FCC RADIO TEST REPORT

FCC ID	:	S9GQ710US02
Equipment	:	Q710 LTE Access Point
Brand Name	:	Ruckus
Model Name	:	Q710-US02
Applicant	:	Ruckus Wireless, Inc. 350 West Java Drive Sunnyvale California 94089 USA
Manufacturer	:	Ruckus Wireless, Inc. 350 West Java Drive Sunnyvale California 94089 USA
Standard	:	47 CFR FCC Part2, 96

The product was received on Nov. 14, 2018, and testing was started from Dec. 21, 2018 and completed on Feb. 20, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA-603-E-2016, ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Jordan Hsiao

Approved by: Jordan Hsiao

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

TEL : 886-3-327-3456
FAX : 886-3-327-0973

Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **5**
1.1 Product Feature of Equipment Under Test 5
1.2 Product Specification subjective to this standard 5
1.3 Antenna Information 7
1.4 Maximum EIRP Power, Frequency Tolerance, and Emission Designator 8
1.5 Accessories 8
1.6 Support Equipment 9
1.7 Applicable Standards 9
1.8 Testing Location 9
2 Test Configuration of Equipment Under Test **10**
2.1 Test Frequency 10
2.2 Test Mode 11
2.3 Test Setup Diagram 12
2.4 Measurement Results Explanation Example 13
3 Test Result **14**
3.1 Conducted Output Power 14
3.2 Maximum Effective Isotropic Radiated Power (EIRP) 16
3.3 Maximum Power Spectral Density (PSD) 17
3.4 Reception limits 18
3.5 Peak-to-Average Power Ratio (PAPR) 19
3.6 99% Occupied Bandwidth (OBW) and 26dB Bandwidth 20
3.7 3.5 GHz Emissions and Interference Limits 21
3.8 Field Strength of Spurious Radiation 22
3.9 Frequency Stability for Temperature & Voltage 24
4 Test Equipment and Calibration Data **25**
5 Measurement Uncertainty **26**
Appendix A. Test Result of the Conducted Output Power
Appendix B. Test Result of the Maximum Effective Isotropic Radiated Power (EIRP)
Appendix C. Test Result of the Maximum Power Spectral Density (PSD)
Appendix D. Test Result of the Reception limits
Appendix E. Test Result of the Peak-to-Average Power Ratio (PAPR)
Appendix F. Test Result of the 99% Occupied Bandwidth (OBW) and 26dB Bandwidth
Appendix G. Test Result of the 3.5 GHz Emissions and Interference Limits
Appendix H. Test Result of the Field Strength of Spurious Radiation
Appendix I. Test Result of the Frequency Stability for Temperature & Voltage
Appendix J. Test Photos
Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FG850948-02AA	01	Initial issue of report	Feb. 22, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	2.1046	Conducted Output Power	PASS	-
3.2	96.41(b)	Maximum Effective Isotropic Radiated Power (EIRP)	PASS	-
3.3	96.41(b)	Maximum Power Spectral Density (PSD)	PASS	-
3.4	96.41(f)	Reception limits	PASS	-
3.5	96.41(g)	Peak-to-average power ratio	PASS	-
3.6	2.1049	99% OBW and 26dB Bandwidth	PASS	-
3.7	2.1051 96.41(e)	3.5 GHz Emissions and Interference Limits	PASS	-
3.8	2.1053	Field Strength of Spurious Radiation	PASS	-
3.9	2.1055	Frequency Stability for Temperature & Voltage	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.

Reviewed by: Jordan Hsiao

Report Producer: Sandy Chuang

1 General Description

1.1 Product Feature of Equipment Under Test

Items	Description
Power Type	From power adapter or PoE
EUT supports Radios application	LTE

1.2 Product Specification subjective to this standard

Items	Description
Base Station Classes	☐ Wide Area Base Station (Macro Cell) ☐ Medium Range Base Station (Micro Cell) ☒ Local Area Base Station (Pico Cell) ☐ Home Base Station (Femto Cell)
Category of CBSD	☒ Category A ☐ Category B
Professional Installation	☒ Yes ☐ No
Multi-carrier and/or CA	☒ Yes ☐ No
RF Test Tool Software of CBSD	**<Single-carrier>** SmallCell DVT Test Client (1.0.306.003) **<Multi-carrier and/or CA>** SmallCell DVT Test Client (1.0.316.001)
TX Frequency	10 MHz: 3555 MHz ~ 3695 MHz 20 MHz: 3560 MHz ~ 3690 MHz
RX Frequency	10 MHz: 3555 MHz ~ 3695 MHz 20 MHz: 3560 MHz ~ 3690 MHz
Bandwidth (MHz)	10/20
Maximum Output Power to Antenna	**<Single-carrier>** 10 MHz: 24.85 dBm 20 MHz: 26.19 dBm **<Multi-carrier and/or CA>** 20MHz+20MHz: 25.19 dBm

Maximum 99% Occupied Bandwidth	**<Single-carrier>** 10 MHz: 8.94 MHz 20 MHz: 17.81 MHz **<Multi-carrier and/or CA>** 20MHz+20MHz: 35.65 MHz
Type of Modulation	☒ QPSK ☒16QAM ☒64QAM ☐256QAM

Note: The above information was declared by manufacturer.

1.3 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Ant. Gain (dBi)	Cable Loss (dB)	True Gain (dBi)	Remark
1	2	Ruckus	Q710-US02	Internal BeamFlex	I-PEX	3	0.90	2.10	LTE Ant.
2	3	Ruckus	Q710-US02	Internal BeamFlex	I-PEX	3	0.75	2.25	LTE Ant.
3	1	Ruckus	Q710-US02	Internal BeamFlex	I-PEX	3	1.30	1.70	LTE Ant.
4	4	Ruckus	Q710-US02	Internal BeamFlex	I-PEX	3	1.13	1.87	LTE Ant.

Note 1:

Single-carrier:

Both Port 1 and Port 2 could transmit/receive simultaneously.

Multi-carrier and/or CA:

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

Note 2:

The above information was declared by manufacturer.

1.4 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

<Single-carrier>

FCC Rule	System	Bandwidth	Type of Modulation	Maximum EIRP (dBm/10MHz)	EIRP (W)	Maximum EIRP (dBm/20MHz)	EIRP (W)	Frequency Stability	Emission Designator
Part 96	LTE Band 48	10MHz	QPSK	26.95	0.495	-	-	With in the authorized bands of operation	8M92G7D
			16QAM	26.91	0.491	-	-		8M94W7D
			64QAM	26.81	0.480	-	-		8M92W7D
		20MHz	QPSK	-	-	28.19	0.659		17M8G7D
			16QAM	-	-	28.27	0.671		17M8W7D
			64QAM	-	-	28.29	0.675		17M8W7D

<Multi-carrier and/or CA>

FCC Rule	System	Bandwidth	Type of Modulation	Maximum EIRP (dBm/20+20MHz)	EIRP (W)	Frequency Stability	Emission Designator
Part 96	LTE Band 48	20MHz+20MHz	QPSK	27.44	0.55	With in the authorized bands of operation	35M6G7D
			16QAM	27.40	0.55		35M6W7D
			64QAM	27.09	0.51		35M6W7D

1.5 Accessories

Accessories				
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**
1	Adapter	LEI	MU24-Y120200-A1	INPUT: 100-240Vac ~ 50/60Hz, 0.7A OUTPUT: 12Vdc, 2A
Others				
Wall-mounted rack*1				

1.6 Support Equipment

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Spectrum	Agilent	N9010A	N/A

1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part2, 96
- ANSI / TIA-603-E-2016
- ANSI C63.26-2015
- FCC KDB 971168 D01 v03r01
- FCC KDB 940660 D01 v01
- FCC KDB 412172 D01 v01r01
- FCC KDB 662911 D01 v02r01

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

1.8 Testing Location

Testing Location					
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973			
☐	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085			
Test Condition		**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
RF Conducted		TH01-HY	Lucke Hsieh	23~25°C / 60~62%	Dec. 21, 2018~ Feb. 20, 2019
Radiated Emission		03CH03-HY	Lucke Hsieh	25°C / 60%	Dec. 25, 2018~ Jan. 15, 2019

Test site Designation No. TW1190 with FCC.

Test site registered number IC 4086B-1 with Industry Canada.

2 Test Configuration of Equipment Under Test

2.1 Test Frequency

The EUT was tested in the following operating modes, unless otherwise stated:

Single-carrier			
Bandwidth (MHz)	**Bottom Channel (B) (MHz)**	**Middle Channel (M) (MHz)**	**Top Channel (T) (MHz)**
10	3555	3625	3695
20	3560	3625	3690

Multi-carrier and/or CA (Non-contiguous)			
Bandwidth (MHz)	**Bottom Channel (B) (MHz)**	**Middle Channel (M) (MHz)**	**Top Channel (T) (MHz)**
20+20	-	3560 + 3690	-

Multi-carrier and/or CA (Contiguous)			
Bandwidth (MHz)	**Bottom Channel (B) (MHz)**	**Middle Channel (M) (MHz)**	**Top Channel (T) (MHz)**
20+20	3560 + 3580	3615 + 3635	3670 + 3690

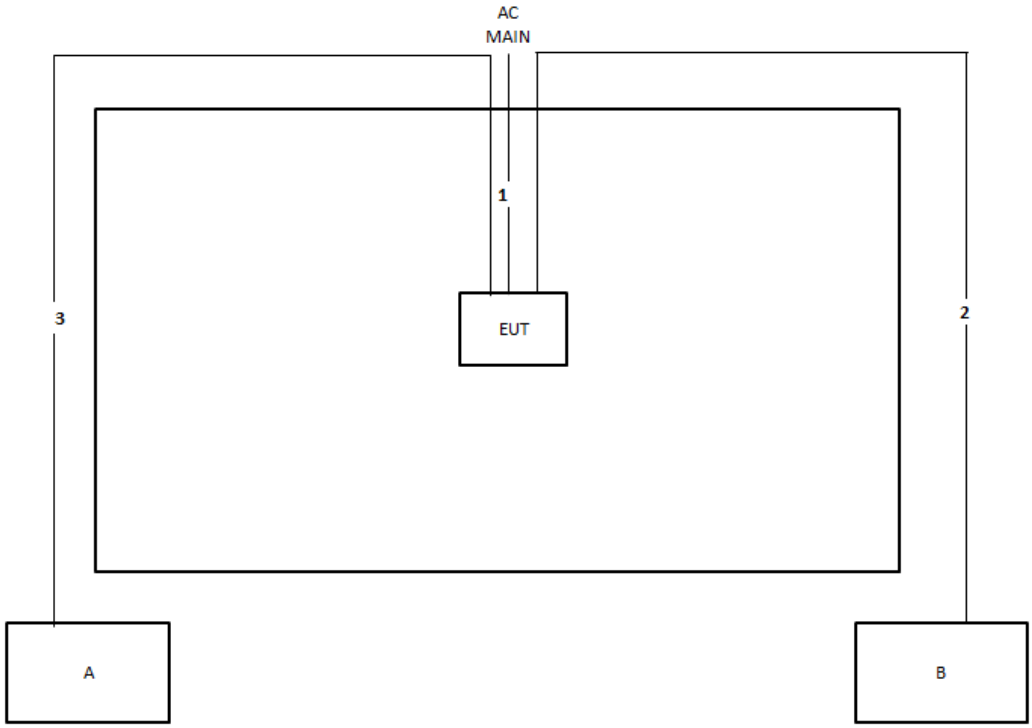
2.2 Test Mode

Test Item	Bandwidth (MHz)	Tested Frequency (MHz)	Mode
Conducted Output Power	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
Maximum Effective Isotropic Radiated Power (EIRP)	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
Maximum Power Spectral Density (PSD)	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
Reception limits	10,20, 20+20	M	-
Peak-to-average power ratio	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
99% OBW and 26dB Bandwidth	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
3.5 GHz Emissions and Interference Limits	10,20, 20+20	B,M,T	QPSK,16-QAM,64-QAM
Field Strength of Spurious Radiation	20, 20+20	B,M,T	64-QAM
Frequency Stability for Temperature & Voltage	10,20, 20+20	B, T	QPSK,16-QAM,64-QAM

Note 1:
B: Bottom
M: Middle
T: Top

Note 2:
For Field Strength of Spurious Radiation test:
<Below 1GHz>
The EUT can be placed in Y-axis and Z-axis.
EUT Z axis has been evaluated to be the worst case at Field Strength of Spurious Radiation<Above 1GHz>; thus, the measurement will follow this same test configuration.
<Above 1GHz>
The EUT can be placed in Y-axis and Z-axis. After evaluating,
“Z axis” generated the worst test result, So the measurement will follow this same test configuration.

2.3 Test Setup Diagram



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RF cable	No	10m
3	RJ-45 cable	No	10m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 1 dB and a 20dB attenuator.

Example:

Offset (dB) = RF cable loss (dB) + attenuator factor (dB).

= 1 + 20 = 21 (dB)

For transmission duty cycle < 98% and setting sweep trigger to free run:

When the EUT cannot be configured to transmit at full-power on a continuous basis (i.e., duty cycle < 98%) and the instrumentation cannot be configured to measure only during active full-power transmissions, then set sweep trigger to free run and add 10 log (1/duty cycle) to the measured power level if the EUT duty cycle is constant (i.e., duty cycle variations are less than or equal to ±2%).

Example:

Add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25%.

3 Test Result

3.1 Conducted Output Power

3.1.1 Description of the Conducted Output Power measurement

The EUT shall be set at maximum power through commands provided by manufacturer. The measured power in the radio frequency at the transmitter output terminals shall be reported.

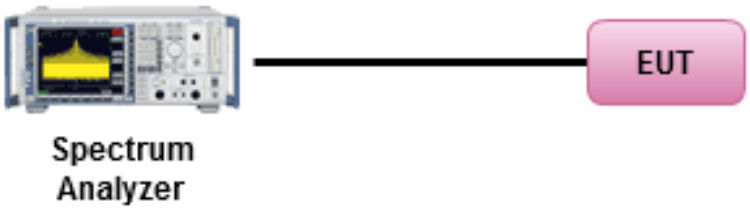
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. Connect the transmitter output port of EUT to the spectrum analyzer.
2. Set EUT to transmit at maximum output power.
3. Select lowest, middle, and highest channels for each modulation.
4. Measure the maximum power at RF output terminals .

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Refer as Appendix A

3.2 Maximum Effective Isotropic Radiated Power (EIRP)

3.2.1 Description of the Maximum Effective Isotropic Radiated Power measurement

The EUT shall be set at maximum power through commands provided by manufacturer, and the the EIRP limit shall apply to any 10 MHz portion of the bandwidth.The EIRP of category A CBSD shall be limited to 30dBm/10MHz, and the EIRP of category B CBSD shall be limited to 47dBm/10MHz. According to FCC KDB 940660 D01 v01

Power Approach, the EIRP can be determined from conducted output power.

EIRP = $P_T + G_T – L_C$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

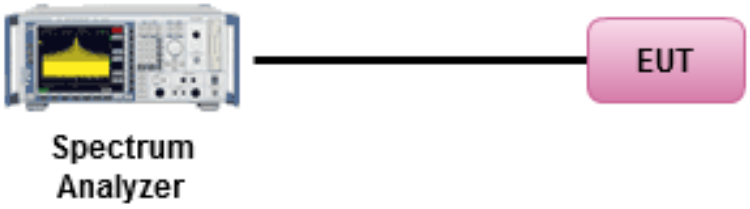
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The testing follows Section 5.2 of ANSI C63.26-2015.
2. Connect the transmitter output port of EUT to the spectrum analyzer.
3. Set EUT to transmit at maximum output power.
4. Select lowest, middle, and highest channels for each modulation.
5. Measure the maximum power in any 10 MHz portion of the bandwidth at RF output terminals.
6. Determining EIRP by conducted RF output power plus transmitting antenna gain.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Effective Isotropic Radiated Power

Refer as Appendix B

3.3 Maximum Power Spectral Density (PSD)

3.3.1 Description of the Maximum Powe Spectral Density Measurement

The maximum power spectral density measurements, where the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission. To perform this measurement, the EUT must be configured to transmit continuously at maximum power. The PSD of category A CBSD shall be limited to 20dBm/MHz, and the EIRP of category B CBSD shall be limited to 37dBm/MHz.

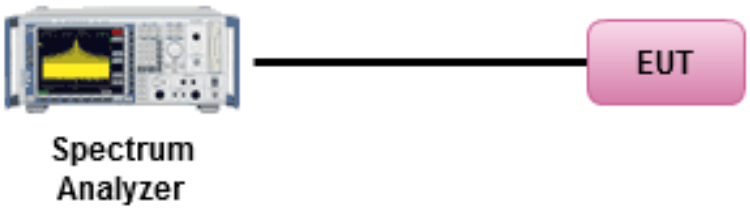
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows Section 5.2 of ANSI C63.26-2015.
2. Connect the transmitter output port of EUT to the spectrum analyzer.
3. Set EUT to transmit at maximum output power.
4. Select lowest, middle, and highest channels for each modulation.
5. Measure the maximum PSD at RF output terminals .

3.3.4 Test Setup



3.3.5 Test Result of Maximum Power spectral density

Refer as Appendix C

3.4 Reception limits

3.4.1 Description of the Receptiont limits Measurement

Priority Access Licensees must accept adjacent channel and in-band blocking interference (3550 and 3700 MHz) up to a power spectral density level not to exceed −40 dBm at receive antenna ports with greater than 99% probability when integrated over a 10 megahertz reference bandwidth.

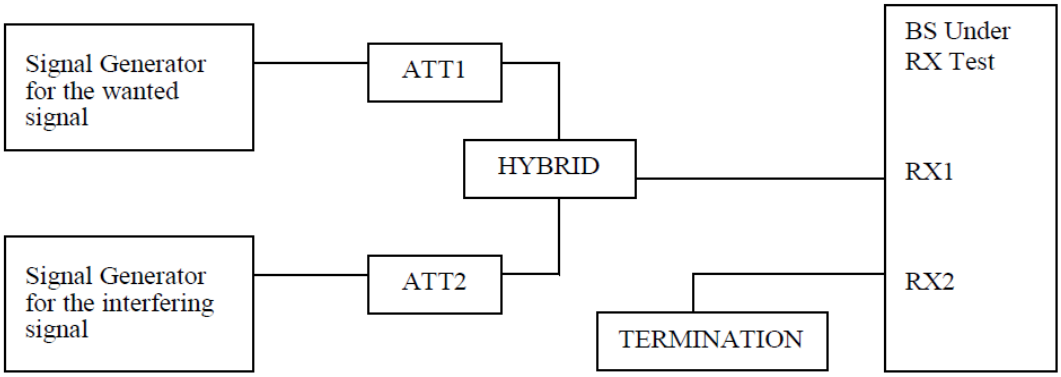
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. Refer to the figure in 3.4.4 for connecting EUT and signal generator.
   Generate the wanted signal and adjust the input level to specified (ex. -86.5dBm) power level.
2. Select lowest, middle, and highest channels for each modulation.
3. For adjacent channel interference, Set-up the interfering signals at the adjacent channel frequency and adjust the interfering signal level to -40dBm at receiver antenna ports.
4. For in-band blocking interference, Set-up the interfering signal in the range from 3550MHz to 3700MHz and adjust the interfering signal level to -40dBm at receiver antenna ports.
5. Measure and check the throughput of EUT greater than 99% probability.

3.4.4 Test Setup



3.4.5 Test Result of Reception limits

Refer as Appendix D

3.5 Peak-to-Average Power Ratio (PAPR)

3.5.1 Description of the Peak-to-Average Power Ratio Measurement

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

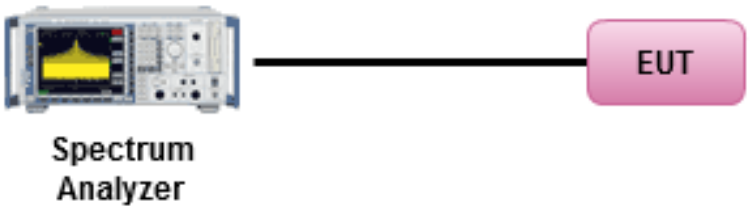
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The testing follows Section 5.2.6 of ANSI C63.26-2015.
2. Connect the transmitter output port of EUT to the spectrum analyzer.
3. Set EUT to transmit at maximum output power.
4. Select lowest, middle, and highest channels for each modulation.
5. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.

3.5.4 Test Setup



3.5.5 Test Result of Peak-to-Average Ratio

Refer as Appendix E

3.6 99% Occupied Bandwidth (OBW) and 26dB Bandwidth

3.6.1 Description of the 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

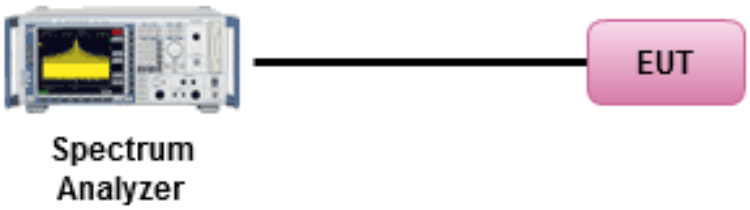
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. Connect the transmitter output port of EUT to the spectrum analyzer.
2. Set EUT to transmit at maximum output power.
3. Select lowest, middle, and highest channels for each modulation.
4. The setting of spectrum analyzer follows the FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.
5. Record the result of 99% occupied bandwidth and the 26dB bandwidth.

3.6.4 Test Setup



3.6.5 Test Result of Occupied Bandwidth and 26dB Bandwidth

Refer as Appendix F

3.7 3.5 GHz Emissions and Interference Limits

3.7.1 Description of the 3.5 GHz Emissions and Interference Limits Measurement

Confirm that the device satisfies the emission limits specified in Section 96.41(e) for all declared channel sizes, at the lowest and highest edges of the band, and in the middle of the band. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic. The limits for emission outside the fundamental are as follows.

• Within 0 MHz to 10 MHz above and below the assigned channel ≤ -13 dBm/MHz

• Greater than 10 MHz above and below the assigned channel ≤ -25 dBm/MHz

• Any emission below 3530 MHz and above 3720 MHz ≤ -40 dBm/MHz

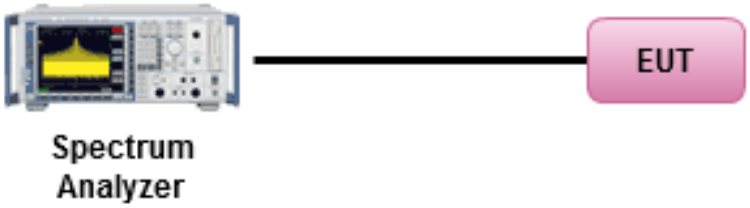
3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Procedures

1. Connect the transmitter output port of EUT to the spectrum analyzer.
2. Set EUT to transmit at maximum output power.
3. Select lowest, middle, and highest channels for each modulation.
4. The setting of spectrum analyzer follows FCC KDB 940660 D01 v01 Section 6.0.
5. Note that unwanted emissions for CBSDs are relative to the authorized channel

3.7.4 Test Setup



3.7.5 Test Result (Plots) of Conducted Band Edge

Refer as Appendix G

3.8 Field Strength of Spurious Radiation

3.8.1 Description of the Field Strength of Spurious Radiated Measurement

Confirm that the radiated emission satisfies the limits specified in Section 96.41(e) for all declared channel sizes, at the lowest and highest edges of the band, and in the middle of the band. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic. The limits for emission outside the fundamental are as follows.

• Within 0 MHz to 10 MHz above and below the assigned channel ≤ -13 dBm/MHz (55.2 dBuV/m at 3m)

• Greater than 10 MHz above and below the assigned channel ≤ -25 dBm/MHz (82.2 dBuV/m at 3m)

• Any emission below 3530 MHz and above 3720 MHz ≤ -40 dBm/MHz (55.2 dBuV/m at 3m)

3.8.2 Measuring Instruments

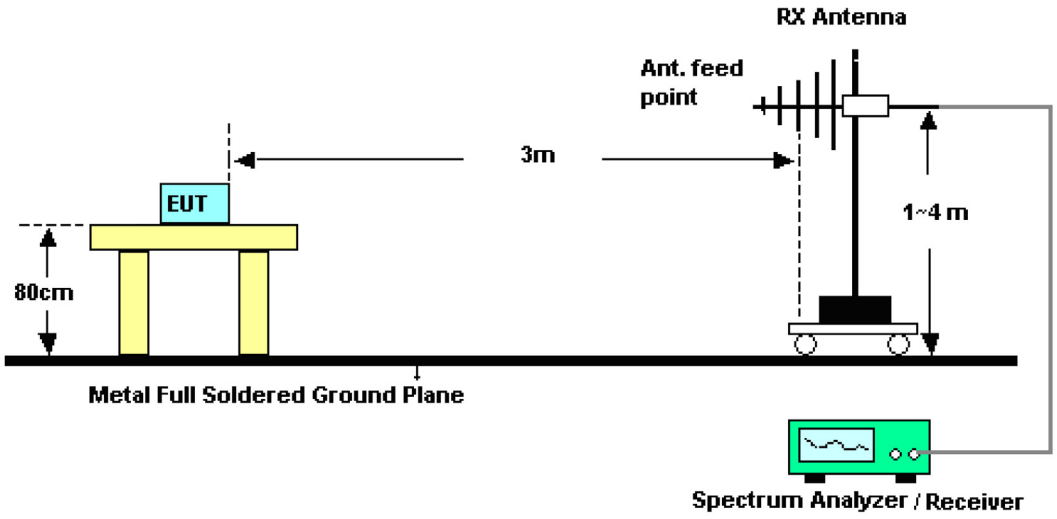
The measuring equipment is listed in the section 4 of this test report.

3.8.3 Test Procedures

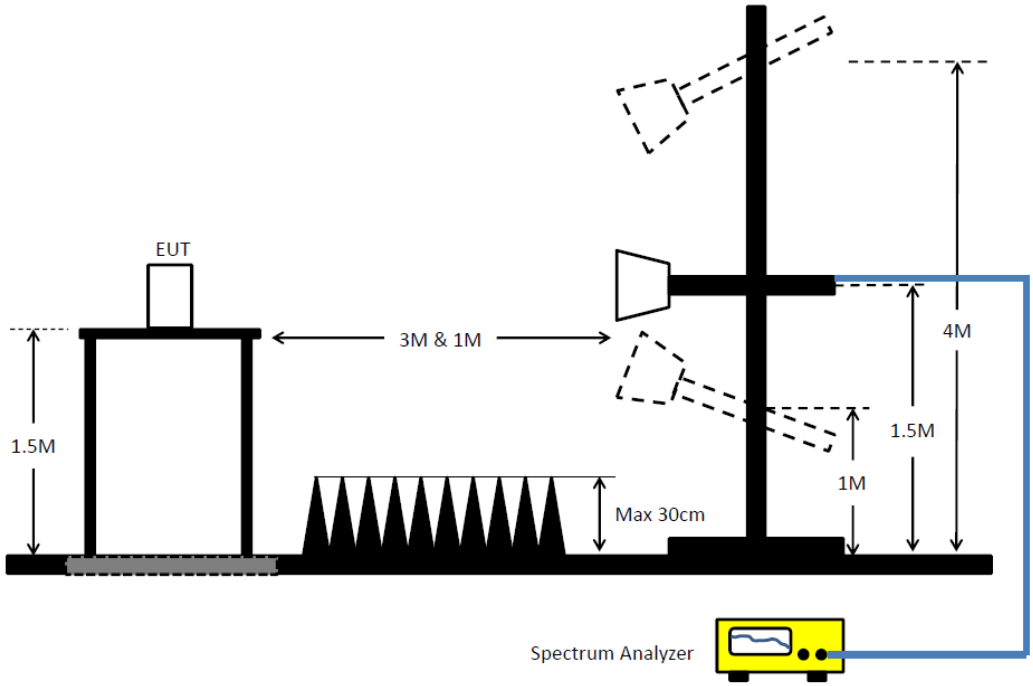
1. The testing follows Section 5.7 of ANSI C63.26-2015.
2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.8.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.8.5 Test Result of Field Strength of Spurious Radiated

Refer as Appendix H

3.9 Frequency Stability for Temperature & Voltage

3.9.1 Description of the Frequency Stability for Temperature & Voltage Measurement

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in Section 2.1055. And ensure that the fundamental emission stays within the authorized frequency block.

3.9.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

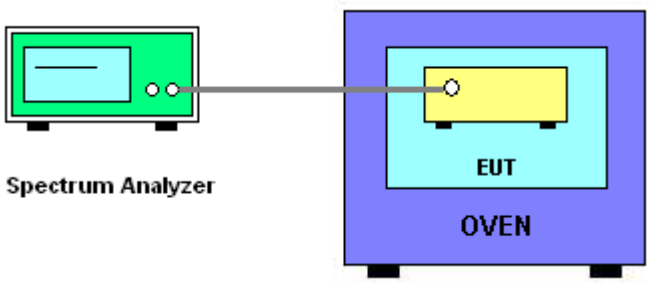
3.9.3 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 D01 v03r01 Section 9.0
2. The EUT was set up in the thermal chamber and connected to the spectrum analyzer.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in -30°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
5. Frequency measurements shall be made at intervals of not more than 10° centigrade through the range.

3.9.4 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.
2. The EUT was placed in a temperature chamber at 25±5° C and connected to the spectrum analyzer.
3. The power supply voltage to the EUT was varied from 85 to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

3.9.5 Test Setup



3.9.6 Test Result of Temperature and Voltage Variation

Refer as Appendix I

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Signal analyzer	Agilent	N9010A	MY52220519	10kHz~44GHz	Mar. 20, 2018	Mar. 19, 2019	Radiation (03CH03-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Oct. 30, 2018	Oct. 29, 2019	Radiation (03CH03-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	Oct. 30, 2018	Oct. 29, 2019	Radiation (03CH03-HY)
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	Apr. 23, 2018	Apr. 19, 2019	Radiation (03CH03-HY)
Microwave System Preamplifier	KEYSIGHT	83017A	MY53270196	1GHz ~ 26.5GHz	Sep. 05, 2018	Sep. 04, 2019	Radiation (03CH03-HY)
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	Aug. 24, 2018	Aug. 23, 2019	Radiation (03CH03-HY)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH03-HY)
Signal analyzer	Agilent	N9010A	MY52220519	10kHz~44GHz	Mar. 20, 2018	Mar. 19, 2019	Conducted (TH01-HY)
Temp. and Humidity Chamber	GIANT FORCE	GTH-225-40-CP-AR	MAA1311-008	-40~100℃ 10~98%RH	May 30, 2018	May 29, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz –26.5 GHz	Oct. 03, 2018	Oct. 02, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 03, 2018	Oct. 02, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 03, 2018	Oct. 02, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 03, 2018	Oct. 02, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 03, 2018	Oct. 02, 2019	Conducted (TH01-HY)
Power Sensor	Agilent	U2021XA	MY54320013	50MHz~18GHz	Aug. 13, 2018	Aug. 12, 2019	Conducted (TH01-HY)
MW Analog Signal Generator	Keysight	N5183A	MY50142965	100kHz~20GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-HY)
Vector Signal Generator	Keysight	N5182B	MY53052408	9kHz~6GHz	Jan. 02, 2018	Jan. 01, 2019	Conducted (TH01-HY)
Vector Signal Generator	Keysight	N5182B	MY53052408	9kHz~6GHz	Jan. 04, 2019	Jan. 03, 2020	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

<Single-carrier>

Summary

Mode	Power (dBm)	Power (W)
Band 48	-	-
Band 48_LTE_10MHz_(QPSK)_2TX	24.85	0.305
Band 48_LTE_10MHz_(16QAM)_2TX	24.81	0.303
Band 48_LTE_10MHz_(64QAM)_2TX	24.71	0.296
Band 48_LTE_20MHz_(QPSK)_2TX	26.09	0.406
Band 48_LTE_20MHz_(16QAM)_2TX	26.17	0.414
Band 48_LTE_20MHz_(64QAM)_2TX	26.19	0.416

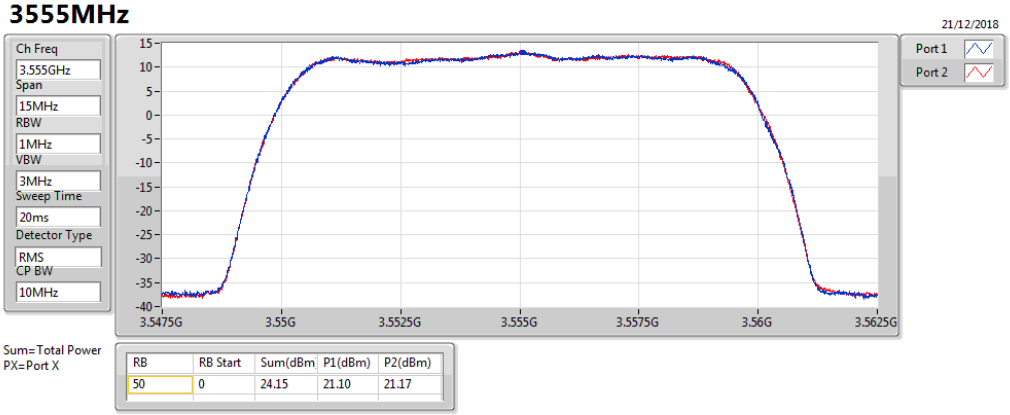
Result

Mode	Setting	Result	RB	RB Start	DG (dBi)	P1 (dBm)	P2 (dBm)	Power (dBm)	Power (W)
LTE_10MHz_(QPSK)_2TX		-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.10	21.17	24.15	0.260
3625MHz	22	Pass	50	0	2.10	21.23	21.19	24.22	0.264
3695MHz	22	Pass	50	0	2.10	21.78	21.89	24.85	0.305
LTE_10MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.34	21.15	24.26	0.267
3625MHz	22	Pass	50	0	2.10	21.24	21.14	24.20	0.263
3695MHz	22	Pass	50	0	2.10	21.69	21.90	24.81	0.303
LTE_10MHz_(64QAM)_2TX		-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.30	20.88	24.11	0.258
3625MHz	22	Pass	50	0	2.10	21.06	21.09	24.09	0.256
3695MHz	22	Pass	50	0	2.10	21.60	21.80	24.71	0.296
LTE_20MHz_(QPSK)_2TX		-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	23.14	22.64	25.91	0.390
3625MHz	23.5	Pass	100	0	2.10	22.73	22.52	25.64	0.366
3690MHz	23.5	Pass	100	0	2.10	22.99	23.16	26.09	0.406
LTE_20MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	23.05	22.54	25.81	0.381
3625MHz	23.5	Pass	100	0	2.10	22.66	22.63	25.66	0.368
3690MHz	23.5	Pass	100	0	2.10	23.12	23.19	26.17	0.414
LTE_20MHz_(64QAM)_2TX		-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	22.90	22.62	25.77	0.378
3625MHz	23.5	Pass	100	0	2.10	22.67	22.47	25.58	0.361
3690MHz	23.5	Pass	100	0	2.10	23.19	23.17	26.19	0.416

