

FCC Test Report

Equipment : cnPilot E501S Outdoor
Brand Name : Cambium Networks
Model No. : cnPilot E501S Outdoor
FCC ID : Z8H89FT0029
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 Feb. 15, 2017 and completely tested on Mar. 13, 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.





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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

[illegible]

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:

- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 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.
- 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)	
						2.4GHz	5GHz
1	1, 2	Cambium	A005332	Embedded Ant.	I-PEX	10.5	-
2	1, 2	Cambium	A005332	Embedded Ant.	I-PEX	-	13

Note: The EUT has two antennas.

<For 2.4GHz Band>

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

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

<For 5GHz Band>

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

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.996	0.017
802.11g	0.979	0.092
802.11n HT20	0.976	0.106
802.11n HT40	0.962	0.168

1.1.4 EUT Operational Condition

EUT Power Type	From PoE		
Beamforming Function	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming	

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 v03r05
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	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	Serway Lin/Peter Wu	25°C / 56%	Feb. 22, 2017~ Feb. 24, 2017
Radiated	03CH01-CB	Justin Lin/Welson Chen	22°C / 54%	Feb. 15, 2017~ Feb. 23, 2017
AC Conduction	CO02-CB	Hank Yang	24°C / 55%	Feb. 25, 2017~ Mar. 13, 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	23
2437MHz	22.5
2462MHz	22.5
802.11g_(6Mbps)_2TX	-
2412MHz	17
2437MHz	23
2462MHz	18
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	16
2437MHz	22.5
2462MHz	16
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	12.5
2437MHz	17
2452MHz	12.5

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
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 5GHz +WLAN 2.4GHz
Refer to Sporton Test Report No.: FA721518 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only be used in Y-axis position.

Note 2: The PoE below is for measurement only, would not be marked.

Support Unit	Brand	Model	FCC ID
PoE	Cambium Networks	NET-P30-56IN	DoC

2.3 EUT Operation during Test

For CTX Mode:

non-beamforming 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 Accessories

Wall-mounted rack (1)*1

Wall-mounted rack (2)*2 (Set)

2.5 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	AP	HP	MRLBB-1305	DoC
3	PoE	Cambium Networks	NET-P30-56IN	DoC

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E4300	DoC
2	AP	HP	MRLBB-1305	DoC
3	PoE	Cambium Networks	NET-P30-56IN	DoC

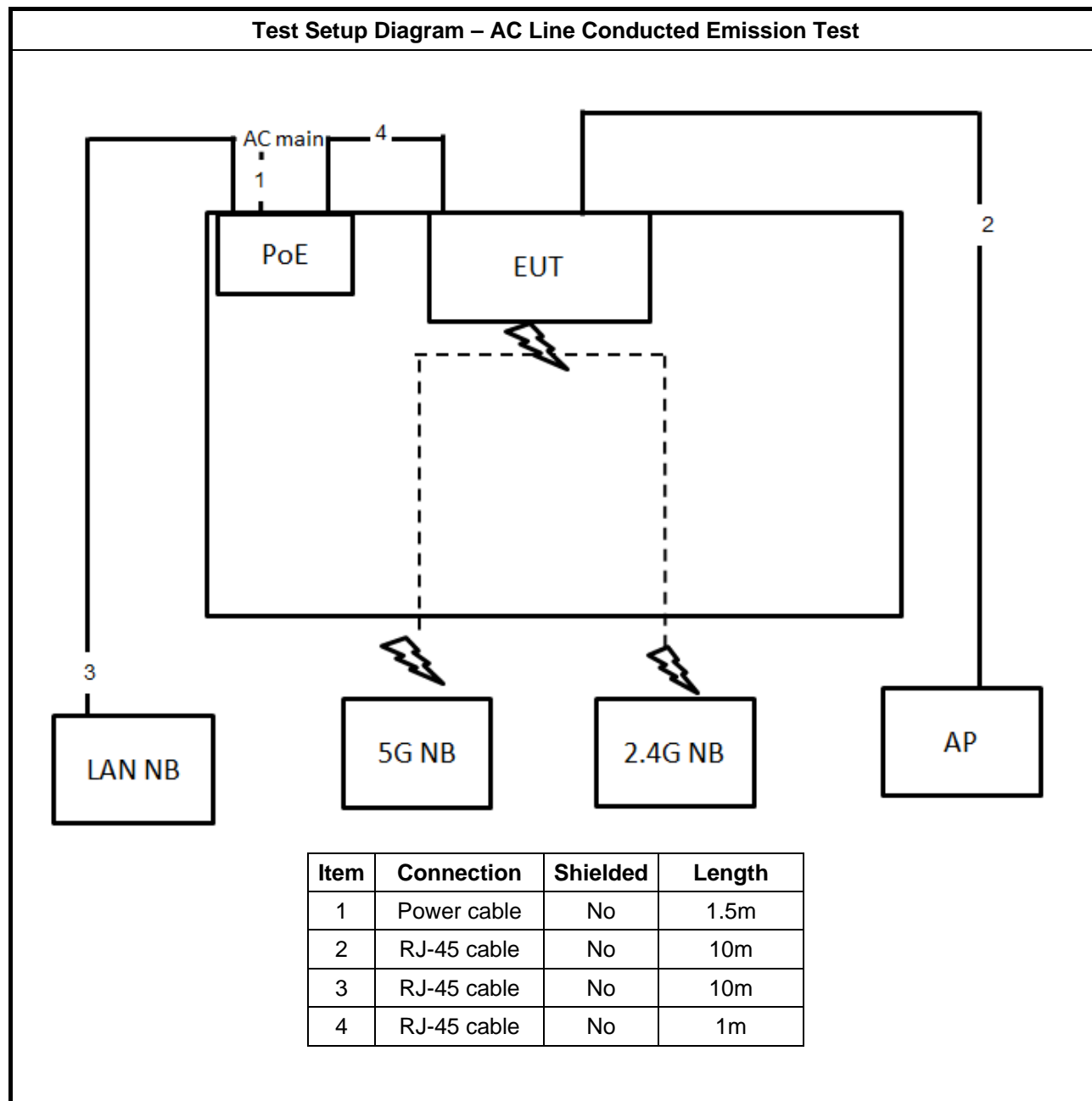
For Test Site No: 03CH01-CB (Above 1GHz)

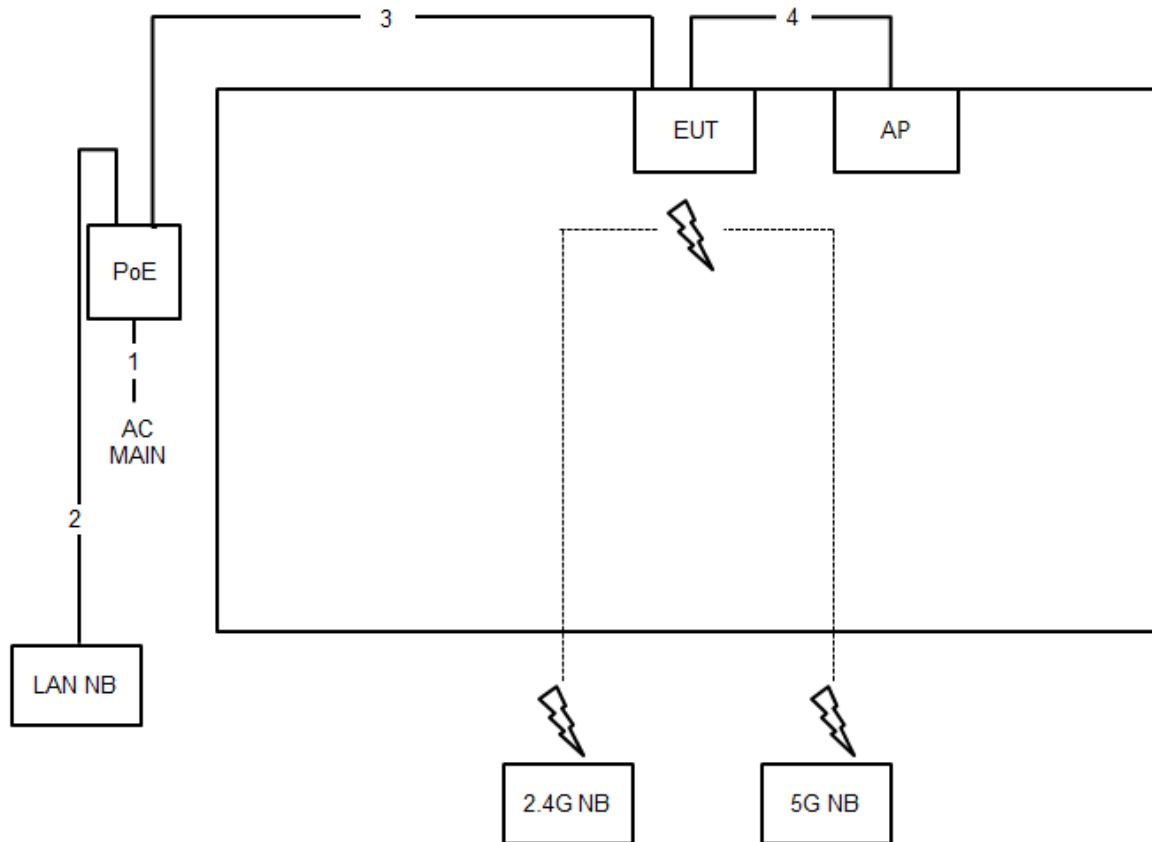
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	PoE	Cambium Networks	NET-P30-56IN	DoC

For Test Site No: TH01-CB

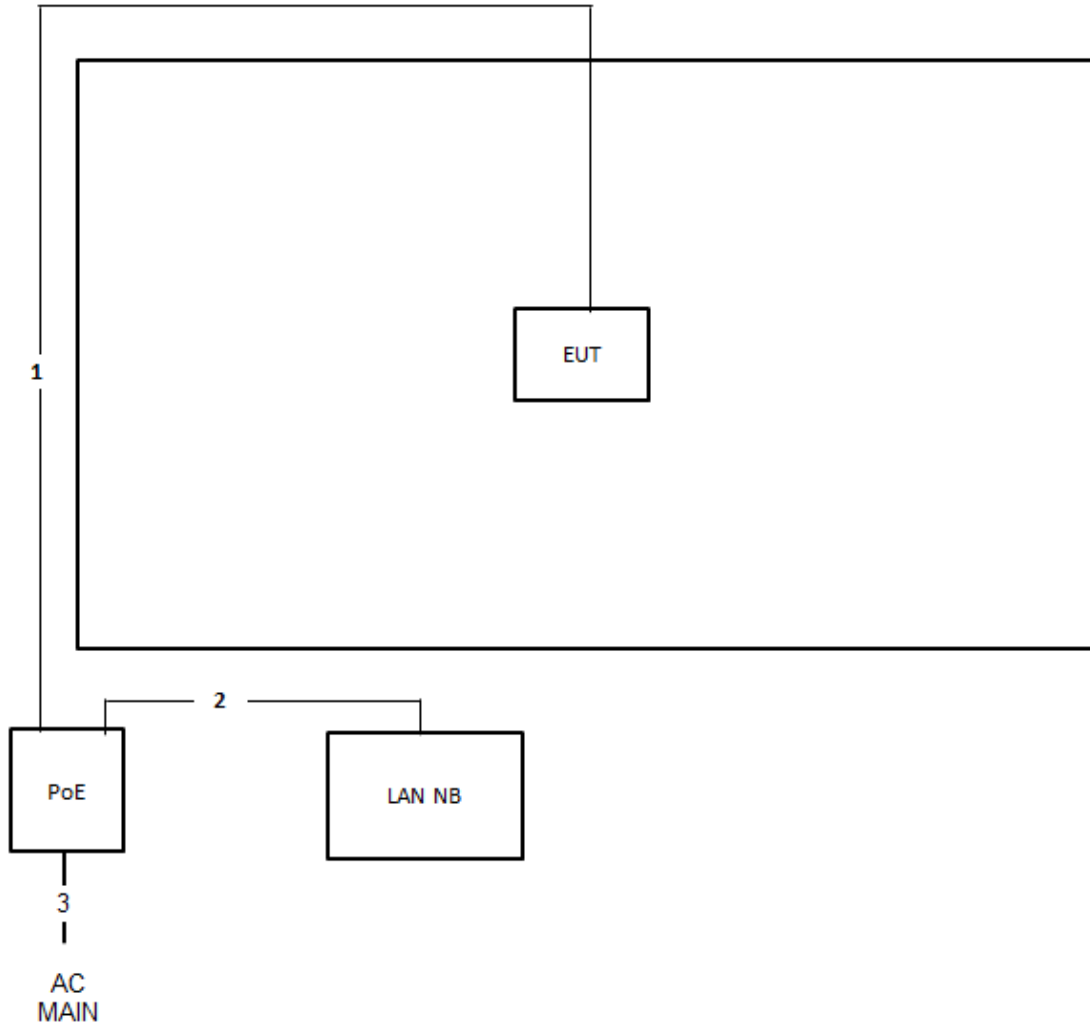
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	PoE	Cambium Networks	NET-P30-56IN	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test (Below 1GHz)


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

Test Setup Diagram - Radiated Test (Above 1GHz)


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

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.

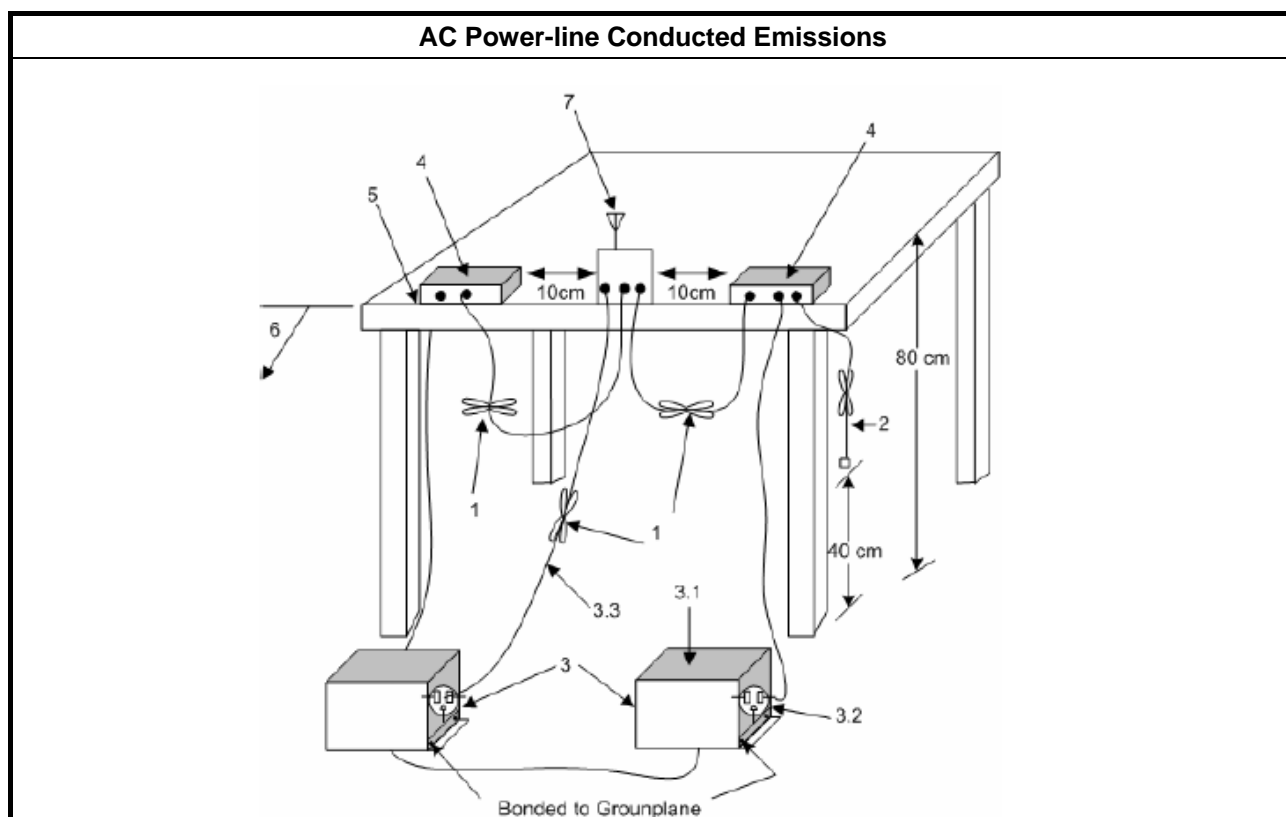
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup





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 \geq 500 kHz.

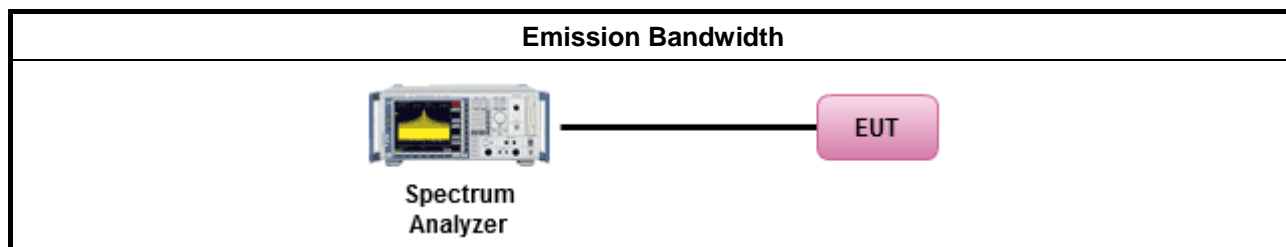
3.2.2 Measuring Instruments

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:
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



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.	

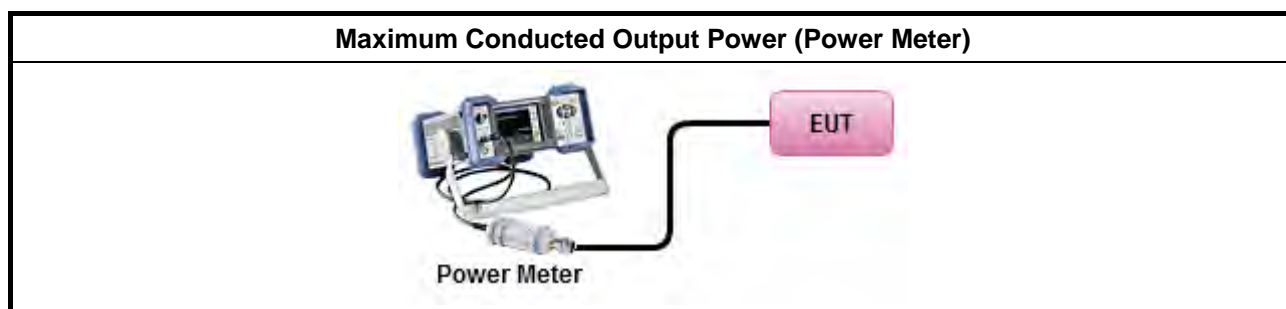
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
[duty cycle ≥ 98% or external video / power trigger]	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
<input type="checkbox"/>	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	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$ 	

3.3.4 Test Setup



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
<ul style="list-style-type: none"> Power Spectral Density (PSD) ≤ 8 dBm/3kHz

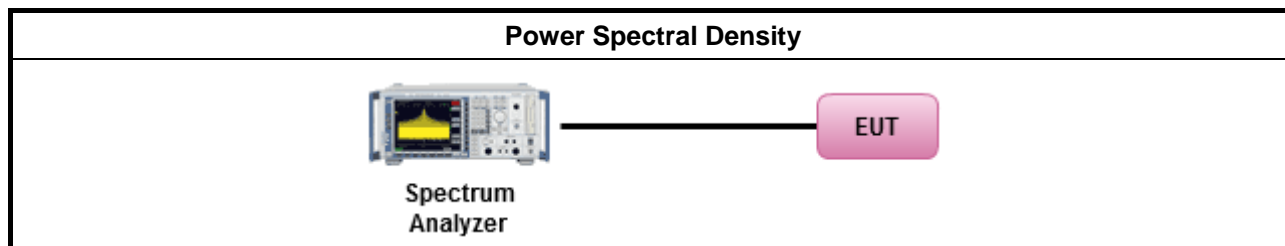
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
<ul style="list-style-type: none"> 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).
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq 98\%$ or external video / power trigger]
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
<input type="checkbox"/> 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
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
<ul style="list-style-type: none"> For conducted measurement.
<ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below:
<input checked="" type="checkbox"/> 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.
<input type="checkbox"/> 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,
<input type="checkbox"/> 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



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
<p>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.</p> <p>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.</p>	

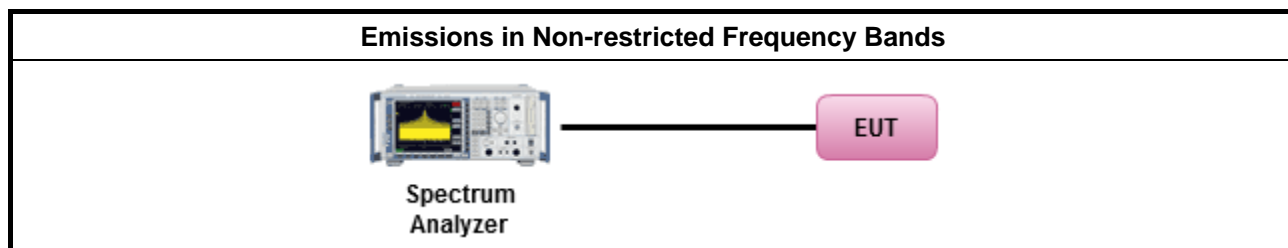
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



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.

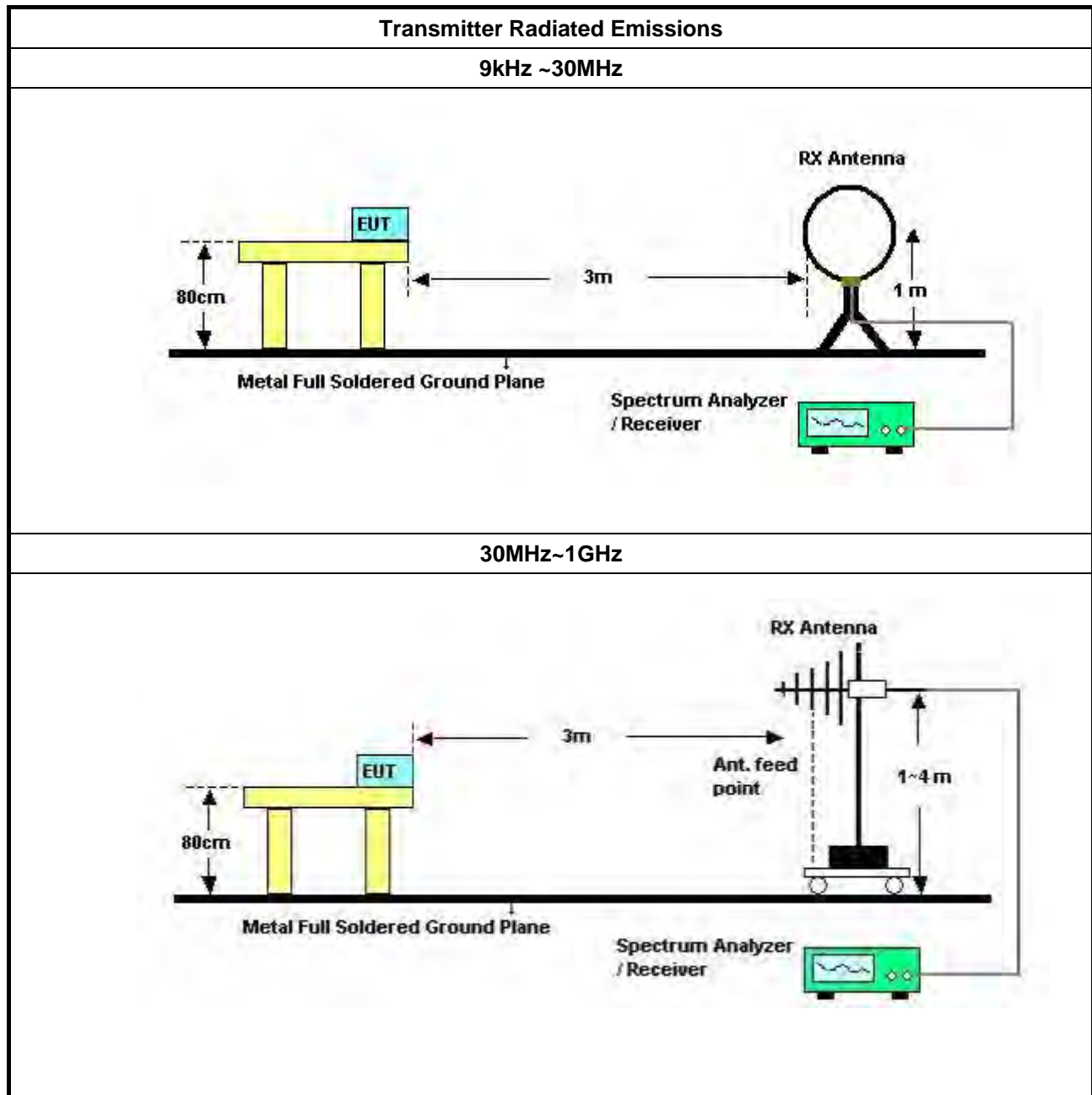
3.6.2 Measuring Instruments

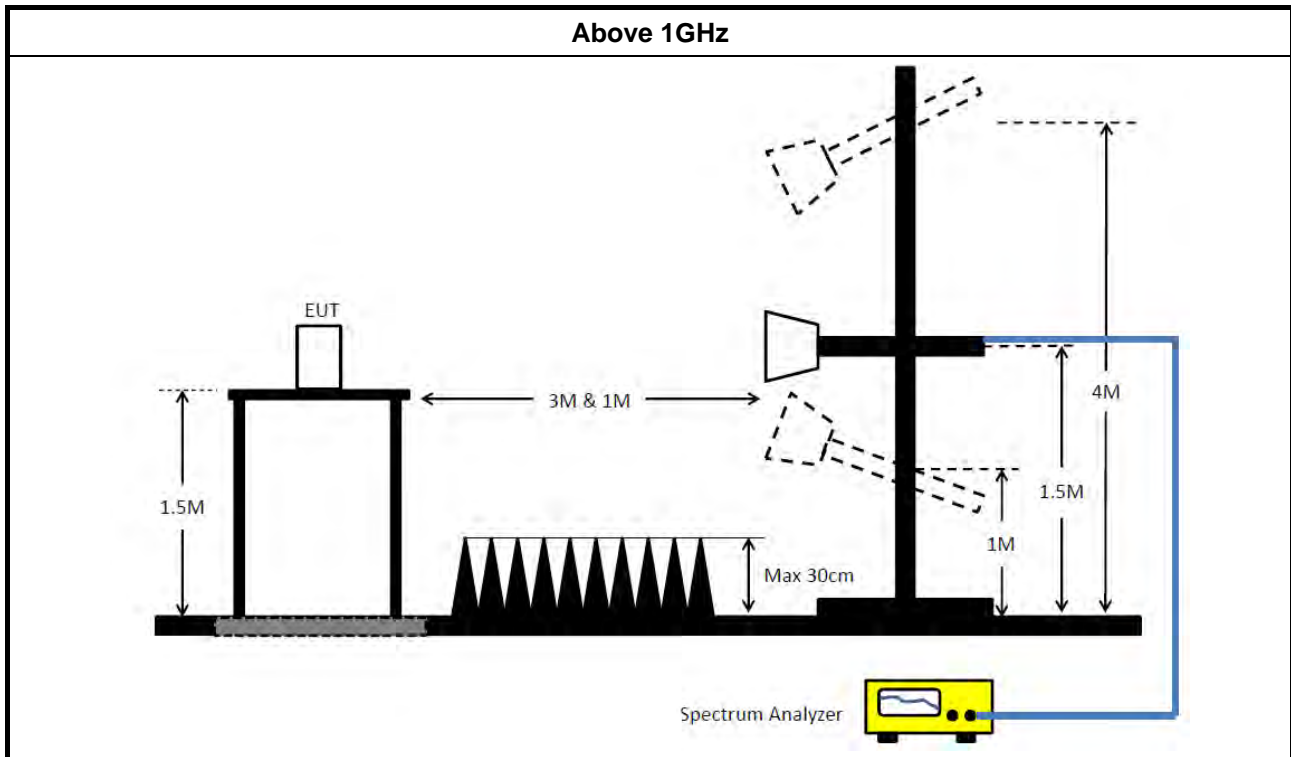
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. 	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> For the transmitter band-edge emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> 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).
<ul style="list-style-type: none"> For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2. 	
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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





