

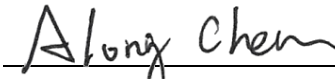
FCC Test Report

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

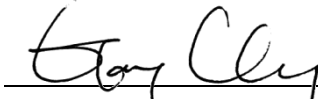

Gary Chang / Manager

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LTE BAND 71

APPENDIX A TEST RESULTS FOR EFFECTIVE RADIATED POWER

APPENDIX B TEST RESULTS FOR E RADIATED EMISSIONS

APPENDIX C.1 TEST RESULTS FOR OUT OF BAND EMISSIONS

APPENDIX C.2 TEST RESULTS FOR BAND EDGE

APPENDIX D TEST RESULTS FOR OCCUPIED AND 26 dB BANDWIDTH

APPENDIX E TEST RESULTS FOR PEAK TO AVERAGE POWER RATIO

APPENDIX F TEST RESULTS FOR FREQUENCY STABILITY

Release Record

Report No.	Version	Description	Issued Date
FG132502-04P27N	Rev. 01	Initial issue	Apr. 18, 2023

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 27.50(c)(10)	Effective Radiated Power	Maximum ERP [dBm]: 19.52	Pass
2.1053 27.53(g)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 27.53(g)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 27.53(g)	Band Edge	Meet the requirement of limit	Pass
2.1049	Occupied Bandwidth	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Ratio	Meet the requirement of limit	Pass

Declaration of Conformity:

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

Comments and Explanations:

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

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
XSquare	XS5G01-GB0	5G SOM	With GPS Component
	XS5G01-GBI		Without GPS Component
✦ The above models, model XS5G01-GB0 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	5G NR n71 Channel Bandwidth: 5MHz: 665.5 MHz ~ 695.5 MHz Channel Bandwidth: 10MHz: 668 MHz ~ 693 MHz Channel Bandwidth: 15MHz: 670.5 MHz ~ 690.5 MHz Channel Bandwidth: 20MHz: 673 MHz ~ 688 MHz
Operation Mode	SA and NSA
Uplink Modulation	QPSK , 16QAM , 64AQM , 256QAM for CP-OFDM $\pi/2$ -BPSK, QPSK, 16QAM, 64QAM and 256QAM for DFT-s-OFDM
Downlink Modulation	QPSK , 16QAM , 64AQM , 256QAM for CP-OFDM
Uplink EN-DC band	DC_2A_n71A, DC_66A_n71A

1.1.3 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)
Anjie	AELQ2S-B066L	Dipole	SMA	-2.8

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

Channel Bandwidth	Modulation	Maximum Conducted Power (W)	Emission Designator
20 MHz	PI/2 BPSK	0.169	17M9G7D
20 MHz	QPSK	0.171	18M9G7D
20 MHz	16QAM	0.140	18M9W7D
20 MHz	64QAM	0.100	19M0W7D
20 MHz	256QAM	0.066	18M9W7D
15 MHz	PI/2 BPSK	0.167	13M5G7D
15 MHz	QPSK	0.166	14M1G7D
15 MHz	16QAM	0.136	14M1W7D
15 MHz	64QAM	0.100	14M1W7D
15 MHz	256QAM	0.064	14M2W7D
10 MHz	PI/2 BPSK	0.169	8M93G7D
10 MHz	QPSK	0.170	9M26G7D
10 MHz	16QAM	0.136	9M27W7D
10 MHz	64QAM	0.097	9M27W7D
10 MHz	256QAM	0.064	9M27W7D
5 MHz	PI/2 BPSK	0.165	4M47G7D
5 MHz	QPSK	0.167	4M46G7D
5 MHz	16QAM	0.138	4M47W7D
5 MHz	64QAM	0.097	4M46W7D
5 MHz	256QAM	0.064	4M46W7D

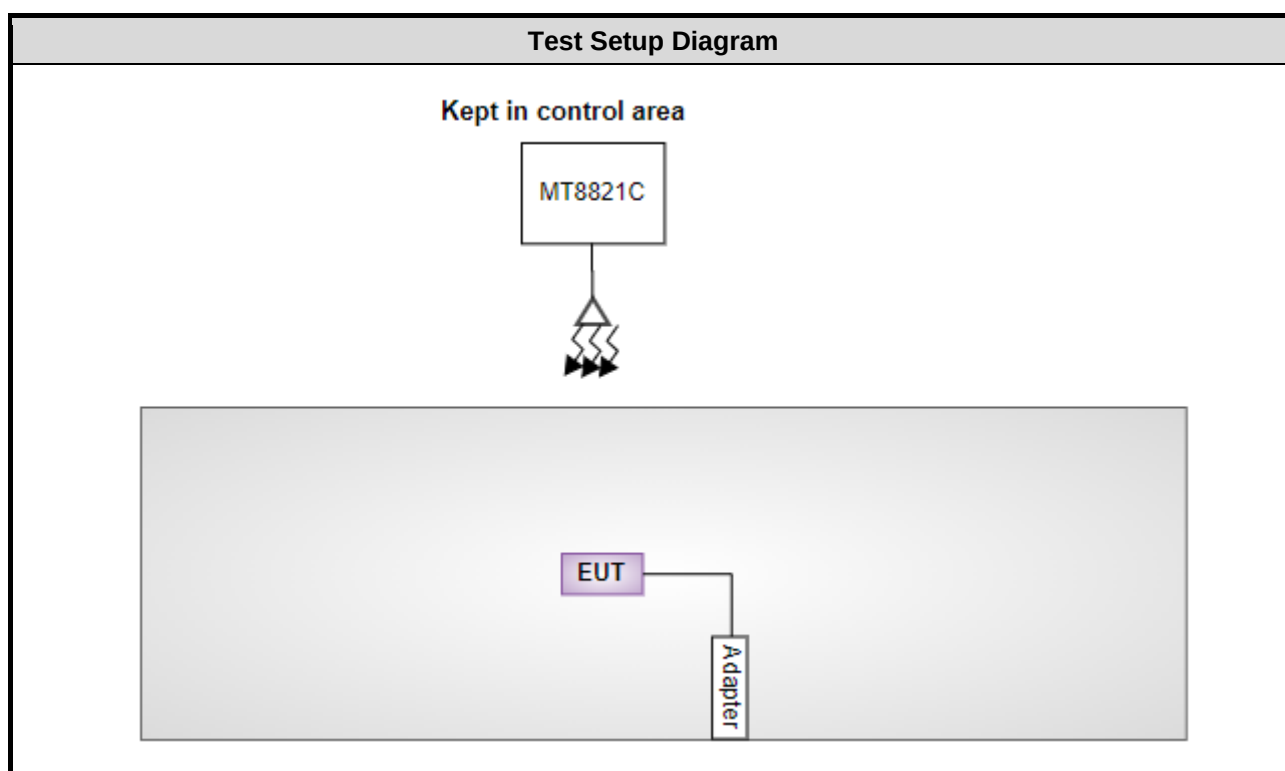
1.1.7 Operating Channel List

Channel Bandwidth (MHz)	Channel	Frequency (MHz)
20	134600	673
20	136100	680.5
20	137600	688
15	134100	670.5
15	136100	680.5
15	138100	690.5
10	133600	668
10	136100	680.5
10	138600	693
5	133100	665.5
5	136100	680.5
5	139100	695.5

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
Radio Communication Test Station	Anritsu	MT8000A	6262148276	Sep. 16, 2022	Sep. 15, 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	24°C / 62%	Sean Yu
RF Conducted	TH01-WS	23-25°C / 62-66%	Roger Lu

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

2.2 Testing Facility

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

2.3 The Worst Test Modes and Channel Details

Test items	Band	Bandwidth(MHz)				Modulation					RB#			Test Channel		
		5	10	15	20	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	n71	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
peak-to-Average Ratio	n71				v	v	v	v	v	v			v		v	
26dB and 99% Bandwidth	n71	v	v	v	v	v	v	v	v	v			v		v	
Conducted Band edge	n71	v	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	n71	v	v	v	v	v					v			v	v	v
Frequency Stability	n71				v	v										
E.I.R.P	n71	v	v	v	v	v	v	v	v	v	Max. power					
Radiated Spurious Emission	n71	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. Test combination are DC_2A_n71, DC_66A_n71A. 6. For radiated measurement, pre-scanned in two modes, DFT-s OFDM and CP OFDM. The worst cases (DFT-s OFDM) were recorded in this report, and the worst modes of FR1 and LTE for simultaneous transmission were verified and compliant. 7. All the NR SA/NSA modes are evaluated conducted power to determine the worst case mode for conducted items to be reported, for RSE, the NSA mode is selected to be performed instead of SA mode based on the NR output power is similar. 8. 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 Effective Radiated Power

3.1.1 Limit of Effective Radiated Power

Portable stations (hand-held devices) are limited to 3 watts ERP.

3.1.2 Test Procedures

For E.R.P measurement

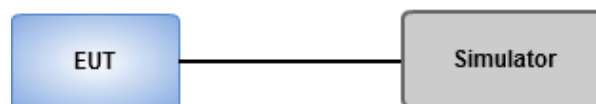
ERP can be calculated by below formula from KDB 412172 D01.

1. $EIRP = P_T + G_T - L_C$
 P_T = transmitter output power, in dBm.
 G_T = gain of the transmitting antenna, in dBi (EIRP).
 L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.
2. $ERP = EIRP - 2.15 \text{ dB}$.

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 of Effective Radiated Power and Conducted Power (dBm)

Refer to Appendix A

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

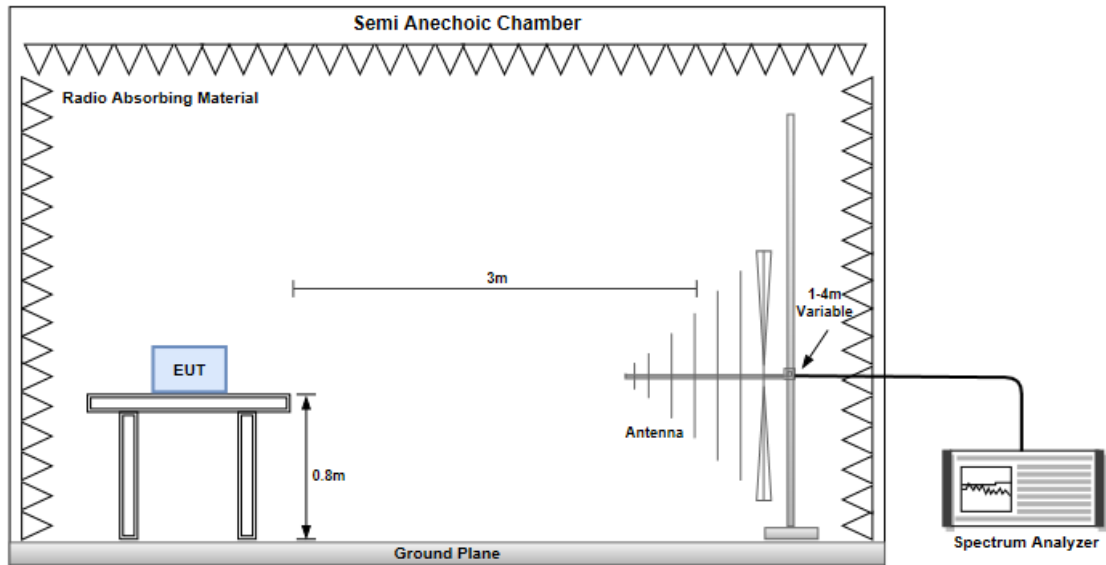
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB equal to -13dBm.

3.2.2 Test Procedures

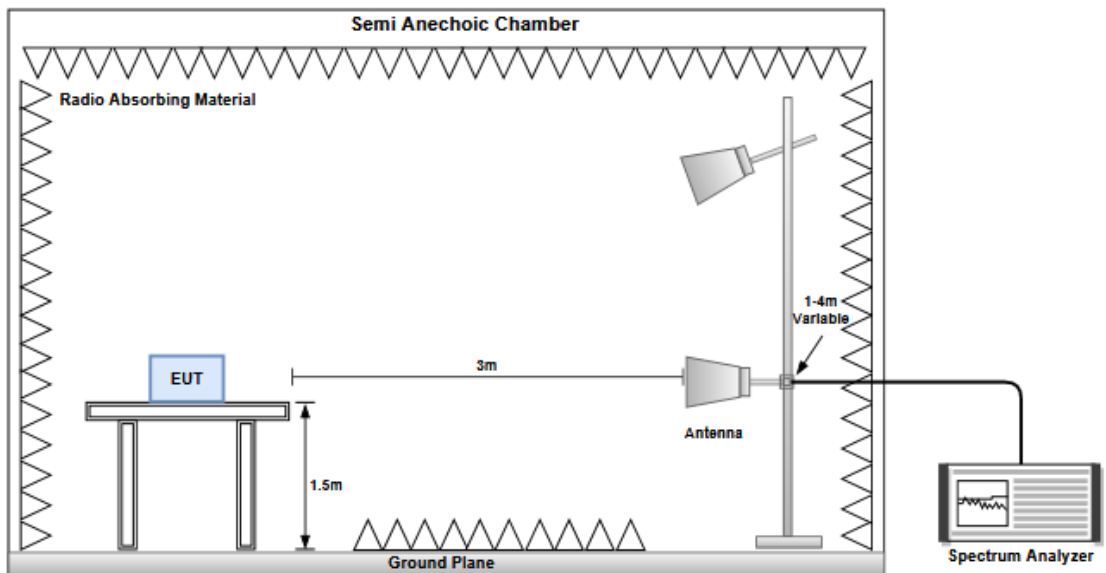
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. $E.I.R.P = \text{output power of step 4} + \text{gain of substitution antenna} - \text{cable loss of RF cable}$. ERP can be calculated by below formula:
 $E.R.P = E.I.R.P - 2.15\text{dB}$.

3.2.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.2.4 Test Result of Radiated Emissions below 1GHz

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

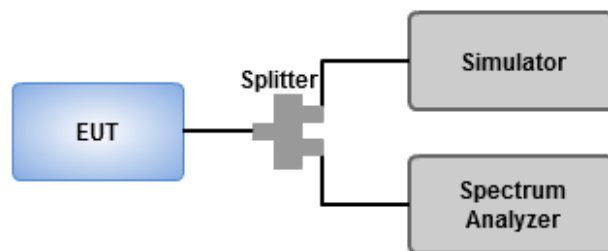
Out of band emission

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 10 GHz.
3. Set RBW = 100 kHz, VBW = 300kHz, detector = RMS, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

Band edge

1. Lowest and highest operating channels are tested for this item.
2. Set RBW = 1% of EBW, VBW = 3 x RBW, detector = RMS, sweep time = auto.
3. Record the max trace value and capture the test plot of each sub frequency band.

3.3.3 Test Setup



3.3.4 Test Result of Out of Band Emissions & Band Edge

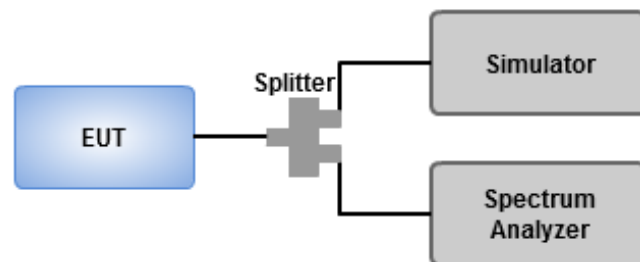
Refer to Appendix C.1, C.2.

3.4 Occupied Bandwidth and 26dB Bandwidth

3.4.1 Test Procedures

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Using occupied bandwidth measurement function of spectrum analyzer to measure occupied bandwidth
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26dB relative to the maximum level measured in the fundamental emission.

3.4.2 Test Setup



3.4.3 Test Result of Occupied and 26 dB Bandwidth

Refer to Appendix D

3.5 Peak to Average Power Ratio

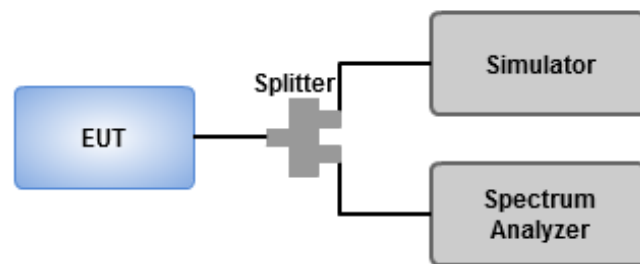
3.5.1 Limit of Peak to Average Power Ratio

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

3.5.2 Test Procedures

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

3.5.3 Test Setup



3.5.4 Test Result of Peak to Average Power Ratio

Refer to Appendix E

3.6 Frequency Stability

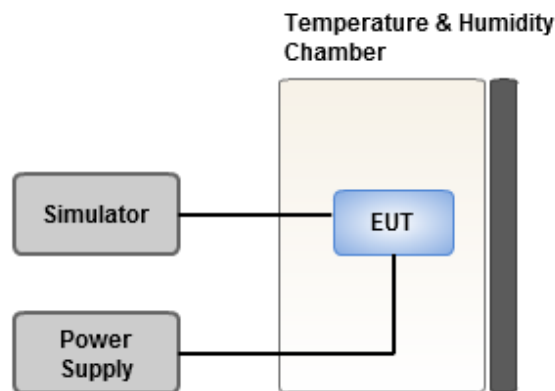
3.6.1 Limit of Frequency Stability

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 Result of Frequency Stability

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==

Summary

Part27 NR n71 Maximum Average Power [dBm](GT-LC= -2.8 dB)								
BW(MHz)	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.27	22.07	22.12	19.47	0.0885
20	1	104		22.06	22.05	22.11		
20	50	25		22.23	22.13	22.18		
20	1	0		21.73	21.59	21.46		
20	1	105		21.53	21.55	21.68		
20	100	0		21.63	21.57	21.67		
20	1	1	QPSK	22.32	22.27	22.16	19.52	0.0895
20	1	104		22.11	22.16	22.06		
20	50	25		22.19	22.07	22.14		
20	1	0		21.36	21.35	21.27		
20	1	105		21.28	21.2	21.23		
20	100	0		21.32	21.23	21.2		
20	1	1	16-QAM	21.45	21.21	21.34	18.65	0.0733
20	50	25		21.35	21.27	21.13		
20	100	0		20.33	20.24	20.37		
20	1	1	64-QAM	19.78	20.01	19.76	17.21	0.0526
20	50	25		19.85	19.75	19.82		
20	100	0		19.82	19.72	19.86		
20	1	1	256-QAM	18.21	17.86	18.11	15.41	0.0348
20	50	25		17.86	17.73	17.85		
20	100	0		17.84	17.83	17.86		
Limit	ERP < 3 W			Result			Pass	

Part27 NR n71 Maximum Average Power [dBm](GT-LC= -2.8 dB)								
BW(MHz)	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.16	22.06	22.07	19.42	0.0875
15	1	77		22.02	22.03	22.06		
15	36	18		22.19	22.02	22.22		
15	1	0		21.66	21.49	21.35		
15	1	78		21.48	21.52	21.45		
15	75	0		21.58	21.35	21.58		
15	1	1	QPSK	22.21	22.05	22.12	19.41	0.0873
15	1	77		22.02	22.03	22.09		
15	36	18		22.16	21.98	22.11		
15	1	0		21.3	21.26	21.21		
15	1	78		21.26	21.15	21.18		
15	75	0		21.24	21.09	21.15		
15	1	1	16-QAM	21.33	21.18	21.26	18.53	0.0713
15	36	18		21.28	21.19	21.23		
15	75	0		20.23	20.21	20.35		
15	1	1	64-QAM	19.75	19.98	19.85	17.18	0.0522
15	36	18		19.79	19.68	19.75		
15	75	0		19.77	19.7	19.68		
15	1	1	256-QAM	18.06	17.88	18.05	15.26	0.0336
15	36	18		17.79	17.65	17.75		
15	75	0		17.72	17.79	17.83		
Limit	ERP < 3 W			Result			Pass	



Part27 NR n71 Maximum Average Power [dBm](GT-LC= -2.8 dB)								
BW(MHz)	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.23	22.08	22.13	19.49	0.0889
10	1	50		22.07	22.06	22.11		
10	25	12		22.21	22.05	22.29		
10	1	0		21.75	21.55	21.62		
10	1	51		21.85	21.56	21.75		
10	50	0		21.63	21.33	21.65		
10	1	1	QPSK	22.31	22.15	22.18	19.51	0.0893
10	1	50		22.28	22.11	22.29		
10	25	12		22.25	22.05	22.3		
10	1	0		21.44	21.22	21.32		
10	1	51		21.58	21.35	21.42		
10	50	0		21.23	21.17	21.15		
10	1	1	16-QAM	21.25	21.21	21.22	18.52	0.0711
10	25	12		21.32	21.23	21.29		
10	50	0		20.27	20.15	20.29		
10	1	1	64-QAM	19.76	19.85	19.88	17.08	0.0511
10	25	12		19.85	19.75	19.75		
10	50	0		19.77	19.67	19.65		
10	1	1	256-QAM	18.03	18.02	17.95	15.23	0.0333
10	25	12		17.86	17.75	17.75		
10	50	0		17.75	17.62	17.66		
Limit	ERP < 3 W			Result			Pass	



Part27 NR n71 Maximum Average Power [dBm](GT-LC= -2.8 dB)								
BW(MHz)	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.09	22.05	22.11	19.38	0.0867
5	1	23		22.15	22.01	22.06		
5	12	6		22.11	22.03	22.18		
5	1	0		21.68	21.38	21.45		
5	1	24		21.79	21.45	21.65		
5	25	0		21.58	21.39	21.43		
5	1	1	QPSK	22.23	22.09	22.1	19.43	0.0877
5	1	23		22.18	22.05	22.06		
5	12	6		22.18	22.03	22.21		
5	1	0		21.37	21.18	21.29		
5	1	24		21.43	21.29	21.35		
5	25	0		21.18	21.2	21.08		
5	1	1	16-QAM	21.39	21.15	21.13	18.59	0.0723
5	12	6		21.28	21.32	21.2		
5	25	0		20.15	20.26	20.18		
5	1	1	64-QAM	19.86	19.78	19.76	17.06	0.0508
5	12	6		19.76	19.85	19.68		
5	25	0		19.65	19.77	19.58		
5	1	1	256-QAM	18.09	18.05	18.02	15.29	0.0338
5	12	6		17.79	17.68	17.68		
5	25	0		17.82	17.65	17.62		
Limit	ERP < 3 W			Result			Pass	

Mode	LTE Band B2A_N71A, PI/2 BPSK , CB:20 MHz, 1 RB, Channel: 134600						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1327.2	H	-59.16	-13	-46.16	-61.59	-60.12	3.11
1990.8	H	-71.74	-13	-58.74	-74.71	-75	5.41
2654.4	H	-68.97	-13	-55.97	-74.38	-72.7	5.88
1327.2	V	-54.36	-13	-41.36	-56.37	-55.32	3.11
1990.8	V	-71.3	-13	-58.3	-74.32	-74.56	5.41
2654.4	V	-69.35	-13	-56.35	-74.6	-73.08	5.88

Mode	LTE Band B2A_N71A, PI/2 BPSK , CB:20 MHz, 1 RB, Channel: 136100						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1342.2	H	-58.88	-13	-45.88	-61.32	-59.84	3.11
2013.3	H	-71.06	-13	-58.06	-74.25	-74.47	5.56
2684.4	H	-68.66	-13	-55.66	-74.24	-72.4	5.89
1342.2	V	-54.43	-13	-41.43	-56.46	-55.39	3.11
2013.3	V	-71.09	-13	-58.09	-74.37	-74.5	5.56
2684.4	V	-68.7	-13	-55.7	-74.14	-72.44	5.89

Mode	LTE Band B2A_N71A, PI/2 BPSK, CB:20 MHz, 1 RB, Channel: 137600						
Frequency (MHz)	Antenna Polarity	E.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)
1357.2	H	-57.78	-13	-44.78	-60.22	-58.75	3.12
2035.8	H	-71.15	-13	-58.15	-74.54	-74.25	5.25
2714.4	H	-68.51	-13	-55.51	-74.26	-72.22	5.86
1357.2	V	-52.66	-13	-39.66	-54.71	-53.63	3.12
2035.8	V	-70.98	-13	-57.98	-74.51	-74.08	5.25
2714.4	V	-68.8	-13	-55.8	-74.43	-72.51	5.86

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

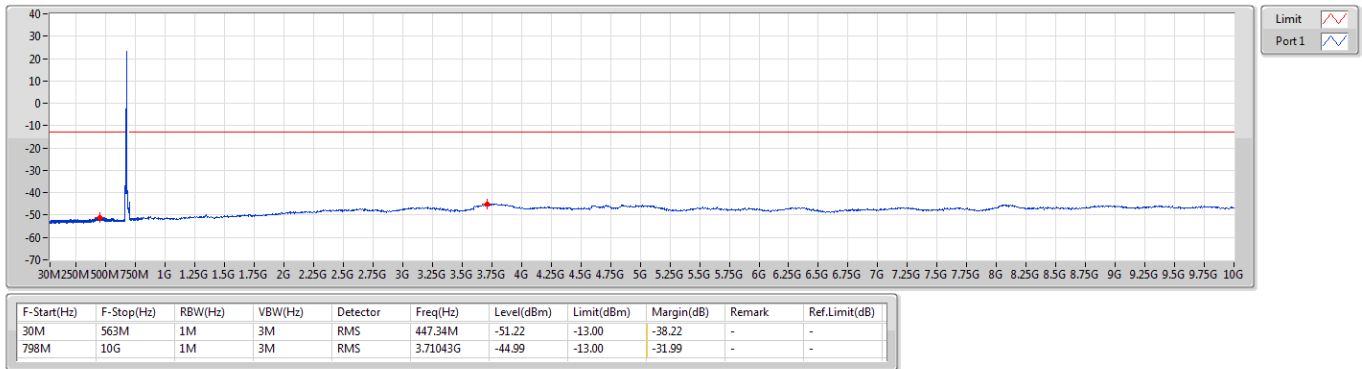


Summary

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 n71	-	-	-	-	-	-	-	-	-	-	-	-
NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	798M	10G	1M	3M	RMS	3.77485G	-44.96	-13.00	-31.96	-	-
NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	798M	10G	1M	3M	RMS	3.77945G	-44.86	-13.00	-31.86	-	-
NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	798M	10G	1M	3M	RMS	3.78405G	-44.90	-13.00	-31.90	-	-
NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	798M	10G	1M	3M	RMS	3.78405G	-44.88	-13.00	-31.88	-	-

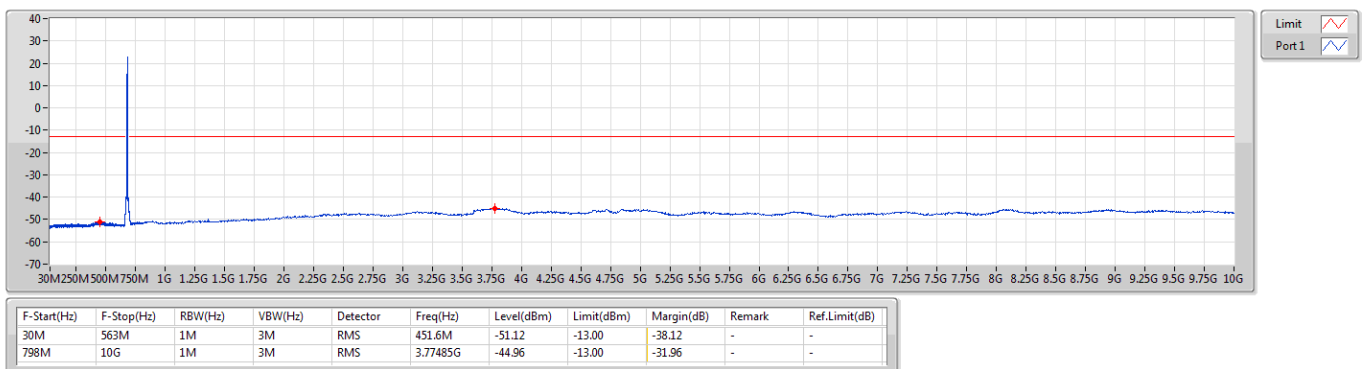
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
673MHz_DFT-s-OFDM_PI2BPSK_1RB

CSE-TX-Sum



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
680.5MHz_DFT-s-OFDM_PI2BPSK_1RB

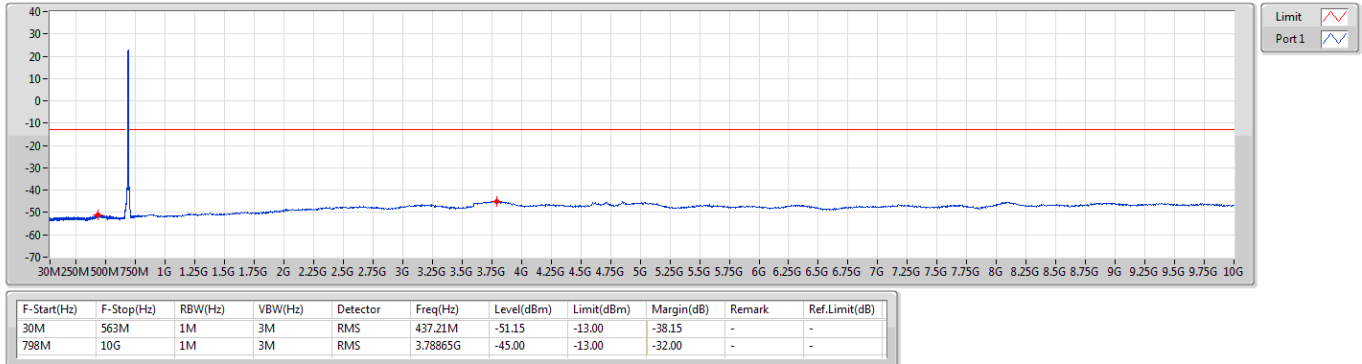
CSE-TX-Sum



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

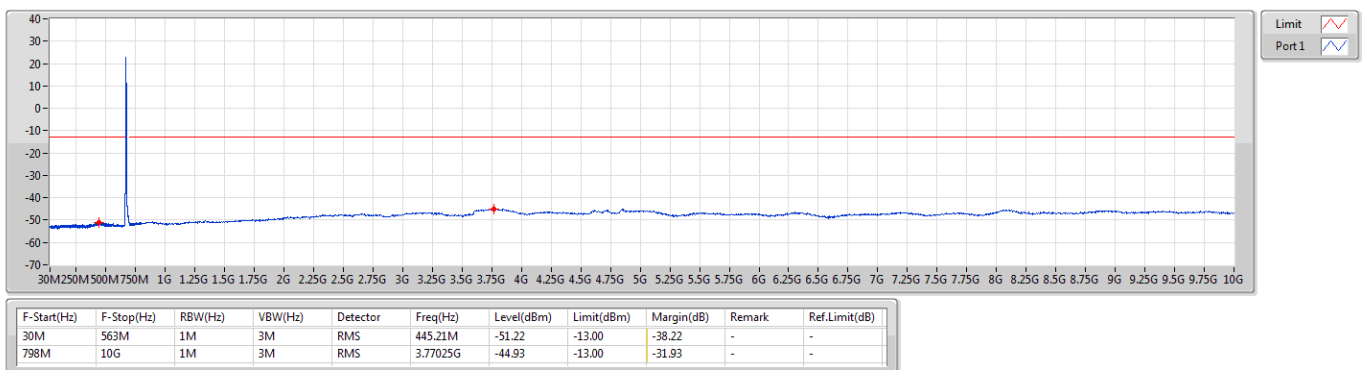
688MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

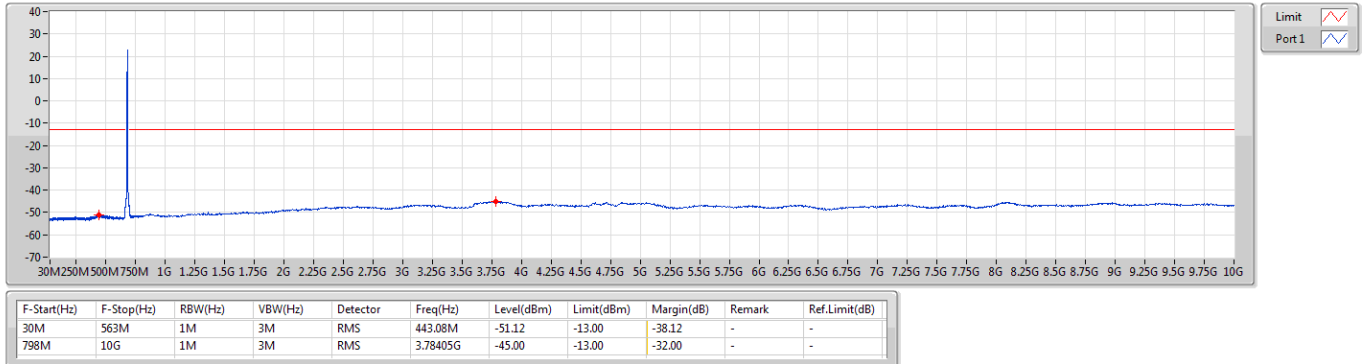
670.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

