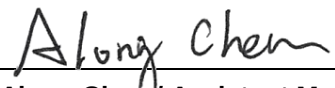


FCC Test Report

FCC ID : 2A7G3XS5G0304
Equipment : 5G DATA CARD
Model No. : XS5G03-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 : Jun. 13, 2022
Tested Date : Jun. 28 ~ Aug. 19, 2022

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

Reviewed by:


Along Chen / Assistant Manager

Approved by:

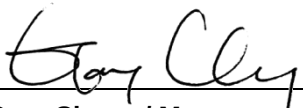

Gary Chang / Manager

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APPENDIX A TEST RESULTS FOR EFFECTIVE ISOTROPICALLY RADIATED POWER

APPENDIX B TEST RESULTS FOR RADIATED EMISSIONS

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APPENDIX D TEST RESULTS FOR OCCUPIED AND 26dB 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
FG261301P27Q-1	Rev. 01	Initial issue	Sep. 23, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 27.50(k)(3)	Equivalent Isotropically Radiated Power	Power[dBm]: 22.99	Pass
2.1053 / 27.53(n)(2)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(n)(2)	Conducted Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(n)(2)	Band Edge Measurement	Meet the requirement of limit	Pass
2.1049	Occupied Bandwidth	Meet the requirement of limit	Pass
27.50(k)(4)	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass

Declaration of Conformity:

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

Comments and Explanations:

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

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
XSquare	XS5G03-GBO	5G DATA CARD	(SA+NSA)+GPS
	XS5G04-GBO		(SA Only)+GPS XS5G03-GBO base band IC disable NSA by SW
✦ The above models, model XS5G03-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 42: Channel Bandwidth: 5MHz: 3402.5 MHz ~ 3597.5 MHz Channel Bandwidth: 10MHz: 3405 MHz ~ 3595 MHz Channel Bandwidth: 15MHz: 3407.5 MHz ~ 3592.5 MHz Channel Bandwidth: 20MHz: 3410 MHz ~ 3590 MHz
Modulation	QPSK, 16QAM, 64QAM (Uplink)

1.1.3 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)
Anjie	AELQ2S-B066L	Dipole	UFL	-0.4

1.1.4 Power Supply Type of Equipment under Test (EUT)

Supply Voltage	3.3Vdc from host		
Operational Voltage	☒ Vnom (3.3 V)	☒ Vmax (3.63 V)	☒ Vmin (3.135 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 42			
Channel Bandwidth	Modulation	Maximum Conducted Power (W)	Emission Designator
5 MHz	QPSK	0.217	4M47G7D
5 MHz	16QAM	0.175	4M46W7D
5 MHz	64QAM	0.136	4M47W7D
10 MHz	QPSK	0.216	8M92G7D
10 MHz	16QAM	0.172	8M92W7D
10 MHz	64QAM	0.148	8M93W7D
15 MHz	QPSK	0.214	13M4G7D
15 MHz	16QAM	0.173	13M4W7D
15 MHz	64QAM	0.148	13M4W7D
20 MHz	QPSK	0.218	17M8G7D
20 MHz	16QAM	0.174	17M8W7D
20 MHz	64QAM	0.147	17M8W7D

1.1.7 Operating Channel List

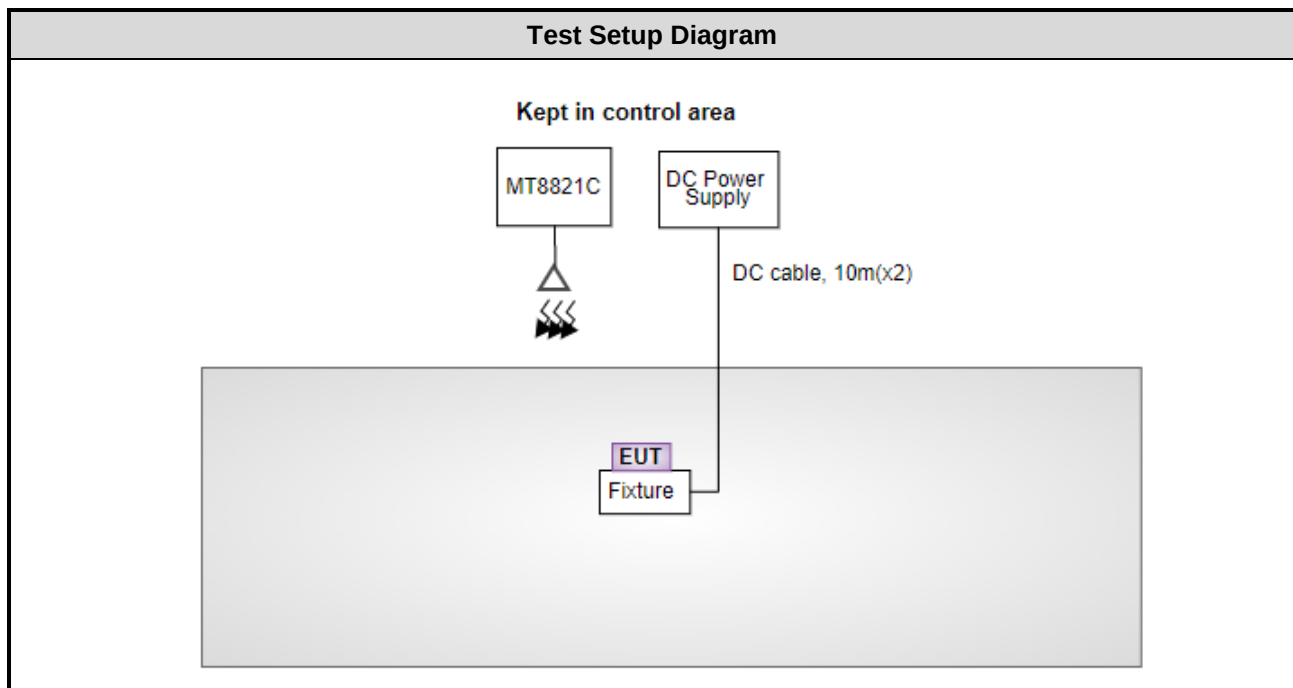
LTE Band 42		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	42115	3452.5
5	42590	3500
5	43065	3547.5
10	42140	3455
10	42590	3500
10	43040	3545
15	42165	3457.5
15	42590	3500
15	43015	3542.5
20	42190	3460
20	42590	3500
20	42990	3540

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	DC Power Supply	GWINSTEK	GPC-60300	---	---
2	Notebook	DELL	Latitude 5400	DoC	---
3	Fixture	---	---	---	Provided by applicant.

Note: The support notebook was disconnected from EUT and was removed from test table after sending command from notebook to control EUT to transmit continuously.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Aug. 08 ~ Aug. 15, 2022				
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. 29, 2021	Nov. 28, 2022
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jun. 28, 2022	Jun. 27, 2023
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 03, 2021	Dec. 02, 2022
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 04, 2021	Nov. 03, 2022
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC118A45SE	980898	Jul. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045B	980192	Jul. 08, 2022	Jul. 07, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 05, 2021	Oct. 04, 2022
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 05, 2021	Oct. 04, 2022
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 05, 2021	Oct. 04, 2022
RF Cable	EMC	EMC104-35M-35M- 8000	210920	Oct. 05, 2021	Oct. 04, 2022
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 05, 2021	Oct. 04, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Sep. 16, 2021	Sep. 15, 2022
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Jun. 28 ~ Aug. 12, 2022				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2022	Apr. 17, 2023
Spectrum Analyzer	keysight	N9020A	MY53420894	Oct. 19, 2021	Oct. 18, 2022
Power Meter	Anritsu	ML2495A	1241002	Nov. 07, 2021	Nov. 06, 2022
Power Sensor	Anritsu	MA2411B	1207366	Nov. 07, 2021	Nov. 06, 2022
DC POWER SOURCE	GW INSTEK	GPC-6030D	GES855395	Nov. 08, 2021	Nov. 07, 2022
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Jun. 22, 2022	Jun. 21, 2023
Measurement Software	Sporton	SENSE-FCC_2G-4 G	V5.10.5	NA	NA
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Sep. 16, 2021	Sep. 15, 2022
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	24-25°C / 61-64%	Bard Wu
RF Conducted	TH01-WS	24-26°C / 63-65%	Aska Huang

- 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 333, 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	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	42	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
peak-to-Average Ratio	42	-	-				v	v	v	v			v		v	
26dB and 99% Bandwidth	42	-	-	v	v	v	v	v	v	v			v		v	
Conducted Band edge	42	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	42	-	-	v	v	v	v	v			v			v	v	v
Frequency Stability	42	-	-				v	v					v		v	
E.R.P / E.I.R.P	42	-	-	v	v	v	v	v	v	v	Max. power					
Radiated Spurious Emission	42	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 X-plane results were found as the worst case and were shown in this report.															

3 Test Results

3.1 Equivalent Isotropically Radiated Power

3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile devices are limited to 1Watt (30 dBm) 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.

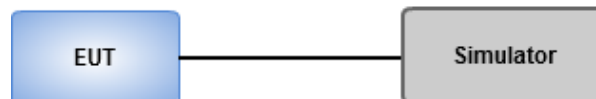
G_T = gain of the transmitting antenna, in dBi (EIRP).

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 of Equivalent Isotropically Radiated Power and Conducted Power (dBm)

Refer to Appendix A.

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

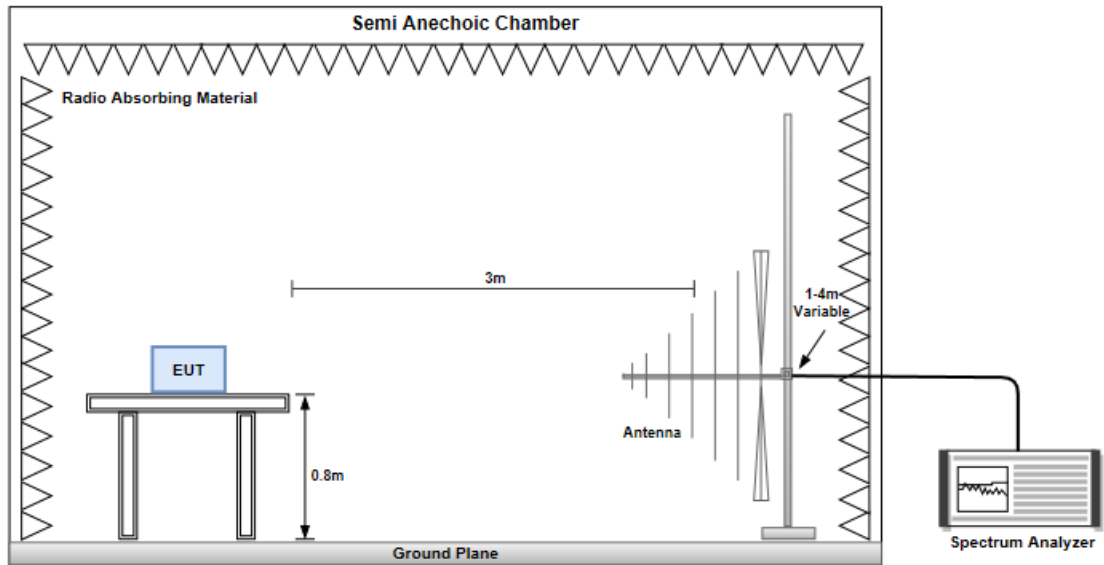
For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz

3.2.2 Test Procedures

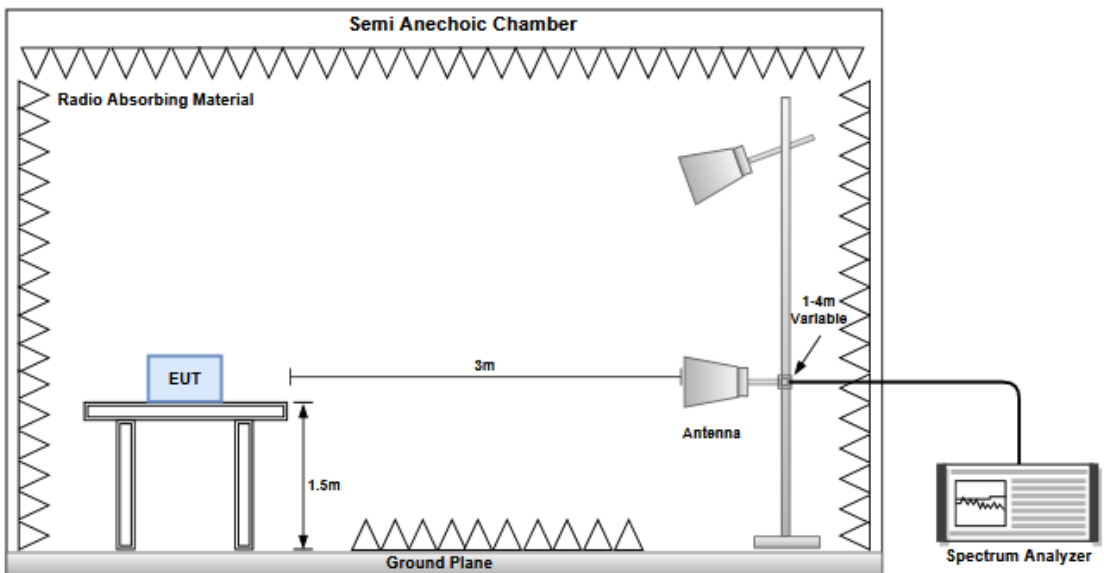
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360° . A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

3.3 Out of Band Emissions& Band Edge

3.3.1 Limit of Out of Band Emissions & Band Edge

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz

3.3.2 Test Procedures

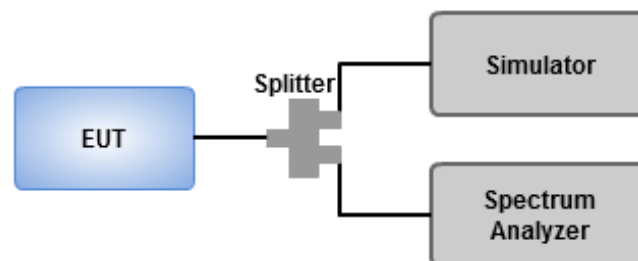
Out of band emission

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 20 GHz.
3. Set RBW = 1 MHz, VBW = 3 MHz, detector = RMS, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

Band edge

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

3.3.3 Test Setup



3.3.4 Test Result of Out of Band Emissions & Band Edge

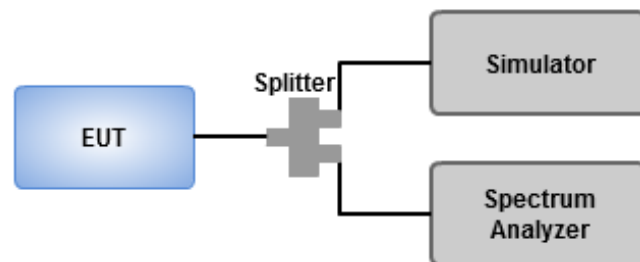
Refer to Appendix C.1, C.2.

3.4 Occupied and 26 dB Bandwidth

3.4.1 Test Procedures

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

3.4.2 Test Setup



3.4.3 Test Result of Occupied and 26 dB Bandwidth

Refer to Appendix D.

3.5 Peak to Average Power Ratio

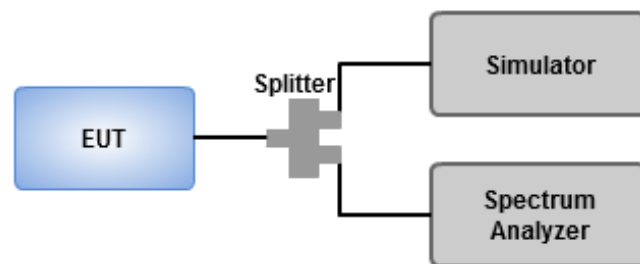
3.5.1 Limit of Peak to Average Power Ratio

The Peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

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

3.5.3 Test Setup



3.5.4 Test Result of Peak to Average Power Ratio

Refer to Appendix E.

3.6 Frequency Stability

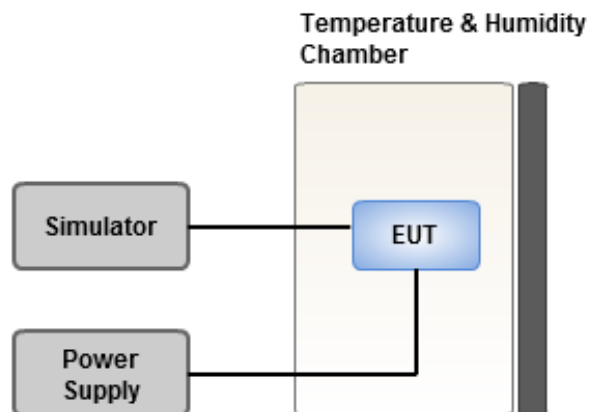
3.6.1 Limit of Frequency Stability

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 333, 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

Part27Q LTE Band 42 Maximum Average Power [dBm](GT-LC= -0.4 dB)								
BW (MHz)	Modulation	RB Size	RB Offset	Lowest	Middle	Highest		
Channel				42190	42590	42990	EIRP	EIRP
Frequency				3460	3500	3540	(dBm)	(W)
20	QPSK	1	0	23.29	23.39	23.32	22.99	0.1991
20	QPSK	1	99	23.15	23.24	23.28		
20	QPSK	100	0	22.21	22.35	22.46		
20	16QAM	1	0	22.13	22.31	22.41	22.01	0.1589
20	64QAM	1	0	21.47	21.67	21.65	21.27	0.1340
Channel				42165	42590	43015	EIRP	EIRP
Frequency				3457.5	3500	3542.5	(dBm)	(W)
15	QPSK	1	0	23.05	23.31	23.25	22.91	0.1954
15	QPSK	1	74	23.01	23.3	23.23		
15	QPSK	75	0	22.25	22.36	22.47		
15	16QAM	1	0	22.21	22.33	22.39	21.99	0.1581
15	64QAM	1	0	21.53	21.68	21.71	21.31	0.1352
Channel				42140	42590	43040	EIRP	EIRP
Frequency				3455	3500	3545	(dBm)	(W)
10	QPSK	1	0	23.15	23.34	23.35	22.95	0.1972
10	QPSK	1	49	23.11	23.31	23.33		
10	QPSK	50	0	22.22	22.28	22.39		
10	16QAM	1	0	22.21	22.33	22.36	21.96	0.1570
10	64QAM	1	0	21.53	21.71	21.69	21.31	0.1352
Channel				42115	42590	43065	EIRP	EIRP
Frequency				3452.5	3500	3547.5	(dBm)	(W)
5	QPSK	1	0	23.23	23.36	23.34	22.96	0.1977
5	QPSK	1	24	23.17	23.35	23.31		
5	QPSK	25	0	22.32	22.39	22.48		
5	16QAM	1	0	22.28	22.37	22.43	22.03	0.1596
5	64QAM	1	0	21.12	21.35	21.29	20.95	0.1245
Limit	EIRP < 1 W			Result			Pass	

Mode	LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42190						
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)
6902.4	H	-51.6	-25	-26.6	-66.34	-55.62	4.02
10353.6	H	-55.01	-25	-30.01	-69.94	-55.79	0.78
13804.8	H	-51.84	-25	-26.84	-67.11	-51.72	-0.12
6902.4	V	-46.78	-25	-21.78	-61.86	-50.8	4.02
10353.6	V	-56.02	-25	-31.02	-70.11	-56.8	0.78
13804.8	V	-52.53	-25	-27.53	-67.12	-52.41	-0.12

Mode	LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42590						
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)
6982.4	H	-49.07	-25	-24.07	-63.26	-52.74	3.67
10473.6	H	-55.41	-25	-30.41	-70.21	-56.08	0.67
13964.8	H	-52.4	-25	-27.4	-66.95	-52	-0.4
6982.4	V	-43.76	-25	-18.76	-58.82	-47.43	3.67
10473.6	V	-55.59	-25	-30.59	-69.95	-56.26	0.67
13964.8	V	-52.81	-25	-27.81	-67.01	-52.41	-0.4

Mode	LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42990						
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)
7062.4	H	-50.43	-25	-25.43	-64.58	-53.77	3.34
10593.6	H	-55.4	-25	-30.4	-70.21	-55.96	0.56
14124.8	H	-52.87	-25	-27.87	-66.76	-52.32	-0.55
7062.4	V	-44.44	-25	-19.44	-59.67	-47.78	3.34
10593.6	V	-55.37	-25	-30.37	-69.83	-55.93	0.56
14124.8	V	-52.71	-25	-27.71	-66.86	-52.16	-0.55

