FCC Test Report

Equipment	:	ePMP Force 190
Brand Name	:	Cambium Networks
Model No.	:	ePMP Force 190
FCC ID	:	Z8H89FT0031
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5250 MHz – 5350 MHz 5470 MHz – 5725 MHz
Applicant	:	Cambium Networks Inc. 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA
Manufacturer	:	Cambium Networks Inc. 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA
Function	:	☒ Outdoor; ☐ Indoor; ☒ Fixed P2P ☐ Client
TPC Function	:	☒ With TPC ☐ Without TPC

The product sample received on Mar. 30, 2017 and completely tested on Apr. 18, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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PHOTOGRAPHS OF EUT V01

Summary of Test Result

Conformance Test Specifications			
Report Clause	**Ref. Std. Clause**	**Description**	**Result**
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.407(a)	Emission Bandwidth	Complied
3.2	15.407(a)	Maximum Conducted Output Power	Complied
3.3	15.407(a)	Peak Power Spectral Density	Complied
3.4	15.407(b)	Unwanted Emissions	Complied
3.5	15.407(g)	Frequency Stability	Complied

Revision History

Report No.	Version	Description	Issued Date
FR733173-01	Rev. 01	Initial issue of report	May 31, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Mode	Ch. Frequency (MHz)	Channel Number
5250-5350	QPSK, 10M	5250	19
		5255	
		5260	
		5265	
		5270	
		5275	
		5280	
		5285	
		5290	
		5295	
		5300	
		5305	
		5310	
		5315	
		5320	
		5325	
		5330	
		5335	
		5340	
5470-5725		5480	50
		5485	
		5490	
		5495	
		5500	
		5505	
		5510	
		5515	
		5520	
		5525	
		5530	
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		5540	
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		5580	
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		5625	
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		5635	
		5640	
		5645	
		5650	
		5655	
		5660	
		5665	
		5670	
		5675	
		5680	
		5685	
		5690	
		5695	
		5700	
		5705	
		5710	
		5715	
		5720	

		5725	
5250-5350	QPSK, 40M	5270	2
		5310	
5470-5725		5510	4
		5550	
		5670	
		5710	

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	QPSK,10M	10	2TX
5.25-5.35GHz	QPSK,40M	40	2TX
5.47-5.725GHz	QPSK,10M	10	2TX
5.47-5.725GHz	QPSK,40M	40	2TX

Note:
- 10M, 40M use QPSK modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	Printed	N/A	22
	2	-	-	Printed	N/A	22

Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
QPSK,10M	0.943	0.255
QPSK,40M	0.908	0.419

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Weather Band	☐	With 5600~5650MHz	☒	Without 5600~5650MHz

1.1.5 Table for Class III Change

This product is an extension of original one reported under Sporton project number: FR733173.

Below is the table for the change of the product with respect to the original one.

Description	Performance Checking
Adding 5G Band 2 (5250/5255//5260/5265/5270/5275/5280/5285/5290/5295/5300/5305/5310/5315/5320/5325/5330/5335/5340) and 5G Band 3 (5480/5485/5490/5495/5500/5505/5510/5515/5520/5525/5530/5535/5540/5545/5550/5555/55560/5565/5570/5575/5580/5585/5590/5595/5600/5605/5610/5615/5620/5625/5630/5635/5640/5645/5650/5655/5660/5665/5670/5675/5680/5685/5690/5695/5700/5705/5710/5715/5720/5725) only for 10M and 40M.	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Spectral Density 4. Unwanted Emissions 5. Frequency Stability

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 789033 D02 v01r04
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456	FAX	:	886-3-318-0055
☒	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-CB	Lucke Hsieh	22°C / 54%	Apr. 07, 2017~Apr. 18, 2017
Radiated	03CH01-CB	Lucke Hsieh	22°C / 54%	Mar. 30, 2017~ Apr. 18, 2017

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Power Setting
QPSK,10M_Nss1_2TX	-
5250MHz	13
5250MHz	13
5255MHz	13
5300MHz	7.5
5340MHz	8.5
QPSK,40M_Nss1_2TX	-
5270MHz	10.5
5310MHz	10.5
QPSK,10M_Nss1_2TX	-
5480MHz	9
5595MHz	13
5715MHz	14
5725MHz Straddle 5.47-5.725GHz	14
QPSK,40M_Nss1_2TX	-
5510MHz	11
5550MHz	11.5
5670MHz	11.5
5710MHz Straddle 5.47-5.725GHz	12.5
QPSK,10M_Nss1_2TX	-
5725MHz Straddle 5.725-5.85GHz	14
QPSK,40M_Nss1_2TX	-
5710MHz Straddle 5.725-5.85GHz	12.5

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Frequency Stability
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode > 1GHz	CTX

Note: 1.The EUT can only be used at Z axis position.
2. PoE information as below:
The EUT was powered by PoE, and the PoE was for measurement only, would not be marketed.

Support Unit	Brand	Model
PoE	Cambium	G1021-300-0265

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

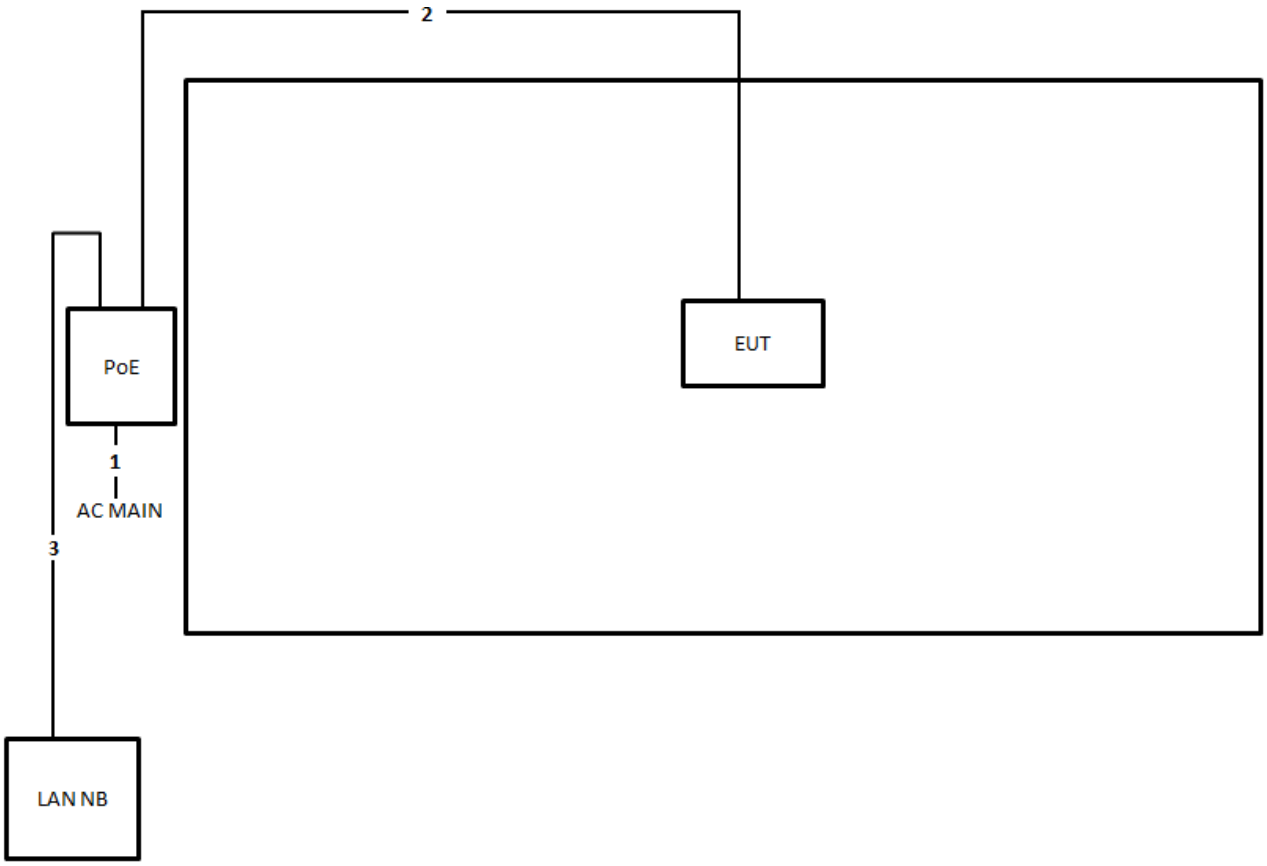
2.4 Support Equipment

For Test Site No: 03CH01-CB / TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	PoE	Cambium	G1021-300-0265	DoC

2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test



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

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☒	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.

3.1.2 Measuring Instruments

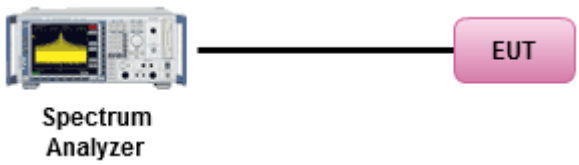
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method		
▪	For the emission bandwidth shall be measured using one of the options below:	
	☒	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
	☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
	☒	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.1.4 Test Setup

Emission Bandwidth



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If G_{TX} > 23 dBi, then P_{Out} = 30 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒	For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒	For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

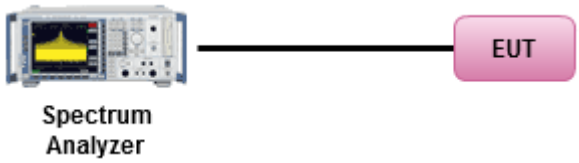
3.2.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup

For Straddle channel test:

RF Output Power (Spectrum Analyzer)



For Other Test:

RF Output Power (Power Meter)

3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Peak Power Spectral Density

3.3.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☒	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

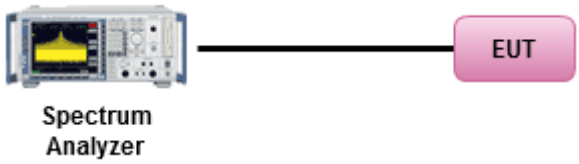
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method			
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:			
	☐ Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth		
	[duty cycle ≥ 98% or external video / power trigger]		
	☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).		
	☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)		
	duty cycle < 98% and average over on/off periods with duty factor		
	☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).		
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)		
▪ For conducted measurement.			
	▪ If the EUT supports multiple transmit chains using options given below:		
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
	▪	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	

3.3.4 Test Setup

Power Spectral Density



3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.4 Unwanted Emissions

3.4.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.4.2 Measuring Instruments

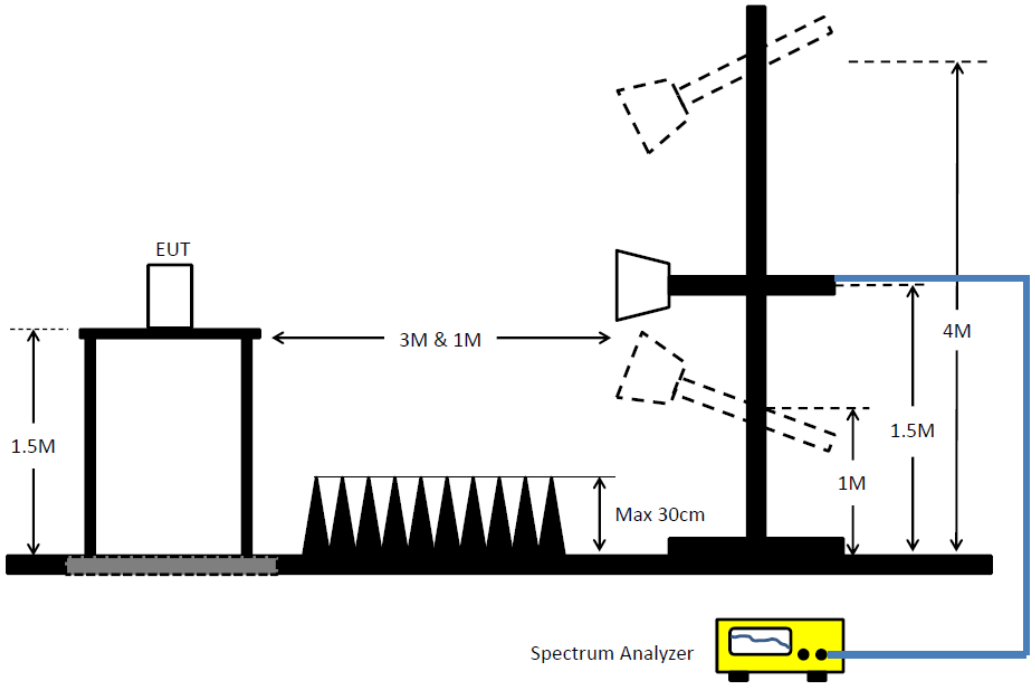
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method			
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ For the transmitter unwanted emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.		
	▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.		
		☐	Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		☒	Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		☐	Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐	Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒	Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		☐	Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
▪ For radiated measurement.			
	▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.		
	▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.		
	▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.		
▪ The any unwanted emissions level shall not exceed the fundamental emission level.			
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.			

3.4.4 Test Setup

Transmitter Radiated Unwanted Emissions
Above 1GHz



3.4.5 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

3.5 Frequency Stability

3.5.1 Frequency Stability Limit

Frequency Stability Limit
UNII Devices
▪ In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
LE-LAN Devices
▪ N/A
IEEE Std. 802.11
▪ The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

3.5.2 Measuring Instruments

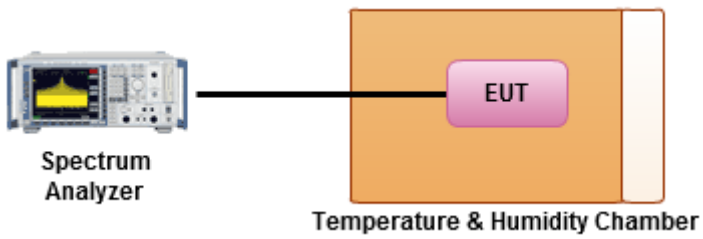
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	▪ Frequency stability with respect to ambient temperature
	▪ Frequency stability when varying supply voltage
	▪ Extreme temperature is -40˚C~70˚C.

3.5.4 Test Setup

Frequency Stability



3.5.5 Test Result of Frequency Stability

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
QPSK,10M_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	4.96M	4.398M	4M40D1D	4.8M	4.398M
5.25-5.35GHz	10.8M	8.821M	8M82D1D	4.8M	4.398M
QPSK,40M_Nss1_2TX	-	-	-	-	-
5.25-5.35GHz	47.55M	36.282M	36M3D1D	46.45M	36.182M
QPSK,10M_Nss1_2TX	-	-	-	-	-
5.47-5.725GHz	10.55M	8.821M	8M82D1D	4.92M	4.363M
QPSK,40M_Nss1_2TX	-	-	-	-	-
5.47-5.725GHz	48.35M	36.382M	36M4D1D	38.43M	33.093M
QPSK,10M_Nss1_2TX	-	-	-	-	-
5.725-5.85GHz	4.3M	4.478M	4M48D1D	4.28M	4.338M
QPSK,40M_Nss1_2TX	-	-	-	-	-
5.725-5.85GHz	3.14M	4.978M	4M98D1D	3.14M	4.718M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

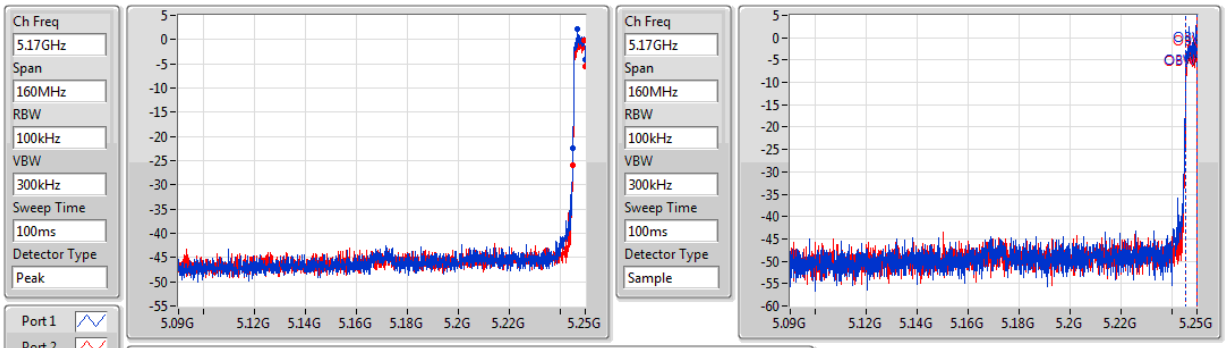
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5250MHz	Pass	Inf	4.8M	4.398M	4.96M	4.398M
5250MHz	Pass	Inf	4.8M	4.398M	4.8M	4.398M
5255MHz	Pass	Inf	9.988M	8.796M	9.925M	8.808M
5300MHz	Pass	Inf	9.95M	8.808M	10.438M	8.796M
5340MHz	Pass	Inf	10.8M	8.808M	10.388M	8.821M
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	47.55M	36.282M	46.45M	36.232M
5310MHz	Pass	Inf	47.55M	36.182M	46.7M	36.232M
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5480MHz	Pass	Inf	10.375M	8.796M	10.288M	8.821M
5595MHz	Pass	Inf	10.55M	8.808M	10M	8.821M
5715MHz	Pass	Inf	10.413M	8.796M	9.875M	8.808M
5725MHz Straddle 5.47-5.725GHz	Pass	Inf	5.1M	4.363M	4.92M	4.363M
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5510MHz	Pass	Inf	47.5M	36.282M	47M	36.282M
5550MHz	Pass	Inf	48.35M	36.382M	46.65M	36.182M
5670MHz	Pass	Inf	47.6M	36.182M	45.85M	36.182M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	40.04M	33.093M	38.43M	33.093M
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5725MHz Straddle 5.725-5.85GHz	Pass	500k	4.28M	4.338M	4.3M	4.478M
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	4.978M	3.14M	4.718M

Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

QPSK,10M_Nss1_2TX — EBW

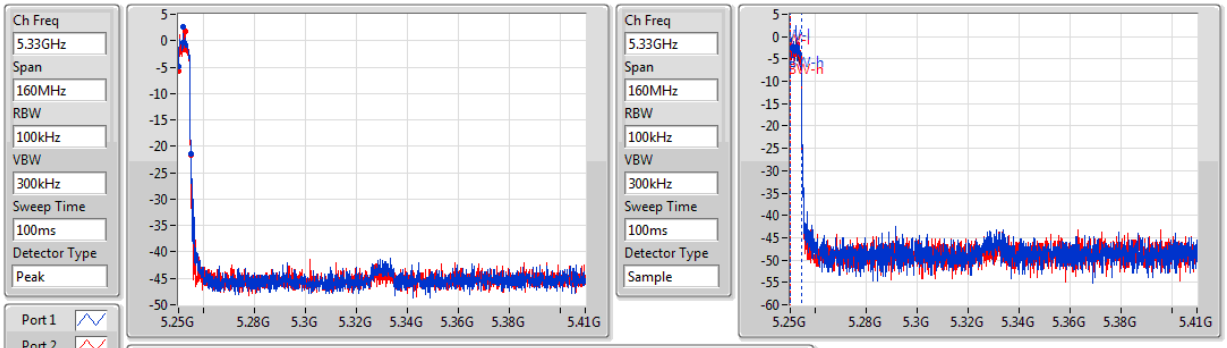
5250MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.8M	5.2452G	5.25G	4.398M	5.245482G	5.24988G	Inf	1
4.96M	5.24504G	5.25G	4.398M	5.245482G	5.24988G	Inf	2

QPSK,10M_Nss1_2TX — EBW

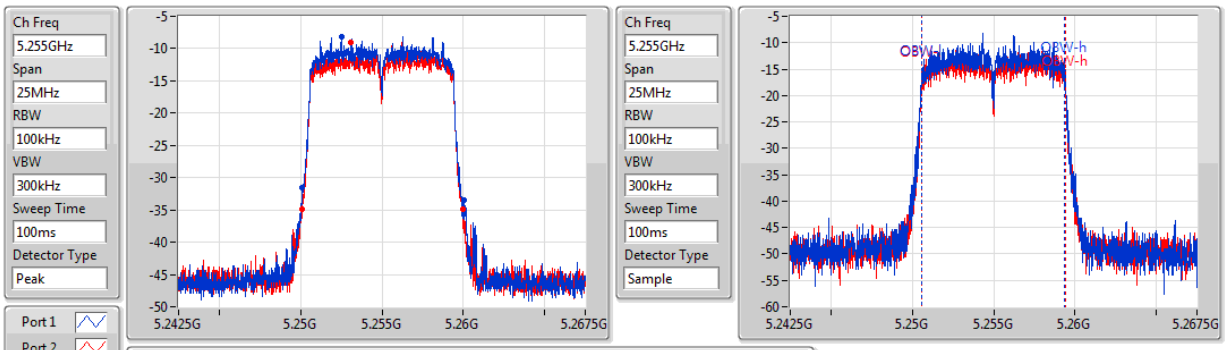
5250MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.8M	5.25G	5.2548G	4.398M	5.25004G	5.254438G	Inf	1
4.8M	5.25G	5.2548G	4.398M	5.25004G	5.254438G	Inf	2

QPSK,10M_Nss1_2TX — EBW

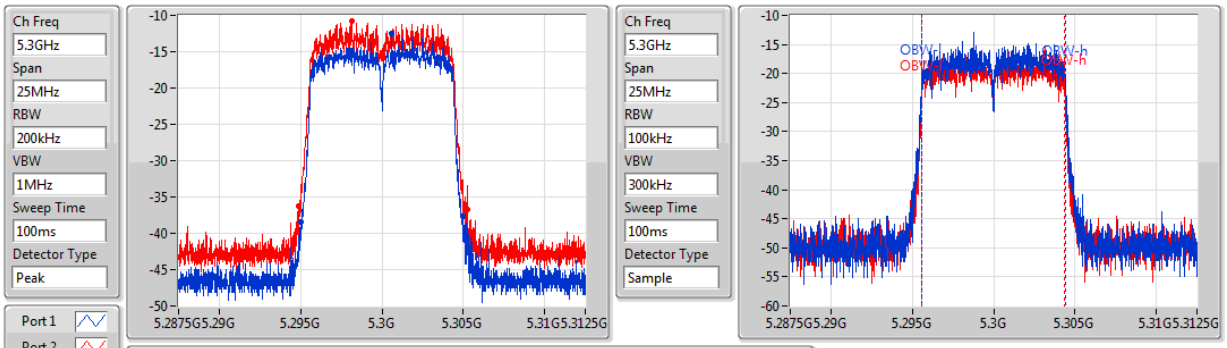
5255MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.988M	5.250063G	5.26005G	8.796M	5.25059G	5.259385G	Inf	1
9.925M	5.250075G	5.26G	8.808M	5.25059G	5.259398G	Inf	2

QPSK,10M_Nss1_2TX — EBW

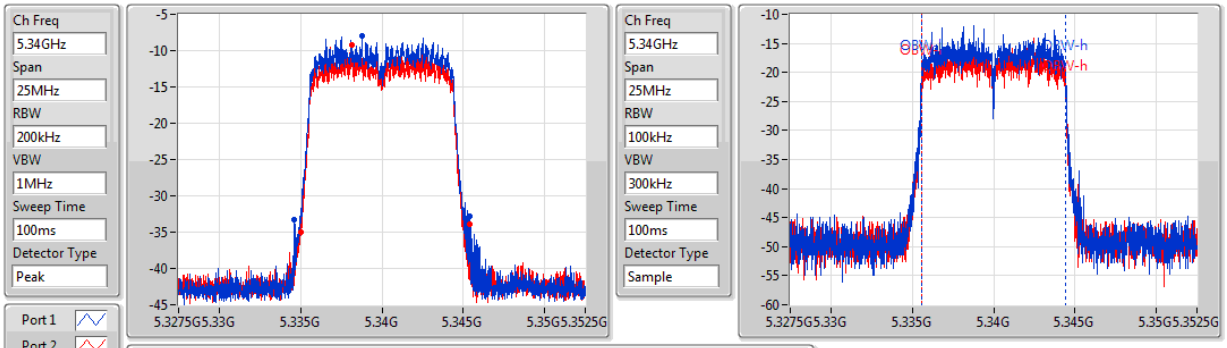
5300MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.95M	5.295025G	5.304975G	8.808M	5.29559G	5.304398G	Inf	1
10.438M	5.29485G	5.305288G	8.796M	5.29559G	5.304385G	Inf	2

QPSK,10M_Nss1_2TX — EBW

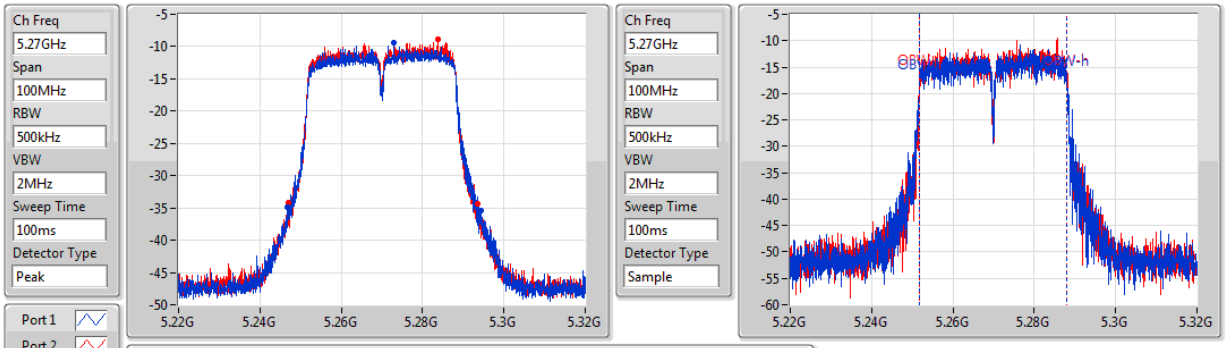
5340MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.8M	5.334588G	5.345388G	8.808M	5.33559G	5.344398G	Inf	1
10.388M	5.334988G	5.345375G	8.821M	5.335577G	5.344398G	Inf	2

