FCC Test Report

Equipment	:	cnPilot E410 Indoor
Brand Name	:	Cambium Networks
Model No.	:	cnPilot E410 Indoor
FCC ID	:	Z8H89FT0035
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
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

The product sample received on Apr. 06, 2017 and completely tested on May 09, 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

Table of Contents

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR721427-01AA	Rev. 01	Initial issue of report	Jun. 01, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM 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.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Accton	120G00000168A	PIFA Antenna	I-PEX	Note
2	Accton	120G00000168A	PIFA Antenna	I-PEX	

Note:

Ant.	Gain (dBi)		
	2.4GHz	5GHz Band 1	5GHz Band 4
1	4.38	4.54	5.47
2	5.24	5.32	4.72

Note: The EUT has two antennas.
Ant.1 = port 1, Ant.2 = port 2

For 2.4GHz WLAN function

For IEEE 802.11b/g/n mode (2TX, 2RX):

Ant. 1(Port 1) and Ant. 2(Port 2) could transmit/receive simultaneously.

For 5GHz WLAN function

For IEEE 802.11a/n/ac mode (2TX, 2RX):

Ant. 1(Port 1) and Ant. 2(Port 2) could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.984	0.07
802.11g	0.96	0.177
802.11n HT20	0.981	0.083
802.11n HT40	0.888	0.516

1.1.4 EUT Operational Condition

EUT Power Type	From PoE

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 558074 D01 v04
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

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	Peter Wu	25°C / 55%	Apr. 17, 2017
Radiated	03CH01-CB	Paul Chen / Mason Chen	22°C / 54%	Apr. 11, 2017~May 09, 2017
AC Conduction	CO01-CB	Edison Lin	23°C / 57%	Apr. 14, 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
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
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%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_2TX	-
2412MHz	21.5
2437MHz	22.5
2462MHz	22.5
802.11g_(6Mbps)_2TX	-
2412MHz	16
2437MHz	23
2462MHz	16
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	18.5
2437MHz	23
2462MHz	16.5
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	14
2437MHz	16.5
2452MHz	14.5

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
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	Normal Link
1	EUT in Y axis Nornal Link
2	EUT in Z axis Nornal Link
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at Z axis and Y axis position. The worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz+WLAN 5 GHz-in Y axis
2	WLAN 2.4GHz+WLAN 5 GHz-in Z axis
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+WLAN 5 GHz
Refer to Sporton Test Report No.: FA721427-01 for Co-location RF Exposure Evaluation.	

Noted: The PoE below is for measurement only, would not be marked

Support Unit	Brand	Model
PoE	Cambium Networks	NET-P15-56IN

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*3	DELL	E6430	DoC
2	PoE	Cambium Networks	NET-P15-56IN	DoC

For Test Site No: 03CH01-CB (below 1GHz)

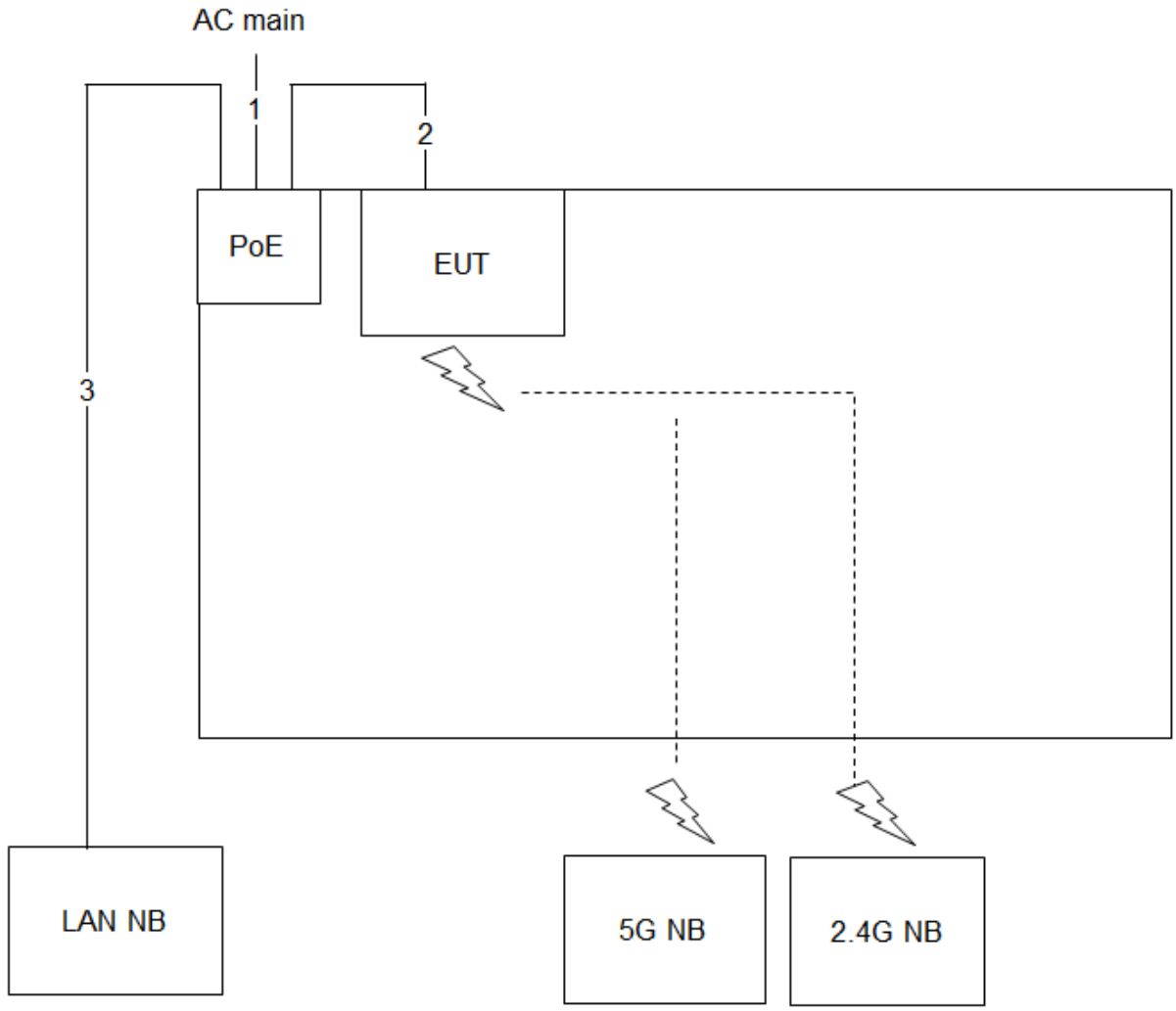
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
3	PoE	Cambium Networks	NET-P15-56IN	DoC

For Test Site No: 03CH01-CB (above 1GHz) / TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	PoE	Cambium Networks	NET-P15-56IN	DoC

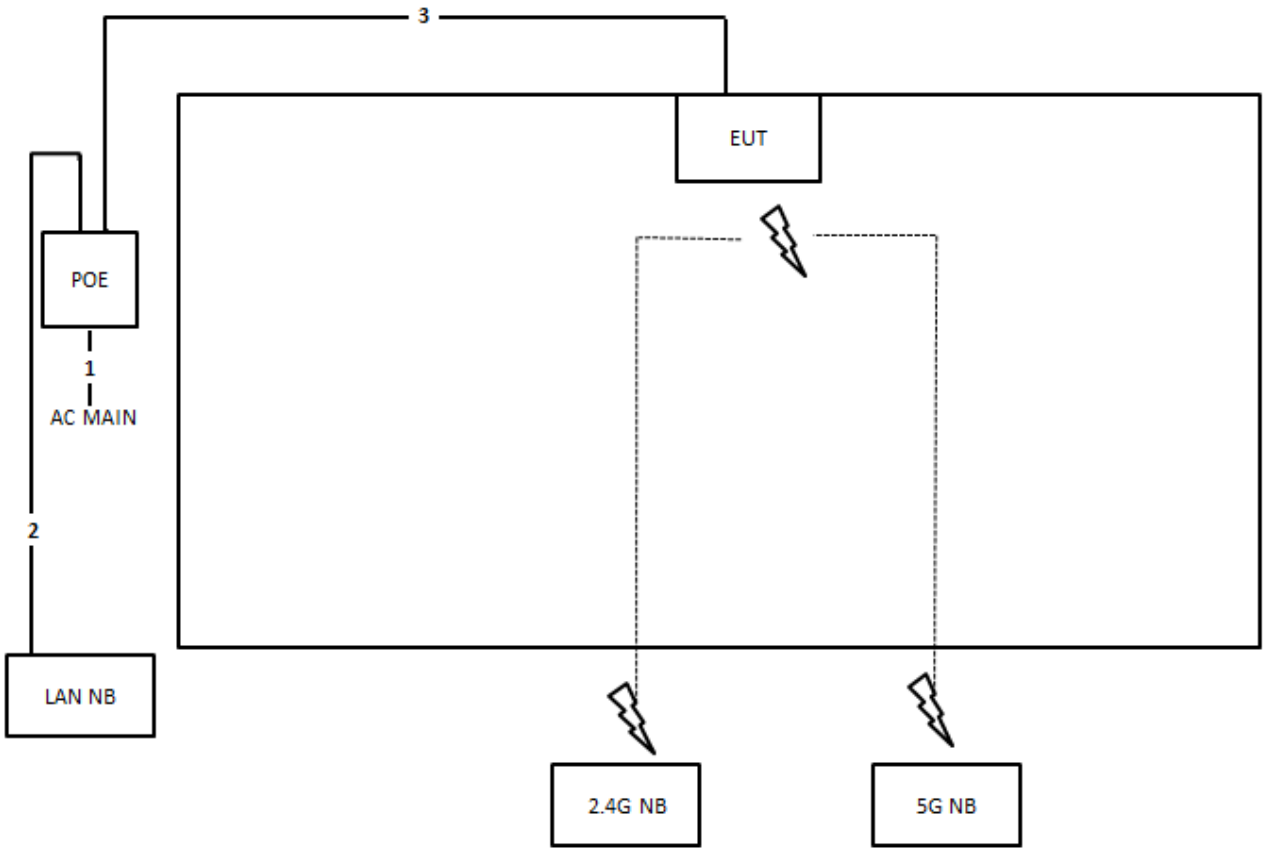
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



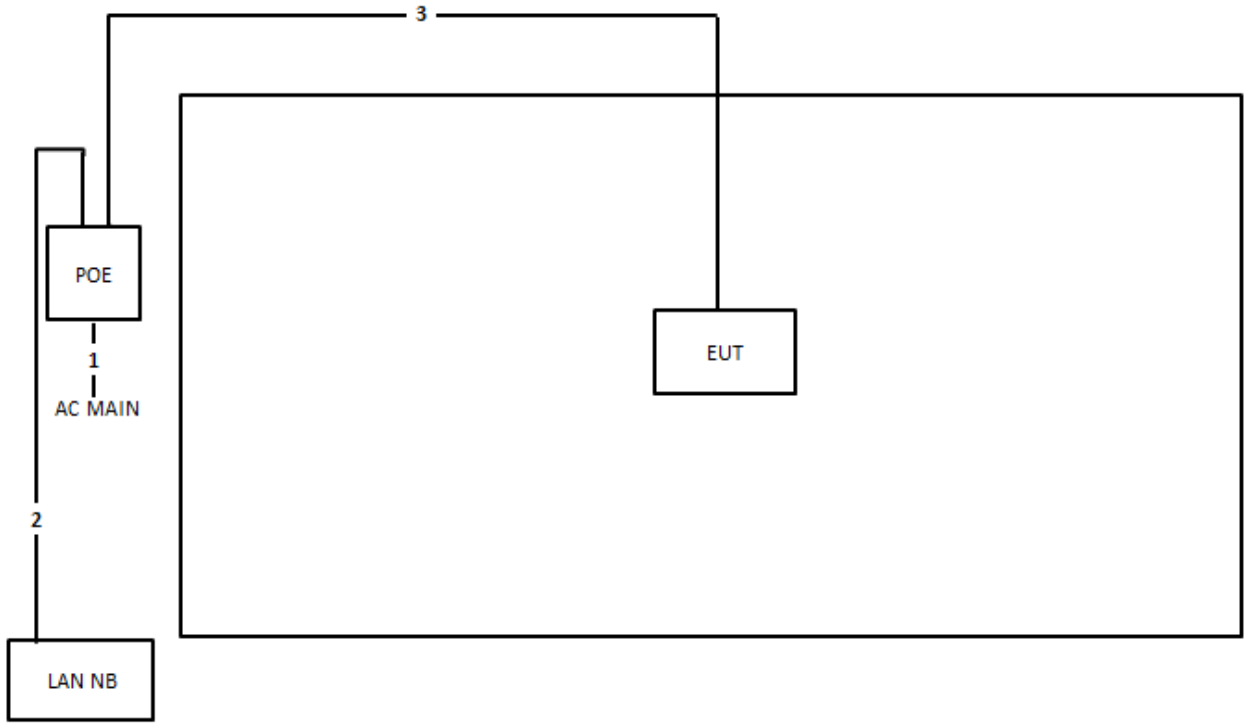
Item	Connection	Shielded	Length
1	Power cable	No	0.9m
2	RJ-45 cable	No	1m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

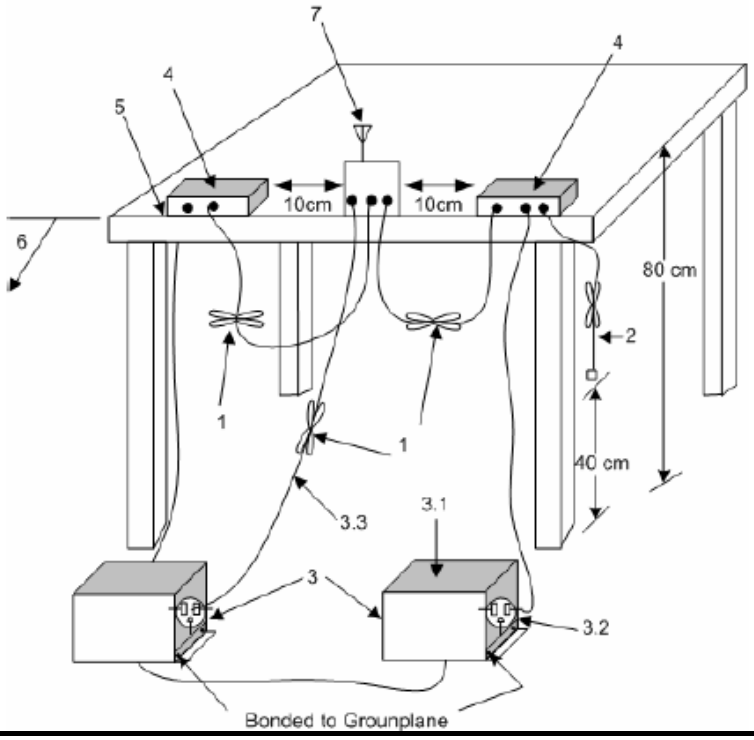
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

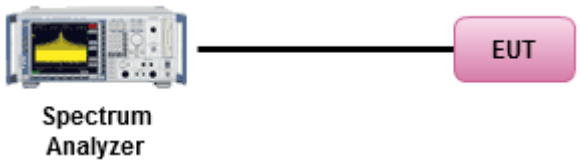
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **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	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	☒ Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
	☐ Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
▪ 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]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

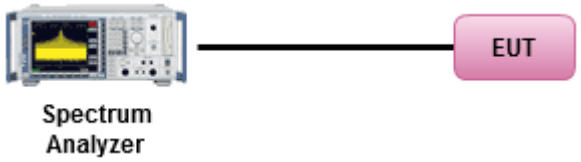
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).	
	[duty cycle ≥ 98% or external video / power trigger]	
	☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)	
	duty cycle < 98% and average over on/off periods with duty factor	
	☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (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.

3.4.4 Test Setup

Power Spectral Density
 Spectrum Analyzer

3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.
Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

3.5.2 Measuring Instruments

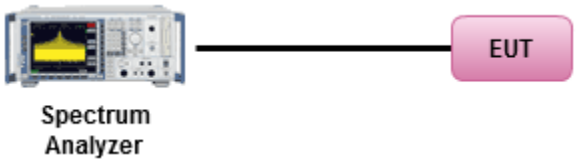
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions 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.

3.6.2 Measuring Instruments

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

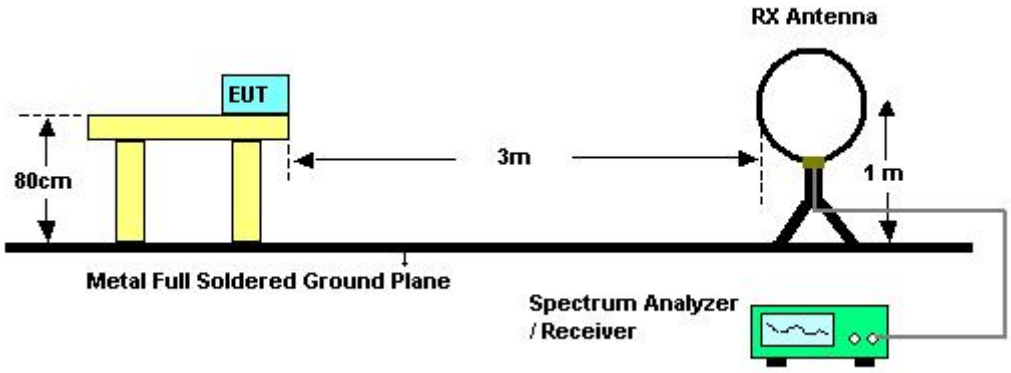
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐ 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 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.	
	▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

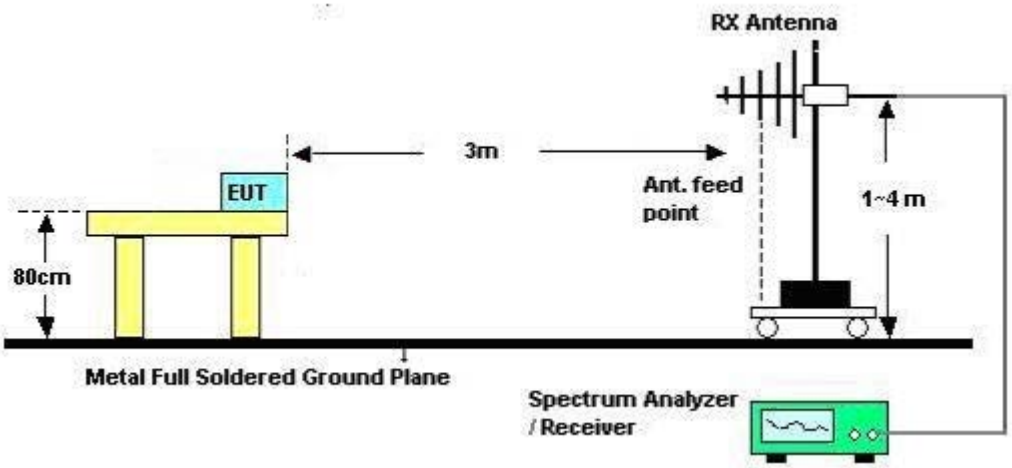
3.6.4 Test Setup

Transmitter Radiated Emissions

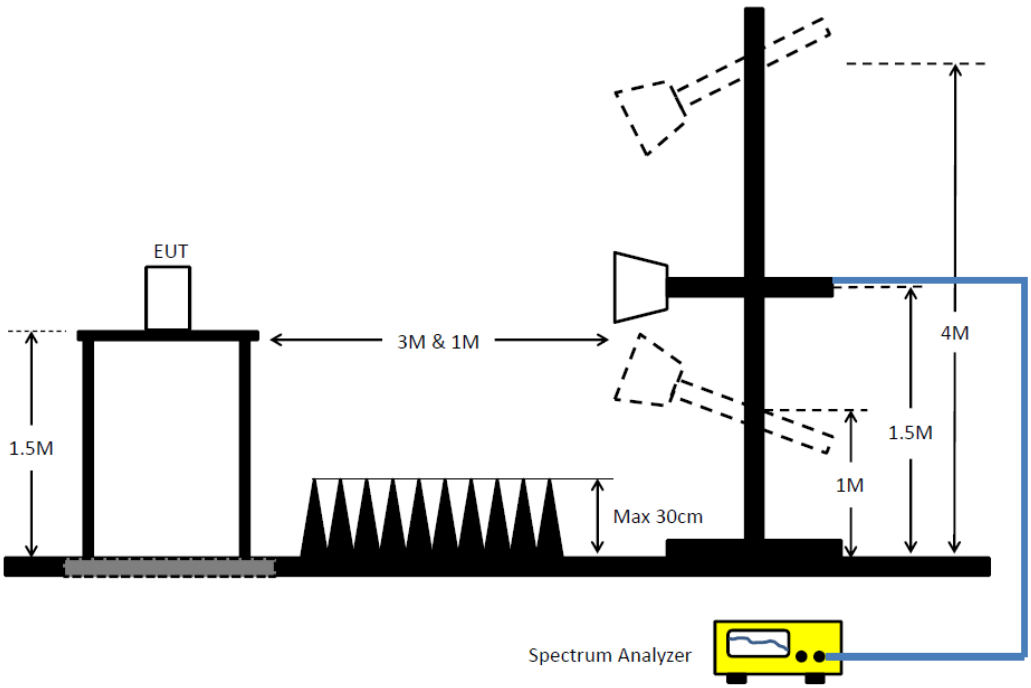
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
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	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 2017	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)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 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)
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)

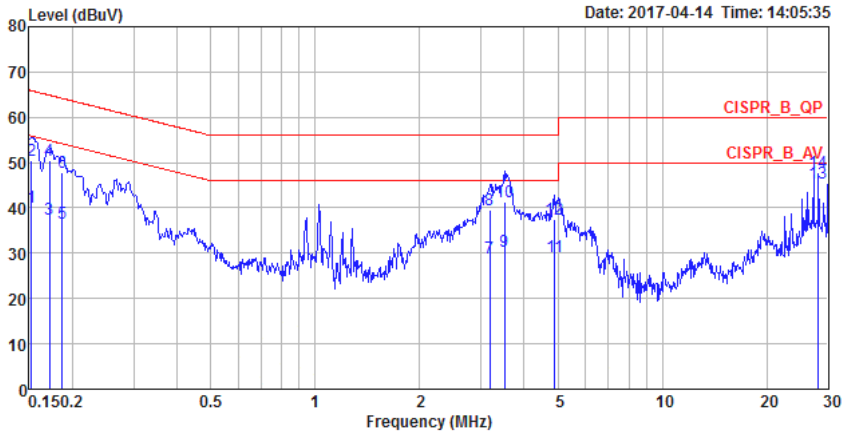
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

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

"*" Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

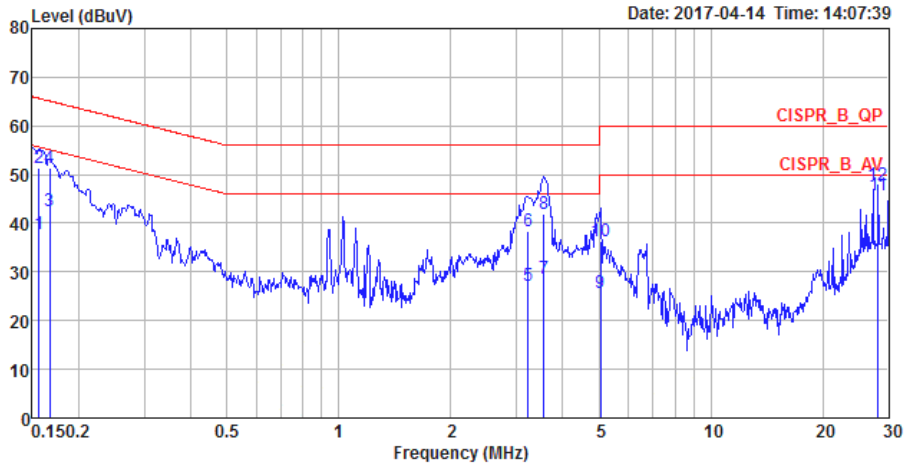
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1524	40.08	-15.79	55.87	30.10	9.94	0.04	Average	NEUTRAL
2	0.1524	50.37	-15.50	65.87	40.39	9.94	0.04	QP	NEUTRAL
3	0.1712	37.63	-17.27	54.90	27.63	9.96	0.04	Average	NEUTRAL
4	0.1712	50.46	-14.44	64.90	40.46	9.96	0.04	QP	NEUTRAL
5	0.1864	36.47	-17.73	54.20	26.45	9.97	0.05	Average	NEUTRAL
6	0.1864	47.92	-16.28	64.20	37.90	9.97	0.05	QP	NEUTRAL
7	3.1900	29.04	-16.96	46.00	18.89	10.04	0.11	Average	NEUTRAL
8	3.1900	39.50	-16.50	56.00	29.35	10.04	0.11	QP	NEUTRAL
9	3.5092	30.31	-15.69	46.00	20.13	10.06	0.12	Average	NEUTRAL
10	3.5092	41.46	-14.54	56.00	31.28	10.06	0.12	QP	NEUTRAL
11	4.8997	29.34	-16.66	46.00	19.10	10.10	0.14	Average	NEUTRAL
12	4.8997	37.35	-18.65	56.00	27.11	10.10	0.14	QP	NEUTRAL
13	28.1258	45.55	-4.45	50.00	34.93	10.33	0.29	Average	NEUTRAL
14	28.1258	47.78	-12.22	60.00	37.16	10.33	0.29	QP	NEUTRAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1565	37.85	-17.80	55.65	27.86	9.95	0.04	Average	LINE
2	0.1565	51.30	-14.35	65.65	41.31	9.95	0.04	QP	LINE
3	0.1668	42.43	-12.69	55.12	32.45	9.94	0.04	Average	LINE
4	0.1668	51.24	-13.88	65.12	41.26	9.94	0.04	QP	LINE
5	3.2239	27.02	-18.98	46.00	16.94	9.97	0.11	Average	LINE
6	3.2239	38.24	-17.76	56.00	28.16	9.97	0.11	QP	LINE
7	3.5654	28.62	-17.38	46.00	18.54	9.96	0.12	Average	LINE
8	3.5654	41.83	-14.17	56.00	31.75	9.96	0.12	QP	LINE
9	5.0580	25.58	-24.42	50.00	15.46	9.98	0.14	Average	LINE
10	5.0580	36.17	-23.83	60.00	26.05	9.98	0.14	QP	LINE
11	28.1236	45.90	-4.10	50.00	35.26	10.35	0.29	Average	LINE
12	28.1236	47.86	-12.14	60.00	37.22	10.35	0.29	QP	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11b_(1Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	9.075M	14.093M	14M1G1D	7.125M	13.168M
802.11g_(6Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	16.325M	20.915M	20M9D1D	16.325M	16.392M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	17.575M	21.139M	21M1D1D	17.525M	17.616M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	35.8M	36.032M	36M0D1D	32.35M	35.882M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

