

FCC Test Report

Equipment : 300Mbps High Power Wireless N Router
Brand Name : TP-Link
Model No. : TL-WR841HP
FCC ID : TE7WR841HPV5
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4),Central
Science and Technology Park,Nanshan
Shenzhen,518057 China
Manufacturer : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4),Central
Science and Technology Park,Nanshan
Shenzhen,518057 China

The product sample received on Feb. 10, 2017 and completely tested on Feb. 24, 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



SPORTON INTERNATIONAL INC.
TEL : 886-3-3273456
FAX : 886-3-3270973
FCC ID: TE7WR841HPV5

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
2.4G	802.11b	20	2TX
2.4G	802.11g	20	2TX
2.4G	802.11n HT20	20	2TX
2.4G	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.
- 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	P/N	Antenna Type	Connector	Gain (dBi)	Cable Loss	True Gain (dBi)
1	TP-LINK	3101501165	Dipole Antenna	Reversed-SMA	7.12	0.8	6.32
2	TP-LINK	3101501165	Dipole Antenna	Reversed-SMA	7.12	0.8	6.32

Note: The EUT has two antennas.

Chain 1 connect Ant. 1 and Chain 2 connect Ant. 2

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

Chain 1(Port 1) and Chain 2(Port 2) can be used as transmitting/receiving antenna.

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11g	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11n HT20	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11n HT40	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter		
Beamforming Function	☐ With beamforming	☒ Without beamforming	

1.1.5 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

1.2 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	Serway Li	23°C / 47%	Feb. 23, 2017
Radiated	03CH01-CB	Steven Liang	22°C / 54%	Feb. 21, 2017~ Feb. 24, 2017
AC Conduction	CO01-CB	Gavin Peng	23°C / 55%	Feb. 21, 2017

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.3 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 x10 ⁻⁸	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_2TX	-
2412MHz	22
2437MHz	23
2462MHz	20
802.11g_(6Mbps)_2TX	-
2412MHz	1B
2437MHz	20
2462MHz	19
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	19
2437MHz	20
2462MHz	1C
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	14
2437MHz	1C
2452MHz	11

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
1	EUT + Adapter

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	Place EUT in Y axis + Adapter
2	Place EUT in Z axis + Adapter
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 Y axis and Z axis position, and the worst case was found at Z axis. So the measurement will follow this same test configuration.	
1	Place EUT in Z axis

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 Accessories

Accessories			
Equipment Name	Brand	Model Name	Rating
Adapter	TP-Link	T120100-2B1	INPUT: 100-240V~50/60Hz, 0.3A OUTPUT: 12V, 1A
Other			
Antenna rack*2			

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	DoC
2	NB	DELL	E6430	DoC
3	NB	DELL	E6430	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	DELL	E4300	DoC
3	NB	Apple	Mac Book	DoC

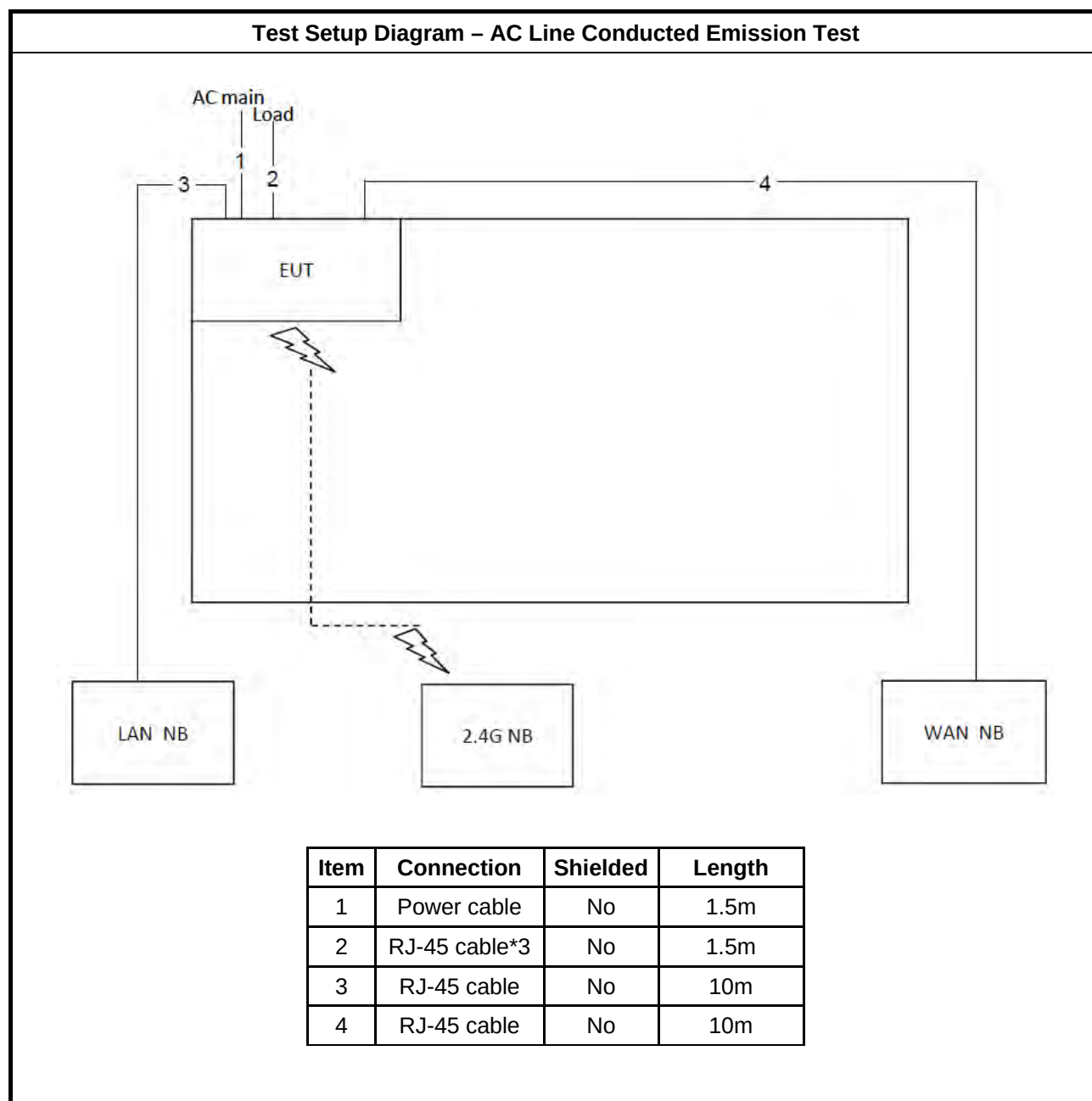
For Test Site No: 03CH01-CB (above 1GHz)

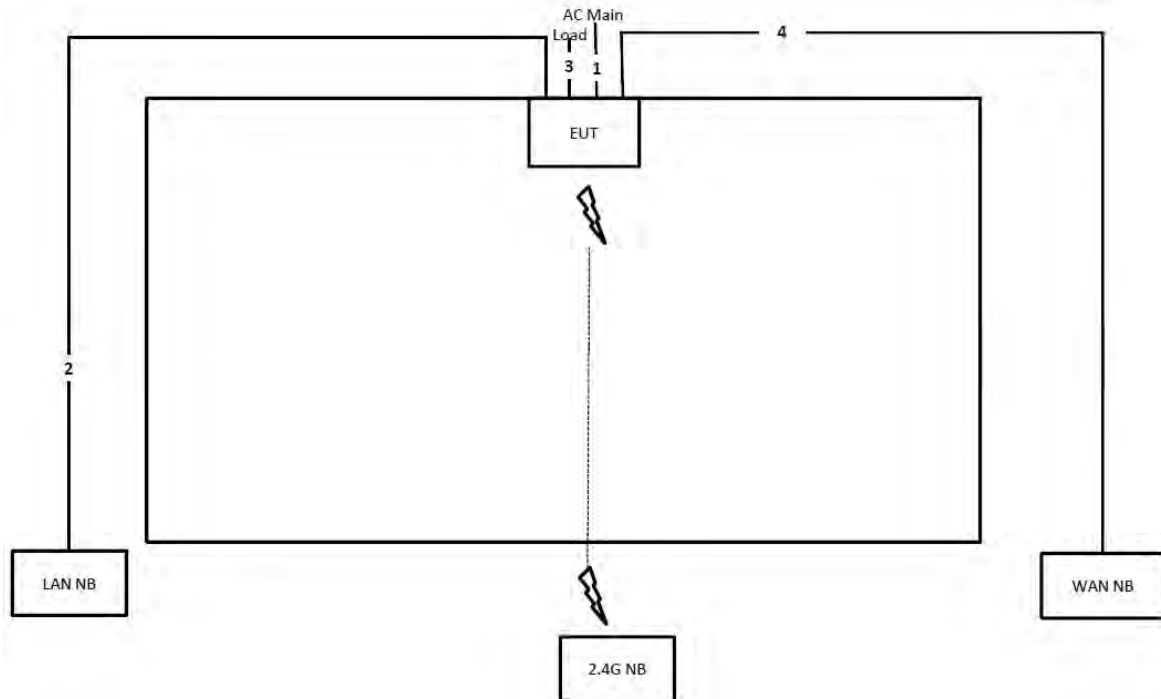
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

For Test Site No: TH01-CB

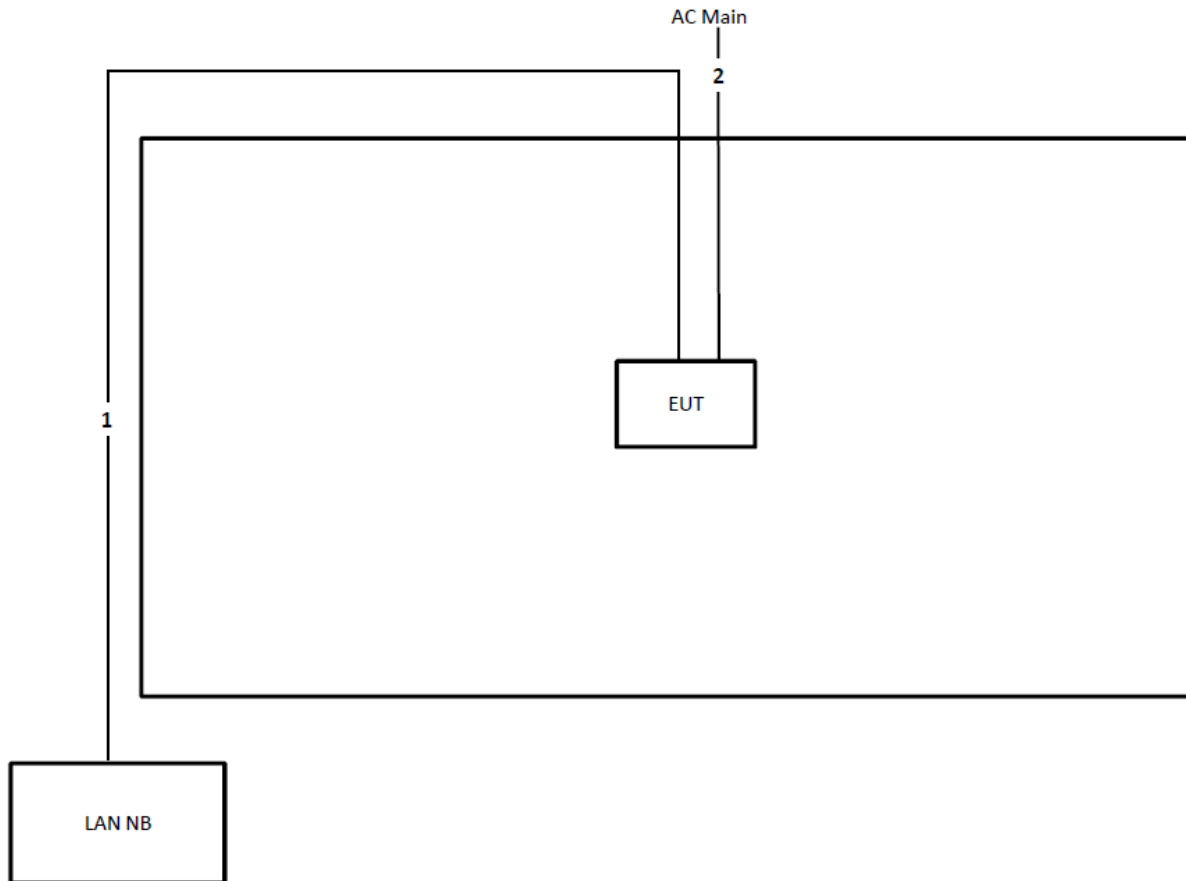
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	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.

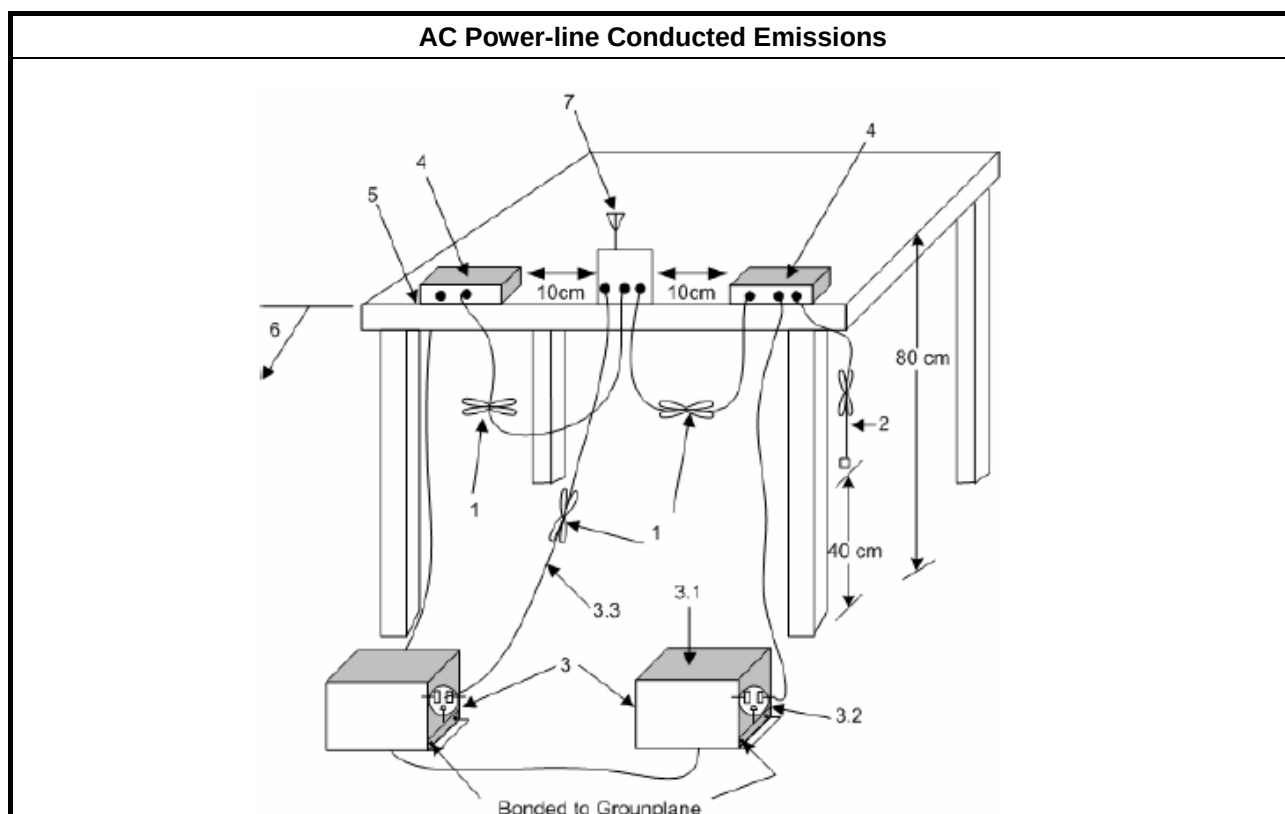
3.1.2 Measuring Instruments

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





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.

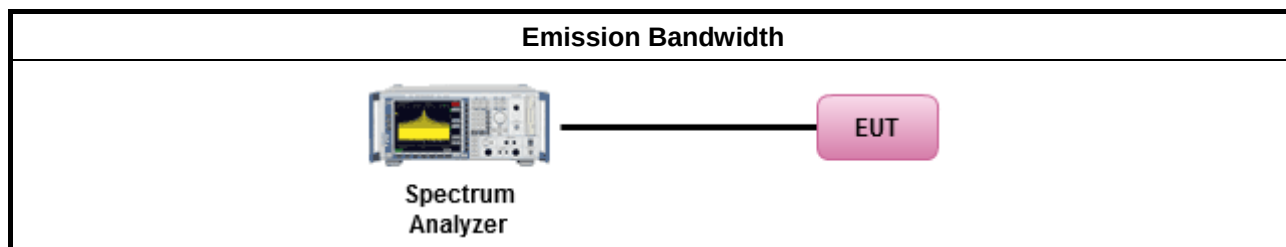
3.2.2 Measuring Instruments

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:
☒	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



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.	

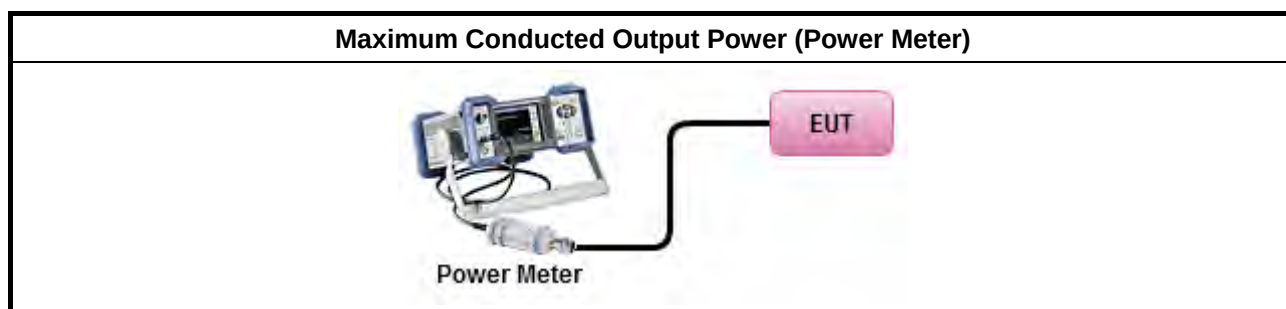
3.3.2 Measuring Instruments

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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

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

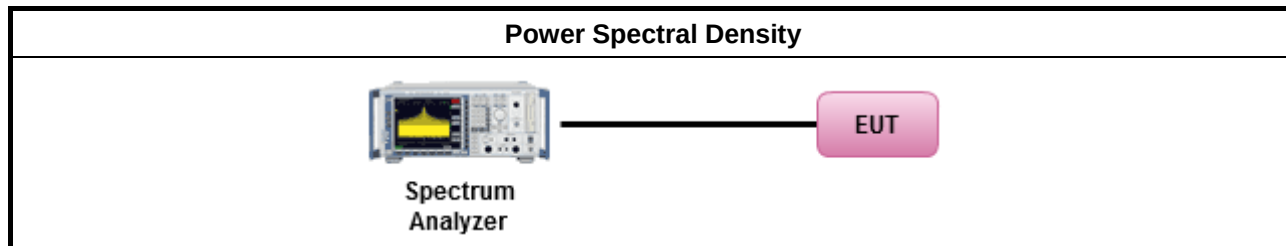
3.4.2 Measuring Instruments

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 $\geq 98\%$ 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



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.	

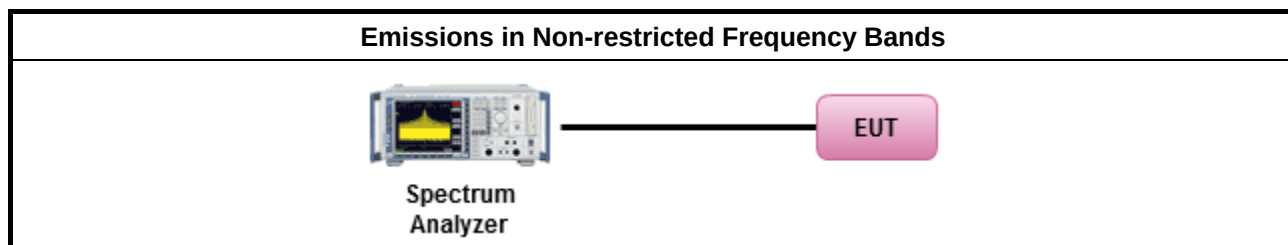
3.5.2 Measuring Instruments

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



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.

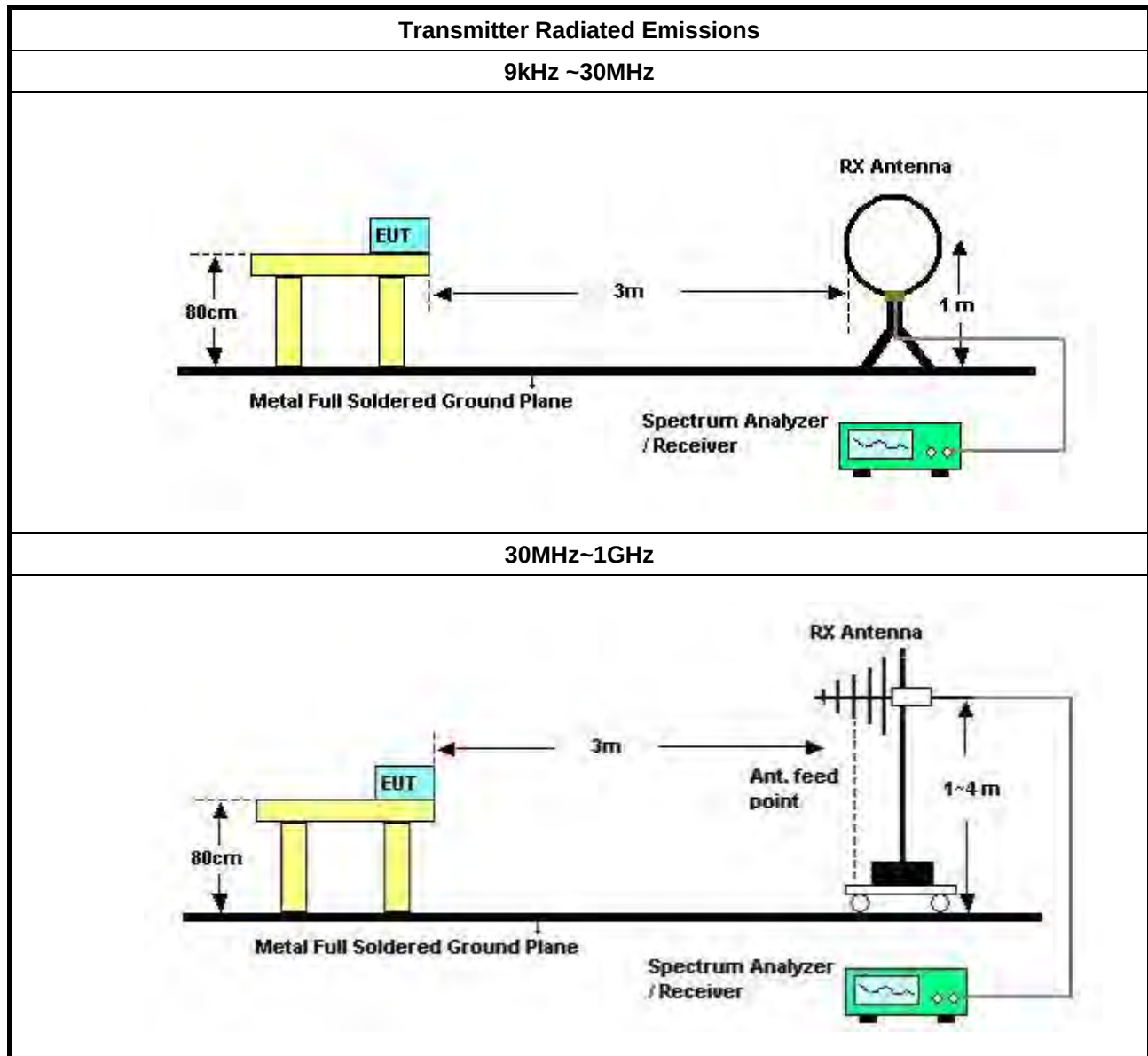
3.6.2 Measuring Instruments

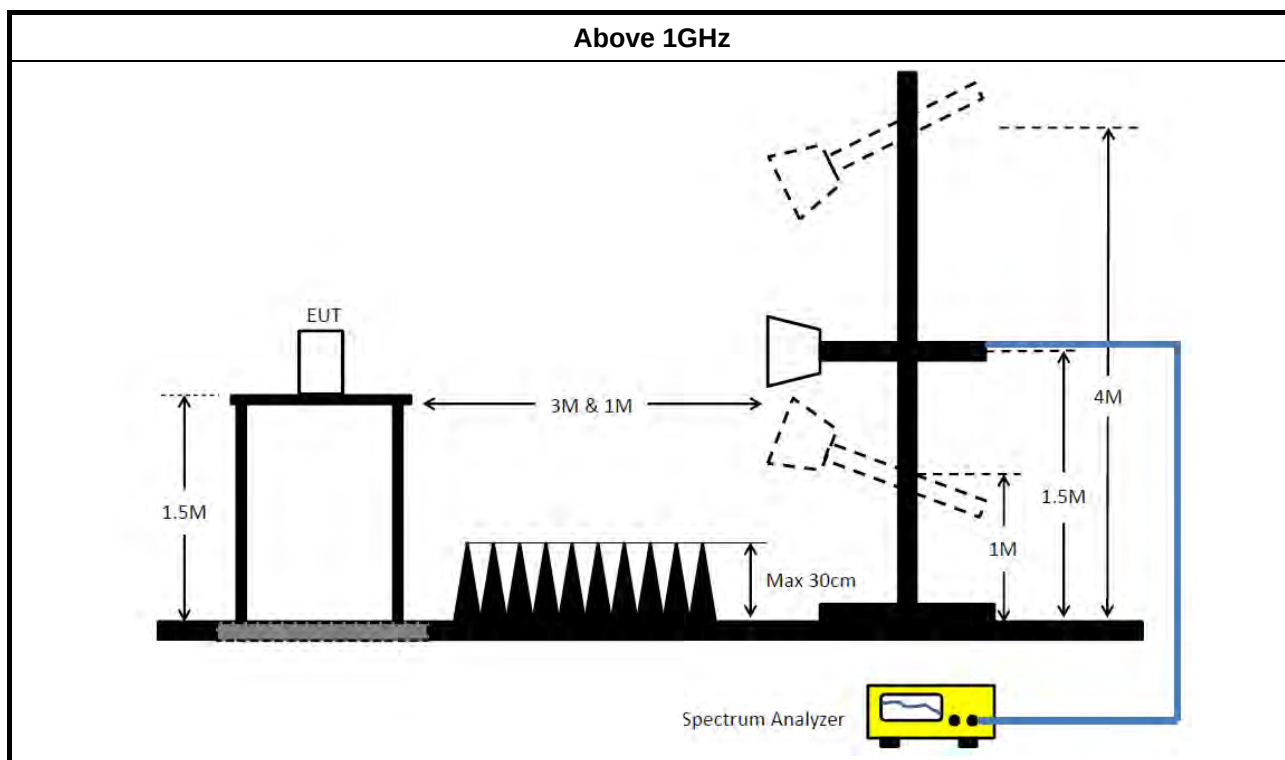
Refer a test equipment and calibration data table in this test report.