QPSK,40M_Nss1_2TX — EBW

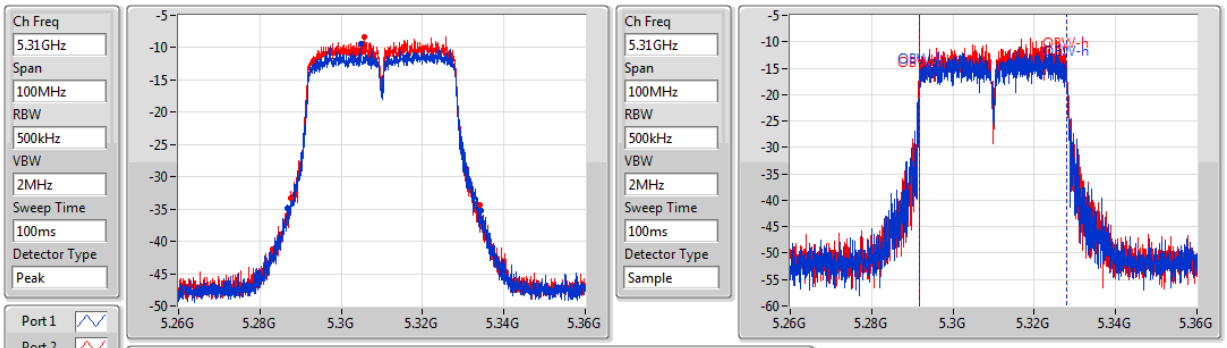
5270MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
47.55M	5.2468G	5.29435G	36.282M	5.251809G	5.288091G	Inf	1
46.45M	5.24705G	5.2935G	36.232M	5.251859G	5.288091G	Inf	2

QPSK,40M_Nss1_2TX — EBW

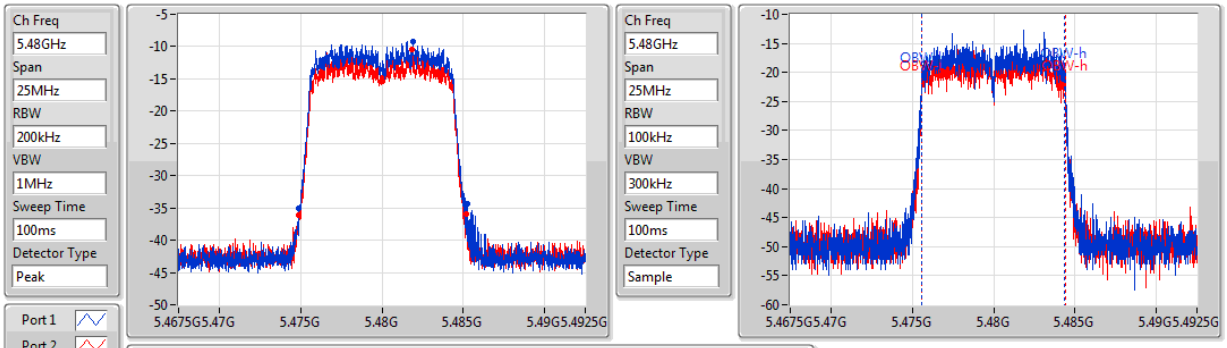
5310MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
47.55M	5.2868G	5.33435G	36.182M	5.291859G	5.328041G	Inf	1
46.7M	5.2875G	5.3342G	36.232M	5.291809G	5.328041G	Inf	2

QPSK,10M_Nss1_2TX — EBW

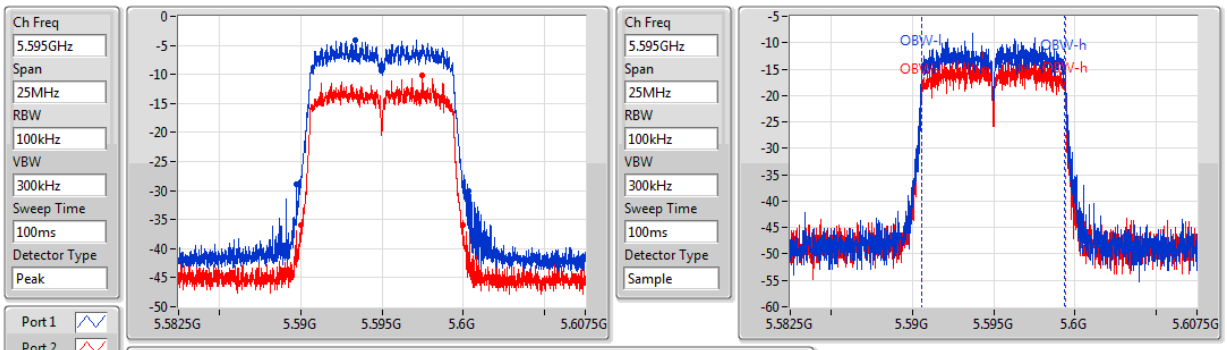
5480MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.375M	5.474913G	5.485288G	8.796M	5.47559G	5.484385G	Inf	1
10.288M	5.474888G	5.485175G	8.821M	5.475577G	5.484398G	Inf	2

QPSK,10M_Nss1_2TX — EBW

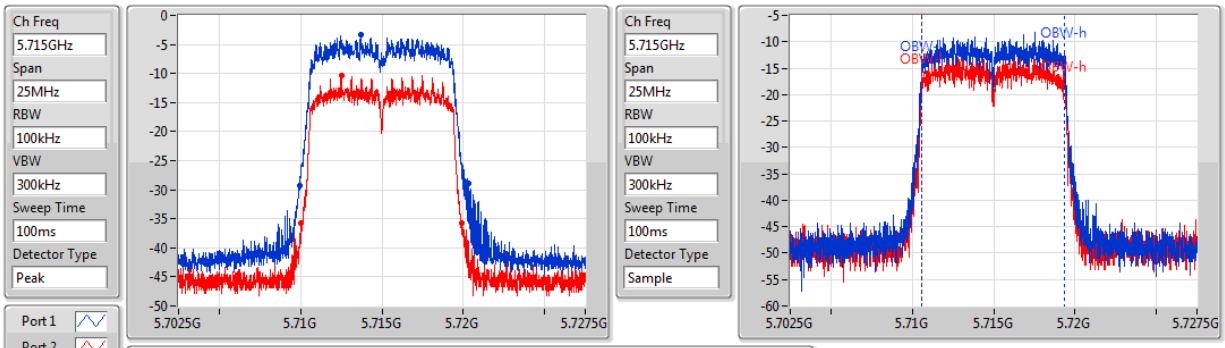
5595MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.55M	5.589763G	5.600313G	8.808M	5.590577G	5.599385G	Inf	1
10M	5.590013G	5.600013G	8.821M	5.590577G	5.599398G	Inf	2

QPSK,10M_Nss1_2TX — EBW

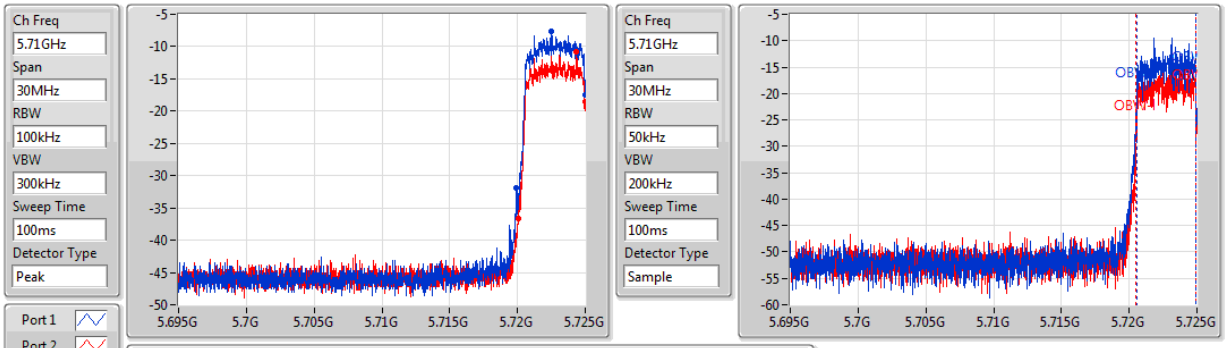
5715MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.413M	5.709925G	5.720338G	8.796M	5.71059G	5.719385G	Inf	1
9.875M	5.710038G	5.719913G	8.808M	5.710577G	5.719385G	Inf	2

QPSK,10M_Nss1_2TX — EBW

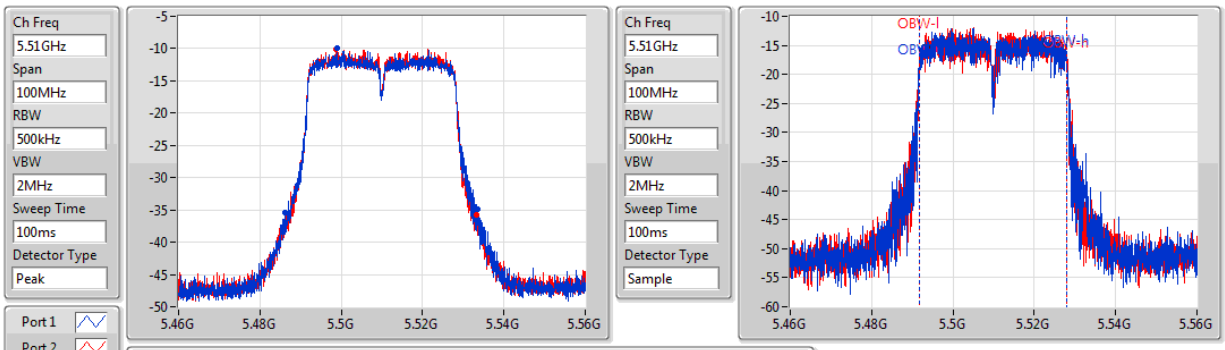
5725MHz Straddle 5.47-5.725GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
5.1M	5.7199G	5.725G	4.363M	5.72054G	5.724903G	Inf	1
4.92M	5.72008G	5.725G	4.363M	5.720525G	5.724888G	Inf	2

QPSK,40M_Nss1_2TX — EBW

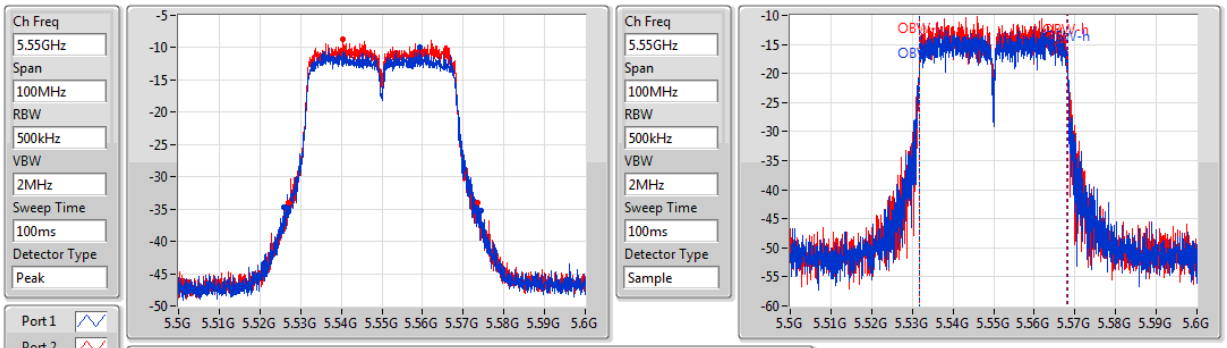
5510MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
47.5M	5.48615G	5.53365G	36.282M	5.491759G	5.528041G	Inf	1
47M	5.48625G	5.53325G	36.282M	5.491759G	5.528041G	Inf	2

QPSK,40M_Nss1_2TX — EBW

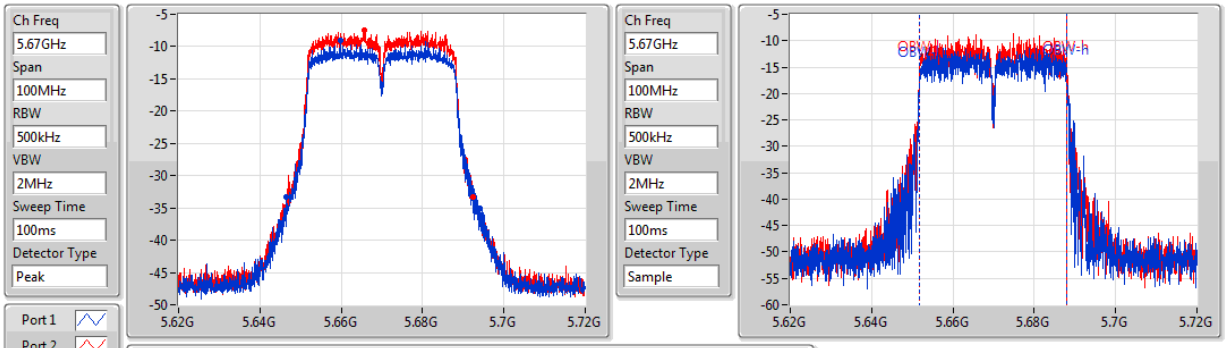
5550MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
48.35M	5.526G	5.57435G	36.382M	5.531759G	5.568141G	Inf	1
46.65M	5.52695G	5.5736G	36.182M	5.531859G	5.568041G	Inf	2

QPSK,40M_Nss1_2TX — EBW

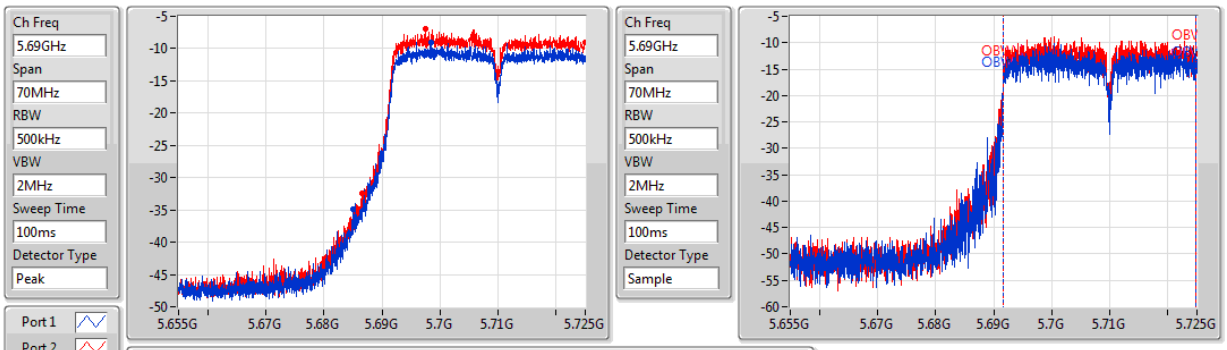
5670MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
47.6M	5.6464G	5.694G	36.182M	5.651859G	5.688041G	Inf	1
45.85M	5.6466G	5.69245G	36.182M	5.651859G	5.688041G	Inf	2

QPSK,40M_Nss1_2TX — EBW

5710MHz Straddle 5.47-5.725GHz

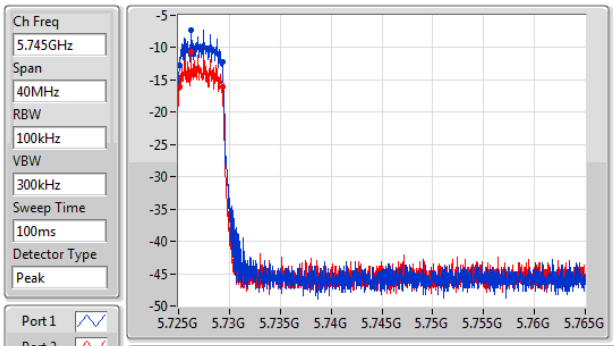


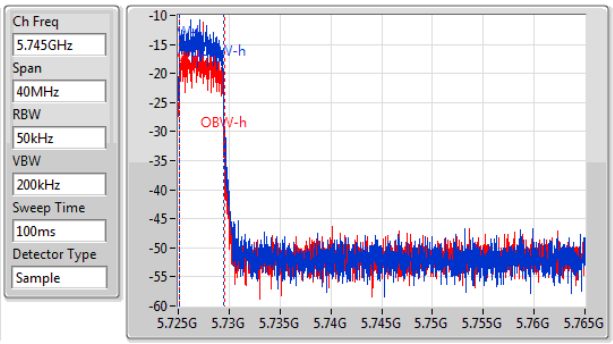
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.04M	5.68496G	5.725G	33.093M	5.691749G	5.724843G	Inf	1
38.43M	5.68657G	5.725G	33.093M	5.691749G	5.724843G	Inf	2

QPSK,10M_Nss1_2TX

EBW

5725MHz Straddle 5.725-5.85GHz



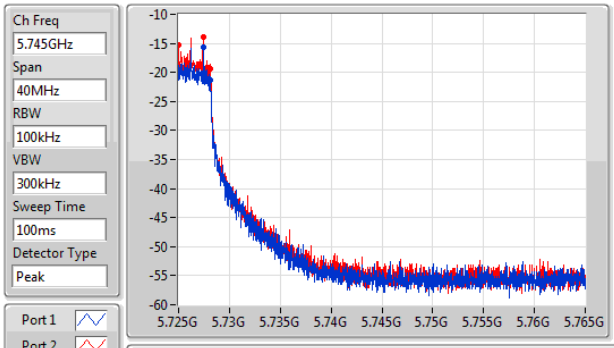


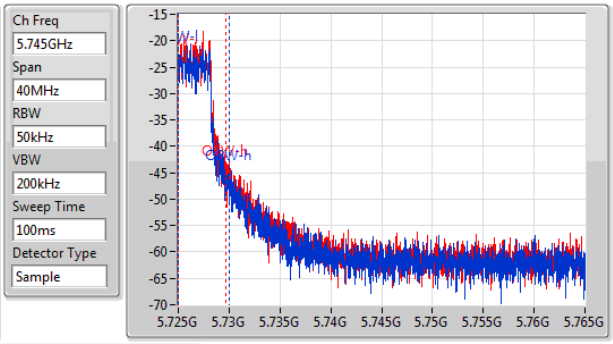
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.28M	5.72506G	5.72934G	4.338M	5.72509G	5.729428G	500k	1
4.3M	5.72506G	5.72936G	4.478M	5.72509G	5.729568G	500k	2

QPSK,40M_Nss1_2TX

EBW

5710MHz Straddle 5.725-5.85GHz





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.14M	5.725G	5.72814G	4.978M	5.72501G	5.729988G	500k	1
3.14M	5.725G	5.72814G	4.718M	5.72501G	5.729728G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
QPSK,10M_Nss1_2TX	-	-	-	-
5.15-5.25GHz	1.38	0.00137	23.38	0.21777
5.25-5.35GHz	4.84	0.00305	26.84	0.48306
QPSK,40M_Nss1_2TX	-	-	-	-
5.25-5.35GHz	3.01	0.00200	25.01	0.31696
QPSK,10M_Nss1_2TX	-	-	-	-
5.47-5.725GHz	4.87	0.00307	26.87	0.48641
QPSK,40M_Nss1_2TX	-	-	-	-
5.47-5.725GHz	4.14	0.00259	26.14	0.41115
QPSK,10M_Nss1_2TX	-	-	-	-
5.725-5.85GHz	1.64	0.00146	23.64	0.23121
QPSK,40M_Nss1_2TX	-	-	-	-
5.725-5.85GHz	-7.01	0.00020	14.99	0.03155

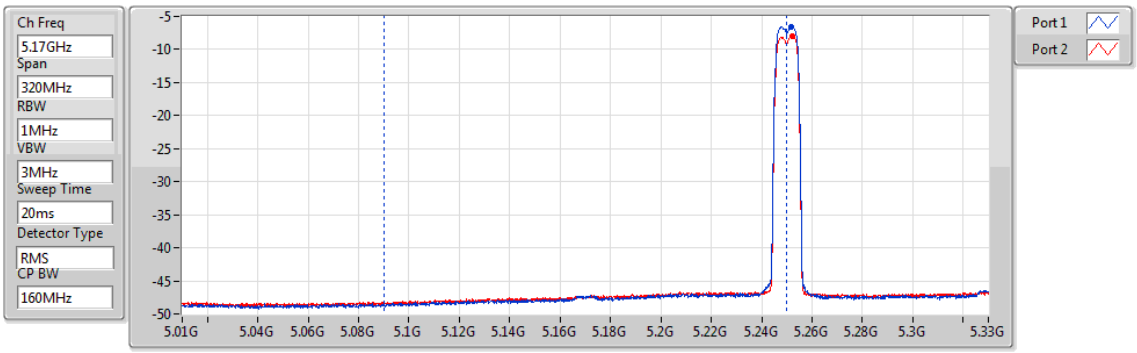
Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5250MHz	Pass	22.00	-0.93	-2.47	1.38	30.00
5250MHz	Pass	22.00	-0.72	-1.89	1.74	1.81
5255MHz	Pass	22.00	2.38	1.2	4.84	4.97
5300MHz	Pass	22.00	-2.47	-4.35	-0.30	4.98
5340MHz	Pass	22.00	-1.55	-3.13	0.74	5.17
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5270MHz	Pass	22.00	-0.68	-0.23	2.56	7.98
5310MHz	Pass	22.00	-0.57	0.51	3.01	7.98
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5480MHz	Pass	22.00	-2.18	-3.78	0.10	5.12
5595MHz	Pass	22.00	3.06	0.08	4.83	5.00
5715MHz	Pass	22.00	3.35	-0.43	4.87	4.95
5725MHz Straddle 5.47-5.725GHz	Pass	22.00	0.36	-3.45	1.87	1.92
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5510MHz	Pass	22.00	-0.89	-0.5	2.32	7.98
5550MHz	Pass	22.00	-0.39	0.65	3.17	7.98
5670MHz	Pass	22.00	-0.15	1.72	3.90	7.98
5710MHz Straddle 5.47-5.725GHz	Pass	22.00	0.13	1.94	4.14	7.98
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5725MHz Straddle 5.725-5.85GHz	Pass	22.00	0.05	-3.5	1.64	30.00
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5710MHz Straddle 5.725-5.85GHz	Pass	22.00	-10.81	-9.35	-7.01	30.00

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

QPSK,10M_Nss1_2TX **AV Power**

5250MHz

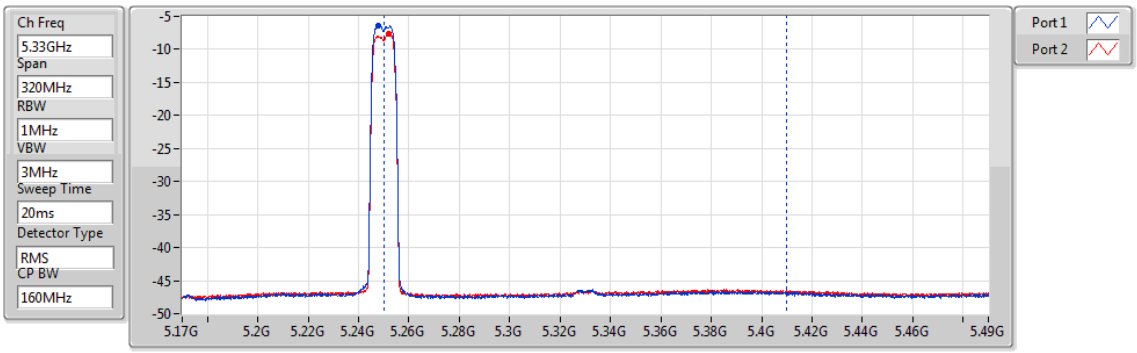


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
1.38	-0.93	-2.47

QPSK,10M_Nss1_2TX **AV Power**

5250MHz

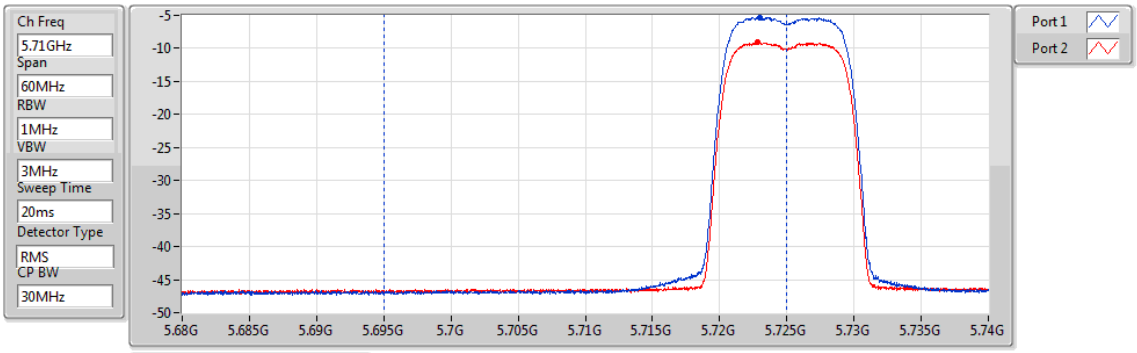


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
1.74	-0.72	-1.89

QPSK,10M_Nss1_2TX **AV Power**

5725MHz Straddle 5.47-5.725GHz

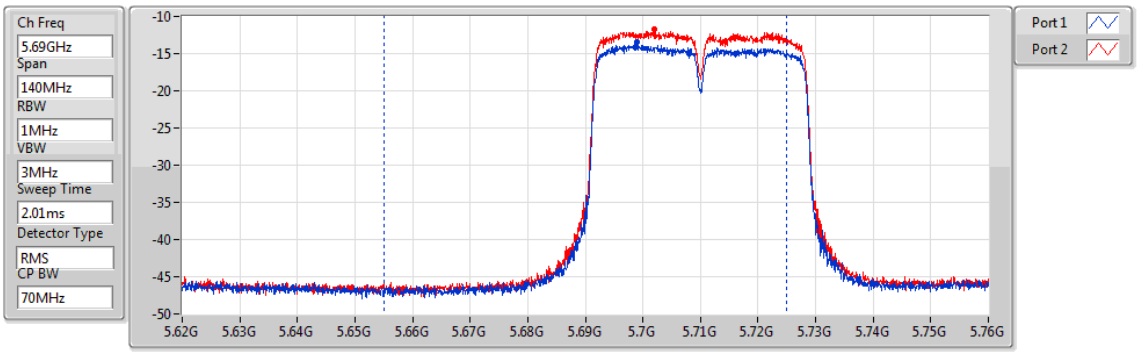


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
1.87	0.36	-3.45

QPSK,40M_Nss1_2TX — AV Power

5710MHz Straddle 5.47-5.725GHz

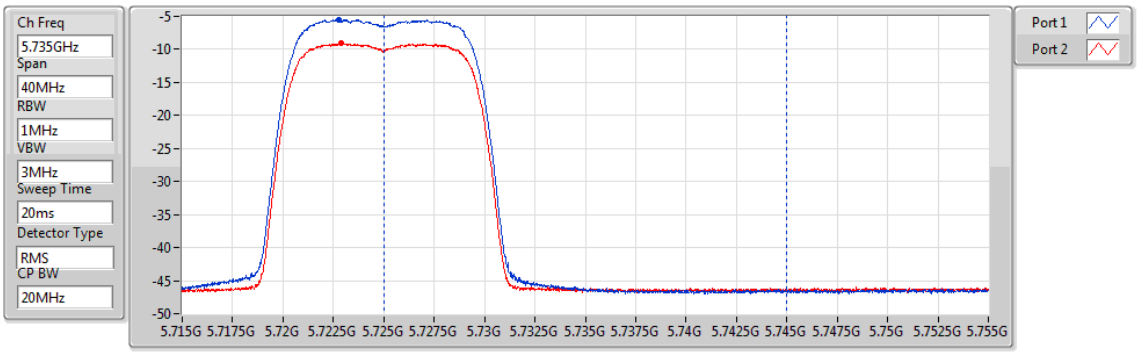


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
4.14	0.13	1.94

QPSK,10M_Nss1_2TX — AV Power

5725MHz Straddle 5.725-5.85GHz

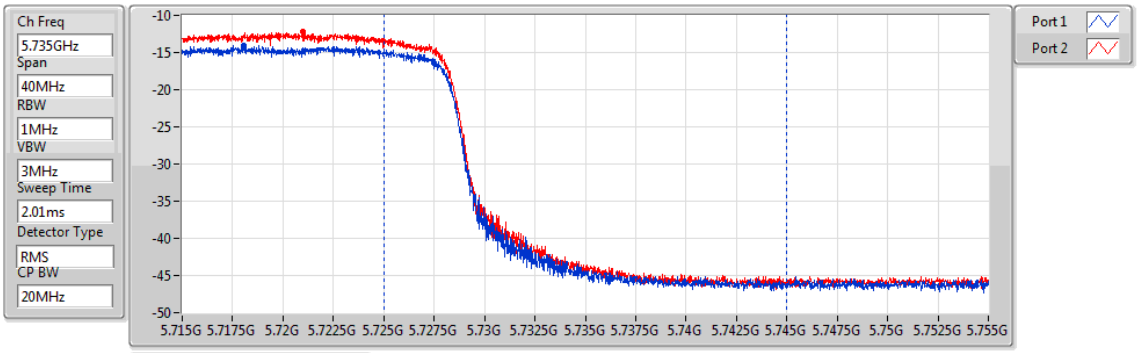


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
1.64	0.05	-3.50

QPSK,40M_Nss1_2TX — AV Power

5710MHz Straddle 5.725-5.85GHz



Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)
-7.01	-10.81	-9.35

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
QPSK,10M_Nss1_2TX	-	-
5.15-5.25GHz	-5.87	16.13
5.25-5.35GHz	-5.16	16.84
QPSK,40M_Nss1_2TX	-	-
5.25-5.35GHz	-12.39	9.61
QPSK,10M_Nss1_2TX	-	-
5.47-5.725GHz	-5.02	16.98
QPSK,40M_Nss1_2TX	-	-
5.47-5.725GHz	-11.6	10.40
QPSK,10M_Nss1_2TX	-	-
5.725-5.85GHz	-6.99	15.01
QPSK,40M_Nss1_2TX	-	-
5.725-5.85GHz	-14.2	7.80