DG = Directional Gain;**Port X** = Port X output power

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3555MHz

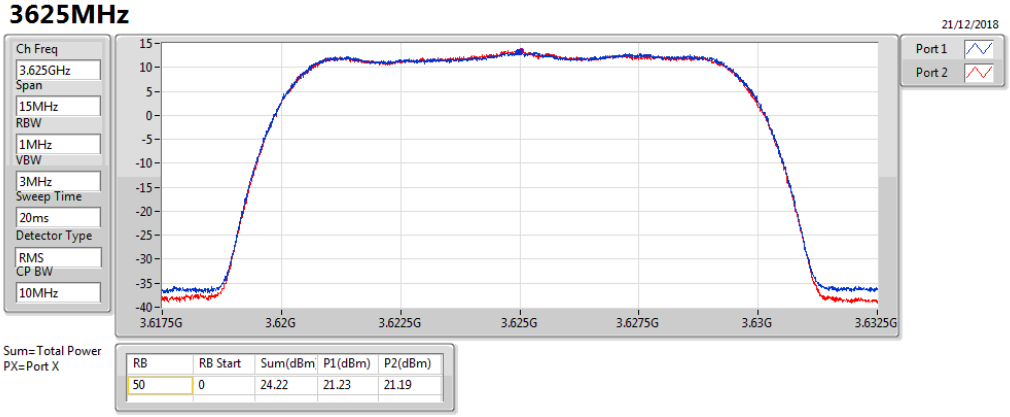


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.15	21.10	21.17

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3625MHz

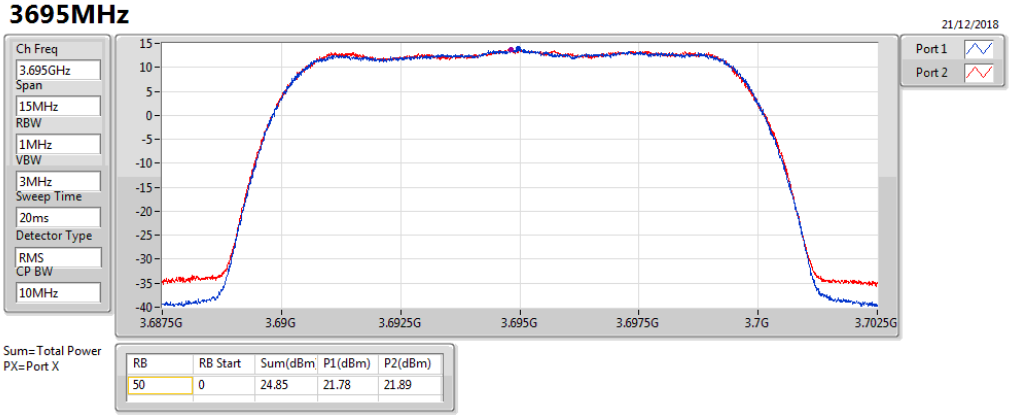


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.22	21.23	21.19

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3695MHz

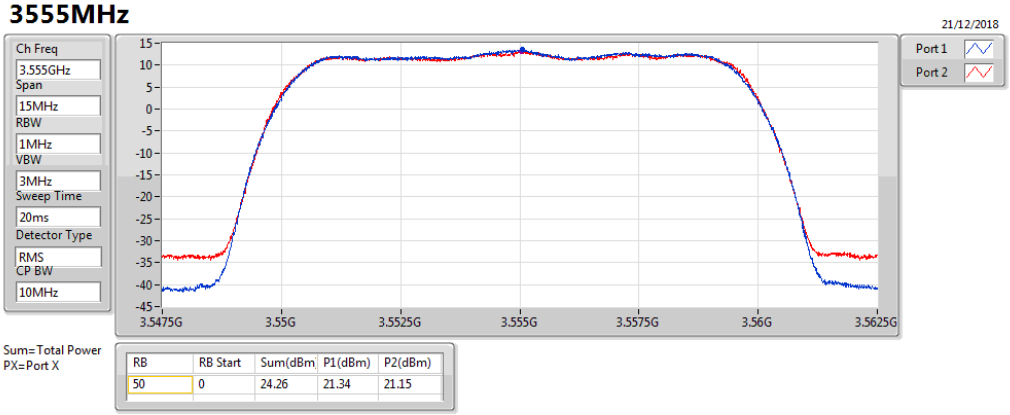


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.85	21.78	21.89

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3555MHz

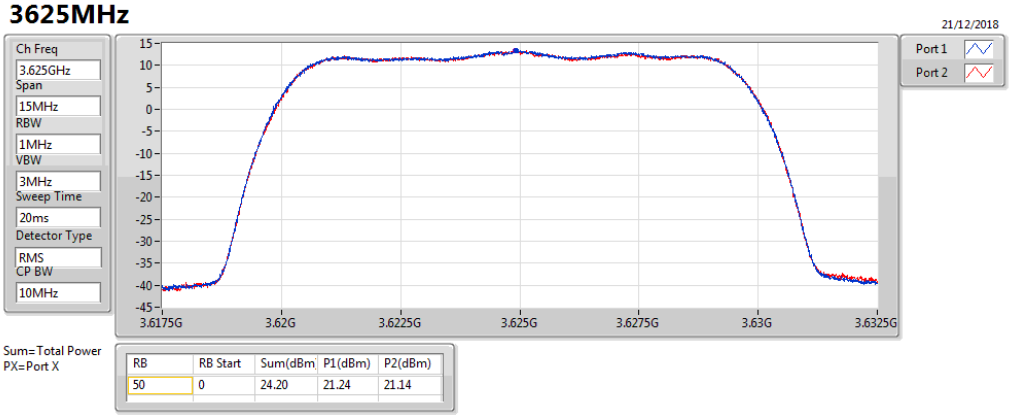


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.26	21.34	21.15

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3625MHz

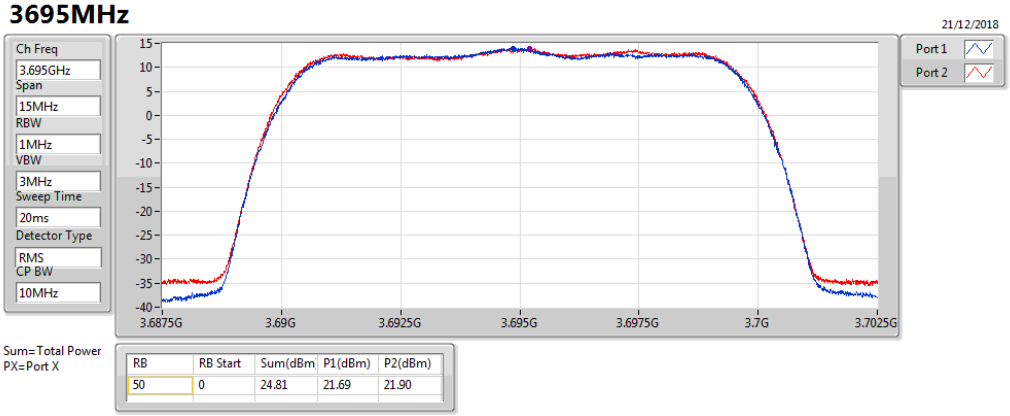


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.20	21.24	21.14

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3695MHz

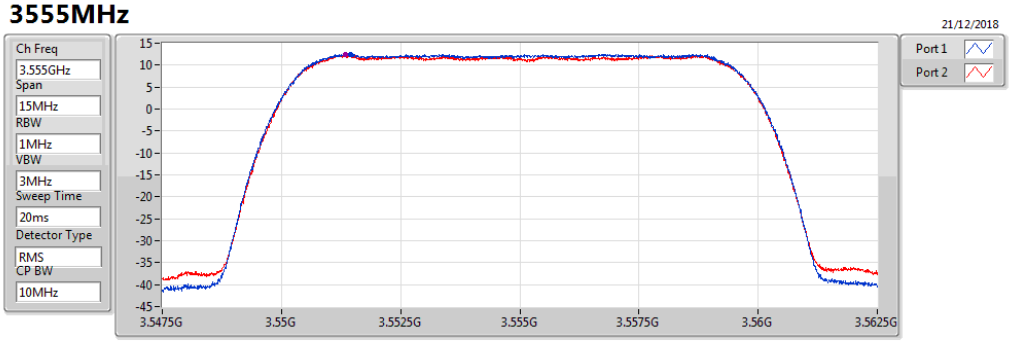


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.81	21.69	21.90

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3555MHz

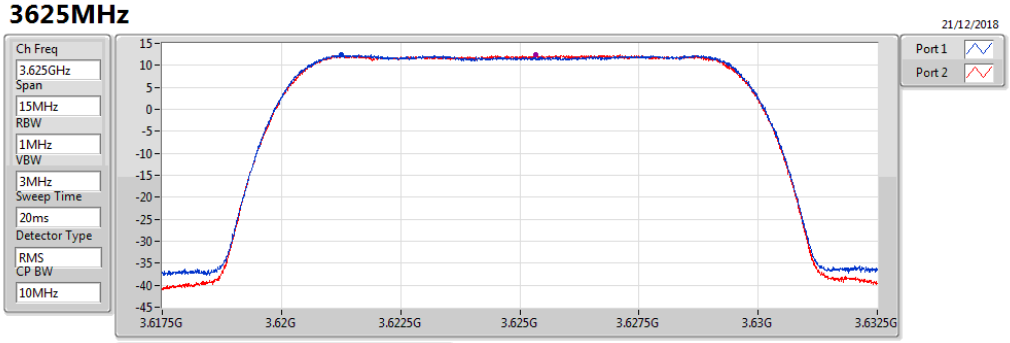


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.11	21.30	20.88

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3625MHz

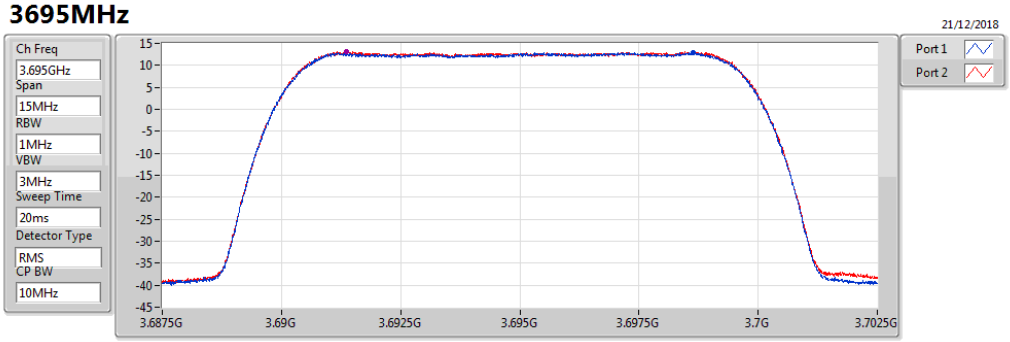


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.09	21.06	21.09

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3695MHz

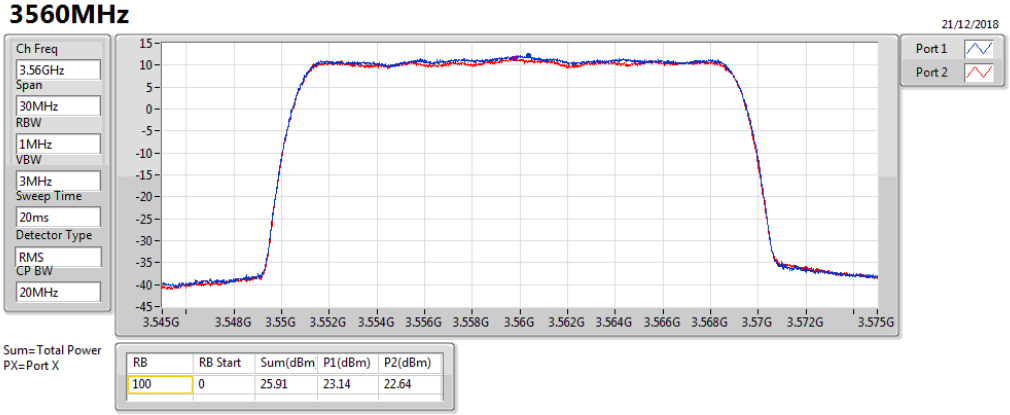


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.71	21.60	21.80

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3560MHz

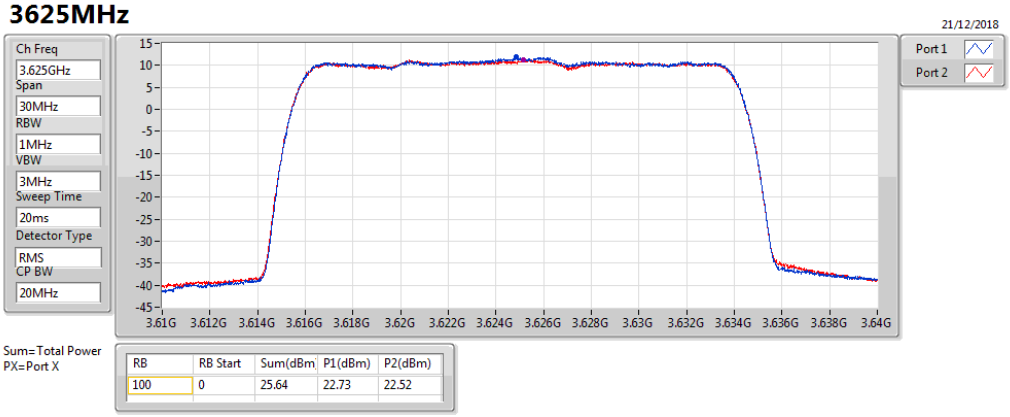


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.91	23.14	22.64

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3625MHz

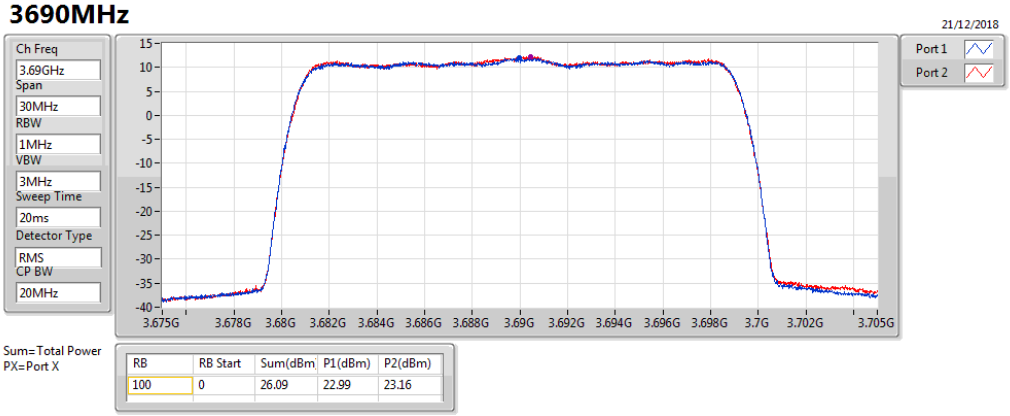


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.64	22.73	22.52

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3690MHz

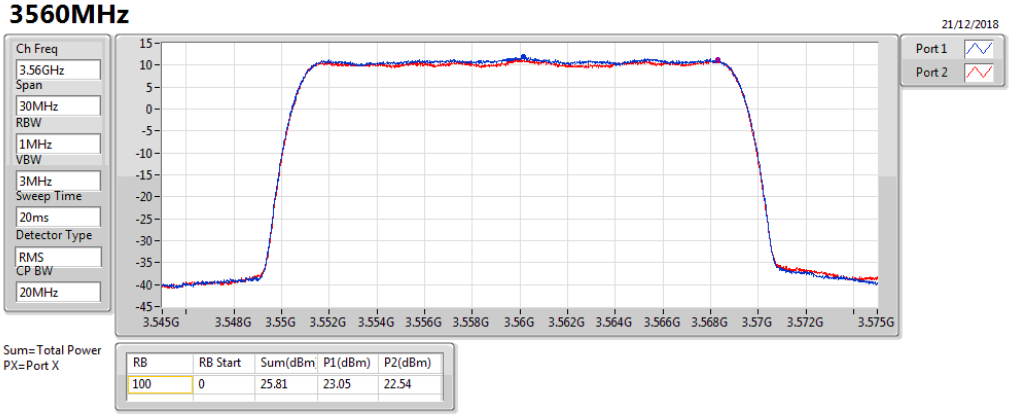


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	26.09	22.99	23.16

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3560MHz

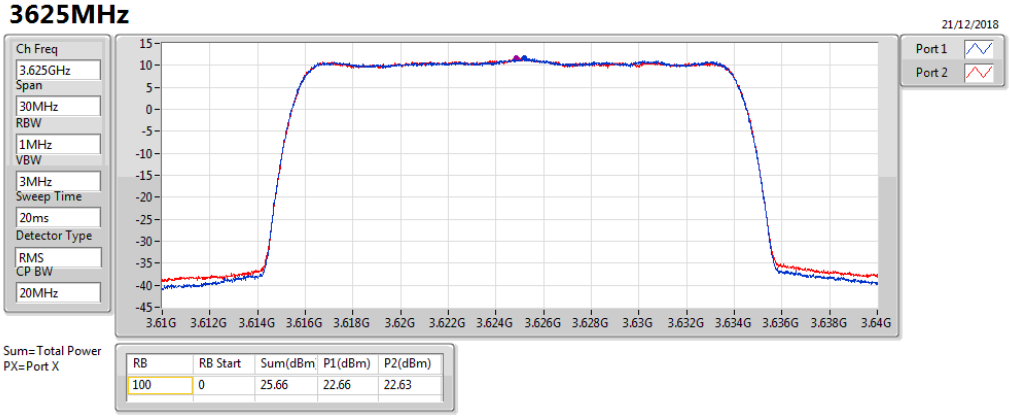


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.81	23.05	22.54

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3625MHz

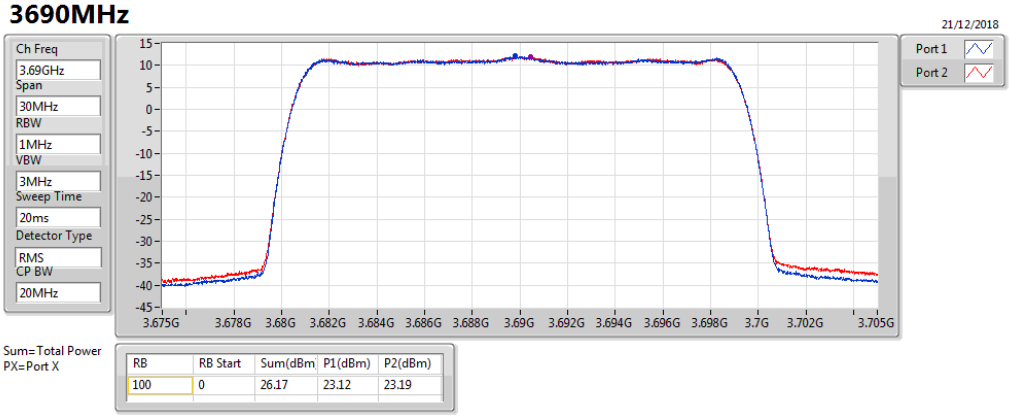


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.66	22.66	22.63

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3690MHz

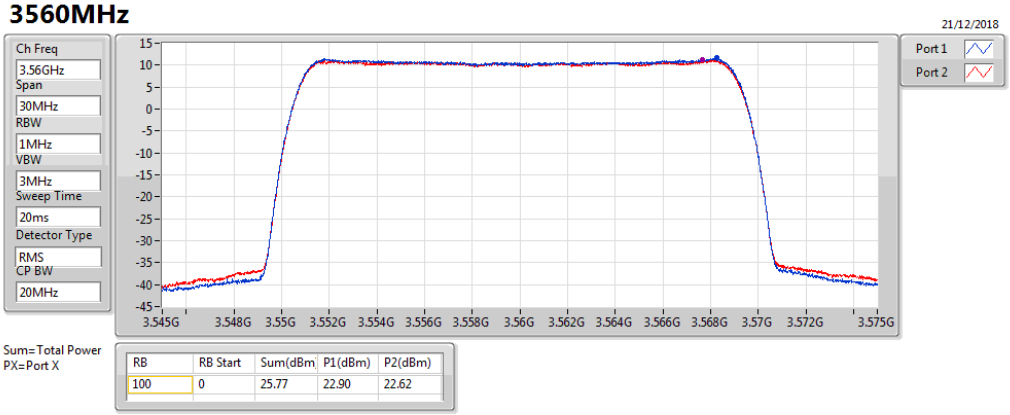


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	26.17	23.12	23.19

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3560MHz

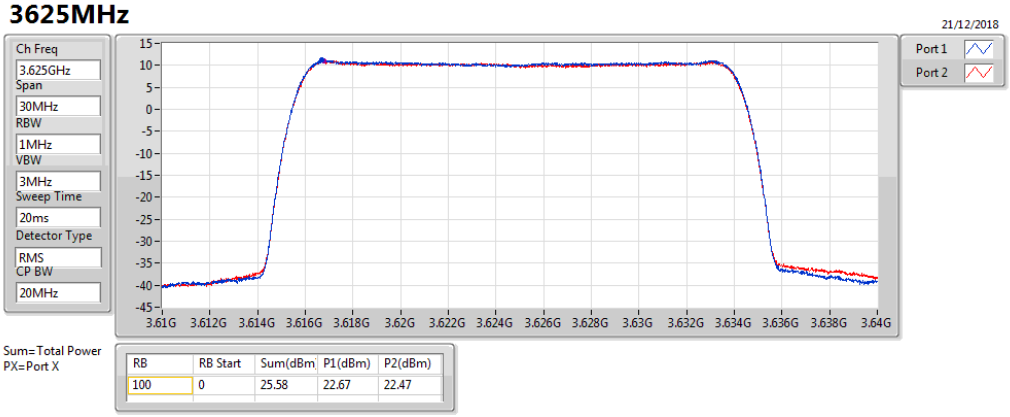


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.77	22.90	22.62

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3625MHz

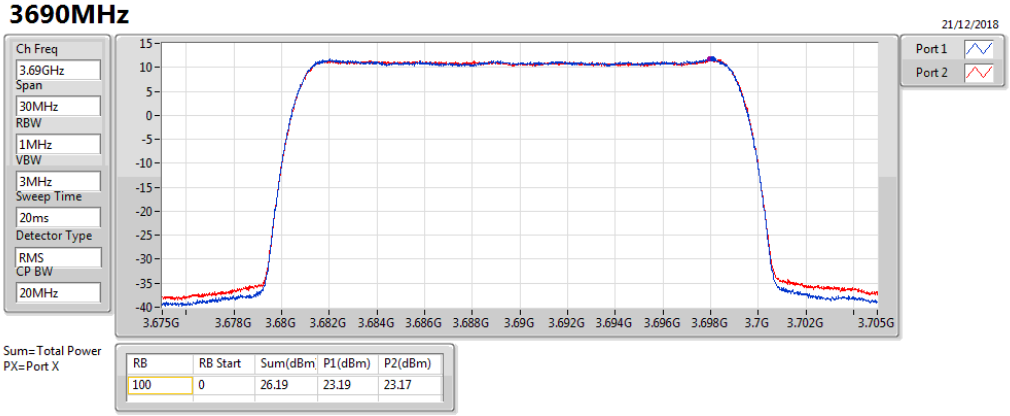


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.58	22.67	22.47

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3690MHz



Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	26.19	23.19	23.17

<Multi-carrier and/or CA>

Summary

Mode	Max Carrier Power (dBm)	Max Carrier Power (W)
Band 48	-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	25.19	0.33
Band 48_LTE_20MHz+20MHz_16QAM_4TX	25.15	0.33
Band 48_LTE_20MHz+20MHz_64QAM_4TX	24.84	0.30

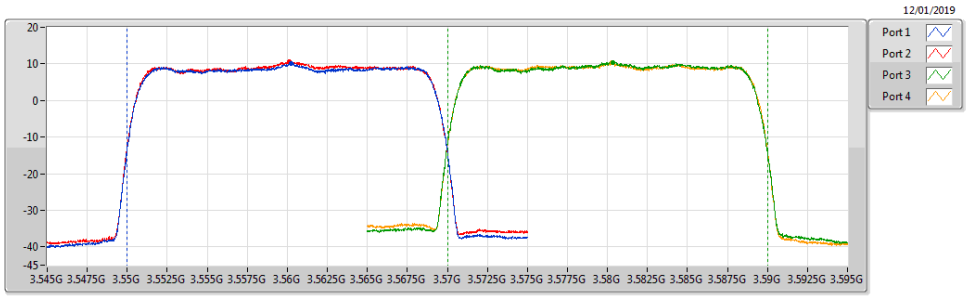
Result

Mode	Setting	Result	DG (dBi)	1Carrier Port 1 (dBm)	1Carrier Port 2 (dBm)	2Carrier Port 3 (dBm)	2Carrier Port 4 (dBm)	Max Carrier Power (dBm)	Max Carrier Power (W)
LTE_20MHz+20MHz_QPSK_4TX	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.77	21.18	21.31	21.27	24.30	0.27
P#3615MHz,#3635MHz	22	Pass	2.25	20.85	21.28	21.63	21.77	24.71	0.30
P#3670MHz,#3690MHz	22	Pass	2.25	21.29	21.63	22.30	22.06	25.19	0.33
P#3560MHz,#3690MHz	22	Pass	2.25	21.05	21.49	22.25	22.10	25.19	0.33
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.82	21.31	21.38	21.36	24.38	0.27
P#3615MHz,#3635MHz	22	Pass	2.25	20.72	21.08	21.59	21.68	24.65	0.29
P#3670MHz,#3690MHz	22	Pass	2.25	21.24	21.59	22.23	21.98	25.12	0.32
P#3560MHz,#3690MHz	22	Pass	2.25	20.80	21.51	22.25	22.03	25.15	0.33
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.96	21.42	21.45	21.44	24.46	0.28
P#3615MHz,#3635MHz	22	Pass	2.25	20.77	21.15	21.52	21.61	24.58	0.29
P#3670MHz,#3690MHz	22	Pass	2.25	21.11	21.47	21.90	21.58	24.75	0.30
P#3560MHz,#3690MHz	22	Pass	2.25	20.76	21.15	21.98	21.68	24.84	0.30

DG = Directional Gain; **Port n** = Port n output power
Note: 20MHz BW used dBm/20MHz measurement.

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

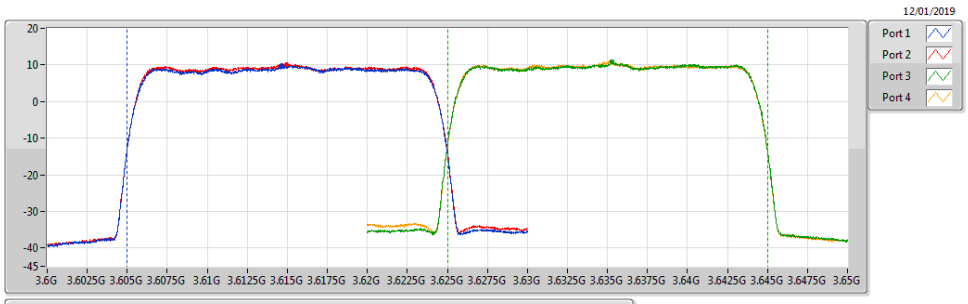
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.77	3.56G	30M	1M	3M	20m	RMS	20M	1
21.18	3.56G	30M	1M	3M	20m	RMS	20M	2
21.31	3.58G	30M	1M	3M	20m	RMS	20M	3
21.27	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.16								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

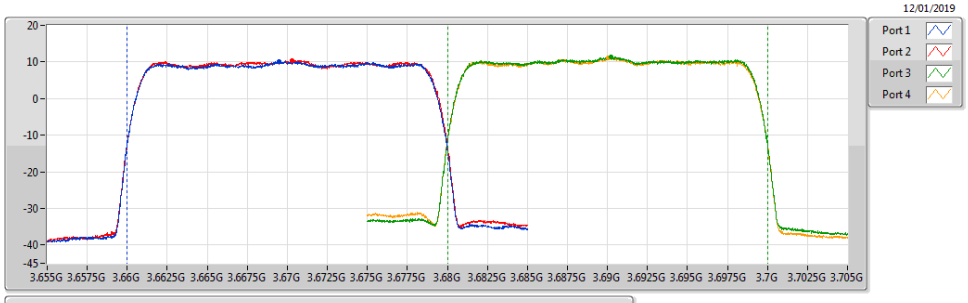
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.85	3.615G	30M	1M	3M	20m	RMS	20M	1
21.28	3.615G	30M	1M	3M	20m	RMS	20M	2
21.63	3.635G	30M	1M	3M	20m	RMS	20M	3
21.77	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.42								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

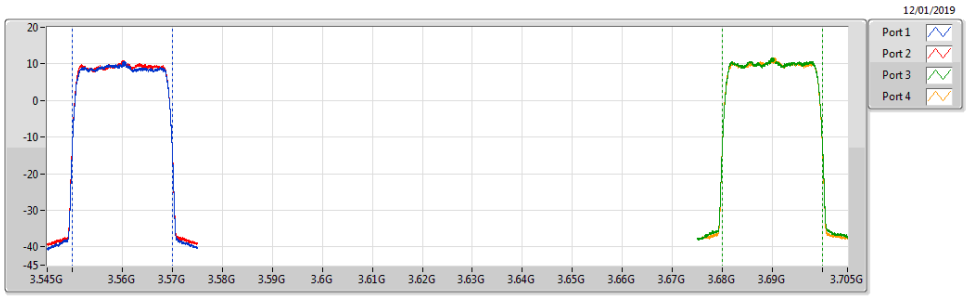
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.29	3.67G	30M	1M	3M	20m	RMS	20M	1
21.63	3.67G	30M	1M	3M	20m	RMS	20M	2
22.30	3.69G	30M	1M	3M	20m	RMS	20M	3
22.06	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.86								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

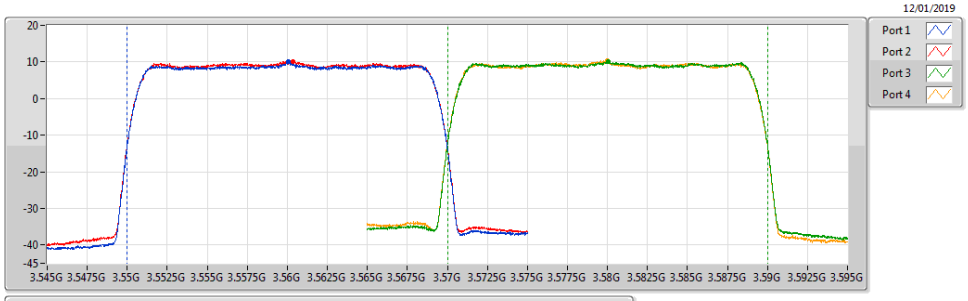
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.05	3.56G	30M	1M	3M	20m	RMS	20M	1
21.49	3.56G	30M	1M	3M	20m	RMS	20M	2
22.25	3.69G	30M	1M	3M	20m	RMS	20M	3
22.10	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.77								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

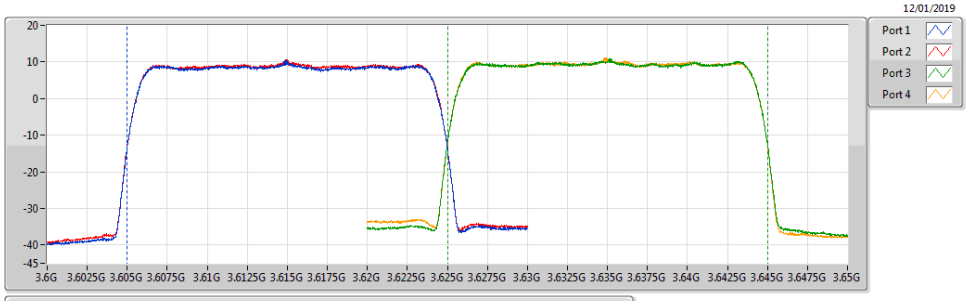
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.82	3.56G	30M	1M	3M	20m	RMS	20M	1
21.31	3.56G	30M	1M	3M	20m	RMS	20M	2
21.38	3.58G	30M	1M	3M	20m	RMS	20M	3
21.36	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.24								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

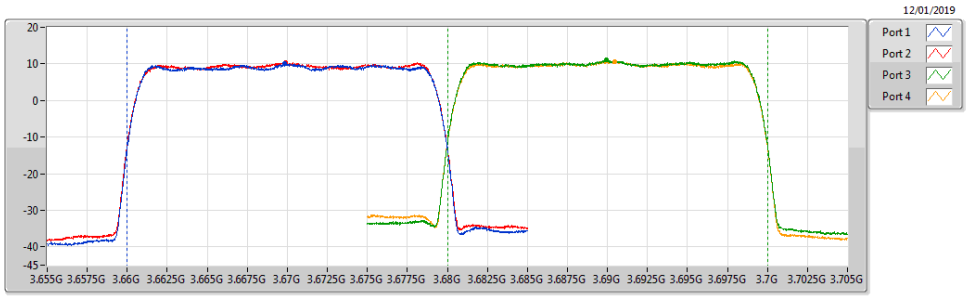
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.72	3.615G	30M	1M	3M	20m	RMS	20M	1
21.08	3.615G	30M	1M	3M	20m	RMS	20M	2
21.59	3.635G	30M	1M	3M	20m	RMS	20M	3
21.68	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.31								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

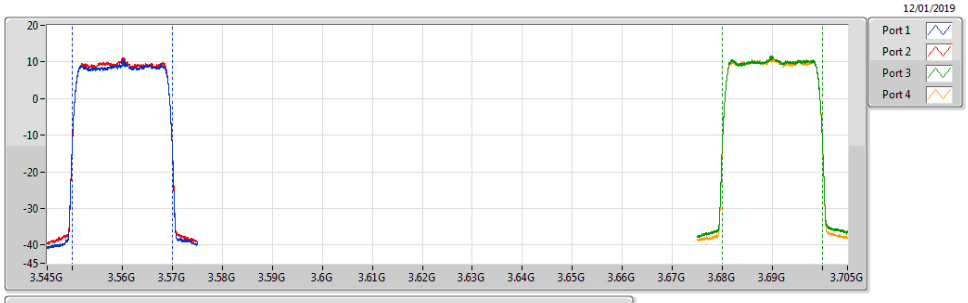
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.24	3.67G	30M	1M	3M	20m	RMS	20M	1
21.59	3.67G	30M	1M	3M	20m	RMS	20M	2
22.23	3.69G	30M	1M	3M	20m	RMS	20M	3
21.98	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.80								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

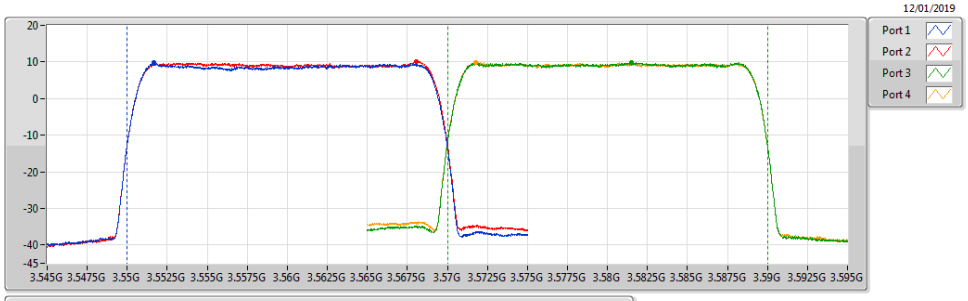
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.80	3.56G	30M	1M	3M	20m	RMS	20M	1
21.51	3.56G	30M	1M	3M	20m	RMS	20M	2
22.25	3.69G	30M	1M	3M	20m	RMS	20M	3
22.03	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.70								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

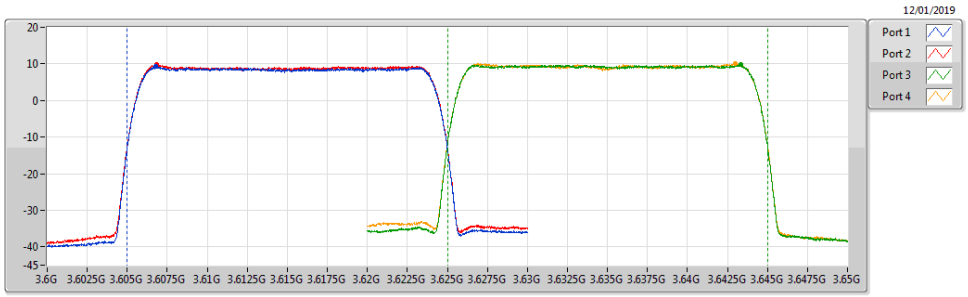
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.96	3.56G	30M	1M	3M	20m	RMS	20M	1
21.42	3.56G	30M	1M	3M	20m	RMS	20M	2
21.45	3.58G	30M	1M	3M	20m	RMS	20M	3
21.44	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.34								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