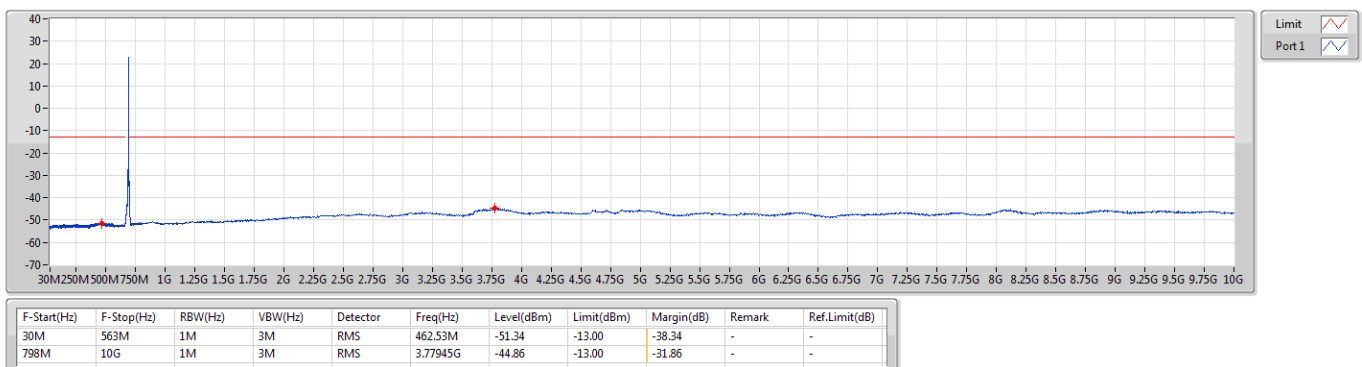
680.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

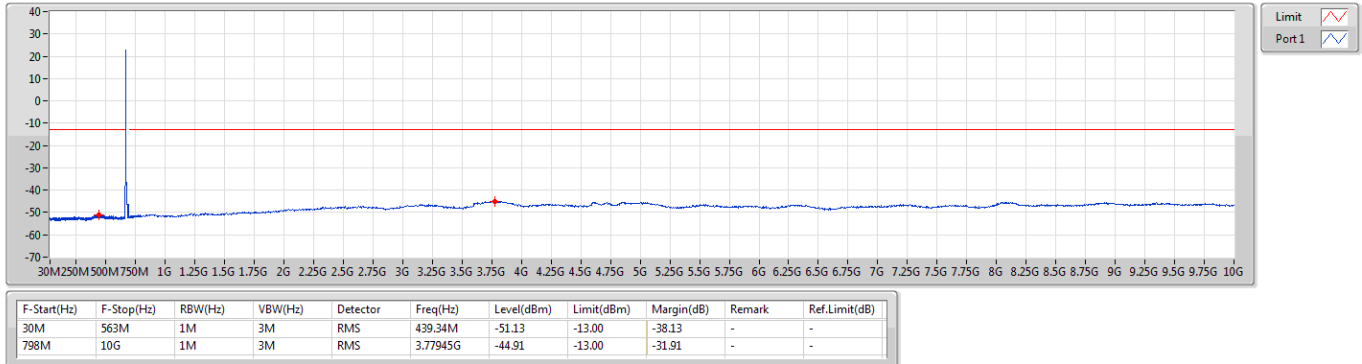
690.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

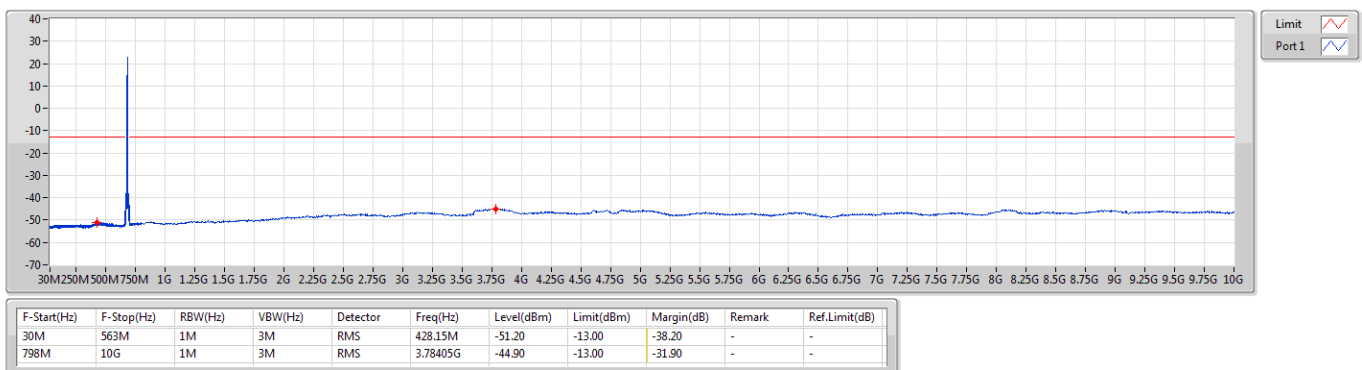
668MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

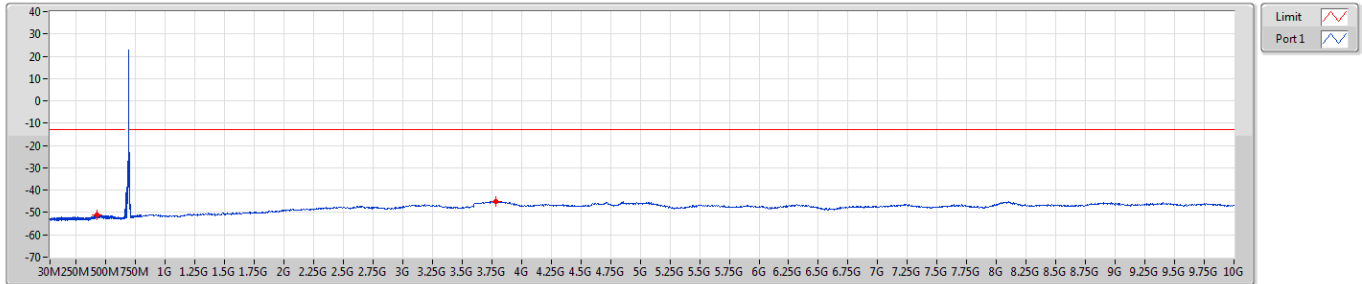
680.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

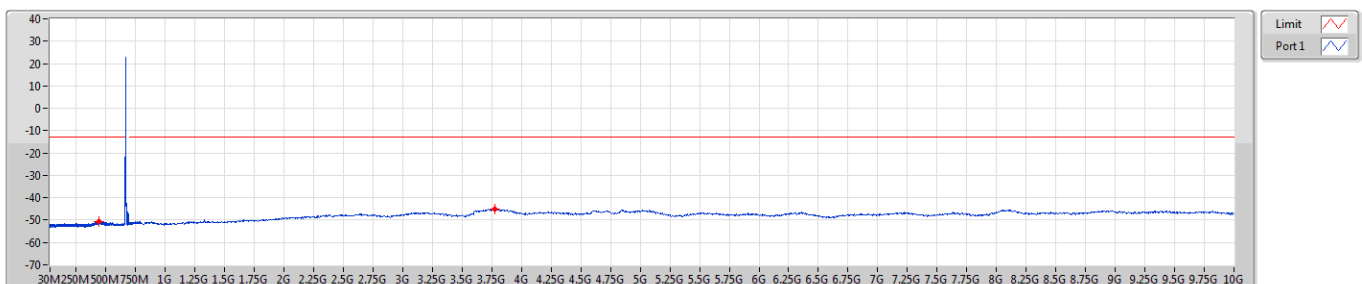
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Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

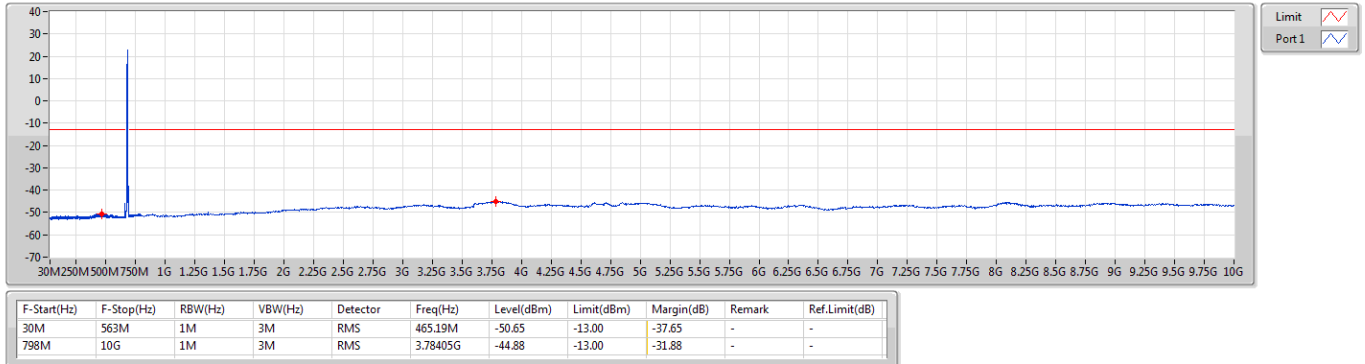
665.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

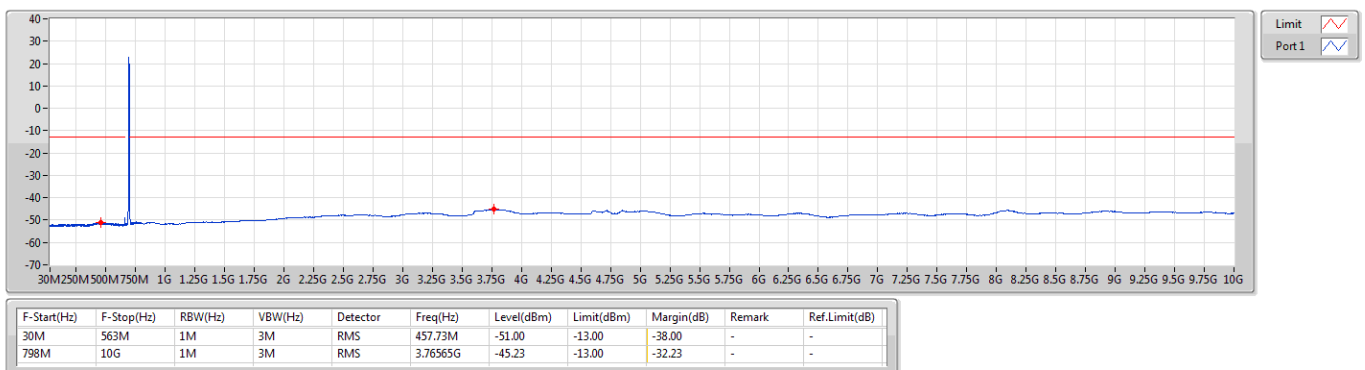
680.5MHz_DFT-s-OFDM_PI2BPSK_1RB



Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

CSE-TX-Sum

695.5MHz_DFT-s-OFDM_PI2BPSK_1RB

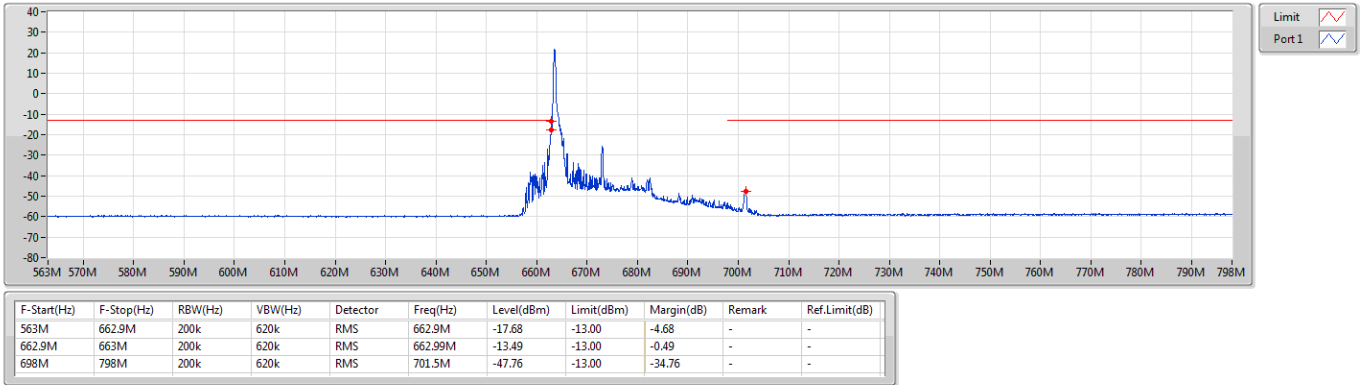


Summary

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 n71	-	-	-	-	-	-	-	-	-	-	-	-
NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	662.9M	663M	200k	620k	RMS	662.99M	-13.49	-13.00	-0.49	-	-
NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX	Pass	662.9M	663M	200k	620k	RMS	663M	-13.95	-13.00	-0.95	-	-
NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX	Pass	698M	698.1M	200k	620k	RMS	698M	-15.51	-13.00	-2.51	-	-
NR_20MHz_Nss1,DFT-s-OFDM_64QAM_1TX	Pass	662.9M	663M	200k	620k	RMS	662.98M	-15.01	-13.00	-2.01	-	-
NR_20MHz_Nss1,DFT-s-OFDM_256QAM_1TX	Pass	698M	698.1M	200k	620k	RMS	698M	-17.92	-13.00	-4.92	-	-
NR_20MHz_Nss1,CP-OFDM_QPSK_1TX	Pass	698M	698.1M	200k	620k	RMS	698M	-31.54	-13.00	-18.54	-	-
NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	662.9M	663M	150k	470k	RMS	663M	-16.70	-13.00	-3.70	-	-
NR_15MHz_Nss1,DFT-s-OFDM_QPSK_1TX	Pass	662.9M	663M	150k	470k	RMS	663M	-16.42	-13.00	-3.42	-	-
NR_15MHz_Nss1,DFT-s-OFDM_16QAM_1TX	Pass	662.9M	663M	150k	470k	RMS	663M	-17.49	-13.00	-4.49	-	-
NR_15MHz_Nss1,DFT-s-OFDM_64QAM_1TX	Pass	662.9M	663M	150k	470k	RMS	663M	-19.03	-13.00	-6.03	-	-
NR_15MHz_Nss1,DFT-s-OFDM_256QAM_1TX	Pass	698M	698.1M	150k	470k	RMS	698M	-21.16	-13.00	-8.16	-	-
NR_15MHz_Nss1,CP-OFDM_QPSK_1TX	Pass	698M	698.1M	150k	470k	RMS	698M	-34.13	-13.00	-21.13	-	-
NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	662.9M	663M	100k	300k	RMS	663M	-16.41	-13.00	-3.41	-	-
NR_10MHz_Nss1,DFT-s-OFDM_QPSK_1TX	Pass	662.9M	663M	100k	300k	RMS	663M	-17.27	-13.00	-4.27	-	-
NR_10MHz_Nss1,DFT-s-OFDM_16QAM_1TX	Pass	662.9M	663M	100k	300k	RMS	663M	-16.80	-13.00	-3.80	-	-
NR_10MHz_Nss1,DFT-s-OFDM_64QAM_1TX	Pass	662.9M	663M	100k	300k	RMS	663M	-17.62	-13.00	-4.62	-	-
NR_10MHz_Nss1,DFT-s-OFDM_256QAM_1TX	Pass	698M	698.1M	100k	300k	RMS	698.01M	-20.35	-13.00	-7.35	-	-
NR_10MHz_Nss1,CP-OFDM_QPSK_1TX	Pass	698M	698.1M	100k	300k	RMS	698.01M	-32.39	-13.00	-19.39	-	-
NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	662.9M	663M	51k	200k	RMS	663M	-19.08	-13.00	-6.08	-	-
NR_5MHz_Nss1,DFT-s-OFDM_QPSK_1TX	Pass	662.9M	663M	51k	200k	RMS	663M	-19.97	-13.00	-6.97	-	-
NR_5MHz_Nss1,DFT-s-OFDM_16QAM_1TX	Pass	662.9M	663M	51k	200k	RMS	663M	-19.45	-13.00	-6.45	-	-
NR_5MHz_Nss1,DFT-s-OFDM_64QAM_1TX	Pass	662.9M	663M	51k	200k	RMS	663M	-19.77	-13.00	-6.77	-	-
NR_5MHz_Nss1,DFT-s-OFDM_256QAM_1TX	Pass	698M	698.1M	51k	200k	RMS	698M	-23.28	-13.00	-10.28	-	-
NR_5MHz_Nss1,CP-OFDM_QPSK_1TX	Pass	662.9M	663M	51k	200k	RMS	663M	-34.76	-13.00	-21.76	-	-

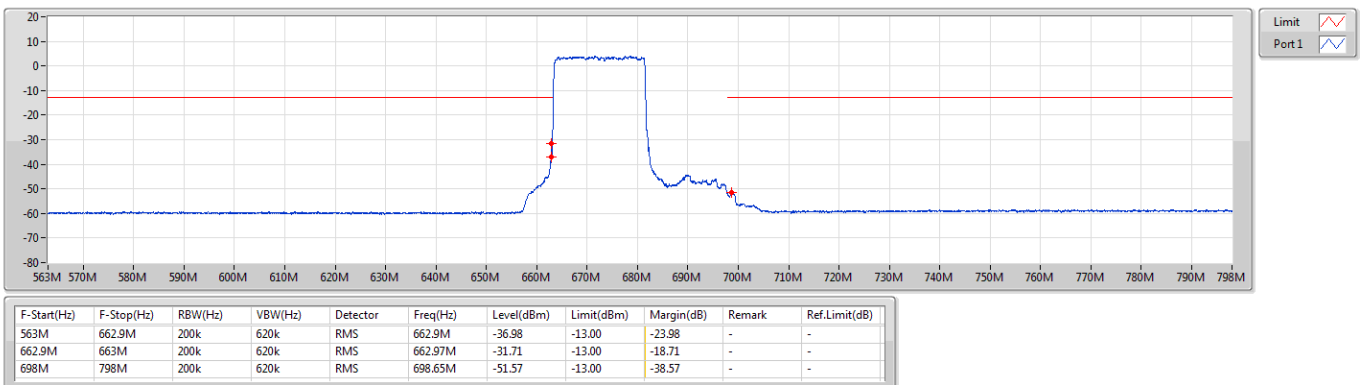
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
673MHz_DFT-s-OFDM_PI2BPSK_Edge_1RB_Left

CSE-TX-Sum



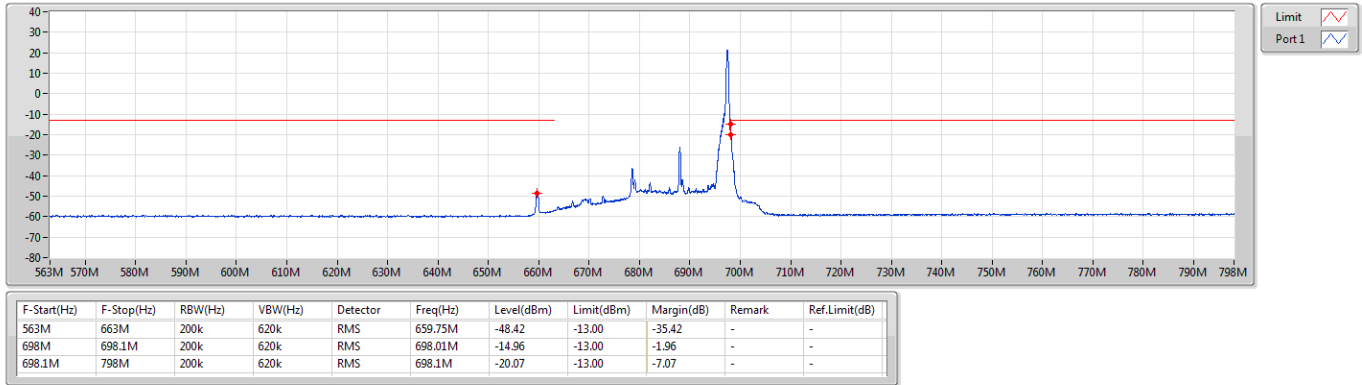
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673MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

CSE-TX-Sum



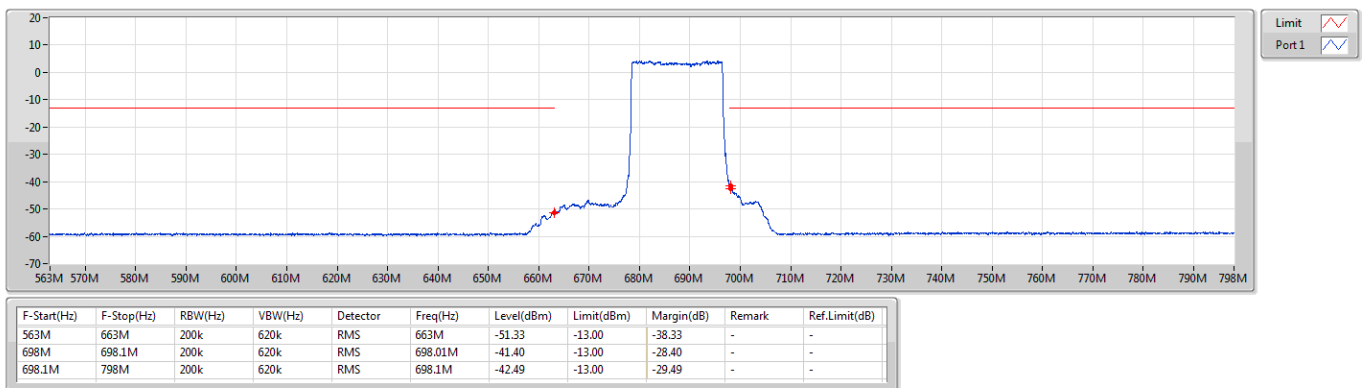
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
688MHz_DFT-s-OFDM_PI2BPSK_Edge_1RB_Right

CSE-TX-Sum



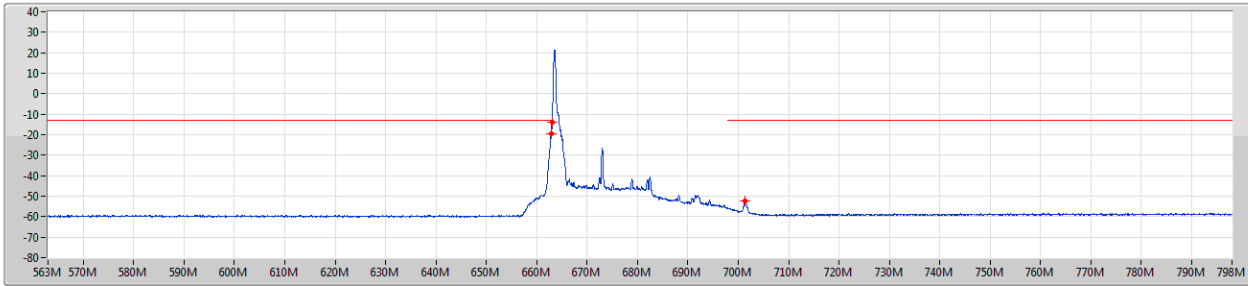
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
688MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

CSE-TX-Sum



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX
673MHz_DFT-s-OFDM_QPSK_Edge_1RB_Left

CSE-TX-Sum

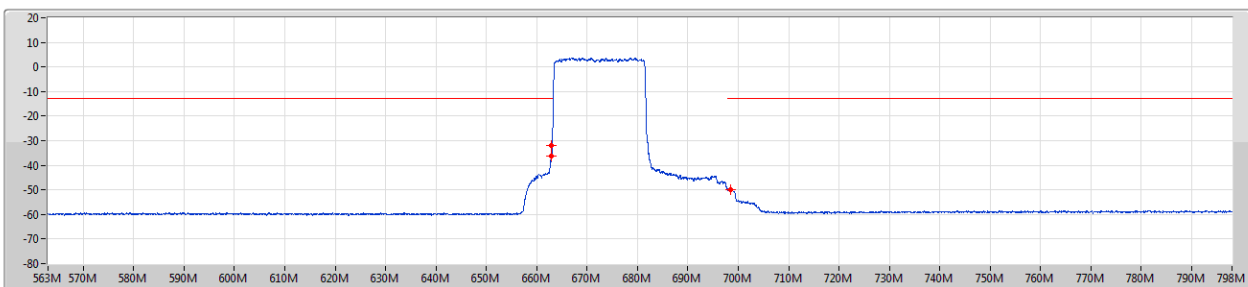


Limit
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
563M	662.9M	200k	620k	RMS	662.9M	-19.40	-13.00	-6.40	-	-
662.9M	663M	200k	620k	RMS	663M	-13.95	-13.00	-0.95	-	-
698M	798M	200k	620k	RMS	701.35M	-52.56	-13.00	-39.56	-	-

Band n71_NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX
673MHz_DFT-s-OFDM_QPSK_Outer_Full

CSE-TX-Sum

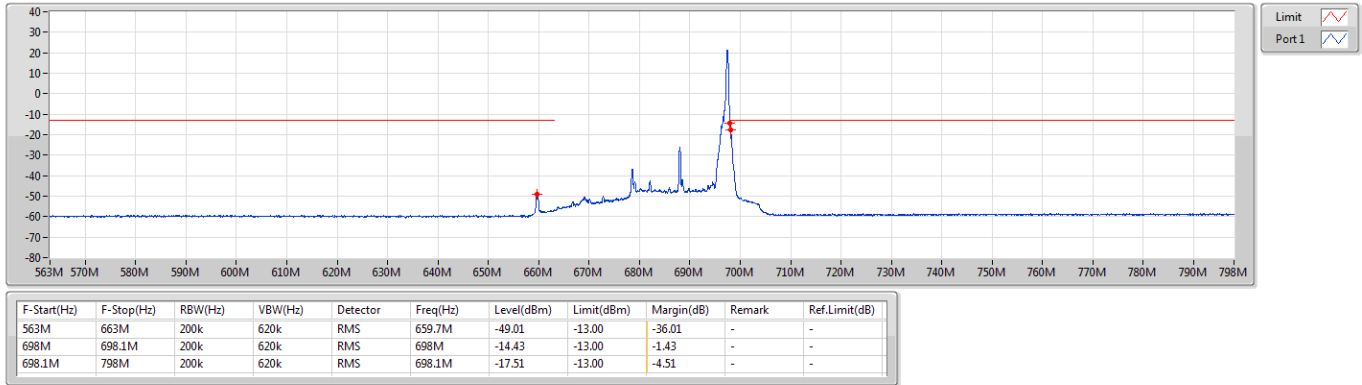


Limit
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
563M	662.9M	200k	620k	RMS	662.9M	-36.34	-13.00	-23.34	-	-
662.9M	663M	200k	620k	RMS	662.99M	-31.82	-13.00	-18.82	-	-
698M	798M	200k	620k	RMS	698.4M	-49.92	-13.00	-36.92	-	-

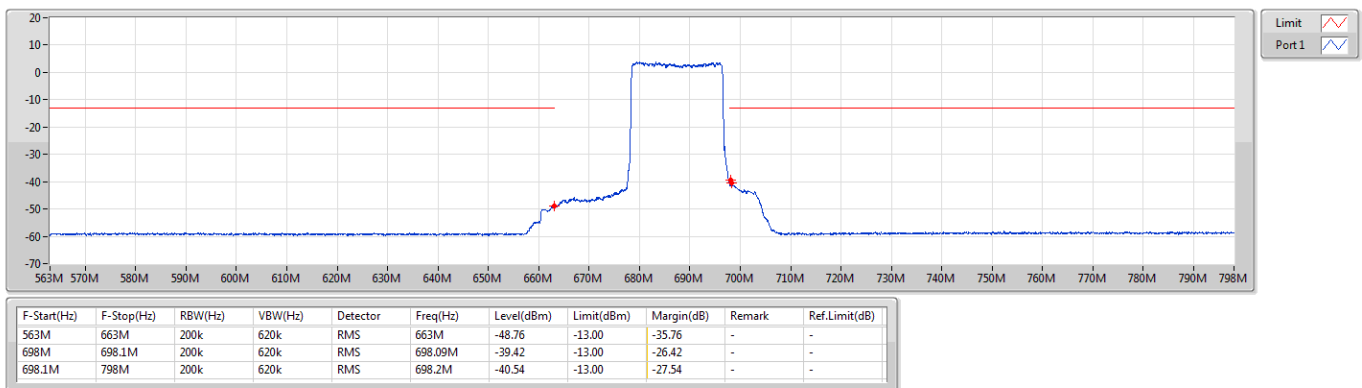
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688MHz_DFT-s-OFDM_QPSK_Edge_1RB_Right

CSE-TX-Sum



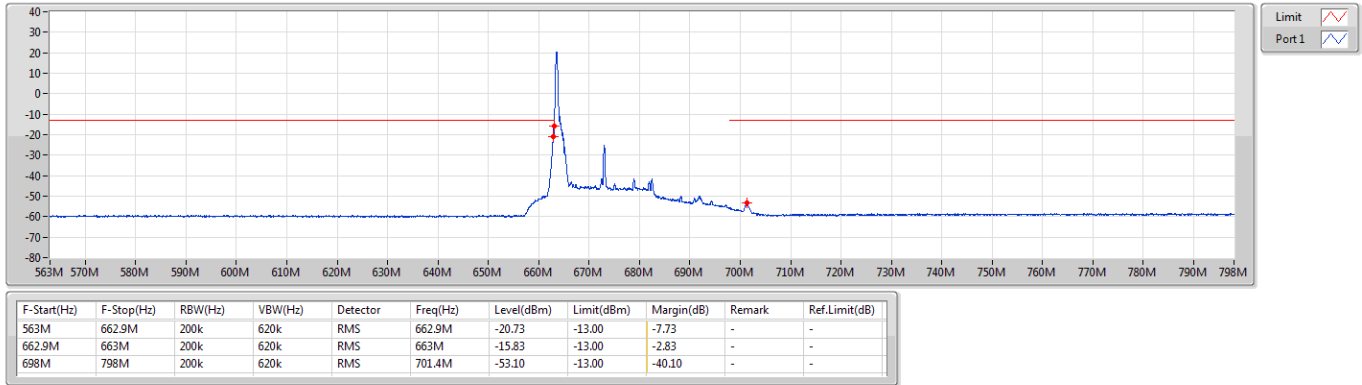
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX
688MHz_DFT-s-OFDM_QPSK_Outer_Full

CSE-TX-Sum



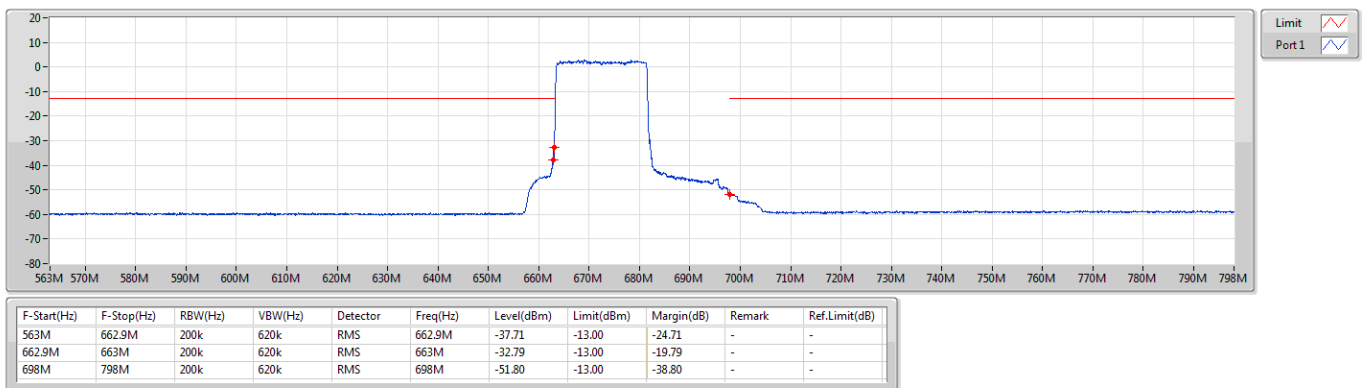
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX
673MHz_DFT-s-OFDM_16QAM_Edge_1RB_Left