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

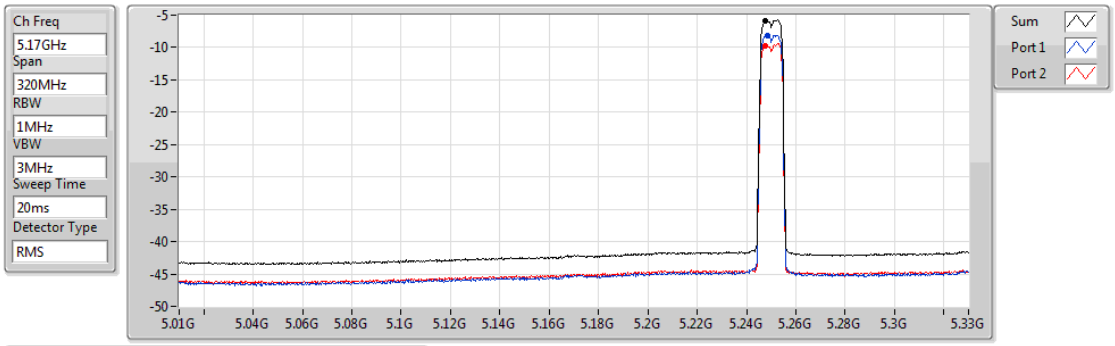
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5250MHz	Pass	22.00	-8.14	-9.67	-5.87	17.00
5250MHz	Pass	22.00	-7.9	-9.26	-5.52	-5.00
5255MHz	Pass	22.00	-7.6	-8.64	-5.16	-5.00
5300MHz	Pass	22.00	-12.14	-14.08	-10.05	-5.00
5340MHz	Pass	22.00	-11.33	-12.96	-9.11	-5.00
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5270MHz	Pass	22.00	-16.09	-15.67	-12.88	-5.00
5310MHz	Pass	22.00	-15.93	-14.86	-12.39	-5.00
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5480MHz	Pass	22.00	-12.19	-13.77	-9.92	-5.00
5595MHz	Pass	22.00	-7.23	-10.17	-5.56	-5.00
5715MHz	Pass	22.00	-6.58	-10.13	-5.02	-5.00
5725MHz Straddle 5.47-5.725GHz	Pass	22.00	-6.88	-10.63	-5.37	-5.00
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5510MHz	Pass	22.00	-16.88	-16.75	-13.83	-5.00
5550MHz	Pass	22.00	-16.55	-15.77	-13.16	-5.00
5670MHz	Pass	22.00	-16.07	-14.12	-12.03	-5.00
5710MHz Straddle 5.47-5.725GHz	Pass	22.00	-15.61	-13.72	-11.60	-5.00
QPSK,10M_Nss1_2TX	-	-	-	-	-	-
5725MHz Straddle 5.725-5.85GHz	Pass	22.00	-8.59	-12.08	-6.99	30.00
QPSK,40M_Nss1_2TX	-	-	-	-	-	-
5710MHz Straddle 5.725-5.85GHz	Pass	22.00	-18.1	-16.38	-14.20	30.00

DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

QPSK,10M_Nss1_2TX **PSD**

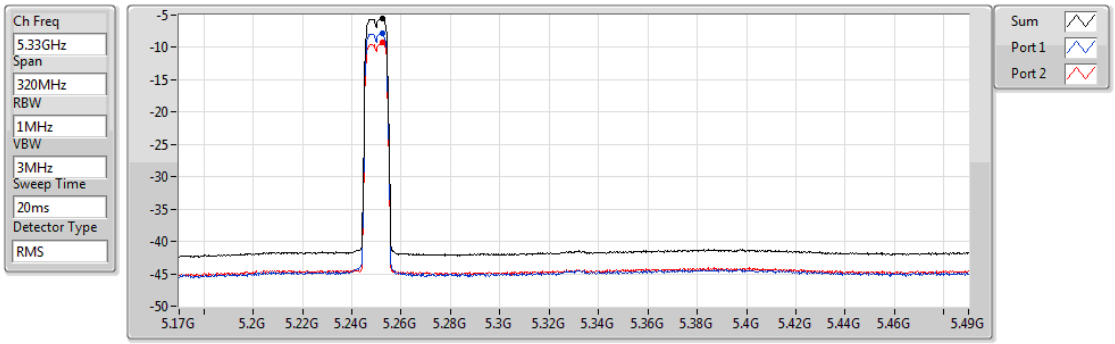
5250MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.87	-5.87	-8.14	-9.67

QPSK,10M_Nss1_2TX **PSD**

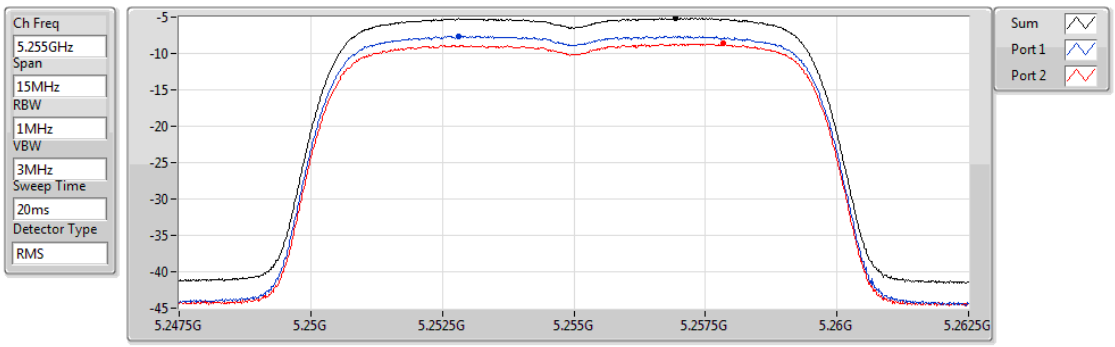
5250MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.52	-5.52	-7.90	-9.26

QPSK,10M_Nss1_2TX **PSD**

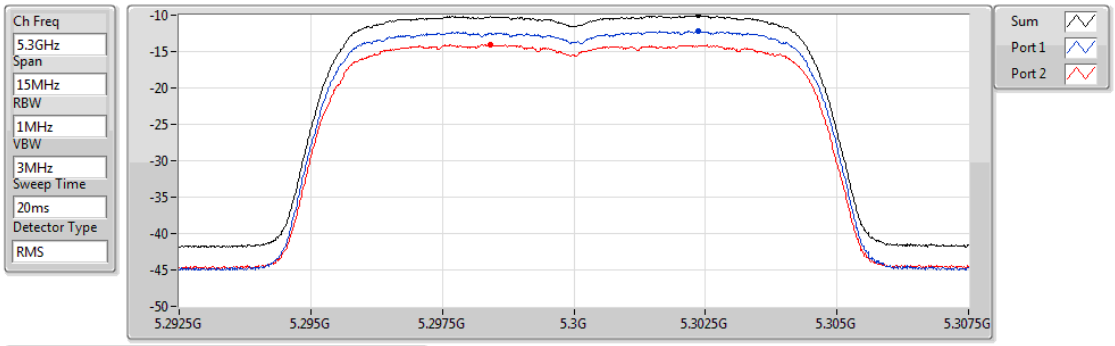
5255MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.16	-5.16	-7.60	-8.64

QPSK,10M_Nss1_2TX PSD

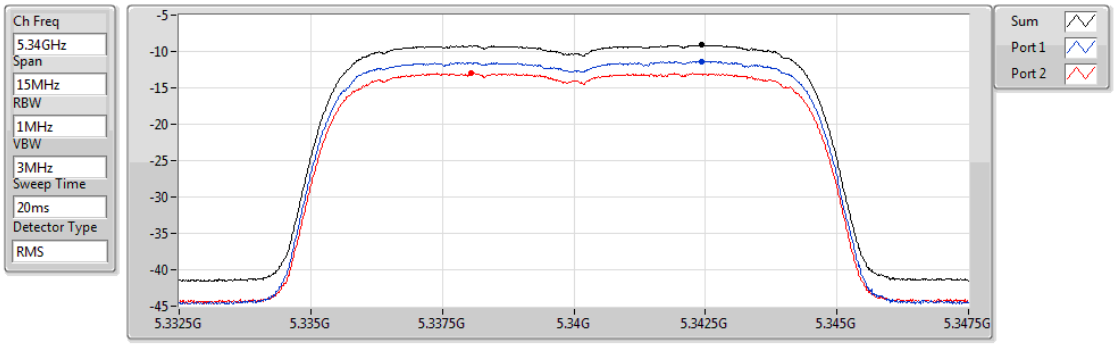
5300MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.05	-10.05	-12.14	-14.08

QPSK,10M_Nss1_2TX PSD

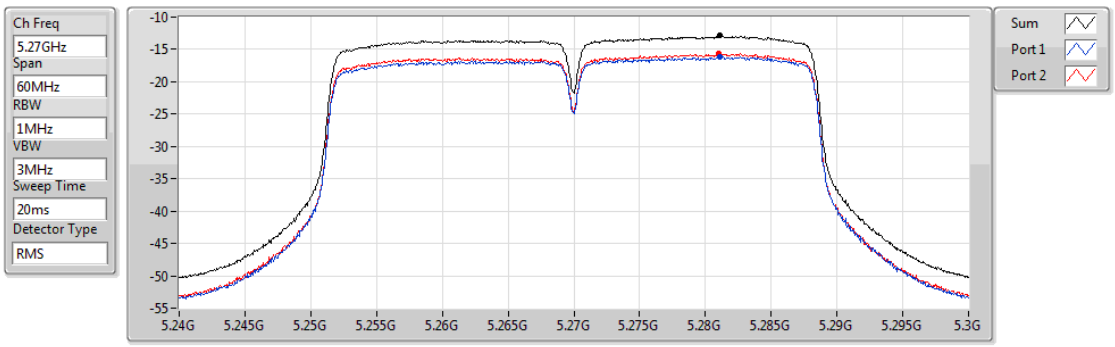
5340MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.11	-9.11	-11.33	-12.96

QPSK,40M_Nss1_2TX PSD

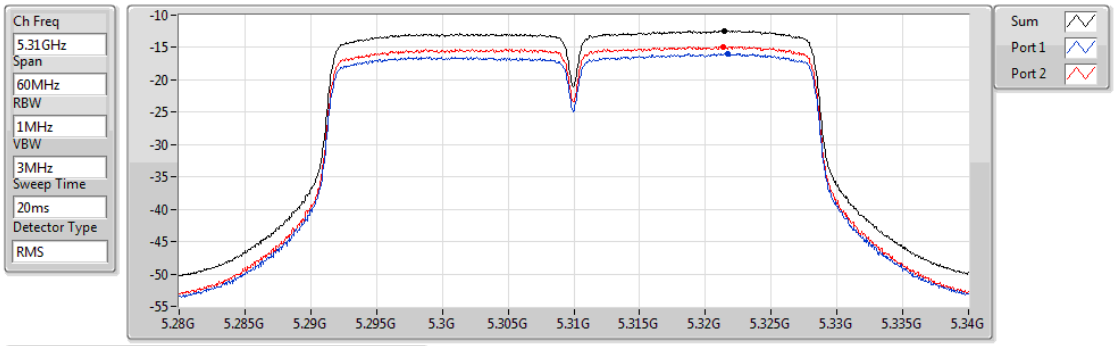
5270MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.88	-12.88	-16.09	-15.67

QPSK,40M_Nss1_2TX PSD

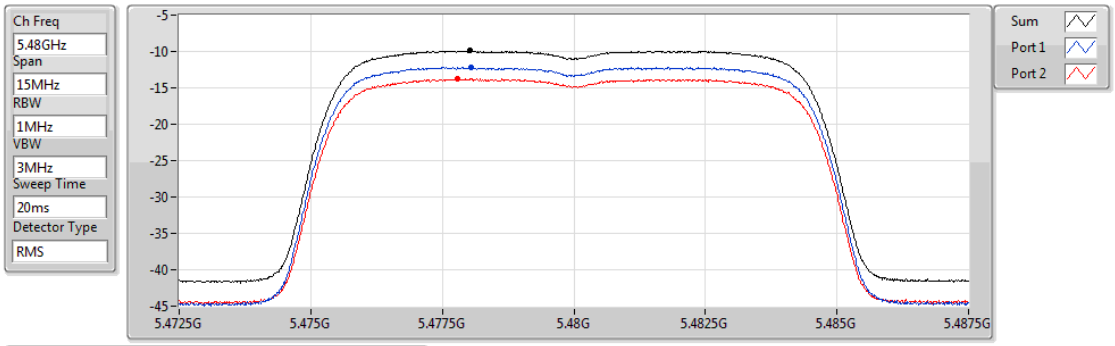
5310MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.39	-12.39	-15.93	-14.86

QPSK,10M_Nss1_2TX PSD

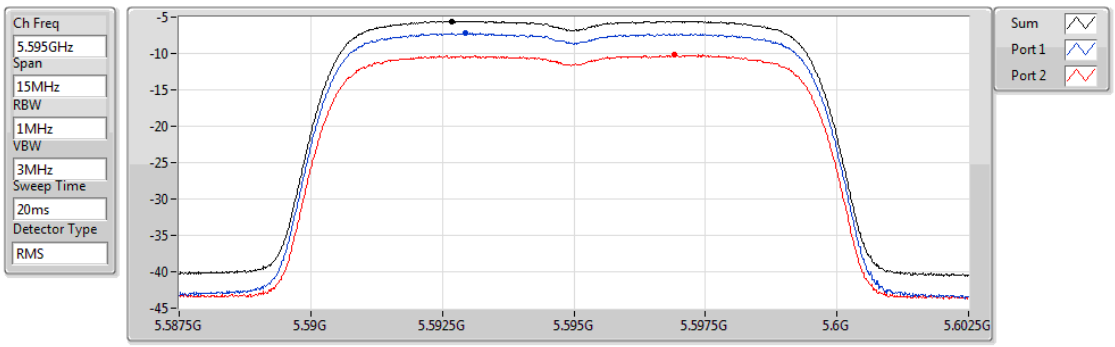
5480MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.92	-9.92	-12.19	-13.77

QPSK,10M_Nss1_2TX PSD

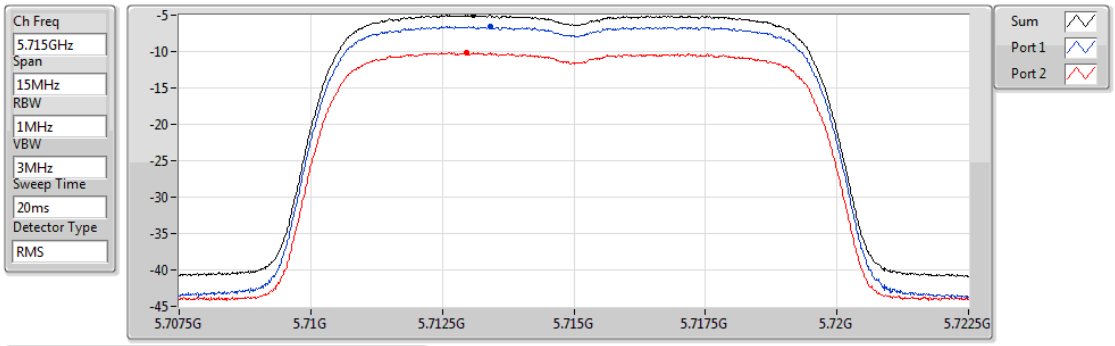
5595MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.56	-5.56	-7.23	-10.17

QPSK,10M_Nss1_2TX PSD

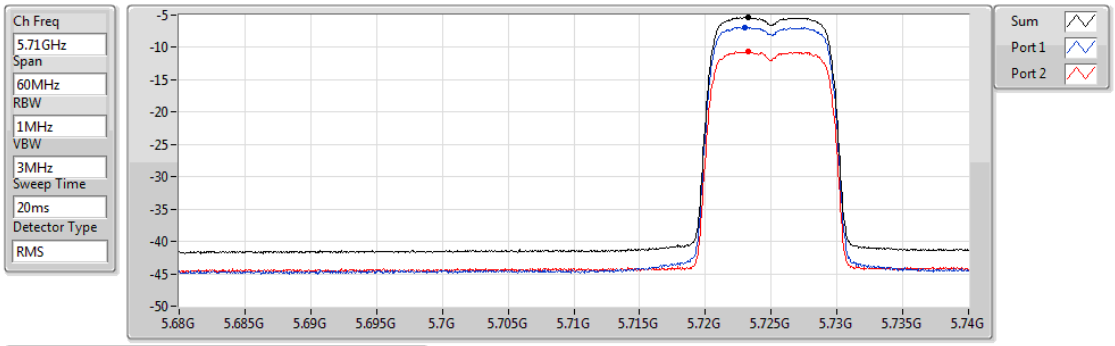
5715MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.02	-5.02	-6.58	-10.13

QPSK,10M_Nss1_2TX PSD

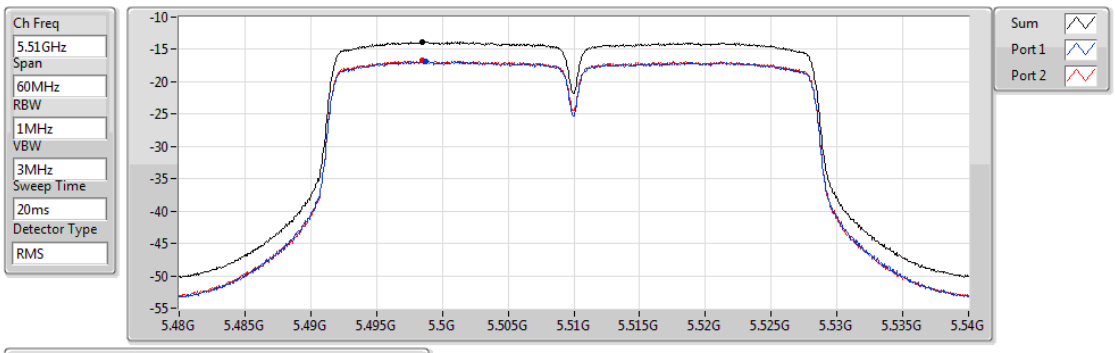
5725MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.37	-5.37	-6.88	-10.63

QPSK,40M_Nss1_2TX PSD

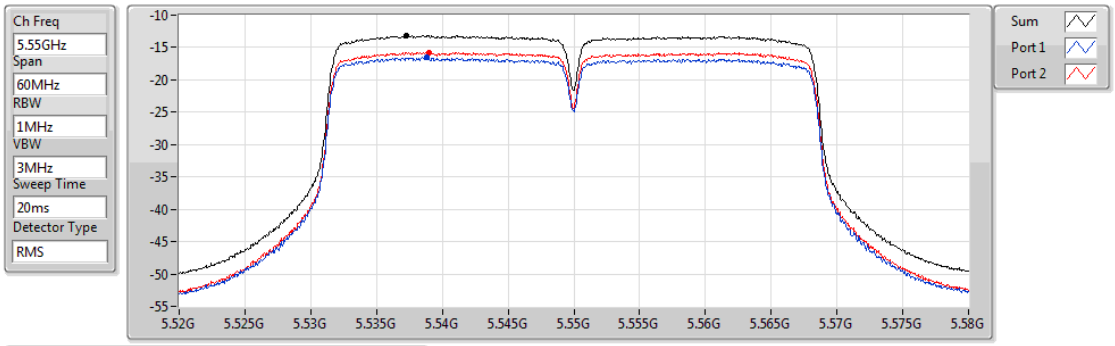
5510MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.83	-13.83	-16.88	-16.75

QPSK,40M_Nss1_2TX **PSD**

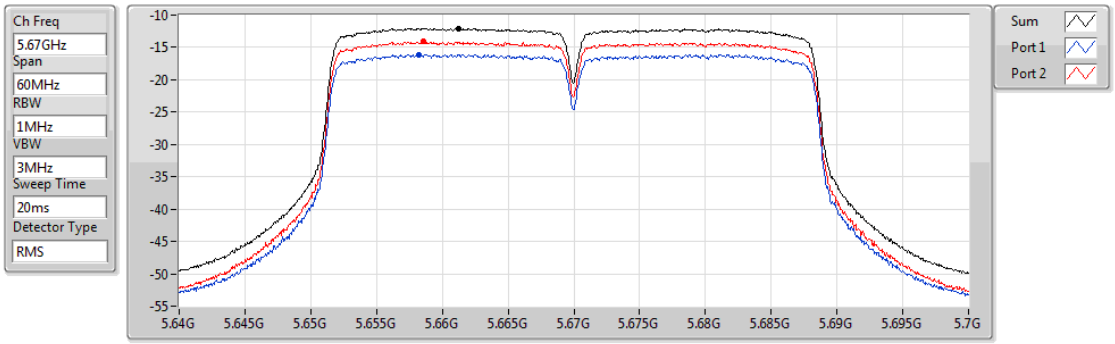
5550MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.16	-13.16	-16.55	-15.77

QPSK,40M_Nss1_2TX **PSD**

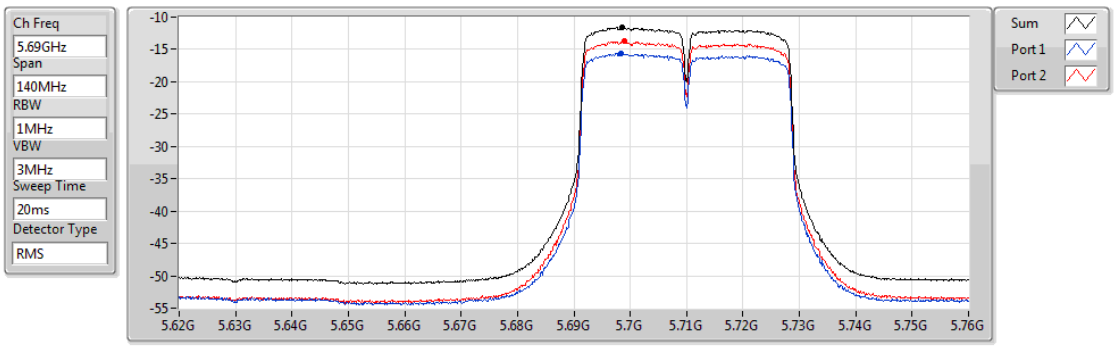
5670MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.03	-12.03	-16.07	-14.12

QPSK,40M_Nss1_2TX **PSD**

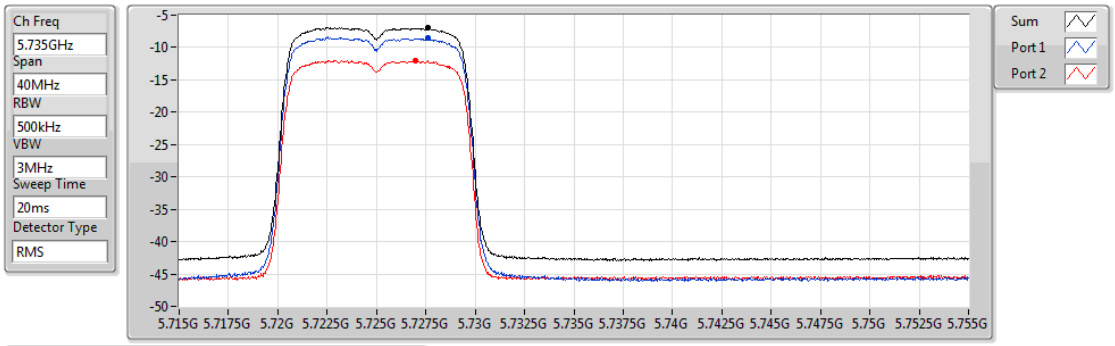
5710MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.60	-11.60	-15.61	-13.72