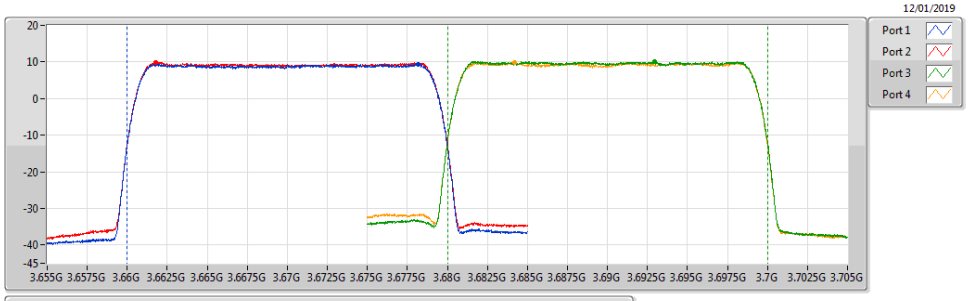
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.77	3.615G	30M	1M	3M	20m	RMS	20M	1
21.15	3.615G	30M	1M	3M	20m	RMS	20M	2
21.52	3.635G	30M	1M	3M	20m	RMS	20M	3
21.61	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.30								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

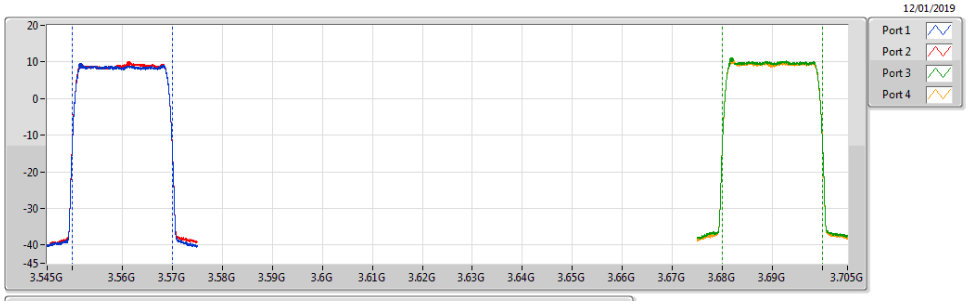
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.11	3.67G	30M	1M	3M	20m	RMS	20M	1
21.47	3.67G	30M	1M	3M	20m	RMS	20M	2
21.90	3.69G	30M	1M	3M	20m	RMS	20M	3
21.58	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.54								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.76	3.56G	30M	1M	3M	20m	RMS	20M	1
21.15	3.56G	30M	1M	3M	20m	RMS	20M	2
21.98	3.69G	30M	1M	3M	20m	RMS	20M	3
21.68	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.44								

<Single-carrier>

Summary

Mode	Power (dBm)	Power (W)	EIRP (dBm)	EIRP (W)
Band 48	-	-	-	-
Band 48_LTE_10MHz_(QPSK)_2TX	24.85	0.305	26.95	0.495
Band 48_LTE_10MHz_(16QAM)_2TX	24.81	0.303	26.91	0.491
Band 48_LTE_10MHz_(64QAM)_2TX	24.71	0.296	26.81	0.480
Band 48_LTE_20MHz_(QPSK)_2TX	26.09	0.406	28.19	0.659
Band 48_LTE_20MHz_(16QAM)_2TX	26.17	0.414	28.27	0.671
Band 48_LTE_20MHz_(64QAM)_2TX	26.19	0.416	28.29	0.675

Result

Mode	Setting	Result	RB	RB Start	DG (dBi)	P1 (dBm)	P2 (dBm)	Power (dBm)	Power (W)	EIRP (dBm)	EIRP (W)	EIRP Lim. (W)
LTE_10MHz_(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.10	21.17	24.15	0.260	26.25	0.422	1
3625MHz	22	Pass	50	0	2.10	21.23	21.19	24.22	0.264	26.32	0.429	1
3695MHz	22	Pass	50	0	2.10	21.78	21.89	24.85	0.305	26.95	0.495	1
LTE_10MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.34	21.15	24.26	0.267	26.36	0.433	1
3625MHz	22	Pass	50	0	2.10	21.24	21.14	24.20	0.263	26.30	0.427	1
3695MHz	22	Pass	50	0	2.10	21.69	21.90	24.81	0.303	26.91	0.491	1
LTE_10MHz_(64QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3555MHz	22	Pass	50	0	2.10	21.30	20.88	24.11	0.258	26.21	0.418	1
3625MHz	22	Pass	50	0	2.10	21.06	21.09	24.09	0.256	26.19	0.416	1
3695MHz	22	Pass	50	0	2.10	21.60	21.80	24.71	0.296	26.81	0.480	1
LTE_20MHz_(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	23.14	22.64	25.91	0.390	28.01	0.632	Inf
3625MHz	23.5	Pass	100	0	2.10	22.73	22.52	25.64	0.366	27.74	0.594	Inf
3690MHz	23.5	Pass	100	0	2.10	22.99	23.16	26.09	0.406	28.19	0.659	Inf
LTE_20MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	23.05	22.54	25.81	0.381	27.91	0.618	Inf
3625MHz	23.5	Pass	100	0	2.10	22.66	22.63	25.66	0.368	27.76	0.597	Inf
3690MHz	23.5	Pass	100	0	2.10	23.12	23.19	26.17	0.414	28.27	0.671	Inf
LTE_20MHz_(64QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	22.90	22.62	25.77	0.378	27.87	0.612	Inf
3625MHz	23.5	Pass	100	0	2.10	22.67	22.47	25.58	0.361	27.68	0.586	Inf
3690MHz	23.5	Pass	100	0	2.10	23.19	23.17	26.19	0.416	28.29	0.675	Inf

DG = Directional Gain;**Port X** = Port X output power

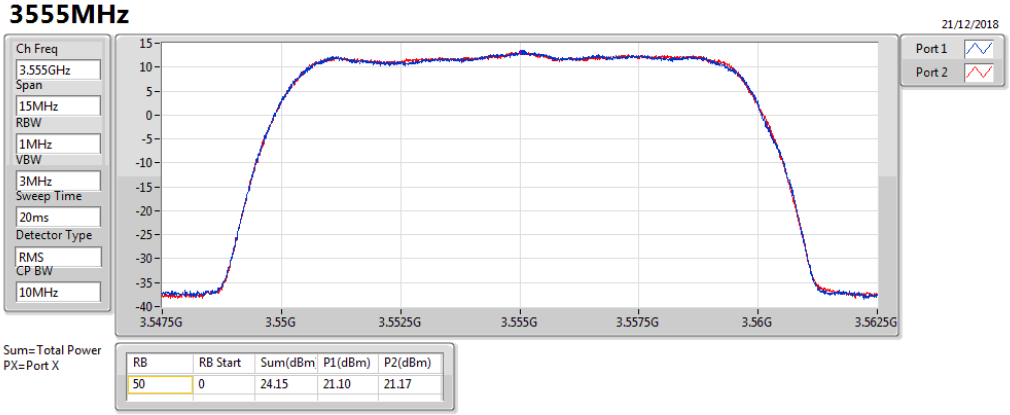
Note:

10MHz BW used dBm/10MHz measurement.

20MHz BW used dBm/20MHz measurement.

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3555MHz

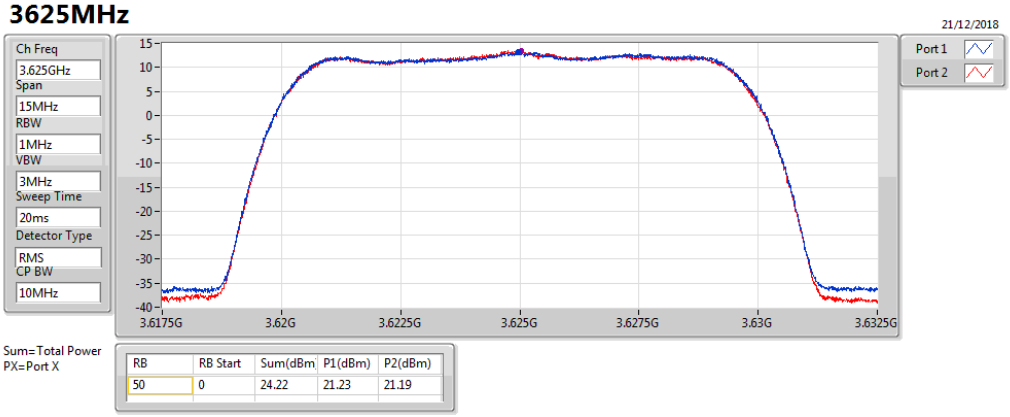


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.15	21.10	21.17

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3625MHz

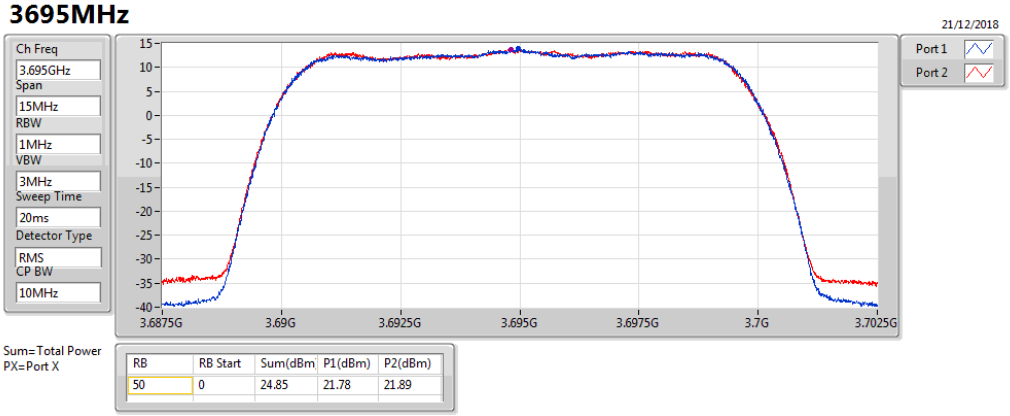


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.22	21.23	21.19

Band 48_LTE_10MHz_(QPSK)_2TX **AV Power**

3695MHz

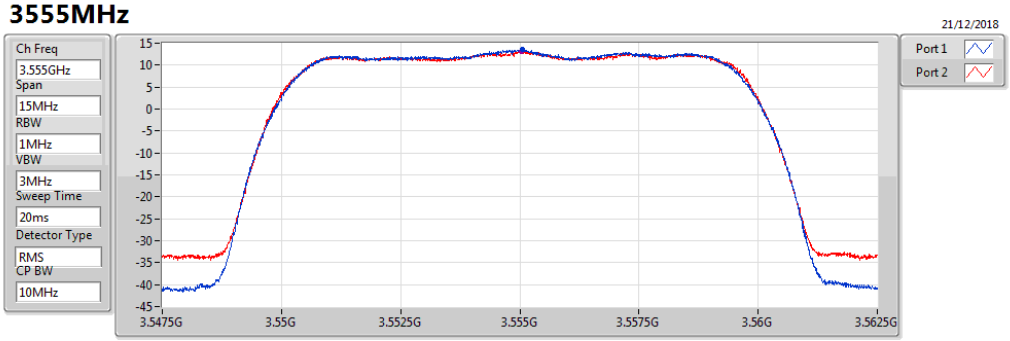


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.85	21.78	21.89

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3555MHz

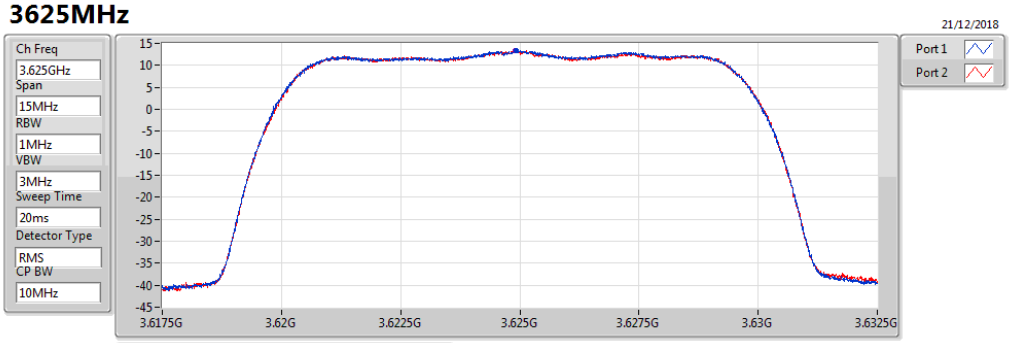


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.26	21.34	21.15

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3625MHz

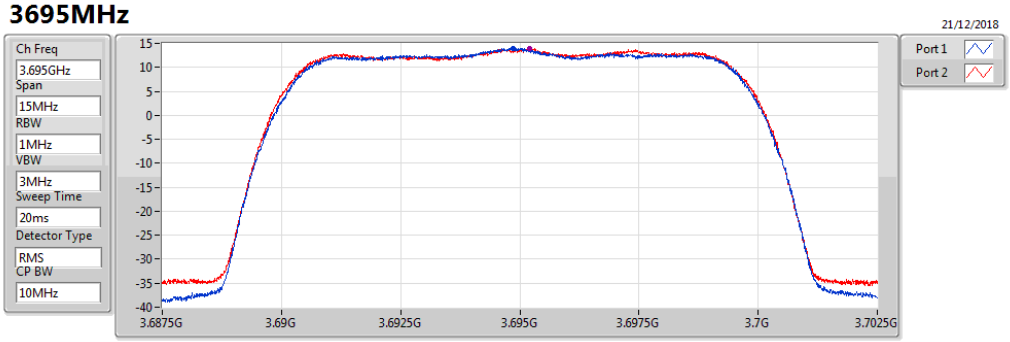


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.20	21.24	21.14

Band 48_LTE_10MHz_(16QAM)_2TX **AV Power**

3695MHz

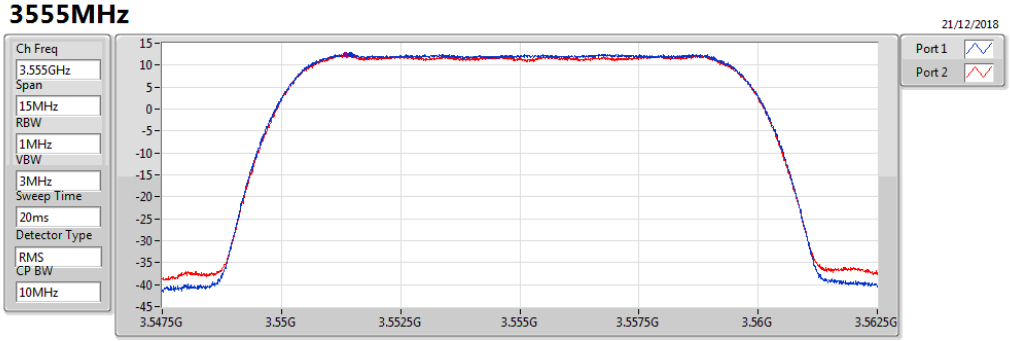


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
50	0	24.81	21.69	21.90

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3555MHz

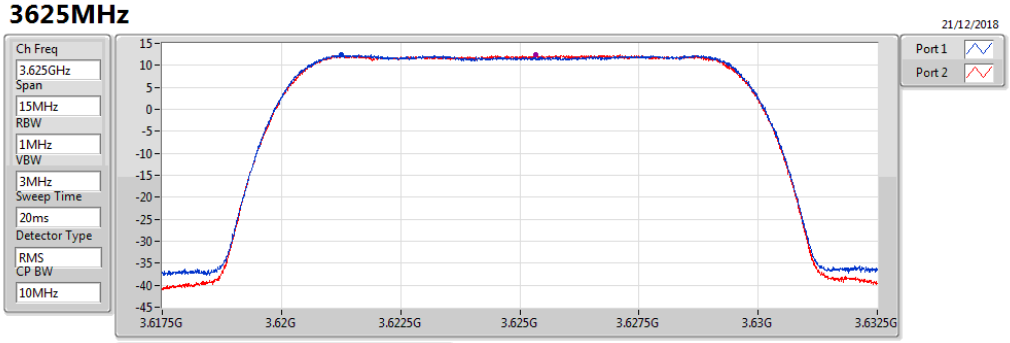


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.11	21.30	20.88

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3625MHz

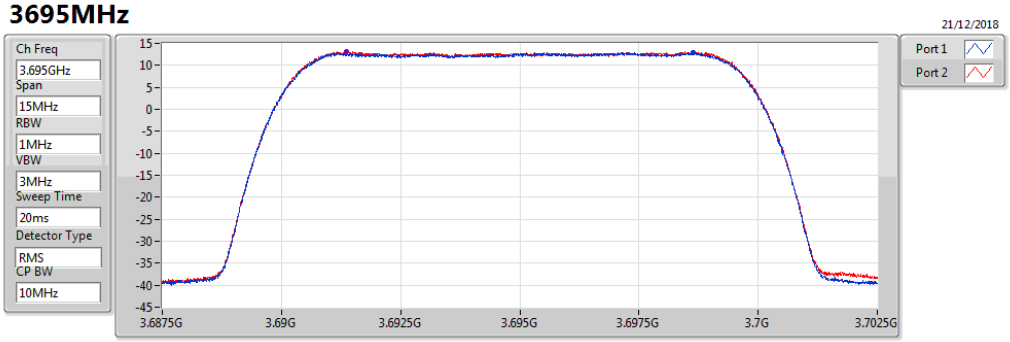


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.09	21.06	21.09

Band 48_LTE_10MHz_(64QAM)_2TX **AV Power**

3695MHz

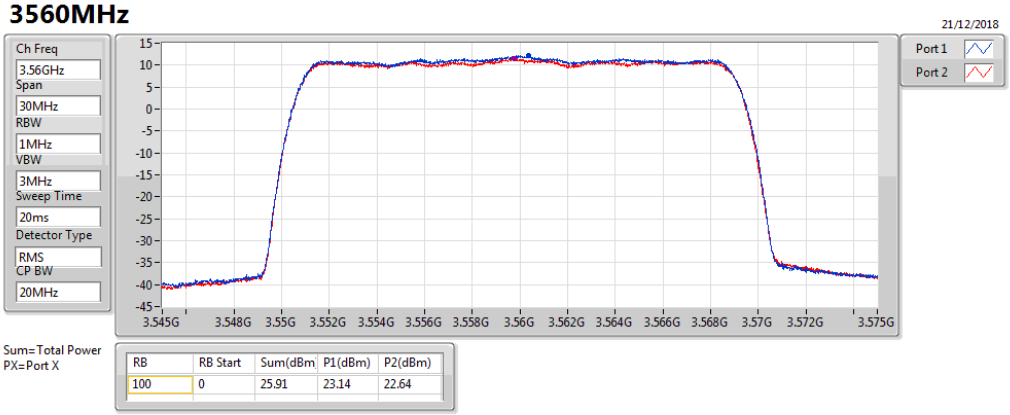


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
50	0	24.71	21.60	21.80

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3560MHz

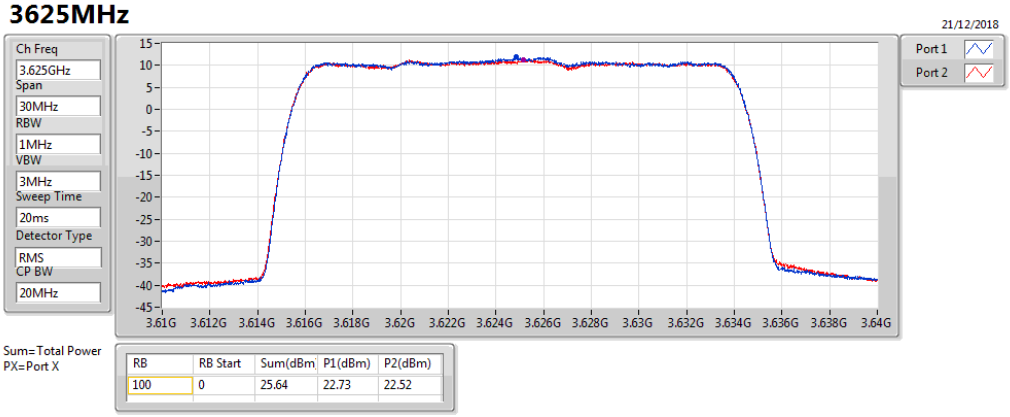


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	25.91	23.14	22.64

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3625MHz

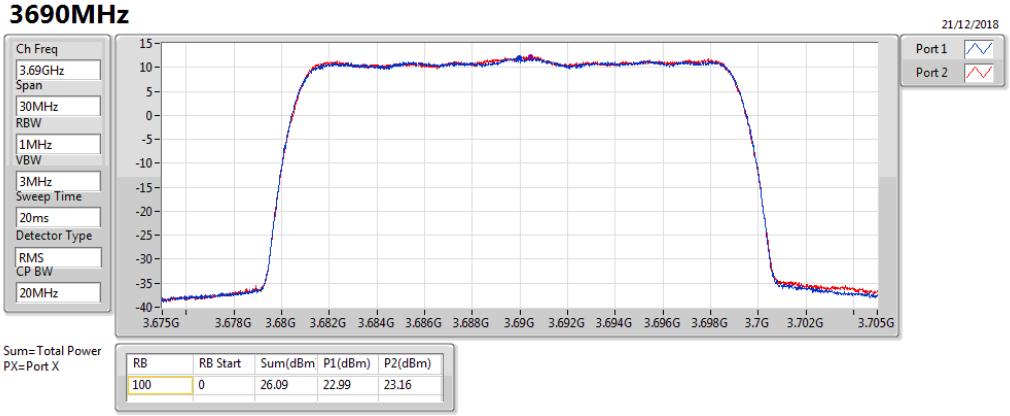


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	25.64	22.73	22.52

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3690MHz

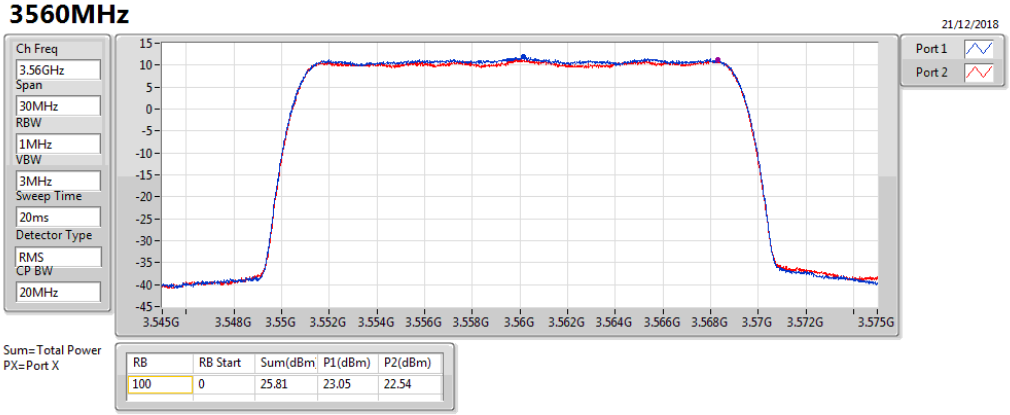


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	26.09	22.99	23.16

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3560MHz

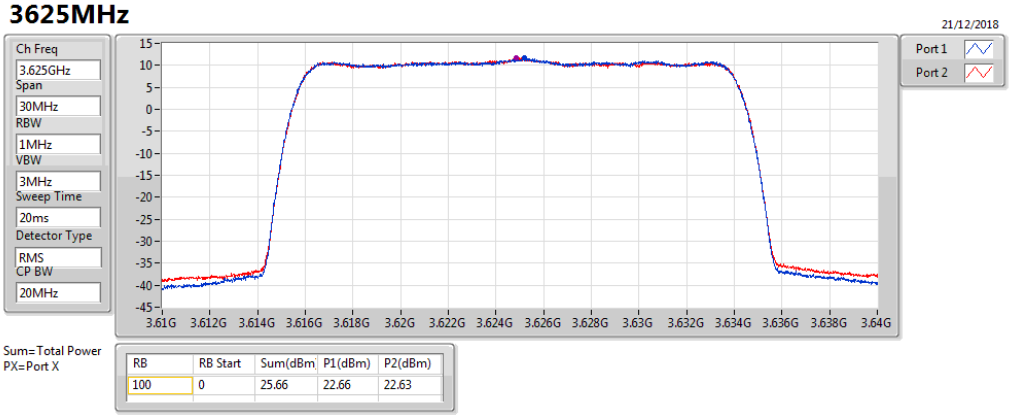


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.81	23.05	22.54

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3625MHz

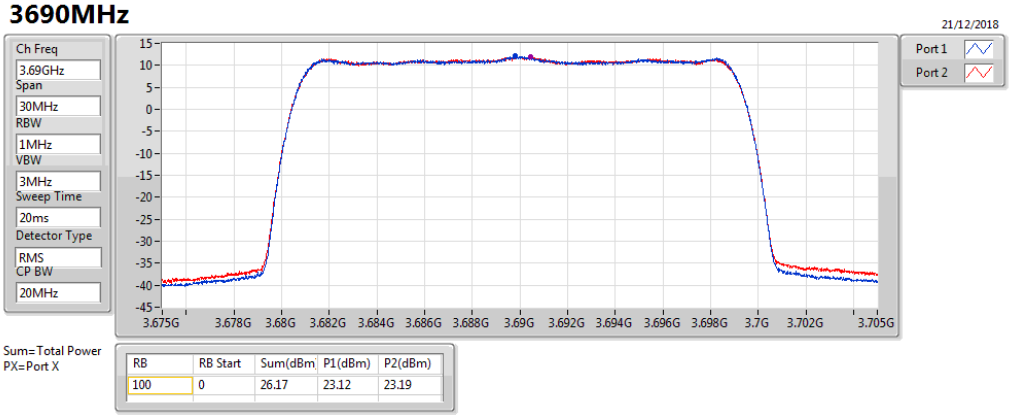


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	25.66	22.66	22.63

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3690MHz

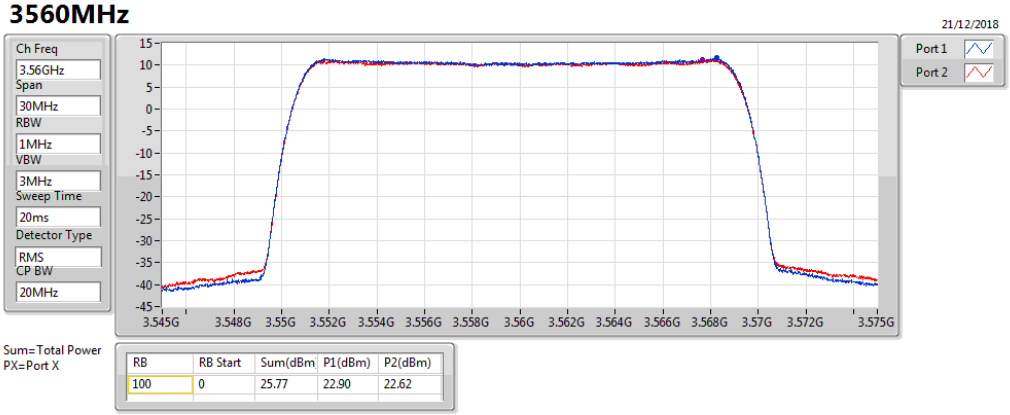


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	26.17	23.12	23.19

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3560MHz

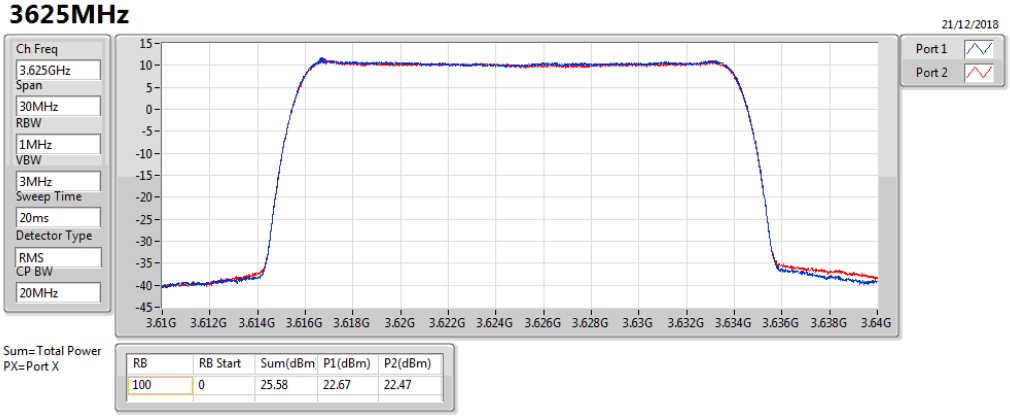


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	25.77	22.90	22.62

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3625MHz

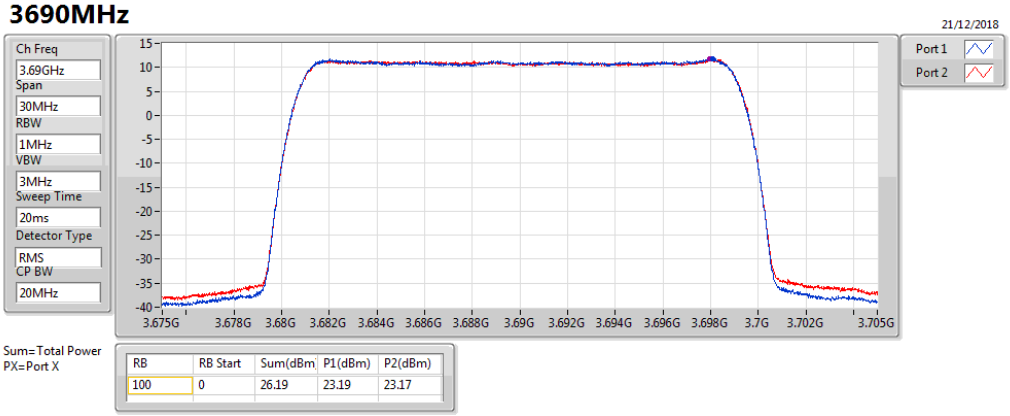


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	25.58	22.67	22.47

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3690MHz



Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm)	P1(dBm)	P2(dBm)
100	0	26.19	23.19	23.17

<Single-carrier>

Summary

Mode	Power (dBm/10MHz)	Power (W)	EIRP (dBm/10MHz)	EIRP (W)
Band 48	-	-	-	-
Band 48_LTE_20MHz_(QPSK)_2TX	24.62	0.290	26.72	0.470
Band 48_LTE_20MHz_(16QAM)_2TX	24.58	0.287	26.68	0.466
Band 48_LTE_20MHz_(64QAM)_2TX	24.35	0.272	26.45	0.442

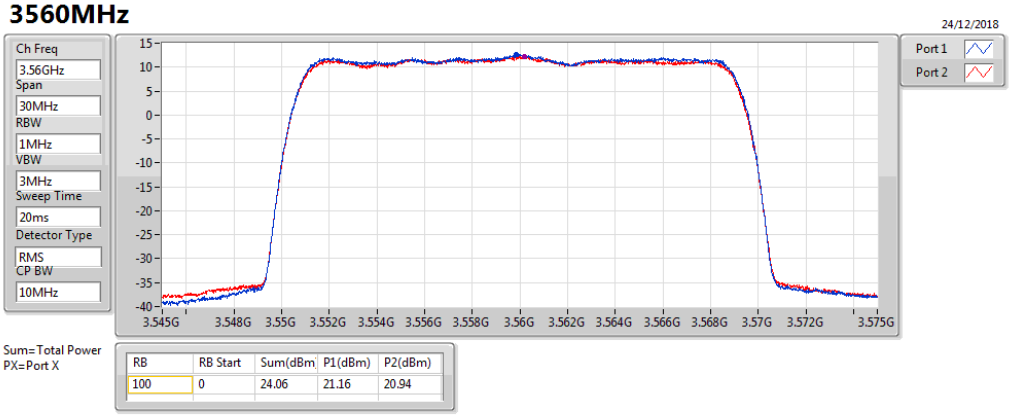
Result

Mode	**Setting**	**Result**	**RB**	**RB Start**	**DG (dBi)**	**P1** (dBm/10MHz)	**P2** (dBm/10MHz)	**Power** (dBm/10MHz)	**Power (W)**	**EIRP** (dBm/10MHz)	**EIRP (W)**	**EIRP Lim. (W)**
LTE_20MHz_(QPSK)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	21.16	20.94	24.06	0.255	26.16	0.413	1
3625MHz	23.5	Pass	100	0	2.10	20.96	20.77	23.88	0.244	25.98	0.396	1
3690MHz	23.5	Pass	100	0	2.10	21.58	21.64	24.62	0.290	26.72	0.470	1
LTE_20MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	21.02	20.67	23.86	0.243	25.96	0.394	1
3625MHz	23.5	Pass	100	0	2.10	20.75	20.52	23.65	0.232	25.75	0.376	1
3690MHz	23.5	Pass	100	0	2.10	21.63	21.50	24.58	0.287	26.68	0.466	1
LTE_20MHz_(64QAM)_2TX		-	-	-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	21.04	20.55	23.81	0.240	25.91	0.390	1
3625MHz	23.5	Pass	100	0	2.10	20.55	20.45	23.51	0.224	25.61	0.364	1
3690MHz	23.5	Pass	100	0	2.10	21.43	21.24	24.35	0.272	26.45	0.442	1