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 $\geq 98\%$)
	☐ 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 $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, 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





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)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & -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)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-10-7	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)



FCC Test Report

Report No. : FR611212-01

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
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)
Cable	Marvelous Microwave	n/a	Cable-REF-1	9k-1GHz	Oct. 21, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

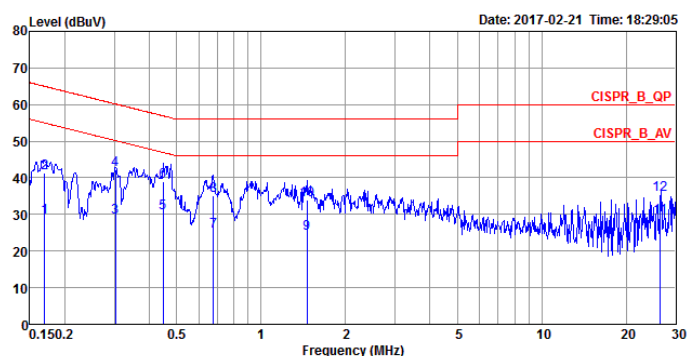
Note: Calibration Interval of instruments listed above is one year.

“*” 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		



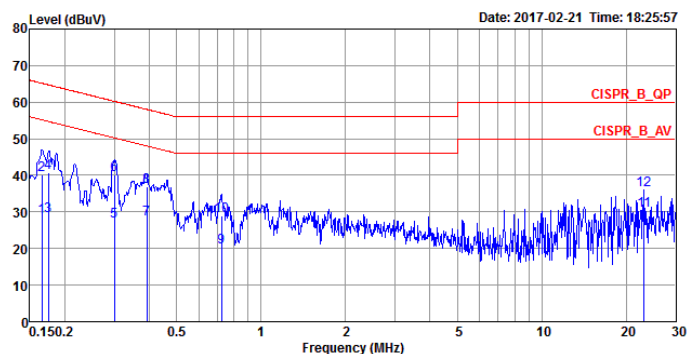
	Freq	Level	Over	Limit	Read	LISN	Cable		
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Pol/Phase	Remark
			dB	dBuV	dBuV	dB	dB		
1	0.1694	29.18	-25.81	54.99	29.01	0.00	0.17	NEUTRAL	Average
2	0.1694	41.38	-23.61	64.99	41.21	0.00	0.17	NEUTRAL	QP
3	0.3035	29.16	-20.99	50.15	28.94	0.14	0.08	NEUTRAL	Average
4	0.3035	42.24	-17.91	60.15	42.02	0.14	0.08	NEUTRAL	QP
5	0.4468	30.55	-16.38	46.93	30.32	0.14	0.09	NEUTRAL	Average
6	0.4468	39.02	-17.91	56.93	38.79	0.14	0.09	NEUTRAL	QP
7	0.6754	25.47	-20.53	46.00	24.89	0.16	0.42	NEUTRAL	Average
8	0.6754	34.99	-21.01	56.00	34.41	0.16	0.42	NEUTRAL	QP
9	1.4562	24.68	-21.32	46.00	24.18	0.13	0.37	NEUTRAL	Average
10	1.4562	34.08	-21.92	56.00	33.58	0.13	0.37	NEUTRAL	QP
11	26.4872	29.36	-20.64	50.00	28.56	0.51	0.29	NEUTRAL	Average
12	26.4872	35.48	-24.52	60.00	34.68	0.51	0.29	NEUTRAL	QP

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	Read	LISN	Cable	Pol/Phase	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss		
			dB	dBuV	dBuV	dB	dB		
1	0.1659	28.57	-26.59	55.16	28.39	0.01	0.17	LINE	Average
2	0.1659	40.27	-24.89	65.16	40.09	0.01	0.17	LINE	QP
3	0.1749	28.87	-25.85	54.72	28.64	0.05	0.18	LINE	Average
4	0.1749	40.65	-24.07	64.72	40.42	0.05	0.18	LINE	QP
5	0.3003	27.54	-22.70	50.24	27.38	0.07	0.09	LINE	Average
6	0.3003	40.08	-20.16	60.24	39.92	0.07	0.09	LINE	QP
7	0.3914	28.10	-19.93	48.03	27.99	0.09	0.02	LINE	Average
8	0.3914	36.93	-21.10	58.03	36.82	0.09	0.02	LINE	QP
9	0.7236	20.38	-25.62	46.00	19.81	0.09	0.48	LINE	Average
10	0.7236	28.79	-27.21	56.00	28.22	0.09	0.48	LINE	QP
11	23.1279	30.43	-19.57	50.00	29.74	0.43	0.26	LINE	Average
12	23.1279	35.96	-24.04	60.00	35.27	0.43	0.26	LINE	QP

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	9.55M	14.143M	14M1G1D	9M	14.068M
802.11g_(6Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	16.275M	16.367M	16M4D1D	15.8M	16.317M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	17.55M	17.541M	17M5D1D	16.875M	17.466M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	35.8M	35.932M	35M9D1D	31M	35.732M

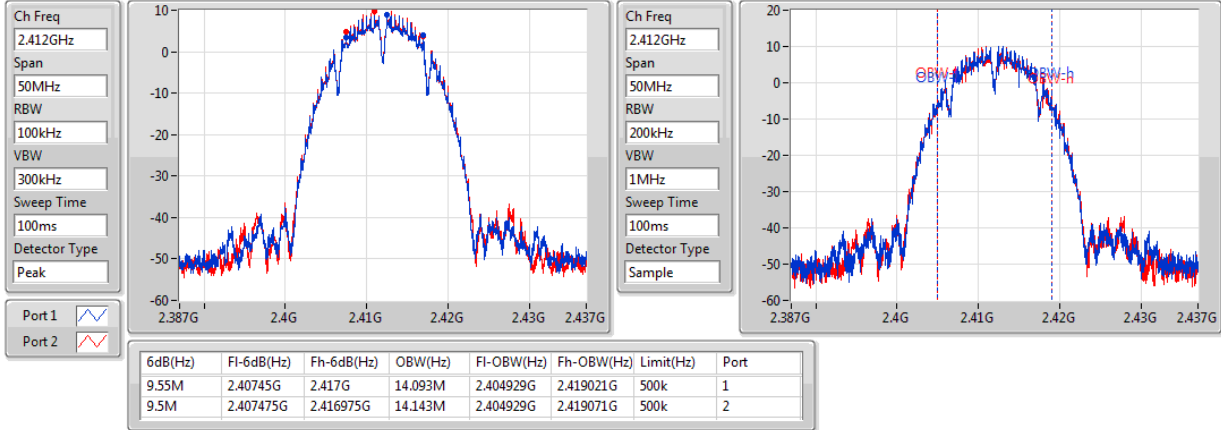
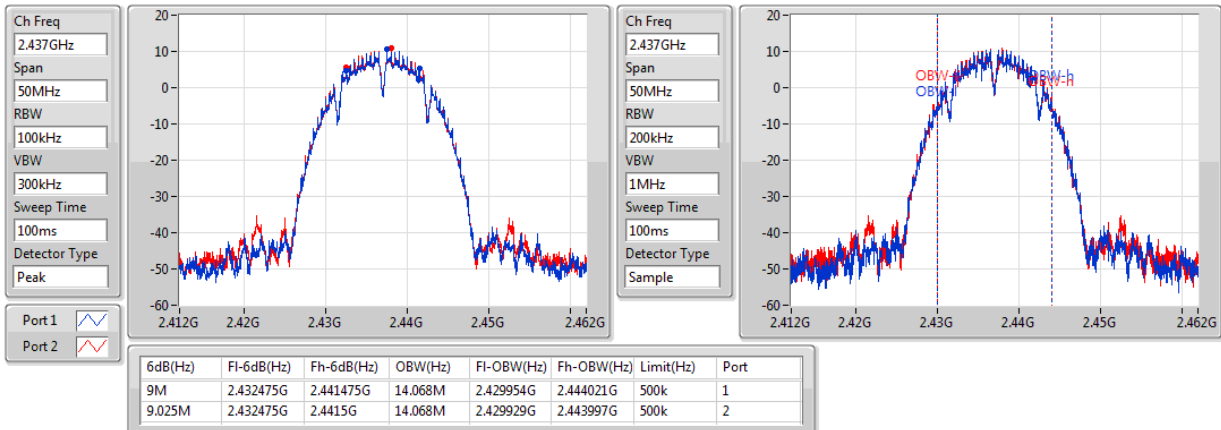
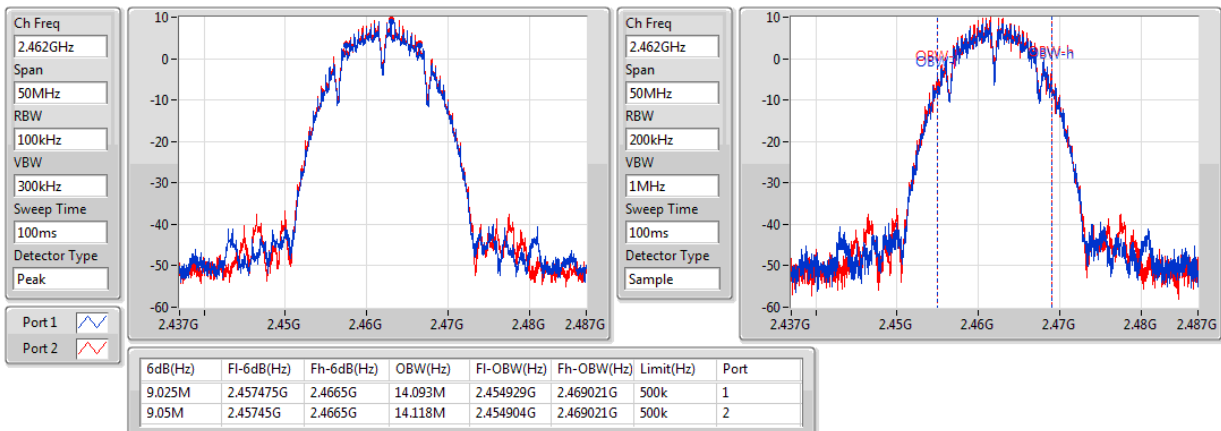
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

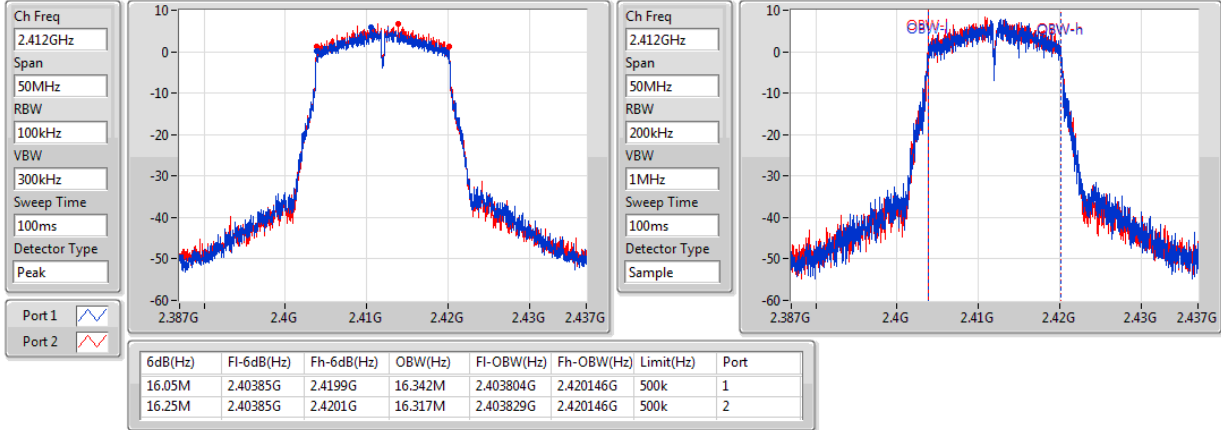
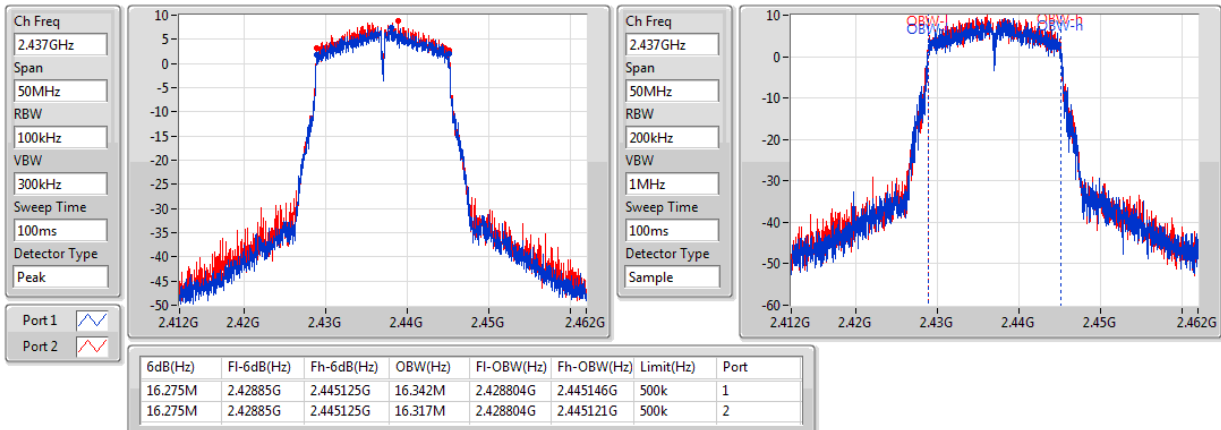
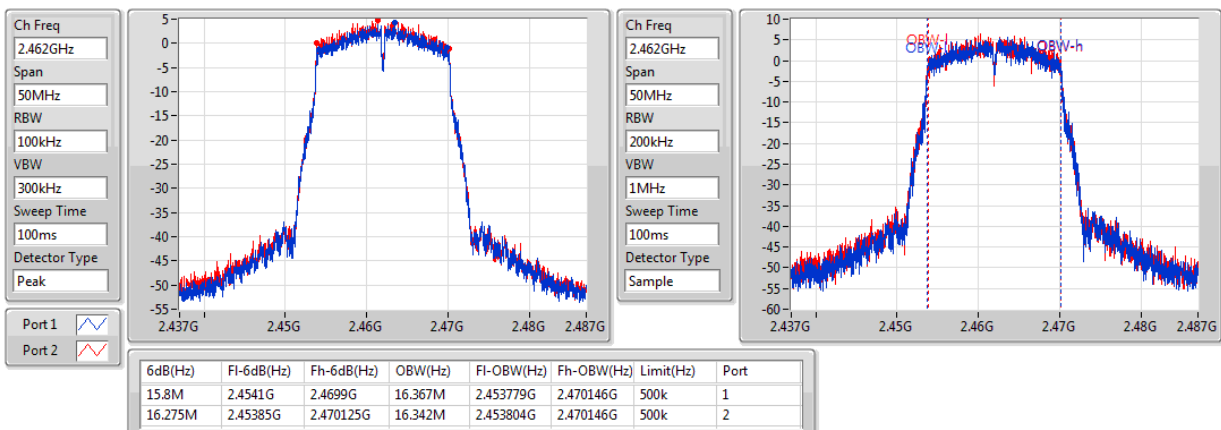
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

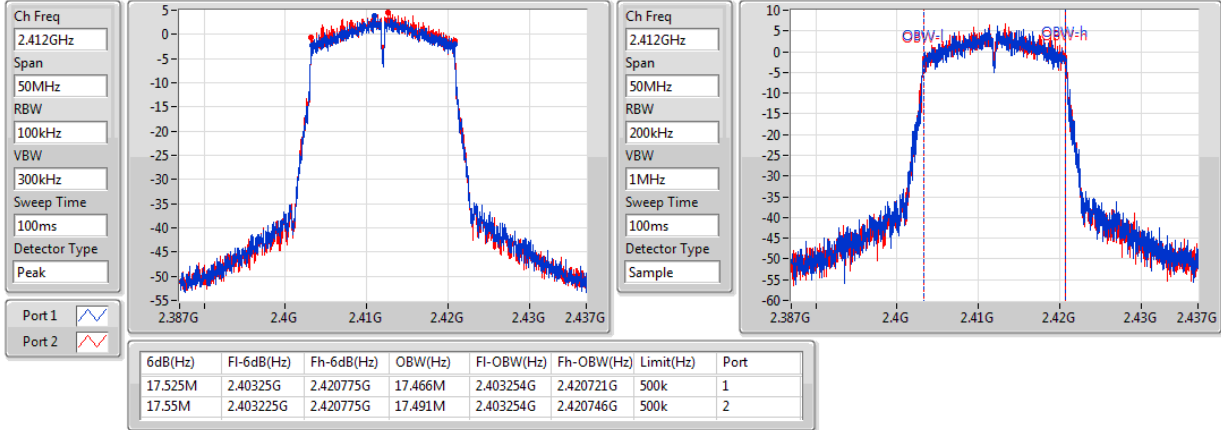
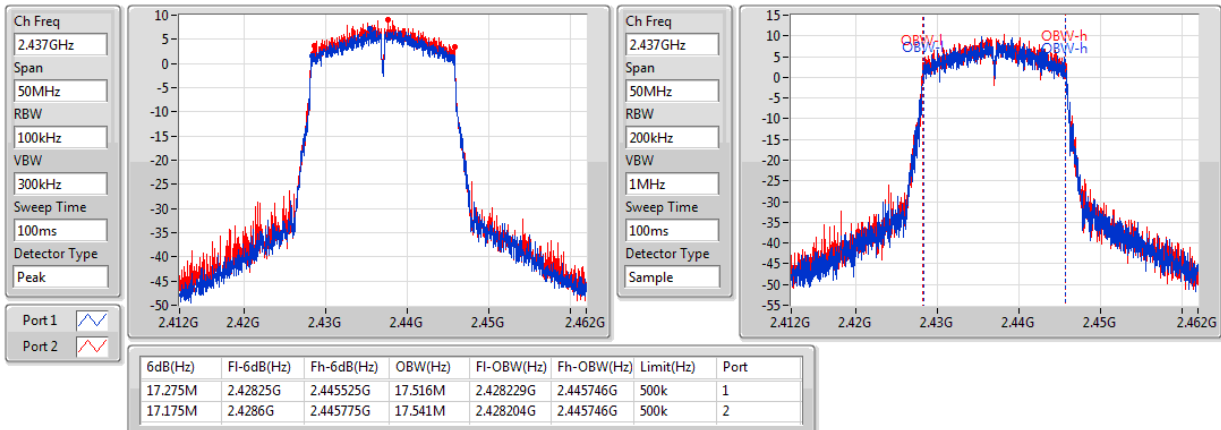
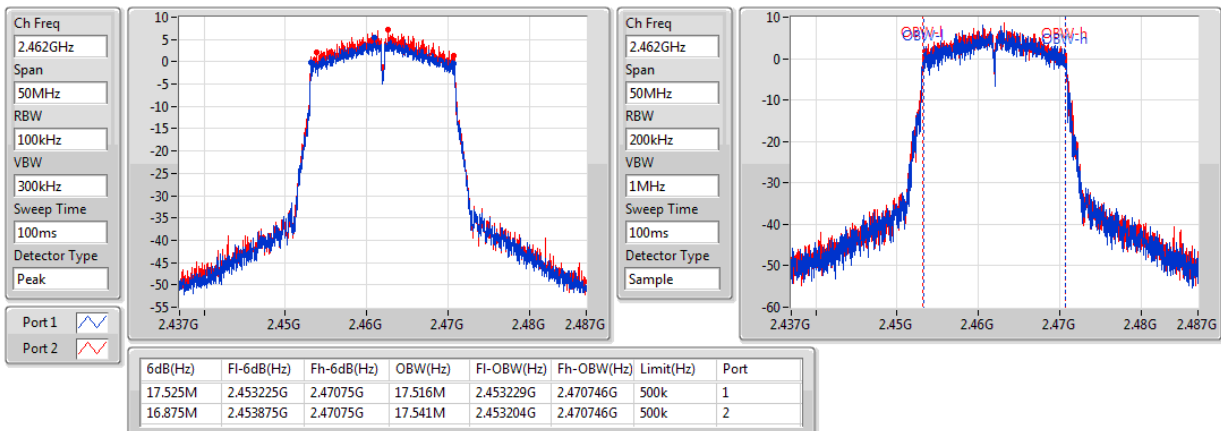
Result