QPSK,10M_Nss1_2TX **PSD**

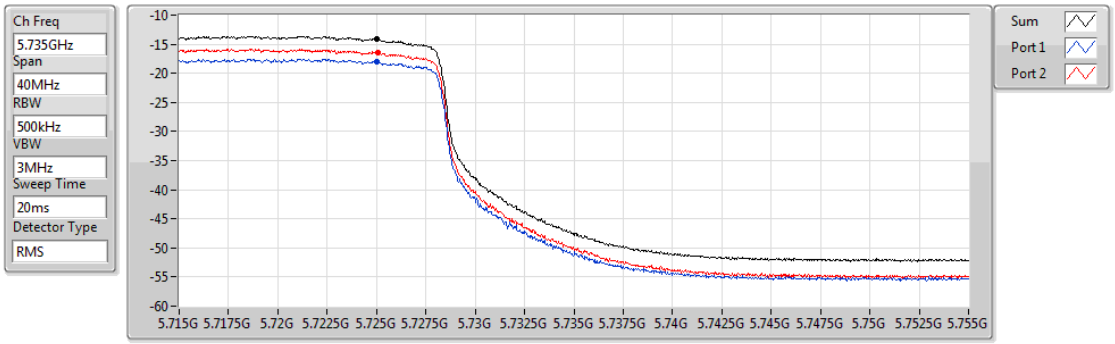
5725MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.99	-6.99	-8.59	-12.08

QPSK,40M_Nss1_2TX **PSD**

5710MHz Straddle 5.725-5.85GHz



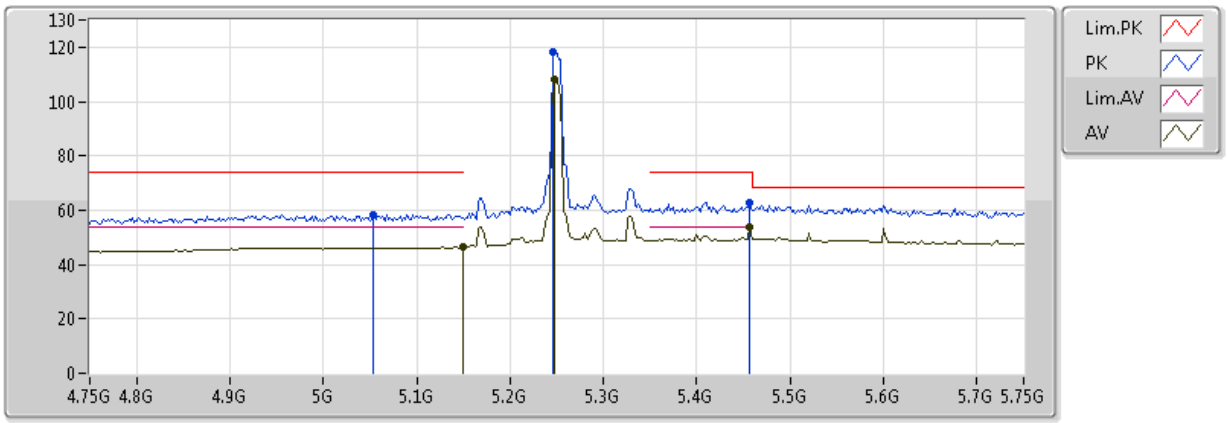
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.20	-14.20	-18.10	-16.38

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
QPSK,10M_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5.47-5.725GHz	Pass	AV	5.402G	53.97	54.00	-0.03	9.44	3	H	87	1.68	-

QPSK,10M_Nss1_2TX

5250MHz_TX

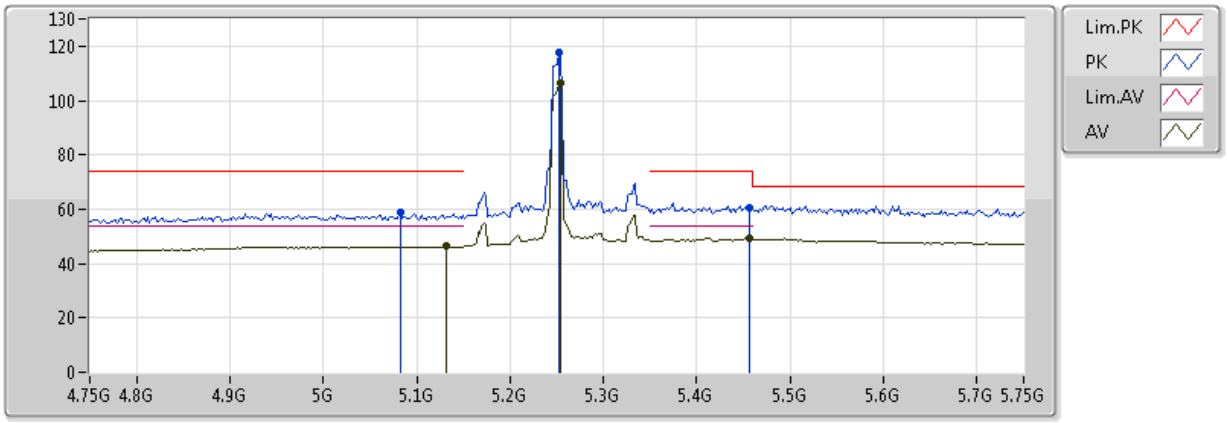


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	46.46	54.00	-7.54	8.93	3	V	86	1.59	-
AV	5.248G	107.93	Inf	-Inf	9.15	3	V	86	1.59	-
AV	5.456G	53.56	54.00	-0.44	9.58	3	V	86	1.59	-
PK	5.054G	58.46	74.00	-15.54	8.68	3	V	86	1.59	-
PK	5.246G	118.28	Inf	-Inf	9.15	3	V	86	1.59	-
PK	5.456G	62.66	74.00	-11.34	9.58	3	V	86	1.59	-

QPSK,10M_Nss1_2TX

5250MHz_TX

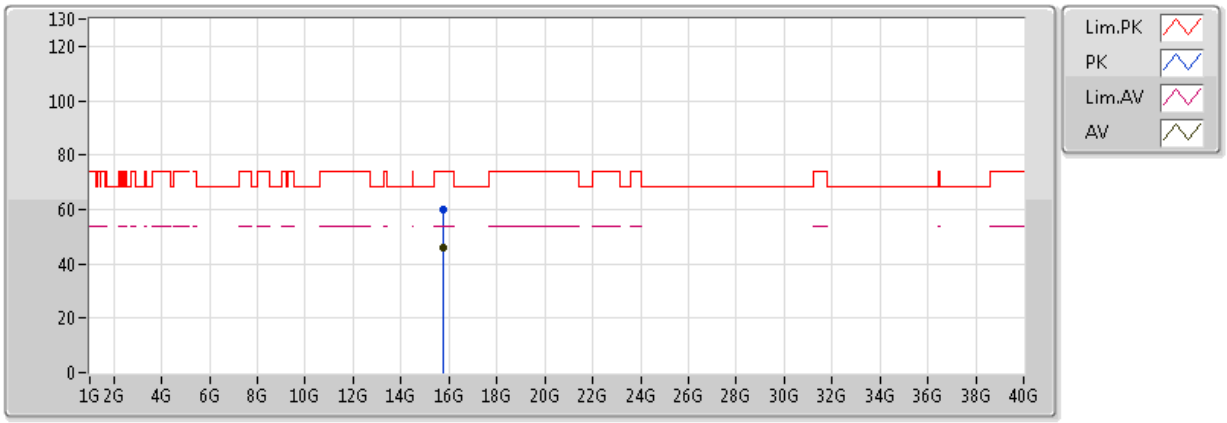


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.132G	46.33	54.00	-7.67	8.88	3	H	88	1.67	-
AV	5.254G	106.67	Inf	-Inf	9.16	3	H	88	1.67	-
AV	5.456G	49.42	54.00	-4.58	9.58	3	H	88	1.67	-
PK	5.082G	58.72	74.00	-15.28	8.75	3	H	88	1.67	-
PK	5.252G	117.65	Inf	-Inf	9.16	3	H	88	1.67	-
PK	5.456G	60.77	74.00	-13.23	9.58	3	H	88	1.67	-

QPSK,10M_Nss1_2TX

5250MHz_TX

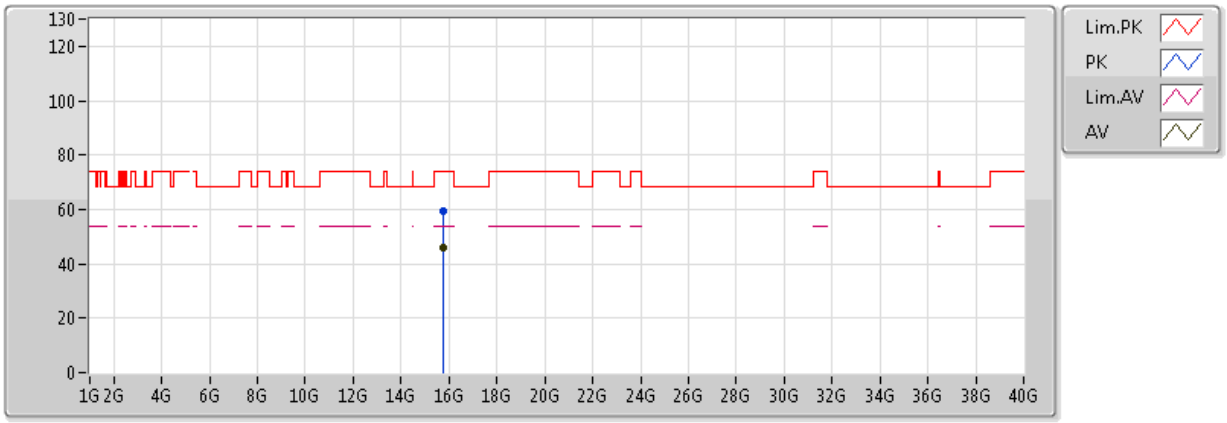


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.7493G	46.03	54.00	-7.97	17.57	3	V	241	1.29	-
PK	15.74837G	60.00	74.00	-14.00	17.58	3	V	241	1.29	-

QPSK,10M_Nss1_2TX

5250MHz_TX

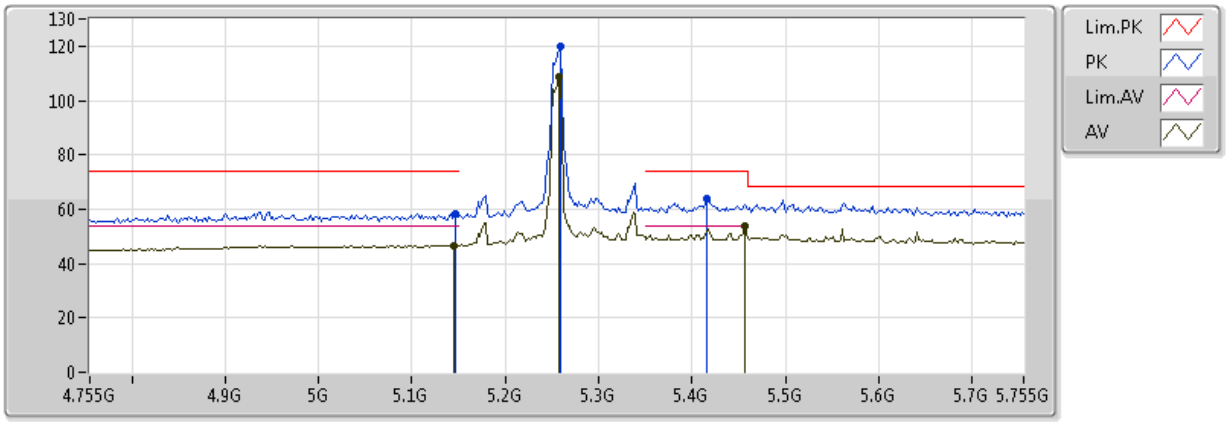


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.7511G	46.01	54.00	-7.99	17.57	3	H	23	1.61	-
PK	15.75163G	59.20	74.00	-14.80	17.57	3	H	23	1.61	-

QPSK,10M_Nss1_2TX

5255MHz_TX

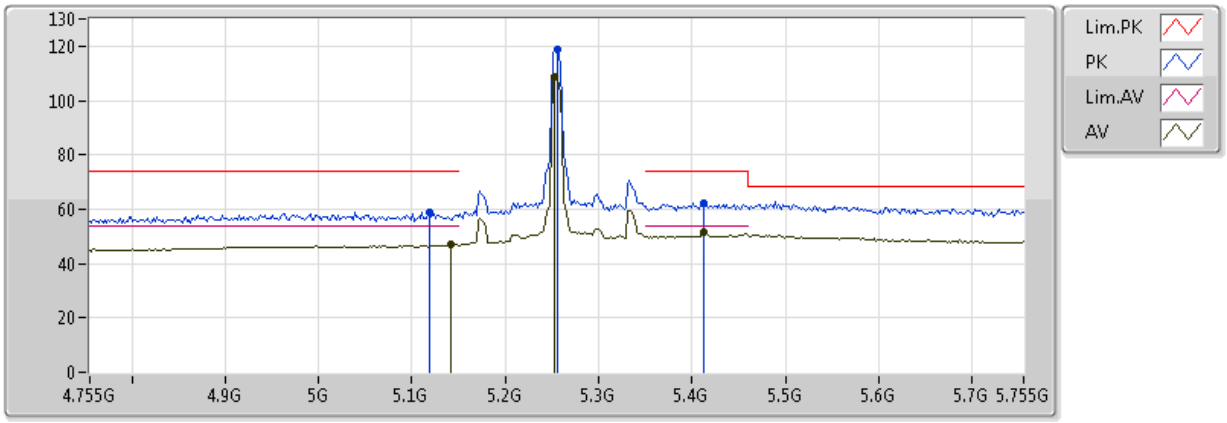


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.145G	46.77	54.00	-7.23	8.92	3	V	84	1.53	-
AV	5.257G	108.61	Inf	-Inf	9.17	3	V	84	1.53	-
AV	5.457G	53.67	54.00	-0.33	9.58	3	V	84	1.53	-
PK	5.147G	58.20	74.00	-15.80	8.92	3	V	84	1.53	-
PK	5.259G	119.67	Inf	-Inf	9.17	3	V	84	1.53	-
PK	5.415G	64.15	74.00	-9.85	9.47	3	V	84	1.53	-

QPSK,10M_Nss1_2TX

5255MHz_TX

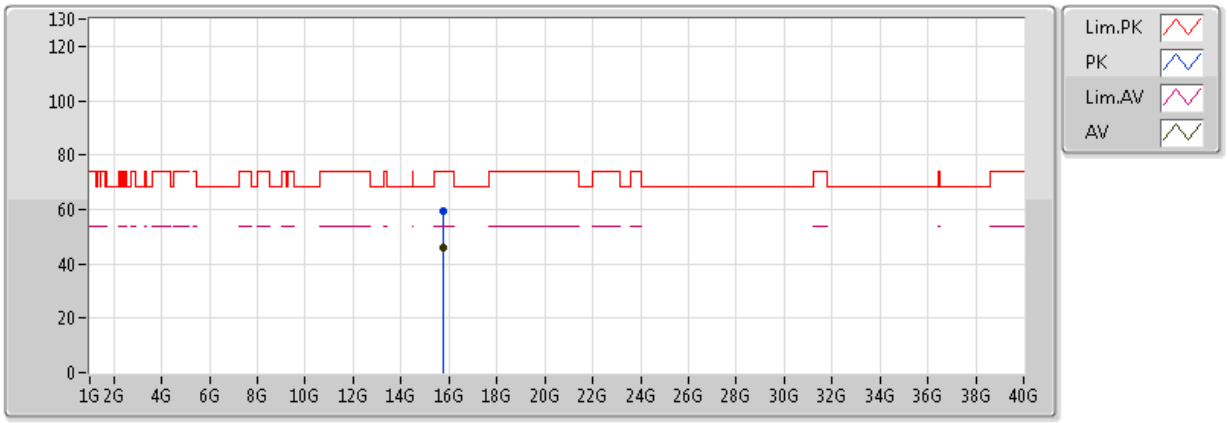


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.141G	46.84	54.00	-7.16	8.91	3	H	88	1.70	-
AV	5.253G	108.45	Inf	-Inf	9.16	3	H	88	1.70	-
AV	5.413G	51.44	54.00	-2.56	9.46	3	H	88	1.70	-
PK	5.119G	59.08	74.00	-14.92	8.85	3	H	88	1.70	-
PK	5.255G	118.75	Inf	-Inf	9.16	3	H	88	1.70	-
PK	5.413G	62.04	74.00	-11.96	9.46	3	H	88	1.70	-

QPSK,10M_Nss1_2TX

5255MHz_TX

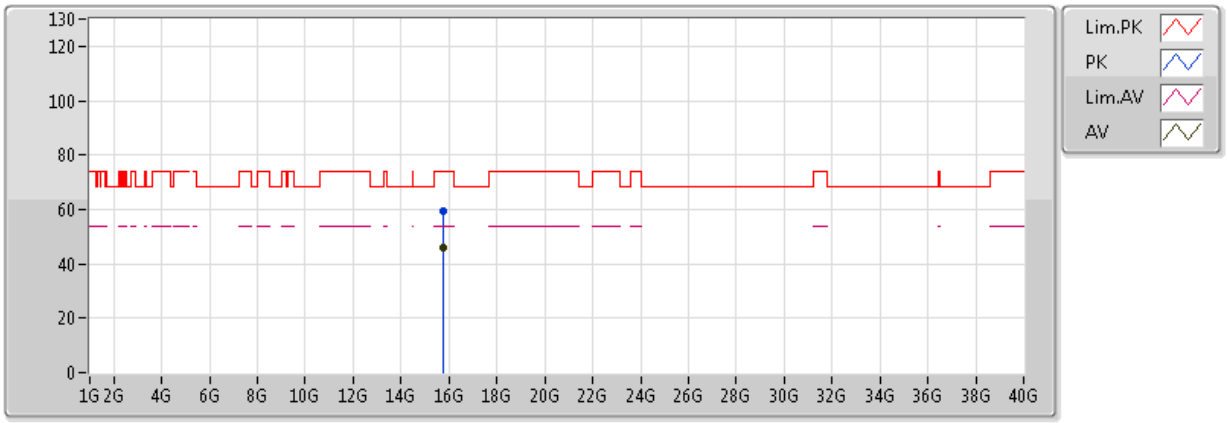


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.76539G	45.93	54.00	-8.07	17.53	3	V	42	2.22	-
PK	15.76566G	59.18	74.00	-14.82	17.53	3	V	42	2.22	-

QPSK,10M_Nss1_2TX

5255MHz_TX

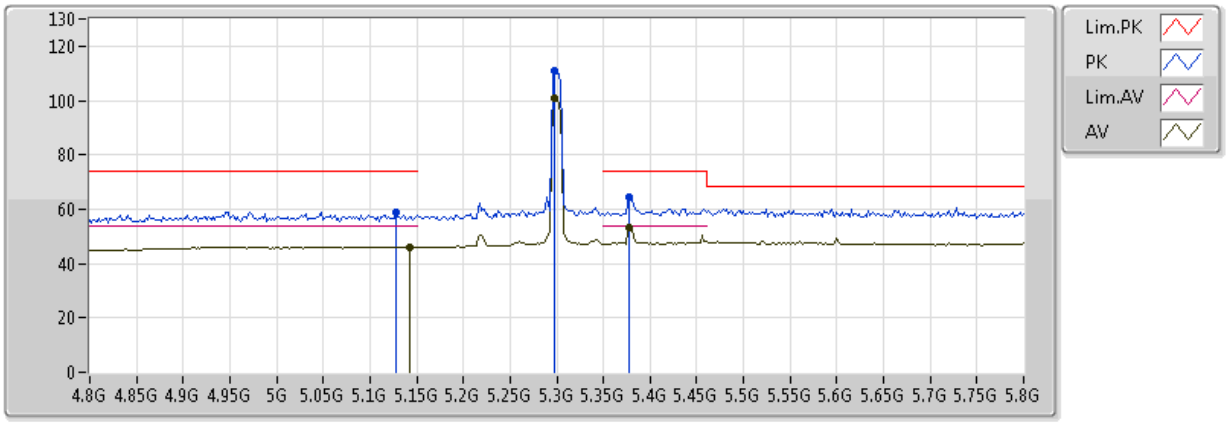


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.76743G	46.04	54.00	-7.96	17.53	3	H	56	2.28	-
PK	15.76557G	59.56	74.00	-14.44	17.53	3	H	56	2.28	-

QPSK,10M_Nss1_2TX

5300MHz_TX

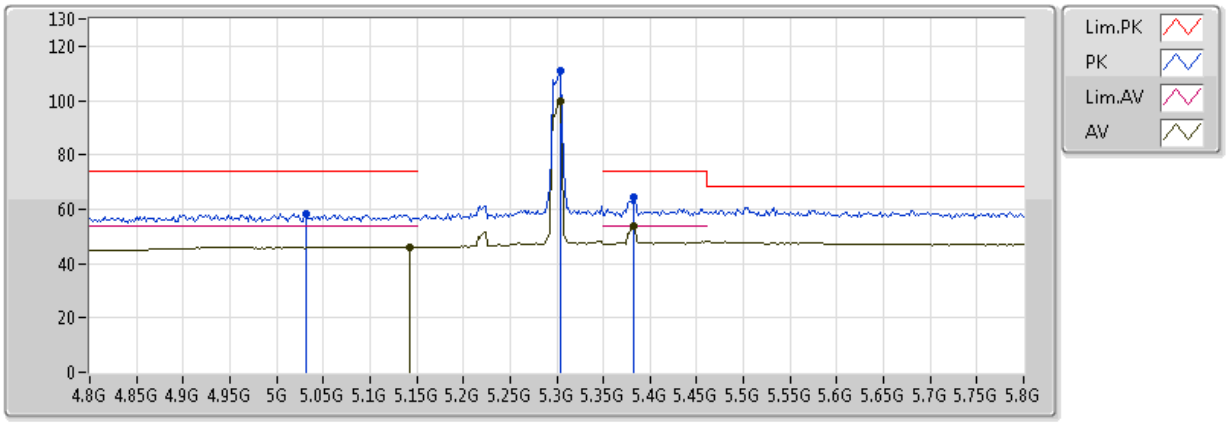


20170330
EUT Z 2TX Non-TXBF
setting 7.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.142G	46.08	54.00	-7.92	8.91	3	V	85	1.61	-
AV	5.298G	100.76	Inf	-Inf	9.25	3	V	85	1.61	-
AV	5.378G	53.10	54.00	-0.90	9.39	3	V	85	1.61	-
PK	5.128G	59.11	74.00	-14.89	8.87	3	V	85	1.61	-
PK	5.298G	111.07	Inf	-Inf	9.25	3	V	85	1.61	-
PK	5.378G	64.28	74.00	-9.72	9.39	3	V	85	1.61	-

QPSK,10M_Nss1_2TX

5300MHz_TX

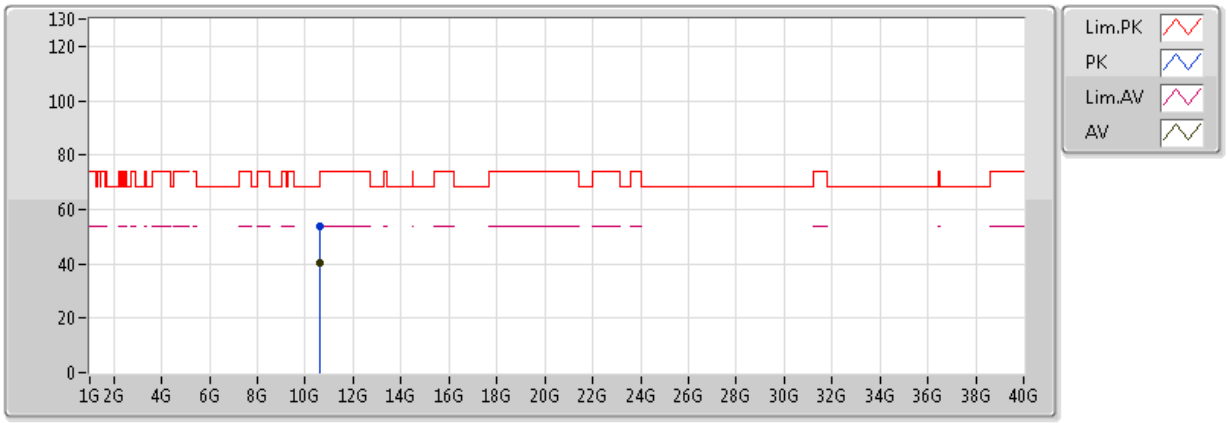


20170330
EUT Z 2TX Non-TXBF
setting 7.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.142G	46.16	54.00	-7.84	8.91	3	H	86	1.65	-
AV	5.304G	99.64	Inf	-Inf	9.26	3	H	86	1.65	-
AV	5.382G	53.81	54.00	-0.19	9.40	3	H	86	1.65	-
PK	5.032G	58.46	74.00	-15.54	8.62	3	H	86	1.65	-
PK	5.304G	110.72	Inf	-Inf	9.26	3	H	86	1.65	-
PK	5.382G	64.42	74.00	-9.58	9.40	3	H	86	1.65	-

QPSK,10M_Nss1_2TX

5300MHz_TX

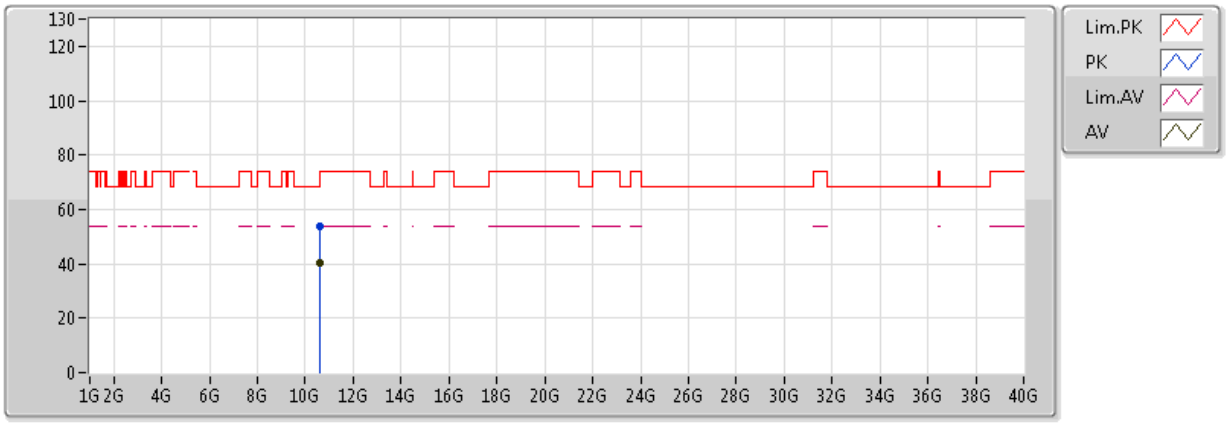


20170330
EUT Z 2TX Non-TXBF
setting 7.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.60056G	40.17	54.00	-13.83	15.92	3	V	72	2.10	-
PK	10.60229G	53.59	74.00	-20.41	15.92	3	V	72	2.10	-