DG = Directional Gain;**Port X** = Port X output power

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3560MHz

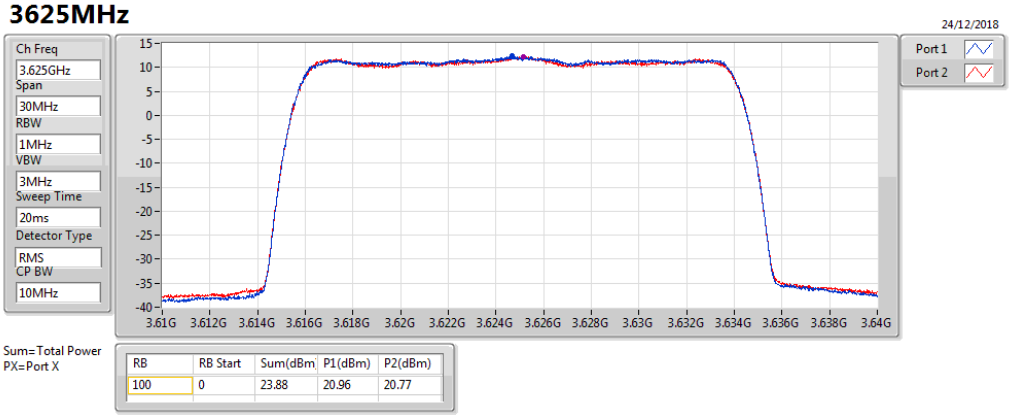


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	24.06	21.16	20.94

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3625MHz

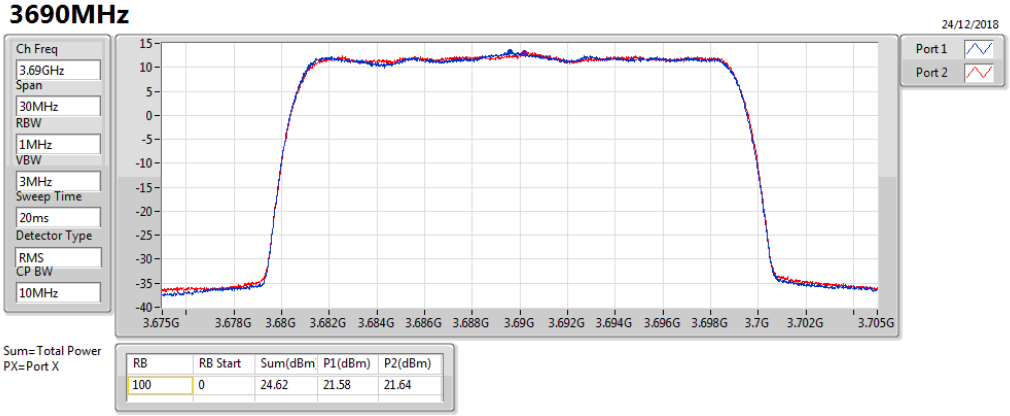


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	23.88	20.96	20.77

Band 48_LTE_20MHz_(QPSK)_2TX **AV Power**

3690MHz

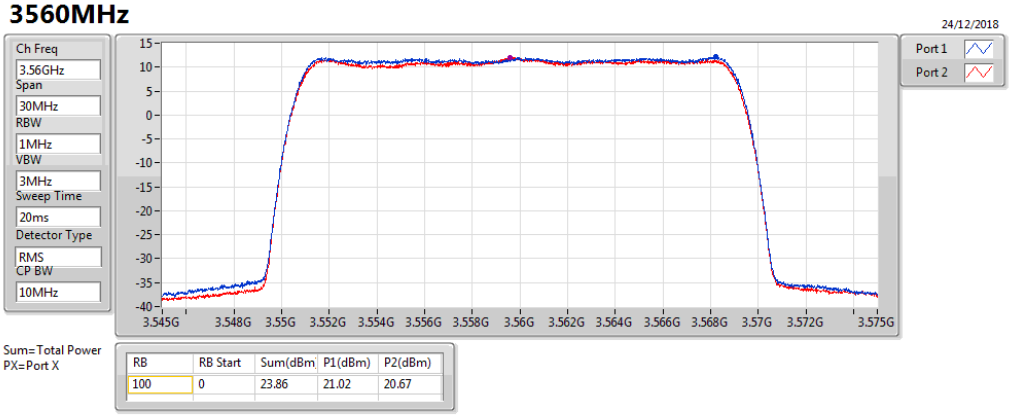


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	24.62	21.58	21.64

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3560MHz

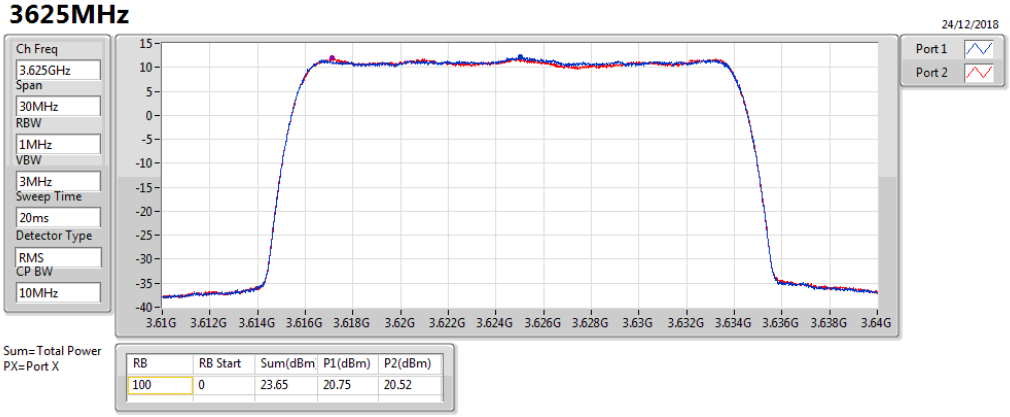


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	23.86	21.02	20.67

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3625MHz

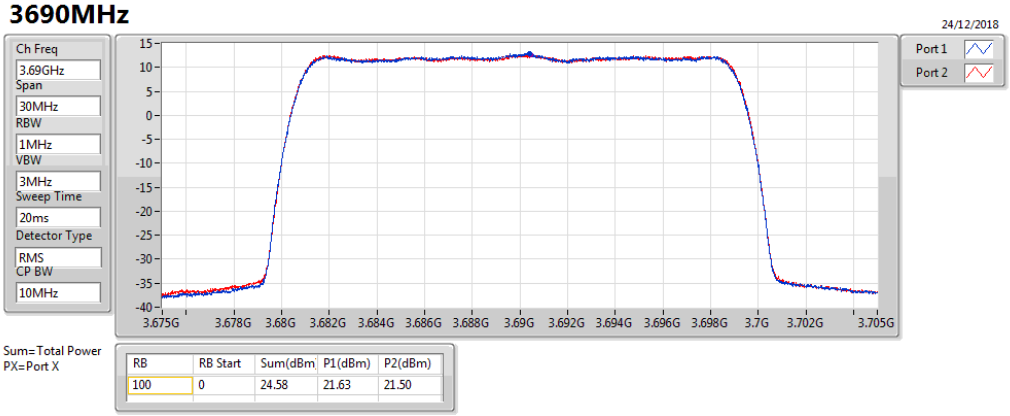


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	23.65	20.75	20.52

Band 48_LTE_20MHz_(16QAM)_2TX **AV Power**

3690MHz

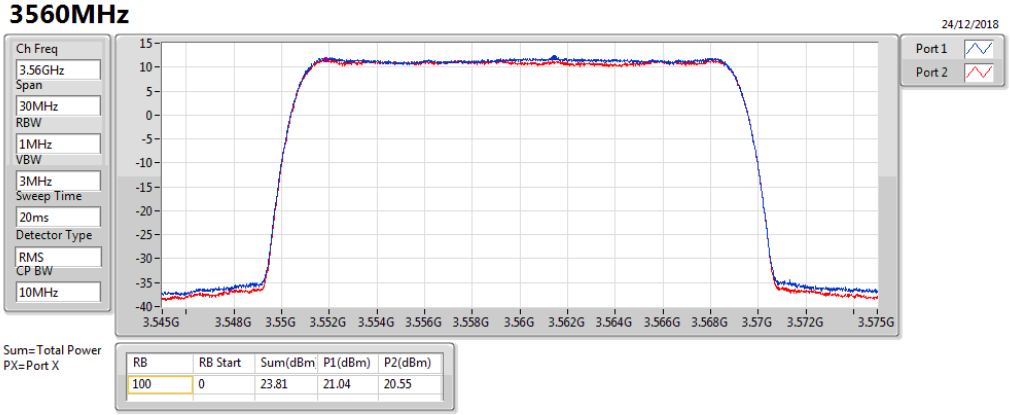


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	24.58	21.63	21.50

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3560MHz

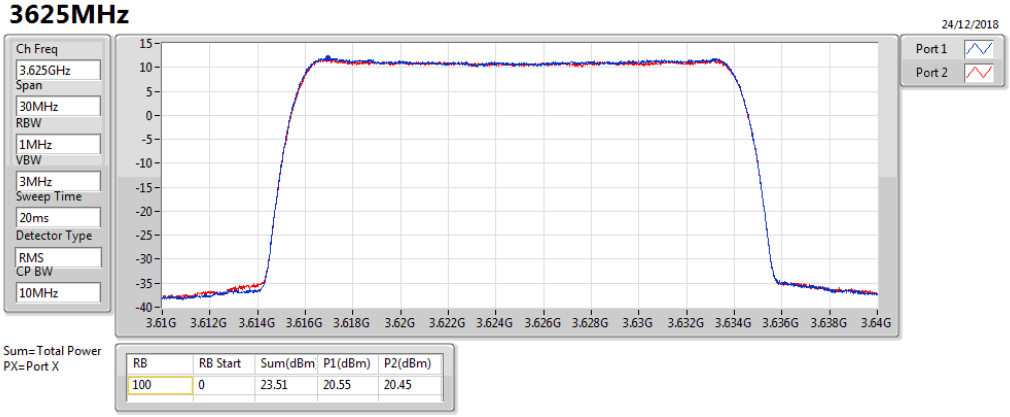


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	23.81	21.04	20.55

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3625MHz

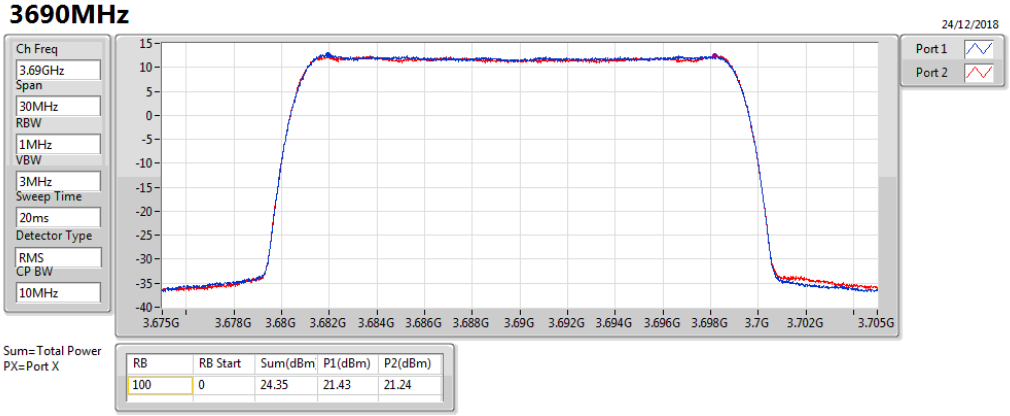


Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	23.51	20.55	20.45

Band 48_LTE_20MHz_(64QAM)_2TX **AV Power**

3690MHz



Sum=Total Power
PX=Port X

RB	RB Start	Sum(dBm	P1(dBm)	P2(dBm)
100	0	24.35	21.43	21.24

<Multi-carrier and/or CA>

Summary

Mode	Max Carrier Power (dBm)	Max Carrier Power (W)	Max Carrier EIRP (dBm)	Max Carrier EIRP (W)
Band 48	-	-	-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	25.19	0.33	27.44	0.55
Band 48_LTE_20MHz+20MHz_16QAM_4TX	25.15	0.33	27.40	0.55
Band 48_LTE_20MHz+20MHz_64QAM_4TX	24.84	0.30	27.09	0.51

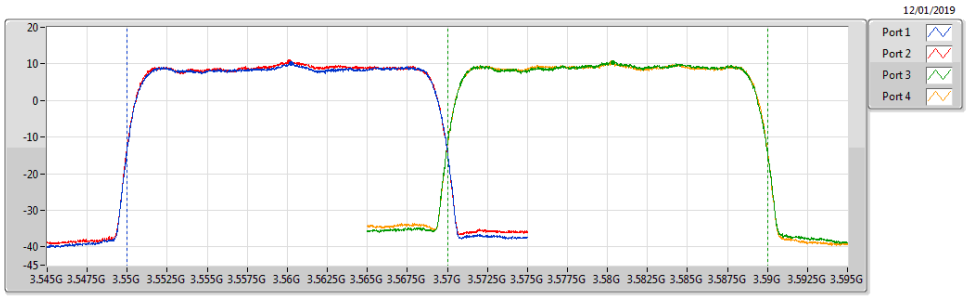
Result

Mode	Setting	Result	DG (dBi)	1Carrier Port 1 (dBm)	1Carrier Port 2 (dBm)	2Carrier Port 3 (dBm)	2Carrier Port 4 (dBm)	Max Carrier Power (dBm)	Max Carrier Power (W)	Max Carrier EIRP (dBm)	Max Carrier EIRP (W)	EIRP Lim. (W)
LTE_20MHz+20MHz_QPSK_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.77	21.18	21.31	21.27	24.30	0.27	26.55	0.45	Inf
P#3615MHz,#3635MHz	22	Pass	2.25	20.85	21.28	21.63	21.77	24.71	0.30	26.96	0.50	Inf
P#3670MHz,#3690MHz	22	Pass	2.25	21.29	21.63	22.30	22.06	25.19	0.33	27.44	0.55	Inf
P#3560MHz,#3690MHz	22	Pass	2.25	21.05	21.49	22.25	22.10	25.19	0.33	27.44	0.55	Inf
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.82	21.31	21.38	21.36	24.38	0.27	26.63	0.46	Inf
P#3615MHz,#3635MHz	22	Pass	2.25	20.72	21.08	21.59	21.68	24.65	0.29	26.90	0.49	Inf
P#3670MHz,#3690MHz	22	Pass	2.25	21.24	21.59	22.23	21.98	25.12	0.32	27.37	0.55	Inf
P#3560MHz,#3690MHz	22	Pass	2.25	20.80	21.51	22.25	22.03	25.15	0.33	27.40	0.55	Inf
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	20.96	21.42	21.45	21.44	24.46	0.28	26.71	0.47	Inf
P#3615MHz,#3635MHz	22	Pass	2.25	20.77	21.15	21.52	21.61	24.58	0.29	26.83	0.48	Inf
P#3670MHz,#3690MHz	22	Pass	2.25	21.11	21.47	21.90	21.58	24.75	0.30	27.00	0.50	Inf
P#3560MHz,#3690MHz	22	Pass	2.25	20.76	21.15	21.98	21.68	24.84	0.30	27.09	0.51	Inf

DG = Directional Gain; **Port n** = Port n output power

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

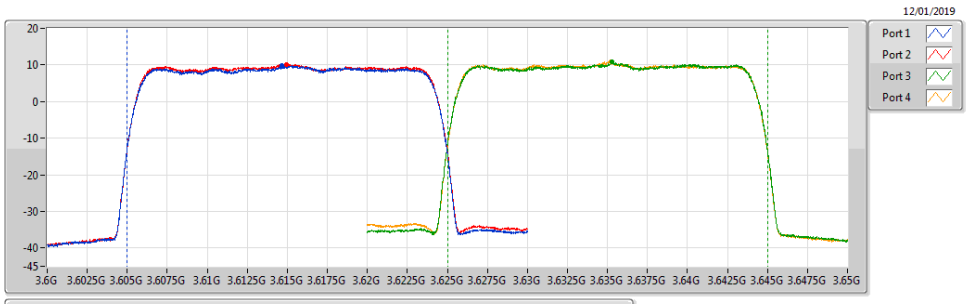
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.77	3.56G	30M	1M	3M	20m	RMS	20M	1
21.18	3.56G	30M	1M	3M	20m	RMS	20M	2
21.31	3.58G	30M	1M	3M	20m	RMS	20M	3
21.27	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.16								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

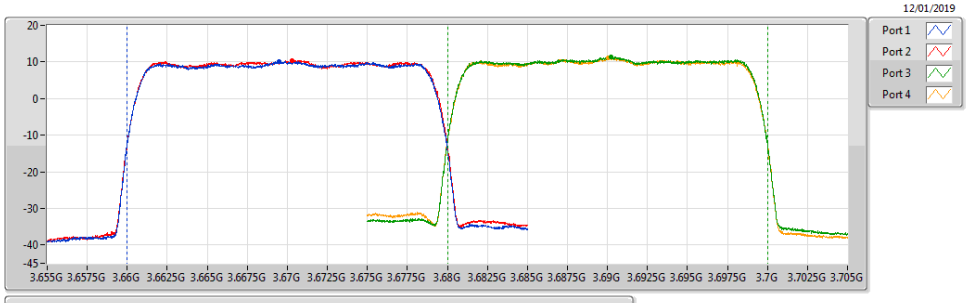
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.85	3.615G	30M	1M	3M	20m	RMS	20M	1
21.28	3.615G	30M	1M	3M	20m	RMS	20M	2
21.63	3.635G	30M	1M	3M	20m	RMS	20M	3
21.77	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.42								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

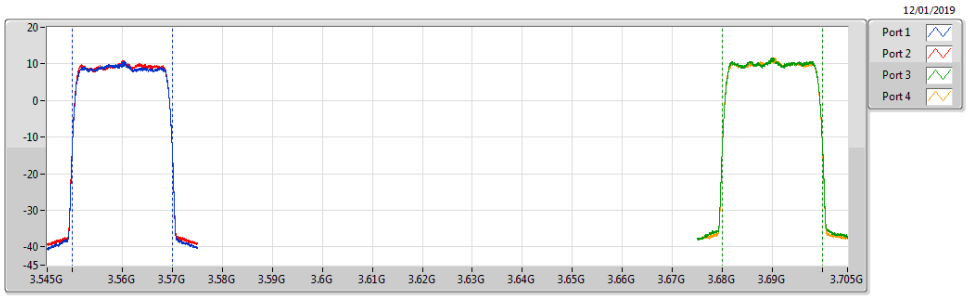
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.29	3.67G	30M	1M	3M	20m	RMS	20M	1
21.63	3.67G	30M	1M	3M	20m	RMS	20M	2
22.30	3.69G	30M	1M	3M	20m	RMS	20M	3
22.06	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.86								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

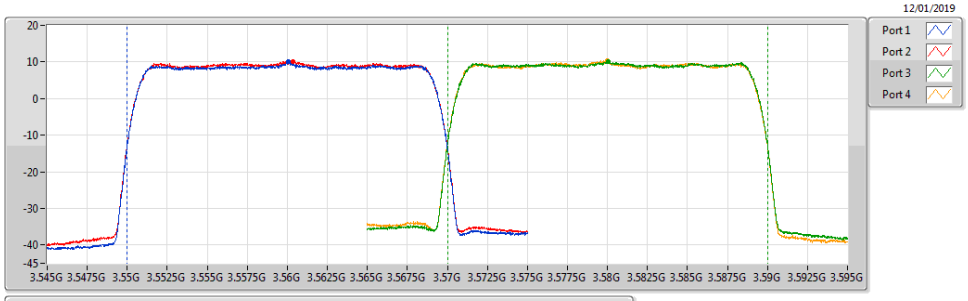
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.05	3.56G	30M	1M	3M	20m	RMS	20M	1
21.49	3.56G	30M	1M	3M	20m	RMS	20M	2
22.25	3.69G	30M	1M	3M	20m	RMS	20M	3
22.10	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.77								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

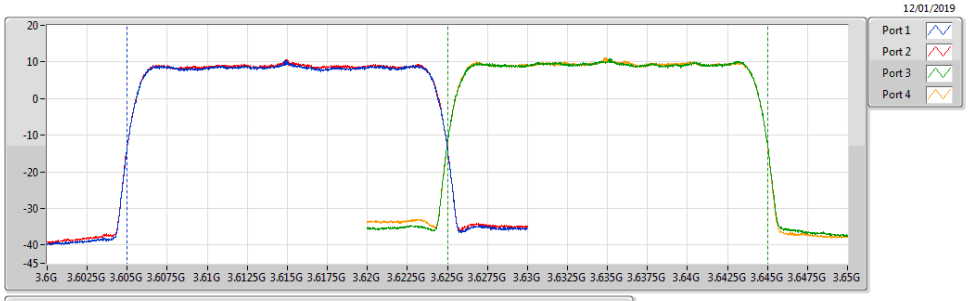
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.82	3.56G	30M	1M	3M	20m	RMS	20M	1
21.31	3.56G	30M	1M	3M	20m	RMS	20M	2
21.38	3.58G	30M	1M	3M	20m	RMS	20M	3
21.36	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.24								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

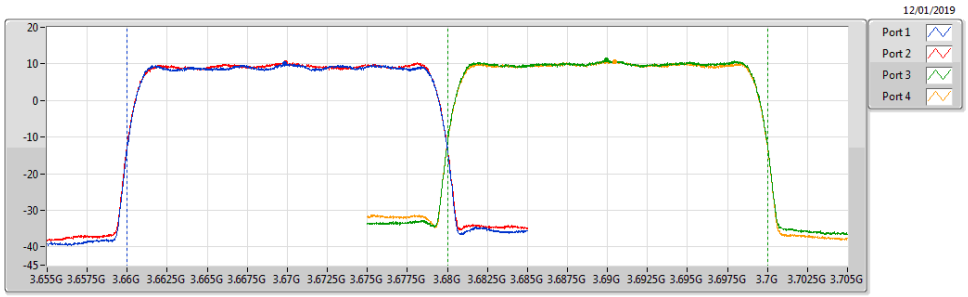
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.72	3.615G	30M	1M	3M	20m	RMS	20M	1
21.08	3.615G	30M	1M	3M	20m	RMS	20M	2
21.59	3.635G	30M	1M	3M	20m	RMS	20M	3
21.68	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.31								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

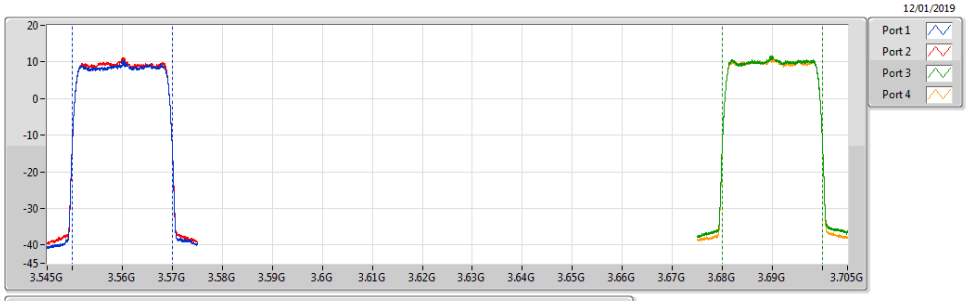
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.24	3.67G	30M	1M	3M	20m	RMS	20M	1
21.59	3.67G	30M	1M	3M	20m	RMS	20M	2
22.23	3.69G	30M	1M	3M	20m	RMS	20M	3
21.98	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.80								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

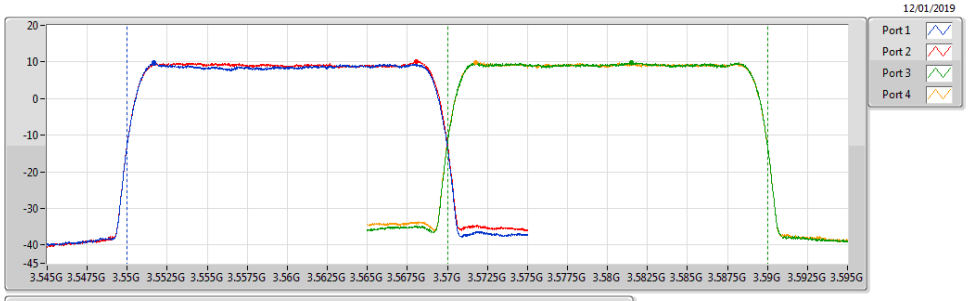
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.80	3.56G	30M	1M	3M	20m	RMS	20M	1
21.51	3.56G	30M	1M	3M	20m	RMS	20M	2
22.25	3.69G	30M	1M	3M	20m	RMS	20M	3
22.03	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.70								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

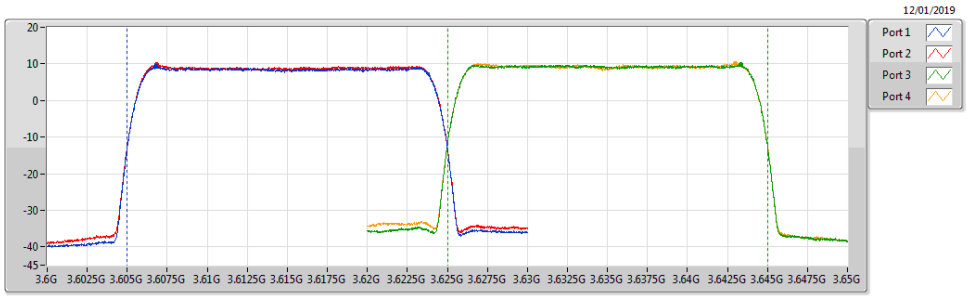
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.96	3.56G	30M	1M	3M	20m	RMS	20M	1
21.42	3.56G	30M	1M	3M	20m	RMS	20M	2
21.45	3.58G	30M	1M	3M	20m	RMS	20M	3
21.44	3.58G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.34								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

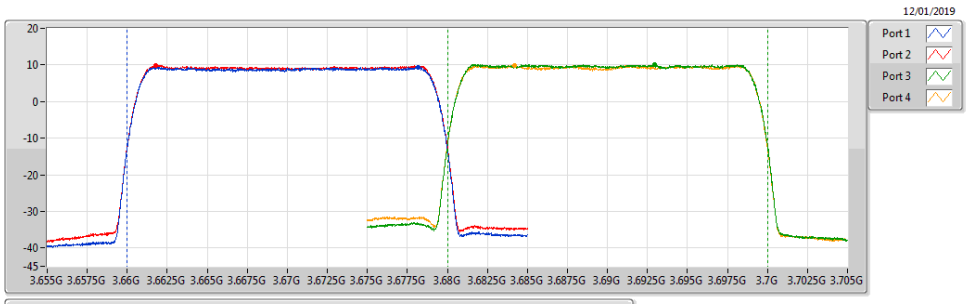
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.77	3.615G	30M	1M	3M	20m	RMS	20M	1
21.15	3.615G	30M	1M	3M	20m	RMS	20M	2
21.52	3.635G	30M	1M	3M	20m	RMS	20M	3
21.61	3.635G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.30								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

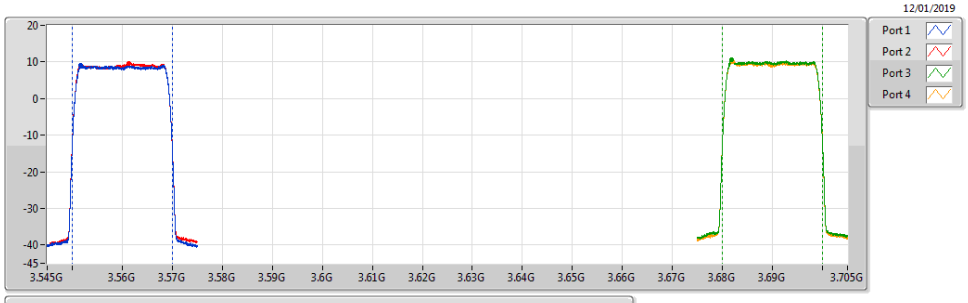
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
21.11	3.67G	30M	1M	3M	20m	RMS	20M	1
21.47	3.67G	30M	1M	3M	20m	RMS	20M	2
21.90	3.69G	30M	1M	3M	20m	RMS	20M	3
21.58	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.54								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
20.76	3.56G	30M	1M	3M	20m	RMS	20M	1
21.15	3.56G	30M	1M	3M	20m	RMS	20M	2
21.98	3.69G	30M	1M	3M	20m	RMS	20M	3
21.68	3.69G	30M	1M	3M	20m	RMS	20M	4
Sum(dBm)								
27.44								

<Multi-carrier and/or CA>

Summary

Mode	Max Carrier Power (dBm/10MHz)	Max Carrier Power (W)	Max Carrier EIRP (dBm/10MHz)	Max Carrier EIRP (W)
Band 48	-	-	-	-
LTE_20MHz+20MHz_QPSK_4TX	22.56	0.180	24.81	0.302
LTE_20MHz+20MHz_16QAM_4TX	22.62	0.182	24.87	0.306
LTE_20MHz+20MHz_64QAM_4TX	22.51	0.178	24.76	0.299

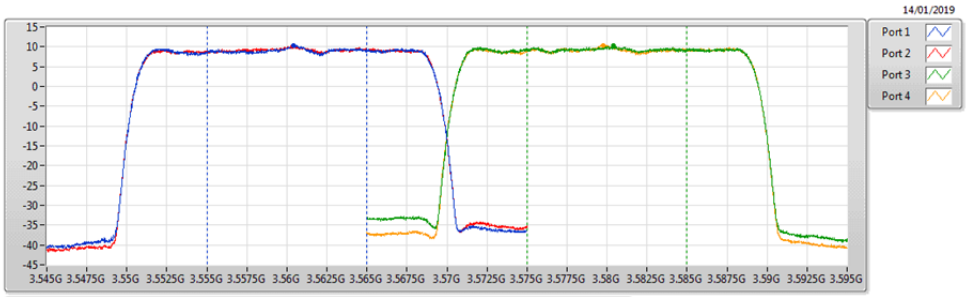
Result

Mode	Setting	Result	DG (dBi)	1Carrier Port 1 (dBm/10 MHz)	1Carrier Port 2 (dBm/10 MHz)	2Carrier Port 3 (dBm/10 MHz)	2Carrier Port 4 (dBm/10 MHz)	Max Carrier Power (dBm/10 MHz)	Max Carrier Power (W)	Max Carrier EIRP (dBm/10 MHz)	Max Carrier EIRP (W)	EIRP Lim. (W)
LTE_20MHz+20MHz_QPSK_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	18.75	18.90	19.00	18.89	21.96	0.157	24.21	0.263	1
P#3615MHz,#3635MHz	22	Pass	2.25	18.38	18.56	18.99	18.83	21.92	0.155	24.17	0.261	1
P#3670MHz,#3690MHz	22	Pass	2.25	18.70	18.90	19.69	19.41	22.56	0.180	24.81	0.302	1
P#3560MHz,#3690MHz	22	Pass	2.25	18.80	18.89	19.62	19.39	22.52	0.178	24.77	0.299	1
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	18.58	18.68	18.81	18.78	21.81	0.151	24.06	0.254	1
P#3615MHz,#3635MHz	22	Pass	2.25	18.46	18.73	19.13	18.94	22.05	0.160	24.3	0.269	1
P#3670MHz,#3690MHz	22	Pass	2.25	18.91	19.06	19.66	19.55	22.62	0.182	24.87	0.306	1
P#3560MHz,#3690MHz	22	Pass	2.25	18.75	18.88	19.68	19.38	22.54	0.179	24.79	0.301	1
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	18.26	18.38	18.86	18.73	21.81	0.151	24.06	0.254	1
P#3615MHz,#3635MHz	22	Pass	2.25	18.40	18.49	18.93	18.70	21.83	0.152	24.08	0.255	1
P#3670MHz,#3690MHz	22	Pass	2.25	18.67	18.93	19.62	19.37	22.51	0.178	24.76	0.299	1
P#3560MHz,#3690MHz	22	Pass	2.25	18.55	18.72	19.55	19.26	22.42	0.174	24.67	0.293	1

DG = Directional Gain; **Port n** = Port n output power

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

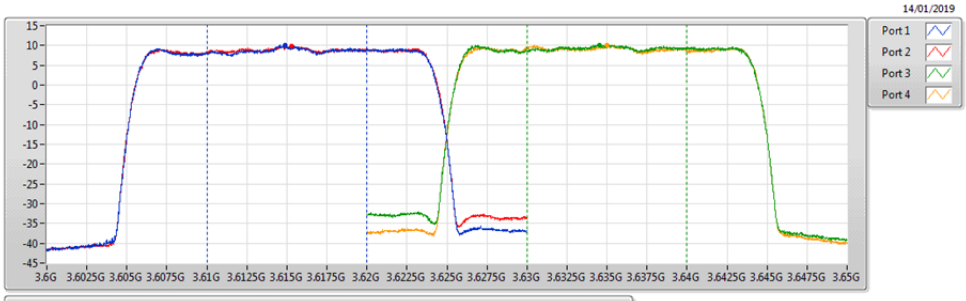
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.75	3.56G	30M	1M	3M	20m	RMS	10M	1
18.90	3.56G	30M	1M	3M	20m	RMS	10M	2
19.00	3.58G	30M	1M	3M	20m	RMS	10M	3
18.89	3.58G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.91								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

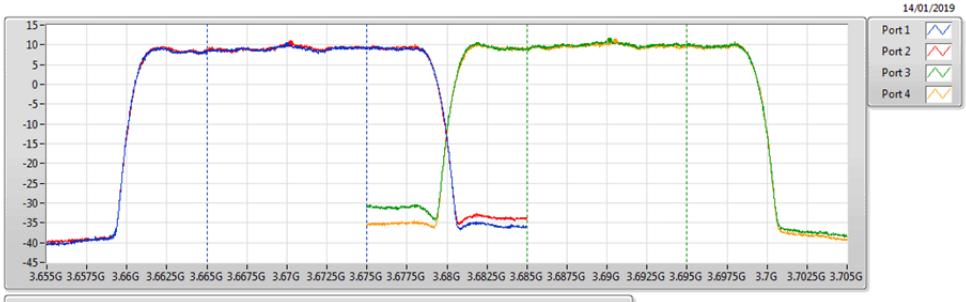
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.38	3.615G	30M	1M	3M	20m	RMS	10M	1
18.56	3.615G	30M	1M	3M	20m	RMS	10M	2
18.99	3.635G	30M	1M	3M	20m	RMS	10M	3
18.83	3.635G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.72								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

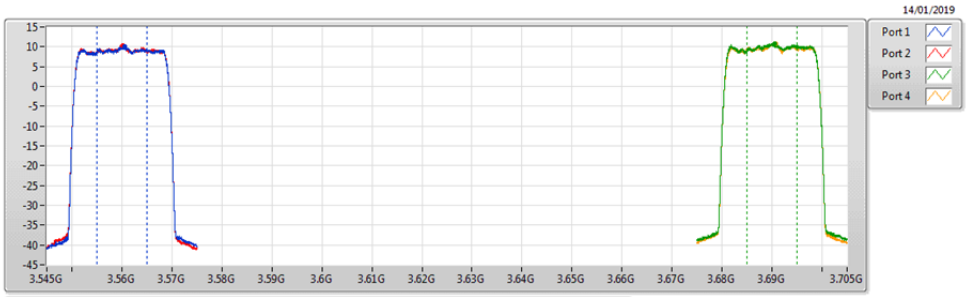
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.70	3.67G	30M	1M	3M	20m	RMS	10M	1
18.90	3.67G	30M	1M	3M	20m	RMS	10M	2
19.69	3.69G	30M	1M	3M	20m	RMS	10M	3
19.41	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.21								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

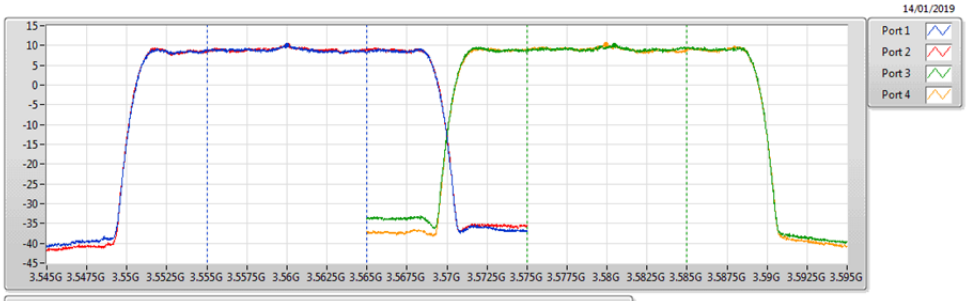
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.80	3.56G	30M	1M	3M	20m	RMS	10M	1
18.89	3.56G	30M	1M	3M	20m	RMS	10M	2
19.62	3.69G	30M	1M	3M	20m	RMS	10M	3
19.39	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.21								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

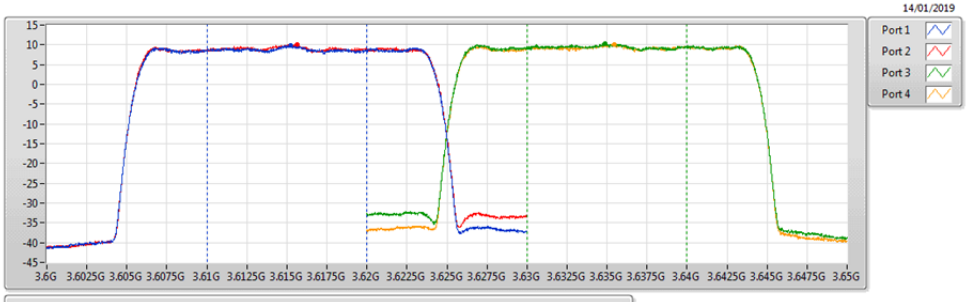
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.58	3.56G	30M	1M	3M	20m	RMS	10M	1
18.68	3.56G	30M	1M	3M	20m	RMS	10M	2
18.81	3.58G	30M	1M	3M	20m	RMS	10M	3
18.78	3.58G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.73								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

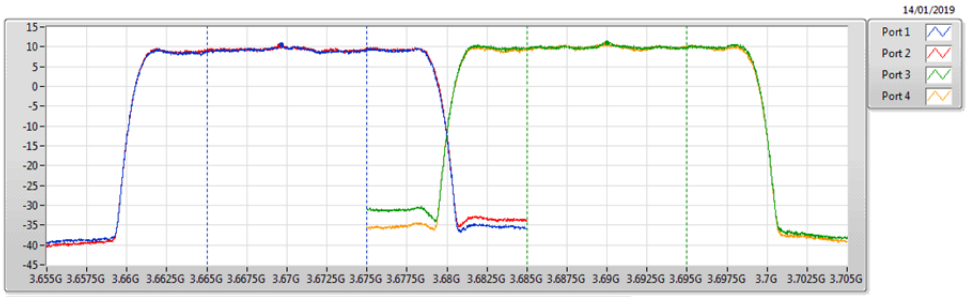
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.46	3.615G	30M	1M	3M	20m	RMS	10M	1
18.73	3.615G	30M	1M	3M	20m	RMS	10M	2
19.13	3.635G	30M	1M	3M	20m	RMS	10M	3
18.94	3.635G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.84								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