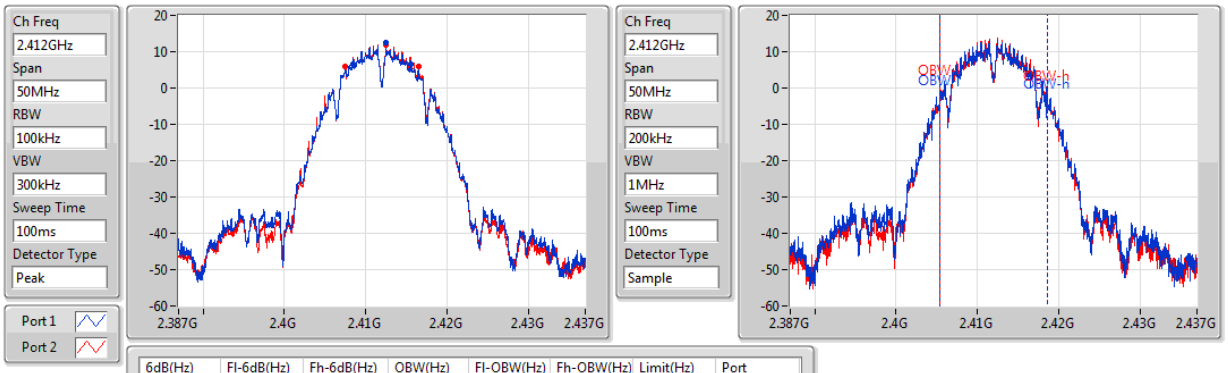
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7.125M	13.318M	9.025M	13.168M
2437MHz	Pass	500k	8.55M	13.968M	9.075M	13.718M
2462MHz	Pass	500k	8.55M	14.093M	7.575M	13.568M
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.417M	16.325M	16.392M
2437MHz	Pass	500k	16.325M	20.915M	16.325M	20.39M
2462MHz	Pass	500k	16.325M	16.392M	16.325M	16.417M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.666M	17.525M	17.641M
2437MHz	Pass	500k	17.575M	21.139M	17.575M	20.615M
2462MHz	Pass	500k	17.575M	17.616M	17.575M	17.616M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35M	35.932M	35.35M	35.932M
2437MHz	Pass	500k	35.05M	35.932M	34.8M	35.932M
2452MHz	Pass	500k	32.35M	35.882M	35.8M	36.032M

Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

802.11b_(1Mbps)_2TX EBW

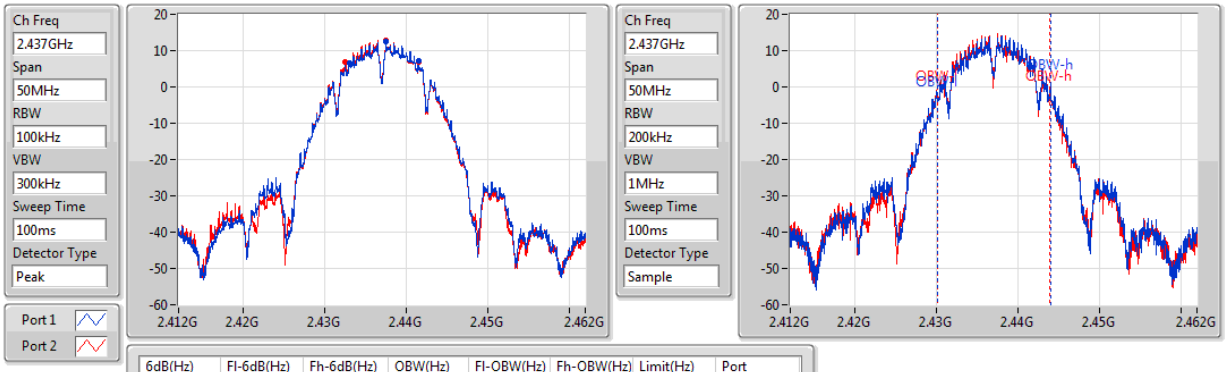
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.125M	2.408425G	2.41555G	13.318M	2.405353G	2.418672G	500k	1
9.025M	2.407475G	2.4165G	13.168M	2.405403G	2.418572G	500k	2

802.11b_(1Mbps)_2TX EBW

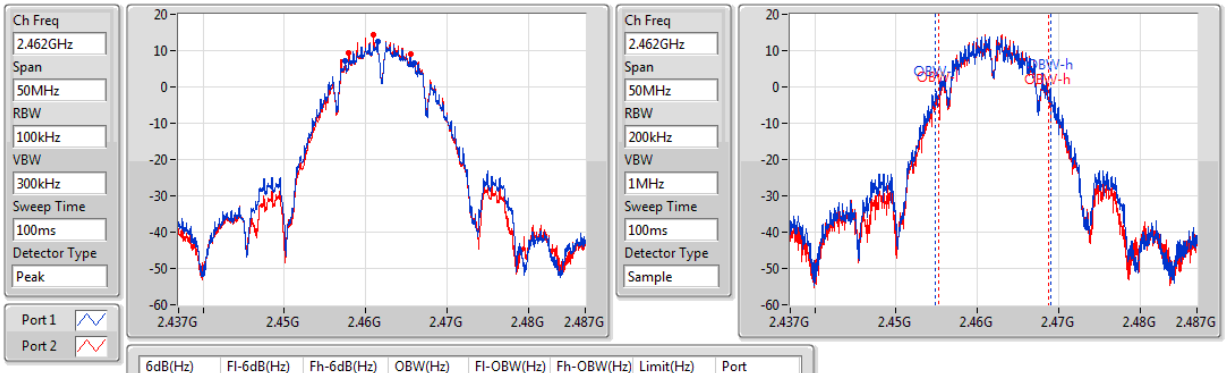
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.432975G	2.441525G	13.968M	2.430053G	2.444021G	500k	1
9.075M	2.43245G	2.441525G	13.718M	2.430128G	2.443847G	500k	2

802.11b_(1Mbps)_2TX EBW

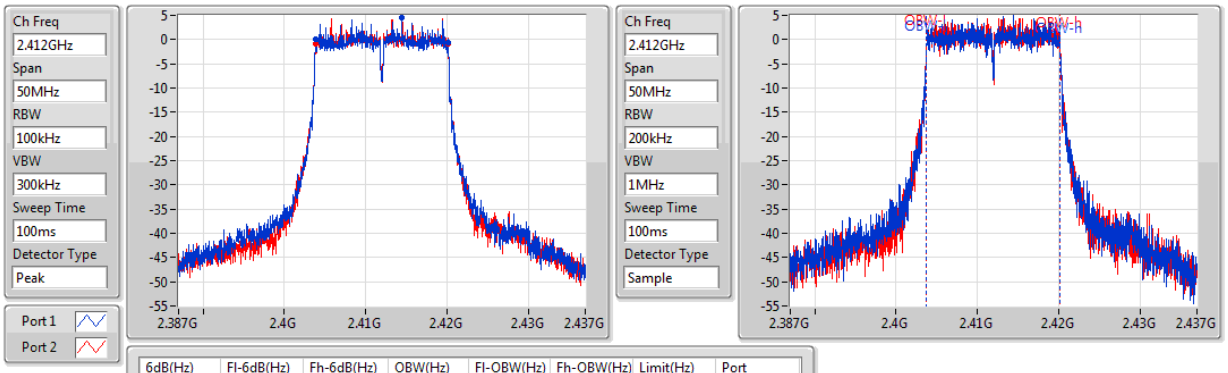
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.45745G	2.466G	14.093M	2.454879G	2.468972G	500k	1
7.575M	2.45795G	2.465525G	13.568M	2.455178G	2.468747G	500k	2

802.11g_(6Mbps)_2TX EBW

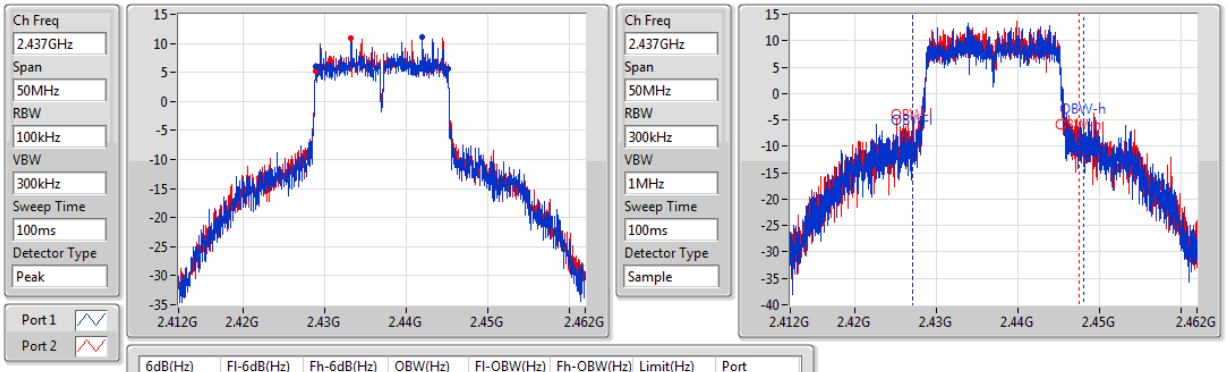
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.417M	2.403754G	2.420171G	500k	1
16.325M	2.403825G	2.42015G	16.392M	2.403779G	2.420171G	500k	2

802.11g_(6Mbps)_2TX EBW

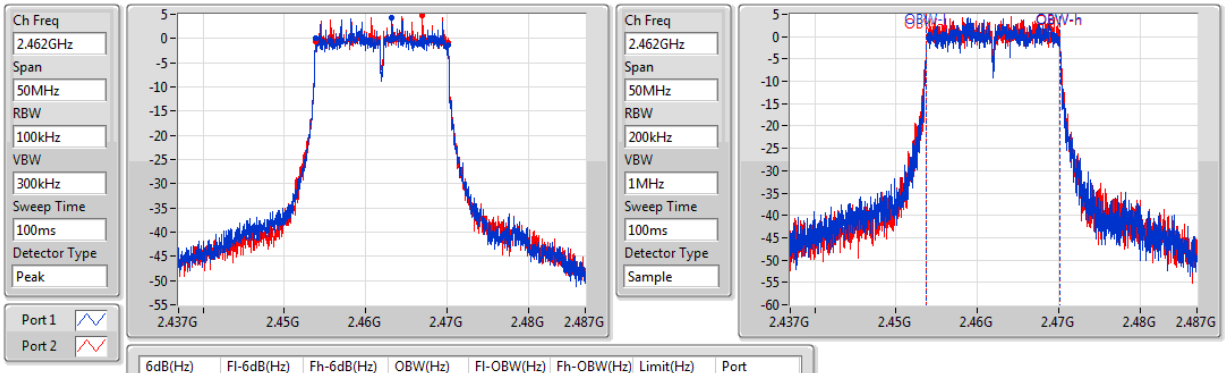
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	20.915M	2.427105G	2.448019G	500k	1
16.325M	2.428825G	2.44515G	20.39M	2.42708G	2.44747G	500k	2

802.11g_(6Mbps)_2TX EBW

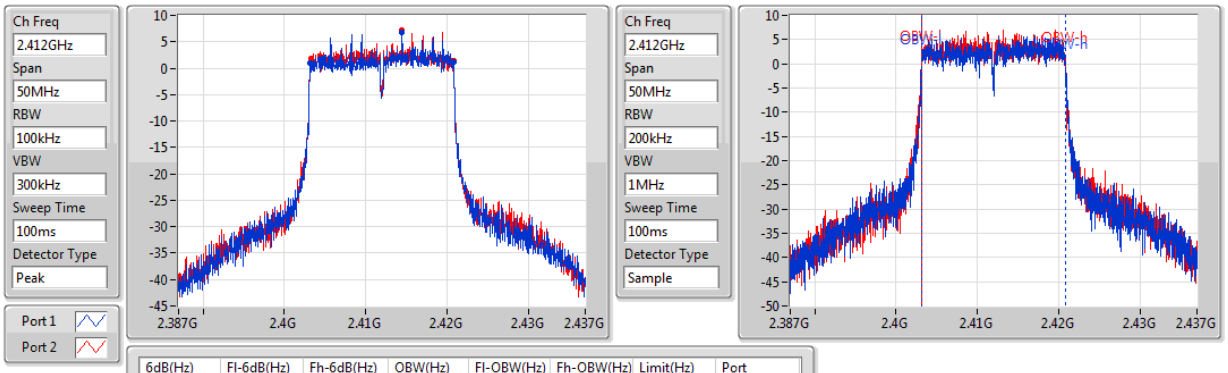
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.392M	2.453779G	2.470171G	500k	1
16.325M	2.453825G	2.47015G	16.417M	2.453754G	2.470171G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

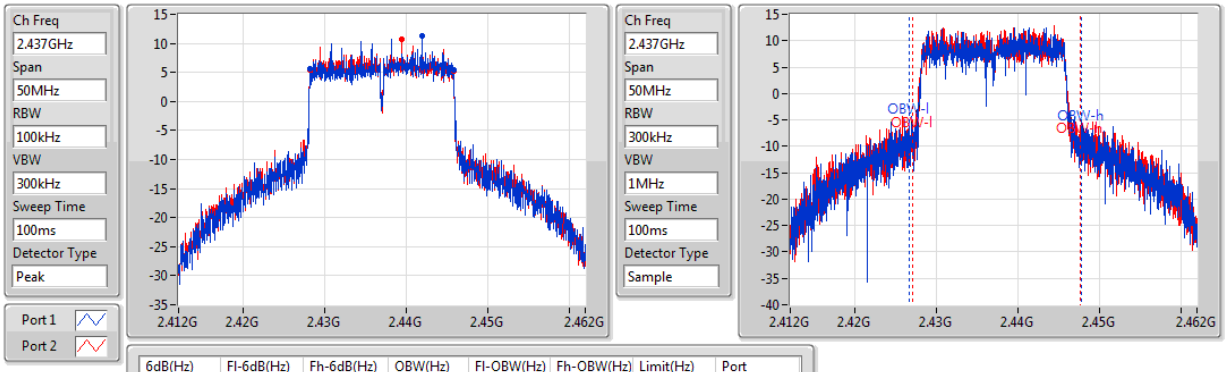
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4032G	2.420775G	17.666M	2.403154G	2.420821G	500k	1
17.525M	2.40325G	2.420775G	17.641M	2.403154G	2.420796G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

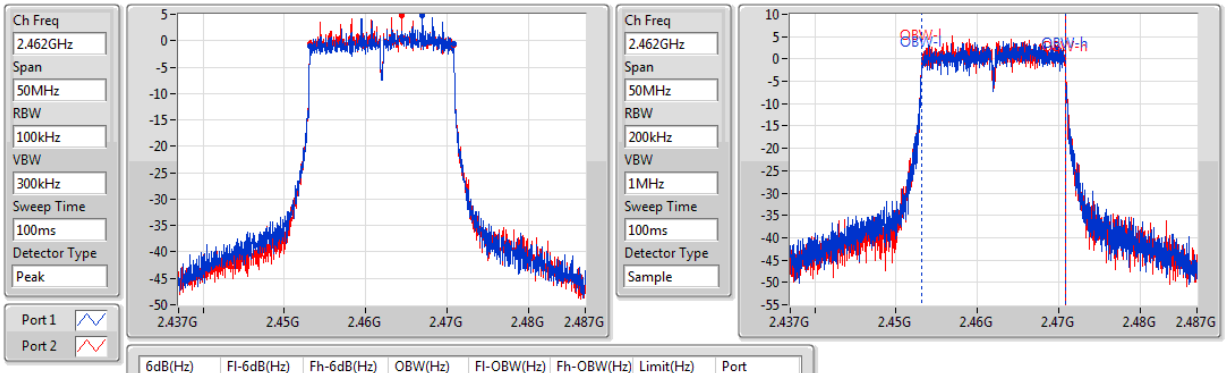
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4282G	2.445775G	21.139M	2.42663G	2.44777G	500k	1
17.575M	2.4282G	2.445775G	20.615M	2.42698G	2.447595G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

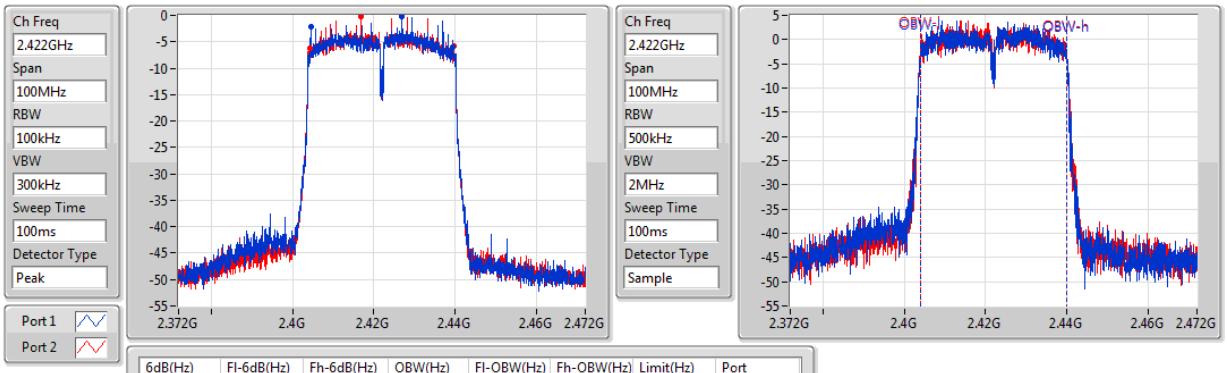
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4532G	2.470775G	17.616M	2.453179G	2.470796G	500k	1
17.575M	2.4532G	2.470775G	17.616M	2.453179G	2.470796G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

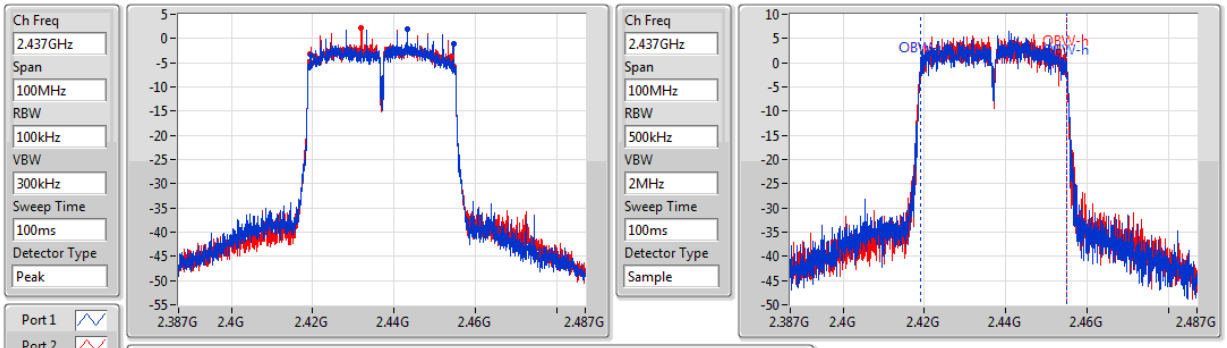
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35M	2.4045G	2.4395G	35.932M	2.404009G	2.439941G	500k	1
35.35M	2.4042G	2.43955G	35.932M	2.404009G	2.439941G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

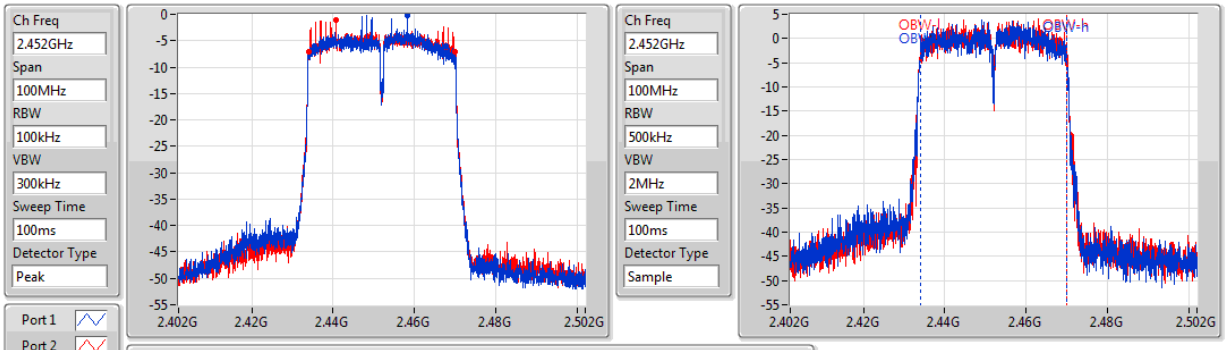
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.4195G	2.45455G	35.932M	2.419009G	2.454941G	500k	1
34.8M	2.41945G	2.45425G	35.932M	2.419009G	2.454941G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.35M	2.4353G	2.46765G	35.882M	2.434009G	2.469891G	500k	1
35.8M	2.4341G	2.4699G	36.032M	2.433959G	2.469991G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_2TX	-	-
2.4-2.4835GHz	25.14	0.32659
802.11g_(6Mbps)_2TX	-	-
2.4-2.4835GHz	25.00	0.31623
802.11n HT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	25.05	0.31989
802.11n HT40_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	18.92	0.07798

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	21.35	21.03	24.20	30.00
2437MHz	Pass	5.24	22.31	21.95	25.14	30.00
2462MHz	Pass	5.24	22.17	21.98	25.09	30.00
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	15.91	15.64	18.79	30.00
2437MHz	Pass	5.24	22.16	21.81	25.00	30.00
2462MHz	Pass	5.24	15.86	15.44	18.67	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	18.31	17.83	21.09	30.00
2437MHz	Pass	5.24	22.24	21.83	25.05	30.00
2462MHz	Pass	5.24	16.35	15.97	19.17	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.24	14.03	13.82	16.94	30.00
2437MHz	Pass	5.24	16.06	15.76	18.92	30.00
2452MHz	Pass	5.24	13.98	13.71	16.86	30.00

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_2TX	-
2.4-2.4835GHz	-2.30
802.11g_(6Mbps)_2TX	-
2.4-2.4835GHz	-4.15
802.11n HT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-3.97
802.11n HT40_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-11.38

RBW=3kHz.