QPSK,10M_Nss1_2TX

5300MHz_TX

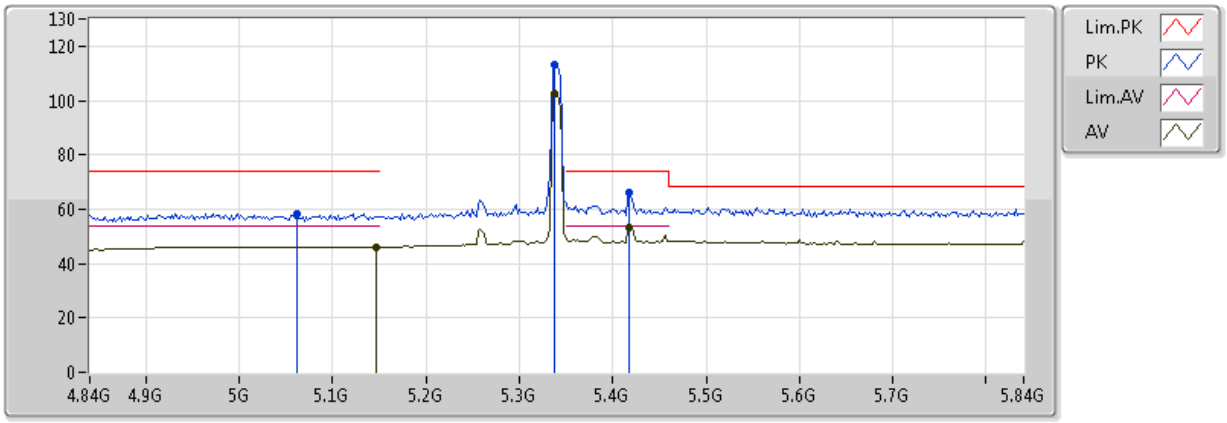


20170330
EUT Z 2TX Non-TXBF
setting 7.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.60208G	40.19	54.00	-13.81	15.92	3	H	5	1.56	-
PK	10.60222G	53.81	74.00	-20.19	15.92	3	H	5	1.56	-

QPSK,10M_Nss1_2TX

5340MHz_TX

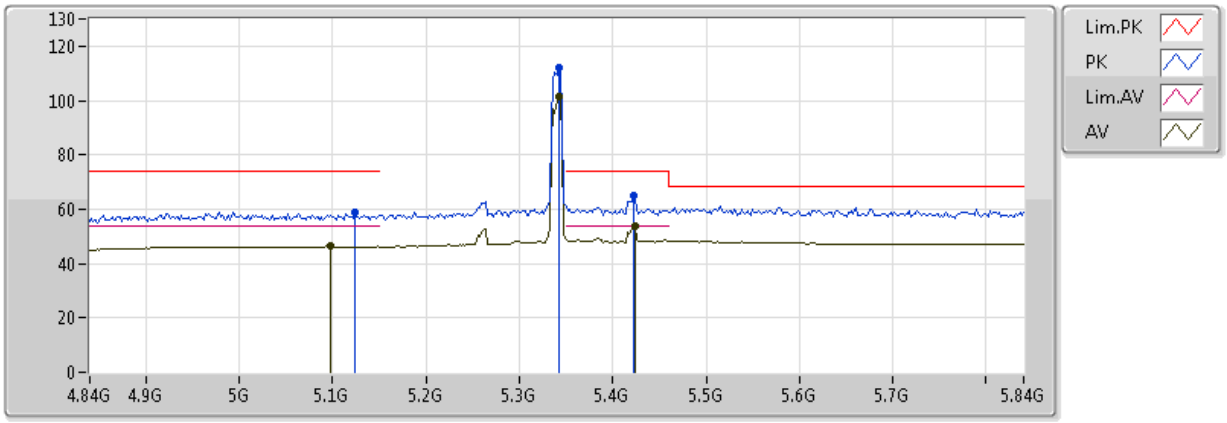


20170330
EUT Z 2TX Non-TXBF
setting 8.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.146G	46.21	54.00	-7.79	8.92	3	V	85	1.59	-
AV	5.338G	102.53	Inf	-Inf	9.32	3	V	85	1.59	-
AV	5.418G	53.31	54.00	-0.69	9.48	3	V	85	1.59	-
PK	5.062G	58.49	74.00	-15.51	8.70	3	V	85	1.59	-
PK	5.338G	113.12	Inf	-Inf	9.32	3	V	85	1.59	-
PK	5.418G	66.09	74.00	-7.91	9.48	3	V	85	1.59	-

QPSK,10M_Nss1_2TX

5340MHz_TX

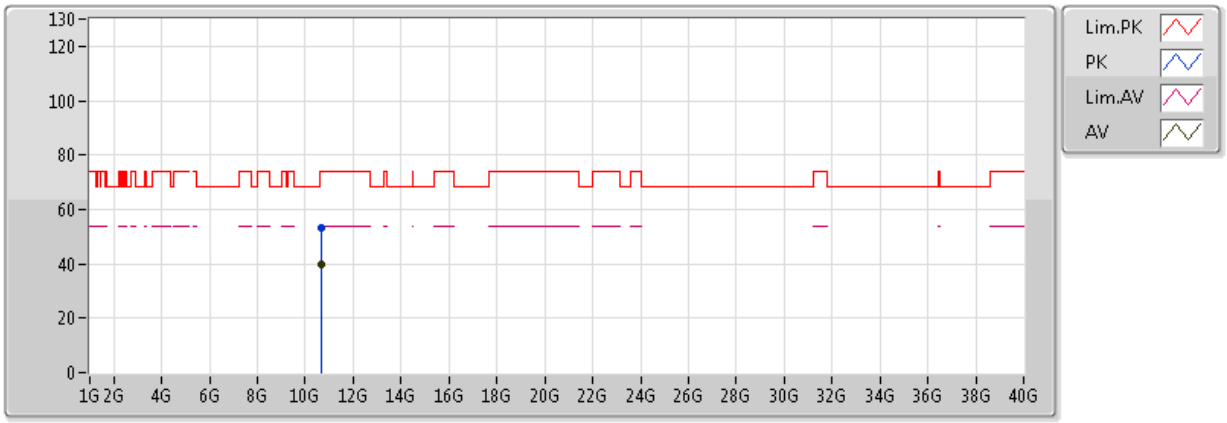


20170330
EUT Z 2TX Non-TXBF
setting 8.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.098G	46.31	54.00	-7.69	8.79	3	H	87	1.67	-
AV	5.342G	101.70	Inf	-Inf	9.33	3	H	87	1.67	-
AV	5.424G	53.76	54.00	-0.24	9.49	3	H	87	1.67	-
PK	5.124G	58.74	74.00	-15.26	8.86	3	H	87	1.67	-
PK	5.342G	112.14	Inf	-Inf	9.33	3	H	87	1.67	-
PK	5.422G	65.06	74.00	-8.94	9.49	3	H	87	1.67	-

QPSK,10M_Nss1_2TX

5340MHz_TX

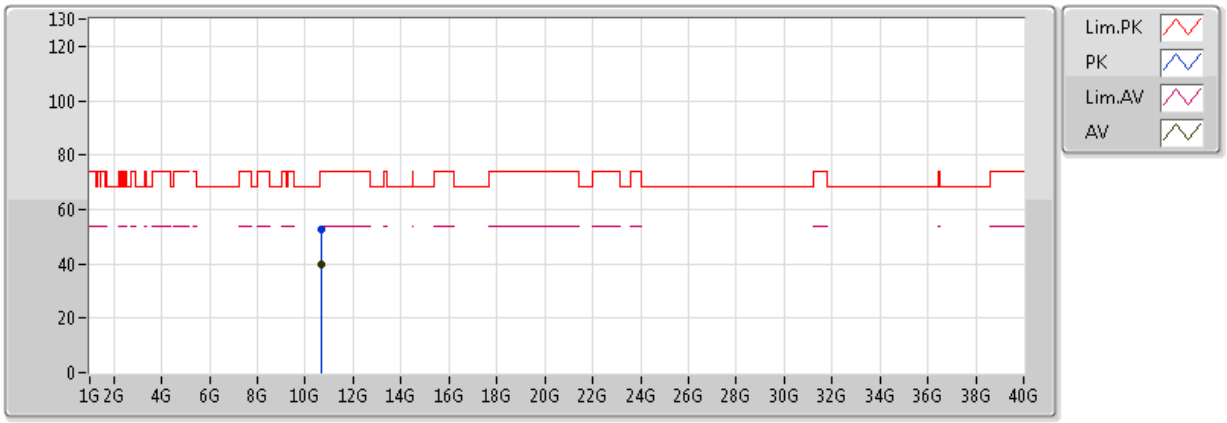


20170330
EUT Z 2TX Non-TXBF
setting 8.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.67959G	39.57	54.00	-14.43	15.90	3	V	340	1.48	-
PK	10.6796G	53.26	74.00	-20.74	15.90	3	V	340	1.48	-

QPSK,10M_Nss1_2TX

5340MHz_TX

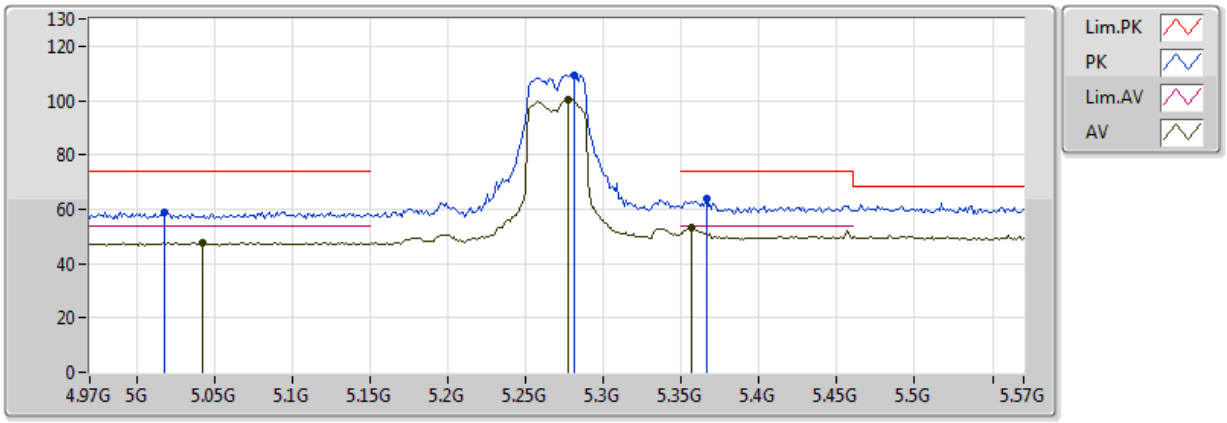


20170330
EUT Z 2TX Non-TXBF
setting 8.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.67758G	39.53	54.00	-14.47	15.90	3	H	30	1.69	-
PK	10.68126G	52.91	74.00	-21.09	15.90	3	H	30	1.69	-

QPSK,40M_Nss1_2TX

5270MHz_TX

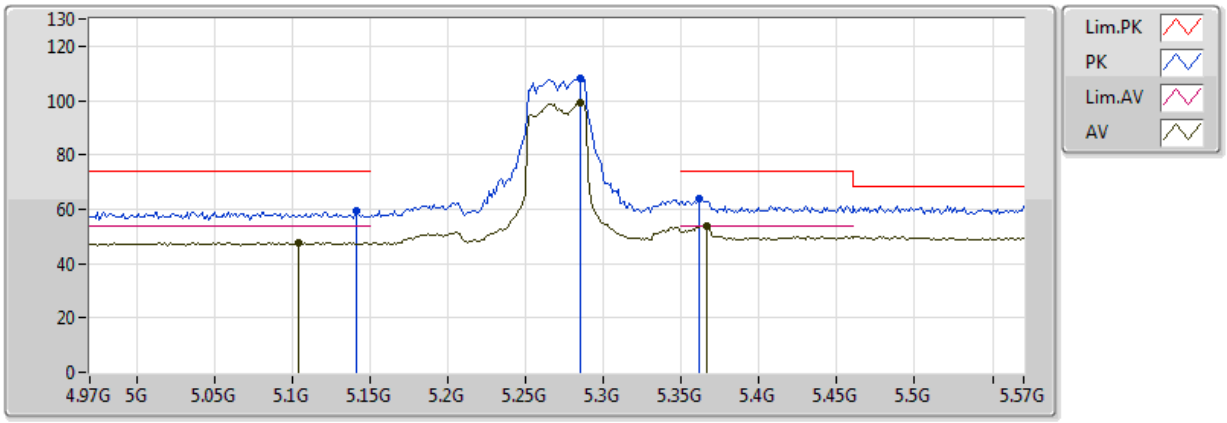


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.042G	47.64	54.00	-6.36	8.64	3	V	89	1.70	-
AV	5.2772G	100.51	Inf	-Inf	9.21	3	V	89	1.70	-
AV	5.3564G	53.22	54.00	-0.78	9.35	3	V	89	1.70	-
PK	5.018G	59.05	74.00	-14.95	8.58	3	V	89	1.70	-
PK	5.2808G	109.54	Inf	-Inf	9.21	3	V	89	1.70	-
PK	5.366G	63.65	74.00	-10.35	9.37	3	V	89	1.70	-

QPSK,40M_Nss1_2TX

5270MHz_TX

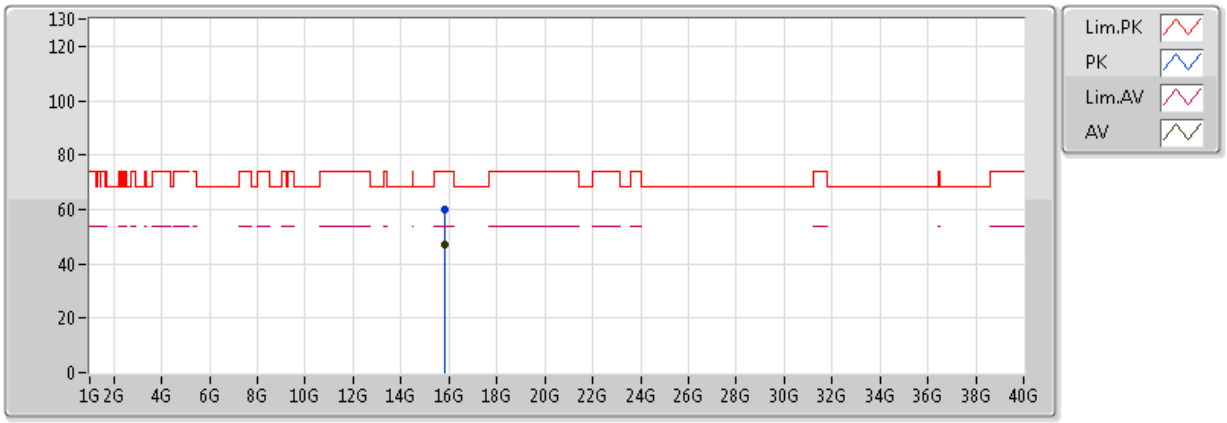


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1044G	47.85	54.00	-6.15	8.81	3	H	90	1.65	-
AV	5.2856G	99.43	Inf	-Inf	9.22	3	H	90	1.65	-
AV	5.366G	53.88	54.00	-0.12	9.37	3	H	90	1.65	-
PK	5.1416G	59.40	74.00	-14.60	8.91	3	H	90	1.65	-
PK	5.2856G	107.93	Inf	-Inf	9.22	3	H	90	1.65	-
PK	5.3612G	63.80	74.00	-10.20	9.36	3	H	90	1.65	-

QPSK,40M_Nss1_2TX

5270MHz_TX

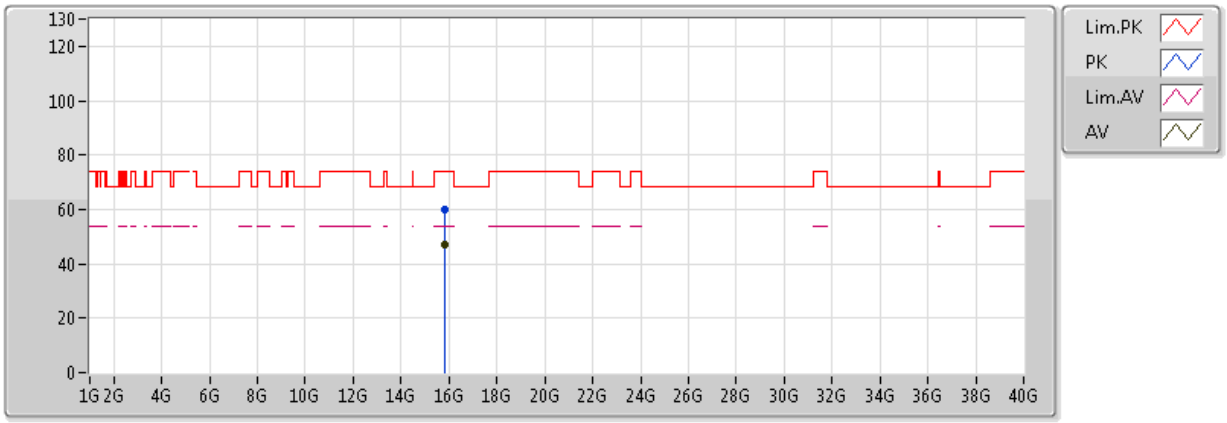


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.81089G	47.13	54.00	-6.87	17.42	3	V	316	1.46	-
PK	15.80938G	59.89	74.00	-14.11	17.42	3	V	316	1.46	-

QPSK,40M_Nss1_2TX

5270MHz_TX

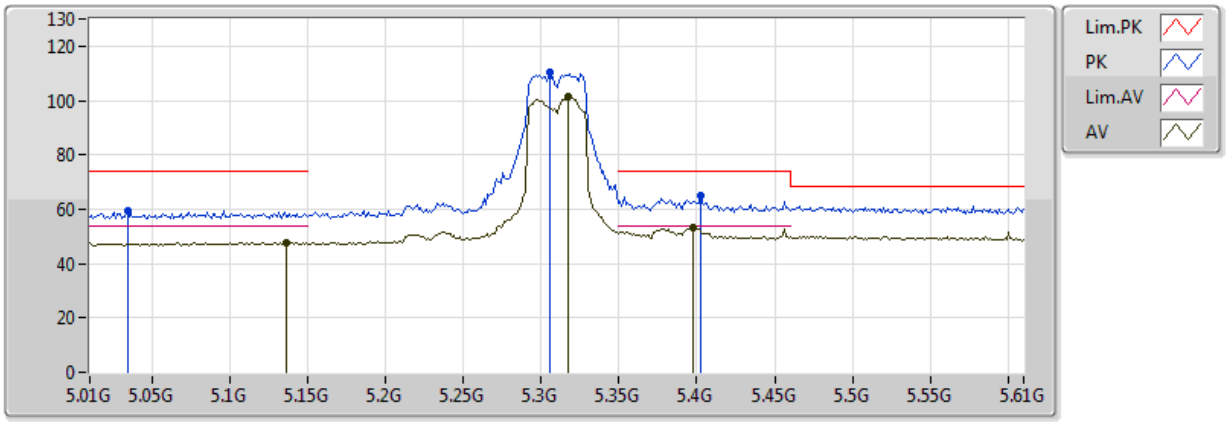


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.80843G	47.06	54.00	-6.94	17.42	3	H	298	2.04	-
PK	15.81067G	60.12	74.00	-13.88	17.42	3	H	298	2.04	-

QPSK,40M_Nss1_2TX

5310MHz_TX

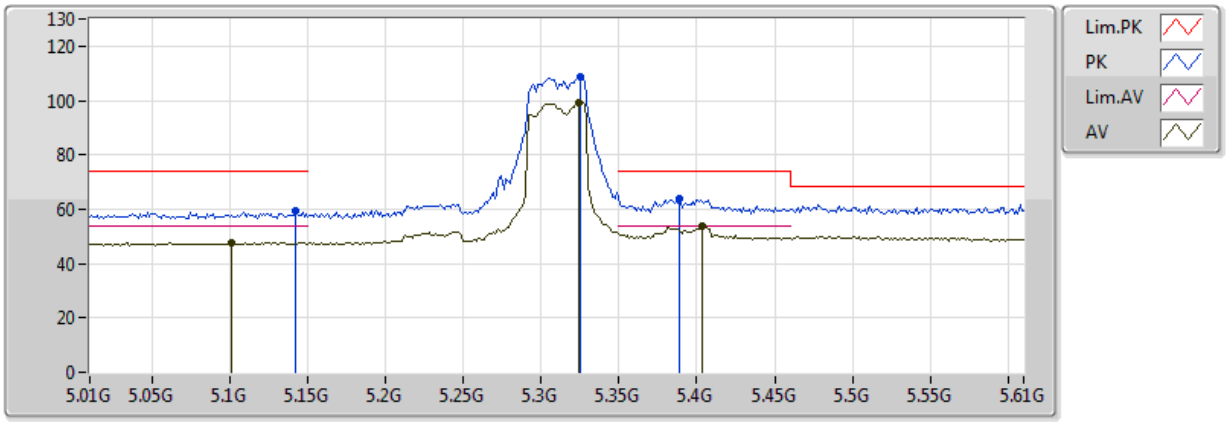


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.136G	47.78	54.00	-6.22	8.89	3	V	89	1.66	-
AV	5.3172G	101.21	Inf	-Inf	9.28	3	V	89	1.66	-
AV	5.3976G	53.11	54.00	-0.89	9.43	3	V	89	1.66	-
PK	5.034G	59.42	74.00	-14.58	8.62	3	V	89	1.66	-
PK	5.3052G	110.53	Inf	-Inf	9.26	3	V	89	1.66	-
PK	5.4024G	64.96	74.00	-9.04	9.44	3	V	89	1.66	-

QPSK,40M_Nss1_2TX

5310MHz_TX

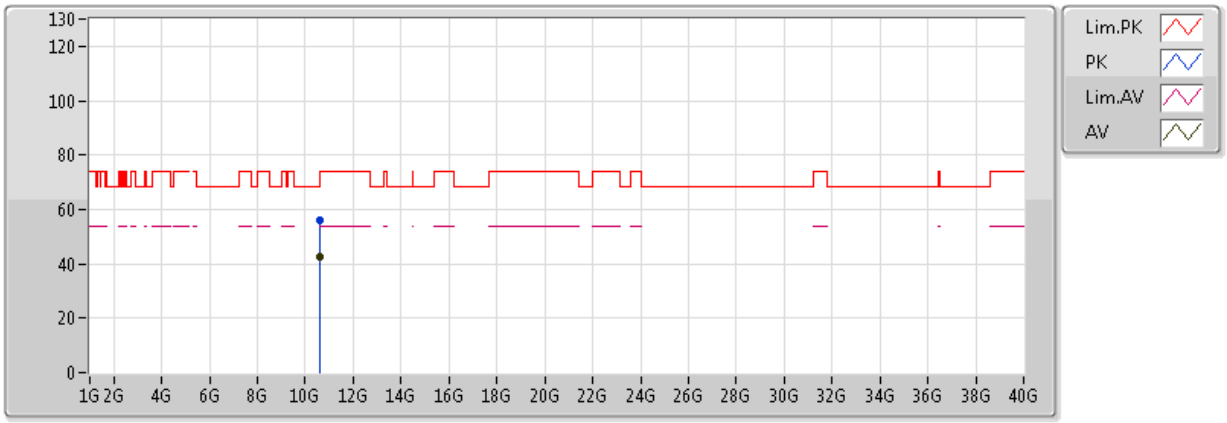


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1012G	47.81	54.00	-6.19	8.80	3	H	90	1.67	-
AV	5.3244G	99.21	Inf	-Inf	9.29	3	H	90	1.67	-
AV	5.4036G	53.73	54.00	-0.27	9.44	3	H	90	1.67	-
PK	5.142G	59.37	74.00	-14.63	8.91	3	H	90	1.67	-
PK	5.3256G	108.54	Inf	-Inf	9.30	3	H	90	1.67	-
PK	5.3892G	63.74	74.00	-10.26	9.41	3	H	90	1.67	-

QPSK,40M_Nss1_2TX

5310MHz_TX

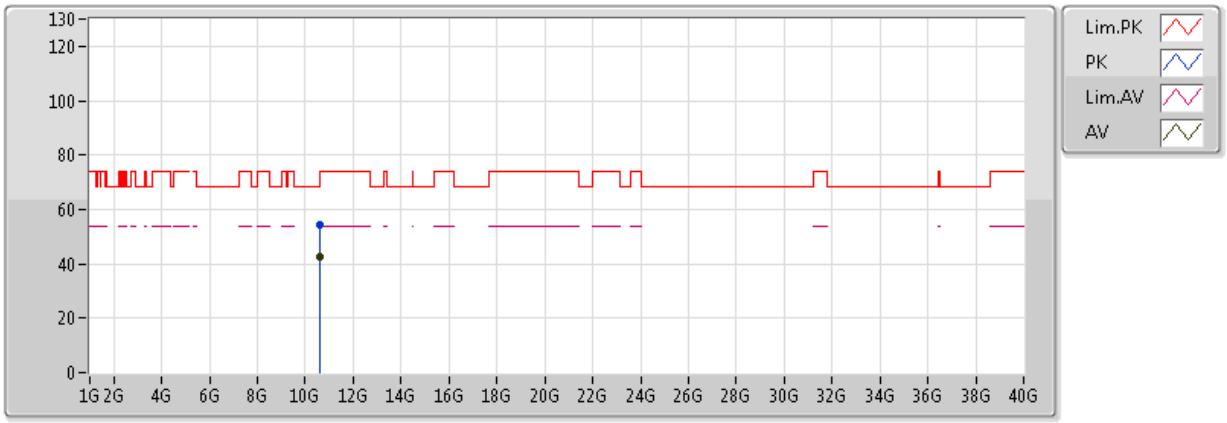


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.62237G	42.36	54.00	-11.64	15.91	3	V	67	2.15	-
PK	10.6215G	55.99	74.00	-18.01	15.91	3	V	67	2.15	-