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

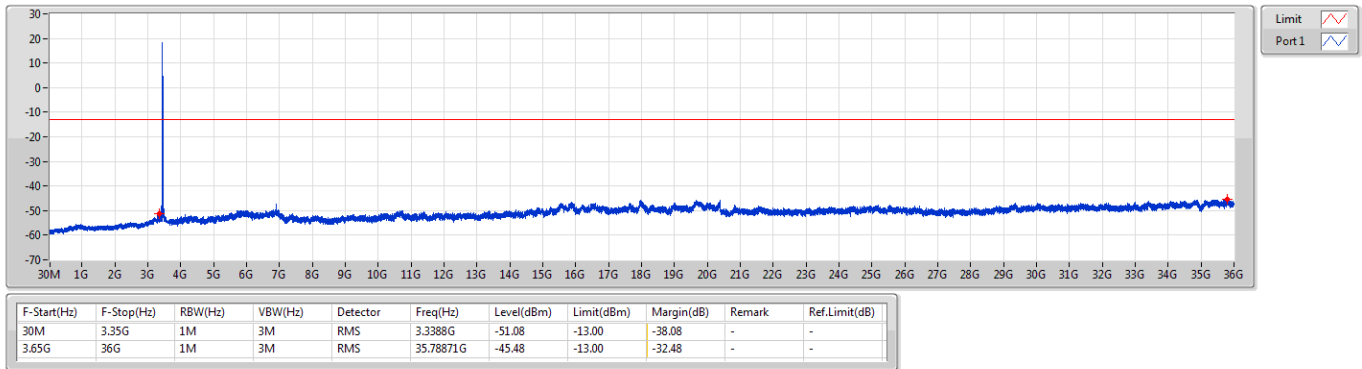
**Summary**

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 42	-	-	-	-	-	-	-	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	3.65G	36G	1M	3M	RMS	35.84128G	-45.16	-13.00	-32.16	-	-
LTE_15MHz_Nss1,QPSK_1TX	Pass	3.65G	36G	1M	3M	RMS	35.46218G	-45.15	-13.00	-32.15	-	-
LTE_10MHz_Nss1,QPSK_1TX	Pass	3.65G	36G	1M	3M	RMS	34.87483G	-45.10	-13.00	-32.10	-	-
LTE_5MHz_Nss1,QPSK_1TX	Pass	3.65G	36G	1M	3M	RMS	35.81298G	-45.29	-13.00	-32.29	-	-

Band 42_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

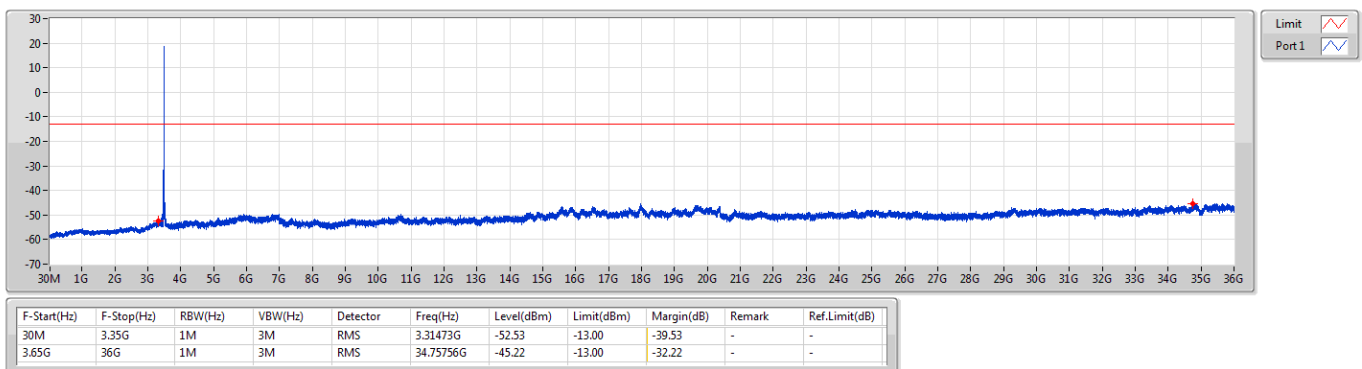
3460MHz_QPSK_RB 1



Band 42_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

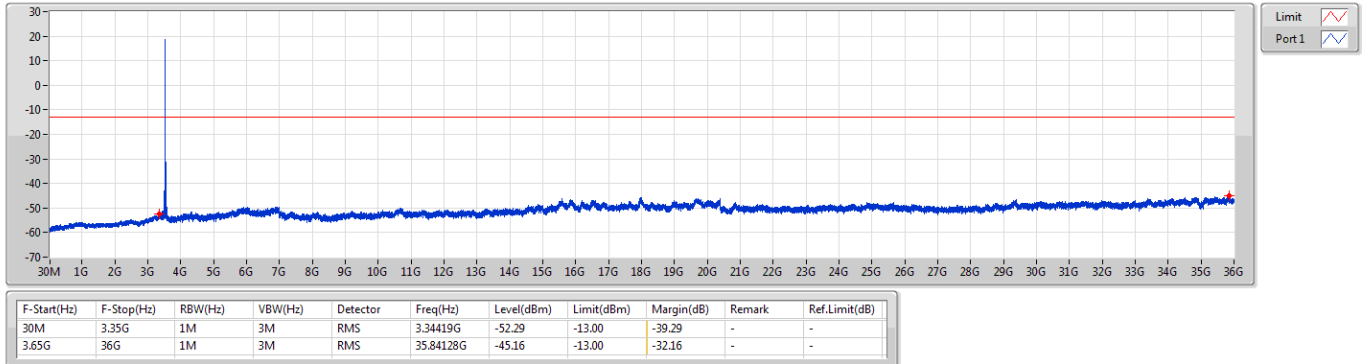
3500MHz_QPSK_RB 1



Band 42_LTE_20MHz_Nss1,QPSK_1TX

CSE-TX-Sum

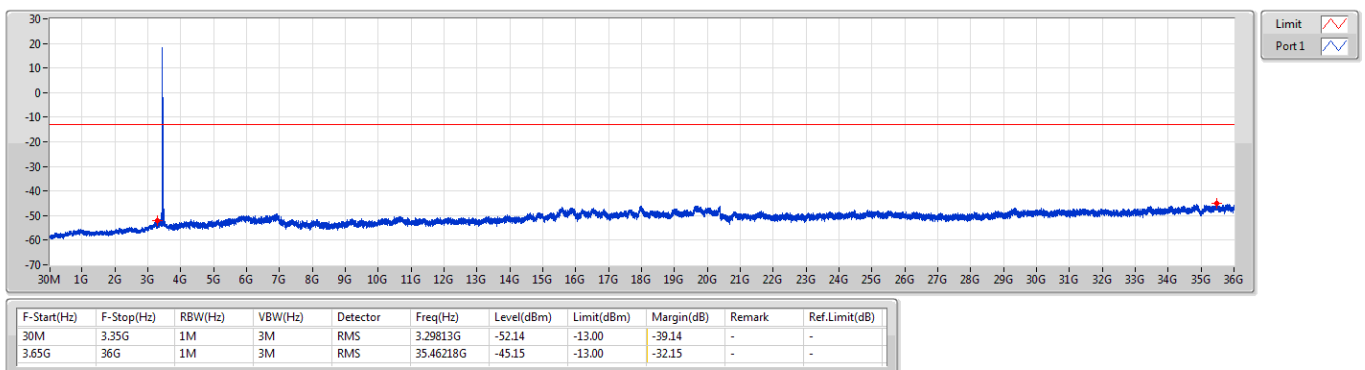
3540MHz_QPSK_RB 1



Band 42_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

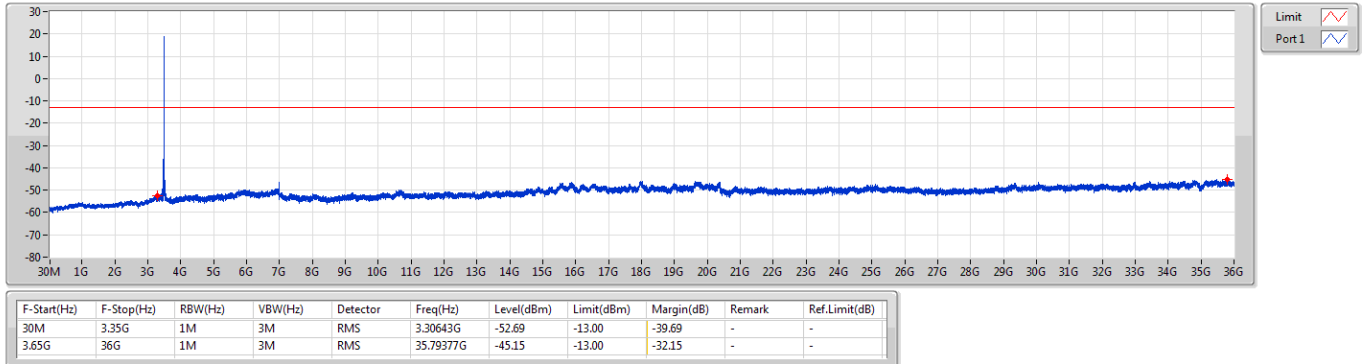
3457.5MHz_QPSK_RB 1



Band 42_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

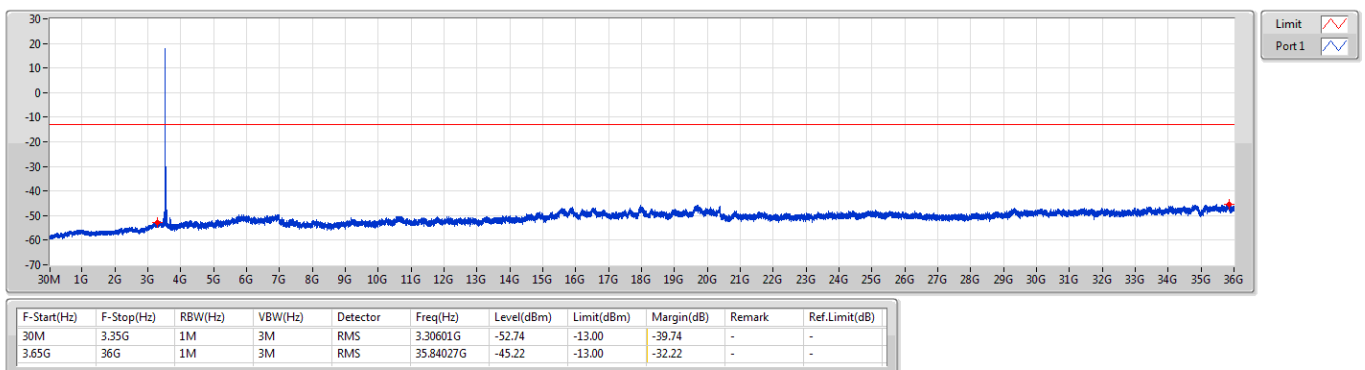
3500MHz_QPSK_RB 1



Band 42_LTE_15MHz_Nss1,QPSK_1TX

CSE-TX-Sum

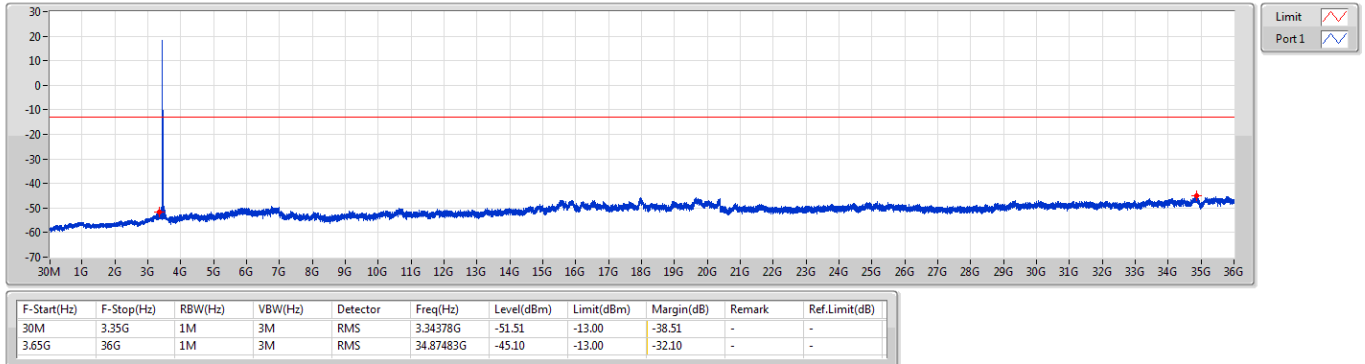
3542.5MHz_QPSK_RB 1



Band 42_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

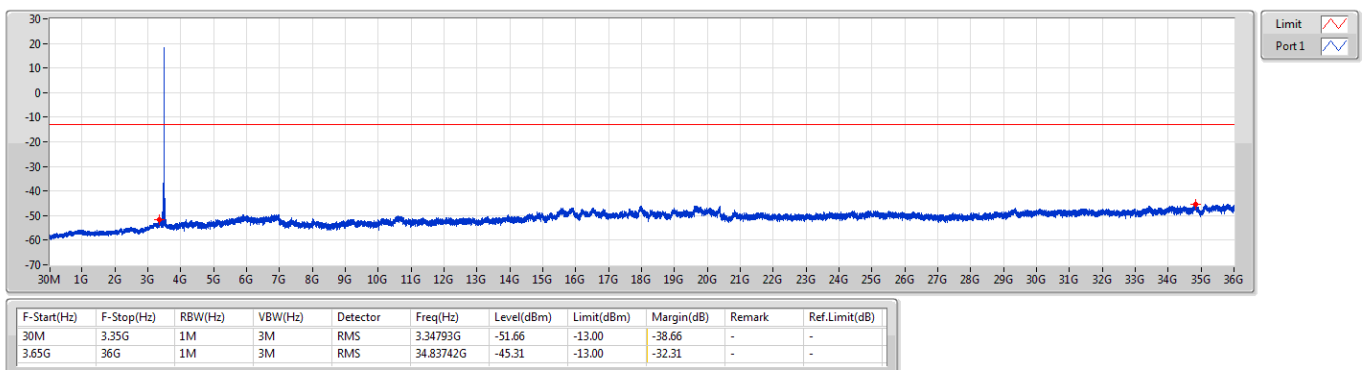
3455MHz_QPSK_RB 1



Band 42_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

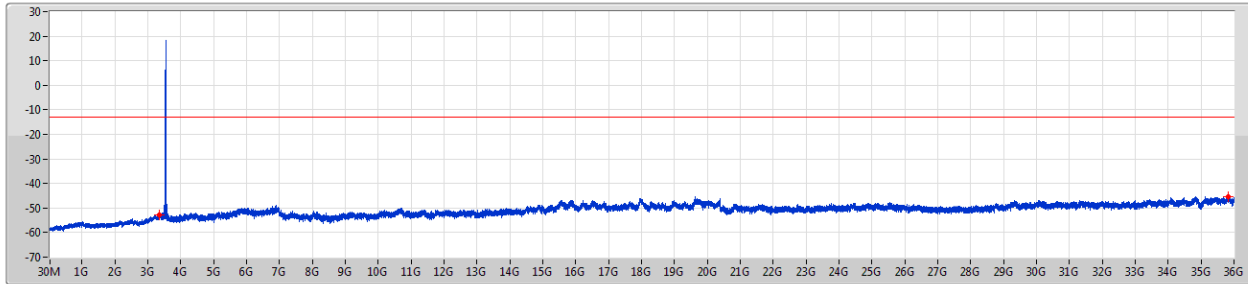
3500MHz_QPSK_RB 1



Band 42_LTE_10MHz_Nss1,QPSK_1TX

CSE-TX-Sum

3545MHz_QPSK_RB 1



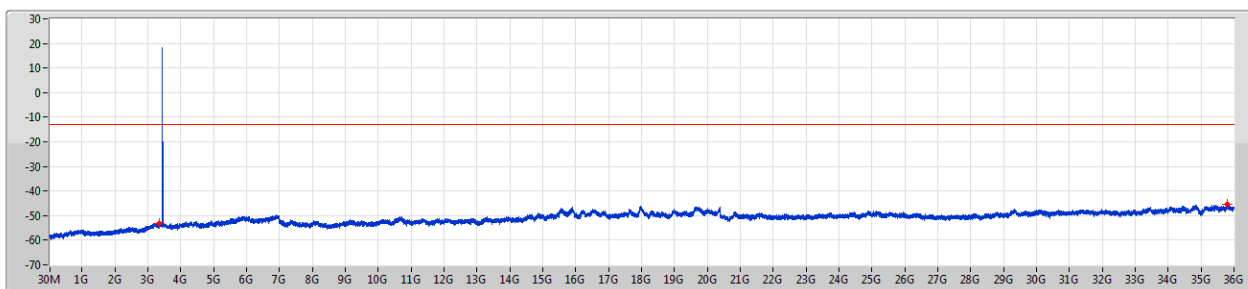
Limit
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	3.35G	1M	3M	RMS	3.33631G	-52.67	-13.00	-39.67	-	-
3.65G	36G	1M	3M	RMS	35.81095G	-45.38	-13.00	-32.38	-	-

Band 42_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

3452.5MHz_QPSK_RB 1



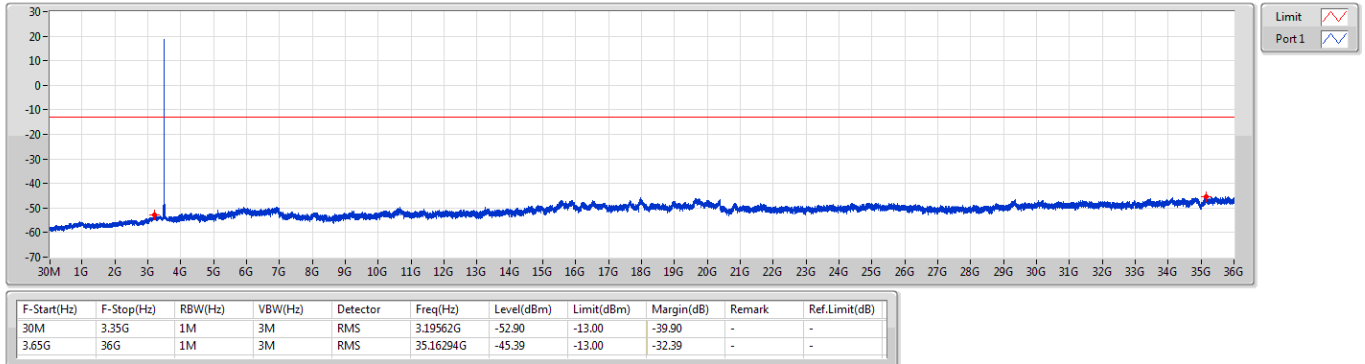
Limit
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Remark	Ref.Limit(dB)
30M	3.35G	1M	3M	RMS	3.33921G	-53.07	-13.00	-40.07	-	-
3.65G	36G	1M	3M	RMS	35.80186G	-45.42	-13.00	-32.42	-	-