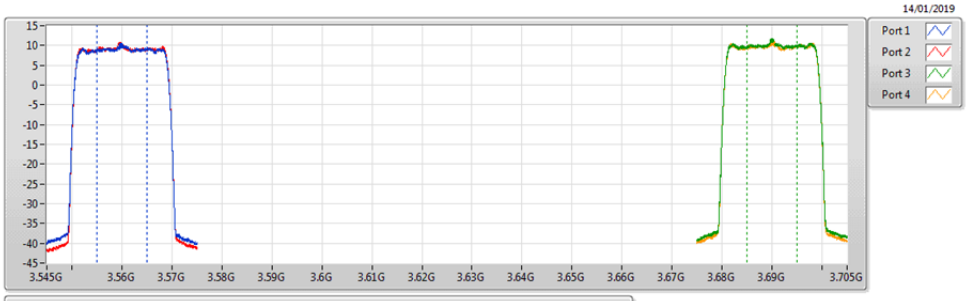
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.91	3.67G	30M	1M	3M	20m	RMS	10M	1
19.06	3.67G	30M	1M	3M	20m	RMS	10M	2
19.66	3.69G	30M	1M	3M	20m	RMS	10M	3
19.55	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.33								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

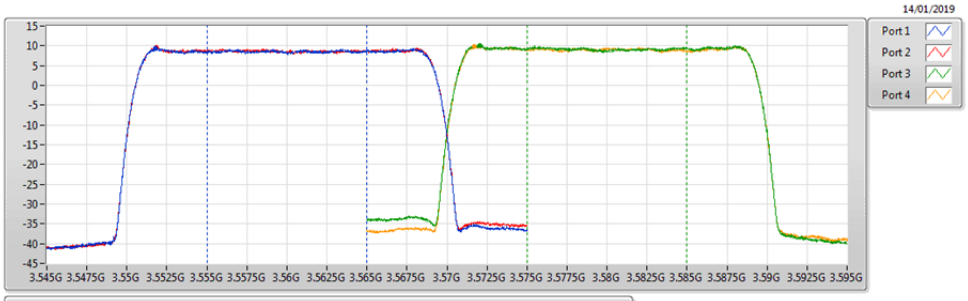
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.75	3.56G	30M	1M	3M	20m	RMS	10M	1
18.88	3.56G	30M	1M	3M	20m	RMS	10M	2
19.68	3.69G	30M	1M	3M	20m	RMS	10M	3
19.38	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.21								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

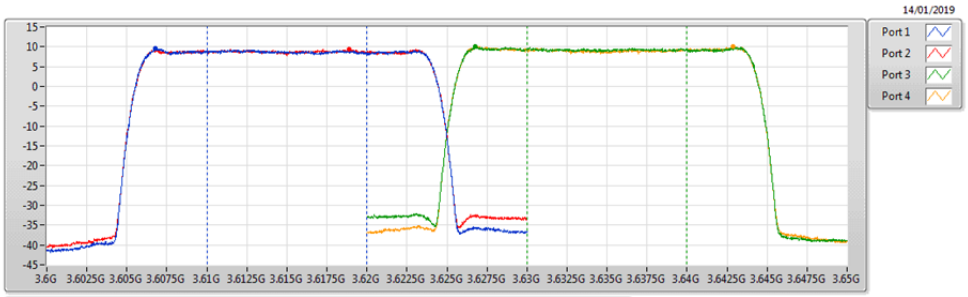
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.26	3.56G	30M	1M	3M	20m	RMS	10M	1
18.38	3.56G	30M	1M	3M	20m	RMS	10M	2
18.86	3.58G	30M	1M	3M	20m	RMS	10M	3
18.73	3.58G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.59								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

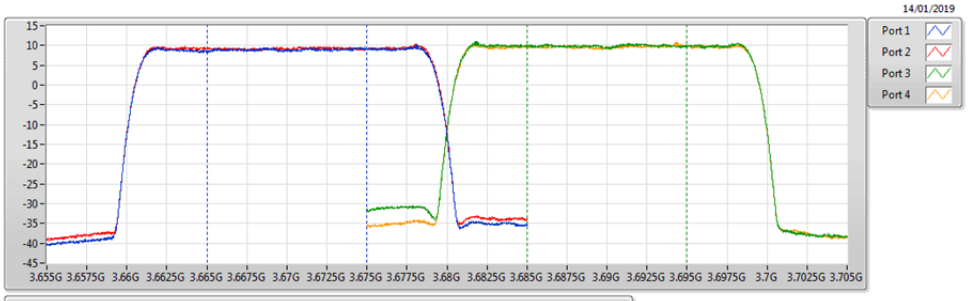
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.40	3.615G	30M	1M	3M	20m	RMS	10M	1
18.49	3.615G	30M	1M	3M	20m	RMS	10M	2
18.93	3.635G	30M	1M	3M	20m	RMS	10M	3
18.70	3.635G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
24.66								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

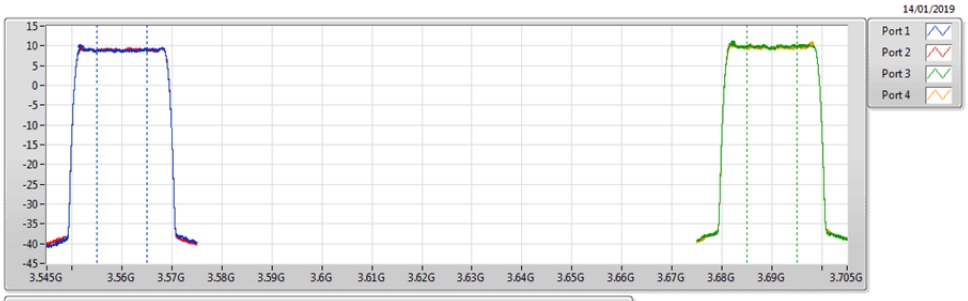
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.67	3.67G	30M	1M	3M	20m	RMS	10M	1
18.93	3.67G	30M	1M	3M	20m	RMS	10M	2
19.62	3.69G	30M	1M	3M	20m	RMS	10M	3
19.37	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.18								

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PowerAV**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



CP(dBm)	CF(Hz)	Span(Hz)	RBW(Hz)	VBW(Hz)	Sweep(s)	Detector	CP BW(Hz)	Port
18.55	3.56G	30M	1M	3M	20m	RMS	10M	1
18.72	3.56G	30M	1M	3M	20m	RMS	10M	2
19.55	3.69G	30M	1M	3M	20m	RMS	10M	3
19.26	3.69G	30M	1M	3M	20m	RMS	10M	4
Sum(dBm)								
25.06								

<Single-carrier>

Summary

Mode	PD (dBm/MHz)	PD (mW/MHz)	EIRP PD (dBm/MHz)	EIRP PD (mW/MHz)
Band 48	-	-	-	-
Band 48_LTE_10MHz_(QPSK)_2TX	17.45	55.59	19.55	90.16
Band 48_LTE_10MHz_(16QAM)_2TX	17.52	56.49	19.62	91.62
Band 48_LTE_10MHz_(64QAM)_2TX	16.50	44.67	18.60	72.44
Band 48_LTE_20MHz_(QPSK)_2TX	15.15	32.73	17.25	53.09
Band 48_LTE_20MHz_(16QAM)_2TX	15.03	31.84	17.13	51.64
Band 48_LTE_20MHz_(64QAM)_2TX	14.72	29.65	16.82	48.08

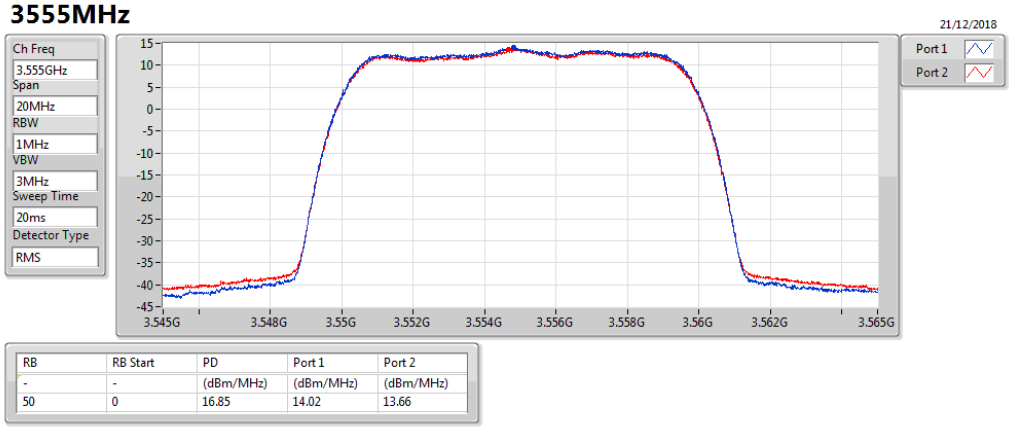
Result

Mode	Setting	Result	RB	RB Start	Gain (dBi)	Port 1 (dBm/MHz)	Port 2 (dBm/MHz)	PD (dBm/MHz)	EIRP PD (dBm/MHz)	EIRP PD Limit (dBm/MHz)
LTE_10MHz_(QPSK)_2TX		-	-	-	-	-	-	-		-
3555MHz	22	Pass	50	0	2.10	14.02	13.66	16.85	18.95	20
3625MHz	22	Pass	50	0	2.10	13.86	13.55	16.72	18.82	20
3695MHz	22	Pass	50	0	2.10	14.55	14.32	17.45	19.55	20
LTE_10MHz_(16QAM)_2TX		-	-	-	-	-	-	-		-
3555MHz	22	Pass	50	0	2.10	13.90	13.34	16.64	18.74	20
3625MHz	22	Pass	50	0	2.10	13.96	13.76	16.87	18.97	20
3695MHz	22	Pass	50	0	2.10	14.48	14.54	17.52	19.62	20
LTE_10MHz_(64QAM)_2TX		-	-	-	-	-	-	-		-
3555MHz	22	Pass	50	0	2.10	12.79	12.58	15.70	17.80	20
3625MHz	22	Pass	50	0	2.10	12.77	12.95	15.87	17.97	20
3695MHz	22	Pass	50	0	2.10	13.44	13.54	16.50	18.60	20
LTE_20MHz_(QPSK)_2TX		-	-	-	-	-	-	-		-
3560MHz	23.5	Pass	100	0	2.10	12.28	11.78	15.05	17.15	20
3625MHz	23.5	Pass	100	0	2.10	11.61	11.56	14.60	16.70	20
3690MHz	23.5	Pass	100	0	2.10	12.03	12.24	15.15	17.25	20
LTE_20MHz_(16QAM)_2TX		-	-	-	-	-	-	-	-	-
3560MHz	23.5	Pass	100	0	2.10	11.71	11.08	14.42	16.52	20
3625MHz	23.5	Pass	100	0	2.10	11.45	11.47	14.47	16.57	20
3690MHz	23.5	Pass	100	0	2.10	12.00	12.03	15.03	17.13	20
LTE_20MHz_(64QAM)_2TX		-	-	-	-	-	-	-		-
3560MHz	23.5	Pass	100	0	2.10	11.42	11.17	14.31	16.41	20
3625MHz	23.5	Pass	100	0	2.10	11.19	10.96	14.09	16.19	20
3690MHz	23.5	Pass	100	0	2.10	11.78	11.64	14.72	16.82	20

DG = Directional Gain;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

Band 48_LTE_10MHz_(QPSK)_2TX **PSD**

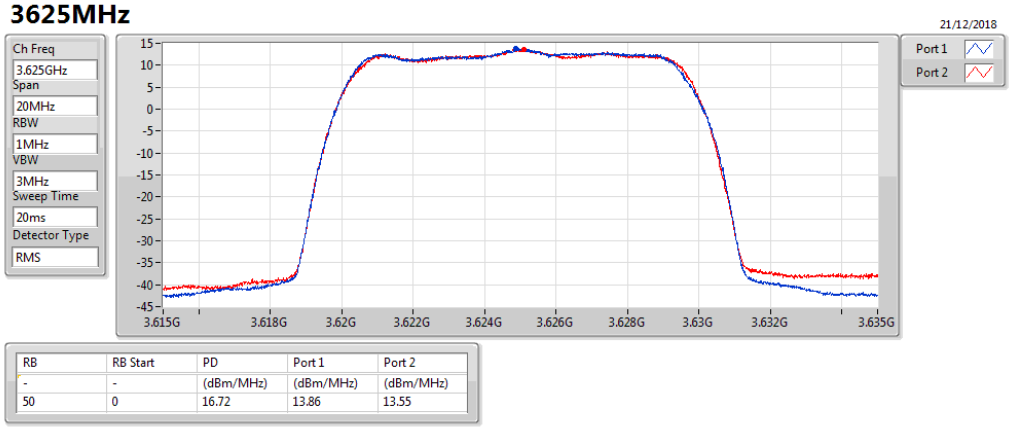
3555MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	16.85	14.02	13.66

Band 48_LTE_10MHz_(QPSK)_2TX **PSD**

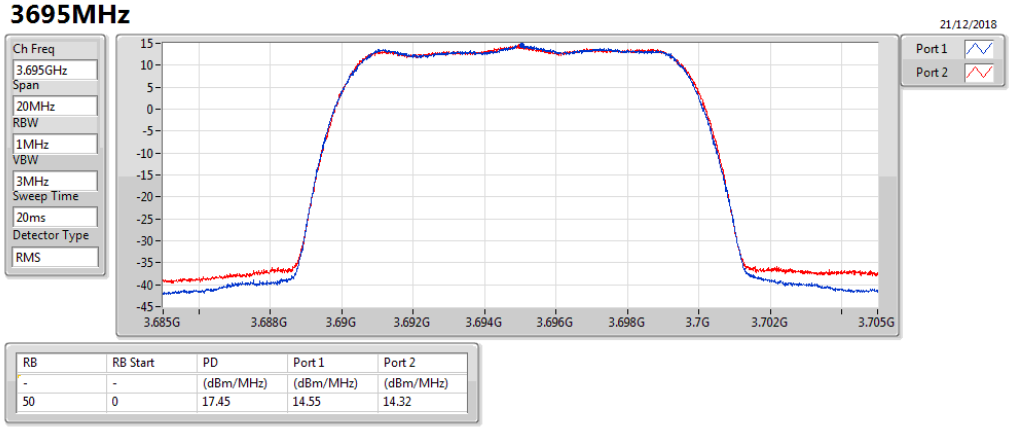
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	16.72	13.86	13.55

Band 48_LTE_10MHz_(QPSK)_2TX **PSD**

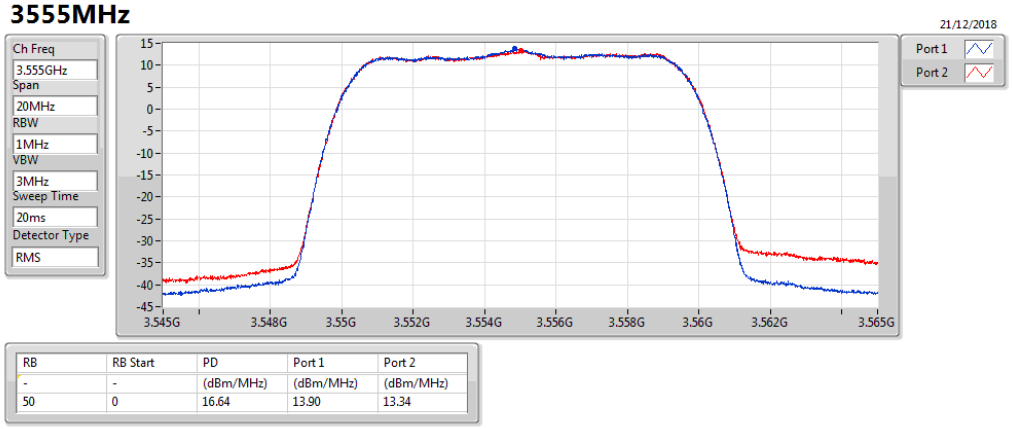
3695MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	17.45	14.55	14.32

Band 48_LTE_10MHz_(16QAM)_2TX **PSD**

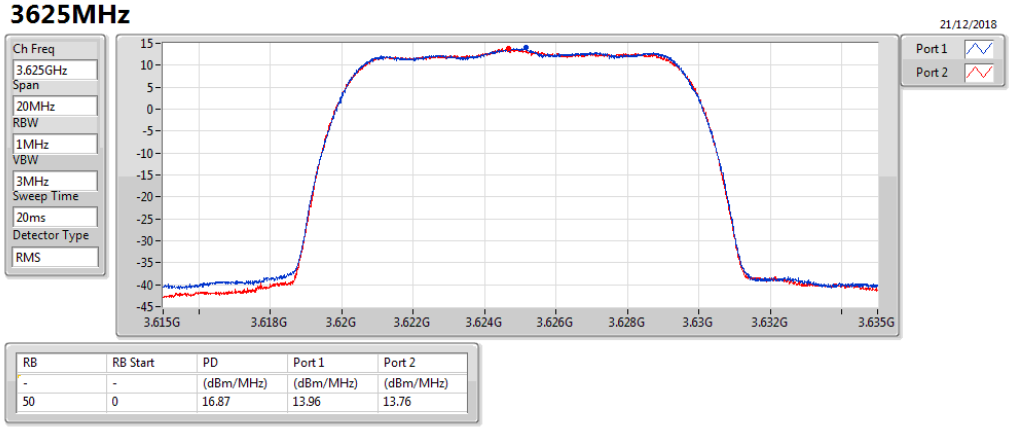
3555MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	16.64	13.90	13.34

Band 48_LTE_10MHz_(16QAM)_2TX **PSD**

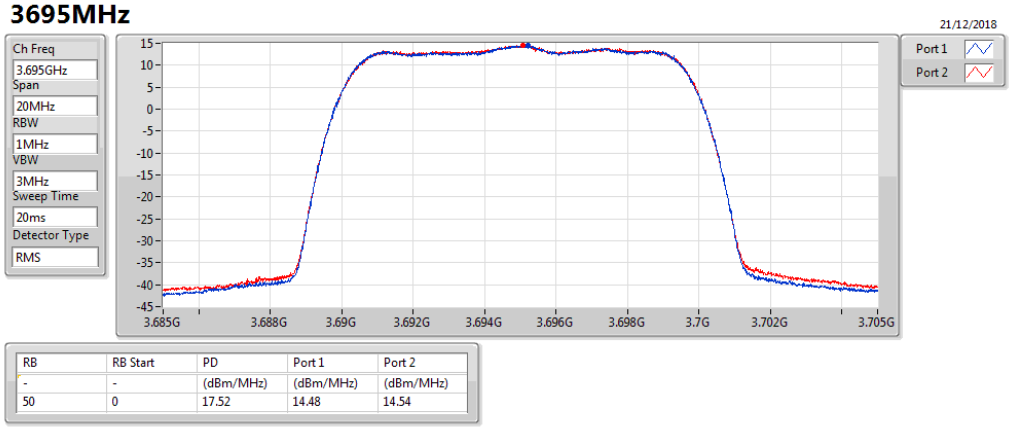
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	16.87	13.96	13.76

Band 48_LTE_10MHz_(16QAM)_2TX **PSD**

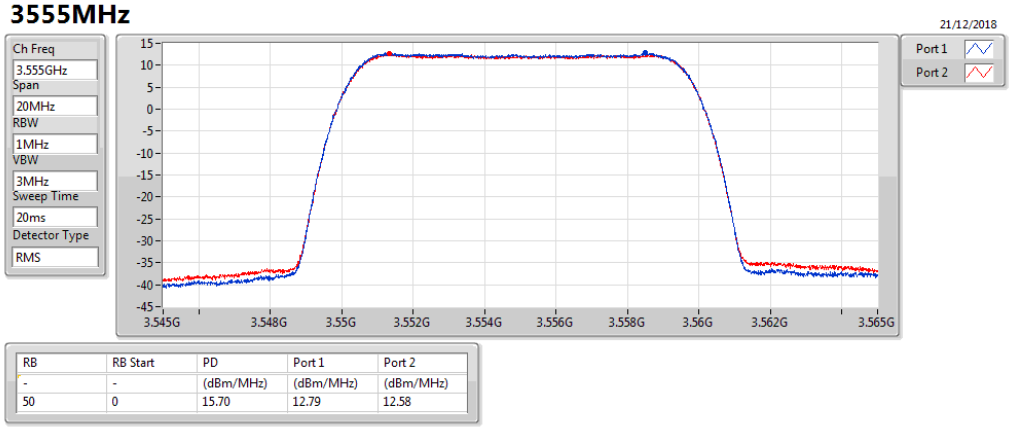
3695MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	17.52	14.48	14.54

Band 48_LTE_10MHz_(64QAM)_2TX **PSD**

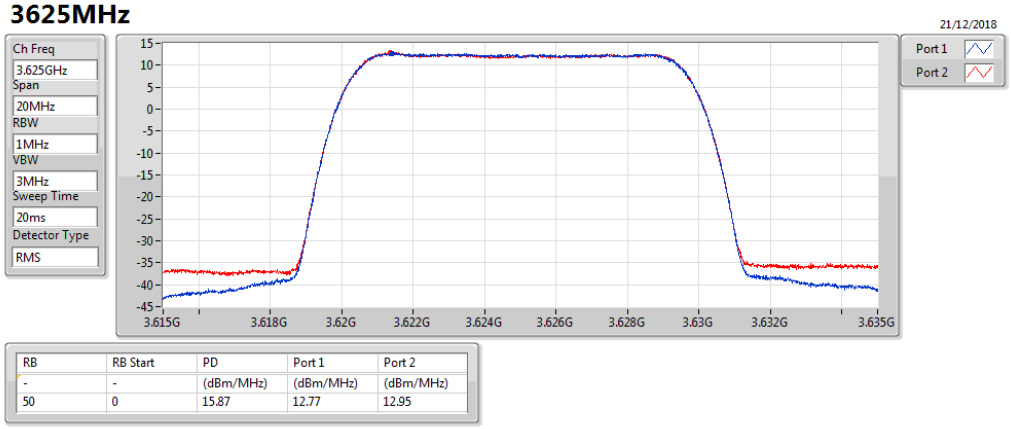
3555MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	15.70	12.79	12.58

Band 48_LTE_10MHz_(64QAM)_2TX **PSD**

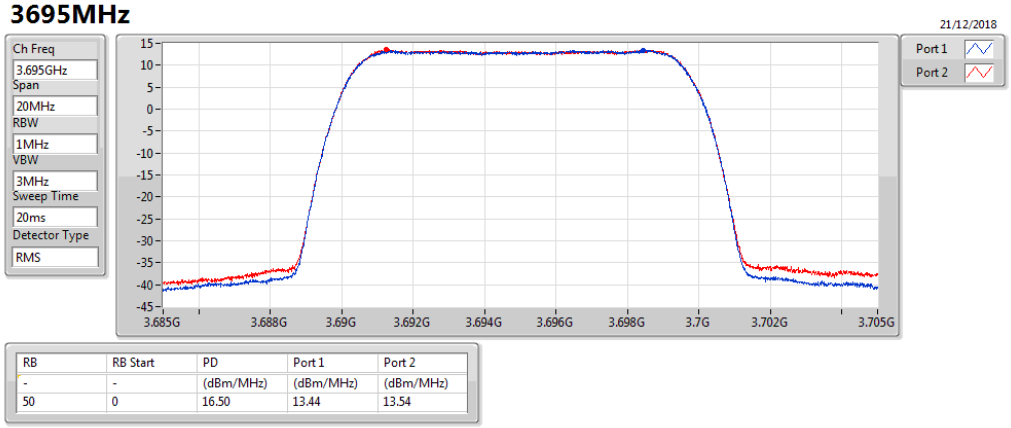
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	15.87	12.77	12.95

Band 48_LTE_10MHz_(64QAM)_2TX **PSD**

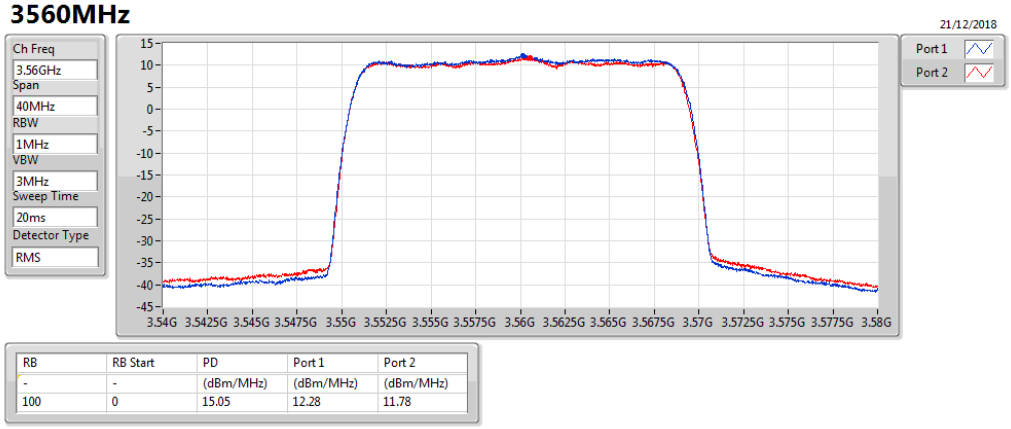
3695MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
50	0	16.50	13.44	13.54

Band 48_LTE_20MHz_(QPSK)_2TX **PSD**

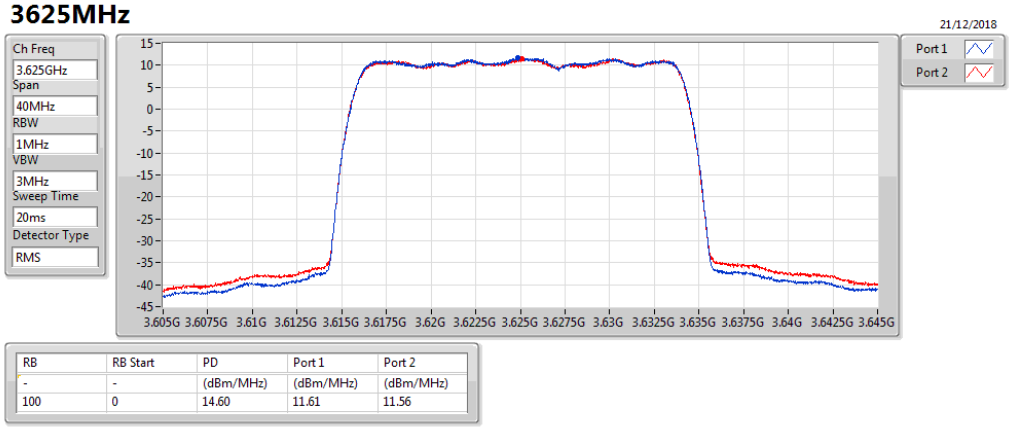
3560MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	15.05	12.28	11.78

Band 48_LTE_20MHz_(QPSK)_2TX **PSD**

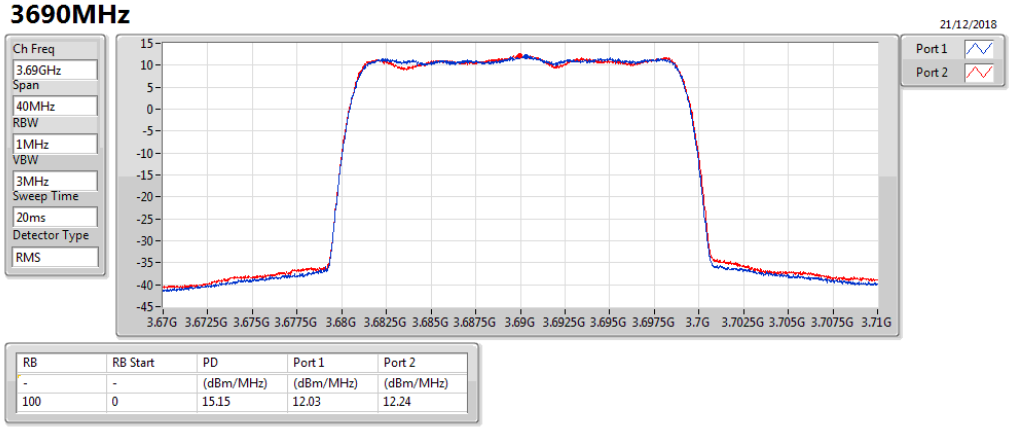
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.60	11.61	11.56

Band 48_LTE_20MHz_(QPSK)_2TX **PSD**

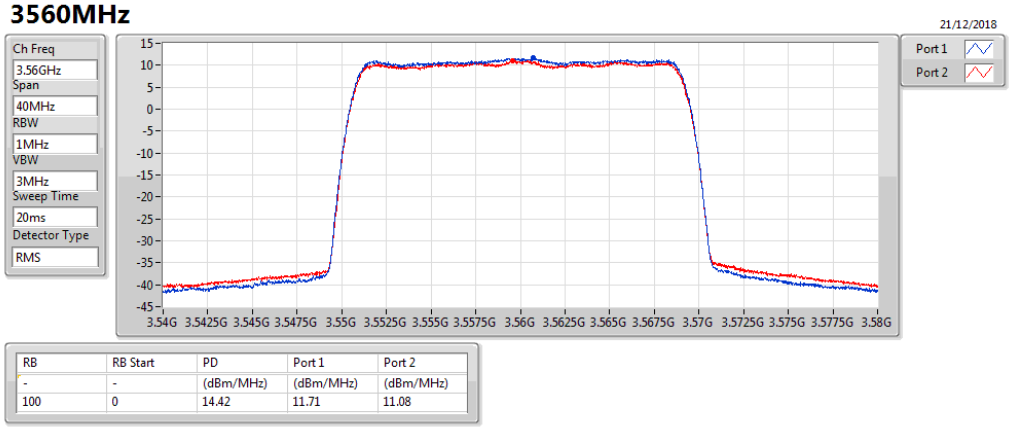
3690MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	15.15	12.03	12.24

Band 48_LTE_20MHz_(16QAM)_2TX **PSD**

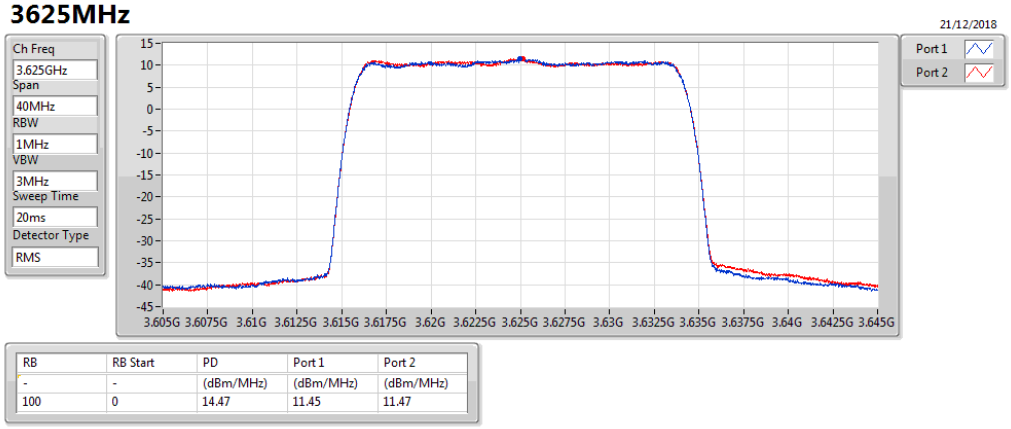
3560MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.42	11.71	11.08

Band 48_LTE_20MHz_(16QAM)_2TX **PSD**

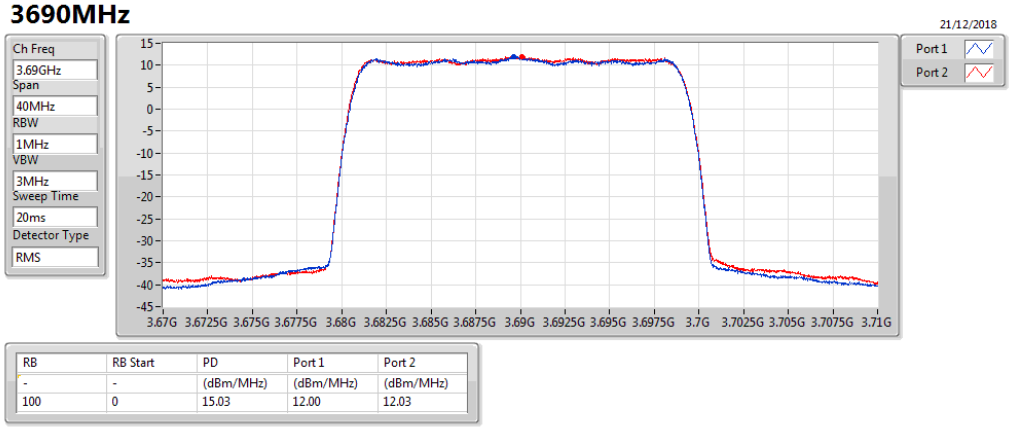
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.47	11.45	11.47

Band 48_LTE_20MHz_(16QAM)_2TX **PSD**

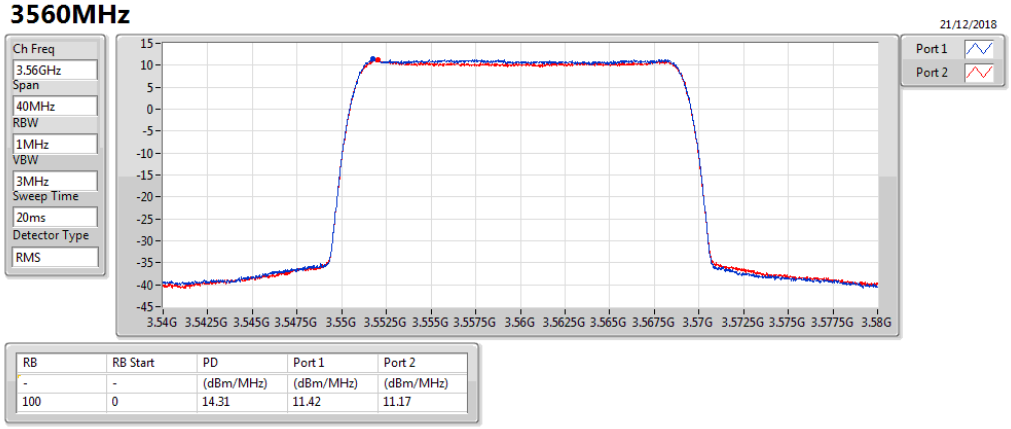
3690MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	15.03	12.00	12.03

Band 48_LTE_20MHz_(64QAM)_2TX **PSD**

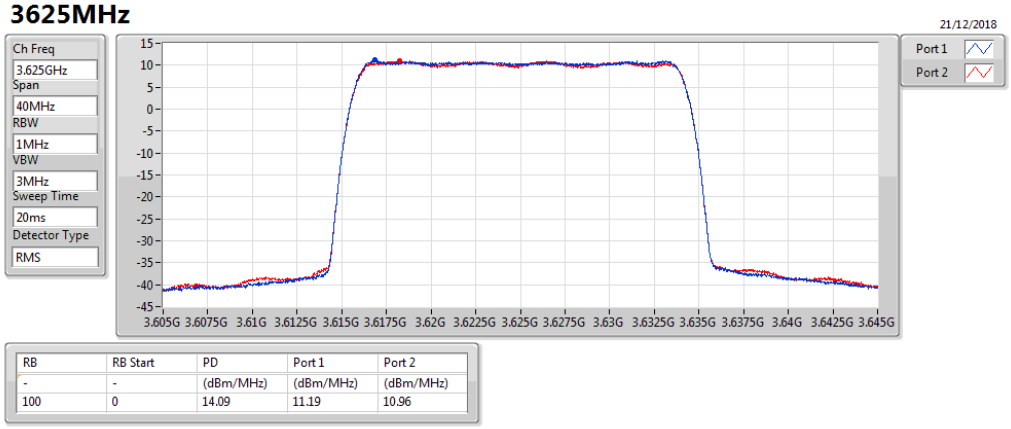
3560MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.31	11.42	11.17