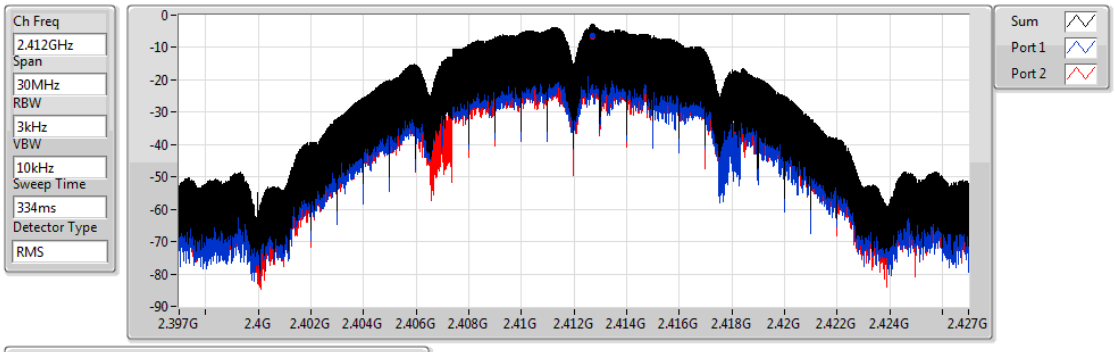
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.83	-6.44	-6.73	-3.57	6.17
2437MHz	Pass	7.83	-4.99	-5.65	-2.30	6.17
2462MHz	Pass	7.83	-6.02	-5.73	-2.87	6.17
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.83	-11.46	-12.25	-10.03	6.17
2437MHz	Pass	7.83	-5.48	-5.74	-4.15	6.17
2462MHz	Pass	7.83	-11.94	-12.28	-10.01	6.17
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.83	-9.40	-9.44	-8.00	6.17
2437MHz	Pass	7.83	-5.94	-6.20	-3.97	6.17
2462MHz	Pass	7.83	-11.33	-11.83	-9.23	6.17
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	7.83	-15.63	-16.00	-13.01	6.17
2437MHz	Pass	7.83	-13.30	-13.61	-11.38	6.17
2452MHz	Pass	7.83	-15.27	-15.47	-13.35	6.17

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_(1Mbps)_2TX PSD

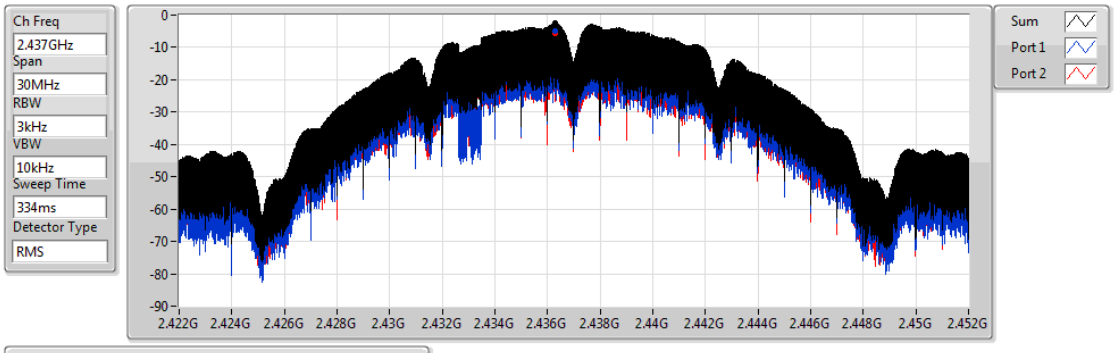
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.57	-3.57	-6.44	-6.73

802.11b_(1Mbps)_2TX PSD

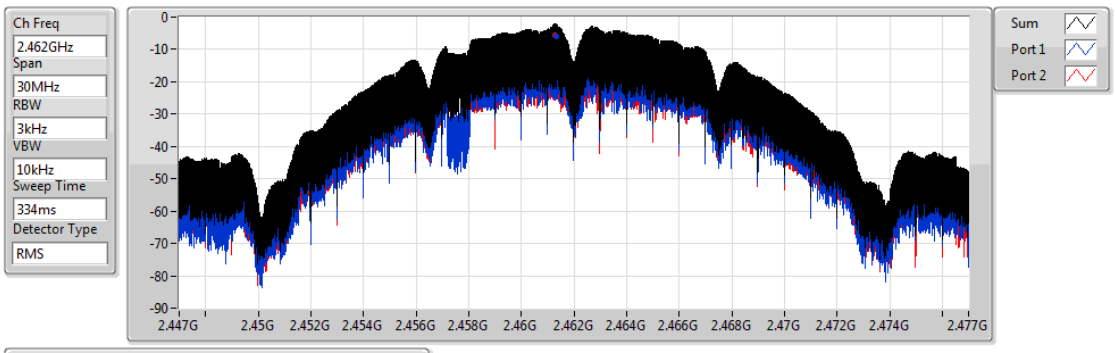
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.30	-2.30	-4.99	-5.65

802.11b_(1Mbps)_2TX PSD

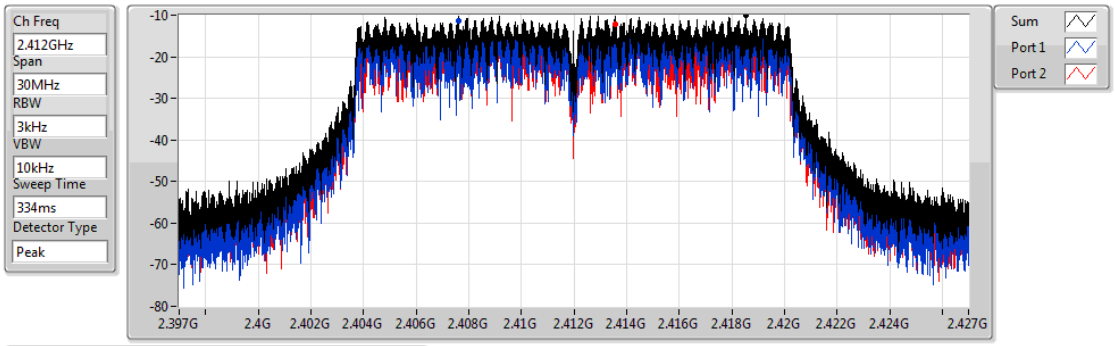
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.87	-2.87	-6.02	-5.73

802.11g_(6Mbps)_2TX **PSD**

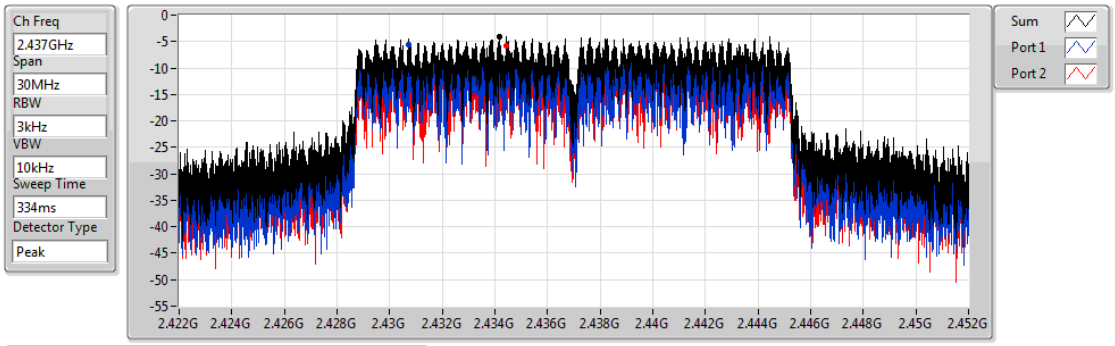
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.03	-10.03	-11.46	-12.25

802.11g_(6Mbps)_2TX **PSD**

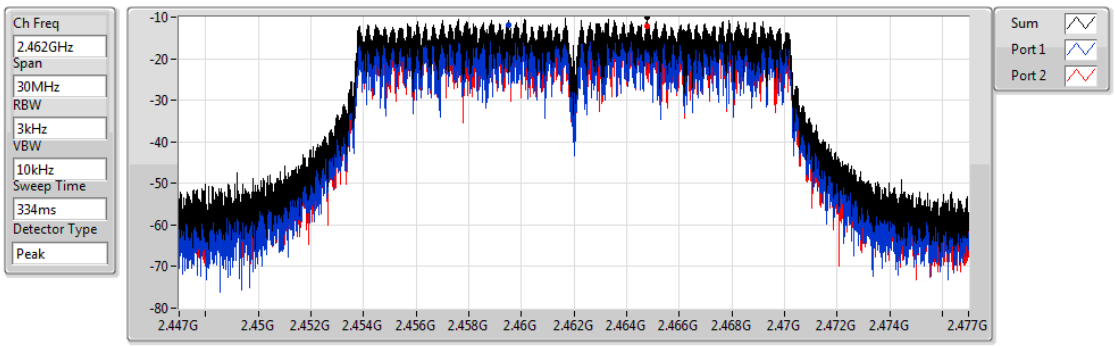
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.15	-4.15	-5.48	-5.74

802.11g_(6Mbps)_2TX **PSD**

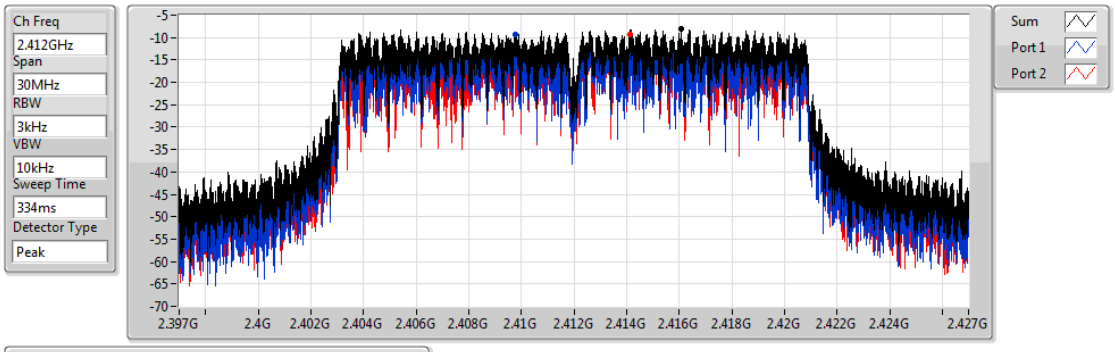
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.01	-10.01	-11.94	-12.28

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

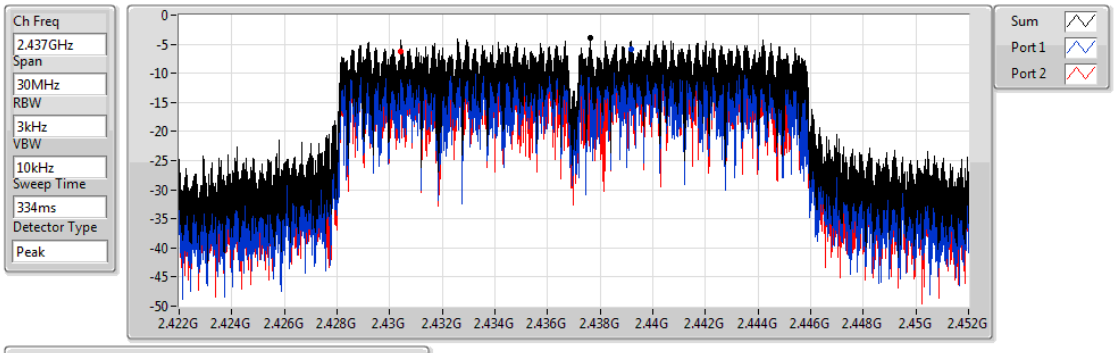
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.00	-8.00	-9.40	-9.44

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

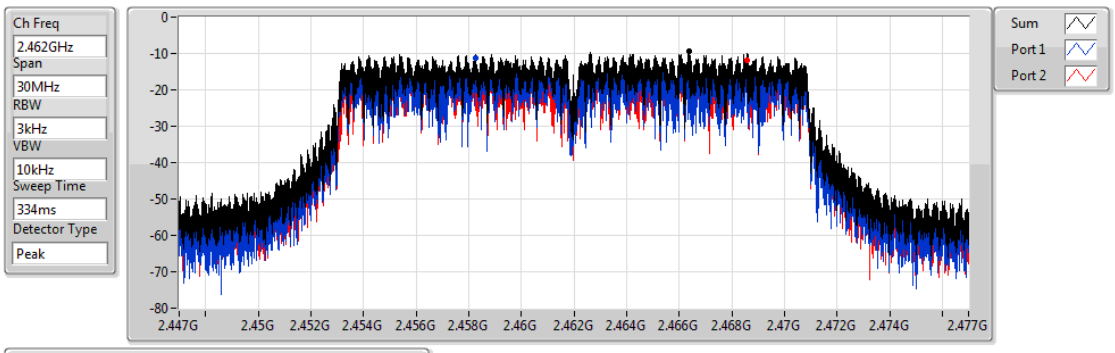
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.97	-3.97	-5.94	-6.20

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

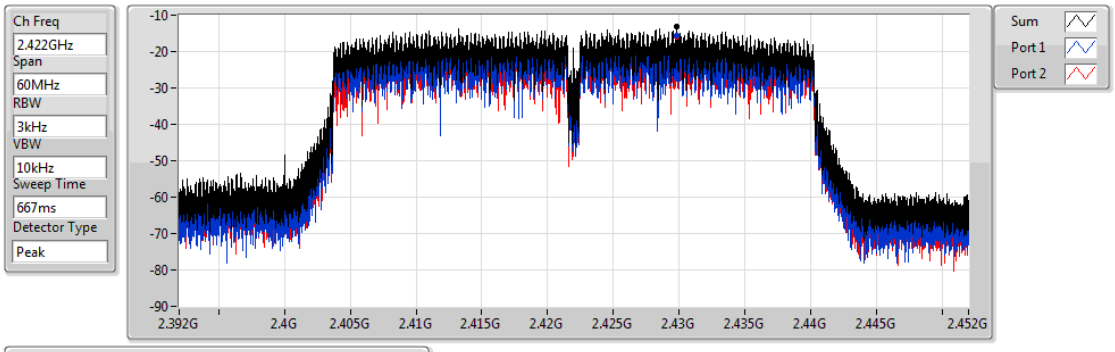
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.23	-9.23	-11.33	-11.83

802.11n HT40_Nss1,(MCS0)_2TX PSD

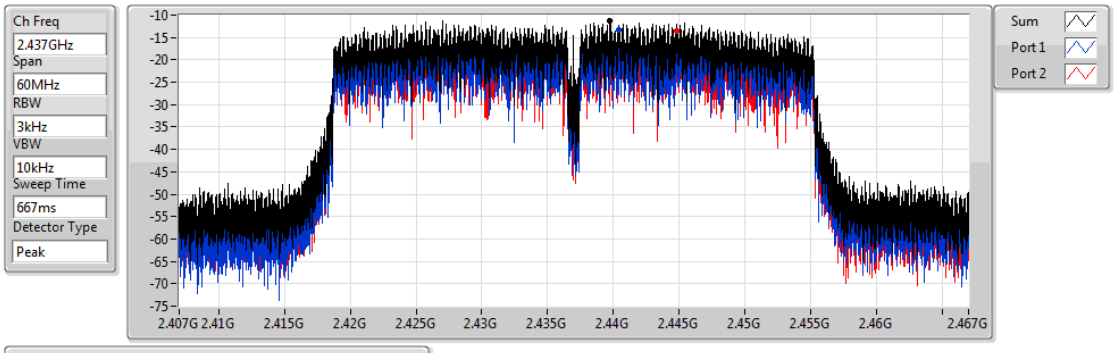
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.01	-13.01	-15.63	-16.00

802.11n HT40_Nss1,(MCS0)_2TX PSD

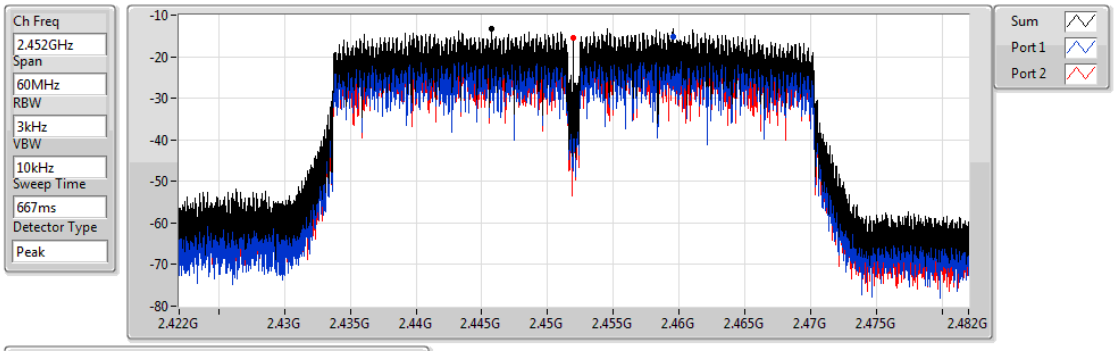
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.38	-11.38	-13.30	-13.61

802.11n HT40_Nss1,(MCS0)_2TX PSD

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.35	-13.35	-15.27	-15.47

Summary

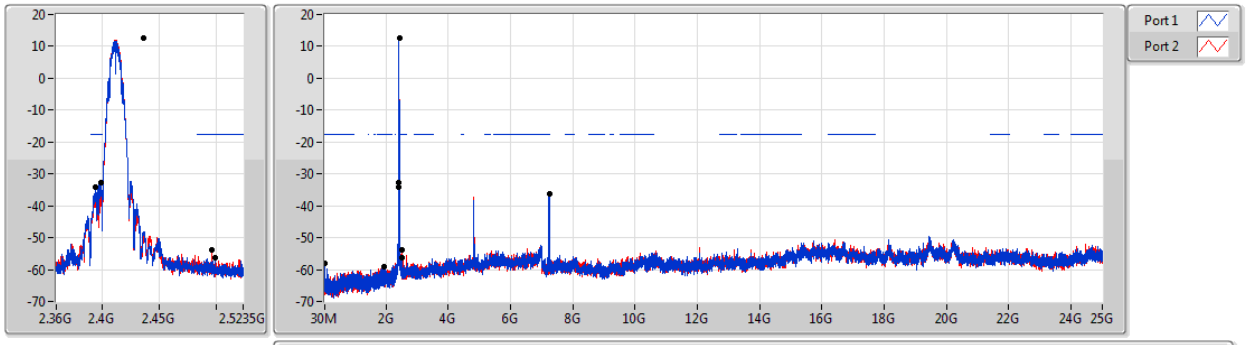
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.434402G	10.41	-19.59	2.30408G	-56.46	2.39928G	-26.31	2.49334G	-55.51	7.240755G	-43.96	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.436406G	12.54	-17.46	30M	-57.97	2.39952G	-32.82	2.49902G	-56.22	7.235136G	-36.41	1
2412MHz	Pass	2.436406G	12.54	-17.46	1.94293G	-59.02	2.39448G	-34.13	2.49598G	-53.95	7.235136G	-36.39	2
2437MHz	Pass	2.436406G	12.54	-17.46	31.165M	-57.79	2.39752G	-49.26	2.4855G	-52.66	16.388691G	-51.80	1
2437MHz	Pass	2.436406G	12.54	-17.46	2.307575G	-58.57	2.39752G	-48.50	2.49598G	-54.05	24.783664G	-51.45	2
2462MHz	Pass	2.436406G	12.54	-17.46	30M	-56.98	2.39744G	-57.37	2.48846G	-40.69	16.686505G	-52.25	1
2462MHz	Pass	2.436406G	12.54	-17.46	718.515M	-58.74	2.39296G	-56.89	2.48742G	-43.32	16.391501G	-50.96	2
802.11g_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.433233G	10.94	-19.06	30M	-56.50	2.39984G	-34.99	2.48446G	-55.56	7.229517G	-42.80	1
2412MHz	Pass	2.433233G	10.94	-19.06	2.30408G	-56.46	2.39976G	-37.52	2.49598G	-50.77	7.235136G	-45.49	2
2437MHz	Pass	2.433233G	10.94	-19.06	31.165M	-56.85	2.39824G	-36.00	2.48358G	-44.08	6.990704G	-52.01	1
2437MHz	Pass	2.433233G	10.94	-19.06	2.307575G	-58.07	2.3992G	-36.92	2.4863G	-44.65	6.945751G	-51.13	2
2462MHz	Pass	2.433233G	10.94	-19.06	2.15729G	-57.94	2.39728G	-55.03	2.48382G	-43.80	16.58817G	-51.62	1
2462MHz	Pass	2.433233G	10.94	-19.06	1.983705G	-58.33	2.39992G	-52.62	2.48422G	-45.01	16.366214G	-51.48	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.434402G	10.41	-19.59	2.30408G	-56.46	2.39928G	-26.31	2.49334G	-55.51	7.240755G	-43.96	1
2412MHz	Pass	2.434402G	10.41	-19.59	2.309905G	-55.99	2.3992G	-26.54	2.49598G	-51.46	7.235136G	-41.65	2
2437MHz	Pass	2.434402G	10.41	-19.59	30M	-57.43	2.39984G	-37.94	2.48598G	-43.88	16.377453G	-51.16	1
2437MHz	Pass	2.434402G	10.41	-19.59	2.302915G	-58.87	2.3992G	-36.86	2.48382G	-43.66	16.633123G	-51.30	2
2462MHz	Pass	2.434402G	10.41	-19.59	30M	-55.73	2.39664G	-53.95	2.48406G	-42.12	16.616266G	-51.33	1
2462MHz	Pass	2.434402G	10.41	-19.59	2.30175G	-58.22	2.3908G	-54.31	2.48382G	-41.83	16.694933G	-50.85	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.445758G	2.46	-27.54	31.145M	-56.80	2.39456G	-36.82	2.48878G	-52.65	7.247119G	-49.94	1
2422MHz	Pass	2.445758G	2.46	-27.54	2.305115G	-54.93	2.39648G	-42.57	2.49598G	-50.89	16.690081G	-50.55	2
2437MHz	Pass	2.445758G	2.46	-27.54	30M	-57.01	2.39888G	-38.55	2.48414G	-45.84	16.356338G	-50.23	1
2437MHz	Pass	2.445758G	2.46	-27.54	2.305115G	-56.67	2.39456G	-39.82	2.48382G	-44.88	16.673254G	-51.83	2
2452MHz	Pass	2.445758G	2.46	-27.54	32.29M	-57.20	2.39744G	-49.29	2.48926G	-46.62	6.991904G	-51.59	1
2452MHz	Pass	2.445758G	2.46	-27.54	2.305115G	-59.01	2.3992G	-49.83	2.48494G	-45.90	16.673254G	-51.30	2

802.11b_(1Mbps)_2TX **CSE NdB**

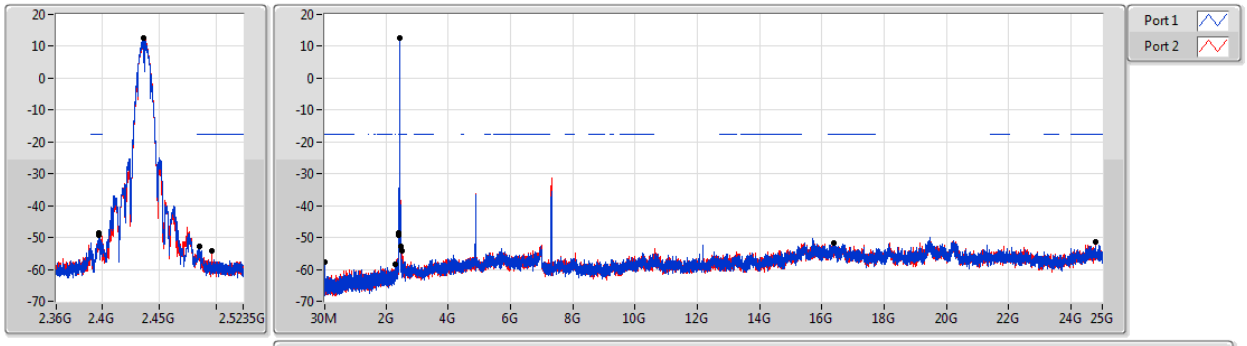
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436406G	12.54	-17.46	30M	-57.97	2.39952G	-32.82	2.49902G	-56.22	7.235136G	-36.41	1
2.436406G	12.54	-17.46	1.94293G	-59.02	2.39448G	-34.13	2.49598G	-53.95	7.235136G	-36.39	2

802.11b_(1Mbps)_2TX **CSE NdB**

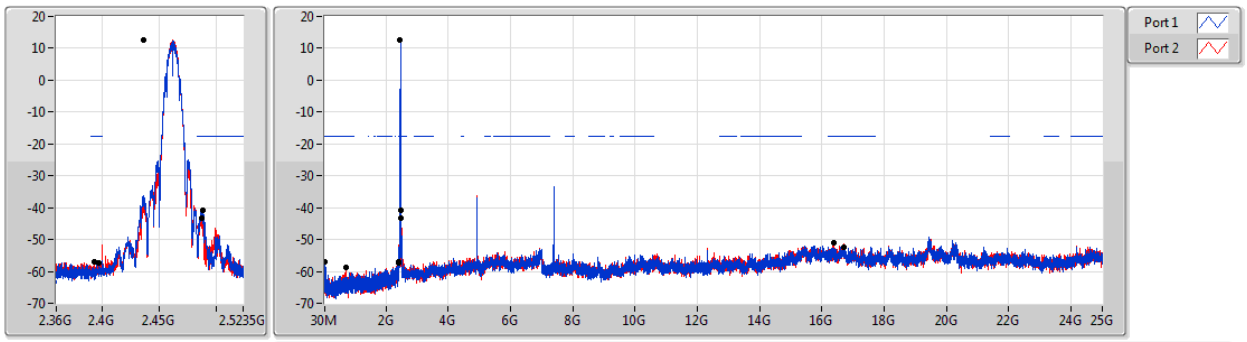
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436406G	12.54	-17.46	31.165M	-57.79	2.39752G	-49.26	2.4855G	-52.66	16.388691G	-51.80	1
2.436406G	12.54	-17.46	2.307575G	-58.57	2.39752G	-48.50	2.49598G	-54.05	24.783664G	-51.45	2

802.11b_(1Mbps)_2TX **CSE NdB**

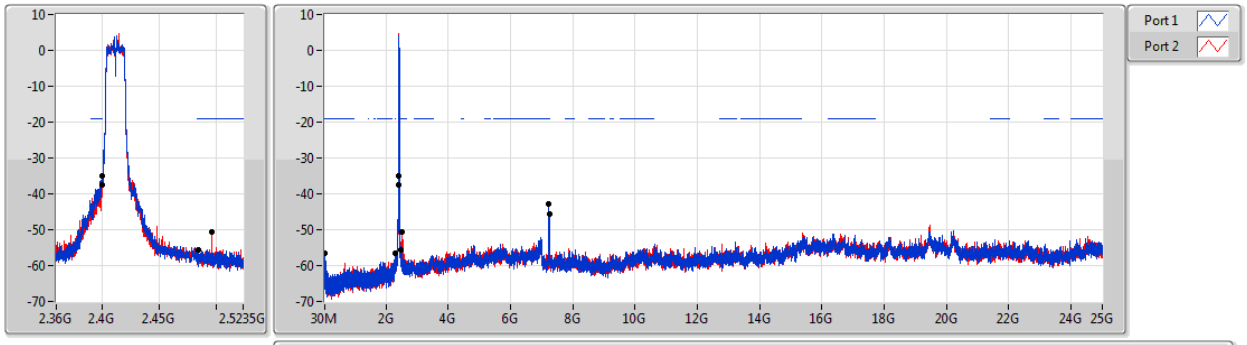
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436406G	12.54	-17.46	30M	-56.98	2.39744G	-57.37	2.48846G	-40.69	16.686505G	-52.25	1
2.436406G	12.54	-17.46	718.515M	-58.74	2.39296G	-56.89	2.48742G	-43.32	16.391501G	-50.96	2

