

FCC Test Report

Equipment : 802.11ac Tri Band PoE Access Point
Brand Name : LITE-ON, MOJO
Model No. : WP8333V1, C-110
FCC ID : PPQ-WP8333V1
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : LITE-ON Technology Corp.
Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City,
23585 Taiwan
Manufacturer : Lite-On Network Communication (Dongguan) Limited
30#Keji Rd.,Yin Hu Industrial Area,Qingxi
Town,DongGuan City,Guangdong,China

The product sample received on Apr. 17, 2017 and completely tested on Jun. 15, 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.





Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	8
1.3	Testing Location Information	8
1.4	Measurement Uncertainty	8
2	TEST CONFIGURATION OF EUT	9
2.1	Test Channel Mode	9
2.2	The Worst Case Measurement Configuration.....	10
2.3	EUT Operation during Test	12
2.4	Accessories	13
2.5	Support Equipment.....	13
2.6	Test Setup Diagram	14
3	TRANSMITTER TEST RESULT	17
3.1	AC Power-line Conducted Emissions	17
3.2	DTS Bandwidth	19
3.3	Maximum Conducted Output Power	20
3.4	Power Spectral Density	22
3.5	Emissions in Non-restricted Frequency Bands	24
3.6	Emissions in Restricted Frequency Bands.....	25
4	TEST EQUIPMENT AND CALIBRATION DATA	29
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS		
APPENDIX B. TEST RESULTS OF DTS BANDWIDTH		
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER		
APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY		
APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS		
APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS		
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION		
APPENDIX H. TEST PHOTOS		
PHOTOGRAPHS OF EUT V01		

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



Report No. : FR741722AA

[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), ac (VHT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ac (VHT40)	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	802.11ac VHT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11ac VHT40	40	2TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM 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 Holder	Model Name	Antenna Type	Connector	Radio
1	Master Wave Technology CO., LTD	98P7NPIPF000	PCB Antenna	I-PEX	R1
2	Master Wave Technology CO., LTD	98P7NPIPF001	PCB Antenna	I-PEX	R1
3	Master Wave Technology CO., LTD	98P7PUPIPF000	PCB Antenna	I-PEX	R2
4	Master Wave Technology CO., LTD	98P7QUIPF000	PCB Antenna	I-PEX	R2
5	Master Wave Technology CO., LTD	98P7RPIPF000	PCB Antenna	I-PEX	R3
6	Master Wave Technology CO., LTD	98P7RPIPF001	PCB Antenna	I-PEX	R3
7	Master Wave Technology CO., LTD	98P7SMIPF000	PCB Antenna	I-PEX	R4

Ant.	Gain (dBi)										
	Radio 1			Radio 2		Radio 3					Radio 4
	2.4G	5G B1	5G B4	5G B1	5G B4	2.4G	5G B1	5G B2	5G B3	5G B4	BT
1	6.3	4.3	5.3	-	-	-	-	-	-	-	-
2	6.5	4.9	6.1	-	-	-	-	-	-	-	-
3	-	-	-	5.6	5.9	-	-	-	-	-	-
4	-	-	-	5.6	4.6	-	-	-	-	-	-
5	-	-	-	-	-	6.5	4.7	4.7	5.6	6.0	-
6	-	-	-	-	-	6.5	4.8	5.4	5.8	5.5	-
7	-	-	-	-	-	-	-	-	-	-	2.1

Note1: The EUT has seven antennas.

Note2: The EUT contain Radio 3 (2.4G)/(5G) RF module (Model Name: WM862FEMD

FCC ID: PPQ-WM862FEMD)

For 2.4GHz function:

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

Radio 1

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

Radio 3

Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.

For 5GHz function:

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

Radio 1 (For B1 and B4)

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

Radio 2 (For B1 and B4)

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

Radio 3 (For B1~B4)

Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.

For bluetooth function:

For bluetooth mode (1TX/1RX)

Radio 4

Only Ant. 7 (port 1) can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.992	0.035
802.11g	0.963	0.164
802.11ac VHT20	0.961	0.173
802.11ac VHT40	0.966	0.15

1.1.4 EUT Operational Condition

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

1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
LITE-ON	WP8333V1	All the models are identical, the difference model name for difference brand served as marketing strategy.
MOJO	C-110	

From the above models, model: WP8333V1 was selected as representative model for the test and its data was recorded in this report.