Band 48_LTE_20MHz_(64QAM)_2TX **PSD**

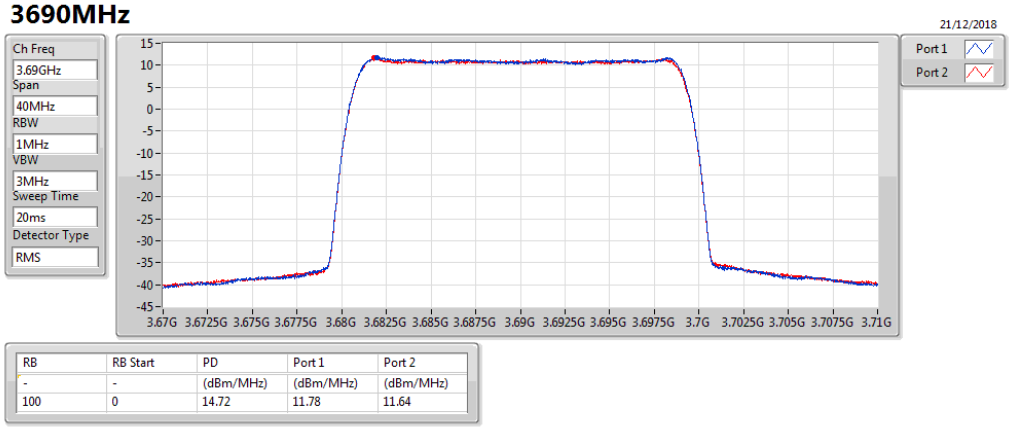
3625MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.09	11.19	10.96

Band 48_LTE_20MHz_(64QAM)_2TX **PSD**

3690MHz



RB	RB Start	PD	Port 1	Port 2
-	-	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)
100	0	14.72	11.78	11.64

<Multi-carrier and/or CA>

Summary

Mode	PD (dBm/MHz)	EIRP PD (dBm/MHz)
Band 48	-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	12.38	14.63
Band 48_LTE_20MHz+20MHz_16QAM_4TX	12.20	14.45
Band 48_LTE_20MHz+20MHz_64QAM_4TX	11.79	14.04

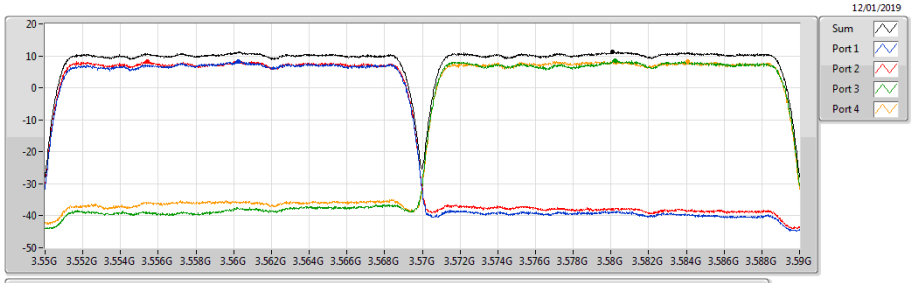
Result

Mode	Setting	Result	DG (dBi)	Port 1 (dBm/MHz)	Port 2 (dBm/MHz)	Port 3 (dBm/MHz)	Port 4 (dBm/MHz)	PD (dBm/MHz)	EIRP PD (dBm/MHz)	EIRP PD Limit (dBm/MHz)
LTE_20MHz+20MHz_QPSK_4TX	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	8.18	8.24	8.48	8.26	11.31	13.56	20.00
P#3615MHz,#3635MHz	22	Pass	2.25	8.21	8.43	9.25	9.05	11.91	14.16	20.00
P#3670MHz,#3690MHz	22	Pass	2.25	8.83	8.84	9.42	9.53	12.38	14.63	20.00
P#3560MHz,#3690MHz	22	Pass	2.25	8.53	8.62	9.39	9.13	12.27	14.52	20.00
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	8.31	8.85	9.03	8.87	11.75	14.00	20.00
P#3615MHz,#3635MHz	22	Pass	2.25	7.79	8.59	8.84	8.81	11.67	13.92	20.00
P#3670MHz,#3690MHz	22	Pass	2.25	8.48	8.75	9.70	9.04	12.20	14.45	20.00
P#3560MHz,#3690MHz	22	Pass	2.25	7.82	8.41	9.01	8.77	11.80	14.05	20.00
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-	-	-	-	-
P#3560MHz,#3580MHz	22	Pass	2.25	8.19	8.37	8.75	8.84	11.68	13.93	20.00
P#3615MHz,#3635MHz	22	Pass	2.25	7.71	8.52	8.37	8.61	11.38	13.63	20.00
P#3670MHz,#3690MHz	22	Pass	2.25	8.27	8.69	8.79	8.76	11.79	14.04	20.00
P#3560MHz,#3690MHz	22	Pass	2.25	7.54	8.03	8.75	8.37	11.57	13.82	20.00

DG = Directional Gain;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

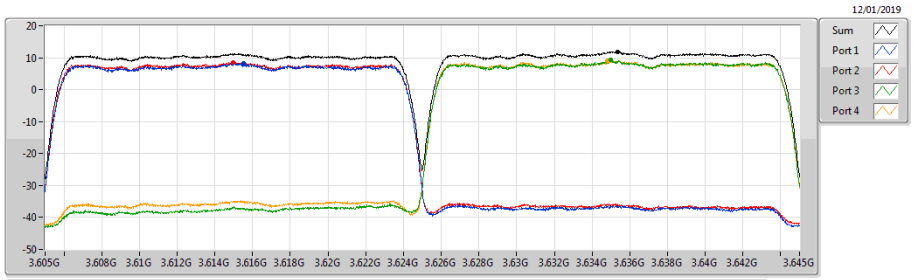
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.18	3.57G	40M	1M	3M	20m	RMS	1
8.24	3.57G	40M	1M	3M	20m	RMS	2
8.48	3.57G	40M	1M	3M	20m	RMS	3
8.26	3.57G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.31							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

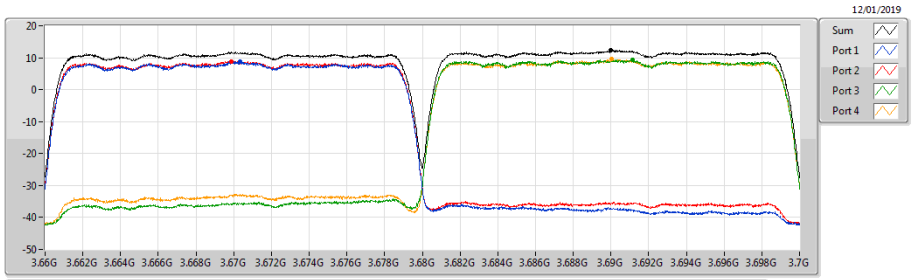
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.21	3.625G	40M	1M	3M	20m	RMS	1
8.43	3.625G	40M	1M	3M	20m	RMS	2
9.25	3.625G	40M	1M	3M	20m	RMS	3
9.05	3.625G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.91							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

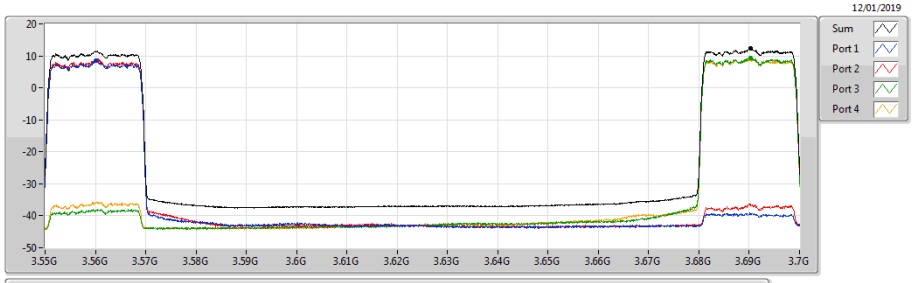
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.83	3.68G	40M	1M	3M	20m	RMS	1
8.84	3.68G	40M	1M	3M	20m	RMS	2
9.42	3.68G	40M	1M	3M	20m	RMS	3
9.53	3.68G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
12.38							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

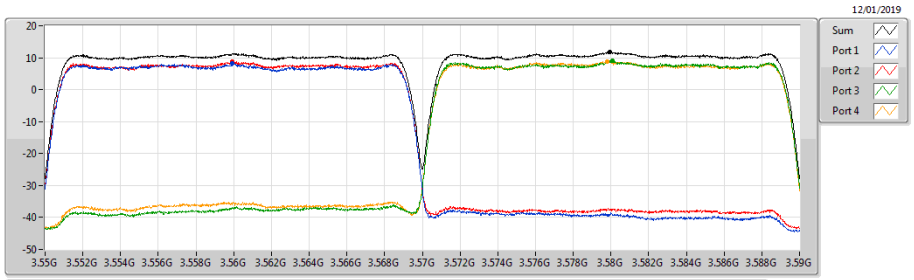
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.53	3.625G	150M	1M	3M	20m	RMS	1
8.62	3.625G	150M	1M	3M	20m	RMS	2
9.39	3.625G	150M	1M	3M	20m	RMS	3
9.13	3.625G	150M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
12.27							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

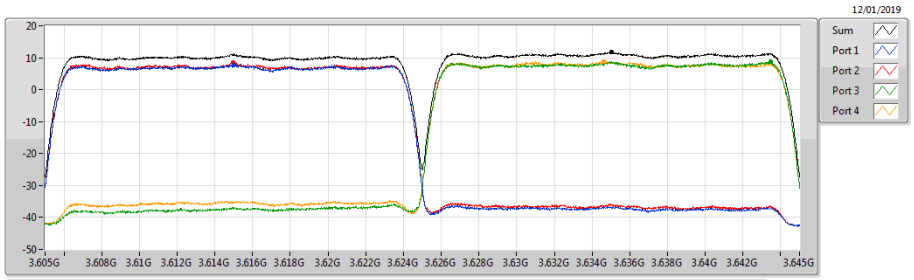
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.31	3.57G	40M	1M	3M	20m	RMS	1
8.85	3.57G	40M	1M	3M	20m	RMS	2
9.03	3.57G	40M	1M	3M	20m	RMS	3
8.87	3.57G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.75							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

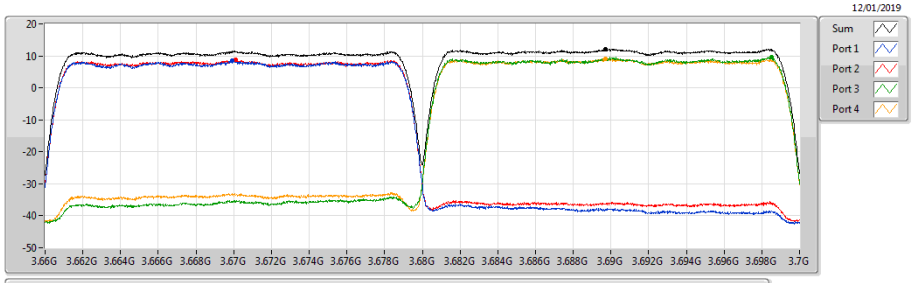
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
7.79	3.625G	40M	1M	3M	20m	RMS	1
8.59	3.625G	40M	1M	3M	20m	RMS	2
8.84	3.625G	40M	1M	3M	20m	RMS	3
8.81	3.625G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.67							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

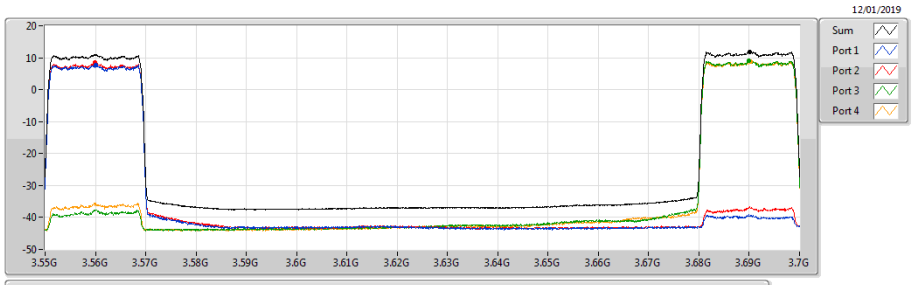
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.48	3.68G	40M	1M	3M	20m	RMS	1
8.75	3.68G	40M	1M	3M	20m	RMS	2
9.70	3.68G	40M	1M	3M	20m	RMS	3
9.04	3.68G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
12.20							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

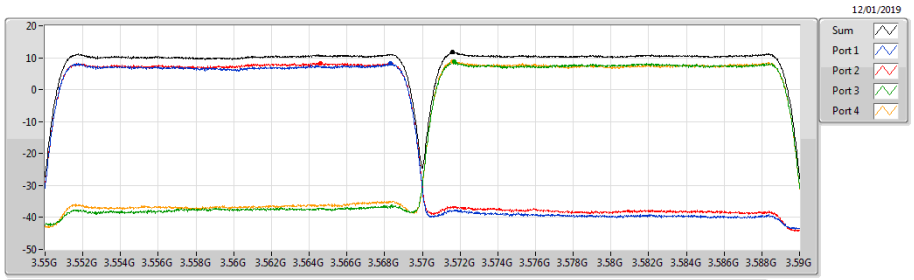
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
7.82	3.625G	150M	1M	3M	20m	RMS	1
8.41	3.625G	150M	1M	3M	20m	RMS	2
9.01	3.625G	150M	1M	3M	20m	RMS	3
8.77	3.625G	150M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.80							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

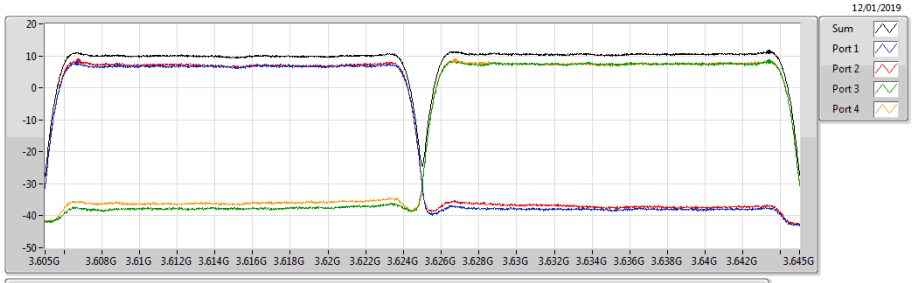
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.19	3.57G	40M	1M	3M	20m	RMS	1
8.37	3.57G	40M	1M	3M	20m	RMS	2
8.75	3.57G	40M	1M	3M	20m	RMS	3
8.84	3.57G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.68							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

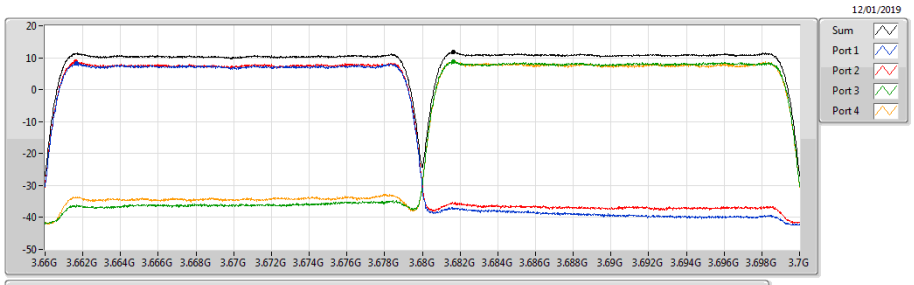
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
7.71	3.625G	40M	1M	3M	20m	RMS	1
8.52	3.625G	40M	1M	3M	20m	RMS	2
8.37	3.625G	40M	1M	3M	20m	RMS	3
8.61	3.625G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.38							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

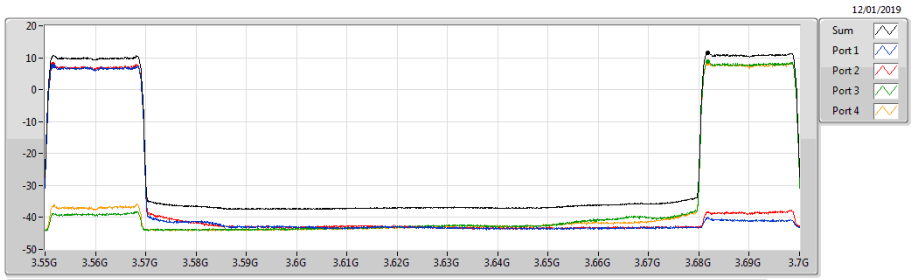
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
8.27	3.68G	40M	1M	3M	20m	RMS	1
8.69	3.68G	40M	1M	3M	20m	RMS	2
8.79	3.68G	40M	1M	3M	20m	RMS	3
8.76	3.68G	40M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.79							

Band 48_LTE_20MHz+20MHz_Nss1_4TX **PSD**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



PD	CF	Span	RBW	VBW	Sweep	Detector	Port
(dBm/MHz)	(Hz)	(Hz)	(Hz)	(Hz)	(s)		
7.54	3.625G	150M	1M	3M	20m	RMS	1
8.03	3.625G	150M	1M	3M	20m	RMS	2
8.75	3.625G	150M	1M	3M	20m	RMS	3
8.37	3.625G	150M	1M	3M	20m	RMS	4
Sum PD							
(dBm/MHz)							
11.57							

<Single-carrier>

Result

Mode	P1 Wanted signal power level (dBm)	Adjacent Channel Selectivity Throughput (%)	In-band blocking Throughput (%)	P2 Wanted signal power level (dBm)	Adjacent Channel Selectivity Throughput (%)	In-band blocking Throughput (%)	Interference signal power level (dBm/10MHz)	Result
Band 48_LTE_10MHz_2TX	-	-	-	-	-	-		-
3625MHz, RB Offset = 0	-86.5	100	100	-86.5	100	100	-40	Pass
3625MHz, RB Offset = 25	-86.5	100	100	-86.5	100	100	-40	Pass
Band 48_LTE_20MHz_2TX								-
3625MHz, RB Offset = 0	-86.5	100	100	-86.5	100	100	-40	Pass
3625MHz, RB Offset = 25	-86.5	100	100	-86.5	100	100	-40	Pass
3625MHz, RB Offset = 50	-86.5	100	100	-86.5	100	100	-40	Pass
3625MHz, RB Offset = 75	-86.5	100	100	-86.5	100	100	-40	Pass

Note1: This requirement shall be met for each consecutive application of a single instance of FRC A1-3 mapped to disjoint frequency ranges with a width of 25 resource blocks each.

The parameters of the FRC A1-3 as below:

Allocated resource blocks	25
DFT-OFDM Symbols per subframe	12
Modulation	QPSK
Code rate	1/3
Payload size (bits)	2216
Transport block CRC (bits)	24
Code block CRC size (bits)	0
Number of code blocks - C	1
Coded block size including 12bits trellis termination (bits)	6732
Total number of bits per sub-frame	7200
Total symbols per sub-frame	3600

Note2 : The interference signal is 10MHz(50RB) LTE signal.

<Multi-carrier and/or CA>

Result

Mode Contiguous	P1 Wanted signal power level (dBm)	Adjacent Channel Selectivity Throughput (%)	In-band blocking Throughput (%)	P2 Wanted signal power level (dBm)	Adjacent Channel Selectivity Throughput (%)	In-band blocking Throughput (%)	Interference signal power level (dBm/10MHz)	Result
Band 48_LTE_20MHz+20MHz_4TX								-
P#3615MHz,#3635MHz, RB Offset = 0	-86.5	100	100	-86.5	100	100	-40	Pass
P#3615MHz,#3635MHz, RB Offset = 25	-86.5	100	100	-86.5	100	100	-40	Pass
P#3615MHz,#3635MHz, RB Offset = 50	-86.5	100	100	-86.5	100	100	-40	Pass
P#3615MHz,#3635MHz, RB Offset = 75	-86.5	100	100	-86.5	100	100	-40	Pass

Mode Non-Contiguous	P1 Wanted signal power level (dBm)	In-band blocking Throughput (%)	P2 Wanted signal power level (dBm)	In-band blocking Throughput (%)	Interference signal power level (dBm/10MHz)	Result
Band 48_LTE_20MHz+20MHz_4TX						-
P#3560MHz,#3690MHz, RB Offset = 0	-86.5	100	-86.5	100	-40	Pass
P#3560MHz,#3690MHz, RB Offset = 25	-86.5	100	-86.5	100	-40	Pass
P#3560MHz,#3690MHz, RB Offset = 50	-86.5	100	-86.5	100	-40	Pass
P#3560MHz,#3690MHz, RB Offset = 75	-86.5	100	-86.5	100	-40	Pass

Note1: This requirement shall be met for each consecutive application of a single instance of FRC A1-3 mapped to disjoint frequency ranges with a width of 25 resource blocks each.

The parameters of the FRC A1-3 as below:

Allocated resource blocks	25
DFT-OFDM Symbols per subframe	12
Modulation	QPSK
Code rate	1/3
Payload size (bits)	2216
Transport block CRC (bits)	24
Code block CRC size (bits)	0
Number of code blocks - C	1
Coded block size including 12bits trellis termination (bits)	6732
Total number of bits per sub-frame	7200
Total symbols per sub-frame	3600

Note2 : The interference signal is 10MHz(50RB) LTE signal.

<Single-carrier>

Summary

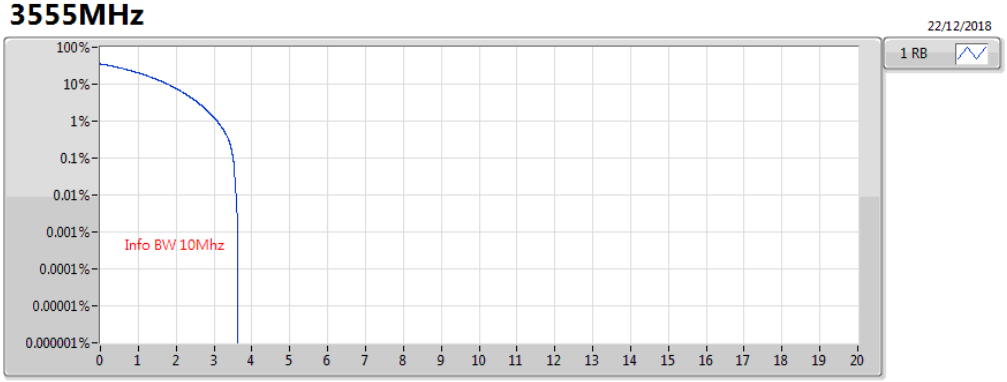
Mode	Result	RB	RB Start	Freq (Hz)	0.1%	Margin (dB)	Limit (dB)	Port
Band 48	-	-	-	-	-	-	-	-
Band 48_LTE_20MHz_(64QAM)_2TX	Pass	100	0	3.625G	9.69	-3.31	13.00	1

Result

Mode	Result	RB	RB Start	Freq (Hz)	0.1%	Margin (dB)	Limit (dB)	Port
LTE_10MHz_(QPSK)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	8.74	-4.26	13.00	1
3625MHz	Pass	50	0	3.625G	8.74	-4.26	13.00	1
3695MHz	Pass	50	0	3.695G	8.56	-4.44	13.00	1
LTE_10MHz_(16QAM)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	7.78	-5.22	13.00	1
3625MHz	Pass	50	0	3.625G	8.92	-4.08	13.00	1
3695MHz	Pass	50	0	3.695G	9.16	-3.84	13.00	1
LTE_10MHz_(64QAM)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	9.63	-3.37	13.00	1
3625MHz	Pass	50	0	3.625G	8.65	-4.35	13.00	1
3695MHz	Pass	50	0	3.695G	8.12	-4.88	13.00	1
LTE_20MHz_(QPSK)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	8.20	-4.80	13.00	1
3625MHz	Pass	100	0	3.625G	9.63	-3.37	13.00	1
3690MHz	Pass	100	0	3.69G	9.69	-3.31	13.00	1
LTE_20MHz_(16QAM)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	8.38	-4.62	13.00	1
3625MHz	Pass	100	0	3.625G	9.69	-3.31	13.00	1
3690MHz	Pass	100	0	3.69G	9.52	-3.48	13.00	1
LTE_20MHz_(64QAM)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	8.95	-4.05	13.00	1
3625MHz	Pass	100	0	3.625G	9.69	-3.31	13.00	1
3690MHz	Pass	100	0	3.69G	9.64	-3.36	13.00	1

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

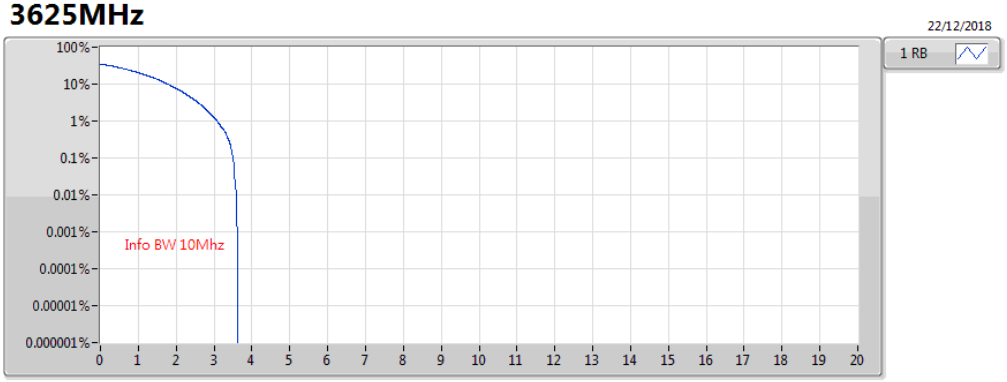
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.74	-4.26	13.00	1

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

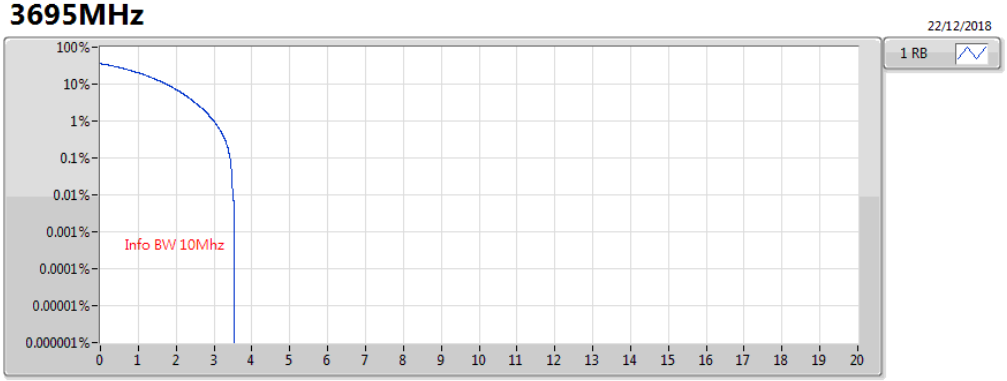
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.74	-4.26	13.00	1

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

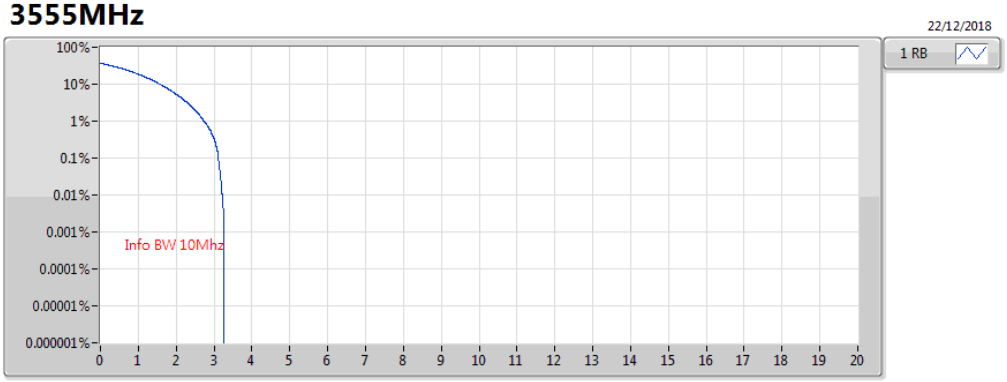
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.56	-4.44	13.00	1

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

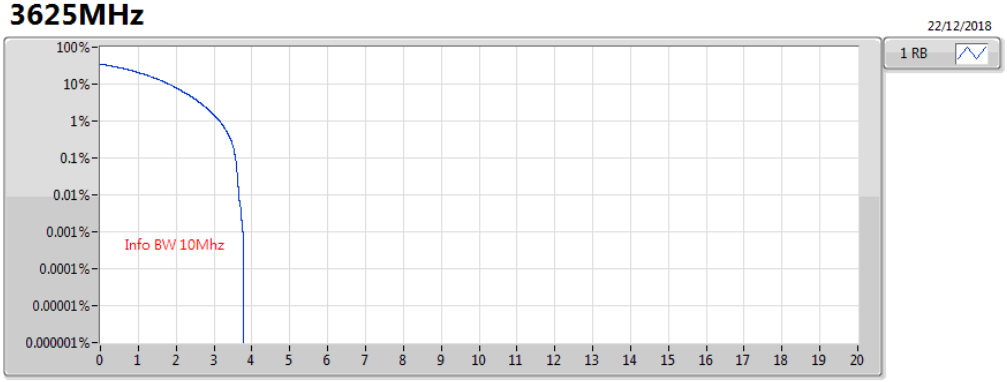
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	7.78	-5.22	13.00	1

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

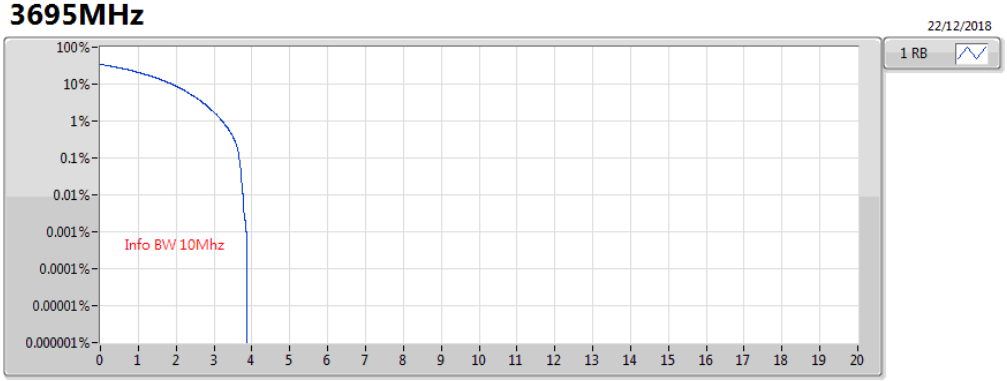
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.92	-4.08	13.00	1

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

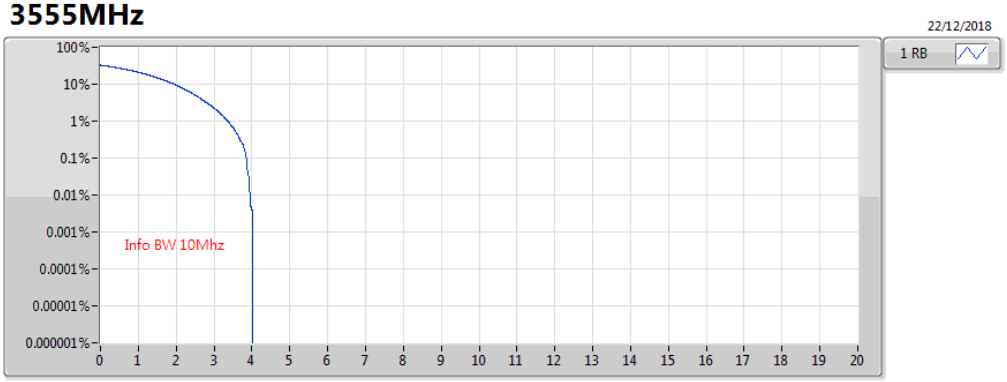
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	9.16	-3.84	13.00	1

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

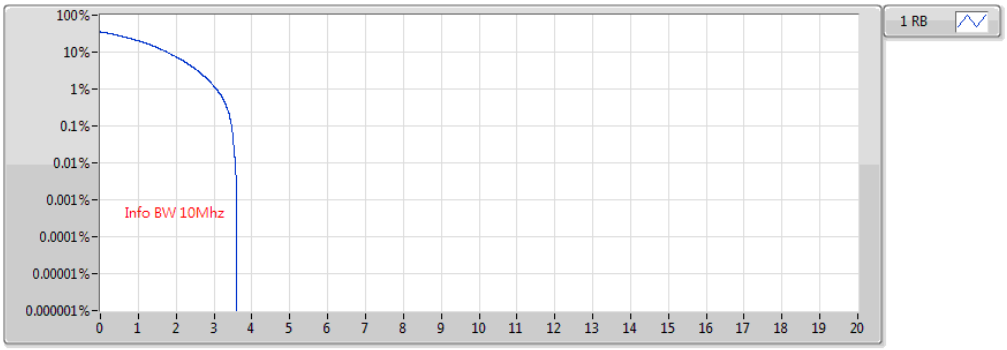
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	9.63	-3.37	13.00	1

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

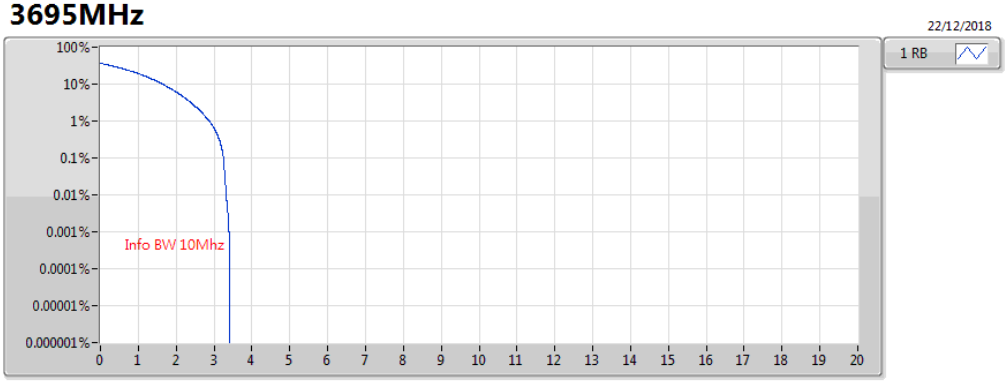
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.65	-4.35	13.00	1

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

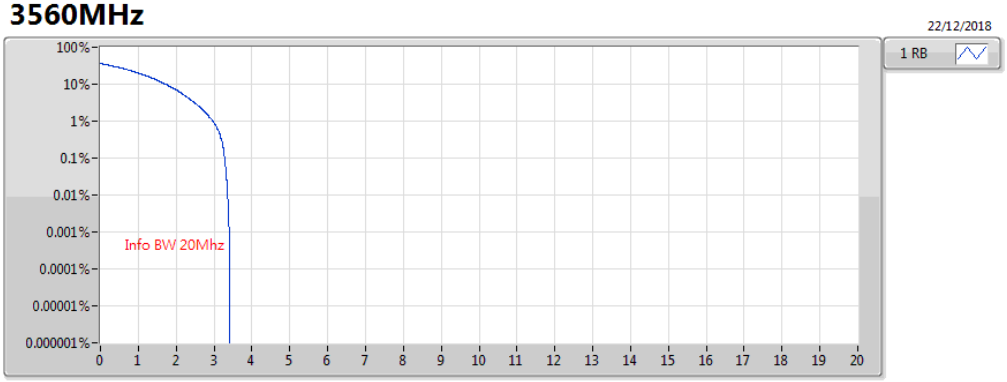
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.12	-4.88	13.00	1