CSE-TX-Sum



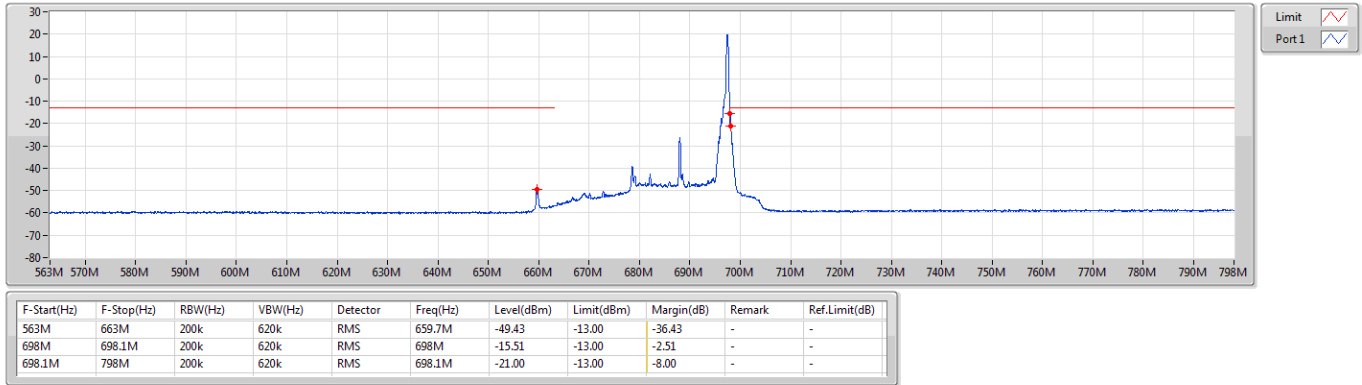
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX
673MHz_DFT-s-OFDM_16QAM_Outer_Full

CSE-TX-Sum



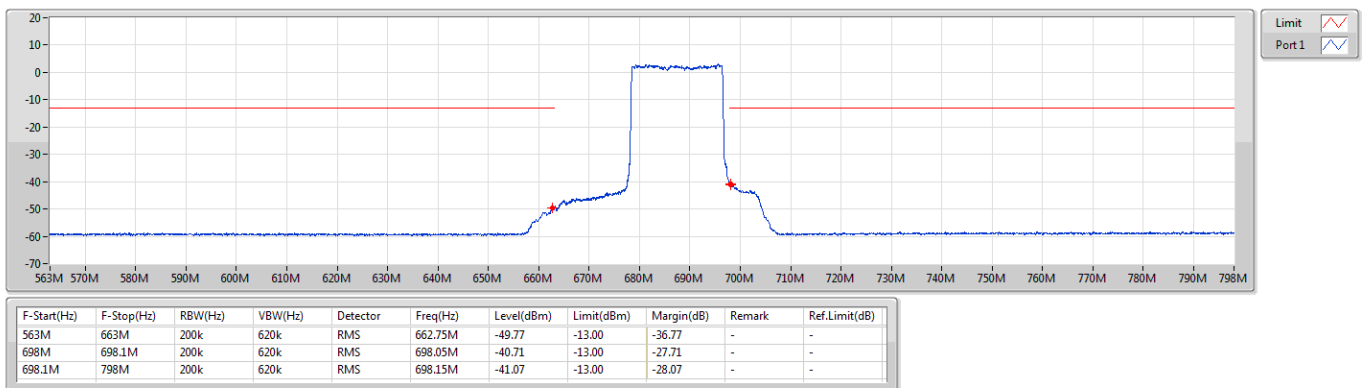
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX
688MHz_DFT-s-OFDM_16QAM_Edge_1RB_Right

CSE-TX-Sum



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX
688MHz_DFT-s-OFDM_16QAM_Outer_Full

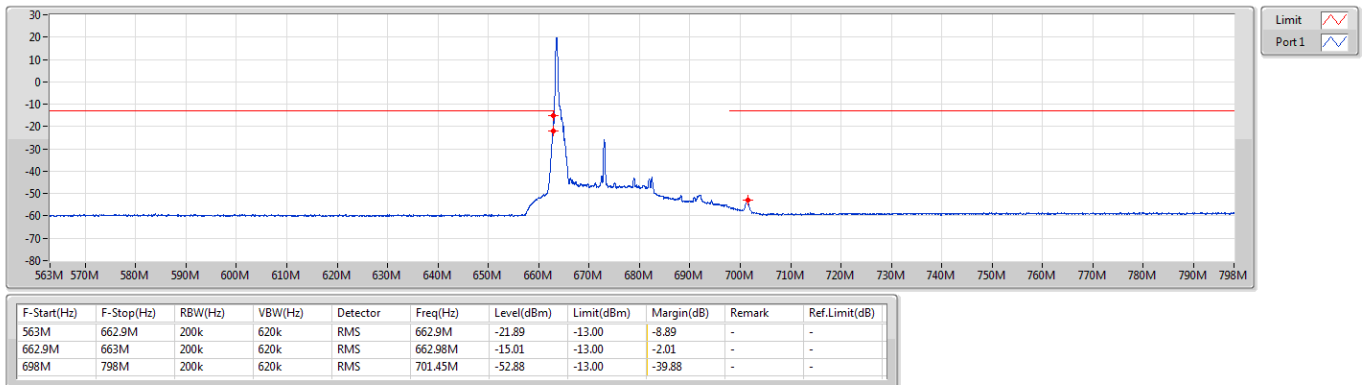
CSE-TX-Sum





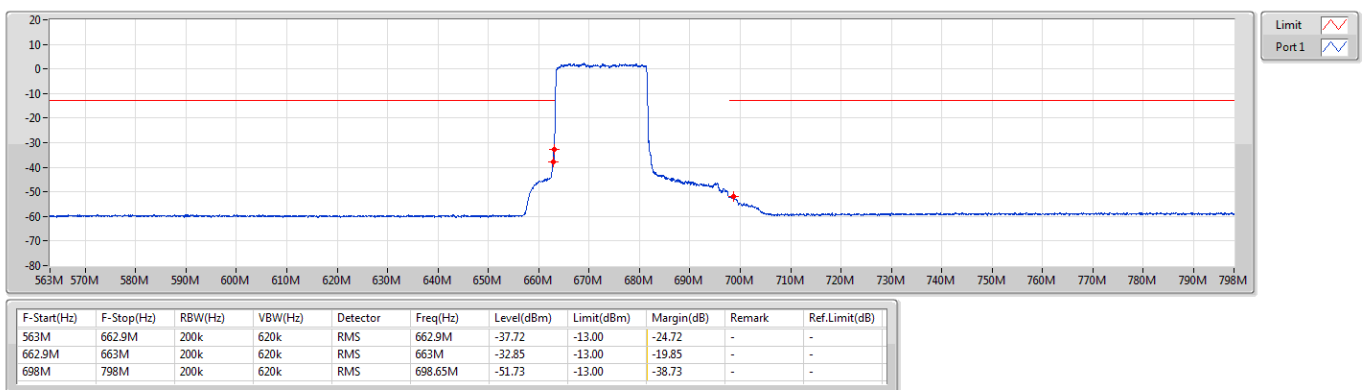
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_64QAM_1TX
673MHz_DFT-s-OFDM_64QAM_Edge_1RB_Left

CSE-TX-Sum



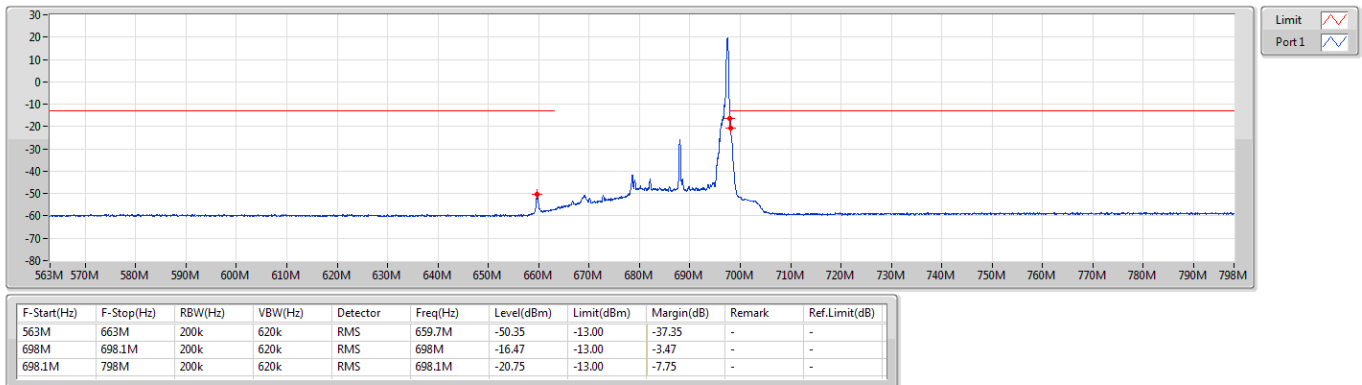
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673MHz_DFT-s-OFDM_64QAM_Outer_Full

CSE-TX-Sum



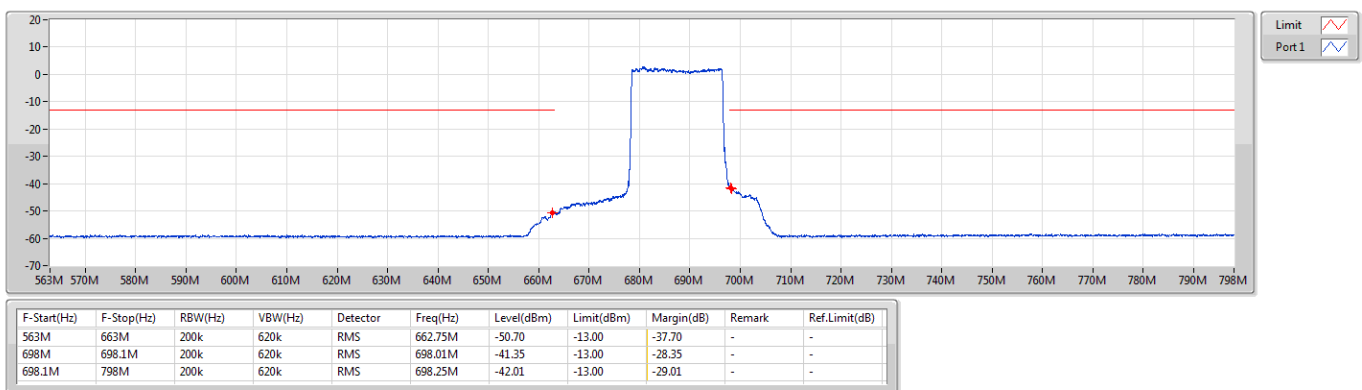
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688MHz_DFT-s-OFDM_64QAM_Edge_1RB_Right

CSE-TX-Sum



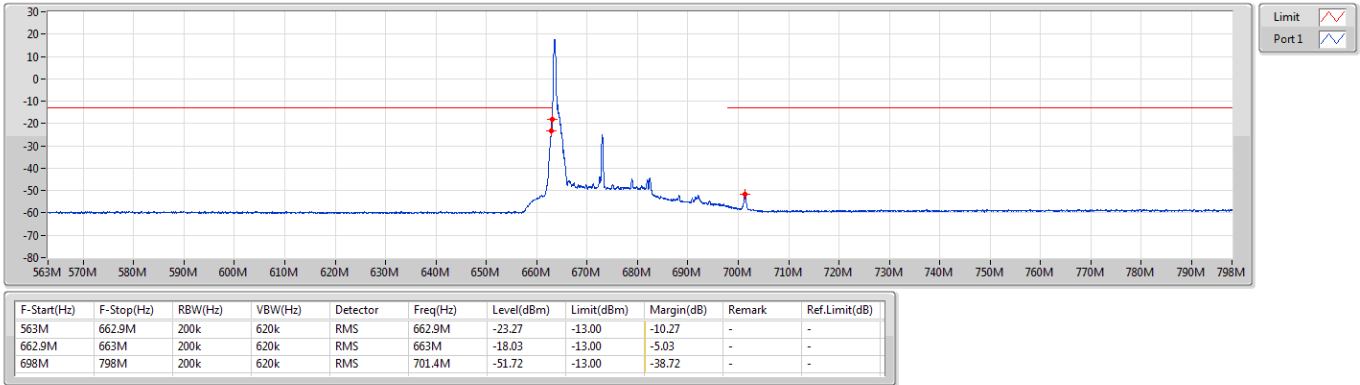
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CSE-TX-Sum



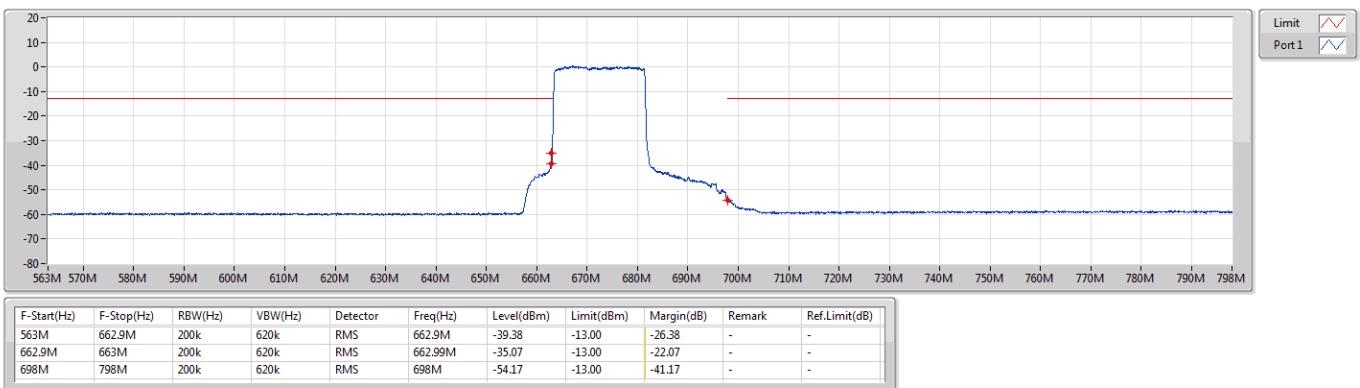
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673MHz_DFT-s-OFDM_256QAM_Edge_1RB_Left

CSE-TX-Sum



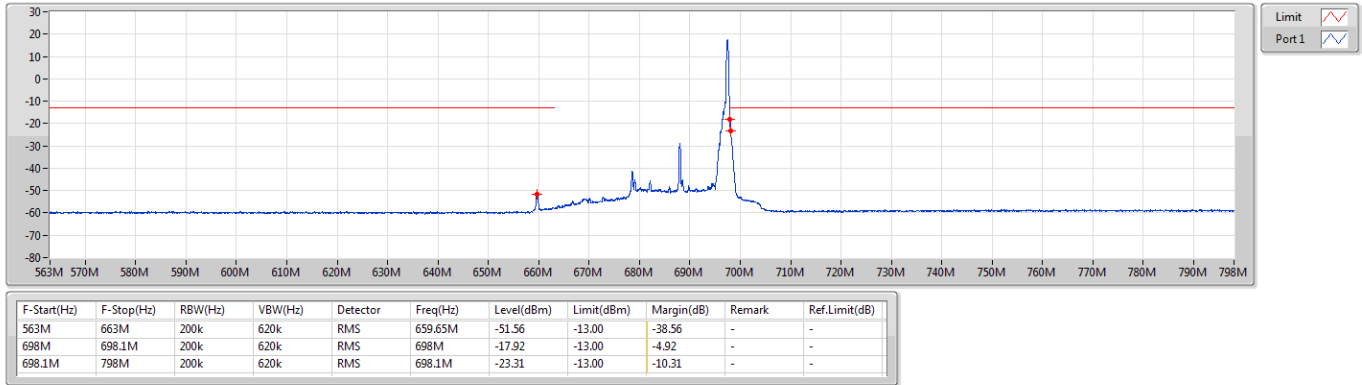
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673MHz_DFT-s-OFDM_256QAM_Outer_Full

CSE-TX-Sum



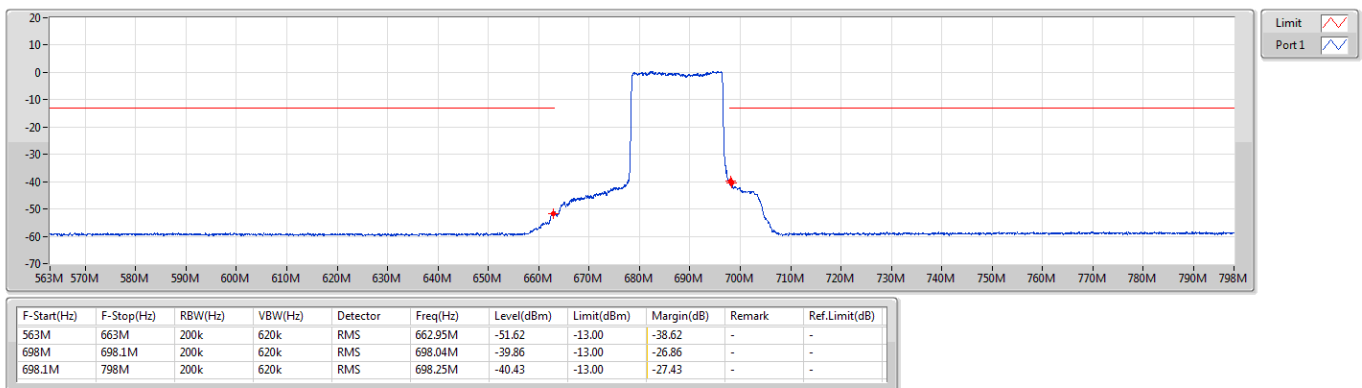
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688MHz_DFT-s-OFDM_256QAM_Edge_1RB_Right

CSE-TX-Sum



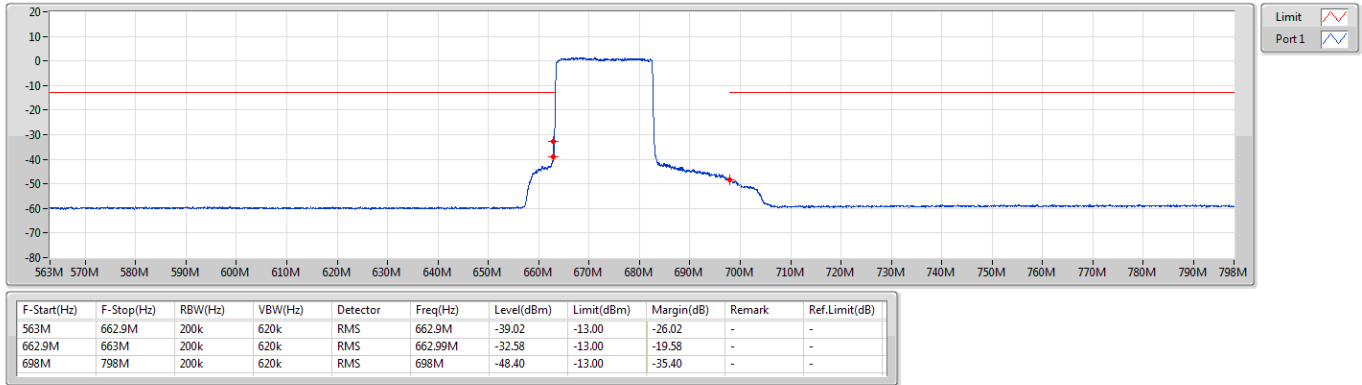
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688MHz_DFT-s-OFDM_256QAM_Outer_Full

CSE-TX-Sum



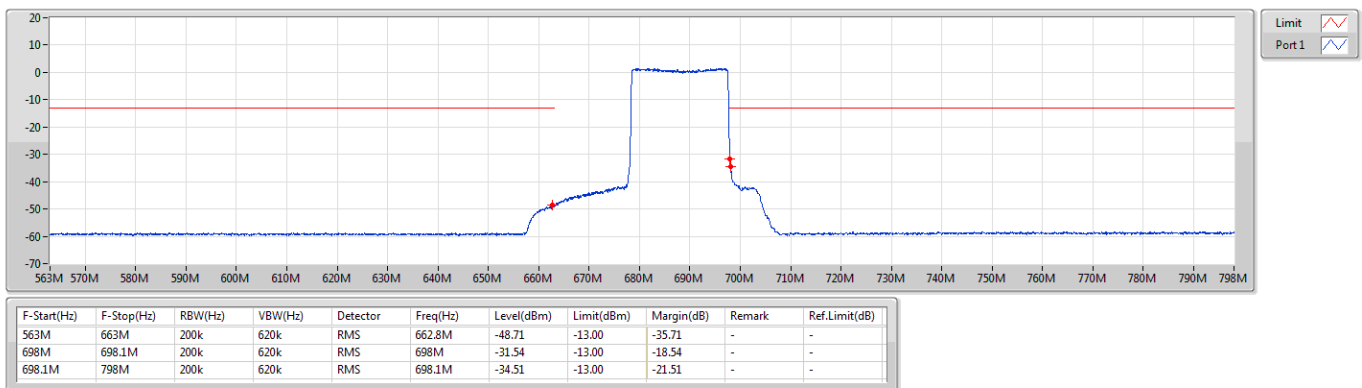
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673MHz_CP-OFDM_QPSK_Outer_Full

CSE-TX-Sum



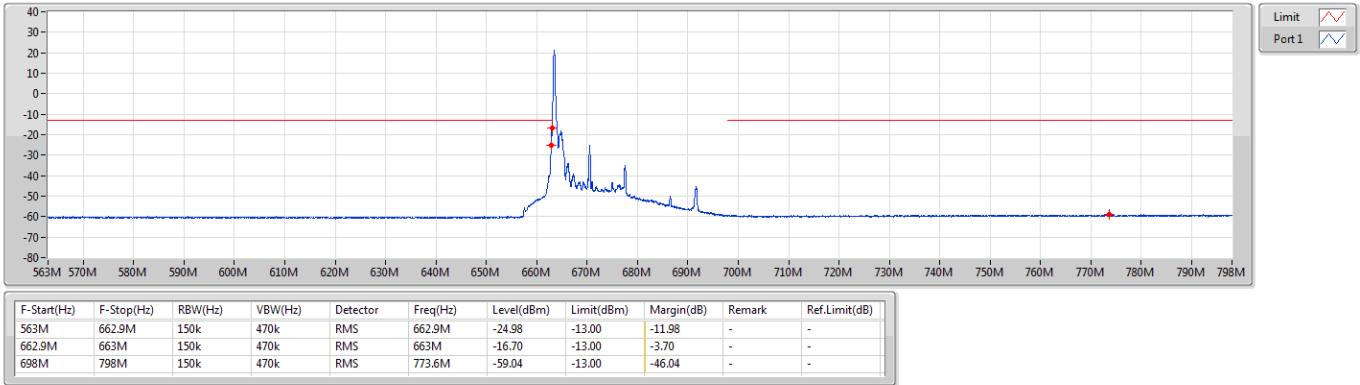
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688MHz_CP-OFDM_QPSK_Outer_Full

CSE-TX-Sum



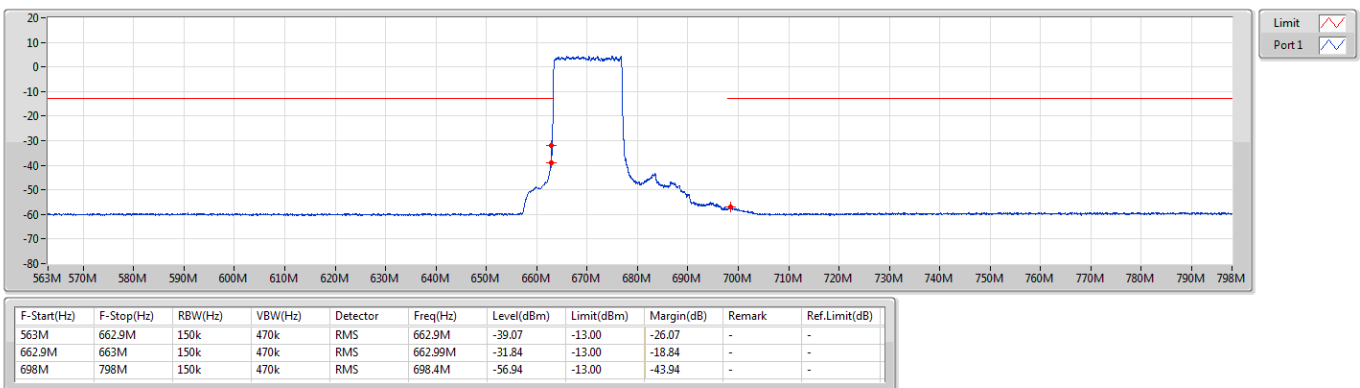
Band n71_NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
670.5MHz_DFT-s-OFDM_PI2BPSK_Edge_1RB_Left

CSE-TX-Sum



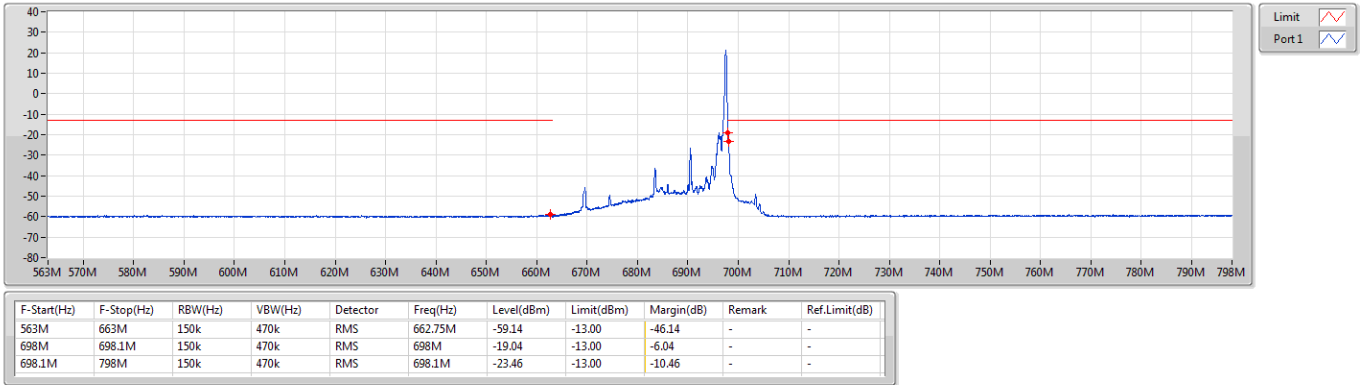
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670.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

CSE-TX-Sum



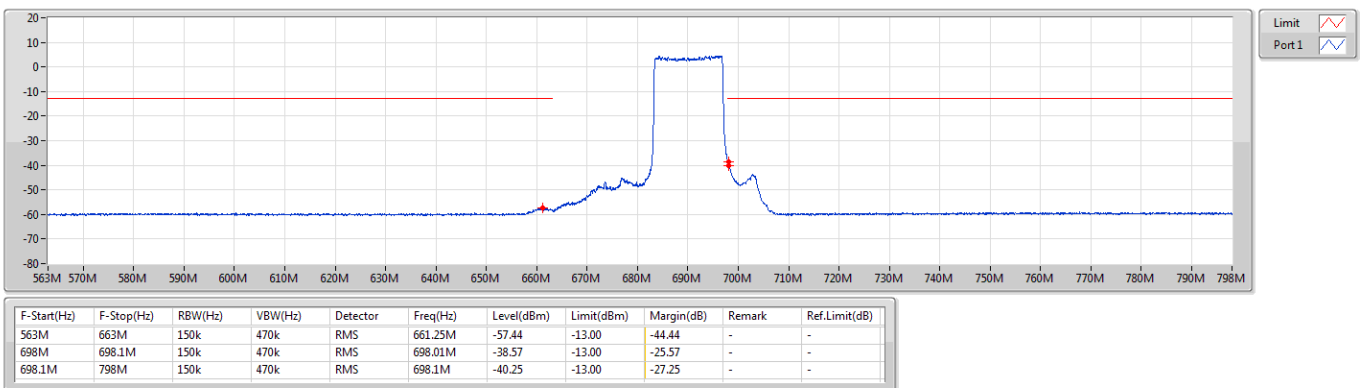
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690.5MHz_DFT-s-OFDM_PI2BPSK_Edge_1RB_Right

CSE-TX-Sum



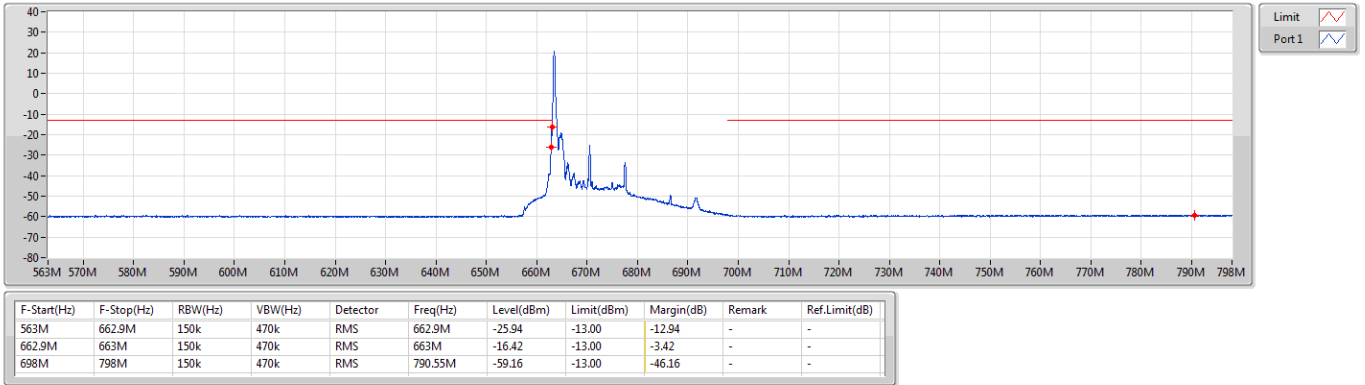
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690.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

CSE-TX-Sum



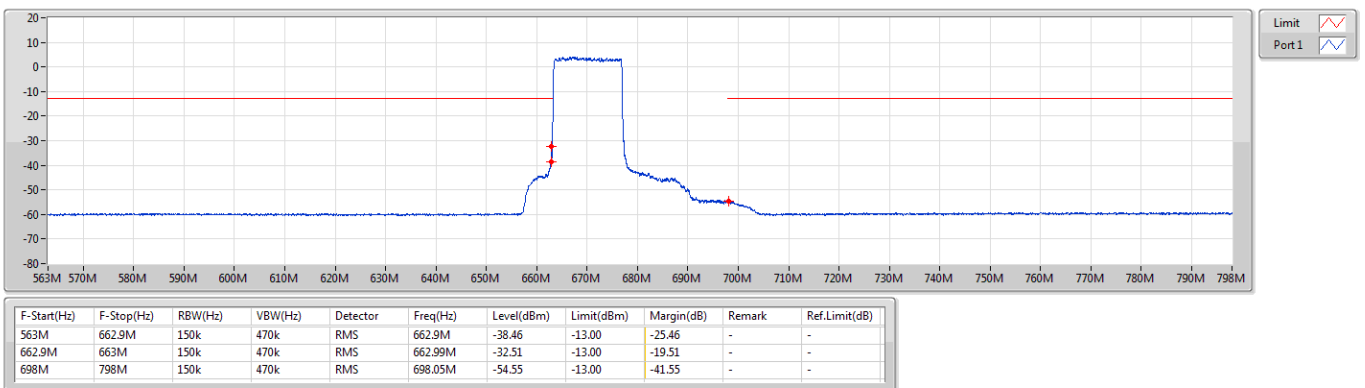
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670.5MHz_DFT-s-OFDM_QPSK_Edge_1RB_Left

CSE-TX-Sum



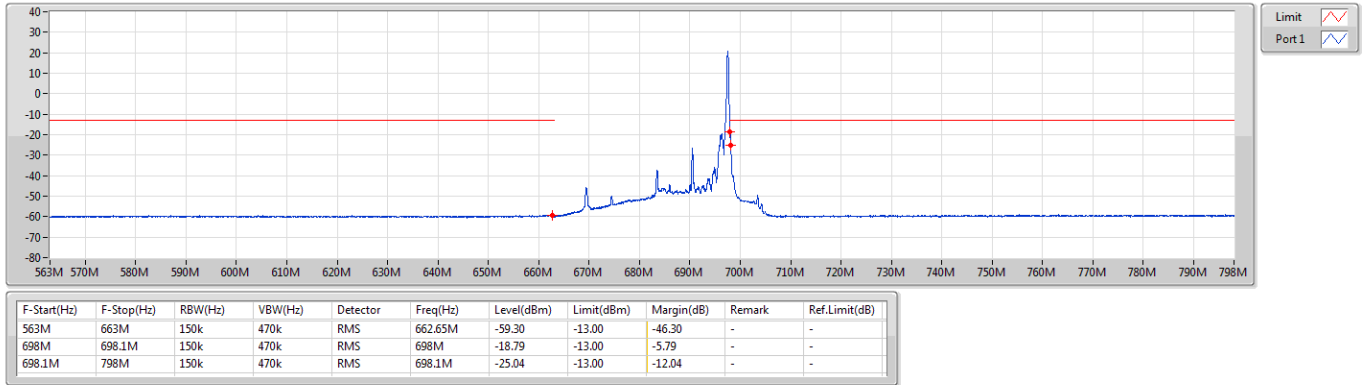
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670.5MHz_DFT-s-OFDM_QPSK_Outer_Full