802.11g_(6Mbps)_2TX **CSE NdB**

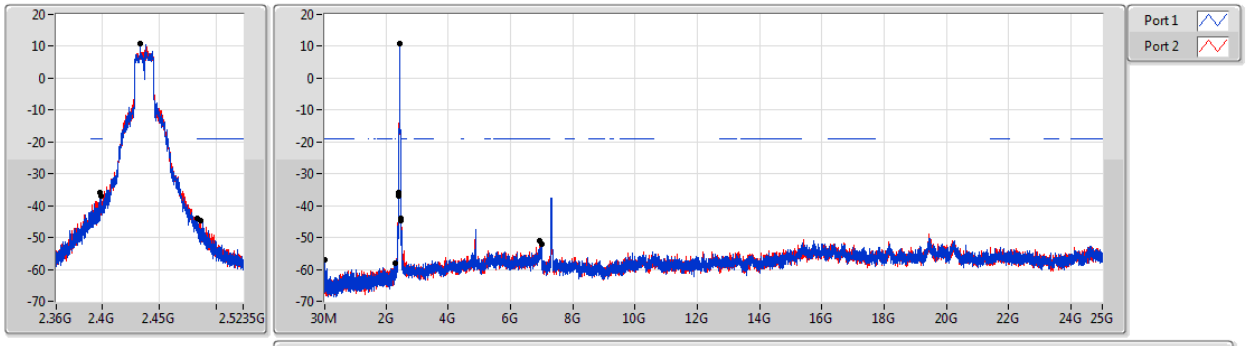
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433233G	10.94	-19.06	30M	-56.50	2.39984G	-34.99	2.48446G	-55.56	7.229517G	-42.80	1
2.433233G	10.94	-19.06	2.30408G	-56.46	2.39976G	-37.52	2.49598G	-50.77	7.235136G	-45.49	2

802.11g_(6Mbps)_2TX **CSE NdB**

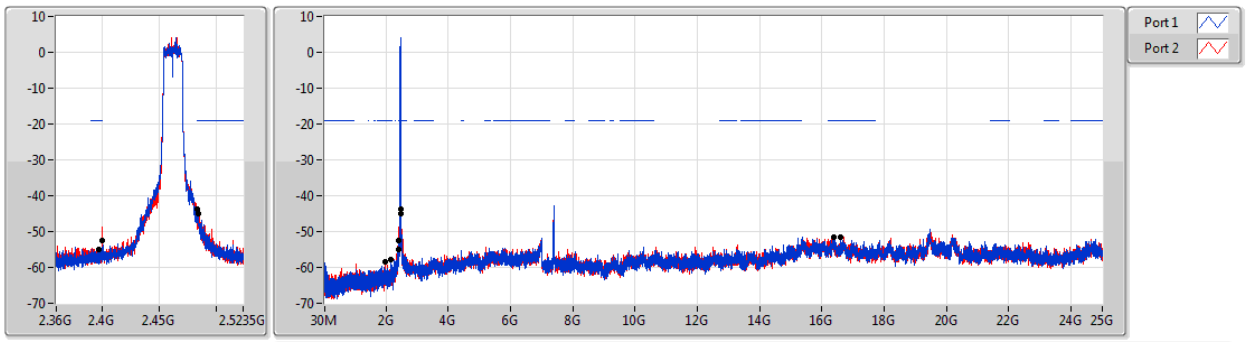
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433233G	10.94	-19.06	31.165M	-56.85	2.39824G	-36.00	2.48358G	-44.08	6.990704G	-52.01	1
2.433233G	10.94	-19.06	2.307575G	-58.07	2.3992G	-36.92	2.4863G	-44.65	6.945751G	-51.13	2

802.11g_(6Mbps)_2TX **CSE NdB**

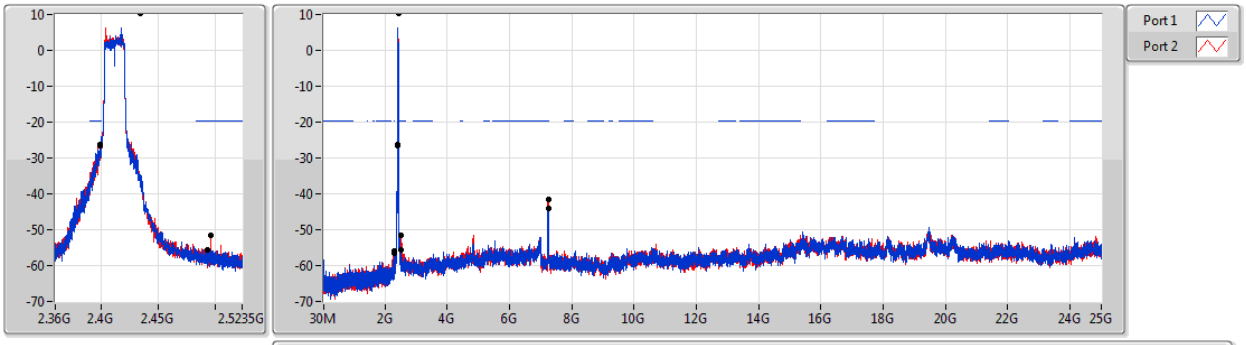
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433233G	10.94	-19.06	2.15729G	-57.94	2.39728G	-55.03	2.48382G	-43.80	16.58817G	-51.62	1
2.433233G	10.94	-19.06	1.983705G	-58.33	2.39992G	-52.62	2.48422G	-45.01	16.366214G	-51.48	2

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

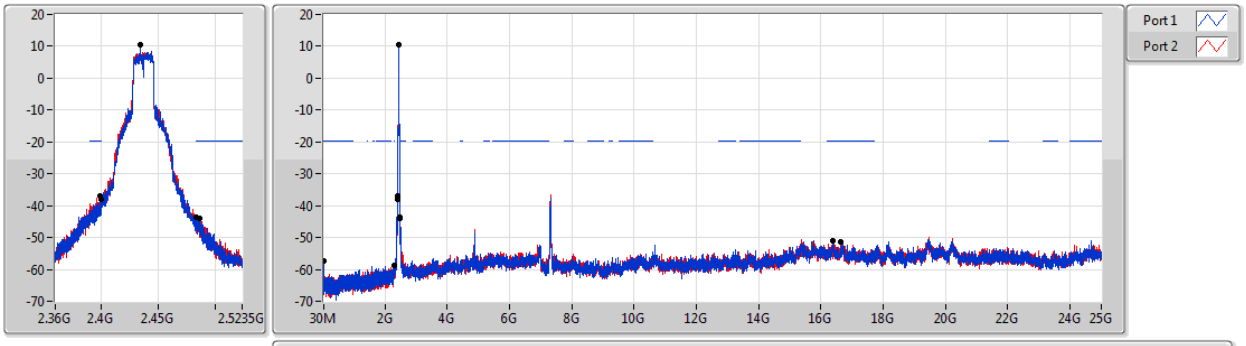
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	10.41	-19.59	2.30408G	-56.46	2.39928G	-26.31	2.49334G	-55.51	7.240755G	-43.96	1
2.434402G	10.41	-19.59	2.309905G	-55.99	2.3992G	-26.54	2.49598G	-51.46	7.235136G	-41.65	2

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

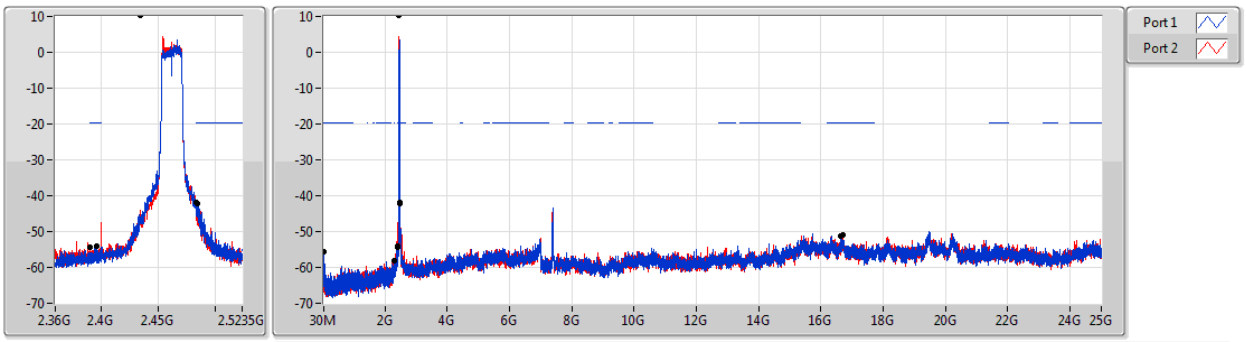
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	10.41	-19.59	30M	-57.43	2.39984G	-37.94	2.48598G	-43.88	16.377453G	-51.16	1
2.434402G	10.41	-19.59	2.302915G	-58.87	2.3992G	-36.86	2.48382G	-43.66	16.633123G	-51.30	2

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

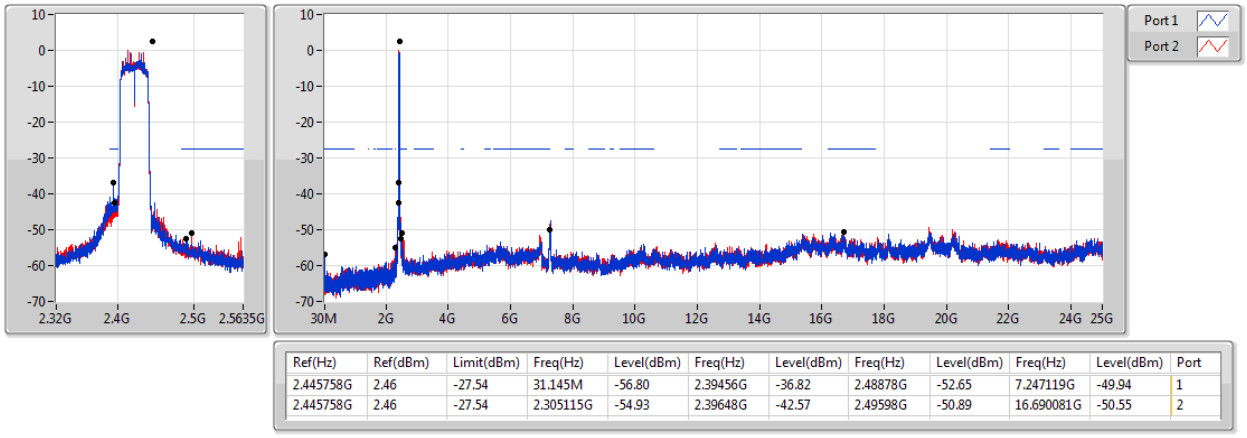
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	10.41	-19.59	30M	-55.73	2.39664G	-53.95	2.48406G	-42.12	16.616266G	-51.33	1
2.434402G	10.41	-19.59	2.30175G	-58.22	2.3908G	-54.31	2.48382G	-41.83	16.694933G	-50.85	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

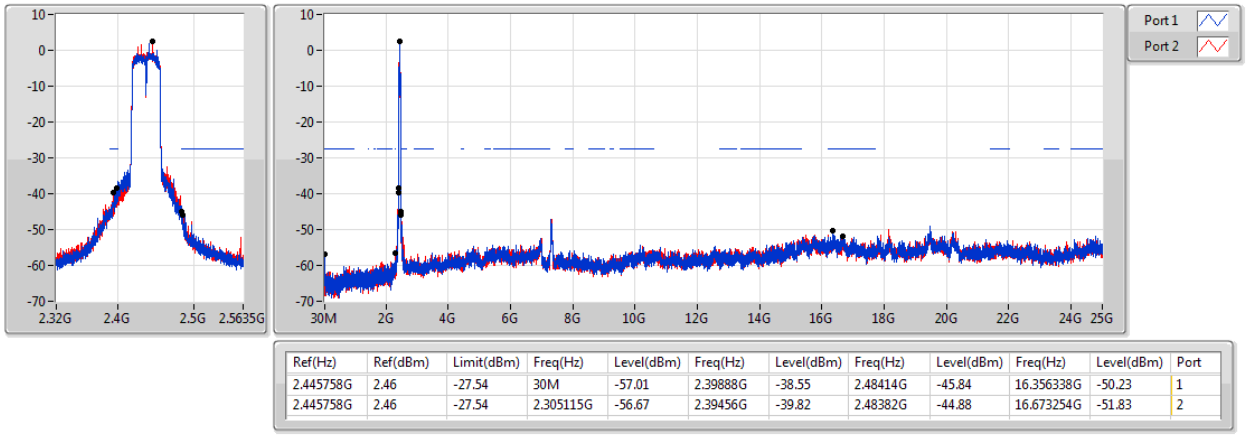
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.445758G	2.46	-27.54	31.145M	-56.80	2.39456G	-36.82	2.48878G	-52.65	7.247119G	-49.94	1
2.445758G	2.46	-27.54	2.305115G	-54.93	2.39648G	-42.57	2.49598G	-50.89	16.690081G	-50.55	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

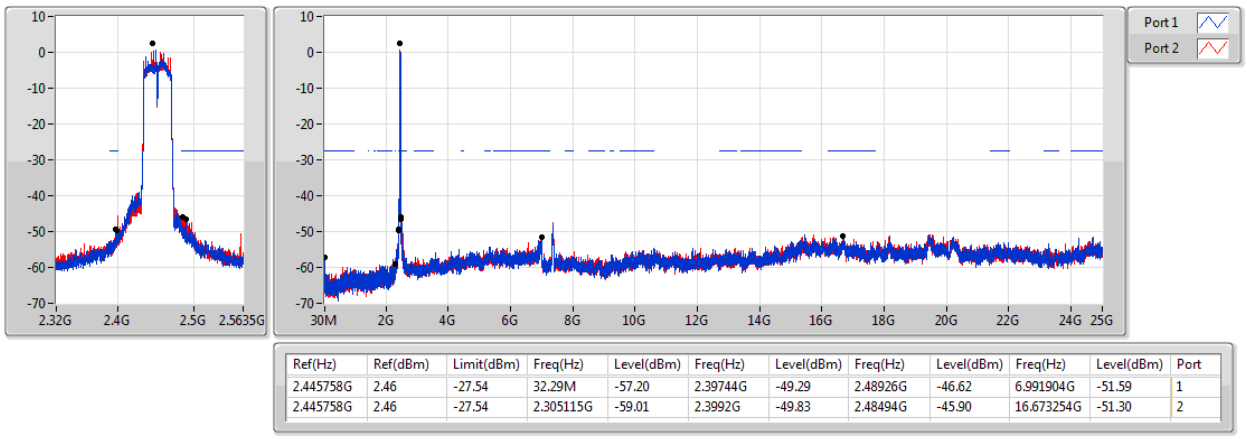
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.445758G	2.46	-27.54	30M	-57.01	2.39888G	-38.55	2.48414G	-45.84	16.356338G	-50.23	1
2.445758G	2.46	-27.54	2.305115G	-56.67	2.39456G	-39.82	2.48382G	-44.88	16.673254G	-51.83	2

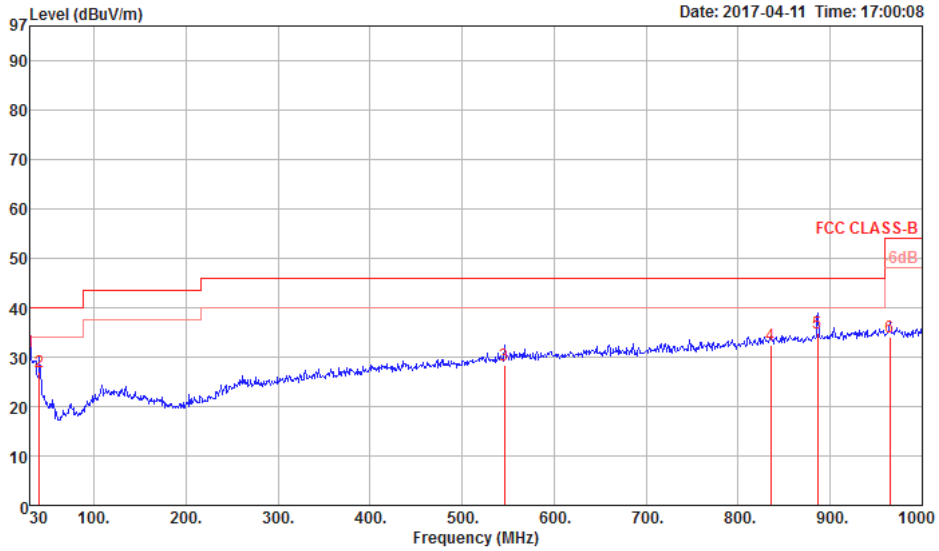
802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.445758G	2.46	-27.54	32.29M	-57.20	2.39744G	-49.29	2.48926G	-46.62	6.991904G	-51.59	1
2.445758G	2.46	-27.54	2.305115G	-59.01	2.3992G	-49.83	2.48494G	-45.90	16.673254G	-51.30	2

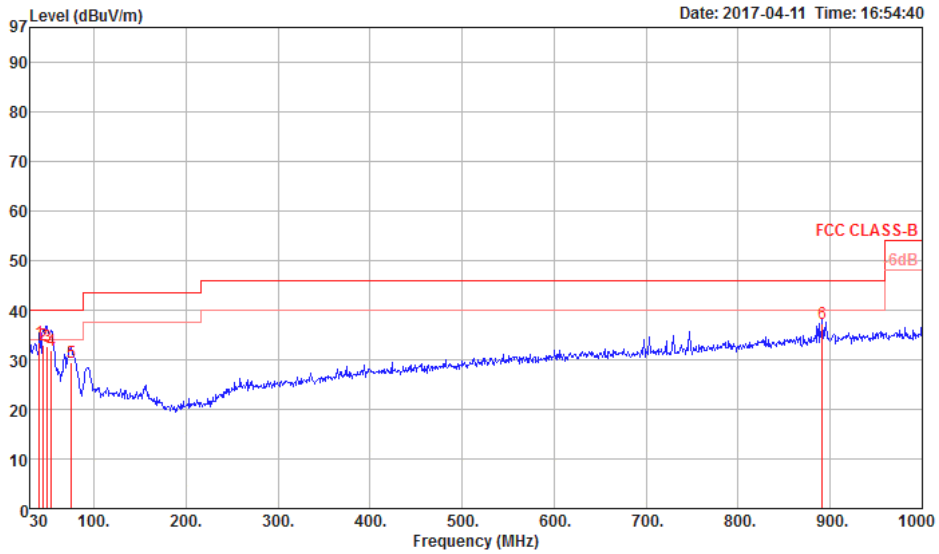
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	30.00	31.02	40.00	-8.98	33.26	2.10	24.24	28.58	142	64	QP	HORIZONTAL
2	40.67	27.12	40.00	-12.88	34.25	2.12	19.33	28.58	115	206	QP	HORIZONTAL
3	546.04	28.29	46.00	-17.71	29.39	3.53	24.70	29.33	151	199	QP	HORIZONTAL
4	835.10	32.34	46.00	-13.66	30.66	4.36	26.30	28.98	147	234	QP	HORIZONTAL
5	886.51	34.87	46.00	-11.13	32.78	4.50	26.43	28.84	137	58	QP	HORIZONTAL
6	965.08	34.03	54.00	-19.97	30.90	4.72	27.03	28.62	150	88	QP	HORIZONTAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	40.67	33.49	40.00	-6.51	40.62	2.12	19.33	28.58	111	135	QP	VERTICAL
2	44.55	33.08	40.00	-6.92	42.48	2.14	17.03	28.57	109	154	QP	VERTICAL
3	49.40	32.81	40.00	-7.19	44.70	2.16	14.52	28.57	132	88	QP	VERTICAL
4	53.28	31.88	40.00	-8.12	45.07	2.17	13.20	28.56	105	98	QP	VERTICAL
5	75.59	29.57	40.00	-10.43	43.31	2.19	12.55	28.48	141	206	QP	VERTICAL
6	891.36	37.15	46.00	-8.85	35.04	4.52	26.43	28.84	193	25	QP	VERTICAL

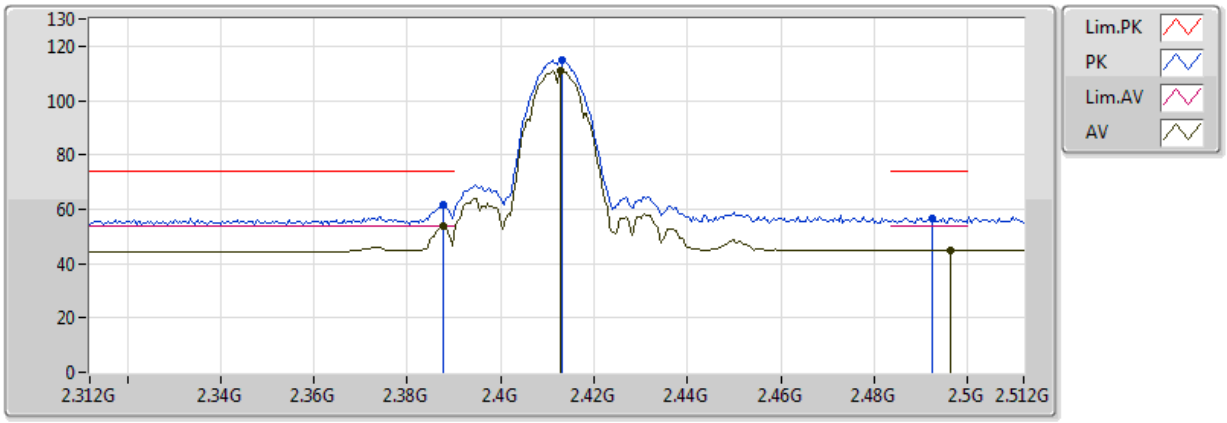
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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
802.11b_(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	4.92404G	53.98	54.00	-0.02	6.87	3	V	59	1.14	-

802.11b_(1Mbps)_2TX

2412MHz_TX

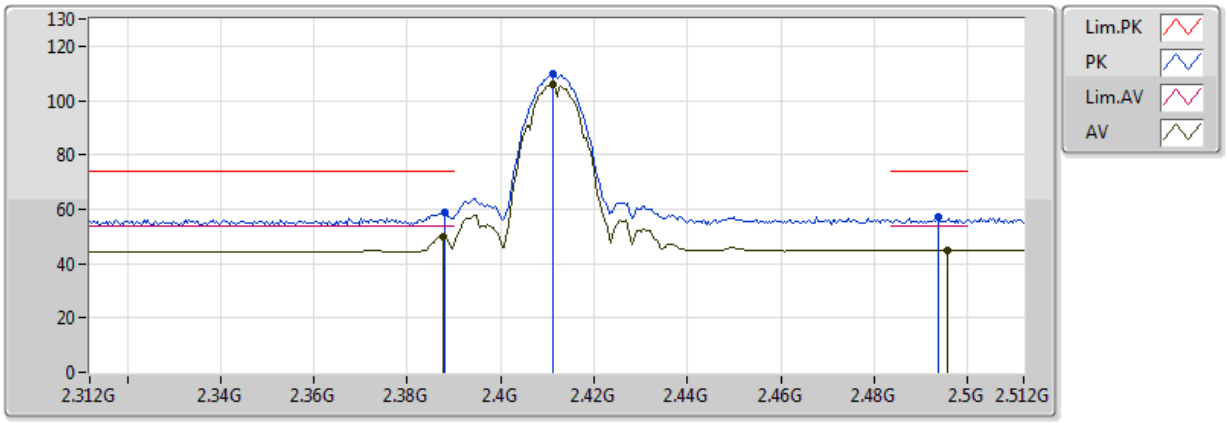


20170413
EUT Z Non-TXBF 2TX
Setting 21.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3876G	53.55	54.00	-0.45	32.36	3	V	88	2.99	-
AV	2.4128G	110.98	Inf	-Inf	32.46	3	V	88	2.99	-
AV	2.4964G	45.06	54.00	-8.94	32.76	3	V	88	2.99	-
PK	2.3876G	61.37	74.00	-12.63	32.36	3	V	88	2.99	-
PK	2.4132G	115.01	Inf	-Inf	32.46	3	V	88	2.99	-
PK	2.4924G	56.87	74.00	-17.13	32.74	3	V	88	2.99	-