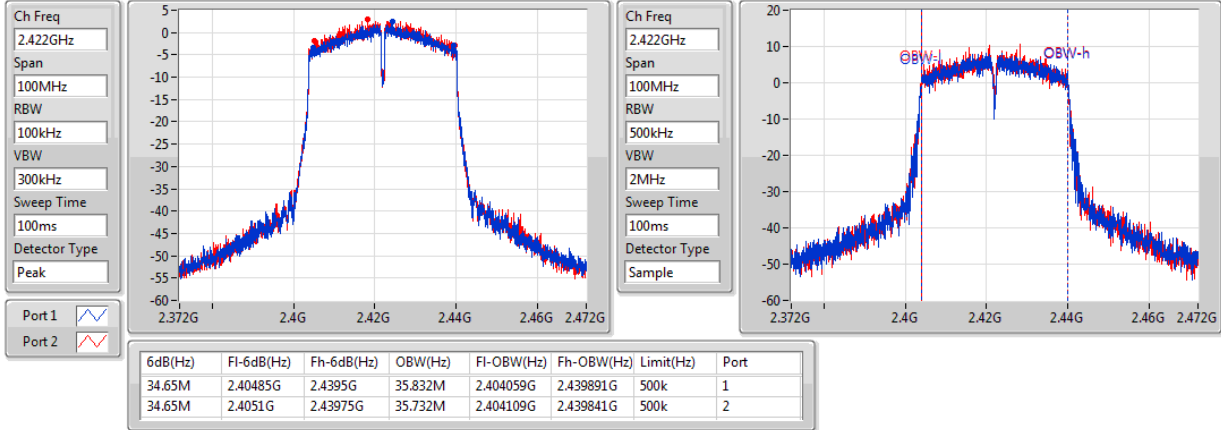
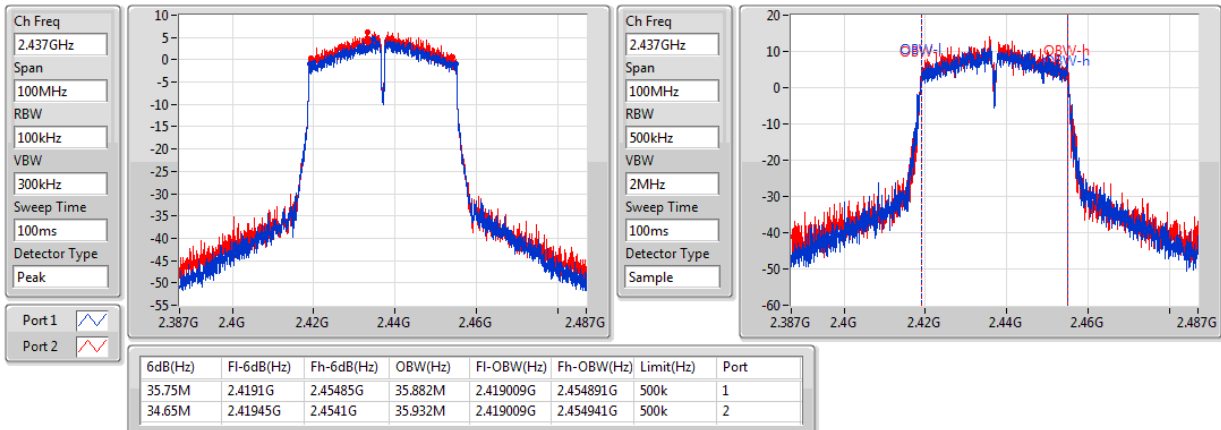
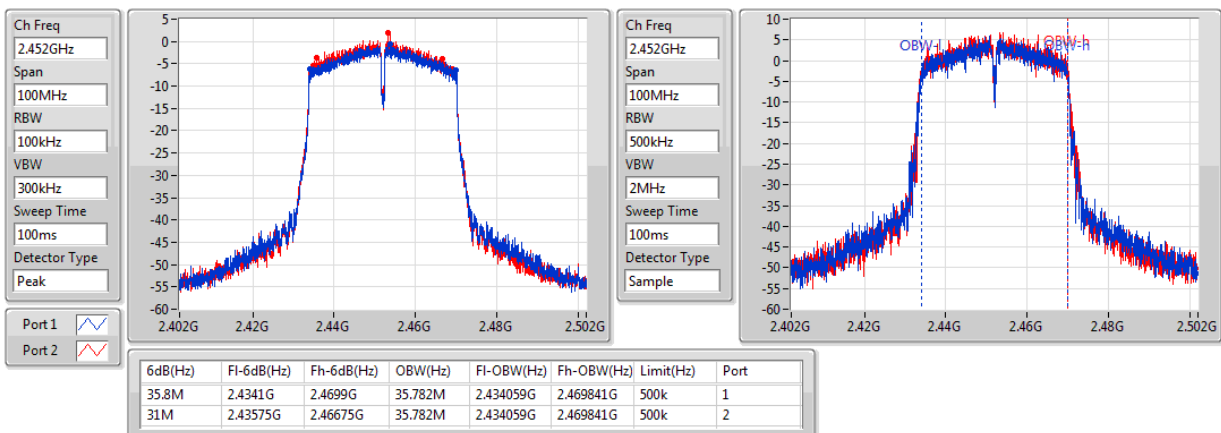
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	9.55M	14.093M	9.5M	14.143M
2437MHz	Pass	500k	9M	14.068M	9.025M	14.068M
2462MHz	Pass	500k	9.025M	14.093M	9.05M	14.118M
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.05M	16.342M	16.25M	16.317M
2437MHz	Pass	500k	16.275M	16.342M	16.275M	16.317M
2462MHz	Pass	500k	15.8M	16.367M	16.275M	16.342M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.525M	17.466M	17.55M	17.491M
2437MHz	Pass	500k	17.275M	17.516M	17.175M	17.541M
2462MHz	Pass	500k	17.525M	17.516M	16.875M	17.541M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	34.65M	35.832M	34.65M	35.732M
2437MHz	Pass	500k	35.75M	35.882M	34.65M	35.932M
2452MHz	Pass	500k	35.8M	35.782M	31M	35.782M

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	22.03	0.15959
802.11g_(6Mbps)_2TX	-	-
2.4-2.4835GHz	23.39	0.21827
802.11n HT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	23.32	0.21478
802.11n HT40_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	23.80	0.23988

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.32	18.21	18.37	21.30	29.68
2437MHz	Pass	6.32	18.97	19.06	22.03	29.68
2462MHz	Pass	6.32	17.31	17.95	20.65	29.68
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.32	17.76	18.07	20.93	29.68
2437MHz	Pass	6.32	20.12	20.63	23.39	29.68
2462MHz	Pass	6.32	16.43	16.94	19.70	29.68
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.32	16.35	16.74	19.56	29.68
2437MHz	Pass	6.32	20.04	20.57	23.32	29.68
2462MHz	Pass	6.32	17.75	18.51	21.16	29.68
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.32	17.61	17.83	20.73	29.68
2437MHz	Pass	6.32	20.36	21.18	23.80	29.68
2452MHz	Pass	6.32	15.02	15.25	18.15	29.68

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_2TX	-
2.4-2.4835GHz	-1.80
802.11g_(6Mbps)_2TX	-
2.4-2.4835GHz	-2.07
802.11n HT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-2.44
802.11n HT40_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-4.89

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	9.33	-5.68	-3.96	-2.71	4.67
2437MHz	Pass	9.33	-4.00	-2.14	-1.80	4.67
2462MHz	Pass	9.33	-5.09	-4.43	-3.23	4.67
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.33	-6.47	-5.33	-4.69	4.67
2437MHz	Pass	9.33	-4.78	-3.87	-2.07	4.67
2462MHz	Pass	9.33	-7.99	-8.12	-5.85	4.67
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.33	-8.94	-7.95	-7.03	4.67
2437MHz	Pass	9.33	-5.75	-3.83	-2.44	4.67
2462MHz	Pass	9.33	-7.55	-6.48	-5.27	4.67
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	9.33	-9.69	-9.86	-8.13	4.67
2437MHz	Pass	9.33	-6.38	-6.52	-4.89	4.67
2452MHz	Pass	9.33	-12.31	-12.21	-10.64	4.67

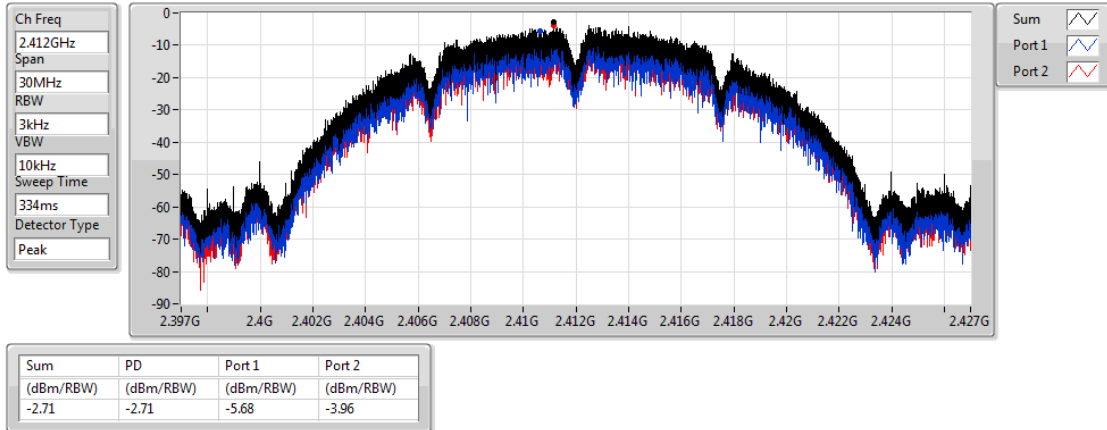
DG = Directional Gain; RBW=3kHz;

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

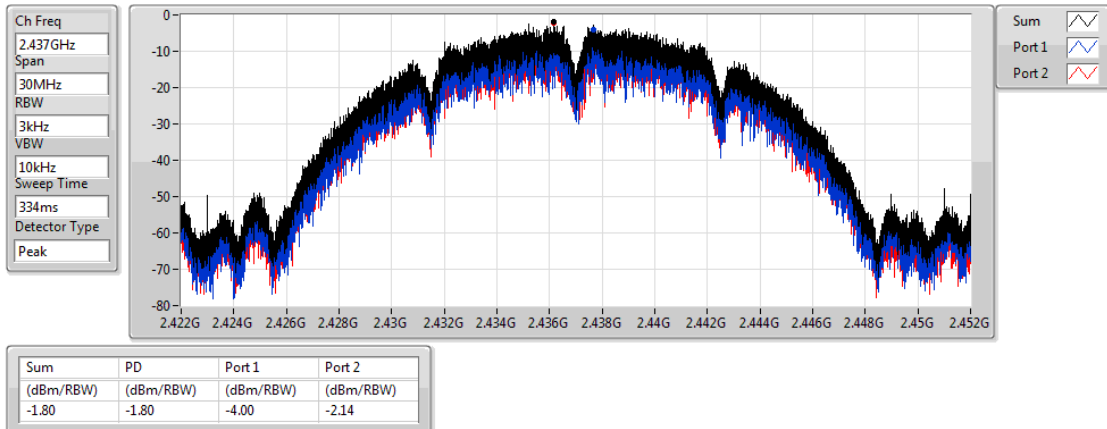
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802.11b_(1Mbps)_2TX

PSD

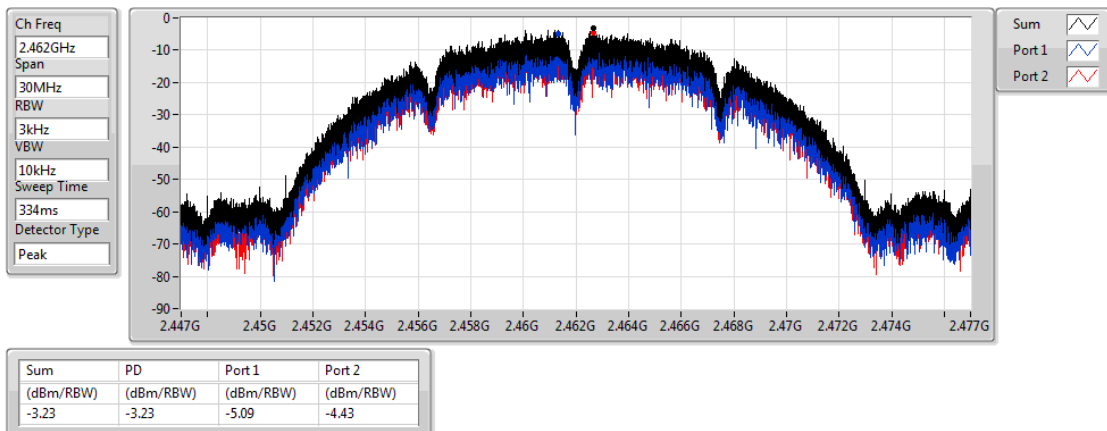
2437MHz



802.11b_(1Mbps)_2TX

PSD

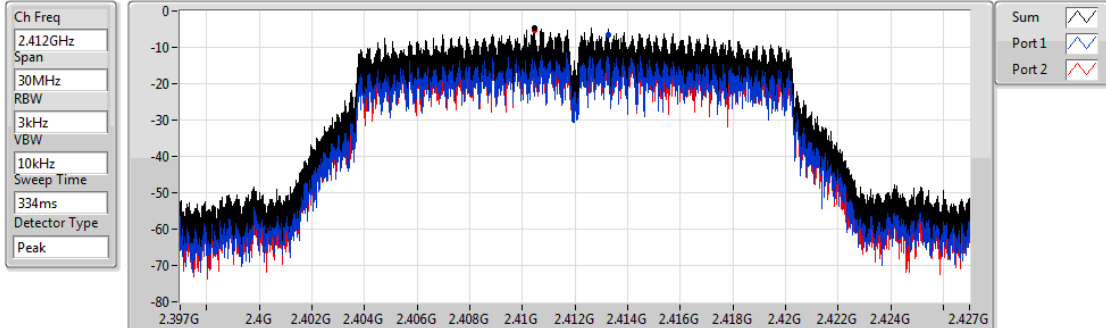
2462MHz



802.11g_(6Mbps)_2TX

PSD

2412MHz

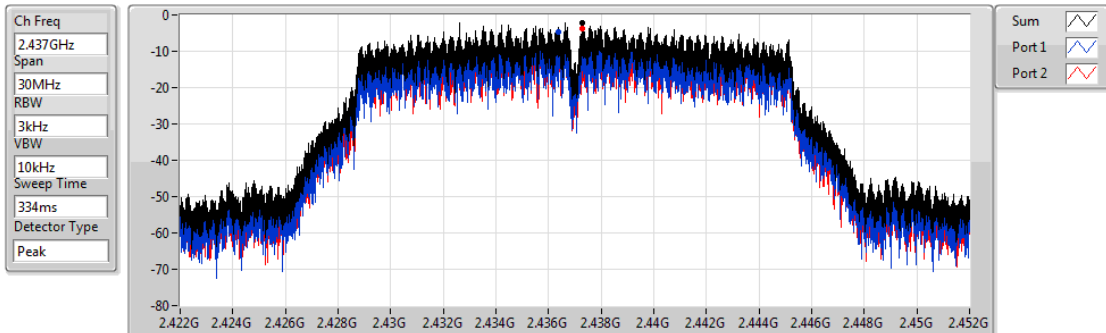


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.69	-4.69	-6.47	-5.33

802.11g_(6Mbps)_2TX

PSD

2437MHz

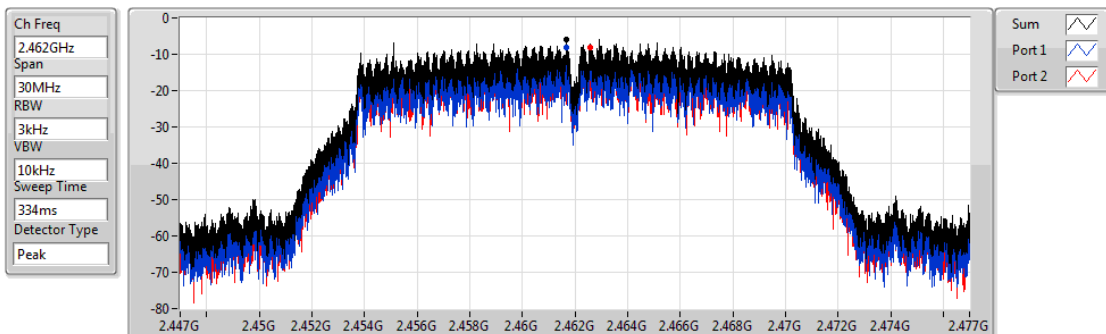


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.07	-2.07	-4.78	-3.87

802.11g_(6Mbps)_2TX

PSD

2462MHz

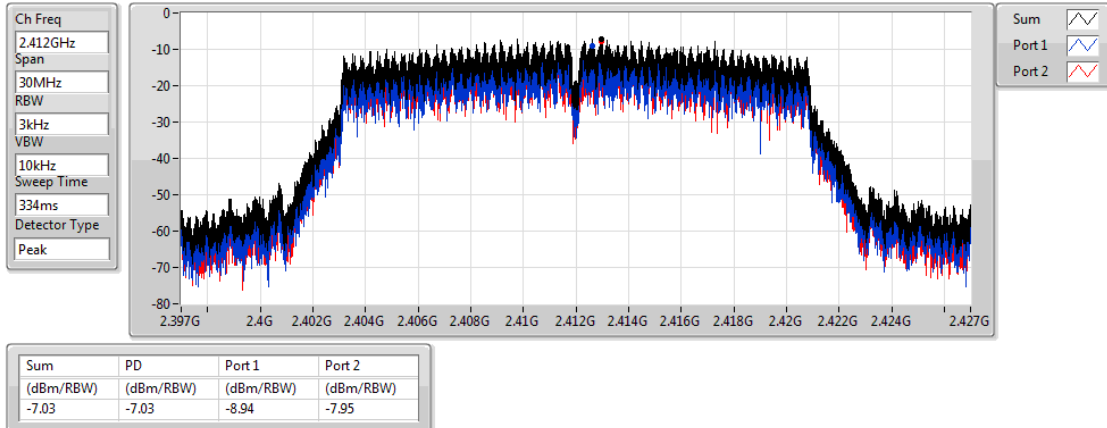


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.85	-5.85	-7.99	-8.12

802.11n HT20_Nss1,(MCS0)_2TX

PSD

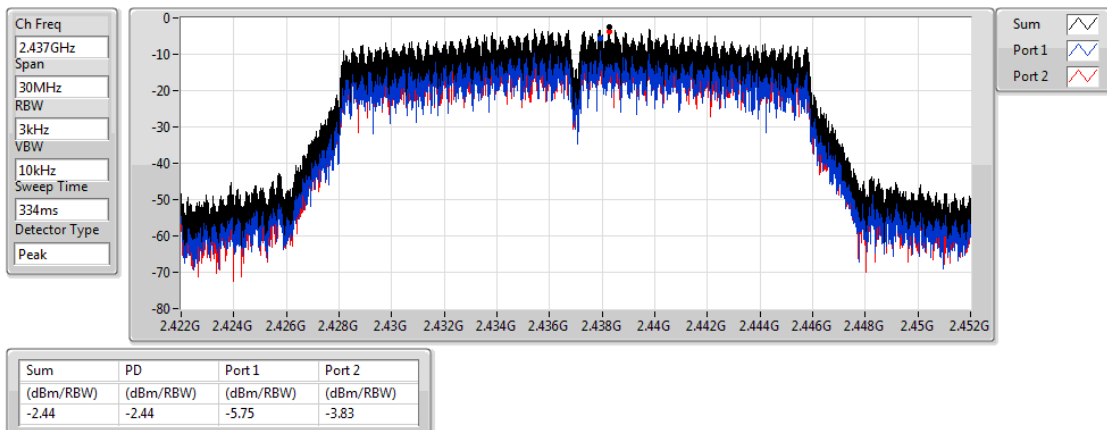
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

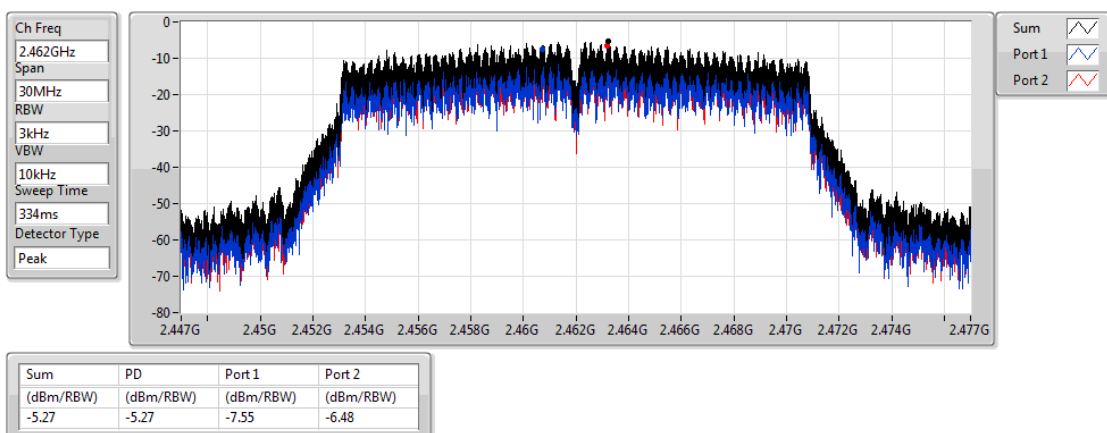
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

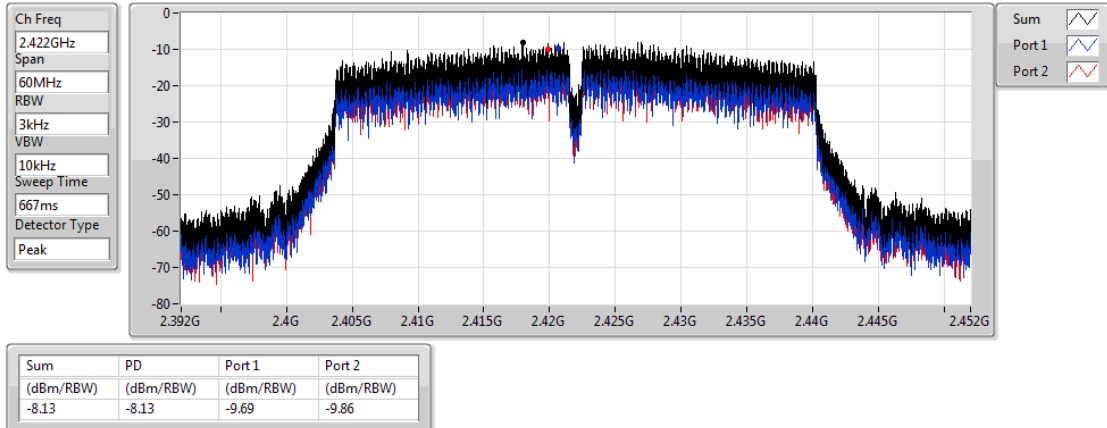
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

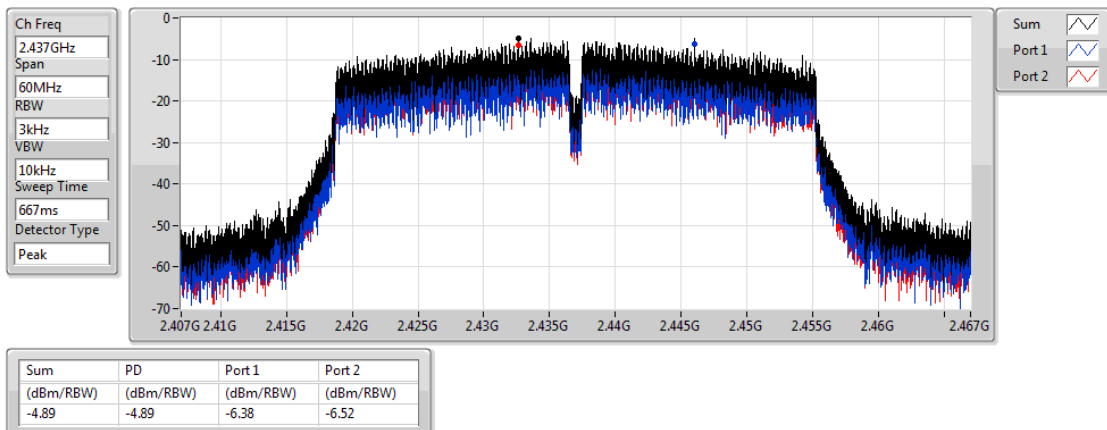
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802.11n HT40_Nss1,(MCS0)_2TX

PSD

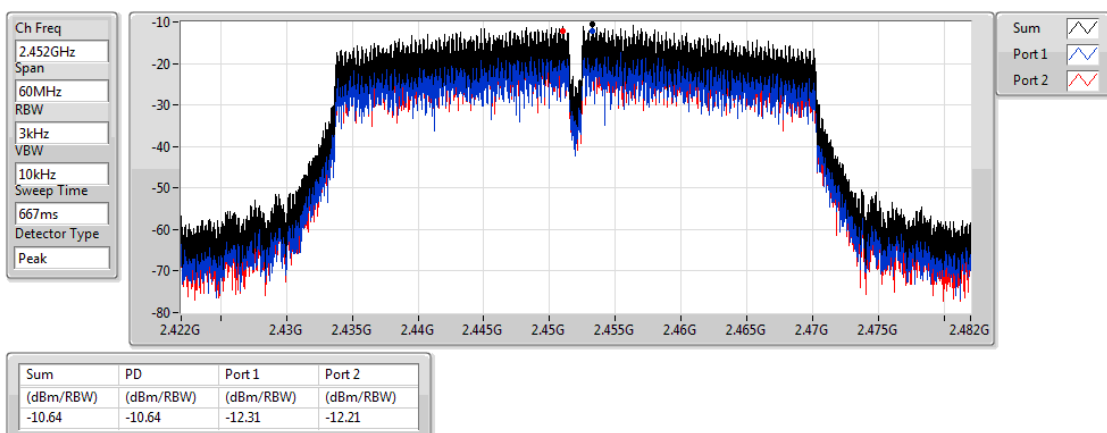
2437MHz



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	2.434402G	6.69	-23.31	2.309695G	-61.32	2.39968G	-36.28	2.49998G	-51.95	7.249924G	-48.83	2