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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 23, 2016	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 15, 2016	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 16, 2017	Conduction (CO02-CB)
COND Cable	Woken	Cable	01	0.15MHz ~ 30MHz	Nov. 30, 2016	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F	9561-F073	9kHz ~ 30MHz	Sep. 29, 2016	Conduction (CO02-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. 15, 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. 21, 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)



FCC Test Report

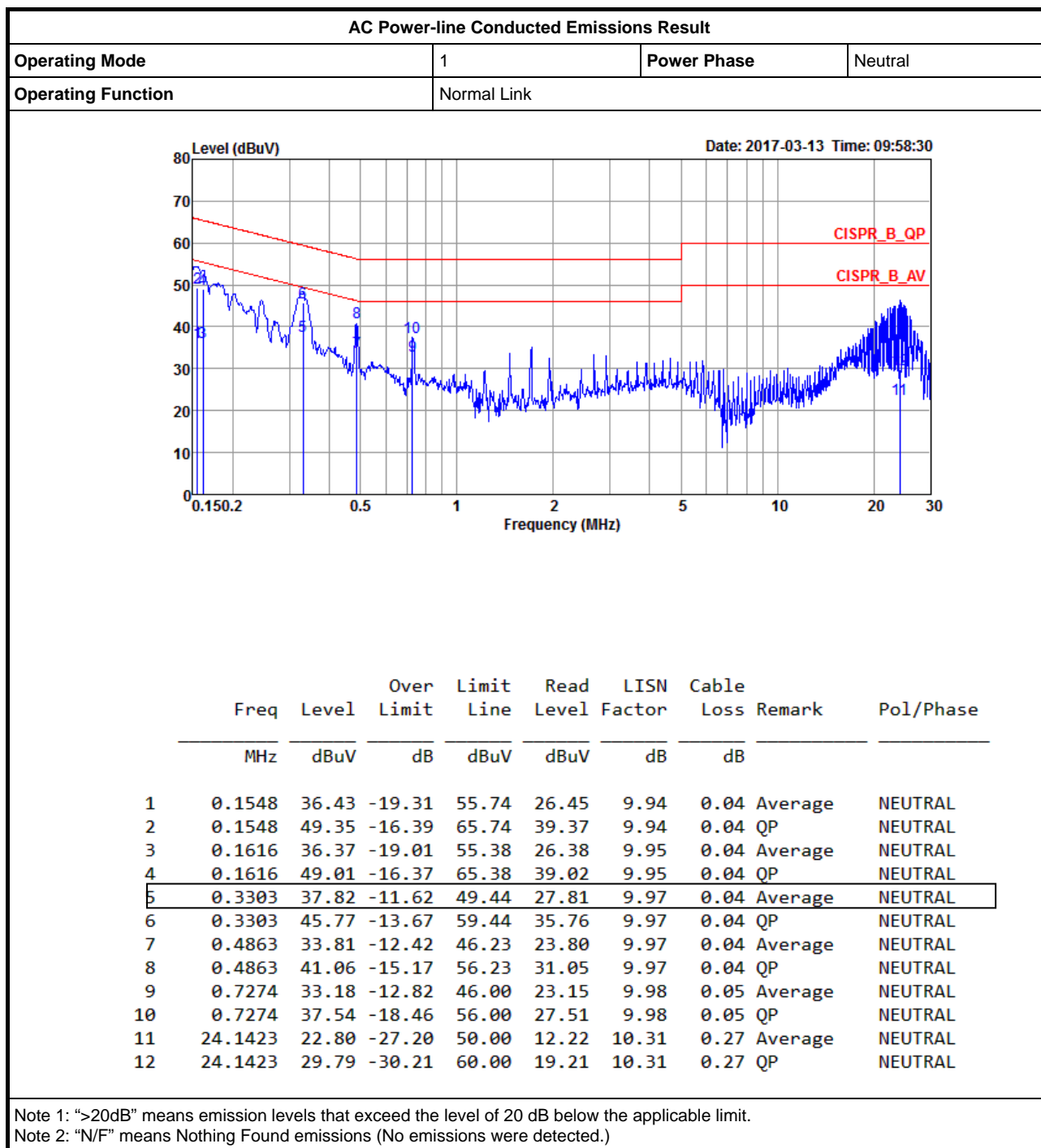
Report No. : FR721518AA

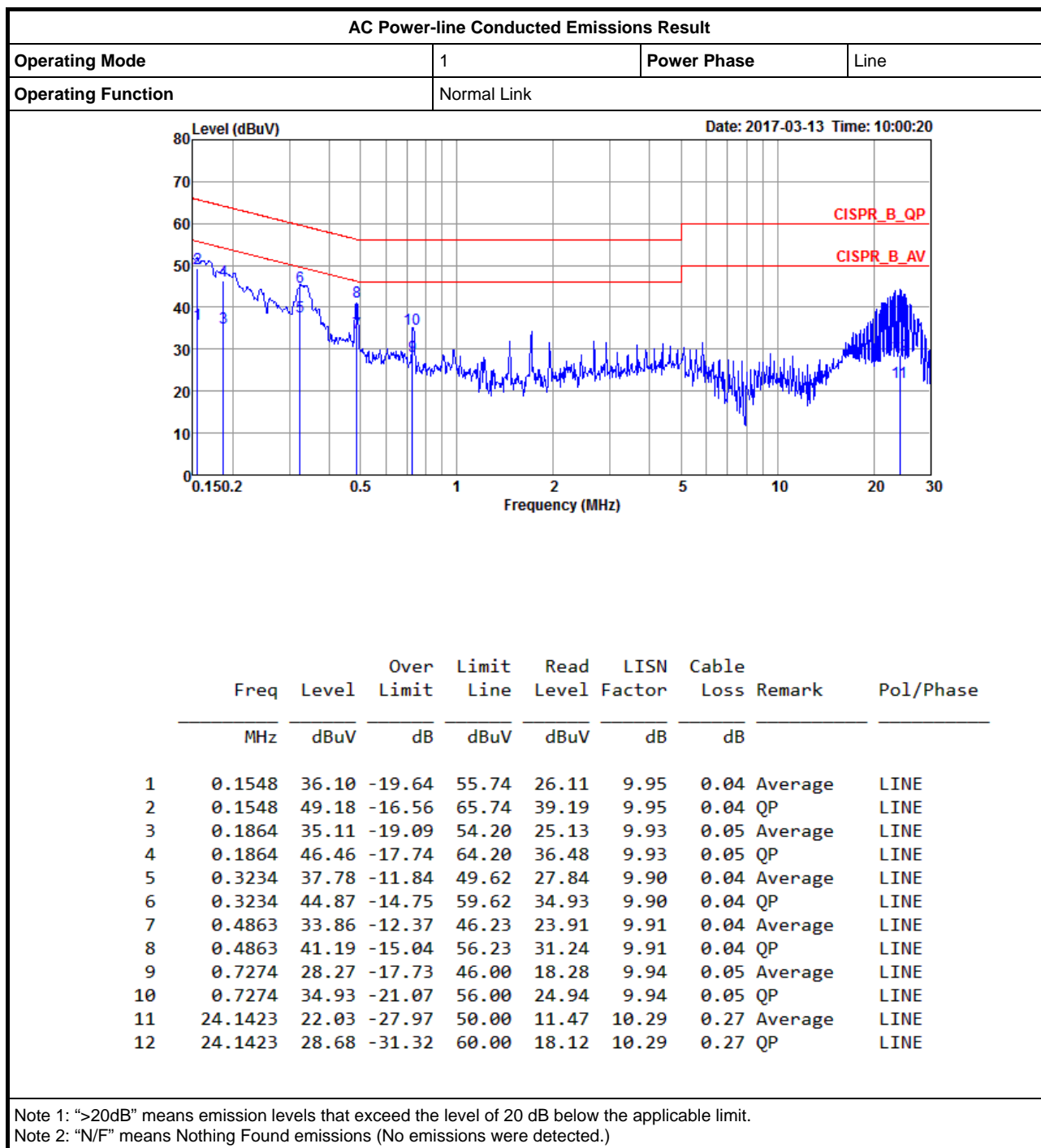
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (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)
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.

NCR means Non-Calibration required.





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	7.05M	11.994M	12M0G1D	6.575M	11.819M
802.11g_(6Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	16.35M	16.592M	16M6D1D	16.3M	16.542M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	17.6M	17.766M	17M8D1D	17.25M	17.741M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	36.3M	36.382M	36M4D1D	35.7M	36.282M

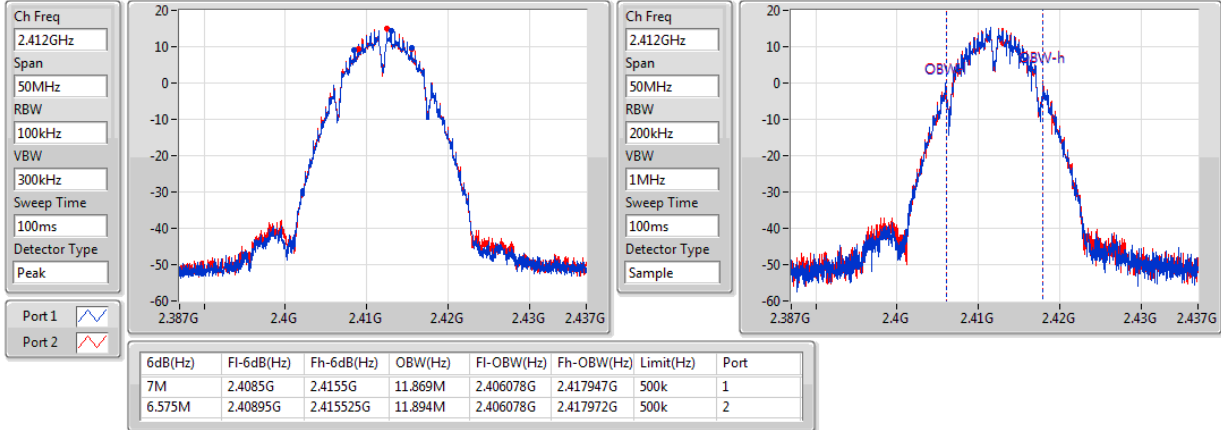
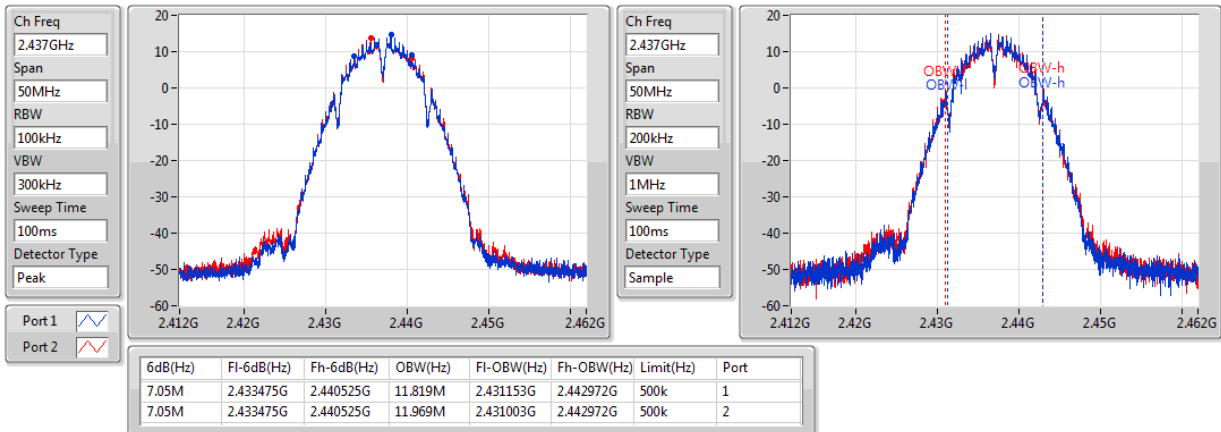
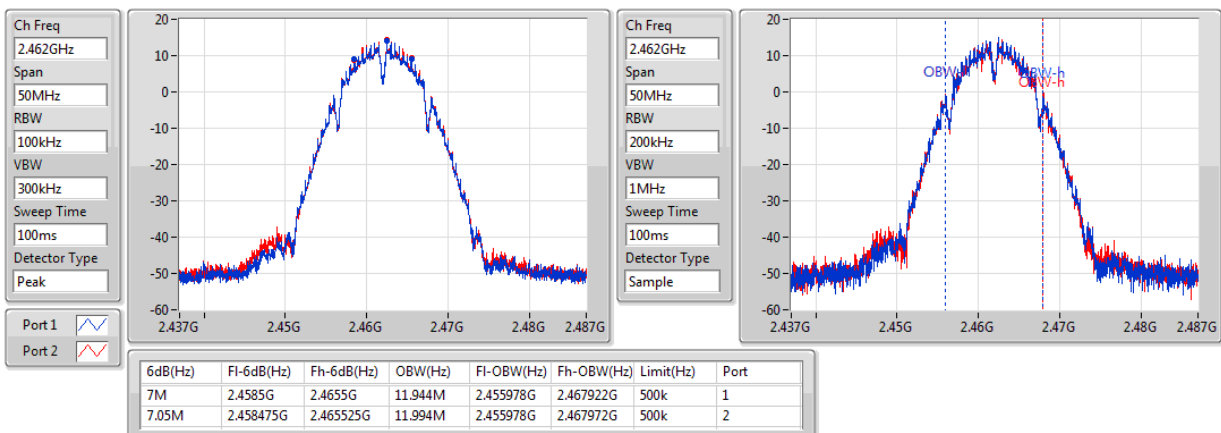
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

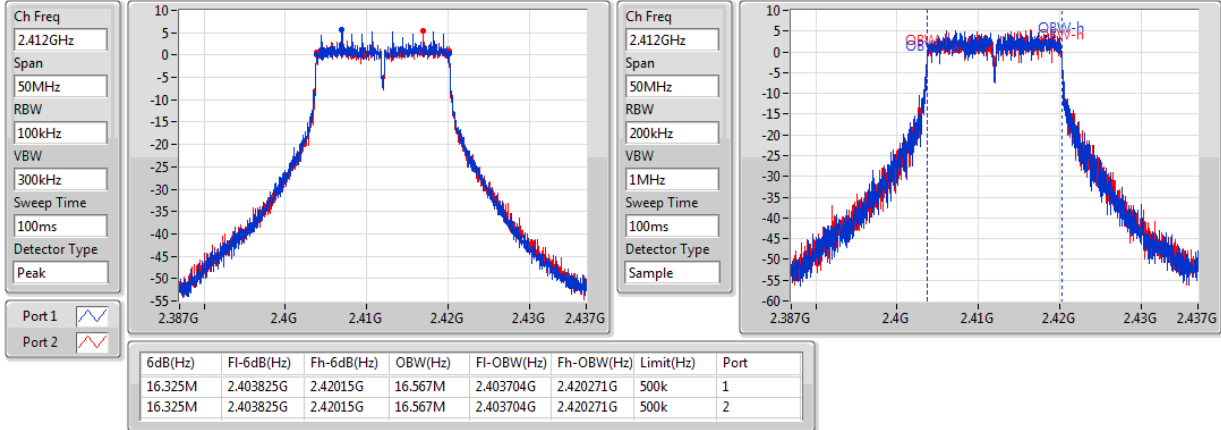
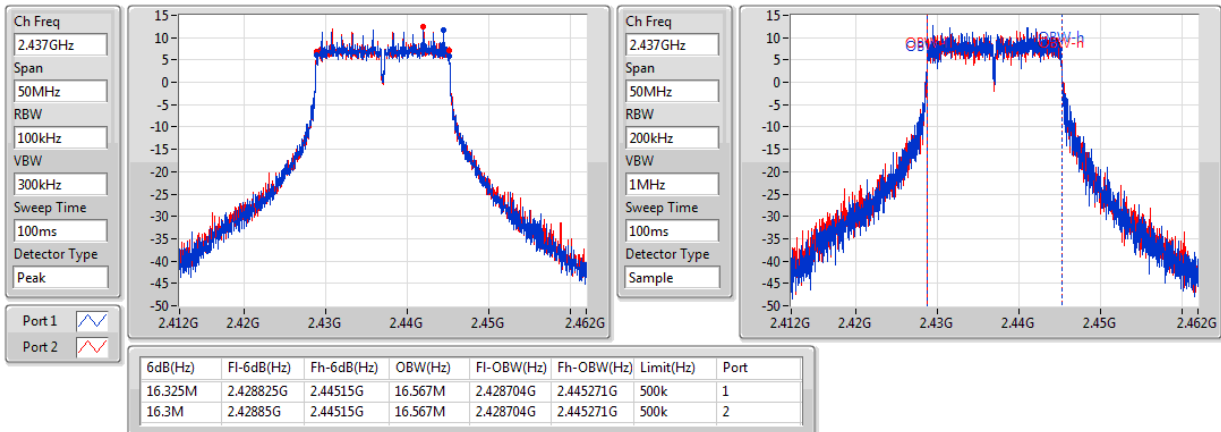
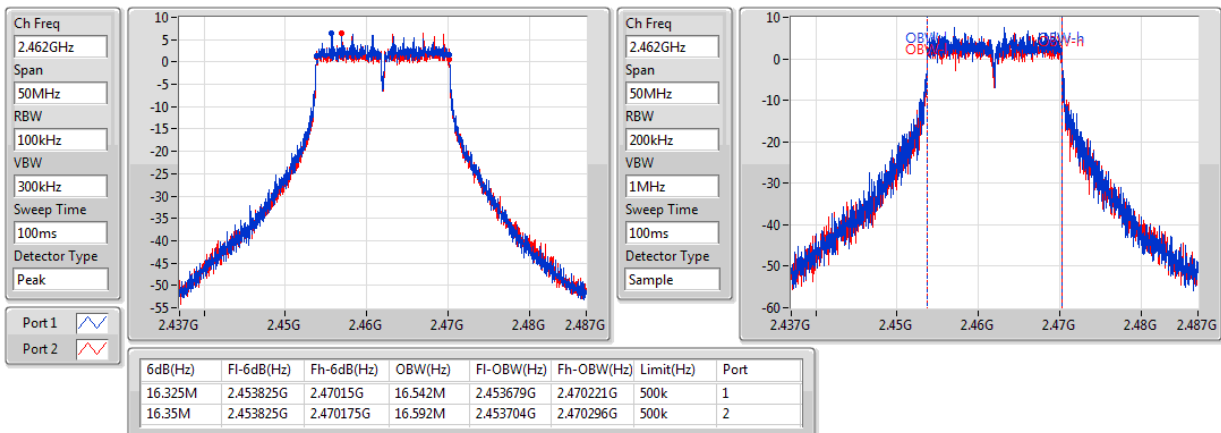
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

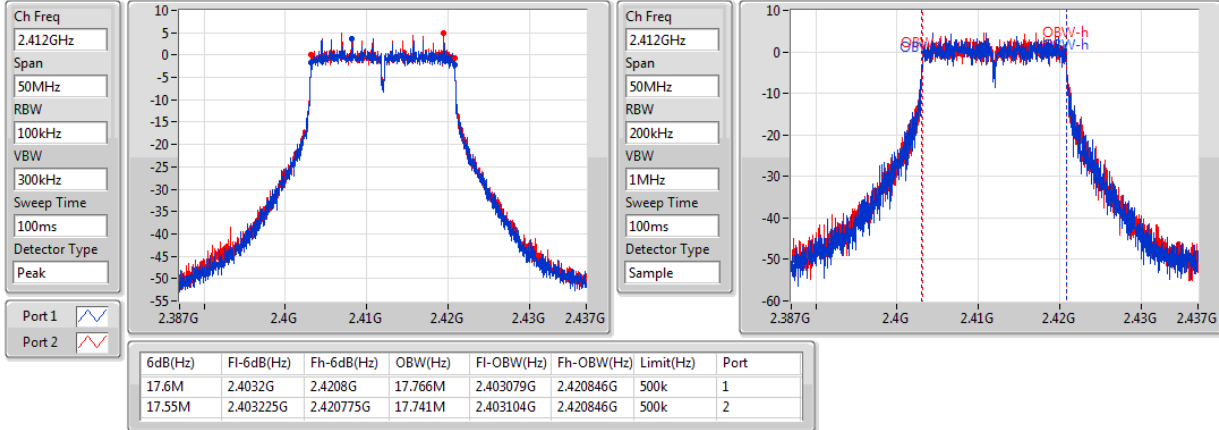
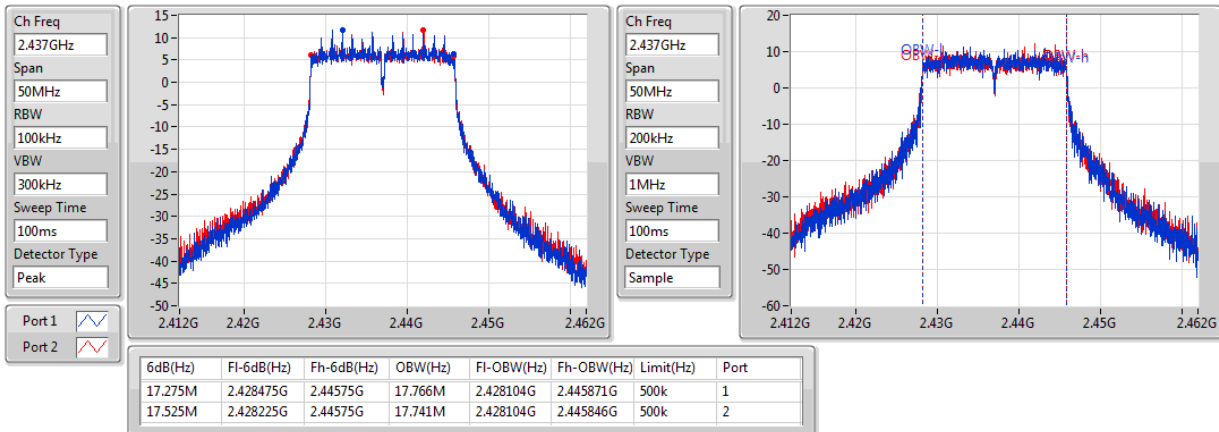
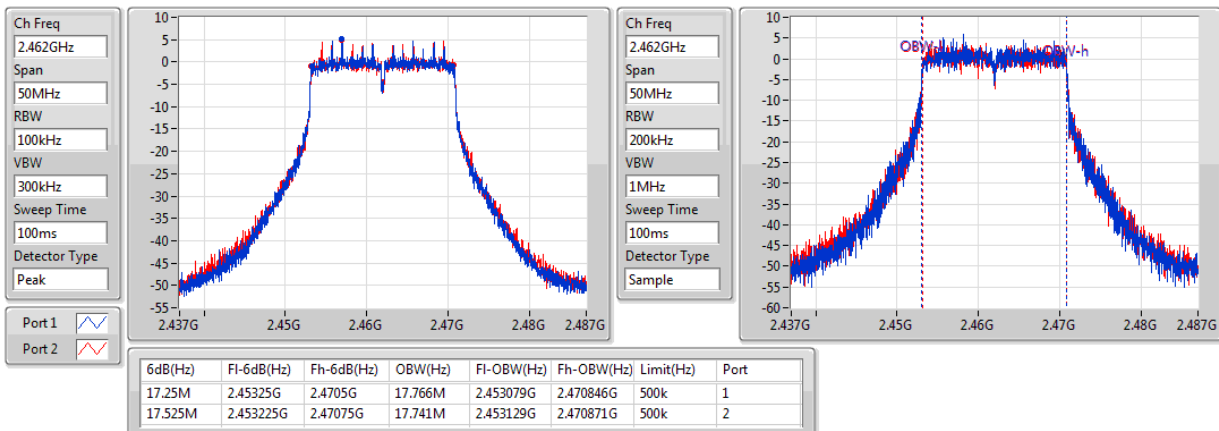
Result

