
15 MHz	64QAM	0.142	13M4W7D
15 MHz	256QAM	0.072	13M4W7D
20 MHz	QPSK	0.222	17M9G7D
20 MHz	16QAM	0.183	17M9W7D
20 MHz	64QAM	0.143	17M9W7D
20 MHz	256QAM	0.070	17M9W7D

LTE Band 41			
Channel Bandwidth	Modulation	Maximum Conducted Power (W)	Emission Designator
5 MHz	QPSK	0.244	4M47G7D
5 MHz	16QAM	0.200	4M47W7D
5 MHz	64QAM	0.164	4M47W7D
5MHz	256QAM	0.082	4M46W7D
10 MHz	QPSK	0.249	8M93G7D
10 MHz	16QAM	0.206	8M93W7D
10 MHz	64QAM	0.166	8M94W7D
10MHz	256QAM	0.085	8M91W7D
15 MHz	QPSK	0.245	13M5G7D
15 MHz	16QAM	0.203	13M5W7D
15 MHz	64QAM	0.160	13M4W7D
15 MHz	256QAM	0.083	13M4W7D
20 MHz	QPSK	0.250	17M9G7D
20 MHz	16QAM	0.204	17M9W7D
20 MHz	64QAM	0.169	17M9W7D
20 MHz	256QAM	0.086	17M9W7D

1.1.7 Operating Channel List

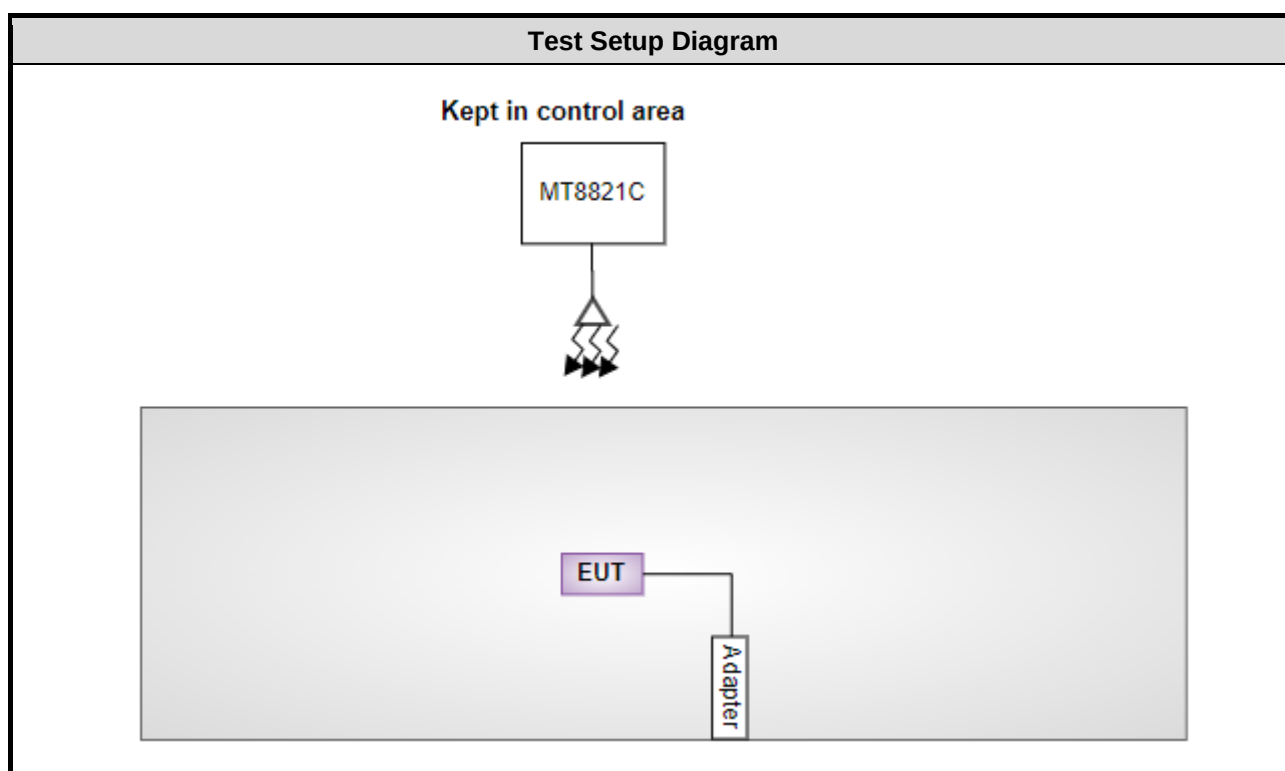
LTE Band 38		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	37775	2572.5
5	38000	2595
5	38225	2617.5
10	37800	2575
10	38000	2595
10	38200	2615
15	37825	2577.5
15	38000	2595
15	38175	2612.5
20	37850	2580
20	38000	2595
20	38150	2610

LTE Band 41		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	39675	2498.5
5	40620	2593
5	41565	2687.5
10	39700	2501
10	40620	2593
10	41540	2685
15	39725	2503.5
15	40620	2593
15	41515	2682.5
20	39750	2506
20	40620	2593
20	41490	2680

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Adapter	APD	WY-36C12FU	---	Provided by applicant.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Feb. 06 ~ Feb. 09, 2023				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Spectrum Analyzer	R&S	FSV40	101498	Nov. 21, 2022	Nov. 20, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 01, 2022	Oct. 31, 2023
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 03, 2022	Aug. 02, 2023
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 25, 2022	Nov. 24, 2023
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 27, 2022	Oct. 26, 2023
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC118A45SE	980898	Jul. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045SE	980903	Jul. 16, 2022	Jul. 15, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 04, 2022	Oct. 03, 2023
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 04, 2022	Oct. 03, 2023
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 04, 2022	Oct. 03, 2023
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 04, 2022	Oct. 03, 2023
RF Cable	EMC	EMC104-35M-35M- 8000	210920	Oct. 04, 2022	Oct. 03, 2023
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 04, 2022	Oct. 03, 2023
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Sep. 12, 2022	Sep. 11, 2023
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Dec. 23, 2022 ~ Feb. 09, 2023				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 08, 2022	Apr. 07, 2023
Spectrum Analyzer	Keysight	N9010A	MY54510374	Aug. 26, 2022	Aug. 25, 2023
Power Meter	Anritsu	ML2495A	1241002	Nov. 23, 2022	Nov. 22, 2023
Power Sensor	Anritsu	MA2411B	1207366	Nov. 23, 2022	Nov. 22, 2023
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Jun. 22, 2022	Jun. 21, 2023
DC POWER SOURCE	GW INSTRON	GPC-6030D	GES855395	Oct. 31, 2022	Oct. 30, 2023
Measurement Software	Sporton	SENSE-FCC_2G-4G	V6.1.6	NA	NA
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Sep. 12, 2022	Sep. 11, 2023
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 Condition and Location Information

Test Item	Test Site	Ambient Condition	Tested By
Radiated Emissions	03CH01-WS	22-24°C / 65-66%	Brad Wu
RF Conducted	TH01-WS	23-25°C / 62-66%	Roger Lu

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

2.2 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

2.3 The Worst Test Modes and Channel Details

Test items	Band	Bandwidth(MHz)						Modulation				RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK	16 QAM	64 QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	38	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
peak-to-Average Ratio	38	Covered by LTE Band41															
	41	-	-				v	v	v	v	v			v		v	
26dB and 99% Bandwidth	38	Covered by LTE Band41															
	41	-	-	v	v	v	v	v	v	v	v			v		v	
Conducted Channel Edge	38	Covered by LTE Band41															
	41	-	-	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	38	Covered by LTE Band41															
	41	-	-	v	v	v	v	v				v			v	v	v
Frequency Stability	38	Covered by LTE Band41															
	41	-	-				v	v						v		v	
E.I.R.P	38	-	-	v	v	v	v	v	v	v	v	Max. power					
	41	-	-	v	v	v	v	v	v	v	v						
Radiated Spurious Emission	38	Covered by LTE Band41													v	v	v
	41	Worst Case													v	v	v
Remark	1. "v": this configuration is for testing. 2. "-":This bandwidth is not supported. 3. Frequency range of radiated measurement is from 30 MHz to 10th harmonic of fundamental frequency. 4. All spurious emissions below 1000 MHz are more than 20 dB below the limit. 5. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report.																

3 Test Results

3.1 Equivalent Isotropically Radiated Power

3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile stations are limited to 2.0 watts EIRP

3.1.2 Test Procedures

For E.I.R.P measurement

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

1. $EIRP = P_T + G_T - L_C$

P_T = transmitter output power, in dBm.

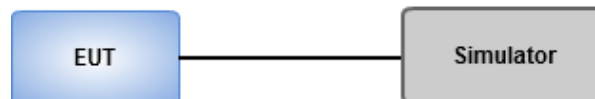
G_T = gain of the transmitting antenna, in dBi (EIRP).

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

For Conducted power measurement

1. The EUT links up with simulator and is set to maximum output power level at low / 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 Result

Refer to Appendix A.1, A.2.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

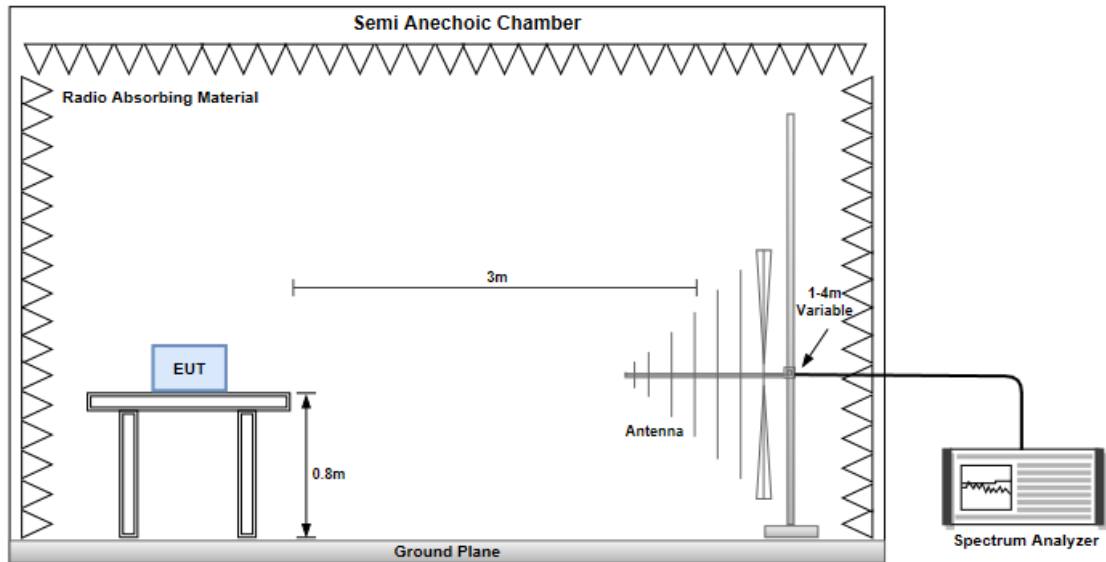
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13 dBm.

3.2.2 Test Procedures

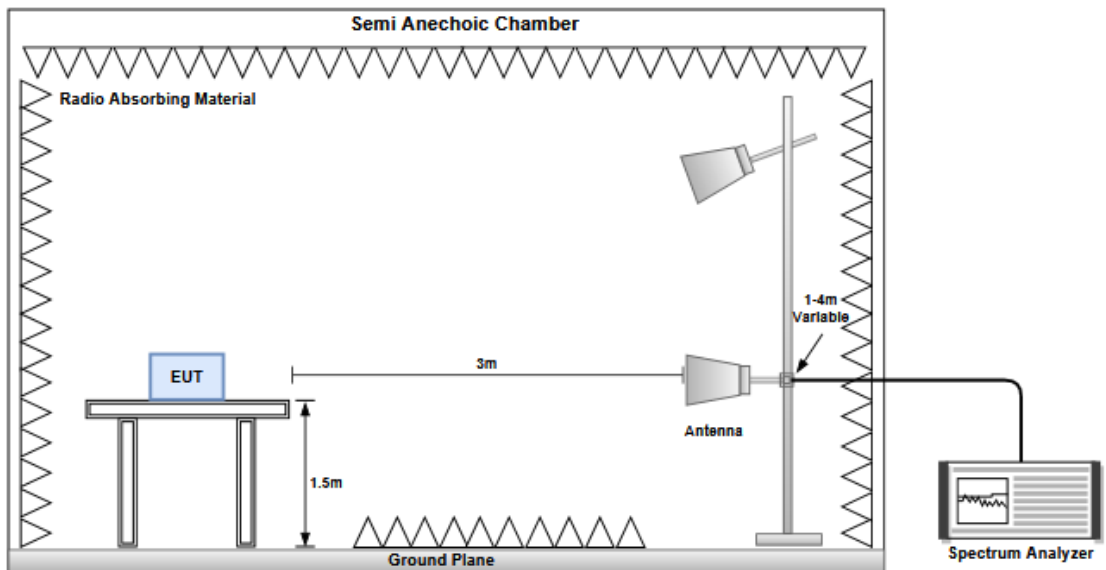
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Refer to Appendix B.1.

3.3 Out of Band Emissions

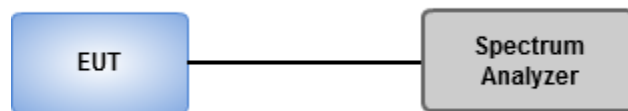
3.3.1 Limit of Out of Band Emissions

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 $55 + 10 \log(P)$ dB equal to -25dBm.

3.3.2 Test Procedures

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30MHz~27GHz.
3. Set RBW = 1MHz, VBW = 3MHz, detector = average, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

3.3.3 Test Setup



3.3.4 Test Result of Conducted Emissions

Refer to Appendix C.1.

3.4 Channel Edge

3.4.1 Limit of Channel Edge

The attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph FCC Part 27.53(m)(6). In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz

3.4.2 Test Procedures

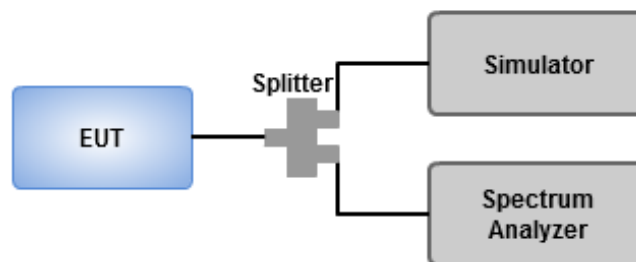
Band power measurement

1. Lowest and highest operating channels are tested for this item.
2. Set RBW = 2% of emission bandwidth, VBW = 3 x RBW, detector = RMS, sweep time = auto.
3. Enable adjacent channel power of spectrum analyzer to measure power of channel edge
4. Record the max trace value and capture the test plot.

Non-Band power measurement

1. Lowest and highest operating channels are tested for this item.
2. Set RBW = 1MHz, VBW = 3 MHz, detector = RMS, sweep time = auto.
3. Record the max trace value and capture the test plot.

3.4.3 Test Setup



3.4.4 Test Result of Band Edge

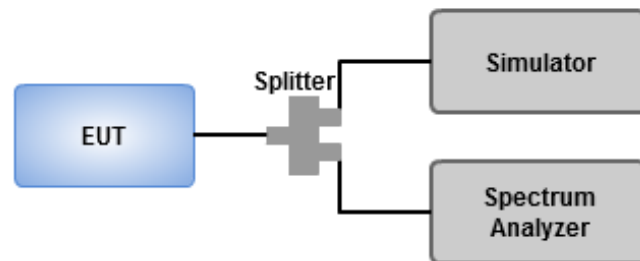
Refer to Appendix D.1

3.5 Emission and Occupied Bandwidth

3.5.1 Test Procedures

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Set Detector = Peak, Trace mode = max hold, Sweep = auto couple, Allow the trace to stabilize.
3. Using 26dB and occupied bandwidth measurement function of spectrum analyzer to measure bandwidth

3.5.2 Test Setup



3.5.3 Test Result of Emission and Occupied Bandwidth

Refer to Appendix E.1.

3.6 Frequency Stability

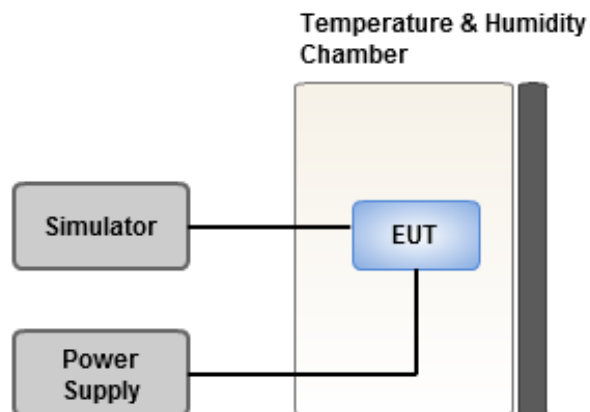
3.6.1 Limit of Frequency Stability

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 Result of Frequency Stability

Refer to Appendix F.1.

3.7 Peak to Average Power Ratio

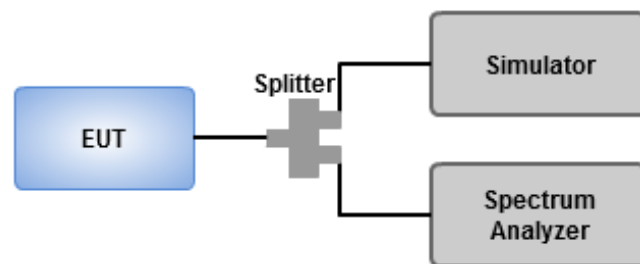
3.7.1 Limit of Peak to Average Power Ratio

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

3.7.2 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%.

3.7.3 Test Setup



3.7.4 Test Result of Peak to Average Power Ratio

Refer to Appendix G.1

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==

Summary

Part27M LTE Band 41 Maximum Average Power [dBm](GT-LC= -1.1 dB)								
BW (MHz)	Modulation	RB Size	RB Offset	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
Channel				39750	40620	41490		
Frequency				2506	2593	2680		
20	QPSK	1	0	23.98	23.51	23.76	22.88	0.1941
20	QPSK	1	99	23.92	23.5	23.72		
20	QPSK	100	0	23.27	22.5	22.95		
20	16QAM	1	0	23.09	22.63	22.93	21.99	0.1581
20	64QAM	1	0	22.27	21.74	22.15	21.17	0.1309
20	256QAM	1	0	19.35	18.91	19.17	18.25	0.0668
Channel				39725	40620	41515	EIRP (dBm)	EIRP (W)
Frequency				2503.5	2593	2682.5		
15	QPSK	1	0	23.89	23.46	23.63	22.79	0.1901
15	QPSK	1	74	23.86	23.45	23.62		
15	QPSK	75	0	23	22.49	22.71		
15	16QAM	1	0	23.07	22.53	22.83	21.97	0.1574
15	64QAM	1	0	22.04	21.51	21.78	20.94	0.1242
15	256QAM	1	0	19.21	18.82	19.04	18.11	0.0647
Channel				39700	40620	41540	EIRP (dBm)	EIRP (W)
Frequency				2501	2593	2685		
10	QPSK	1	0	23.96	23.52	23.68	22.86	0.1932
10	QPSK	1	49	23.91	23.5	23.62		
10	QPSK	50	0	23.1	22.62	22.76		
10	16QAM	1	0	23.14	22.65	22.79	22.04	0.1600
10	64QAM	1	0	22.2	21.67	21.89	21.1	0.1288
10	256QAM	1	0	19.27	18.84	19.1	18.17	0.0656
Channel				39675	40620	41565	EIRP (dBm)	EIRP (W)
Frequency				2498.5	2593	2687.5		
5	QPSK	1	0	23.88	23.44	23.6	22.78	0.1897
5	QPSK	1	24	23.82	23.42	23.59		
5	QPSK	25	0	22.94	22.47	22.68		
5	16QAM	1	0	23.02	22.56	22.75	21.92	0.1556
5	64QAM	1	0	22.15	21.56	21.86	21.05	0.1274
5	256QAM	1	0	19.14	18.73	18.71	18.04	0.0637
Limit	EIRP < 2 W			Result			Pass	

Summary

Part27M LTE Band 38 Maximum Average Power [dBm](GT-LC= -1.1 dB)								
BW (MHz)	Modulation	RB Size	RB Offset	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
Channel				37850	38000	38150		
Frequency				2580	2595	2610		
20	QPSK	1	0	23.47	23.45	23.44	22.37	0.1726
20	QPSK	1	99	23.38	23.42	23.42		
20	QPSK	100	0	22.3	22.37	22.4		
20	16QAM	1	0	22.35	22.48	22.62	21.52	0.1419
20	64QAM	1	0	21.32	21.47	21.55	20.45	0.1109
20	256QAM	1	0	18.45	18.31	18.47	17.37	0.0546
Channel				37825	38000	38175	EIRP (dBm)	EIRP (W)
Frequency				2577.5	2595	2612.5		
15	QPSK	1	0	23.46	23.43	23.47	22.37	0.1726
15	QPSK	1	74	23.45	23.4	23.42		
15	QPSK	75	0	22.32	22.33	22.36		
15	16QAM	1	0	22.54	22.41	22.47	21.44	0.1393
15	64QAM	1	0	21.49	21.53	21.42	20.43	0.1104
15	256QAM	1	0	18.47	18.51	18.55	17.45	0.0556
Channel				37800	38000	38200	EIRP (dBm)	EIRP (W)
Frequency				2575	2595	2615		
10	QPSK	1	0	23.5	23.49	23.48	22.4	0.1738
10	QPSK	1	49	23.47	23.46	23.44		
10	QPSK	50	0	22.33	22.42	22.39		
10	16QAM	1	0	22.62	22.68	22.66	21.58	0.1439
10	64QAM	1	0	21.54	21.45	21.42	20.44	0.1107
10	256QAM	1	0	18.44	18.46	18.45	17.36	0.0545
Channel				37775	38000	38225	EIRP (dBm)	EIRP (W)
Frequency				2572.5	2595	2617.5		
5	QPSK	1	0	23.46	23.42	23.45	22.36	0.1722
5	QPSK	1	24	23.43	23.41	23.42		
5	QPSK	25	0	22.32	22.45	22.39		
5	16QAM	1	0	22.65	22.52	22.63	21.55	0.1429
5	64QAM	1	0	21.53	21.6	21.45	20.5	0.1122
5	256QAM	1	0	18.42	18.62	18.57	17.52	0.0565
Limit	EIRP < 2 W			Result			Pass	

Mode	LTE Band 41, QPSK, CB:20 MHz, 1 RB, Channel: 39750						
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)
4994.4	H	-59.59	-25	-34.59	-71.44	-65.64	6.05
7491.6	H	-55.92	-25	-30.92	-71.28	-59.01	3.09
9988.8	H	-53.61	-25	-28.61	-68.89	-54.73	1.12
4994.4	V	-59.51	-25	-34.51	-71.48	-65.56	6.05
7491.6	V	-55.22	-25	-30.22	-71.04	-58.31	3.09
9988.8	V	-55.23	-25	-30.23	-68.57	-56.35	1.12

Mode	LTE Band 41, QPSK, CB:20 MHz, 1 RB, Channel: 40620						
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)
5168.4	H	-60.14	-25	-35.14	-71.53	-65.96	5.82
7752.6	H	-56.19	-25	-31.19	-71.14	-59.17	2.98
10336.8	H	-53.77	-25	-28.77	-68.72	-54.57	0.8
5168.4	V	-60.11	-25	-35.11	-71.53	-65.93	5.82
7752.6	V	-55.65	-25	-30.65	-71.06	-58.63	2.98
10336.8	V	-54.02	-25	-29.02	-68.07	-54.82	0.8

Mode	LTE Band 41, QPSK, CB:20 MHz, 1 RB, Channel: 41490						
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)
5342.4	H	-60.04	-25	-35.04	-71.97	-66.28	6.24
8013.6	H	-55.86	-25	-30.86	-70.72	-58.24	2.38
10684.8	H	-52.32	-25	-27.32	-67.16	-52.79	0.47
5342.4	V	-59.96	-25	-34.96	-71.92	-66.2	6.24
8013.6	V	-55.41	-25	-30.41	-70.68	-57.79	2.38
10684.8	V	-52.93	-25	-27.93	-67.41	-53.4	0.47

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

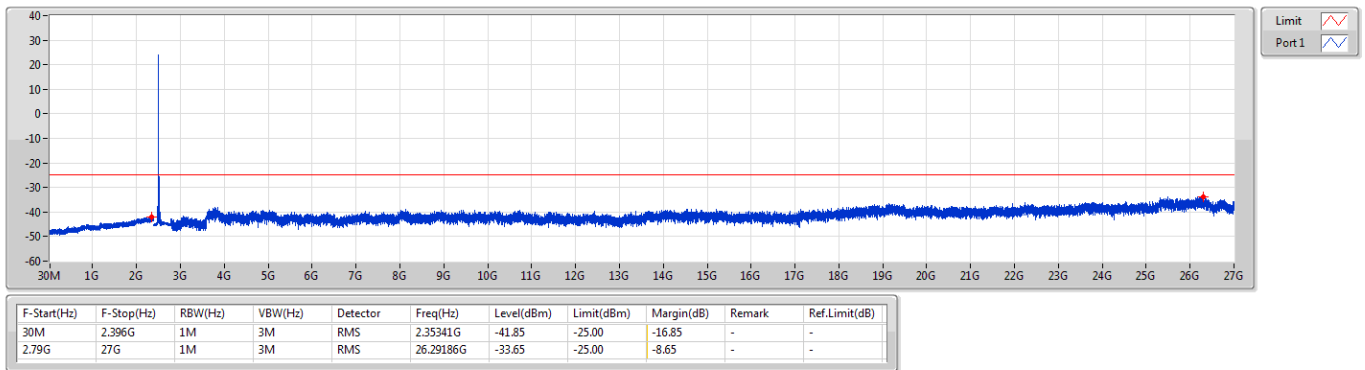
**Summary**

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 41	-	-	-	-	-	-	-	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	2.79G	27G	1M	3M	RMS	26.29186G	-33.65	-25.00	-8.65	-	-
LTE_15MHz_Nss1,QPSK_1TX	Pass	2.79G	27G	1M	3M	RMS	26.32817G	-33.31	-25.00	-8.31	-	-
LTE_10MHz_Nss1,QPSK_1TX	Pass	2.79G	27G	1M	3M	RMS	25.94838G	-33.28	-25.00	-8.28	-	-
LTE_5MHz_Nss1,QPSK_1TX	Pass	2.79G	27G	1M	3M	RMS	26.14433G	-33.37	-25.00	-8.37	-	-



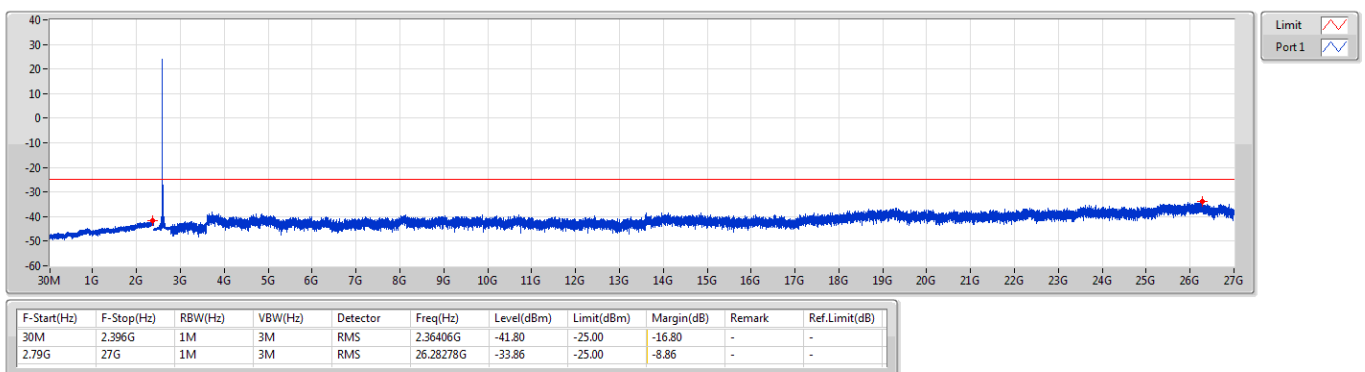
Band 41_LTE_20MHz_Nss1,QPSK_1TX
2506MHz_QPSK_RB 1

CSE-TX-Sum



Band 41_LTE_20MHz_Nss1,QPSK_1TX
2593MHz_QPSK_RB 1

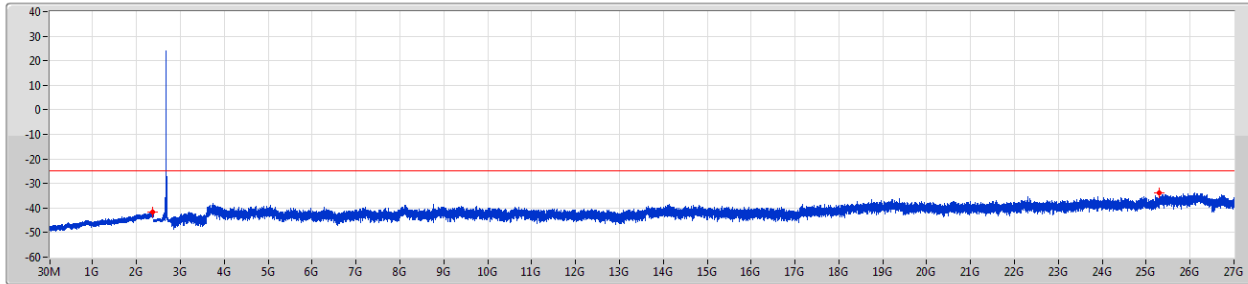
CSE-TX-Sum



Band 41_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

2680MHz_QPSK_RB 1

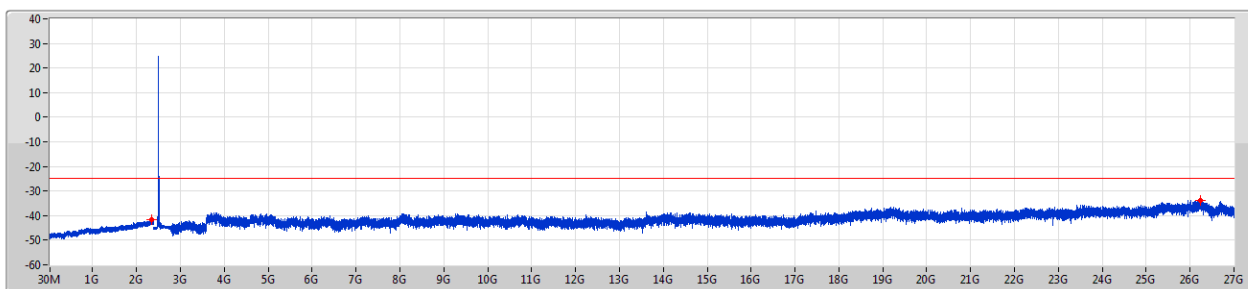


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	2.396G	1M	3M	RMS	2.3682G	-41.55	-25.00	-16.55	-	-
2.79G	27G	1M	3M	RMS	25.3053G	-33.96	-25.00	-8.96	-	-