1.1.6 Table for Explanation of Flash

EUT No.	Brand name	Model name	Flash
1	winbond	25Q256JVFQ	32M+32M
2	MXIC	MX25L51245GMI-08G	64M

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 558074 D01 v04
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 644545 D01 v01r02
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-318-0055
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	TEL : 886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Ron Huang & Peter Wu	23.1°C / 75%	May 15, 2017 ~ Jun. 02, 2017
Radiated below 1GHz	03CH01-CB	Joy Tseng & Welson Chen	22°C / 54%	Jun. 15, 2017
Radiated above 1GHz	03CH01-CB	Joy Tseng & Welson Chen	22°C / 54%	May 11, 2017 ~ Jun. 15, 2017
AC Conduction	CO01-CB	Kane Liu	21°C / 60%	Jun. 03, 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 x10 ⁻⁸	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_2TX	-
2412MHz	24
2437MHz	22
2462MHz	21
802.11g_(6Mbps)_2TX	-
2412MHz	19.5
2437MHz	20.5
2462MHz	18
802.11ac VHT20_Nss1,(MCS0)_2TX	-
2412MHz	19.5
2437MHz	19.5
2462MHz	18.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
2422MHz	17.5
2437MHz	19
2452MHz	18

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

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 1 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter
2	EUT 1 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter
Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT 1 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter
For operating mode 3 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter
2	EUT 1 in Z axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT 1 in Y axis - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode.	
5	EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + PoE
Mode 5 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 will follow this same test mode.	
6	EUT 2 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + PoE
For operating mode 5 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX The EUT was performed at X axis, Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT 2 in Y axis - R1 (2.4G)

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	EUT 2 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT)
2	EUT 2 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT)
3	EUT 2 - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT)
4	EUT 2 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT)
For operating mode 4 is the worst case and it was record in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT 2 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT)
2	EUT 2 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT)
3	EUT 2 - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT)
4	EUT 2 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT)
Refer to Sporton Test Report No.: FA741722 for Co-location RF Exposure Evaluation.	

Note: The PoE and Adapter were for measurement only, would not be marketed.

The PoE and Adapter information as below:

Support Unit	Brand	Model Number
PoE	Ruckus	740-64214-001
Adapter	APD	WB-18D12FU

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

N/A

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*5	DELL	E6430	DoC
2	Device	LITE-ON	WP8333V1	PPQ-WP8333V1
3	Flash disk3.0	Transcend	JetFlash-700	DoC
4	Adapter	APD	WB-18D12FU	DoC

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

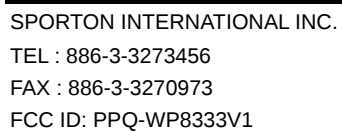
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*5	DELL	E4300	DoC
2	Device	LITE-ON	WP8333V1	PPQ-WP8333V1
3	Flash disk3.0	Silicon Power	B06	DoC
4	PoE	Ruckus	740-64214-001	DoC