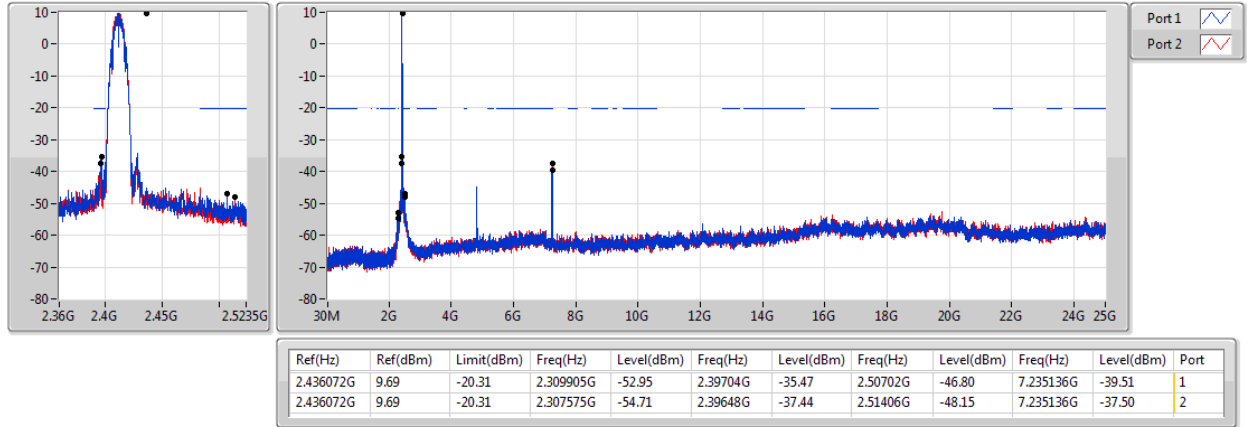
Result

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	2.436072G	9.69	-20.31	2.309905G	-52.95	2.39704G	-35.47	2.50702G	-46.80	7.235136G	-39.51	1
2412MHz	Pass	2.436072G	9.69	-20.31	2.307575G	-54.71	2.39648G	-37.44	2.51406G	-48.15	7.235136G	-37.50	2
2437MHz	Pass	2.436072G	9.69	-20.31	2.307575G	-57.99	2.39808G	-48.91	2.48798G	-46.69	2.537548G	-52.48	1
2437MHz	Pass	2.436072G	9.69	-20.31	2.305245G	-56.71	2.39952G	-45.78	2.49998G	-45.48	2.5235G	-53.07	2
2462MHz	Pass	2.436072G	9.69	-20.31	2.309905G	-58.09	2.39088G	-49.66	2.48542G	-47.08	2.52631G	-51.44	1
2462MHz	Pass	2.436072G	9.69	-20.31	2.302915G	-60.41	2.39904G	-51.25	2.49294G	-48.42	16.231355G	-54.42	2
802.11g_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.437575G	9.00	-21.00	2.30874G	-59.24	2.39952G	-34.29	2.49998G	-51.82	7.229517G	-41.79	1
2412MHz	Pass	2.437575G	9.00	-21.00	2.302915G	-57.93	2.39992G	-37.09	2.49998G	-50.50	7.232327G	-41.37	2
2437MHz	Pass	2.437575G	9.00	-21.00	2.30408G	-56.69	2.39664G	-47.75	2.48934G	-47.54	2.531929G	-50.46	1
2437MHz	Pass	2.437575G	9.00	-21.00	2.309905G	-59.30	2.39888G	-48.67	2.49206G	-49.40	17.650185G	-53.22	2
2462MHz	Pass	2.437575G	9.00	-21.00	2.305245G	-59.42	2.39496G	-53.69	2.48382G	-49.66	16.236975G	-53.90	1
2462MHz	Pass	2.437575G	9.00	-21.00	2.305245G	-59.13	2.39352G	-51.36	2.4851G	-48.17	2.534738G	-53.80	2
802.11n HT20_Nss1(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.438911G	8.32	-21.68	2.307575G	-59.00	2.39872G	-35.96	2.49998G	-50.96	7.235136G	-42.73	1
2412MHz	Pass	2.438911G	8.32	-21.68	2.30874G	-57.62	2.39976G	-36.15	2.50006G	-50.49	7.232327G	-42.54	2
2437MHz	Pass	2.438911G	8.32	-21.68	2.30641G	-55.74	2.39192G	-46.74	2.48694G	-47.51	2.529119G	-52.51	1
2437MHz	Pass	2.438911G	8.32	-21.68	2.300585G	-59.54	2.396G	-49.17	2.49998G	-49.19	24.379087G	-53.07	2
2462MHz	Pass	2.438911G	8.32	-21.68	2.307575G	-60.79	2.39576G	-52.43	2.48374G	-46.85	17.655804G	-54.59	1
2462MHz	Pass	2.438911G	8.32	-21.68	2.302915G	-59.09	2.39992G	-50.78	2.48478G	-44.24	2.531929G	-54.01	2
802.11n HT40_Nss1(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.434402G	6.69	-23.31	2.305115G	-60.08	2.3992G	-37.14	2.49998G	-52.41	7.249924G	-49.36	1
2422MHz	Pass	2.434402G	6.69	-23.31	2.309695G	-61.32	2.39968G	-36.28	2.49998G	-51.95	7.249924G	-48.83	2
2437MHz	Pass	2.434402G	6.69	-23.31	2.307405G	-59.09	2.39984G	-41.12	2.48366G	-45.52	17.351958G	-54.09	1
2437MHz	Pass	2.434402G	6.69	-23.31	2.309695G	-57.22	2.3968G	-40.46	2.48542G	-42.83	16.440475G	-54.29	2
2452MHz	Pass	2.434402G	6.69	-23.31	2.30168G	-61.73	2.3968G	-55.54	2.48446G	-44.47	16.21611G	-54.89	1
2452MHz	Pass	2.434402G	6.69	-23.31	2.302825G	-62.10	2.39616G	-55.88	2.48446G	-45.23	16.213306G	-54.09	2

802.11b_(1Mbps)_2TX

CSE NdB

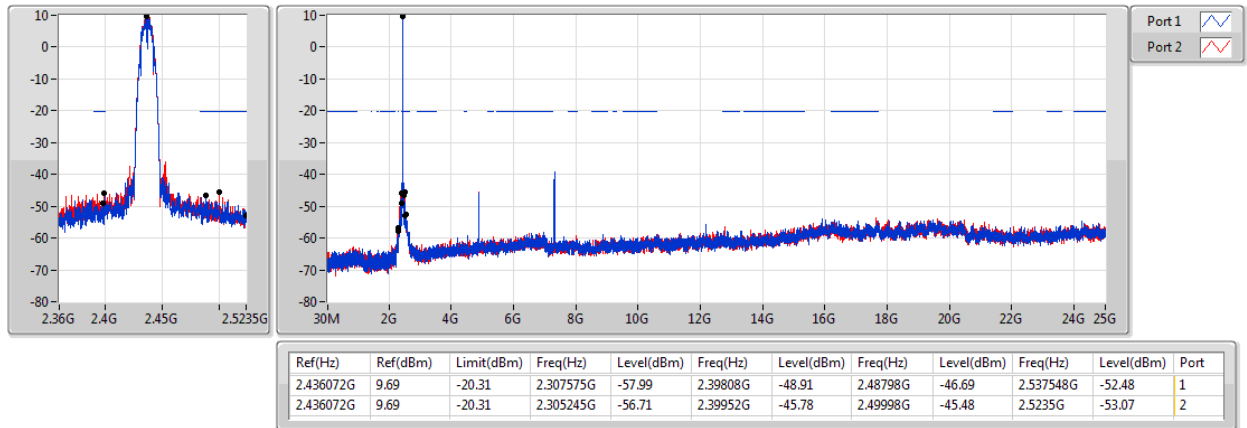
2412MHz



802.11b_(1Mbps)_2TX

CSE NdB

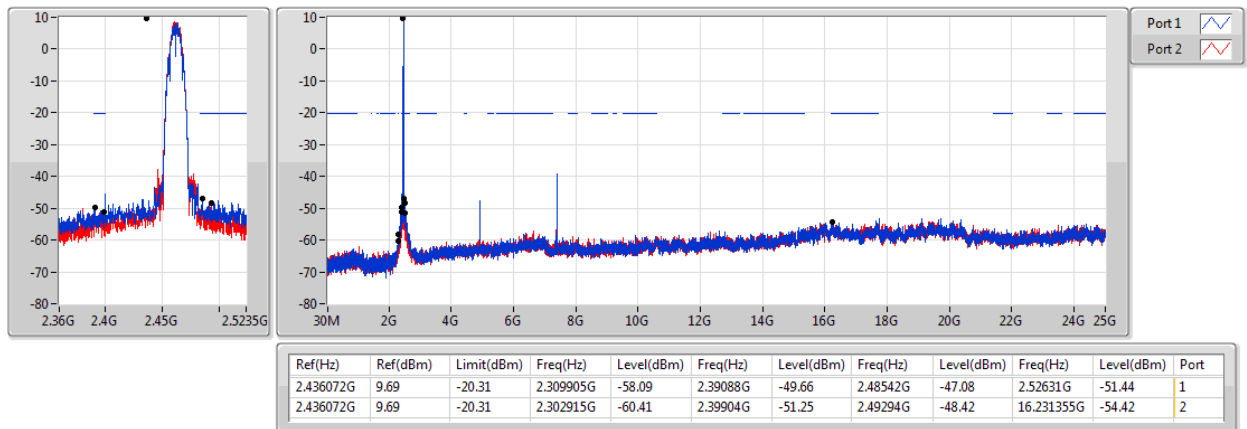
2437MHz



802.11b_(1Mbps)_2TX

CSE NdB

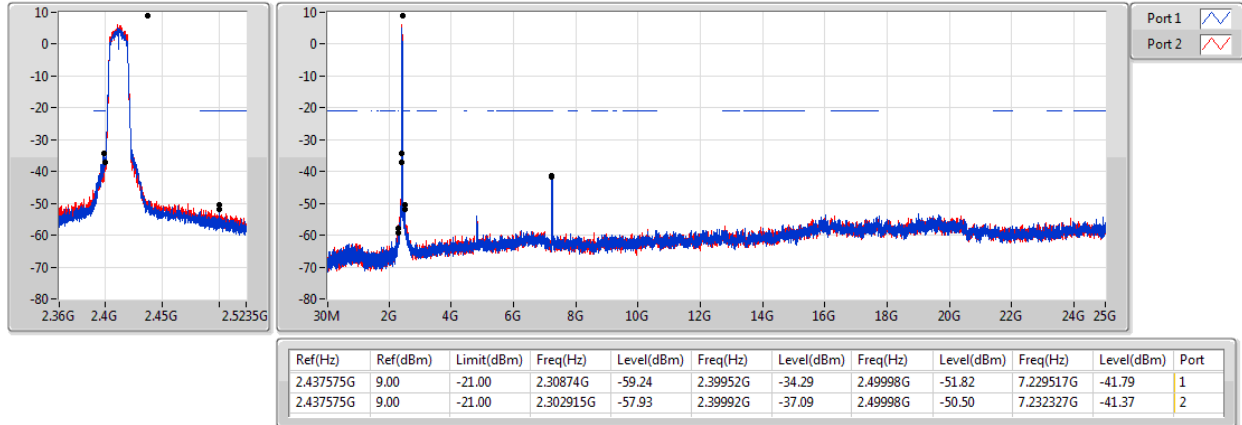
2462MHz



802.11g_(6Mbps)_2TX

CSE NdB

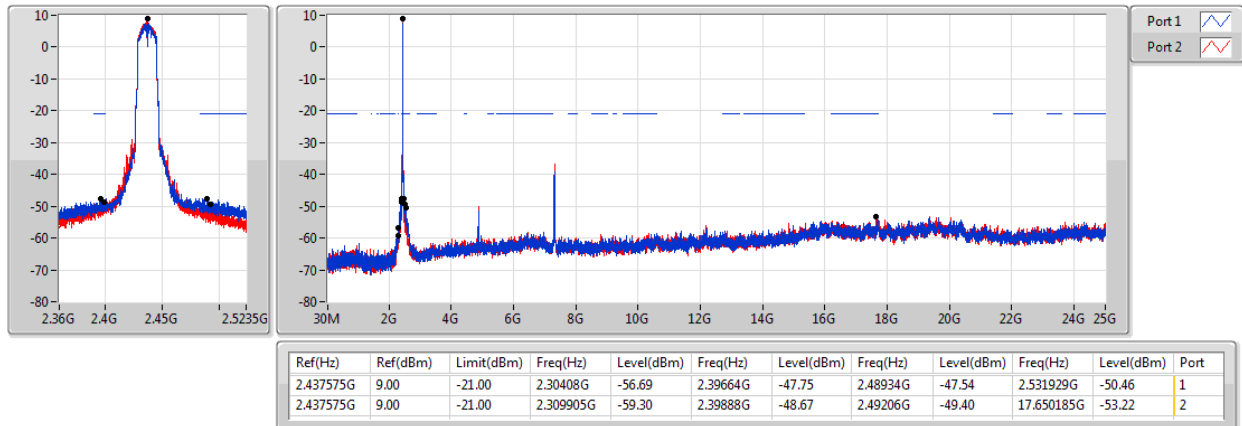
2412MHz



802.11g_(6Mbps)_2TX

CSE NdB

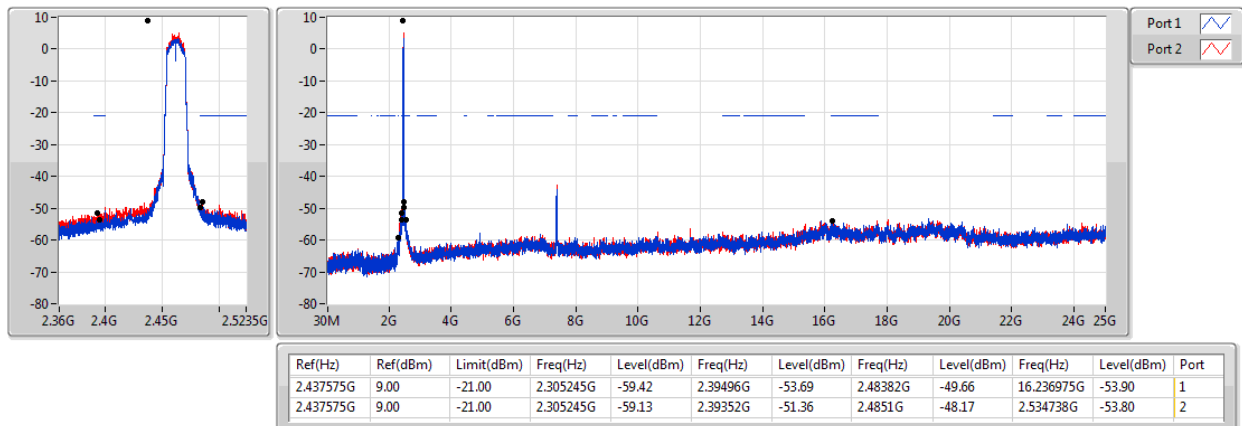
2437MHz



802.11g_(6Mbps)_2TX

CSE NdB

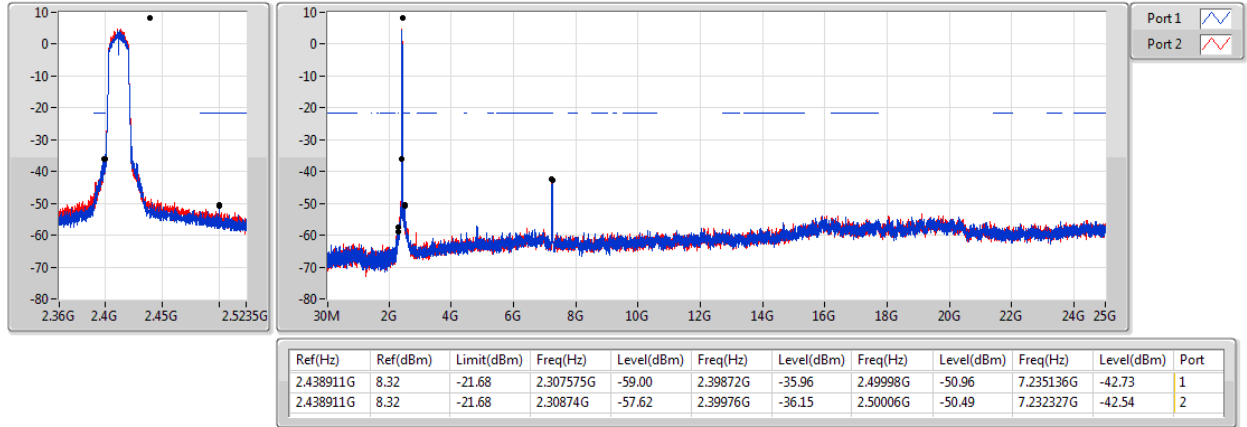
2462MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

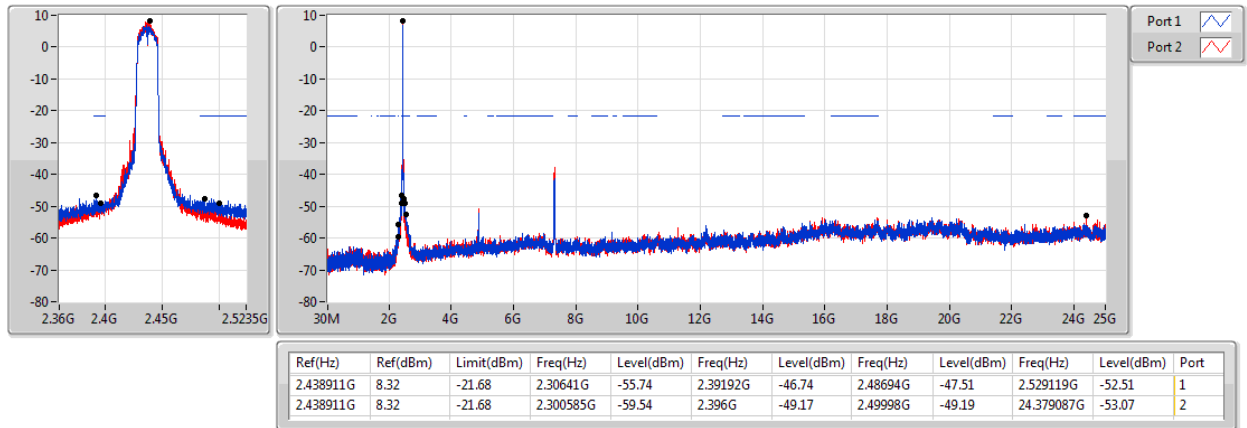
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

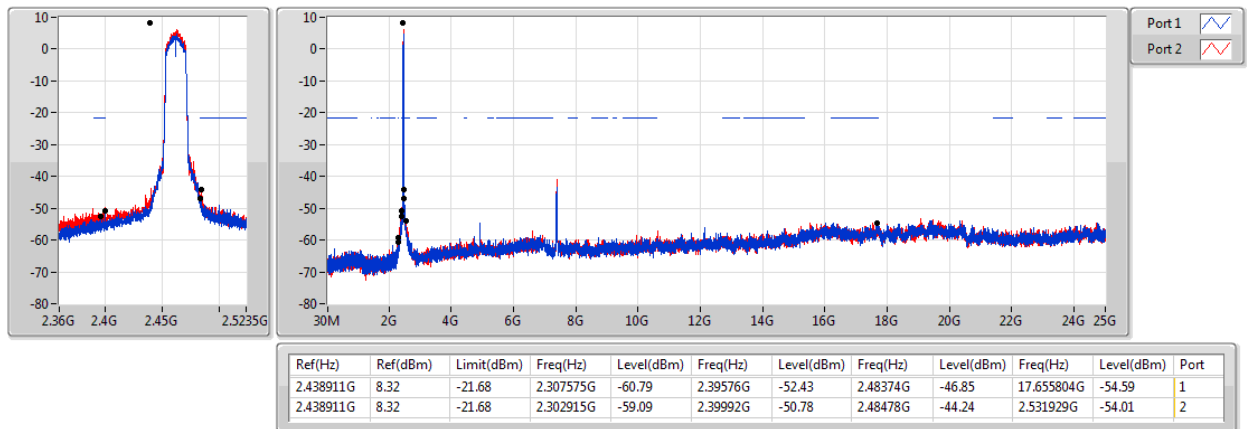
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

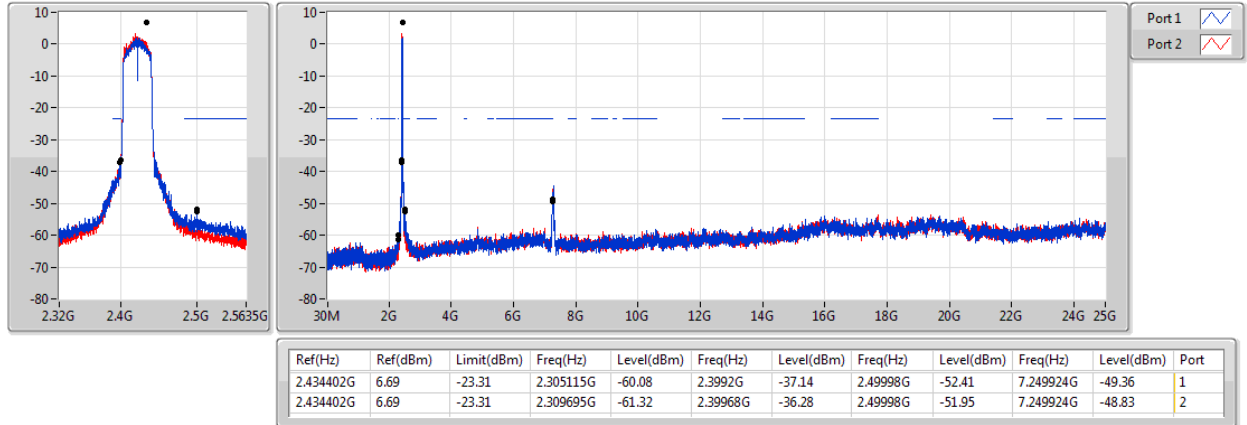
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

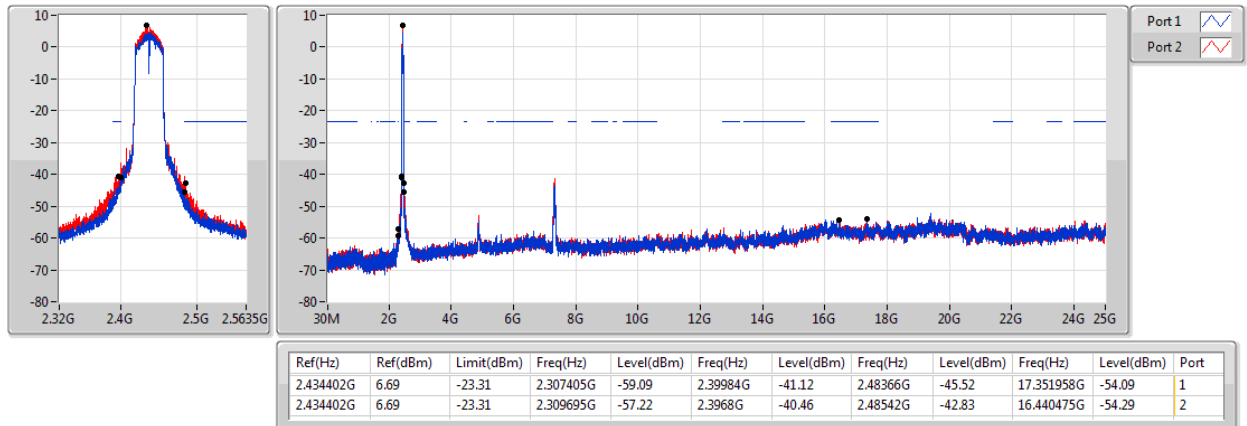
2422MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