CSE-TX-Sum



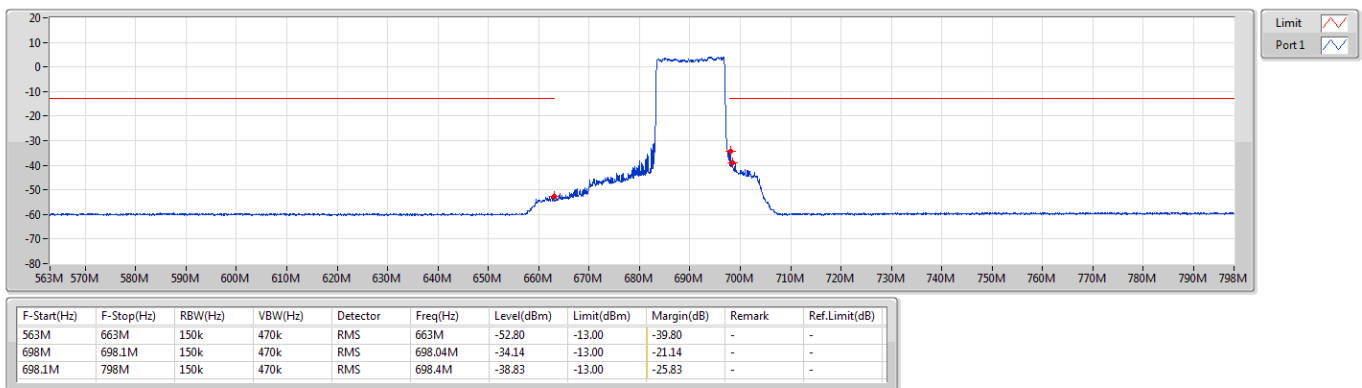
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690.5MHz_DFT-s-OFDM_QPSK_Edge_1RB_Right

CSE-TX-Sum



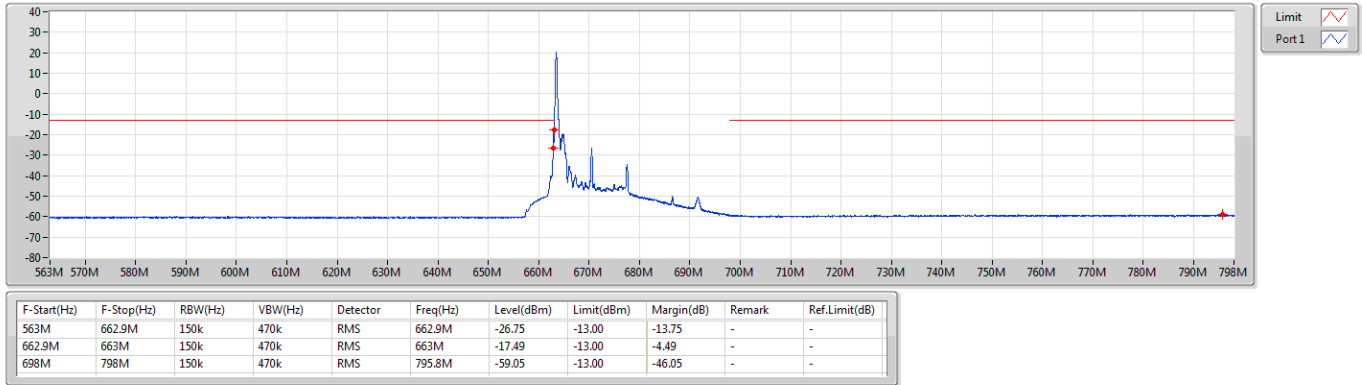
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CSE-TX-Sum



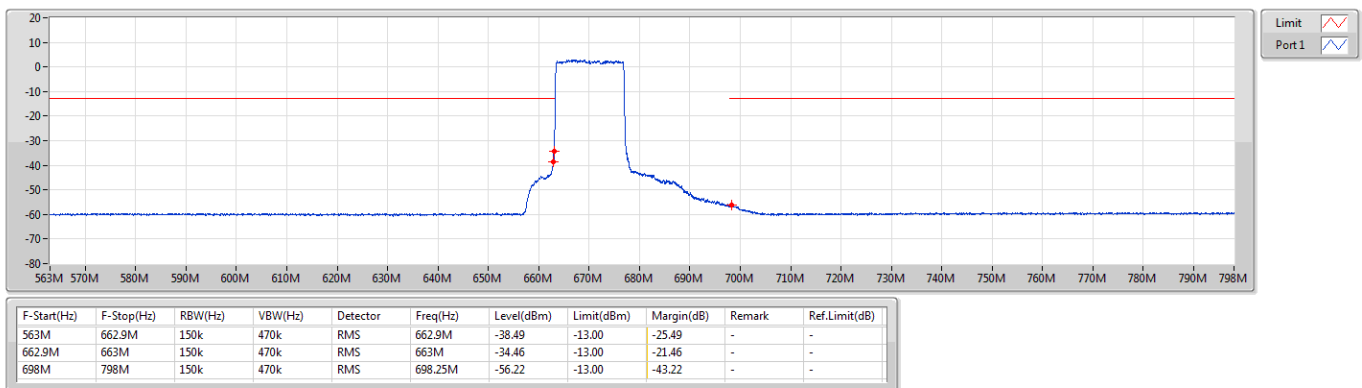
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670.5MHz_DFT-s-OFDM_16QAM_Edge_1RB_Left

CSE-TX-Sum



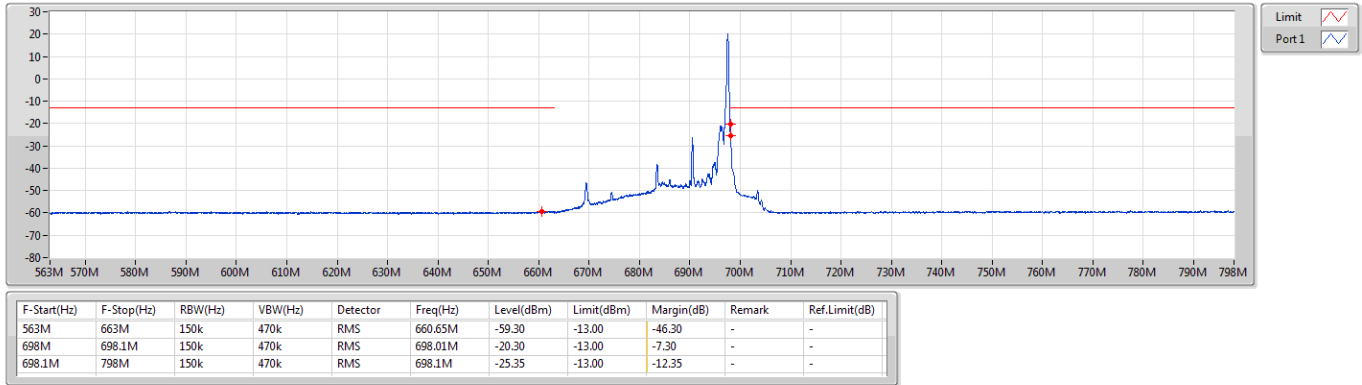
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CSE-TX-Sum



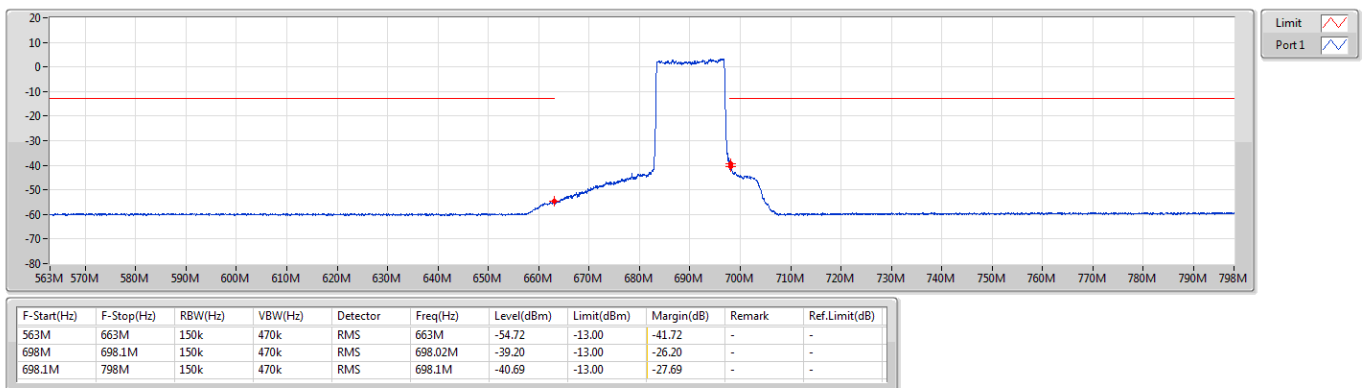
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CSE-TX-Sum



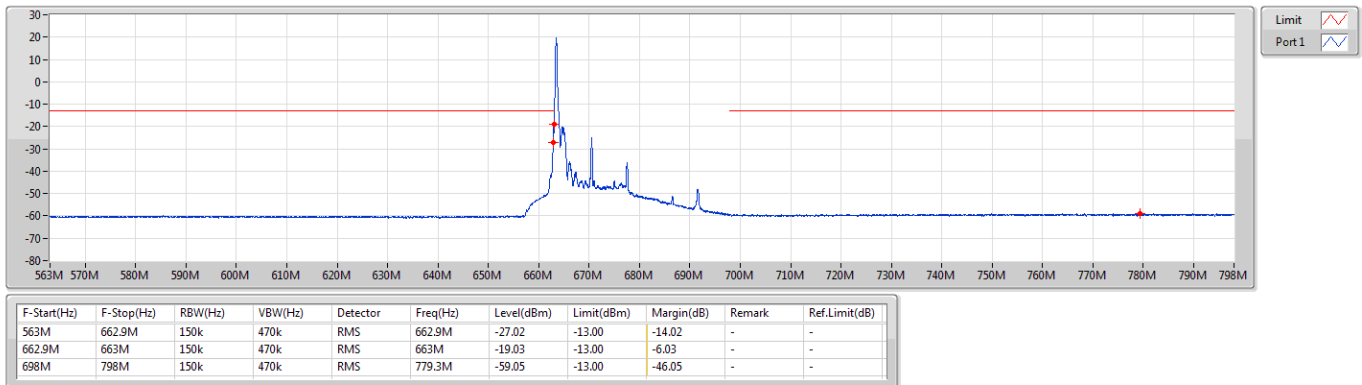
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690.5MHz_DFT-s-OFDM_16QAM_Outer_Full

CSE-TX-Sum



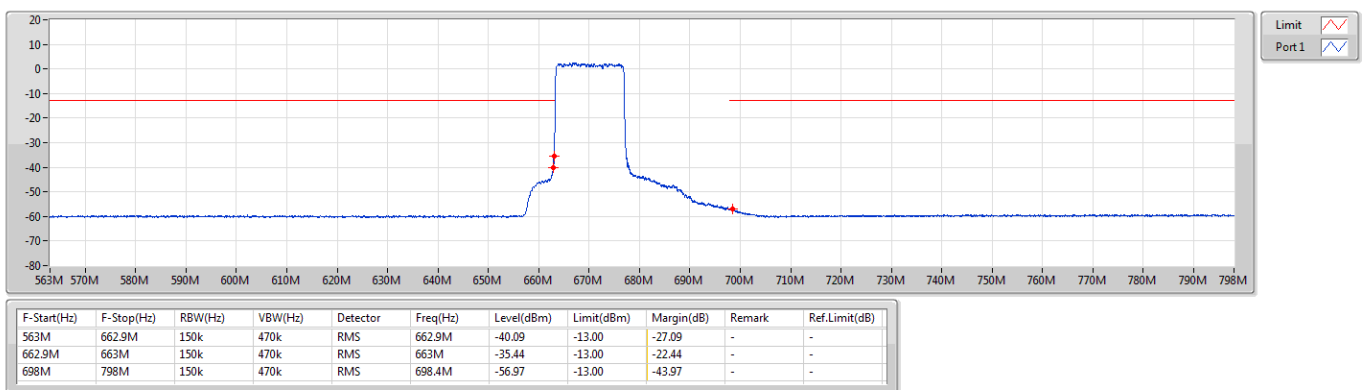
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CSE-TX-Sum



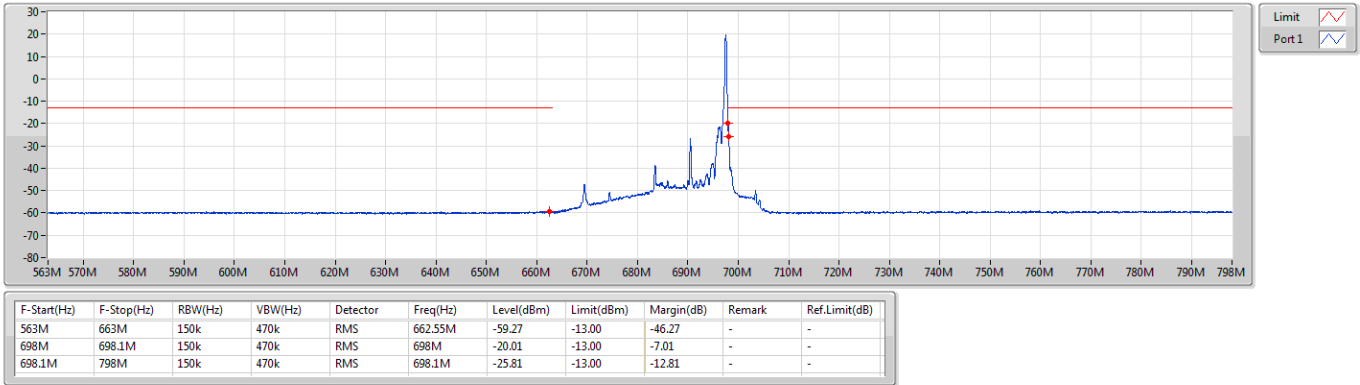
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670.5MHz_DFT-s-OFDM_64QAM_Outer_Full

CSE-TX-Sum



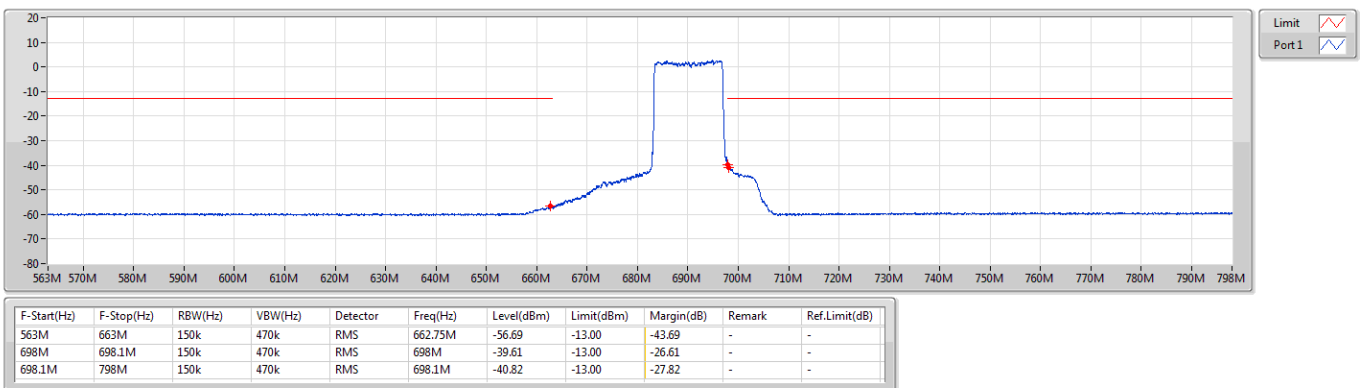
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CSE-TX-Sum



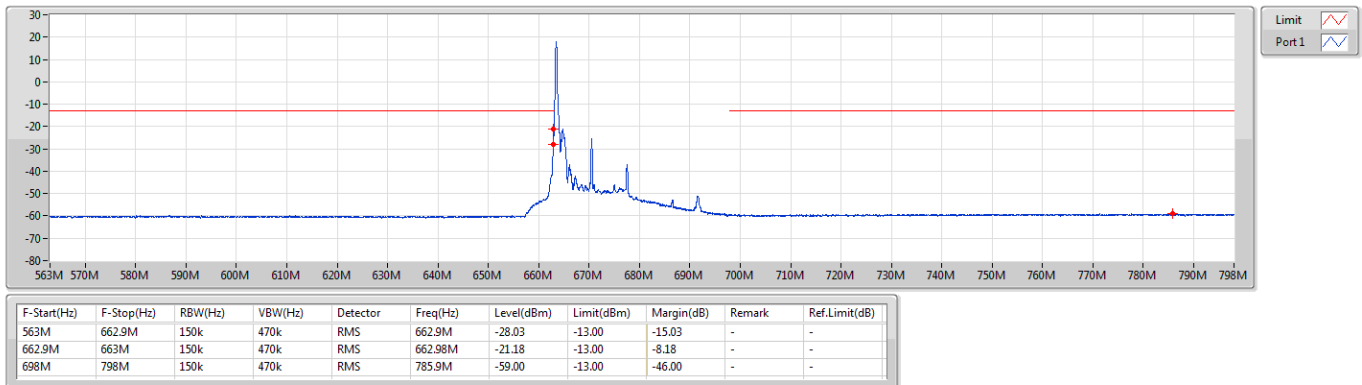
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CSE-TX-Sum



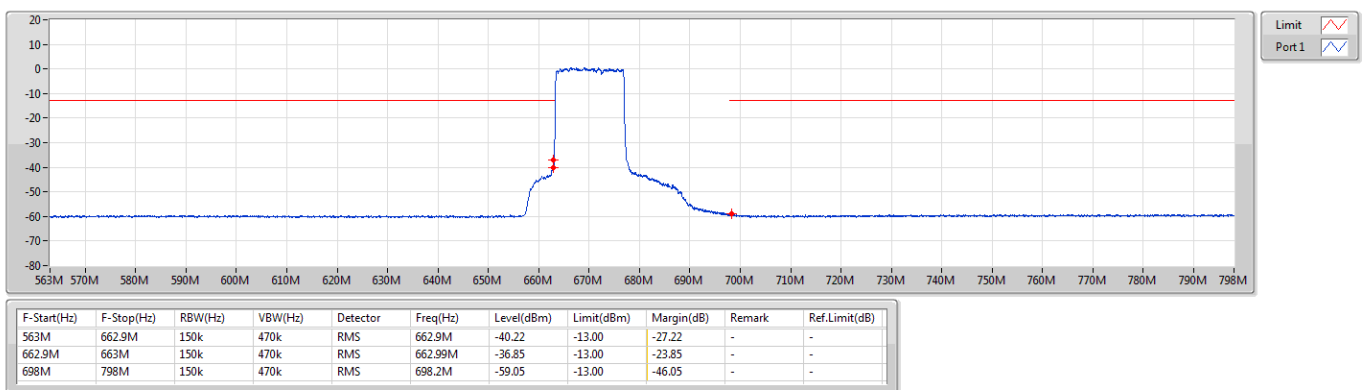
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CSE-TX-Sum



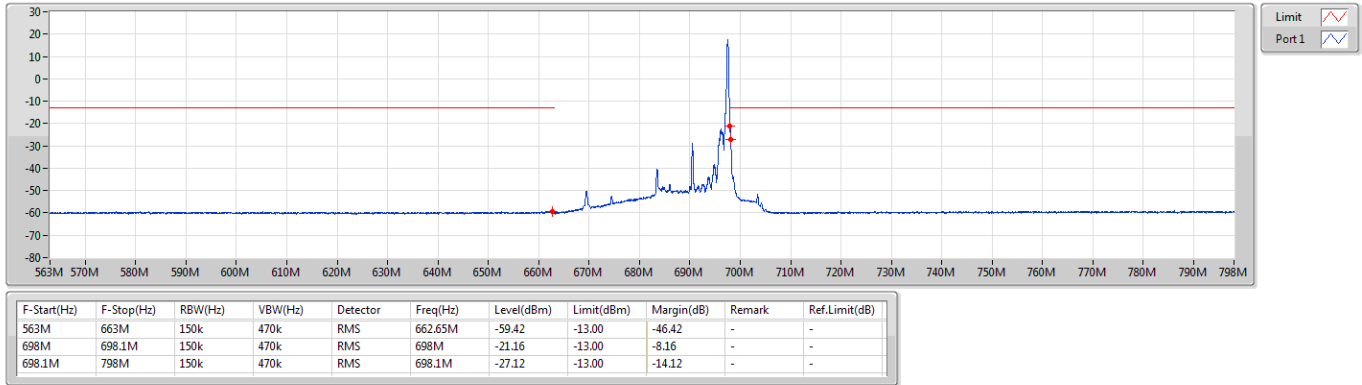
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CSE-TX-Sum



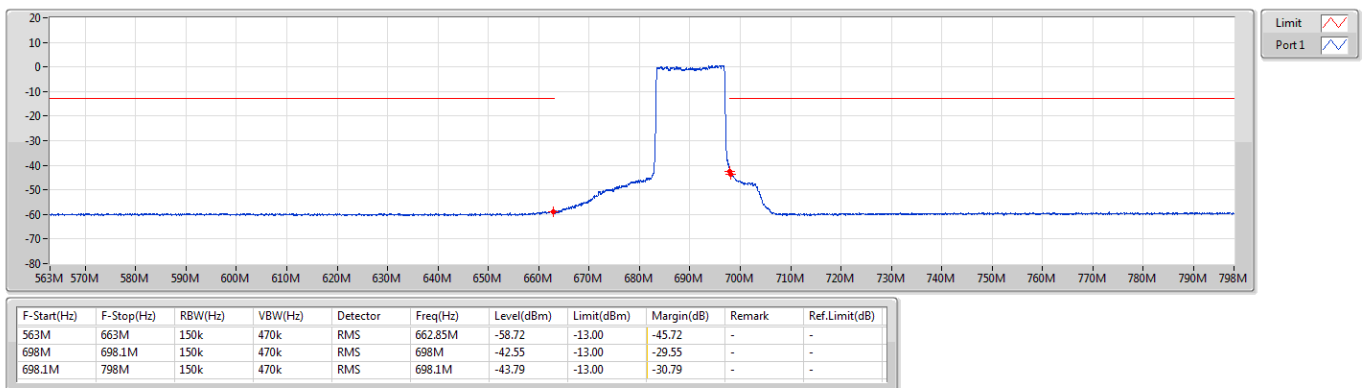
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CSE-TX-Sum



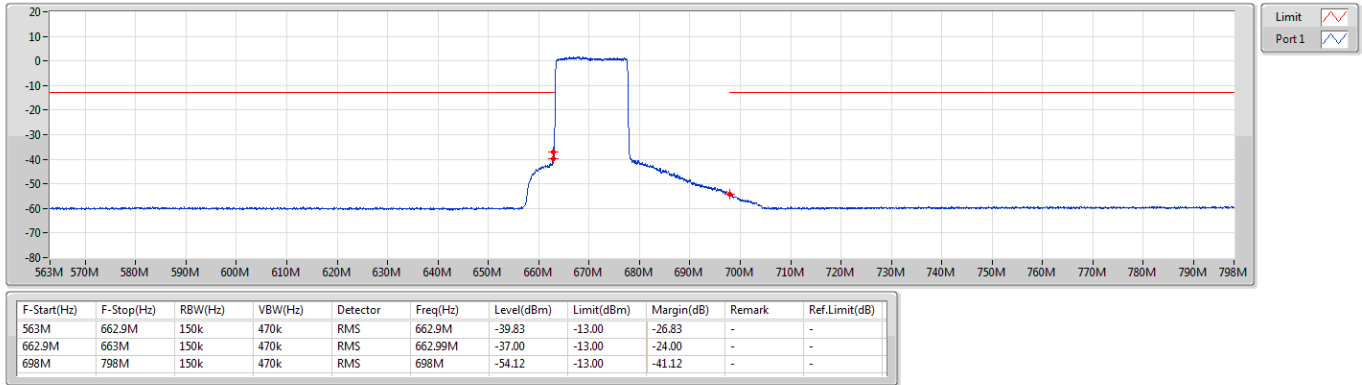
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690.5MHz_DFT-s-OFDM_256QAM_Outer_Full

CSE-TX-Sum



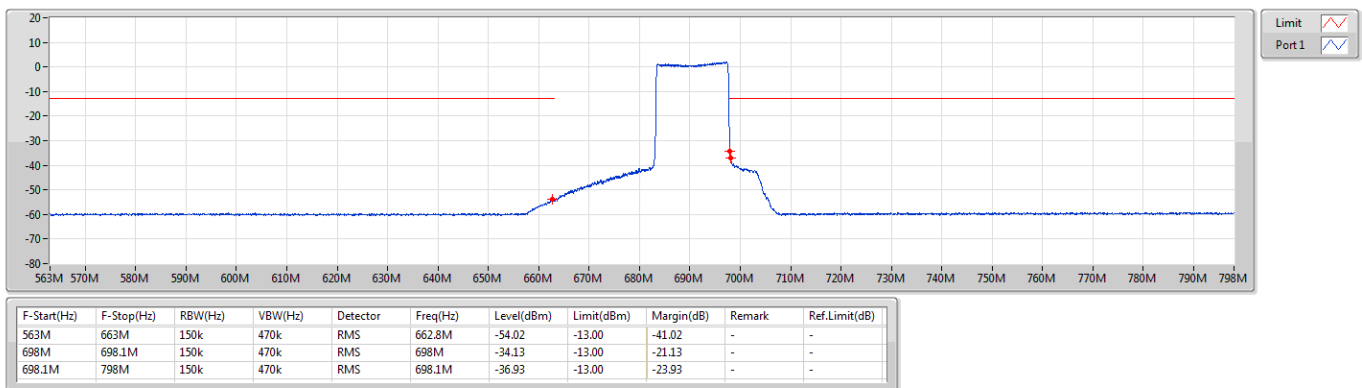
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CSE-TX-Sum



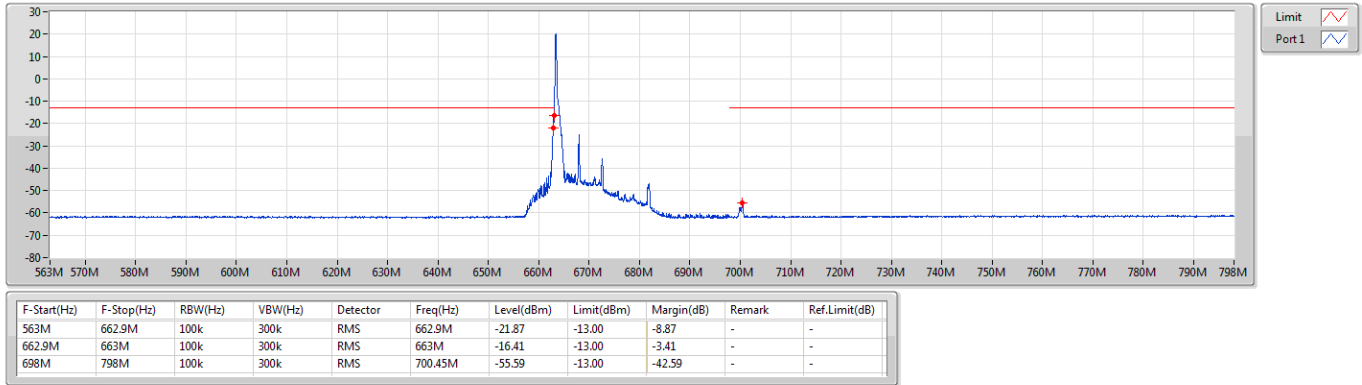
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CSE-TX-Sum



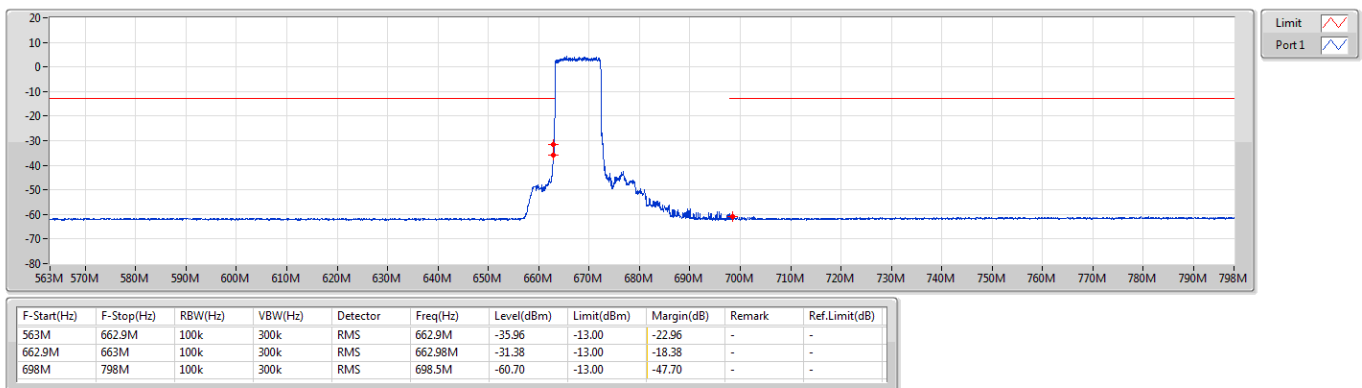
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CSE-TX-Sum



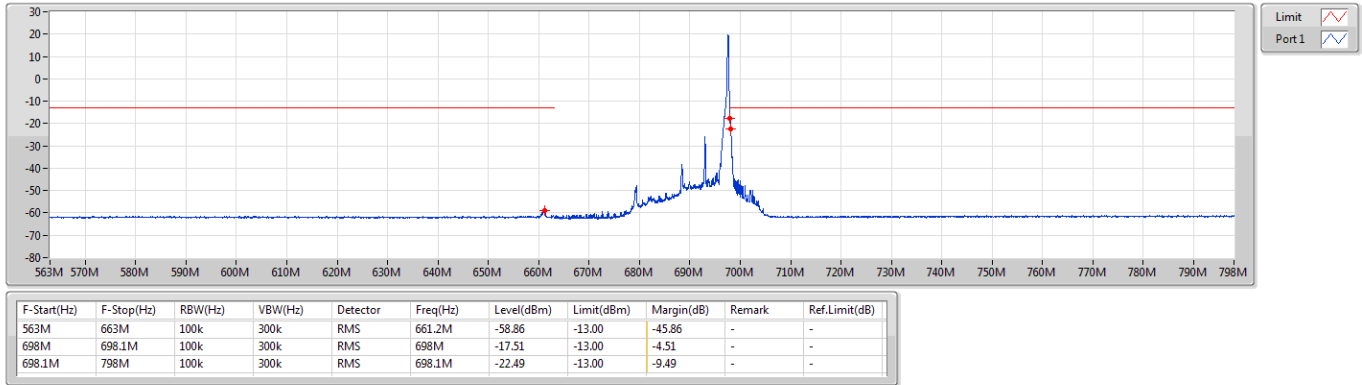
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CSE-TX-Sum



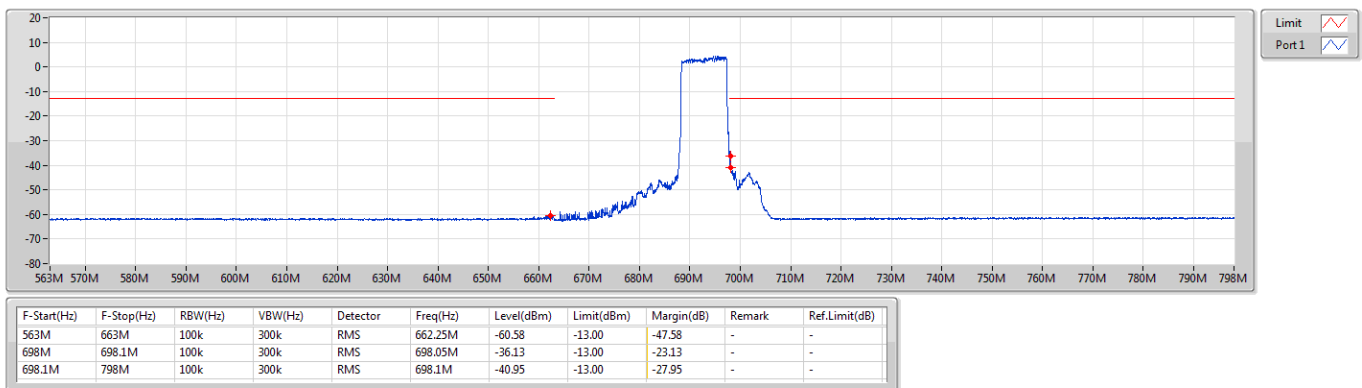
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CSE-TX-Sum