802.11b_(1Mbps)_2TX

2412MHz_TX

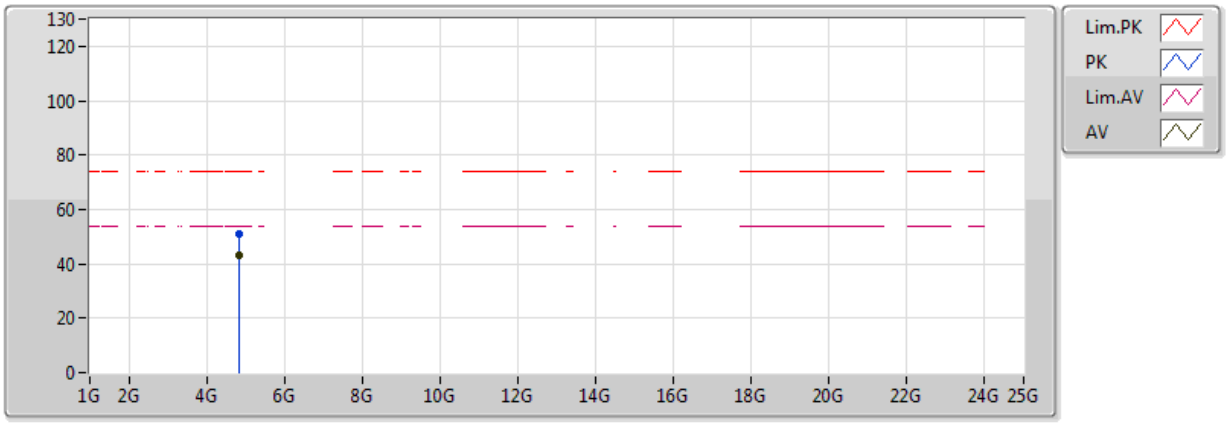


20170413
EUT Z Non-TXBF 2TX
Setting 21.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3876G	49.91	54.00	-4.09	32.36	3	H	280	2.99	-
AV	2.4112G	105.84	Inf	-Inf	32.45	3	H	280	2.99	-
AV	2.4956G	44.78	54.00	-9.22	32.75	3	H	280	2.99	-
PK	2.388G	59.11	74.00	-14.89	32.37	3	H	280	2.99	-
PK	2.4112G	109.64	Inf	-Inf	32.45	3	H	280	2.99	-
PK	2.4936G	57.07	74.00	-16.93	32.75	3	H	280	2.99	-

802.11b_(1Mbps)_2TX

2412MHz_TX

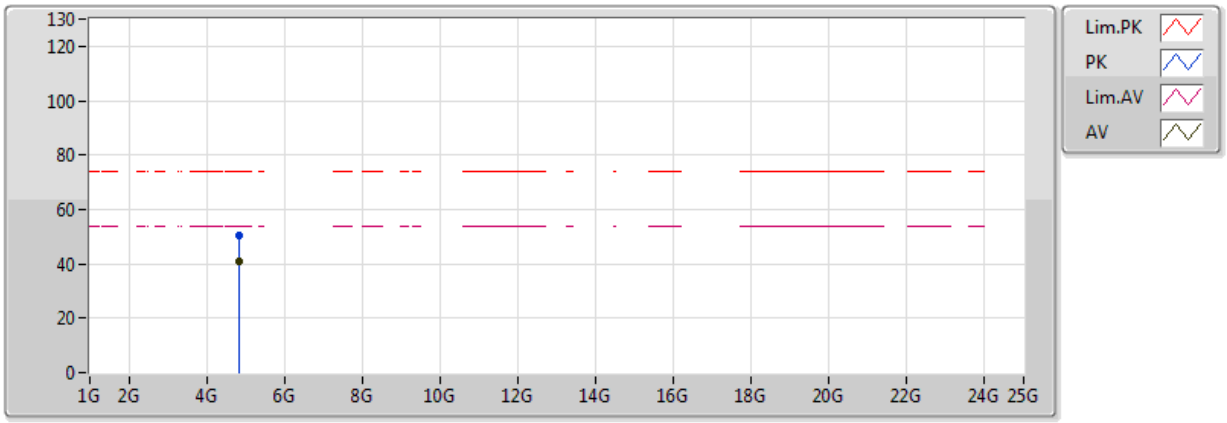


20170413
EUT Z Non-TXBF 2TX
Setting 21.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82096G	43.26	54.00	-10.74	6.60	3	V	67	1.10	-
PK	4.82104G	51.21	74.00	-22.79	6.60	3	V	67	1.10	-

802.11b_(1Mbps)_2TX

2412MHz_TX

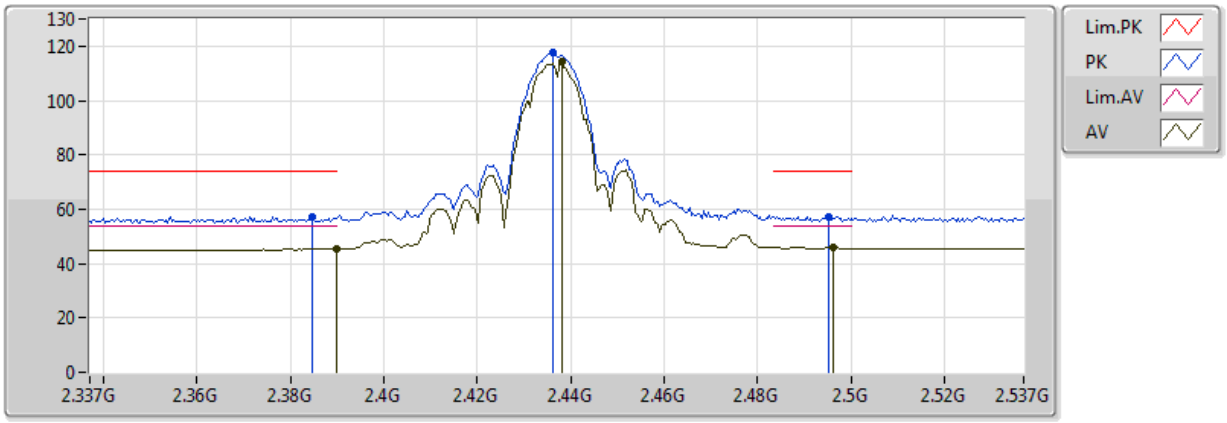


20170413
EUT Z Non-TXBF 2TX
Setting 21.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82396G	40.76	54.00	-13.24	6.60	3	H	256	1.01	-
PK	4.82396G	50.58	74.00	-23.42	6.60	3	H	256	1.01	-

802.11b_(1Mbps)_2TX

2437MHz_TX

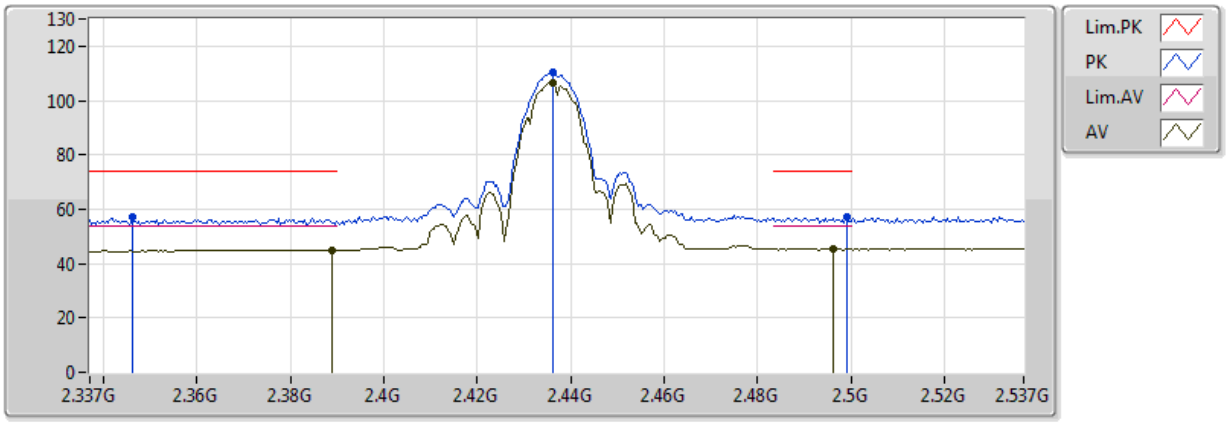


20170413
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	45.65	54.00	-8.35	32.37	3	V	126	1.79	-
AV	2.4382G	114.46	Inf	-Inf	32.55	3	V	126	1.79	-
AV	2.4962G	46.01	54.00	-7.99	32.76	3	V	126	1.79	-
PK	2.3846G	57.23	74.00	-16.77	32.35	3	V	126	1.79	-
PK	2.4362G	117.42	Inf	-Inf	32.54	3	V	126	1.79	-
PK	2.4954G	57.37	74.00	-16.63	32.75	3	V	126	1.79	-

802.11b_(1Mbps)_2TX

2437MHz_TX

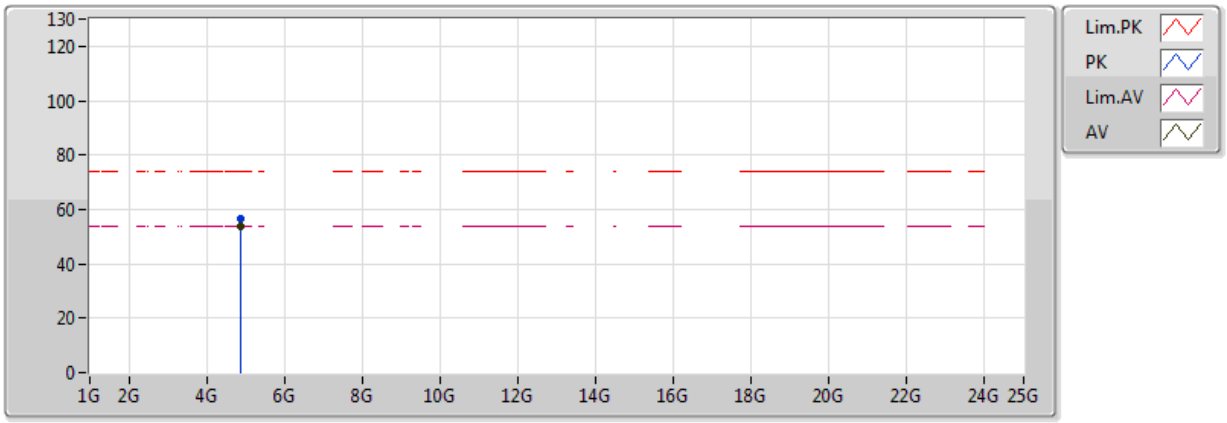


20170413
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	44.75	54.00	-9.25	32.37	3	H	237	1.72	-
AV	2.4362G	106.56	Inf	-Inf	32.54	3	H	237	1.72	-
AV	2.4962G	45.30	54.00	-8.70	32.76	3	H	237	1.72	-
PK	2.3462G	57.23	74.00	-16.77	32.21	3	H	237	1.72	-
PK	2.4362G	110.43	Inf	-Inf	32.54	3	H	237	1.72	-
PK	2.499G	57.08	74.00	-16.92	32.77	3	H	237	1.72	-

802.11b_(1Mbps)_2TX

2437MHz_TX

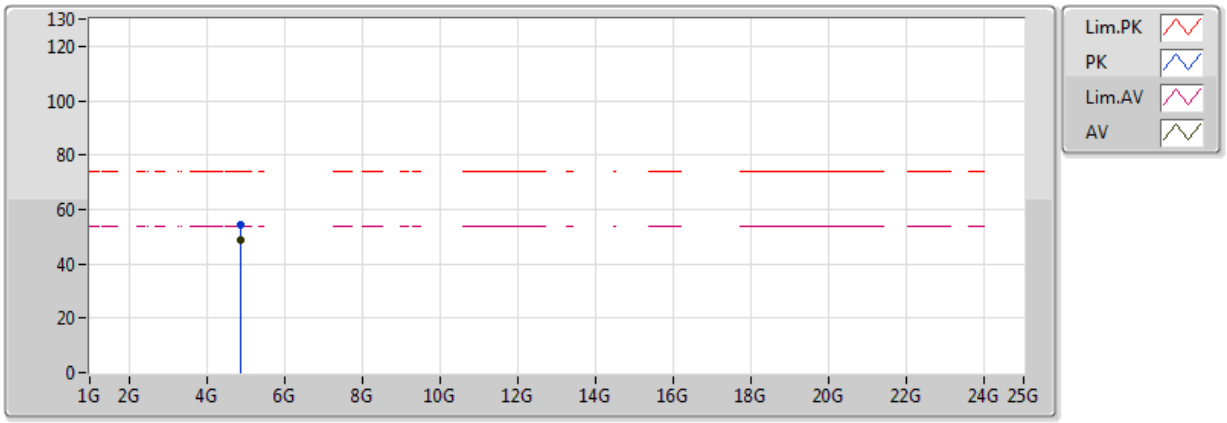


20170413
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87396G	53.67	54.00	-0.33	6.74	3	V	62	1.07	-
PK	4.87404G	56.68	74.00	-17.32	6.74	3	V	62	1.07	-

802.11b_(1Mbps)_2TX

2437MHz_TX

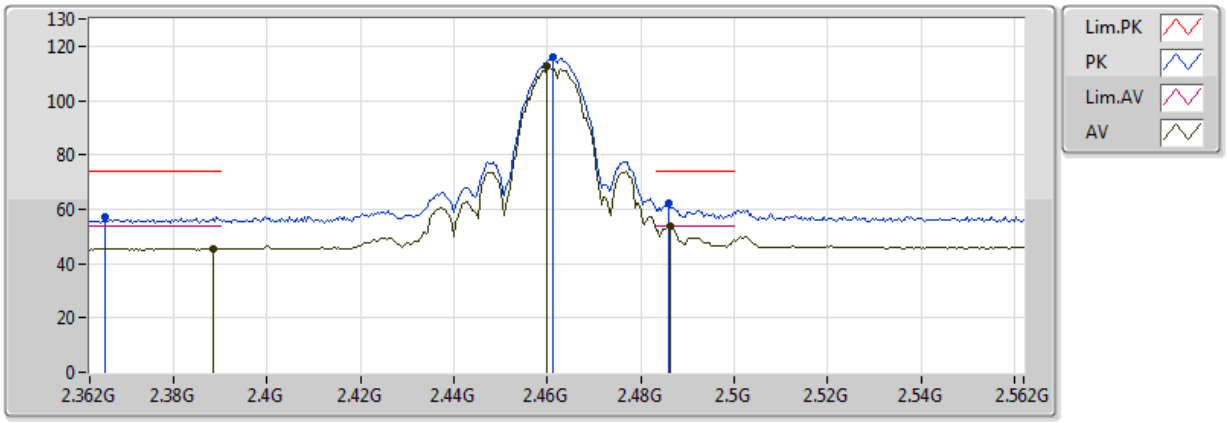


20170413
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	48.95	54.00	-5.05	6.74	3	H	283	1.10	-
PK	4.874G	54.18	74.00	-19.82	6.74	3	H	283	1.10	-

802.11b_(1Mbps)_2TX

2462MHz_TX

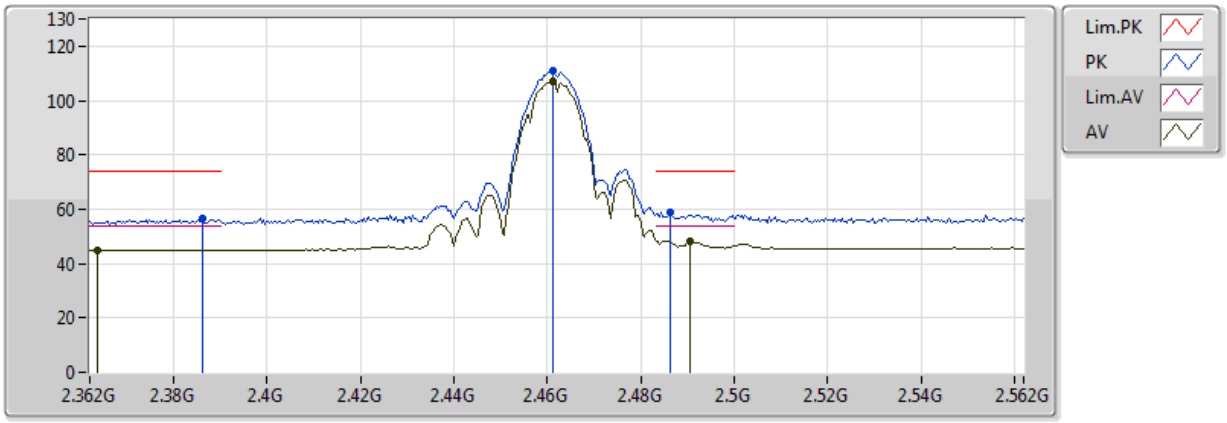


20170414
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	45.44	54.00	-8.56	32.37	3	V	79	2.79	-
AV	2.46G	112.60	Inf	-Inf	32.63	3	V	79	2.79	-
AV	2.4864G	53.85	54.00	-0.15	32.72	3	V	79	2.79	-
PK	2.3652G	57.29	74.00	-16.71	32.28	3	V	79	2.79	-
PK	2.4612G	115.76	Inf	-Inf	32.63	3	V	79	2.79	-
PK	2.486G	62.35	74.00	-11.65	32.72	3	V	79	2.79	-

802.11b_(1Mbps)_2TX

2462MHz_TX

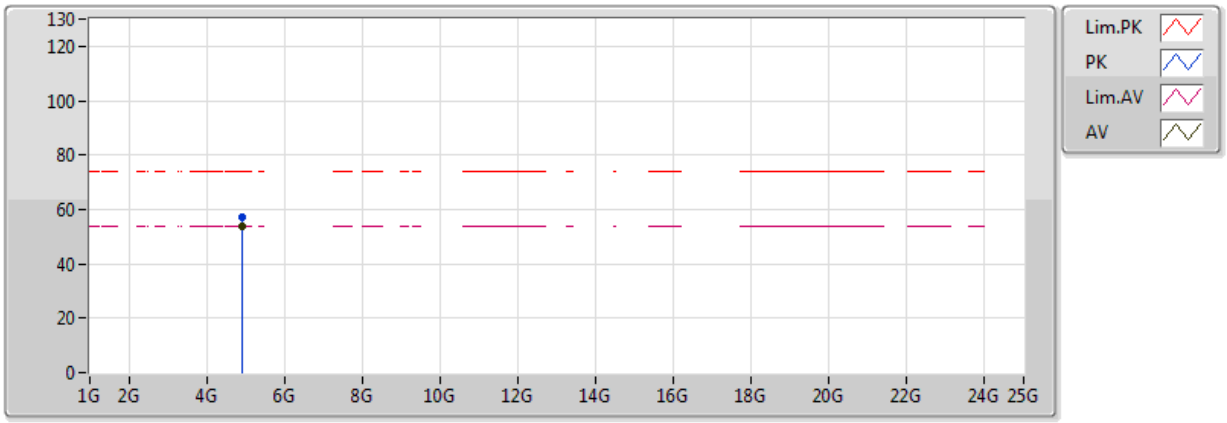


20170414
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3636G	45.08	54.00	-8.92	32.28	3	H	215	2.14	-
AV	2.4612G	107.17	Inf	-Inf	32.63	3	H	215	2.14	-
AV	2.4904G	48.24	54.00	-5.76	32.74	3	H	215	2.14	-
PK	2.386G	56.36	74.00	-17.64	32.36	3	H	215	2.14	-
PK	2.4612G	110.87	Inf	-Inf	32.63	3	H	215	2.14	-
PK	2.4864G	58.73	74.00	-15.27	32.72	3	H	215	2.14	-

802.11b_(1Mbps)_2TX

2462MHz_TX

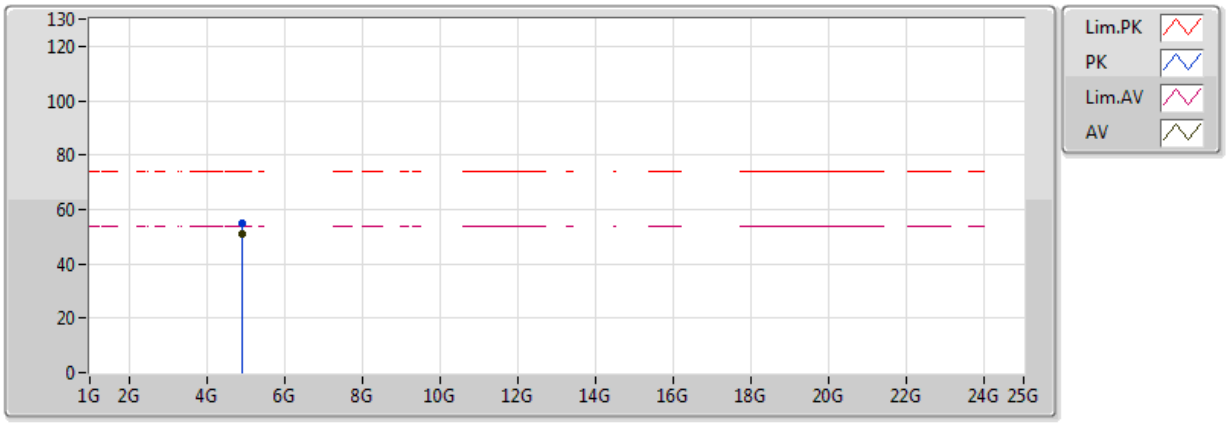


20170414
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92404G	53.98	54.00	-0.02	6.87	3	V	59	1.14	-
PK	4.924G	57.05	74.00	-16.95	6.87	3	V	59	1.14	-

802.11b_(1Mbps)_2TX

2462MHz_TX

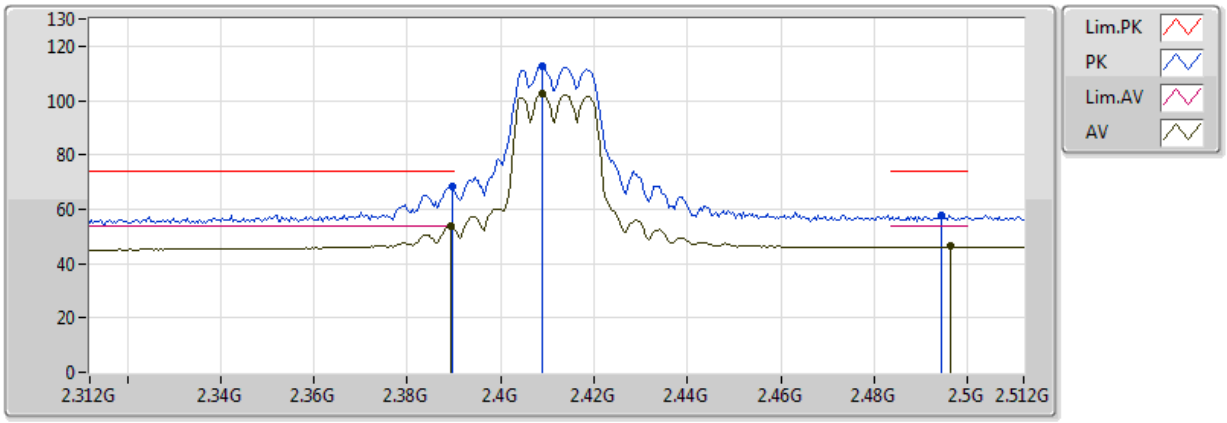


20170414
EUT Z Non-TXBF 2TX
Setting 22.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	51.12	54.00	-2.88	6.87	3	H	23	1.01	-
PK	4.92404G	55.09	74.00	-18.91	6.87	3	H	23	1.01	-

802.11g_(6Mbps)_2TX

2412MHz_TX

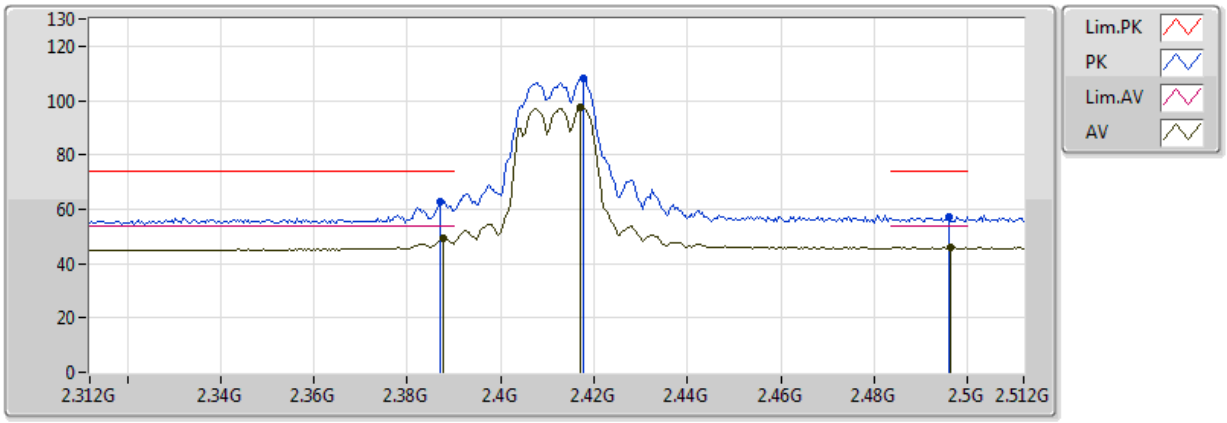


20170413
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3892G	53.98	54.00	-0.02	32.37	3	V	74	2.48	-
AV	2.4088G	102.46	Inf	-Inf	32.44	3	V	74	2.48	-
AV	2.4964G	46.56	54.00	-7.44	32.76	3	V	74	2.48	-
PK	2.3896G	68.40	74.00	-5.60	32.37	3	V	74	2.48	-
PK	2.4088G	112.78	Inf	-Inf	32.44	3	V	74	2.48	-
PK	2.4944G	57.52	74.00	-16.48	32.75	3	V	74	2.48	-