Band 41_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

2503.5MHz_QPSK_RB 1

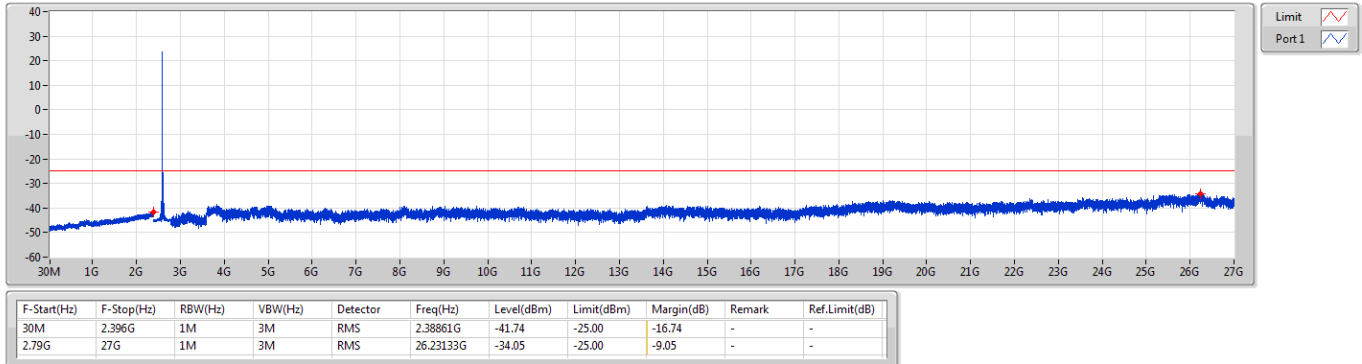


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	2.396G	1M	3M	RMS	2.34247G	-41.66	-25.00	-16.66	-	-
2.79G	27G	1M	3M	RMS	26.23436G	-33.80	-25.00	-8.80	-	-

Band 41_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

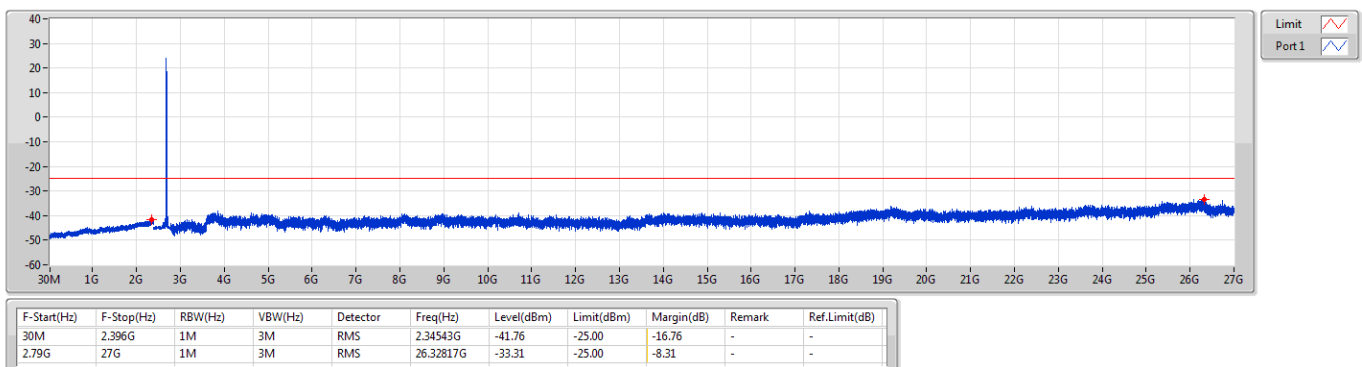
2593MHz_QPSK_RB 1



Band 41_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

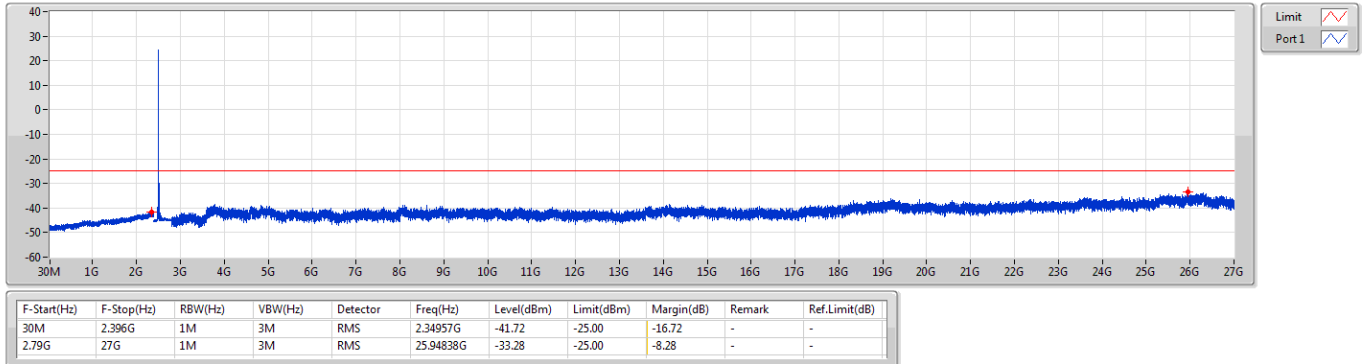
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Band 41_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

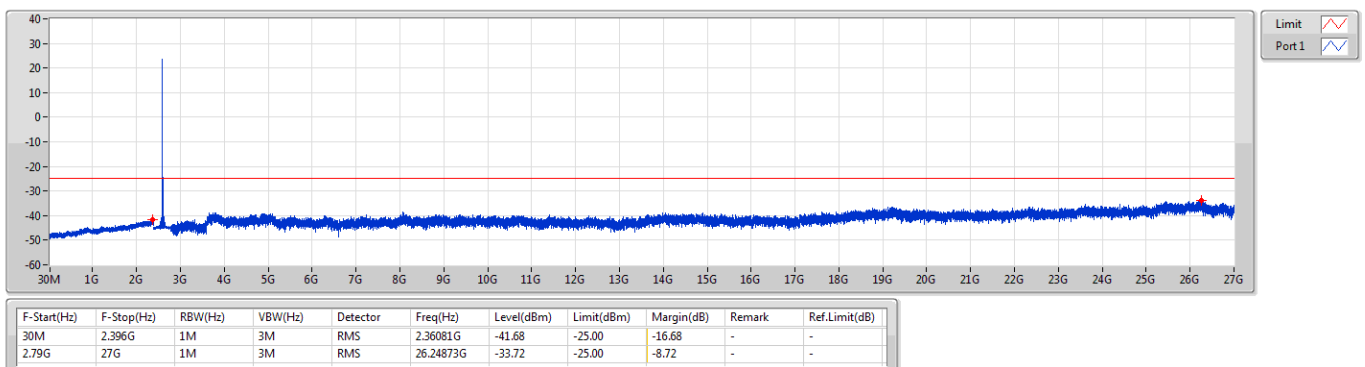
2501MHz_QPSK_RB 1



Band 41_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

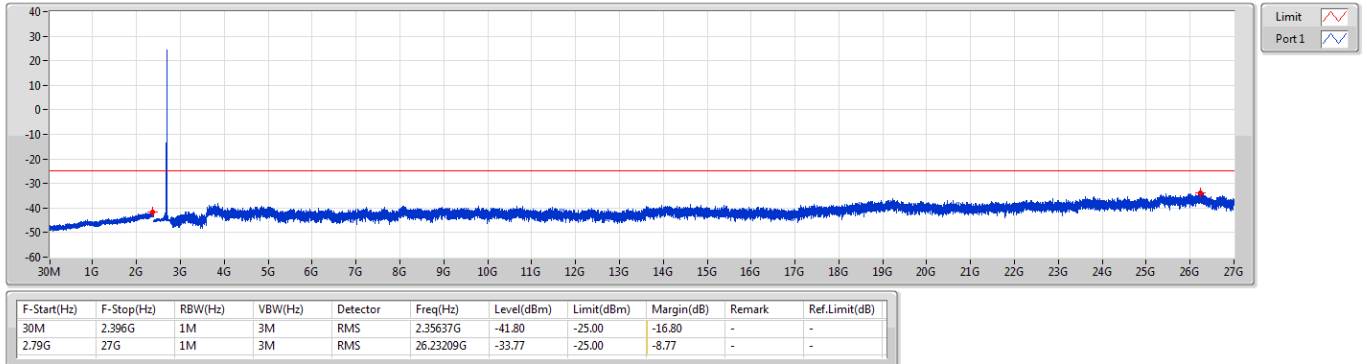
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Band 41_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

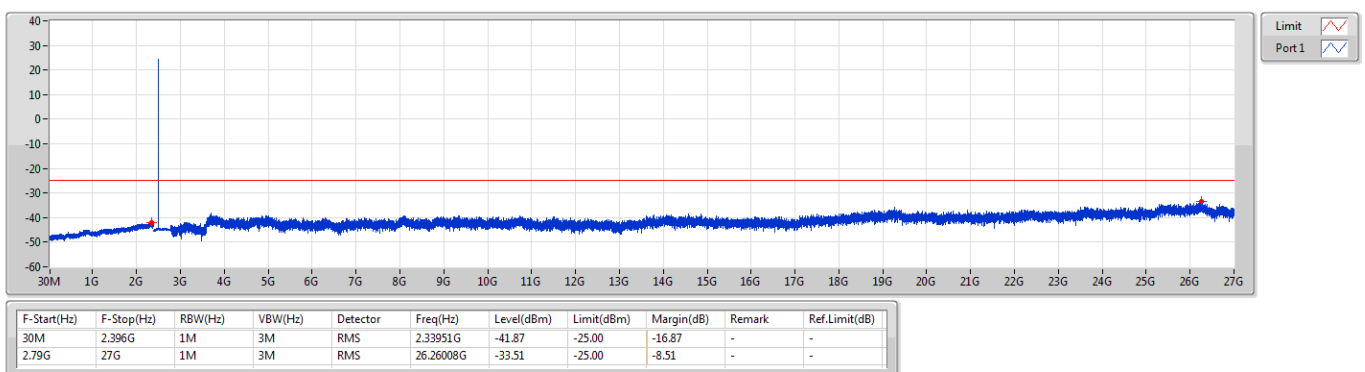
2685MHz_QPSK_RB 1



Band 41_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

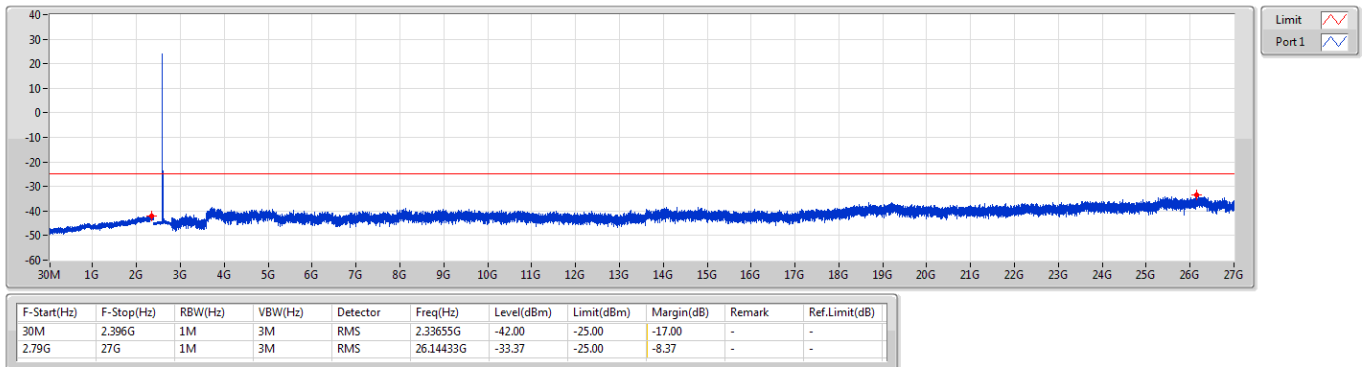
2498.5MHz_QPSK_RB 1



Band 41_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

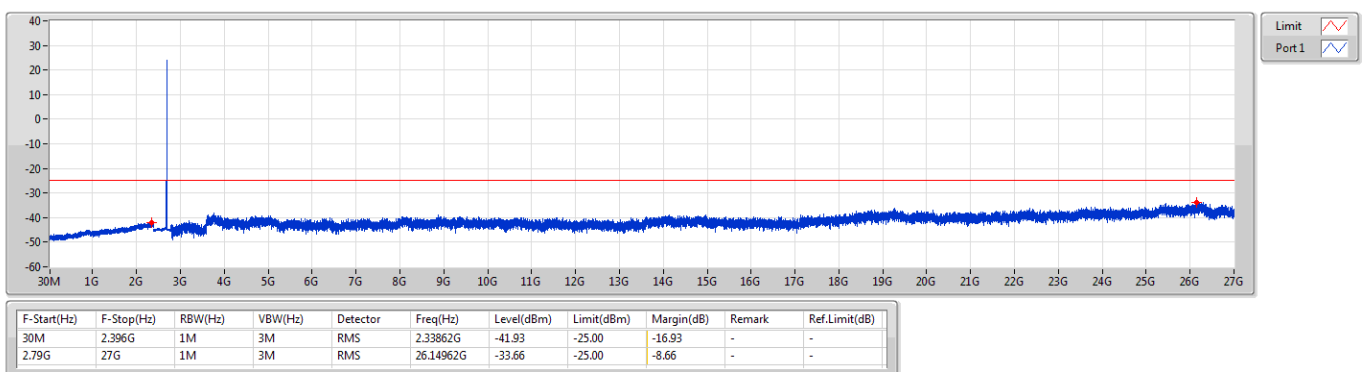
2593MHz_QPSK_RB 1



Band 41_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

2687.5MHz_QPSK_RB 1



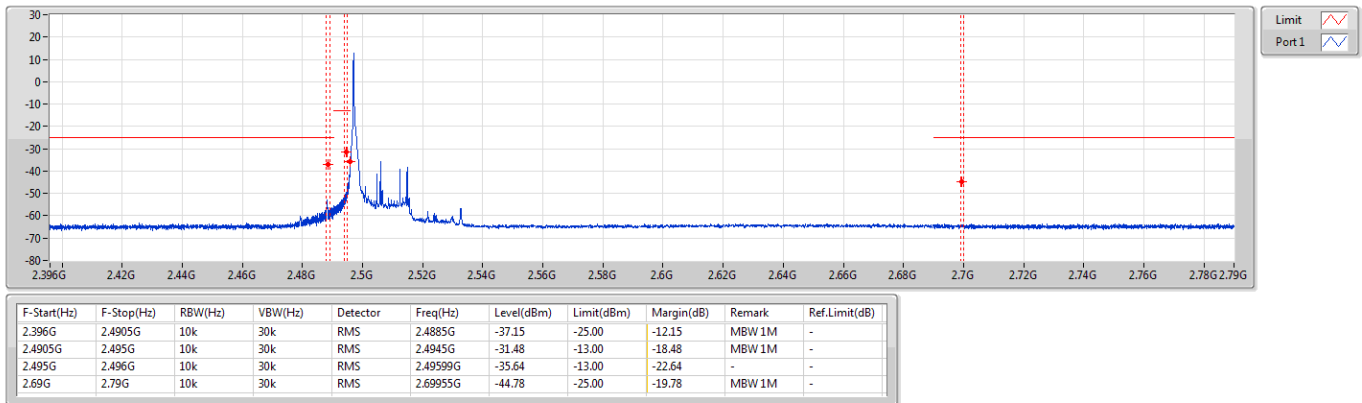
Summary

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 41	-	-	-	-	-	-	-	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	2.396G	2.4905G	510k	2M	RMS	2.49G	-27.32	-25.00	-2.32	MBW 1M	-
LTE_20MHz_Nss1,16QAM_1TX	Pass	2.396G	2.4905G	510k	2M	RMS	2.4895G	-26.82	-25.00	-1.82	MBW 1M	-
LTE_20MHz_Nss1,64QAM_1TX	Pass	2.396G	2.4905G	510k	2M	RMS	2.49G	-27.87	-25.00	-2.87	MBW 1M	-
LTE_20MHz_Nss1,256QAM_1TX	Pass	2.396G	2.4905G	510k	2M	RMS	2.49G	-30.63	-25.00	-5.63	MBW 1M	-
LTE_15MHz_Nss1,QPSK_1TX	Pass	2.396G	2.4905G	300k	1M	RMS	2.49G	-26.59	-25.00	-1.59	MBW 1M	-
LTE_15MHz_Nss1,16QAM_1TX	Pass	2.396G	2.4905G	300k	1M	RMS	2.49G	-26.13	-25.00	-1.13	MBW 1M	-
LTE_15MHz_Nss1,64QAM_1TX	Pass	2.396G	2.4905G	300k	1M	RMS	2.49G	-27.11	-25.00	-2.11	MBW 1M	-
LTE_15MHz_Nss1,256QAM_1TX	Pass	2.396G	2.4905G	300k	1M	RMS	2.49G	-30.20	-25.00	-5.20	MBW 1M	-
LTE_10MHz_Nss1,QPSK_1TX	Pass	2.396G	2.4905G	200k	620k	RMS	2.49G	-26.32	-25.00	-1.32	MBW 1M	-
LTE_10MHz_Nss1,16QAM_1TX	Pass	2.396G	2.4905G	200k	620k	RMS	2.49G	-26.77	-25.00	-1.77	MBW 1M	-
LTE_10MHz_Nss1,64QAM_1TX	Pass	2.396G	2.4905G	200k	620k	RMS	2.49G	-28.12	-25.00	-3.12	MBW 1M	-
LTE_10MHz_Nss1,256QAM_1TX	Pass	2.396G	2.4905G	200k	620k	RMS	2.49G	-31.16	-25.00	-6.16	MBW 1M	-
LTE_5MHz_Nss1,QPSK_1TX	Pass	2.6899G	2.6909G	10k	30k	RMS	2.6899G	-16.91	-10.00	-6.91	-	-
LTE_5MHz_Nss1,16QAM_1TX	Pass	2.4905G	2.495G	100k	300k	RMS	2.4945G	-20.39	-13.00	-7.39	MBW 1M	-
LTE_5MHz_Nss1,64QAM_1TX	Pass	2.4905G	2.495G	100k	300k	RMS	2.4945G	-21.78	-13.00	-8.78	MBW 1M	-
LTE_5MHz_Nss1,256QAM_1TX	Pass	2.4905G	2.495G	100k	300k	RMS	2.4945G	-24.24	-13.00	-11.24	MBW 1M	-

Band 41_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

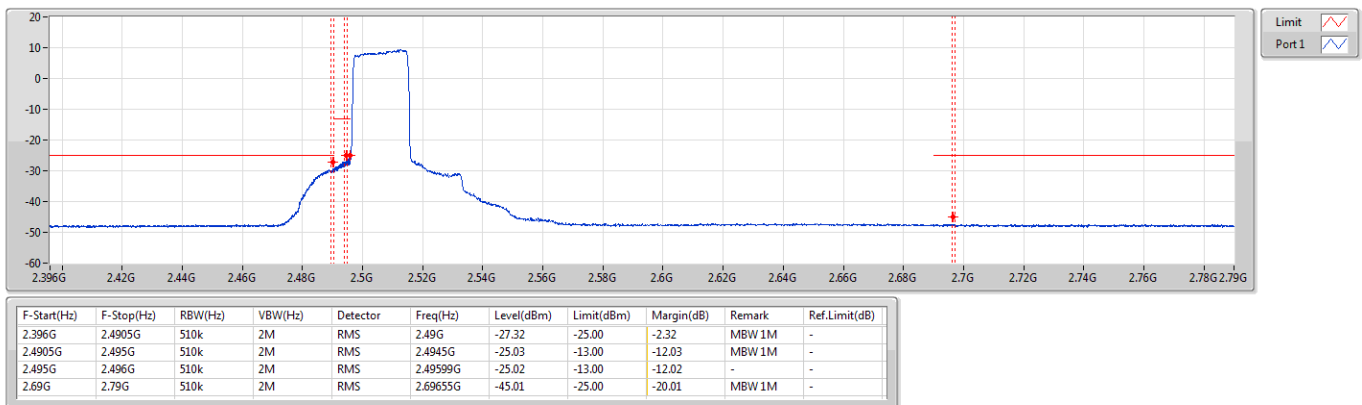
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Band 41_LTE_20MHz_Nss1,QPSK_1TX

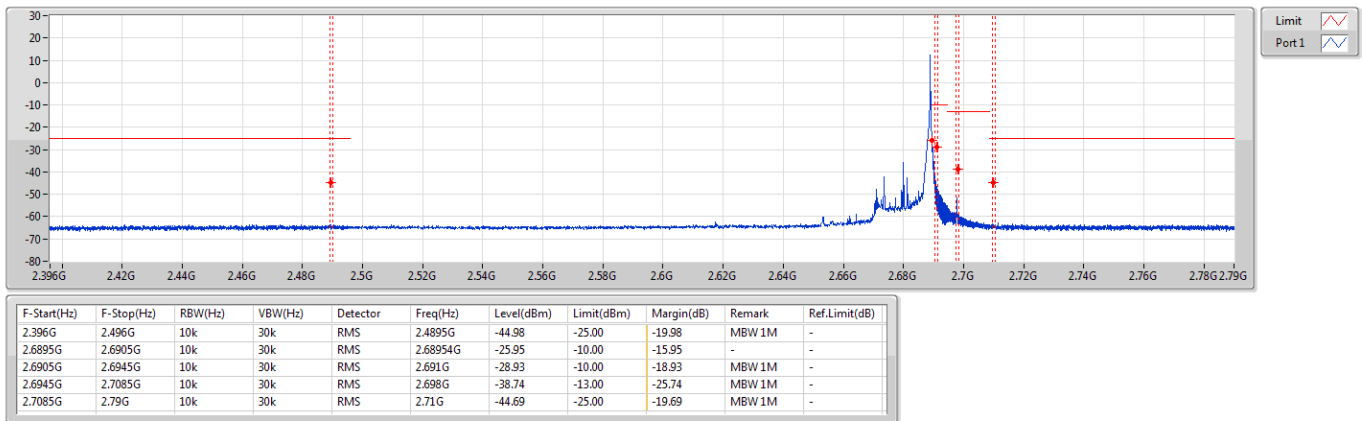
CSE-TX-Sum

2506MHz_QPSK_RB 100,#RB 0



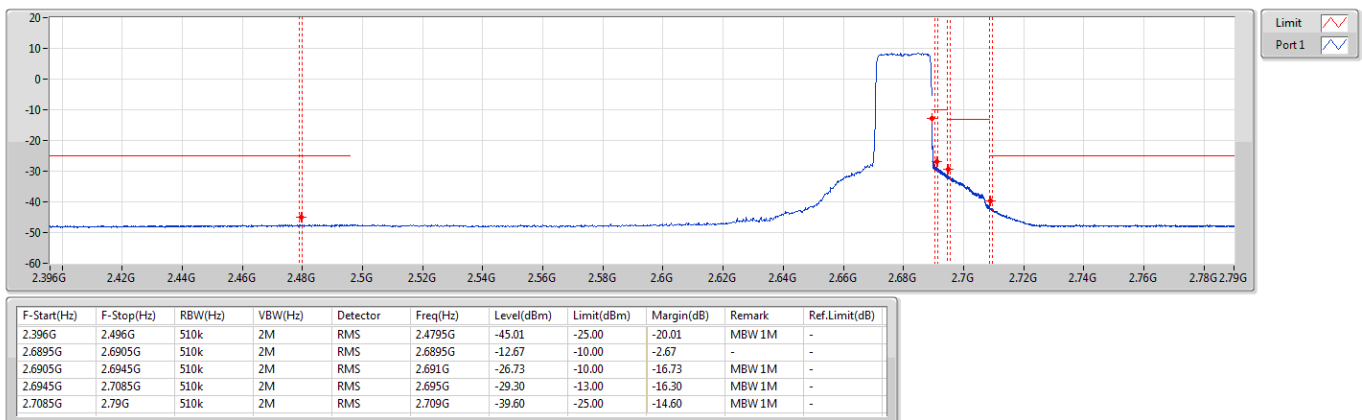
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CSE-TX-Sum



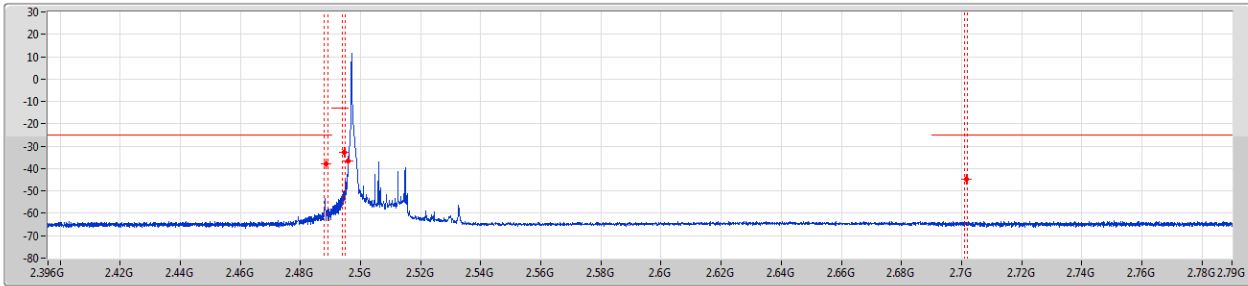
Band 41_LTE_20MHz_Nss1,QPSK_1TX 2680MHz_QPSK_RB 100,#RB 0

CSE-TX-Sum



Band 41_LTE_20MHz_Nss1,16QAM_1TX
2506MHz_16QAM_RB 1,#RB L

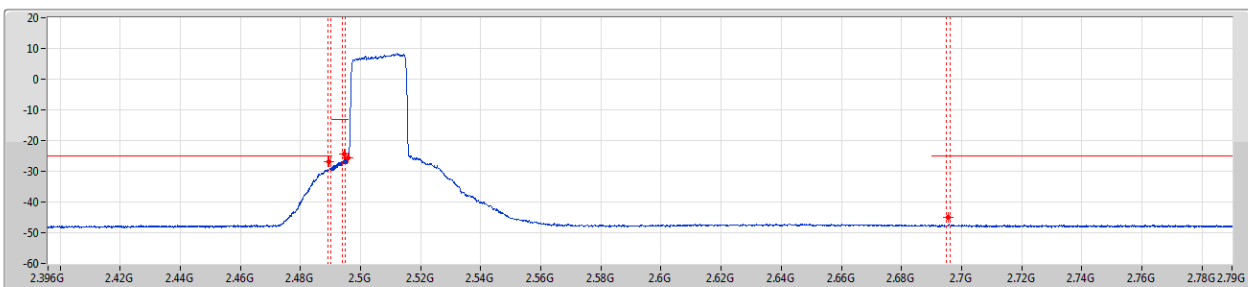
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
2.396G	2.4905G	10k	30k	RMS	2.4885G	-37.80	-25.00	-12.80	MBW 1M	-
2.4905G	2.495G	10k	30k	RMS	2.4945G	-32.67	-13.00	-19.67	MBW 1M	-
2.495G	2.496G	10k	30k	RMS	2.49599G	-36.46	-13.00	-23.46	-	-
2.69G	2.79G	10k	30k	RMS	2.70155G	-44.88	-25.00	-19.88	MBW 1M	-

Band 41_LTE_20MHz_Nss1,16QAM_1TX
2506MHz_16QAM_RB 100,#RB 0

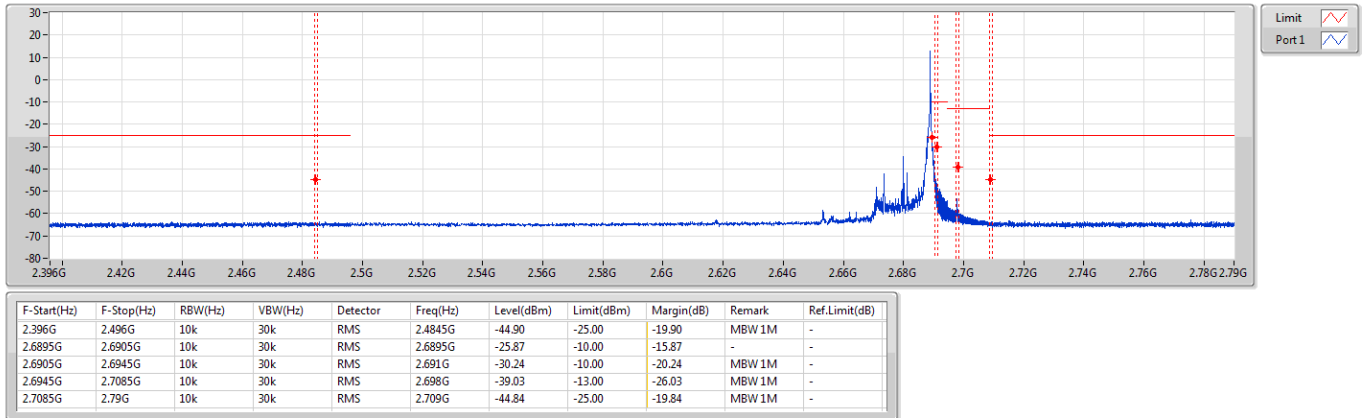
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
2.396G	2.4905G	510k	2M	RMS	2.4895G	-26.82	-25.00	-1.82	MBW 1M	-
2.4905G	2.495G	510k	2M	RMS	2.4945G	-24.35	-13.00	-11.35	MBW 1M	-
2.495G	2.496G	510k	2M	RMS	2.49583G	-25.77	-13.00	-12.77	-	-
2.69G	2.79G	510k	2M	RMS	2.69555G	-45.02	-25.00	-20.02	MBW 1M	-

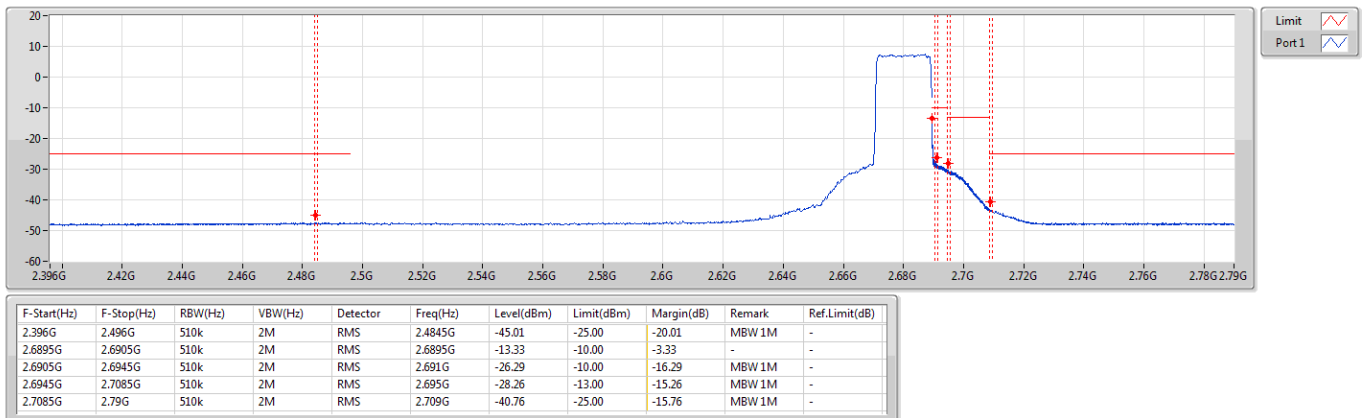
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2680MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