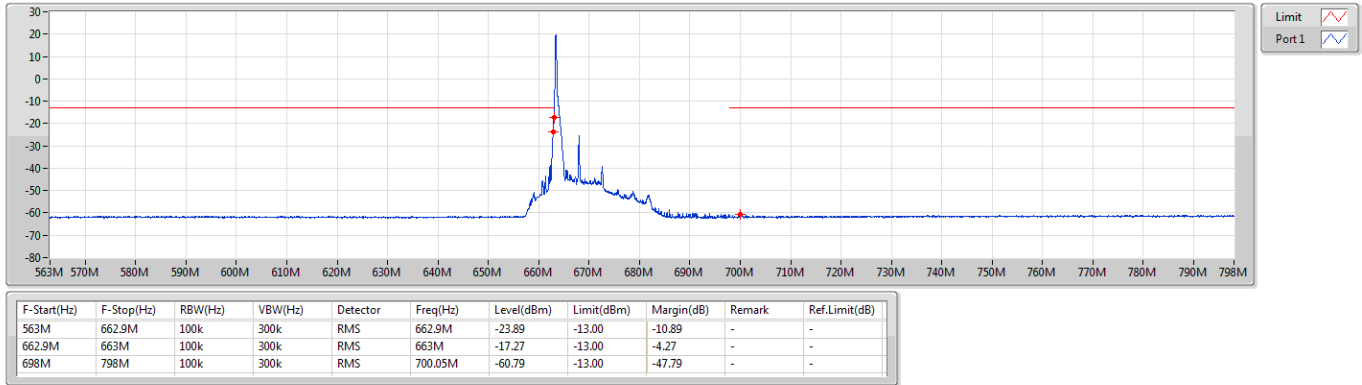
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CSE-TX-Sum



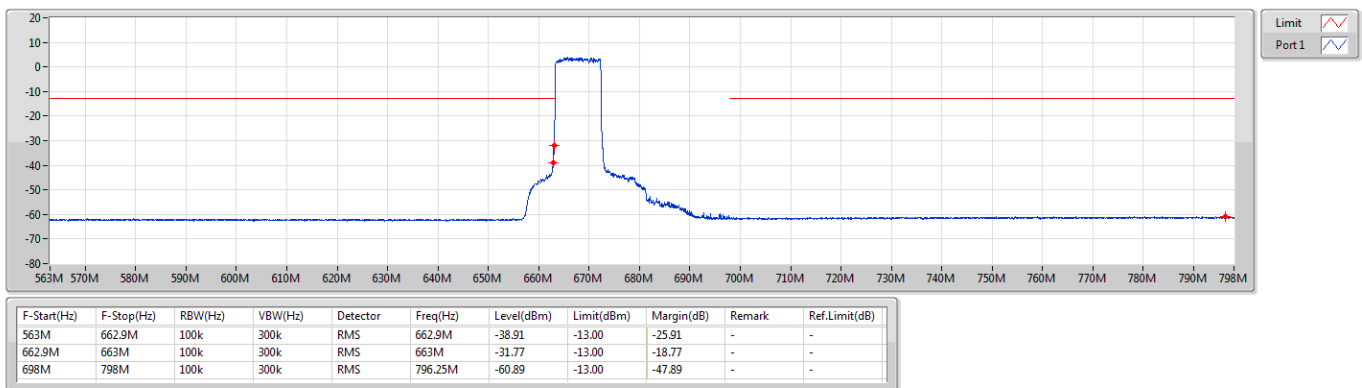
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668MHz_DFT-s-OFDM_QPSK_Edge_1RB_Left

CSE-TX-Sum



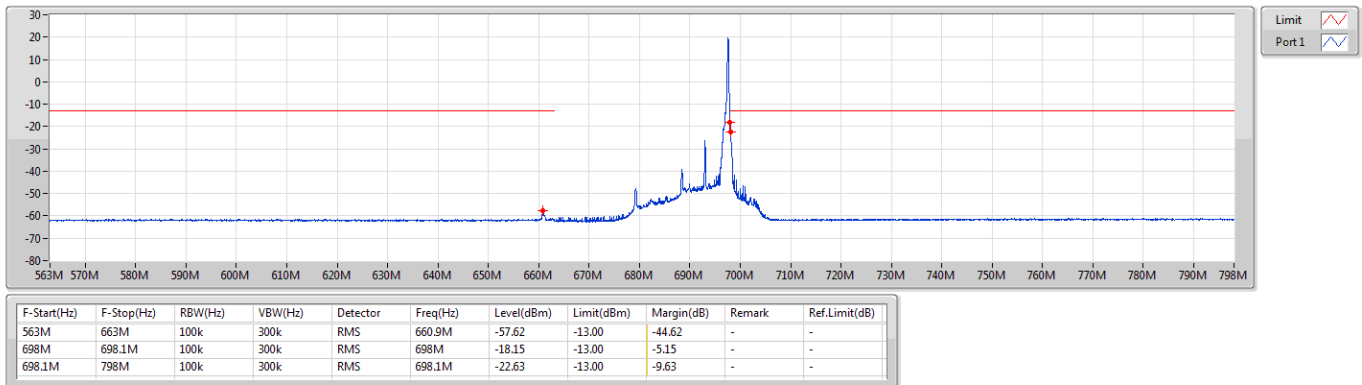
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CSE-TX-Sum



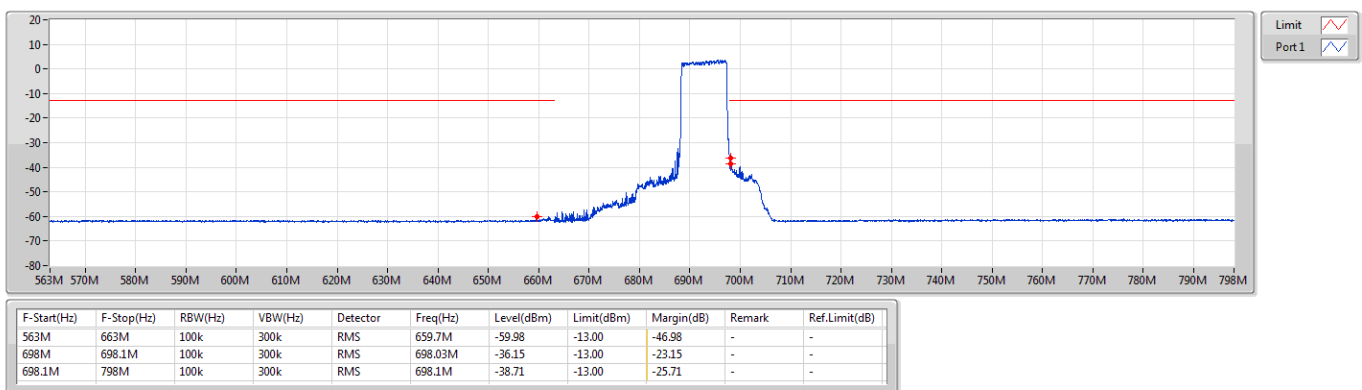
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CSE-TX-Sum



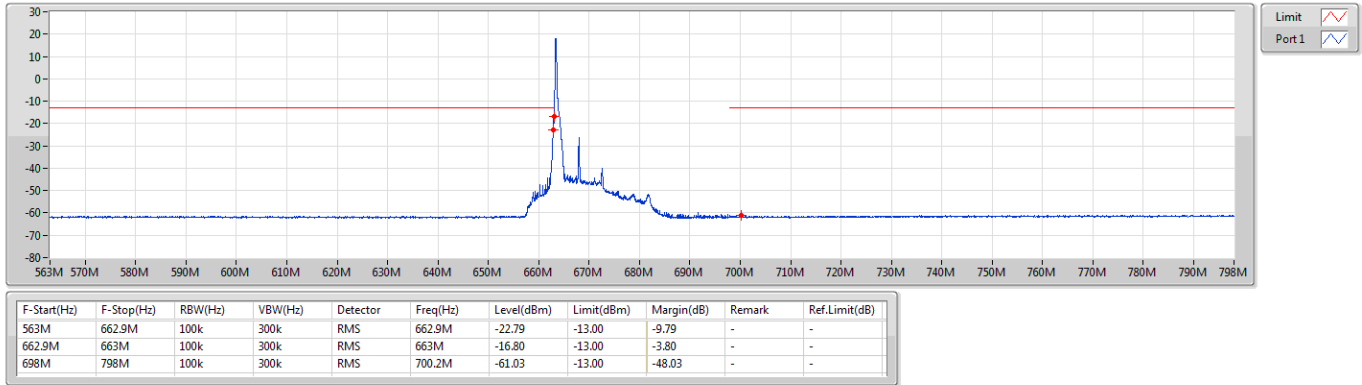
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CSE-TX-Sum



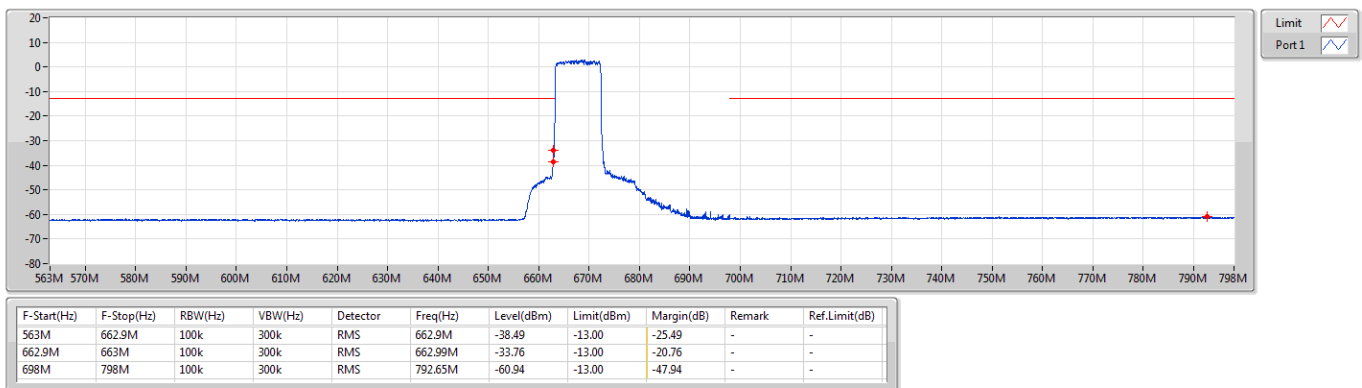
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CSE-TX-Sum



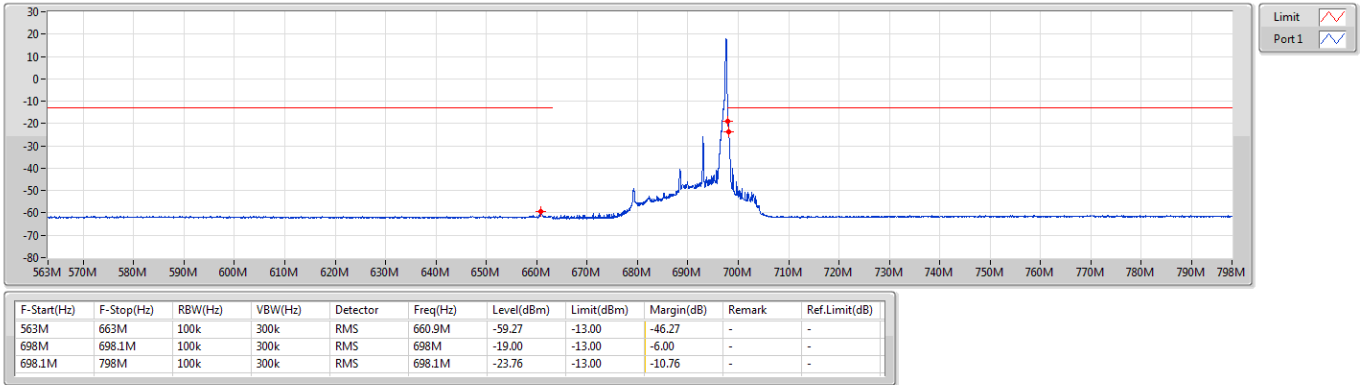
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CSE-TX-Sum



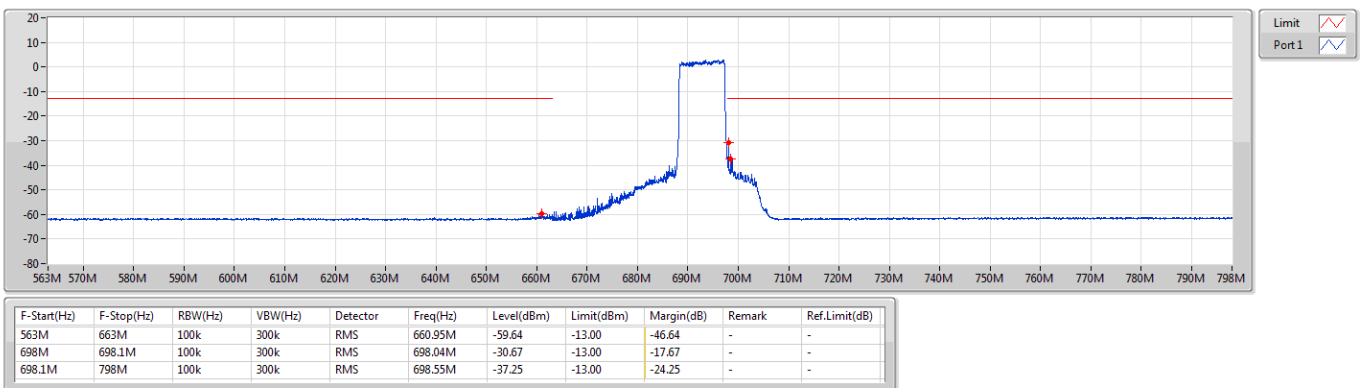
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CSE-TX-Sum



Band n71_NR_10MHz_Nss1,DFT-s-OFDM_16QAM_1TX
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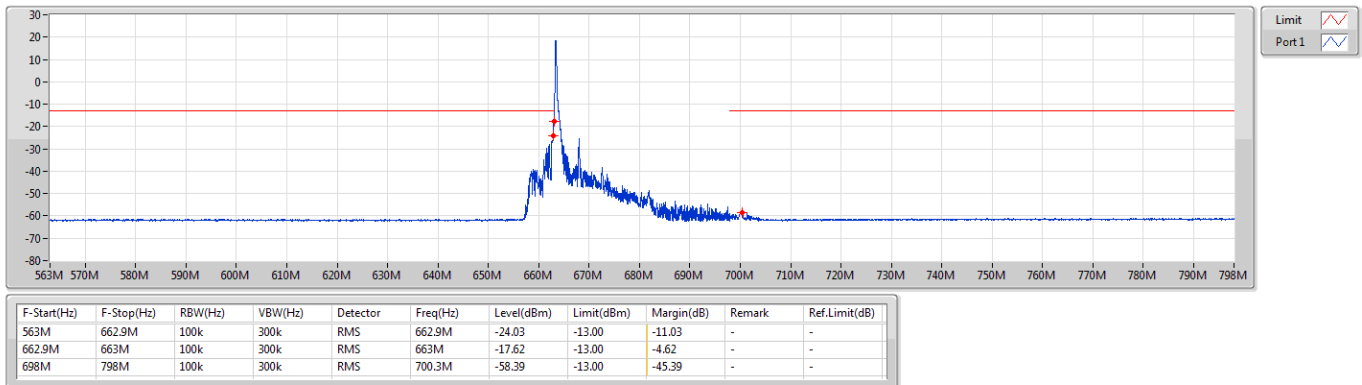
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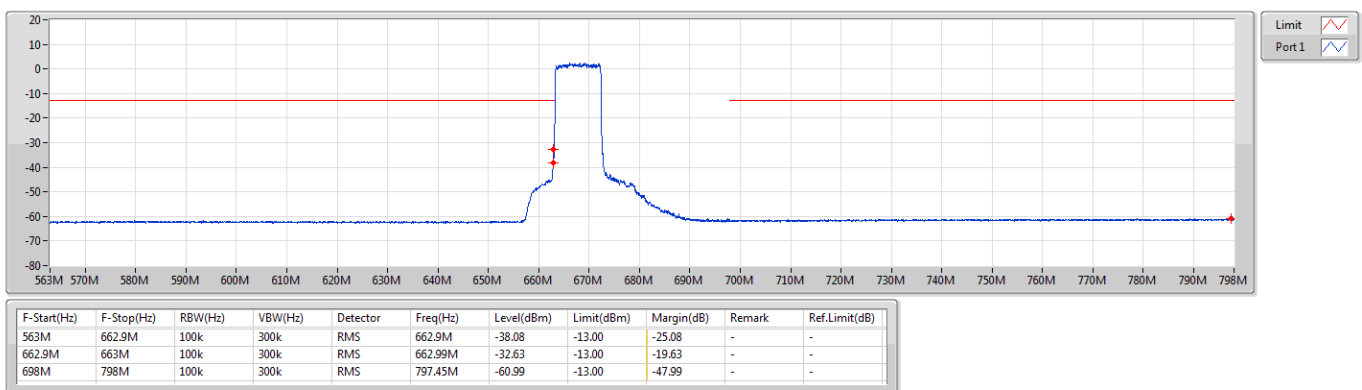
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CSE-TX-Sum



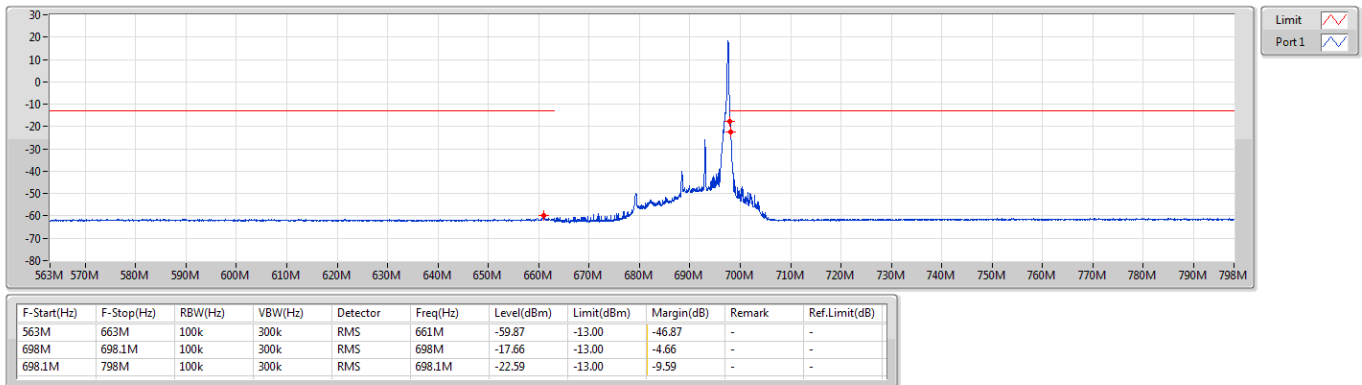
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CSE-TX-Sum



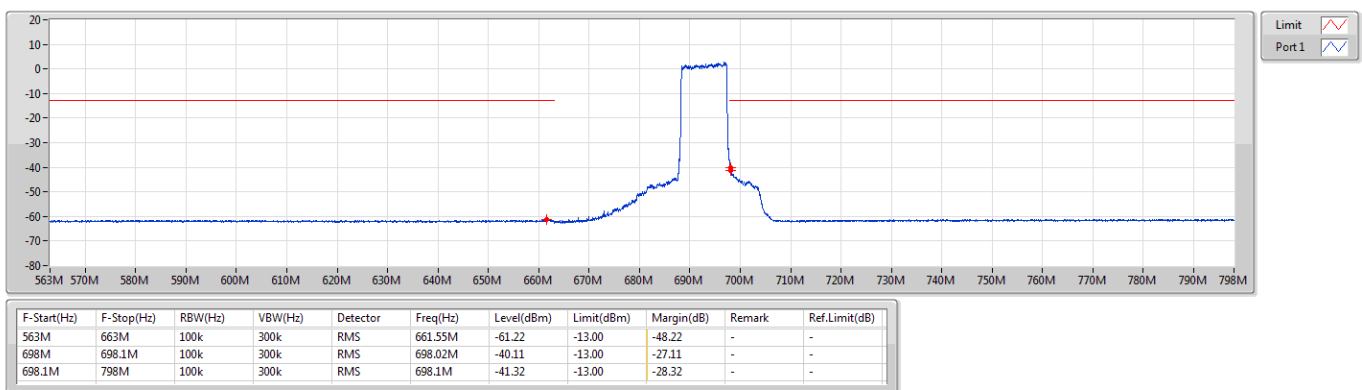
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693MHz_DFT-s-OFDM_64QAM_Edge_1RB_Right

CSE-TX-Sum



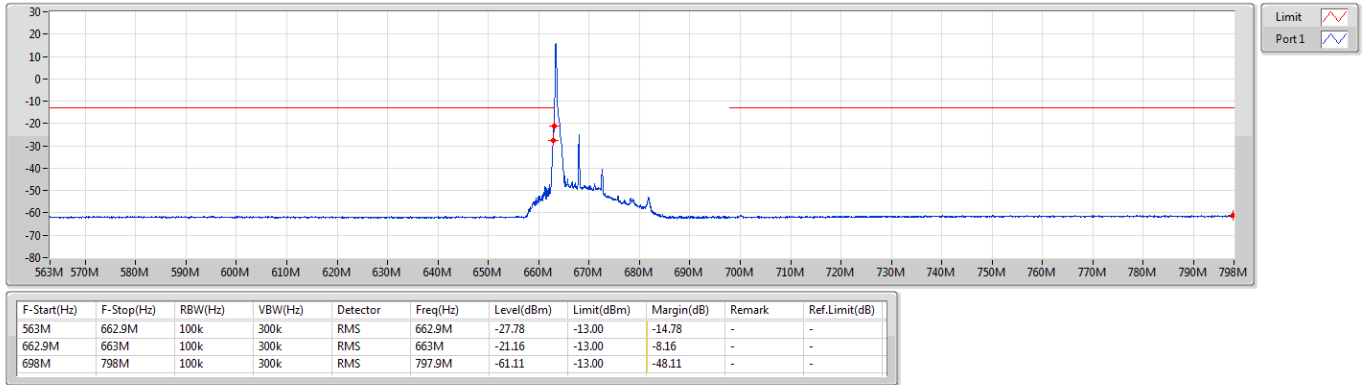
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CSE-TX-Sum



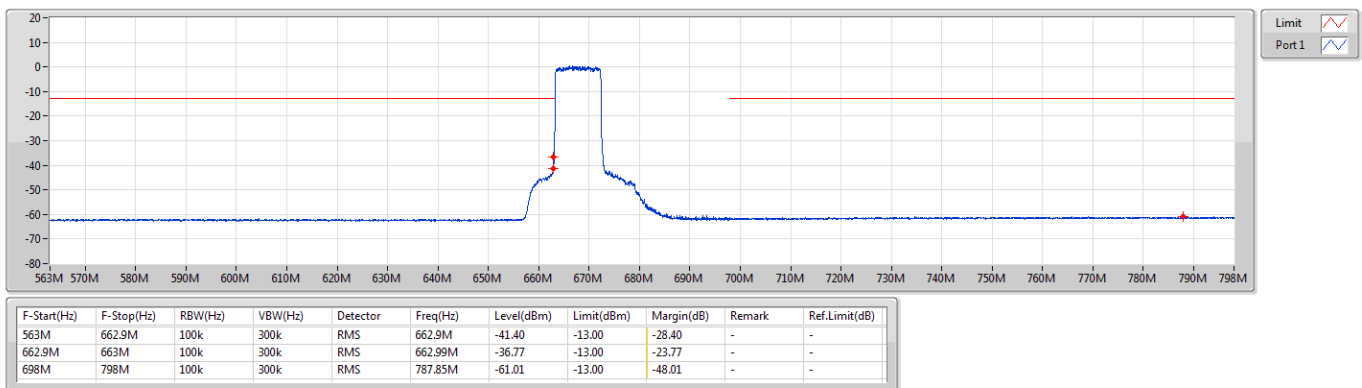
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CSE-TX-Sum



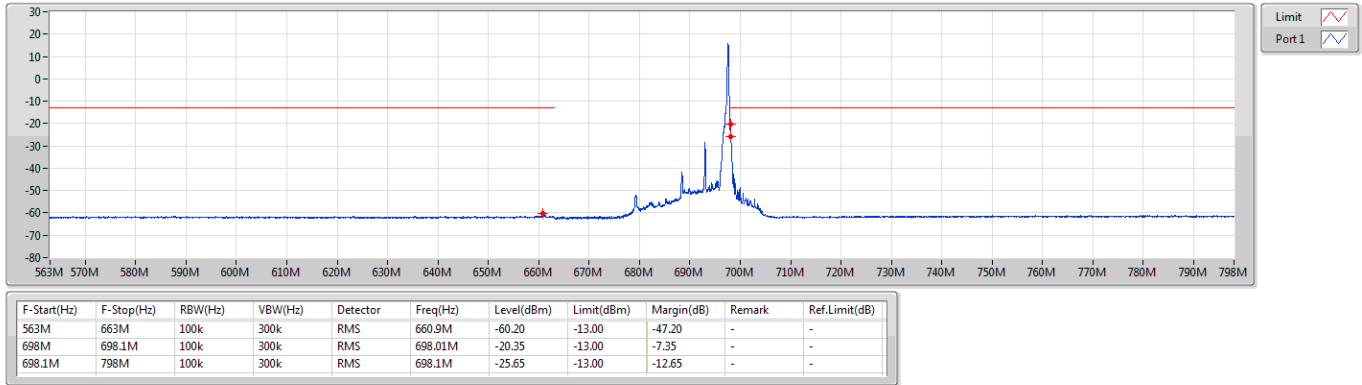
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CSE-TX-Sum



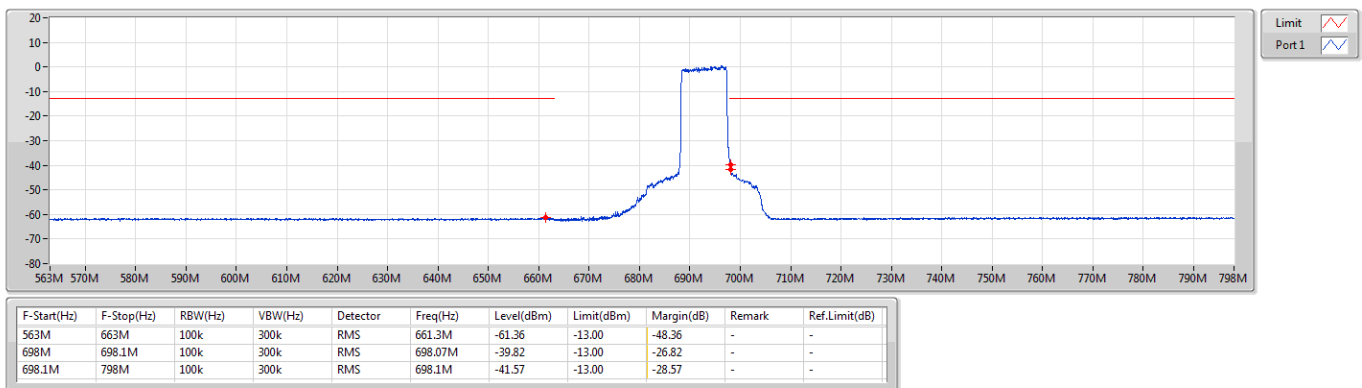
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CSE-TX-Sum



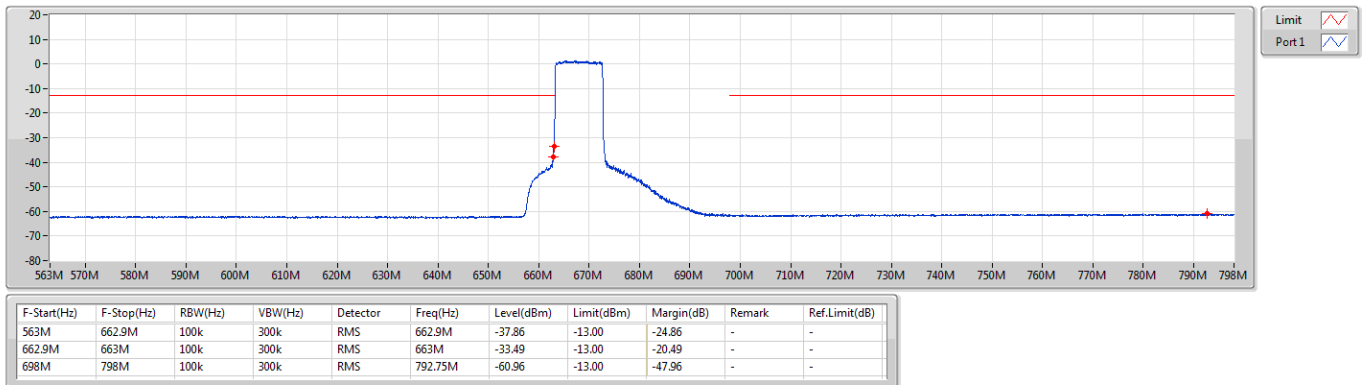
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CSE-TX-Sum



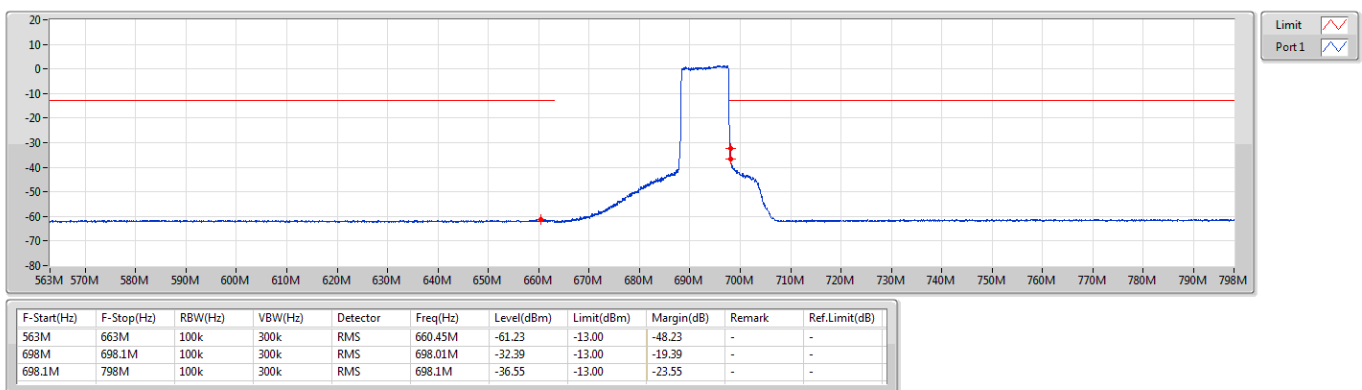
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CSE-TX-Sum



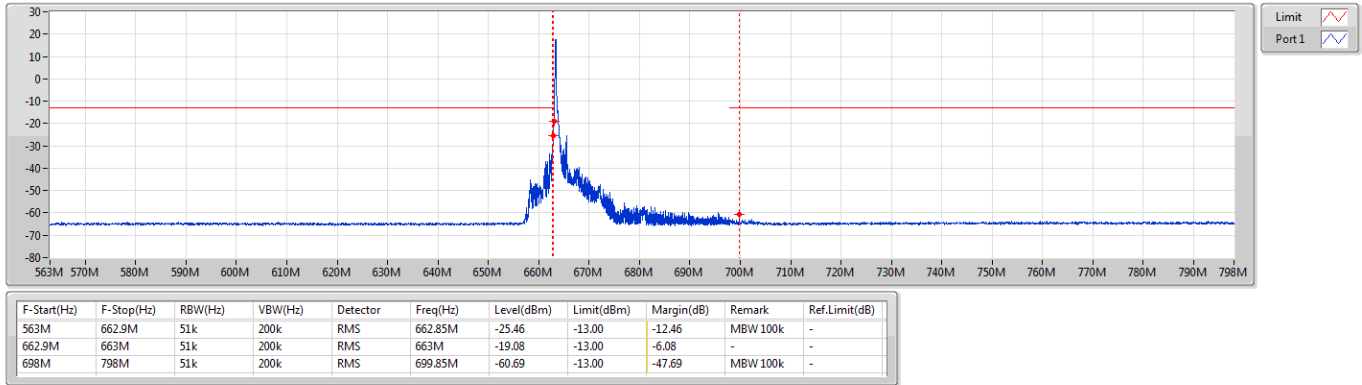
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CSE-TX-Sum