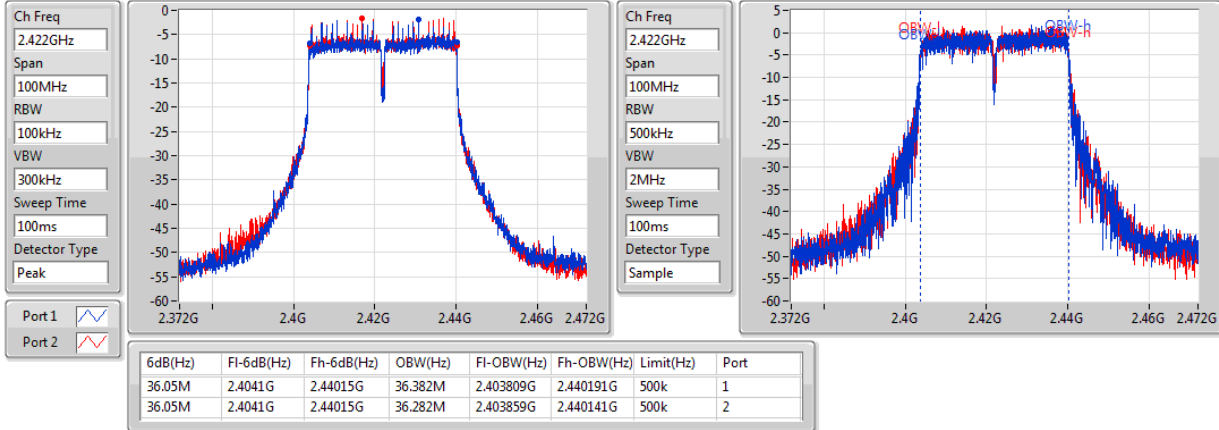
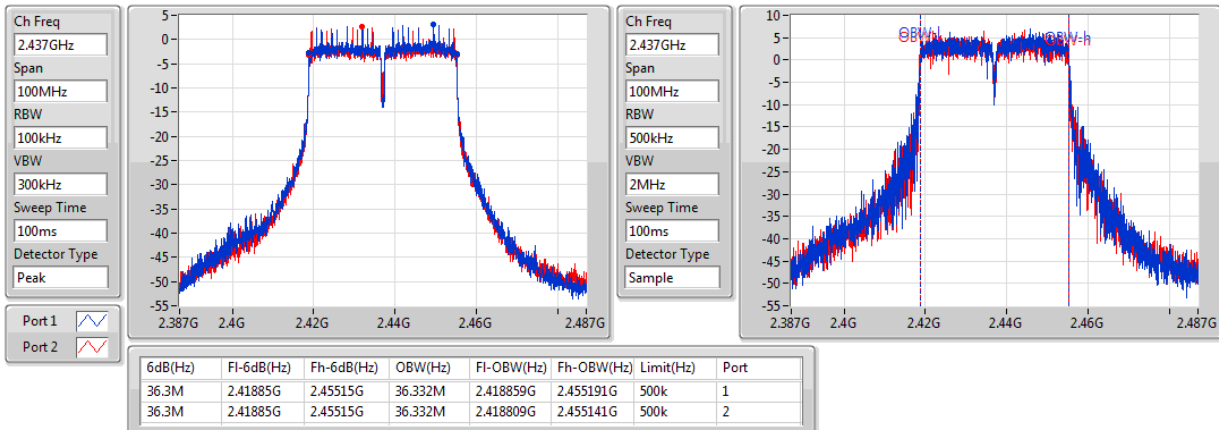
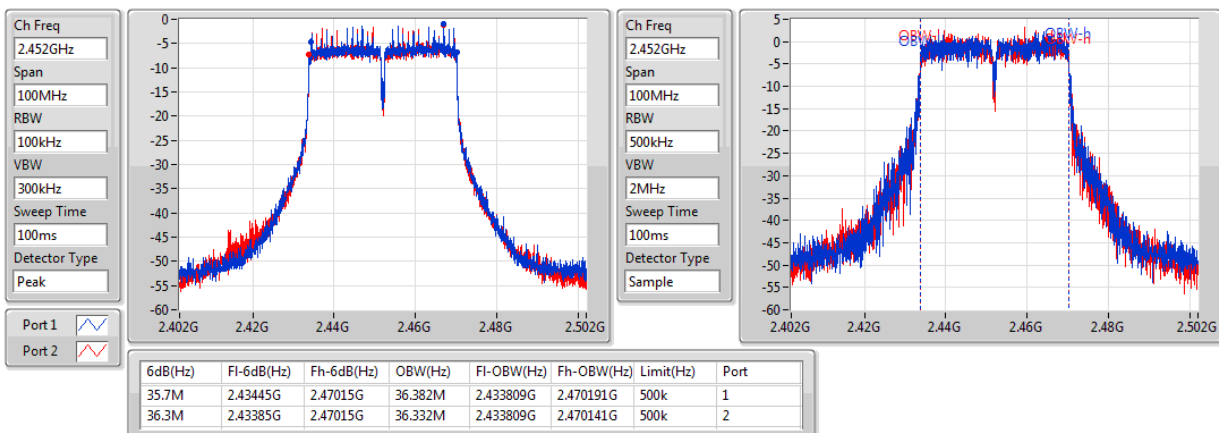
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7M	11.869M	6.575M	11.894M
2437MHz	Pass	500k	7.05M	11.819M	7.05M	11.969M
2462MHz	Pass	500k	7M	11.944M	7.05M	11.994M
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.567M	16.325M	16.567M
2437MHz	Pass	500k	16.325M	16.567M	16.3M	16.567M
2462MHz	Pass	500k	16.325M	16.542M	16.35M	16.592M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.6M	17.766M	17.55M	17.741M
2437MHz	Pass	500k	17.275M	17.766M	17.525M	17.741M
2462MHz	Pass	500k	17.25M	17.766M	17.525M	17.741M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	36.05M	36.382M	36.05M	36.282M
2437MHz	Pass	500k	36.3M	36.332M	36.3M	36.332M
2452MHz	Pass	500k	35.7M	36.382M	36.3M	36.332M

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

802.11b_(1Mbps)_2TX
EBW
2412MHz

802.11b_(1Mbps)_2TX
EBW
2437MHz

802.11b_(1Mbps)_2TX
EBW
2462MHz


802.11g_(6Mbps)_2TX
EBW
2412MHz

802.11g_(6Mbps)_2TX
EBW
2437MHz

802.11g_(6Mbps)_2TX
EBW
2462MHz


802.11n HT20_Nss1,(MCS0)_2TX
EBW
2412MHz

802.11n HT20_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11n HT20_Nss1,(MCS0)_2TX
EBW
2462MHz


802.11n HT40_Nss1,(MCS0)_2TX
EBW
2422MHz

802.11n HT40_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11n HT40_Nss1,(MCS0)_2TX
EBW
2452MHz


Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_2TX	-	-
2.4-2.4835GHz	25.43	0.34914
802.11g_(6Mbps)_2TX	-	-
2.4-2.4835GHz	25.49	0.35400
802.11n HT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	25.07	0.32137
802.11n HT40_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	19.85	0.09661

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	10.50	21.99	22.78	25.41	25.50
2437MHz	Pass	10.50	22.42	22.42	25.43	25.50
2462MHz	Pass	10.50	22.59	21.98	25.31	25.50
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	10.50	16.30	16.87	19.60	25.50
2437MHz	Pass	10.50	22.34	22.62	25.49	25.50
2462MHz	Pass	10.50	17.30	18.03	20.69	25.50
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	10.50	15.11	15.98	18.58	25.50
2437MHz	Pass	10.50	21.82	22.29	25.07	25.50
2462MHz	Pass	10.50	15.40	16.02	18.73	25.50
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	10.50	12.38	12.79	15.60	25.50
2437MHz	Pass	10.50	16.54	17.12	19.85	25.50
2452MHz	Pass	10.50	12.43	12.91	15.69	25.50

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_2TX	-
2.4-2.4835GHz	0.48
802.11g_(6Mbps)_2TX	-
2.4-2.4835GHz	-1.15
802.11n HT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-2.28
802.11n HT40_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-9.93

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	13.51	-1.52	-0.82	0.48	0.49
2437MHz	Pass	13.51	-1.47	-0.74	0.48	0.49
2462MHz	Pass	13.51	-0.88	-1.85	0.37	0.49
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	13.51	-8.96	-9.28	-7.47	0.49
2437MHz	Pass	13.51	-2.41	-2.41	-1.15	0.49
2462MHz	Pass	13.51	-7.75	-7.80	-6.60	0.49
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	13.51	-9.52	-8.94	-8.16	0.49
2437MHz	Pass	13.51	-4.21	-3.69	-2.28	0.49
2462MHz	Pass	13.51	-10.63	-9.86	-7.50	0.49
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	13.51	-17.05	-15.44	-14.87	0.49
2437MHz	Pass	13.51	-10.78	-10.70	-9.93	0.49
2452MHz	Pass	13.51	-15.79	-16.51	-14.77	0.49

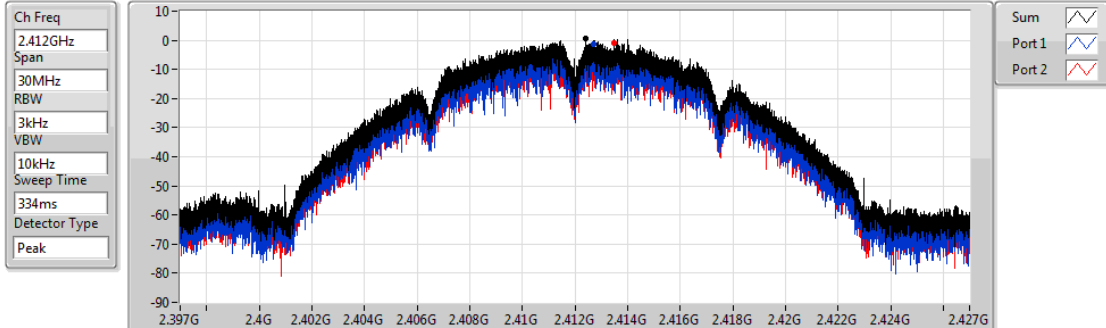
DG = Directional Gain; RBW=3kHz;

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

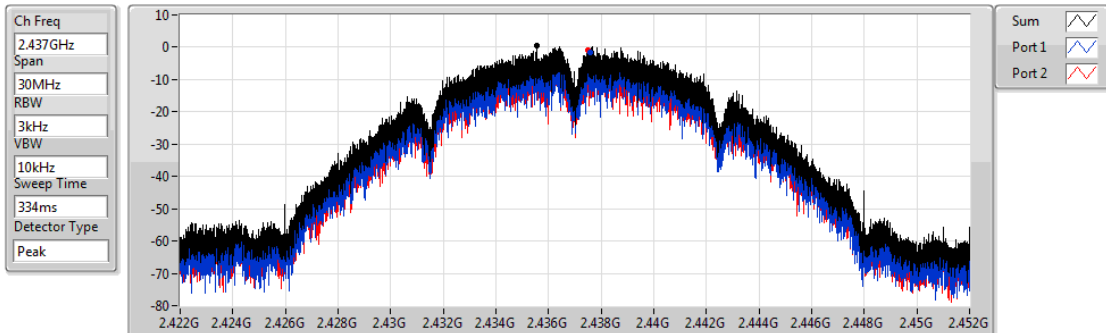


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.48	0.48	-1.52	-0.82

802.11b_(1Mbps)_2TX

PSD

2437MHz

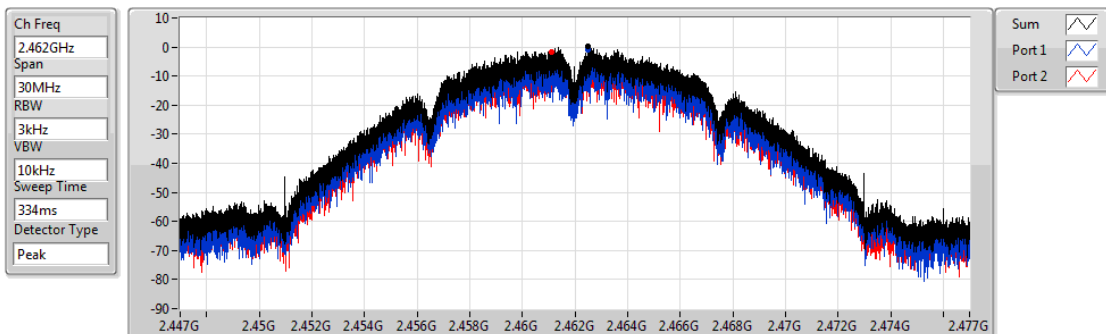


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.48	0.48	-1.47	-0.74

802.11b_(1Mbps)_2TX

PSD

2462MHz

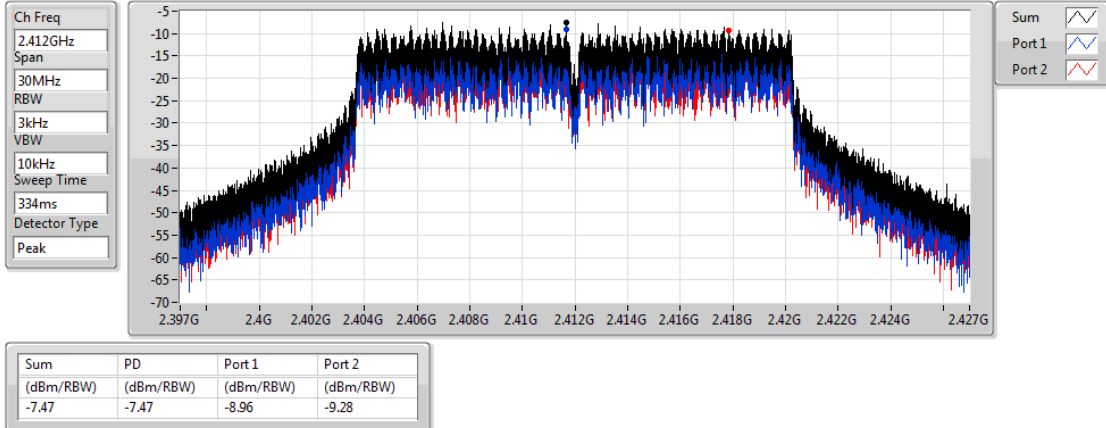


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.37	0.37	-0.88	-1.85

802.11g_(6Mbps)_2TX

PSD

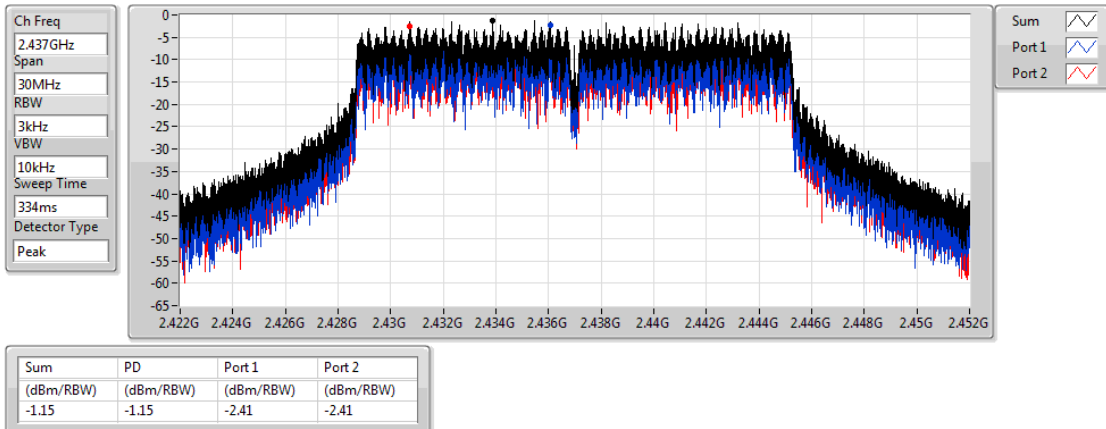
2412MHz



802.11g_(6Mbps)_2TX

PSD

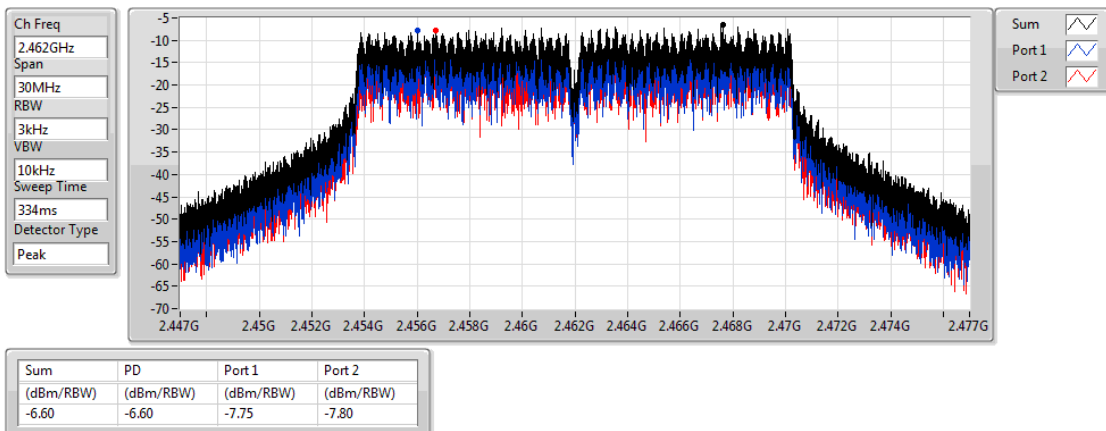
2437MHz



802.11g_(6Mbps)_2TX

PSD

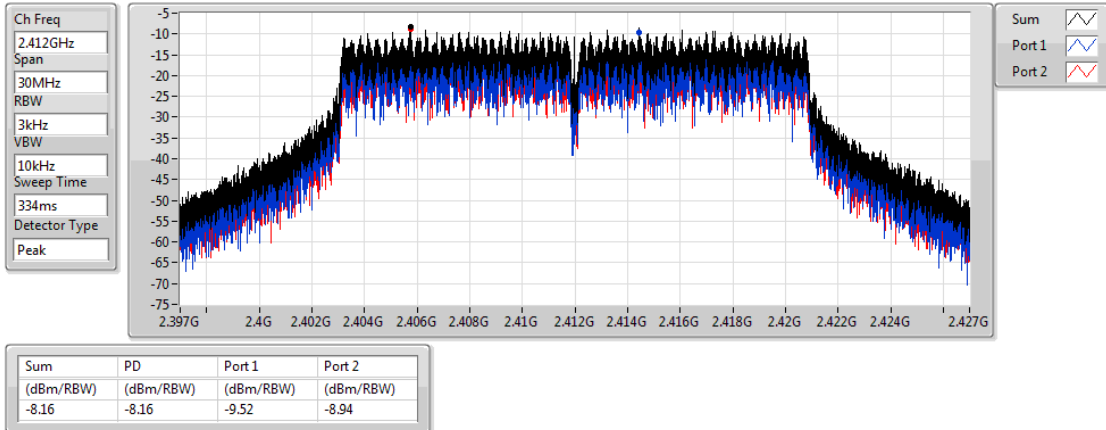
2462MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

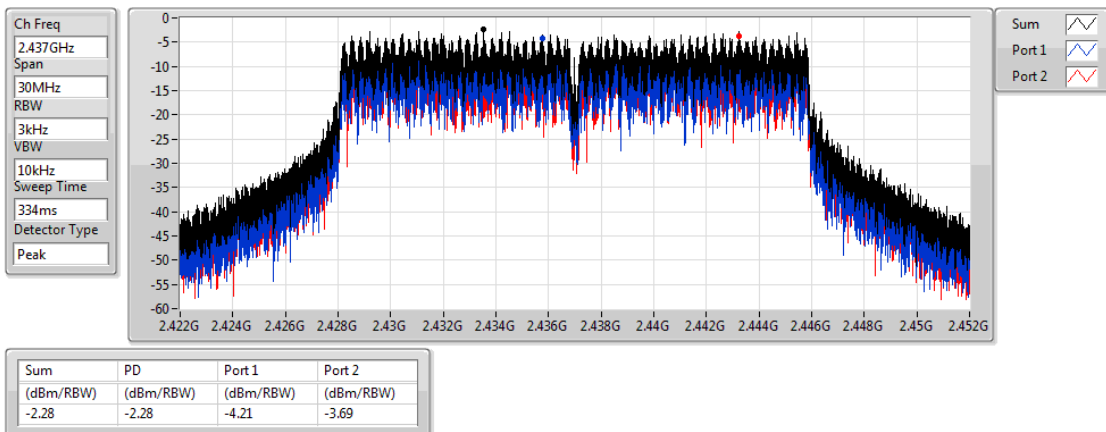
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

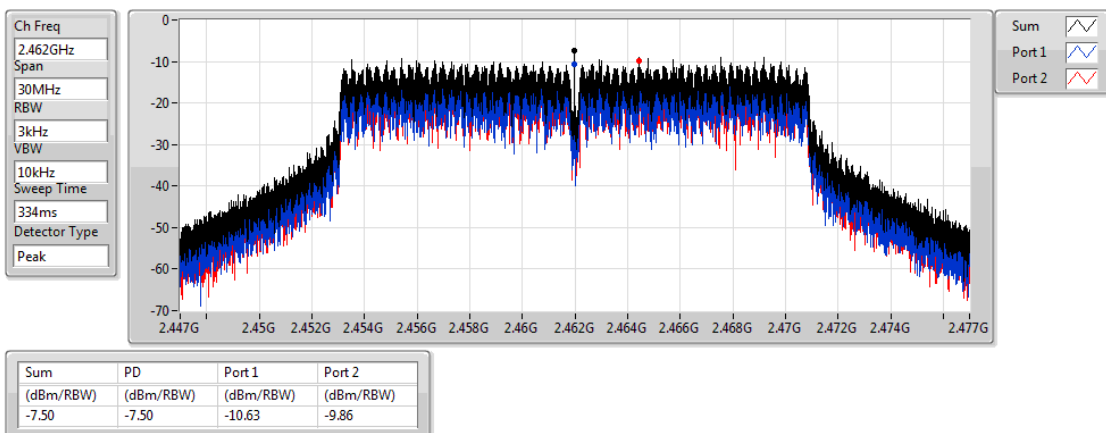
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

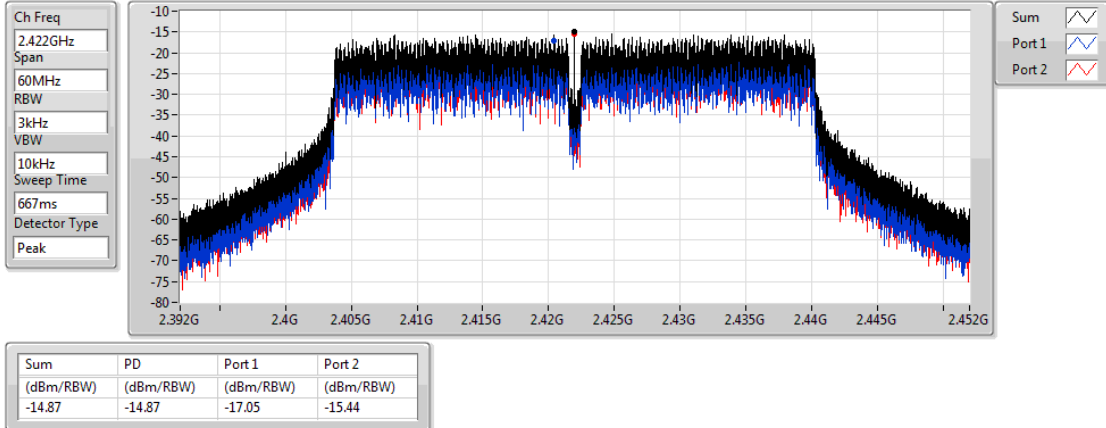
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

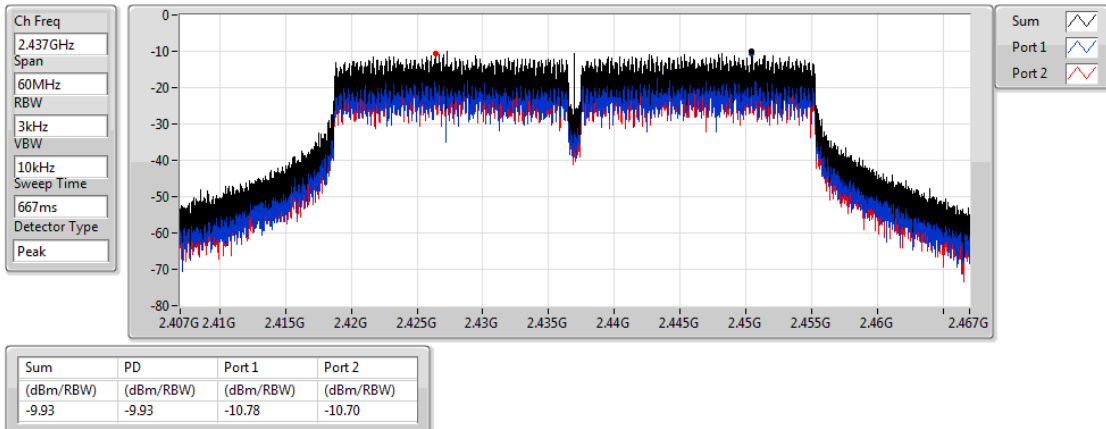
2422MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

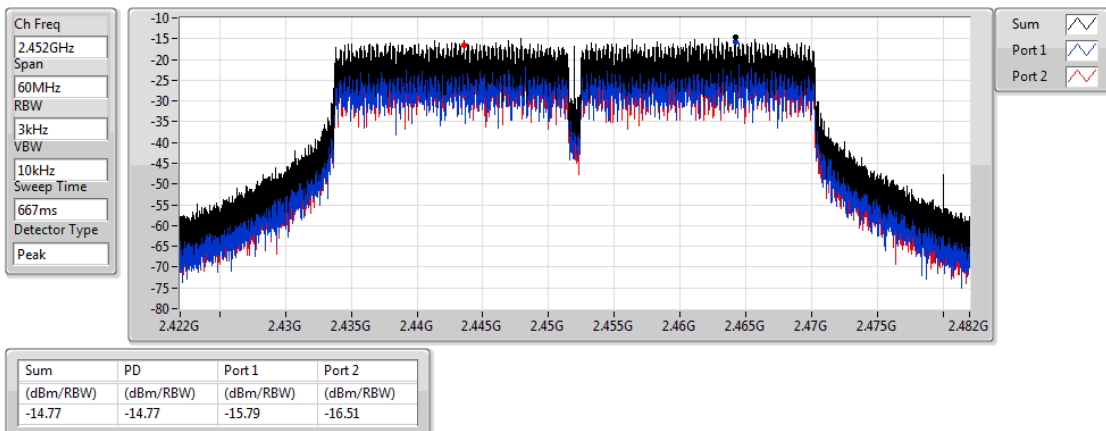
2437MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

2452MHz



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 HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.449432G	3.32	-26.68	2.30168G	-60.55	2.39984G	-33.20	2.55998G	-50.14	2.639223G	-51.35	2