802.11g_(6Mbps)_2TX

2412MHz_TX

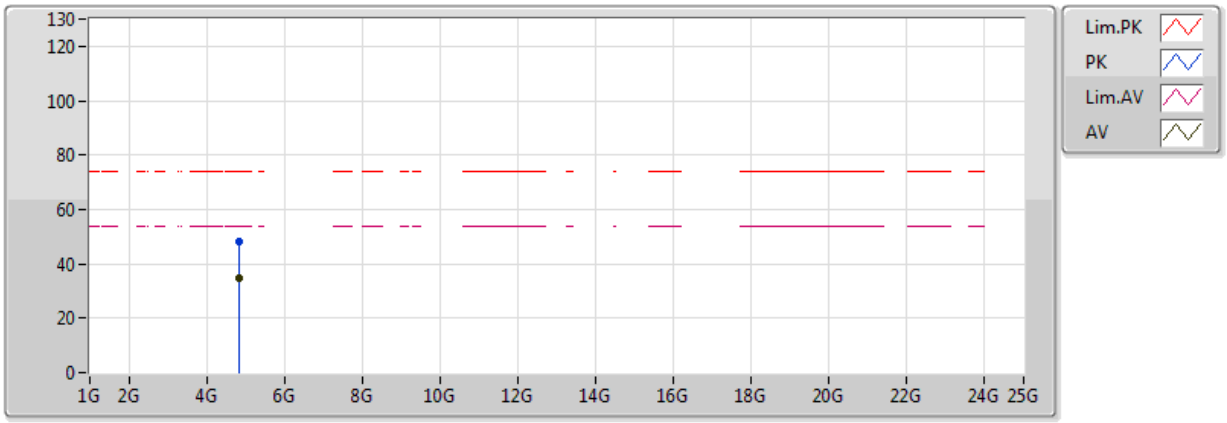


20170413
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3876G	49.21	54.00	-4.79	32.36	3	H	314	1.02	-
AV	2.4172G	97.73	Inf	-Inf	32.47	3	H	314	1.02	-
AV	2.4964G	45.90	54.00	-8.10	32.76	3	H	314	1.02	-
PK	2.3872G	62.99	74.00	-11.01	32.36	3	H	314	1.02	-
PK	2.4176G	108.23	Inf	-Inf	32.47	3	H	314	1.02	-
PK	2.496G	57.28	74.00	-16.72	32.76	3	H	314	1.02	-

802.11g_(6Mbps)_2TX

2412MHz_TX

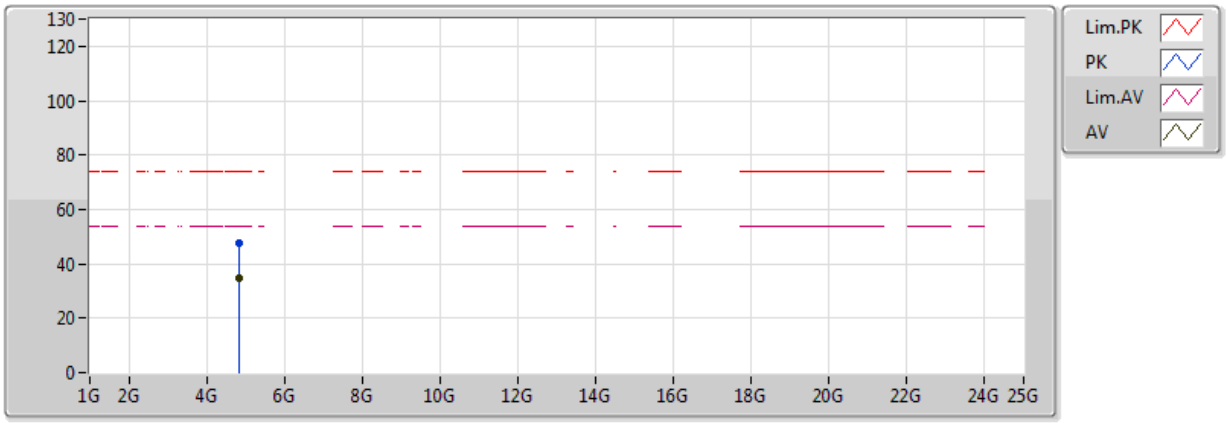


20170413
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82G	34.87	54.00	-19.13	6.59	3	V	201	1.69	-
PK	4.82072G	48.15	74.00	-25.85	6.60	3	V	201	1.69	-

802.11g_(6Mbps)_2TX

2412MHz_TX

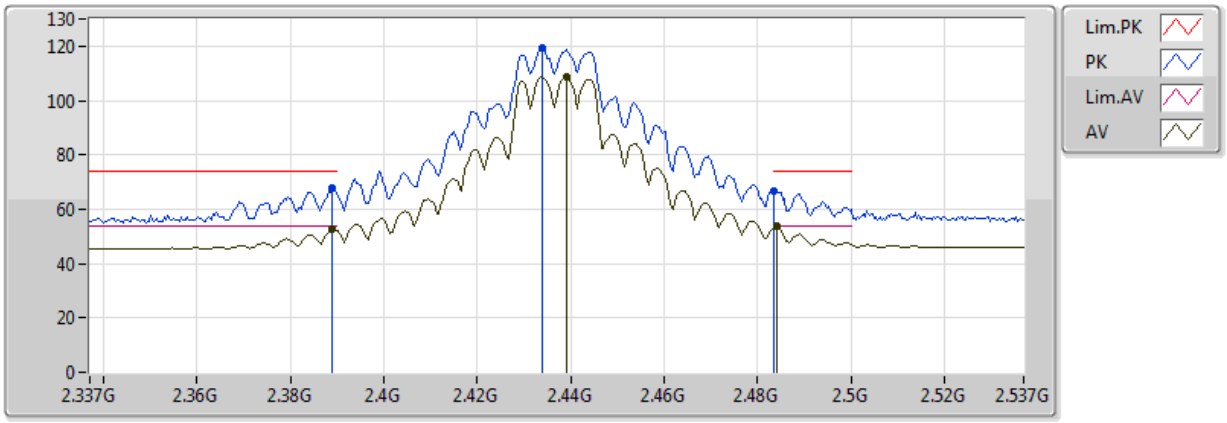


20170413
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82288G	34.65	54.00	-19.35	6.60	3	H	352	2.36	-
PK	4.8274G	47.89	74.00	-26.11	6.61	3	H	352	2.36	-

802.11g_(6Mbps)_2TX

2437MHz_TX

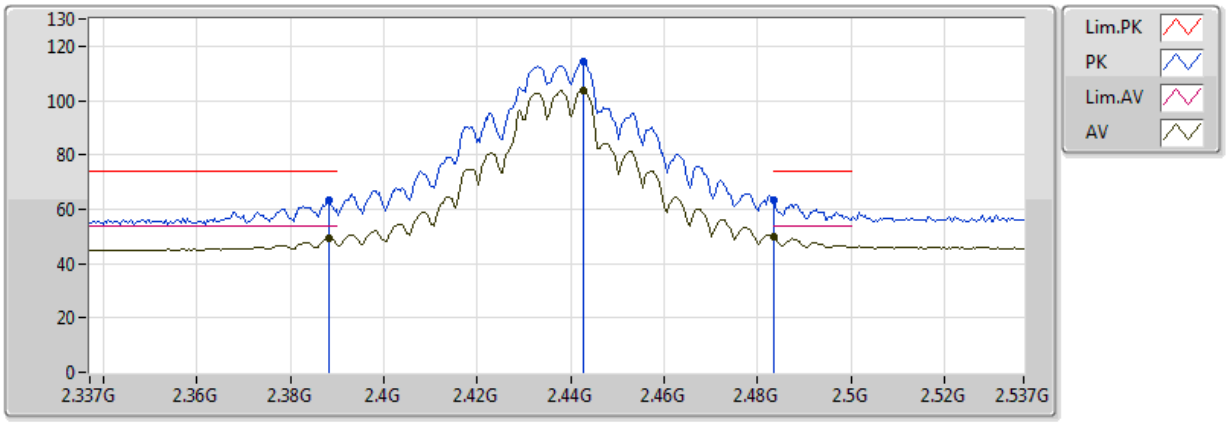


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	52.80	54.00	-1.20	32.37	3	V	76	2.99	-
AV	2.439G	108.63	Inf	-Inf	32.55	3	V	76	2.99	-
AV	2.4842G	53.59	54.00	-0.41	32.71	3	V	76	2.99	-
PK	2.389G	67.87	74.00	-6.13	32.37	3	V	76	2.99	-
PK	2.4338G	119.24	Inf	-Inf	32.53	3	V	76	2.99	-
PK	2.483502G	66.47	74.00	-7.53	32.71	3	V	76	2.99	-

802.11g_(6Mbps)_2TX

2437MHz_TX

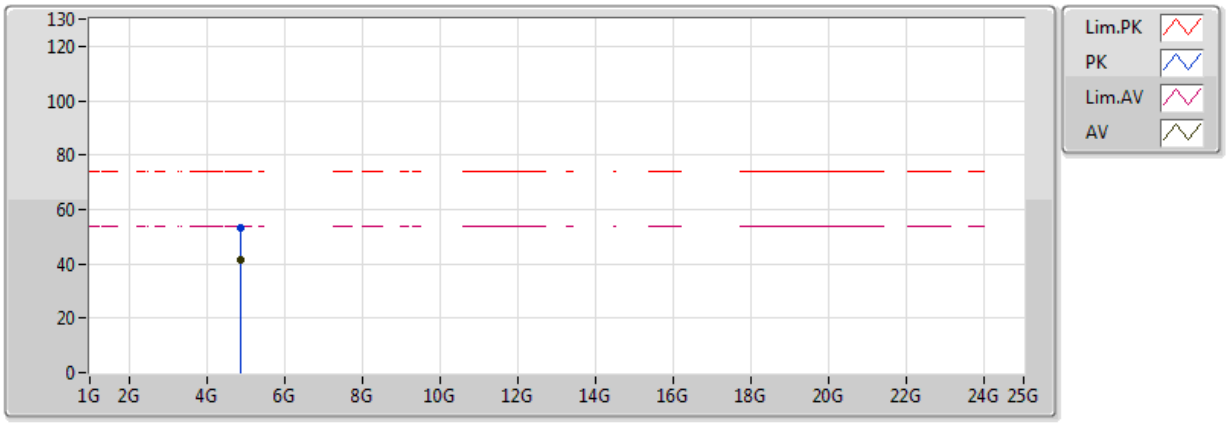


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3882G	49.50	54.00	-4.50	32.37	3	H	310	1.00	-
AV	2.4426G	103.74	Inf	-Inf	32.56	3	H	310	1.00	-
AV	2.483502G	49.76	54.00	-4.24	32.71	3	H	310	1.00	-
PK	2.3882G	63.40	74.00	-10.60	32.37	3	H	310	1.00	-
PK	2.4426G	114.34	Inf	-Inf	32.56	3	H	310	1.00	-
PK	2.483502G	63.54	74.00	-10.46	32.71	3	H	310	1.00	-

802.11g_(6Mbps)_2TX

2437MHz_TX

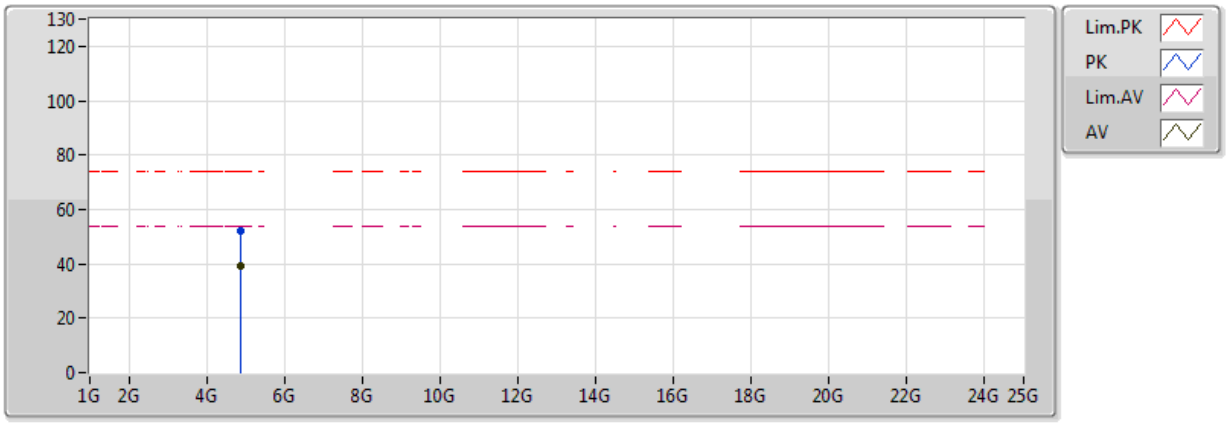


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8728G	41.31	54.00	-12.69	6.74	3	V	74	1.08	-
PK	4.8688G	53.40	74.00	-20.60	6.73	3	V	74	1.08	-

802.11g_(6Mbps)_2TX

2437MHz_TX

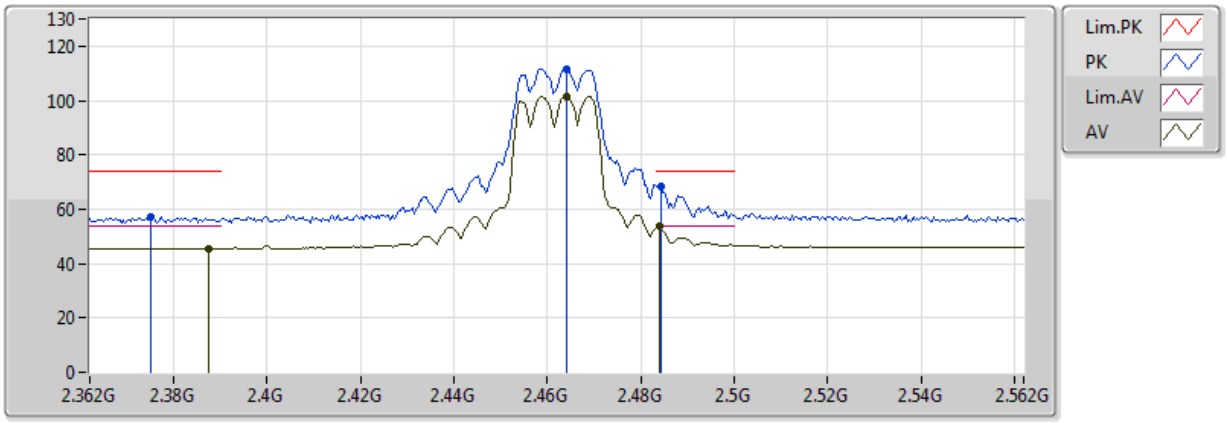


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87208G	39.11	54.00	-14.89	6.73	3	H	278	1.01	-
PK	4.87752G	51.92	74.00	-22.08	6.75	3	H	278	1.01	-

802.11g_(6Mbps)_2TX

2462MHz_TX

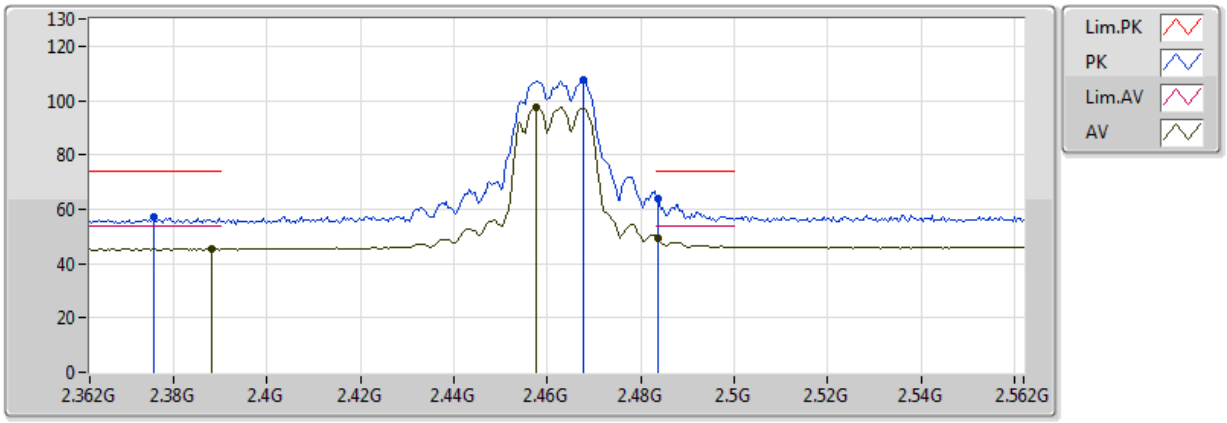


20170414
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3876G	45.59	54.00	-8.41	32.36	3	V	75	2.95	-
AV	2.464G	101.50	Inf	-Inf	32.64	3	V	75	2.95	-
AV	2.484G	53.57	54.00	-0.43	32.71	3	V	75	2.95	-
PK	2.3752G	57.41	74.00	-16.59	32.32	3	V	75	2.95	-
PK	2.464G	111.65	Inf	-Inf	32.64	3	V	75	2.95	-
PK	2.4844G	68.46	74.00	-5.54	32.71	3	V	75	2.95	-

802.11g_(6Mbps)_2TX

2462MHz_TX

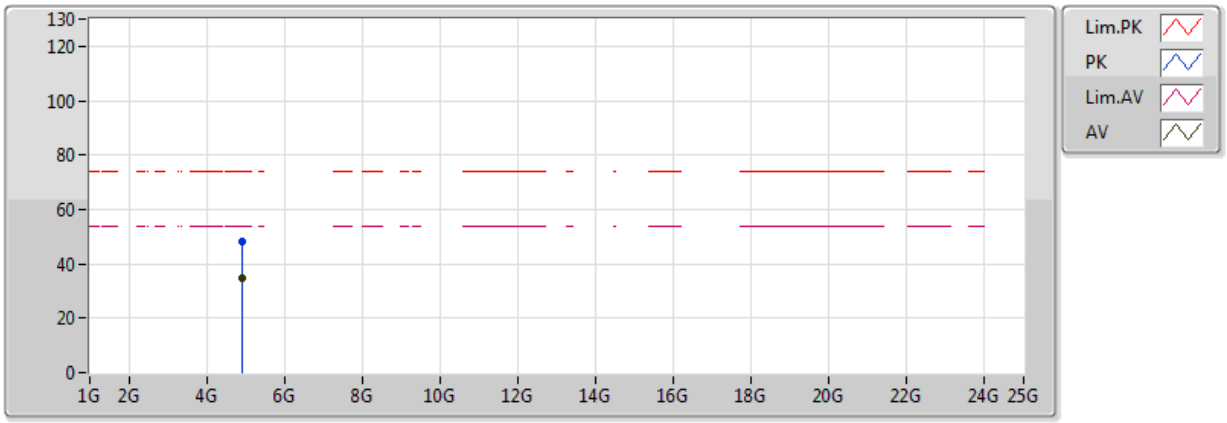


20170414
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.388G	45.42	54.00	-8.58	32.37	3	H	309	1.06	-
AV	2.4576G	97.58	Inf	-Inf	32.62	3	H	309	1.06	-
AV	2.4836G	49.46	54.00	-4.54	32.71	3	H	309	1.06	-
PK	2.3756G	56.96	74.00	-17.04	32.32	3	H	309	1.06	-
PK	2.4676G	107.59	Inf	-Inf	32.65	3	H	309	1.06	-
PK	2.4836G	64.12	74.00	-9.88	32.71	3	H	309	1.06	-

802.11g_(6Mbps)_2TX

2462MHz_TX

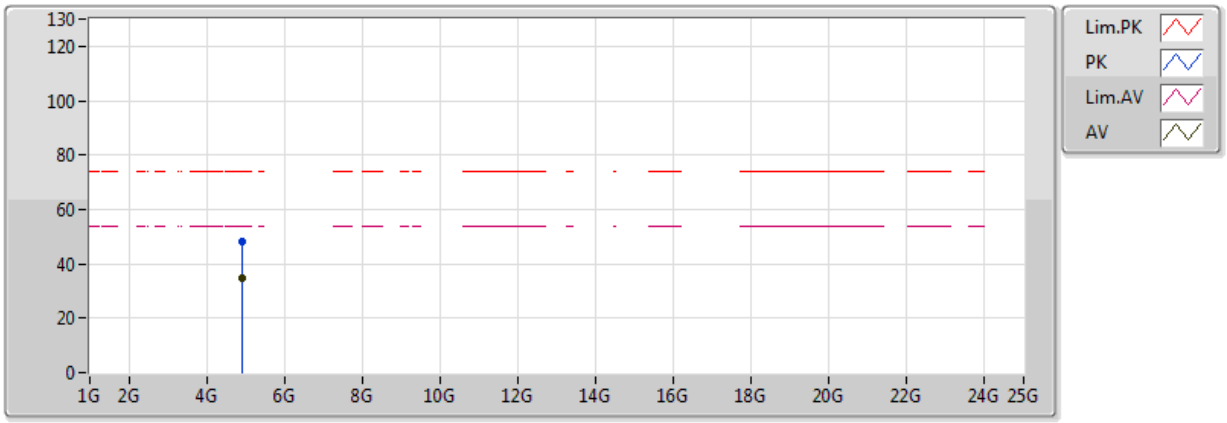


20170414
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92708G	34.78	54.00	-19.22	6.88	3	V	131	2.16	-
PK	4.93064G	48.26	74.00	-25.74	6.89	3	V	131	2.16	-

802.11g_(6Mbps)_2TX

2462MHz_TX

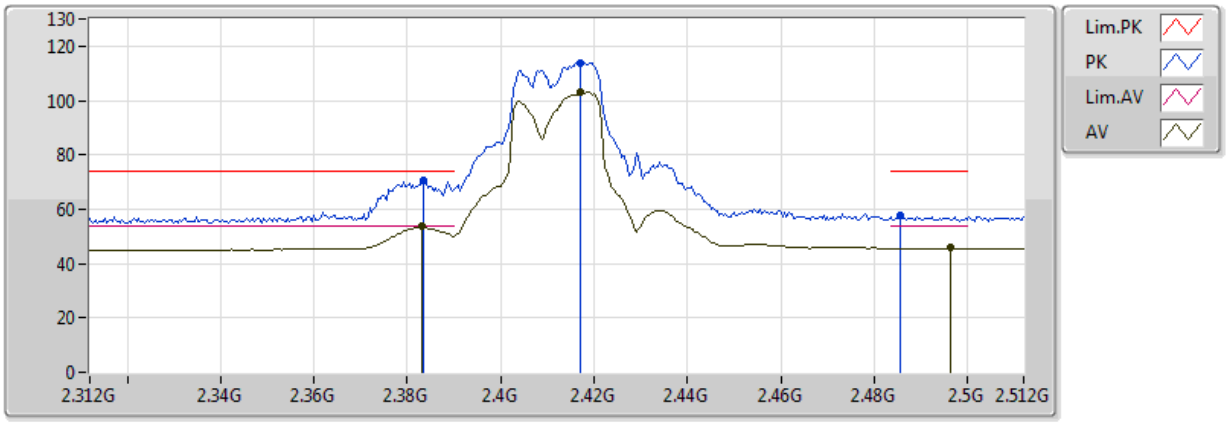


20170414
EUT Z Non-TXBF 2TX
Setting 16
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.93304G	34.53	54.00	-19.47	6.90	3	H	348	1.32	-
PK	4.93332G	48.10	74.00	-25.90	6.90	3	H	348	1.32	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

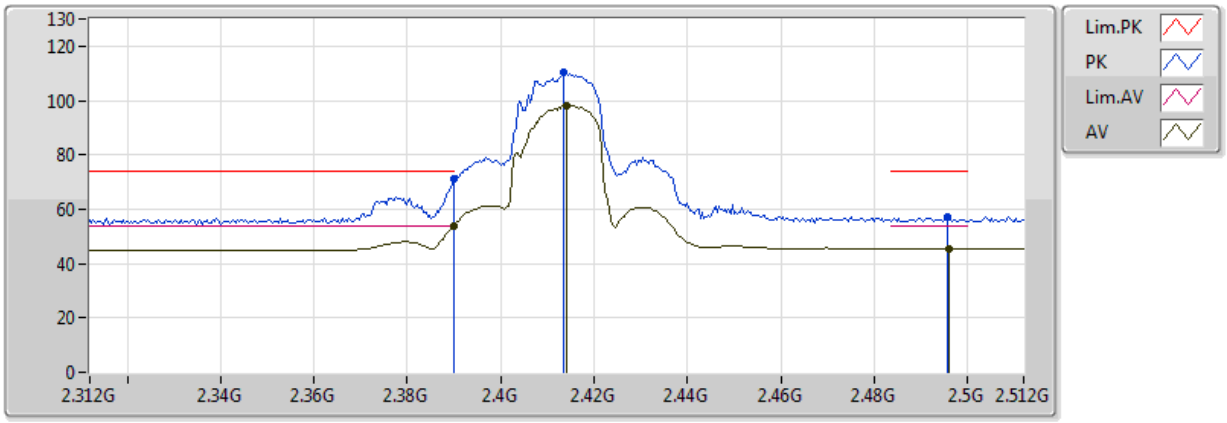


20170414
EUT Z Non-TXBF 2TX
Setting 18.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3832G	53.59	54.00	-0.41	32.35	3	V	72	2.41	-
AV	2.4172G	102.95	Inf	-Inf	32.47	3	V	72	2.41	-
AV	2.4964G	45.89	54.00	-8.11	32.76	3	V	72	2.41	-
PK	2.3836G	70.53	74.00	-3.47	32.35	3	V	72	2.41	-
PK	2.4172G	113.78	Inf	-Inf	32.47	3	V	72	2.41	-
PK	2.4856G	57.92	74.00	-16.08	32.72	3	V	72	2.41	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