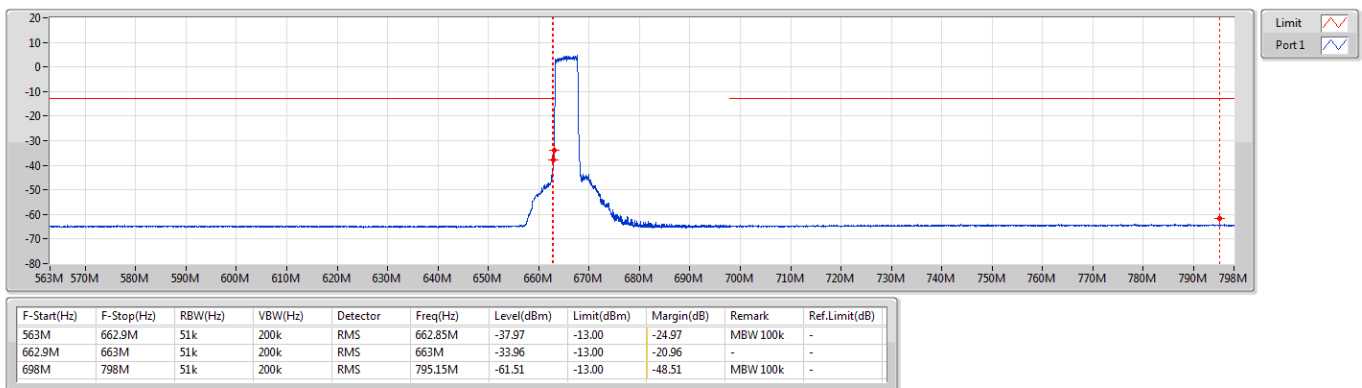
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CSE-TX-Sum



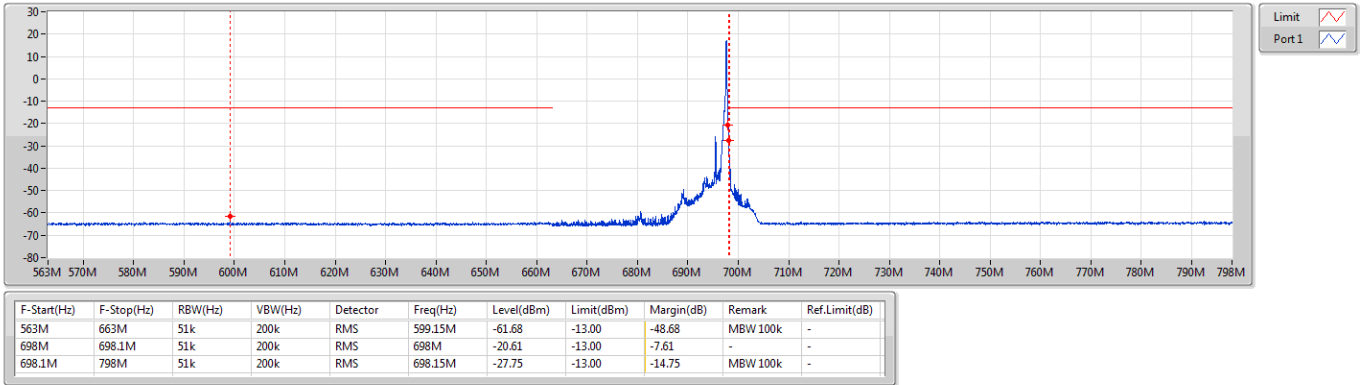
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CSE-TX-Sum



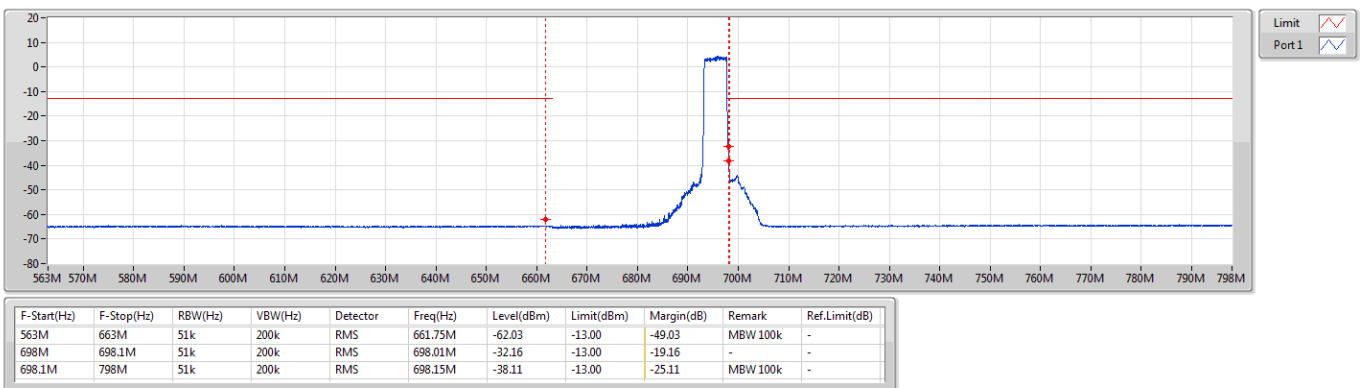
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
695.5MHz_DFT-s-OFDM_PI2BPSK_Edge_1RB_Right

CSE-TX-Sum



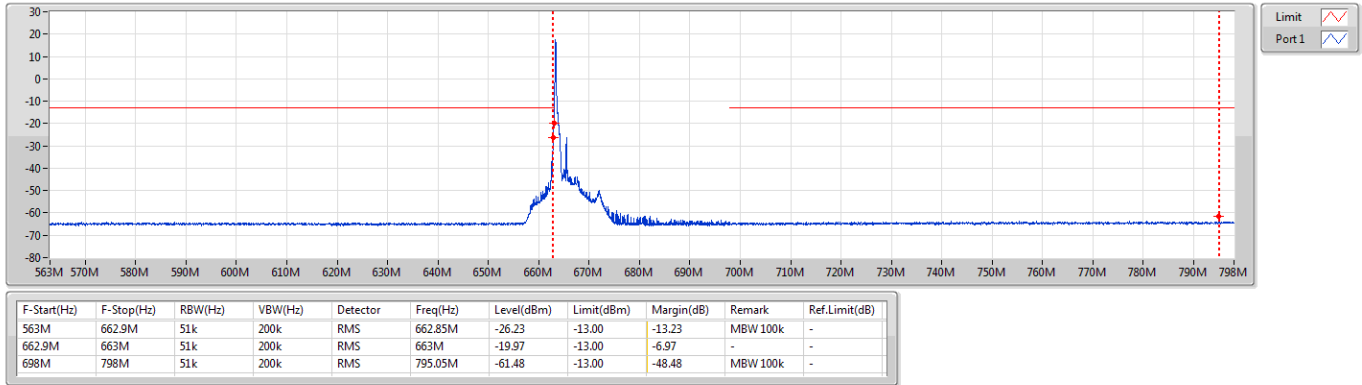
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
695.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

CSE-TX-Sum



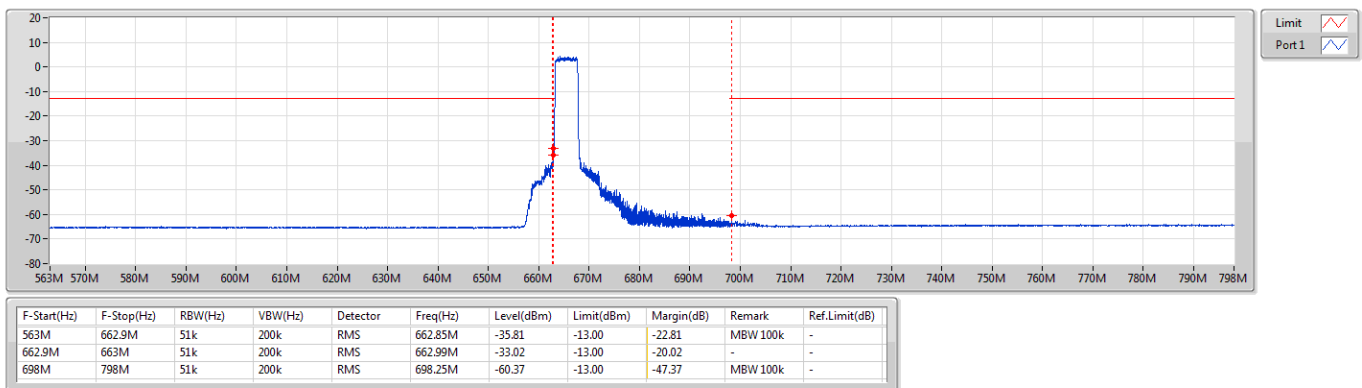
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_QPSK_1TX
665.5MHz_DFT-s-OFDM_QPSK_Edge_1RB_Left

CSE-TX-Sum



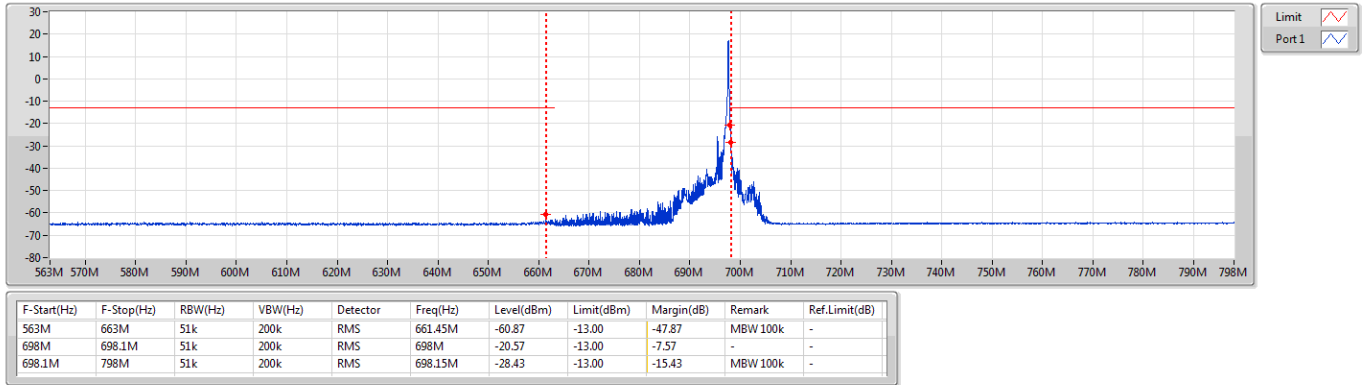
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665.5MHz_DFT-s-OFDM_QPSK_Outer_Full

CSE-TX-Sum



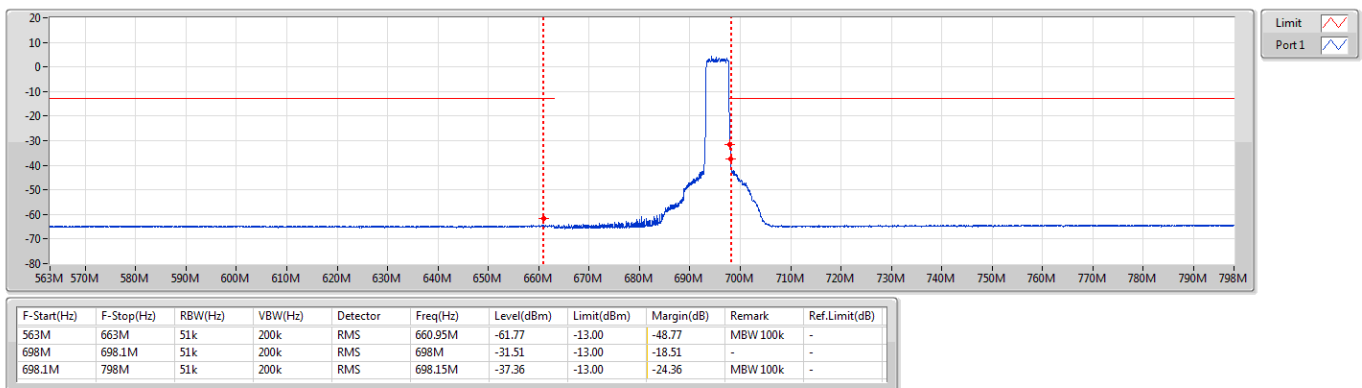
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695.5MHz_DFT-s-OFDM_QPSK_Edge_1RB_Right

CSE-TX-Sum



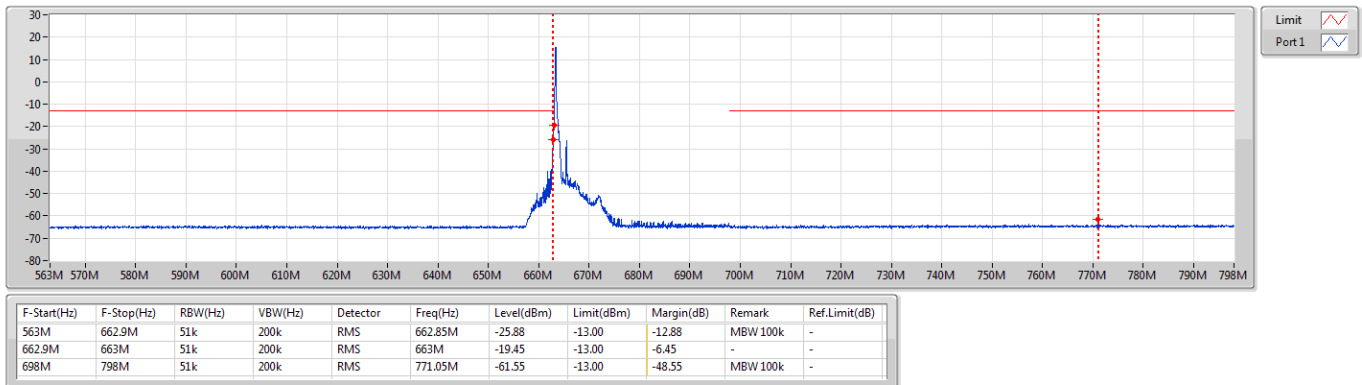
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695.5MHz_DFT-s-OFDM_QPSK_Outer_Full

CSE-TX-Sum



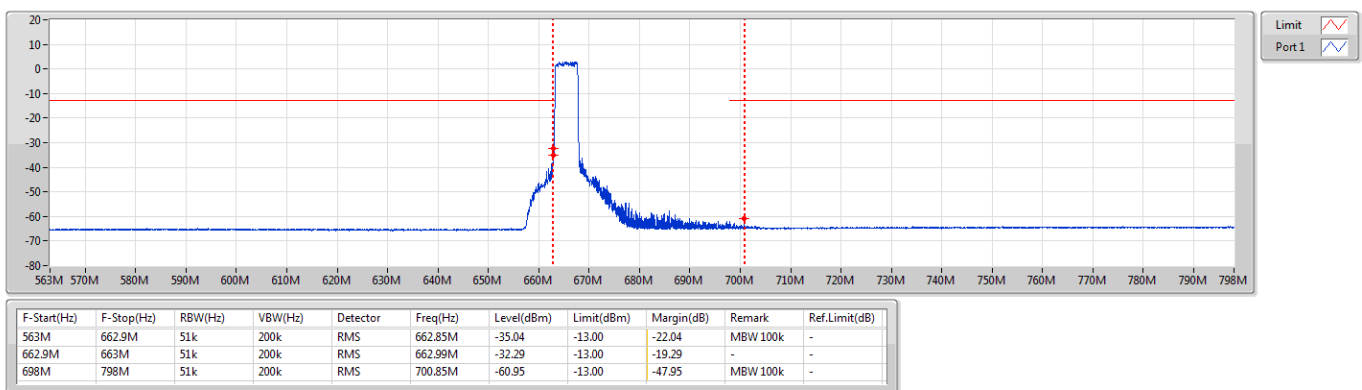
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_16QAM_1TX
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CSE-TX-Sum



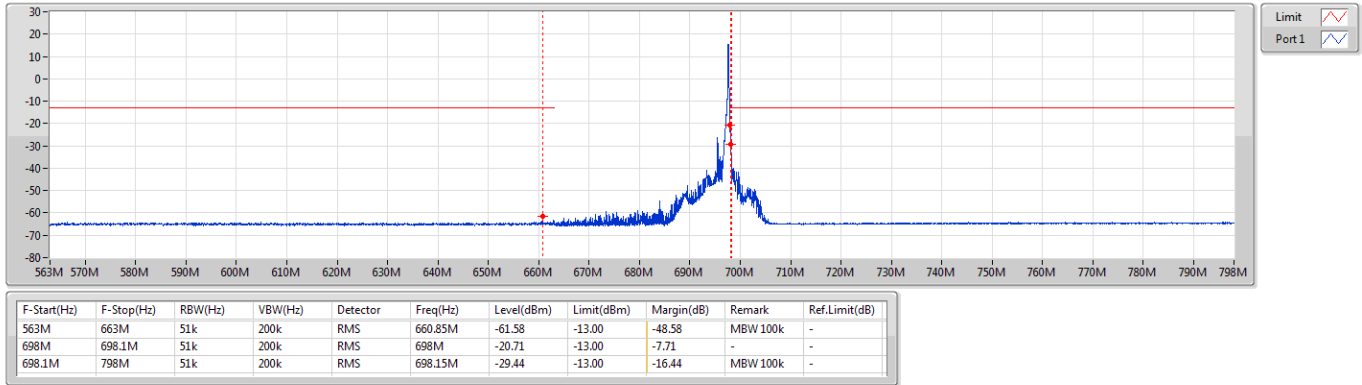
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665.5MHz_DFT-s-OFDM_16QAM_Outer_Full

CSE-TX-Sum



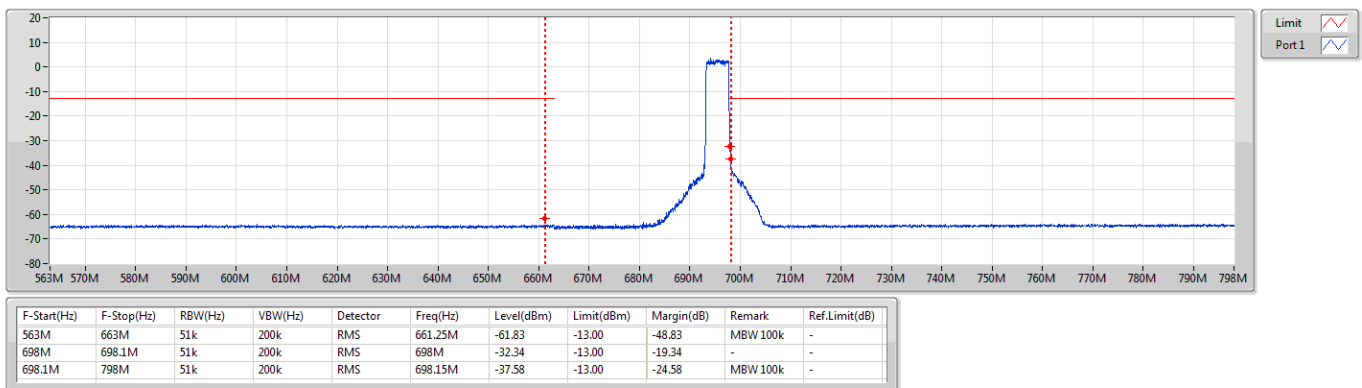
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695.5MHz_DFT-s-OFDM_16QAM_Edge_1RB_Right

CSE-TX-Sum



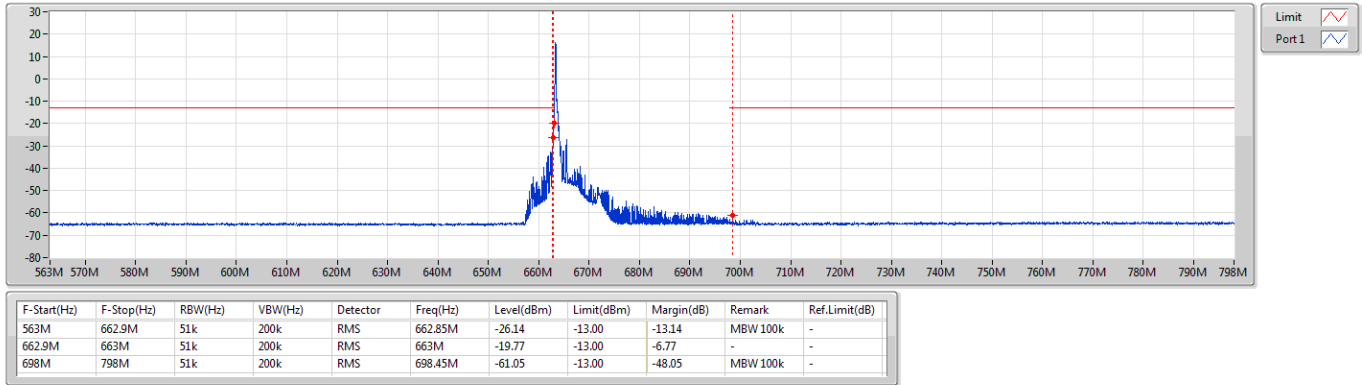
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CSE-TX-Sum



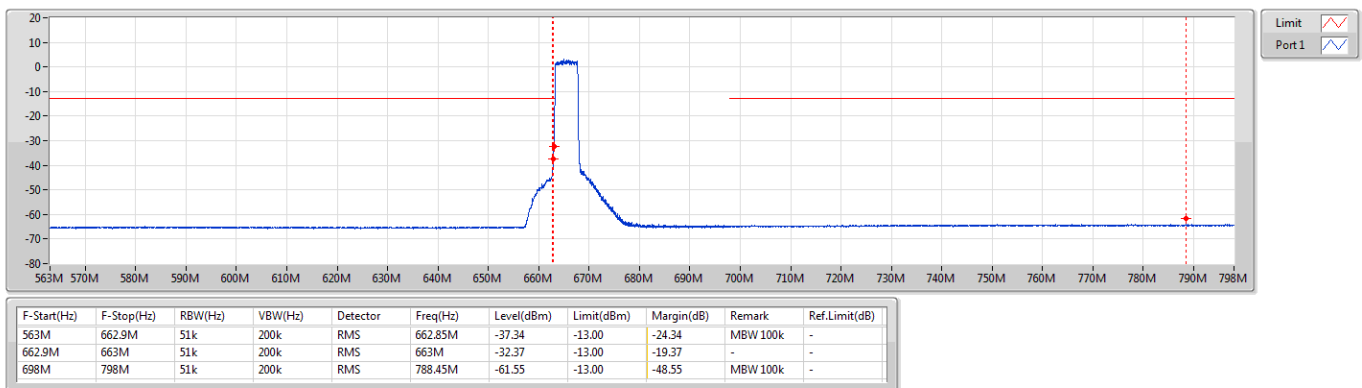
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665.5MHz_DFT-s-OFDM_64QAM_Edge_1RB_Left

CSE-TX-Sum



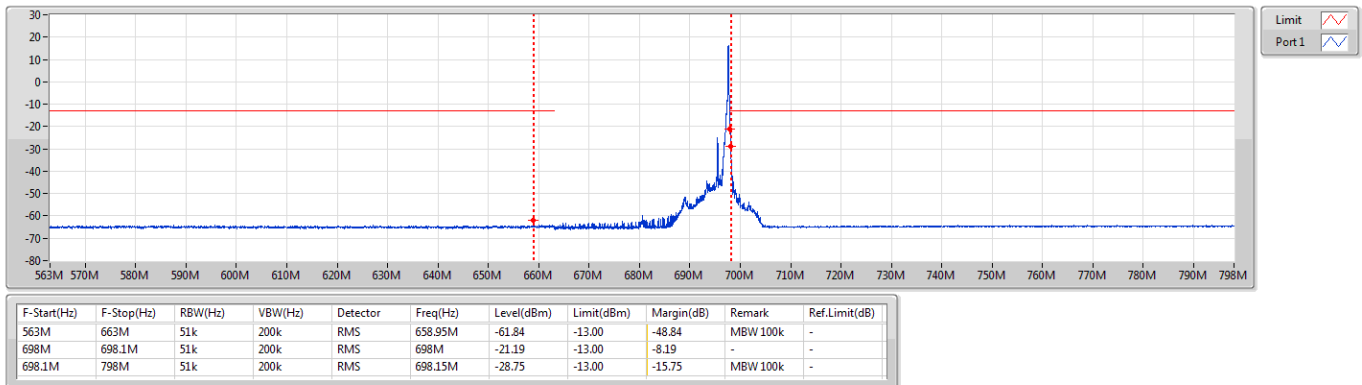
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CSE-TX-Sum



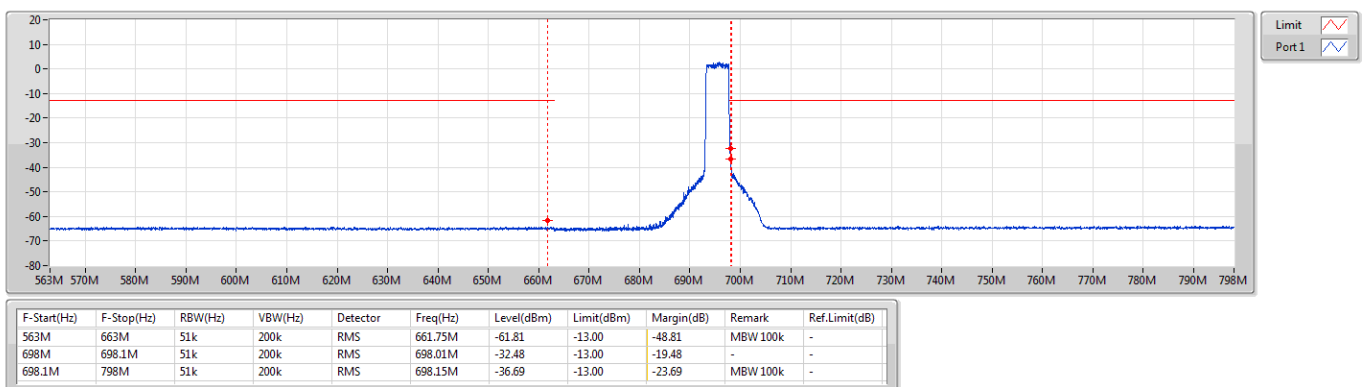
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695.5MHz_DFT-s-OFDM_64QAM_Edge_1RB_Right

CSE-TX-Sum



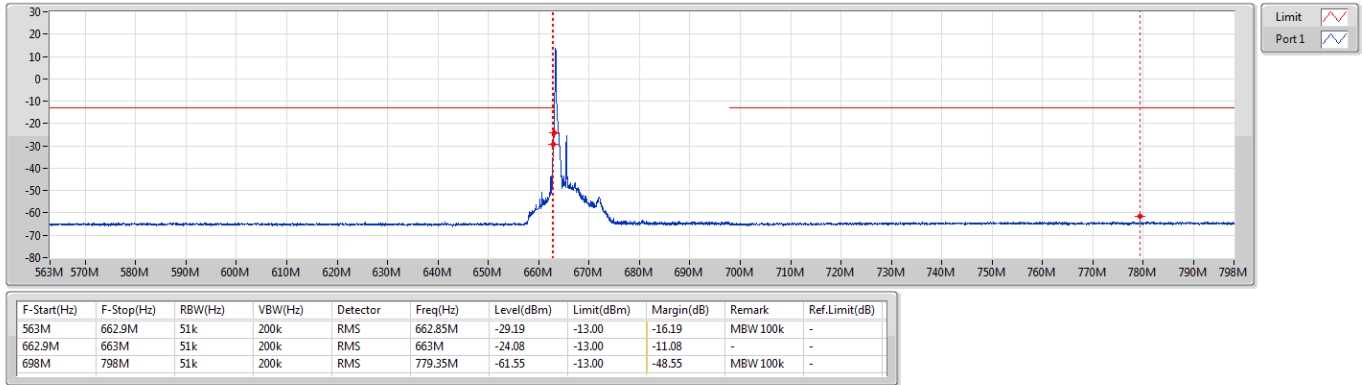
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695.5MHz_DFT-s-OFDM_64QAM_Outer_Full

CSE-TX-Sum



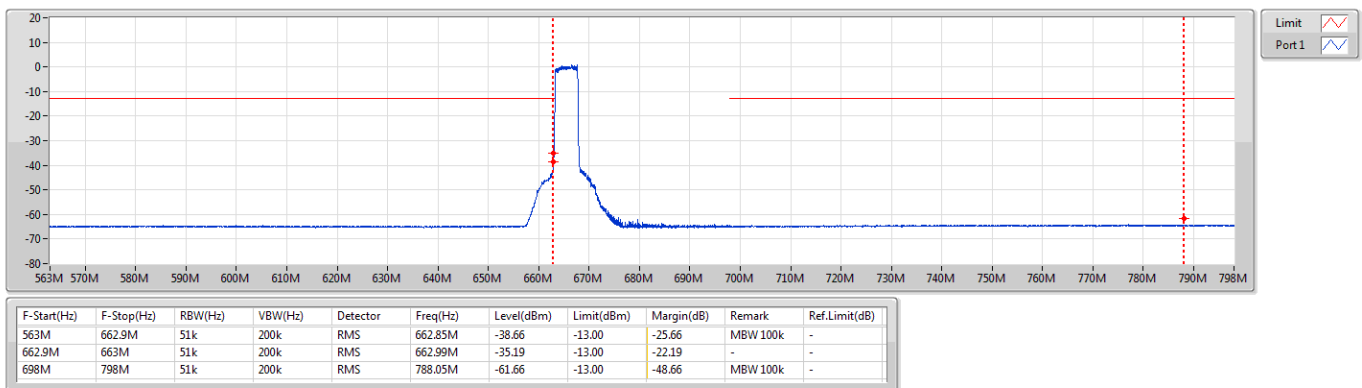
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_256QAM_1TX
665.5MHz_DFT-s-OFDM_256QAM_Edge_1RB_Left

CSE-TX-Sum



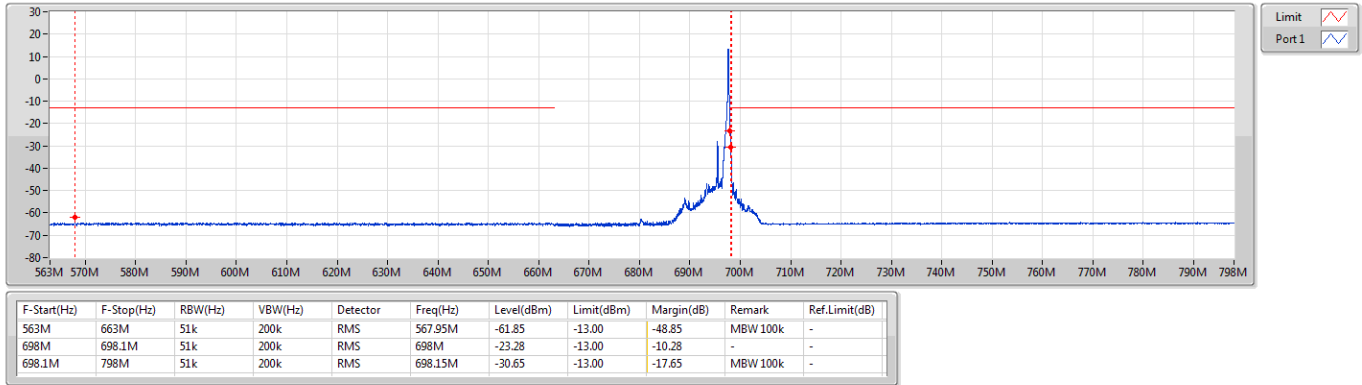
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665.5MHz_DFT-s-OFDM_256QAM_Outer_Full