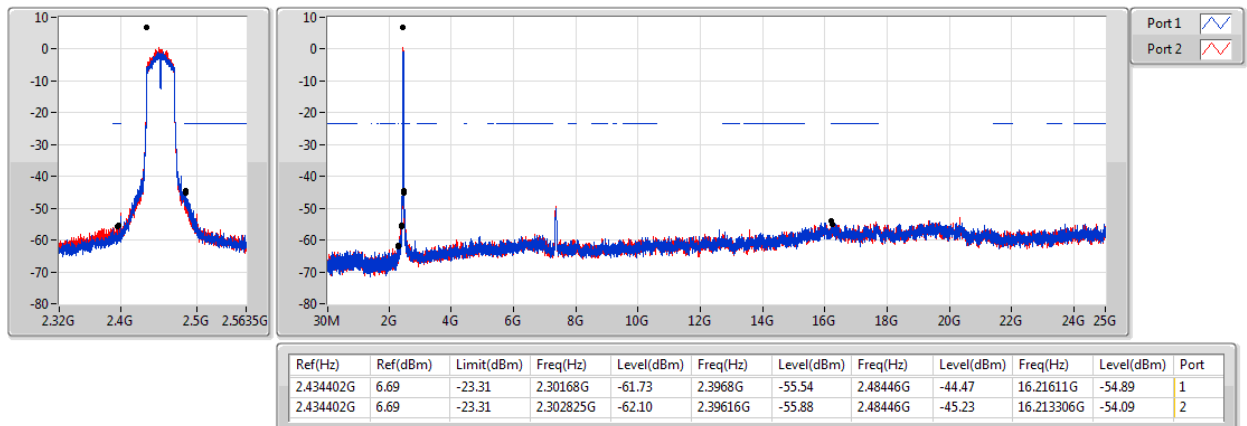
2437MHz

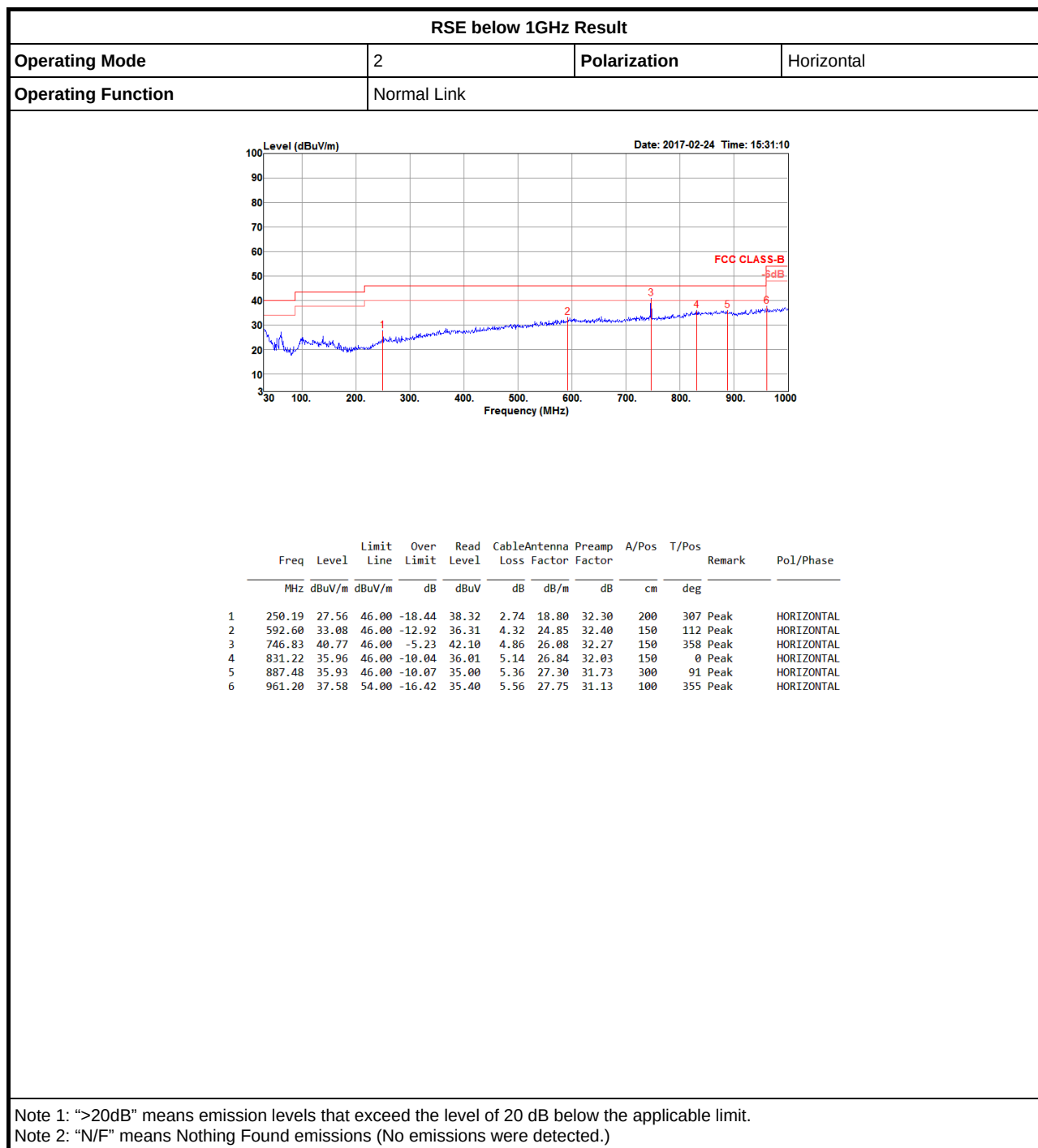


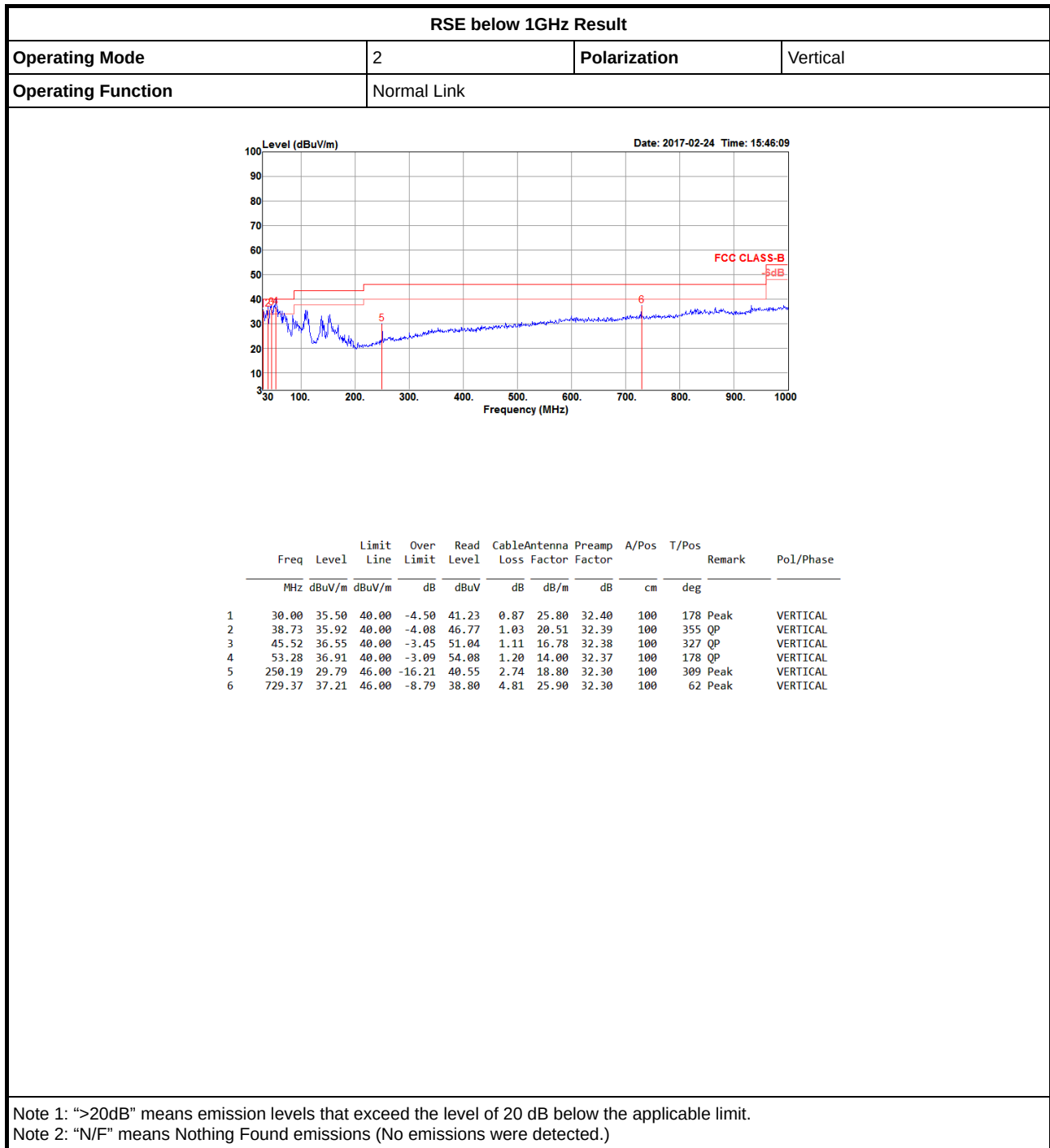
802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

2452MHz





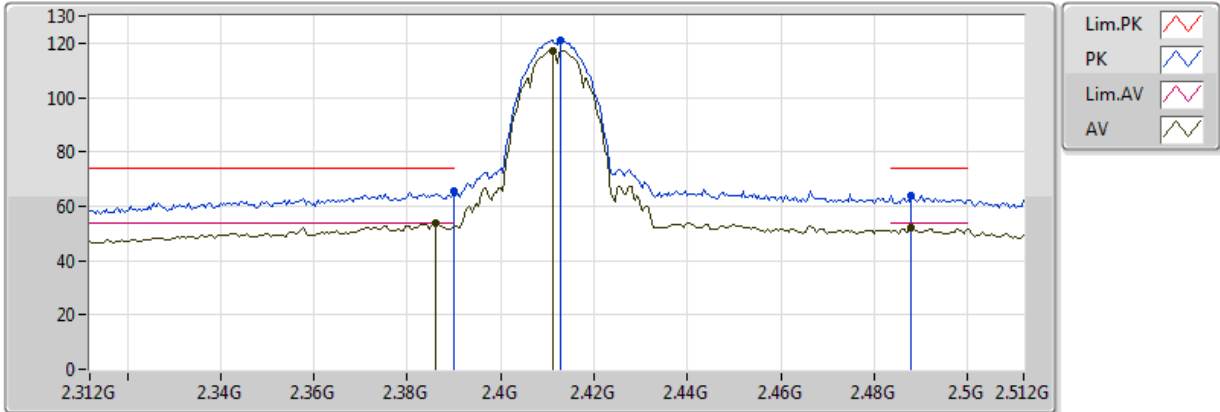


**Summary**

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	2.386G	53.98	54.00	-0.02	31.90	3	V	194	1.68	-

802.11b_(1Mbps)_2TX

2412MHz_TX

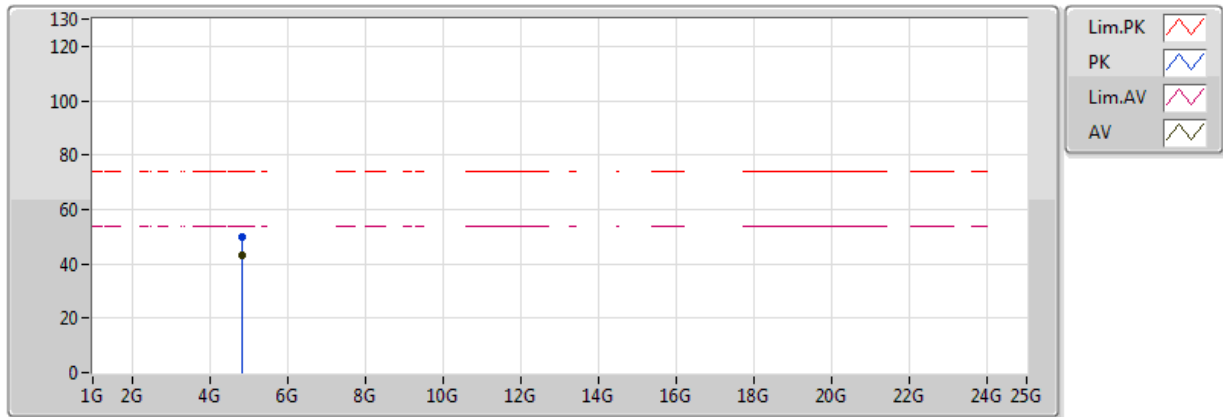


20170221
EUT Z ANT Y 2TX
Setting 22
04-J-5-FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.386G	53.70	54.00	-0.30	32.67	3	V	66	1.77	-
AV	2.4112G	117.23	Inf	-Inf	32.68	3	V	66	1.77	-
AV	2.488G	52.21	54.00	-1.79	32.78	3	V	66	1.77	-
PK	2.39G	65.82	74.00	-8.18	32.67	3	V	66	1.77	-
PK	2.4128G	121.17	Inf	-Inf	32.69	3	V	66	1.77	-
PK	2.488G	63.92	74.00	-10.08	32.78	3	V	66	1.77	-

802.11b_(1Mbps)_2TX

2412MHz_TX

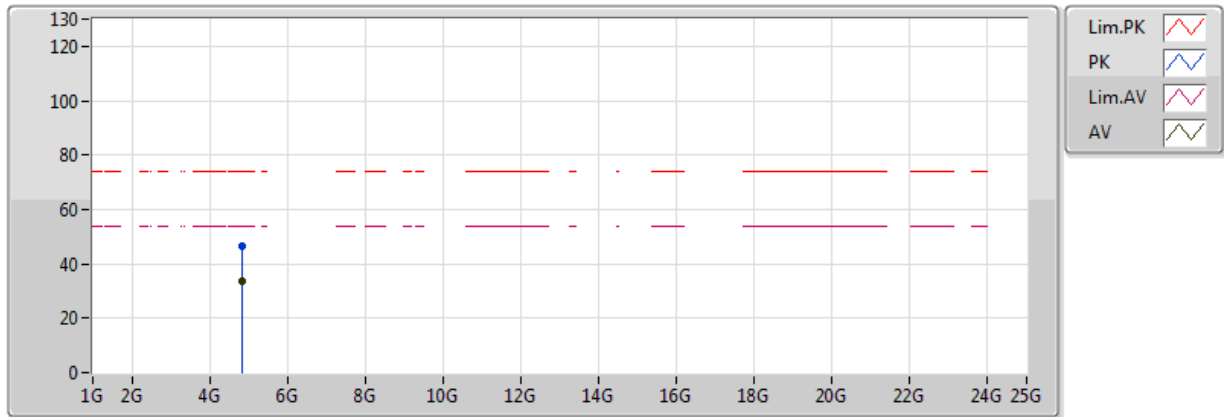


20170221
EUT Z ANT Y 2TX
Setting 22
04-J-5-FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82398G	43.39	54.00	-10.61	3.70	3	V	94	2.10	-
PK	4.82383G	49.73	74.00	-24.27	3.70	3	V	94	2.10	-

802.11b_(1Mbps)_2TX

2412MHz_TX

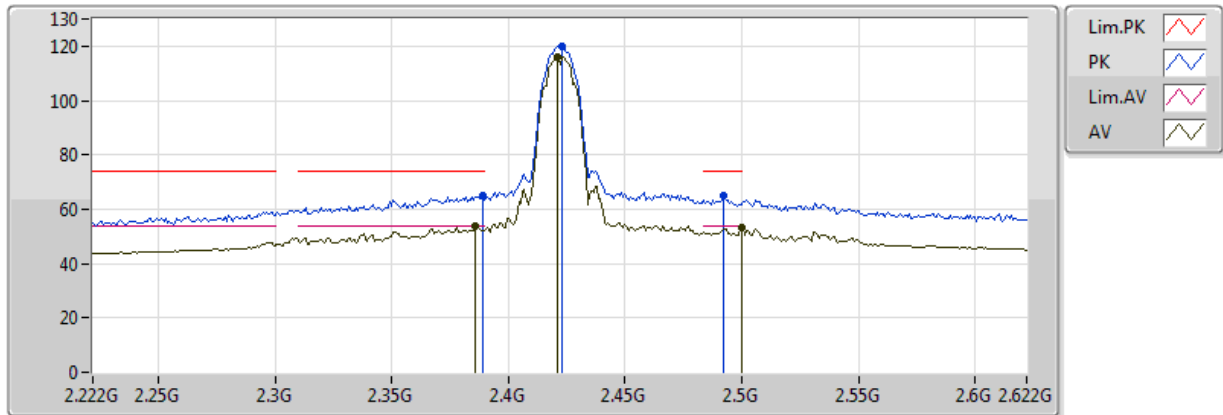


20170221
EUT Z ANT Y 2TX
Setting 22
04-J-5-FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82394G	33.82	54.00	-20.18	3.70	3	H	54	2.56	-
PK	4.82415G	46.35	74.00	-27.65	3.70	3	H	54	2.56	-

802.11b_(1Mbps)_2TX

2422MHz_TX

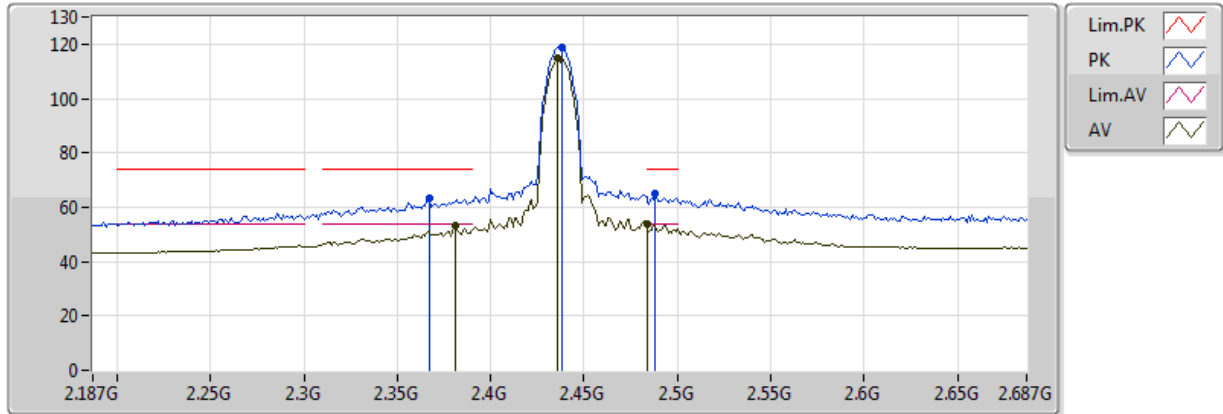


20170223
EUT Z ANT Y 2TX
Setting 21
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.386G	53.98	54.00	-0.02	31.90	3	V	194	1.68	-
AV	2.4212G	116.12	Inf	-Inf	31.99	3	V	194	1.68	-
AV	2.499998G	53.11	54.00	-0.89	32.18	3	V	194	1.68	-
PK	2.3892G	64.86	74.00	-9.14	31.91	3	V	194	1.68	-
PK	2.4228G	119.99	Inf	-Inf	31.99	3	V	194	1.68	-
PK	2.4924G	65.07	74.00	-8.93	32.16	3	V	194	1.68	-

802.11b_(1Mbps)_2TX

2437MHz_TX

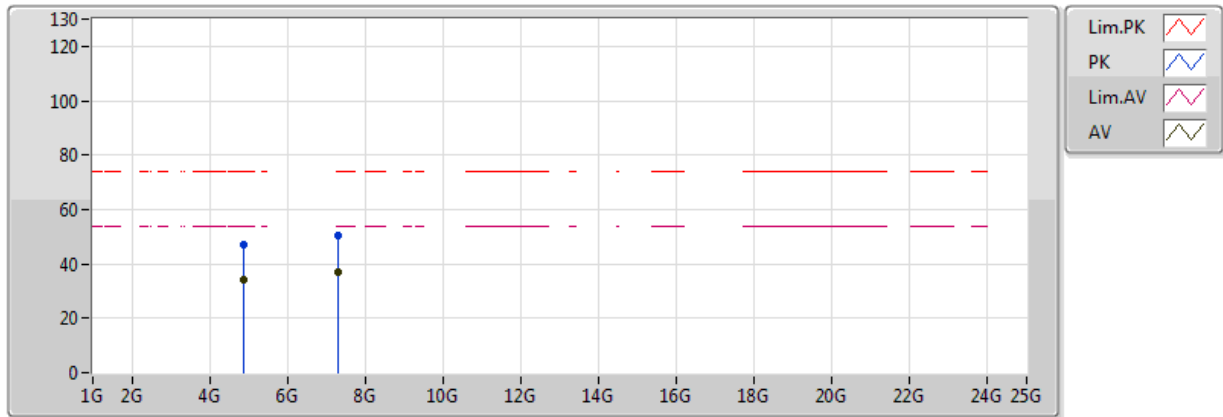


20170221
EUT Z ANT Y 2TX
Setting 23
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.381G	53.11	54.00	-0.89	32.24	3	V	88	1.76	-
AV	2.436G	114.93	Inf	-Inf	32.40	3	V	88	1.76	-
AV	2.483502G	53.98	54.00	-0.02	32.53	3	V	88	1.76	-
PK	2.367G	63.27	74.00	-10.73	32.20	3	V	88	1.76	-
PK	2.438G	118.85	Inf	-Inf	32.41	3	V	88	1.76	-
PK	2.488G	64.73	74.00	-9.27	32.55	3	V	88	1.76	-

802.11b_(1Mbps)_2TX

2437MHz_TX

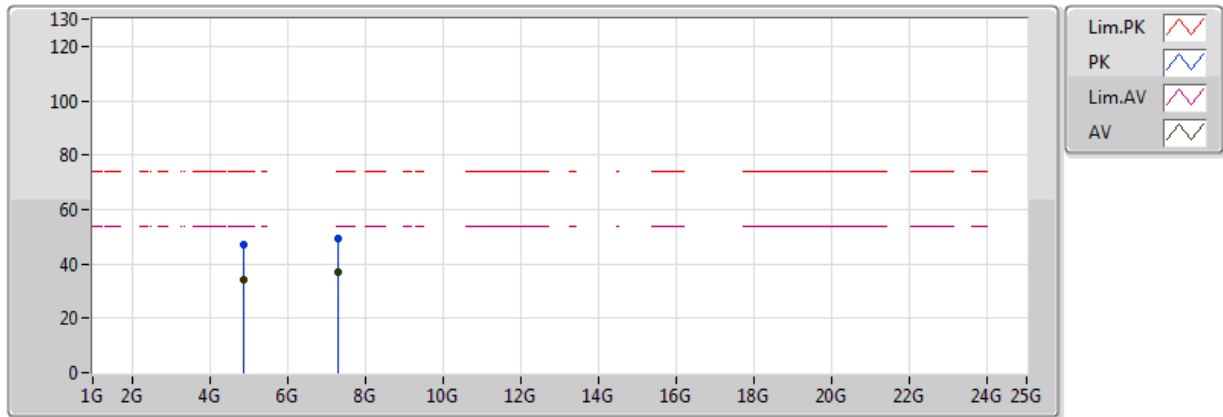


20170221
EUT Z ANT Y 2TX
Setting 23
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87294G	34.28	54.00	-19.72	5.68	3	V	234	1.84	-
PK	4.87176G	46.93	74.00	-27.07	5.68	3	V	234	1.84	-
AV	7.3034G	37.14	54.00	-16.86	9.94	3	V	313	1.15	-
PK	7.30288G	50.54	74.00	-23.46	9.94	3	V	313	1.15	-

802.11b_(1Mbps)_2TX

2437MHz_TX

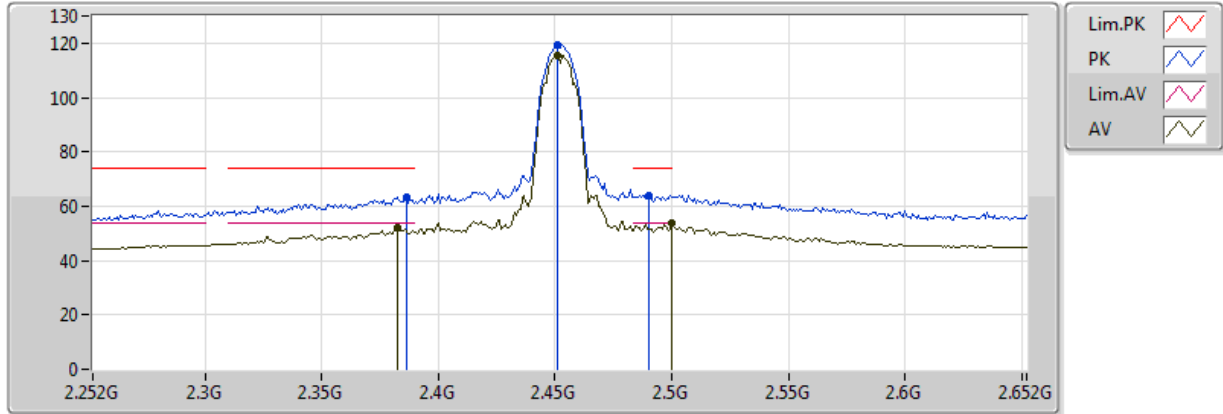


20170221
EUT Z ANT Y 2TX
Setting 23
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8646G	34.04	54.00	-19.96	5.66	3	H	251	1.43	-
PK	4.86948G	47.10	74.00	-26.90	5.67	3	H	251	1.43	-
AV	7.31346G	36.95	54.00	-17.05	9.94	3	H	133	1.70	-
PK	7.30804G	49.50	74.00	-24.50	9.94	3	H	133	1.70	-