Band 42_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

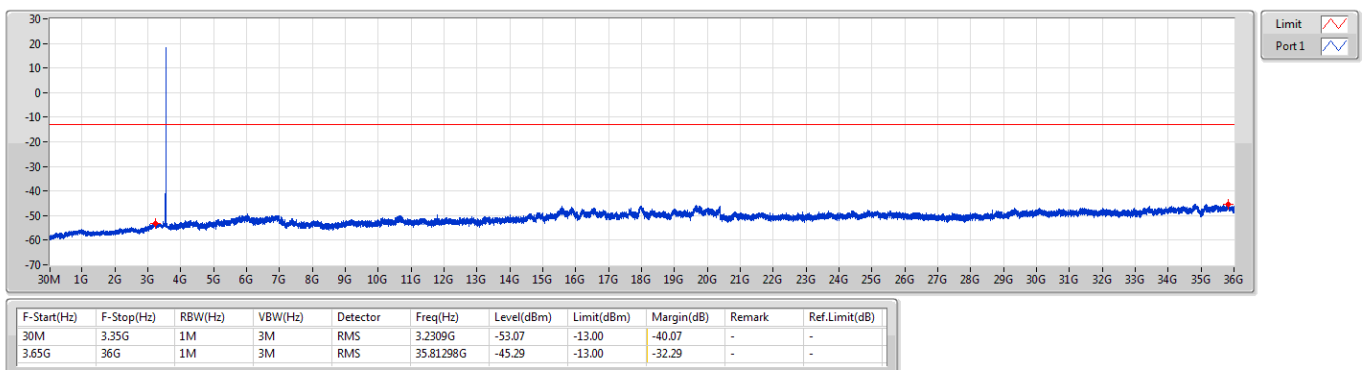
3500MHz_QPSK_RB 1



Band 42_LTE_5MHz_Nss1,QPSK_1TX

CSE-TX-Sum

3547.5MHz_QPSK_RB 1

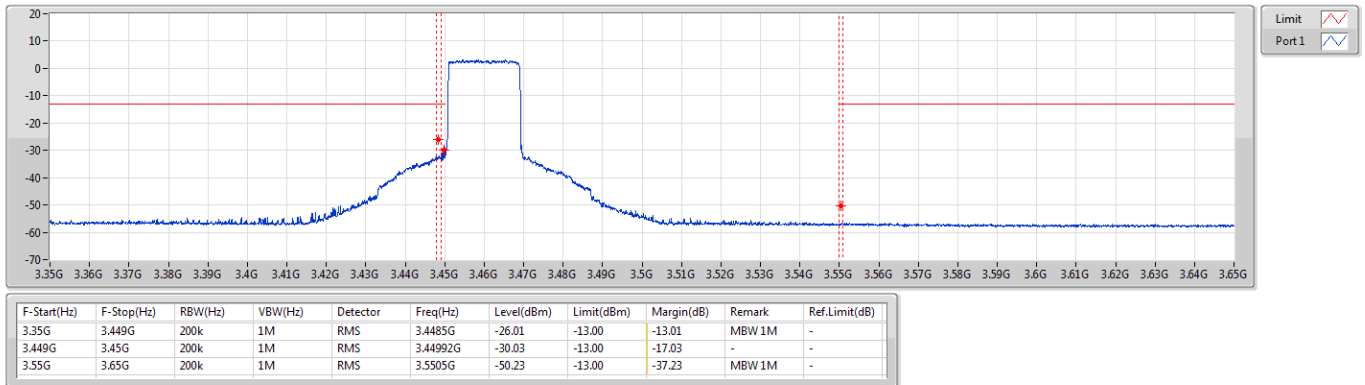


Summary

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 42	-	-	-	-	-	-	-	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	3.55G	3.551G	200k	1M	RMS	3.55G	-23.09	-13.00	-10.09	-	-
LTE_20MHz_Nss1,16QAM_1TX	Pass	3.449G	3.45G	200k	1M	RMS	3.44989G	-24.14	-13.00	-11.14	-	-
LTE_20MHz_Nss1,64QAM_1TX	Pass	3.449G	3.45G	200k	1M	RMS	3.44996G	-24.79	-13.00	-11.79	-	-
LTE_15MHz_Nss1,QPSK_1TX	Pass	3.55G	3.551G	200k	1M	RMS	3.55G	-20.09	-13.00	-7.09	-	-
LTE_15MHz_Nss1,16QAM_1TX	Pass	3.55G	3.551G	200k	1M	RMS	3.55004G	-21.00	-13.00	-8.00	-	-
LTE_15MHz_Nss1,64QAM_1TX	Pass	3.55G	3.551G	200k	1M	RMS	3.55002G	-22.29	-13.00	-9.29	-	-
LTE_10MHz_Nss1,QPSK_1TX	Pass	3.55G	3.551G	100k	300k	RMS	3.55001G	-21.02	-13.00	-8.02	-	-
LTE_10MHz_Nss1,16QAM_1TX	Pass	3.55G	3.551G	100k	300k	RMS	3.55001G	-22.16	-13.00	-9.16	-	-
LTE_10MHz_Nss1,64QAM_1TX	Pass	3.55G	3.551G	100k	300k	RMS	3.55002G	-22.97	-13.00	-9.97	-	-
LTE_5MHz_Nss1,QPSK_1TX	Pass	3.449G	3.45G	50k	200k	RMS	3.44999G	-18.36	-13.00	-5.36	-	-
LTE_5MHz_Nss1,16QAM_1TX	Pass	3.55G	3.551G	50k	200k	RMS	3.55002G	-18.92	-13.00	-5.92	-	-
LTE_5MHz_Nss1,64QAM_1TX	Pass	3.55G	3.551G	50k	200k	RMS	3.55G	-19.94	-13.00	-6.94	-	-

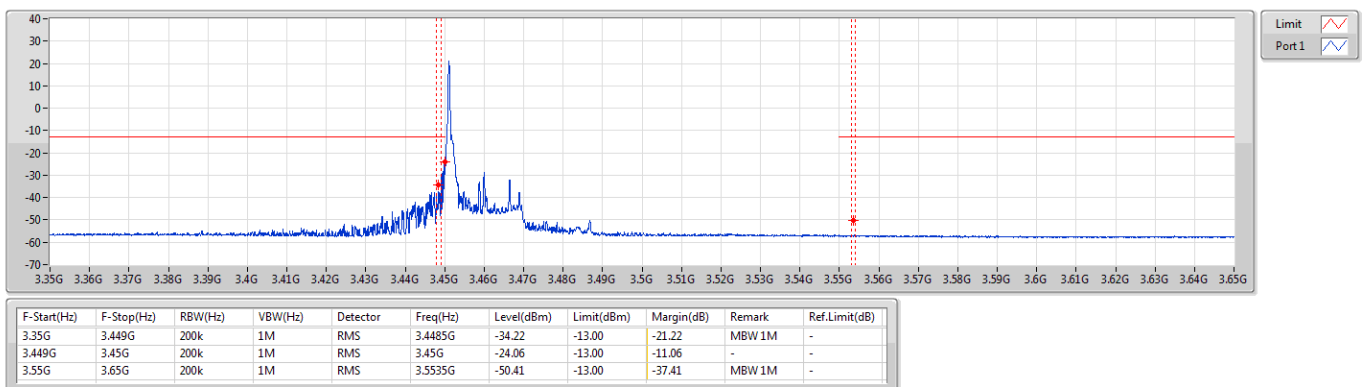
Band 42_LTE_20MHz_Nss1,QPSK_1TX
3460MHz_QPSK_RB 100,#RB 0

CSE-TX-Sum



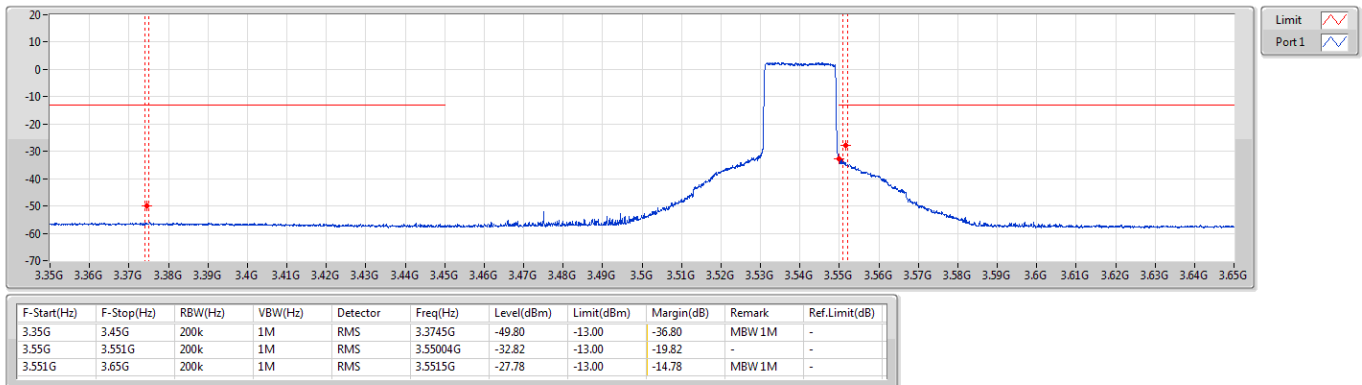
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CSE-TX-Sum



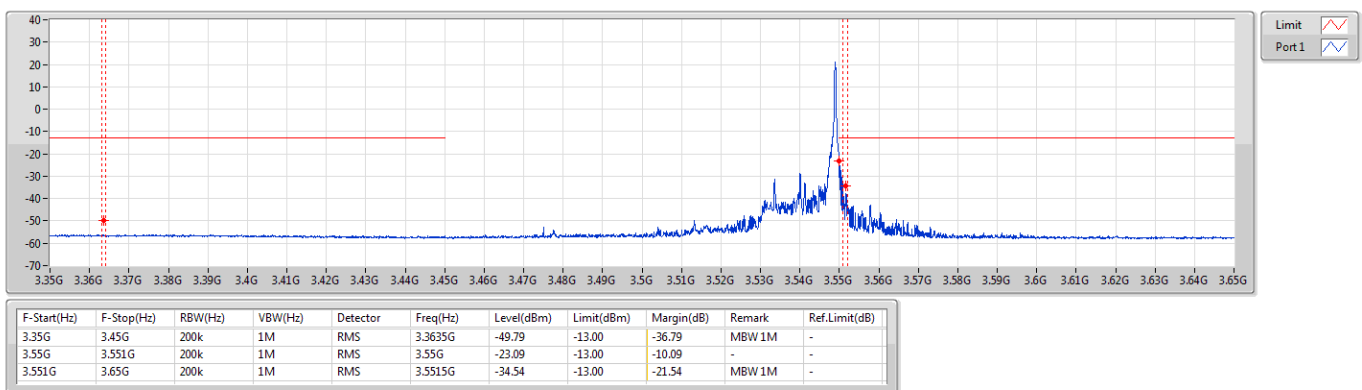
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3540MHz_QPSK_RB 100,#RB 0

CSE-TX-Sum



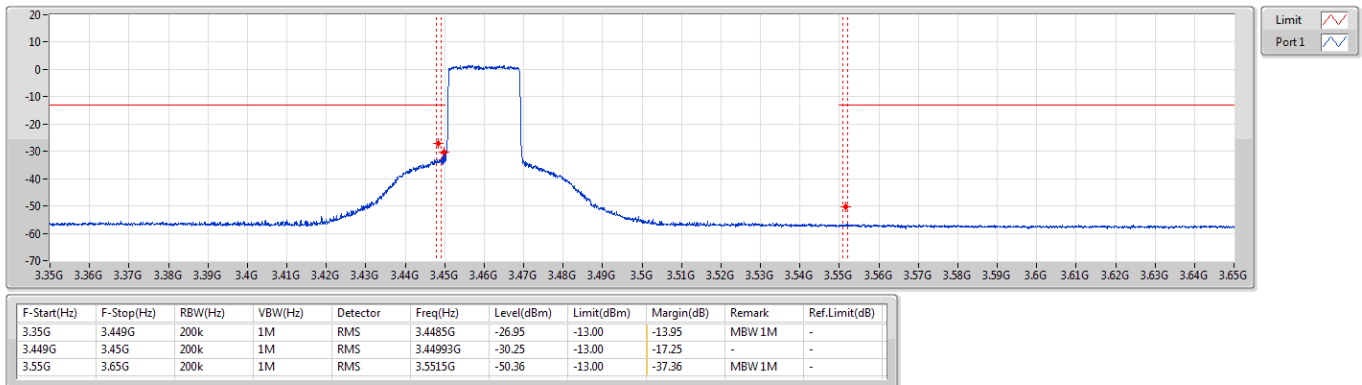
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CSE-TX-Sum



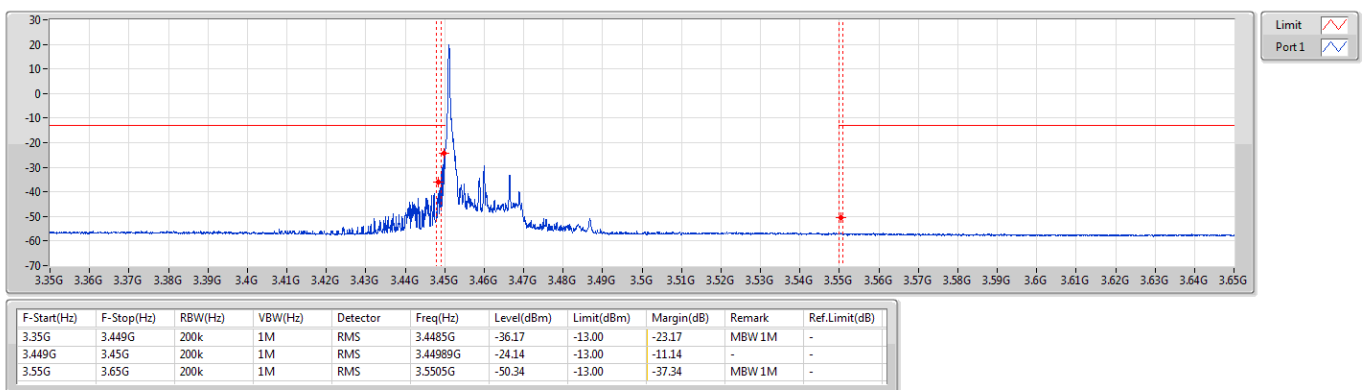
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CSE-TX-Sum



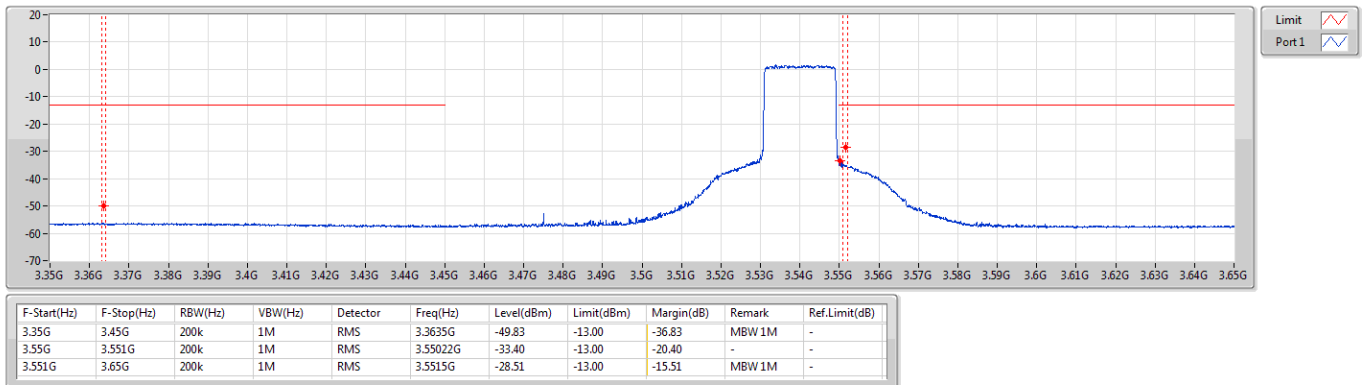
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CSE-TX-Sum



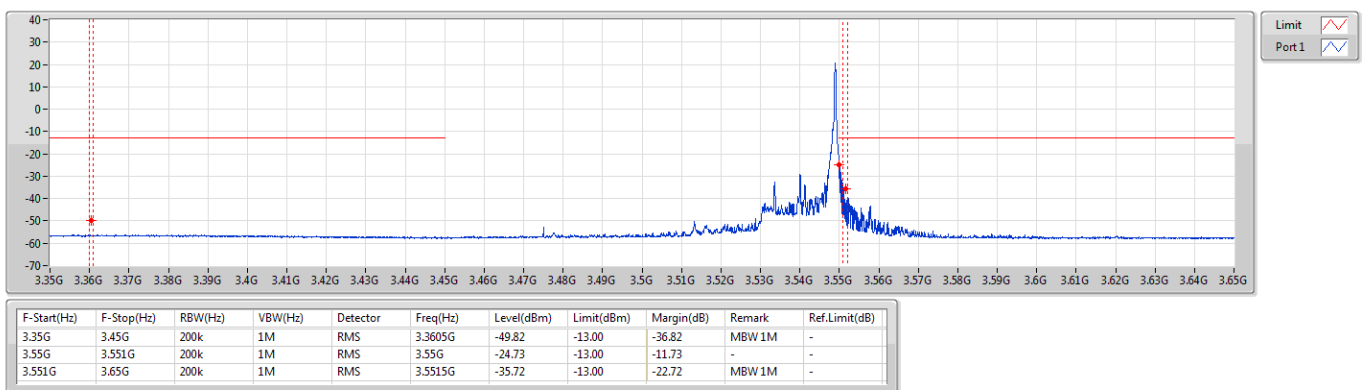
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CSE-TX-Sum



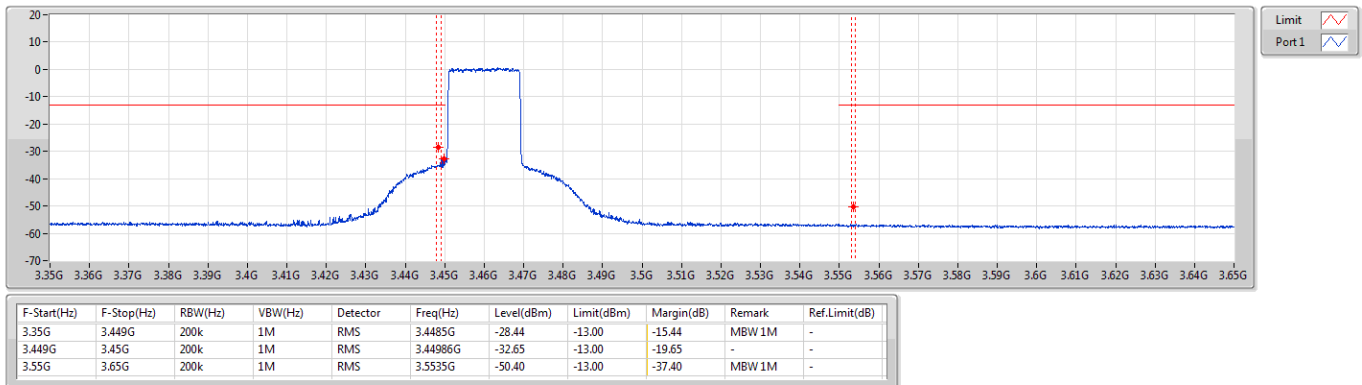
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CSE-TX-Sum



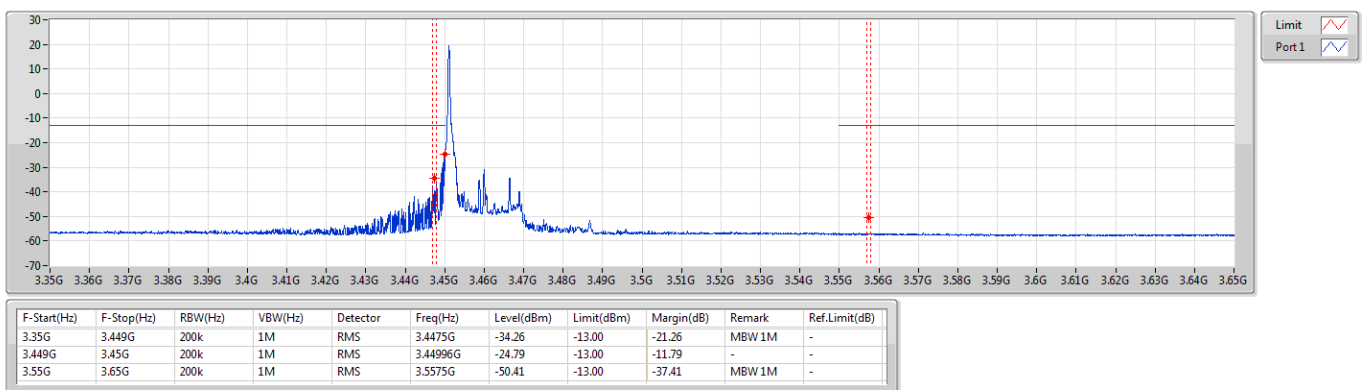
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CSE-TX-Sum



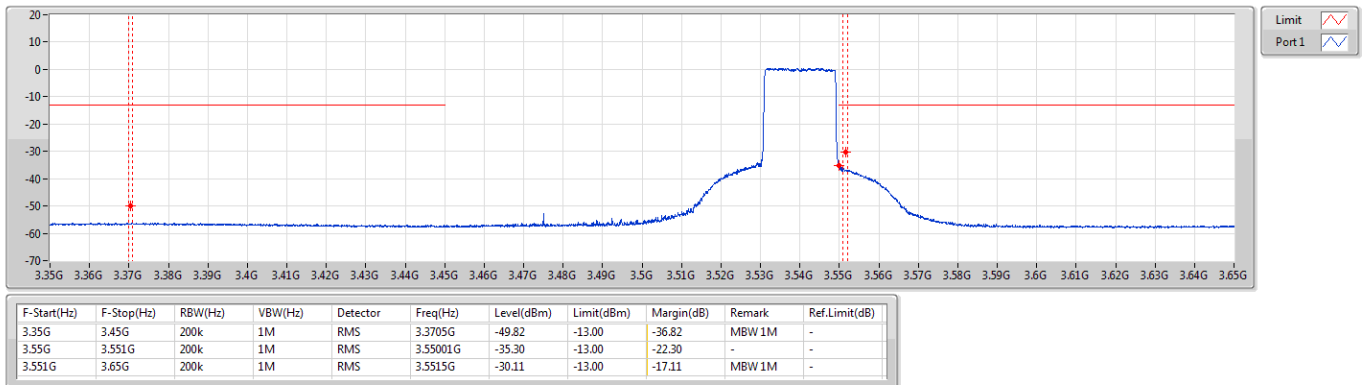
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CSE-TX-Sum