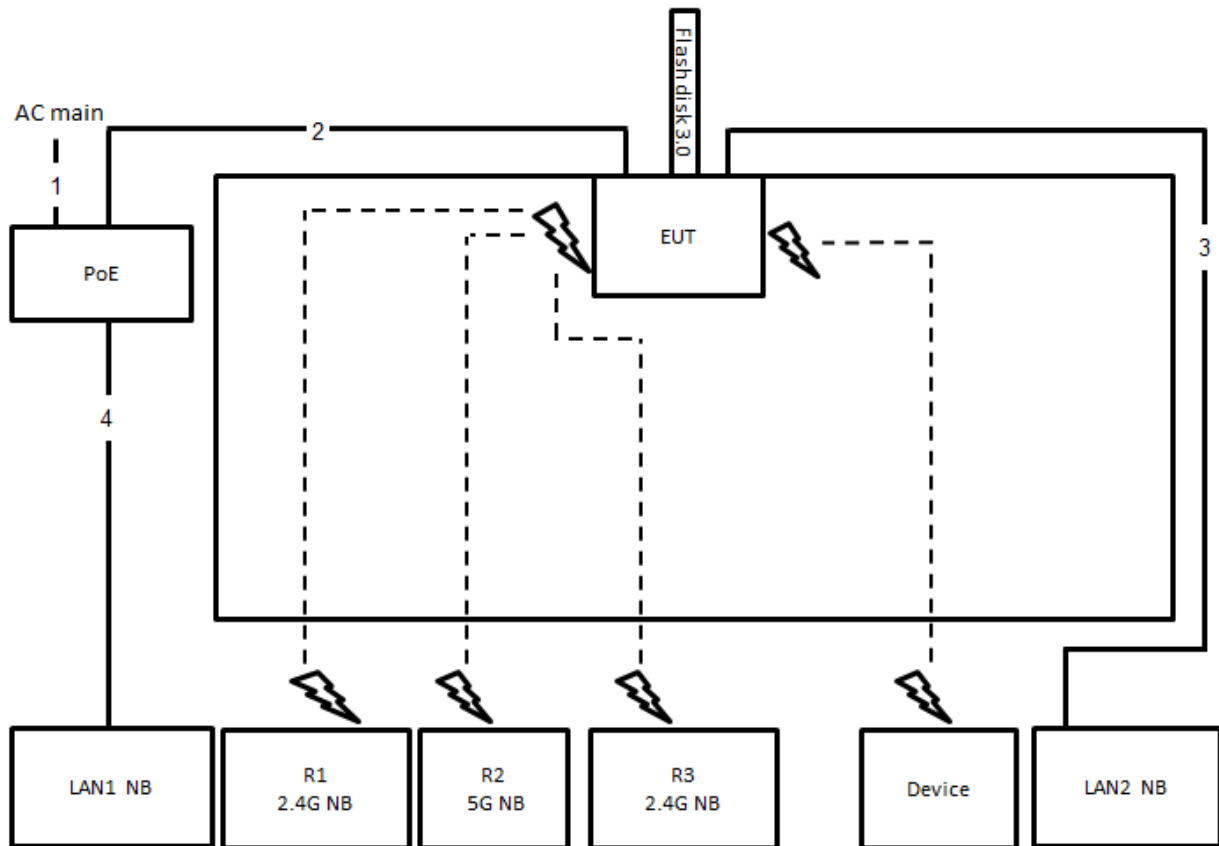
For Test Site No: 03CH01-CB (above 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Adapter	APD	WB-18D12FU	DoC

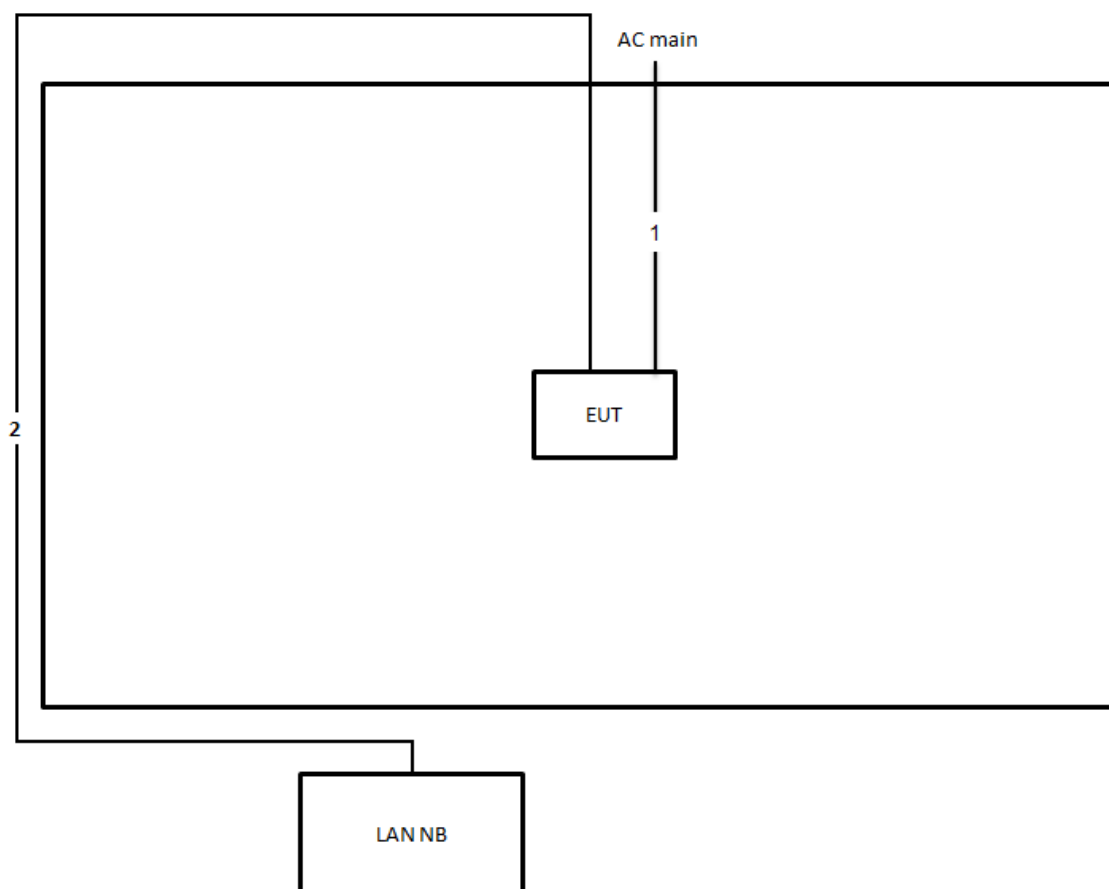
For Test Site No: TH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Adapter	APD	WB-18D12FU	DoC