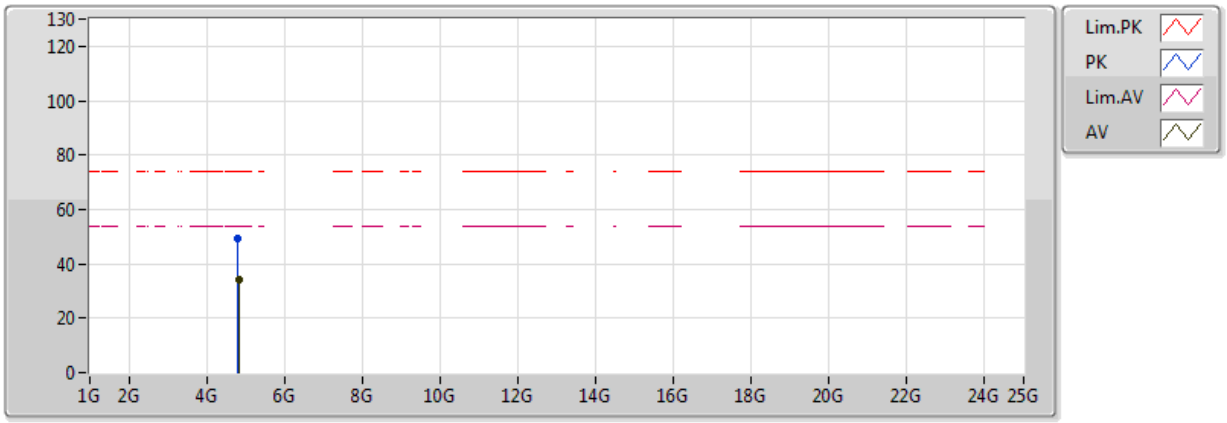


20170414
EUT Z Non-TXBF 2TX
Setting 18.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.97	54.00	-0.03	32.37	3	H	310	1.02	-
AV	2.414G	98.27	Inf	-Inf	32.46	3	H	310	1.02	-
AV	2.496G	45.32	54.00	-8.68	32.76	3	H	310	1.02	-
PK	2.39G	70.98	74.00	-3.02	32.37	3	H	310	1.02	-
PK	2.4136G	110.37	Inf	-Inf	32.46	3	H	310	1.02	-
PK	2.4956G	56.88	74.00	-17.12	32.75	3	H	310	1.02	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

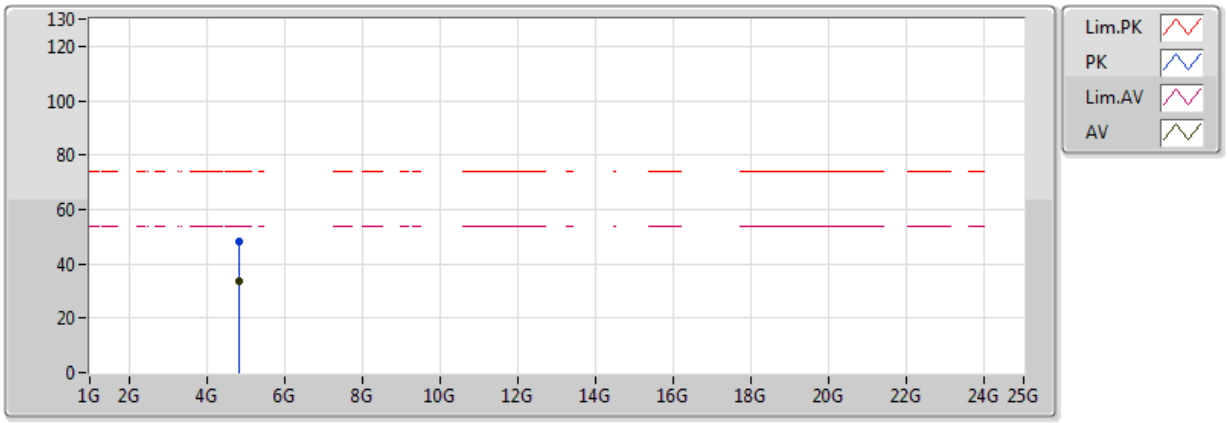


20170414
EUT Z Non-TXBF 2TX
Setting 18.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8332G	33.98	54.00	-20.02	6.63	3	V	87	2.06	-
PK	4.814G	49.06	74.00	-24.94	6.58	3	V	87	2.06	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

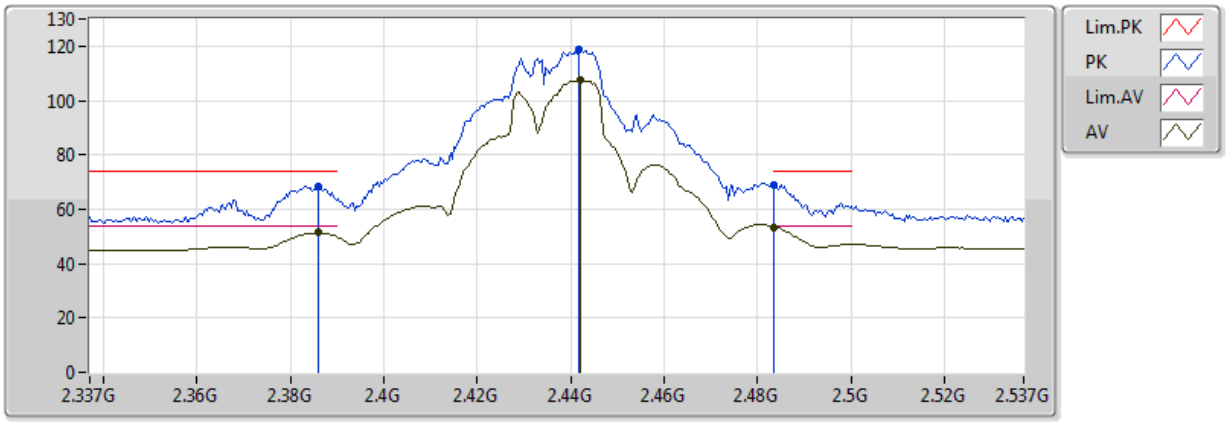


20170414
EUT Z Non-TXBF 2TX
Setting 18.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82236G	33.78	54.00	-20.22	6.60	3	H	4	1.42	-
PK	4.82284G	48.42	74.00	-25.58	6.60	3	H	4	1.42	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

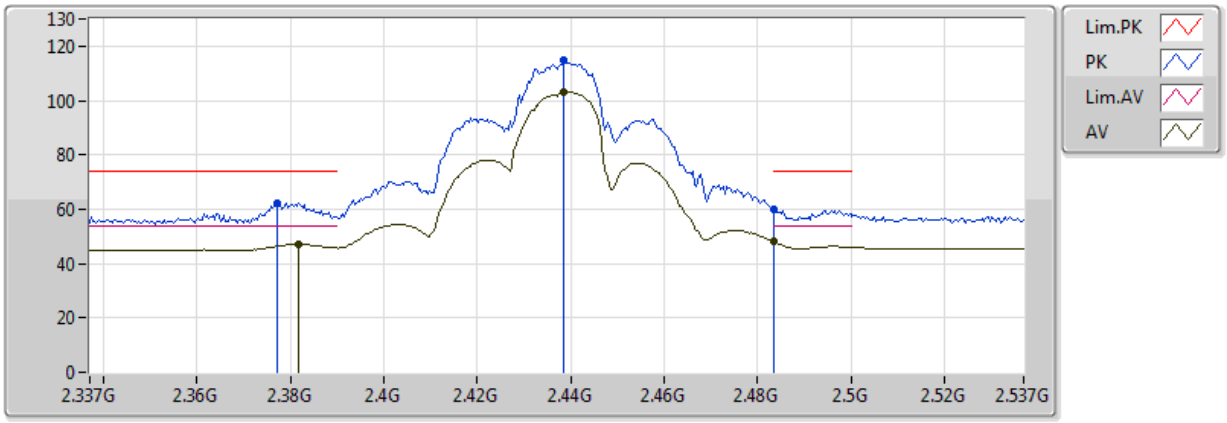


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3858G	51.38	54.00	-2.62	32.36	3	V	64	2.99	-
AV	2.4422G	107.46	Inf	-Inf	32.56	3	V	64	2.99	-
AV	2.483502G	53.51	54.00	-0.49	32.71	3	V	64	2.99	-
PK	2.3858G	68.33	74.00	-5.67	32.36	3	V	64	2.99	-
PK	2.4418G	118.73	Inf	-Inf	32.56	3	V	64	2.99	-
PK	2.483502G	69.02	74.00	-4.98	32.71	3	V	64	2.99	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

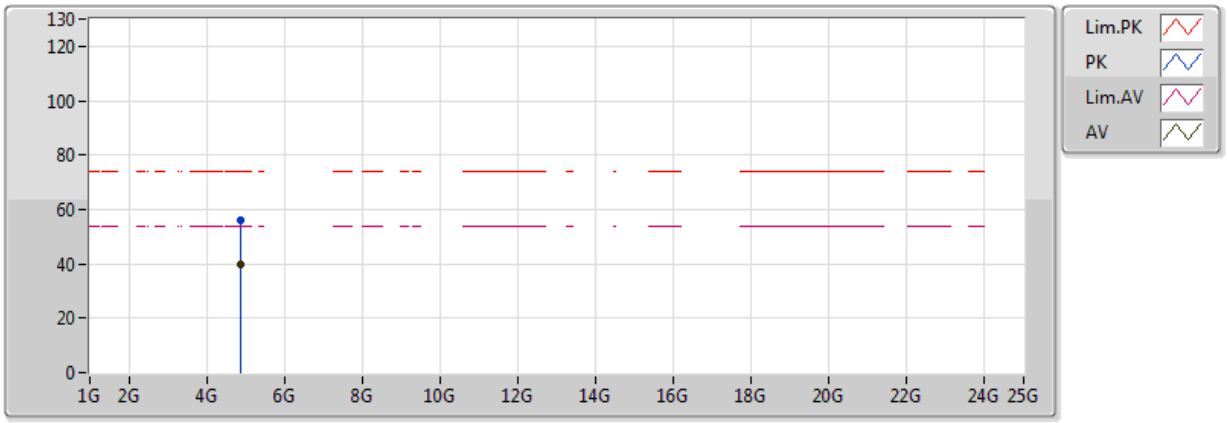


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3818G	47.06	54.00	-6.94	32.34	3	H	310	1.66	-
AV	2.4386G	103.28	Inf	-Inf	32.55	3	H	310	1.66	-
AV	2.483502G	48.01	54.00	-5.99	32.71	3	H	310	1.66	-
PK	2.377G	62.45	74.00	-11.55	32.32	3	H	310	1.66	-
PK	2.4386G	114.84	Inf	-Inf	32.55	3	H	310	1.66	-
PK	2.483502G	60.13	74.00	-13.87	32.71	3	H	310	1.66	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

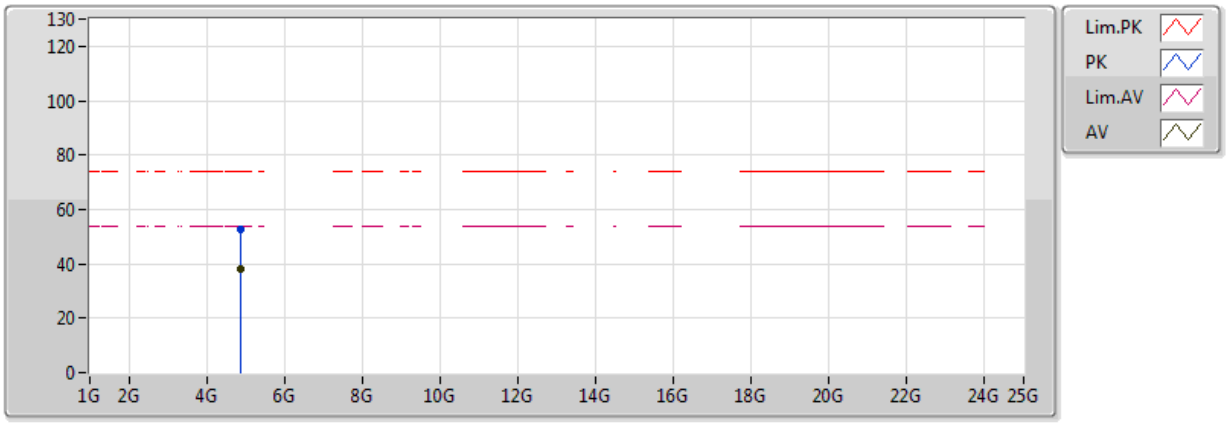


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8738G	39.96	54.00	-14.04	6.74	3	V	54	2.43	-
PK	4.8718G	55.86	74.00	-18.14	6.73	3	V	54	2.43	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

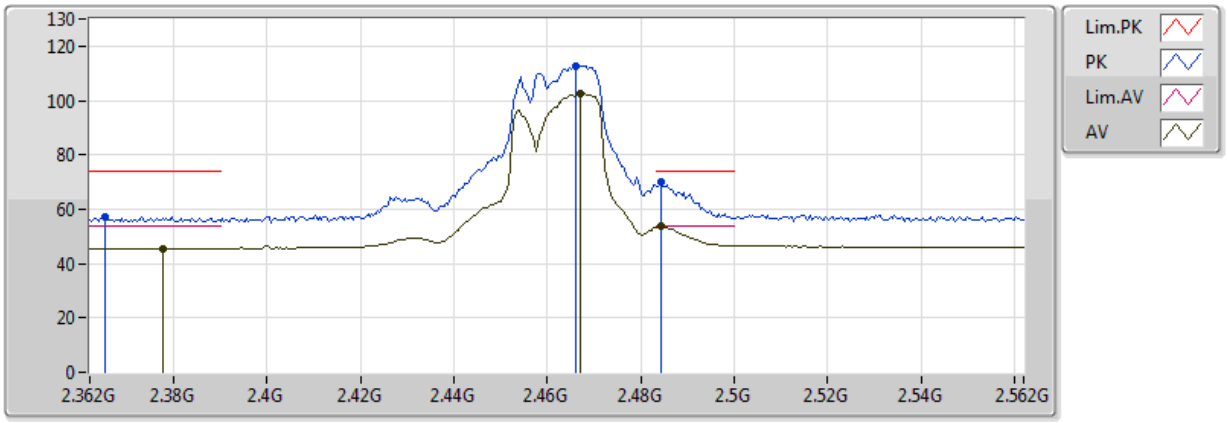


20170414
EUT Z Non-TXBF 2TX
Setting 23
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8702G	37.97	54.00	-16.03	6.73	3	H	91	1.06	-
PK	4.8686G	52.40	74.00	-21.60	6.73	3	H	91	1.06	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

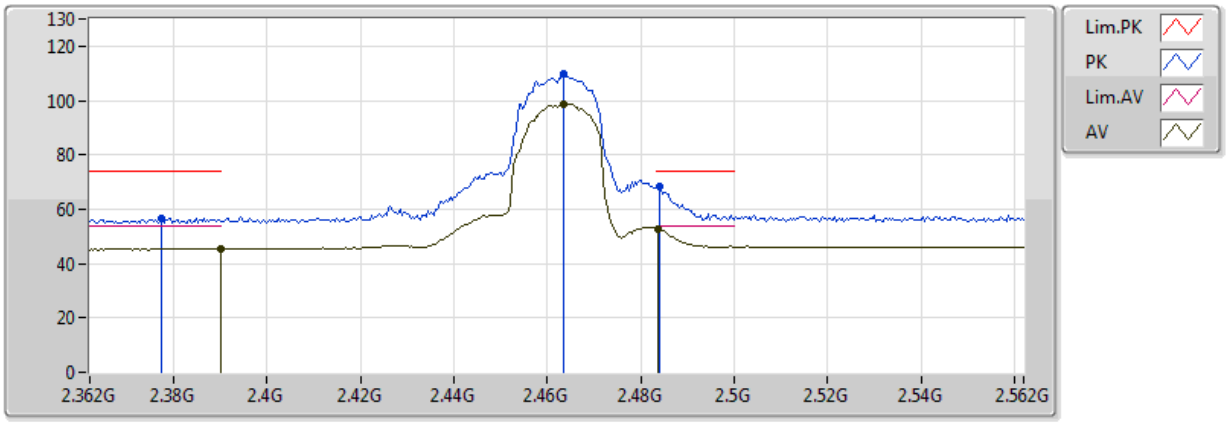


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3776G	45.63	54.00	-8.37	32.33	3	V	62	2.97	-
AV	2.4672G	102.62	Inf	-Inf	32.65	3	V	62	2.97	-
AV	2.4844G	53.73	54.00	-0.27	32.71	3	V	62	2.97	-
PK	2.3652G	57.32	74.00	-16.68	32.28	3	V	62	2.97	-
PK	2.466G	112.74	Inf	-Inf	32.65	3	V	62	2.97	-
PK	2.4844G	69.81	74.00	-4.19	32.71	3	V	62	2.97	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

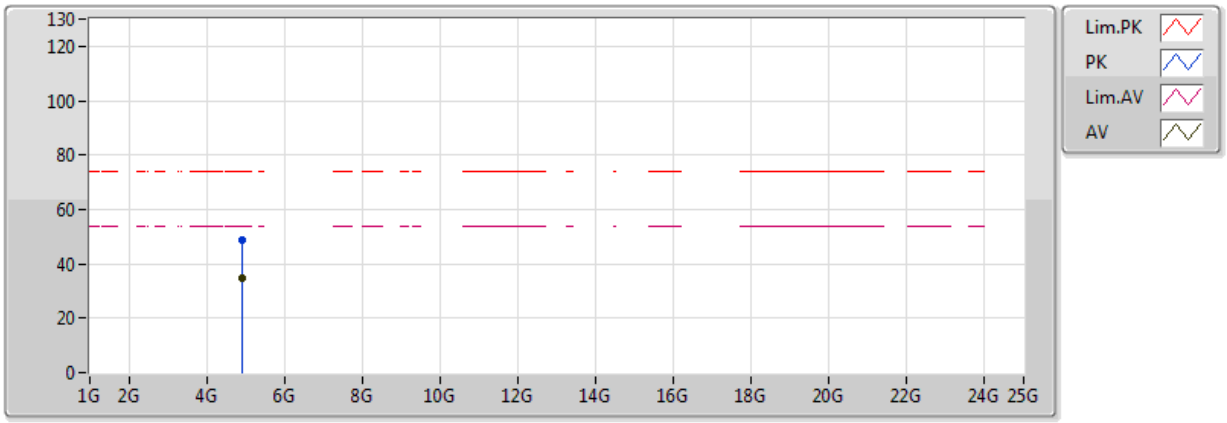


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	45.41	54.00	-8.59	32.37	3	H	310	1.04	-
AV	2.4636G	98.64	Inf	-Inf	32.64	3	H	310	1.04	-
AV	2.4836G	52.62	54.00	-1.38	32.71	3	H	310	1.04	-
PK	2.3772G	56.72	74.00	-17.28	32.33	3	H	310	1.04	-
PK	2.4636G	109.73	Inf	-Inf	32.64	3	H	310	1.04	-
PK	2.484G	68.57	74.00	-5.43	32.71	3	H	310	1.04	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

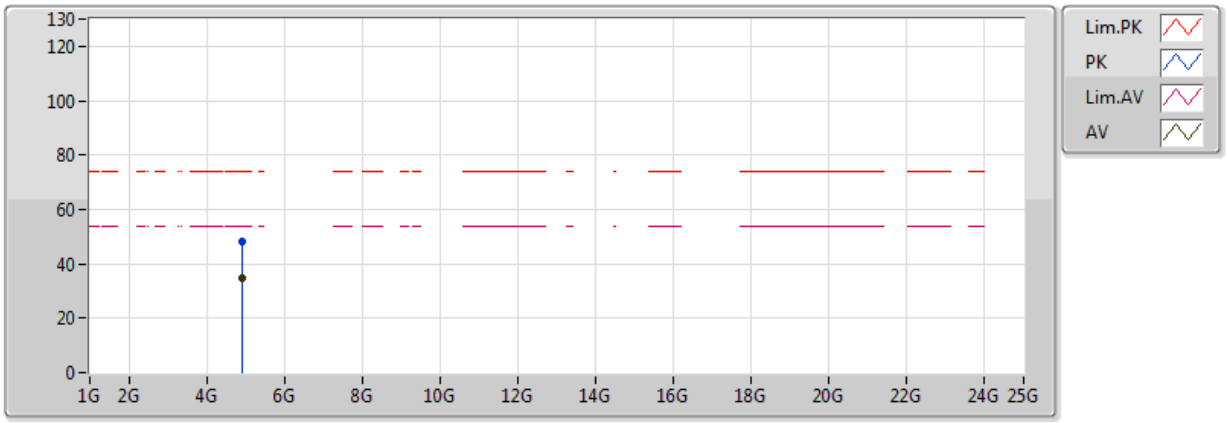


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92356G	34.97	54.00	-19.03	6.87	3	V	326	1.65	-
PK	4.93136G	48.88	74.00	-25.12	6.89	3	V	326	1.65	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

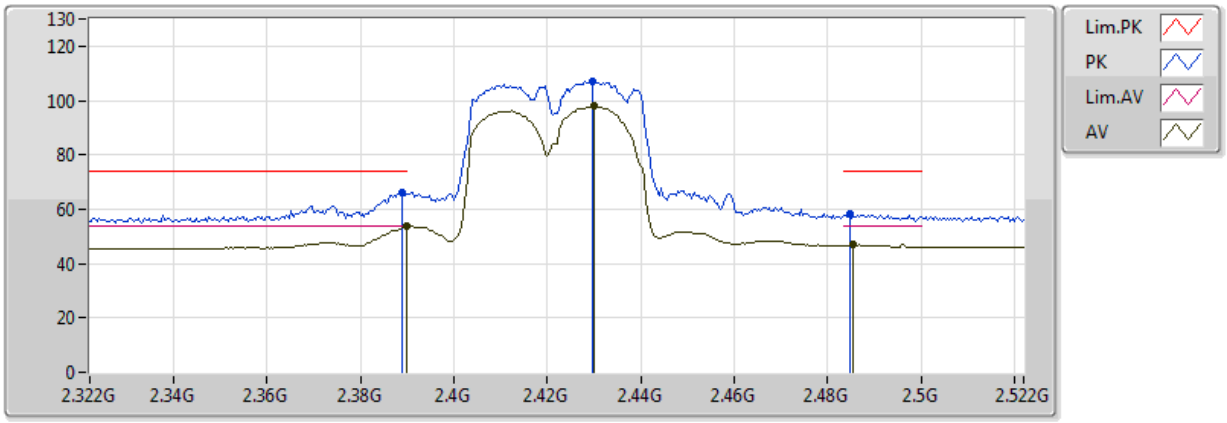


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9242G	34.81	54.00	-19.19	6.87	3	H	216	1.59	-
PK	4.9202G	48.34	74.00	-25.66	6.86	3	H	216	1.59	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

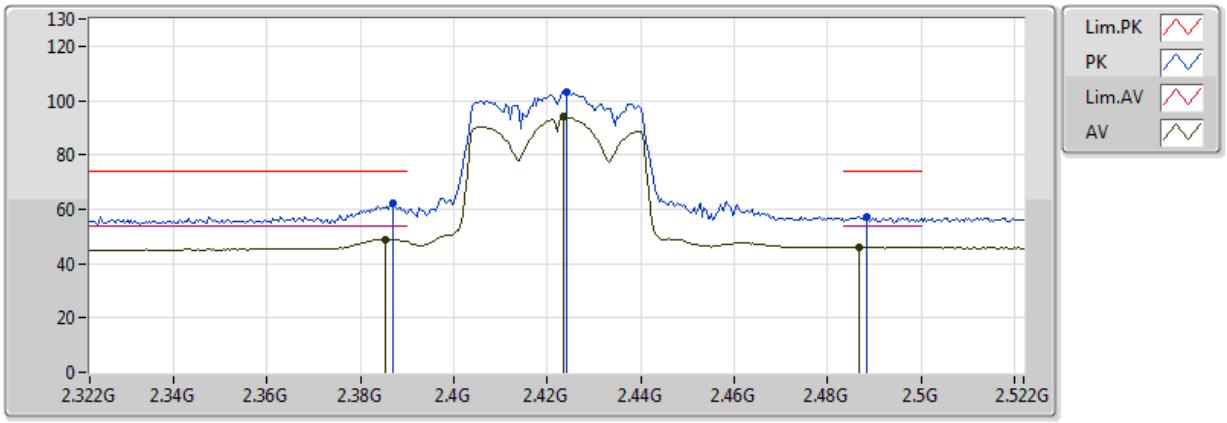


20170414
EUT Z Non-TXBF 2TX
Setting 14
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.55	54.00	-0.45	32.37	3	V	77	2.99	-
AV	2.43G	97.82	Inf	-Inf	32.52	3	V	77	2.99	-
AV	2.4856G	46.83	54.00	-7.17	32.72	3	V	77	2.99	-
PK	2.3888G	65.90	74.00	-8.10	32.37	3	V	77	2.99	-
PK	2.4296G	107.16	Inf	-Inf	32.52	3	V	77	2.99	-
PK	2.4848G	58.13	74.00	-15.87	32.72	3	V	77	2.99	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