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

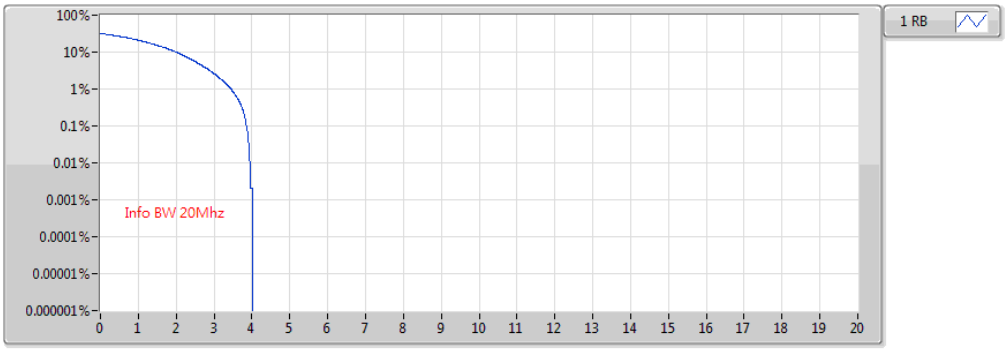
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.20	-4.80	13.00	1

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

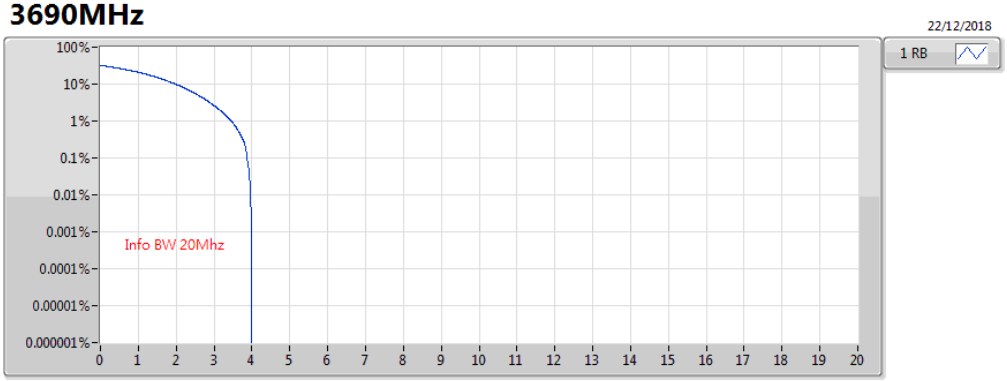
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.63	-3.37	13.00	1

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

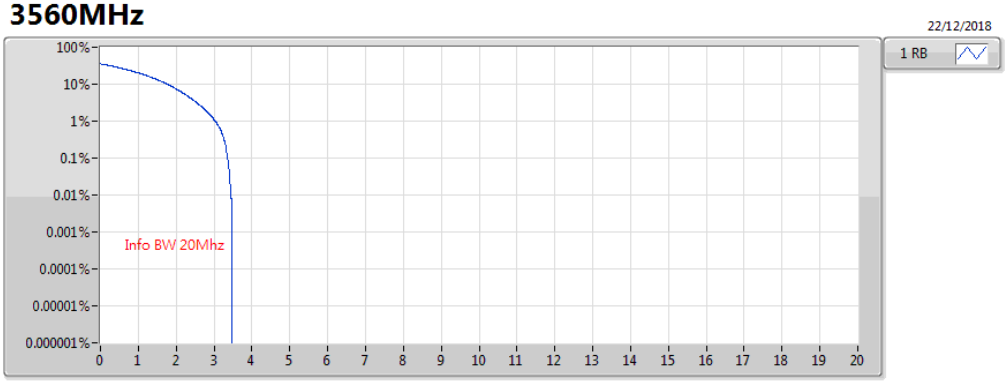
3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.69	-3.31	13.00	1

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

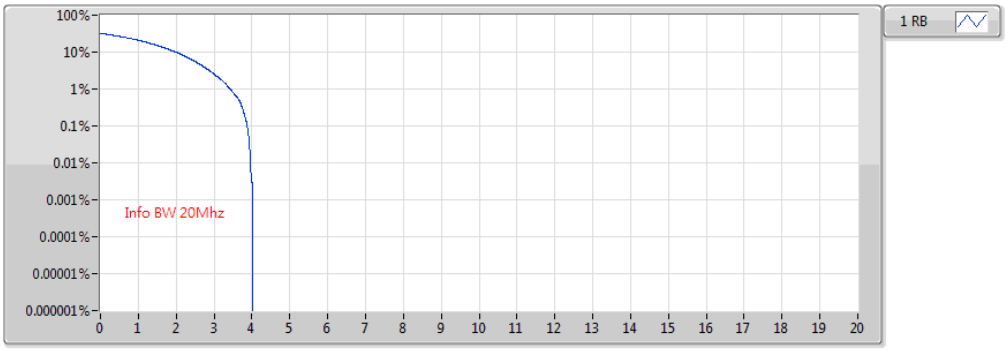
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.38	-4.62	13.00	1

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

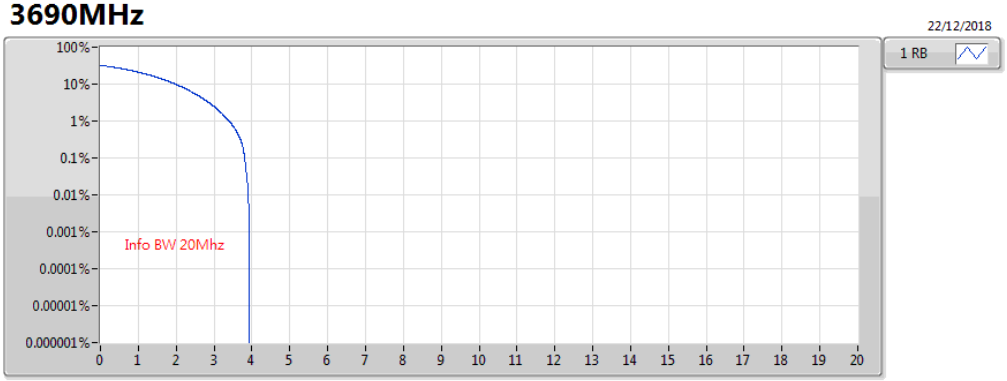
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.69	-3.31	13.00	1

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

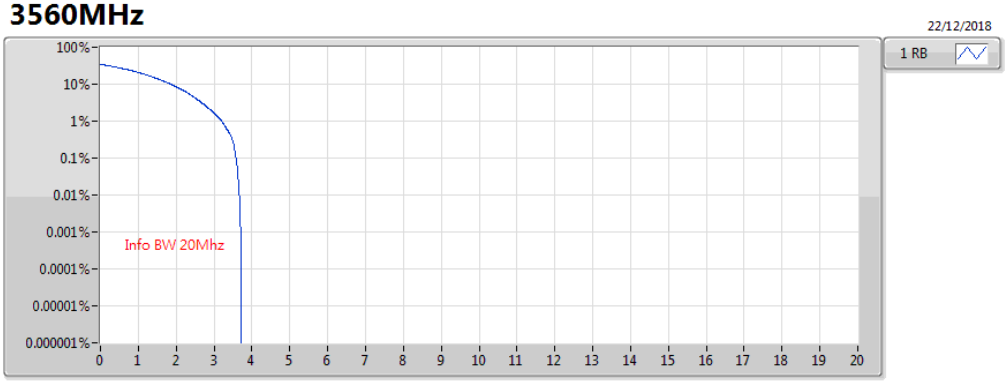
3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.52	-3.48	13.00	1

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

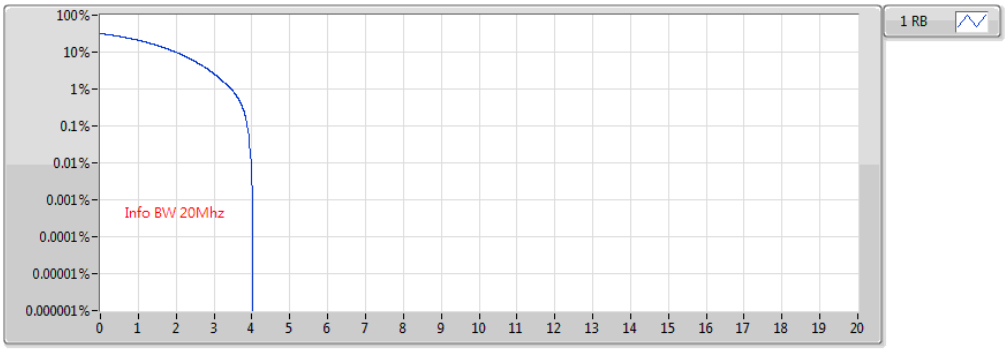
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.95	-4.05	13.00	1

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

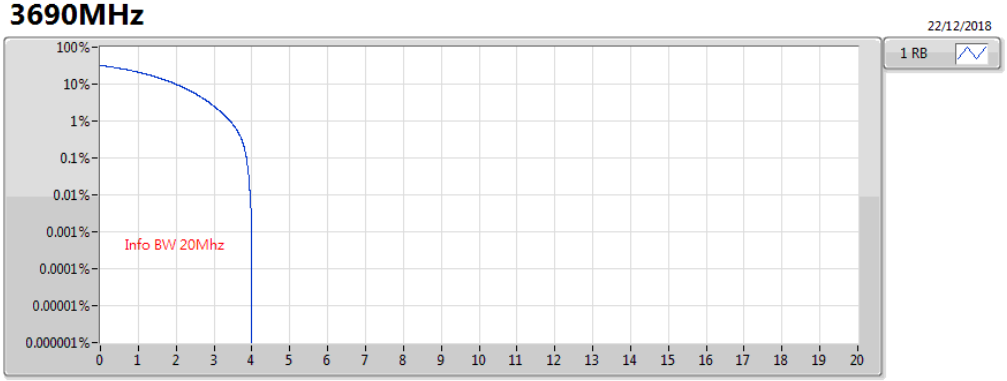
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.69	-3.31	13.00	1

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.64	-3.36	13.00	1

<Single-carrier>

Summary

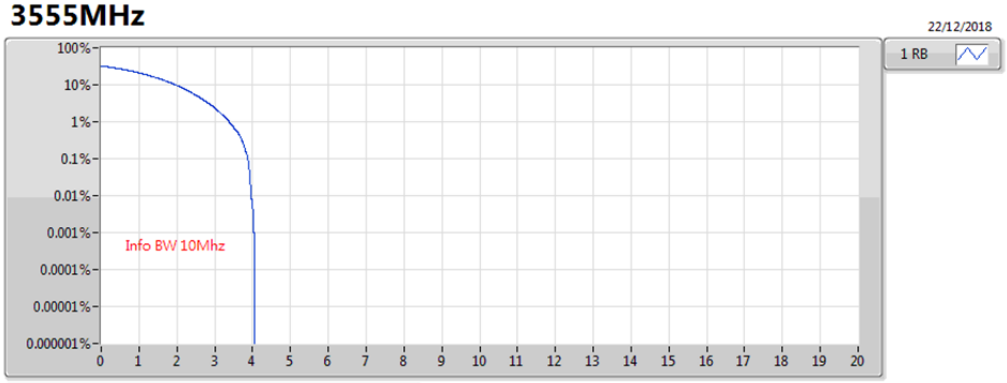
Mode	Result	RB	RB Start	Freq (Hz)	0.1%	Margin (dB)	Limit (dB)	Port
Band 48	-	-	-	-	-	-	-	-
Band 48_LTE_20MHz_(64QAM)_2TX	Pass	100	0	3.56G	9.72	-3.28	13.00	2

Result

Mode	Result	RB	RB Start	Freq (Hz)	0.1%	Margin (dB)	Limit (dB)	Port
LTE_10MHz_(QPSK)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	9.68	-3.32	13.00	2
3625MHz	Pass	50	0	3.625G	8.83	-4.17	13.00	2
3695MHz	Pass	50	0	3.695G	8.80	-4.20	13.00	2
LTE_10MHz_(16QAM)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	8.54	-4.46	13.00	2
3625MHz	Pass	50	0	3.625G	8.05	-4.95	13.00	2
3695MHz	Pass	50	0	3.695G	9.47	-3.53	13.00	2
LTE_10MHz_(64QAM)_2TX	-	-	-	-	-	-	-	-
3555MHz	Pass	50	0	3.555G	9.61	-3.39	13.00	2
3625MHz	Pass	50	0	3.625G	8.34	-4.66	13.00	2
3695MHz	Pass	50	0	3.695G	8.66	-4.34	13.00	2
LTE_20MHz_(QPSK)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	9.61	-3.39	13.00	2
3625MHz	Pass	100	0	3.625G	9.66	-3.34	13.00	2
3690MHz	Pass	100	0	3.69G	8.76	-4.24	13.00	2
LTE_20MHz_(16QAM)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	8.86	-4.14	13.00	2
3625MHz	Pass	100	0	3.625G	9.67	-3.33	13.00	2
3690MHz	Pass	100	0	3.69G	7.72	-5.28	13.00	2
LTE_20MHz_(64QAM)_2TX	-	-	-	-	-	-	-	-
3560MHz	Pass	100	0	3.56G	9.72	-3.28	13.00	2
3625MHz	Pass	100	0	3.625G	9.65	-3.35	13.00	2
3690MHz	Pass	100	0	3.69G	7.56	-5.44	13.00	2

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

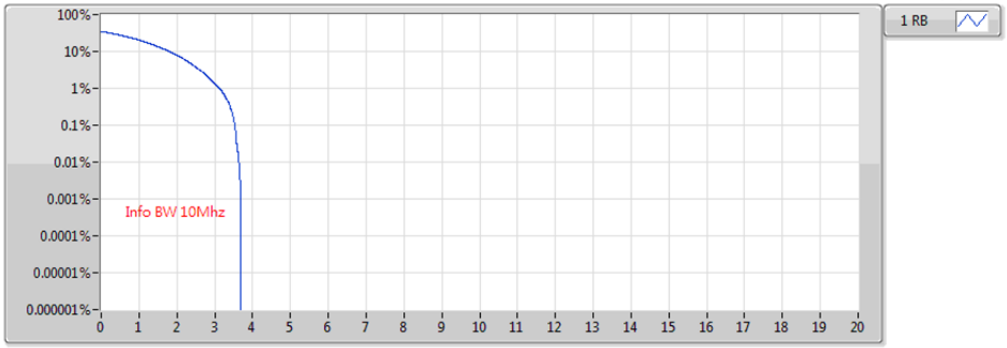
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	9.68	-3.32	13.00	2

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

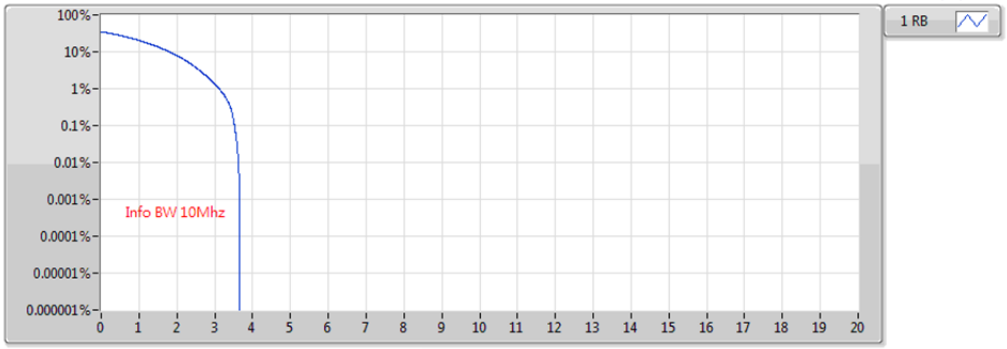
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.83	-4.17	13.00	2

Band 48_LTE_10MHz_(QPSK)_2TX **PAR**

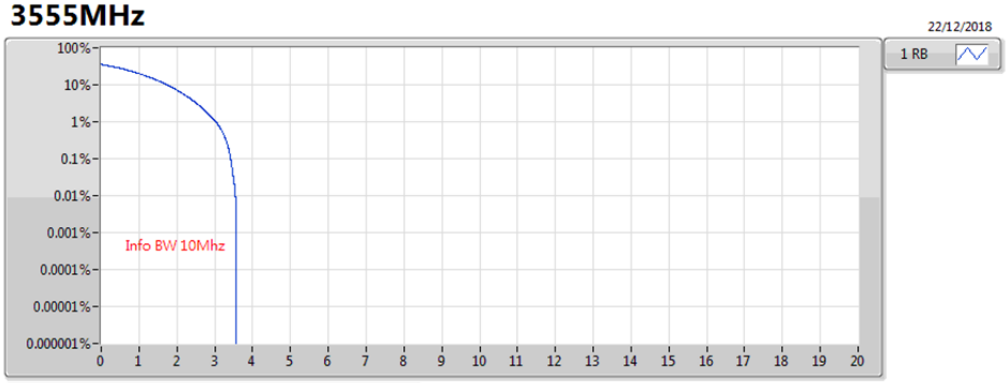
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.80	-4.20	13.00	2

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

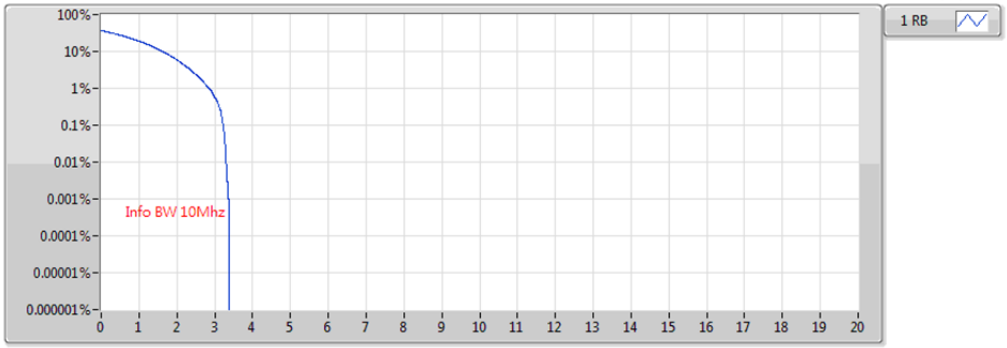
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.54	-4.46	13.00	2

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

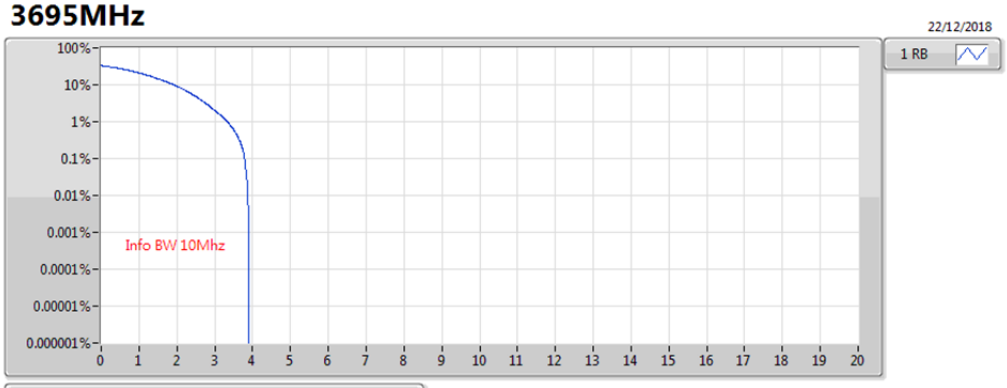
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.05	-4.95	13.00	2

Band 48_LTE_10MHz_(16QAM)_2TX **PAR**

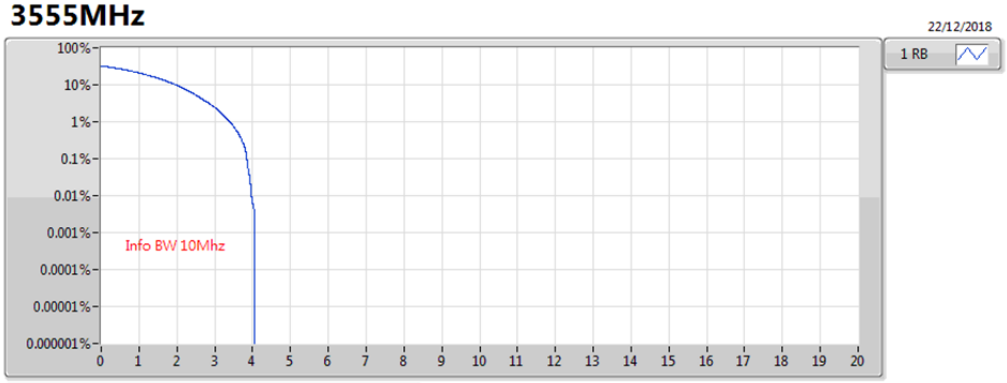
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	9.47	-3.53	13.00	2

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

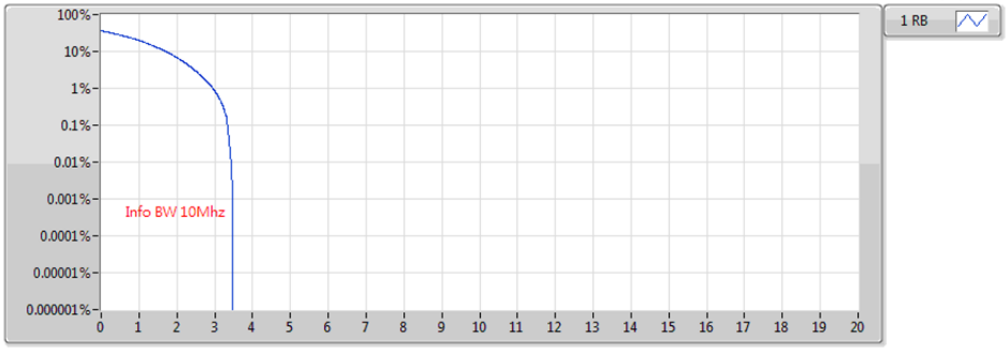
3555MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	9.61	-3.39	13.00	2

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

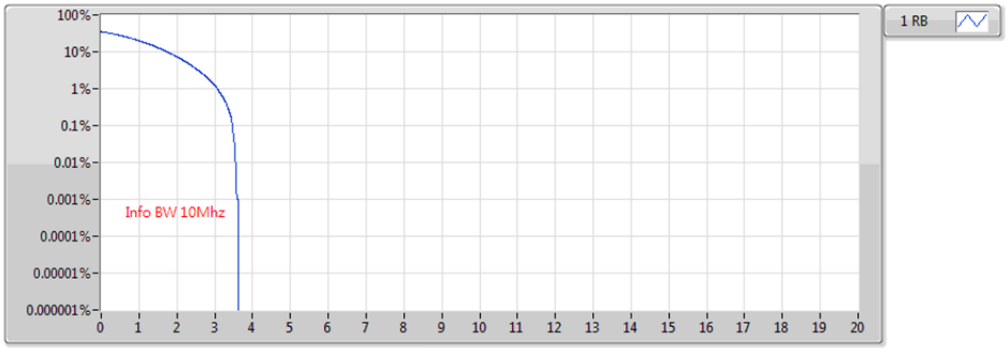
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.34	-4.66	13.00	2

Band 48_LTE_10MHz_(64QAM)_2TX **PAR**

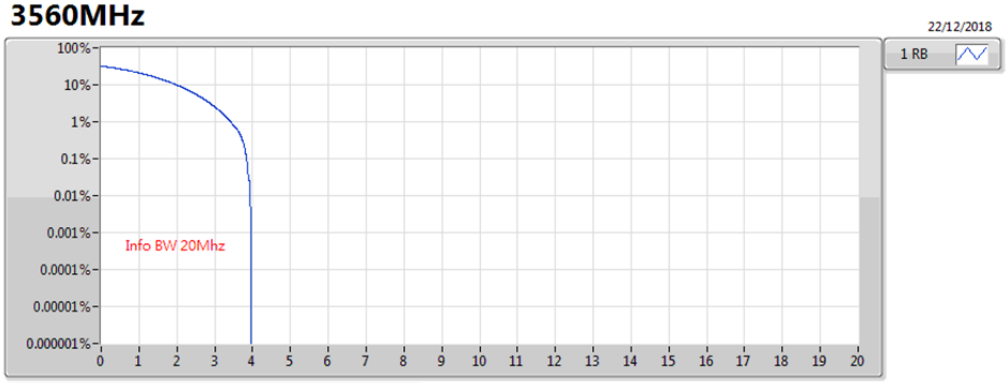
3695MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
50	8.66	-4.34	13.00	2

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

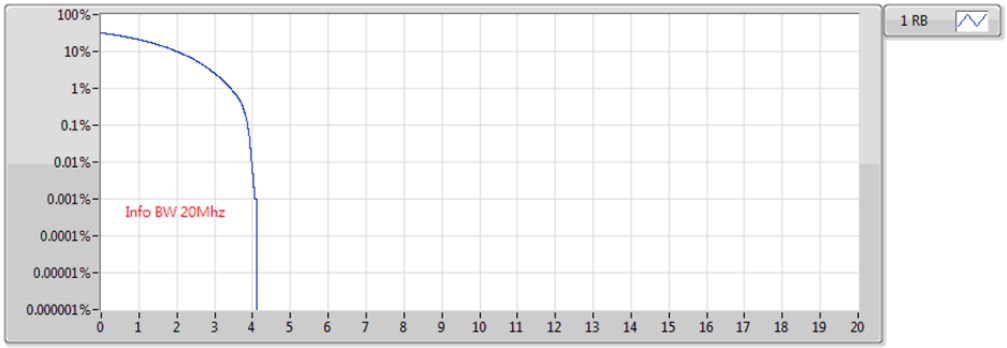
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.61	-3.39	13.00	2

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

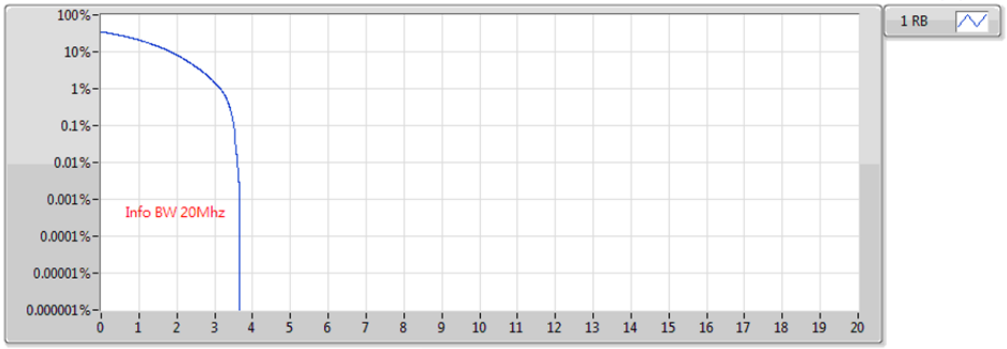
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.66	-3.34	13.00	2

Band 48_LTE_20MHz_(QPSK)_2TX **PAR**

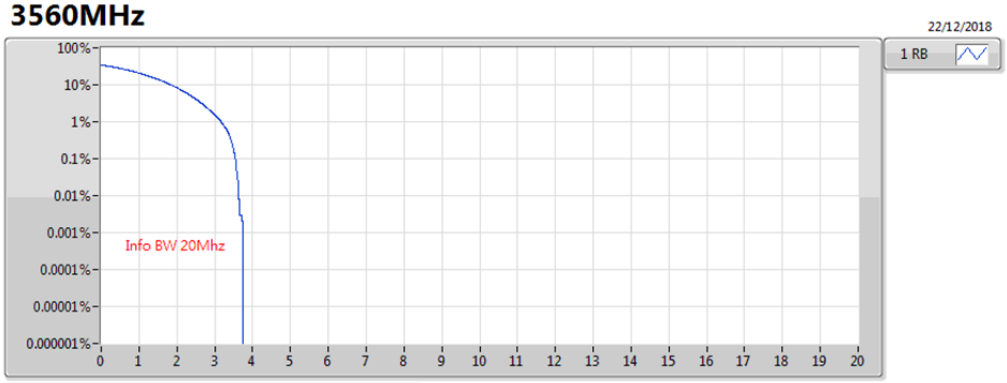
3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.76	-4.24	13.00	2

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

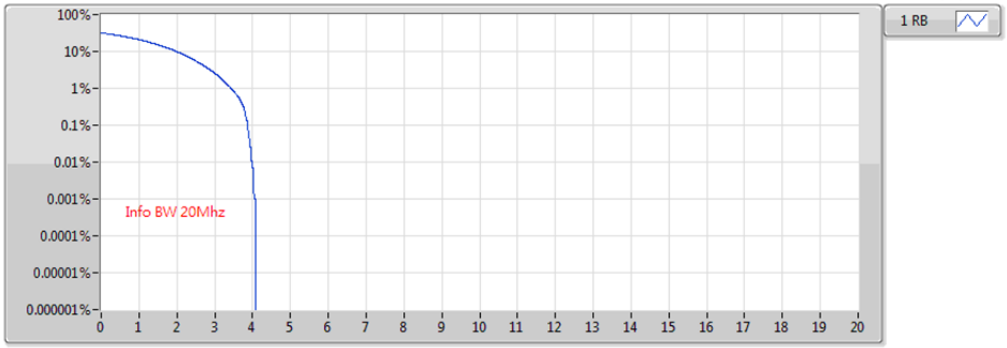
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	8.86	-4.14	13.00	2

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

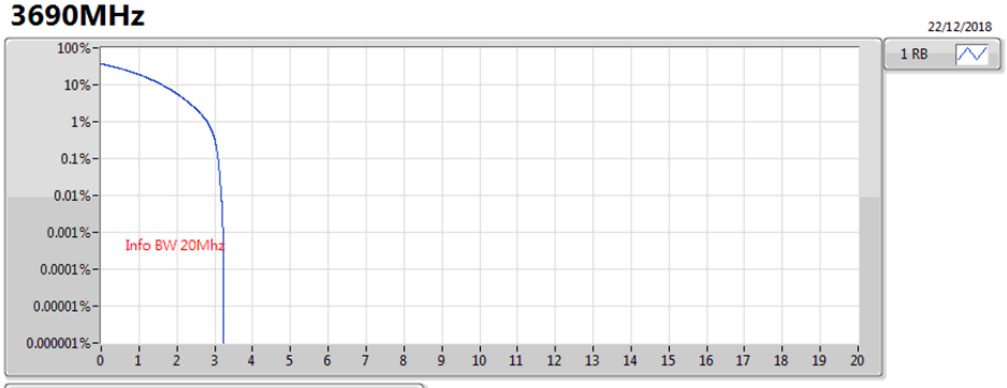
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.67	-3.33	13.00	2

Band 48_LTE_20MHz_(16QAM)_2TX **PAR**

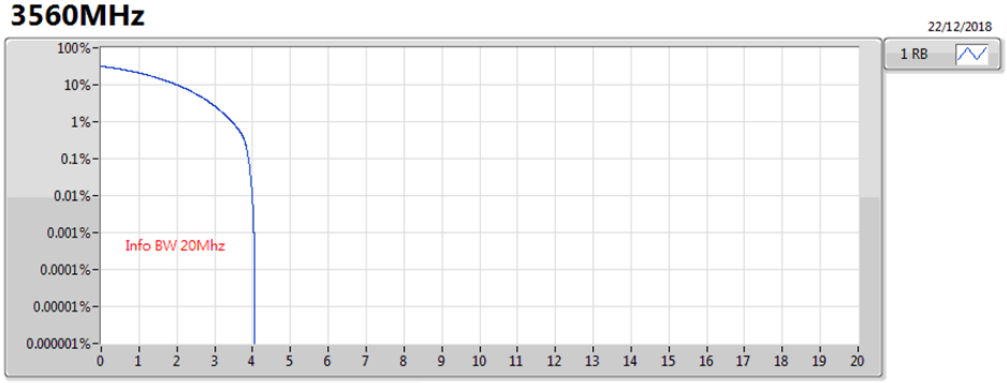
3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	7.72	-5.28	13.00	2

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

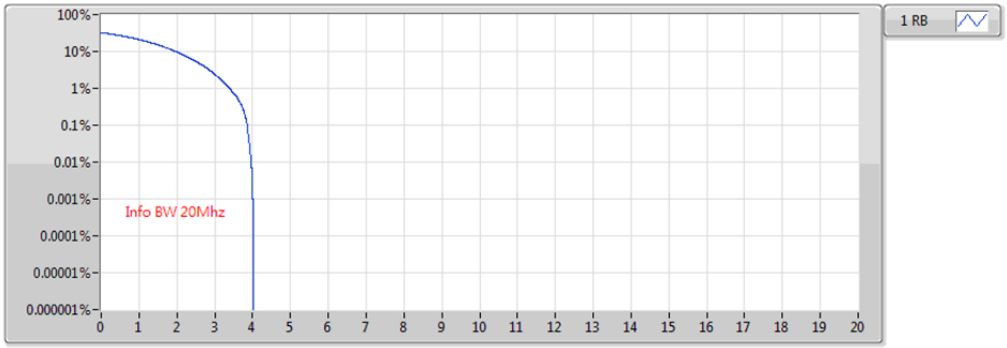
3560MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.72	-3.28	13.00	2

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

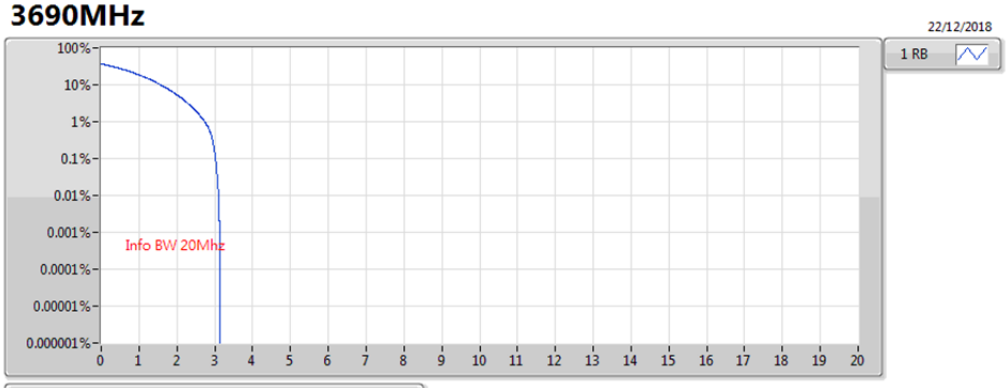
3625MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	9.65	-3.35	13.00	2

Band 48_LTE_20MHz_(64QAM)_2TX **PAR**

3690MHz



RB	0.1%	Margin(dB)	Limit(dB)	Port
100	7.56	-5.44	13.00	2

<Multi-carrier and/or CA>

Summary

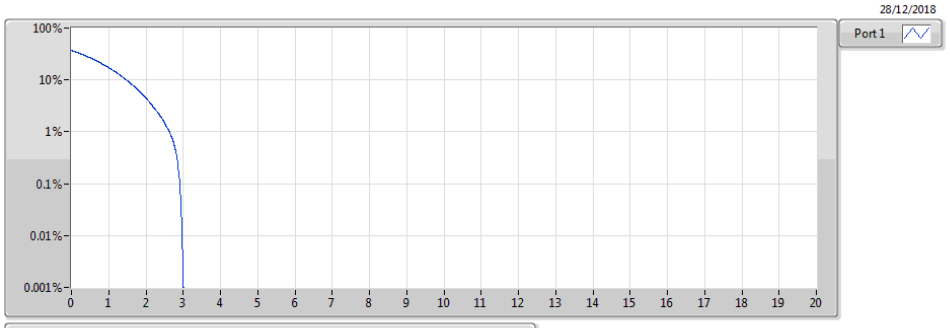
Mode	Result	Freq (MHz)	0.1%	Margin	Limit (dB)	Port
Band 48	-	-	-	-	-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	Pass	3560	7.74	5.26	13.00	1
Band 48_LTE_20MHz+20MHz_16QAM_4TX	Pass	3615	8.39	4.61	13.00	1
Band 48_LTE_20MHz+20MHz_64QAM_4TX	Pass	3560	9.62	3.38	13.00	1