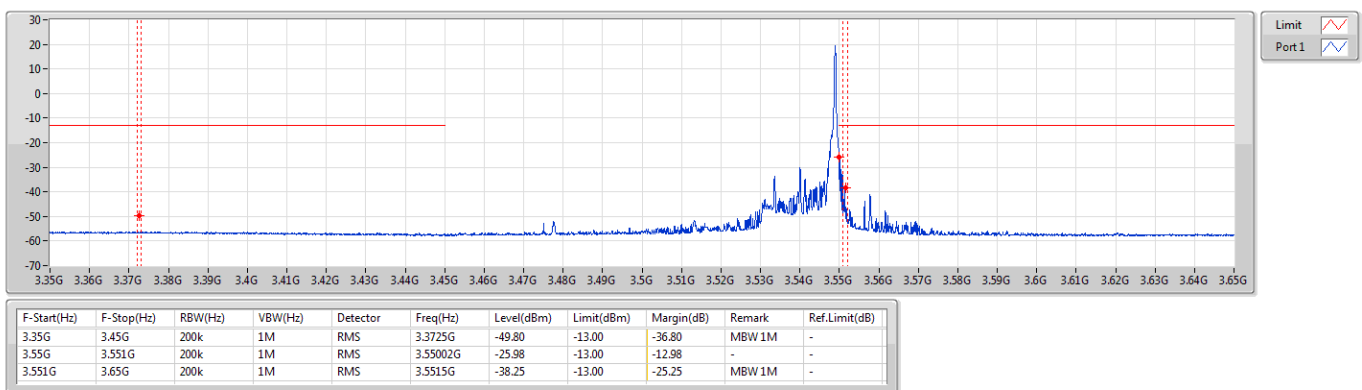
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CSE-TX-Sum



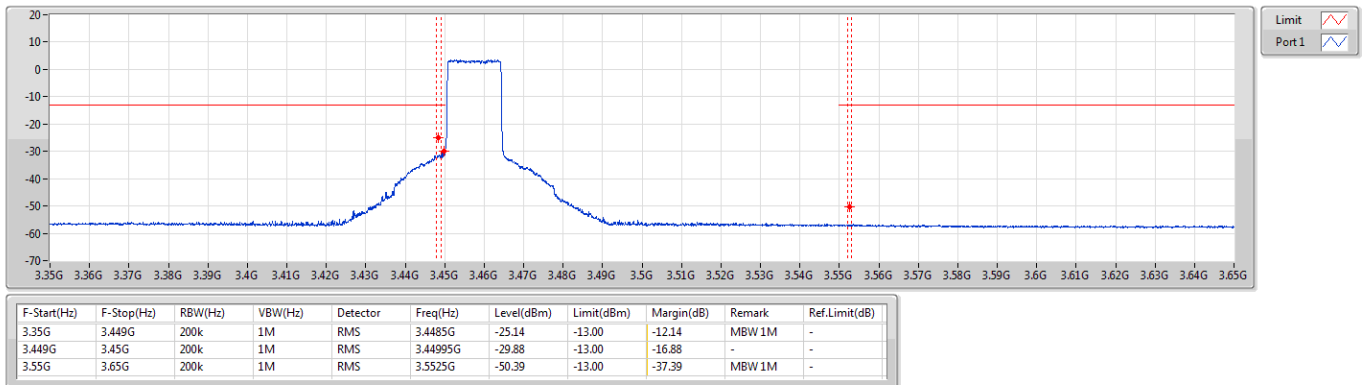
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CSE-TX-Sum



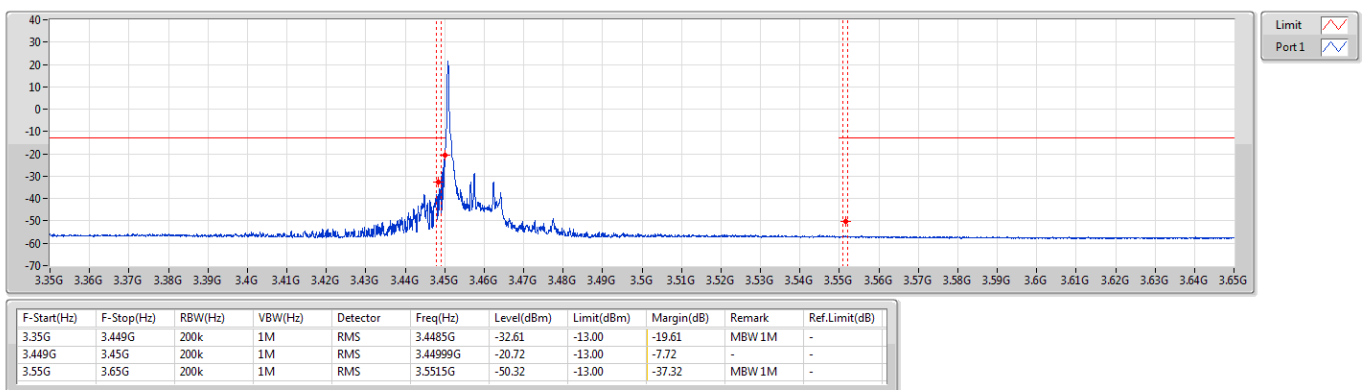
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CSE-TX-Sum



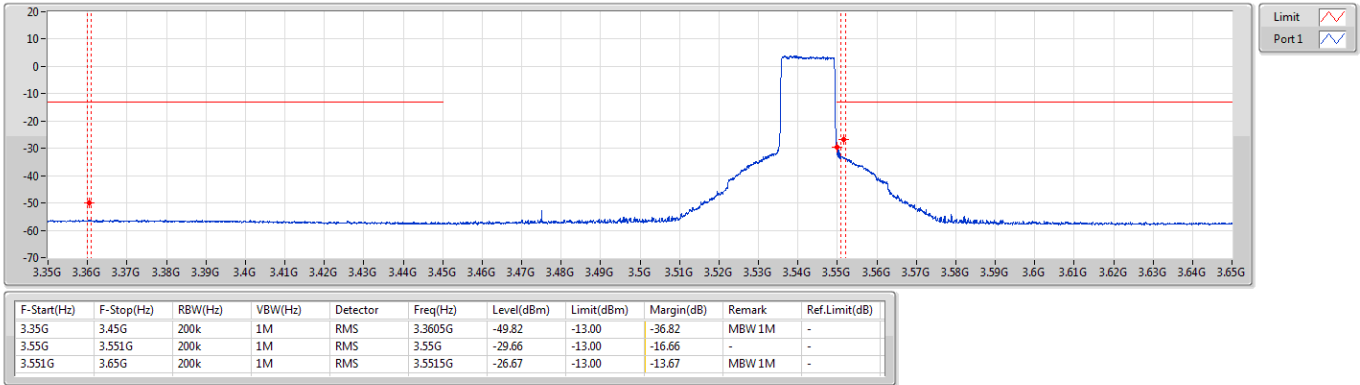
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CSE-TX-Sum



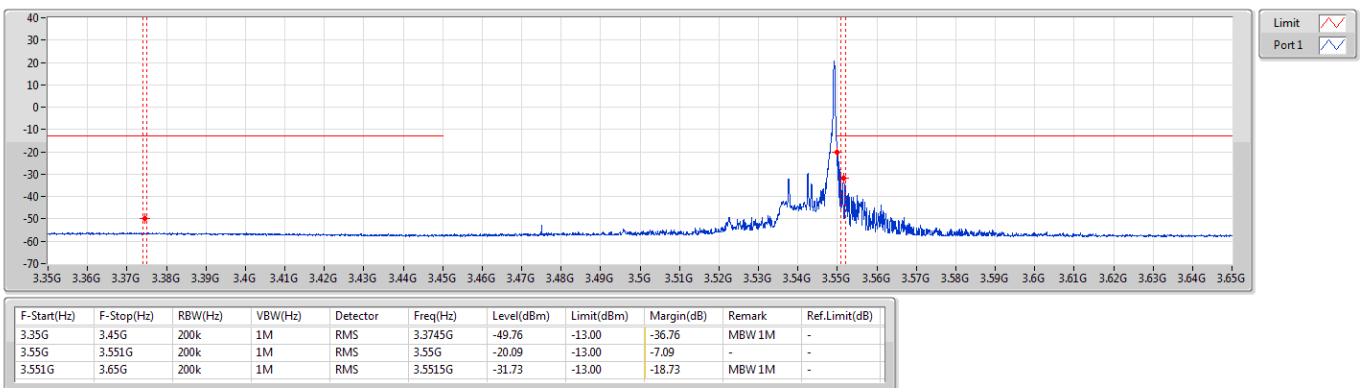
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3542.5MHz_QPSK_RB 75,#RB 0

CSE-TX-Sum



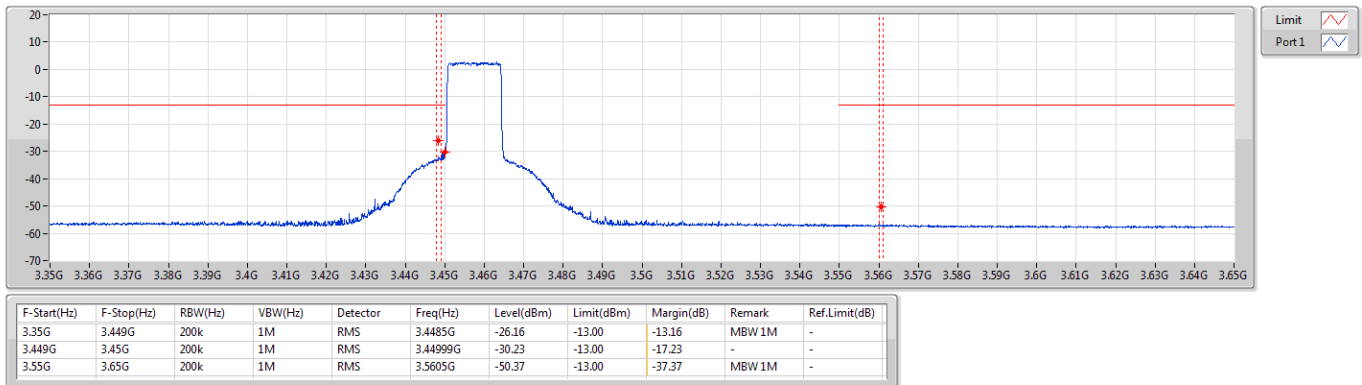
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CSE-TX-Sum



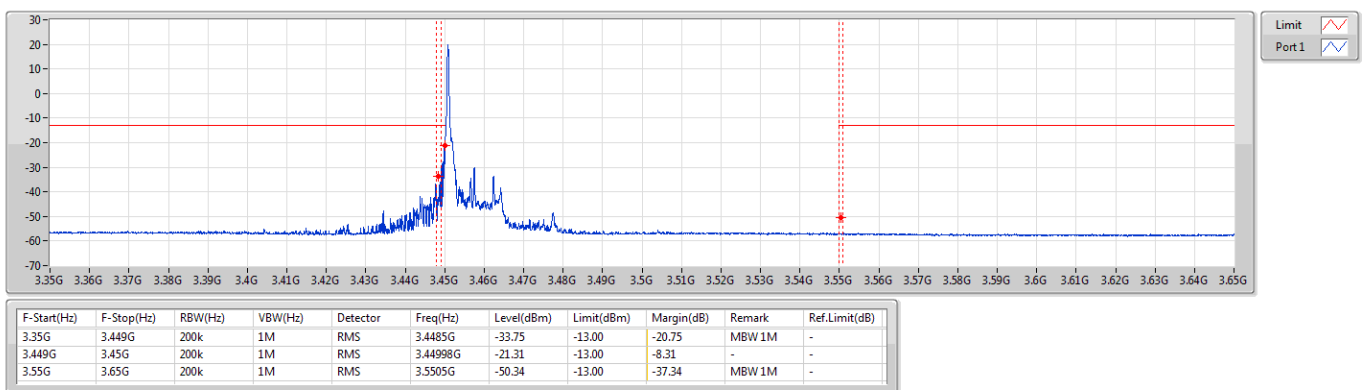
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CSE-TX-Sum



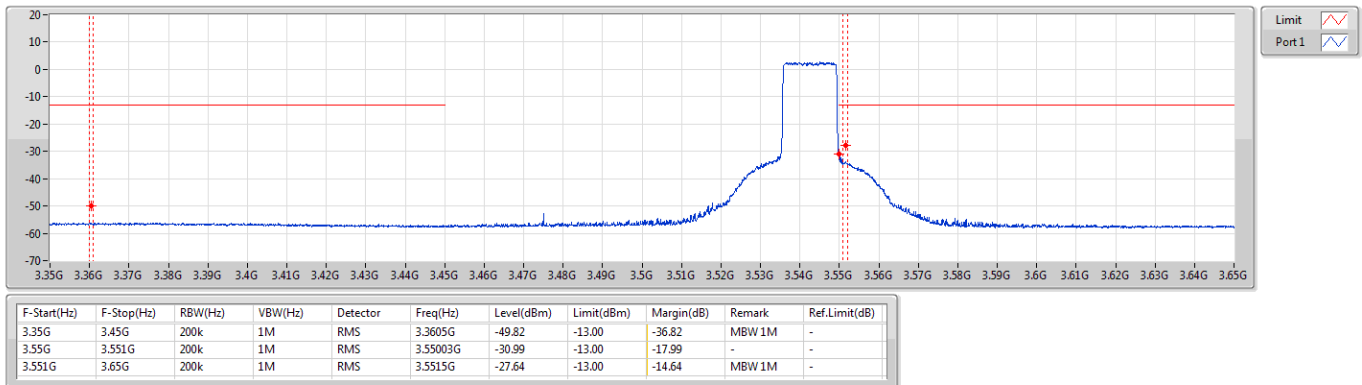
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CSE-TX-Sum



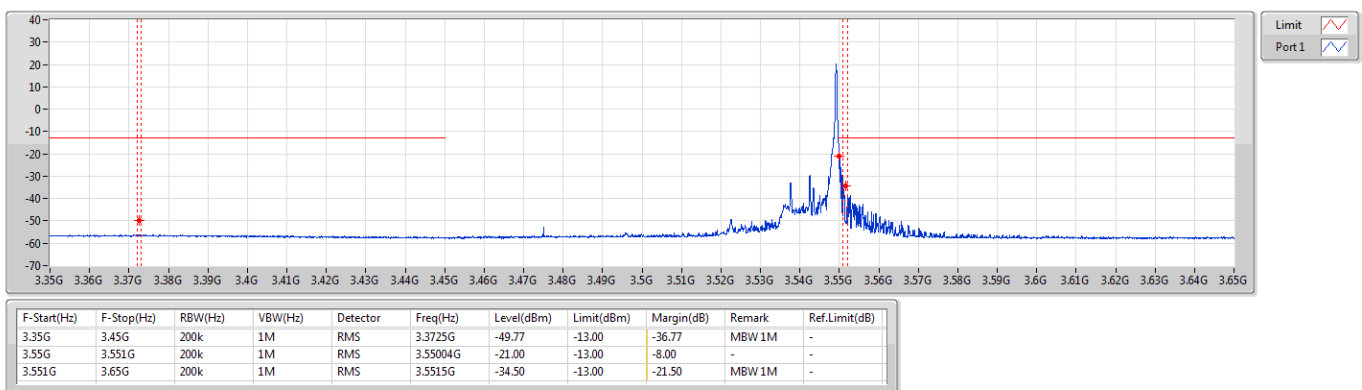
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CSE-TX-Sum



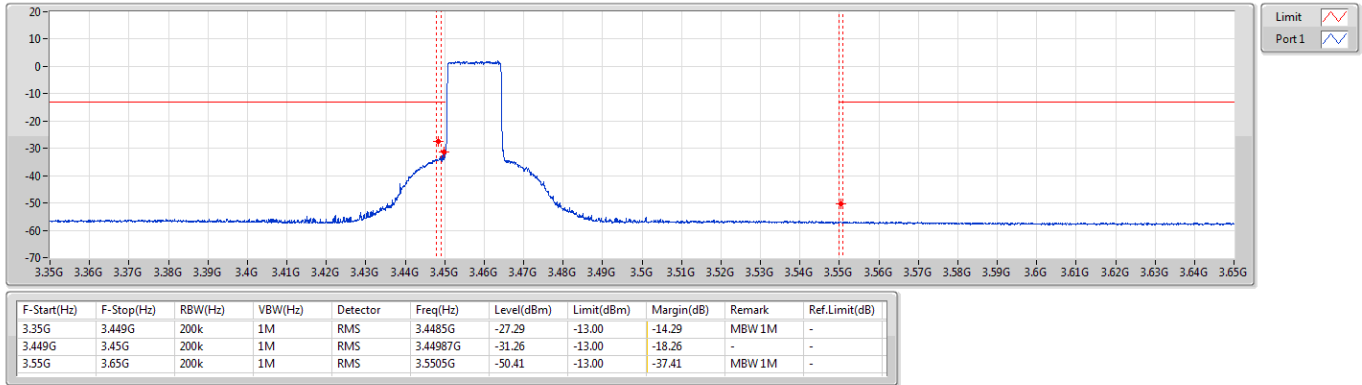
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CSE-TX-Sum



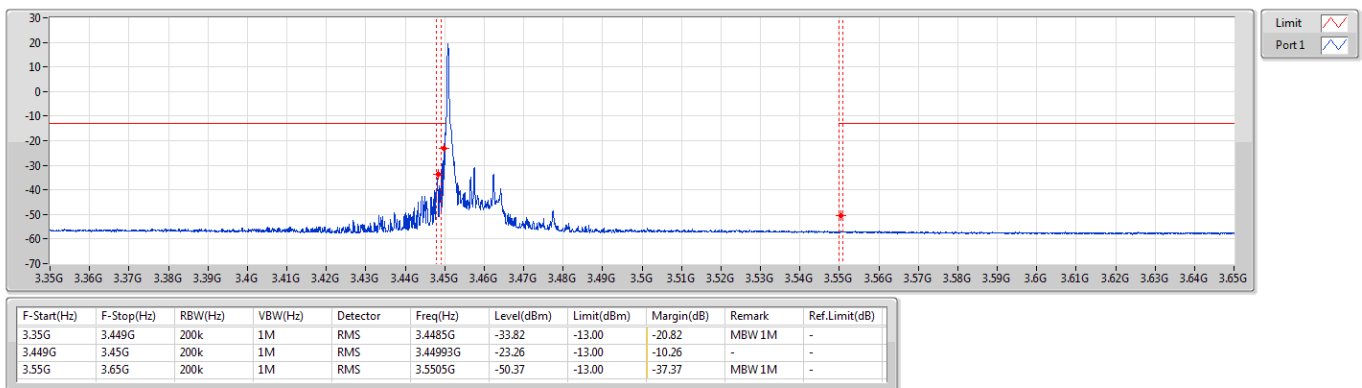
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CSE-TX-Sum



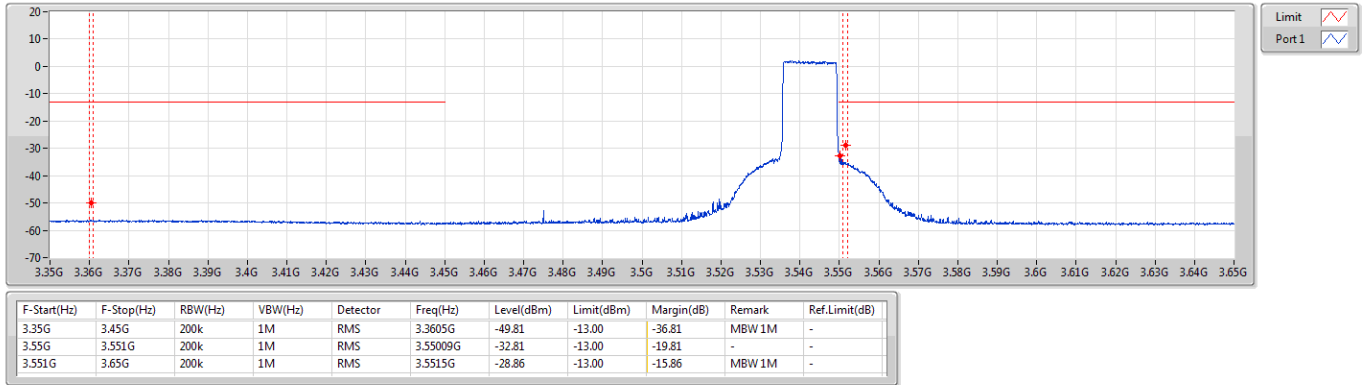
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CSE-TX-Sum