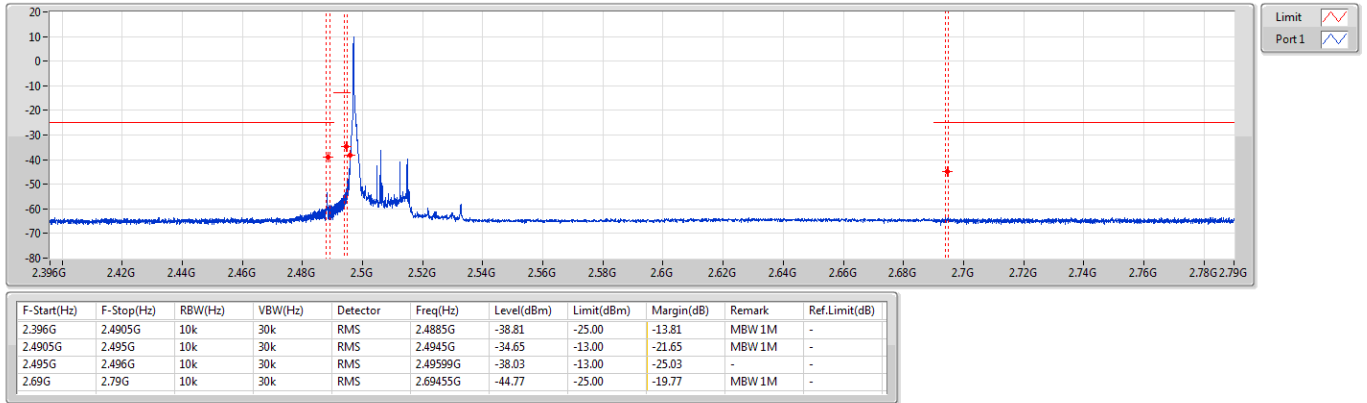
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2680MHz_16QAM_RB 100,#RB 0

CSE-TX-Sum



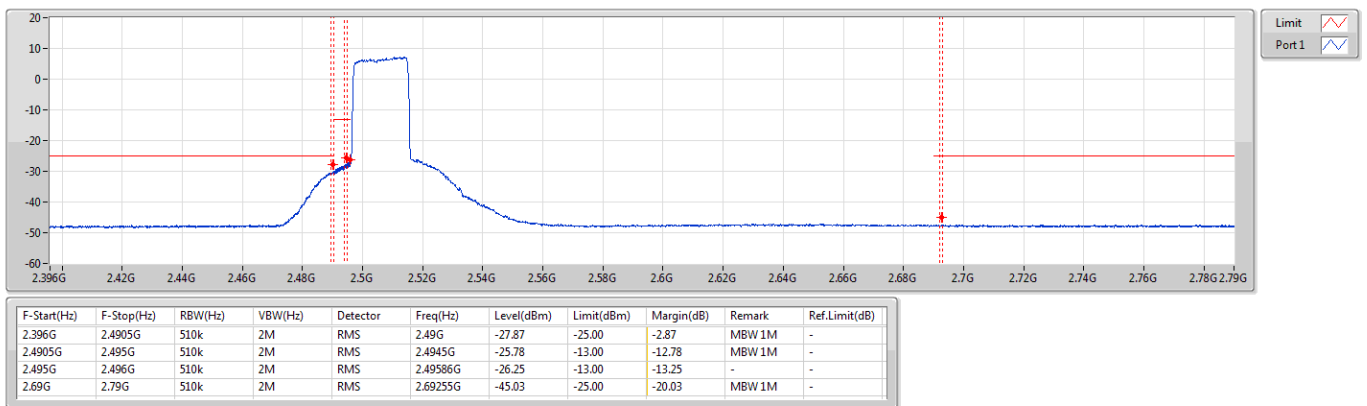
Band 41_LTE_20MHz_Nss1,64QAM_1TX
2506MHz_64QAM_RB 1,#RB L

CSE-TX-Sum



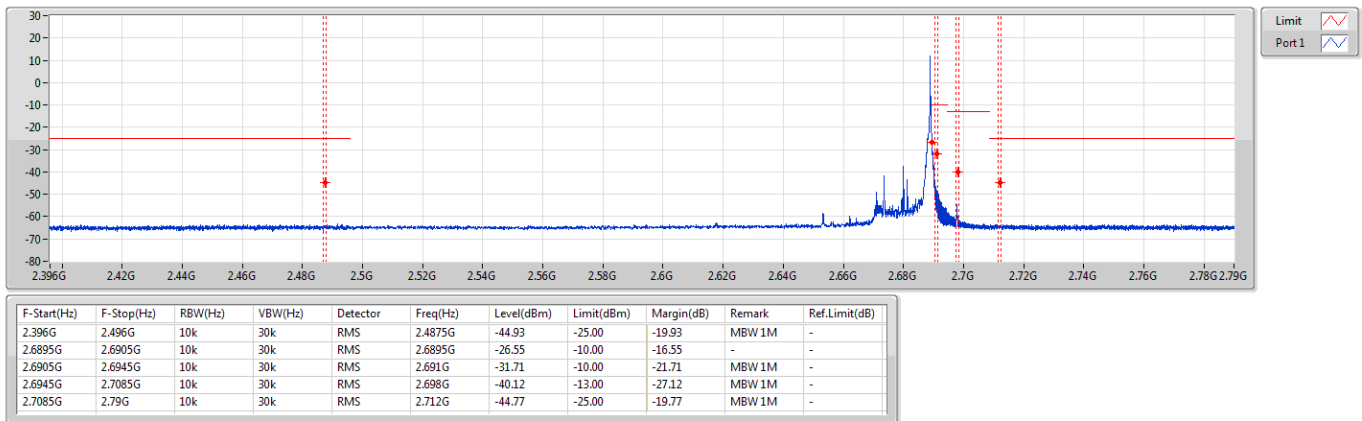
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2506MHz_64QAM_RB 100,#RB 0

CSE-TX-Sum



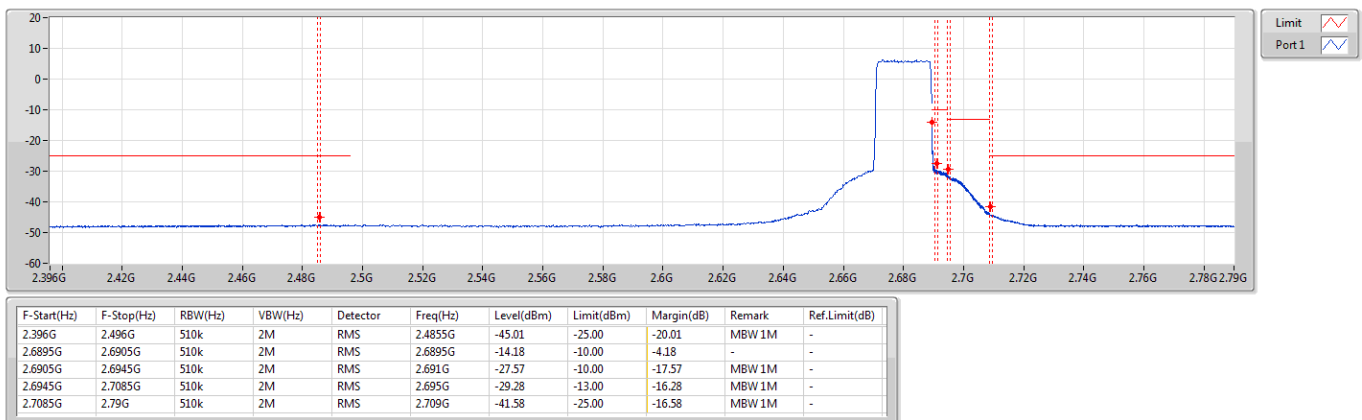
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2680MHz_64QAM_RB 1,#RB R

CSE-TX-Sum



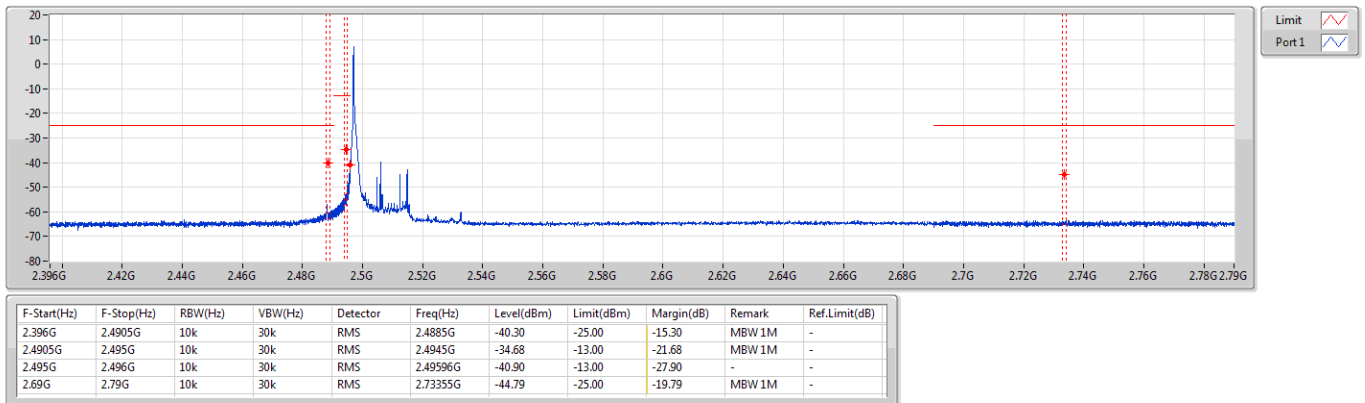
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CSE-TX-Sum



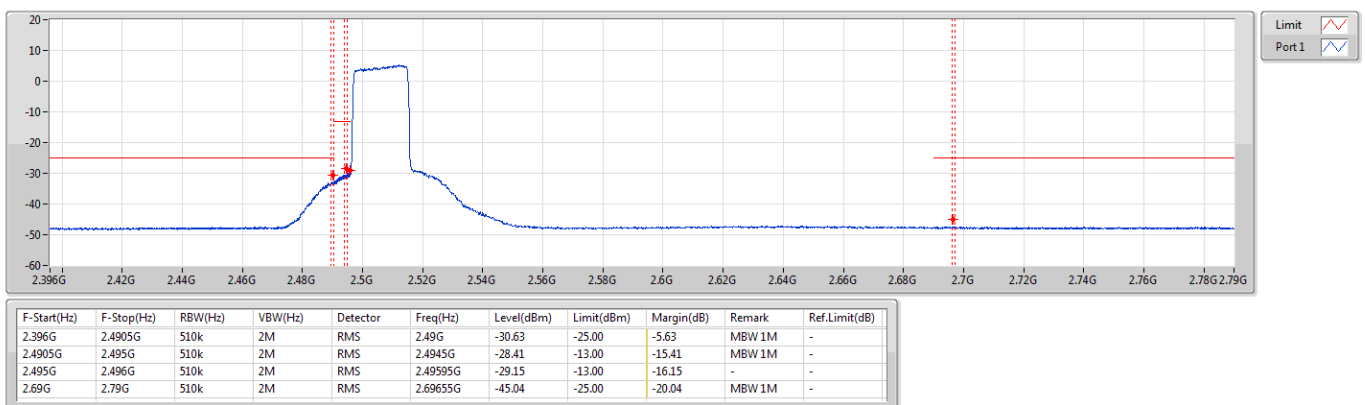
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2506MHz_256QAM_RB 1,#RB L

CSE-TX-Sum



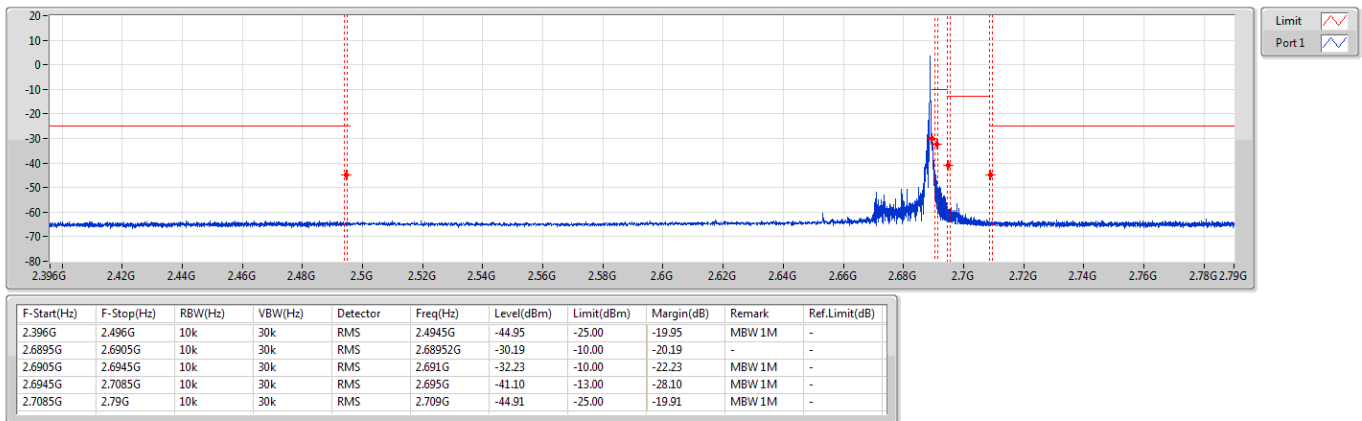
Band 41_LTE_20MHz_Nss1,256QAM_1TX
2506MHz_256QAM_RB 100,#RB 0

CSE-TX-Sum



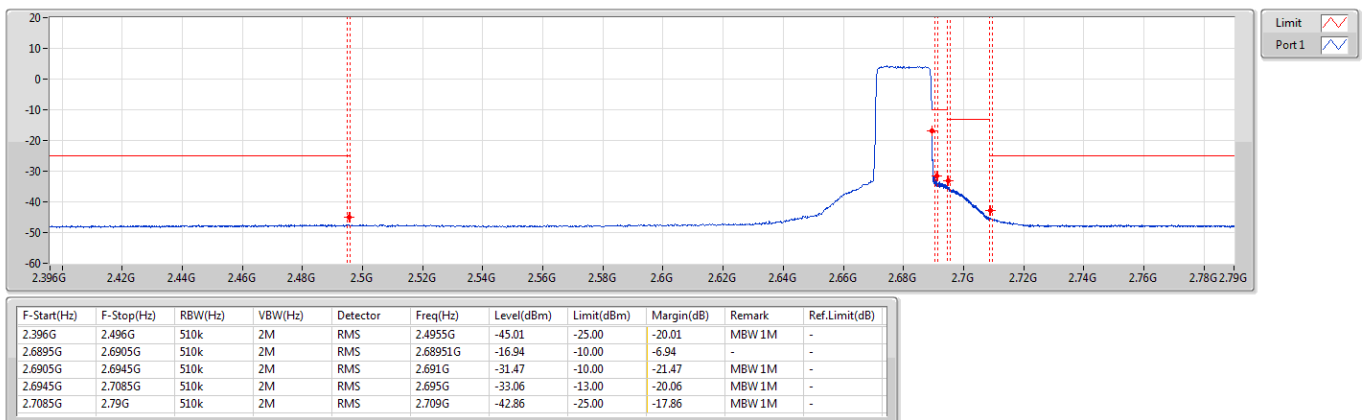
Band 41_LTE_20MHz_Nss1,256QAM_1TX
2680MHz_256QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_20MHz_Nss1,256QAM_1TX
2680MHz_256QAM_RB 100,#RB 0

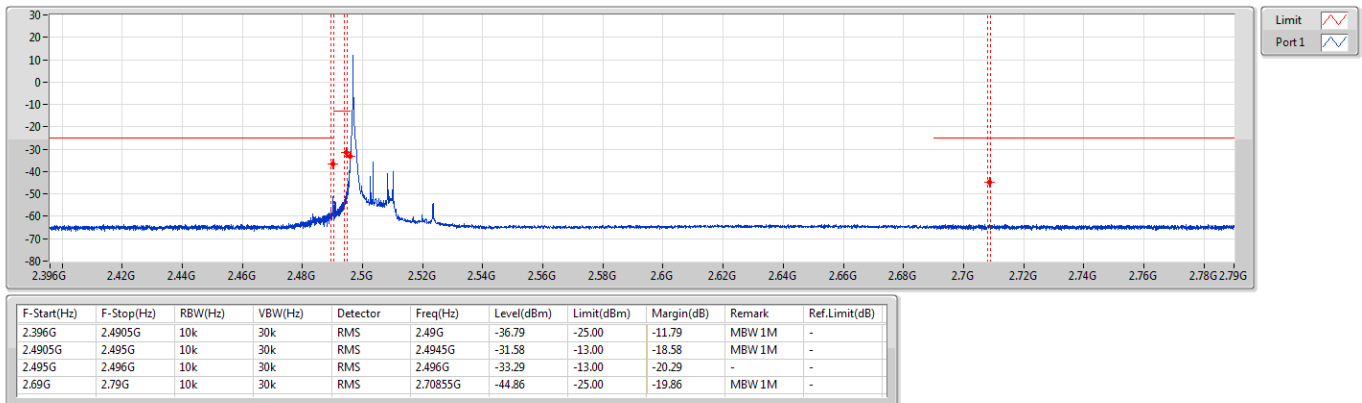
CSE-TX-Sum





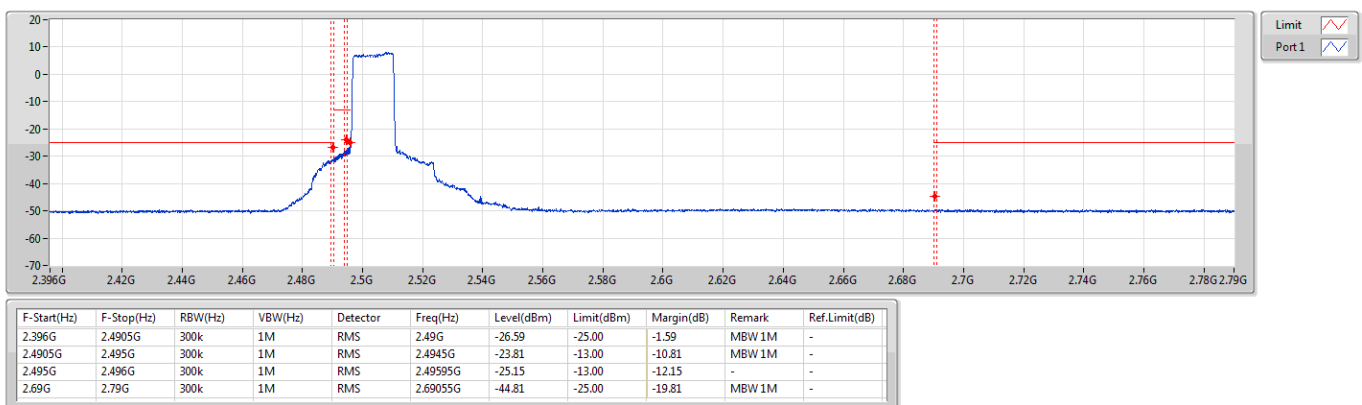
Band 41_LTE_15MHz_Nss1,QPSK_1TX
2503.5MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_15MHz_Nss1,QPSK_1TX
2503.5MHz_QPSK_RB 75,#RB 0

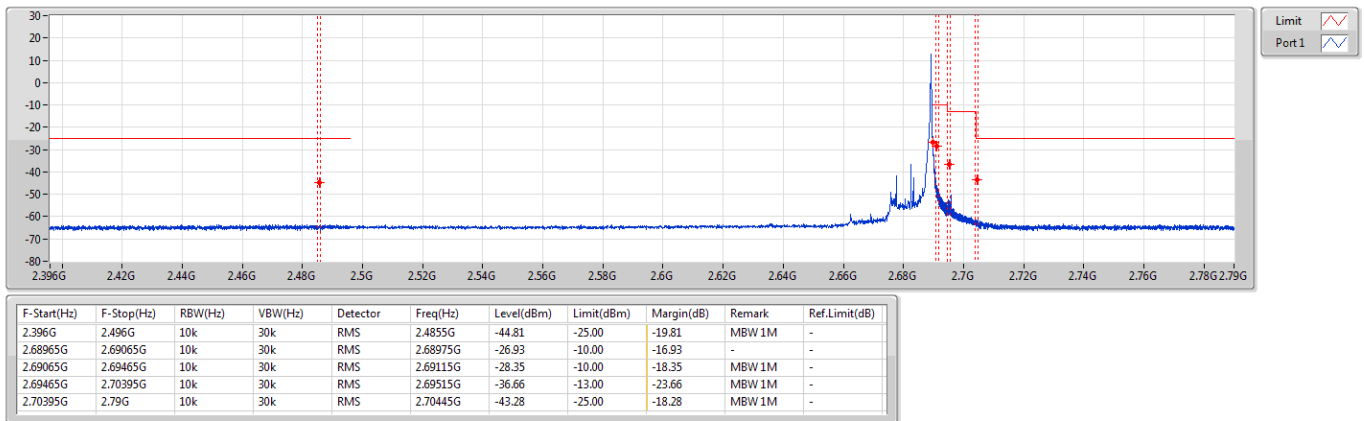
CSE-TX-Sum





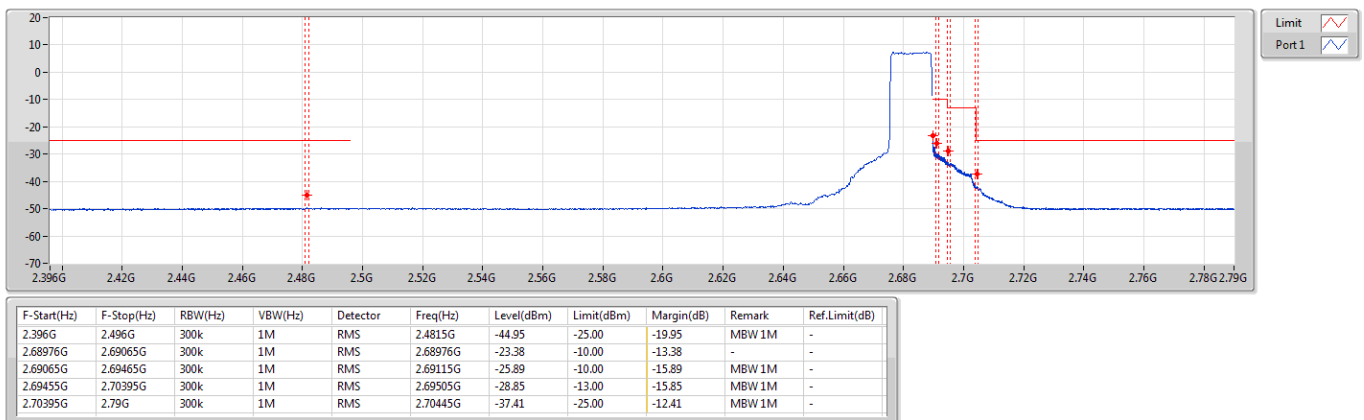
Band 41_LTE_15MHz_Nss1,QPSK_1TX
2682.5MHz_QPSK_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_15MHz_Nss1,QPSK_1TX
2682.5MHz_QPSK_RB 75,#RB 0

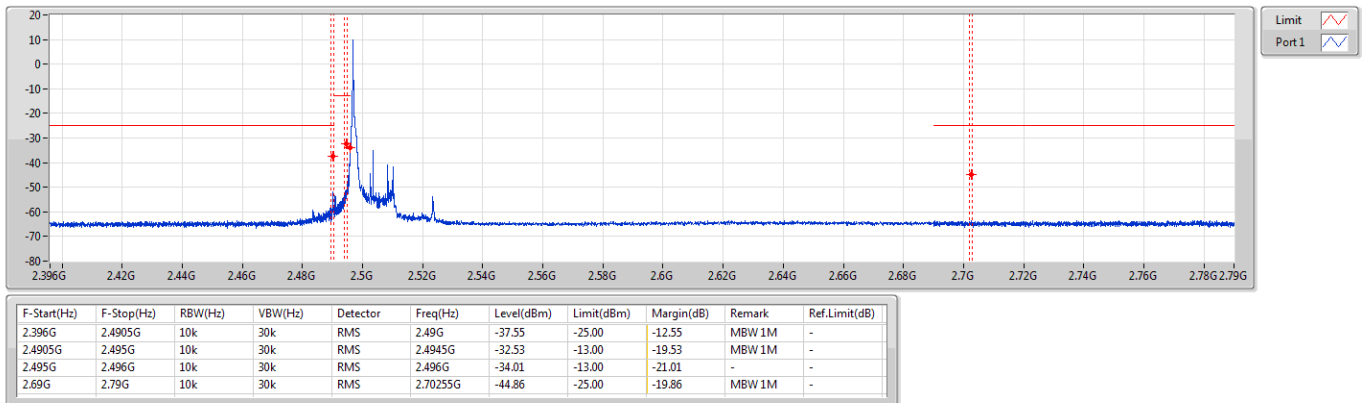
CSE-TX-Sum





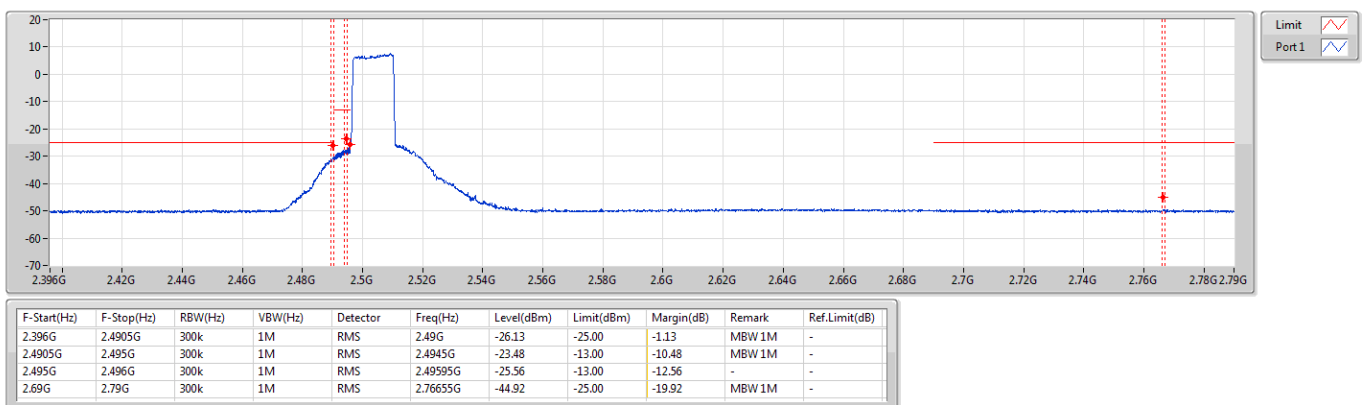
Band 41_LTE_15MHz_Nss1,16QAM_1TX
2503.5MHz_16QAM_RB 1,#RB L

CSE-TX-Sum



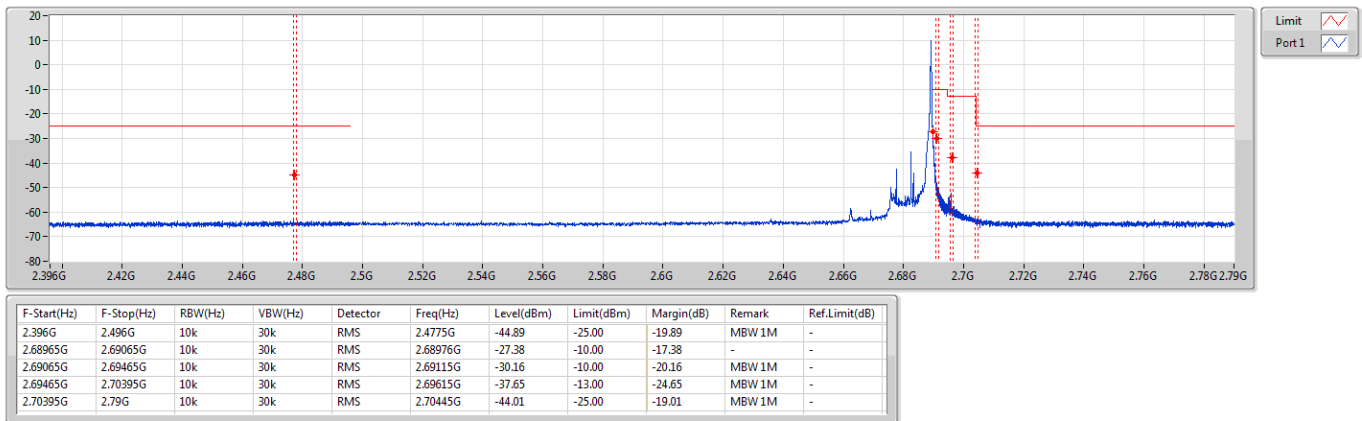
Band 41_LTE_15MHz_Nss1,16QAM_1TX
2503.5MHz_16QAM_RB 75,#RB 0

CSE-TX-Sum



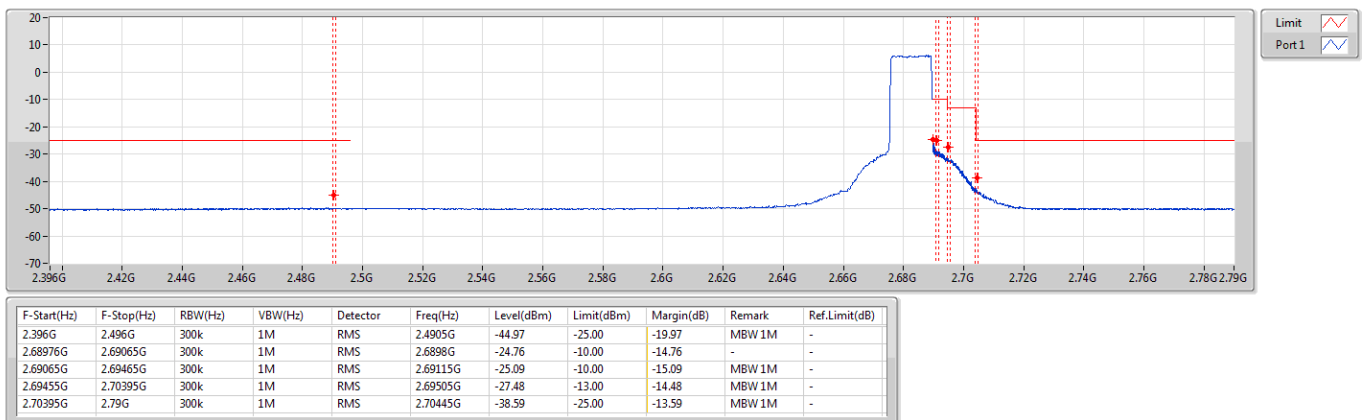
Band 41_LTE_15MHz_Nss1,16QAM_1TX
2682.5MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_15MHz_Nss1,16QAM_1TX
2682.5MHz_16QAM_RB 75,#RB 0