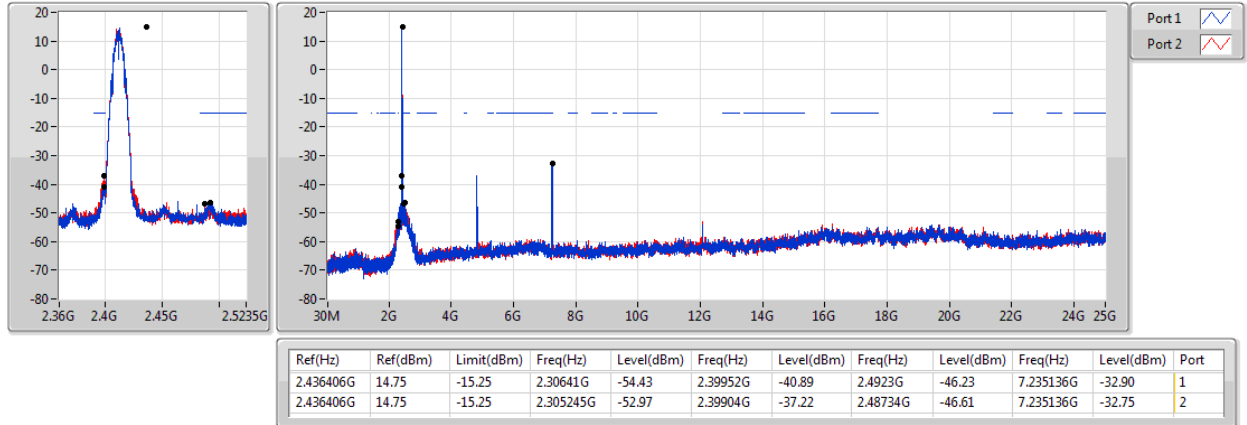
Result

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	14.75	-15.25	2.30641G	-54.43	2.39952G	-40.89	2.4923G	-46.23	7.235136G	-32.90	1
2412MHz	Pass	2.436406G	14.75	-15.25	2.305245G	-52.97	2.39904G	-37.22	2.48734G	-46.61	7.235136G	-32.75	2
2437MHz	Pass	2.436406G	14.75	-15.25	2.300585G	-54.00	2.3956G	-47.10	2.51646G	-46.87	2.638692G	-48.47	1
2437MHz	Pass	2.436406G	14.75	-15.25	2.307575G	-52.82	2.39472G	-48.23	2.51574G	-47.38	2.548786G	-48.68	2
2462MHz	Pass	2.436406G	14.75	-15.25	2.30874G	-52.87	2.39856G	-49.74	2.50254G	-48.03	2.540357G	-48.68	1
2462MHz	Pass	2.436406G	14.75	-15.25	2.302915G	-50.84	2.398G	-52.37	2.5031G	-47.73	2.540357G	-47.74	2
802.11g_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.443253G	11.84	-18.16	2.305245G	-57.49	2.39992G	-26.87	2.4947G	-47.55	7.232327G	-43.77	1
2412MHz	Pass	2.443253G	11.84	-18.16	2.300585G	-53.90	2.3996G	-26.92	2.4943G	-48.60	7.226708G	-43.93	2
2437MHz	Pass	2.443253G	11.84	-18.16	2.30175G	-52.99	2.3992G	-46.95	2.48366G	-46.96	2.638692G	-48.11	1
2437MHz	Pass	2.443253G	11.84	-18.16	2.309905G	-52.69	2.39448G	-47.26	2.52342G	-47.07	2.576882G	-49.51	2
2462MHz	Pass	2.443253G	11.84	-18.16	2.30408G	-55.75	2.39016G	-52.50	2.48358G	-47.60	2.638692G	-48.82	1
2462MHz	Pass	2.443253G	11.84	-18.16	2.309905G	-53.74	2.39056G	-51.56	2.4839G	-46.51	2.545977G	-48.28	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.430728G	11.47	-18.53	2.30874G	-55.22	2.39968G	-27.74	2.4843G	-48.92	7.229517G	-44.43	1
2412MHz	Pass	2.430728G	11.47	-18.53	2.307575G	-53.12	2.39992G	-26.96	2.4927G	-47.80	7.235136G	-42.55	2
2437MHz	Pass	2.430728G	11.47	-18.53	2.30175G	-53.56	2.394G	-48.09	2.4871G	-46.58	2.638692G	-48.19	1
2437MHz	Pass	2.430728G	11.47	-18.53	2.30641G	-51.33	2.39952G	-46.65	2.48582G	-46.52	2.565643G	-49.32	2
2462MHz	Pass	2.430728G	11.47	-18.53	2.30874G	-54.92	2.39512G	-50.30	2.48358G	-48.05	2.531929G	-50.31	1
2462MHz	Pass	2.430728G	11.47	-18.53	2.30874G	-53.13	2.3952G	-49.81	2.48358G	-47.04	2.543167G	-50.04	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.449432G	3.32	-26.68	2.302825G	-55.30	2.39888G	-33.28	2.48558G	-50.49	2.639223G	-51.06	1
2422MHz	Pass	2.449432G	3.32	-26.68	2.30168G	-60.55	2.39984G	-33.20	2.55998G	-50.14	2.639223G	-51.35	2
2437MHz	Pass	2.449432G	3.32	-26.68	2.30855G	-57.32	2.3992G	-37.97	2.48414G	-49.96	2.639223G	-51.41	1
2437MHz	Pass	2.449432G	3.32	-26.68	2.30855G	-52.63	2.39952G	-40.67	2.4955G	-48.15	2.583132G	-50.27	2
2452MHz	Pass	2.449432G	3.32	-26.68	2.30855G	-57.03	2.39984G	-52.49	2.48526G	-46.47	2.639223G	-50.62	1
2452MHz	Pass	2.449432G	3.32	-26.68	2.307405G	-59.45	2.3976G	-56.03	2.48526G	-46.81	2.639223G	-50.77	2

802.11b_(1Mbps)_2TX

CSE NdB

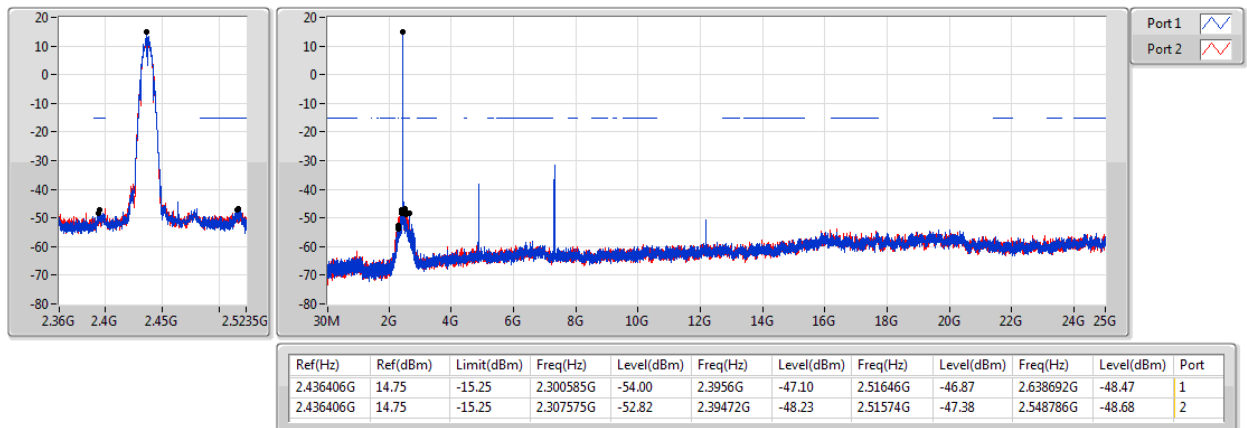
2412MHz



802.11b_(1Mbps)_2TX

CSE NdB

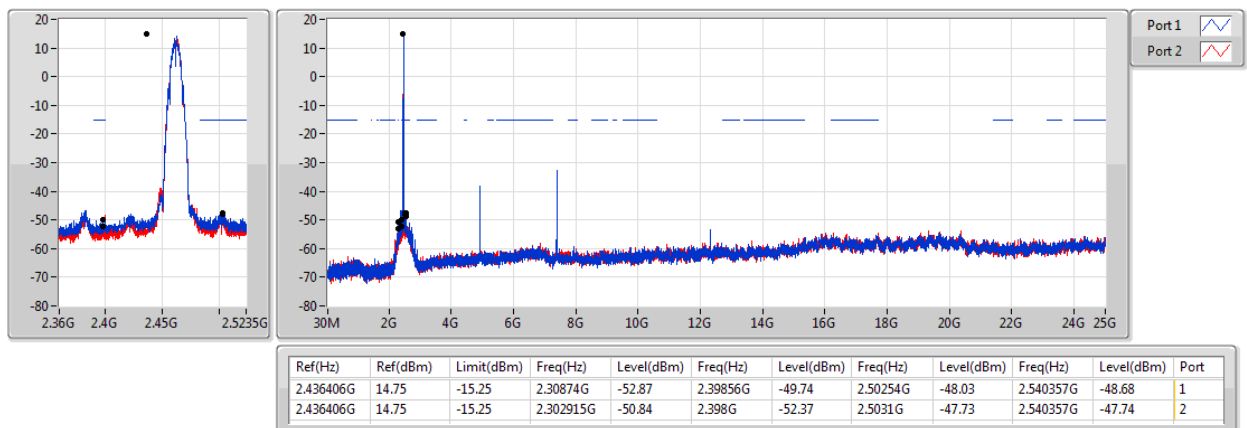
2437MHz



802.11b_(1Mbps)_2TX

CSE NdB

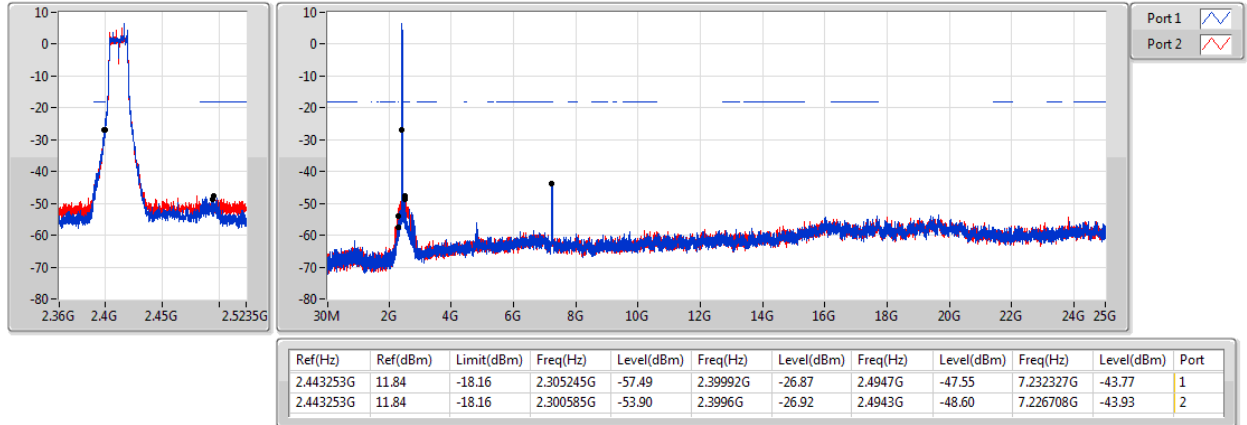
2462MHz



802.11g_(6Mbps)_2TX

CSE NdB

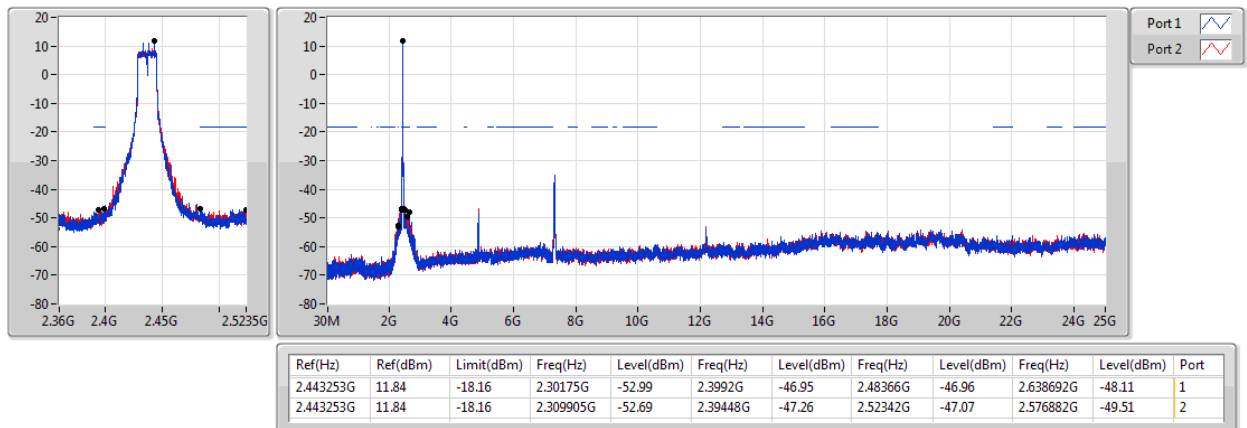
2412MHz



802.11g_(6Mbps)_2TX

CSE NdB

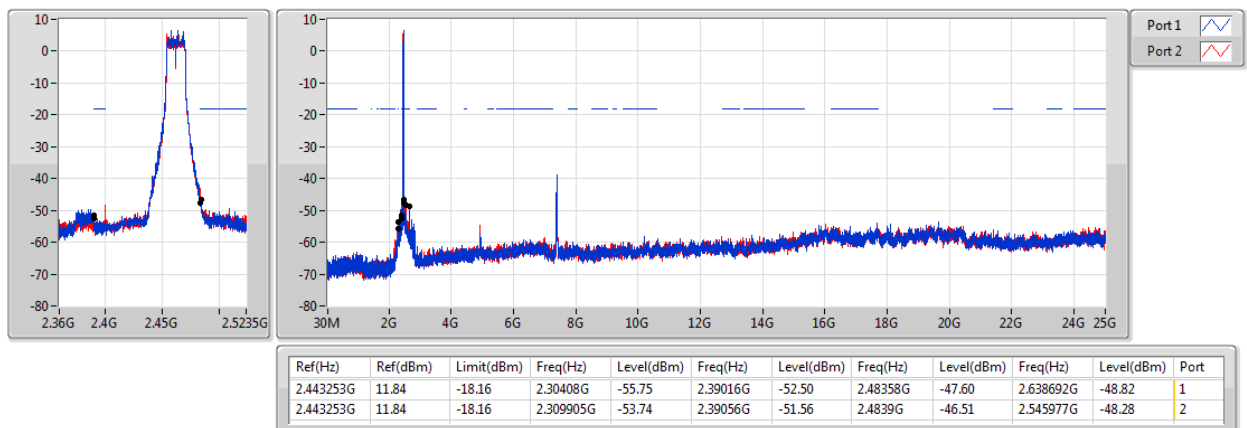
2437MHz



802.11g_(6Mbps)_2TX

CSE NdB

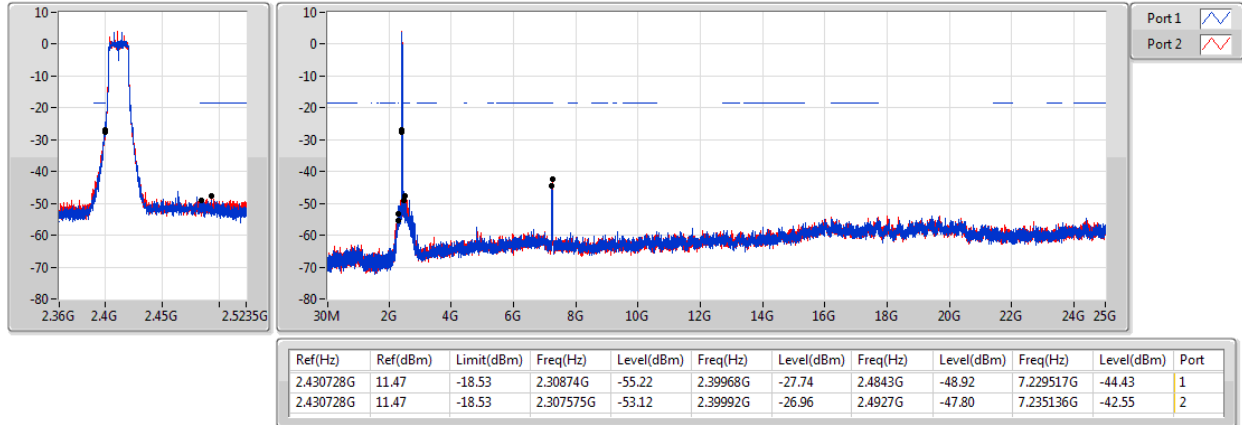
2462MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

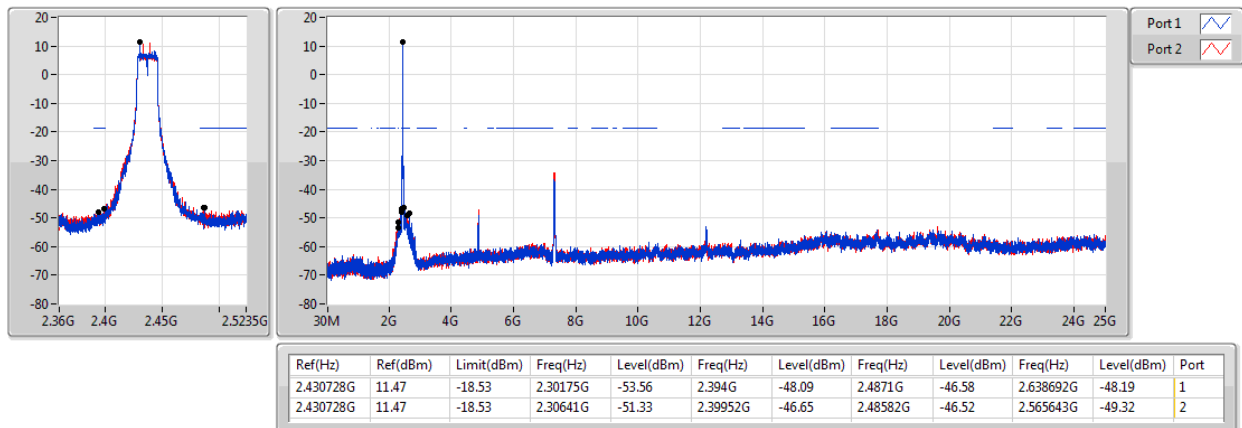
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

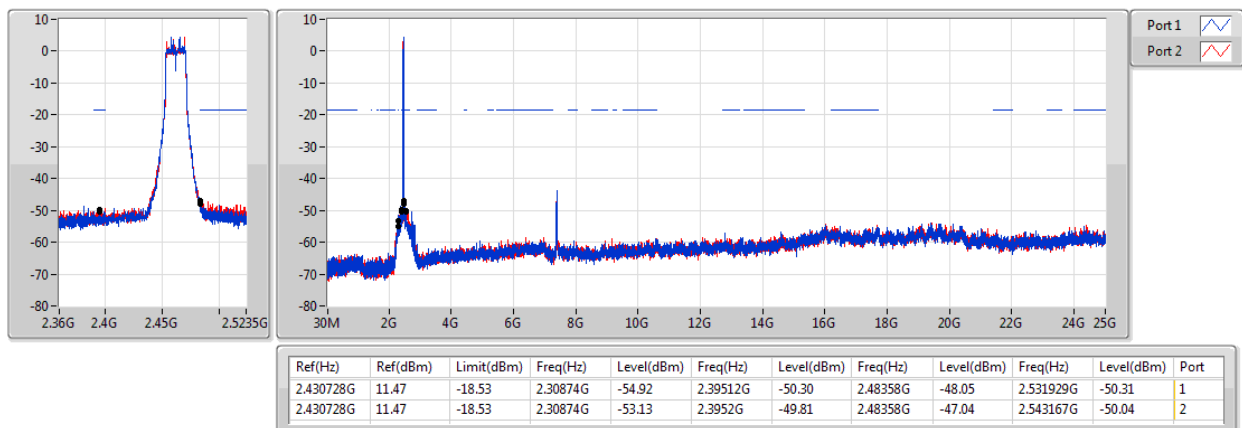
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

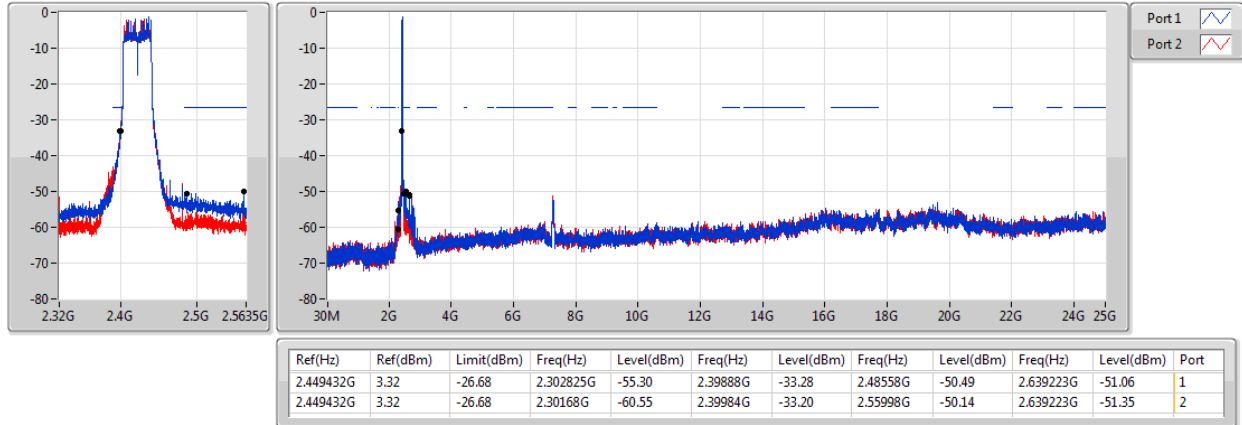
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

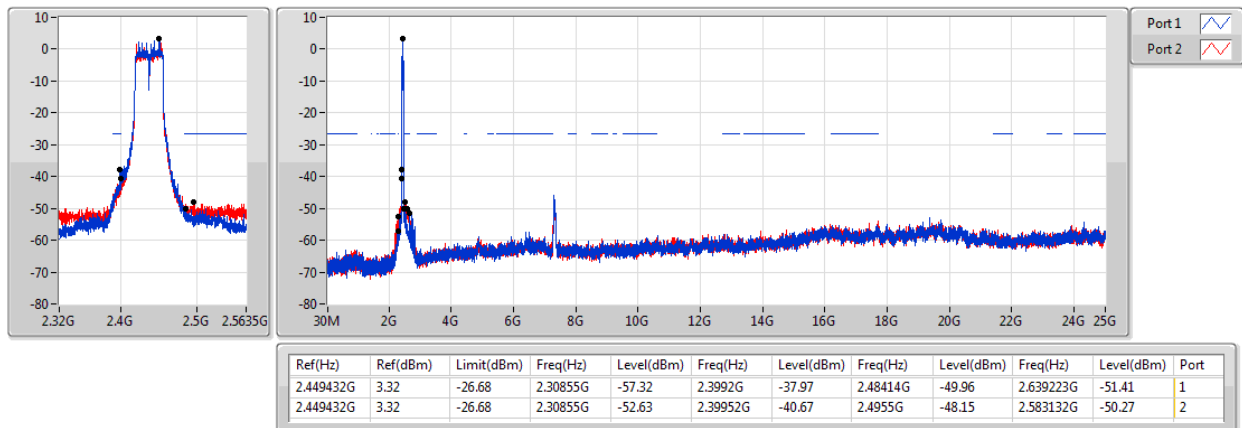
2422MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