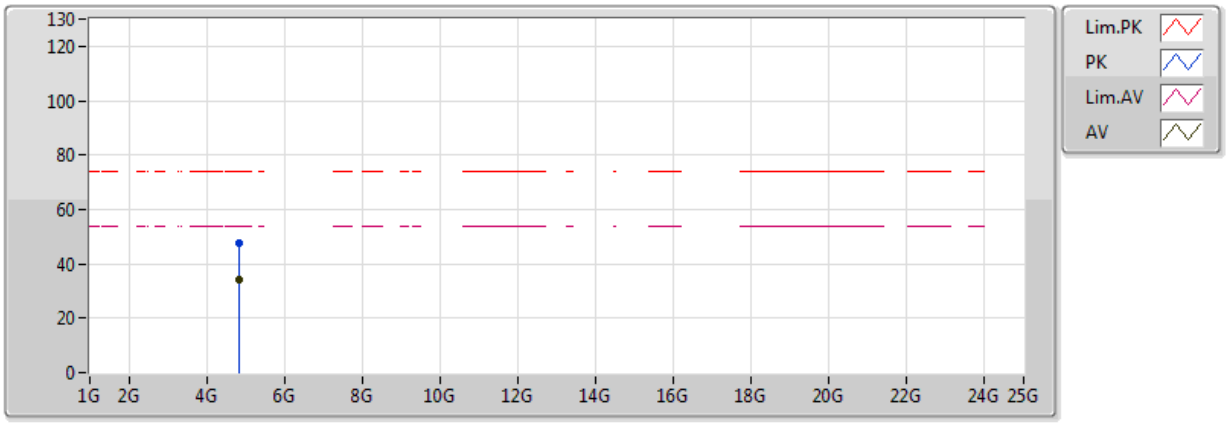


20170414
EUT Z Non-TXBF 2TX
Setting 14
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3852G	48.96	54.00	-5.04	32.36	3	H	312	1.05	-
AV	2.4236G	93.94	Inf	-Inf	32.49	3	H	312	1.05	-
AV	2.4868G	45.95	54.00	-8.05	32.72	3	H	312	1.05	-
PK	2.3868G	62.43	74.00	-11.57	32.36	3	H	312	1.05	-
PK	2.424G	103.01	Inf	-Inf	32.50	3	H	312	1.05	-
PK	2.4884G	57.39	74.00	-16.61	32.73	3	H	312	1.05	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

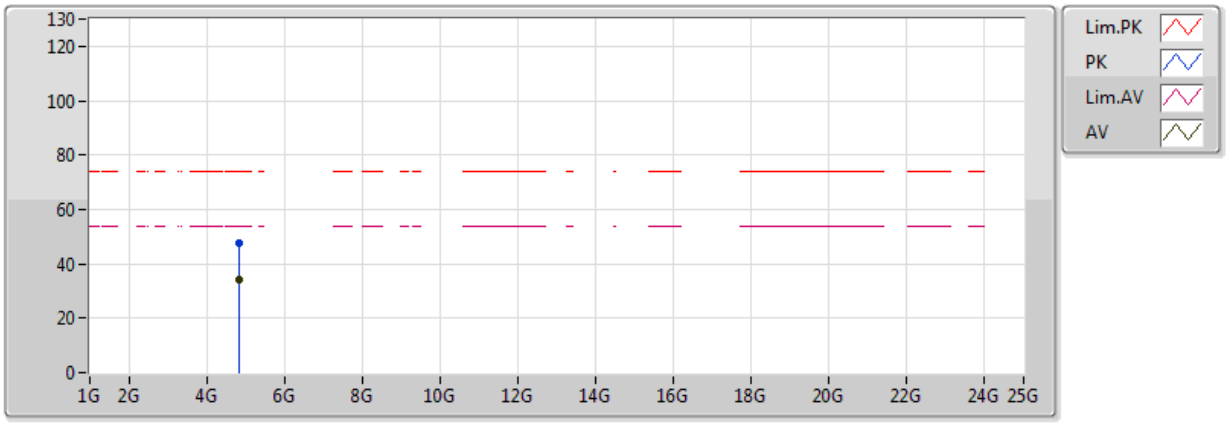


20170414
EUT Z Non-TXBF 2TX
Setting 14
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8414G	34.29	54.00	-19.71	6.65	3	V	38	1.19	-
PK	4.83652G	47.55	74.00	-26.45	6.64	3	V	38	1.19	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

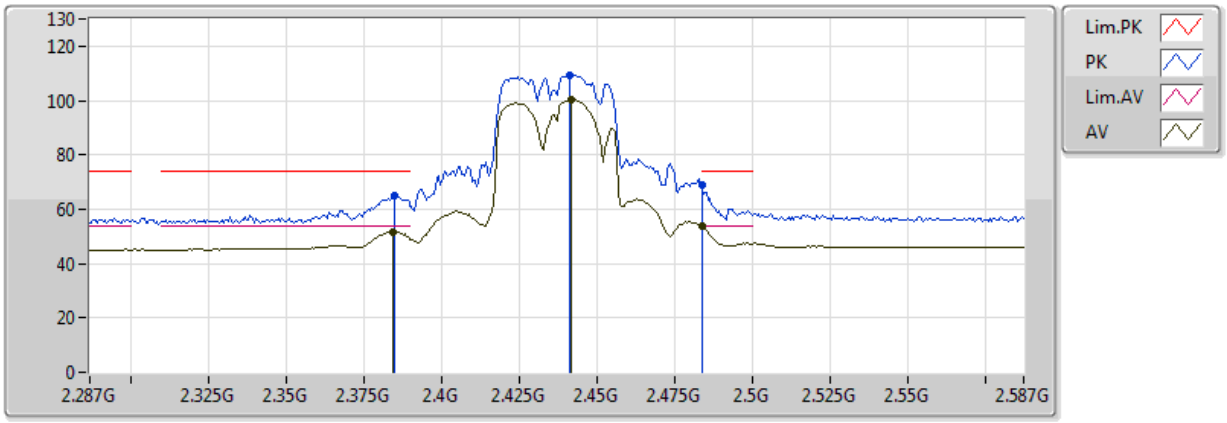


20170414
EUT Z Non-TXBF 2TX
Setting 14
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.85148G	34.36	54.00	-19.64	6.68	3	H	137	1.47	-
PK	4.83424G	47.79	74.00	-26.21	6.63	3	H	137	1.47	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

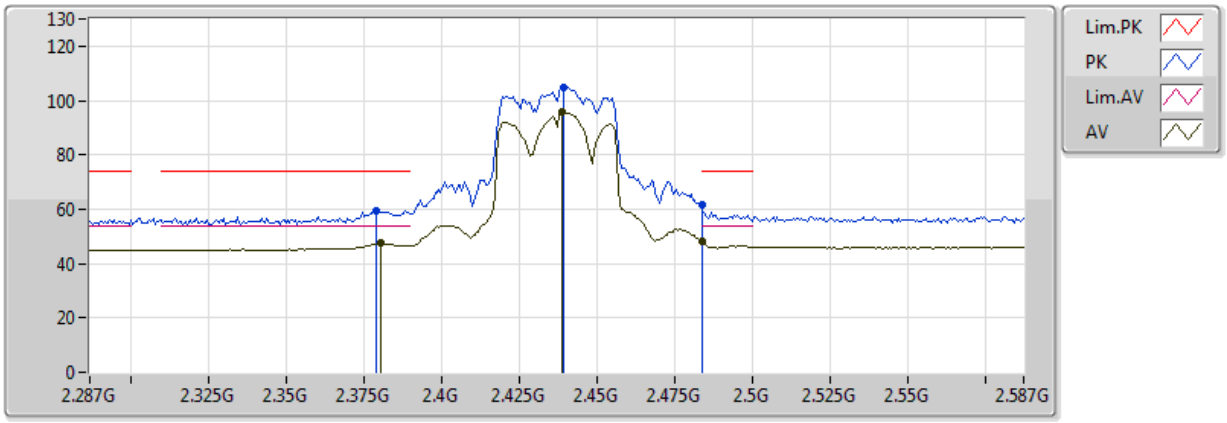


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3842G	51.74	54.00	-2.26	32.35	3	V	58	2.99	-
AV	2.4418G	100.26	Inf	-Inf	32.56	3	V	58	2.99	-
AV	2.483502G	53.54	54.00	-0.46	32.71	3	V	58	2.99	-
PK	2.3848G	65.04	74.00	-8.96	32.35	3	V	58	2.99	-
PK	2.4412G	109.44	Inf	-Inf	32.56	3	V	58	2.99	-
PK	2.483502G	68.76	74.00	-5.24	32.71	3	V	58	2.99	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

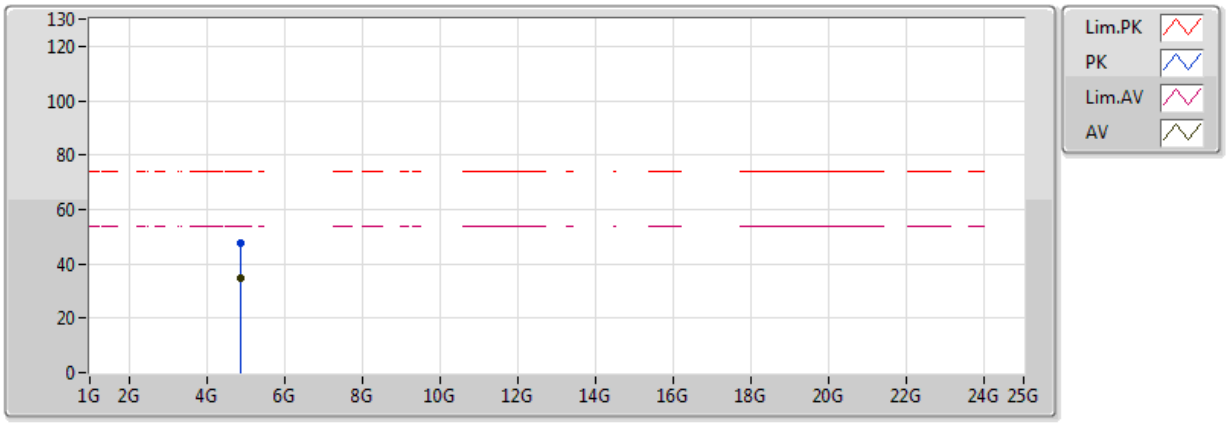


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3806G	47.37	54.00	-6.63	32.34	3	H	309	1.66	-
AV	2.4388G	95.62	Inf	-Inf	32.55	3	H	309	1.66	-
AV	2.483502G	48.23	54.00	-5.77	32.71	3	H	309	1.66	-
PK	2.3788G	59.28	74.00	-14.72	32.33	3	H	309	1.66	-
PK	2.4394G	104.84	Inf	-Inf	32.55	3	H	309	1.66	-
PK	2.483502G	61.49	74.00	-12.51	32.71	3	H	309	1.66	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

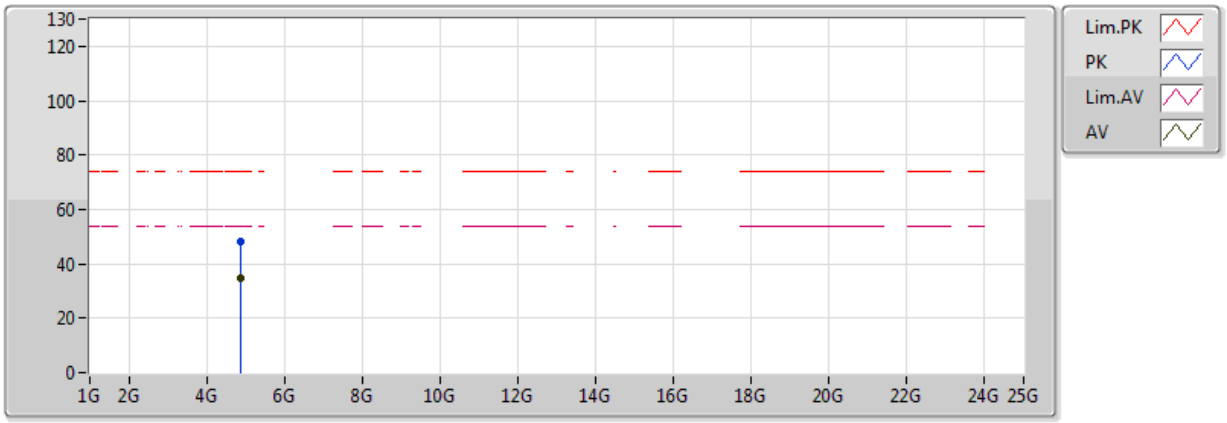


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.86816G	34.81	54.00	-19.19	6.72	3	V	141	1.79	-
PK	4.878G	47.78	74.00	-26.22	6.75	3	V	141	1.79	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

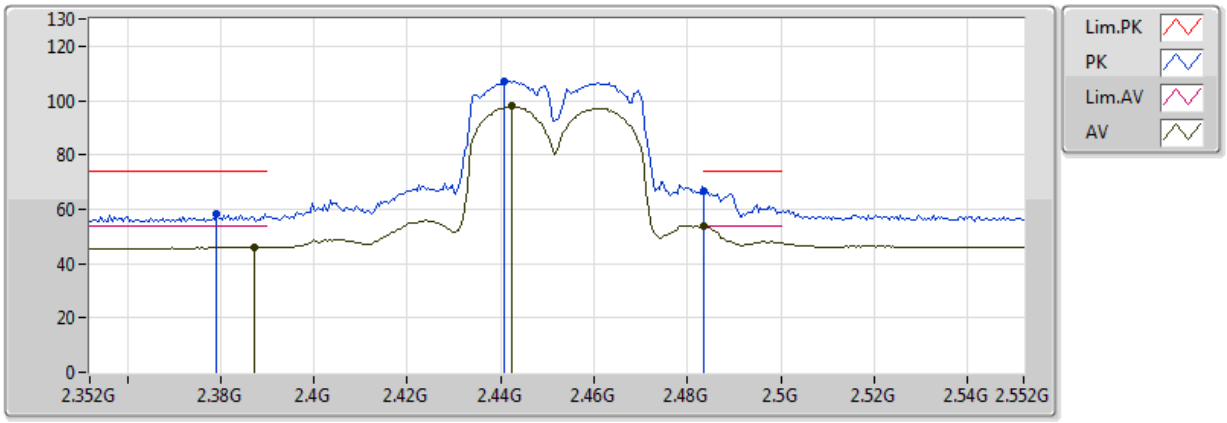


20170414
EUT Z Non-TXBF 2TX
Setting 16.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.86972G	34.50	54.00	-19.50	6.73	3	H	268	1.48	-
PK	4.8676G	48.16	74.00	-25.84	6.72	3	H	268	1.48	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

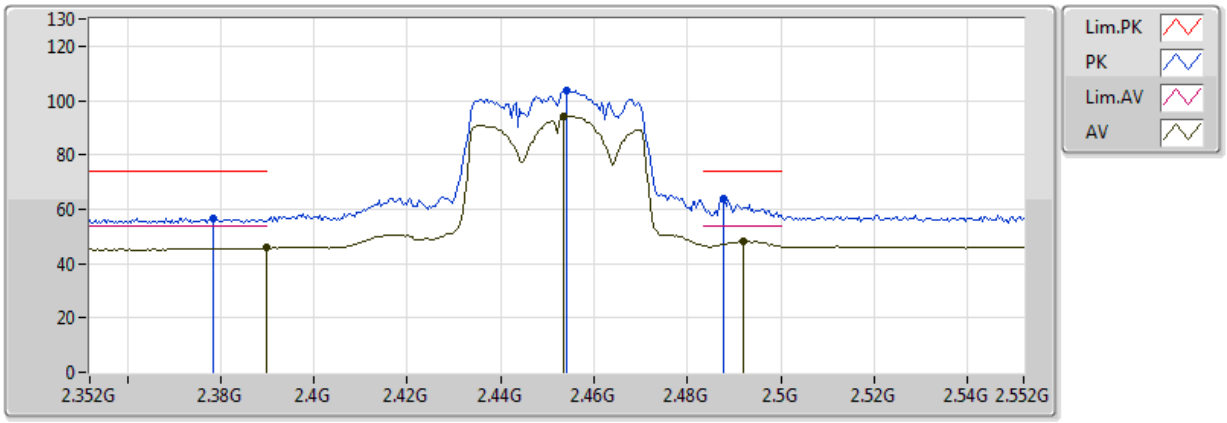


20170414
EUT Z Non-TXBF 2TX
Setting 14.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3872G	46.10	54.00	-7.90	32.36	3	V	85	2.99	-
AV	2.4424G	97.80	Inf	-Inf	32.56	3	V	85	2.99	-
PK	2.3792G	58.14	74.00	-15.86	32.33	3	V	85	2.99	-
PK	2.4408G	107.22	Inf	-Inf	32.56	3	V	85	2.99	-
PK	2.4836G	66.46	74.00	-7.54	32.71	3	V	85	2.99	-
AV	2.4836G	53.56	54.00	-0.44	32.71	3	V	85	2.99	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

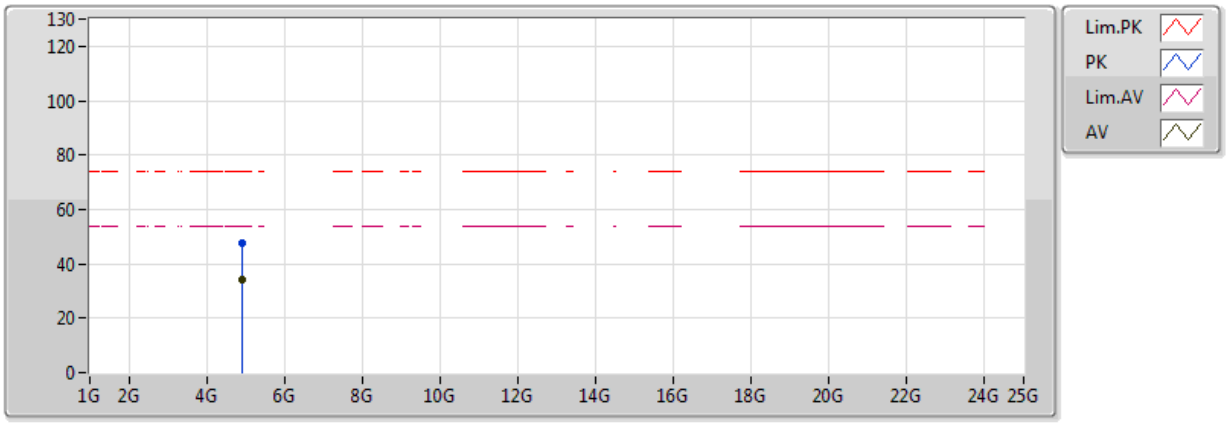


20170414
EUT Z Non-TXBF 2TX
Setting 14.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	45.69	54.00	-8.31	32.37	3	H	307	1.05	-
AV	2.4536G	94.37	Inf	-Inf	32.60	3	H	307	1.05	-
AV	2.492G	48.13	54.00	-5.87	32.74	3	H	307	1.05	-
PK	2.3784G	56.73	74.00	-17.27	32.33	3	H	307	1.05	-
PK	2.454G	103.71	Inf	-Inf	32.60	3	H	307	1.05	-
PK	2.4876G	63.85	74.00	-10.15	32.73	3	H	307	1.05	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

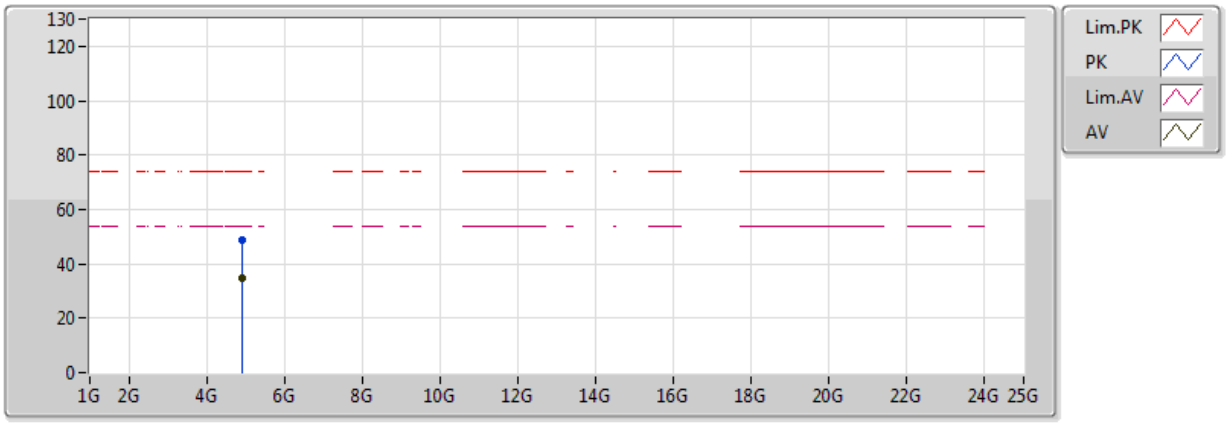


20170414
EUT Z Non-TXBF 2TX
Setting 14.5
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90336G	34.32	54.00	-19.68	6.82	3	V	208	1.08	-
PK	4.90524G	47.37	74.00	-26.63	6.82	3	V	208	1.08	-

802.11n HT40_Nss1,(MCS0)_2TX

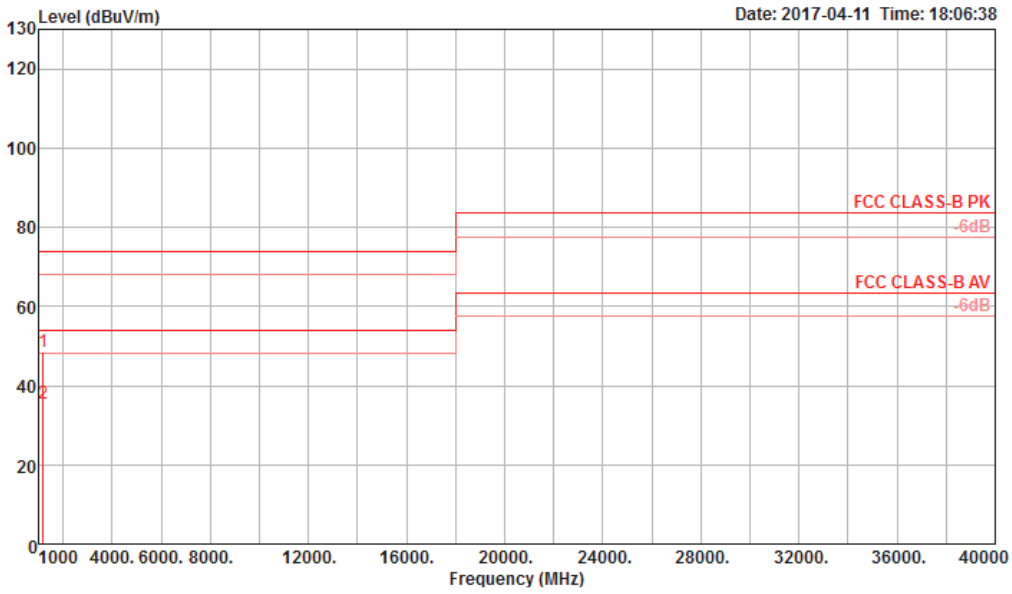
2452MHz_TX



20170414
EUT Z Non-TXBF 2TX
Setting 14.5
05-M-01

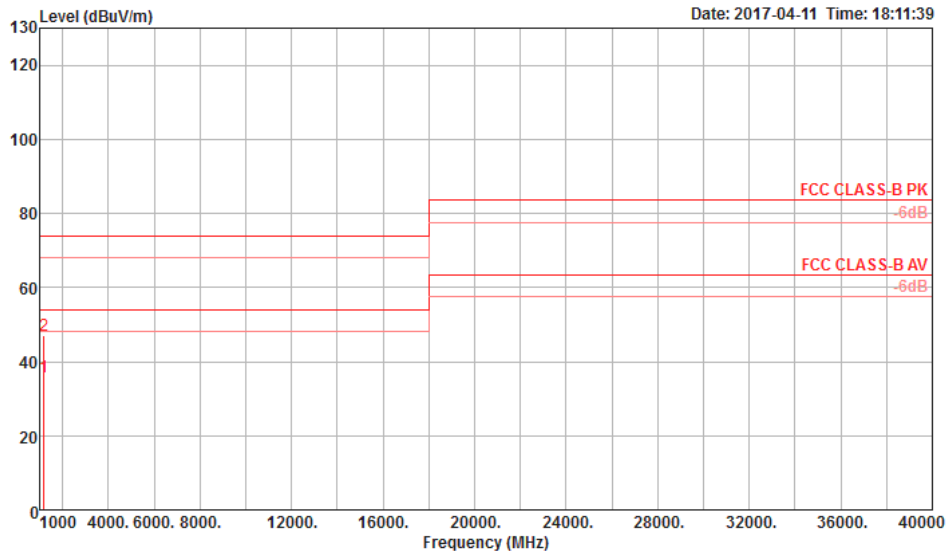
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.89572G	34.47	54.00	-19.53	6.80	3	H	115	1.10	-
PK	4.914G	48.68	74.00	-25.32	6.85	3	H	115	1.10	-

RSE Co-location Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1175.88	48.62	74.00	-25.38	55.56	2.99	24.36	34.29	274	30	Peak	HORIZONTAL
2	1176.00	35.43	54.00	-18.57	42.37	2.99	24.36	34.29	274	30	Average	HORIZONTAL

RSE Co-location Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1177.80	35.80	54.00	-18.20	42.74	2.99	24.37	34.30	128	236	Average	VERTICAL
2	1182.40	46.94	74.00	-27.06	53.86	3.00	24.38	34.30	128	236	Peak	VERTICAL