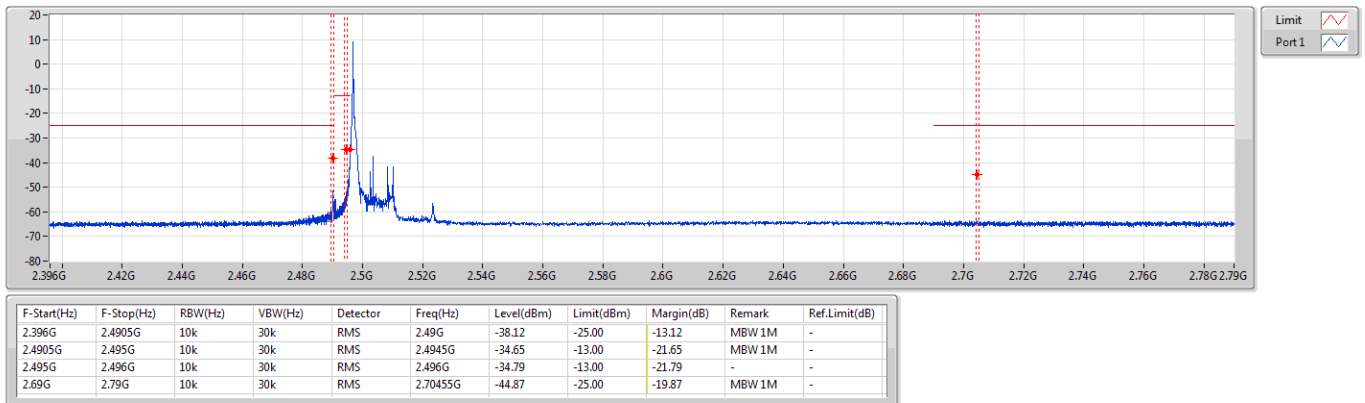
CSE-TX-Sum





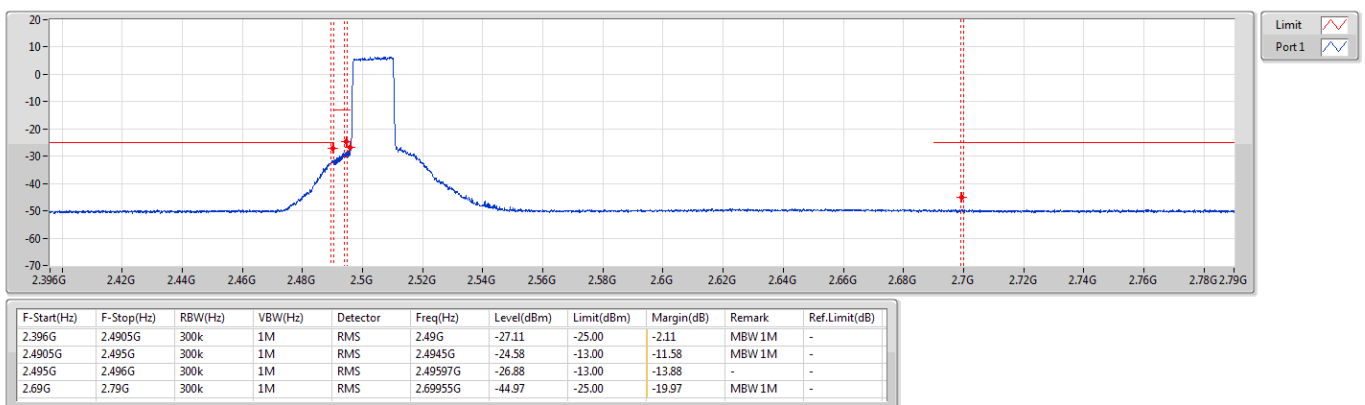
Band 41_LTE_15MHz_Nss1,64QAM_1TX
2503.5MHz_64QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_15MHz_Nss1,64QAM_1TX
2503.5MHz_64QAM_RB 75,#RB 0

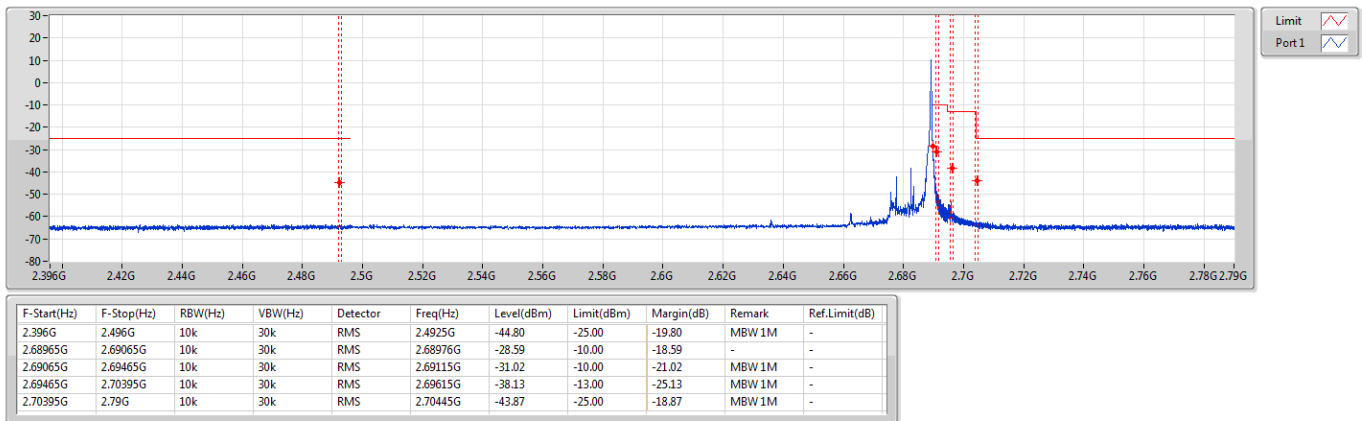
CSE-TX-Sum





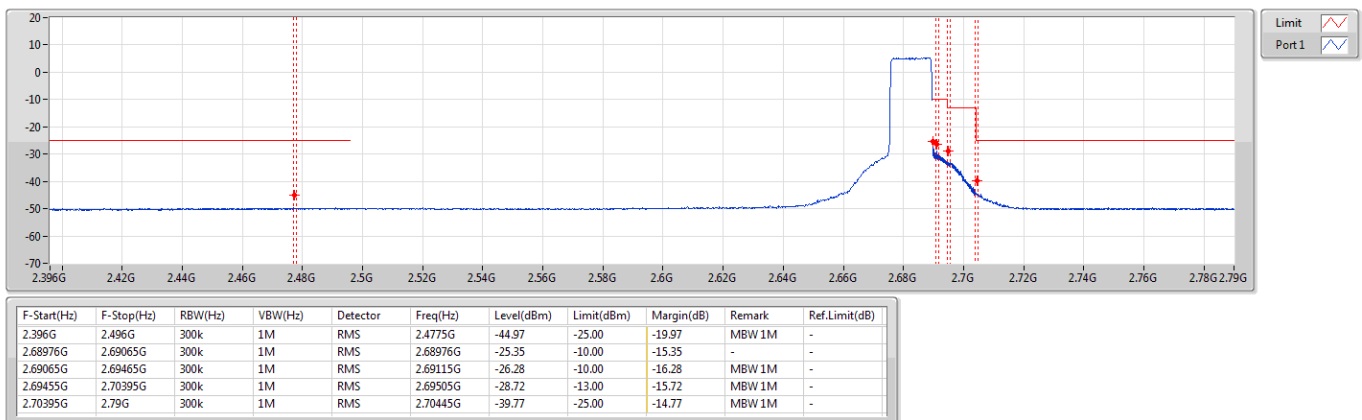
Band 41_LTE_15MHz_Nss1,64QAM_1TX
2682.5MHz_64QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_15MHz_Nss1,64QAM_1TX
2682.5MHz_64QAM_RB 75,#RB 0

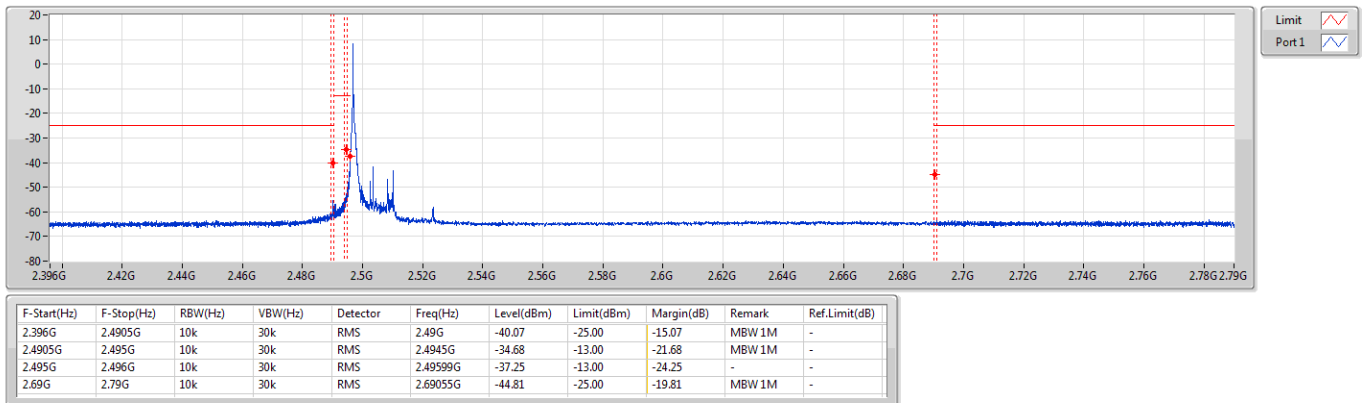
CSE-TX-Sum





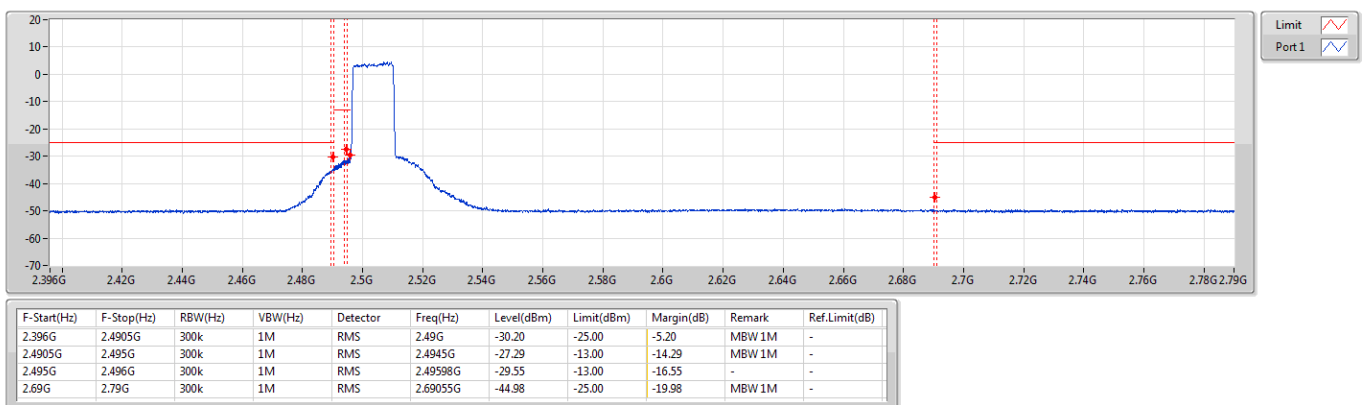
Band 41_LTE_15MHz_Nss1,256QAM_1TX
2503.5MHz_256QAM_RB 1,#RB L

CSE-TX-Sum



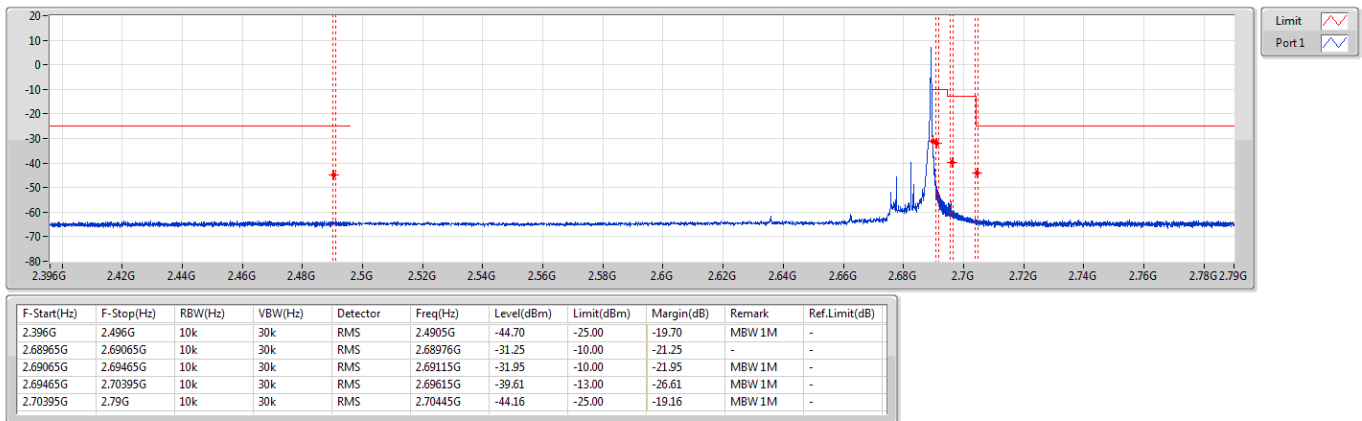
Band 41_LTE_15MHz_Nss1,256QAM_1TX
2503.5MHz_256QAM_RB 75,#RB 0

CSE-TX-Sum



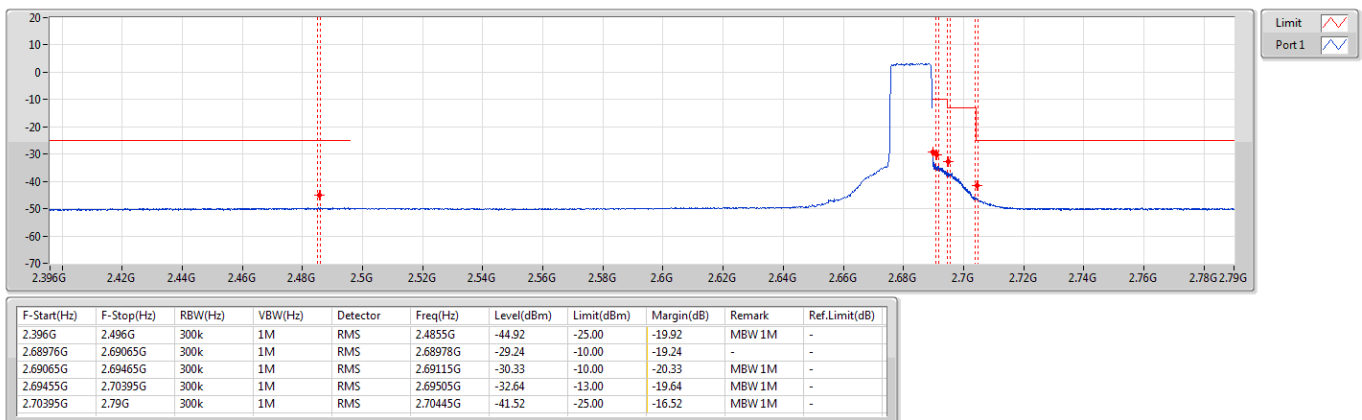
Band 41_LTE_15MHz_Nss1,256QAM_1TX
2682.5MHz_256QAM_RB 1,#RB R

CSE-TX-Sum



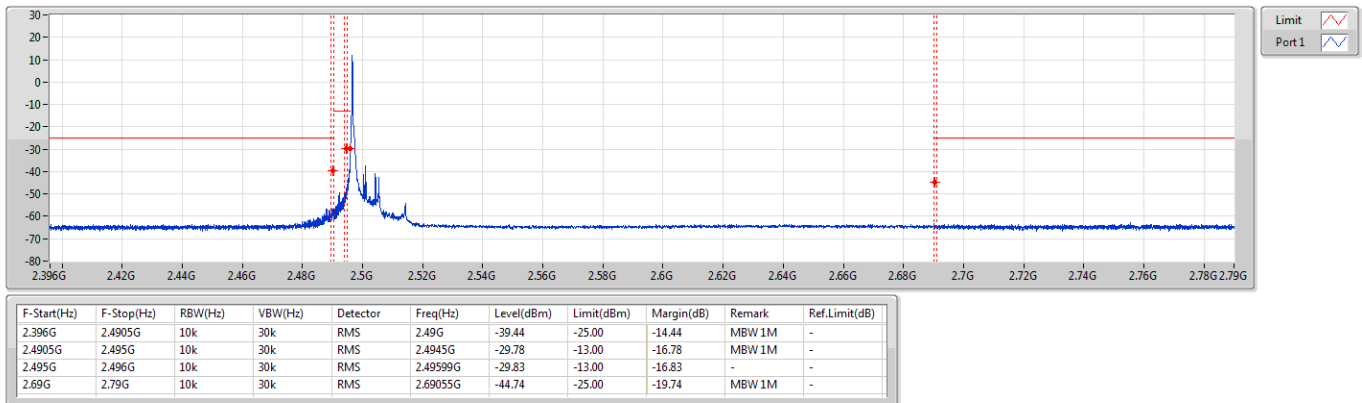
Band 41_LTE_15MHz_Nss1,256QAM_1TX
2682.5MHz_256QAM_RB 75,#RB 0

CSE-TX-Sum



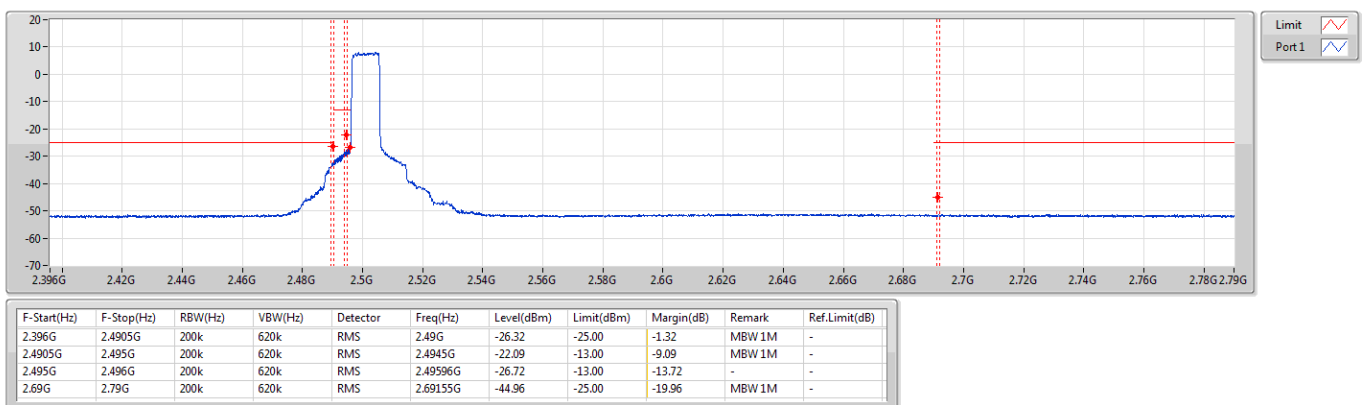
Band 41_LTE_10MHz_Nss1,QPSK_1TX
2501MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,QPSK_1TX
2501MHz_QPSK_RB 50,#RB 0

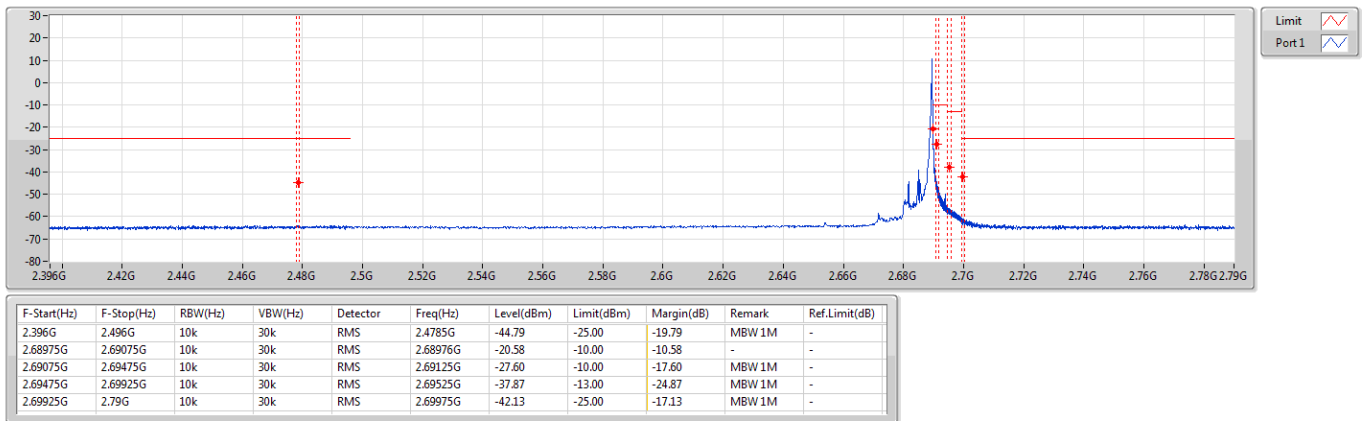
CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

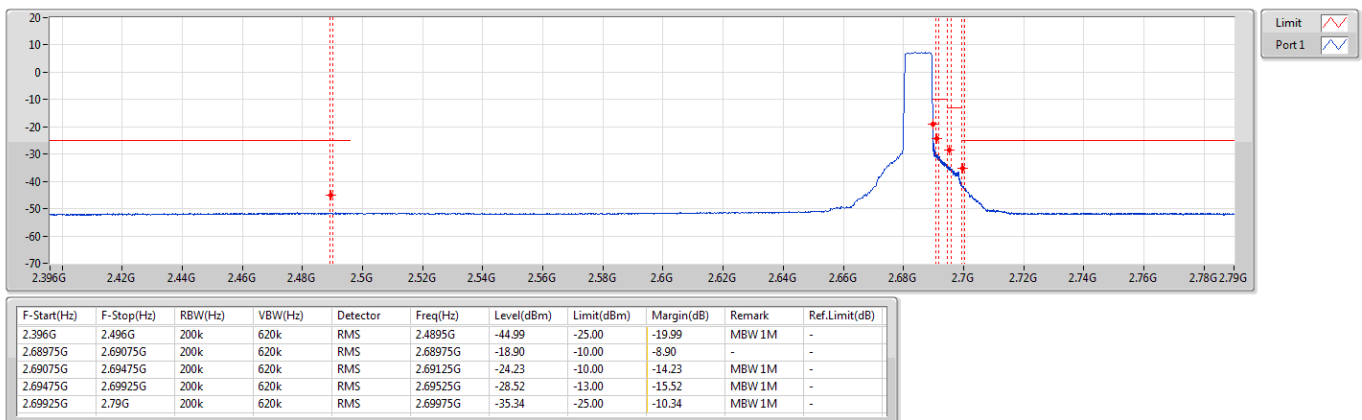
2685MHz_QPSK_RB 1,#RB R



Band 41_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

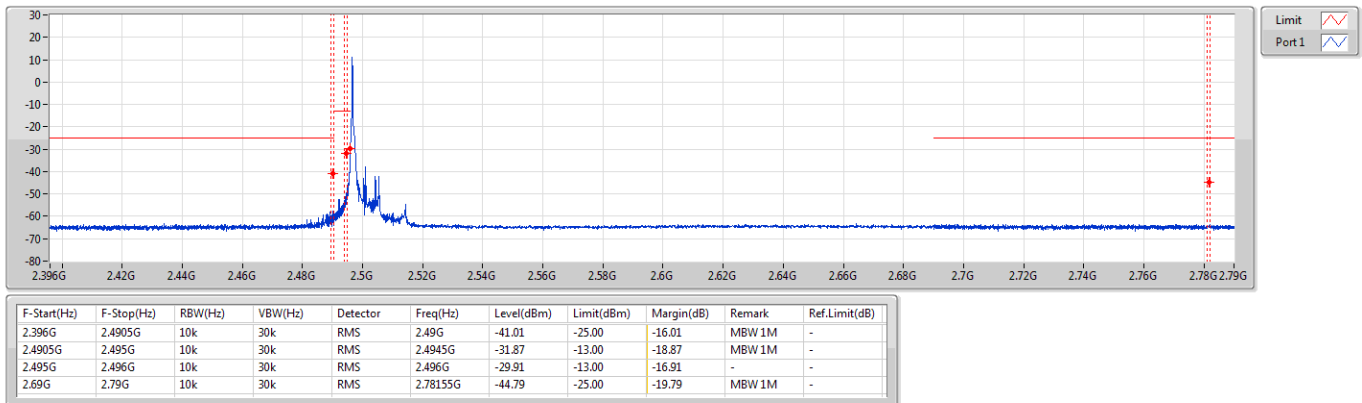
2685MHz_QPSK_RB 50,#RB 0





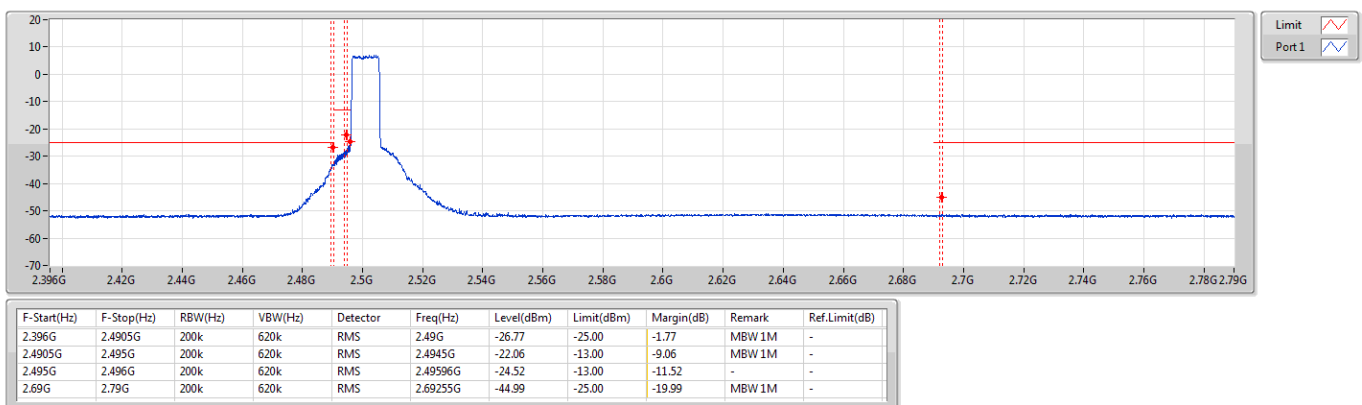
Band 41_LTE_10MHz_Nss1,16QAM_1TX
2501MHz_16QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,16QAM_1TX
2501MHz_16QAM_RB 50,#RB 0

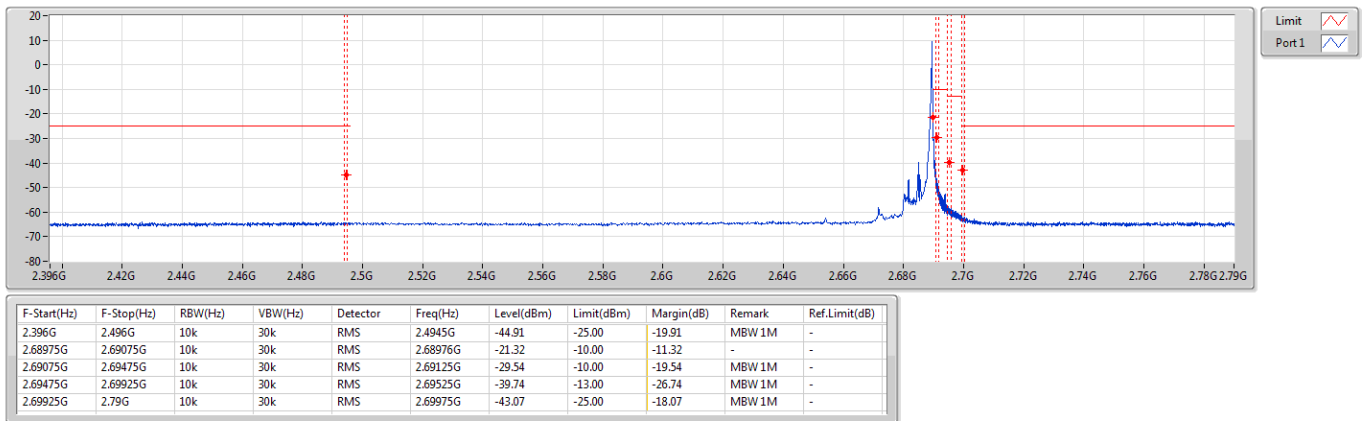
CSE-TX-Sum





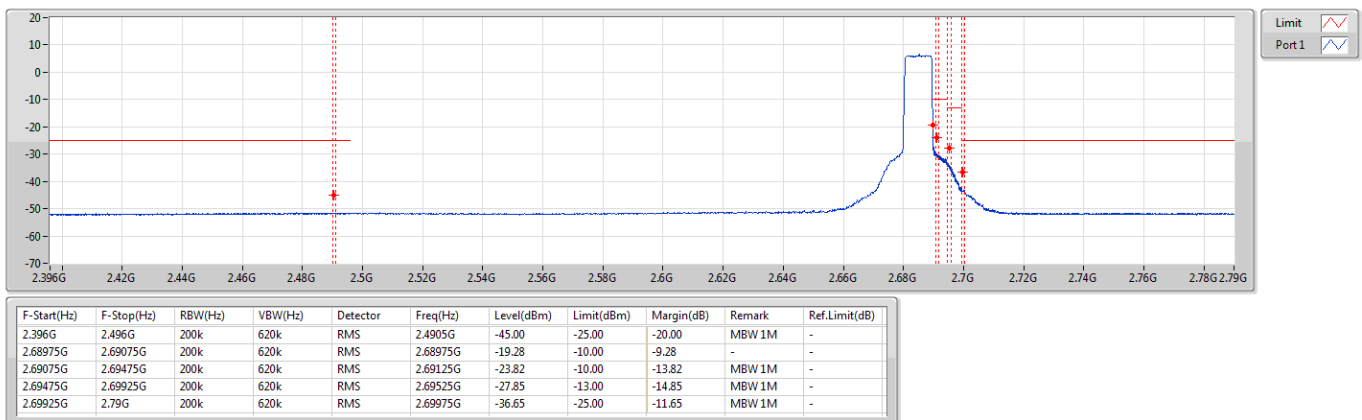
Band 41_LTE_10MHz_Nss1,16QAM_1TX
2685MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,16QAM_1TX
2685MHz_16QAM_RB 50,#RB 0

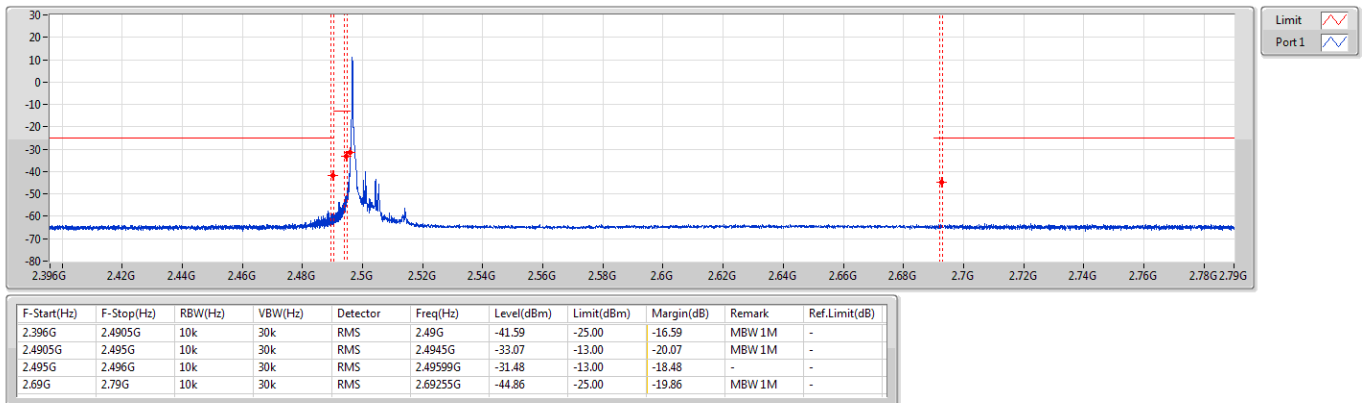
CSE-TX-Sum





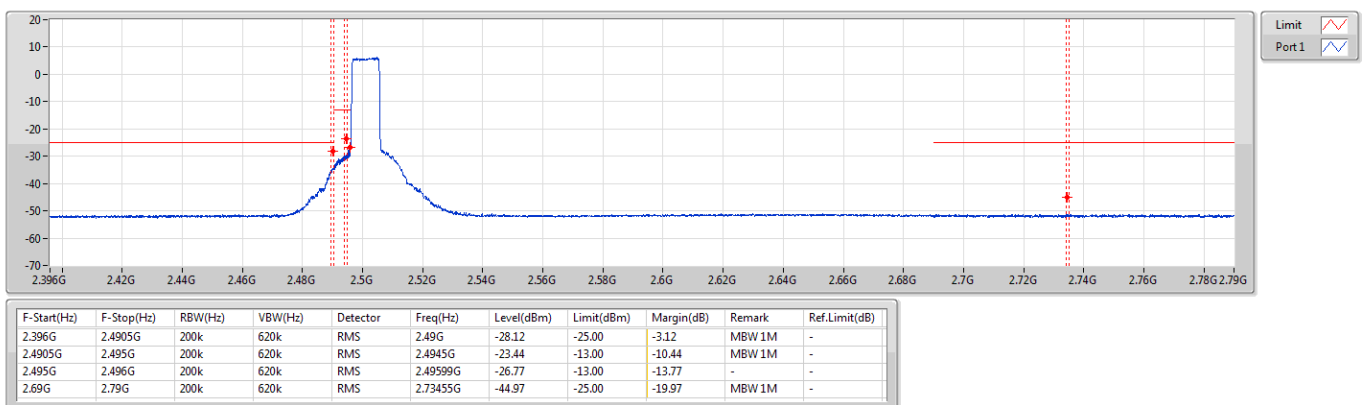
Band 41_LTE_10MHz_Nss1,64QAM_1TX
2501MHz_64QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,64QAM_1TX
2501MHz_64QAM_RB 50,#RB 0