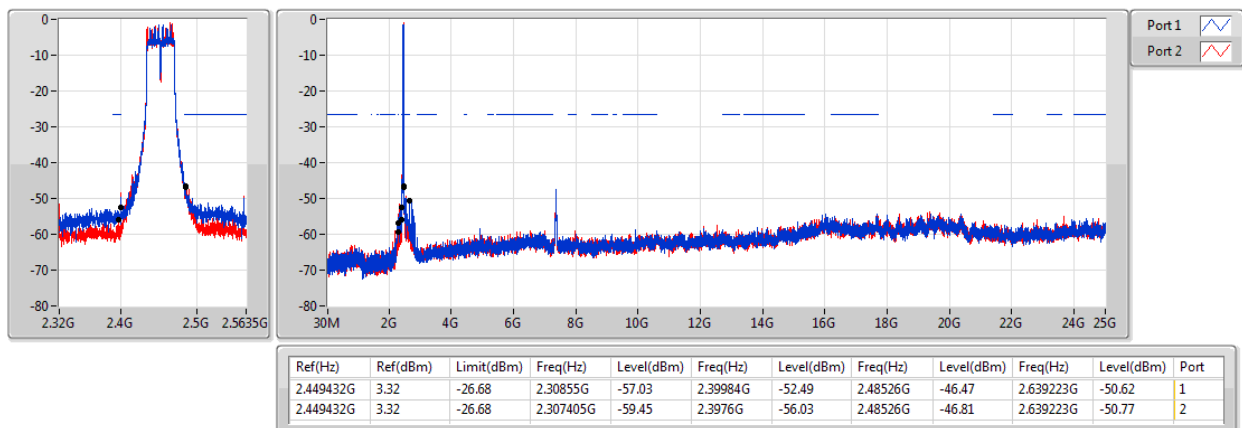
2437MHz

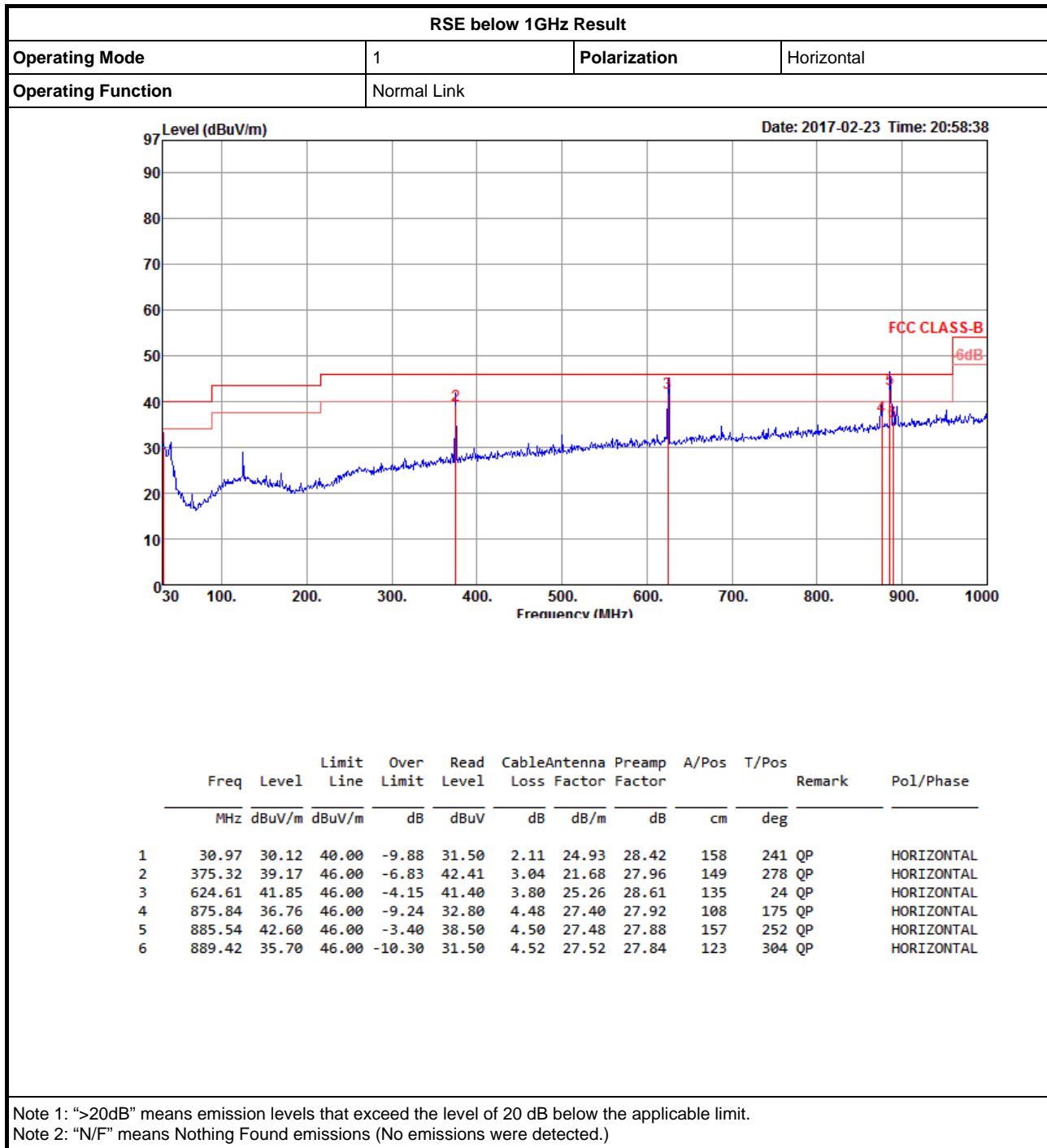


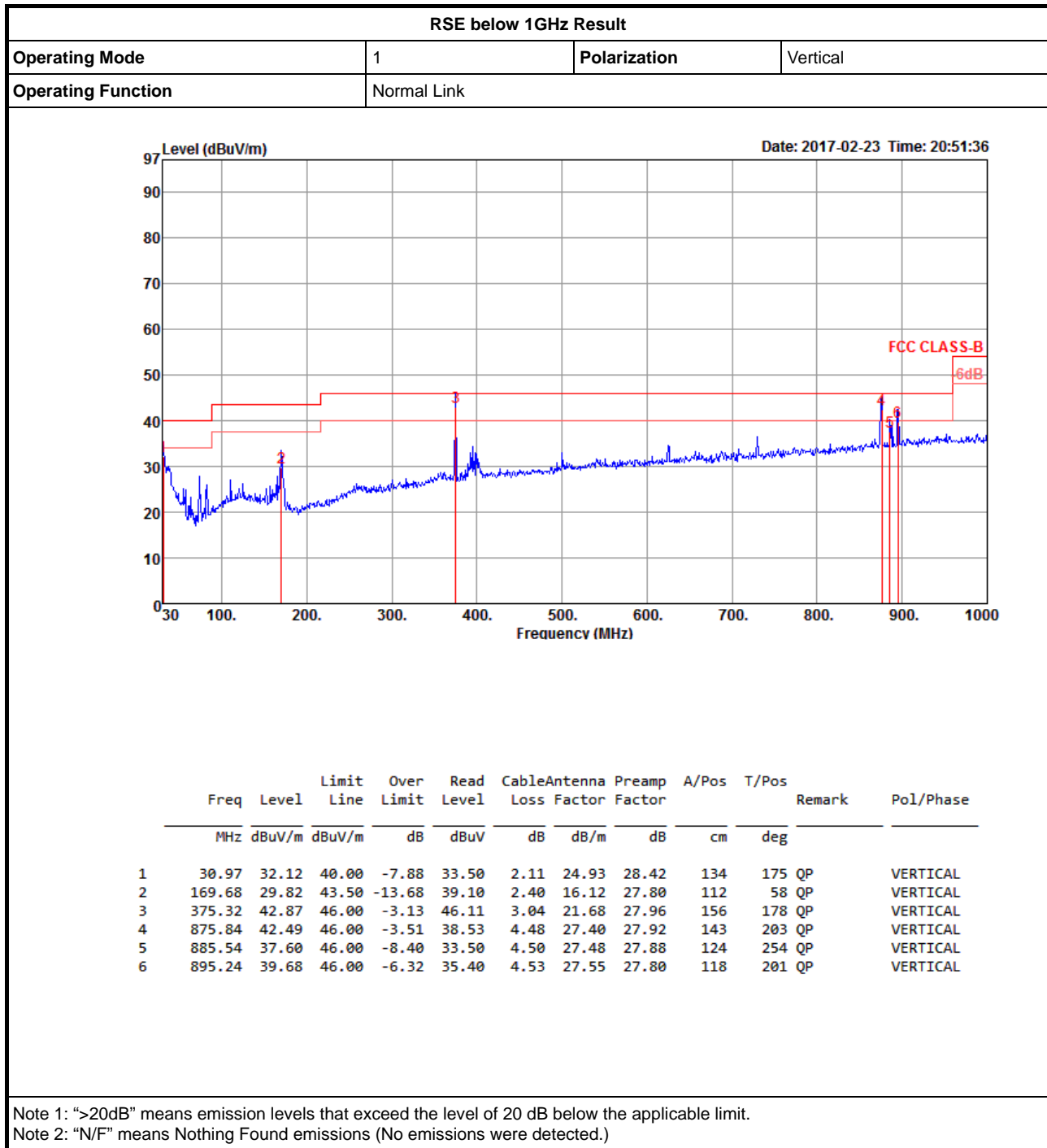
802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

2452MHz









RSE TX above 1GHz Result

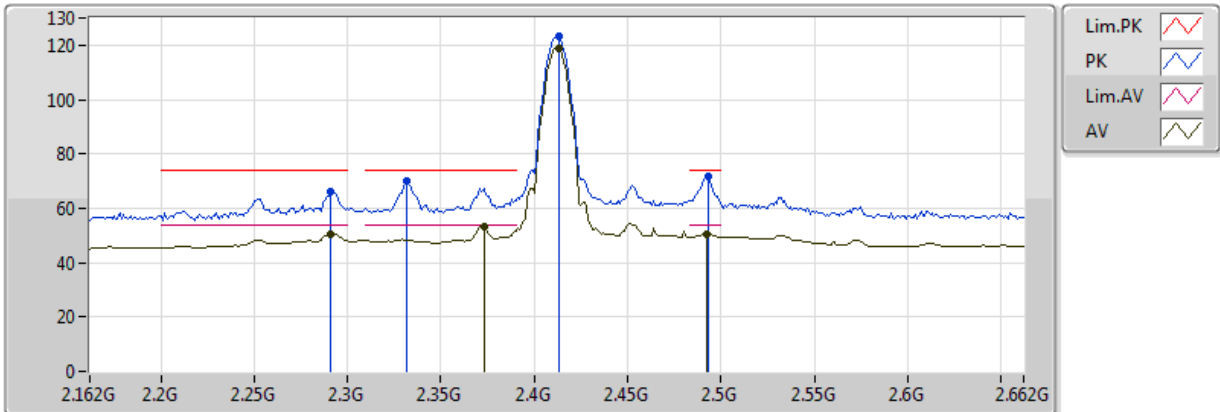
Appendix F.2

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
11b_2.412GHz	Pass	AV	2.371G	53.98	54.00	-0.02	32.66	3	H	1	1.70	-

802.11b_(1Mbps)_2TX

2412MHz_TX

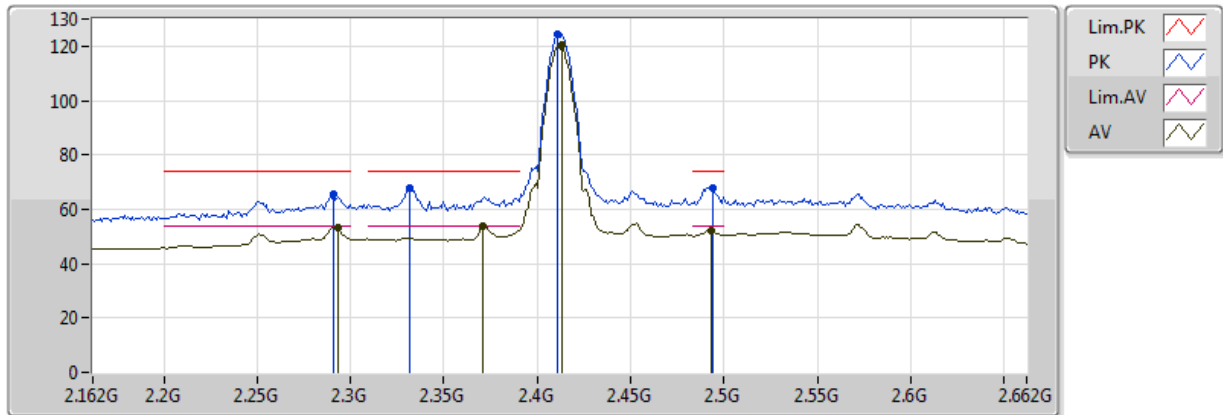


20170216
EUT Y 2TX
Setting 26
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.291G	50.49	54.00	-3.51	32.64	3	V	13	1.50	-
AV	2.373G	53.31	54.00	-0.69	32.66	3	V	13	1.50	-
AV	2.413G	118.95	Inf	-Inf	32.69	3	V	13	1.50	-
AV	2.492G	50.44	54.00	-3.56	32.79	3	V	13	1.50	-
PK	2.291G	65.96	74.00	-8.04	32.64	3	V	13	1.50	-
PK	2.332G	70.05	74.00	-3.95	32.65	3	V	13	1.50	-
PK	2.413G	123.04	Inf	-Inf	32.69	3	V	13	1.50	-
PK	2.493G	71.95	74.00	-2.05	32.79	3	V	13	1.50	-

802.11b_(1Mbps)_2TX

2412MHz_TX

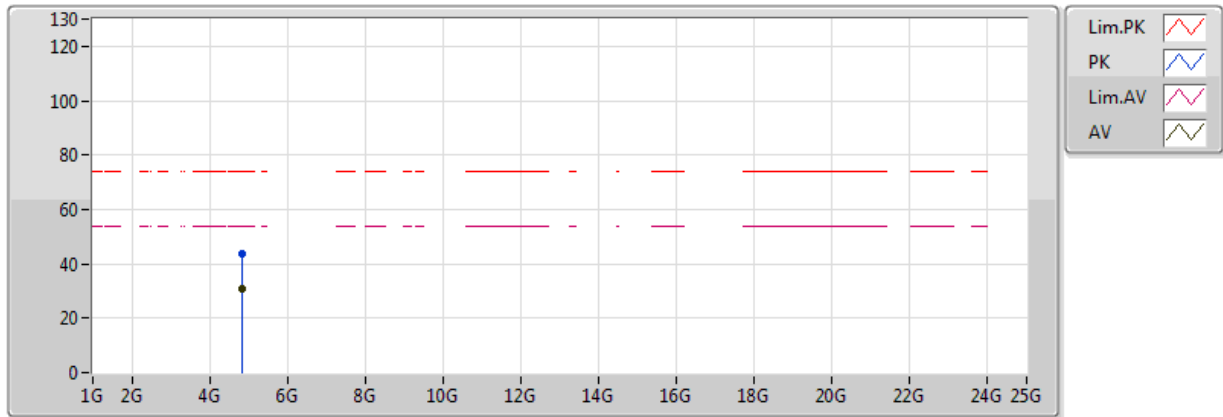


20170216
EUT Y 2TX
Setting 26
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.293G	53.38	54.00	-0.62	32.64	3	H	1	1.70	-
AV	2.371G	53.98	54.00	-0.02	32.66	3	H	1	1.70	-
AV	2.413G	120.22	Inf	-Inf	32.69	3	H	1	1.70	-
AV	2.493G	52.10	54.00	-1.90	32.79	3	H	1	1.70	-
PK	2.291G	65.46	74.00	-8.54	32.64	3	H	1	1.70	-
PK	2.332G	67.82	74.00	-6.18	32.65	3	H	1	1.70	-
PK	2.411G	124.32	Inf	-Inf	32.68	3	H	1	1.70	-
PK	2.494G	67.97	74.00	-6.03	32.79	3	H	1	1.70	-

802.11b_(1Mbps)_2TX

2412MHz_TX

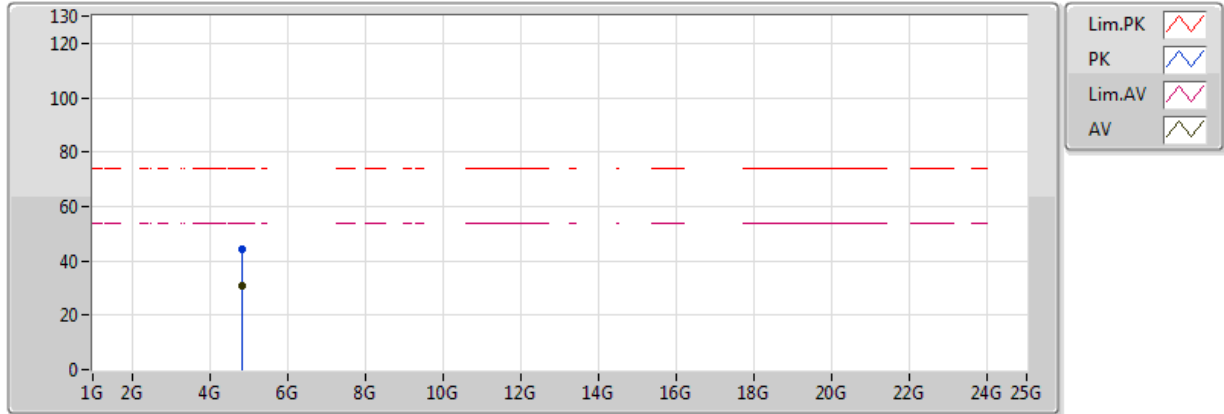


20170216
EUT Y 2TX
Setting 26
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81936G	30.92	54.00	-23.08	3.68	3	V	122	2.25	-
PK	4.81974G	43.95	74.00	-30.05	3.69	3	V	122	2.25	-

802.11b_(1Mbps)_2TX

2412MHz_TX

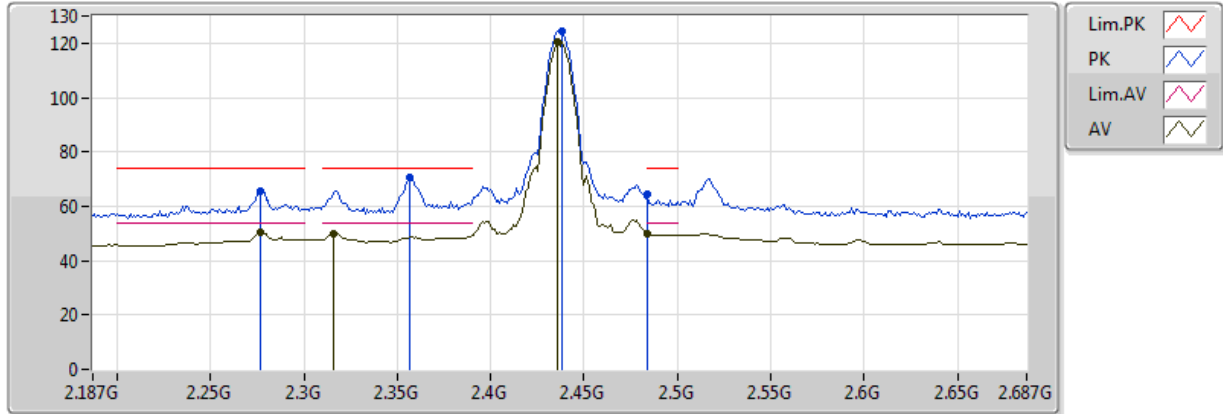


20170216
EUT Y 2TX
Setting 26
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81928G	30.84	54.00	-23.16	3.68	3	H	269	1.28	-
PK	4.8215G	44.16	74.00	-29.84	3.69	3	H	269	1.28	-

802.11b_(1Mbps)_2TX

2437MHz_TX

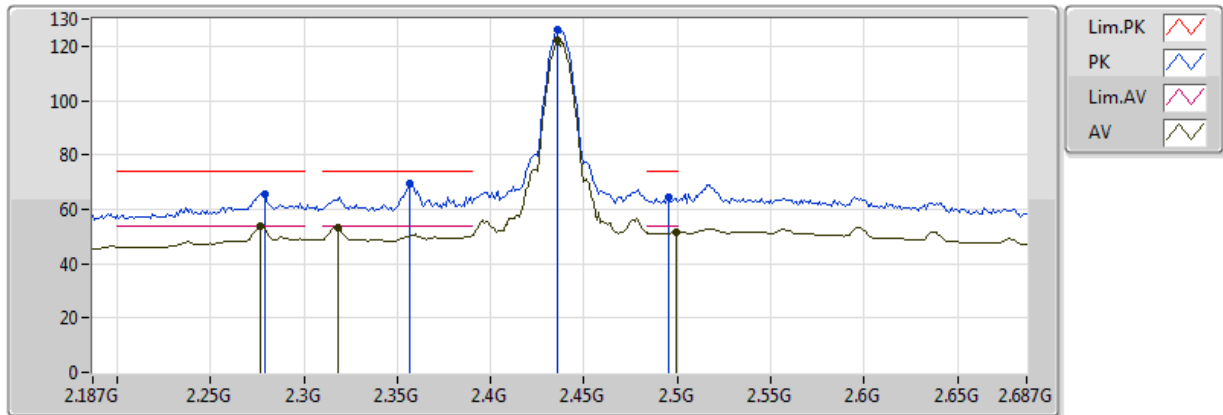


20170216
EUT Y 2TX
Setting 28
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.277G	50.37	54.00	-3.63	32.63	3	V	9	1.50	-
AV	2.316G	49.76	54.00	-4.24	32.64	3	V	9	1.50	-
AV	2.436G	120.46	Inf	-Inf	32.72	3	V	9	1.50	-
AV	2.483502G	49.81	54.00	-4.19	32.78	3	V	9	1.50	-
PK	2.277G	65.58	74.00	-8.42	32.63	3	V	9	1.50	-
PK	2.357G	70.57	74.00	-3.43	32.66	3	V	9	1.50	-
PK	2.438G	124.34	Inf	-Inf	32.72	3	V	9	1.50	-
PK	2.484G	64.56	74.00	-9.44	32.78	3	V	9	1.50	-

802.11b_(1Mbps)_2TX

2437MHz_TX

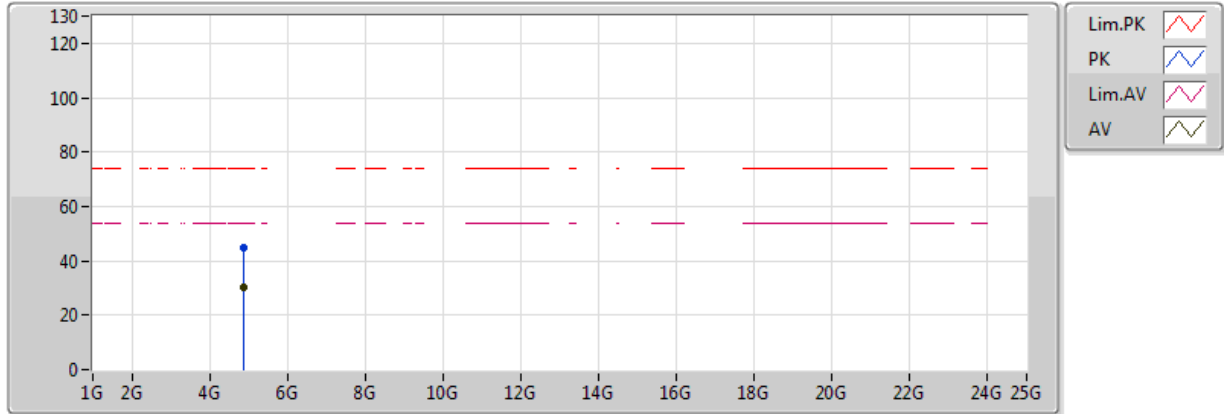


20170216
EUT Y 2TX
Setting 28
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.277G	53.64	54.00	-0.36	32.63	3	H	359	1.98	-
AV	2.318G	53.18	54.00	-0.82	32.65	3	H	359	1.98	-
AV	2.436G	121.88	Inf	-Inf	32.72	3	H	359	1.98	-
AV	2.499G	51.51	54.00	-2.49	32.80	3	H	359	1.98	-
PK	2.279G	65.83	74.00	-8.17	32.63	3	H	359	1.98	-
PK	2.357G	69.56	74.00	-4.44	32.66	3	H	359	1.98	-
PK	2.436G	125.93	Inf	-Inf	32.72	3	H	359	1.98	-
PK	2.495G	64.35	74.00	-9.65	32.79	3	H	359	1.98	-

802.11b_(1Mbps)_2TX

2437MHz_TX

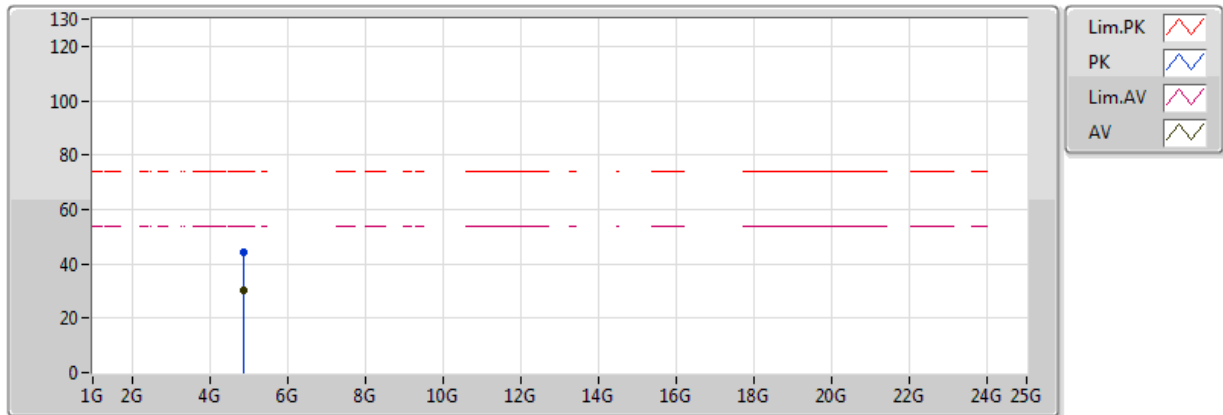


20170216
EUT Y 2TX
Setting 28
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8771G	30.44	54.00	-23.56	3.85	3	V	14	2.22	-
PK	4.87824G	44.92	74.00	-29.08	3.85	3	V	14	2.22	-

802.11b_(1Mbps)_2TX

2437MHz_TX

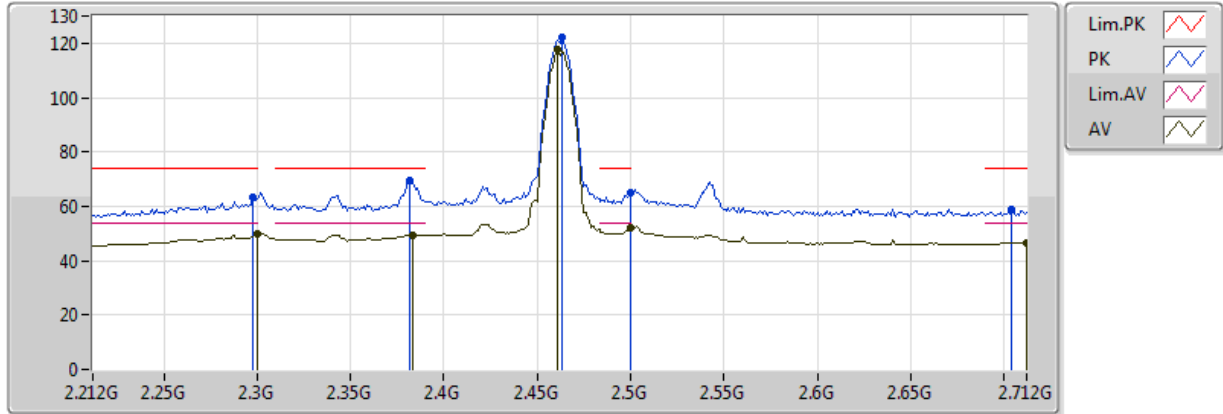


20170216
EUT Y 2TX
Setting 28
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87682G	30.51	54.00	-23.49	3.85	3	H	131	1.89	-
PK	4.877G	44.49	74.00	-29.51	3.85	3	H	131	1.89	-

802.11b_(1Mbps)_2TX

2462MHz_TX

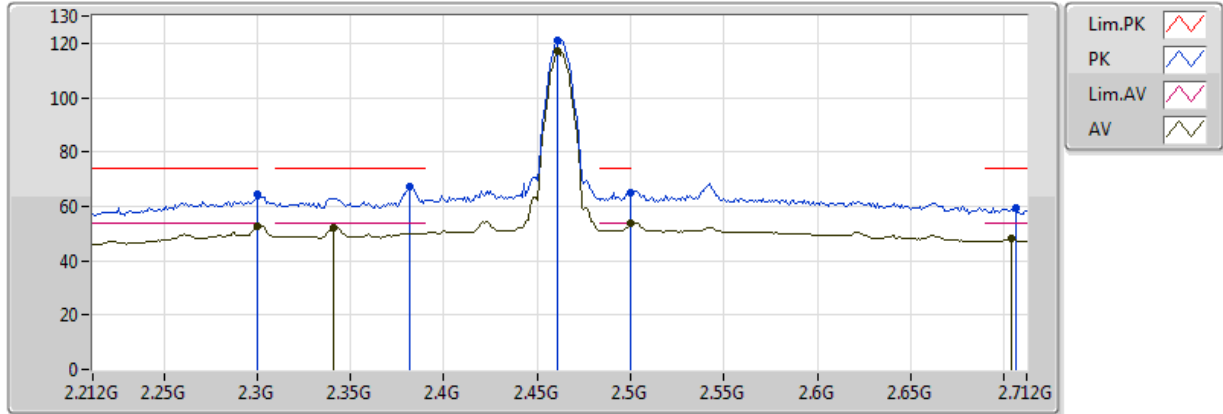


20170216
EUT Y 2TX
Setting 24
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3G	49.78	54.00	-4.22	32.64	3	V	18	1.46	-
AV	2.383G	49.33	54.00	-4.67	32.66	3	V	18	1.46	-
AV	2.461G	117.55	Inf	-Inf	32.75	3	V	18	1.46	-
AV	2.5G	52.02	54.00	-1.98	32.80	3	V	18	1.46	-
AV	2.712G	46.58	54.00	-7.42	33.86	3	V	18	1.46	-
PK	2.298G	63.04	74.00	-10.96	32.64	3	V	18	1.46	-
PK	2.382G	69.56	74.00	-4.44	32.66	3	V	18	1.46	-
PK	2.463G	121.89	Inf	-Inf	32.75	3	V	18	1.46	-
PK	2.5G	65.09	74.00	-8.91	32.80	3	V	18	1.46	-
PK	2.704G	58.67	74.00	-15.33	33.83	3	V	18	1.46	-