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	0.7m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m

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.

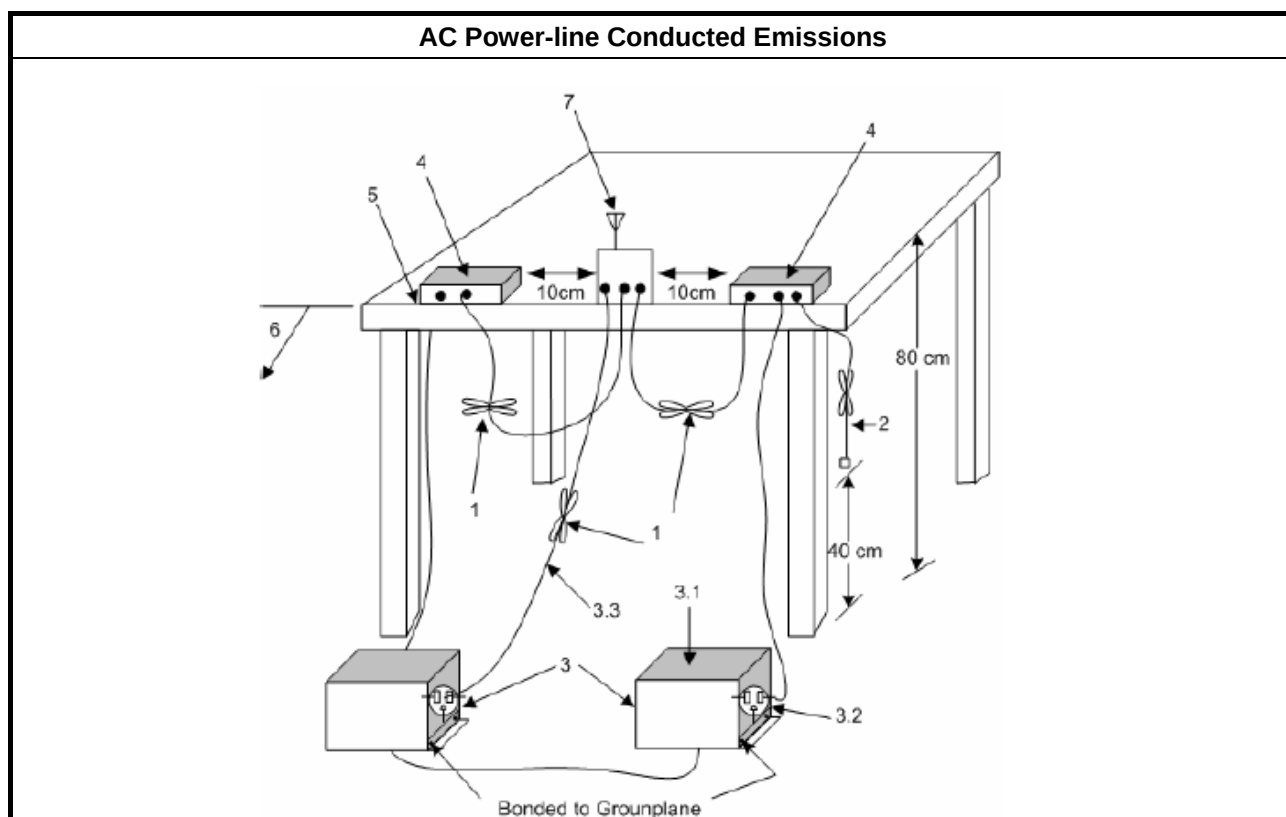
3.1.2 Measuring Instruments

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.

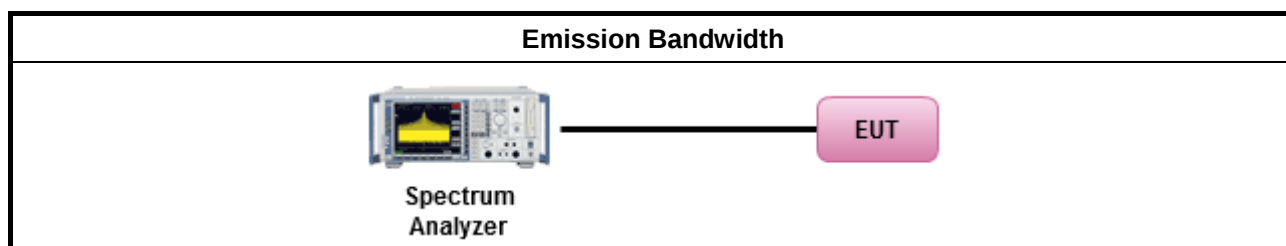