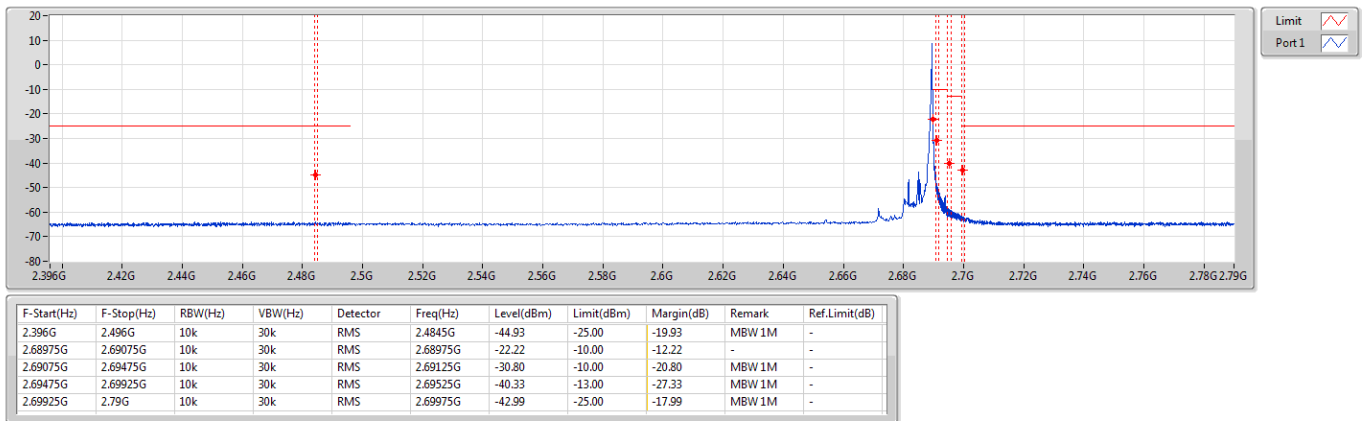
CSE-TX-Sum





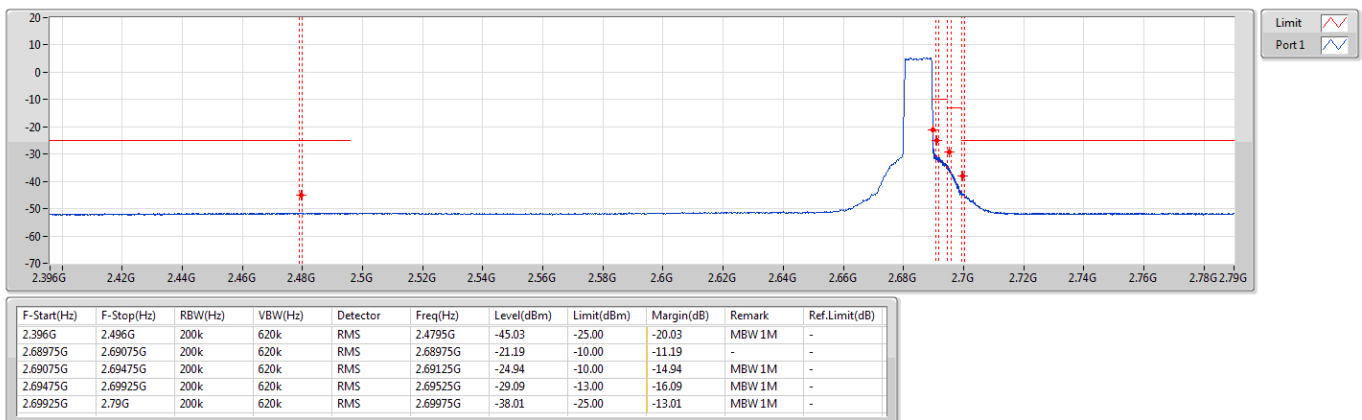
Band 41_LTE_10MHz_Nss1,64QAM_1TX
2685MHz_64QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,64QAM_1TX
2685MHz_64QAM_RB 50,#RB 0

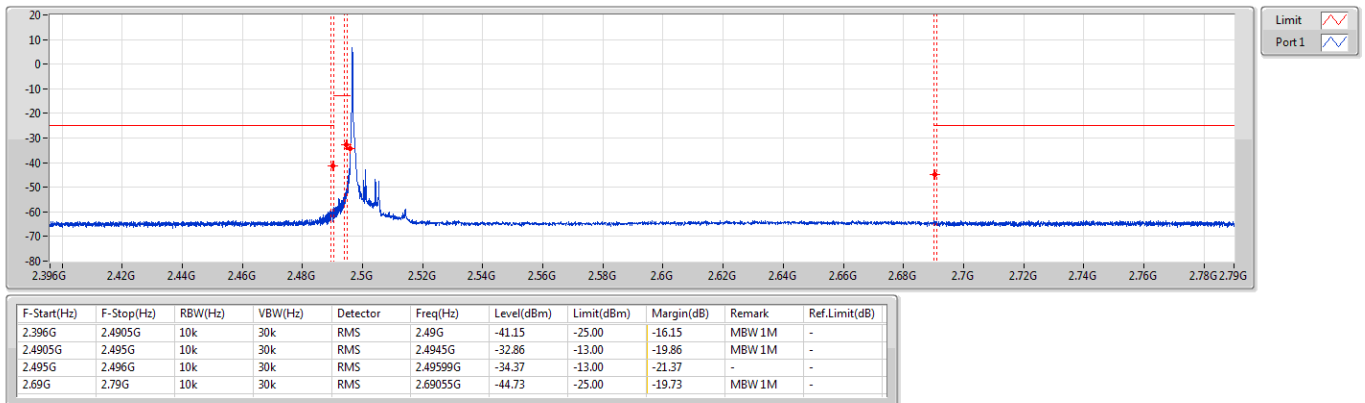
CSE-TX-Sum





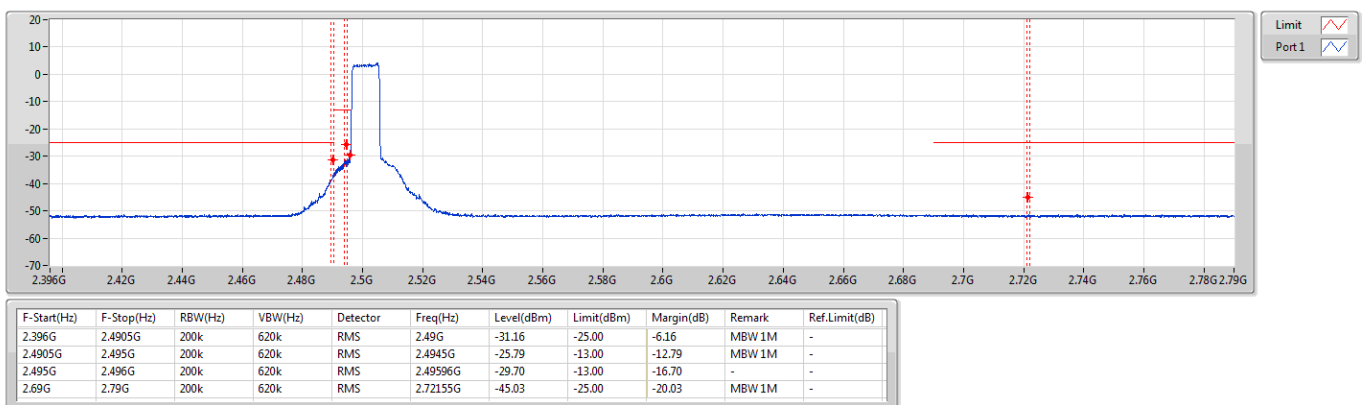
Band 41_LTE_10MHz_Nss1,256QAM_1TX
2501MHz_256QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,256QAM_1TX
2501MHz_256QAM_RB 50,#RB 0

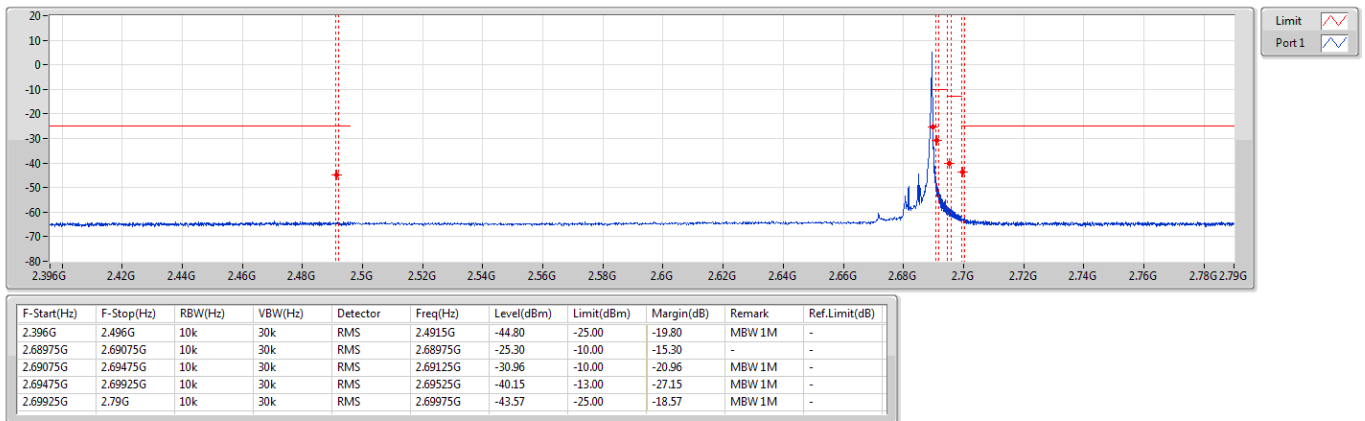
CSE-TX-Sum





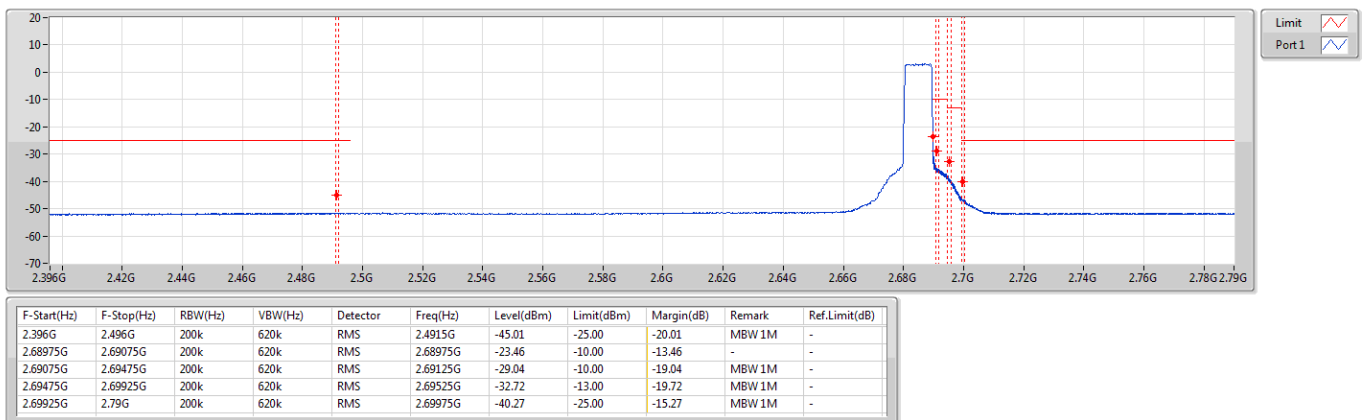
Band 41_LTE_10MHz_Nss1,256QAM_1TX
2685MHz_256QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_10MHz_Nss1,256QAM_1TX
2685MHz_256QAM_RB 50,#RB 0

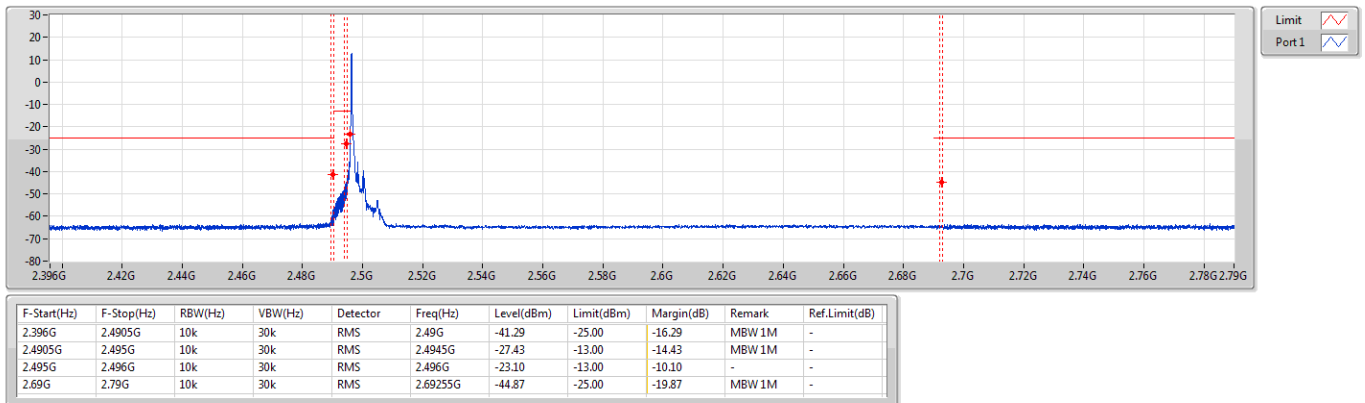
CSE-TX-Sum





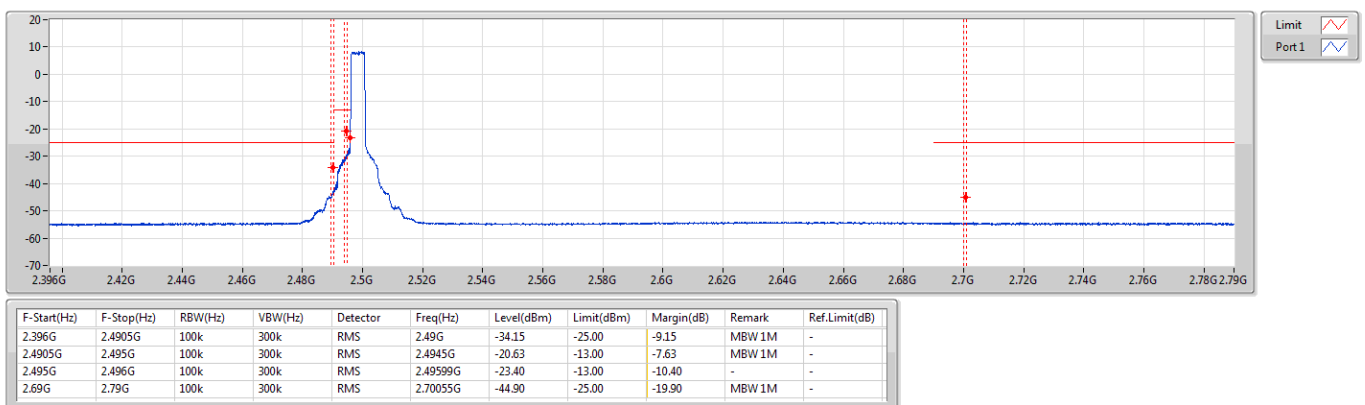
Band 41_LTE_5MHz_Nss1,QPSK_1TX
2498.5MHz_QPSK_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,QPSK_1TX
2498.5MHz_QPSK_RB 25,#RB 0

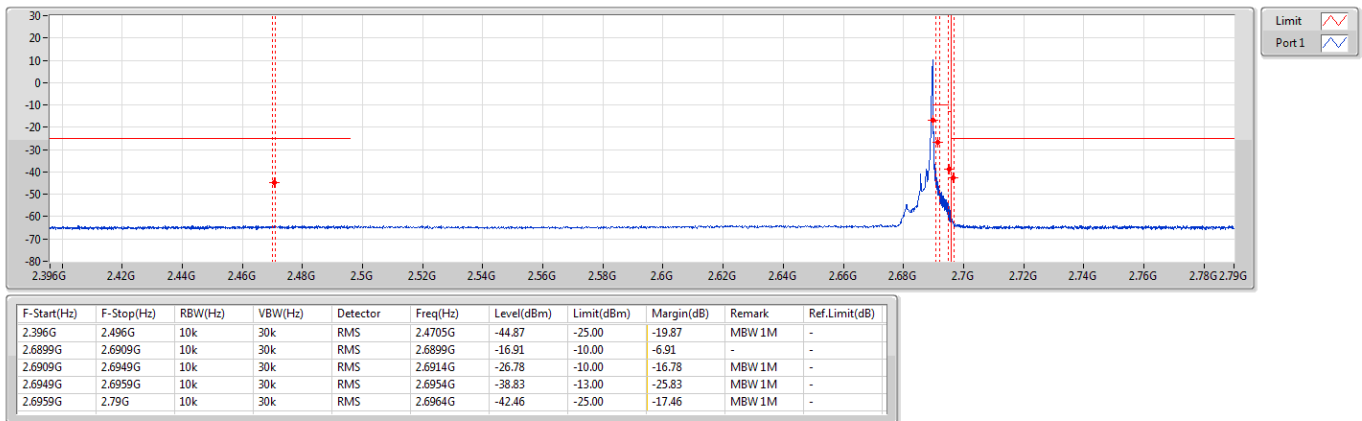
CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

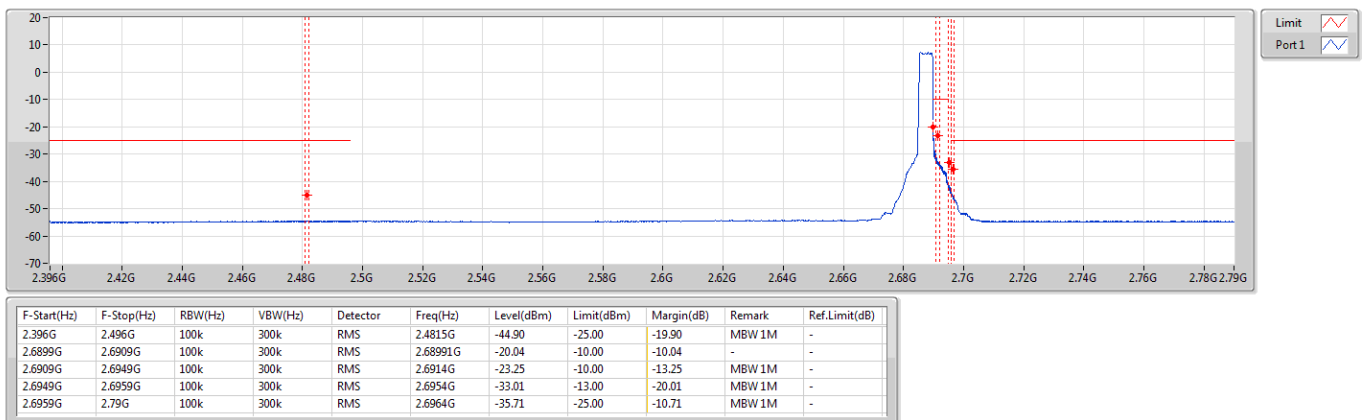
2687.5MHz_QPSK_RB 1,#RB R



Band 41_LTE_5MHz_Nss1,QPSK_1TX

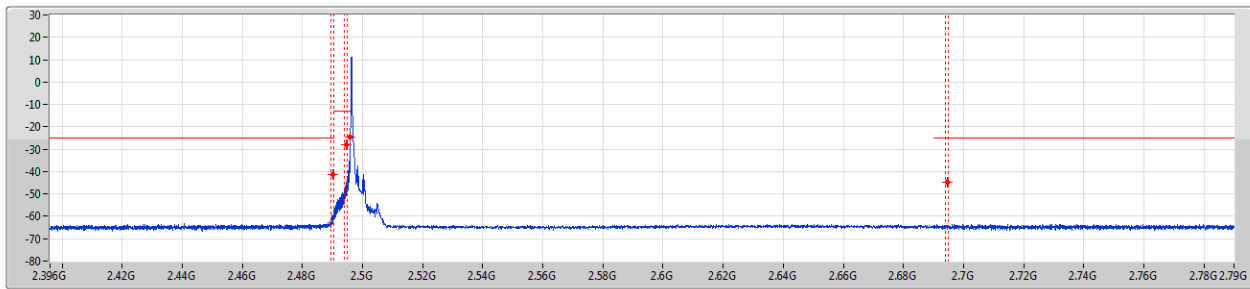
CSE-TX-Sum

2687.5MHz_QPSK_RB 25,#RB 0



Band 41_LTE_5MHz_Nss1,16QAM_1TX
2498.5MHz_16QAM_RB 1,#RB L

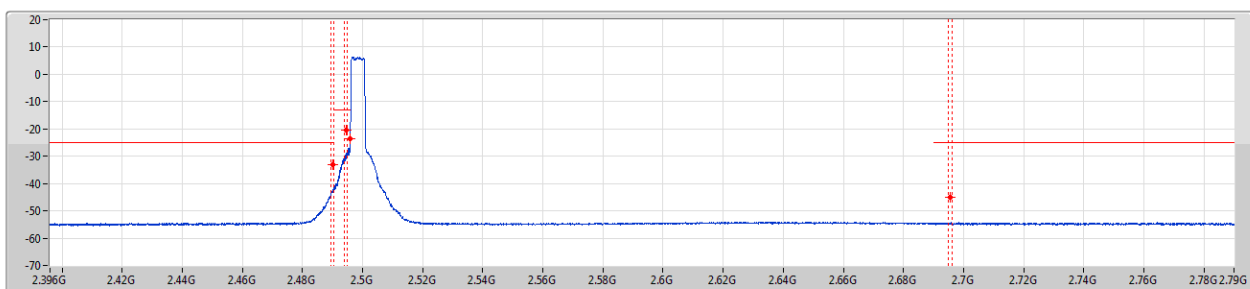
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
2.396G	2.4905G	10k	30k	RMS	2.49G	-41.35	-25.00	-16.35	MBW 1M	-
2.4905G	2.495G	10k	30k	RMS	2.4945G	-27.94	-13.00	-14.94	MBW 1M	-
2.495G	2.496G	10k	30k	RMS	2.496G	-24.50	-13.00	-11.50	-	-
2.69G	2.79G	10k	30k	RMS	2.69455G	-44.88	-25.00	-19.88	MBW 1M	-

Band 41_LTE_5MHz_Nss1,16QAM_1TX
2498.5MHz_16QAM_RB 25,#RB 0

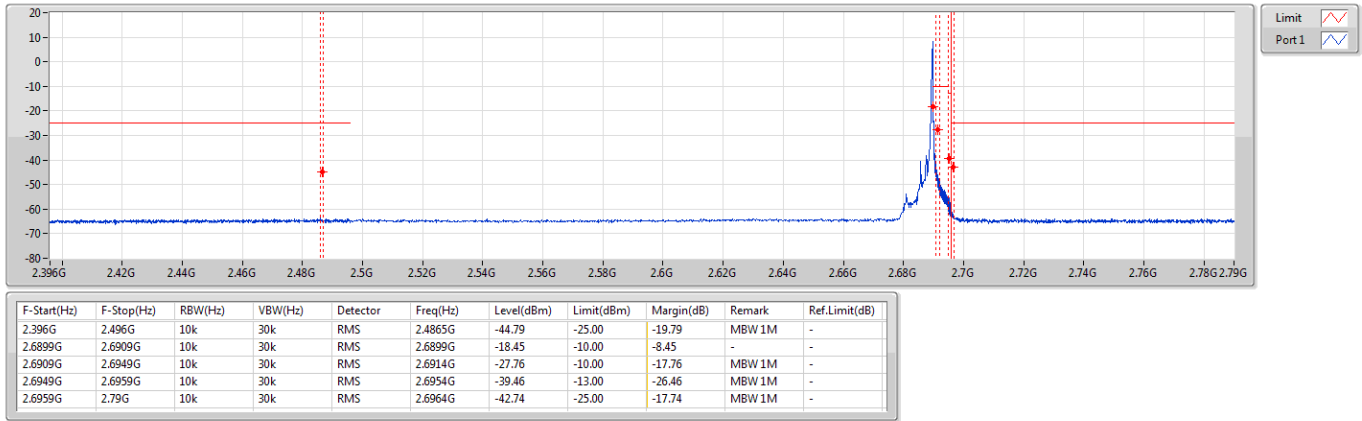
CSE-TX-Sum



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
2.396G	2.4905G	100k	300k	RMS	2.49G	-33.11	-25.00	-8.11	MBW 1M	-
2.4905G	2.495G	100k	300k	RMS	2.4945G	-20.39	-13.00	-7.39	MBW 1M	-
2.495G	2.496G	100k	300k	RMS	2.496G	-23.63	-13.00	-10.63	-	-
2.69G	2.79G	100k	300k	RMS	2.69555G	-44.89	-25.00	-19.89	MBW 1M	-

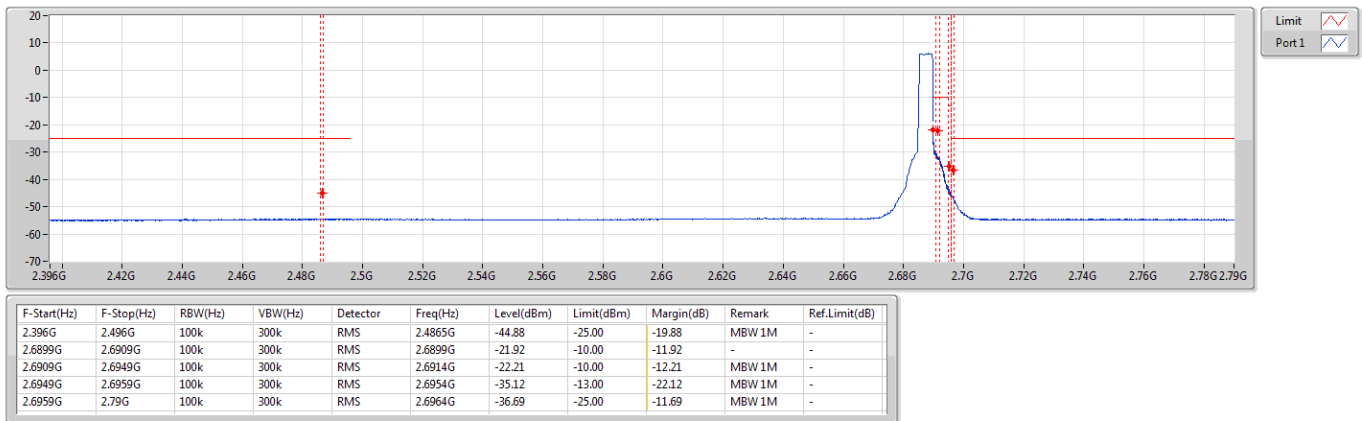
Band 41_LTE_5MHz_Nss1,16QAM_1TX
2687.5MHz_16QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,16QAM_1TX
2687.5MHz_16QAM_RB 25,#RB 0

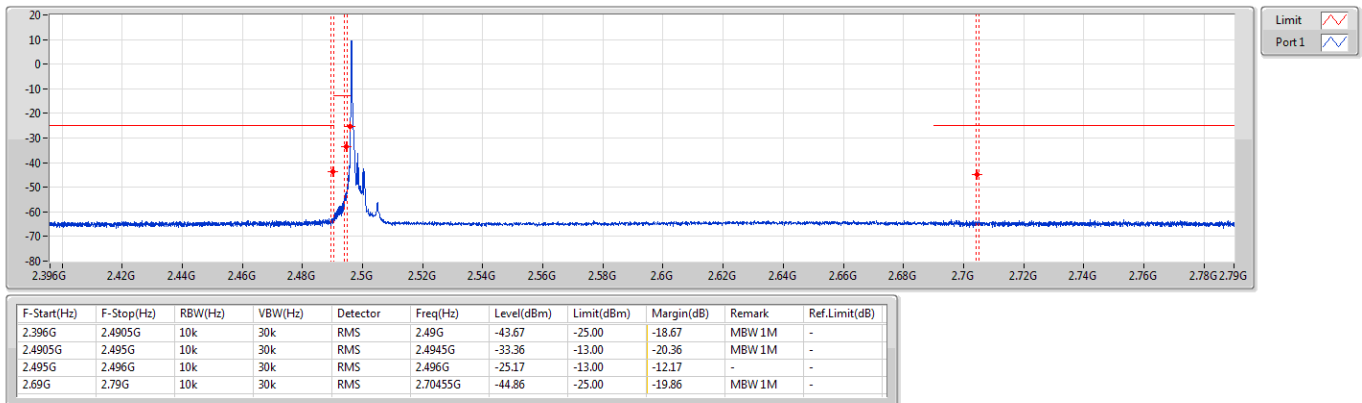
CSE-TX-Sum





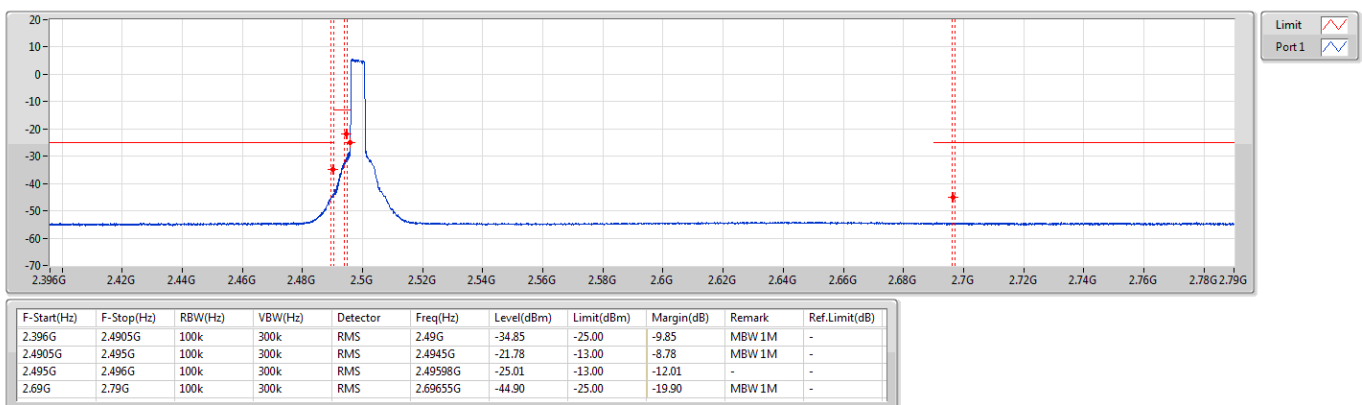
Band 41_LTE_5MHz_Nss1,64QAM_1TX
2498.5MHz_64QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,64QAM_1TX
2498.5MHz_64QAM_RB 25,#RB 0