802.11b_(1Mbps)_2TX

2452MHz_TX

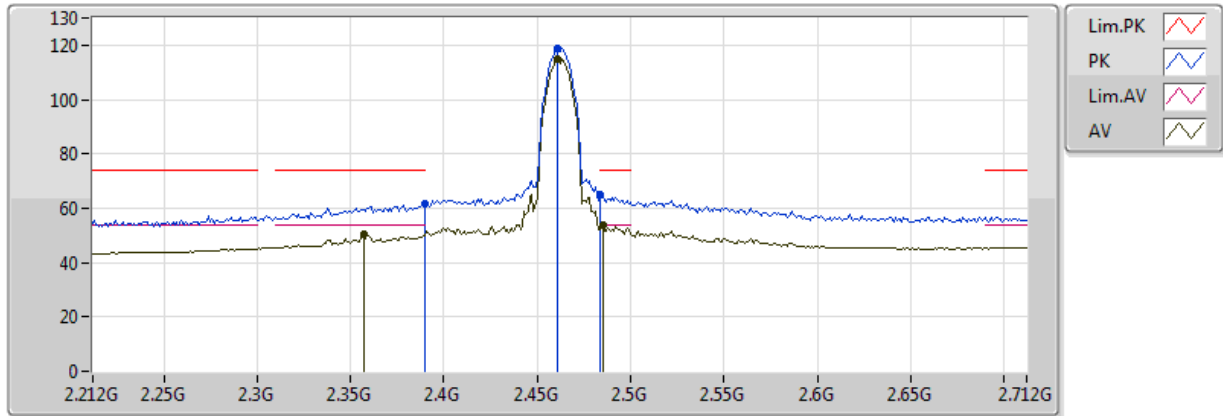


20170223
EUT Z ANT Y 2TX
Setting 21
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3824G	52.32	54.00	-1.68	31.89	3	V	98	1.74	-
AV	2.4512G	115.69	Inf	-Inf	32.06	3	V	98	1.74	-
AV	2.5G	53.78	54.00	-0.22	32.18	3	V	98	1.74	-
PK	2.3864G	63.39	74.00	-10.61	31.90	3	V	98	1.74	-
PK	2.4512G	119.40	Inf	-Inf	32.06	3	V	98	1.74	-
PK	2.4904G	63.79	74.00	-10.21	32.16	3	V	98	1.74	-

802.11b_(1Mbps)_2TX

2462MHz_TX

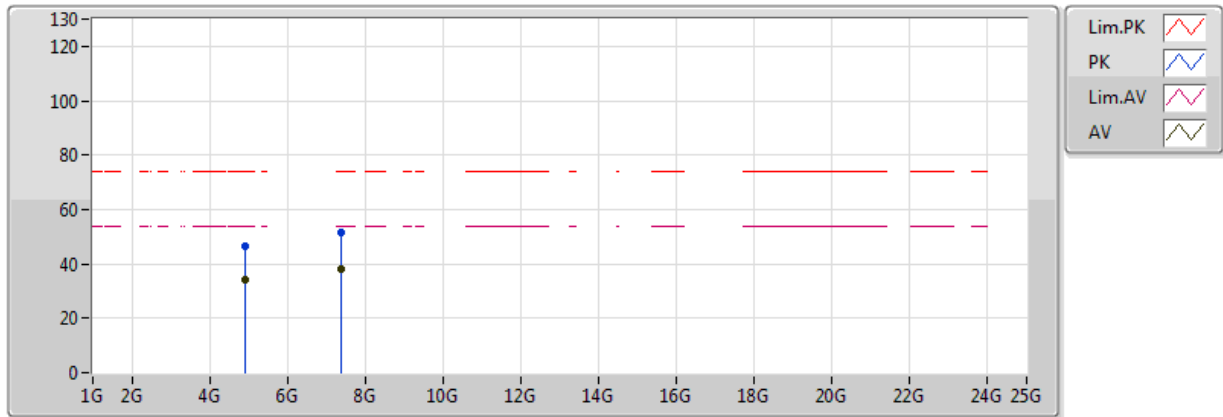


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.357G	50.24	54.00	-3.76	32.18	3	V	159	1.69	-
AV	2.461G	114.90	Inf	-Inf	32.47	3	V	159	1.69	-
AV	2.485G	53.83	54.00	-0.17	32.54	3	V	159	1.69	-
PK	2.39G	61.49	74.00	-12.51	32.27	3	V	159	1.69	-
PK	2.461G	118.62	Inf	-Inf	32.47	3	V	159	1.69	-
PK	2.484G	64.73	74.00	-9.27	32.54	3	V	159	1.69	-

802.11b_(1Mbps)_2TX

2462MHz_TX

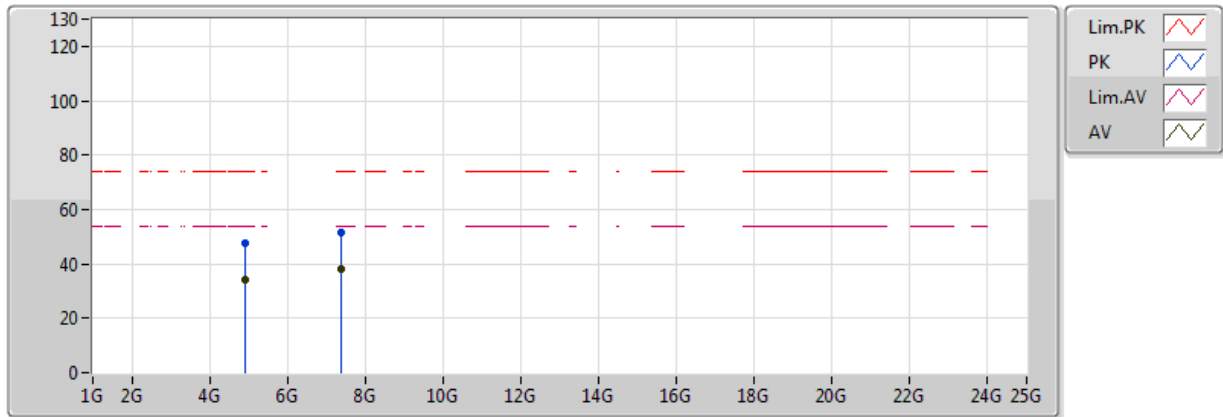


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9193G	34.24	54.00	-19.76	5.80	3	V	225	1.29	-
PK	4.92758G	46.48	74.00	-27.52	5.82	3	V	225	1.29	-
AV	7.38892G	37.98	54.00	-16.02	9.96	3	V	100	2.42	-
PK	7.38172G	51.61	74.00	-22.39	9.96	3	V	100	2.42	-

802.11b_(1Mbps)_2TX

2462MHz_TX

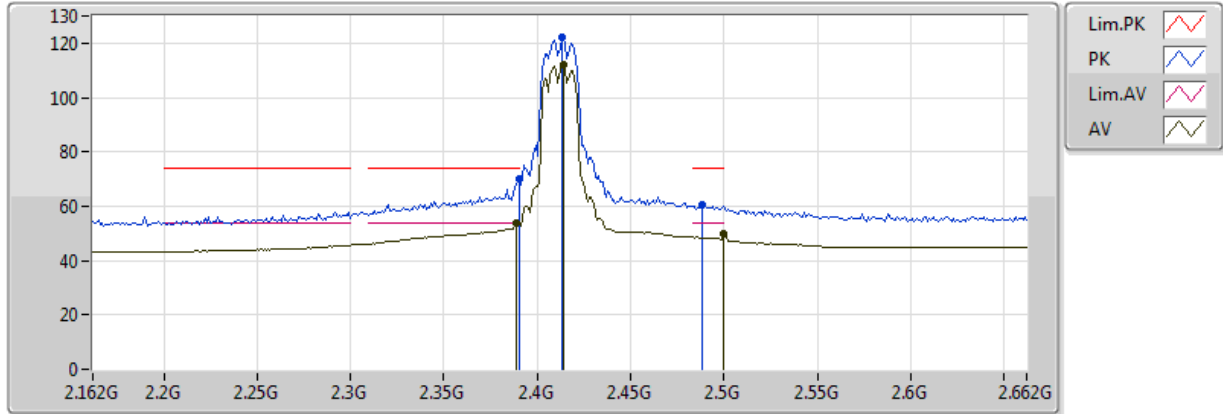


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9282G	34.06	54.00	-19.94	5.82	3	H	257	2.31	-
PK	4.92856G	47.68	74.00	-26.32	5.82	3	H	257	2.31	-
AV	7.3819G	37.84	54.00	-16.16	9.96	3	H	156	1.37	-
PK	7.38818G	51.31	74.00	-22.69	9.96	3	H	156	1.37	-

802.11g_(6Mbps)_2TX

2412MHz_TX

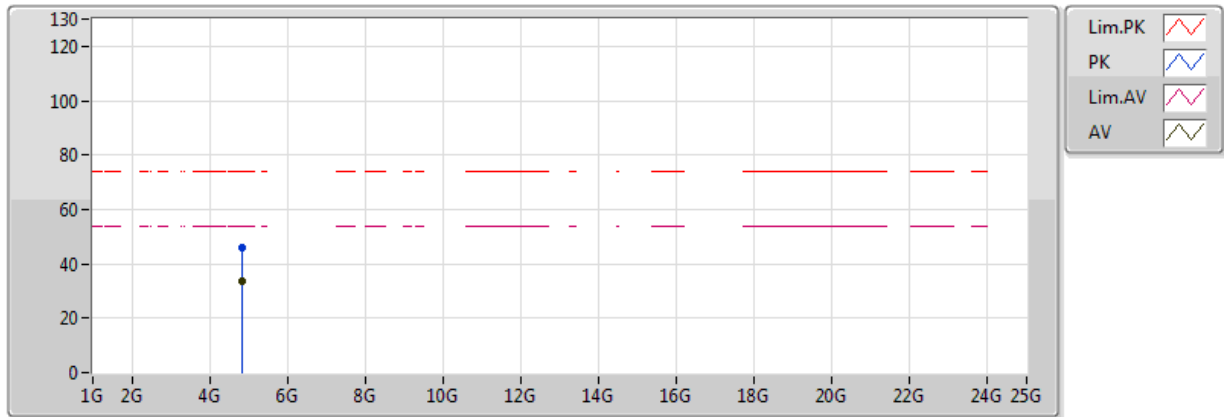


20170221
EUT Z ANT Y 2TX
Setting 1B
03-P-2
FSP(100019)

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	53.64	54.00	-0.36	32.27	3	V	219	1.60	-
AV	2.414G	112.30	Inf	-Inf	32.34	3	V	219	1.60	-
AV	2.5G	49.81	54.00	-4.19	32.58	3	V	219	1.60	-
PK	2.39G	70.17	74.00	-3.83	32.27	3	V	219	1.60	-
PK	2.413G	122.34	Inf	-Inf	32.34	3	V	219	1.60	-
PK	2.488G	60.44	74.00	-13.56	32.55	3	V	219	1.60	-

802.11g_(6Mbps)_2TX

2412MHz_TX

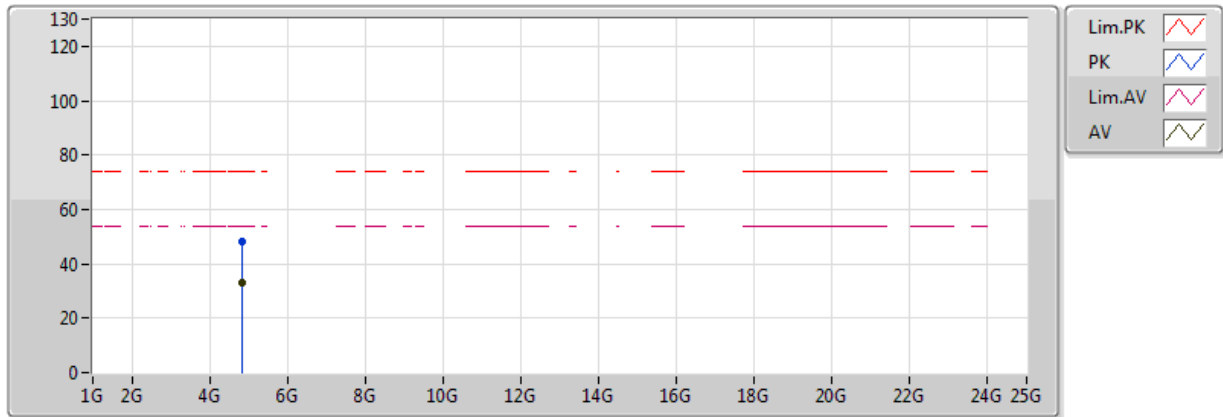


20170221
EUT Z ANT Y 2TX
Setting 1B
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82896G	33.79	54.00	-20.21	5.57	3	V	25	1.29	-
PK	4.82686G	45.95	74.00	-28.05	5.56	3	V	25	1.29	-

802.11g_(6Mbps)_2TX

2412MHz_TX

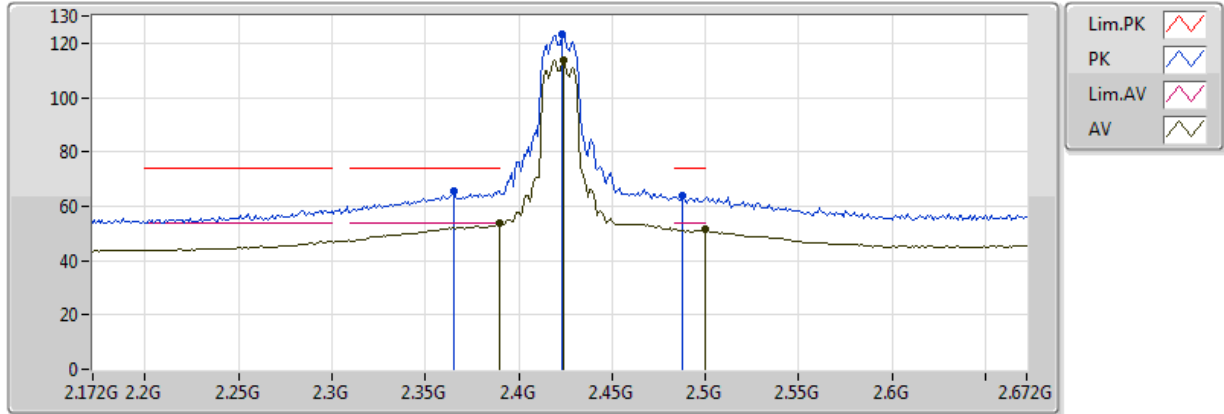


20170221
EUT Z ANT Y 2TX
Setting 1B
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82864G	33.14	54.00	-20.86	5.56	3	H	198	2.44	-
PK	4.82598G	48.05	74.00	-25.95	5.56	3	H	198	2.44	-

802.11g_(6Mbps)_2TX

2422MHz_TX

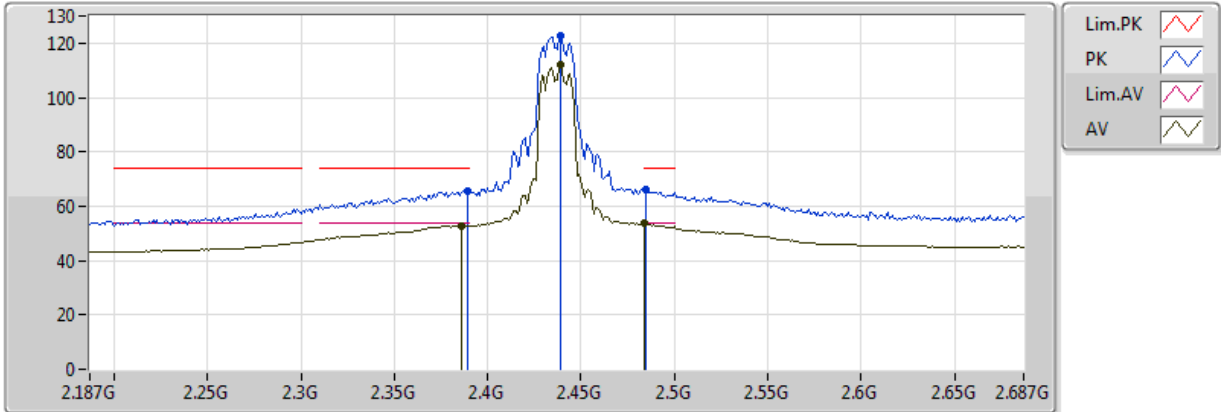


20170223
EUT Z ANT Y 2TX
Setting 1E
03-W-3
FSP(100019)

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	53.57	54.00	-0.43	31.91	3	V	180	1.50	-
AV	2.424G	113.97	Inf	-Inf	32.00	3	V	180	1.50	-
AV	2.5G	51.75	54.00	-2.25	32.18	3	V	180	1.50	-
PK	2.365G	65.52	74.00	-8.48	31.85	3	V	180	1.50	-
PK	2.423G	123.48	Inf	-Inf	32.00	3	V	180	1.50	-
PK	2.488G	63.63	74.00	-10.37	32.15	3	V	180	1.50	-

802.11g_(6Mbps)_2TX

2437MHz_TX

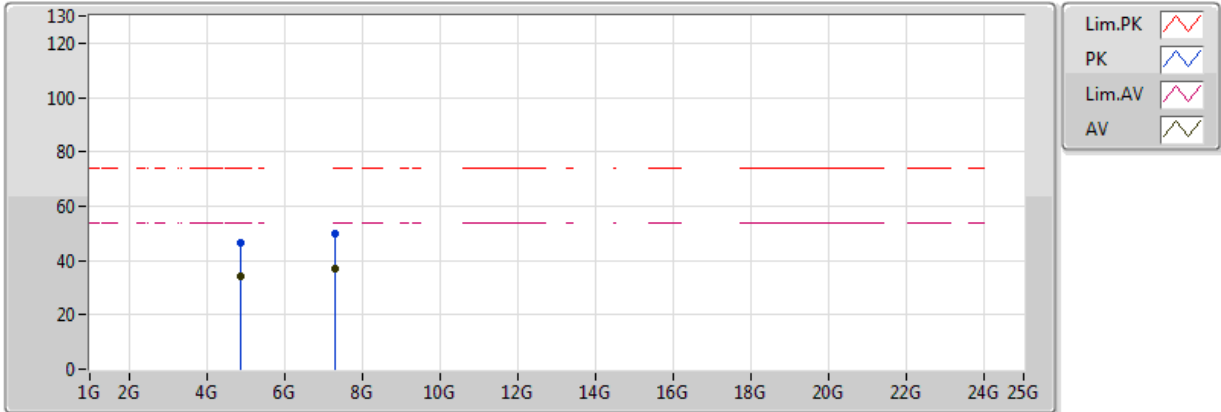


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.386G	52.92	54.00	-1.08	32.26	3	V	144	1.65	-
AV	2.439G	111.82	Inf	-Inf	32.41	3	V	144	1.65	-
AV	2.484G	53.73	54.00	-0.27	32.54	3	V	144	1.65	-
PK	2.389G	65.67	74.00	-8.33	32.27	3	V	144	1.65	-
PK	2.439G	122.50	Inf	-Inf	32.41	3	V	144	1.65	-
PK	2.485G	66.13	74.00	-7.87	32.54	3	V	144	1.65	-

802.11g_(6Mbps)_2TX

2437MHz_TX

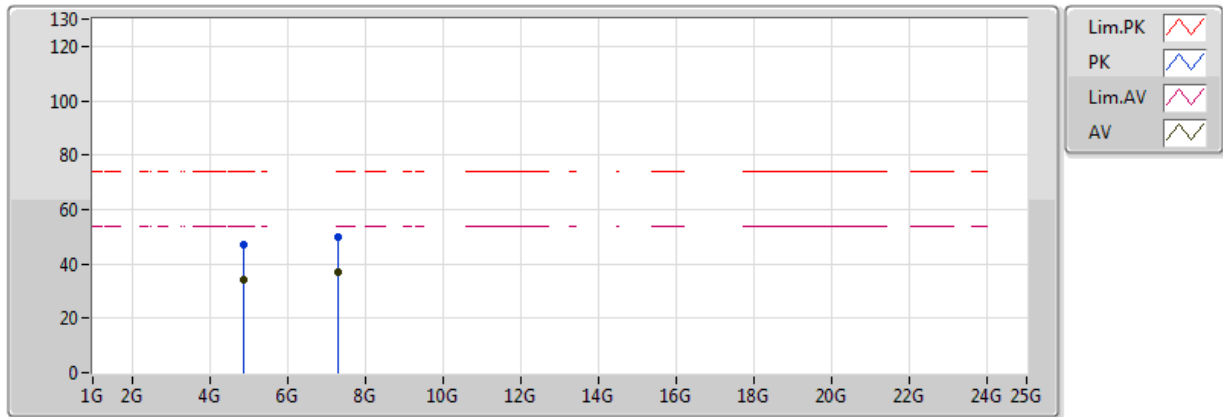


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87146G	34.22	54.00	-19.78	5.68	3	V	169	2.31	-
PK	4.87742G	46.55	74.00	-27.45	5.69	3	V	169	2.31	-
AV	7.30616G	36.98	54.00	-17.02	9.94	3	V	254	1.43	-
PK	7.31196G	49.69	74.00	-24.31	9.94	3	V	254	1.43	-

802.11g_(6Mbps)_2TX

2437MHz_TX

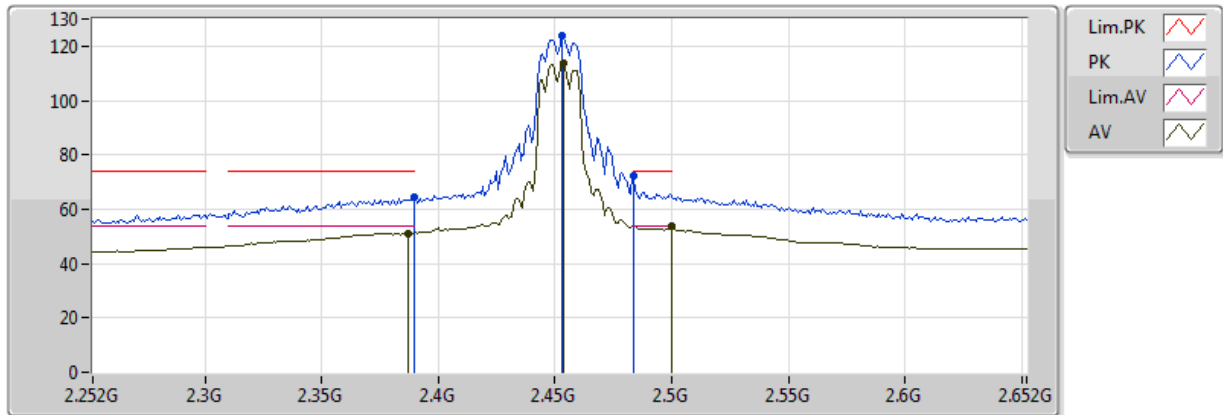


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87246G	34.06	54.00	-19.94	5.68	3	H	98	1.56	-
PK	4.87392G	47.14	74.00	-26.86	5.68	3	H	98	1.56	-
AV	7.31172G	36.93	54.00	-17.07	9.94	3	H	219	1.88	-
PK	7.30738G	49.65	74.00	-24.35	9.94	3	H	219	1.88	-

802.11g_(6Mbps)_2TX

2452MHz_TX

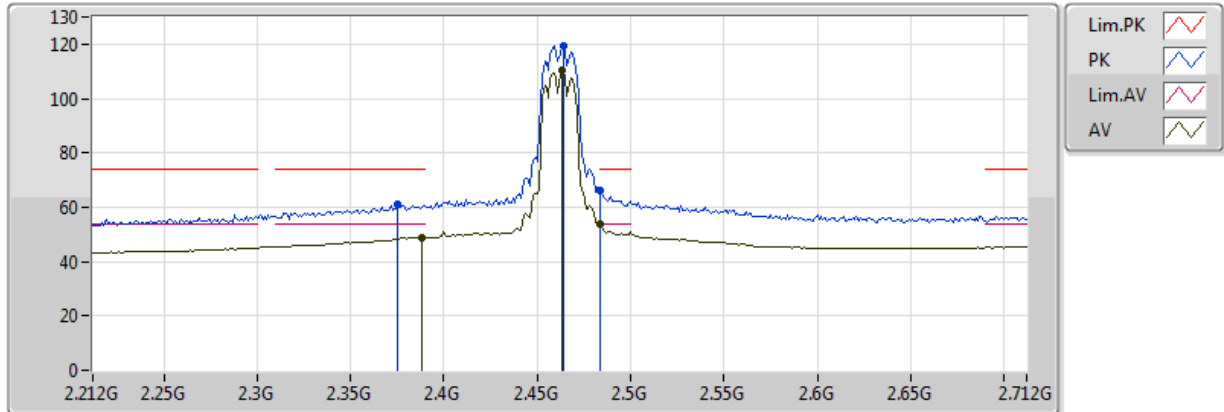


20170223
EUT Z ANT Y 2TX
Setting 21
03-W-3
FSP(100019)

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	51.25	54.00	-2.75	31.91	3	V	185	1.62	-
AV	2.4536G	113.97	Inf	-Inf	32.07	3	V	185	1.62	-
AV	2.5G	53.69	54.00	-0.31	32.18	3	V	185	1.62	-
PK	2.3896G	64.19	74.00	-9.81	31.91	3	V	185	1.62	-
PK	2.4528G	123.58	Inf	-Inf	32.07	3	V	185	1.62	-
PK	2.483502G	72.01	74.00	-1.99	32.14	3	V	185	1.62	-