3.2.2 Measuring Instruments

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.	

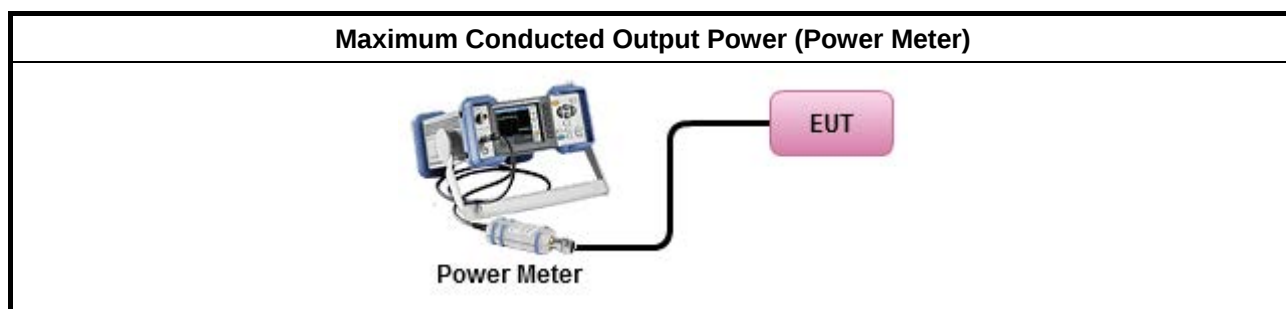
3.3.2 Measuring Instruments

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) $\leq$ 8 dBm/3kHz

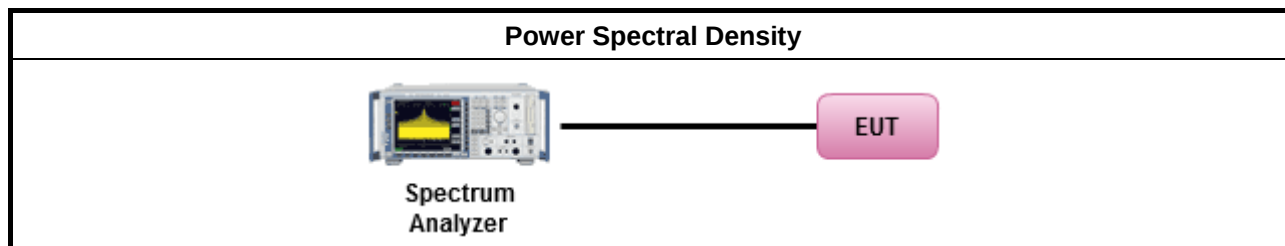
3.4.2 Measuring Instruments

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.	