802.11b_(1Mbps)_2TX

2462MHz_TX

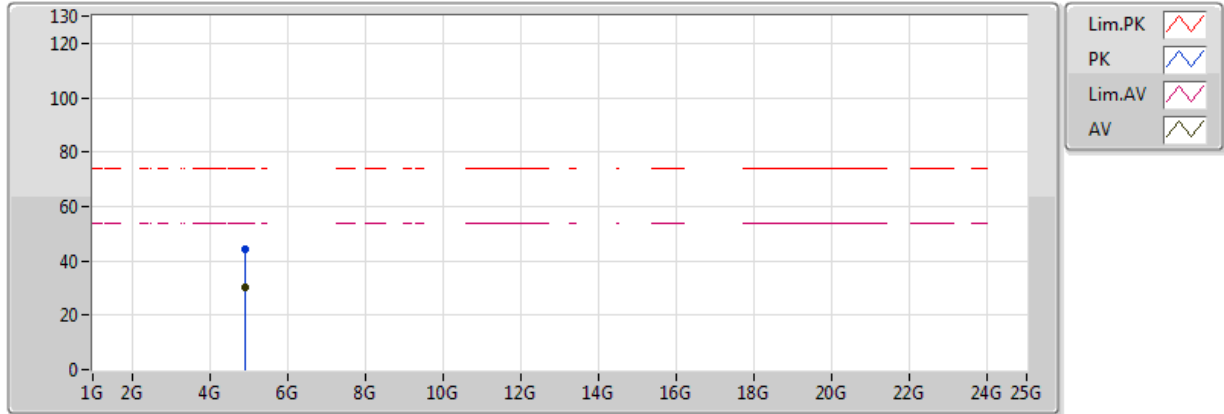


20170216
EUT Y 2TX
Setting 24
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3G	52.46	54.00	-1.54	32.64	3	H	7	1.50	-
AV	2.341G	52.28	54.00	-1.72	32.65	3	H	7	1.50	-
AV	2.461G	117.06	Inf	-Inf	32.75	3	H	7	1.50	-
AV	2.5G	53.71	54.00	-0.29	32.80	3	H	7	1.50	-
AV	2.704G	47.93	54.00	-6.07	33.83	3	H	7	1.50	-
PK	2.3G	64.25	74.00	-9.75	32.64	3	H	7	1.50	-
PK	2.382G	67.33	74.00	-6.67	32.66	3	H	7	1.50	-
PK	2.461G	120.83	Inf	-Inf	32.75	3	H	7	1.50	-
PK	2.5G	65.11	74.00	-8.89	32.80	3	H	7	1.50	-
PK	2.706G	59.19	74.00	-14.81	33.84	3	H	7	1.50	-

802.11b_(1Mbps)_2TX

2462MHz_TX

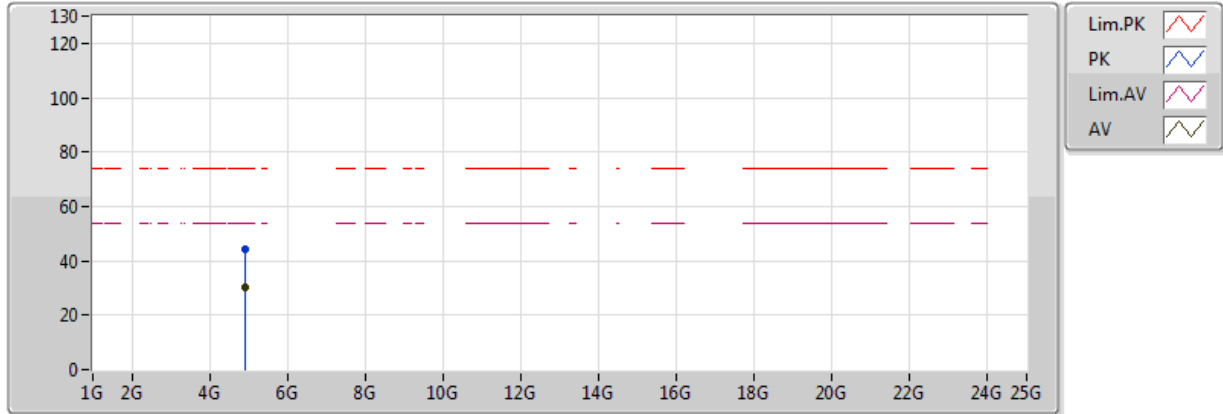


20170215
EUT Y 2TX
Setting 24
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92728G	30.09	54.00	-23.91	3.99	3	V	303	1.14	-
PK	4.92228G	44.19	74.00	-29.81	3.97	3	V	303	1.14	-

802.11b_(1Mbps)_2TX

2462MHz_TX

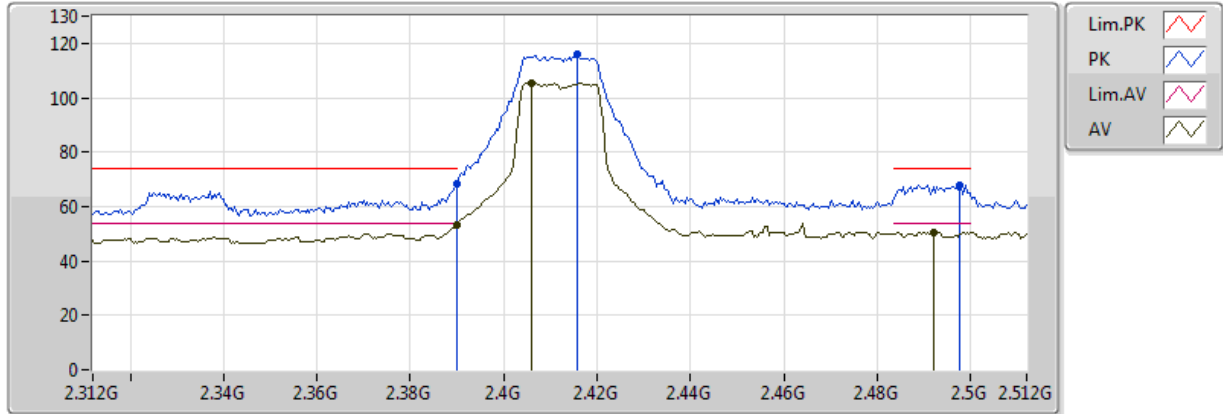


20170215
EUT Y 2TX
Setting 24
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92744G	30.12	54.00	-23.88	3.99	3	H	130	2.18	-
PK	4.92096G	44.52	74.00	-29.48	3.97	3	H	130	2.18	-

802.11g_(6Mbps)_2TX

2412MHz_TX

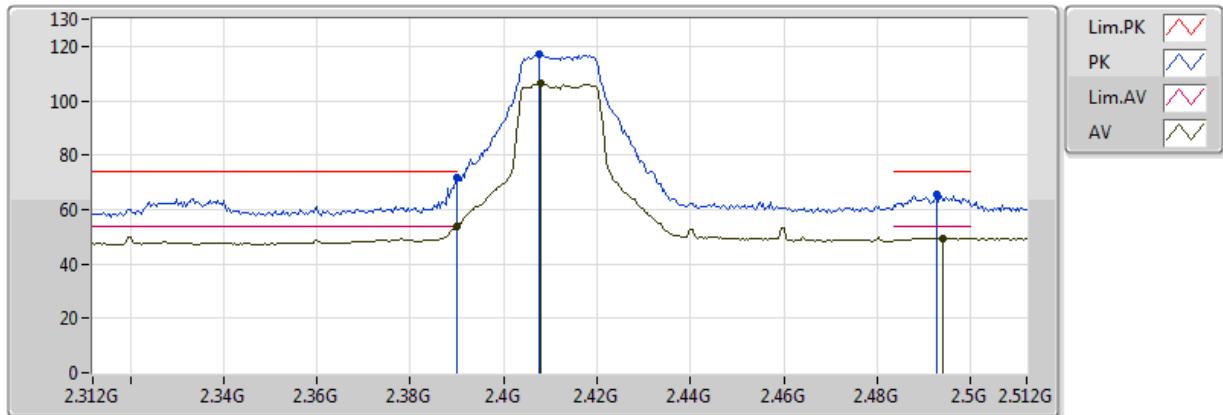


20170216
EUT Y 2TX
Setting 17
04-J-5-FSP(100142)

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	53.21	54.00	-0.79	32.67	3	V	10	1.68	-
AV	2.406G	105.54	Inf	-Inf	32.68	3	V	10	1.68	-
AV	2.492G	50.53	54.00	-3.47	32.79	3	V	10	1.68	-
PK	2.39G	68.42	74.00	-5.58	32.67	3	V	10	1.68	-
PK	2.4156G	115.77	Inf	-Inf	32.69	3	V	10	1.68	-
PK	2.4976G	67.86	74.00	-6.14	32.80	3	V	10	1.68	-

802.11g_(6Mbps)_2TX

2412MHz_TX

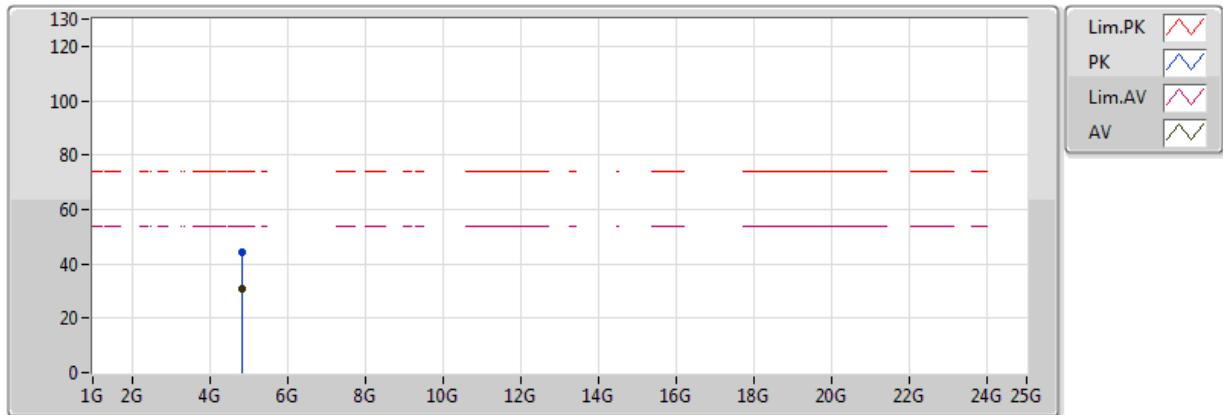


20170216
EUT Y 2TX
Setting 17
04-J-5-FSP(100142)

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	53.80	54.00	-0.20	32.67	3	H	5	1.50	-
AV	2.408G	106.38	Inf	-Inf	32.68	3	H	5	1.50	-
AV	2.494G	49.43	54.00	-4.57	32.79	3	H	5	1.50	-
PK	2.39G	71.75	74.00	-2.25	32.67	3	H	5	1.50	-
PK	2.4076G	117.34	Inf	-Inf	32.68	3	H	5	1.50	-
PK	2.4928G	65.61	74.00	-8.39	32.79	3	H	5	1.50	-

802.11g_(6Mbps)_2TX

2412MHz_TX

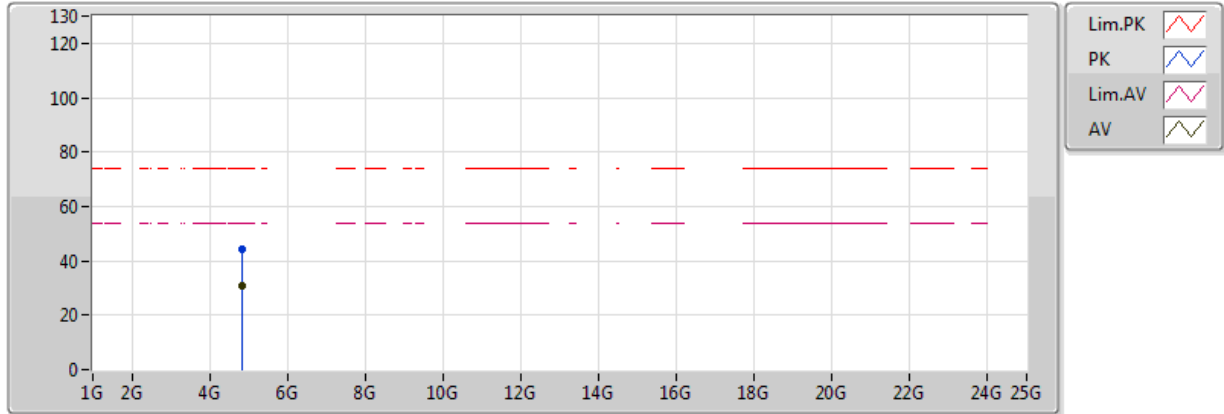


20170215
EUT Y 2TX
Setting 17
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81938G	30.93	54.00	-23.07	3.68	3	V	256	1.60	-
PK	4.82024G	44.00	74.00	-30.00	3.69	3	V	256	1.60	-

802.11g_(6Mbps)_2TX

2412MHz_TX

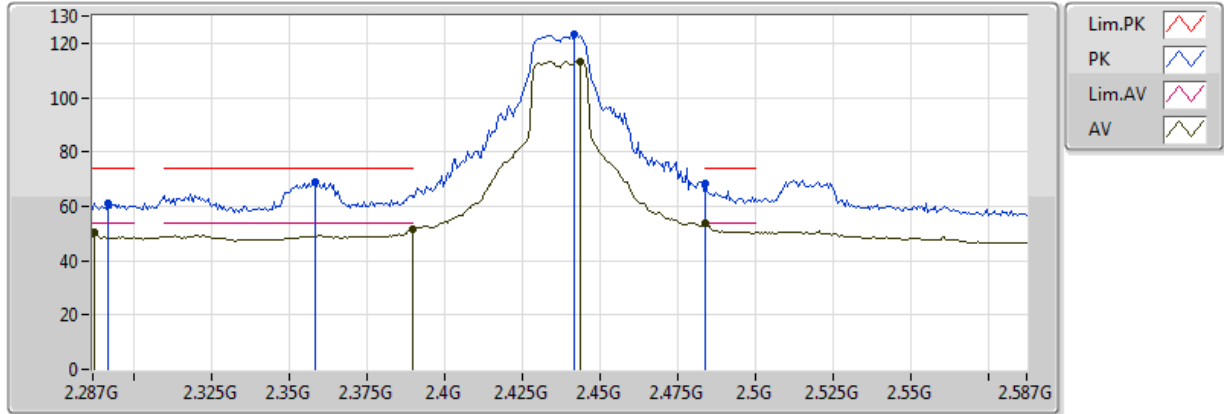


20170215
EUT Y 2TX
Setting 17
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.819G	30.88	54.00	-23.12	3.68	3	H	7	1.15	-
PK	4.8201G	44.22	74.00	-29.78	3.69	3	H	7	1.15	-

802.11g_(6Mbps)_2TX

2437MHz_TX

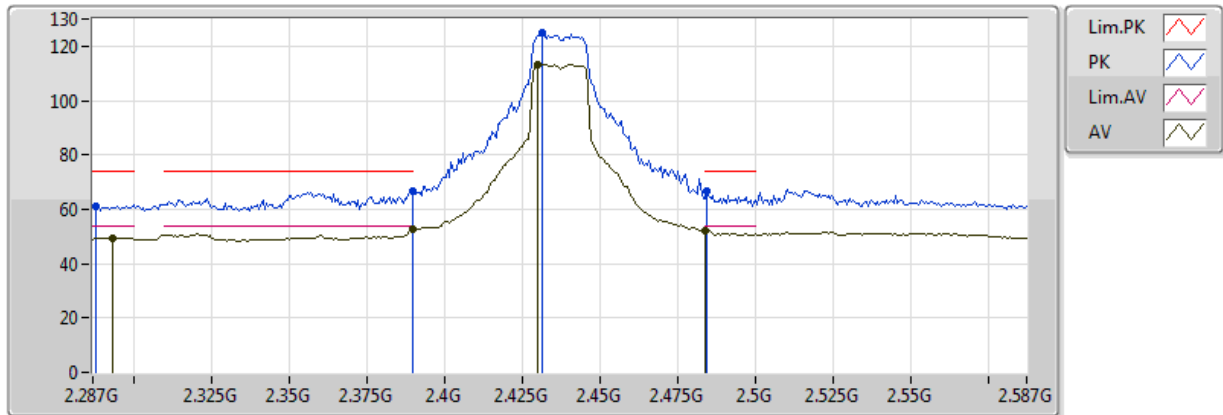


20170216
EUT Y 2TX
Setting 25
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.2876G	50.36	54.00	-3.64	32.64	3	V	0	1.50	-
AV	2.389998G	51.73	54.00	-2.27	32.67	3	V	0	1.50	-
AV	2.4436G	113.40	Inf	-Inf	32.73	3	V	0	1.50	-
AV	2.4838G	53.77	54.00	-0.23	32.78	3	V	0	1.50	-
PK	2.2918G	61.17	74.00	-12.83	32.64	3	V	0	1.50	-
PK	2.3584G	68.98	74.00	-5.02	32.66	3	V	0	1.50	-
PK	2.4418G	123.23	Inf	-Inf	32.72	3	V	0	1.50	-
PK	2.4838G	68.20	74.00	-5.80	32.78	3	V	0	1.50	-

802.11g_(6Mbps)_2TX

2437MHz_TX

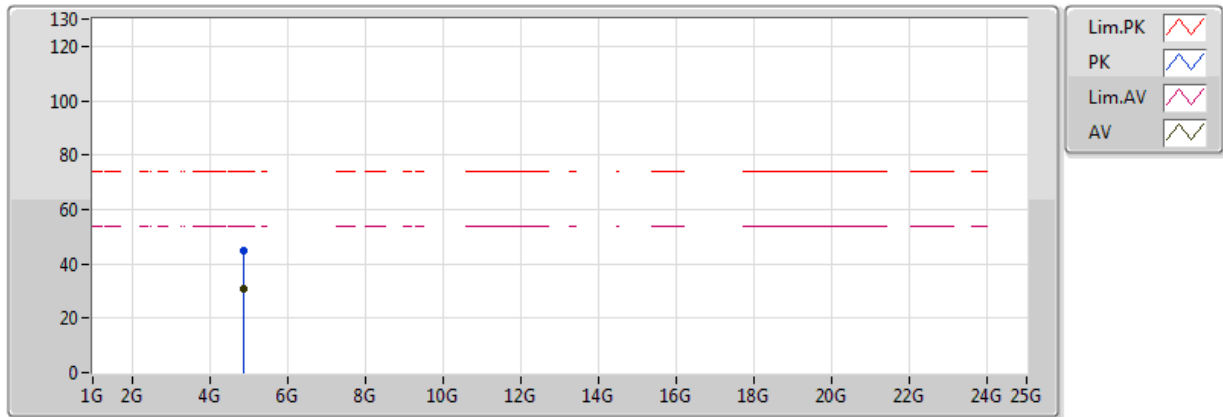


20170216
EUT Y 2TX
Setting 25
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.2936G	49.56	54.00	-4.44	32.64	3	H	359	1.50	-
AV	2.389998G	52.66	54.00	-1.34	32.67	3	H	359	1.50	-
AV	2.4298G	113.43	Inf	-Inf	32.71	3	H	359	1.50	-
AV	2.483502G	52.24	54.00	-1.76	32.78	3	H	359	1.50	-
PK	2.2882G	61.34	74.00	-12.66	32.64	3	H	359	1.50	-
PK	2.389998G	66.78	74.00	-7.22	32.67	3	H	359	1.50	-
PK	2.4316G	124.72	Inf	-Inf	32.71	3	H	359	1.50	-
PK	2.4844G	66.81	74.00	-7.19	32.78	3	H	359	1.50	-

802.11g_(6Mbps)_2TX

2437MHz_TX

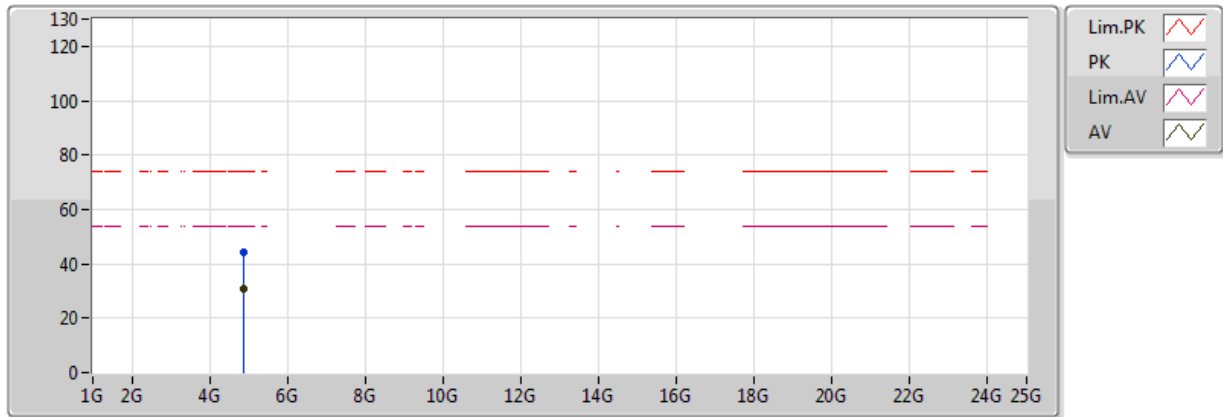


20170215
EUT Y 2TX
Setting 25
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8772G	30.82	54.00	-23.18	3.85	3	V	186	1.18	-
PK	4.87748G	44.64	74.00	-29.36	3.85	3	V	186	1.18	-

802.11g_(6Mbps)_2TX

2437MHz_TX

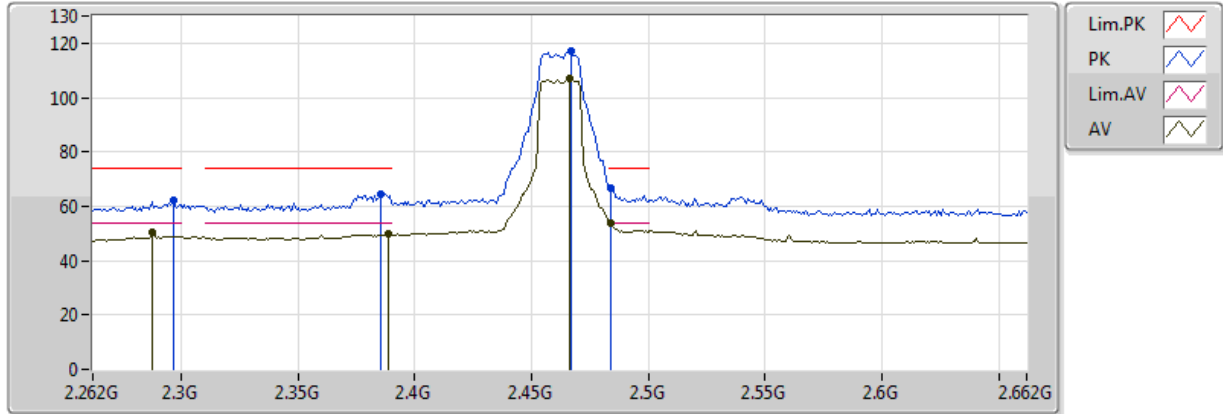


20170215
EUT Y 2TX
Setting 25
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8776G	30.77	54.00	-23.23	3.85	3	H	11	2.10	-
PK	4.87538G	44.02	74.00	-29.98	3.84	3	H	11	2.10	-

802.11g_(6Mbps)_2TX

2462MHz_TX

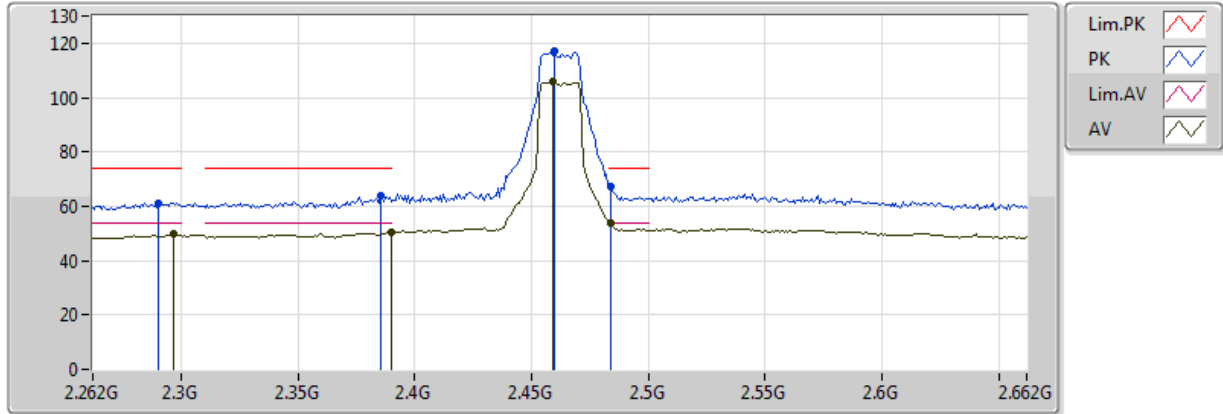


20170216
EUT Y 2TX
Setting 18
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.2876G	50.68	54.00	-3.32	32.64	3	V	15	1.50	-
AV	2.3884G	49.77	54.00	-4.23	32.67	3	V	15	1.50	-
AV	2.466G	106.90	Inf	-Inf	32.76	3	V	15	1.50	-
AV	2.4836G	53.81	54.00	-0.19	32.78	3	V	15	1.50	-
PK	2.2964G	62.11	74.00	-11.89	32.64	3	V	15	1.50	-
PK	2.3852G	64.42	74.00	-9.58	32.67	3	V	15	1.50	-
PK	2.4668G	116.93	Inf	-Inf	32.76	3	V	15	1.50	-
PK	2.4836G	66.71	74.00	-7.29	32.78	3	V	15	1.50	-