QPSK,40M_Nss1_2TX

5310MHz_TX

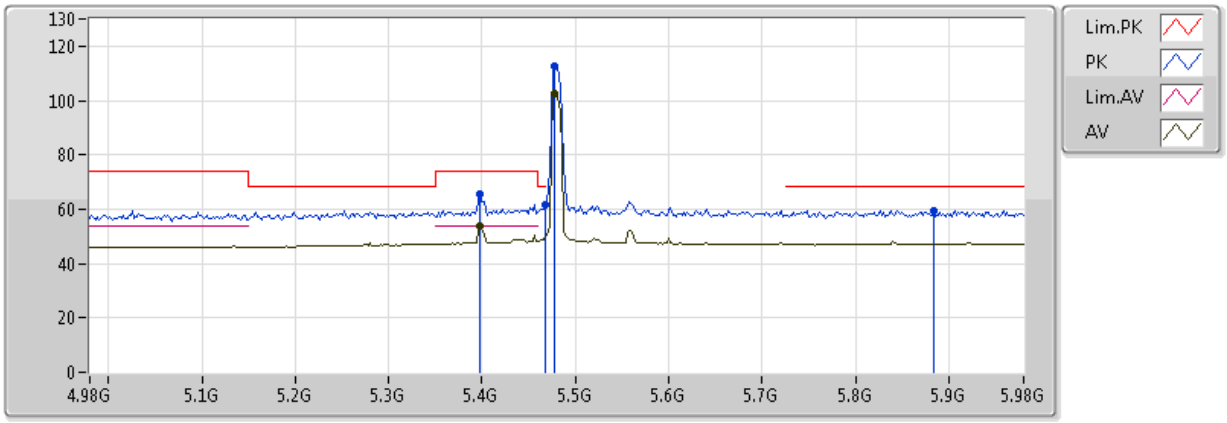


20170329
EUT Z 2TX Non-TXBF
Setting 10.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.61992G	42.43	54.00	-11.57	15.91	3	H	70	1.17	-
PK	10.61938G	54.48	74.00	-19.52	15.91	3	H	70	1.17	-

QPSK,10M_Nss1_2TX

5480MHz_TX

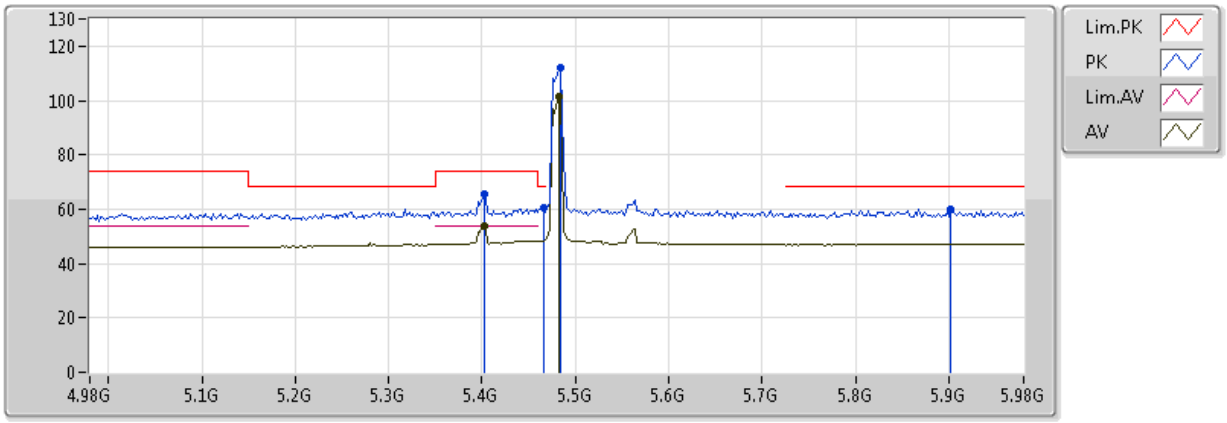


20170330
EUT Z 2TX Non-TXBF
setting 9
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.398G	53.63	54.00	-0.37	9.43	3	V	86	1.61	-
AV	5.478G	102.47	Inf	-Inf	9.63	3	V	86	1.61	-
PK	5.398G	65.42	74.00	-8.58	9.43	3	V	86	1.61	-
PK	5.468G	61.41	68.20	-6.79	9.61	3	V	86	1.61	-
PK	5.478G	112.78	Inf	-Inf	9.63	3	V	86	1.61	-
PK	5.884G	59.62	68.20	-8.58	9.94	3	V	86	1.61	-

QPSK,10M_Nss1_2TX

5480MHz_TX

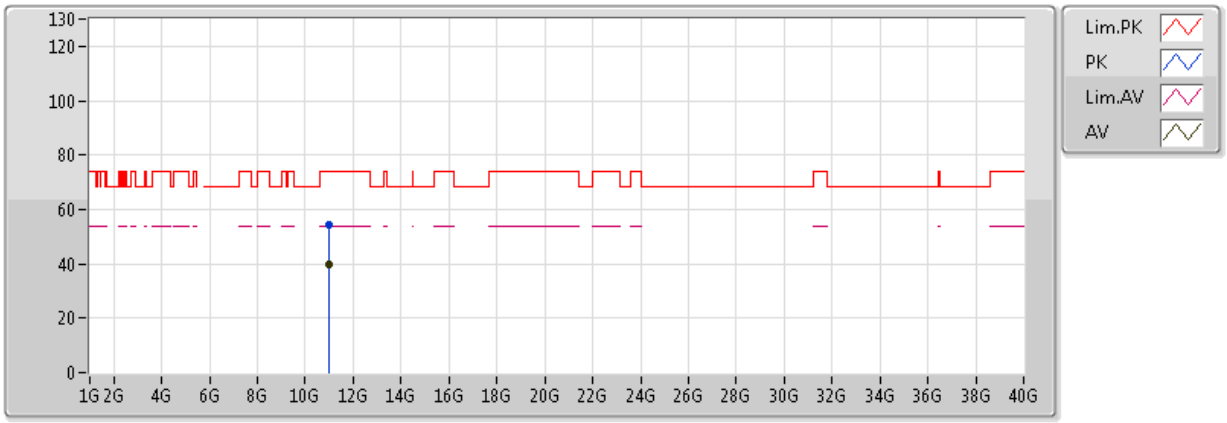


20170330
EUT Z 2TX Non-TXBF
setting 9
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.402G	53.97	54.00	-0.03	9.44	3	H	87	1.68	-
AV	5.482G	101.67	Inf	-Inf	9.64	3	H	87	1.68	-
PK	5.402G	65.40	74.00	-8.60	9.44	3	H	87	1.68	-
PK	5.466G	60.31	68.20	-7.89	9.60	3	H	87	1.68	-
PK	5.484G	111.95	Inf	-Inf	9.65	3	H	87	1.68	-
PK	5.902G	60.18	68.20	-8.02	9.96	3	H	87	1.68	-

QPSK,10M_Nss1_2TX

5480MHz_TX

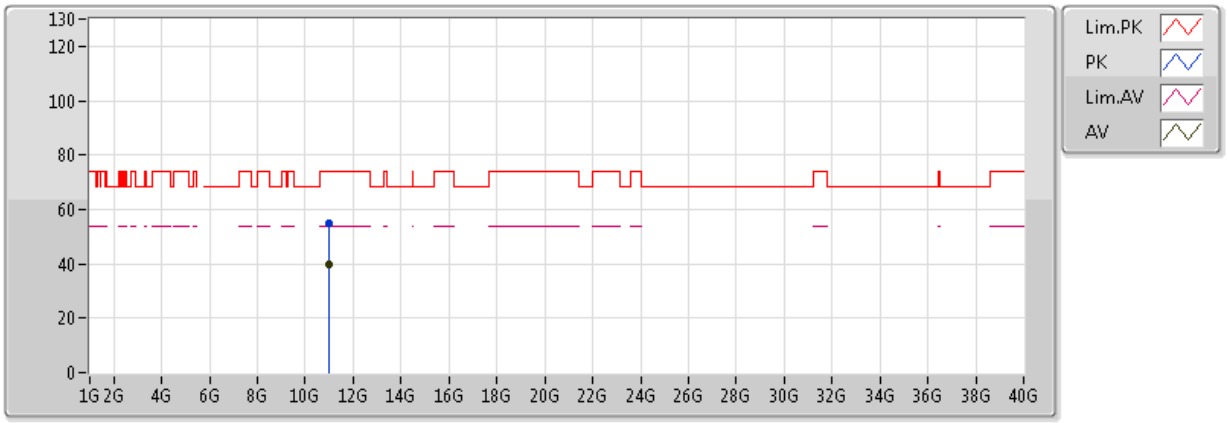


20170330
EUT Z 2TX Non-TXBF
setting 9
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.9594G	39.59	54.00	-14.41	15.84	3	V	191	1.22	-
PK	10.95822G	54.34	74.00	-19.66	15.84	3	V	191	1.22	-

QPSK,10M_Nss1_2TX

5480MHz_TX

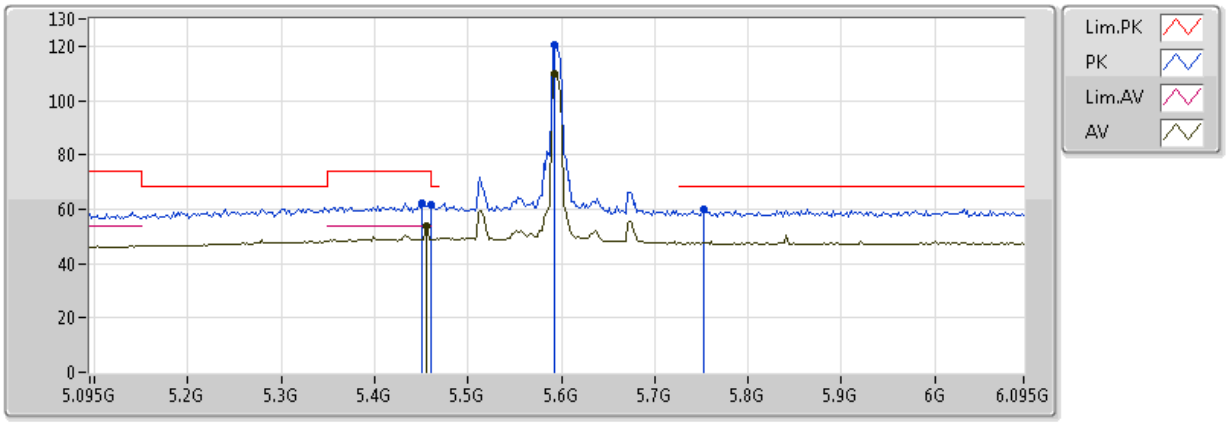


20170330
EUT Z 2TX Non-TXBF
setting 9
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	10.9606G	39.60	54.00	-14.40	15.84	3	H	158	1.54	-
PK	10.96041G	54.65	74.00	-19.35	15.84	3	H	158	1.54	-

QPSK,10M_Nss1_2TX

5595MHz_TX

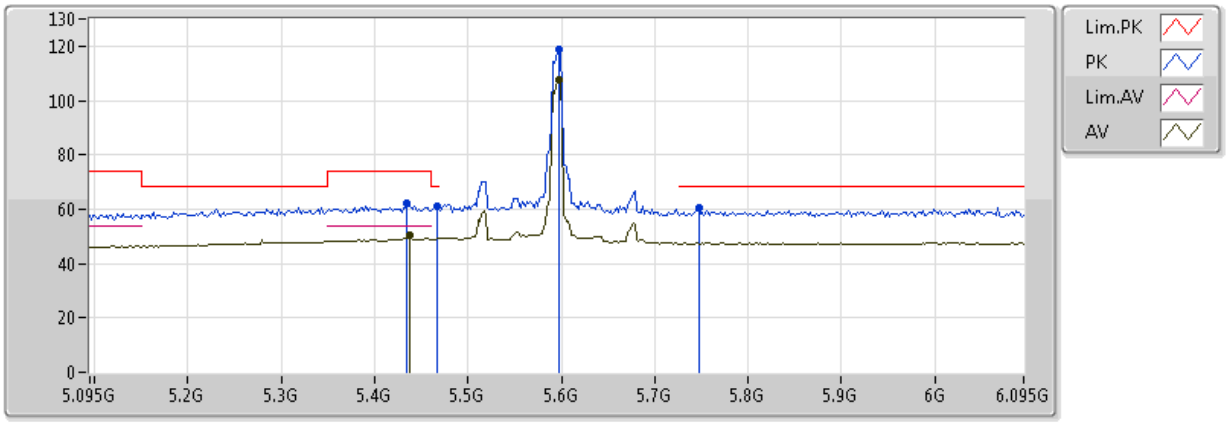


20170330
EUT Z 2TX Non-TXBF
setting 16.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.455G	53.56	54.00	-0.44	9.57	3	V	85	1.60	-
AV	5.593G	109.56	Inf	-Inf	9.77	3	V	85	1.60	-
PK	5.451G	61.94	74.00	-12.06	9.56	3	V	85	1.60	-
PK	5.460005G	61.63	68.20	-6.57	9.59	3	V	85	1.60	-
PK	5.593G	120.74	Inf	-Inf	9.77	3	V	85	1.60	-
PK	5.753G	59.99	68.20	-8.21	9.81	3	V	85	1.60	-

QPSK,10M_Nss1_2TX

5595MHz_TX

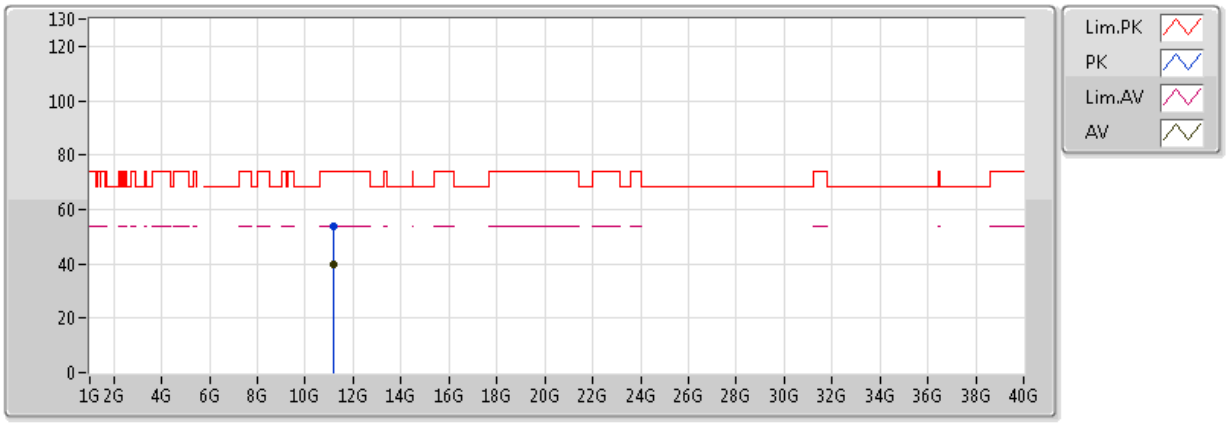


20170330
EUT Z 2TX Non-TXBF
setting 16.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.437G	50.36	54.00	-3.64	9.53	3	H	86	1.65	-
AV	5.597G	107.77	Inf	-Inf	9.78	3	H	86	1.65	-
PK	5.435G	62.22	74.00	-11.78	9.52	3	H	86	1.65	-
PK	5.467G	60.84	68.20	-7.36	9.60	3	H	86	1.65	-
PK	5.597G	118.82	Inf	-Inf	9.78	3	H	86	1.65	-
PK	5.747G	60.59	68.20	-7.61	9.81	3	H	86	1.65	-

QPSK,10M_Nss1_2TX

5595MHz_TX

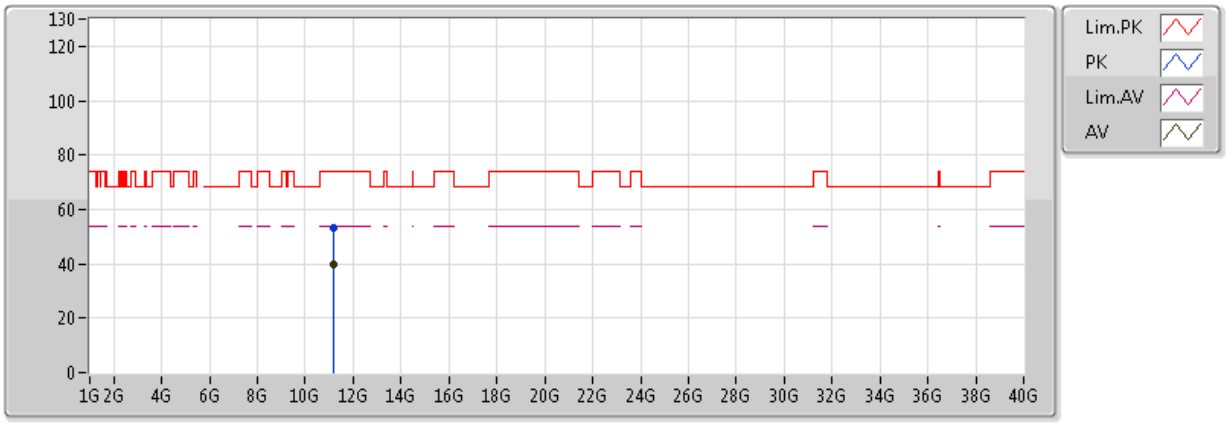


20170330
EUT Z 2TX Non-TXBF
setting 16.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.19165G	39.81	54.00	-14.19	16.02	3	V	50	1.17	-
PK	11.18886G	53.84	74.00	-20.16	16.02	3	V	50	1.17	-

QPSK,10M_Nss1_2TX

5595MHz_TX

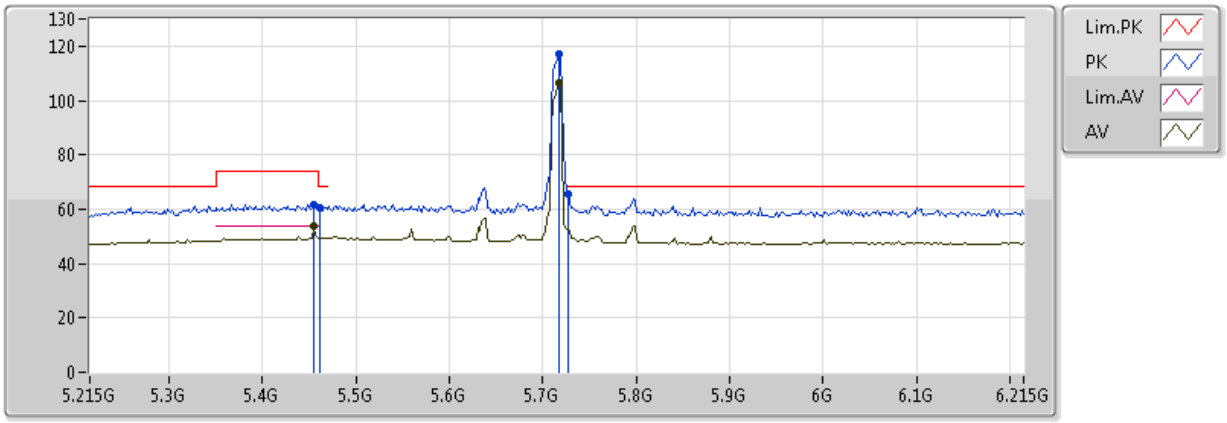


20170330
EUT Z 2TX Non-TXBF
setting 16.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.19162G	39.77	54.00	-14.23	16.02	3	H	248	2.42	-
PK	11.19236G	53.40	74.00	-20.60	16.02	3	H	248	2.42	-

QPSK,10M_Nss1_2TX

5715MHz_TX

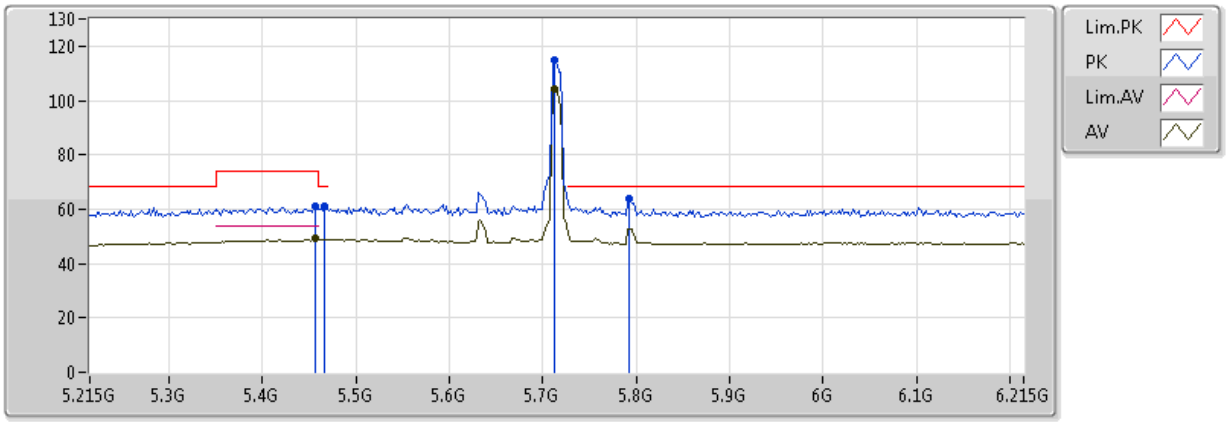


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.455G	53.65	54.00	-0.35	9.57	3	V	85	1.60	-
AV	5.717G	106.21	Inf	-Inf	9.80	3	V	85	1.60	-
PK	5.455G	61.77	74.00	-12.23	9.57	3	V	85	1.60	-
PK	5.461G	60.69	68.20	-7.51	9.59	3	V	85	1.60	-
PK	5.717G	116.98	Inf	-Inf	9.80	3	V	85	1.60	-
PK	5.727G	65.74	68.20	-2.46	9.81	3	V	85	1.60	-

QPSK,10M_Nss1_2TX

5715MHz_TX

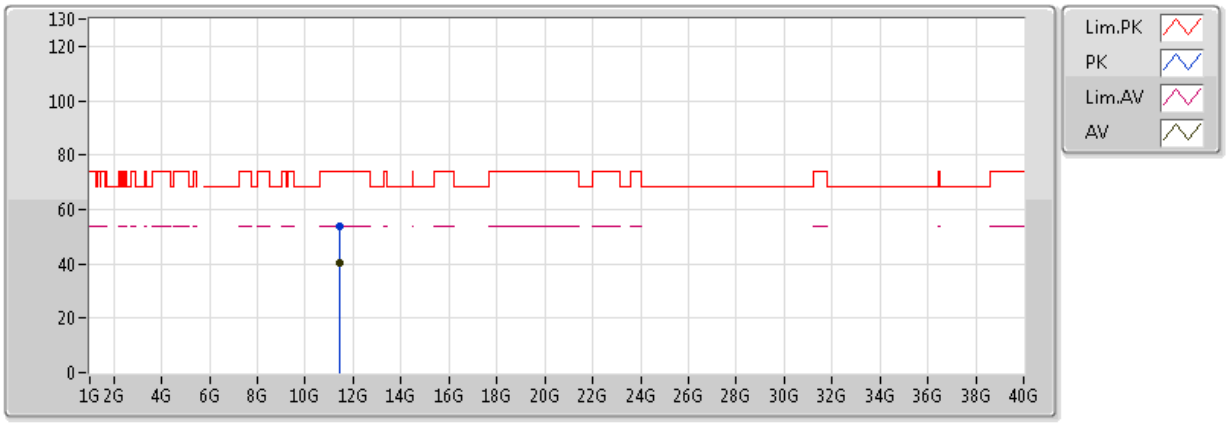


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.457G	49.23	54.00	-4.77	9.58	3	H	87	1.66	-
AV	5.713G	104.44	Inf	-Inf	9.80	3	H	87	1.66	-
PK	5.457G	61.23	74.00	-12.77	9.58	3	H	87	1.66	-
PK	5.467G	61.18	68.20	-7.02	9.60	3	H	87	1.66	-
PK	5.713G	114.78	Inf	-Inf	9.80	3	H	87	1.66	-
PK	5.793G	63.73	68.20	-4.47	9.82	3	H	87	1.66	-

QPSK,10M_Nss1_2TX

5715MHz_TX

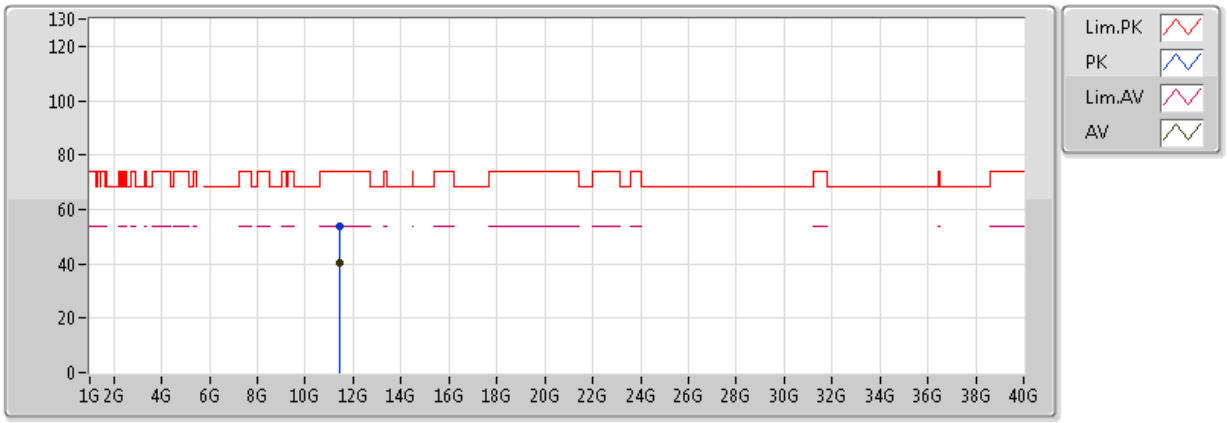


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.4319G	40.26	54.00	-13.74	16.26	3	V	75	1.64	-
PK	11.43131G	53.66	74.00	-20.34	16.26	3	V	75	1.64	-