802.11g_(6Mbps)_2TX

2462MHz_TX

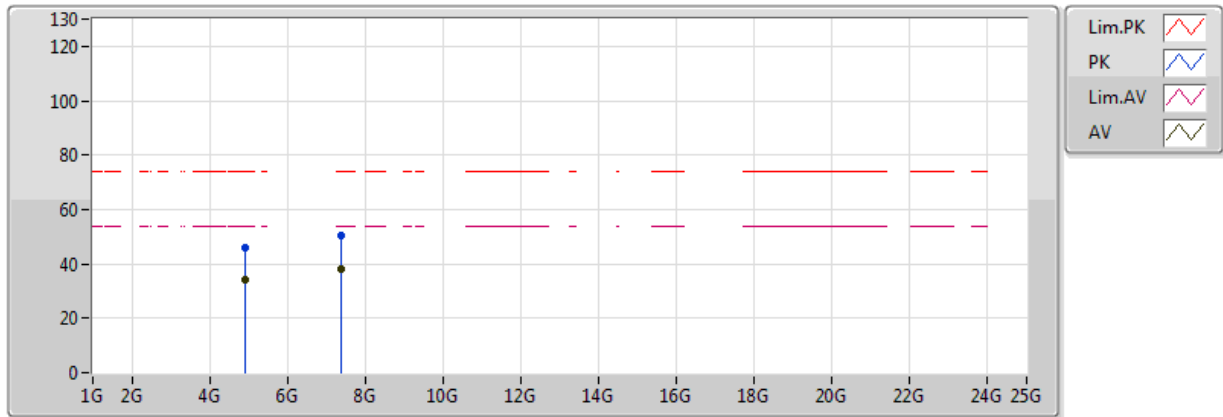


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

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	48.82	54.00	-5.18	32.27	3	V	149	1.58	-
AV	2.463G	110.38	Inf	-Inf	32.48	3	V	149	1.58	-
AV	2.483502G	53.61	54.00	-0.39	32.53	3	V	149	1.58	-
PK	2.375G	61.11	74.00	-12.89	32.23	3	V	149	1.58	-
PK	2.464G	119.63	Inf	-Inf	32.48	3	V	149	1.58	-
PK	2.483502G	65.97	74.00	-8.03	32.53	3	V	149	1.58	-

802.11g_(6Mbps)_2TX

2462MHz_TX

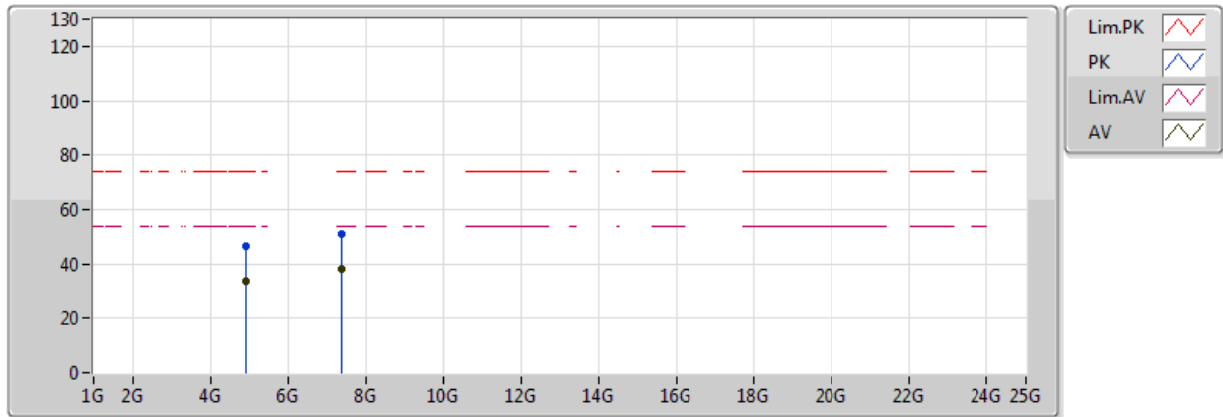


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92486G	33.97	54.00	-20.03	5.81	3	V	215	1.10	-
PK	4.92752G	46.13	74.00	-27.87	5.82	3	V	215	1.10	-
AV	7.3841G	38.04	54.00	-15.96	9.96	3	V	267	1.43	-
PK	7.38594G	50.53	74.00	-23.47	9.96	3	V	267	1.43	-

802.11g_(6Mbps)_2TX

2462MHz_TX

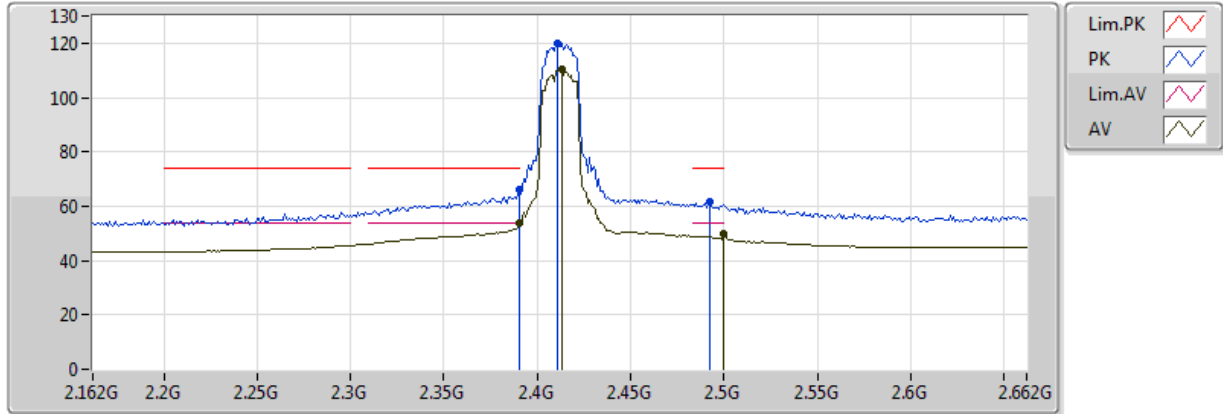


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.91908G	33.90	54.00	-20.10	5.80	3	H	57	1.71	-
PK	4.9254G	46.41	74.00	-27.59	5.82	3	H	57	1.71	-
AV	7.39084G	38.07	54.00	-15.93	9.96	3	H	173	1.35	-
PK	7.38774G	50.86	74.00	-23.14	9.96	3	H	173	1.35	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

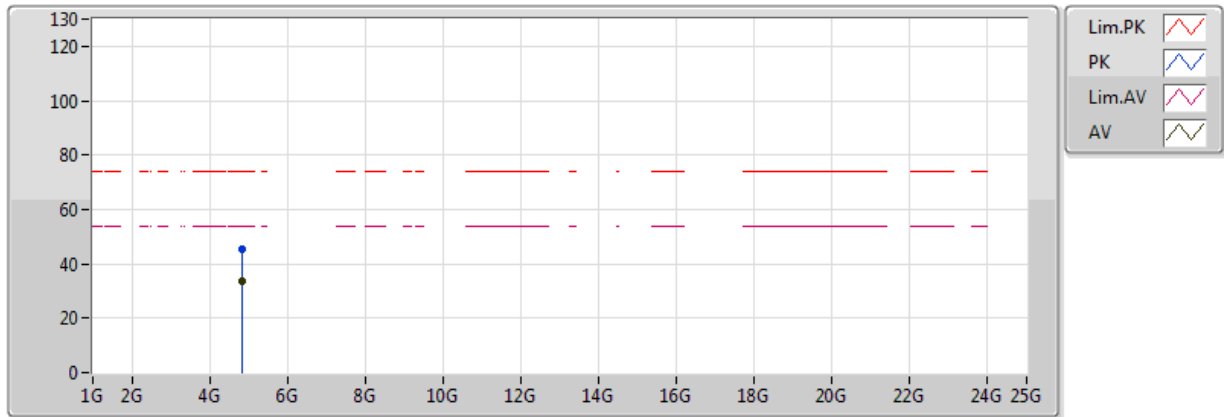


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

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	32.27	3	V	219	1.71	-
AV	2.413G	110.61	Inf	-Inf	32.34	3	V	219	1.71	-
AV	2.5G	49.99	54.00	-4.01	32.58	3	V	219	1.71	-
PK	2.39G	66.12	74.00	-7.88	32.27	3	V	219	1.71	-
PK	2.411G	119.76	Inf	-Inf	32.33	3	V	219	1.71	-
PK	2.492G	61.51	74.00	-12.49	32.56	3	V	219	1.71	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

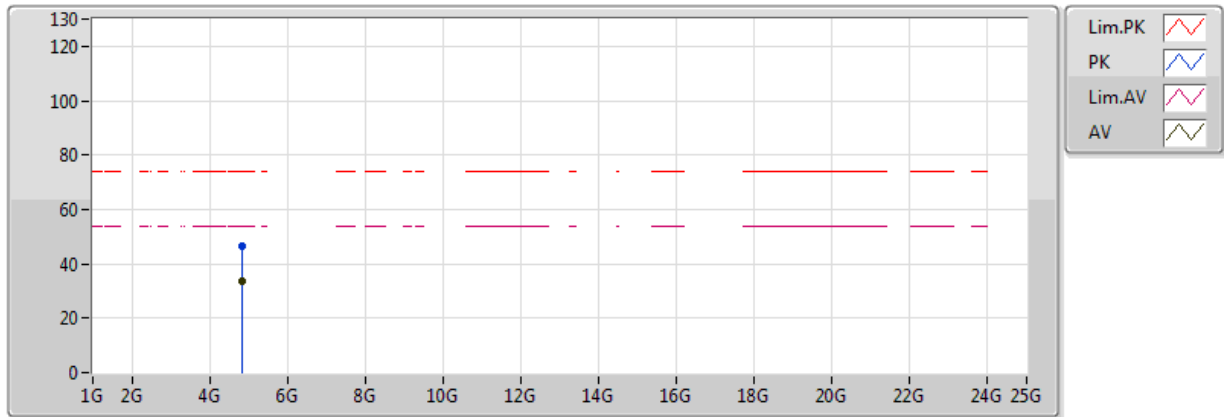


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82788G	33.42	54.00	-20.58	5.56	3	V	200	1.52	-
PK	4.8266G	45.48	74.00	-28.52	5.56	3	V	200	1.52	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

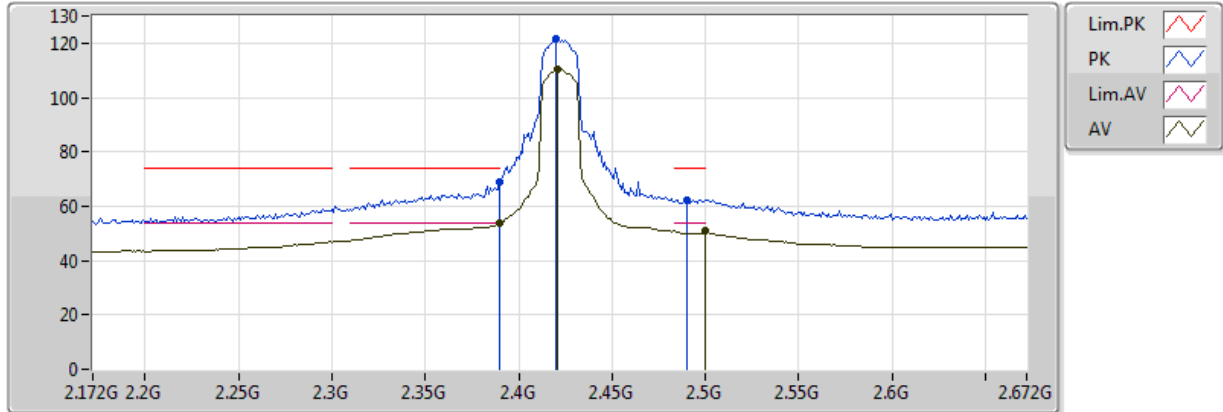


20170221
EUT Z ANT Y 2TX
Setting 19
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82722G	33.58	54.00	-20.42	5.56	3	H	254	1.89	-
PK	4.82196G	46.76	74.00	-27.24	5.55	3	H	254	1.89	-

802.11n HT20_Nss1,(MCS0)_2TX

2422MHz_TX

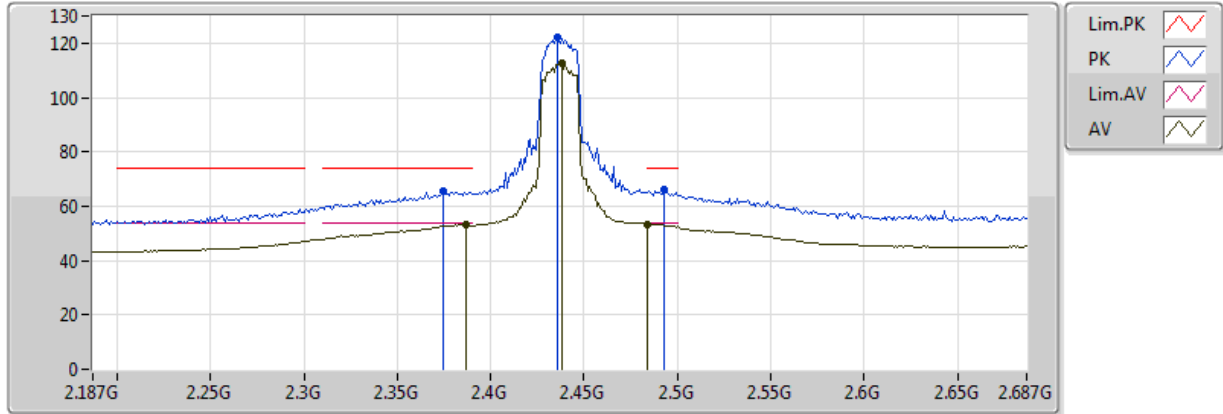


20170223
EUT Z ANT Y 2TX
Setting 22
03-W-3
FSP(100019)

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	31.91	3	V	179	1.53	-
AV	2.421G	110.17	Inf	-Inf	31.99	3	V	179	1.53	-
AV	2.5G	50.81	54.00	-3.19	32.18	3	V	179	1.53	-
PK	2.39G	68.68	74.00	-5.32	31.91	3	V	179	1.53	-
PK	2.42G	121.39	Inf	-Inf	31.99	3	V	179	1.53	-
PK	2.49G	62.40	74.00	-11.60	32.16	3	V	179	1.53	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

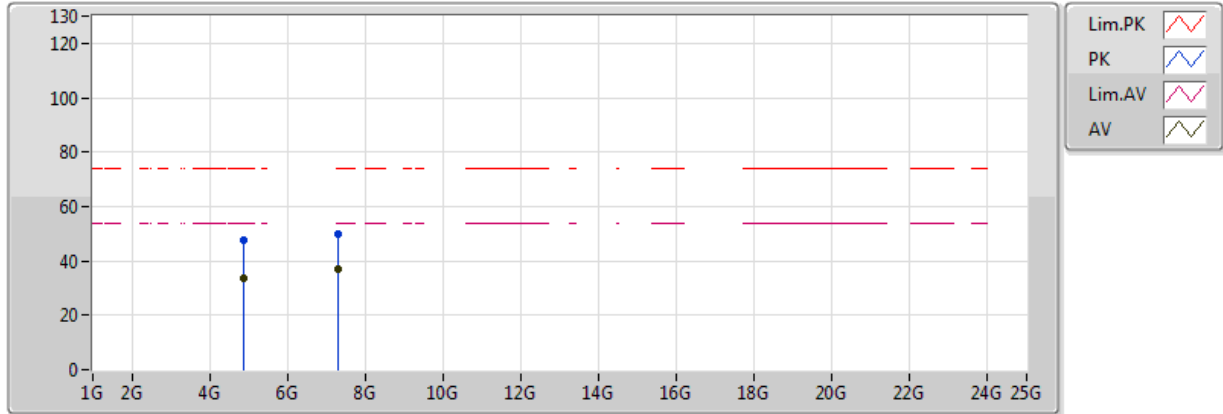


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.387G	53.28	54.00	-0.72	32.26	3	V	145	1.61	-
AV	2.438G	112.59	Inf	-Inf	32.41	3	V	145	1.61	-
AV	2.483502G	53.50	54.00	-0.50	32.53	3	V	145	1.61	-
PK	2.375G	65.70	74.00	-8.30	32.23	3	V	145	1.61	-
PK	2.436G	122.16	Inf	-Inf	32.40	3	V	145	1.61	-
PK	2.493G	65.96	74.00	-8.04	32.56	3	V	145	1.61	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

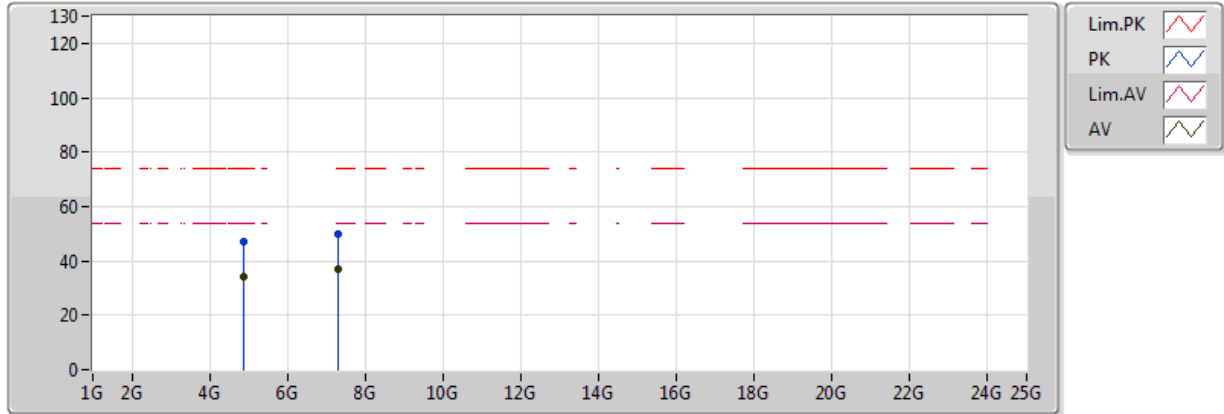


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87234G	33.85	54.00	-20.15	5.68	3	V	262	1.96	-
PK	4.87024G	47.45	74.00	-26.55	5.67	3	V	262	1.96	-
AV	7.3068G	36.81	54.00	-17.19	9.94	3	V	146	1.60	-
PK	7.30696G	49.89	74.00	-24.11	9.94	3	V	146	1.60	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

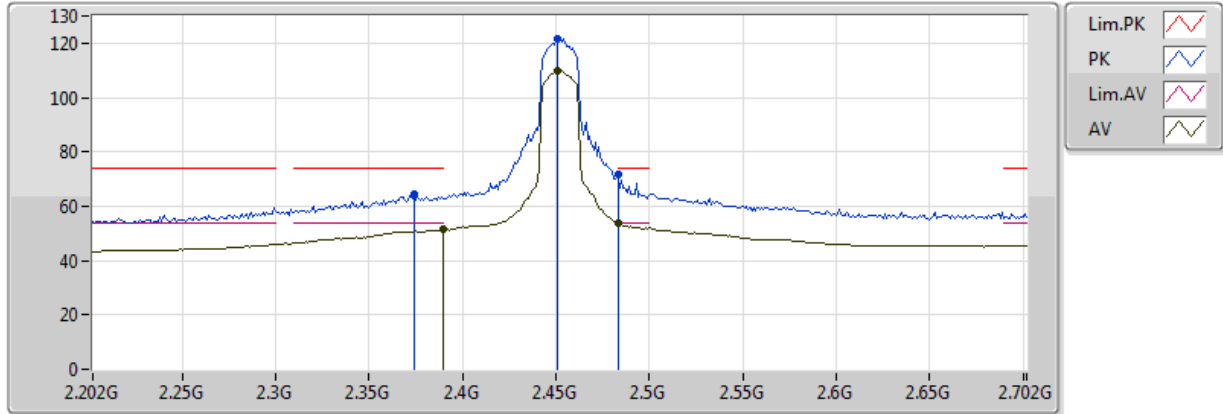


20170221
EUT Z ANT Y 2TX
Setting 20
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87124G	33.93	54.00	-20.07	5.68	3	H	152	1.62	-
PK	4.86972G	46.91	74.00	-27.09	5.67	3	H	152	1.62	-
AV	7.3074G	36.99	54.00	-17.01	9.94	3	H	318	1.71	-
PK	7.31404G	49.64	74.00	-24.36	9.94	3	H	318	1.71	-

802.11n HT20_Nss1,(MCS0)_2TX

2452MHz_TX

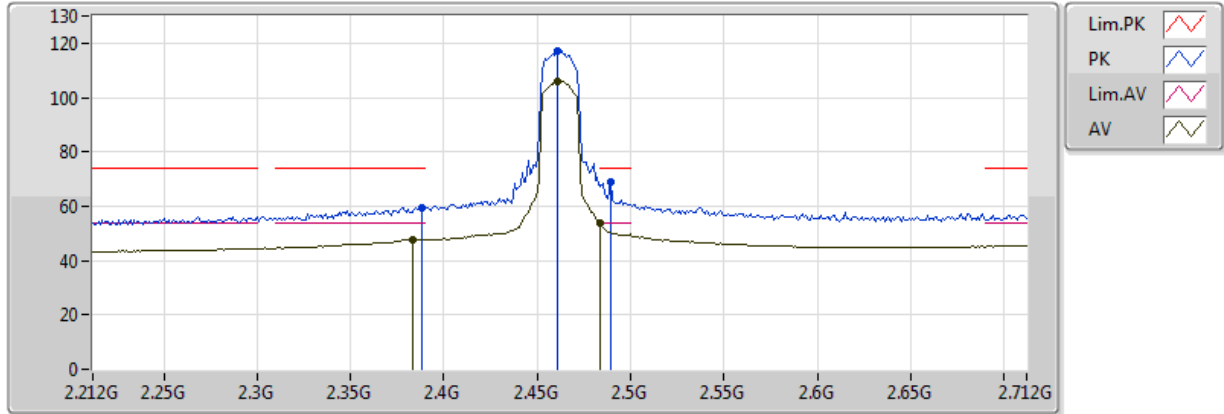


20170223
EUT Z ANT Y 2TX
Setting 23
03-W-3
FSP(100019)

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	51.56	54.00	-2.44	31.91	3	V	141	1.73	-
AV	2.451G	110.01	Inf	-Inf	32.06	3	V	141	1.73	-
AV	2.483502G	53.92	54.00	-0.08	32.14	3	V	141	1.73	-
PK	2.374G	64.55	74.00	-9.45	31.87	3	V	141	1.73	-
PK	2.451G	121.86	Inf	-Inf	32.06	3	V	141	1.73	-
PK	2.483502G	71.56	74.00	-2.44	32.14	3	V	141	1.73	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

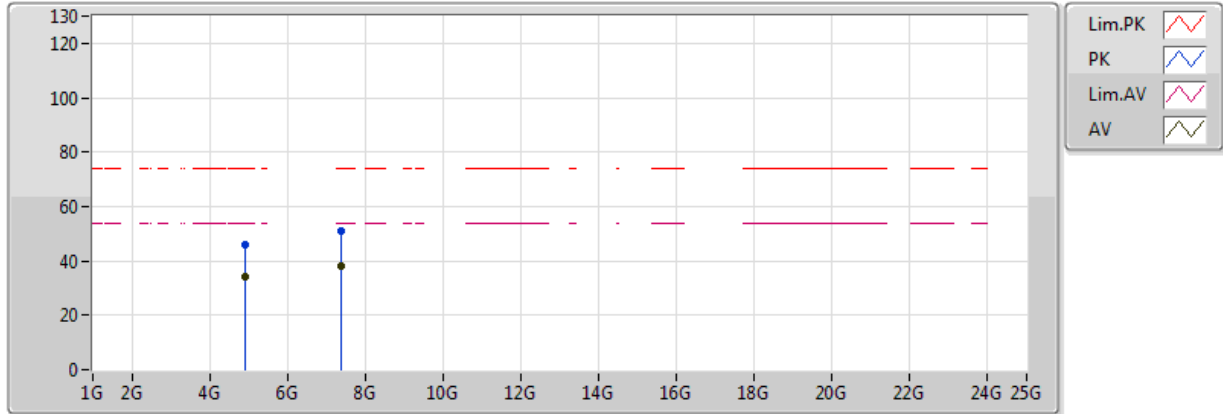


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.383G	47.63	54.00	-6.37	32.25	3	V	175	1.71	-
AV	2.461G	106.18	Inf	-Inf	32.47	3	V	175	1.71	-
AV	2.483502G	53.88	54.00	-0.12	32.53	3	V	175	1.71	-
PK	2.388G	59.52	74.00	-14.48	32.27	3	V	175	1.71	-
PK	2.461G	117.31	Inf	-Inf	32.47	3	V	175	1.71	-
PK	2.489G	68.80	74.00	-5.20	32.55	3	V	175	1.71	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