802.11g_(6Mbps)_2TX

2462MHz_TX

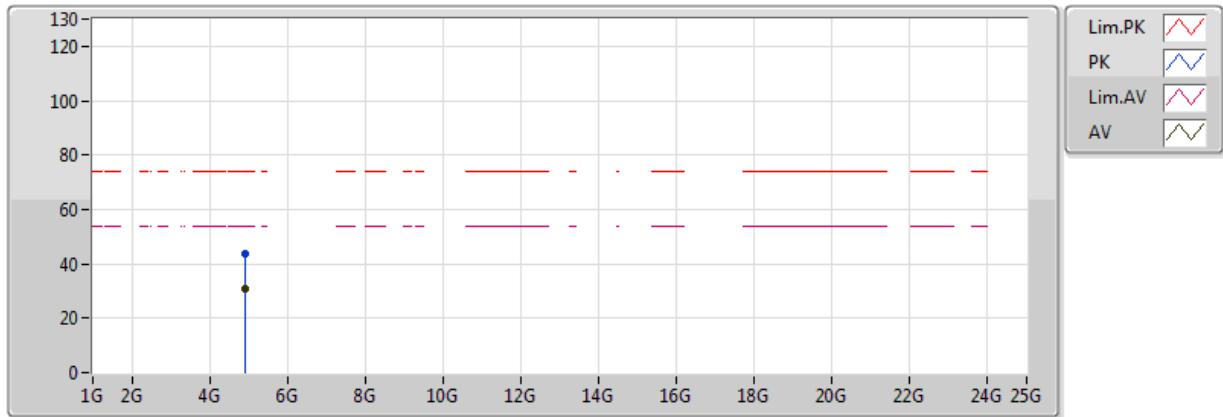


20170216
EUT Y 2TX
Setting 18
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.2964G	49.70	54.00	-4.30	32.64	3	H	359	1.58	-
AV	2.39G	50.53	54.00	-3.47	32.67	3	H	359	1.58	-
AV	2.4588G	105.74	Inf	-Inf	32.75	3	H	359	1.58	-
AV	2.4836G	53.74	54.00	-0.26	32.78	3	H	359	1.58	-
PK	2.29G	61.34	74.00	-12.66	32.64	3	H	359	1.58	-
PK	2.3852G	63.91	74.00	-10.09	32.67	3	H	359	1.58	-
PK	2.4596G	117.04	Inf	-Inf	32.75	3	H	359	1.58	-
PK	2.4836G	67.42	74.00	-6.58	32.78	3	H	359	1.58	-

802.11g_(6Mbps)_2TX

2462MHz_TX

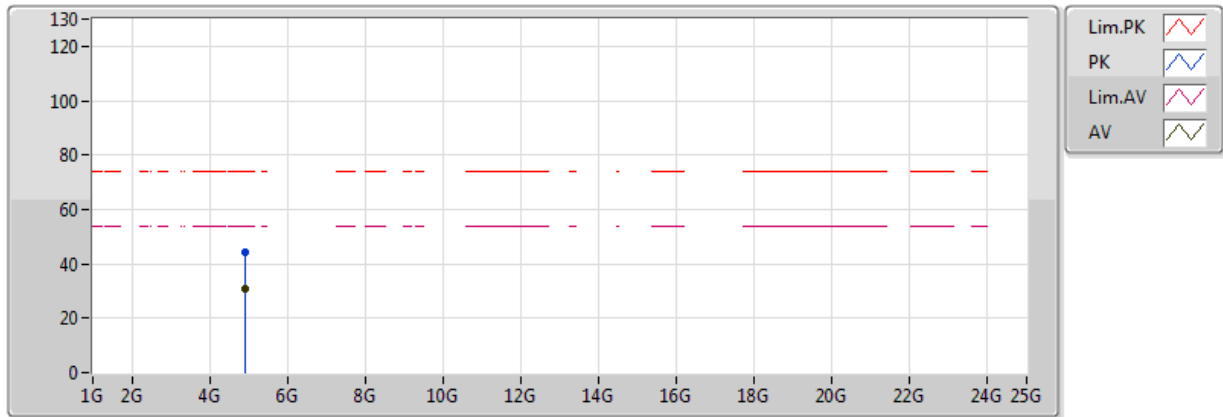


20170215
EUT Y 2TX
Setting 18
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92536G	30.73	54.00	-23.27	3.98	3	V	205	1.05	-
PK	4.92502G	43.95	74.00	-30.05	3.98	3	V	205	1.05	-

802.11g_(6Mbps)_2TX

2462MHz_TX

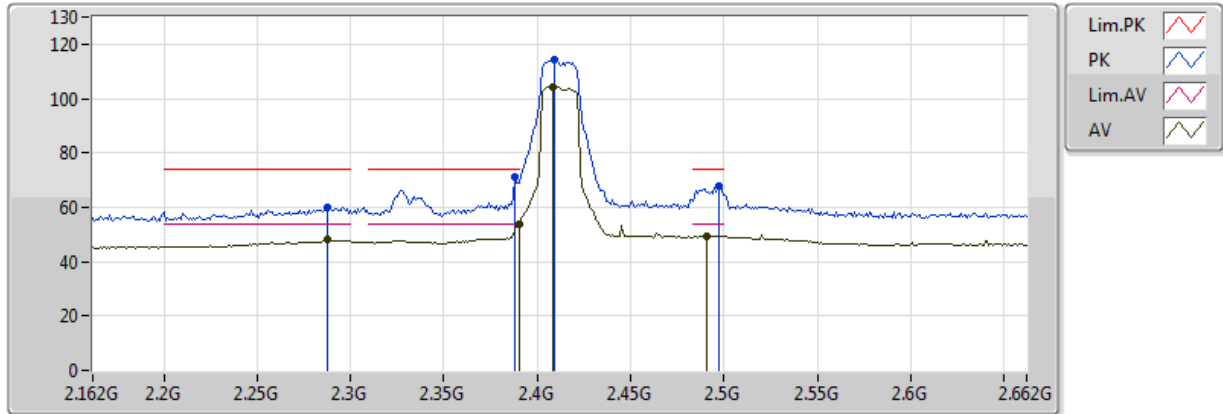


20170215
EUT Y 2TX
Setting 18
04-J-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92798G	30.62	54.00	-23.38	3.99	3	H	145	1.27	-
PK	4.92378G	44.13	74.00	-29.87	3.98	3	H	145	1.27	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

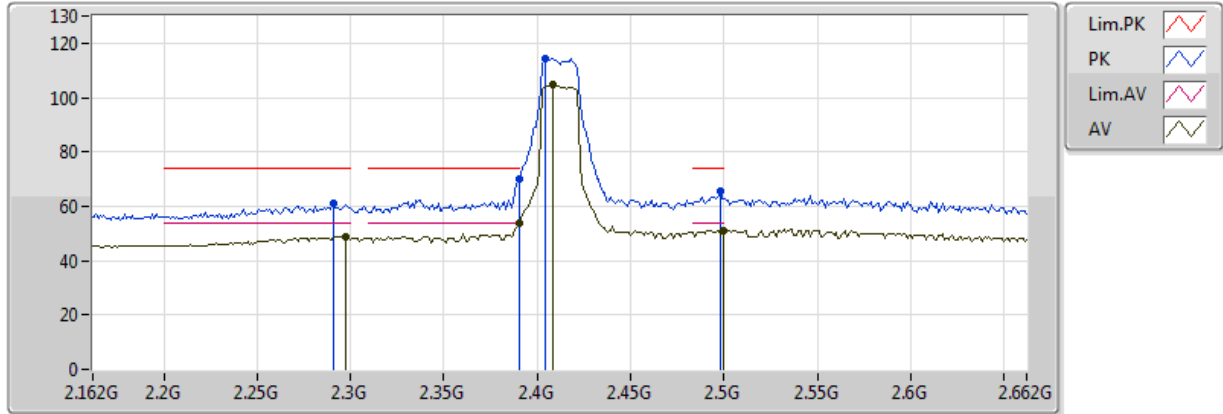


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

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	53.87	54.00	-0.13	32.67	3	V	13	1.50	-
AV	2.408G	104.48	Inf	-Inf	32.68	3	V	13	1.50	-
AV	2.491G	49.45	54.00	-4.55	32.79	3	V	13	1.50	-
PK	2.388G	71.02	74.00	-2.98	32.67	3	V	13	1.50	-
PK	2.409G	114.16	Inf	-Inf	32.68	3	V	13	1.50	-
PK	2.497G	67.86	74.00	-6.14	32.80	3	V	13	1.50	-
PK	2.288G	59.97	74.00	-14.03	32.64	3	V	13	1.50	-
AV	2.288G	48.27	54.00	-5.73	32.64	3	V	13	1.50	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

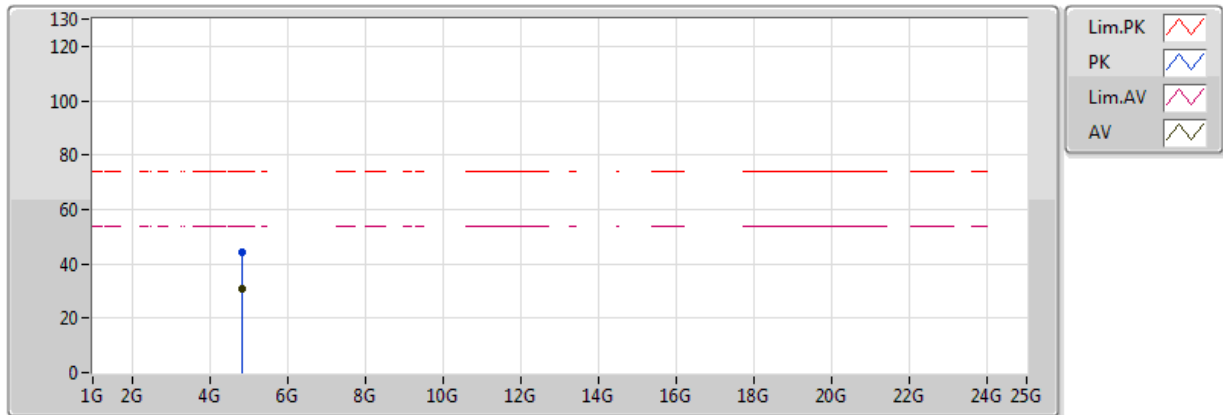


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

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	53.66	54.00	-0.34	32.67	3	H	351	1.93	-
AV	2.408G	104.63	Inf	-Inf	32.68	3	H	351	1.93	-
AV	2.5G	51.09	54.00	-2.91	32.80	3	H	351	1.93	-
PK	2.39G	70.23	74.00	-3.77	32.67	3	H	351	1.93	-
PK	2.404G	114.55	Inf	-Inf	32.68	3	H	351	1.93	-
PK	2.498G	65.34	74.00	-8.66	32.80	3	H	351	1.93	-
PK	2.291G	61.34	74.00	-12.66	32.64	3	H	351	1.93	-
AV	2.297G	48.98	54.00	-5.02	32.64	3	H	351	1.93	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

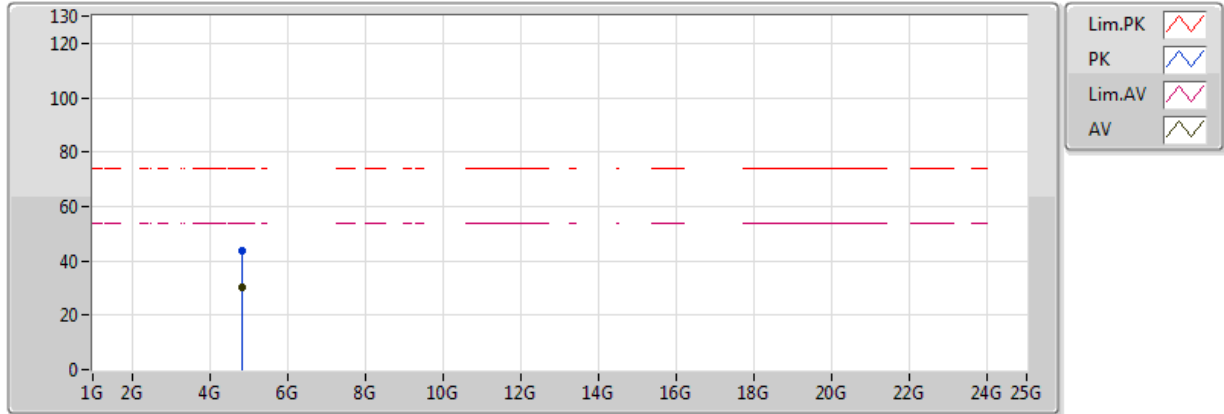


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81912G	30.63	54.00	-23.37	3.68	3	V	217	2.14	-
PK	4.81938G	44.26	74.00	-29.74	3.68	3	V	217	2.14	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

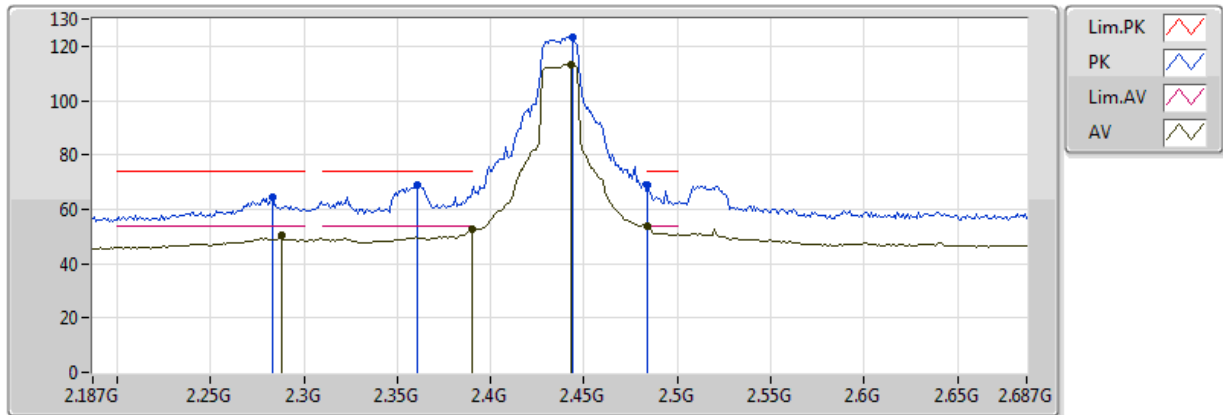


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82222G	30.46	54.00	-23.54	3.69	3	H	116	1.84	-
PK	4.81974G	43.80	74.00	-30.20	3.69	3	H	116	1.84	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

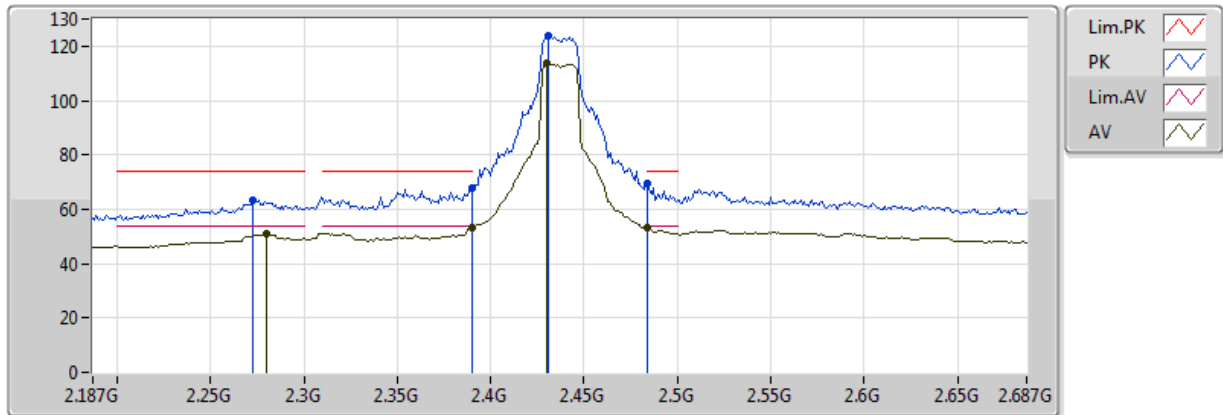


20170216
EUT Y 2TX
Setting 25.5
04-S-5-FSP(100142)

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	52.44	54.00	-1.56	32.67	3	V	12	1.66	-
AV	2.443G	113.46	Inf	-Inf	32.73	3	V	12	1.66	-
AV	2.483502G	53.69	54.00	-0.31	32.78	3	V	12	1.66	-
PK	2.361G	69.17	74.00	-4.83	32.66	3	V	12	1.66	-
PK	2.444G	123.52	Inf	-Inf	32.73	3	V	12	1.66	-
PK	2.484G	68.66	74.00	-5.34	32.78	3	V	12	1.66	-
PK	2.283G	64.60	74.00	-9.40	32.63	3	V	12	1.66	-
AV	2.288G	50.36	54.00	-3.64	32.64	3	V	12	1.66	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

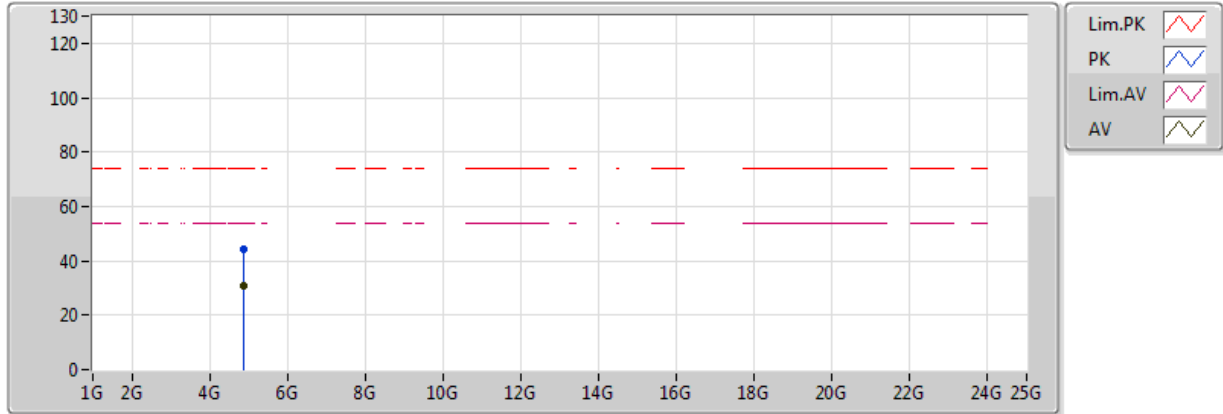


20170216
EUT Y 2TX
Setting 25.5
04-S-5-FSP(100142)

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	53.36	54.00	-0.64	32.67	3	H	359	1.65	-
AV	2.43G	113.55	Inf	-Inf	32.71	3	H	359	1.65	-
AV	2.483502G	53.21	54.00	-0.79	32.78	3	H	359	1.65	-
PK	2.39G	67.76	74.00	-6.24	32.67	3	H	359	1.65	-
PK	2.431G	123.84	Inf	-Inf	32.71	3	H	359	1.65	-
PK	2.483502G	69.48	74.00	-4.52	32.78	3	H	359	1.65	-
PK	2.273G	63.31	74.00	-10.69	32.63	3	H	360	1.65	-
AV	2.28G	50.93	54.00	-3.07	32.63	3	H	360	1.65	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

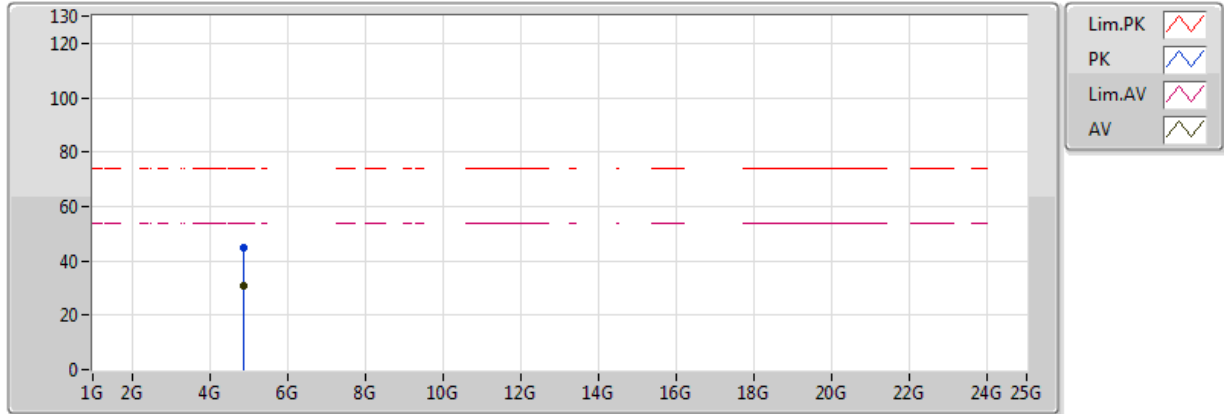


20170216
EUT Y 2TX
Setting 25.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87702G	30.79	54.00	-23.21	3.85	3	V	191	1.25	-
PK	4.87392G	44.17	74.00	-29.83	3.84	3	V	191	1.25	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

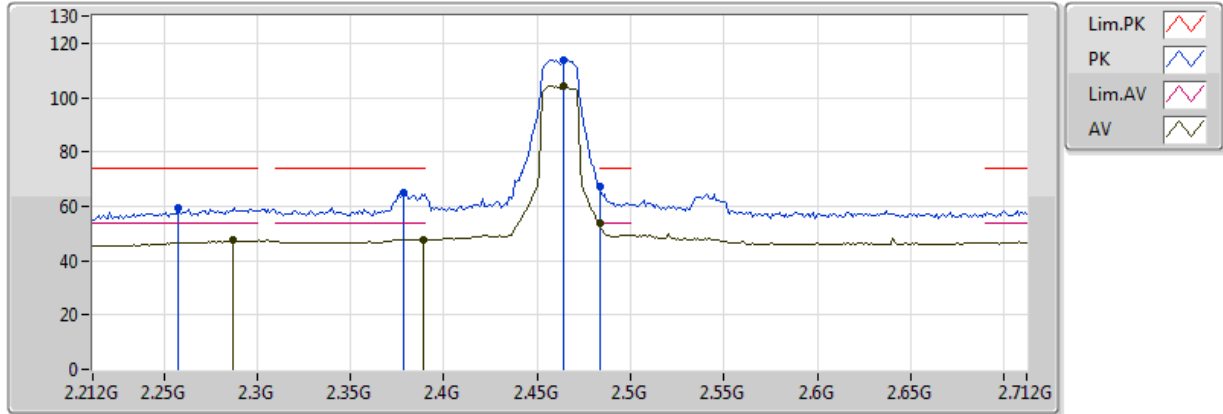


20170216
EUT Y 2TX
Setting 25.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.86912G	30.77	54.00	-23.23	3.82	3	H	4	2.41	-
PK	4.86986G	44.60	74.00	-29.40	3.83	3	H	4	2.41	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

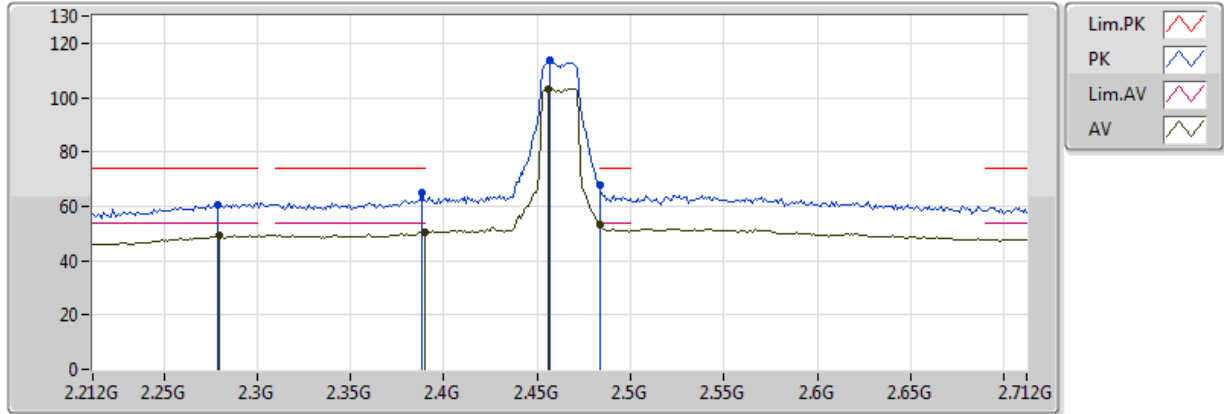


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

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	47.90	54.00	-6.10	32.67	3	V	2	1.45	-
AV	2.464G	104.26	Inf	-Inf	32.75	3	V	2	1.45	-
AV	2.483502G	53.64	54.00	-0.36	32.78	3	V	2	1.45	-
PK	2.378G	65.17	74.00	-8.83	32.66	3	V	2	1.45	-
PK	2.464G	114.01	Inf	-Inf	32.75	3	V	2	1.45	-
PK	2.483502G	67.10	74.00	-6.90	32.78	3	V	2	1.45	-
PK	2.258G	59.46	74.00	-14.54	32.63	3	V	2	1.45	-
AV	2.287G	47.65	54.00	-6.35	32.64	3	V	2	1.45	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

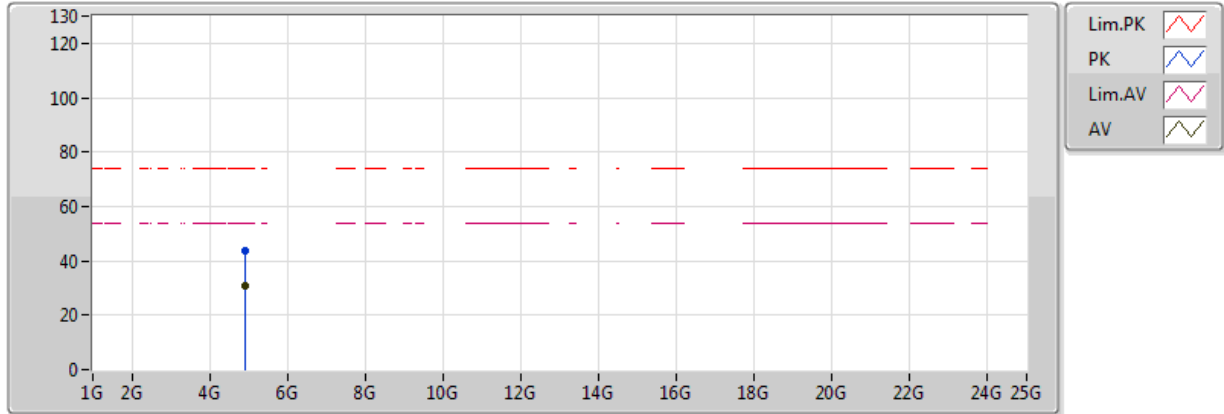


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

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	50.35	54.00	-3.65	32.67	3	H	360	1.65	-
AV	2.456G	103.35	Inf	-Inf	32.74	3	H	360	1.65	-
AV	2.483502G	53.47	54.00	-0.53	32.78	3	H	360	1.65	-
PK	2.388G	64.72	74.00	-9.28	32.67	3	H	360	1.65	-
PK	2.457G	113.79	Inf	-Inf	32.74	3	H	360	1.65	-
PK	2.483502G	67.70	74.00	-6.30	32.78	3	H	360	1.65	-
PK	2.279G	60.77	74.00	-13.23	32.63	3	H	360	1.65	-
AV	2.28G	49.29	54.00	-4.71	32.63	3	H	360	1.65	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