QPSK,10M_Nss1_2TX

5715MHz_TX

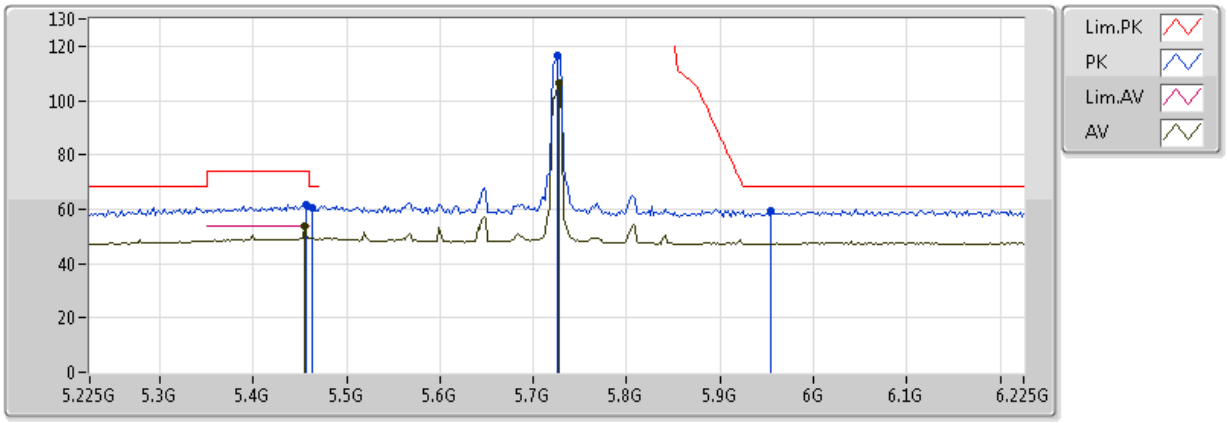


20170330
EUT Z 2TX Non-TXBF
setting 15
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.43168G	40.23	54.00	-13.77	16.26	3	H	141	2.24	-
PK	11.43154G	53.73	74.00	-20.27	16.26	3	H	141	2.24	-

QPSK,10M_Nss1_2TX

5725MHz_TX

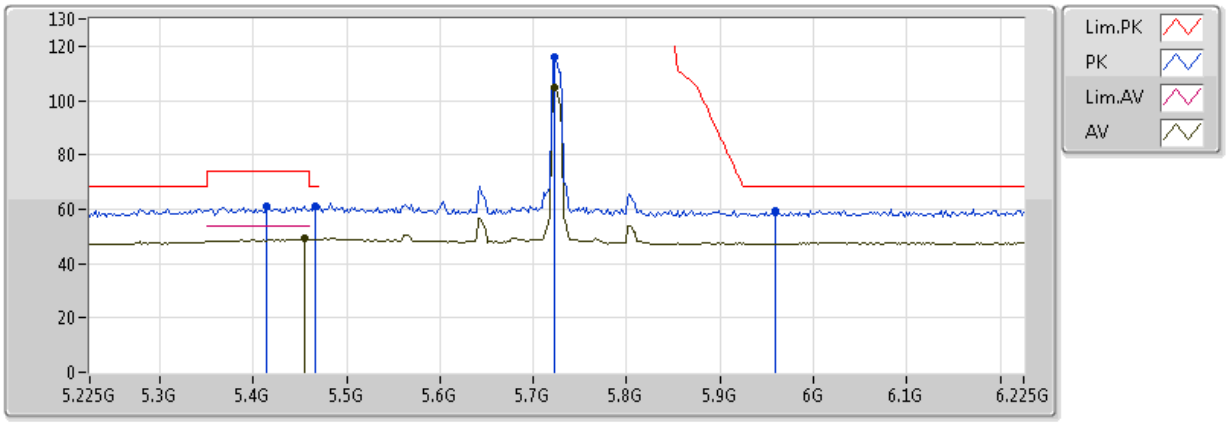


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.455G	53.54	54.00	-0.46	9.57	3	V	85	1.61	-
AV	5.727G	106.22	Inf	-Inf	9.81	3	V	85	1.61	-
PK	5.457G	61.72	74.00	-12.28	9.58	3	V	85	1.61	-
PK	5.463G	60.52	68.20	-7.68	9.59	3	V	85	1.61	-
PK	5.725G	116.63	Inf	-Inf	9.80	3	V	85	1.61	-
PK	5.955G	59.49	68.20	-8.71	10.04	3	V	85	1.61	-

QPSK,10M_Nss1_2TX

5725MHz_TX

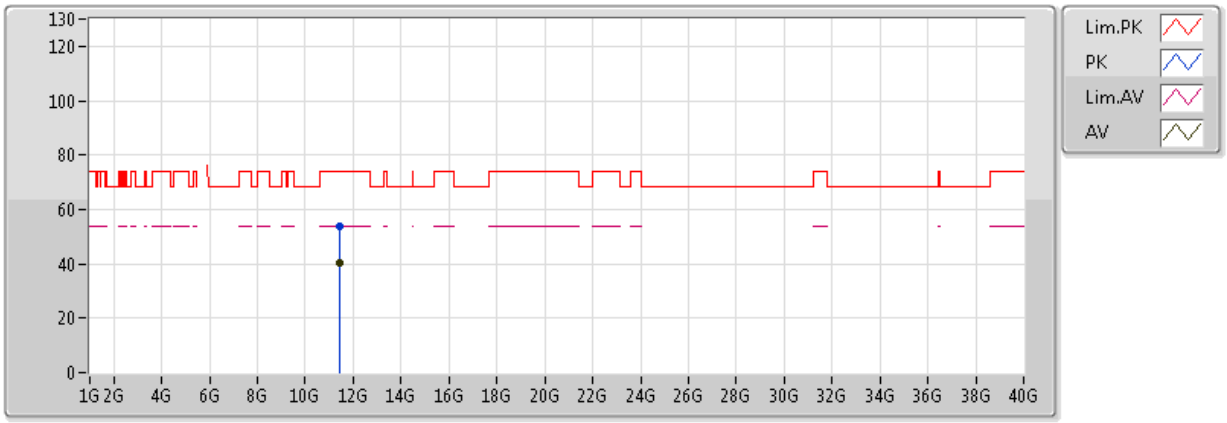


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.455G	49.52	54.00	-4.48	9.57	3	H	86	1.66	-
AV	5.723G	104.64	Inf	-Inf	9.80	3	H	86	1.66	-
PK	5.415G	61.32	74.00	-12.68	9.47	3	H	86	1.66	-
PK	5.467G	60.91	68.20	-7.29	9.60	3	H	86	1.66	-
PK	5.723G	115.83	Inf	-Inf	9.80	3	H	86	1.66	-
PK	5.959G	59.22	68.20	-8.98	10.04	3	H	86	1.66	-

QPSK,10M_Nss1_2TX

5725MHz_TX

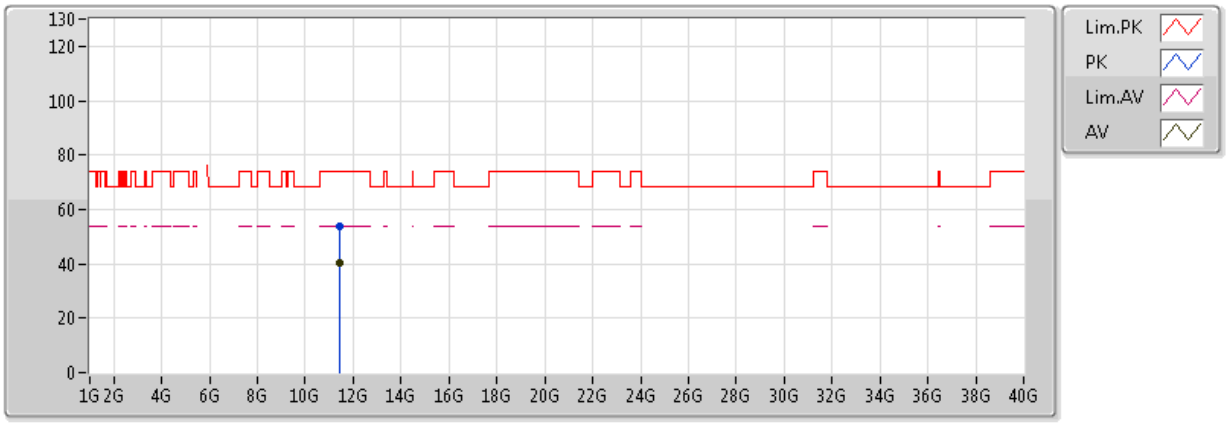


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.44786G	40.12	54.00	-13.88	16.27	3	V	240	1.22	-
PK	11.4482G	53.78	74.00	-20.22	16.27	3	V	240	1.22	-

QPSK,10M_Nss1_2TX

5725MHz_TX

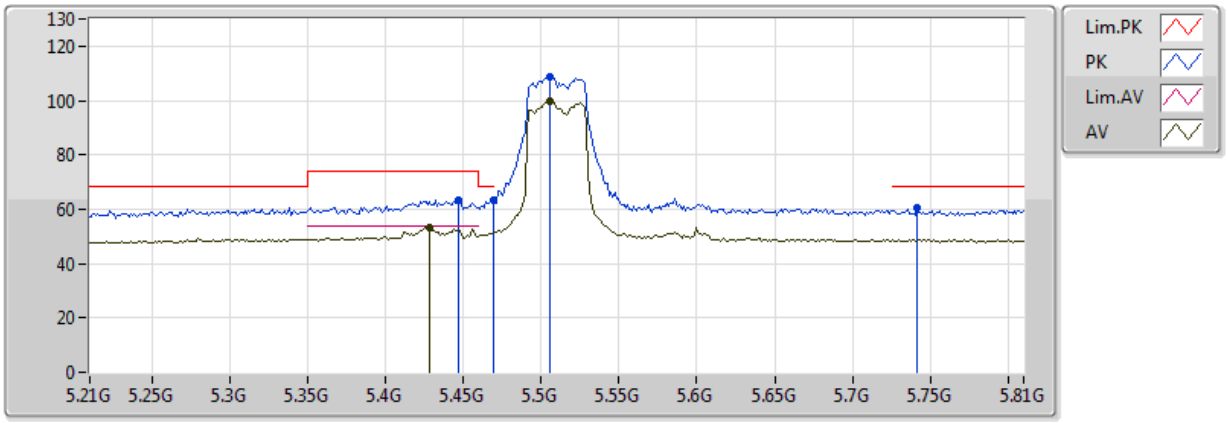


20170330
EUT Z 2TX Non-TXBF
setting 15.5
02-L-2

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.44757G	40.12	54.00	-13.88	16.27	3	H	97	2.14	-
PK	11.44892G	53.66	74.00	-20.34	16.27	3	H	97	2.14	-

QPSK,40M_Nss1_2TX

5510MHz_TX

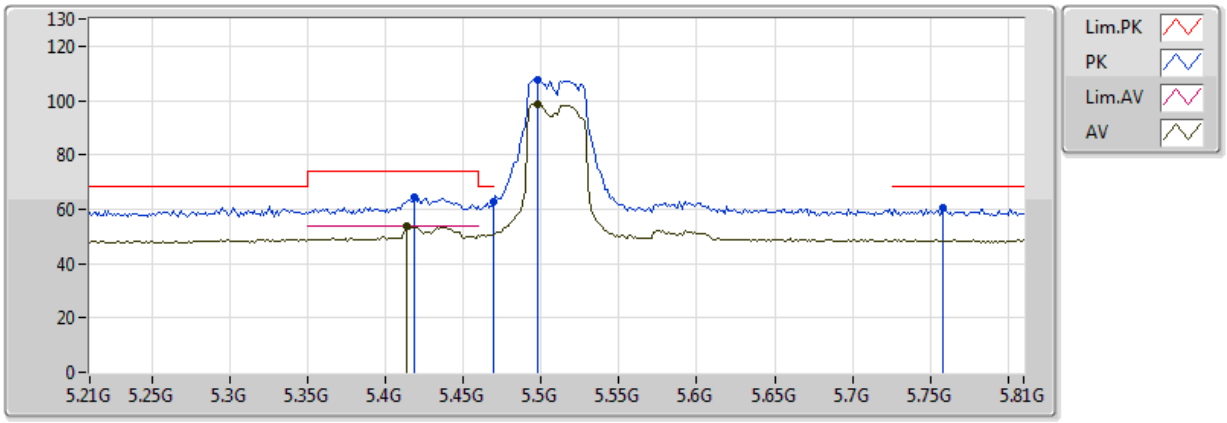


20170329
EUT Z 2TX Non-TXBF
Setting 11
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4284G	53.20	54.00	-0.80	9.50	3	V	90	1.66	-
AV	5.5052G	99.90	Inf	-Inf	9.69	3	V	90	1.66	-
PK	5.4464G	63.23	74.00	-10.77	9.55	3	V	90	1.66	-
PK	5.4692G	63.39	68.20	-4.81	9.61	3	V	90	1.66	-
PK	5.5052G	108.52	Inf	-Inf	9.69	3	V	90	1.66	-
PK	5.7416G	60.36	68.20	-7.84	9.81	3	V	90	1.66	-

QPSK,40M_Nss1_2TX

5510MHz_TX

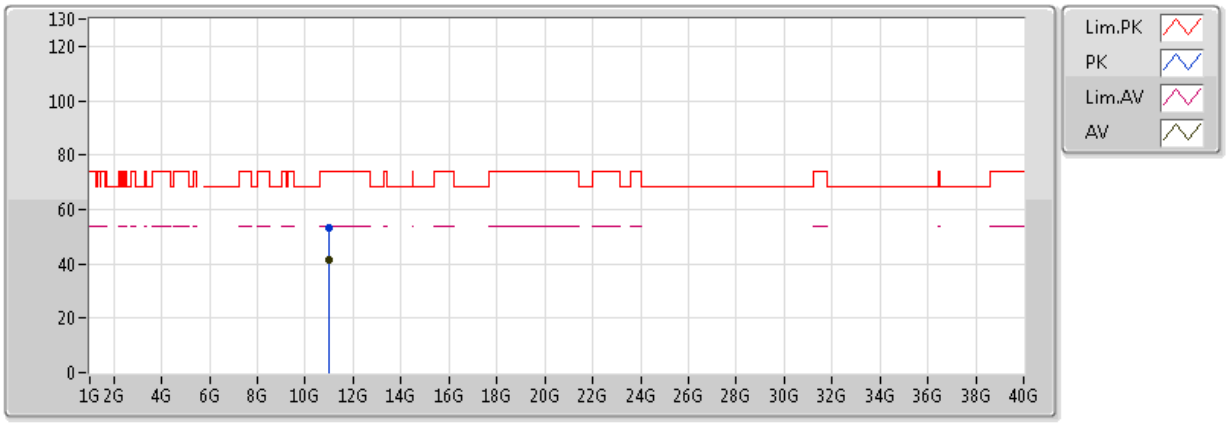


20170329
EUT Z 2TX Non-TXBF
Setting 11
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.414G	53.65	54.00	-0.35	9.47	3	H	90	1.69	-
AV	5.498G	98.65	Inf	-Inf	9.68	3	H	90	1.69	-
PK	5.4188G	64.16	74.00	-9.84	9.48	3	H	90	1.69	-
PK	5.4692G	62.60	68.20	-5.60	9.61	3	H	90	1.69	-
PK	5.498G	107.44	Inf	-Inf	9.68	3	H	90	1.69	-
PK	5.7584G	60.33	68.20	-7.87	9.81	3	H	90	1.69	-

QPSK,40M_Nss1_2TX

5510MHz_TX

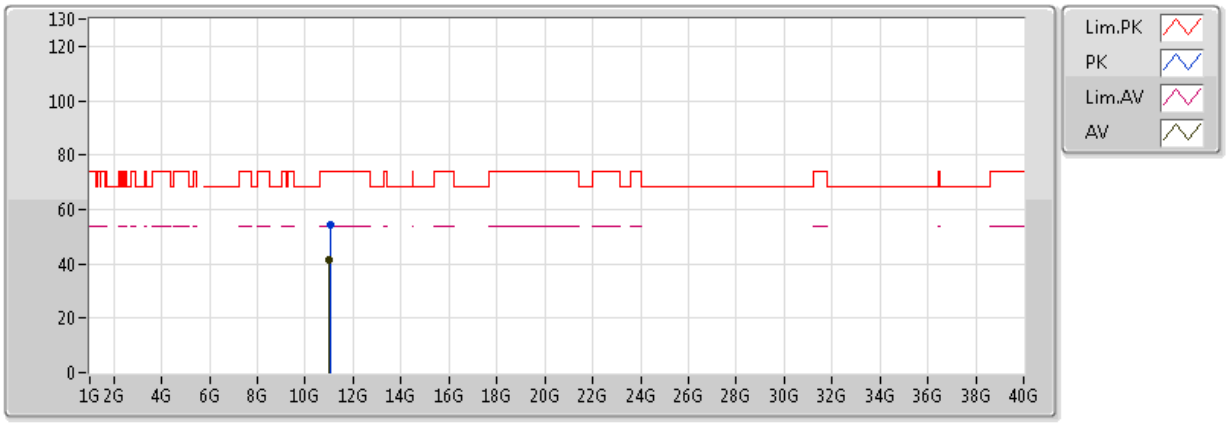


20170329
EUT Z 2TX Non-TXBF
Setting 11
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.01777G	41.34	54.00	-12.66	15.85	3	V	351	1.35	-
PK	11.01931G	53.35	74.00	-20.65	15.85	3	V	351	1.35	-

QPSK,40M_Nss1_2TX

5510MHz_TX

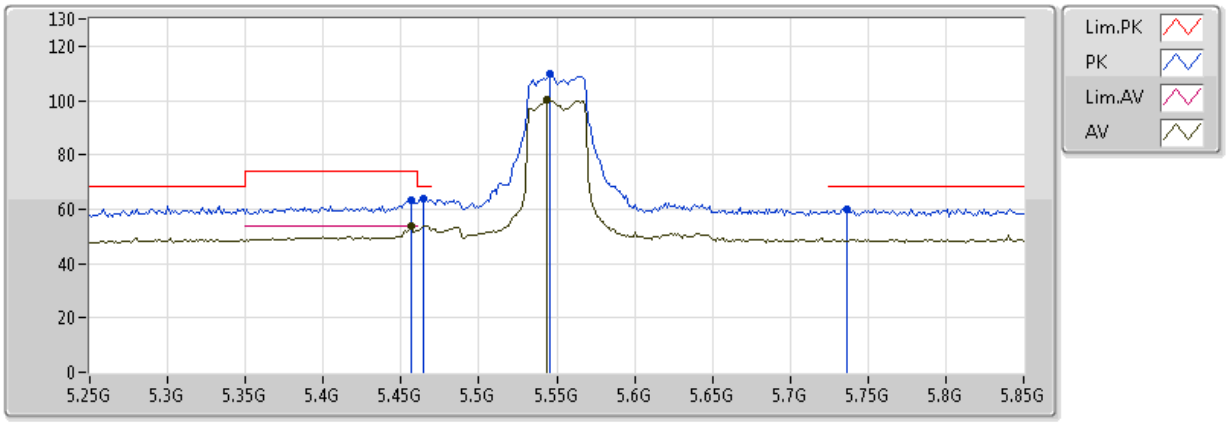


20170329
EUT Z 2TX Non-TXBF
Setting 11
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.01821G	41.64	54.00	-12.36	15.85	3	H	279	1.11	-
PK	11.02223G	54.20	74.00	-19.80	15.85	3	H	279	1.11	-

QPSK,40M_Nss1_2TX

5550MHz_TX

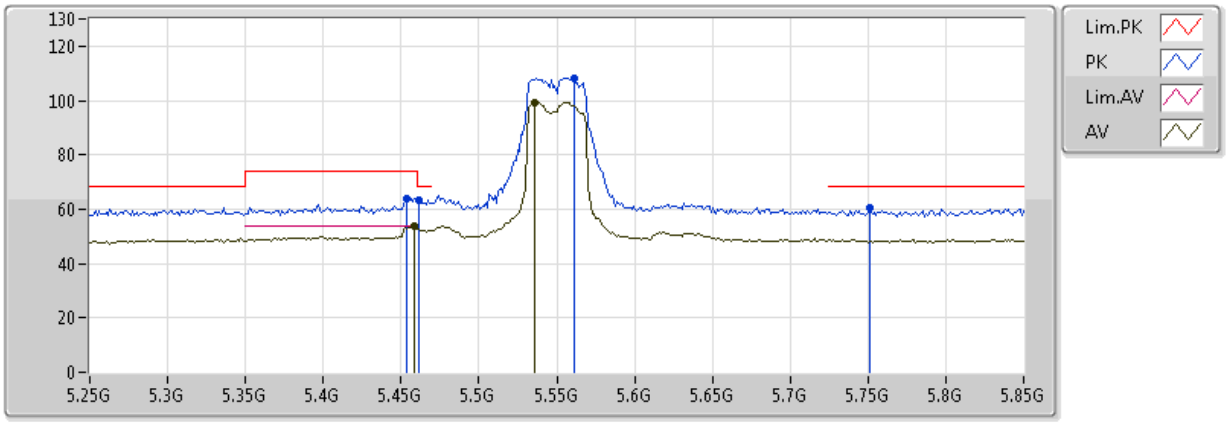


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4564G	53.94	54.00	-0.06	9.58	3	V	90	1.68	-
AV	5.544G	100.16	Inf	-Inf	9.73	3	V	90	1.68	-
PK	5.4564G	63.09	74.00	-10.91	9.58	3	V	90	1.68	-
PK	5.4648G	63.83	68.20	-4.37	9.60	3	V	90	1.68	-
PK	5.5452G	109.76	Inf	-Inf	9.73	3	V	90	1.68	-
PK	5.736G	59.94	68.20	-8.26	9.81	3	V	90	1.68	-

QPSK,40M_Nss1_2TX

5550MHz_TX

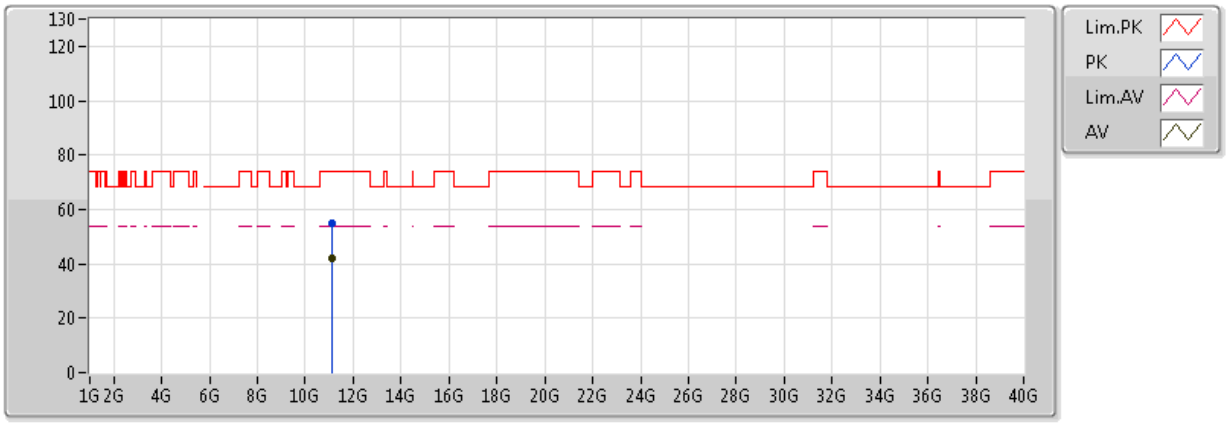


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4588G	53.58	54.00	-0.42	9.58	3	H	90	1.64	-
AV	5.5356G	99.42	Inf	-Inf	9.72	3	H	90	1.64	-
PK	5.454G	64.10	74.00	-9.90	9.57	3	H	90	1.64	-
PK	5.4612G	63.34	68.20	-4.86	9.59	3	H	90	1.64	-
PK	5.5608G	108.30	Inf	-Inf	9.74	3	H	90	1.64	-
PK	5.7516G	60.29	68.20	-7.91	9.81	3	H	90	1.64	-

QPSK,40M_Nss1_2TX

5550MHz_TX

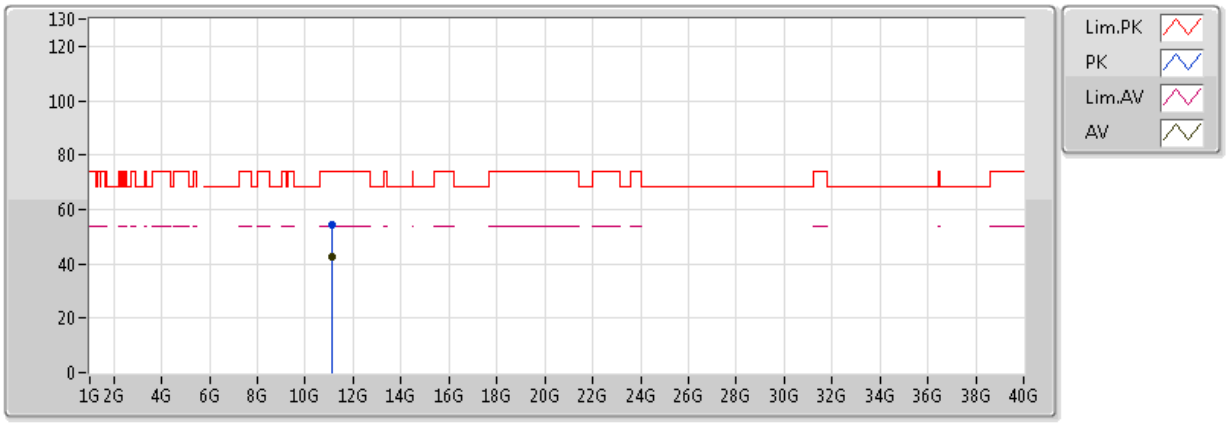


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.10207G	42.29	54.00	-11.71	15.93	3	V	25	2.34	-
PK	11.10239G	54.90	74.00	-19.10	15.93	3	V	25	2.34	-

QPSK,40M_Nss1_2TX

5550MHz_TX

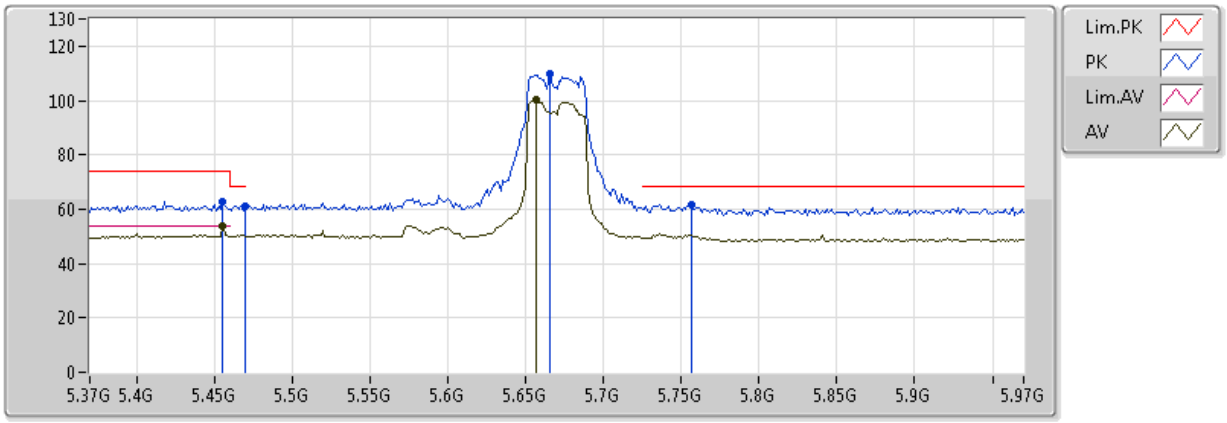


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.1014G	42.37	54.00	-11.63	15.93	3	H	145	1.64	-
PK	11.09881G	54.38	74.00	-19.62	15.93	3	H	145	1.64	-