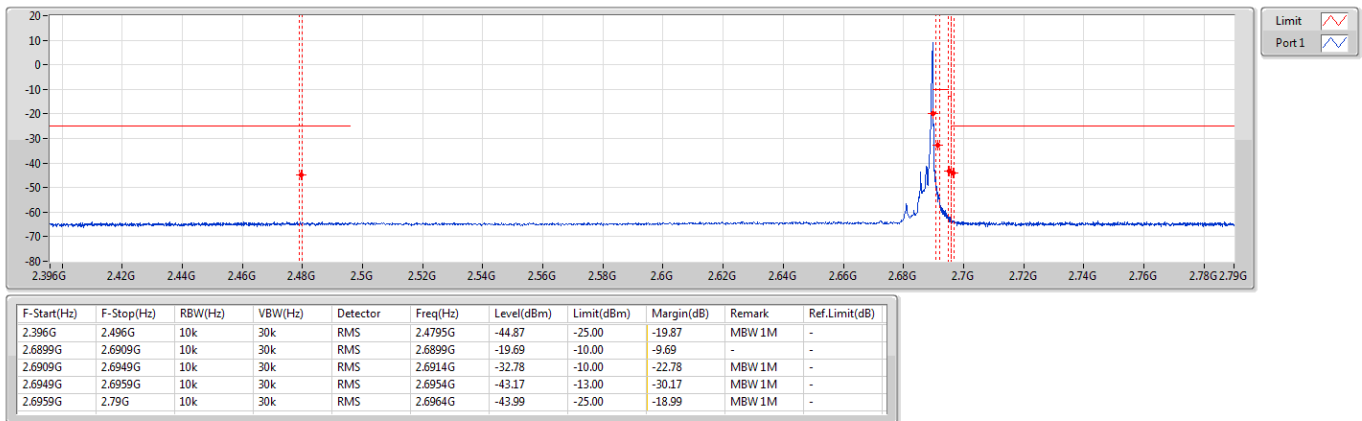
CSE-TX-Sum





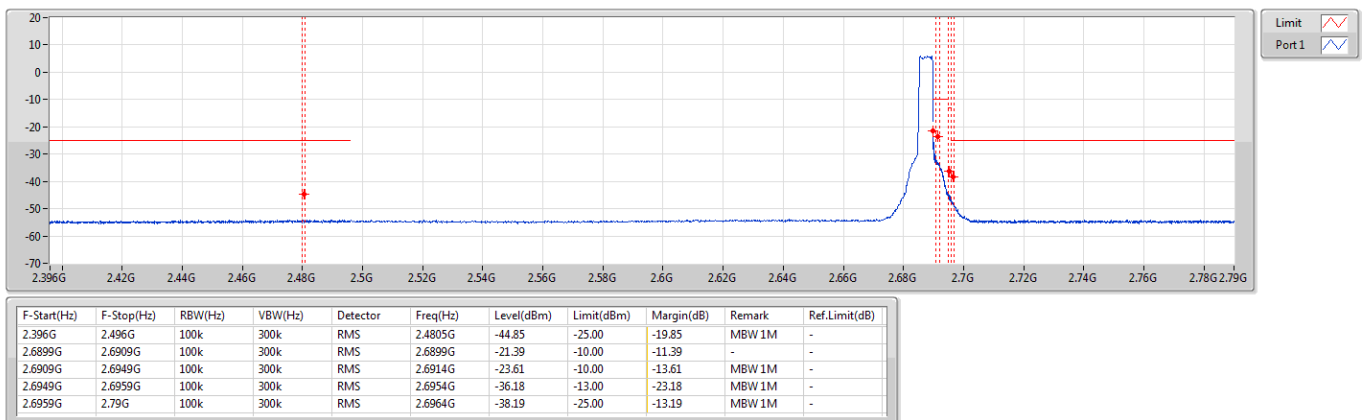
Band 41_LTE_5MHz_Nss1,64QAM_1TX
2687.5MHz_64QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,64QAM_1TX
2687.5MHz_64QAM_RB 25,#RB 0

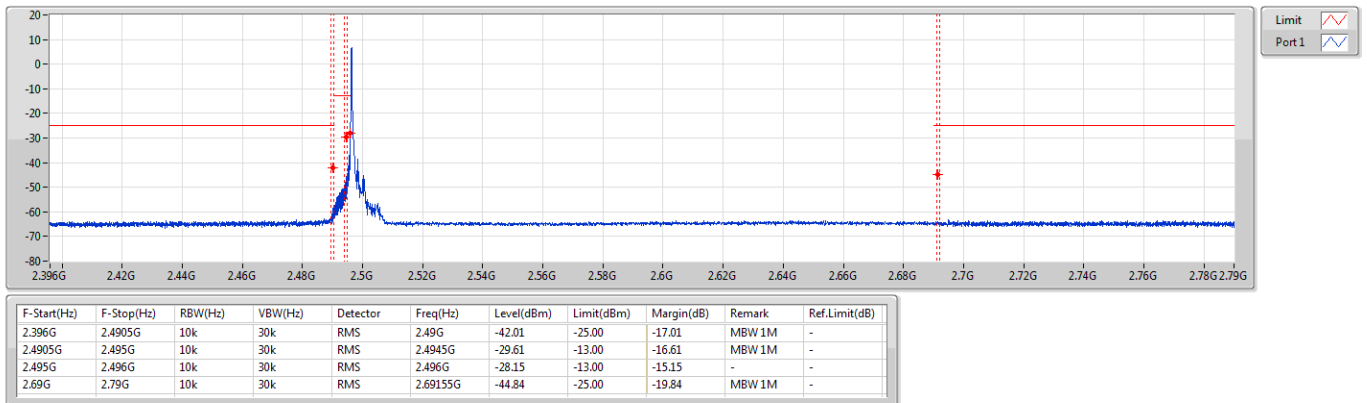
CSE-TX-Sum





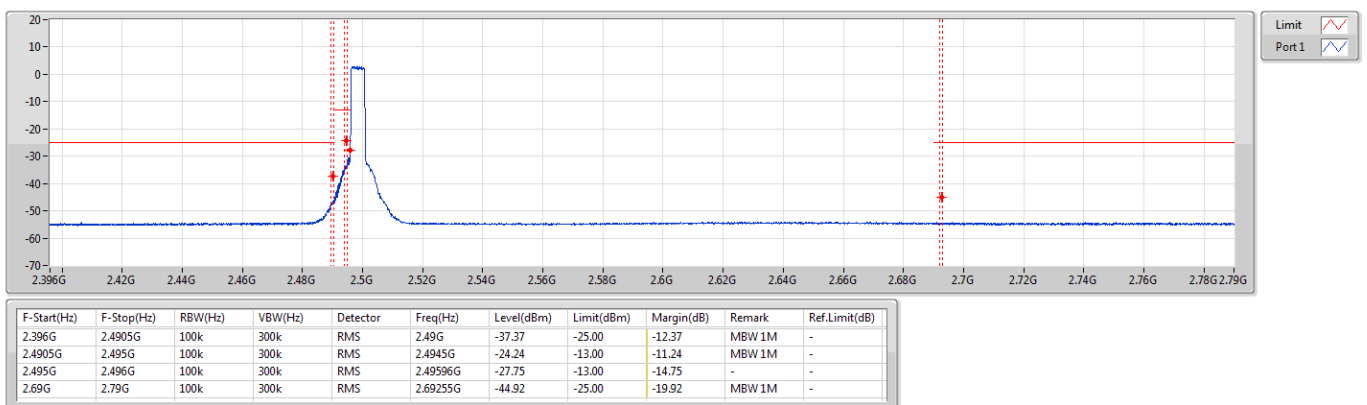
Band 41_LTE_5MHz_Nss1,256QAM_1TX
2498.5MHz_256QAM_RB 1,#RB L

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,256QAM_1TX
2498.5MHz_256QAM_RB 25,#RB 0

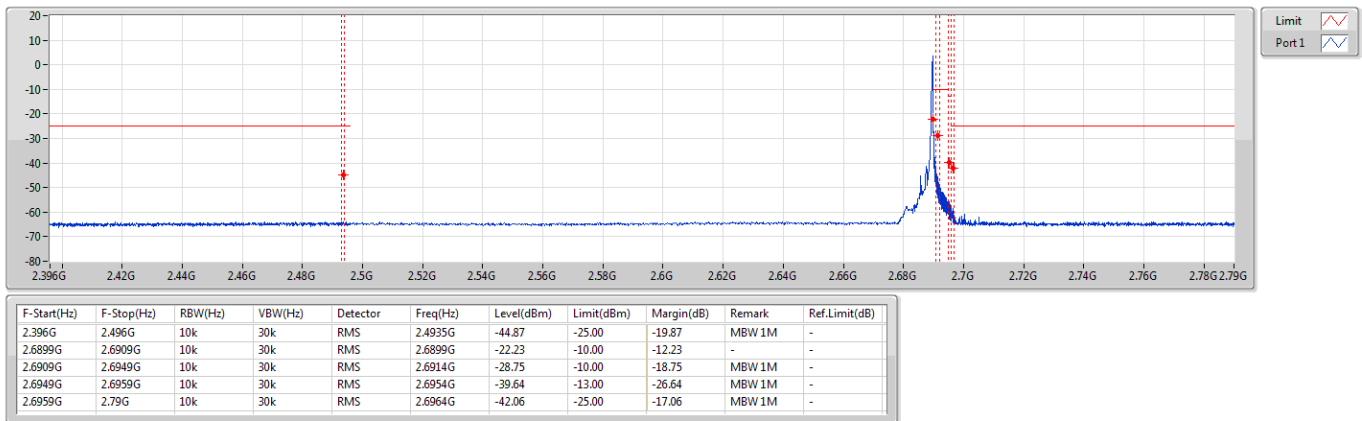
CSE-TX-Sum





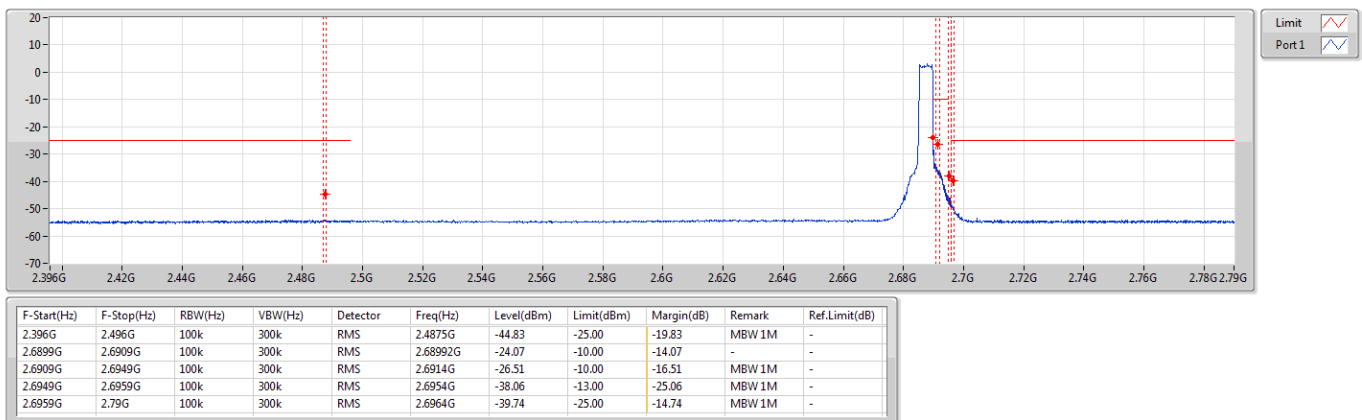
Band 41_LTE_5MHz_Nss1,256QAM_1TX
2687.5MHz_256QAM_RB 1,#RB R

CSE-TX-Sum



Band 41_LTE_5MHz_Nss1,256QAM_1TX
2687.5MHz_256QAM_RB 25,#RB 0

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 41	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	19M	17.802M	17M9G7D	380k	265.044k
LTE_20MHz_Nss1,16QAM_1TX	19.025M	17.831M	17M9W7D	375k	257.901k
LTE_20MHz_Nss1,64QAM_1TX	19M	17.82M	17M9W7D	350k	265.97k
LTE_20MHz_Nss1,256QAM_1TX	19M	17.826M	17M9W7D	410k	278.61k
LTE_15MHz_Nss1,QPSK_1TX	14.55M	13.409M	13M5G7D	375k	247.164k
LTE_15MHz_Nss1,16QAM_1TX	14.475M	13.434M	13M5W7D	382.5k	266.644k
LTE_15MHz_Nss1,64QAM_1TX	14.363M	13.398M	13M4W7D	390k	296.777k
LTE_15MHz_Nss1,256QAM_1TX	14.306M	13.374M	13M4W7D	397.5k	322.32k
LTE_10MHz_Nss1,QPSK_1TX	9.525M	8.928M	8M93G7D	375k	273.791k
LTE_10MHz_Nss1,16QAM_1TX	9.588M	8.928M	8M93W7D	425k	288.121k
LTE_10MHz_Nss1,64QAM_1TX	9.525M	8.943M	8M94W7D	380k	270.817k
LTE_10MHz_Nss1,256QAM_1TX	9.5M	8.907M	8M91W7D	415k	278.362k
LTE_5MHz_Nss1,QPSK_1TX	4.825M	4.47M	4M47G7D	375k	253.211k
LTE_5MHz_Nss1,16QAM_1TX	4.8M	4.466M	4M47W7D	357.5k	245.14k
LTE_5MHz_Nss1,64QAM_1TX	4.8M	4.473M	4M47W7D	387.5k	260.55k
LTE_5MHz_Nss1,256QAM_1TX	4.8M	4.464M	4M46W7D	357.5k	272.719k

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

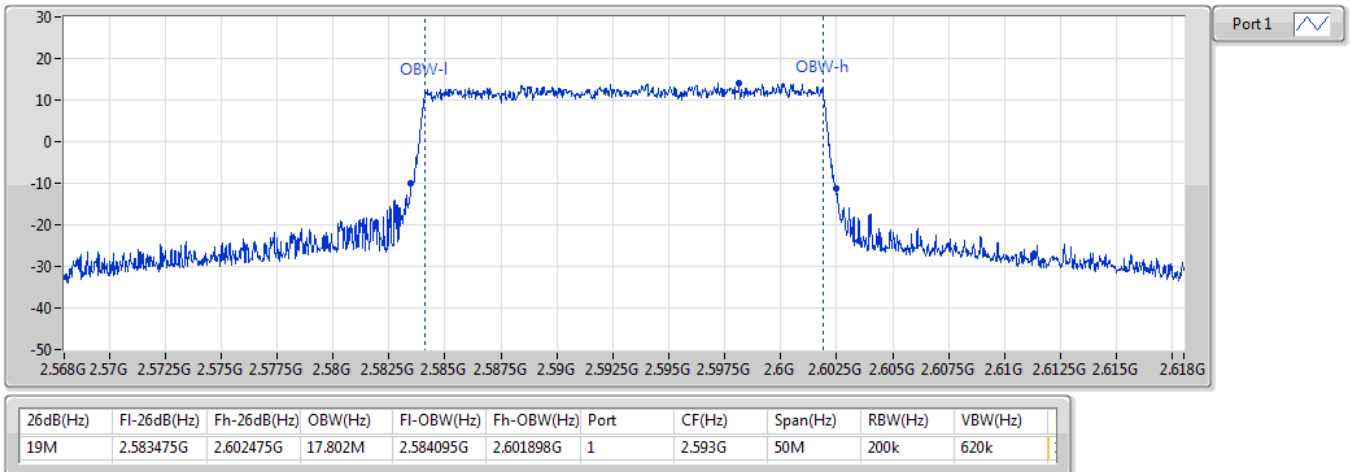
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 41_LTE_20MHz_Nss1_1TX	-	-	-	-
2593MHz_QPSK_RB 100,#RB 0	Pass	19M	17.802M	Inf
2593MHz_QPSK_RB 1,#RB M	Pass	380k	265.044k	Inf
2593MHz_16QAM_RB 100,#RB 0	Pass	19.025M	17.831M	Inf
2593MHz_16QAM_RB 1,#RB M	Pass	375k	257.901k	Inf
2593MHz_64QAM_RB 100,#RB 0	Pass	19M	17.82M	Inf
2593MHz_64QAM_RB 1,#RB M	Pass	350k	265.97k	Inf
2593MHz_256QAM_RB 100,#RB 0	Pass	19M	17.826M	Inf
2593MHz_256QAM_RB 1,#RB M	Pass	410k	278.61k	Inf
Band 41_LTE_15MHz_Nss1_1TX	-	-	-	-
2593MHz_QPSK_RB 75,#RB 0	Pass	14.55M	13.409M	Inf
2593MHz_QPSK_RB 1,#RB M	Pass	375k	247.164k	Inf
2593MHz_16QAM_RB 75,#RB 0	Pass	14.475M	13.434M	Inf
2593MHz_16QAM_RB 1,#RB M	Pass	382.5k	266.644k	Inf
2593MHz_64QAM_RB 75,#RB 0	Pass	14.363M	13.398M	Inf
2593MHz_64QAM_RB 1,#RB M	Pass	390k	296.777k	Inf
2593MHz_256QAM_RB 75,#RB 0	Pass	14.306M	13.374M	Inf
2593MHz_256QAM_RB 1,#RB M	Pass	397.5k	322.32k	Inf
Band 41_LTE_10MHz_Nss1_1TX	-	-	-	-
2593MHz_QPSK_RB 50,#RB 0	Pass	9.525M	8.928M	Inf
2593MHz_QPSK_RB 1,#RB M	Pass	375k	273.791k	Inf
2593MHz_16QAM_RB 50,#RB 0	Pass	9.588M	8.928M	Inf
2593MHz_16QAM_RB 1,#RB M	Pass	425k	288.121k	Inf
2593MHz_64QAM_RB 50,#RB 0	Pass	9.525M	8.943M	Inf
2593MHz_64QAM_RB 1,#RB M	Pass	380k	270.817k	Inf
2593MHz_256QAM_RB 50,#RB 0	Pass	9.5M	8.907M	Inf
2593MHz_256QAM_RB 1,#RB M	Pass	415k	278.362k	Inf
Band 41_LTE_5MHz_Nss1_1TX	-	-	-	-
2593MHz_QPSK_RB 25,#RB 0	Pass	4.825M	4.47M	Inf
2593MHz_QPSK_RB 1,#RB M	Pass	375k	253.211k	Inf
2593MHz_16QAM_RB 25,#RB 0	Pass	4.8M	4.466M	Inf
2593MHz_16QAM_RB 1,#RB M	Pass	357.5k	245.14k	Inf
2593MHz_64QAM_RB 25,#RB 0	Pass	4.8M	4.473M	Inf
2593MHz_64QAM_RB 1,#RB M	Pass	387.5k	260.55k	Inf
2593MHz_256QAM_RB 25,#RB 0	Pass	4.8M	4.464M	Inf
2593MHz_256QAM_RB 1,#RB M	Pass	357.5k	272.719k	Inf

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

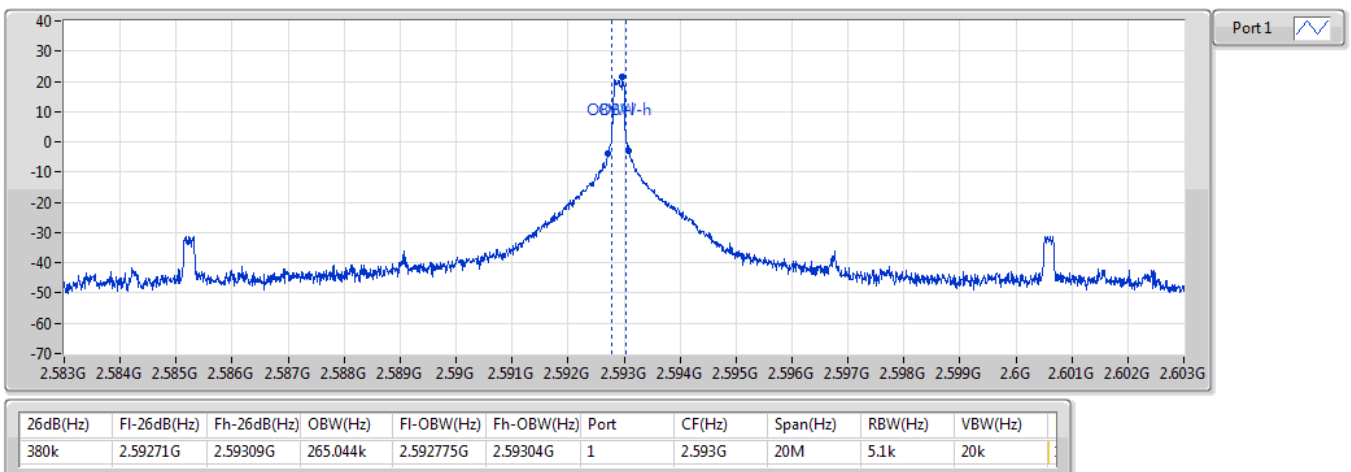
Band 41_LTE_20MHz_Nss1,QPSK_1TX
2593MHz_QPSK_RB 100,#RB 0