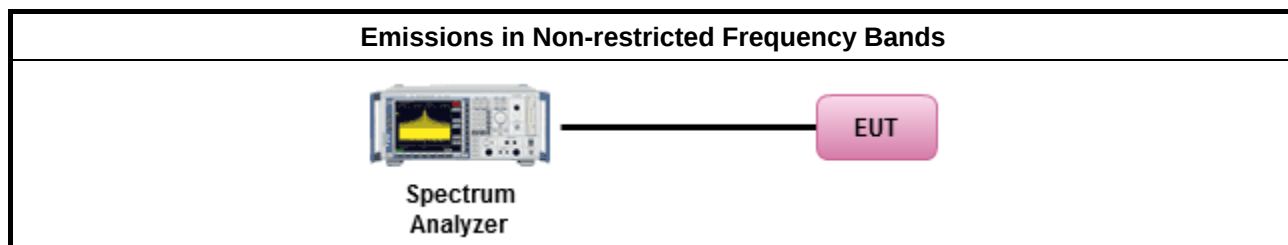
3.5.2 Measuring Instruments

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.

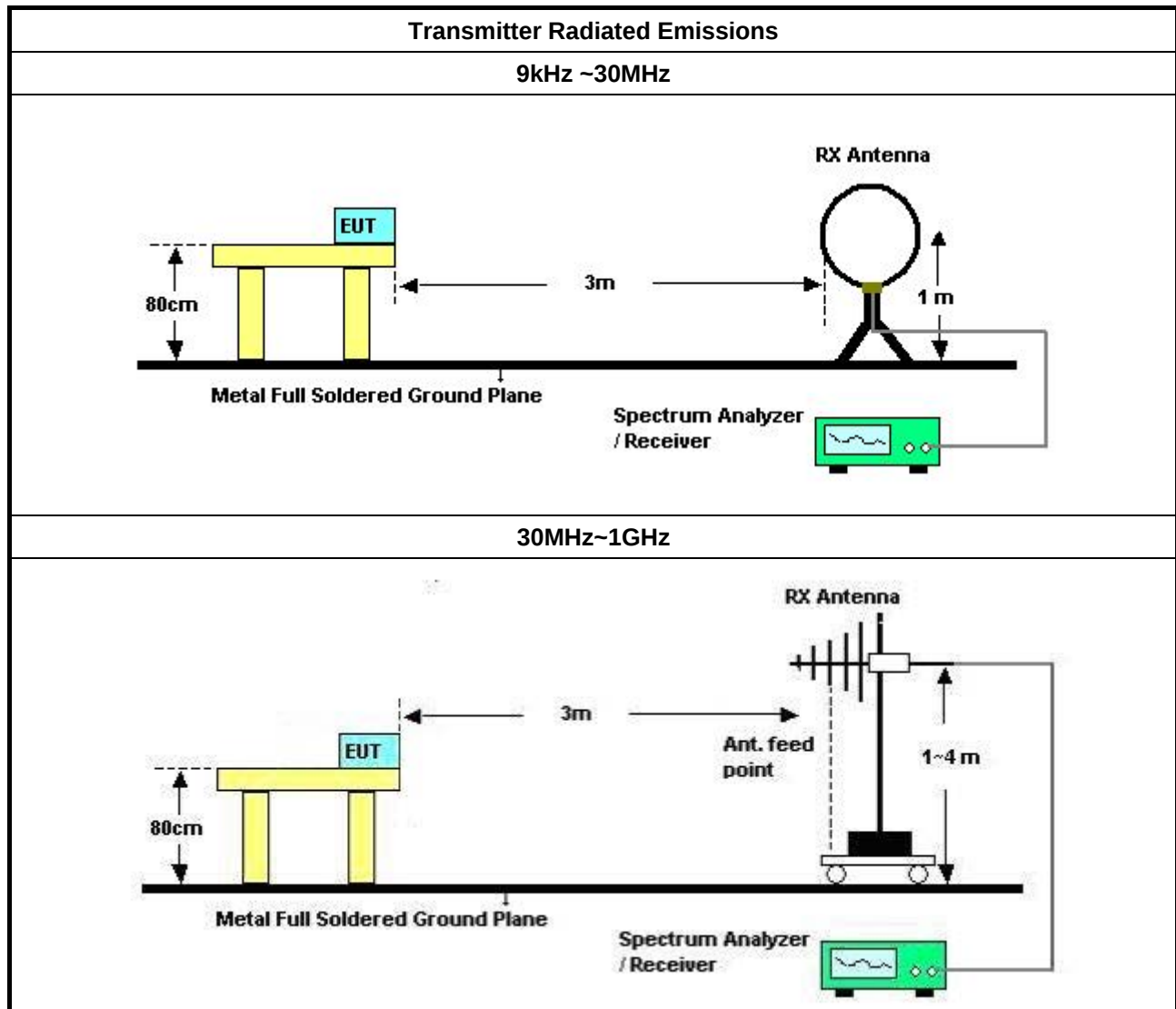