Result

Mode	Result	Freq (MHz)	0.1%	Margin	Limit (dB)	Port
LTE_20MHz+20MHz_QPSK_4TX	-	-	-	-	-	-
P#3560MHz,#3580MHz	Pass	3560	7.27	5.73	13.00	1
P#3615MHz,#3635MHz	Pass	3615	7.39	5.61	13.00	1
P#3670MHz,#3690MHz	Pass	3670	7.64	5.36	13.00	1
P#3560MHz,#3690MHz	Pass	3560	7.74	5.26	13.00	1
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-
P#3560MHz,#3580MHz	Pass	3560	7.17	5.83	13.00	1
P#3615MHz,#3635MHz	Pass	3615	8.39	4.61	13.00	1
P#3670MHz,#3690MHz	Pass	3670	7.46	5.54	13.00	1
P#3560MHz,#3690MHz	Pass	3560	7.28	5.72	13.00	1
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-
P#3560MHz,#3580MHz	Pass	3560	7.82	5.18	13.00	1
P#3615MHz,#3635MHz	Pass	3615	7.75	5.25	13.00	1
P#3670MHz,#3690MHz	Pass	3670	9.16	3.84	13.00	1
P#3560MHz,#3690MHz	Pass	3560	9.62	3.38	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

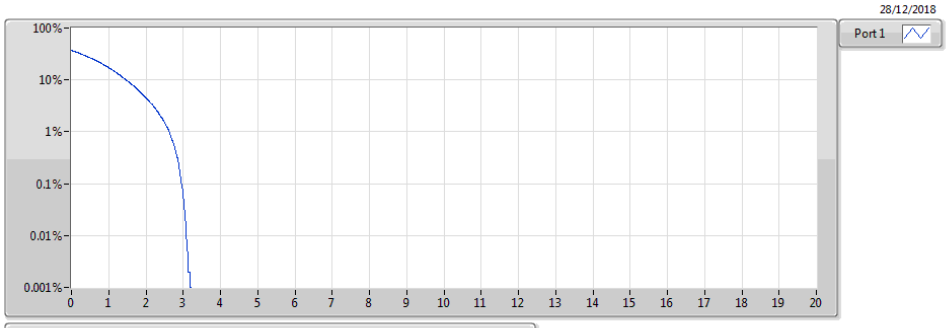
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.27	-5.73	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

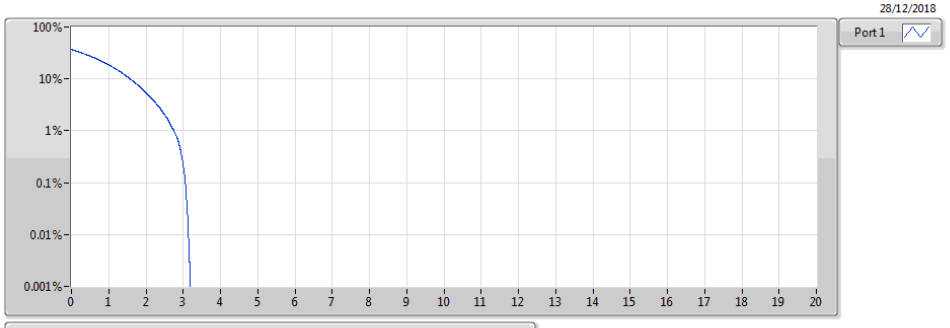
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	7.39	-5.61	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

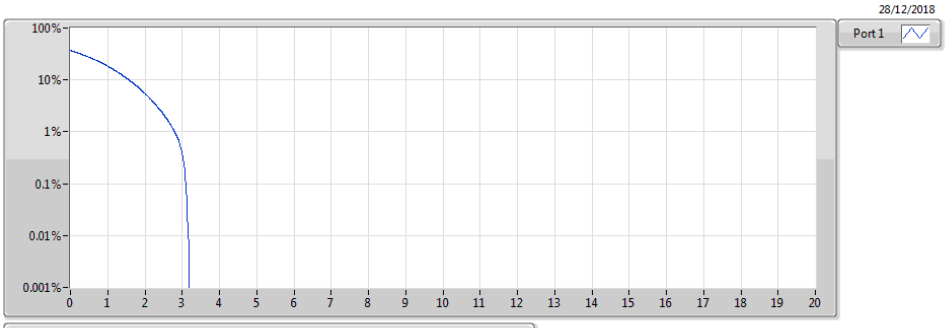
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	7.64	-5.36	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

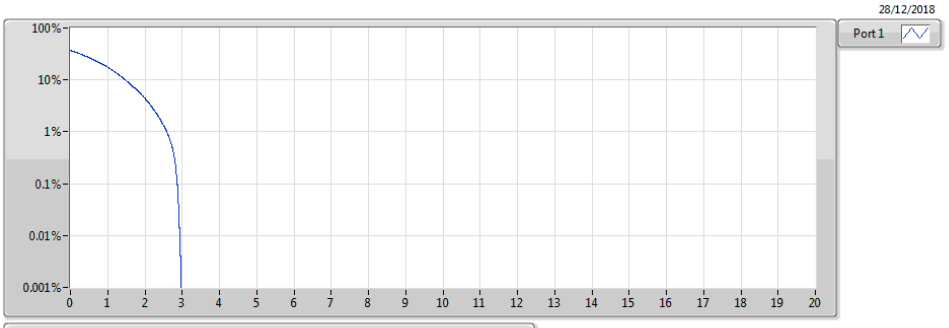
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.74	-5.26	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

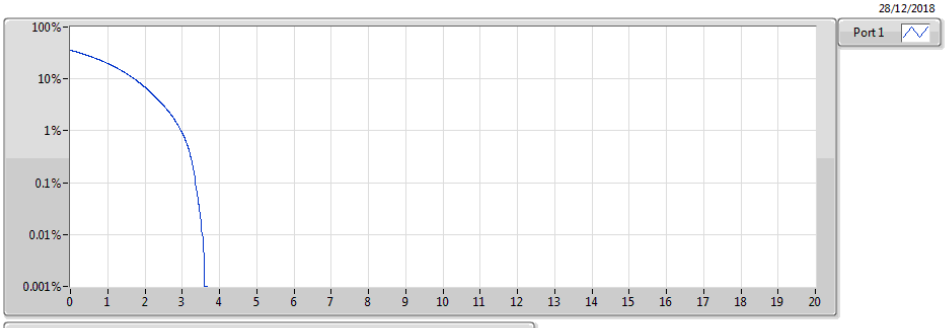
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.17	-5.83	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

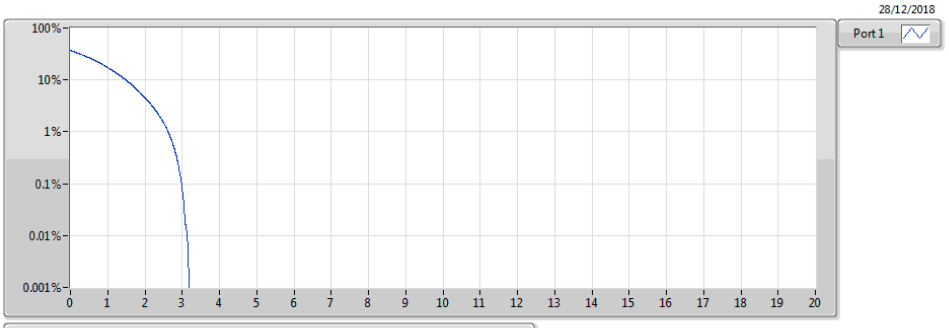
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	8.39	-4.61	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

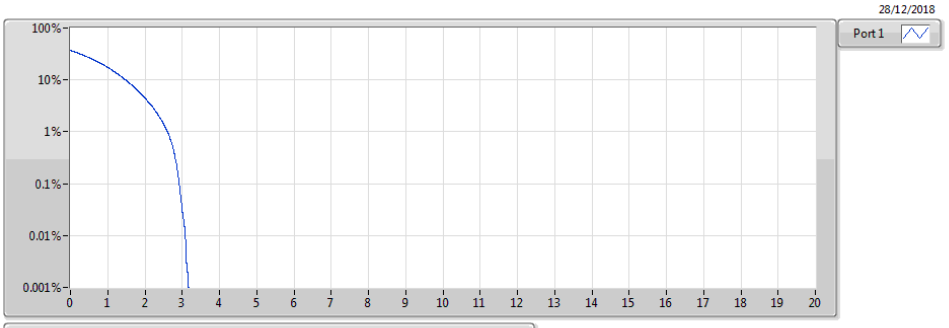
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	7.46	-5.54	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

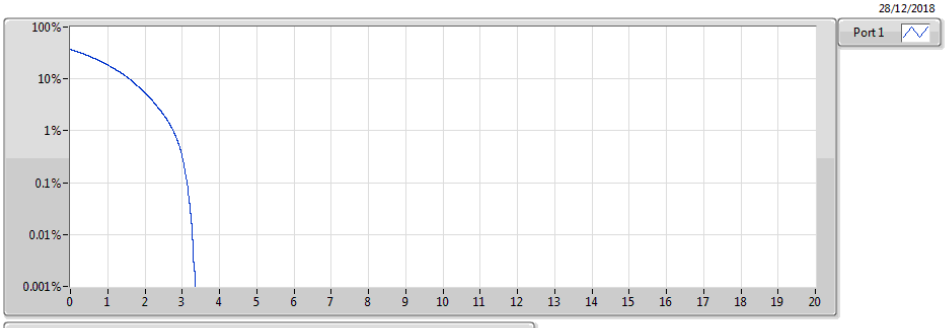
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.28	-5.72	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

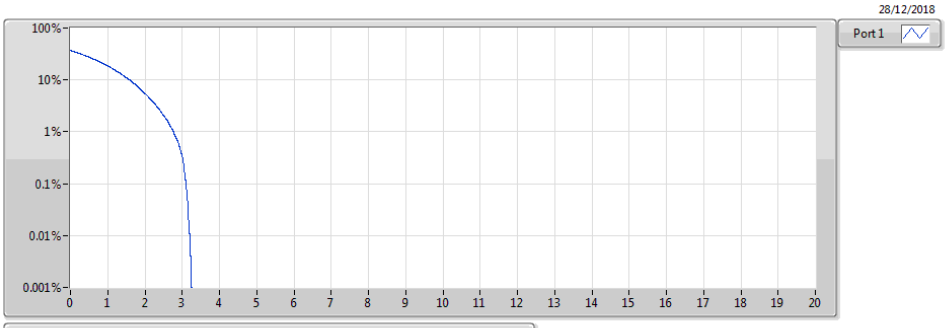
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.82	-5.18	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

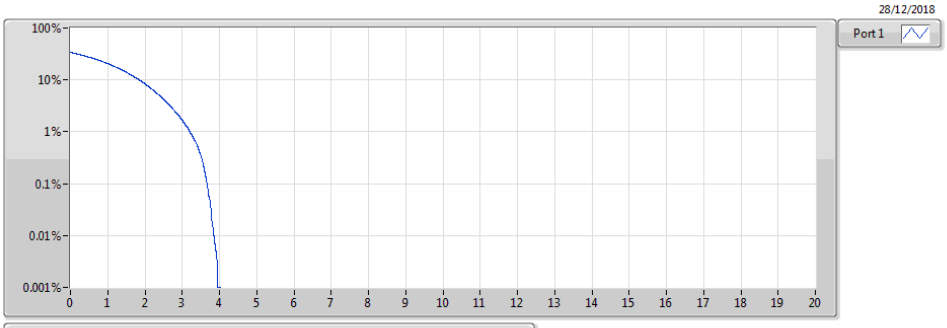
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	7.75	-5.25	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

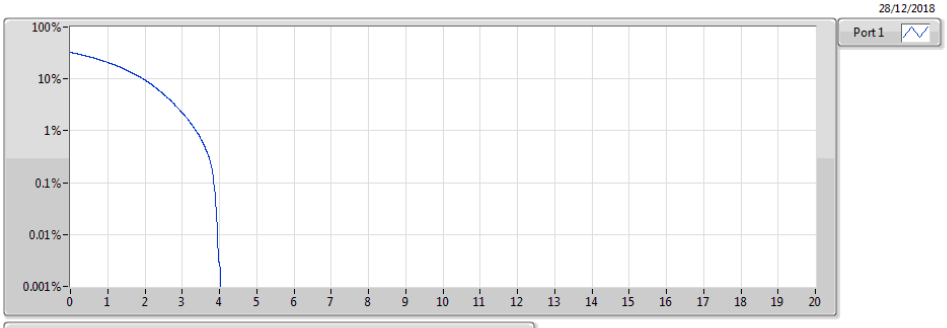
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	9.16	-3.84	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	9.62	-3.38	13.00	1

<Multi-carrier and/or CA>

Summary

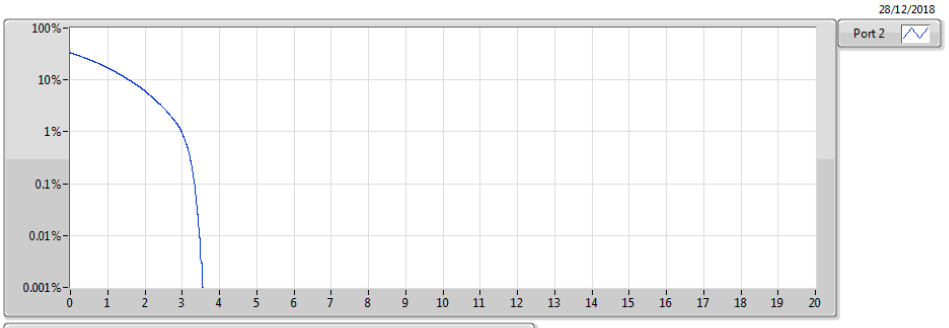
Mode	Result	Freq (MHz)	0.1%	Margin	Limit (dB)	Port
Band 48	-	-	-		-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	Pass	3560	9.06	3.94	13.00	2
Band 48_LTE_20MHz+20MHz_16QAM_4TX	Pass	3560	9.68	3.32	13.00	2
Band 48_LTE_20MHz+20MHz_64QAM_4TX	Pass	3560	7.82	5.18	13.00	2

Result

Mode	Result	Freq (MHz)	0.1%	Margin	Limit (dB)	Port
LTE_20MHz+20MHz_QPSK_4TX	-	-	-		-	-
P#3560MHz,#3580MHz	Pass	3560	8.33	4.67	13.00	2
P#3615MHz,#3635MHz	Pass	3615	7.25	5.75	13.00	2
P#3670MHz,#3690MHz	Pass	3670	7.43	5.57	13.00	2
P#3560MHz,#3690MHz	Pass	3560	9.06	3.94	13.00	2
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-
P#3560MHz,#3580MHz	Pass	3560	7.74	5.26	13.00	2
P#3615MHz,#3635MHz	Pass	3615	7.68	5.32	13.00	2
P#3670MHz,#3690MHz	Pass	3670	7.41	5.59	13.00	2
P#3560MHz,#3690MHz	Pass	3560	9.68	3.32	13.00	2
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-
P#3560MHz,#3580MHz	Pass	3560	7.82	5.18	13.00	2
P#3615MHz,#3635MHz	Pass	3615	7.40	5.6	13.00	2
P#3670MHz,#3690MHz	Pass	3670	7.72	5.28	13.00	2
P#3560MHz,#3690MHz	Pass	3560	7.26	5.74	13.00	2

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

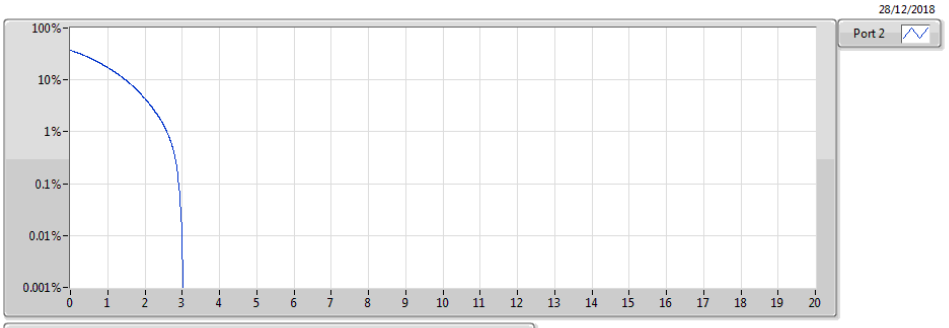
P#3560MHz,#3580MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	8.33	-4.67	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

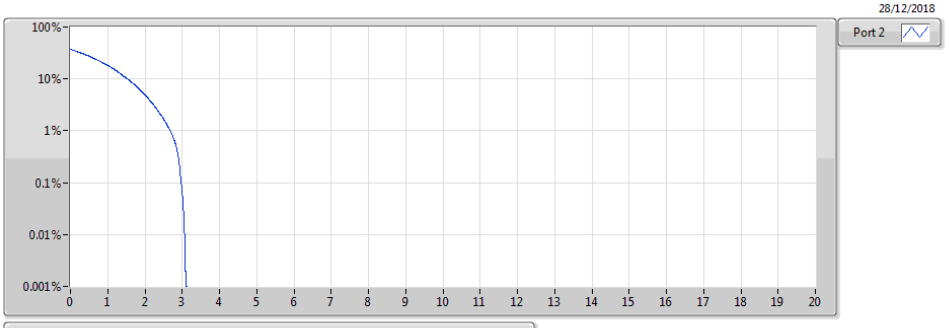
P#3615MHz,#3635MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	7.25	-5.75	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

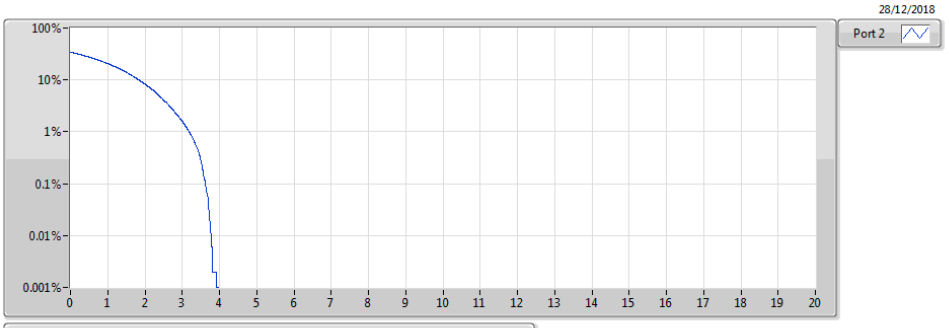
P#3670MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	7.43	-5.57	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

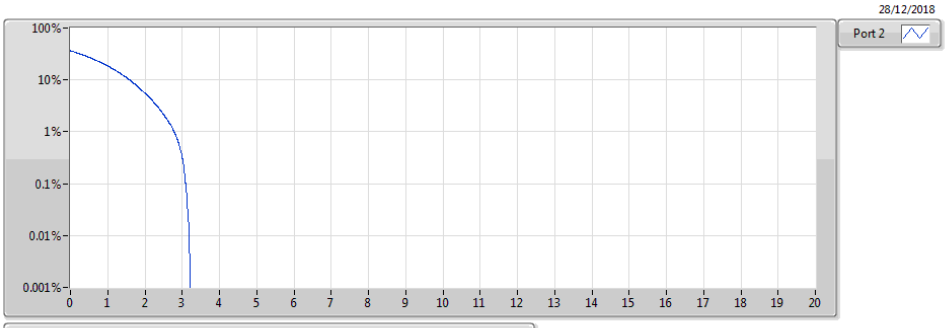
P#3560MHz,#3690MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	9.06	-3.94	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

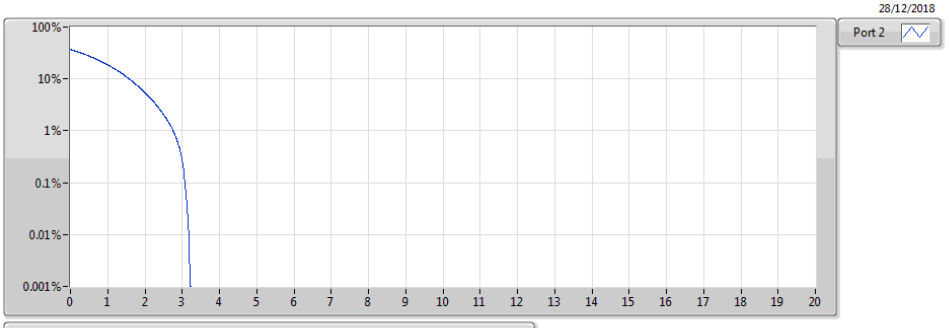
P#3560MHz,#3580MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.74	-5.26	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

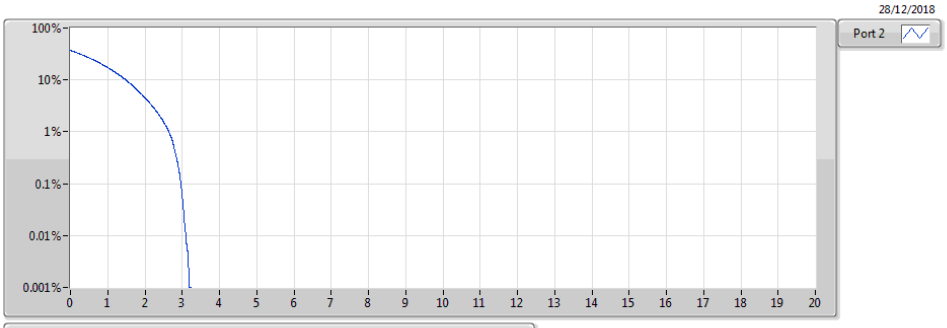
P#3615MHz,#3635MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	7.68	-5.32	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

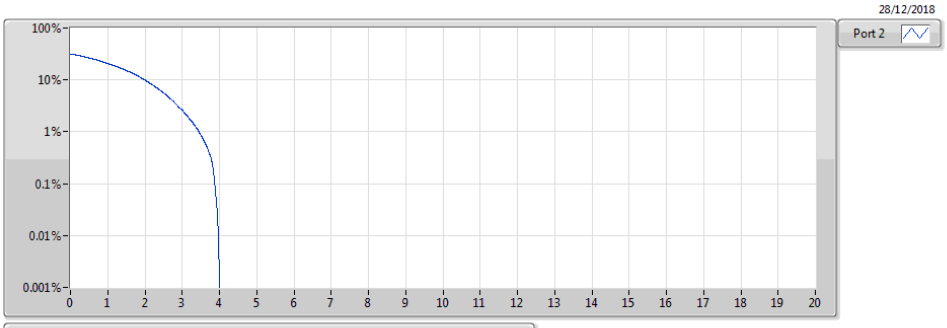
P#3670MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	7.41	-5.59	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

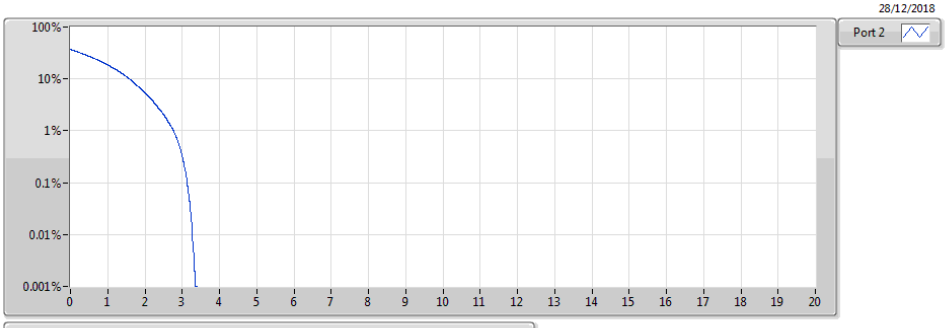
P#3560MHz,#3690MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	9.68	-3.32	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

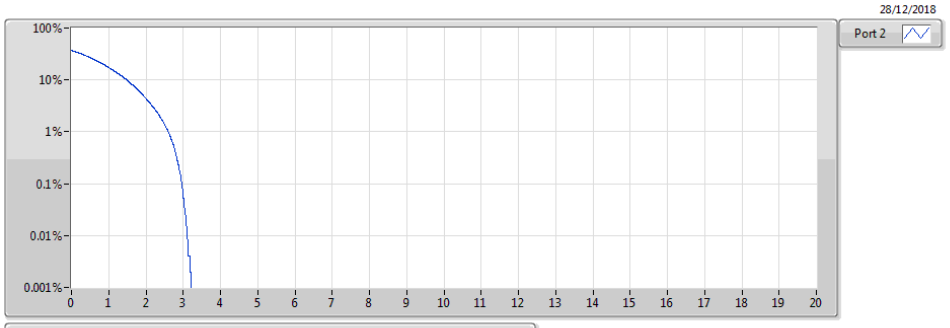
P#3560MHz,#3580MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.82	-5.18	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

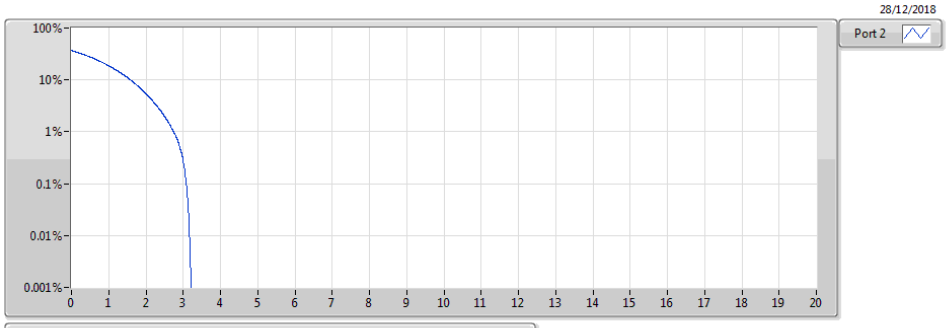
P#3615MHz,#3635MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3615	20M	7.40	-5.60	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

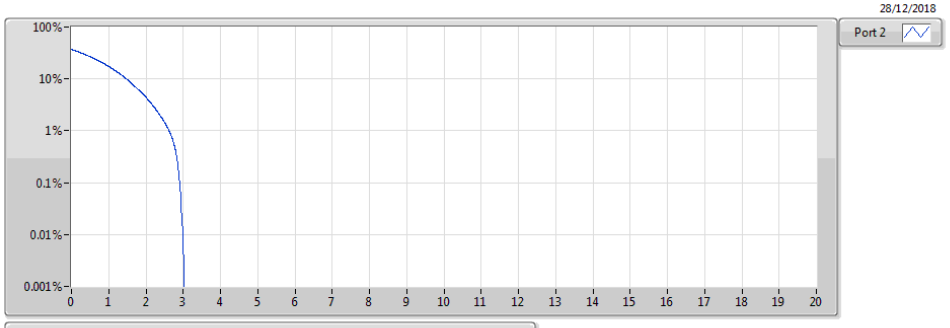
P#3670MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3670	20M	7.72	-5.28	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

P#3560MHz,#3690MHz_64QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3560	20M	7.26	-5.74	13.00	1

<Multi-carrier and/or CA>

Summary

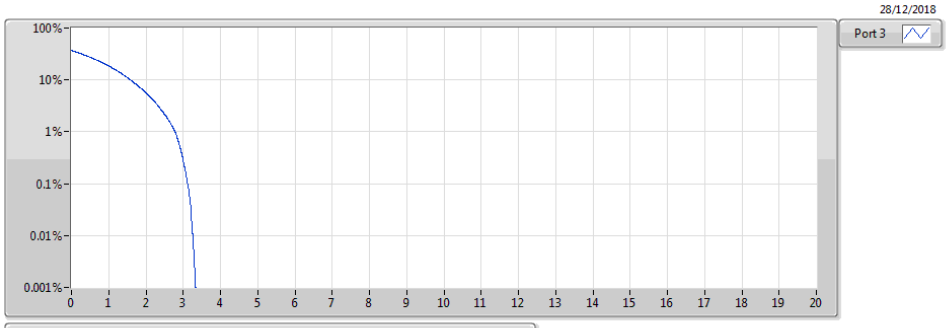
Mode	Result	Freq (MHz)	0.1%	Maargin	Limit (dB)	Port
Band 48	-	-	-		-	-
Band 48_LTE_20MHz+20MHz_QPSK_4TX	Pass	3635	8.77	4.23	13.00	3
Band 48_LTE_20MHz+20MHz_16QAM_4TX	Pass	3690	7.54	5.46	13.00	3
Band 48_LTE_20MHz+20MHz_64QAM_4TX	Pass	3580	9.76	3.24	13.00	3

Result

Mode	Result	Freq (MHz)	0.1%	Margin	Limit (dB)	Port
LTE_20MHz+20MHz_QPSK_4TX	-	-	-		-	-
P#3580MHz,#3560MHz	Pass	3580	7.79	5.21	13.00	3
P#3635MHz,#3615MHz	Pass	3635	8.77	4.23	13.00	3
P#3690MHz,#3670MHz	Pass	3690	8.06	4.94	13.00	3
P#3690MHz,#3560MHz	Pass	3690	7.79	5.21	13.00	3
LTE_20MHz+20MHz_16QAM_4TX	-	-	-	-	-	-
P#3580MHz,#3560MHz	Pass	3580	7.26	5.74	13.00	3
P#3635MHz,#3615MHz	Pass	3635	7.52	5.48	13.00	3
P#3690MHz,#3670MHz	Pass	3690	7.31	5.69	13.00	3
P#3690MHz,#3560MHz	Pass	3690	7.54	5.46	13.00	3
LTE_20MHz+20MHz_64QAM_4TX	-	-	-	-	-	-
P#3580MHz,#3560MHz	Pass	3580	9.76	3.24	13.00	3
P#3635MHz,#3615MHz	Pass	3635	8.48	4.52	13.00	3
P#3690MHz,#3670MHz	Pass	3690	7.65	5.35	13.00	3
P#3690MHz,#3560MHz	Pass	3690	7.86	5.14	13.00	3

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

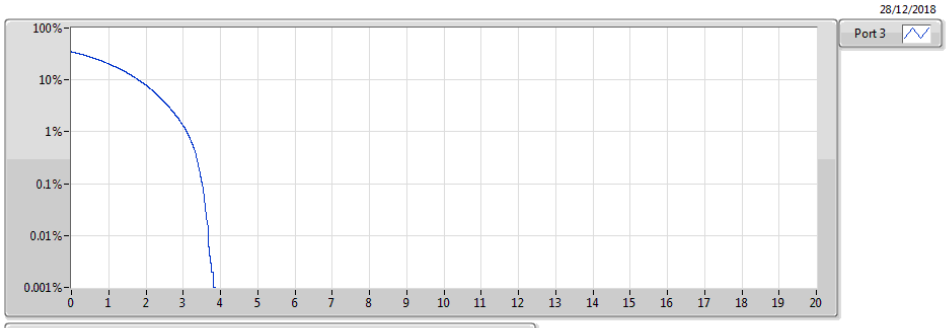
P#3580MHz,#3560MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3580	20M	7.79	-5.21	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

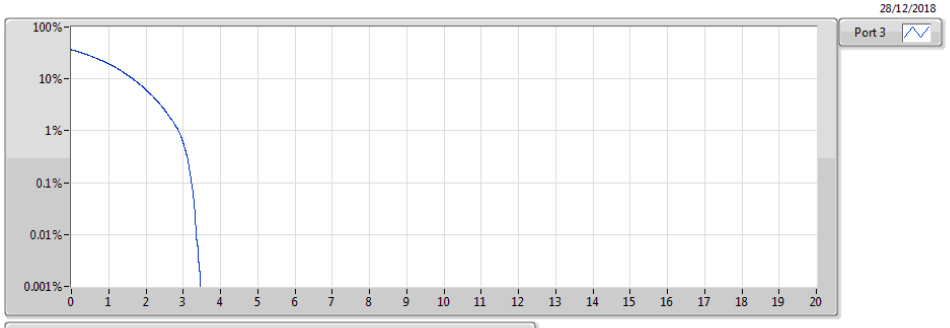
P#3635MHz,#3615MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3635	20M	8.77	-4.23	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

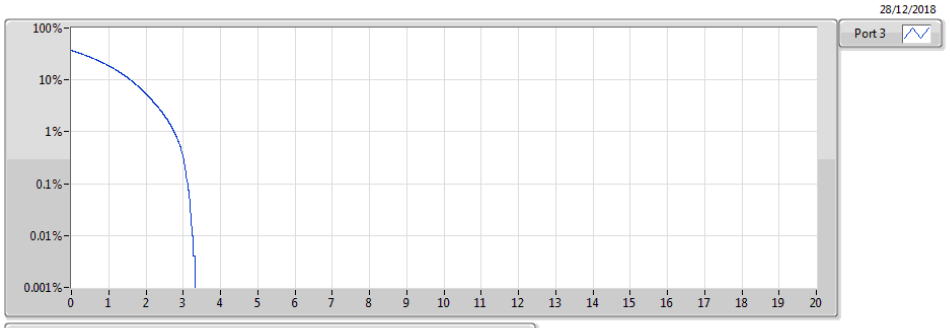
P#3690MHz,#3670MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3690	20M	8.06	-4.94	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

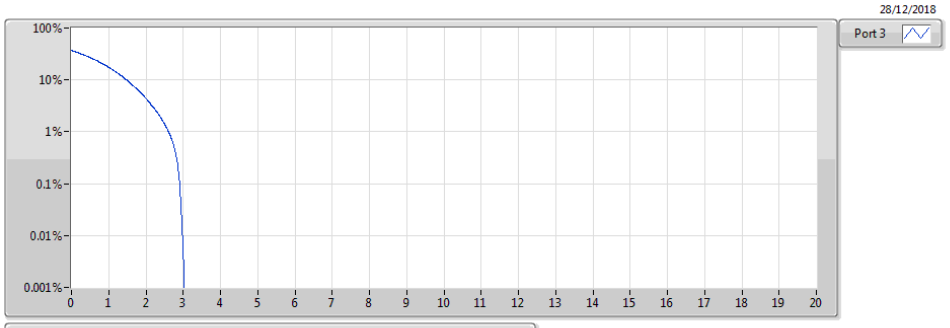
P#3690MHz,#3560MHz_QPSK_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3690	20M	7.79	-5.21	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

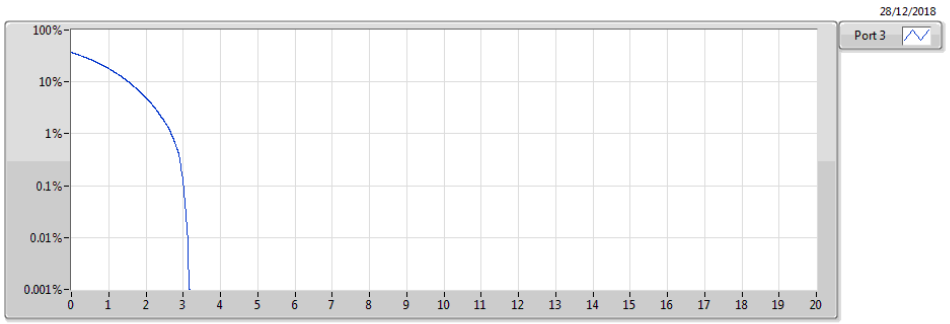
P#3580MHz,#3560MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3580	20M	7.26	-5.74	13.00	1

Band 48_LTE_20MHz+20MHz_Nss1_4TX **CCDF**

P#3635MHz,#3615MHz_16QAM_RB 100,#RB 0+RB 100,#RB 0



Freq (MHz)	MBW(Hz)	0.1%	Margin(dB)	Limit(dB)	Port
3635	20M	7.52	-5.48	13.00	1