EBW



Band 41_LTE_20MHz_Nss1,QPSK_1TX
2593MHz_QPSK_RB 1,#RB M

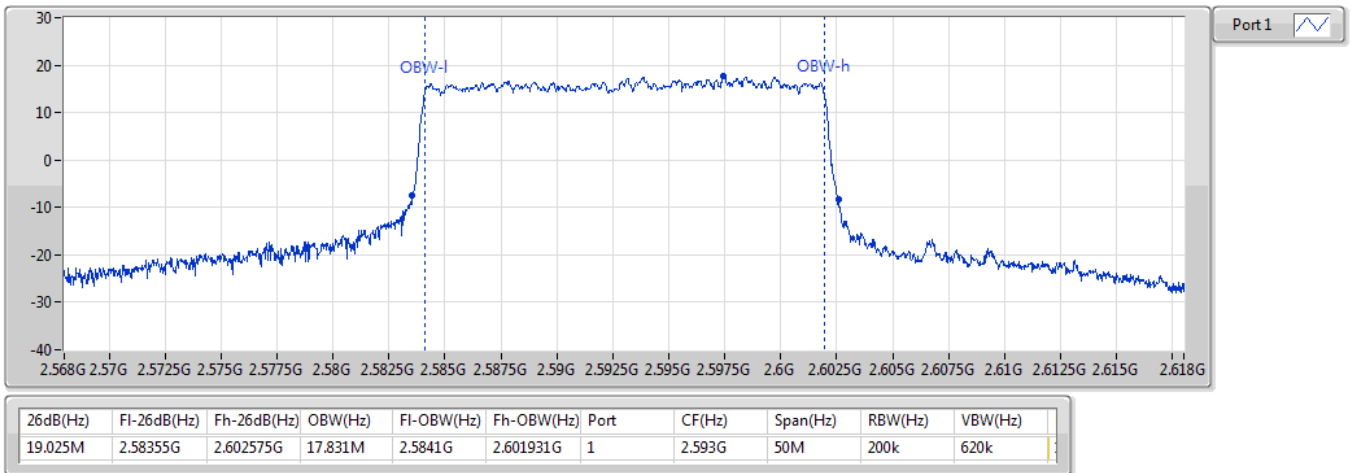
EBW



Band 41_LTE_20MHz_Nss1,16QAM_1TX

EBW

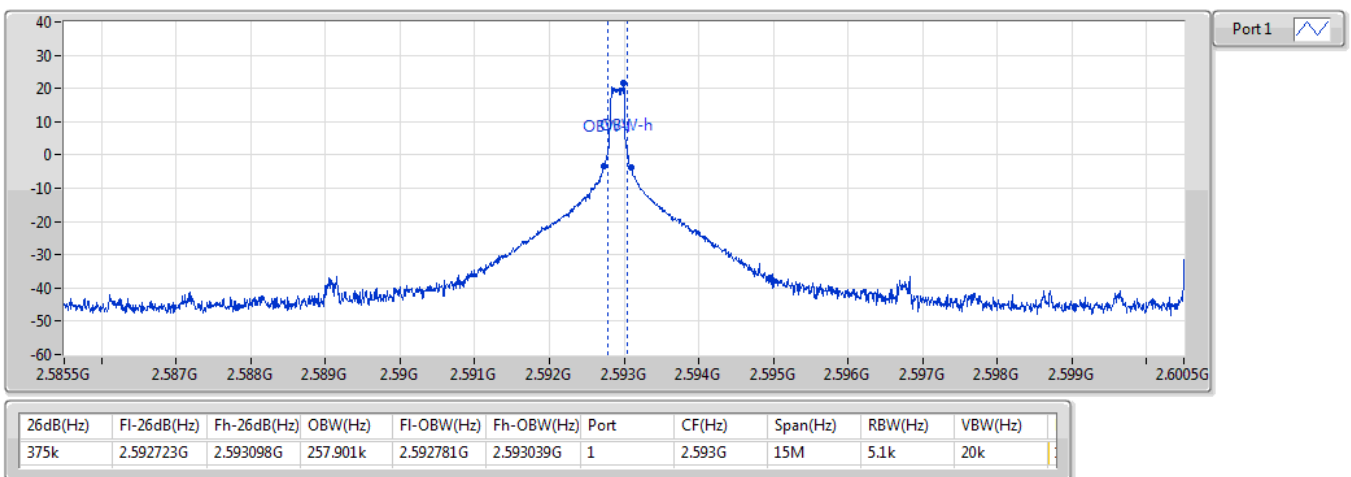
2593MHz_16QAM_RB 100,#RB 0



Band 41_LTE_20MHz_Nss1,16QAM_1TX

EBW

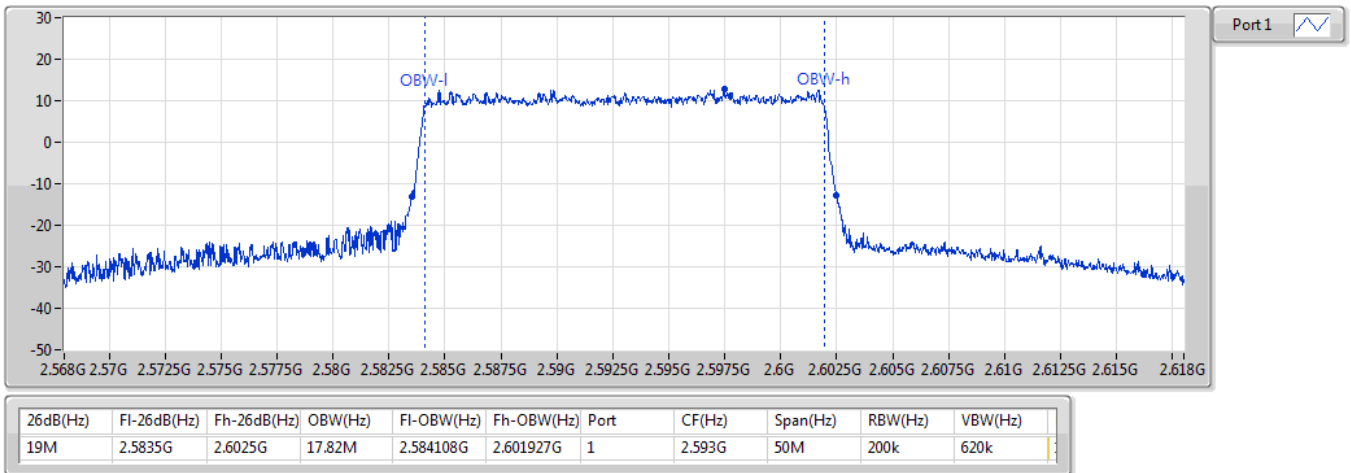
2593MHz_16QAM_RB 1,#RB M



Band 41_LTE_20MHz_Nss1,64QAM_1TX

EBW

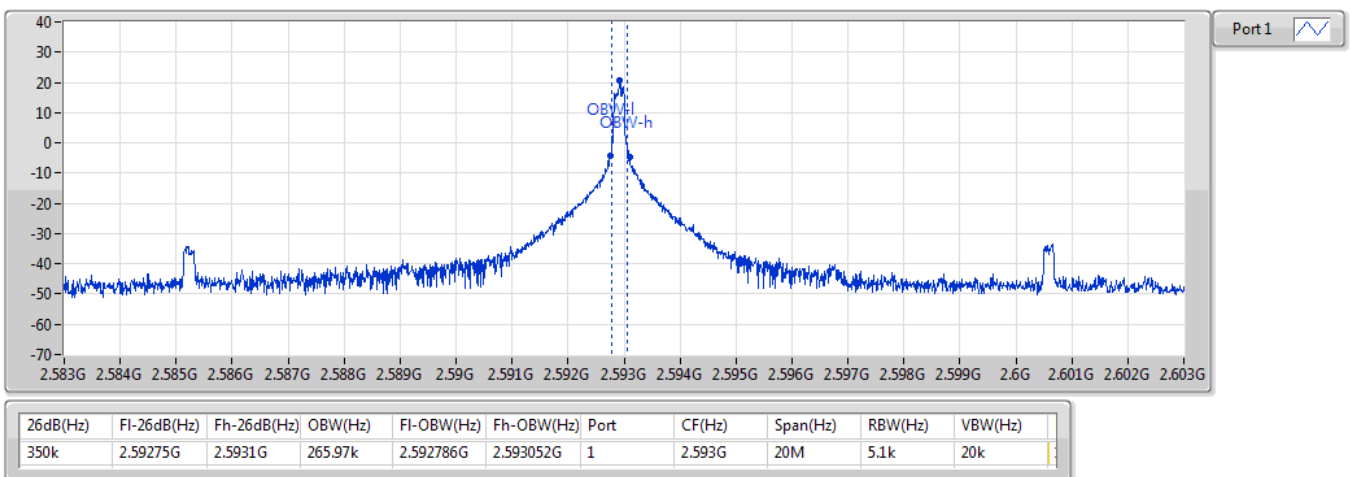
2593MHz_64QAM_RB 100,#RB 0



Band 41_LTE_20MHz_Nss1,64QAM_1TX

EBW

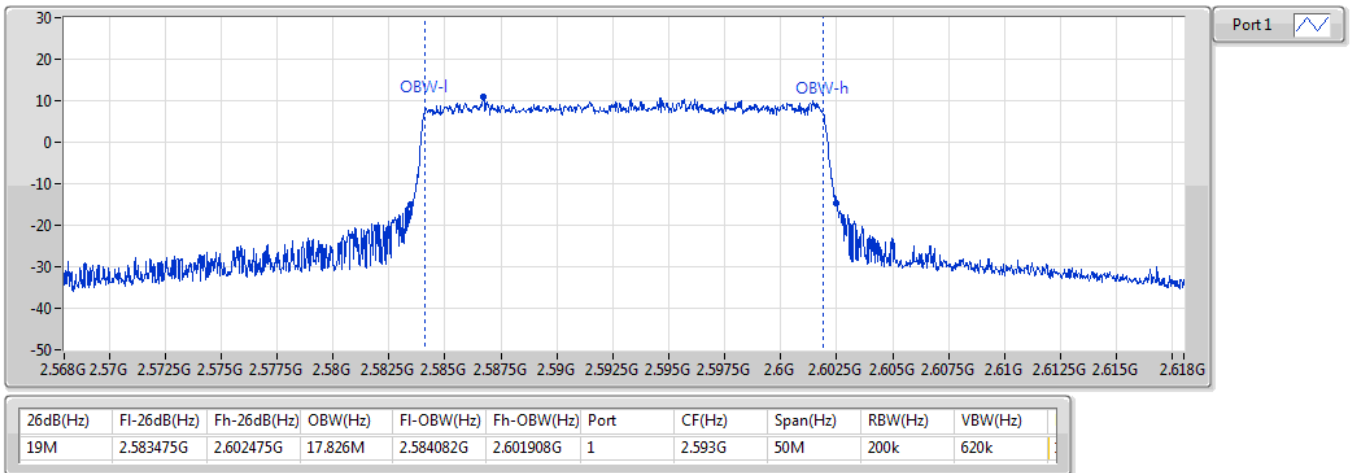
2593MHz_64QAM_RB 1,#RB M



Band 41_LTE_20MHz_Nss1,256QAM_1TX

EBW

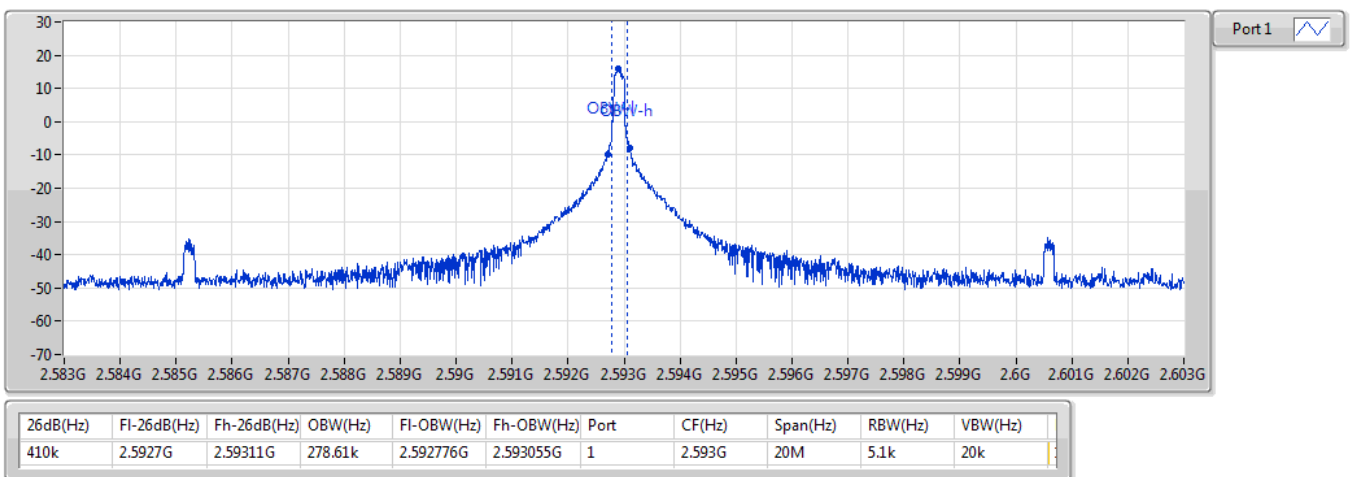
2593MHz_256QAM_RB 100,#RB 0



Band 41_LTE_20MHz_Nss1,256QAM_1TX

EBW

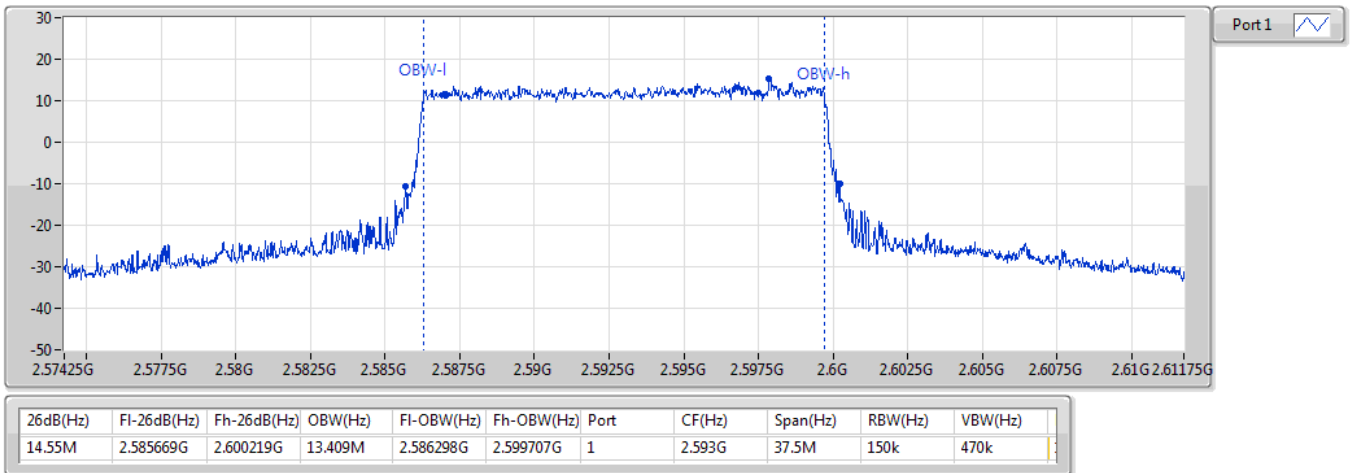
2593MHz_256QAM_RB 1,#RB M



Band 41_LTE_15MHz_Nss1,QPSK_1TX

EBW

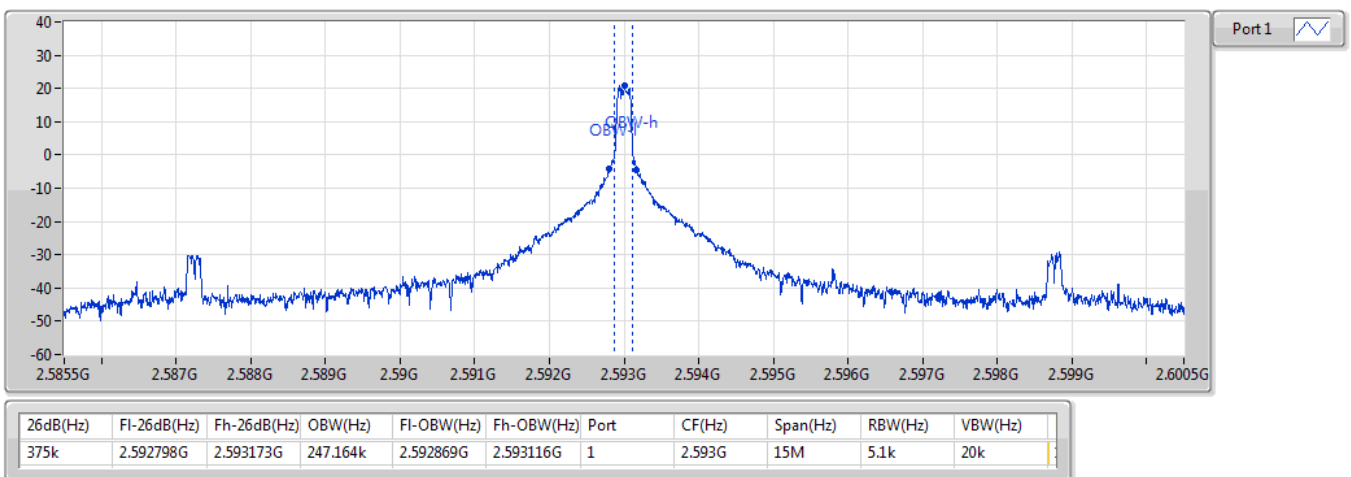
2593MHz_QPSK_RB 75,#RB 0



Band 41_LTE_15MHz_Nss1,QPSK_1TX

EBW

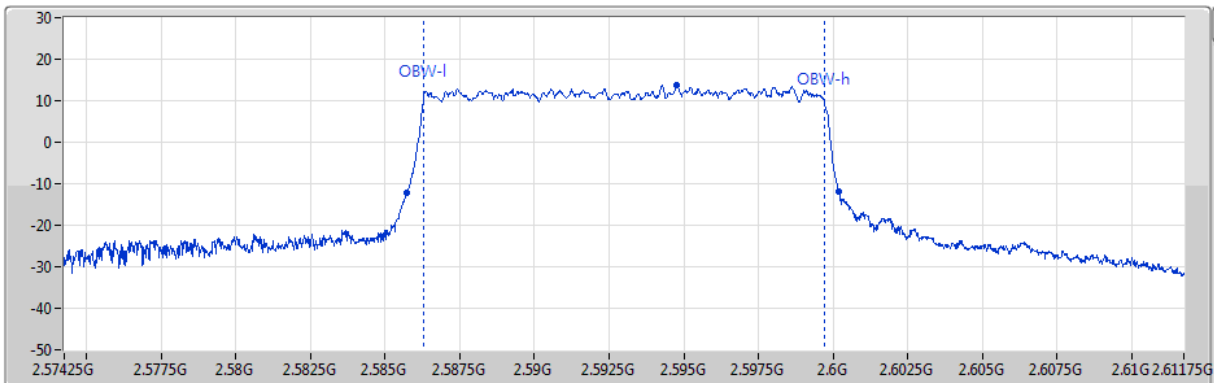
2593MHz_QPSK_RB 1,#RB M



Band 41_LTE_15MHz_Nss1,16QAM_1TX

EBW

2593MHz_16QAM_RB 75,#RB 0

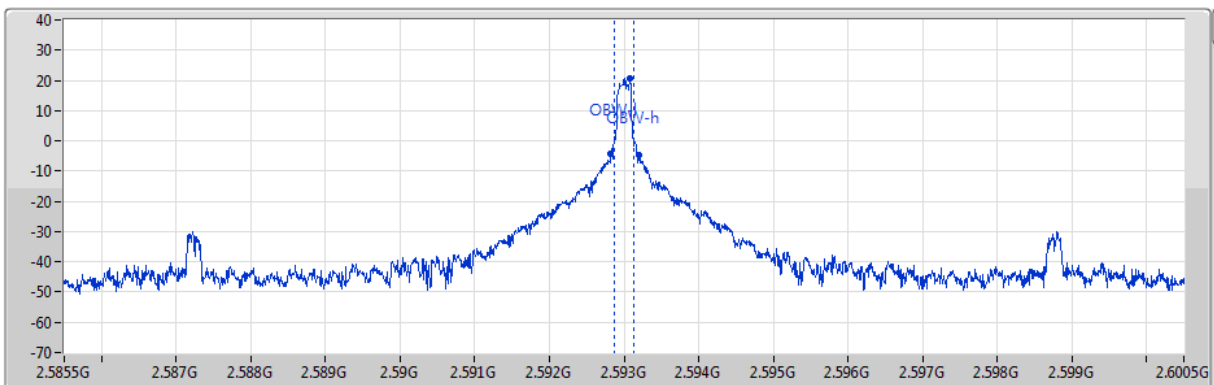


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
14.475M	2.585725G	2.6002G	13.434M	2.586291G	2.599725G	1	2.593G	37.5M	150k	470k

Band 41_LTE_15MHz_Nss1,16QAM_1TX

EBW

2593MHz_16QAM_RB 1,#RB M

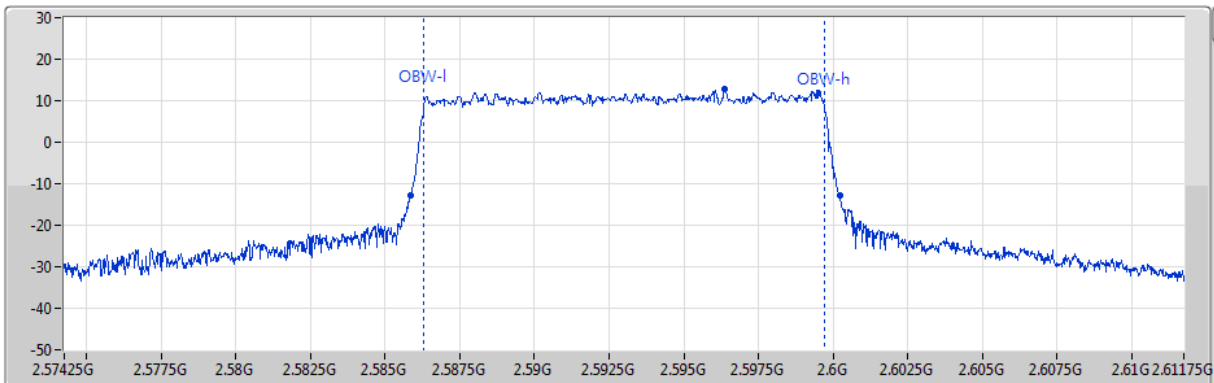


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
382.5k	2.59282G	2.593203G	266.644k	2.592869G	2.593136G	1	2.593G	15M	5.1k	20k

Band 41_LTE_15MHz_Nss1,64QAM_1TX

EBW

2593MHz_64QAM_RB 75,#RB 0

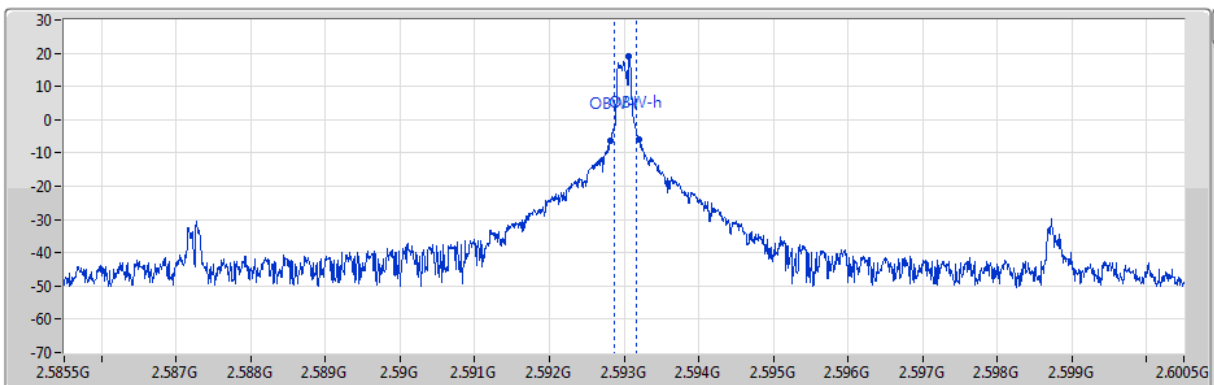


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
14.363M	2.585856G	2.600219G	13.398M	2.586307G	2.599704G	1	2.593G	37.5M	150k	470k

Band 41_LTE_15MHz_Nss1,64QAM_1TX

EBW

2593MHz_64QAM_RB 1,#RB M

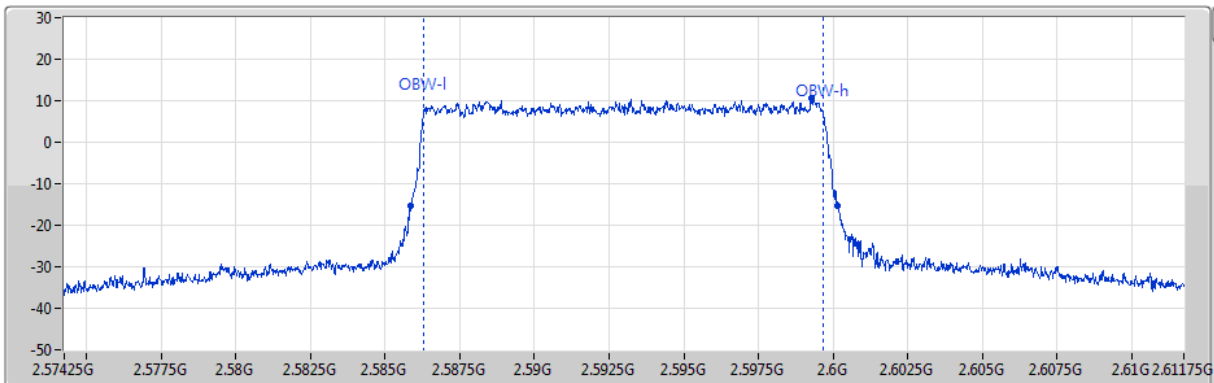


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
390k	2.592813G	2.593203G	296.777k	2.592862G	2.593159G	1	2.593G	15M	5.1k	20k

Band 41_LTE_15MHz_Nss1,256QAM_1TX

EBW

2593MHz_256QAM_RB 75,#RB 0

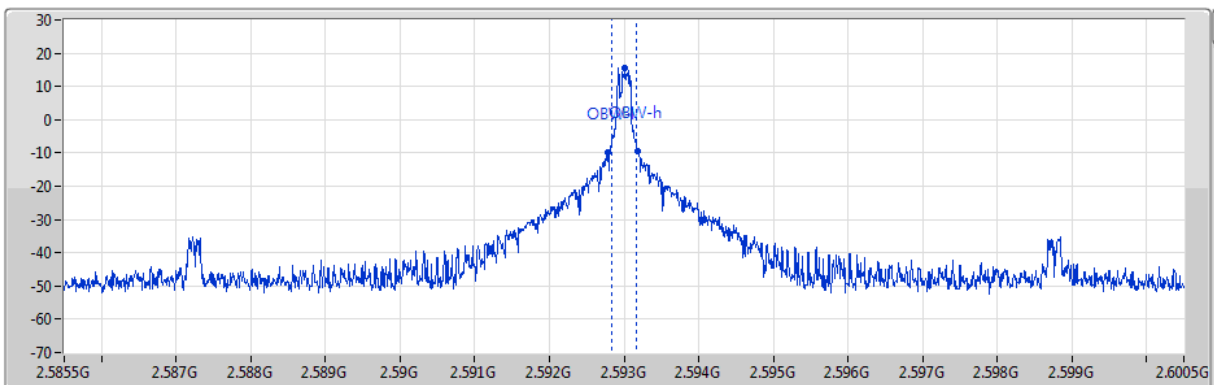


26dB(Hz)	FI-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
14.306M	2.585856G	2.600163G	13.374M	2.586304G	2.599678G	1	2.593G	37.5M	150k	470k

Band 41_LTE_15MHz_Nss1,256QAM_1TX

EBW

2593MHz_256QAM_RB 1,#RB M

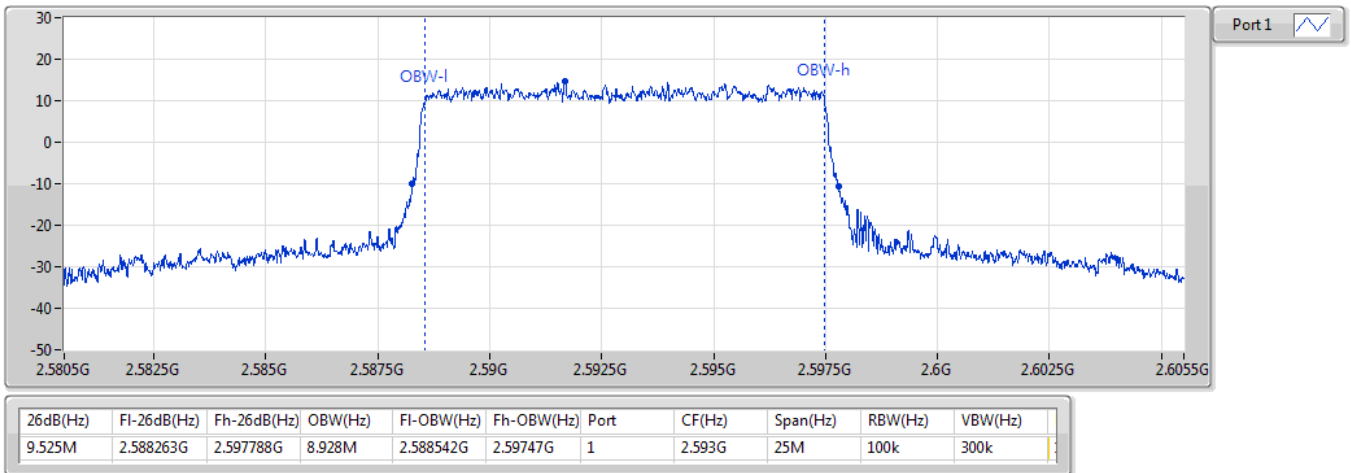


26dB(Hz)	FI-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Port	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)
397.5k	2.59279G	2.593188G	322.32k	2.592836G	2.593158G	1	2.593G	15M	5.1k	20k

Band 41_LTE_10MHz_Nss1,QPSK_1TX

EBW

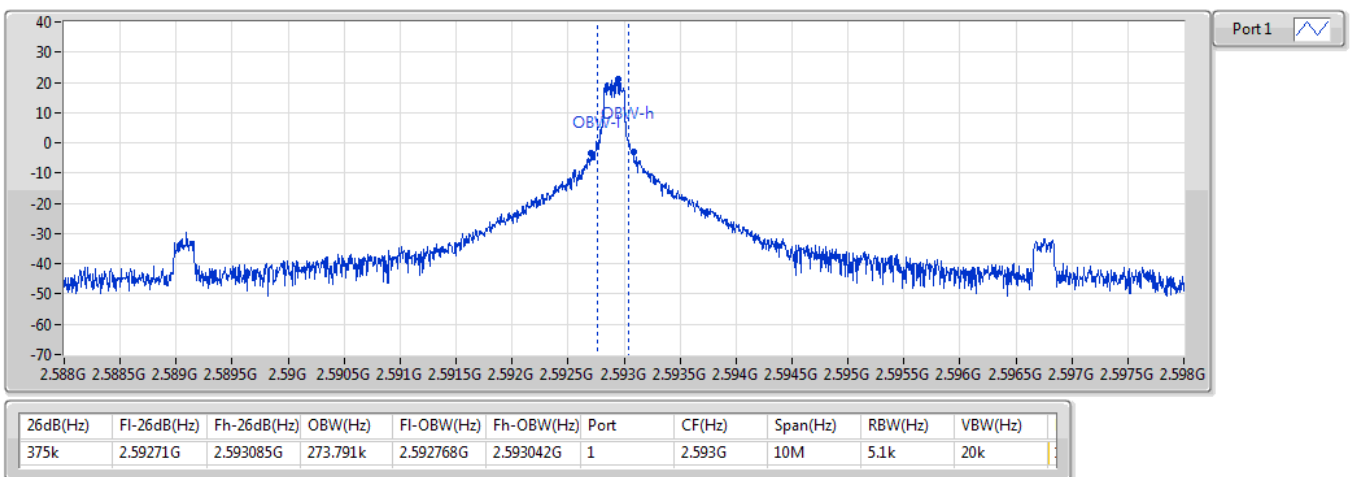
2593MHz_QPSK_RB 50,#RB 0



Band 41_LTE_10MHz_Nss1,QPSK_1TX

EBW

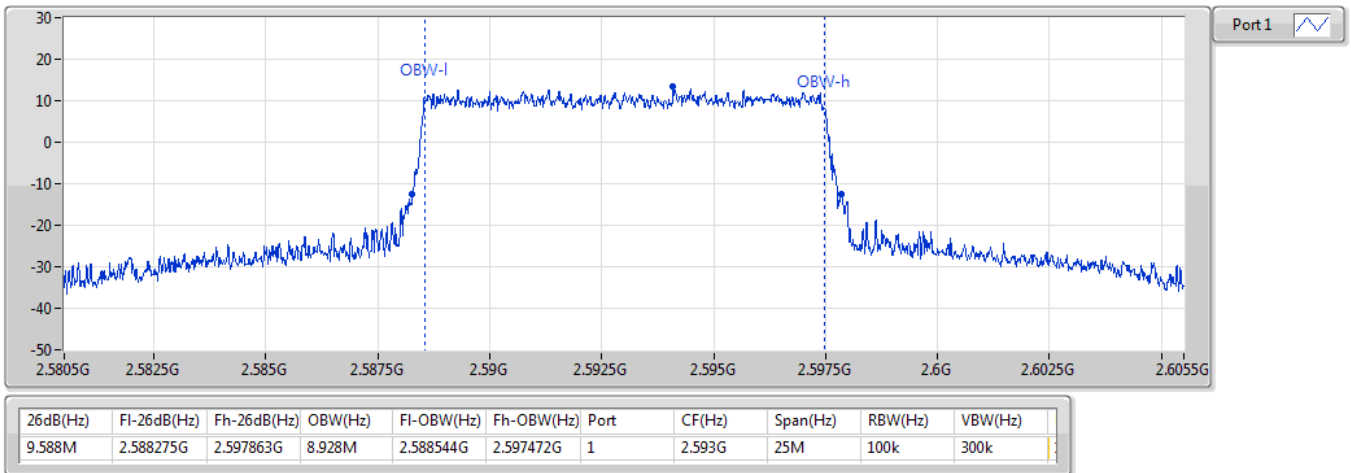
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Band 41_LTE_10MHz_Nss1,16QAM_1TX

EBW

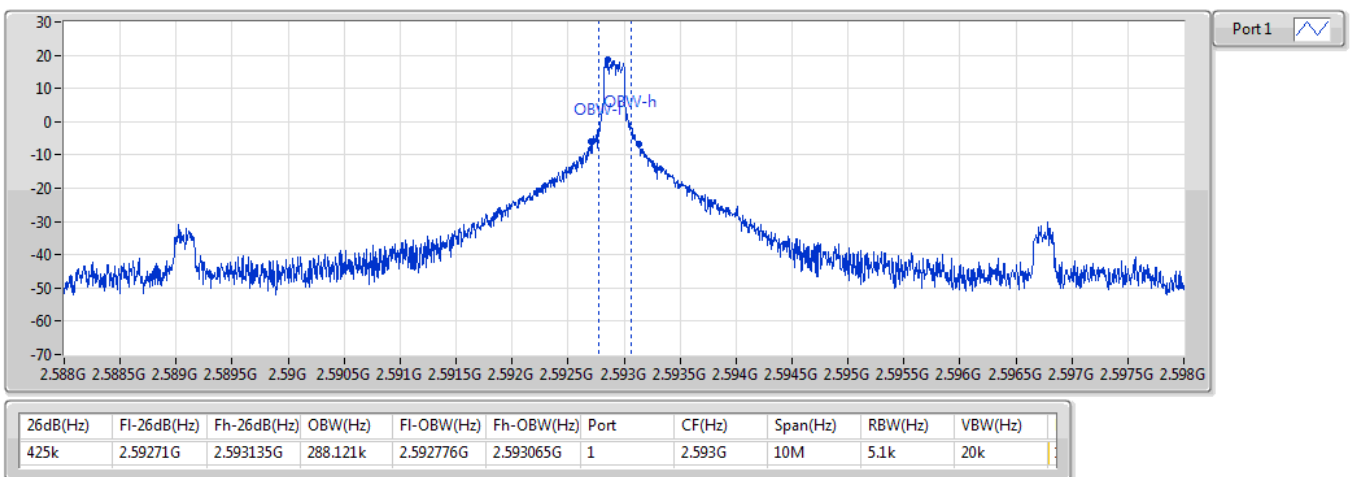
2593MHz_16QAM_RB 50,#RB 0



Band 41_LTE_10MHz_Nss1,16QAM_1TX

EBW

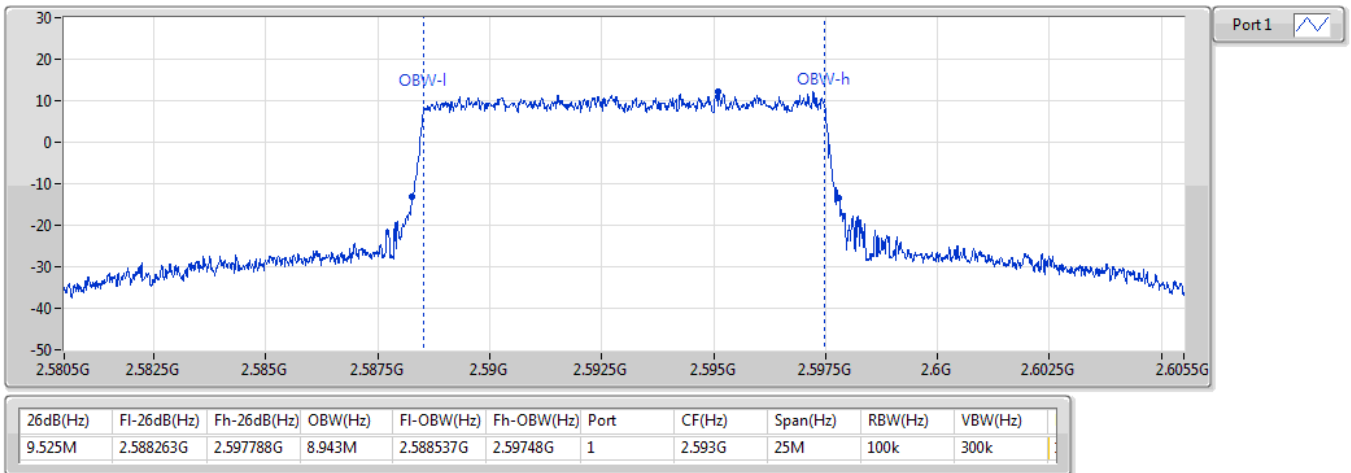
2593MHz_16QAM_RB 1,#RB M



Band 41_LTE_10MHz_Nss1,64QAM_1TX

EBW

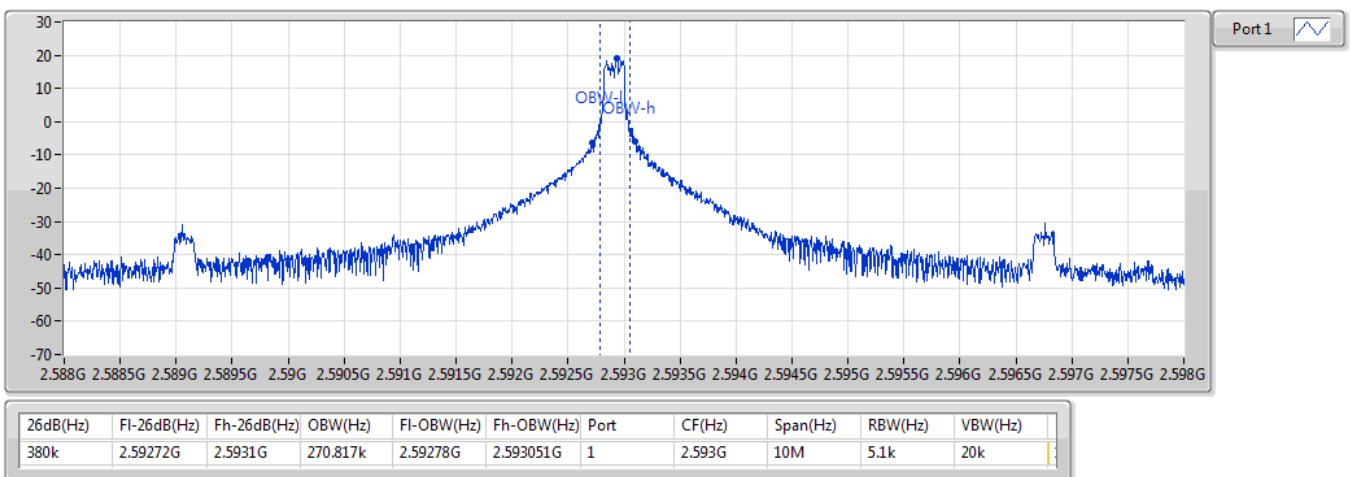
2593MHz_64QAM_RB 50,#RB 0



Band 41_LTE_10MHz_Nss1,64QAM_1TX

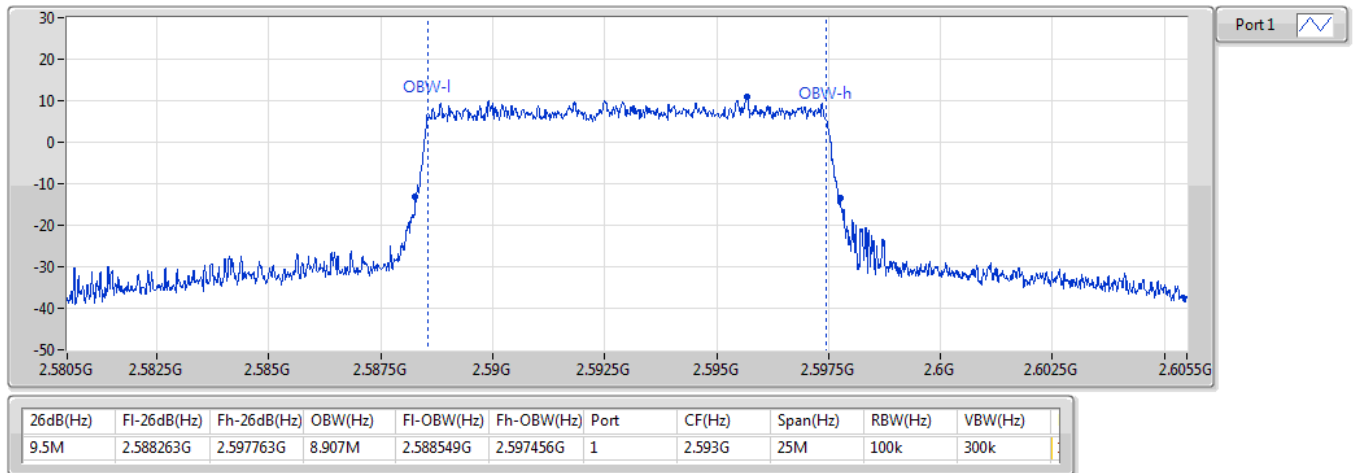
EBW

2593MHz_64QAM_RB 1,#RB M



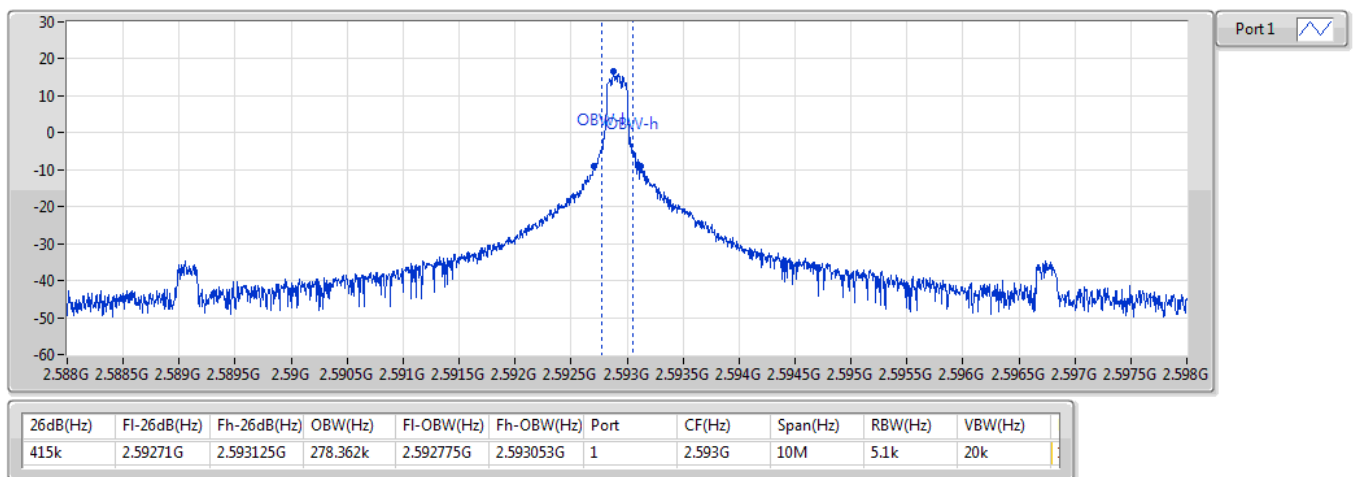
Band 41_LTE_10MHz_Nss1,256QAM_1TX
2593MHz_256QAM_RB 50,#RB 0