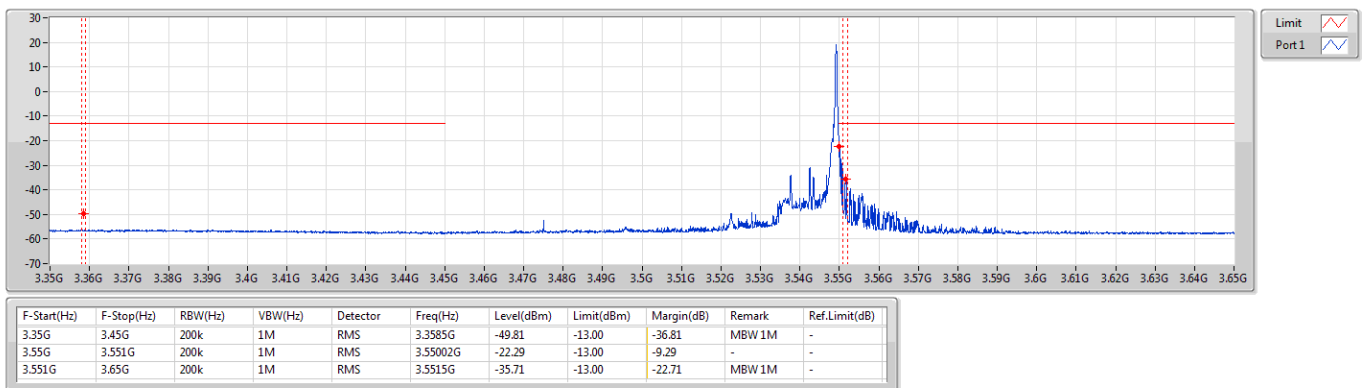
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CSE-TX-Sum



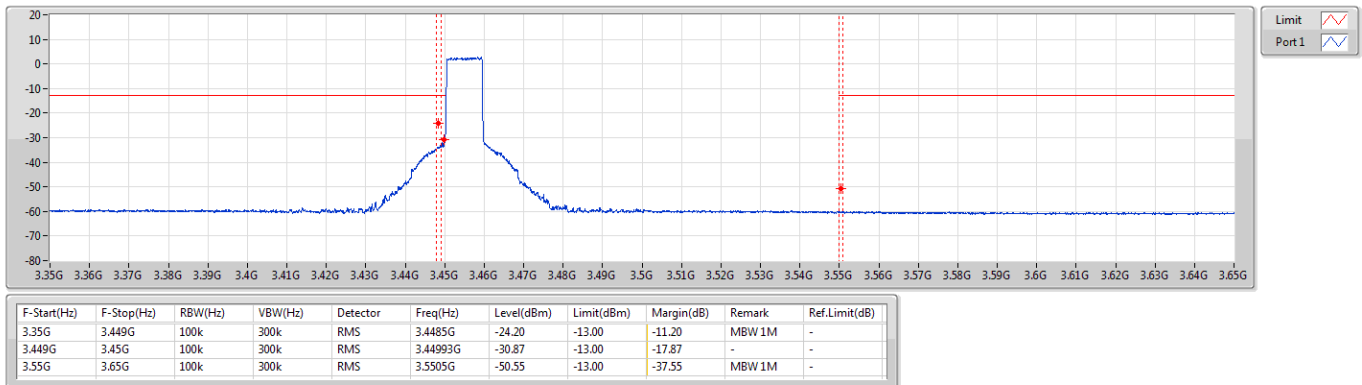
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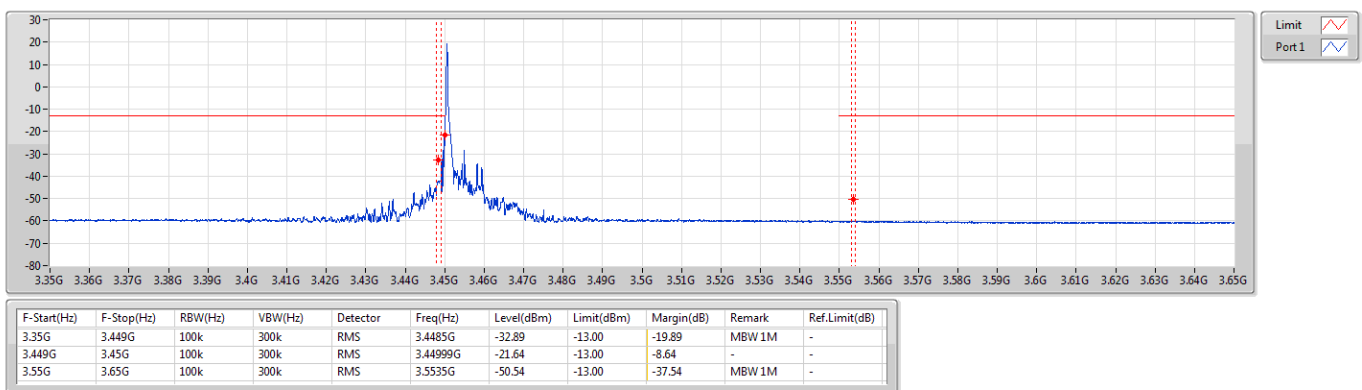
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CSE-TX-Sum



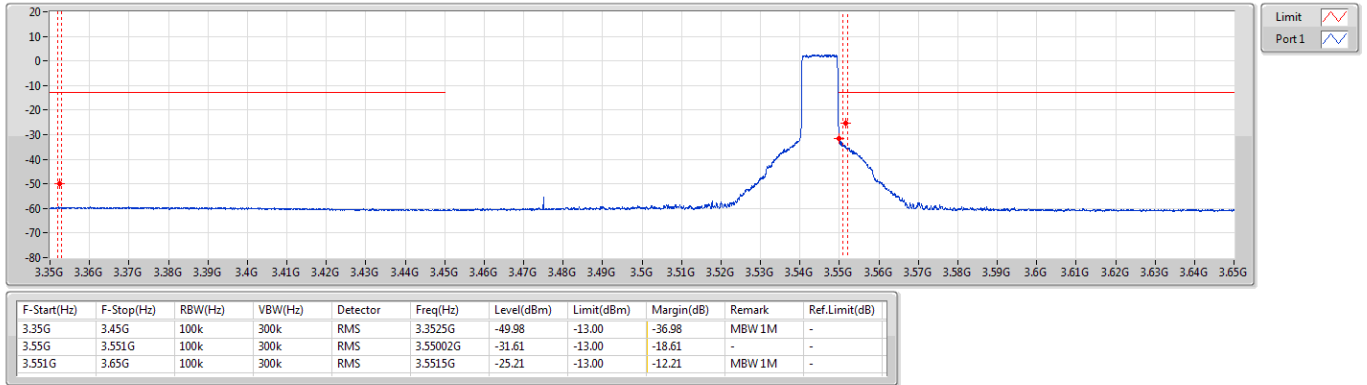
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CSE-TX-Sum



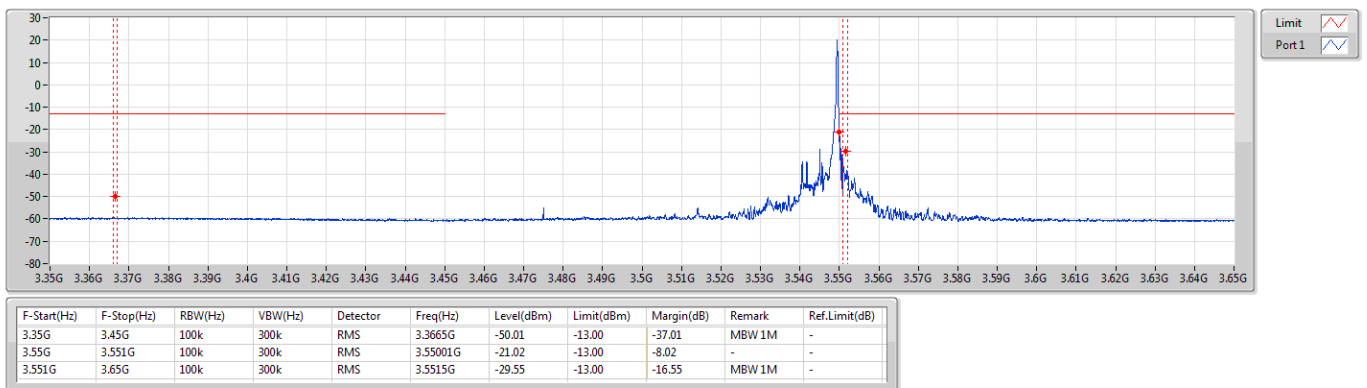
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CSE-TX-Sum



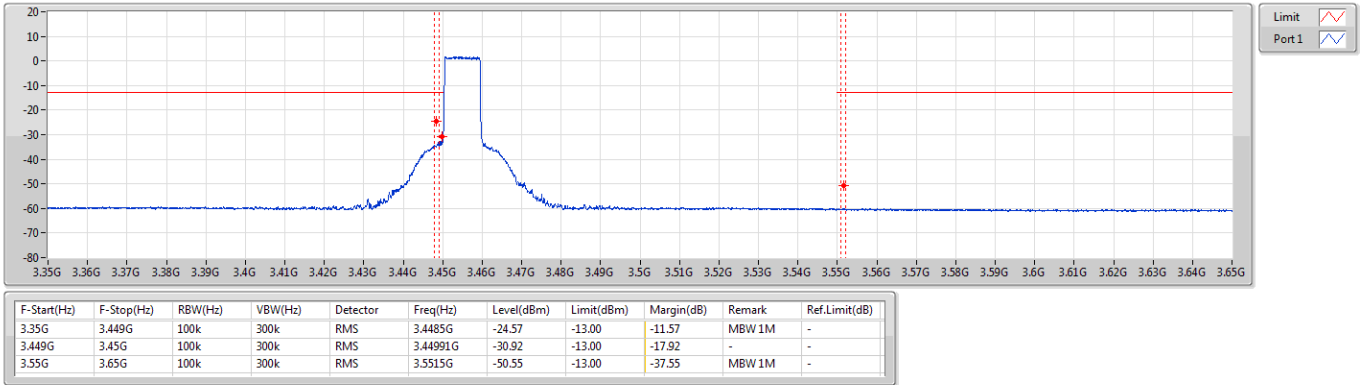
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CSE-TX-Sum



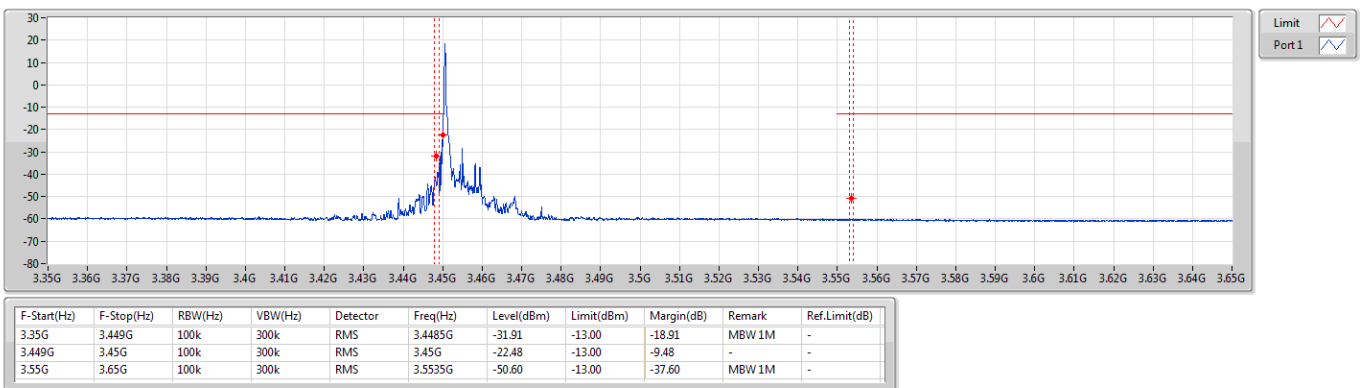
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CSE-TX-Sum



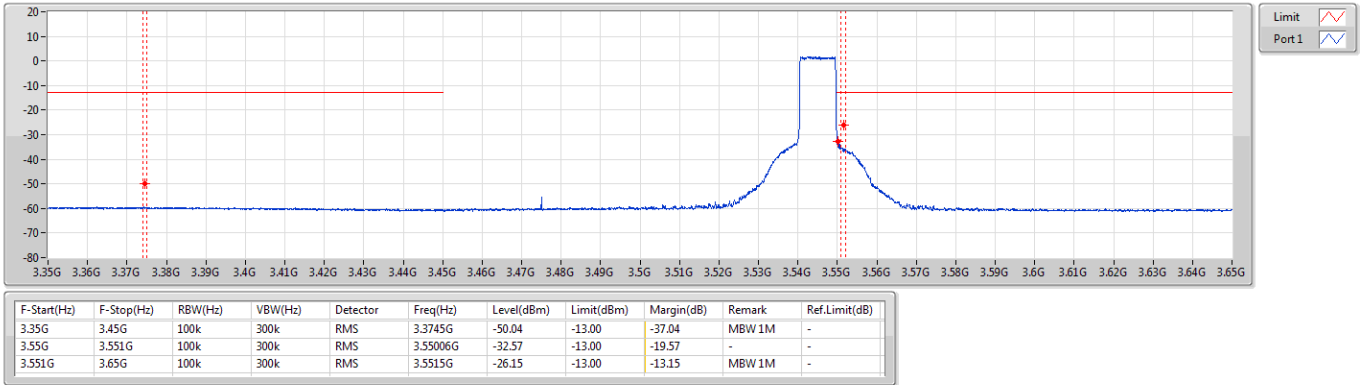
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CSE-TX-Sum



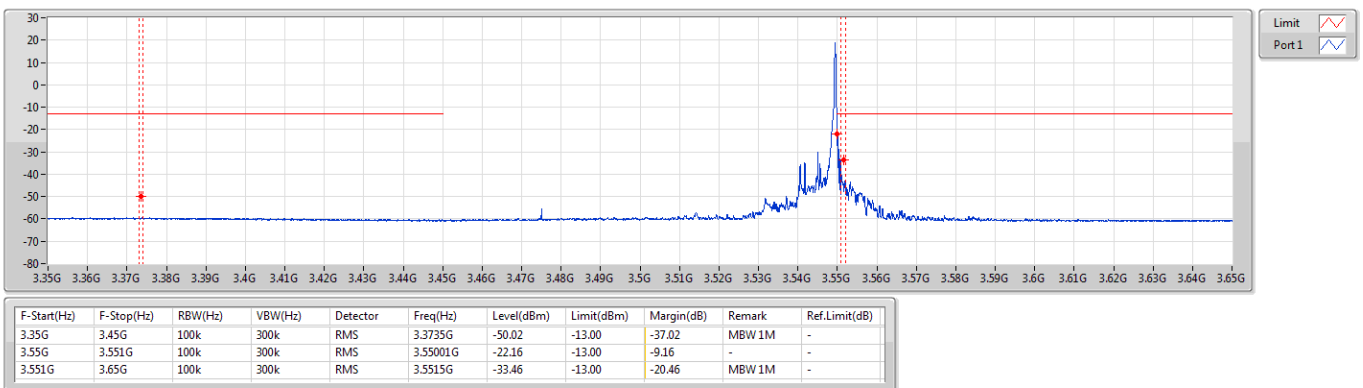
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CSE-TX-Sum



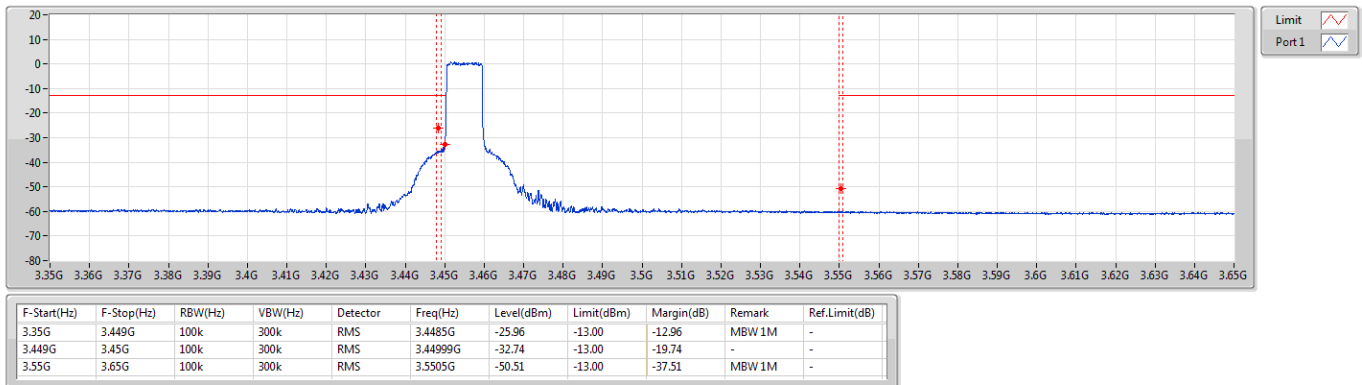
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3545MHz_16QAM_RB 1,#RB 49

CSE-TX-Sum



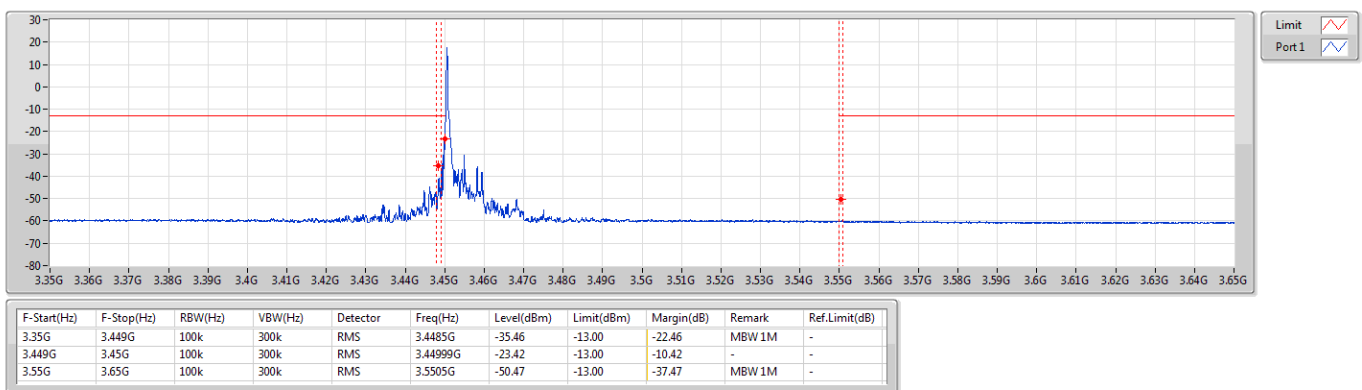
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3455MHz_64QAM_RB 50,#RB 0

CSE-TX-Sum



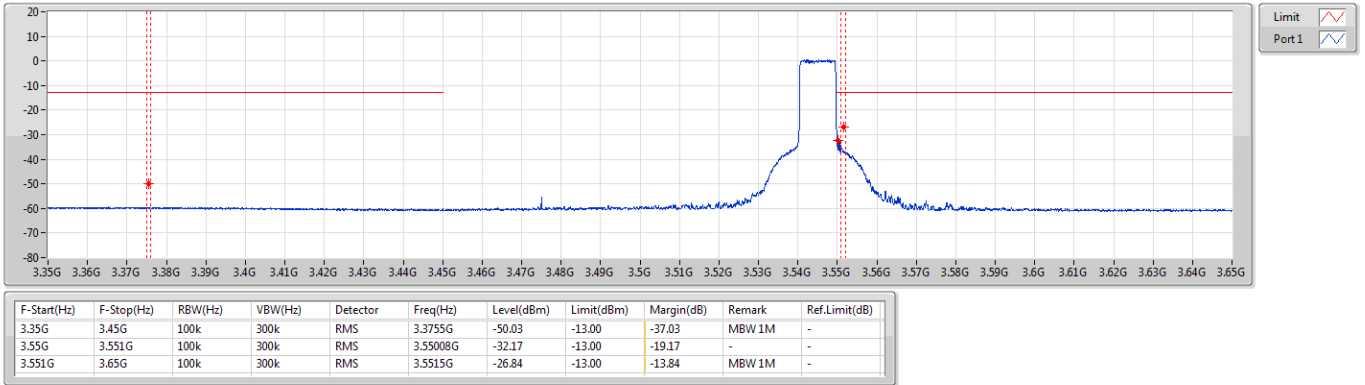
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CSE-TX-Sum