3.6.2 Measuring Instruments

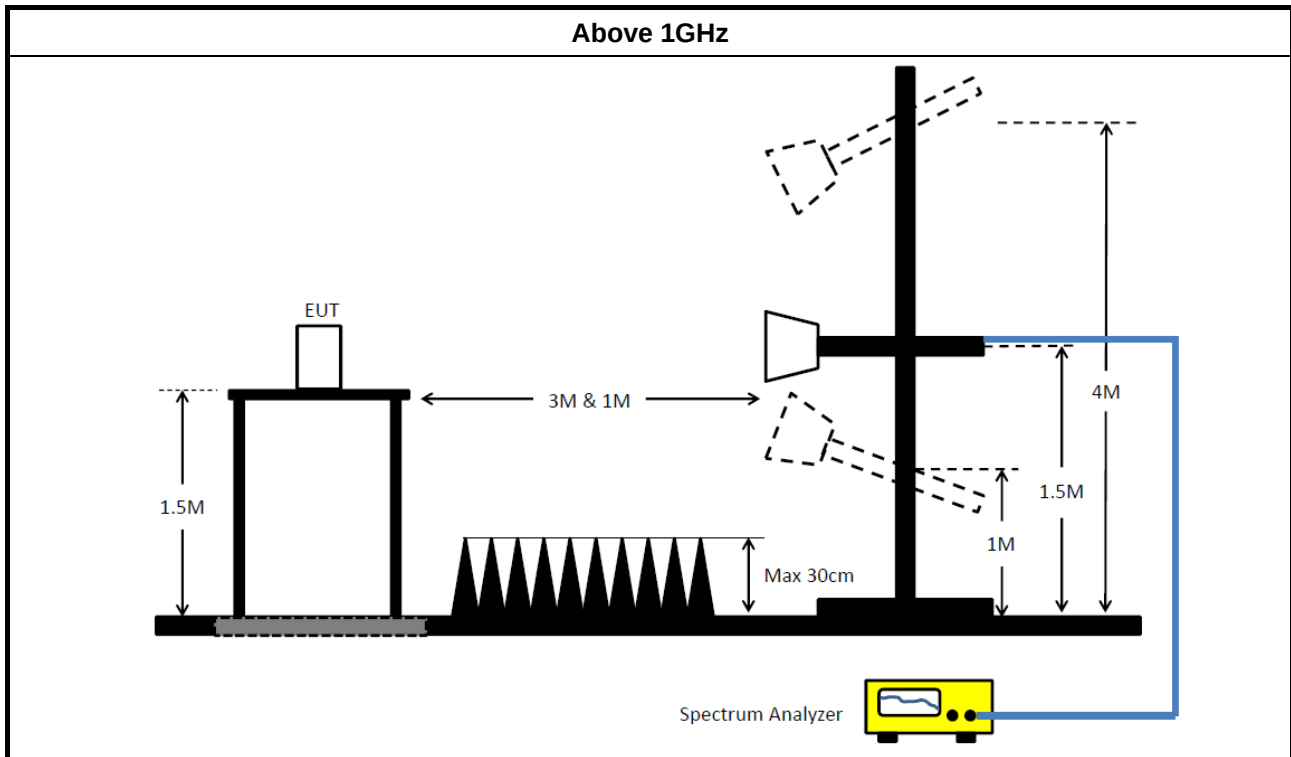
Refer a test equipment and calibration data table in this test report.