CSE-TX-Sum



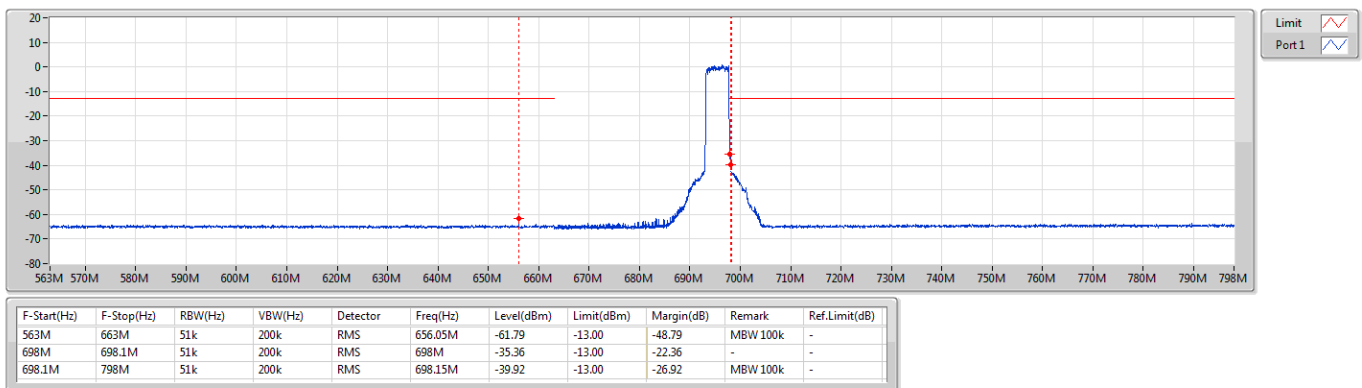
Band n71_NR_5MHz_Nss1,DFT-s-OFDM_256QAM_1TX
695.5MHz_DFT-s-OFDM_256QAM_Edge_1RB_Right

CSE-TX-Sum



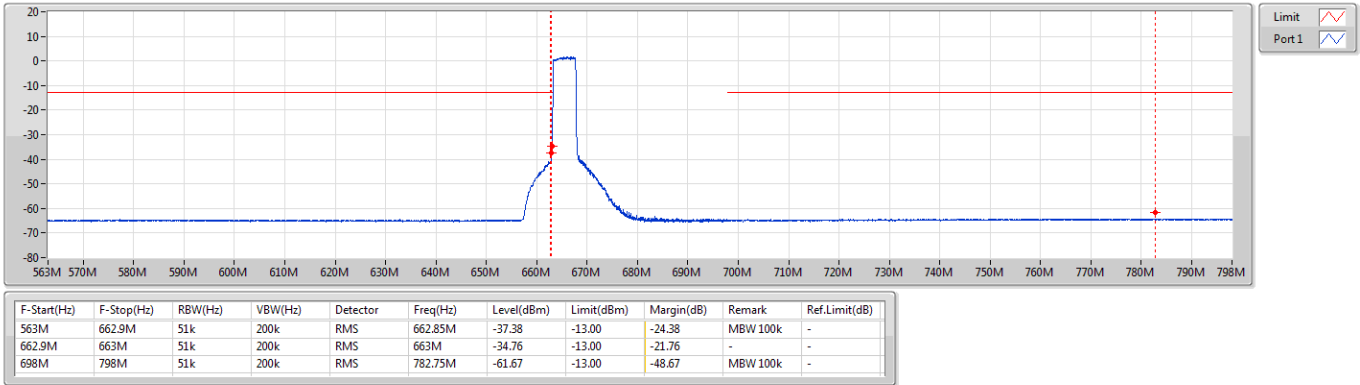
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695.5MHz_DFT-s-OFDM_256QAM_Outer_Full

CSE-TX-Sum



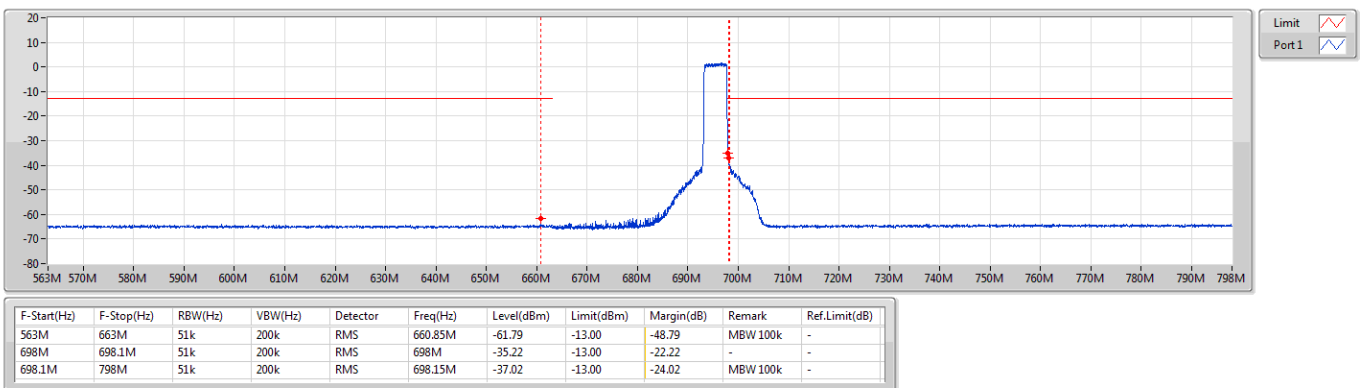
Band n71_NR_5MHz_Nss1,CP-OFDM_QPSK_1TX
665.5MHz_CP-OFDM_QPSK_Outer_Full

CSE-TX-Sum



Band n71_NR_5MHz_Nss1,CP-OFDM_QPSK_1TX
695.5MHz_CP-OFDM_QPSK_Outer_Full

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band n71	-	-	-	-	-
NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	18.8M	17.832M	17M9G7D	18.8M	17.832M
NR_20MHz_Nss1,CP-OFDM_QPSK_1TX	19.8M	18.889M	18M9G7D	19.8M	18.889M
NR_20MHz_Nss1,CP-OFDM_16QAM_1TX	19.9M	18.854M	18M9W7D	19.9M	18.854M
NR_20MHz_Nss1,CP-OFDM_64QAM_1TX	19.8M	18.931M	19M0W7D	19.8M	18.931M
NR_20MHz_Nss1,CP-OFDM_256QAM_1TX	19.925M	18.883M	18M9W7D	19.925M	18.883M
NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	14.044M	13.402M	13M5G7D	14.044M	13.402M
NR_15MHz_Nss1,CP-OFDM_QPSK_1TX	14.7M	14.067M	14M1G7D	14.7M	14.067M
NR_15MHz_Nss1,CP-OFDM_16QAM_1TX	14.775M	14.074M	14M1W7D	14.775M	14.074M
NR_15MHz_Nss1,CP-OFDM_64QAM_1TX	14.756M	14.075M	14M1W7D	14.756M	14.075M
NR_15MHz_Nss1,CP-OFDM_256QAM_1TX	14.775M	14.108M	14M2W7D	14.775M	14.108M
NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	9.575M	8.931M	8M93G7D	9.575M	8.931M
NR_10MHz_Nss1,CP-OFDM_QPSK_1TX	9.825M	9.259M	9M26G7D	9.825M	9.259M
NR_10MHz_Nss1,CP-OFDM_16QAM_1TX	9.9M	9.273M	9M27W7D	9.9M	9.273M
NR_10MHz_Nss1,CP-OFDM_64QAM_1TX	9.788M	9.274M	9M27W7D	9.788M	9.274M
NR_10MHz_Nss1,CP-OFDM_256QAM_1TX	9.888M	9.266M	9M27W7D	9.888M	9.266M
NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	4.856M	4.469M	4M47G7D	4.856M	4.469M
NR_5MHz_Nss1,CP-OFDM_QPSK_1TX	4.838M	4.459M	4M46G7D	4.838M	4.459M
NR_5MHz_Nss1,CP-OFDM_16QAM_1TX	4.831M	4.473M	4M47W7D	4.831M	4.473M
NR_5MHz_Nss1,CP-OFDM_64QAM_1TX	4.819M	4.459M	4M46W7D	4.819M	4.459M
NR_5MHz_Nss1,CP-OFDM_256QAM_1TX	4.931M	4.455M	4M46W7D	4.931M	4.455M

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

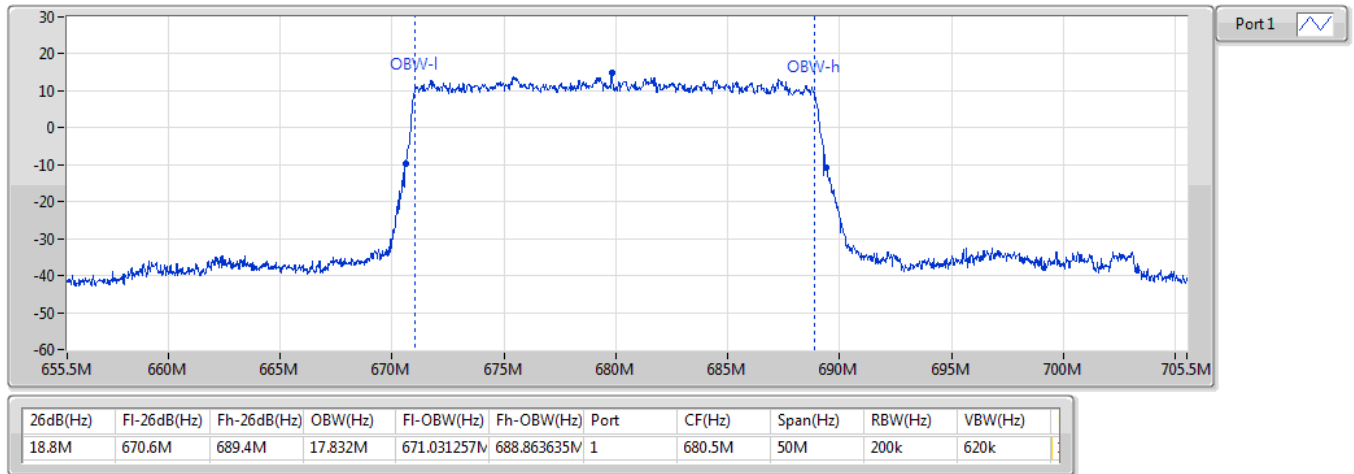
Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band n71_NR_20MHz_Nss1_1TX	-	-	-	-
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full	Pass	18.8M	17.832M	Inf
680.5MHz_CP-OFDM_QPSK_Outer_Full	Pass	19.8M	18.889M	Inf
680.5MHz_CP-OFDM_16QAM_Outer_Full	Pass	19.9M	18.854M	Inf
680.5MHz_CP-OFDM_64QAM_Outer_Full	Pass	19.8M	18.931M	Inf
680.5MHz_CP-OFDM_256QAM_Outer_Full	Pass	19.925M	18.883M	Inf
Band n71_NR_15MHz_Nss1_1TX	-	-	-	-
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full	Pass	14.044M	13.402M	Inf
680.5MHz_CP-OFDM_QPSK_Outer_Full	Pass	14.7M	14.067M	Inf
680.5MHz_CP-OFDM_16QAM_Outer_Full	Pass	14.775M	14.074M	Inf
680.5MHz_CP-OFDM_64QAM_Outer_Full	Pass	14.756M	14.075M	Inf
680.5MHz_CP-OFDM_256QAM_Outer_Full	Pass	14.775M	14.108M	Inf
Band n71_NR_10MHz_Nss1_1TX	-	-	-	-
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full	Pass	9.575M	8.931M	Inf
680.5MHz_CP-OFDM_QPSK_Outer_Full	Pass	9.825M	9.259M	Inf
680.5MHz_CP-OFDM_16QAM_Outer_Full	Pass	9.9M	9.273M	Inf
680.5MHz_CP-OFDM_64QAM_Outer_Full	Pass	9.788M	9.274M	Inf
680.5MHz_CP-OFDM_256QAM_Outer_Full	Pass	9.888M	9.266M	Inf
Band n71_NR_5MHz_Nss1_1TX	-	-	-	-
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full	Pass	4.856M	4.469M	Inf
680.5MHz_CP-OFDM_QPSK_Outer_Full	Pass	4.838M	4.459M	Inf
680.5MHz_CP-OFDM_16QAM_Outer_Full	Pass	4.831M	4.473M	Inf
680.5MHz_CP-OFDM_64QAM_Outer_Full	Pass	4.819M	4.459M	Inf
680.5MHz_CP-OFDM_256QAM_Outer_Full	Pass	4.931M	4.455M	Inf

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

Port X-OBW = Port X 99% occupied bandwidth

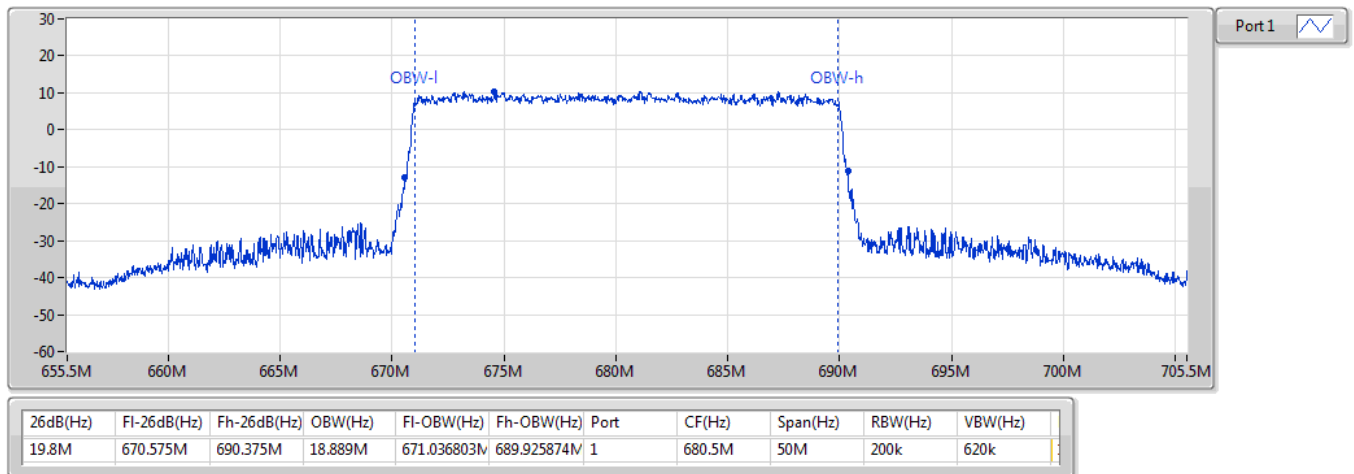
Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

EBW



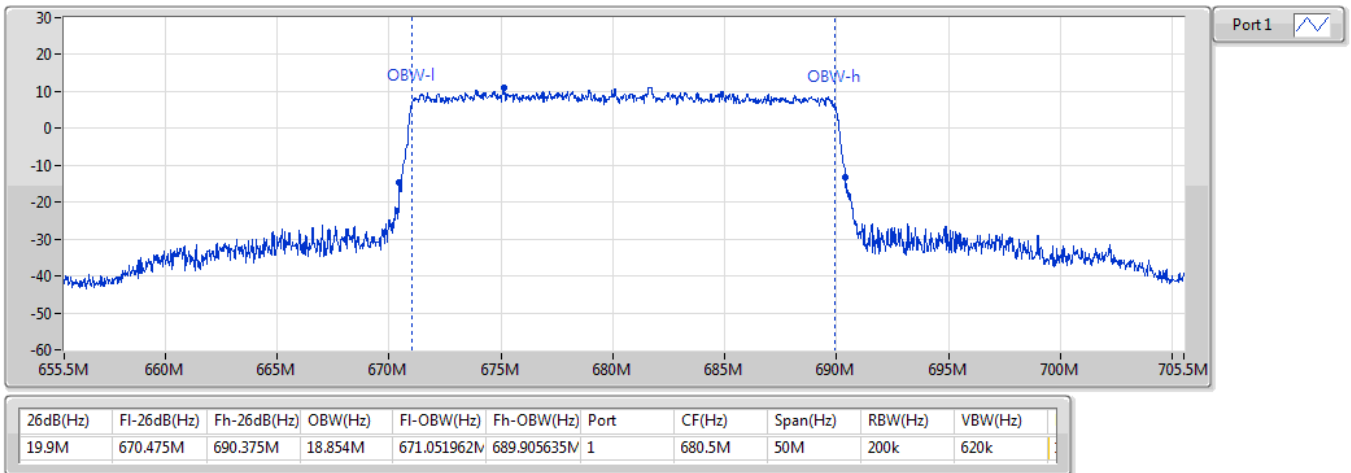
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680.5MHz_CP-OFDM_QPSK_Outer_Full

EBW



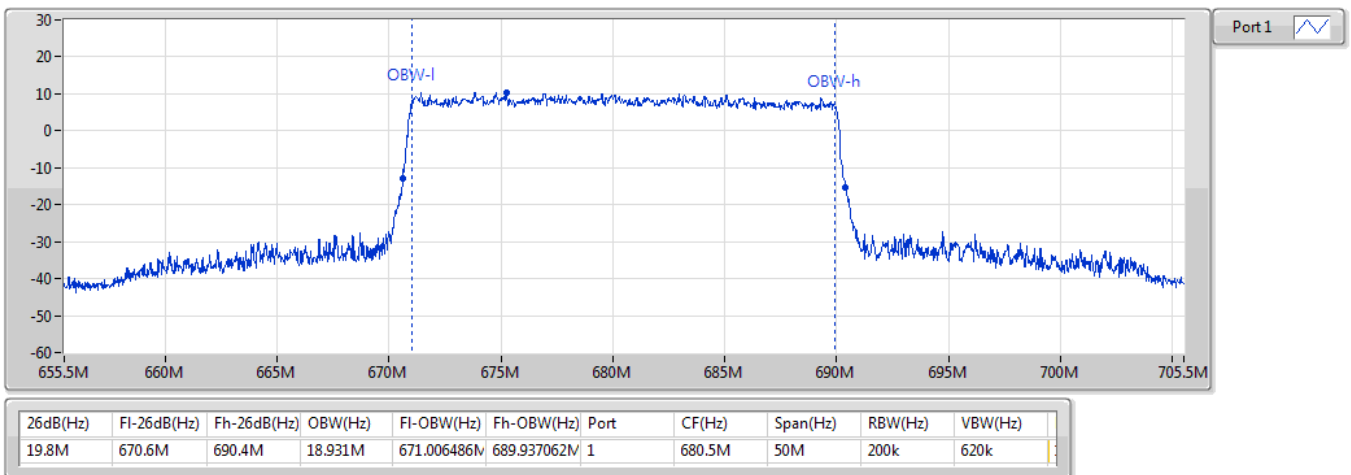
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680.5MHz_CP-OFDM_16QAM_Outer_Full

EBW



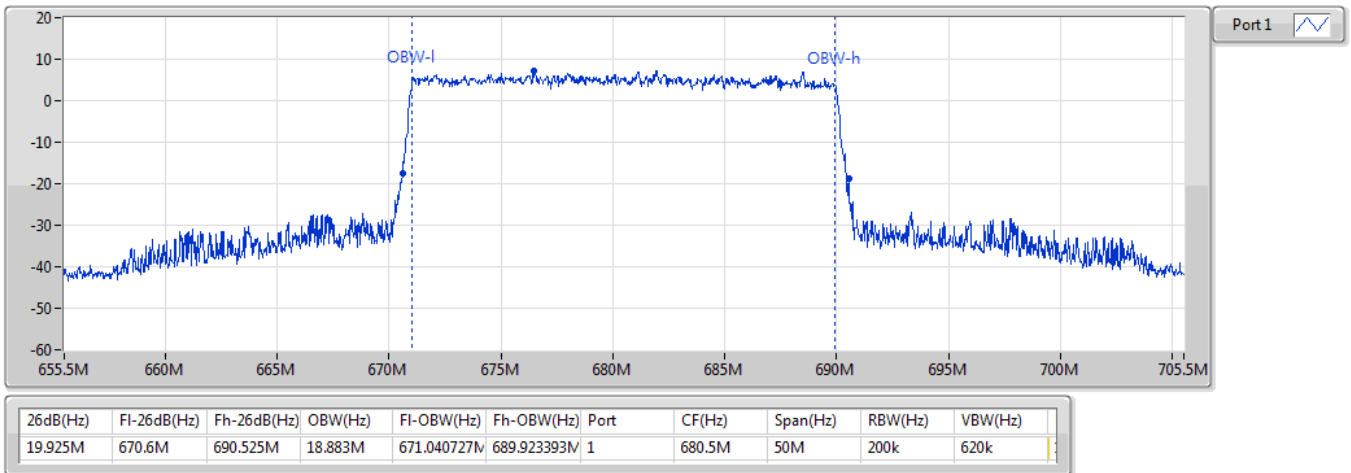
Band n71_NR_20MHz_Nss1,CP-OFDM_64QAM_1TX
680.5MHz_CP-OFDM_64QAM_Outer_Full

EBW



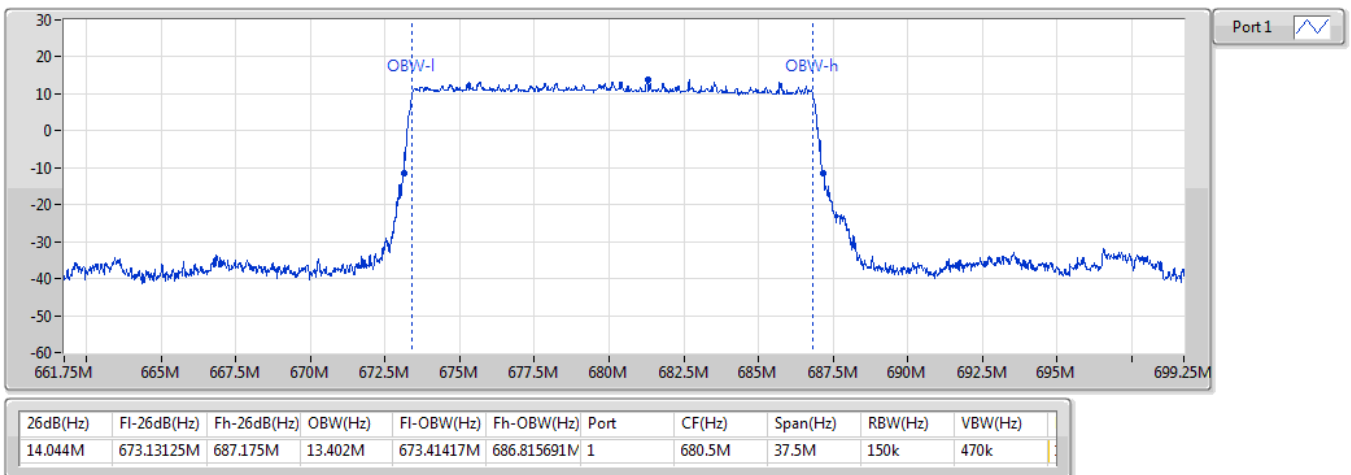
Band n71_NR_20MHz_Nss1,CP-OFDM_256QAM_1TX
680.5MHz_CP-OFDM_256QAM_Outer_Full

EBW



Band n71_NR_15MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

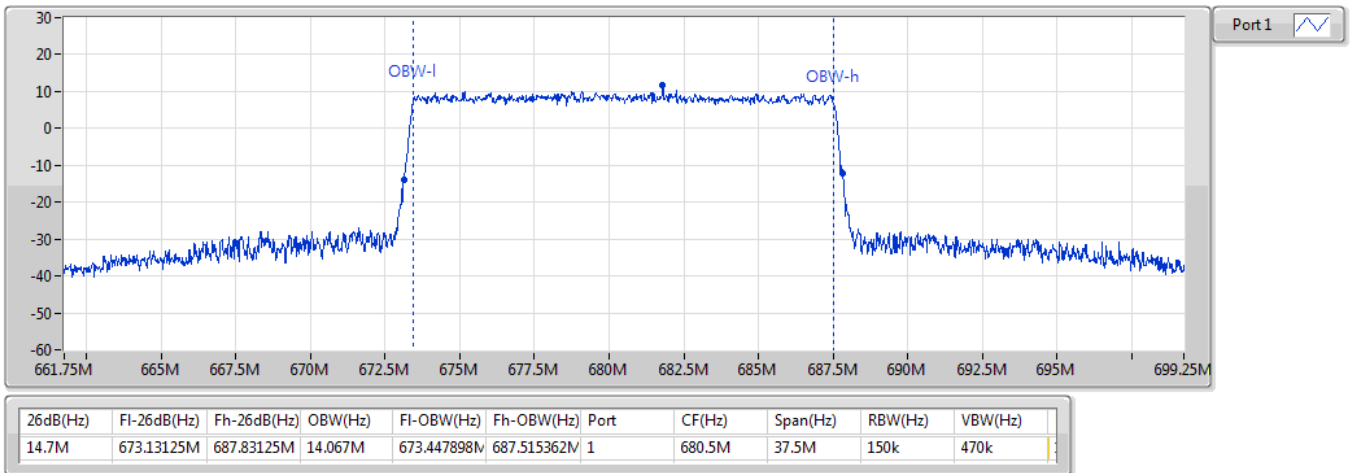
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Band n71_NR_15MHz_Nss1,CP-OFDM_QPSK_1TX

EBW

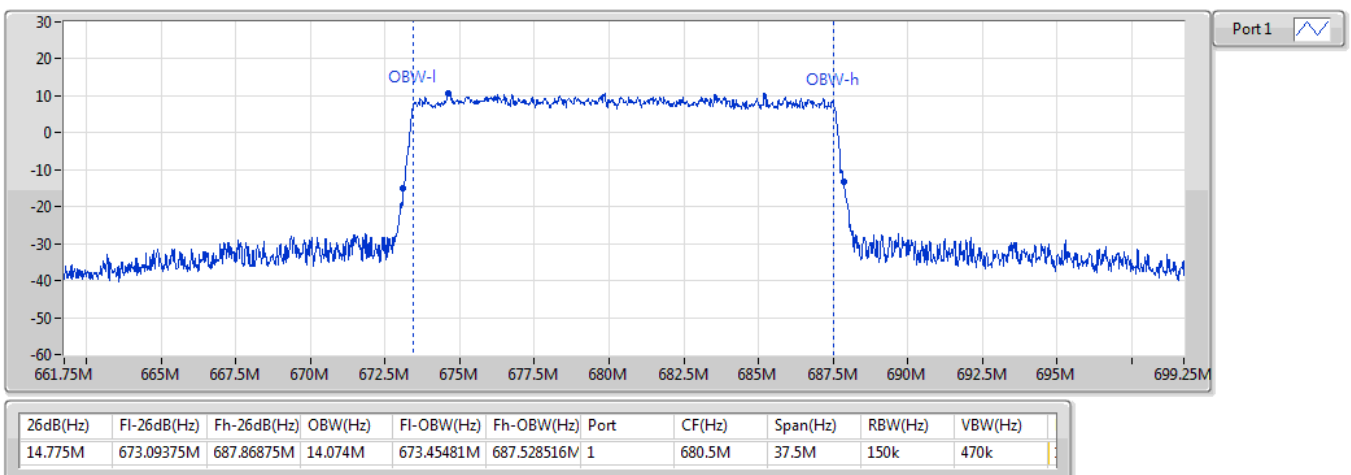
680.5MHz_CP-OFDM_QPSK_Outer_Full



Band n71_NR_15MHz_Nss1,CP-OFDM_16QAM_1TX

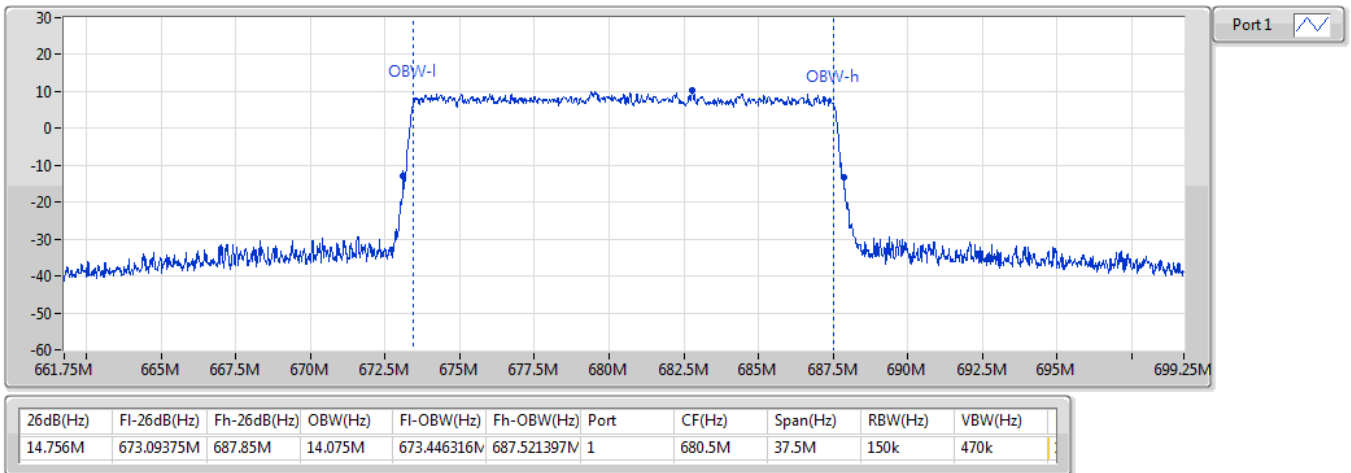
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680.5MHz_CP-OFDM_16QAM_Outer_Full



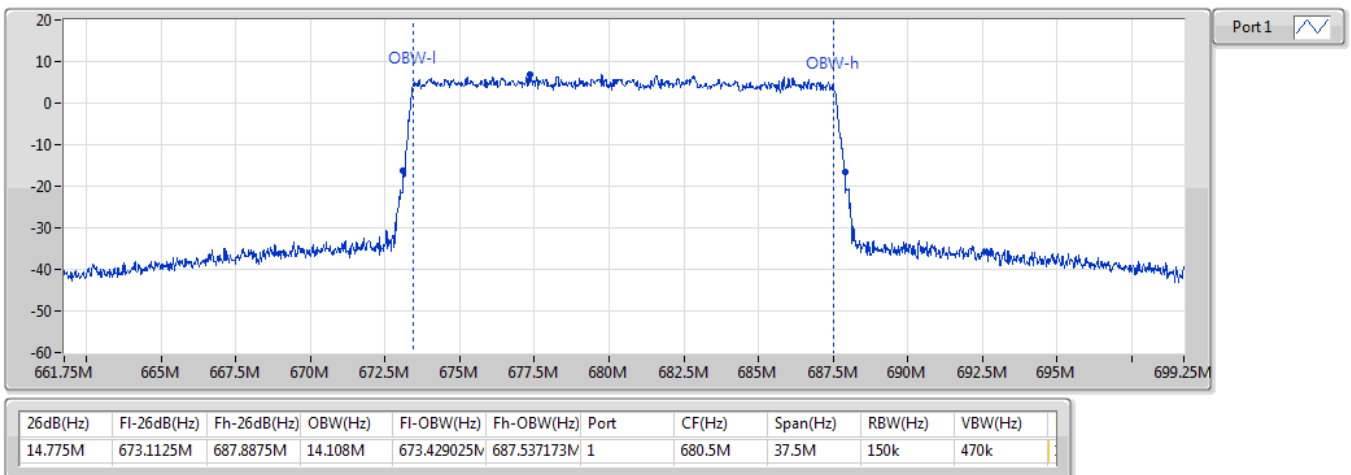
Band n71_NR_15MHz_Nss1,CP-OFDM_64QAM_1TX
680.5MHz_CP-OFDM_64QAM_Outer_Full

EBW



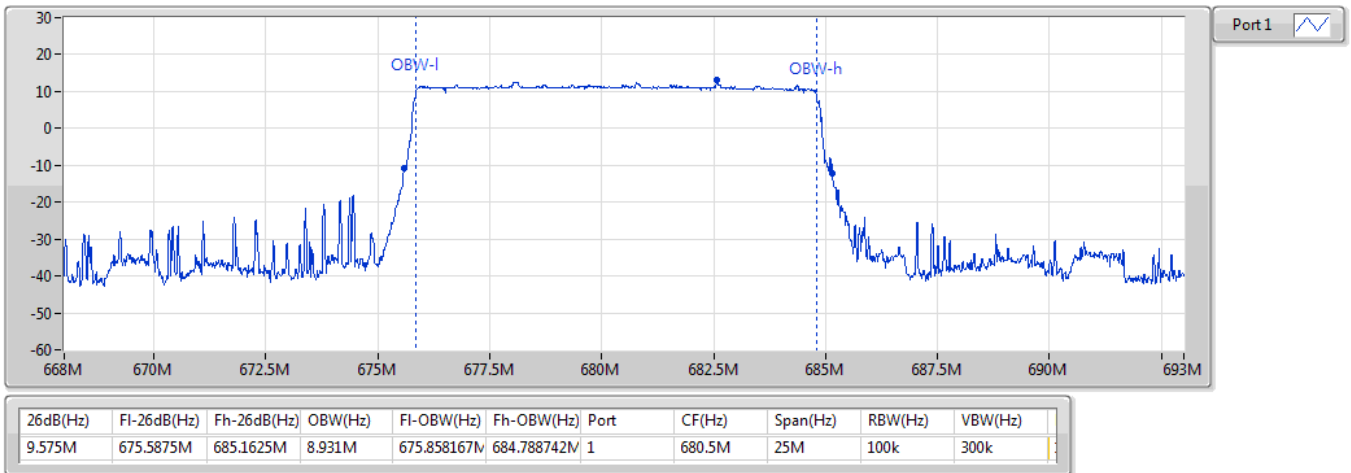
Band n71_NR_15MHz_Nss1,CP-OFDM_256QAM_1TX
680.5MHz_CP-OFDM_256QAM_Outer_Full