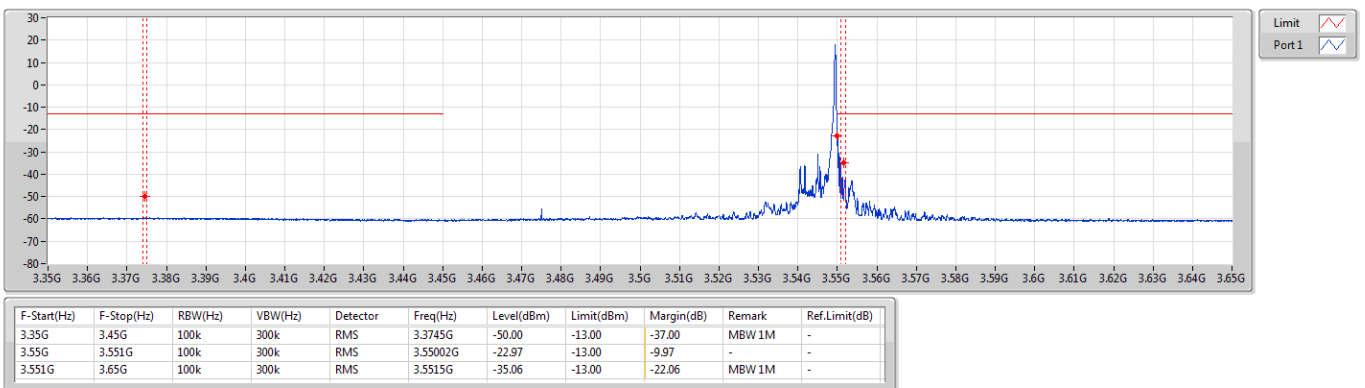
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CSE-TX-Sum



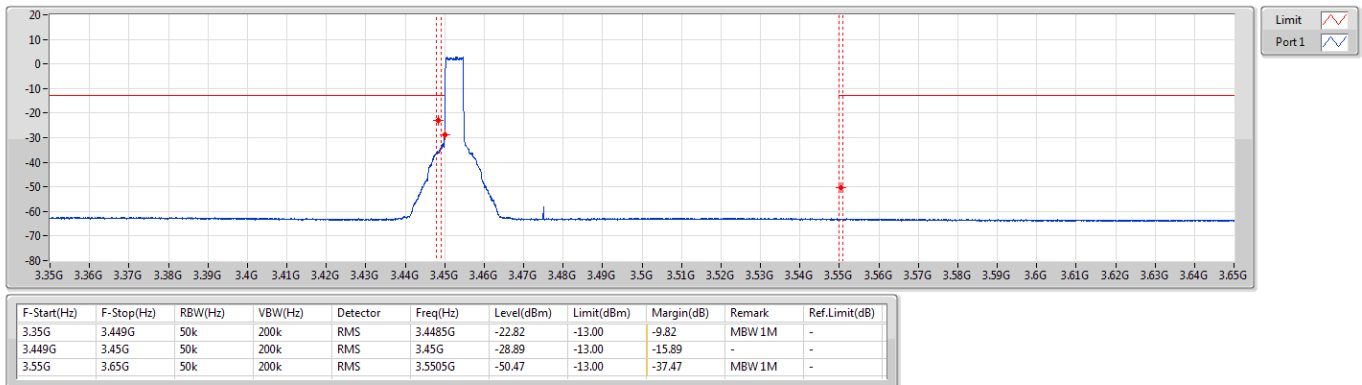
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3545MHz_64QAM_RB 1,#RB 49

CSE-TX-Sum



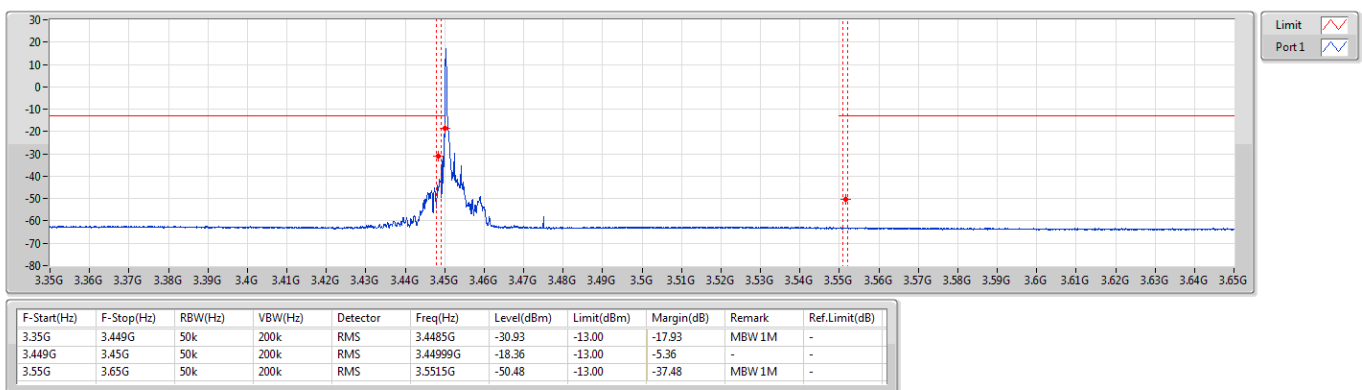
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3452.5MHz_QPSK_RB 25,#RB 0

CSE-TX-Sum



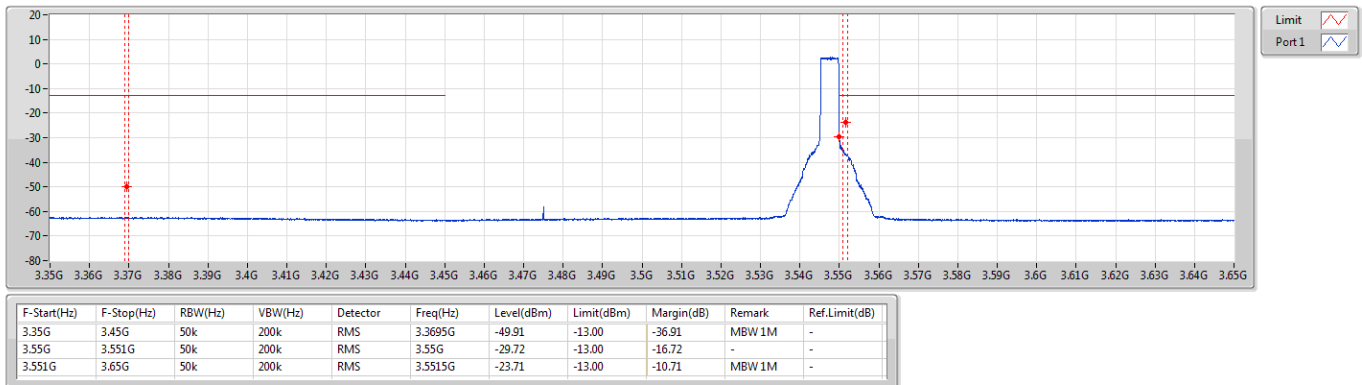
Band 42_LTE_5MHz_Nss1,QPSK_1TX
3452.5MHz_QPSK_RB 1,#RB 0

CSE-TX-Sum



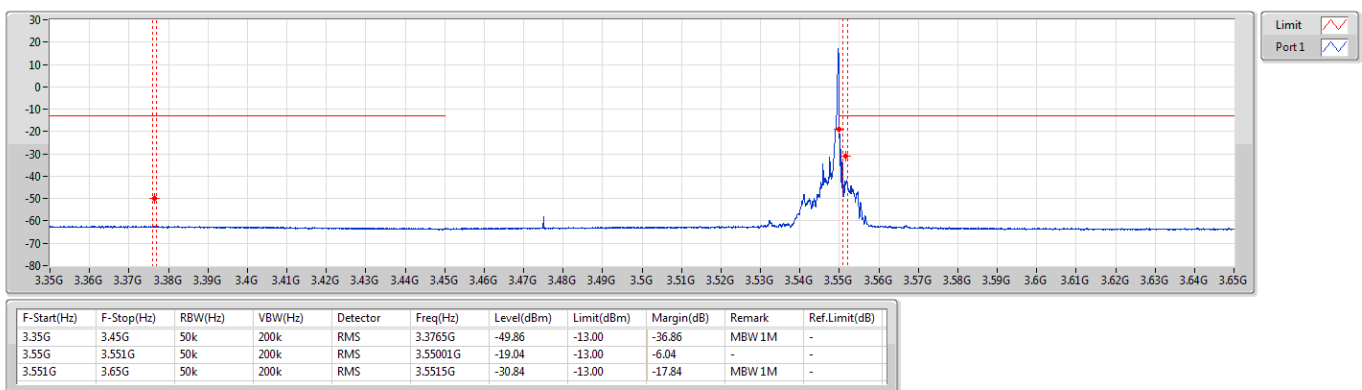
Band 42_LTE_5MHz_Nss1,QPSK_1TX
3547.5MHz_QPSK_RB 25,#RB 0

CSE-TX-Sum



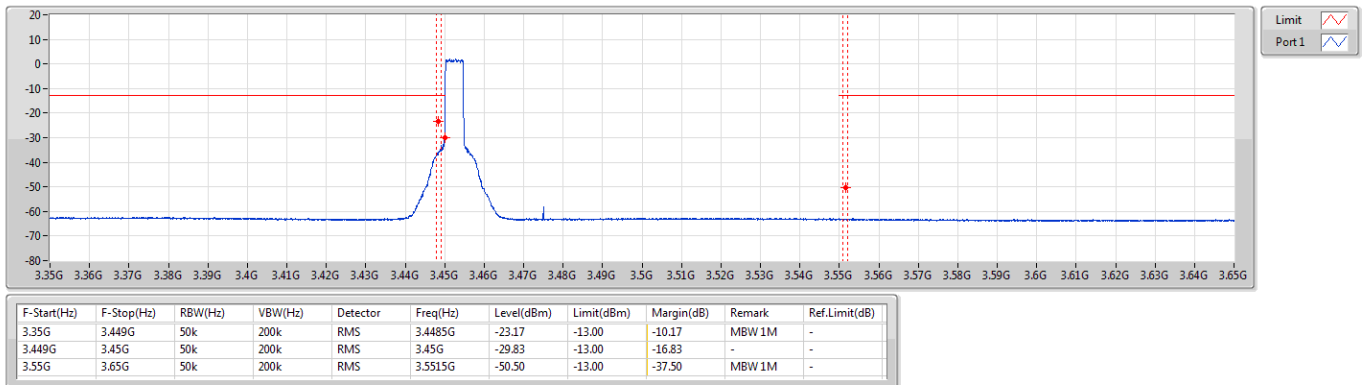
Band 42_LTE_5MHz_Nss1,QPSK_1TX
3547.5MHz_QPSK_RB 1,#RB 24

CSE-TX-Sum



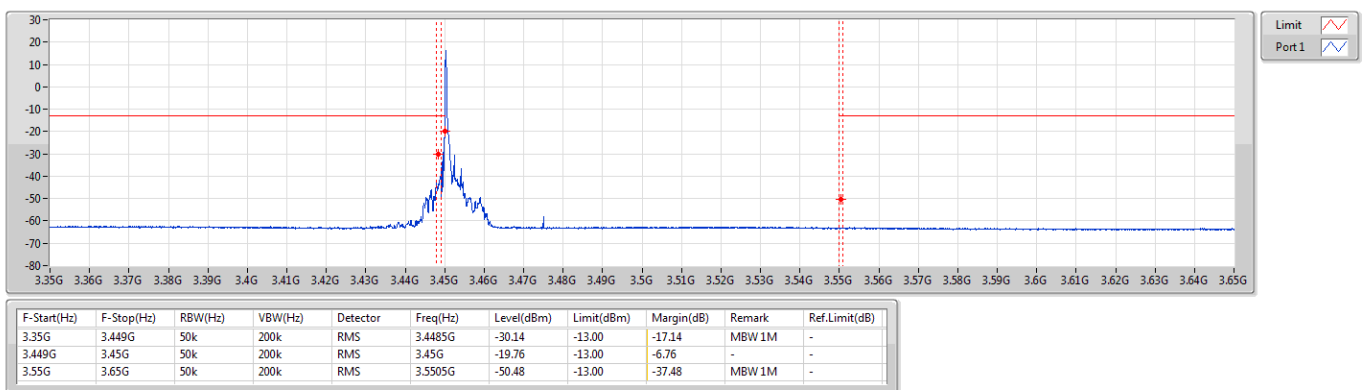
Band 42_LTE_5MHz_Nss1,16QAMCS_1TX
3452.5MHz_16QAM_RB 25,#RB 0

CSE-TX-Sum



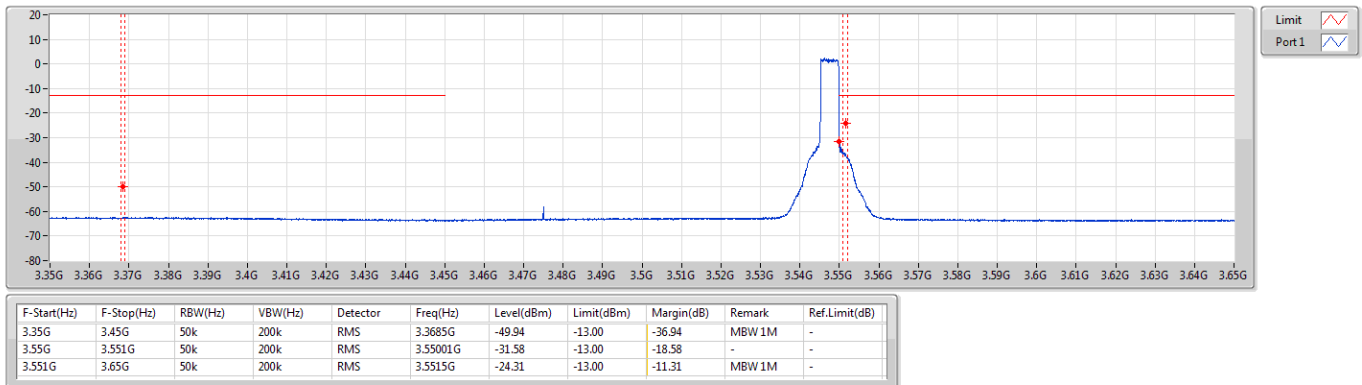
Band 42_LTE_5MHz_Nss1,16QAMCS_1TX
3452.5MHz_16QAM_RB 1,#RB 0

CSE-TX-Sum



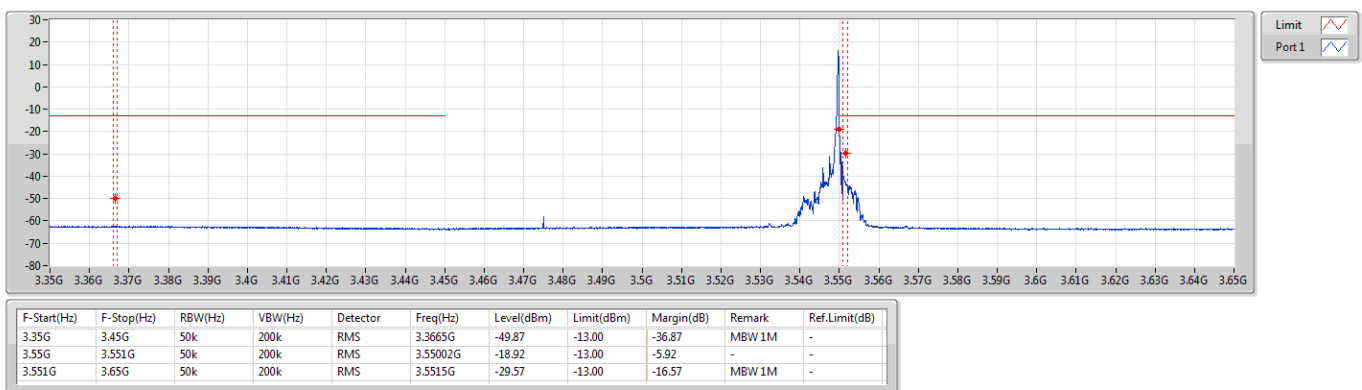
Band 42_LTE_5MHz_Nss1,16QAMCS_1TX
3547.5MHz_16QAM_RB 25,#RB 0

CSE-TX-Sum



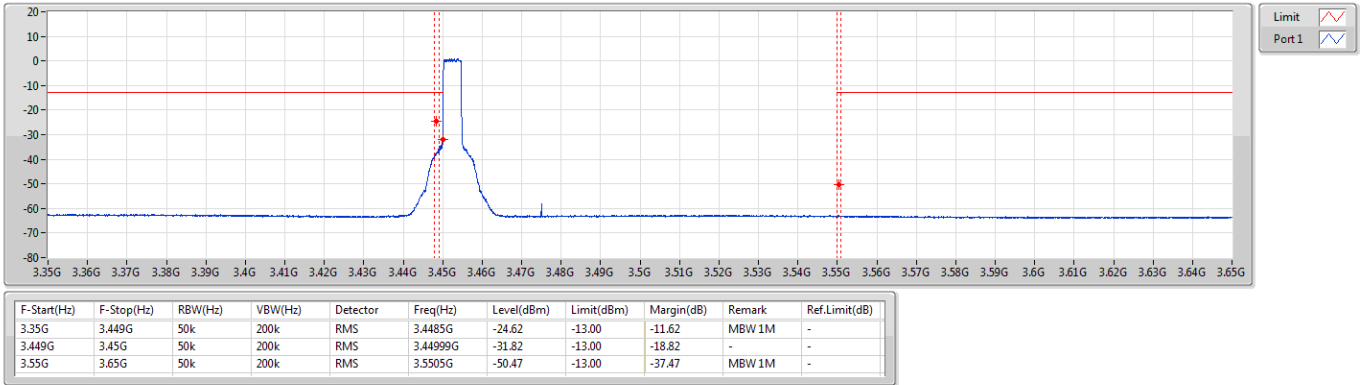
Band 42_LTE_5MHz_Nss1,16QAMCS_1TX
3547.5MHz_16QAM_RB 1,#RB 24

CSE-TX-Sum



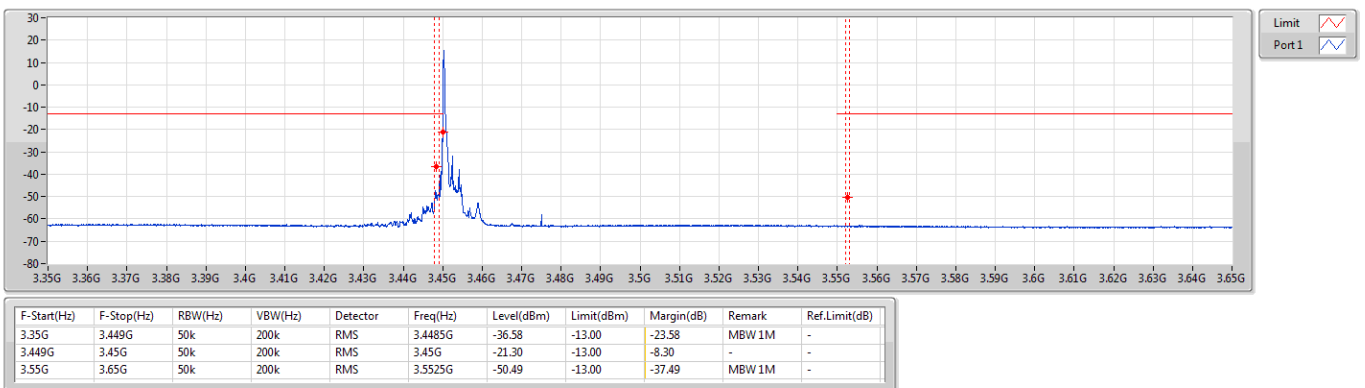
Band 42_LTE_5MHz_Nss1,64QAMCS_1TX
3452.5MHz_64QAM_RB 25,#RB 0