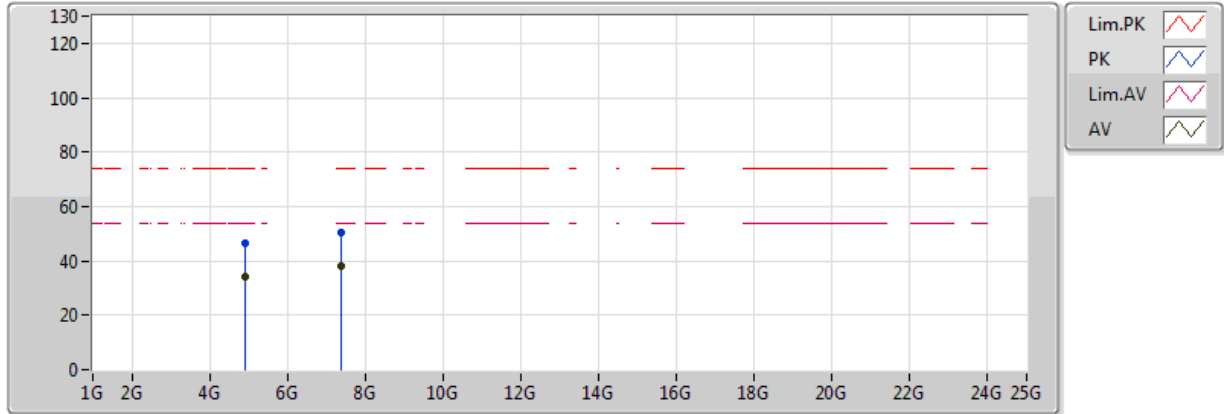


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.93006G	34.35	54.00	-19.65	5.83	3	V	59	1.20	-
PK	4.92742G	46.19	74.00	-27.81	5.82	3	V	59	1.20	-
AV	7.38908G	37.83	54.00	-16.17	9.96	3	V	316	1.38	-
PK	7.38996G	50.89	74.00	-23.11	9.96	3	V	316	1.38	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

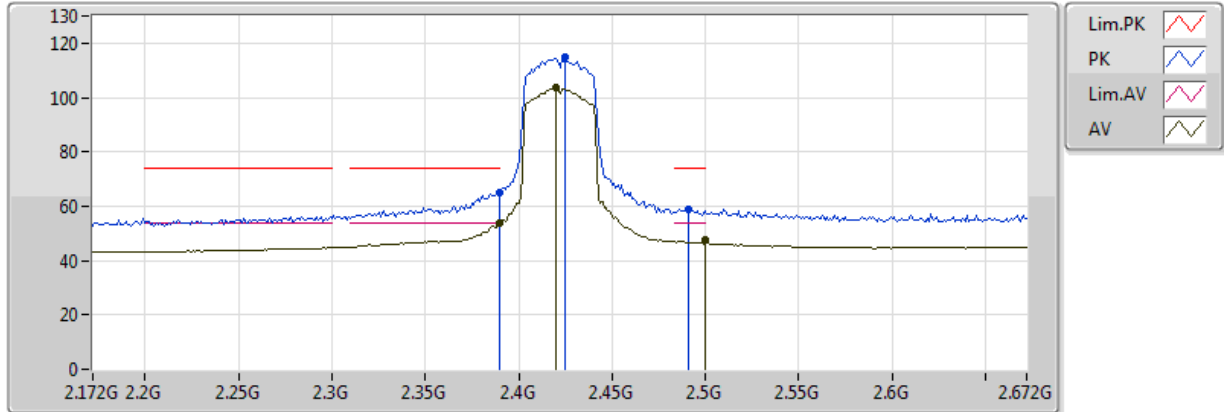


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9251G	33.92	54.00	-20.08	5.82	3	H	131	2.00	-
PK	4.9231G	46.50	74.00	-27.50	5.81	3	H	131	2.00	-
AV	7.3882G	37.89	54.00	-16.11	9.96	3	H	266	1.59	-
PK	7.3873G	50.16	74.00	-23.84	9.96	3	H	266	1.59	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

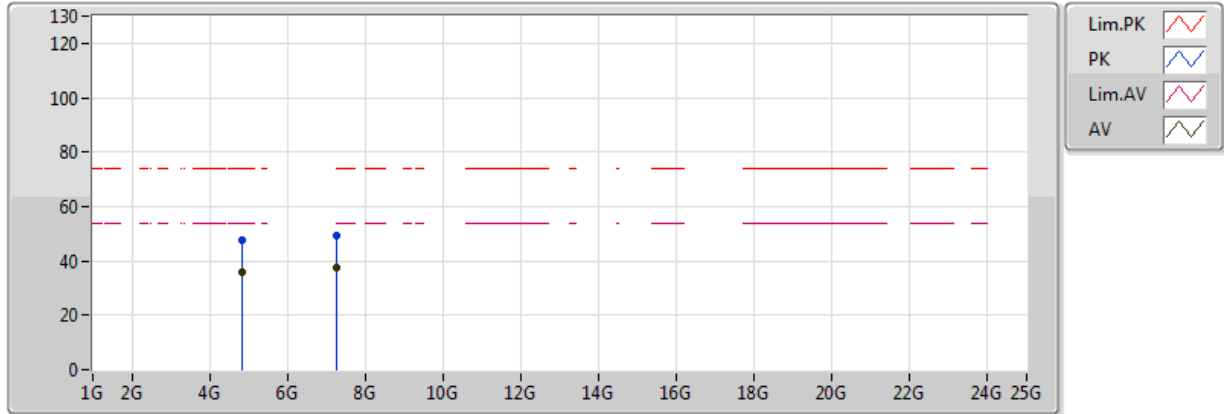


20170221
EUT Z ANT Y 2TX
Setting 14
03-P-2
FSP(100019)

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	53.85	54.00	-0.15	32.27	3	V	215	1.67	-
AV	2.42G	103.71	Inf	-Inf	32.36	3	V	215	1.67	-
AV	2.5G	47.47	54.00	-6.53	32.58	3	V	215	1.67	-
PK	2.39G	65.19	74.00	-8.81	32.27	3	V	215	1.67	-
PK	2.425G	115.15	Inf	-Inf	32.37	3	V	215	1.67	-
PK	2.491G	58.74	74.00	-15.26	32.55	3	V	215	1.67	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

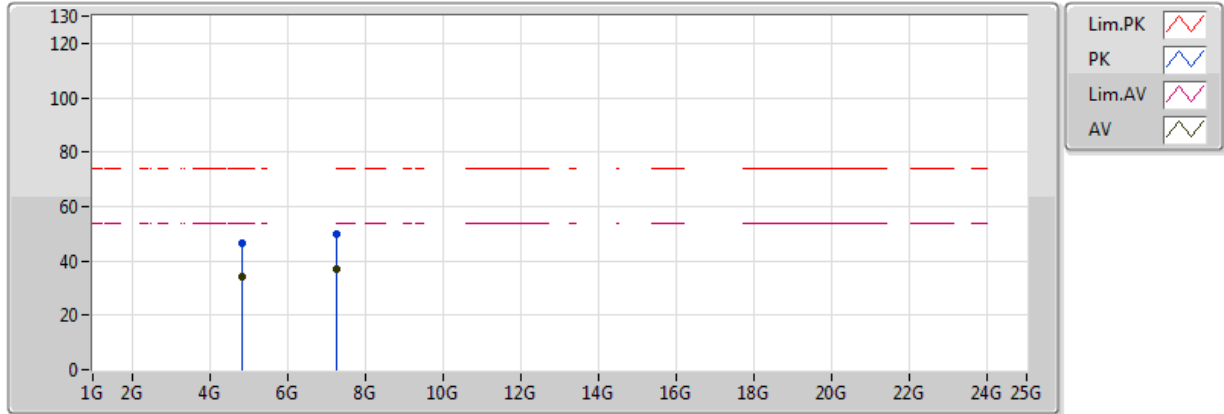


20170221
EUT Z ANT Y 2TX
Setting 14
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84403G	35.91	54.00	-18.09	5.60	3	V	243	1.15	-
PK	4.84432G	47.44	74.00	-26.56	5.61	3	V	243	1.15	-
AV	7.2783G	37.63	54.00	-16.37	9.93	3	V	127	1.89	-
PK	7.275G	49.54	74.00	-24.46	9.93	3	V	127	1.89	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

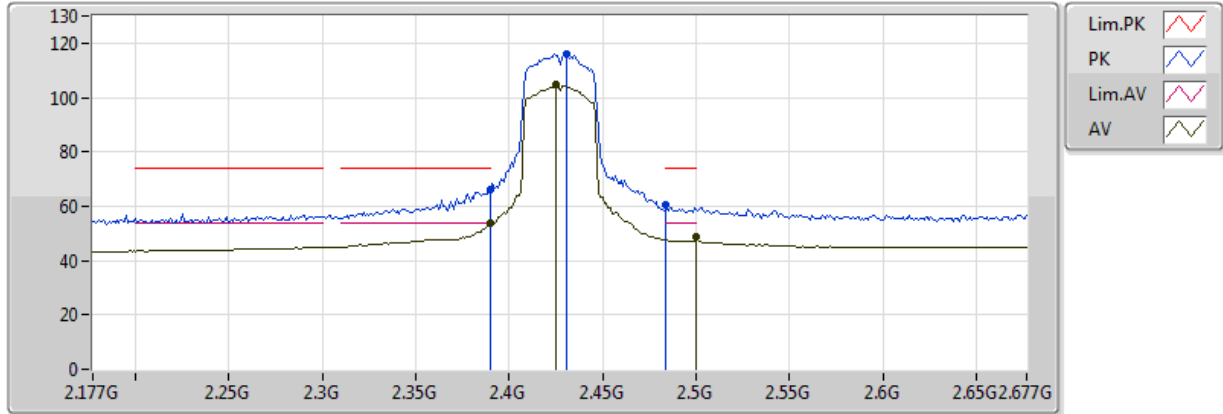


20170221
EUT Z ANT Y 2TX
Setting 14
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84394G	34.03	54.00	-19.97	5.60	3	H	236	1.27	-
PK	4.84056G	46.36	74.00	-27.64	5.60	3	H	236	1.27	-
AV	7.2676G	37.10	54.00	-16.90	9.93	3	H	112	1.12	-
PK	7.26766G	49.92	74.00	-24.08	9.93	3	H	112	1.12	-

802.11n HT40_Nss1,(MCS0)_2TX

2427MHz_TX

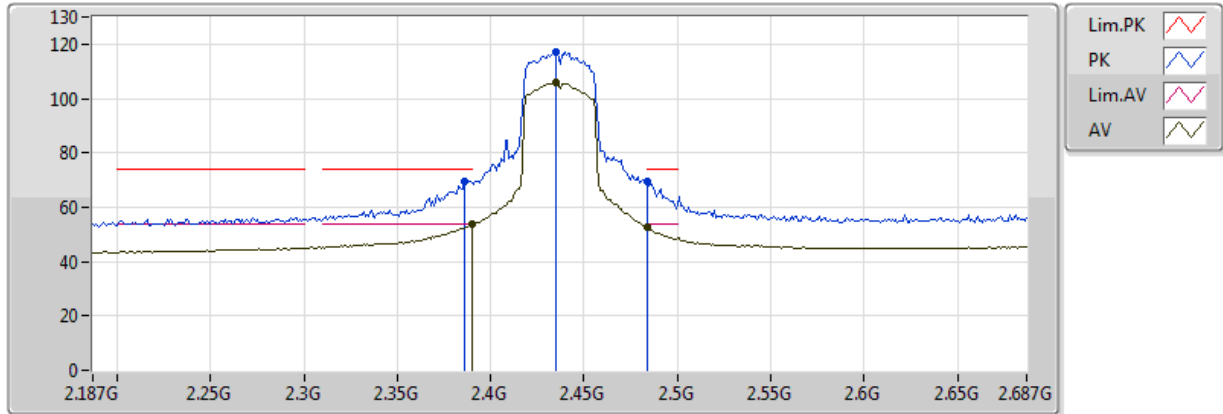


20170223
EUT Z ANT Y 2TX
Setting 16
03-W-3
FSP(100019)

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	31.91	3	V	176	1.58	-
AV	2.425G	104.78	Inf	-Inf	32.00	3	V	176	1.58	-
AV	2.5G	48.86	54.00	-5.14	32.18	3	V	176	1.58	-
PK	2.39G	66.14	74.00	-7.86	31.91	3	V	176	1.58	-
PK	2.431G	116.22	Inf	-Inf	32.01	3	V	176	1.58	-
PK	2.484G	60.43	74.00	-13.57	32.14	3	V	176	1.58	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

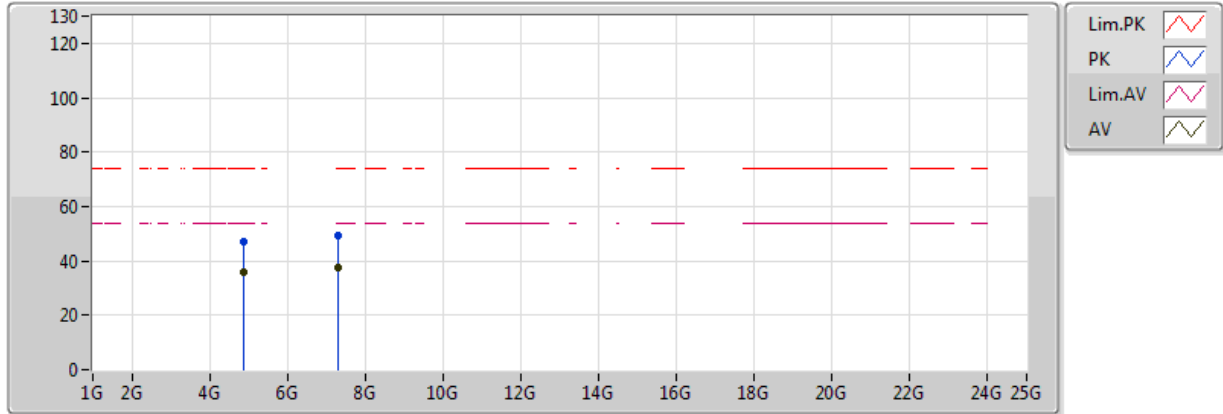


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

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	53.65	54.00	-0.35	32.27	3	V	130	1.50	-
AV	2.435G	106.03	Inf	-Inf	32.40	3	V	130	1.50	-
AV	2.483502G	52.91	54.00	-1.09	32.53	3	V	130	1.50	-
PK	2.386G	69.51	74.00	-4.49	32.26	3	V	130	1.50	-
PK	2.435G	117.30	Inf	-Inf	32.40	3	V	130	1.50	-
PK	2.483502G	69.21	74.00	-4.79	32.53	3	V	130	1.50	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

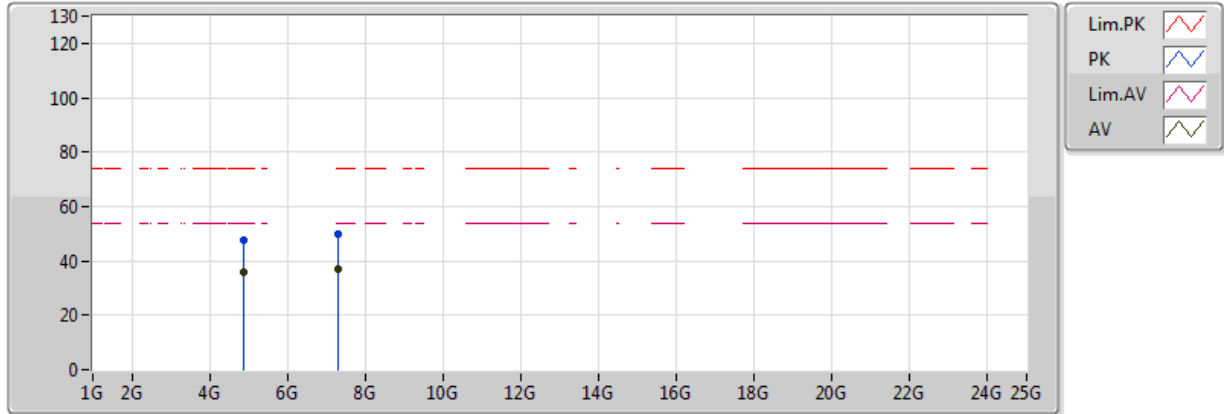


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87404G	35.73	54.00	-18.27	5.68	3	V	300	1.15	-
PK	4.87384G	47.18	74.00	-26.82	5.68	3	V	300	1.15	-
AV	7.2966G	37.29	54.00	-16.71	9.94	3	V	29	1.54	-
PK	7.32276G	49.27	74.00	-24.73	9.94	3	V	29	1.54	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

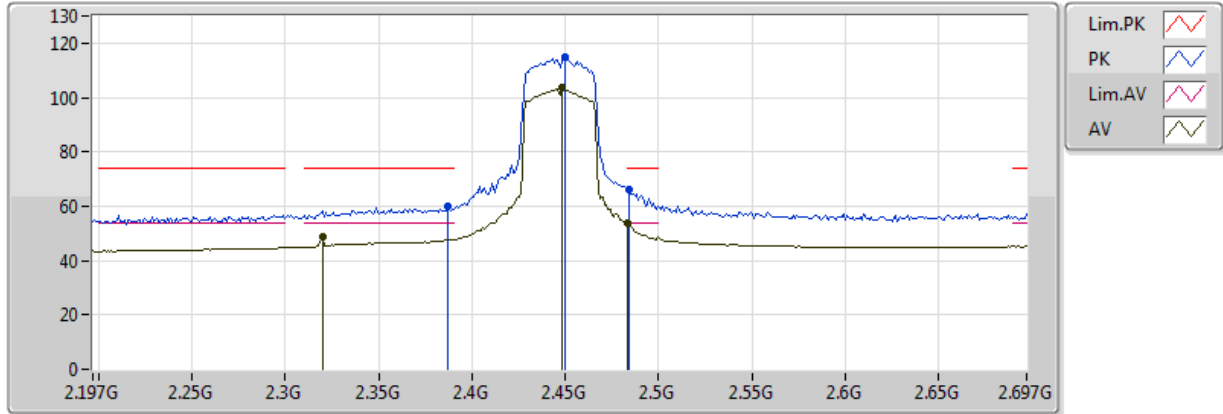


20170221
EUT Z ANT Y 2TX
Setting 1C
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87406G	35.83	54.00	-18.17	5.68	3	H	1	2.12	-
PK	4.87394G	47.50	74.00	-26.50	5.68	3	H	1	2.12	-
AV	7.30638G	37.20	54.00	-16.80	9.94	3	H	306	2.30	-
PK	7.30614G	50.00	74.00	-24.00	9.94	3	H	306	2.30	-

802.11n HT40_Nss1,(MCS0)_2TX

2447MHz_TX

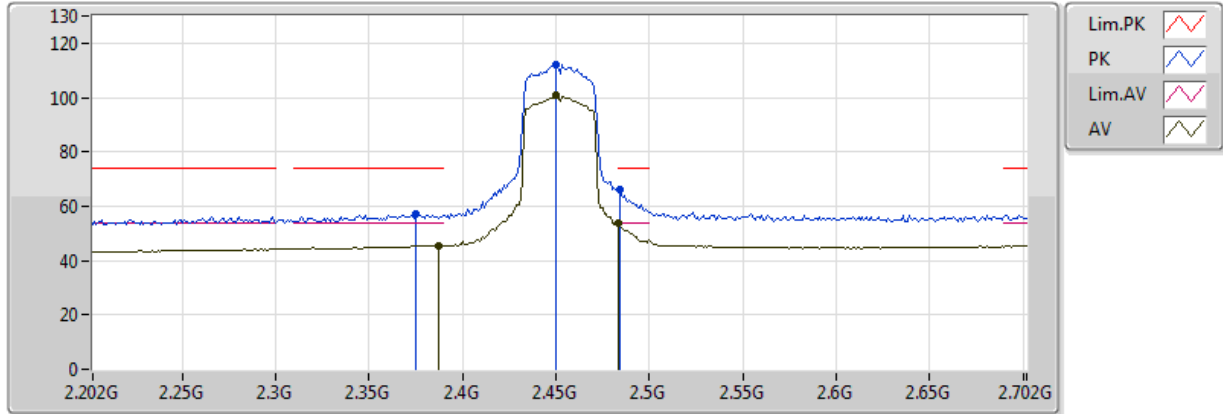


20170223
EUT Z ANT Y 2TX
Setting 16
03-W-3
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.32G	48.70	54.00	-5.30	32.07	3	V	219	1.72	-
AV	2.448G	103.48	Inf	-Inf	32.43	3	V	219	1.72	-
AV	2.483502G	53.68	54.00	-0.32	32.53	3	V	219	1.72	-
PK	2.387G	59.95	74.00	-14.05	32.26	3	V	219	1.72	-
PK	2.45G	115.00	Inf	-Inf	32.44	3	V	219	1.72	-
PK	2.484G	66.24	74.00	-7.76	32.54	3	V	219	1.72	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

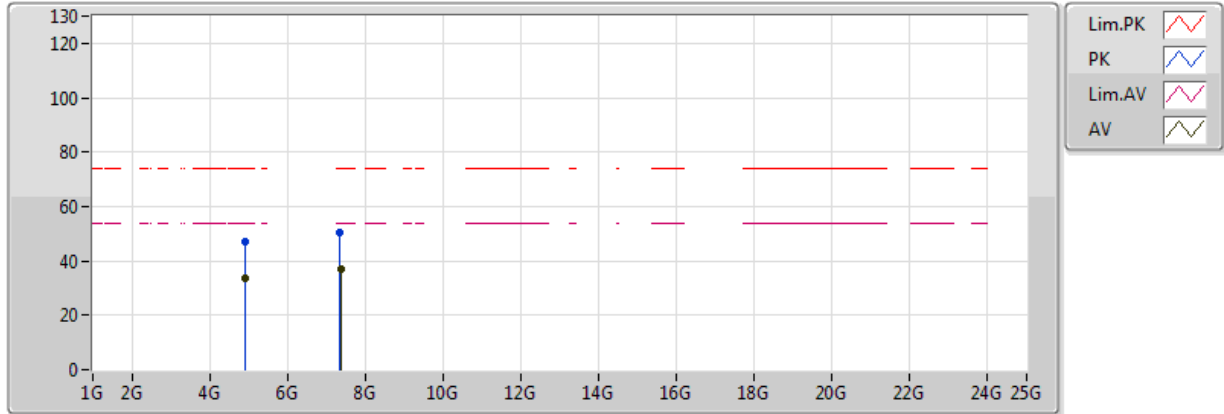


20170221
EUT Z ANT Y 2TX
Setting 11
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.387G	45.50	54.00	-8.50	32.26	3	V	176	1.65	-
AV	2.45G	100.66	Inf	-Inf	32.44	3	V	176	1.65	-
AV	2.483502G	53.78	54.00	-0.22	32.53	3	V	176	1.65	-
PK	2.375G	56.97	74.00	-17.03	32.23	3	V	176	1.65	-
PK	2.45G	111.96	Inf	-Inf	32.44	3	V	176	1.65	-
PK	2.484G	66.02	74.00	-7.98	32.54	3	V	176	1.65	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

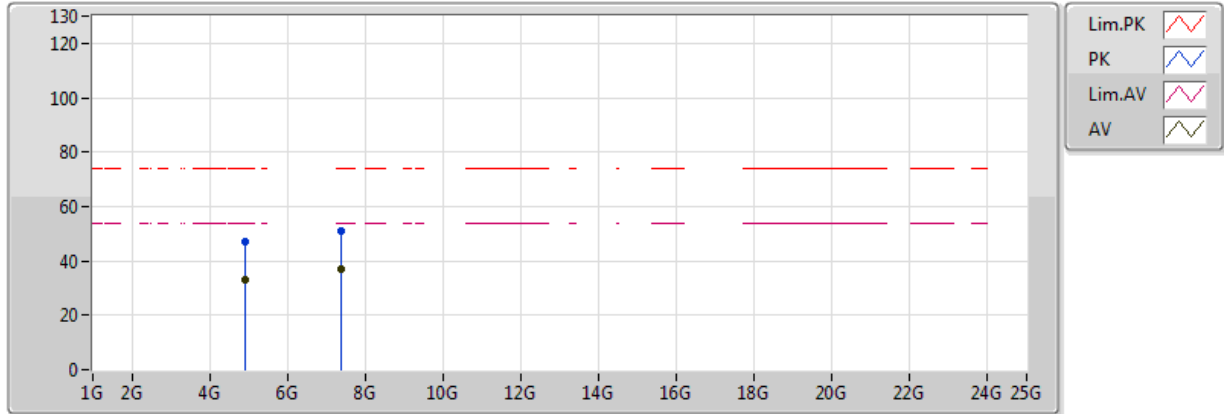


20170221
EUT Z ANT Y 2TX
Setting 11
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90552G	33.39	54.00	-20.61	5.76	3	V	270	1.84	-
AV	7.3686G	36.99	54.00	-17.01	9.95	3	V	61	1.09	-
PK	4.90306G	47.14	74.00	-26.86	5.76	3	V	270	1.84	-
PK	7.34736G	50.43	74.00	-23.57	9.95	3	V	61	1.09	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX



20170221
EUT Z ANT Y 2TX
Setting 11
03-P-2
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90566G	33.30	54.00	-20.70	5.76	3	H	125	1.13	-
AV	7.36878G	36.93	54.00	-17.07	9.95	3	H	16	2.07	-
PK	4.9037G	47.02	74.00	-26.98	5.76	3	H	125	1.13	-
PK	7.36764G	51.01	74.00	-22.99	9.95	3	H	16	2.07	-