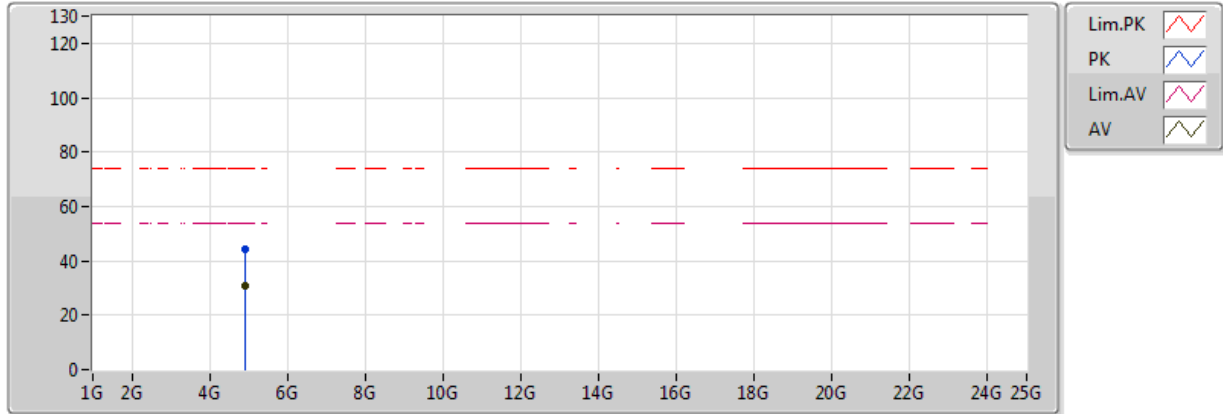


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92824G	30.76	54.00	-23.24	3.99	3	V	103	1.64	-
PK	4.92192G	43.81	74.00	-30.19	3.97	3	V	103	1.64	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

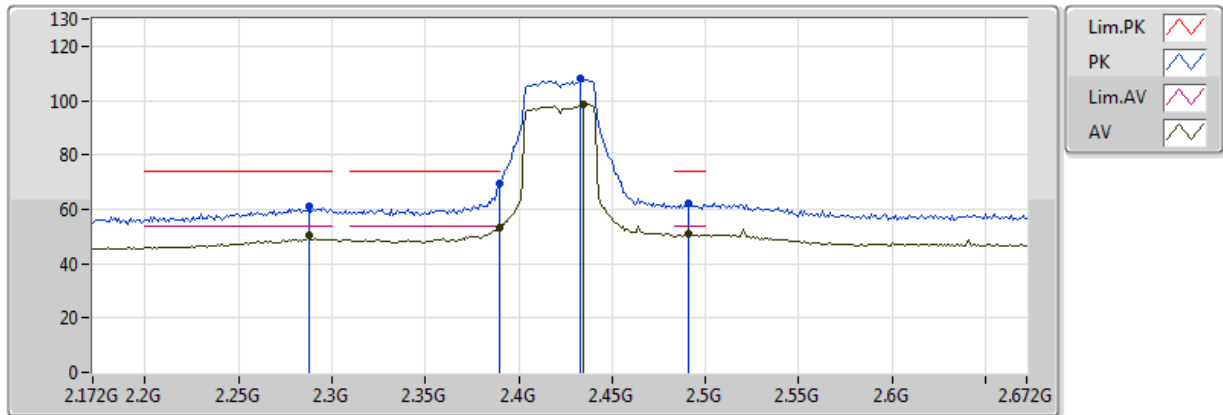


20170216
EUT Y 2TX
Setting 16
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92776G	30.69	54.00	-23.31	3.99	3	H	65	1.95	-
PK	4.92354G	44.13	74.00	-29.87	3.98	3	H	65	1.95	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

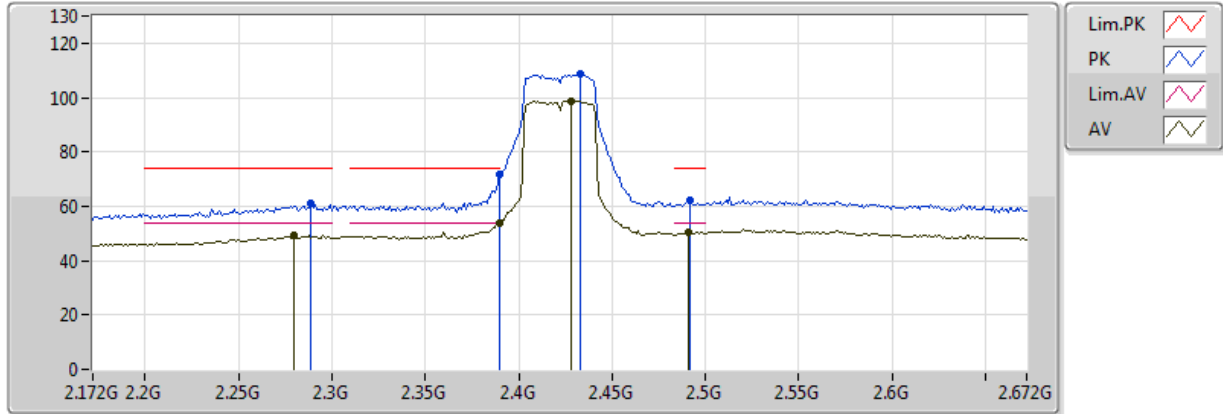


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

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	53.25	54.00	-0.75	32.67	3	V	4	1.55	-
AV	2.435G	98.68	Inf	-Inf	32.72	3	V	4	1.55	-
AV	2.491G	50.97	54.00	-3.03	32.79	3	V	4	1.55	-
PK	2.39G	69.48	74.00	-4.52	32.67	3	V	4	1.55	-
PK	2.433G	108.09	Inf	-Inf	32.71	3	V	4	1.55	-
PK	2.491G	62.16	74.00	-11.84	32.79	3	V	4	1.55	-
PK	2.288G	60.93	74.00	-13.07	32.64	3	V	4	1.55	-
AV	2.288G	50.41	54.00	-3.59	32.64	3	V	4	1.55	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

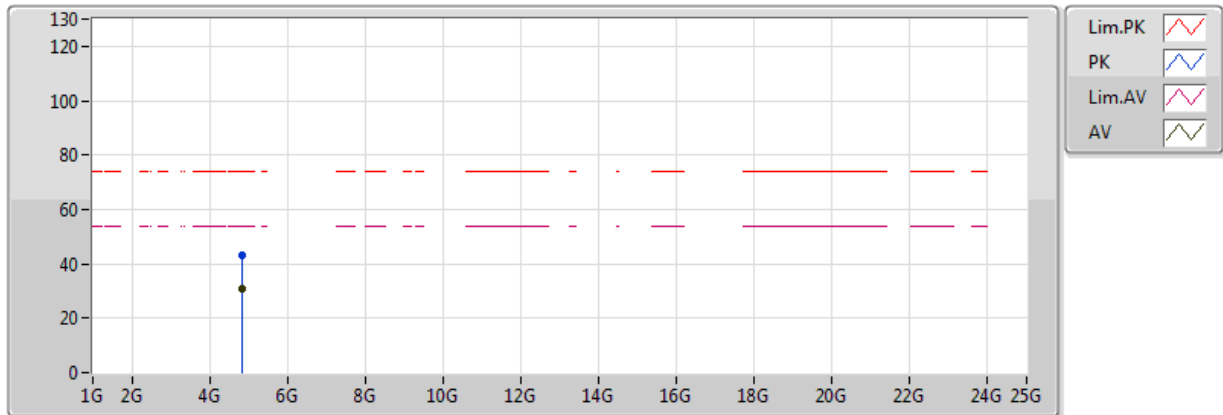


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

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	53.86	54.00	-0.14	32.67	3	H	355	1.61	-
AV	2.428G	98.74	Inf	-Inf	32.71	3	H	355	1.61	-
AV	2.491G	50.44	54.00	-3.56	32.79	3	H	355	1.61	-
PK	2.39G	71.54	74.00	-2.46	32.67	3	H	355	1.61	-
PK	2.433G	108.45	Inf	-Inf	32.71	3	H	355	1.61	-
PK	2.492G	62.08	74.00	-11.92	32.79	3	H	355	1.61	-
PK	2.289G	61.24	74.00	-12.76	32.64	3	H	355	1.61	-
AV	2.28G	49.52	54.00	-4.48	32.63	3	H	355	1.61	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

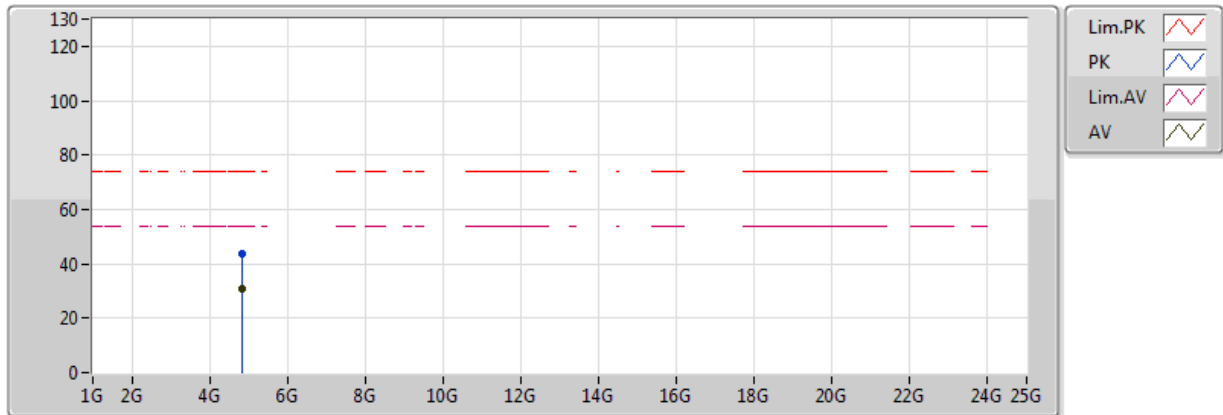


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8396G	30.84	54.00	-23.16	3.74	3	V	66	1.40	-
PK	4.83968G	43.36	74.00	-30.64	3.74	3	V	66	1.40	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

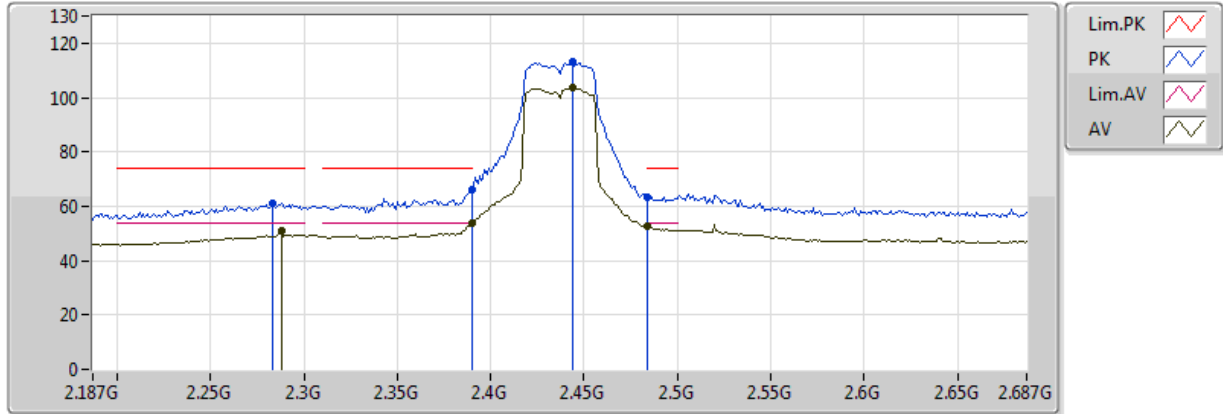


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84G	30.73	54.00	-23.27	3.74	3	H	327	1.31	-
PK	4.8404G	43.77	74.00	-30.23	3.74	3	H	327	1.31	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

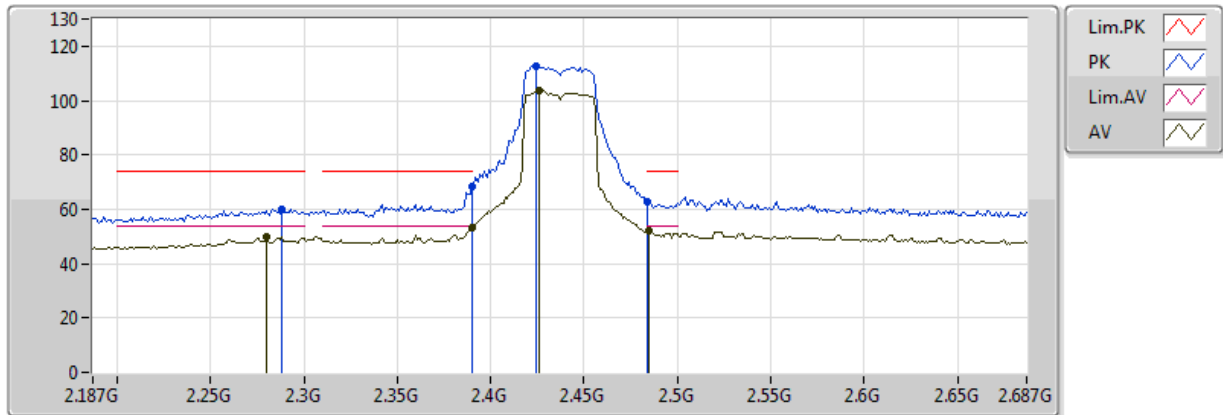


20170216
EUT Y 2TX
Setting 17
04-S-5-FSP(100142)

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	53.64	54.00	-0.36	32.67	3	V	6	1.48	-
AV	2.444G	103.41	Inf	-Inf	32.73	3	V	6	1.48	-
AV	2.484G	52.49	54.00	-1.51	32.78	3	V	6	1.48	-
PK	2.39G	66.13	74.00	-7.87	32.67	3	V	6	1.48	-
PK	2.444G	112.98	Inf	-Inf	32.73	3	V	6	1.48	-
PK	2.484G	63.32	74.00	-10.68	32.78	3	V	6	1.48	-
PK	2.283G	61.07	74.00	-12.93	32.63	3	V	6	1.48	-
AV	2.288G	50.90	54.00	-3.10	32.64	3	V	6	1.48	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

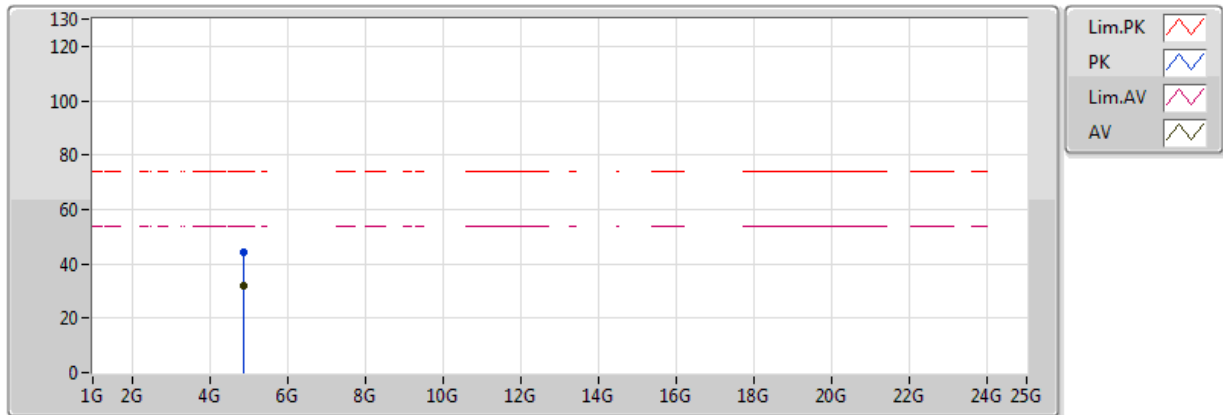


20170216
EUT Y 2TX
Setting 17
04-S-5-FSP(100142)

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	53.30	54.00	-0.70	32.67	3	H	359	1.69	-
AV	2.426G	103.46	Inf	-Inf	32.70	3	H	359	1.69	-
AV	2.485G	51.84	54.00	-2.16	32.78	3	H	359	1.69	-
PK	2.39G	68.12	74.00	-5.88	32.67	3	H	359	1.69	-
PK	2.424G	112.84	Inf	-Inf	32.70	3	H	359	1.69	-
PK	2.483502G	62.75	74.00	-11.25	32.78	3	H	359	1.69	-
PK	2.288G	59.79	74.00	-14.21	32.64	3	H	359	1.69	-
AV	2.28G	49.66	54.00	-4.34	32.63	3	H	359	1.69	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

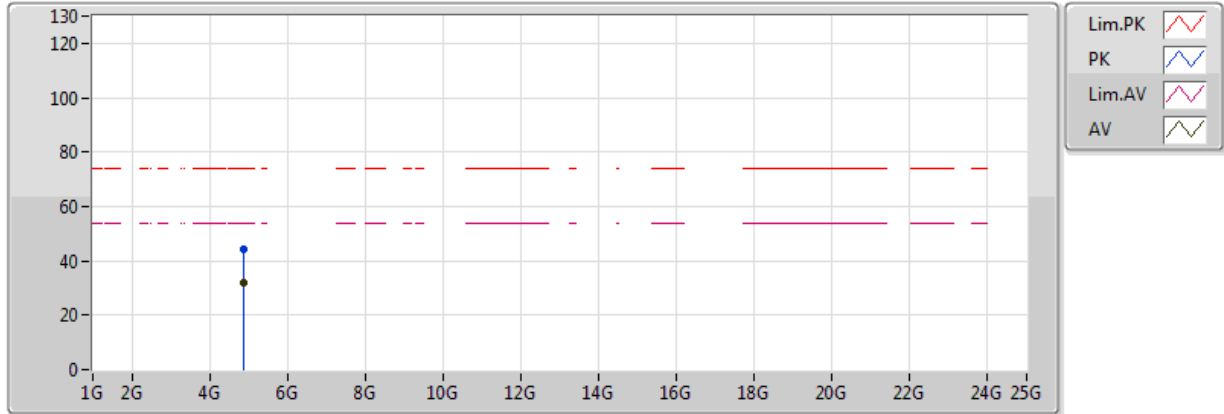


20170216
EUT Y 2TX
Setting 17
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87676G	31.77	54.00	-22.23	3.84	3	V	94	2.14	-
PK	4.87234G	44.25	74.00	-29.75	3.83	3	V	94	2.14	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

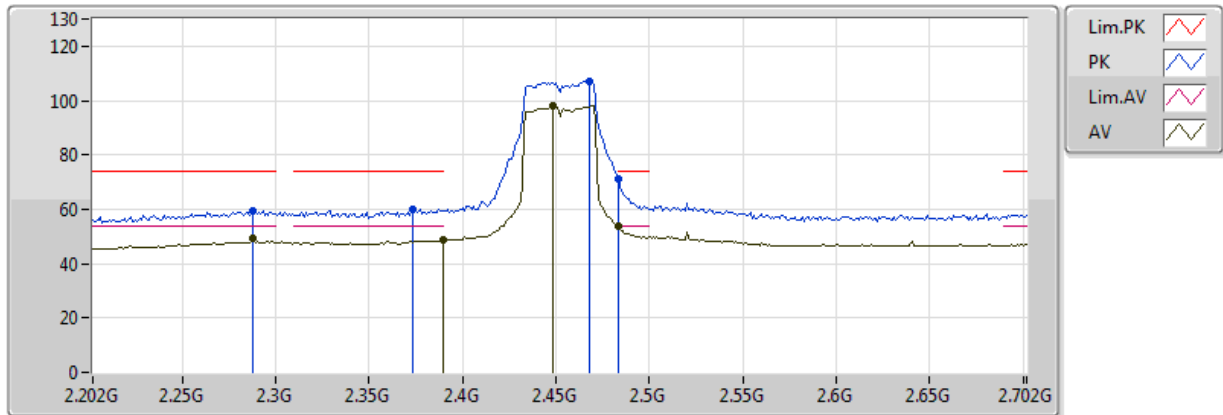


20170216
EUT Y 2TX
Setting 17
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87712G	31.83	54.00	-22.17	3.85	3	H	171	1.35	-
PK	4.87412G	44.49	74.00	-29.51	3.84	3	H	171	1.35	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

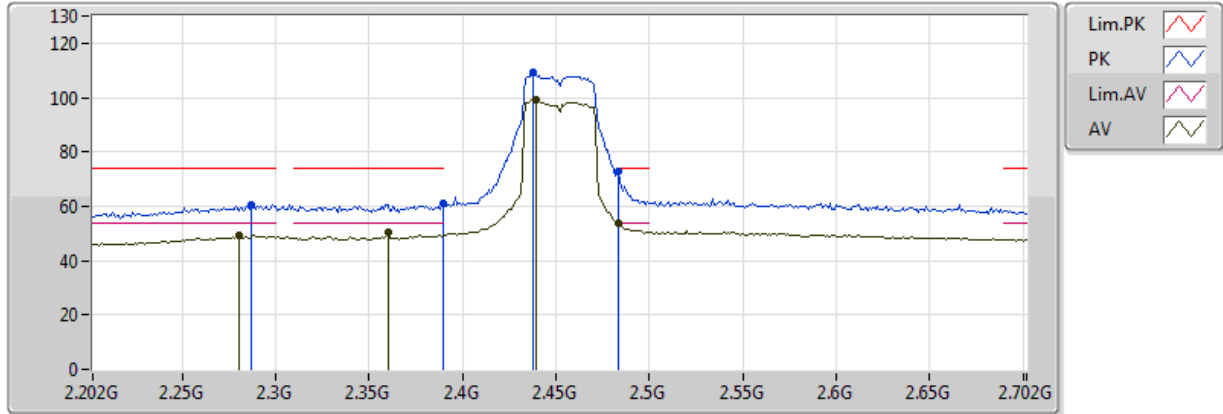


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

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	48.65	54.00	-5.35	32.67	3	V	357	1.47	-
AV	2.448G	97.99	Inf	-Inf	32.73	3	V	357	1.47	-
AV	2.483502G	53.79	54.00	-0.21	32.78	3	V	357	1.47	-
PK	2.373G	59.95	74.00	-14.05	32.66	3	V	357	1.47	-
PK	2.468G	107.06	Inf	-Inf	32.76	3	V	357	1.47	-
PK	2.483502G	71.04	74.00	-2.96	32.78	3	V	357	1.47	-
PK	2.288G	59.64	74.00	-14.36	32.64	3	V	357	1.47	-
AV	2.288G	49.15	54.00	-4.85	32.64	3	V	357	1.47	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

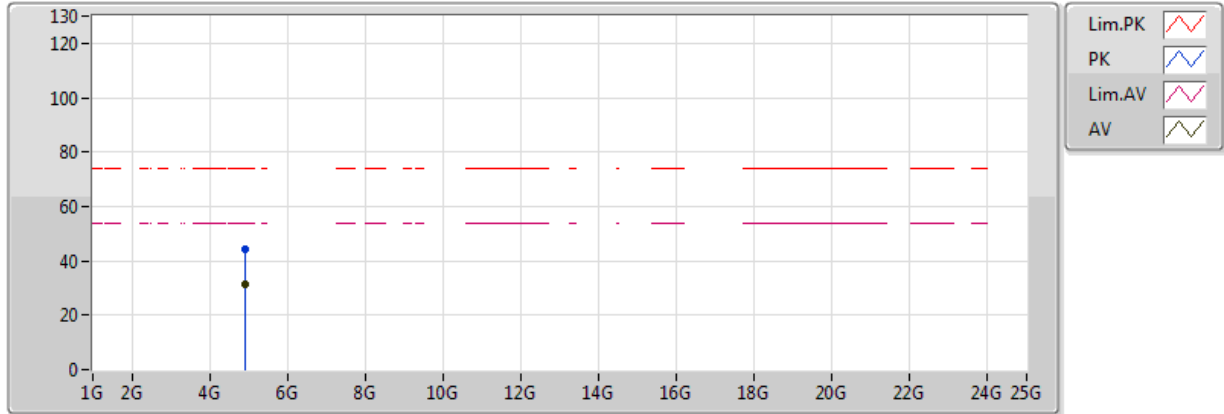


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.36G	50.32	54.00	-3.68	32.66	3	H	14	1.50	-
AV	2.439G	99.01	Inf	-Inf	32.72	3	H	14	1.50	-
AV	2.483502G	53.70	54.00	-0.30	32.78	3	H	14	1.50	-
PK	2.39G	61.35	74.00	-12.65	32.67	3	H	14	1.50	-
PK	2.438G	109.09	Inf	-Inf	32.72	3	H	14	1.50	-
PK	2.483502G	73.08	74.00	-0.92	32.78	3	H	14	1.50	-
PK	2.287G	60.48	74.00	-13.52	32.64	3	H	14	1.50	-
AV	2.28G	49.50	54.00	-4.50	32.63	3	H	14	1.50	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

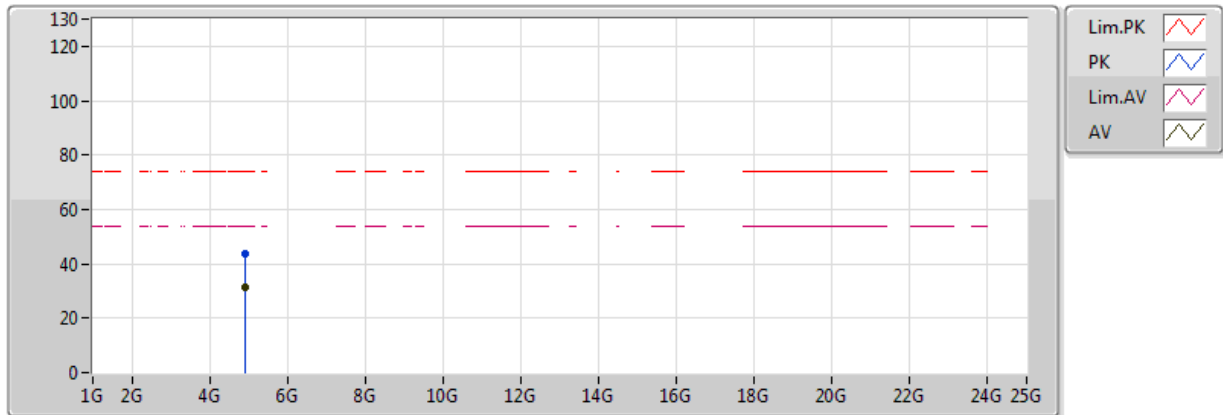


20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90406G	31.24	54.00	-22.76	3.92	3	V	62	1.44	-
PK	4.89938G	44.19	74.00	-29.81	3.91	3	V	62	1.44	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX



20170216
EUT Y 2TX
Setting 12.5
04-S-5-FSP(100142)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90296G	31.22	54.00	-22.78	3.92	3	H	349	1.63	-
PK	4.90036G	43.65	74.00	-30.35	3.91	3	H	349	1.63	-