CSE-TX-Sum



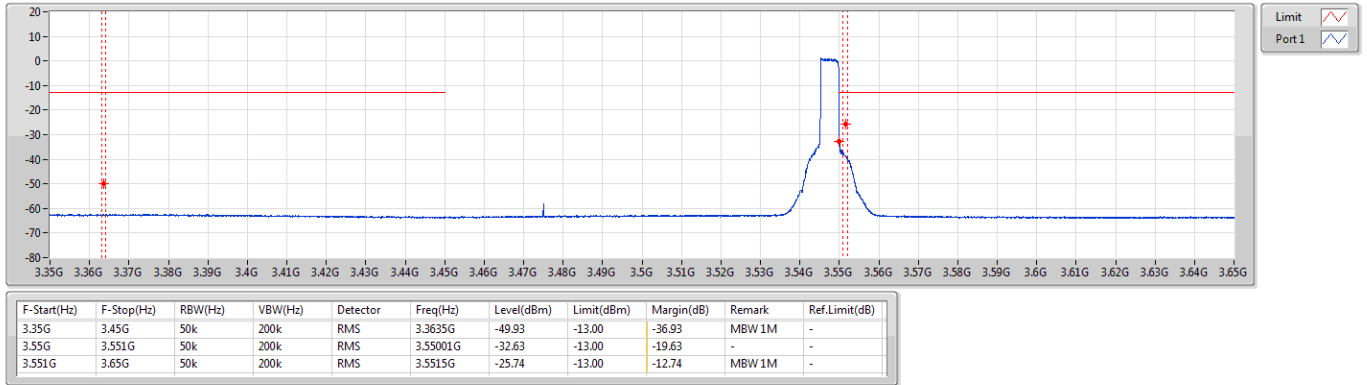
Band 42_LTE_5MHz_Nss1,64QAMCS_1TX
3452.5MHz_64QAM_RB 1,#RB 0

CSE-TX-Sum



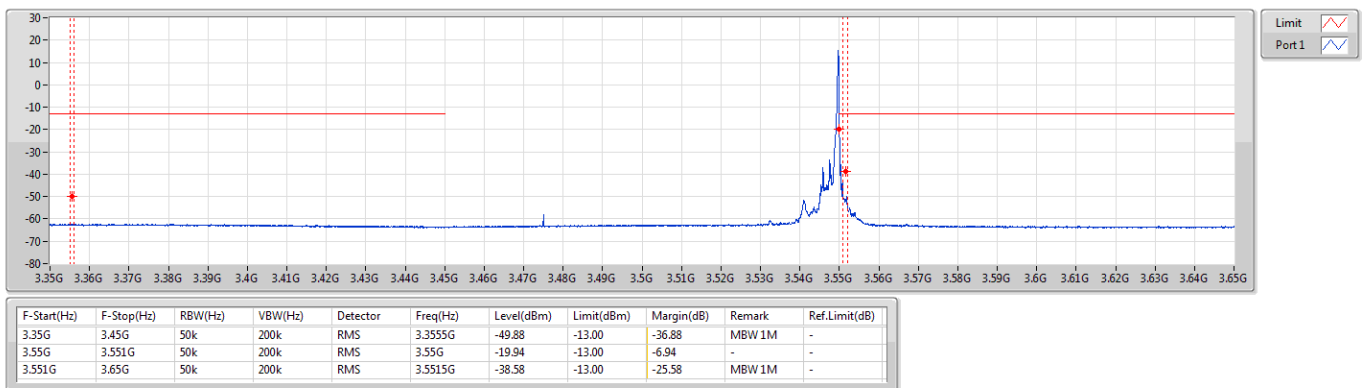
Band 42_LTE_5MHz_Nss1,64QAMCS_1TX
3547.5MHz_64QAM_RB 25,#RB 0

CSE-TX-Sum



Band 42_LTE_5MHz_Nss1,64QAMCS_1TX
3547.5MHz_64QAM_RB 1,#RB 24

CSE-TX-Sum



Summary

Mode	Max-NdB (Hz)	Max-OBW (Hz)	ITU-Code	Min-NdB (Hz)	Min-OBW (Hz)
Band 42	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	19.425M	17.841M	17M8G7D	19.425M	17.841M
LTE_20MHz_Nss1,16QAM_1TX	18.775M	17.816M	17M8W7D	18.775M	17.816M
LTE_20MHz_Nss1,64QAM_1TX	18.775M	17.816M	17M8W7D	18.775M	17.816M
LTE_15MHz_Nss1,QPSK_1TX	14.456M	13.4M	13M4G7D	14.456M	13.4M
LTE_15MHz_Nss1,16QAM_1TX	16.931M	13.418M	13M4W7D	16.931M	13.418M
LTE_15MHz_Nss1,64QAM_1TX	15.506M	13.4M	13M4W7D	15.506M	13.4M
LTE_10MHz_Nss1,QPSK_1TX	9.563M	8.921M	8M92G7D	9.563M	8.921M
LTE_10MHz_Nss1,16QAM_1TX	9.5M	8.921M	8M92W7D	9.5M	8.921M
LTE_10MHz_Nss1,64QAM_1TX	9.75M	8.933M	8M93W7D	9.75M	8.933M
LTE_5MHz_Nss1,QPSK_1TX	4.825M	4.467M	4M47G7D	4.825M	4.467M
LTE_5MHz_Nss1,16QAM_1TX	4.738M	4.46M	4M46W7D	4.738M	4.46M
LTE_5MHz_Nss1,64QAM_1TX	4.738M	4.467M	4M47W7D	4.738M	4.467M

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

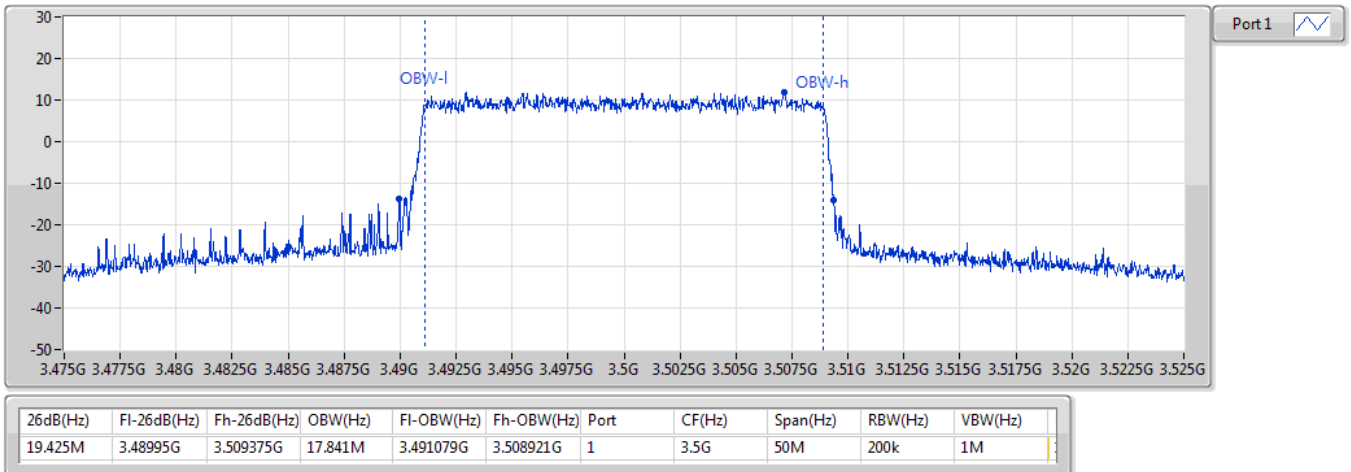
Result

Mode	Result	Port 1-NdB (Hz)	Port 1-OBW (Hz)	Limit (Hz)
Band 42_LTE_20MHz_Nss1_1TX	-	-	-	-
3500MHz_QPSK_RB 100,#RB 0	Pass	19.425M	17.841M	Inf
3500MHz_16QAM_RB 100,#RB 0	Pass	18.775M	17.816M	Inf
3500MHz_64QAM_RB 100,#RB 0	Pass	18.775M	17.816M	Inf
Band 42_LTE_15MHz_Nss1_1TX	-	-	-	-
3500MHz_QPSK_RB 75,#RB 0	Pass	14.456M	13.4M	Inf
3500MHz_16QAM_RB 75,#RB 0	Pass	16.931M	13.418M	Inf
3500MHz_64QAM_RB 75,#RB 0	Pass	15.506M	13.4M	Inf
Band 42_LTE_10MHz_Nss1_1TX	-	-	-	-
3500MHz_QPSK_RB 50,#RB 0	Pass	9.563M	8.921M	Inf
3500MHz_16QAM_RB 50,#RB 0	Pass	9.5M	8.921M	Inf
3500MHz_64QAM_RB 50,#RB 0	Pass	9.75M	8.933M	Inf
Band 42_LTE_5MHz_Nss1_1TX	-	-	-	-
3500MHz_QPSK_RB 25,#RB 0	Pass	4.825M	4.467M	Inf
3500MHz_16QAM_RB 25,#RB 0	Pass	4.738M	4.46M	Inf
3500MHz_64QAM_RB 25,#RB 0	Pass	4.738M	4.467M	Inf

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

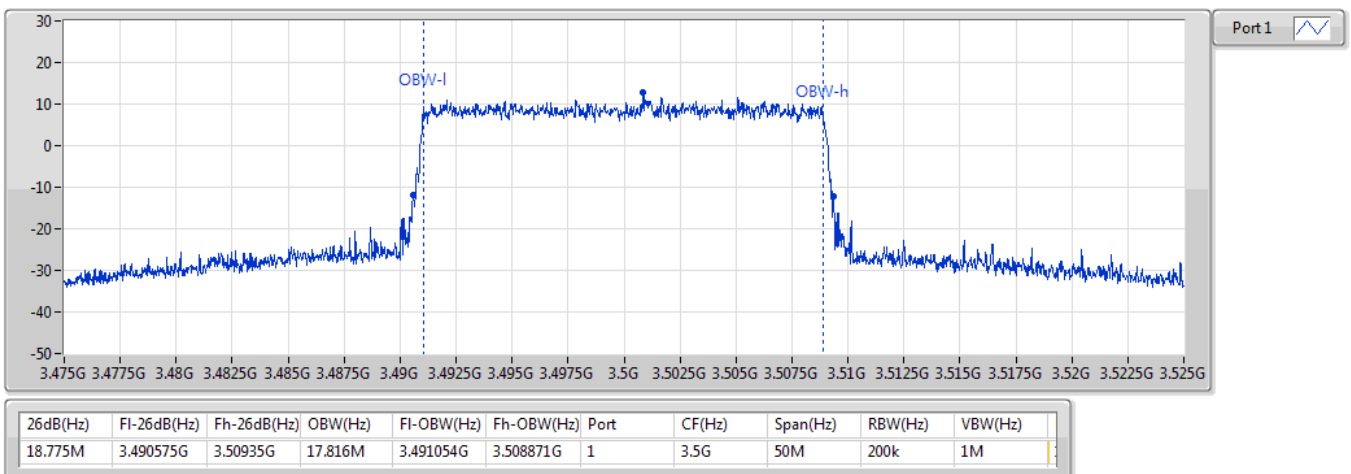
Band 42_LTE_20MHz_Nss1,QPSK_1TX
3500MHz_QPSK_RB 100,#RB 0