EBW



Band 41_LTE_10MHz_Nss1,256QAM_1TX
2593MHz_256QAM_RB 1,#RB M

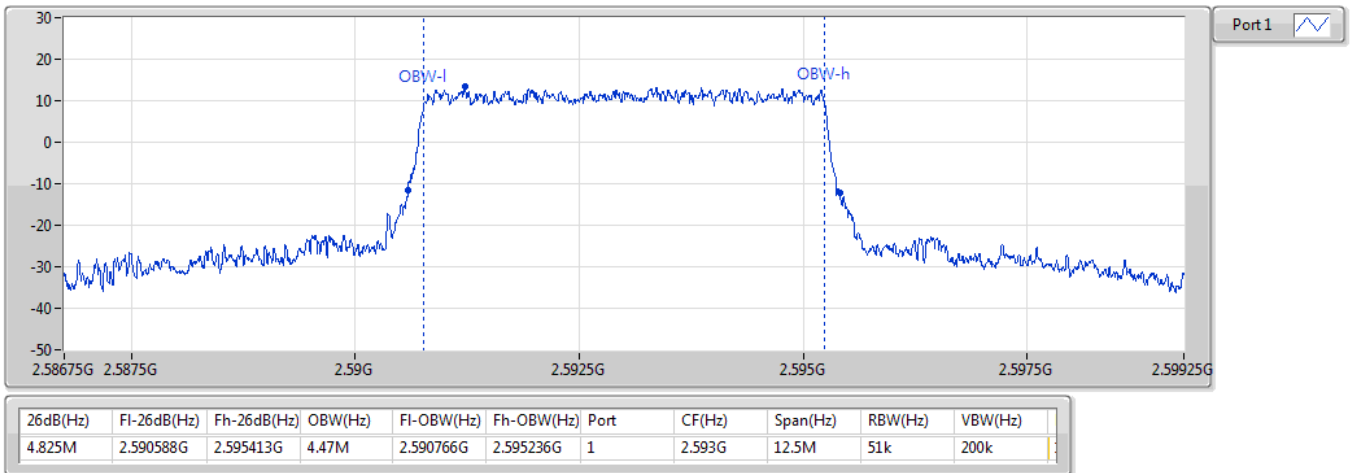
EBW



Band 41_LTE_5MHz_Nss1,QPSK_1TX

EBW

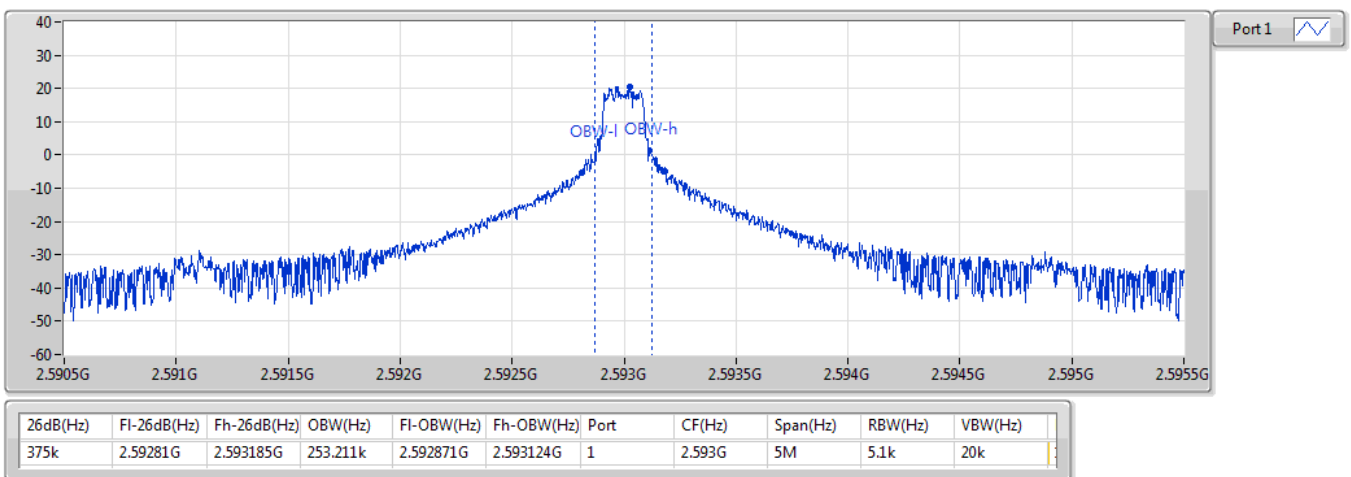
2593MHz_QPSK_RB 25,#RB 0



Band 41_LTE_5MHz_Nss1,QPSK_1TX

EBW

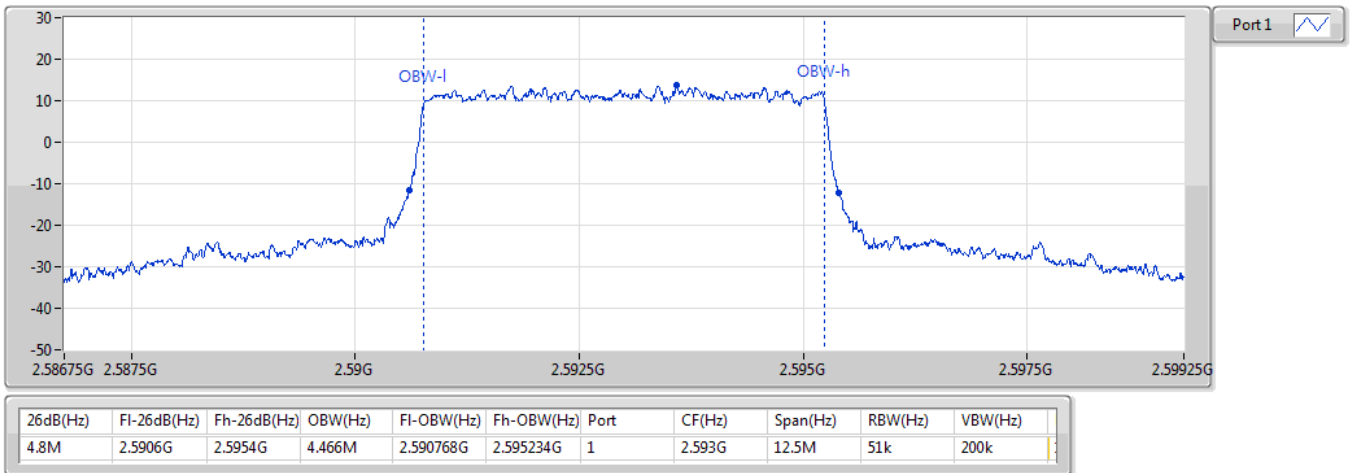
2593MHz_QPSK_RB 1,#RB M



Band 41_LTE_5MHz_Nss1,16QAM_1TX

EBW

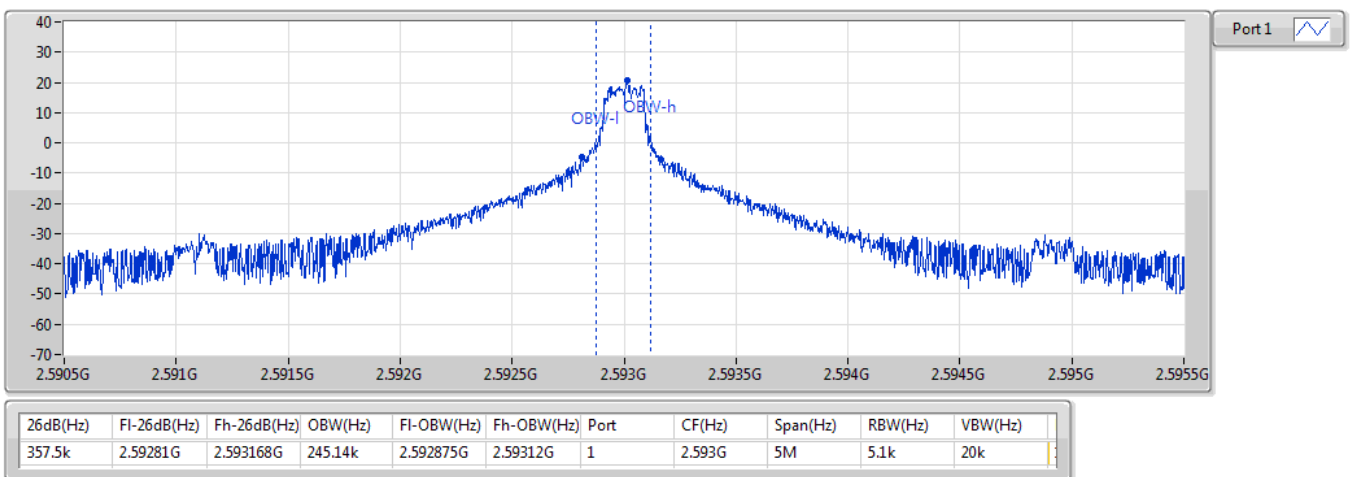
2593MHz_16QAM_RB 25,#RB 0



Band 41_LTE_5MHz_Nss1,16QAM_1TX

EBW

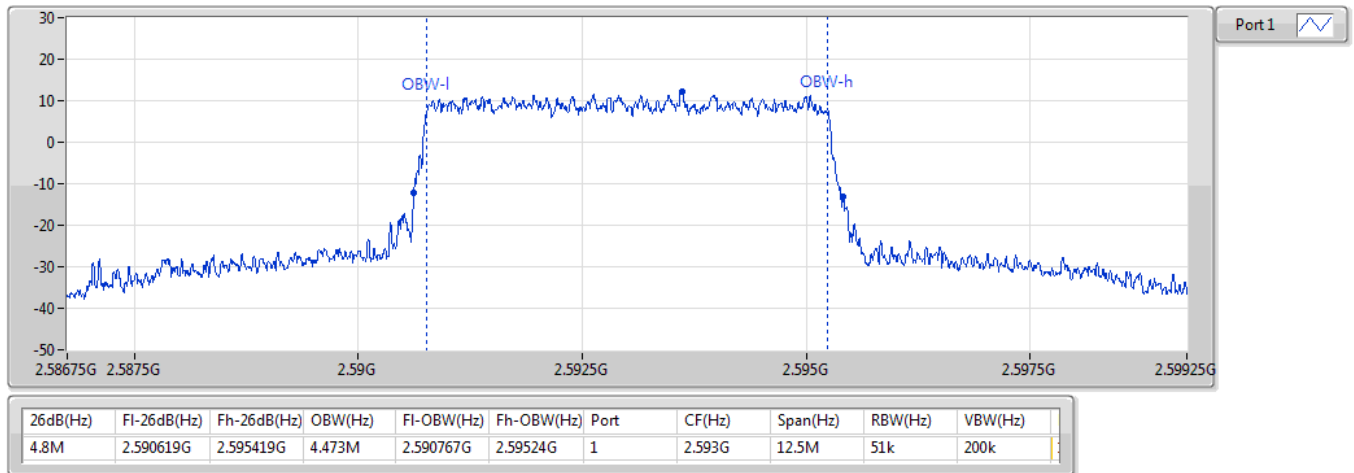
2593MHz_16QAM_RB 1,#RB M



Band 41_LTE_5MHz_Nss1,64QAM_1TX

EBW

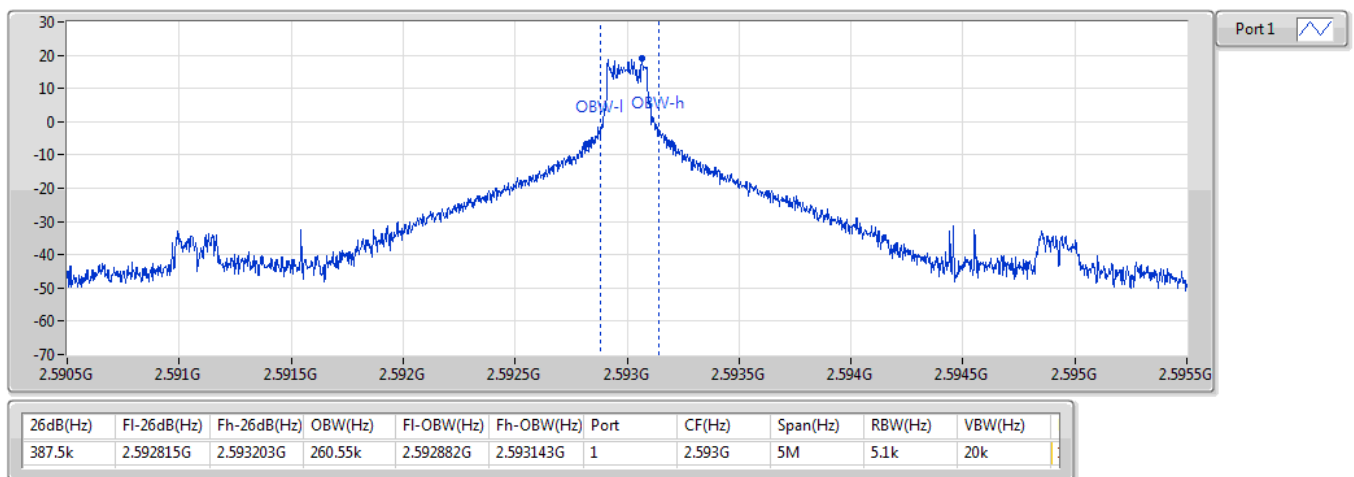
2593MHz_64QAM_RB 25,#RB 0



Band 41_LTE_5MHz_Nss1,64QAM_1TX

EBW

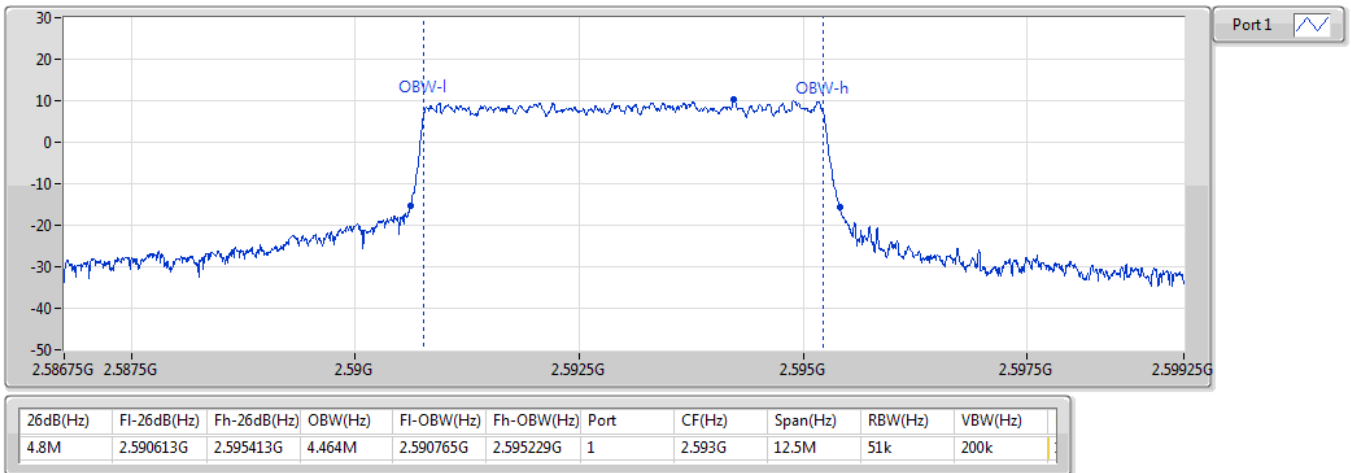
2593MHz_64QAM_RB 1,#RB M



Band 41_LTE_5MHz_Nss1,256QAM_1TX

EBW

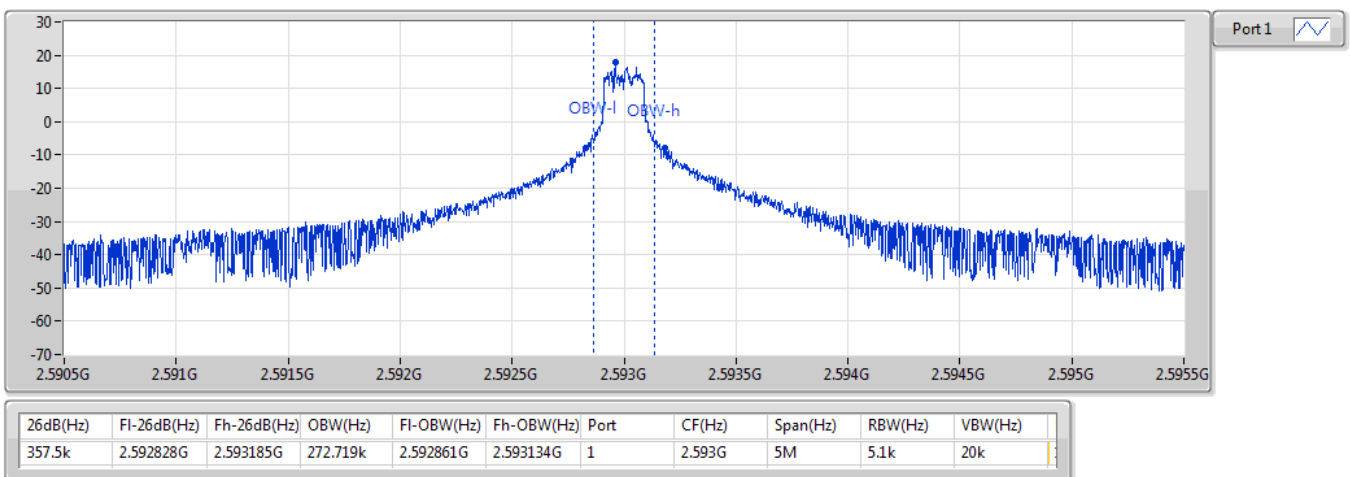
2593MHz_256QAM_RB 25,#RB 0



Band 41_LTE_5MHz_Nss1,256QAM_1TX

EBW

2593MHz_256QAM_RB 1,#RB M



**Summary**

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 41	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	2593	13.00	5.88	1
LTE_20MHz_Nss1,16QAM_1TX	Pass	2593	13.00	6.46	1
LTE_20MHz_Nss1,64QAM_1TX	Pass	2593	13.00	6.78	1
LTE_20MHz_Nss1,256QAM_1TX	Pass	2593	13.00	6.79	1

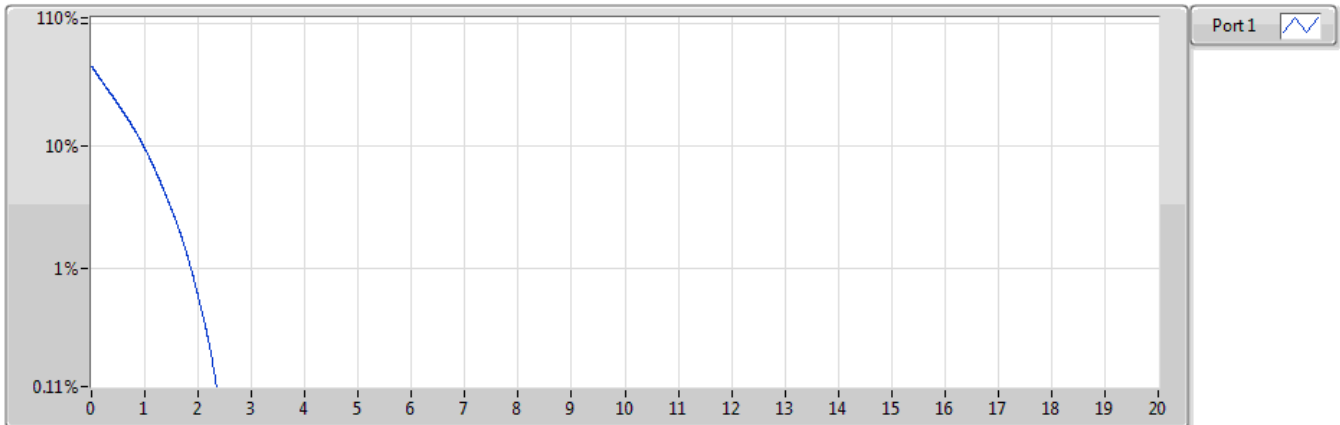
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 41_LTE_20MHz_Nss1_1TX	-	-	-	-	-
2593MHz_QPSK_RB 100,#RB 0	Pass	2593	13.00	5.88	1
2593MHz_16QAM_RB 100,#RB 0	Pass	2593	13.00	6.46	1
2593MHz_64QAM_RB 100,#RB 0	Pass	2593	13.00	6.78	1
2593MHz_256QAM_RB 100,#RB 0	Pass	2593	13.00	6.79	1

Band 41_LTE_20MHz_Nss1,QPSK_1TX

PAPR

2593MHz_QPSK_RB 100,#RB 0

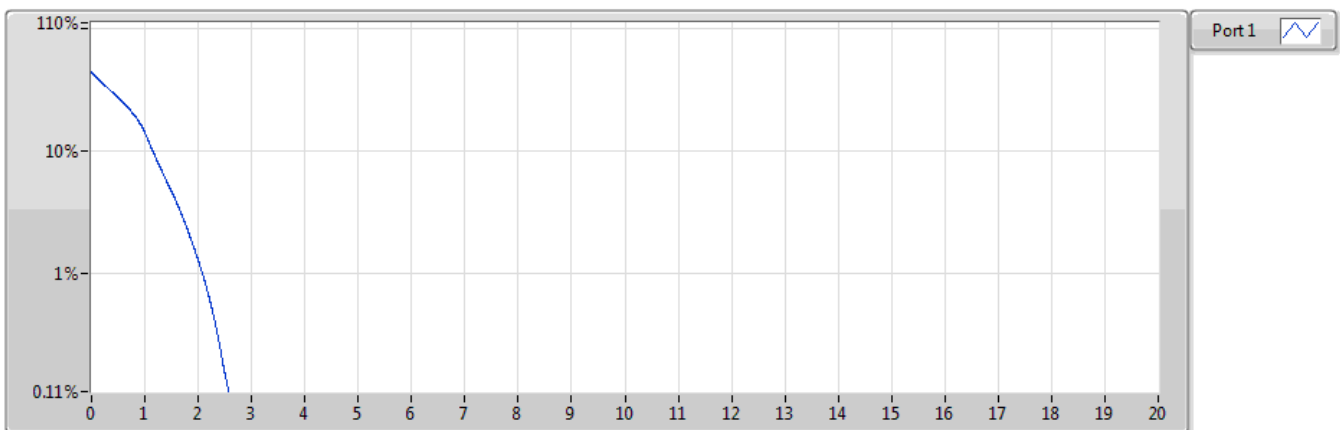


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
2593	20M	5.88	-7.12	13.00	1

Band 41_LTE_20MHz_Nss1,16QAM_1TX

PAPR

2593MHz_16QAM_RB 100,#RB 0

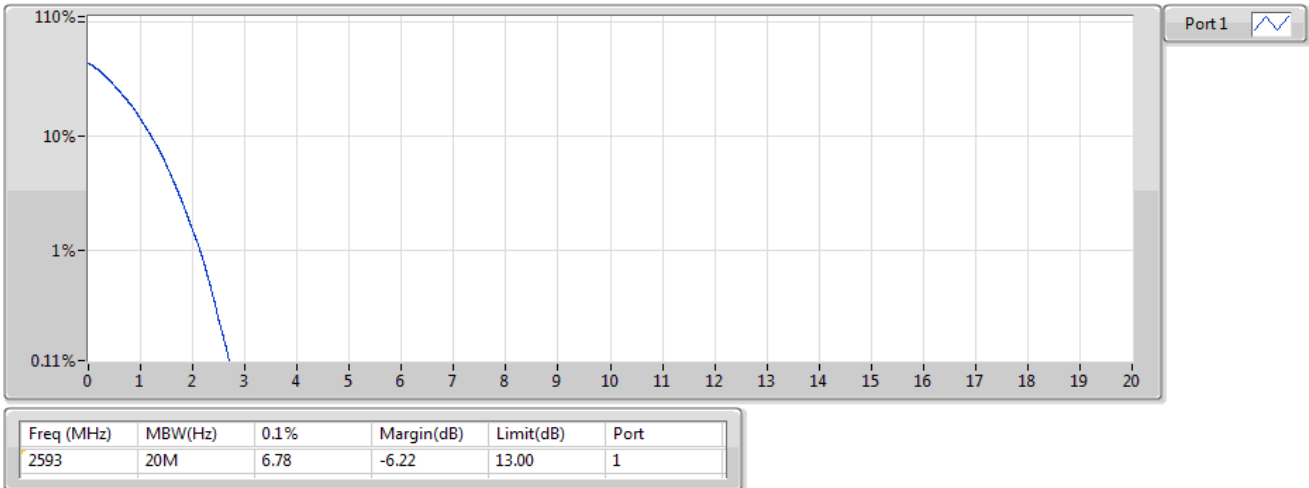


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
2593	20M	6.46	-6.54	13.00	1

Band 41_LTE_20MHz_Nss1,64QAM_1TX

PAPR

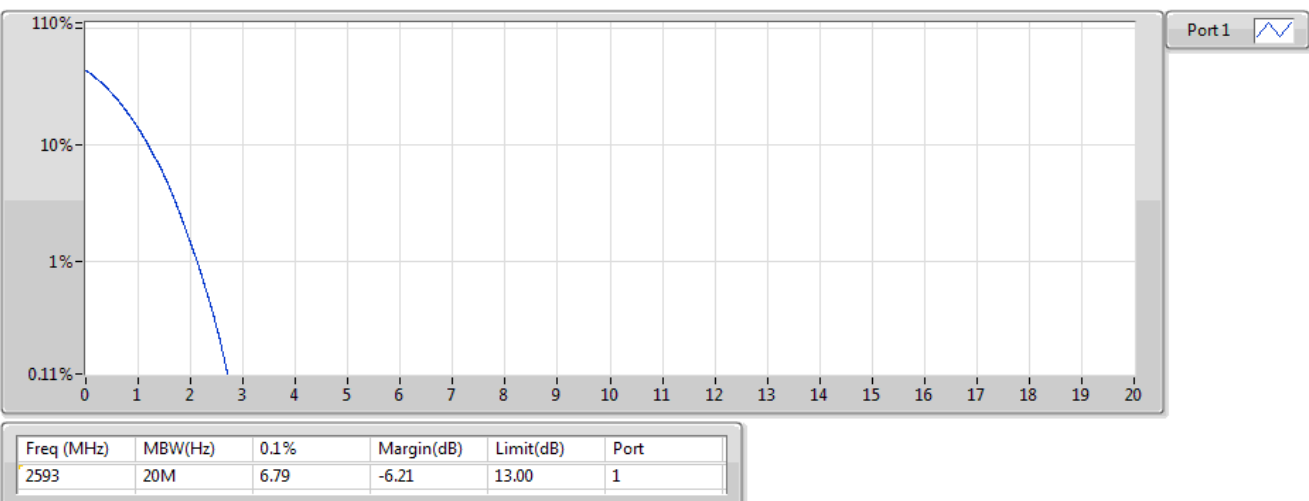
2593MHz_64QAM_RB 100,#RB 0



Band 41_LTE_20MHz_Nss1,256QAM_1TX

PAPR

2593MHz_256QAM_RB 100,#RB 0



Ref. Freq:	2593MHz	
Test Conditions	LTE Band 41(QPSK) / Middle channel	
Temperature (°C)	Deviation (ppm)	Limit ^{Note 1}
		Result
T20°C Vmax	0.01	PASS
T20°C Vmin	0.01	
T70°C Vnom	0.02	
T60°C Vnom	0.01	
T50°C Vnom	0.02	
T40°C Vnom	0.01	
T30°C Vnom	0.01	
T20°C Vnom	0.01	
T10°C Vnom	0.01	
T0°C Vnom	0.01	
T-10°C Vnom	0.01	
T-20°C Vnom	0.01	
T-30°C Vnom	0.02	

Note:

1. The frequency fundamental emissions stay within the authorized frequency block.