QPSK,40M_Nss1_2TX

5670MHz_TX

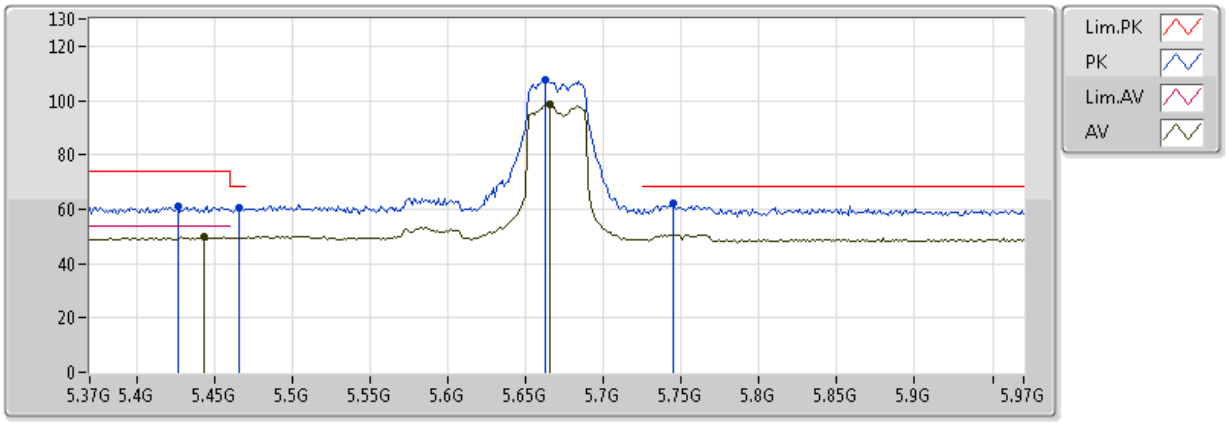


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4552G	53.60	54.00	-0.40	9.57	3	V	89	1.64	-
AV	5.6568G	100.55	Inf	-Inf	9.79	3	V	89	1.64	-
PK	5.4552G	62.55	74.00	-11.45	9.57	3	V	89	1.64	-
PK	5.4696G	61.21	68.20	-6.99	9.61	3	V	89	1.64	-
PK	5.6652G	109.95	Inf	-Inf	9.79	3	V	89	1.64	-
PK	5.7564G	61.38	68.20	-6.82	9.81	3	V	89	1.64	-

QPSK,40M_Nss1_2TX

5670MHz_TX

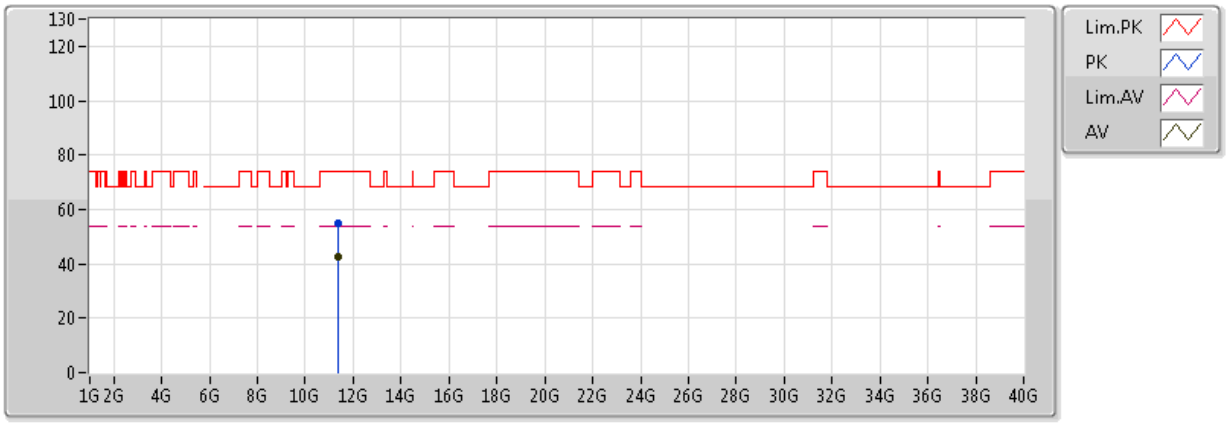


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4432G	49.86	54.00	-4.14	9.54	3	H	89	1.68	-
AV	5.6652G	98.56	Inf	-Inf	9.79	3	H	89	1.68	-
PK	5.4264G	61.20	74.00	-12.80	9.50	3	H	89	1.68	-
PK	5.466G	60.50	68.20	-7.70	9.60	3	H	89	1.68	-
PK	5.6628G	107.77	Inf	-Inf	9.79	3	H	89	1.68	-
PK	5.7444G	61.95	68.20	-6.25	9.81	3	H	89	1.68	-

QPSK,40M_Nss1_2TX

5670MHz_TX

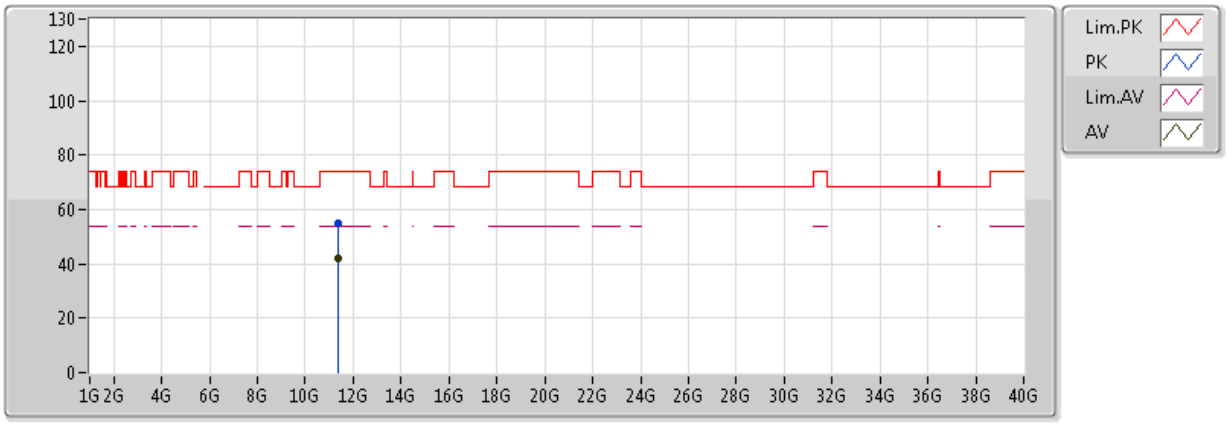


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.34145G	42.33	54.00	-11.67	16.17	3	V	194	1.75	-
PK	11.34083G	54.65	74.00	-19.35	16.17	3	V	194	1.75	-

QPSK,40M_Nss1_2TX

5670MHz_TX

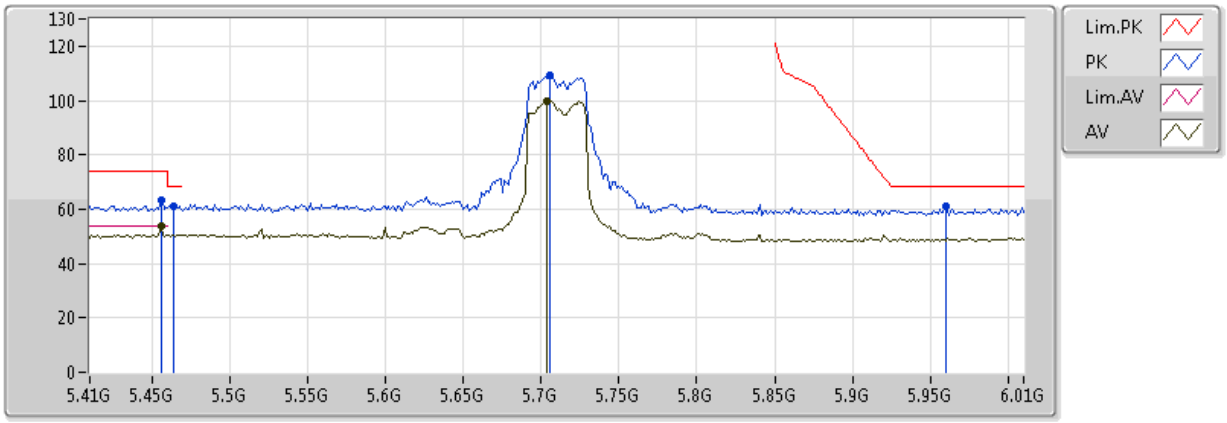


20170329
EUT Z 2TX Non-TXBF
Setting 11.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.34149G	42.20	54.00	-11.80	16.17	3	H	205	2.37	-
PK	11.33987G	54.69	74.00	-19.31	16.17	3	H	205	2.37	-

QPSK,40M_Nss1_2TX

5710MHz_TX

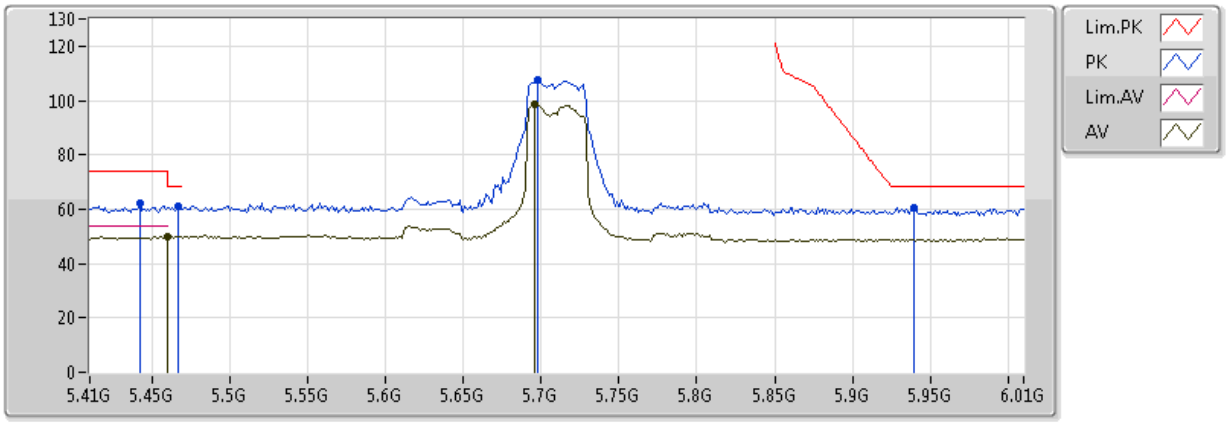


20170329
EUT Z 2TX Non-TXBF
Setting 12.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.4556G	53.66	54.00	-0.34	9.57	3	V	88	1.64	-
AV	5.704G	99.71	Inf	-Inf	9.80	3	V	88	1.64	-
PK	5.4556G	63.54	74.00	-10.46	9.57	3	V	88	1.64	-
PK	5.464G	61.23	68.20	-6.97	9.60	3	V	88	1.64	-
PK	5.7052G	109.01	Inf	-Inf	9.80	3	V	88	1.64	-
PK	5.9596G	60.83	68.20	-7.37	10.04	3	V	88	1.64	-

QPSK,40M_Nss1_2TX

5710MHz_TX

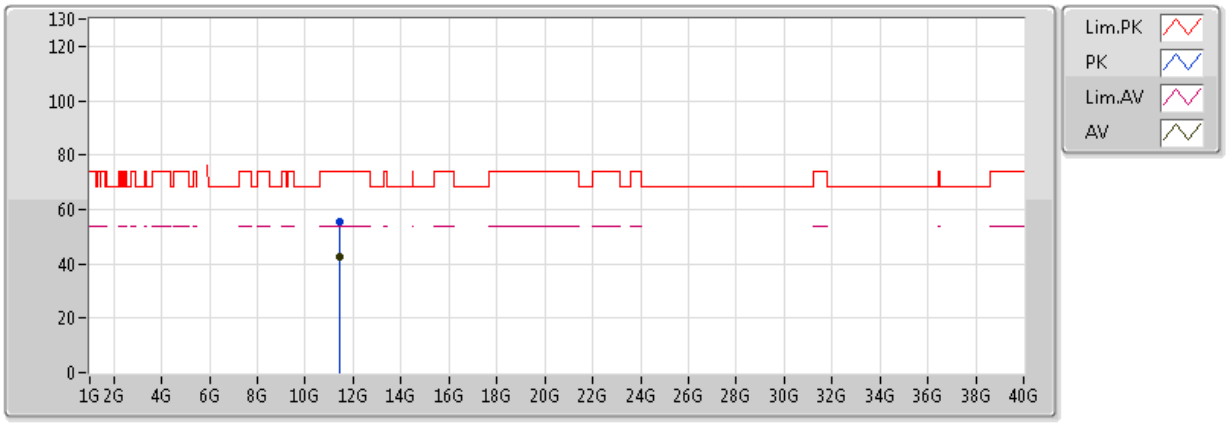


20170329
EUT Z 2TX Non-TXBF
Setting 12.5
02-L-02-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.459995G	49.92	54.00	-4.08	9.59	3	H	90	1.66	-
AV	5.6956G	98.52	Inf	-Inf	9.80	3	H	90	1.66	-
PK	5.4424G	61.96	74.00	-12.04	9.54	3	H	90	1.66	-
PK	5.4664G	60.93	68.20	-7.27	9.60	3	H	90	1.66	-
PK	5.698G	107.67	Inf	-Inf	9.80	3	H	90	1.66	-
PK	5.9392G	60.35	68.20	-7.85	10.01	3	H	90	1.66	-

QPSK,40M_Nss1_2TX

5710MHz_TX

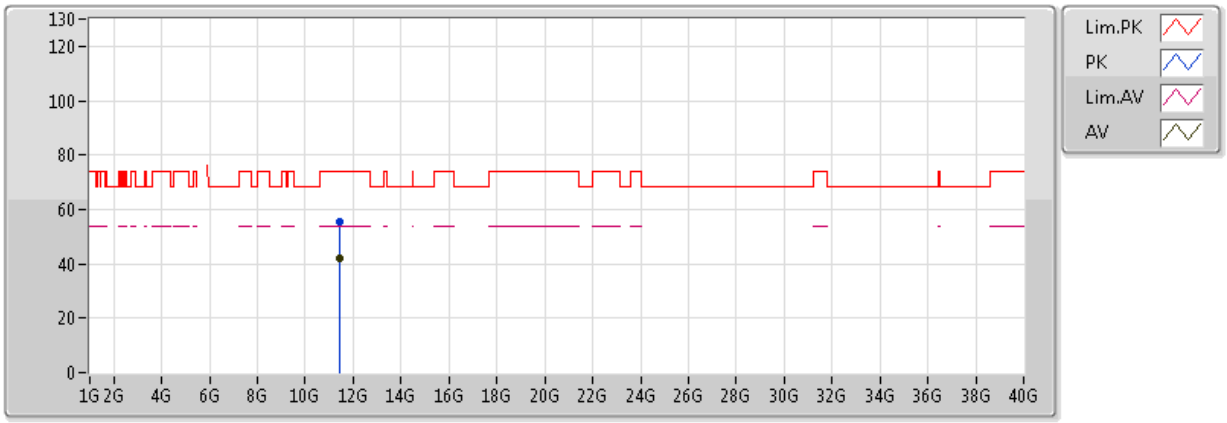


20170329
EUT Z 2TX Non-TXBF
Setting 12.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.42168G	42.40	54.00	-11.60	16.25	3	V	37	2.41	-
PK	11.42051G	55.71	74.00	-18.29	16.25	3	V	37	2.41	-

QPSK,40M_Nss1_2TX

5710MHz_TX



20170329
EUT Z 2TX Non-TXBF
Setting 12.5
02-L-02

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.41999G	42.15	54.00	-11.85	16.25	3	H	356	1.43	-
PK	11.4175G	55.68	74.00	-18.32	16.24	3	H	356	1.43	-

Mode: 10 MHz / Ant 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9944	5299.9939	5299.9938	5299.9934
110.00	5299.9934	5299.9930	5299.9924	5299.9916
93.50	5299.9932	5299.9929	5299.9922	5299.9917
Max. Deviation (MHz)	0.0068	0.0071	0.0078	0.0084
Max. Deviation (ppm)	1.28	1.34	1.47	1.58
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5299.9988	5299.9979	5299.9975	5299.9965
-30	5299.9973	5299.9970	5299.9963	5299.9959
-20	5299.9968	5299.9960	5299.9951	5299.9944
-10	5299.9966	5299.9961	5299.9952	5299.9949
0	5299.9955	5299.9952	5299.9947	5299.9944
10	5299.9941	5299.9933	5299.9924	5299.9914
20	5299.9934	5299.9926	5299.9921	5299.9915
30	5299.9891	5299.9888	5299.9879	5299.9872
40	5299.9881	5299.9880	5299.9878	5299.9868
50	5299.9865	5299.9859	5299.9852	5299.9842
60	5299.9864	5299.9860	5299.9858	5299.9849
70	5299.9860	5299.9856	5299.9855	5299.9846
Max. Deviation (MHz)	0.0140	0.0144	0.0145	0.0154
Max. Deviation (ppm)	2.64	2.72	2.74	2.91
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5595 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5594.9940	5594.9934	5594.9926	5594.9923
110.00	5594.9934	5594.9932	5594.9922	5594.9920
93.50	5594.9931	5594.9930	5594.9926	5594.9920
Max. Deviation (MHz)	0.0069	0.0070	0.0078	0.0080
Max. Deviation (ppm)	1.23	1.25	1.39	1.43
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5595 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5594.9975	5594.9969	5594.9963	5594.9959
-30	5594.9987	5594.9977	5594.9973	5594.9963
-20	5594.9972	5594.9969	5594.9960	5594.9951
-10	5594.9955	5594.9947	5594.9940	5594.9937
0	5594.9954	5594.9953	5594.9947	5594.9945
10	5594.9936	5594.9932	5594.9922	5594.9919
20	5594.9934	5594.9927	5594.9919	5594.9911
30	5594.9891	5594.9890	5594.9882	5594.9880
40	5594.9883	5594.9877	5594.9869	5594.9859
50	5594.9879	5594.9873	5594.9864	5594.9861
60	5594.9880	5594.9876	5594.9867	5594.9862
70	5594.9876	5594.9866	5594.9856	5594.9851
Max. Deviation (MHz)	0.0124	0.0134	0.0144	0.0149
Max. Deviation (ppm)	2.22	2.39	2.57	2.66
Result	Pass			

Mode: 40 MHz / Ant 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5270 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5269.9942	5269.9933	5269.9929	5269.9926
110.00	5269.9934	5269.9926	5269.9921	5269.9917
93.50	5269.9932	5269.9928	5269.9921	5269.9920
Max. Deviation (MHz)	0.0068	0.0074	0.0079	0.0083
Max. Deviation (ppm)	1.29	1.40	1.50	1.57
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5270 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5269.9992	5269.9983	5269.9978	5269.9968
-30	5269.9980	5269.9977	5269.9975	5269.9968
-20	5269.9978	5269.9976	5269.9970	5269.9962
-10	5269.9971	5269.9968	5269.9961	5269.9956
0	5269.9970	5269.9961	5269.9952	5269.9943
10	5269.9950	5269.9940	5269.9931	5269.9929
20	5269.9934	5269.9931	5269.9927	5269.9923
30	5269.9891	5269.9889	5269.9880	5269.9876
40	5269.9884	5269.9874	5269.9867	5269.9859
50	5269.9882	5269.9874	5269.9867	5269.9865
60	5269.9864	5269.9861	5269.9851	5269.9841
70	5269.9877	5269.9875	5269.9871	5269.9868
Max. Deviation (MHz)	0.0136	0.0139	0.0149	0.0159
Max. Deviation (ppm)	2.58	2.64	2.83	3.02
Result	Pass			

Voltage vs. Frequency Stability

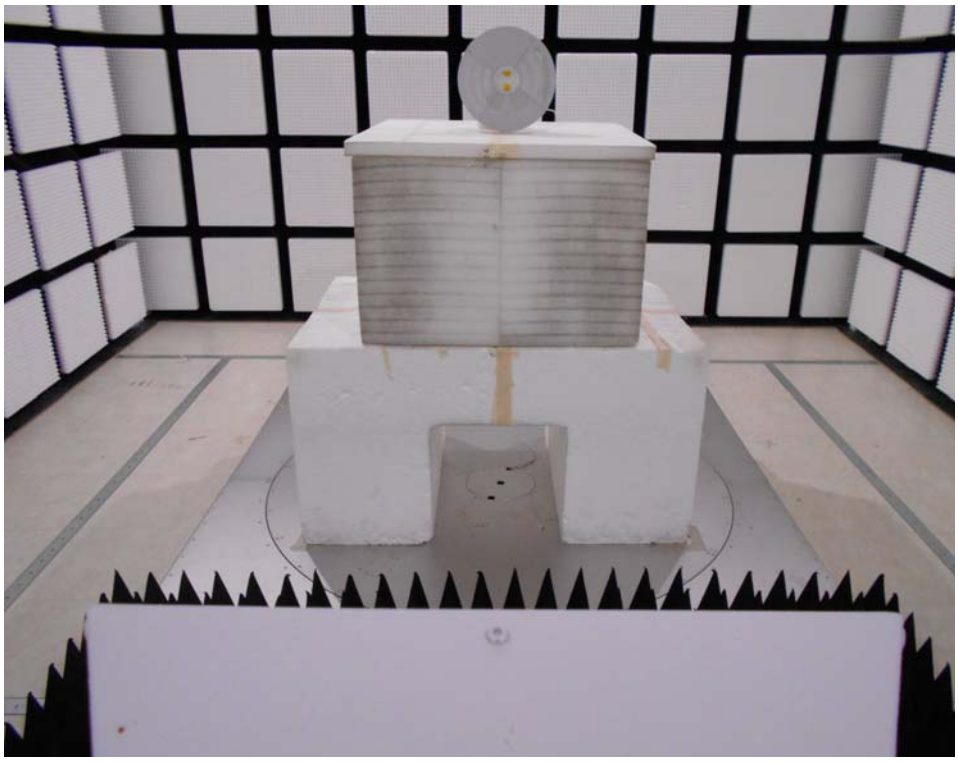
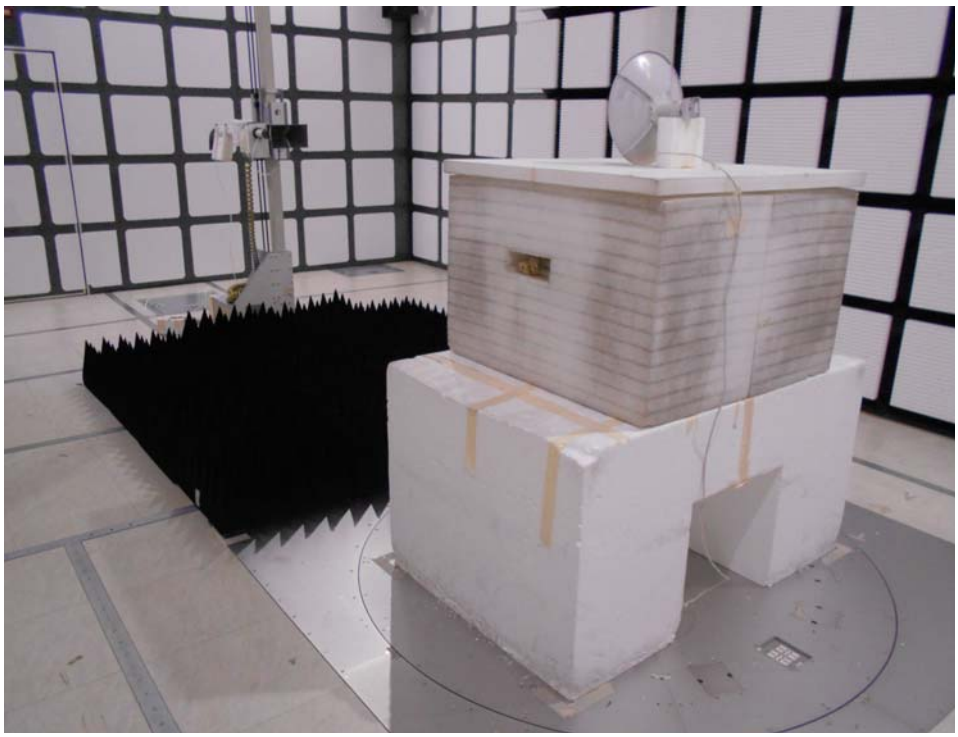
Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9943	5549.9937	5549.9933	5549.9925
110.00	5549.9934	5549.9931	5549.9921	5549.9917
93.50	5549.9927	5549.9925	5549.9920	5549.9918
Max. Deviation (MHz)	0.0073	0.0075	0.0080	0.0083
Max. Deviation (ppm)	1.32	1.35	1.44	1.50
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5549.9998	5549.9996	5549.9995	5549.9988
-30	5549.9985	5549.9979	5549.9972	5549.9965
-20	5549.9976	5549.9973	5549.9966	5549.9961
-10	5549.9968	5549.9960	5549.9953	5549.9944
0	5549.9966	5549.9957	5549.9954	5549.9951
10	5549.9946	5549.9937	5549.9936	5549.9927
20	5549.9934	5549.9930	5549.9925	5549.9917
30	5549.9891	5549.9882	5549.9872	5549.9871
40	5549.9875	5549.9873	5549.9872	5549.9866
50	5549.9871	5549.9870	5549.9860	5549.9851
60	5549.9852	5549.9842	5549.9836	5549.9827
70	5549.9849	5549.9843	5549.9833	5549.9827
Max. Deviation (MHz)	0.0151	0.0158	0.0167	0.0173
Max. Deviation (ppm)	2.72	2.85	3.01	3.12
Result	Pass			

1. Photographs of Radiated Emissions Test Configuration

FRONT VIEW



REAR VIEW