EBW



Band 42_LTE_20MHz_Nss1,16QAMCS_1TX
3500MHz_16QAM_RB 100,#RB 0

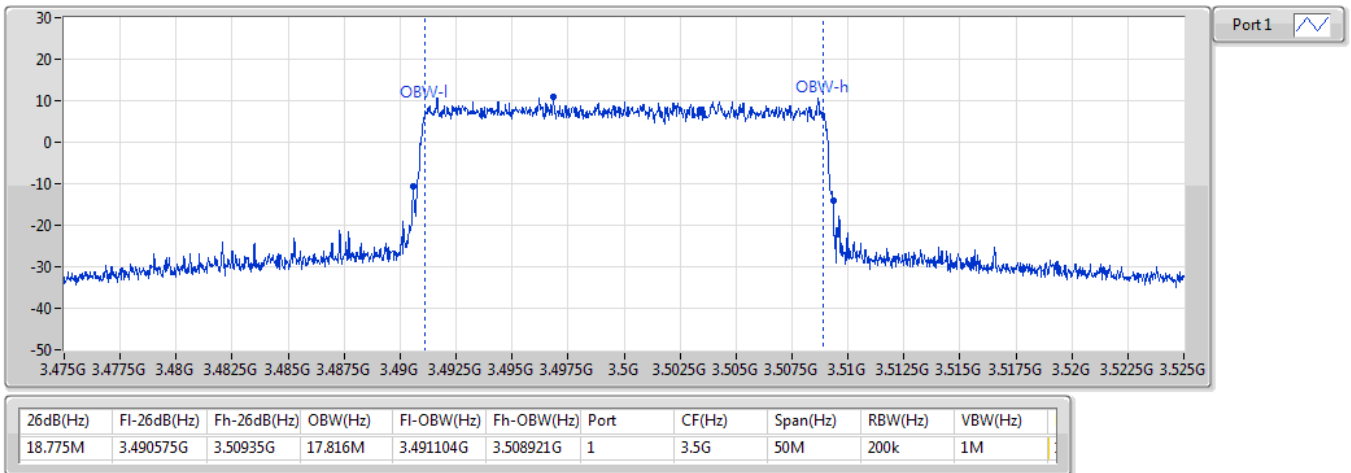
EBW



Band 42_LTE_20MHz_Nss1,64QAMCS_1TX

EBW

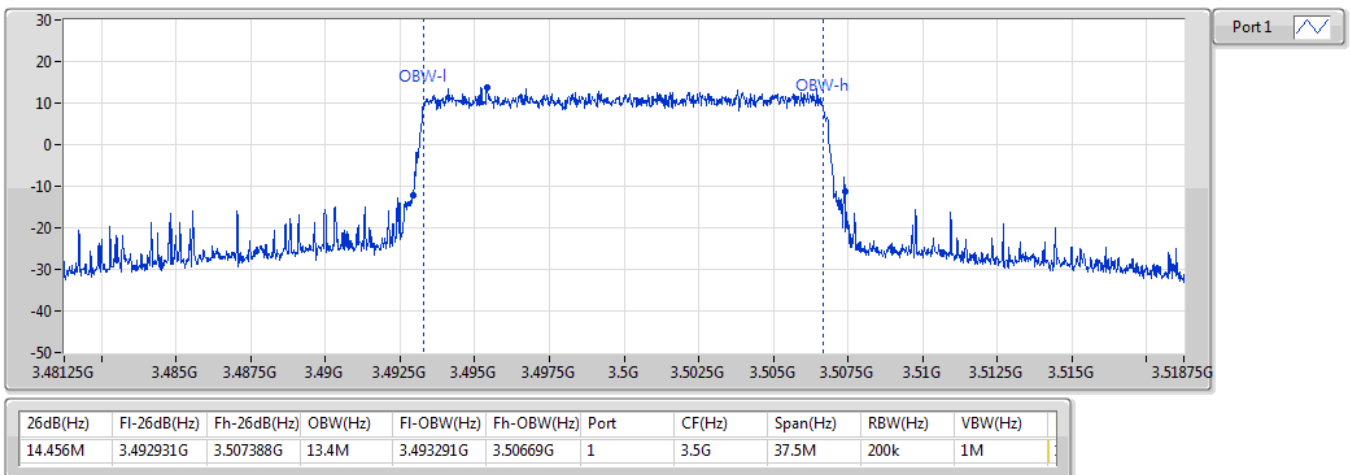
3500MHz_64QAM_RB 100,#RB 0



Band 42_LTE_15MHz_Nss1,QPSK_1TX

EBW

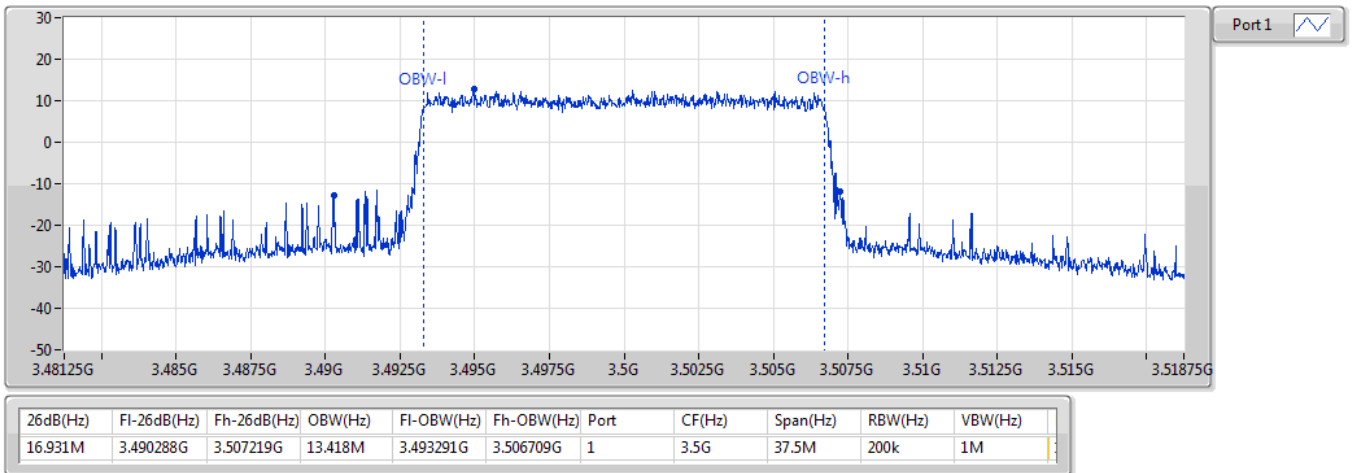
3500MHz_QPSK_RB 75,#RB 0



Band 42_LTE_15MHz_Nss1,16QAMCS_1TX

EBW

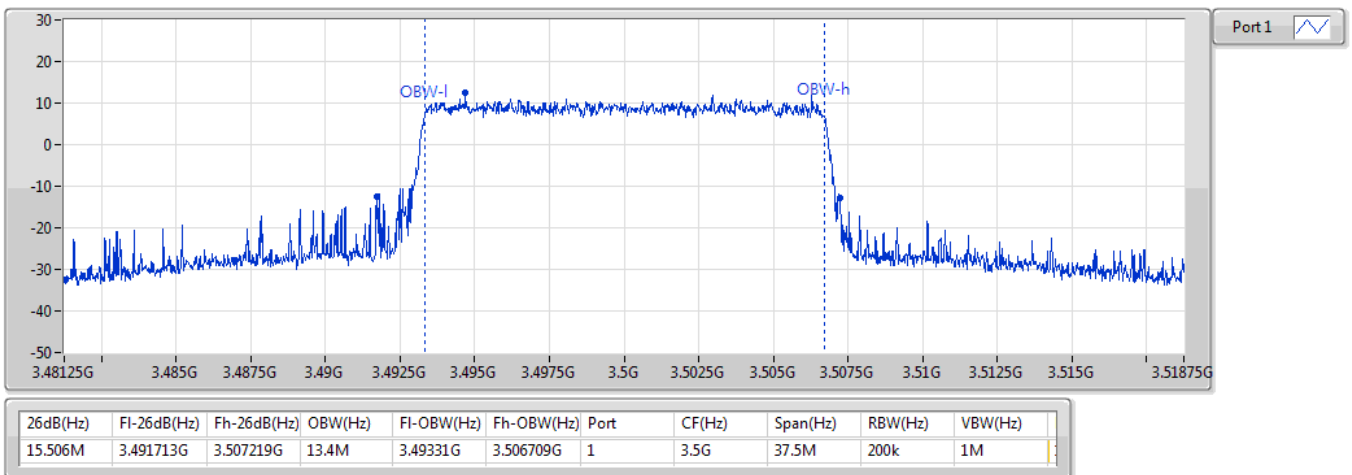
3500MHz_16QAM_RB 75,#RB 0



Band 42_LTE_15MHz_Nss1,64QAMCS_1TX

EBW

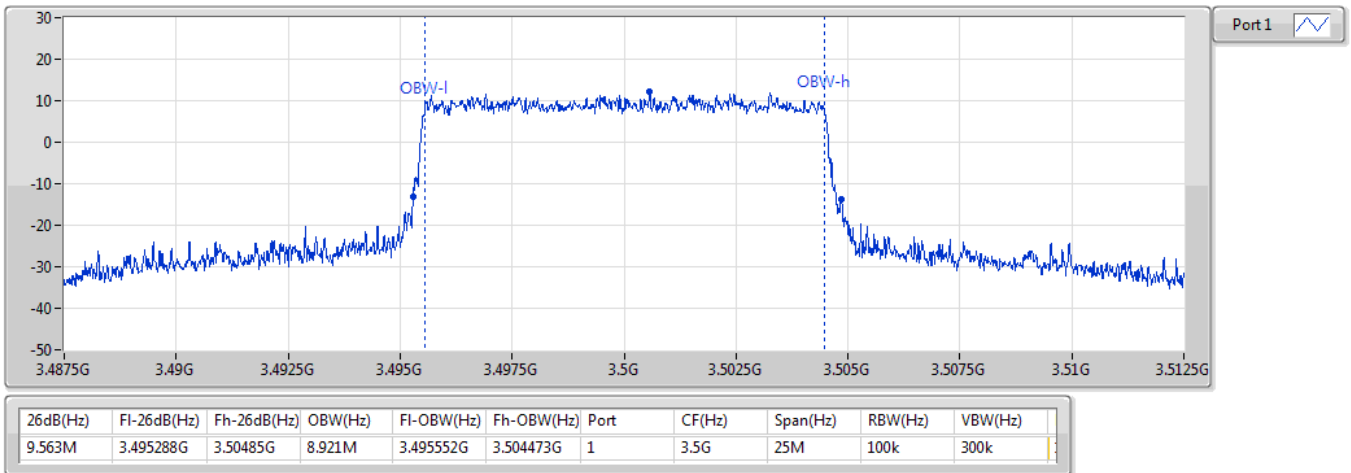
3500MHz_64QAM_RB 75,#RB 0



Band 42_LTE_10MHz_Nss1,QPSK_1TX

EBW

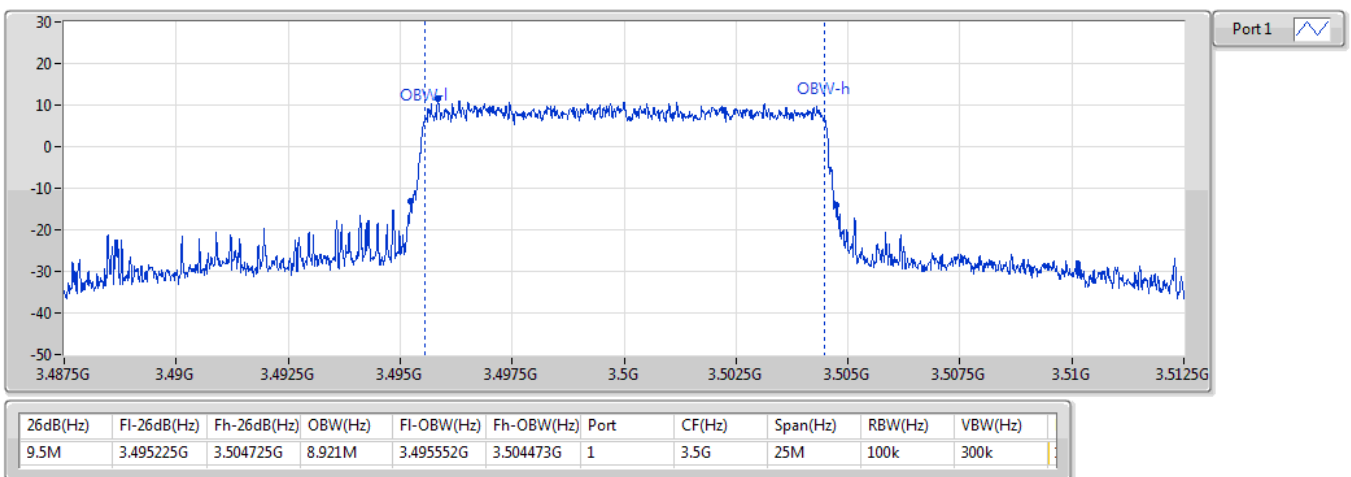
3500MHz_QPSK_RB 50,#RB 0



Band 42_LTE_10MHz_Nss1,16QAMCS_1TX

EBW

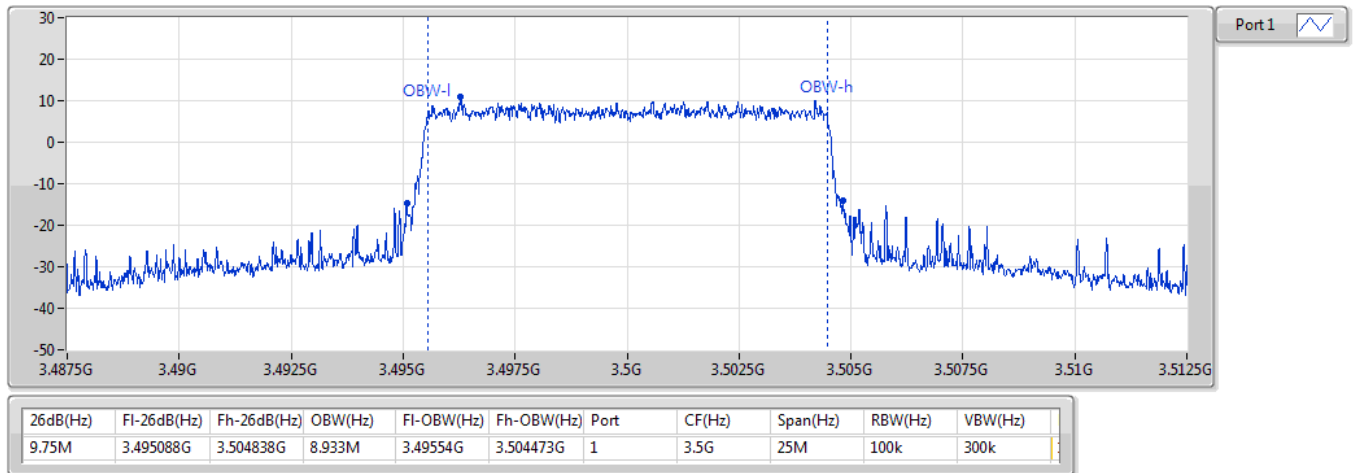
3500MHz_16QAM_RB 50,#RB 0



Band 42_LTE_10MHz_Nss1,64QAMCS_1TX

EBW

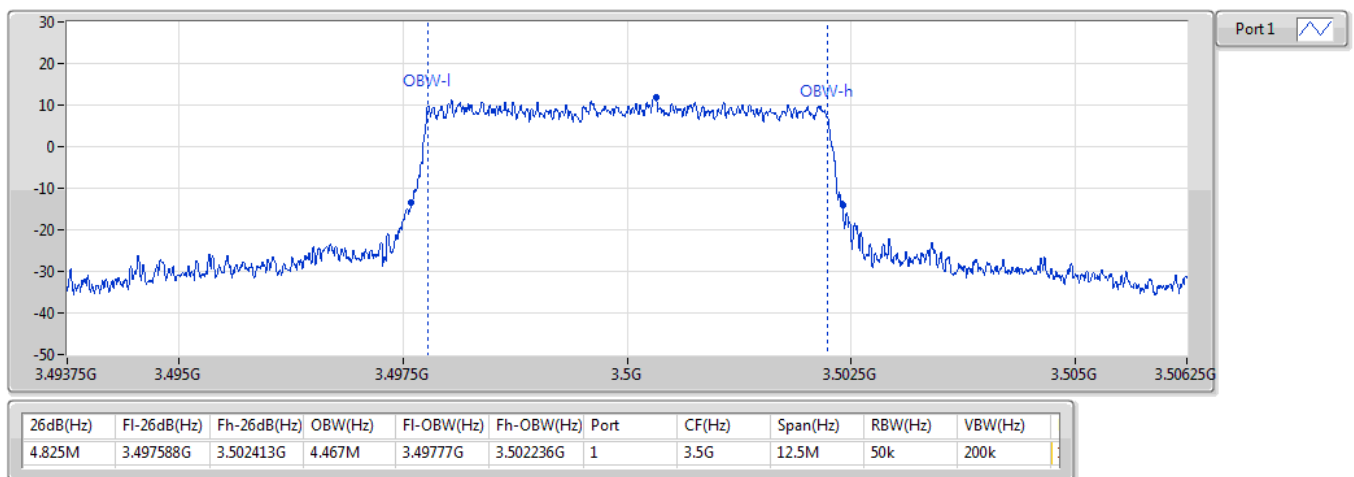
3500MHz_64QAM_RB 50,#RB 0



Band 42_LTE_5MHz_Nss1,QPSK_1TX

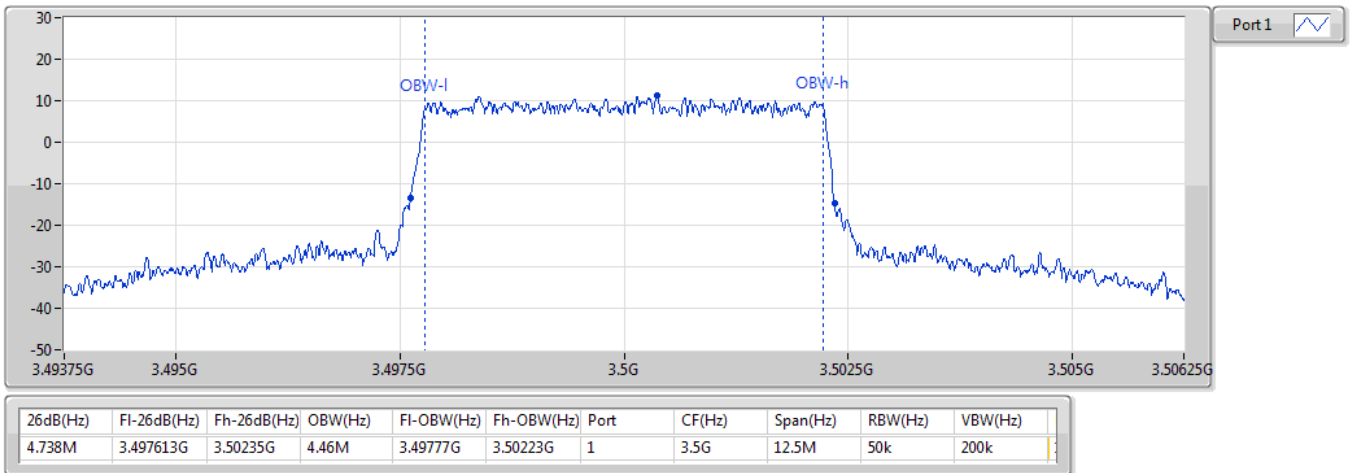
EBW

3500MHz_QPSK_RB 25,#RB 0



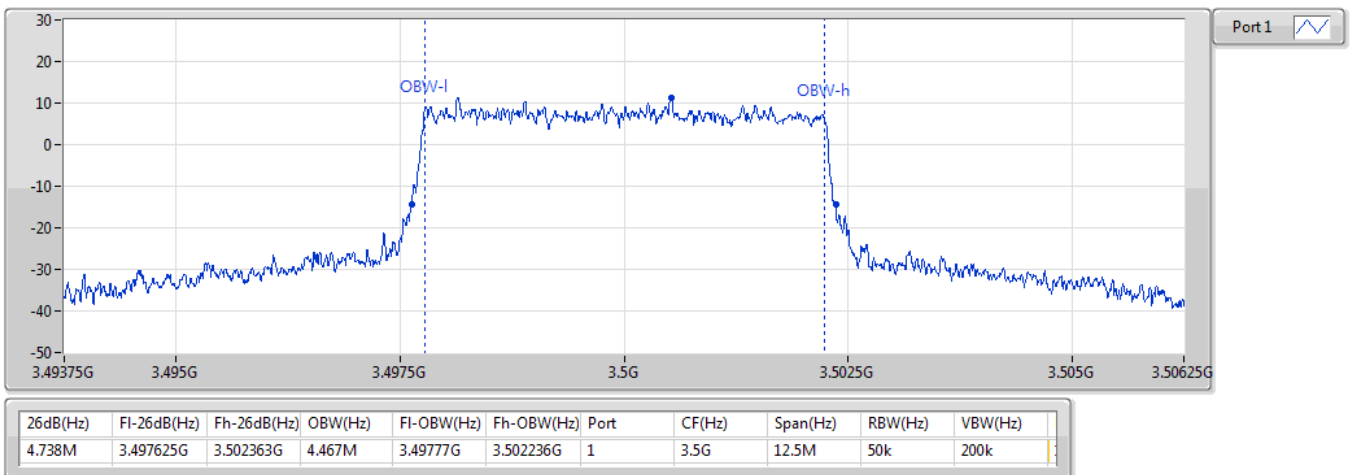
Band 42_LTE_5MHz_Nss1,16QAMCS_1TX
3500MHz_16QAM_RB 25,#RB 0

EBW



Band 42_LTE_5MHz_Nss1,64QAMCS_1TX
3500MHz_64QAM_RB 25,#RB 0

EBW



**Summary**

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 42	-	-	-	-	-
LTE_20MHz_Nss1,QPSK_1TX	Pass	3500	13.00	5.77	1
LTE_20MHz_Nss1,16QAM_1TX	Pass	3500	13.00	6.51	1
LTE_20MHz_Nss1,64QAM_1TX	Pass	3500	13.00	6.67	1

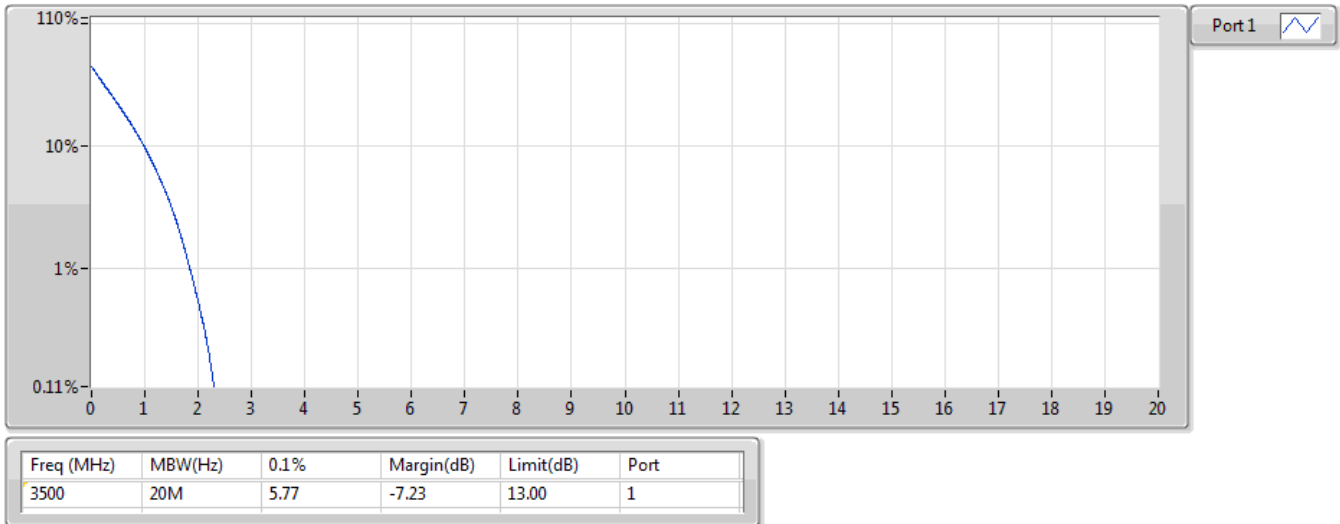
Result

Mode	Result	Freq (MHz)	Limit (dB)	0.1%	Port
Band 42_LTE_20MHz_Nss1_1TX	-	-	-	-	-
3500MHz_QPSK_RB 100,#RB 0	Pass	3500	13.00	5.77	1
3500MHz_16QAM_RB 100,#RB 0	Pass	3500	13.00	6.51	1
3500MHz_64QAM_RB 100,#RB 0	Pass	3500	13.00	6.67	1

Band 42_LTE_20MHz_Nss1,QPSK_1TX

PAPR

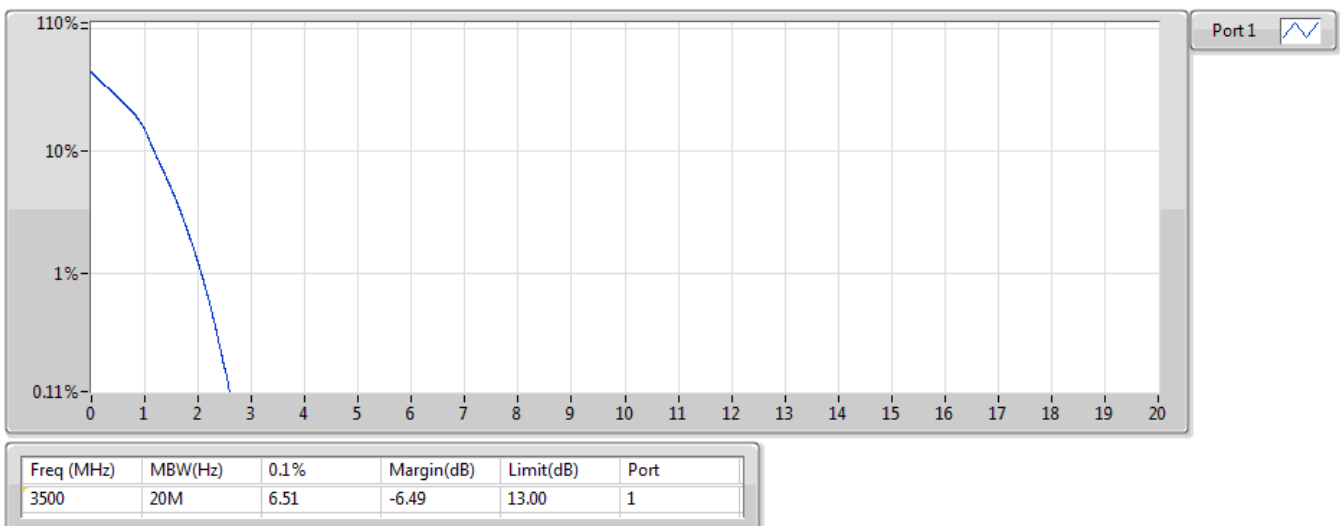
3500MHz_QPSK_RB 100,#RB 0



Band 42_LTE_20MHz_Nss1,16QAMCS_1TX

PAPR

3500MHz_16QAM_RB 100,#RB 0

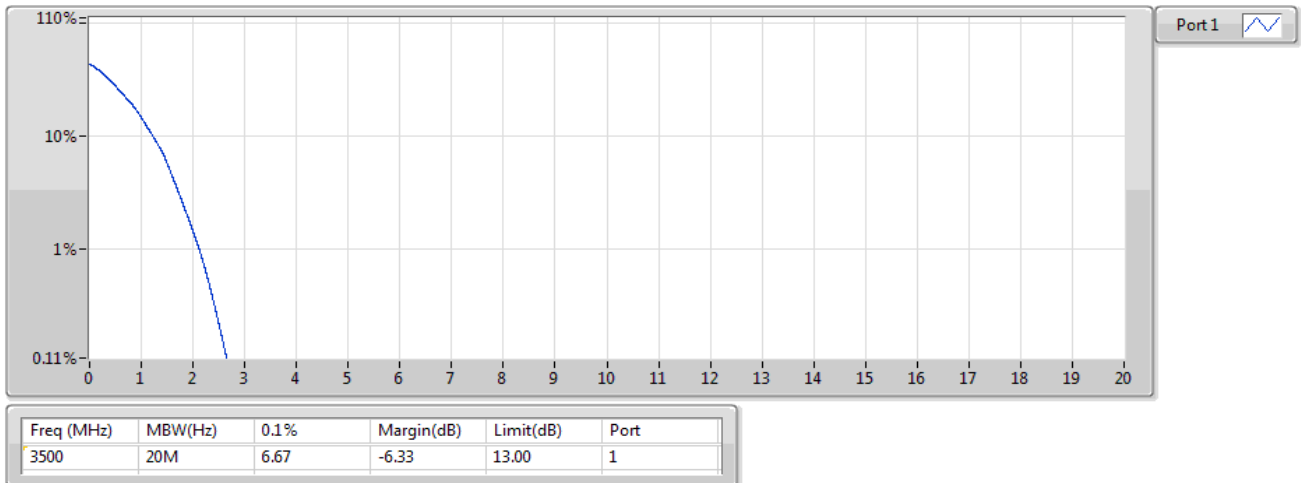




Band 42_LTE_20MHz_Nss1,64QAMCS_1TX

PAPR

3500MHz_64QAM_RB 100,#RB 0



Ref. Freq:	3500MHz	
Test Conditions	LTE Band 42(QPSK) / Middle channel	
Temperature (°C)	Deviation (ppm)	Limit
		Result ^{Note 1}
T20°CVmax	0.01	PASS
T20°CVmin	0.02	
T70°CVnom	0.01	
T60°CVnom	0.02	
T50°CVnom	0.02	
T40°CVnom	0.01	
T30°CVnom	0.02	
T20°CVnom	0.02	
T10°CVnom	0.01	
T0°CVnom	0.01	
T-10°CVnom	0.01	
T-20°CVnom	0.01	
T-30°CVnom	0.01	

Note:

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