EBW



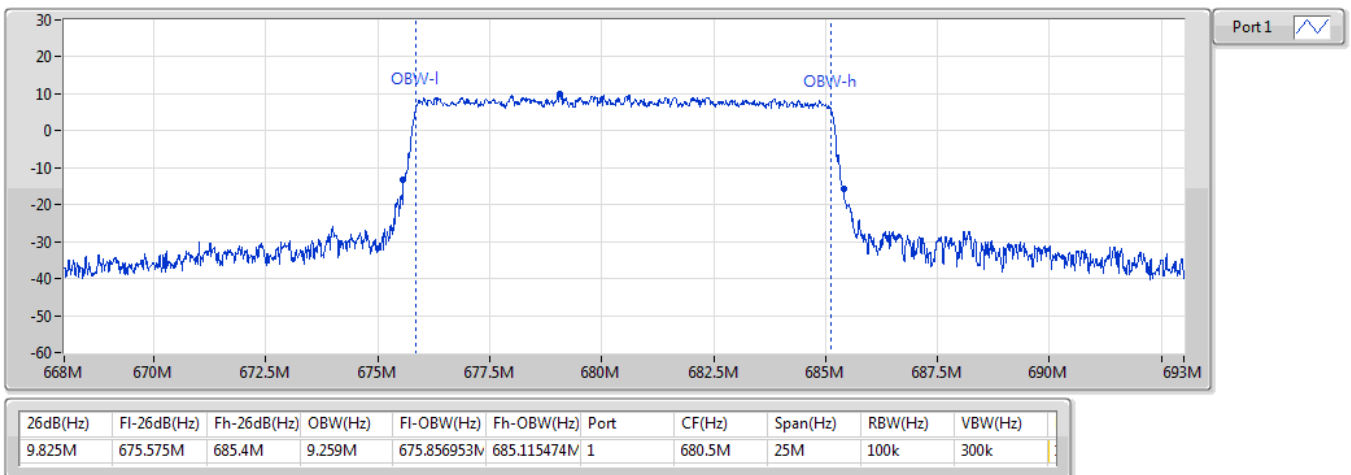
Band n71_NR_10MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

EBW



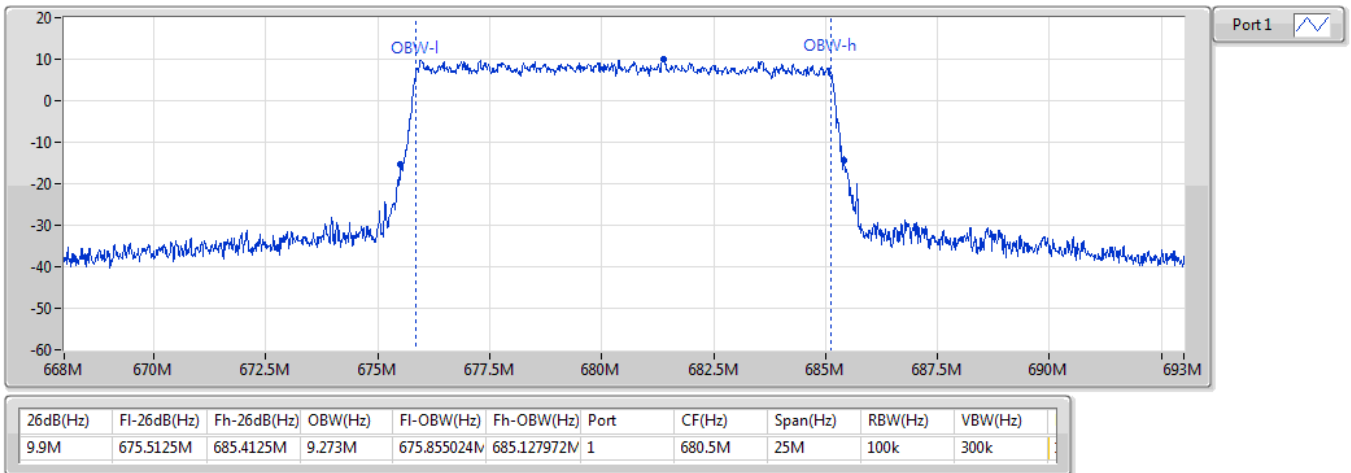
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680.5MHz_CP-OFDM_QPSK_Outer_Full

EBW



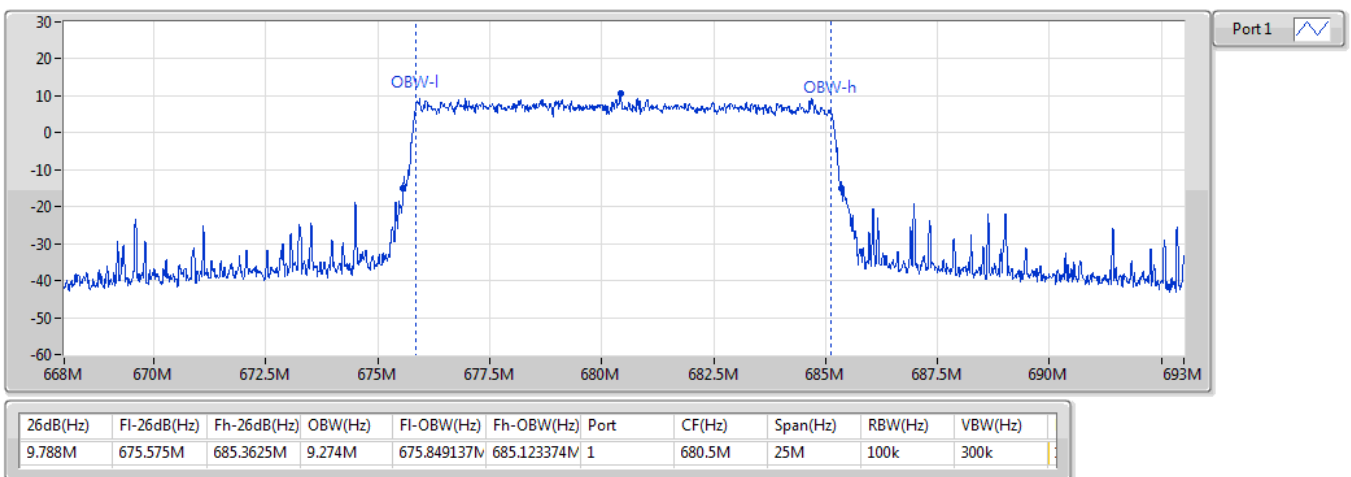
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680.5MHz_CP-OFDM_16QAM_Outer_Full

EBW



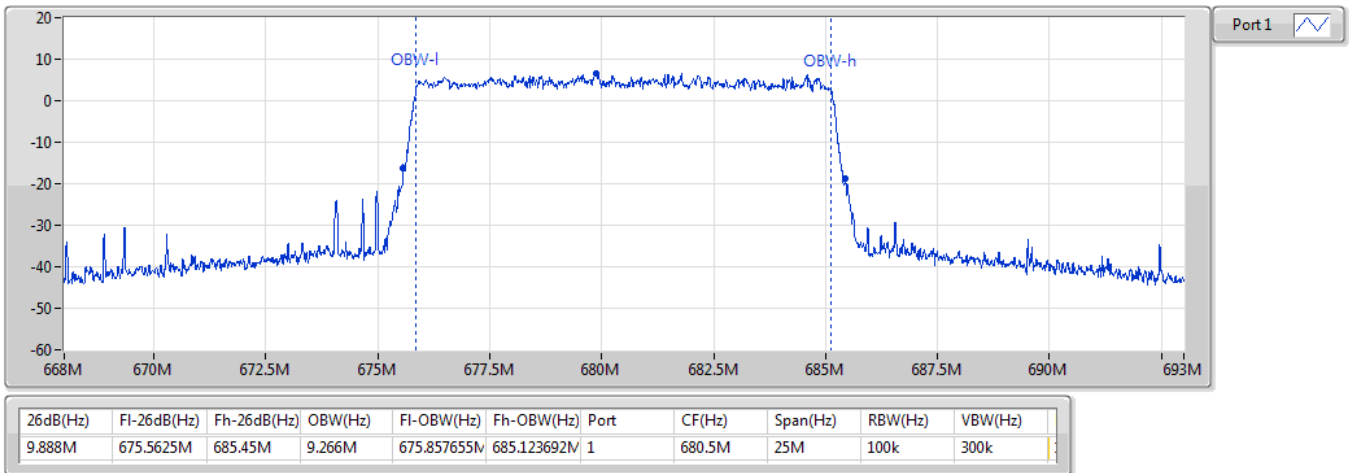
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680.5MHz_CP-OFDM_64QAM_Outer_Full

EBW



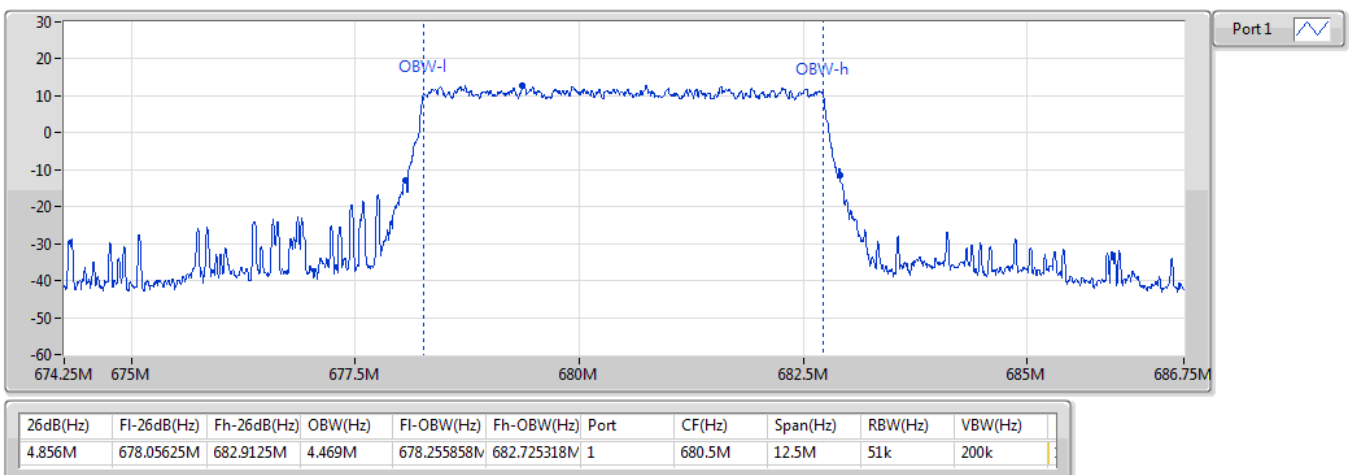
Band n71_NR_10MHz_Nss1,CP-OFDM_256QAM_1TX
680.5MHz_CP-OFDM_256QAM_Outer_Full

EBW



Band n71_NR_5MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX
680.5MHz_DFT-s-OFDM_PI2BPSK_Outer_Full

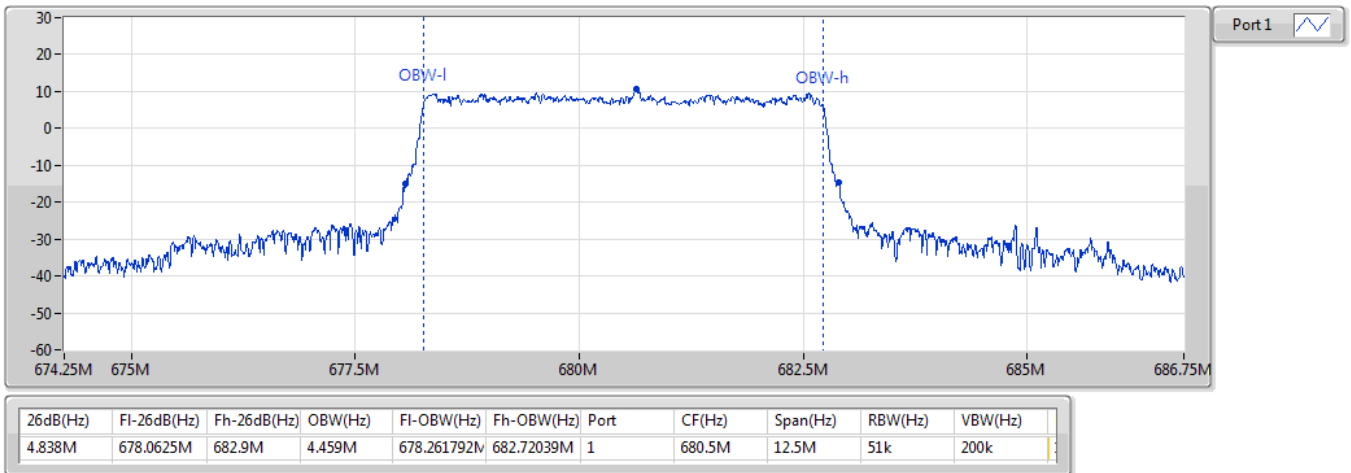
EBW



Band n71_NR_5MHz_Nss1,CP-OFDM_QPSK_1TX

EBW

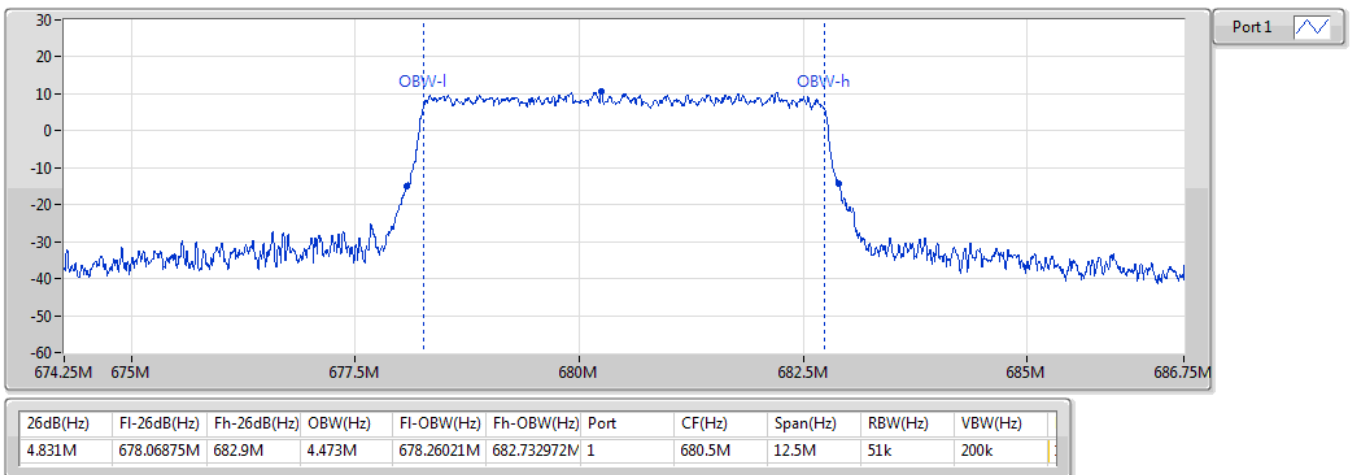
680.5MHz_CP-OFDM_QPSK_Outer_Full



Band n71_NR_5MHz_Nss1,CP-OFDM_16QAM_1TX

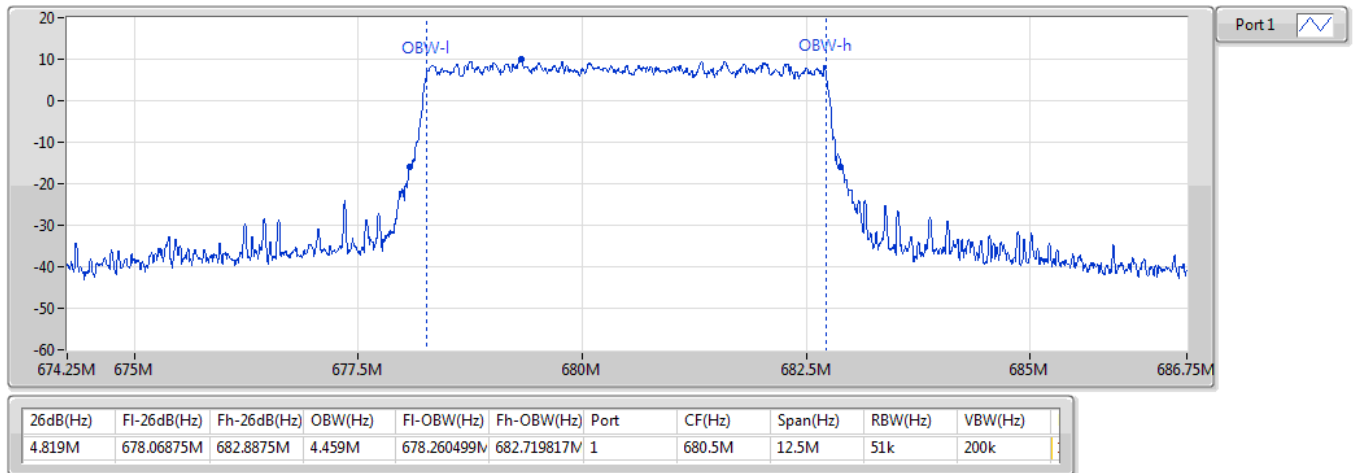
EBW

680.5MHz_CP-OFDM_16QAM_Outer_Full



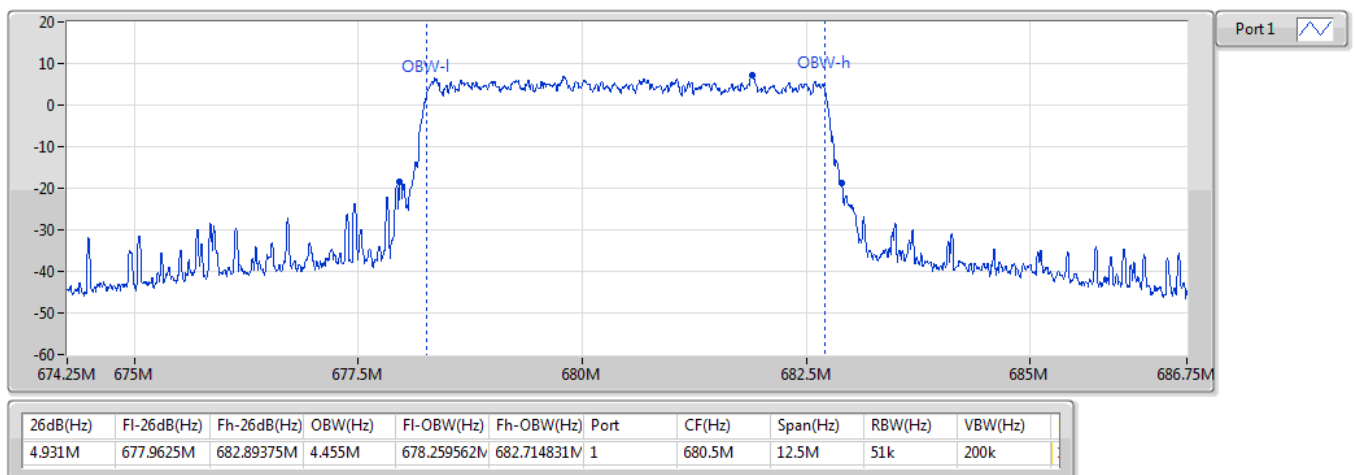
Band n71_NR_5MHz_Nss1,CP-OFDM_64QAM_1TX
680.5MHz_CP-OFDM_64QAM_Outer_Full

EBW



Band n71_NR_5MHz_Nss1,CP-OFDM_256QAM_1TX
680.5MHz_CP-OFDM_256QAM_Outer_Full

EBW



Summary

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band n71	-	-	-	-	-
NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX	Pass	680.5	13.00	4.23	1
NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX	Pass	680.5	13.00	5.49	1
NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX	Pass	680.5	13.00	6.23	1
NR_20MHz_Nss1,DFT-s-OFDM_64QAM_1TX	Pass	680.5	13.00	6.54	1
NR_20MHz_Nss1,DFT-s-OFDM_256QAM_1TX	Pass	680.5	13.00	6.43	1

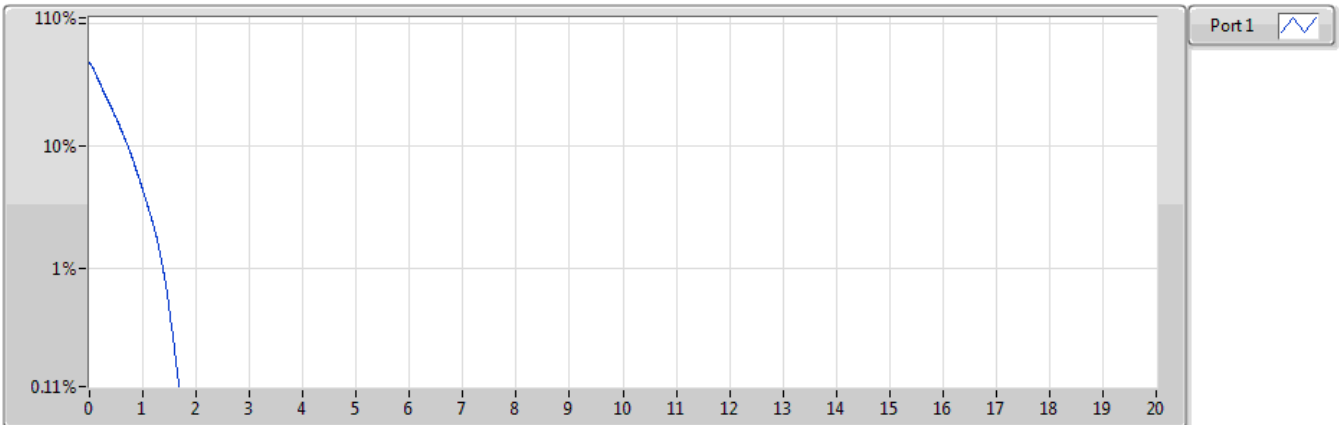
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band n71_NR_20MHz_Nss1_1TX	-	-	-	-	-
680.5MHz_DFT-s-OFDM_PI2BPSK_Inner_Full	Pass	680.5	13.00	4.23	1
680.5MHz_DFT-s-OFDM_QPSK_Inner_Full	Pass	680.5	13.00	5.49	1
680.5MHz_DFT-s-OFDM_16QAM_Inner_Full	Pass	680.5	13.00	6.23	1
680.5MHz_DFT-s-OFDM_64QAM_Inner_Full	Pass	680.5	13.00	6.54	1
680.5MHz_DFT-s-OFDM_256QAM_Inner_Full	Pass	680.5	13.00	6.43	1

Band n71_NR_20MHz_Nss1,DFT-s-OFDM_PI2BPSK_1TX

PAPR

680.5MHz_DFT-s-OFDM_PI2BPSK_Inner_Full

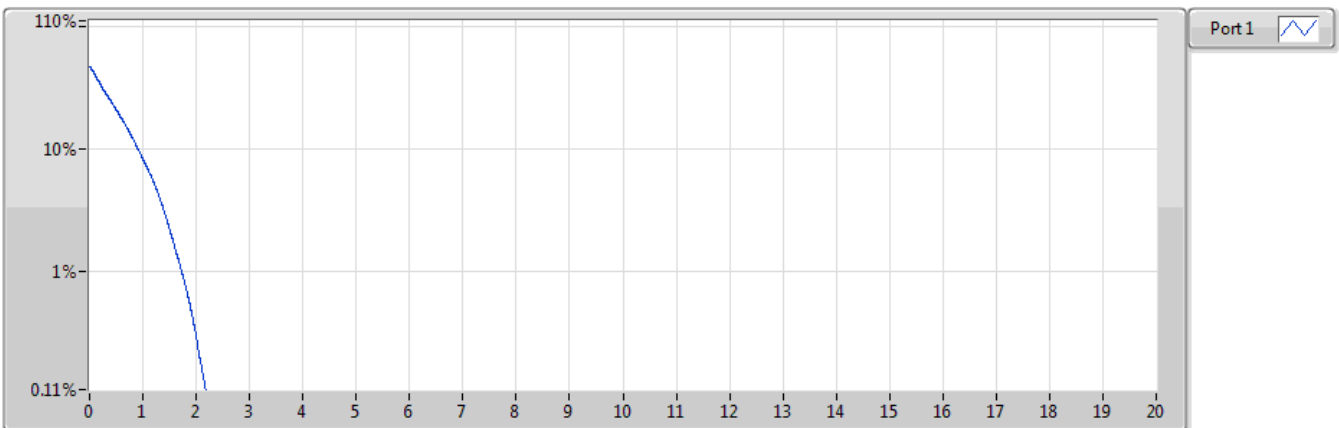


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
680.5	20M	4.23	-8.77	13.00	1

Band n71_NR_20MHz_Nss1,DFT-s-OFDM_QPSK_1TX

PAPR

680.5MHz_DFT-s-OFDM_QPSK_Inner_Full

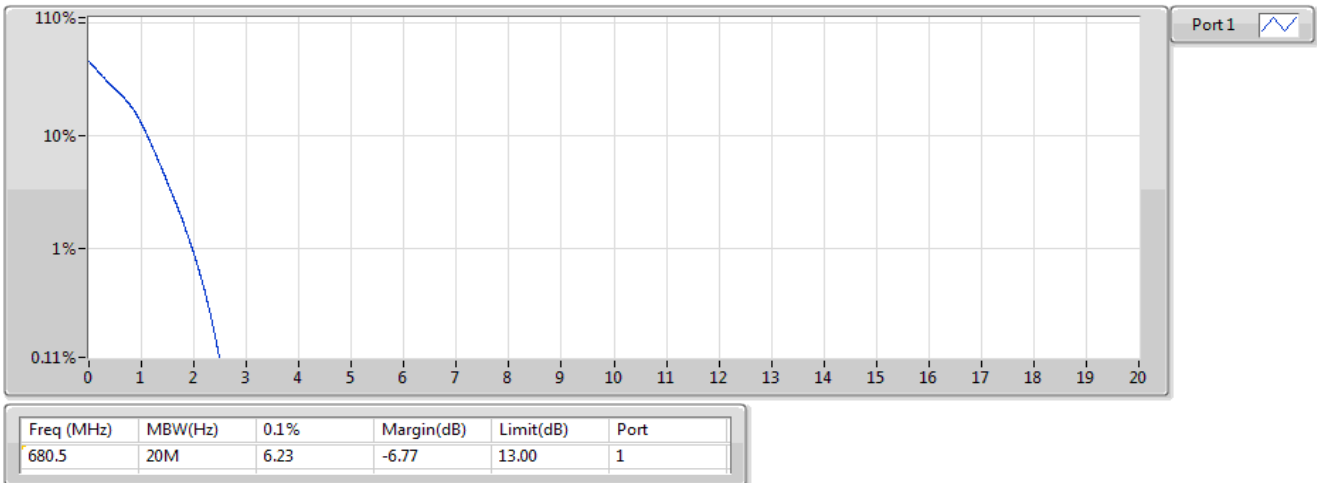


Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
680.5	20M	5.49	-7.51	13.00	1

Band n71_NR_20MHz_Nss1,DFT-s-OFDM_16QAM_1TX

PAPR

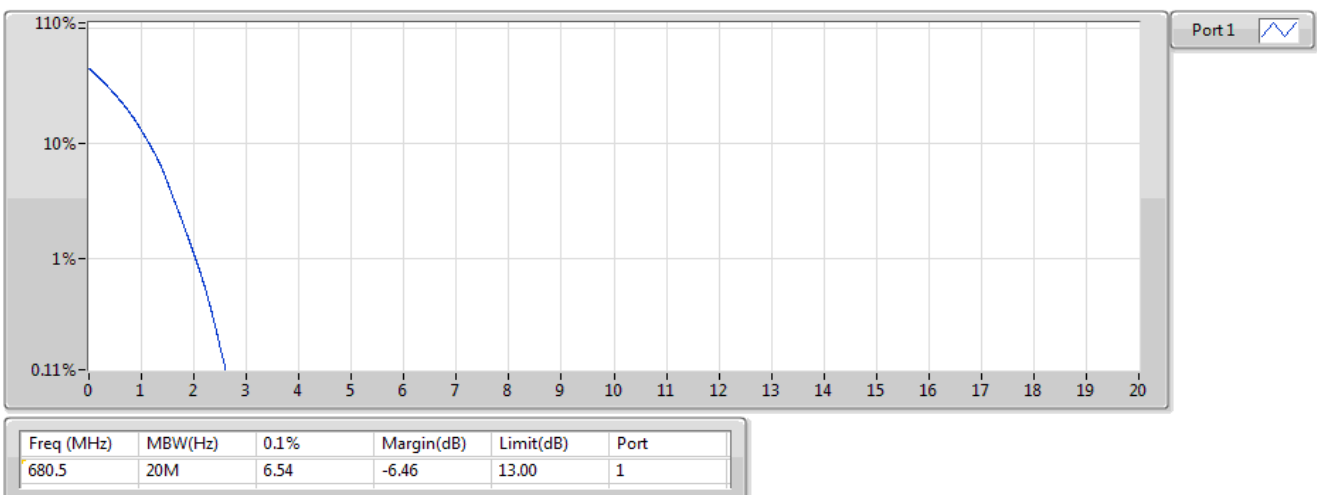
680.5MHz_DFT-s-OFDM_16QAM_Inner_Full



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_64QAM_1TX

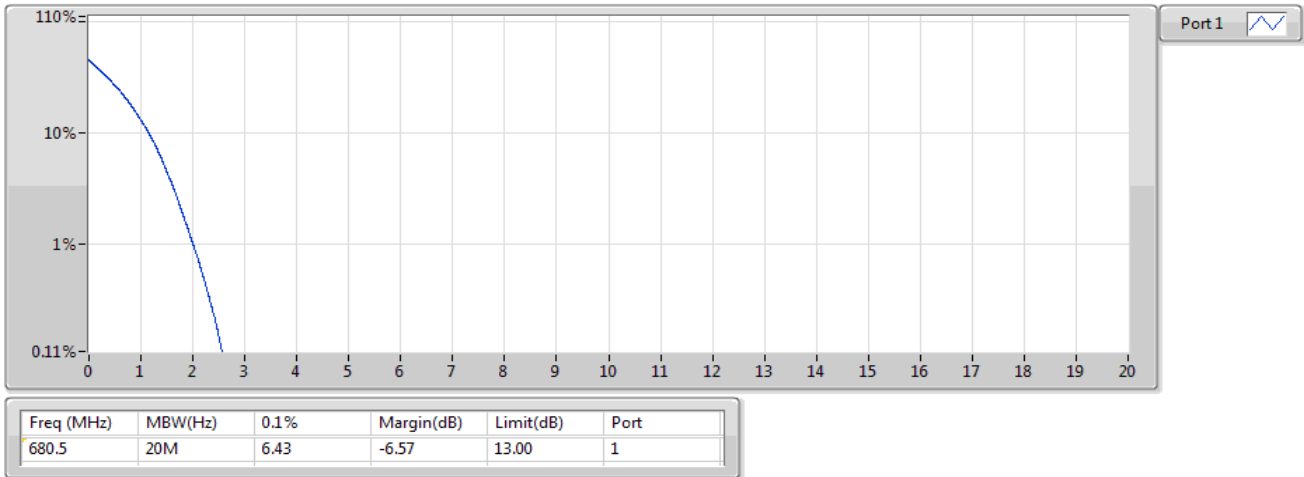
PAPR

680.5MHz_DFT-s-OFDM_64QAM_Inner_Full



Band n71_NR_20MHz_Nss1,DFT-s-OFDM_256QAM_1TX
680.5MHz_DFT-s-OFDM_256QAM_Inner_Full

PAPR



Ref. Freq:	680.5MHz	
Test Conditions	FR1 n71 (BPSK) / Middle channel	
Temperature (°C)	Deviation (ppm)	Limit ^{Note 1}
		Result
T20°C Vmax	0.02	PASS
T20°C Vmin	0.02	
T70°C Vnom	0.07	
T60°C Vnom	0.06	
T50°C Vnom	0.06	
T40°C Vnom	0.06	
T30°C Vnom	0.03	
T20°C Vnom	0.03	
T10°C Vnom	0.03	
T0°C Vnom	0.04	
T-10°C Vnom	0.04	
T-20°C Vnom	0.04	
T-30°C Vnom	0.05	

Note:

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