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 23, 2017	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 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	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)

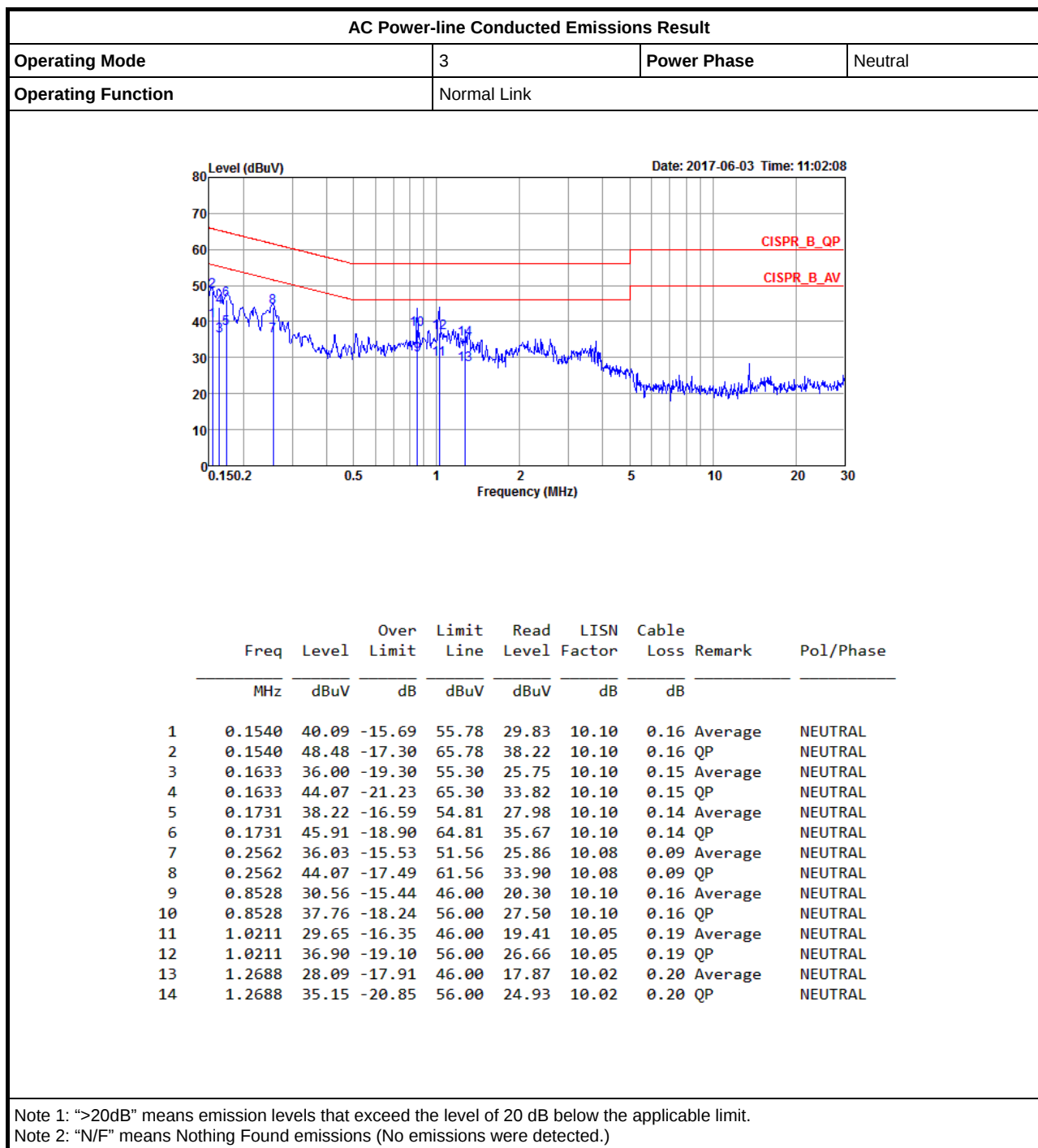


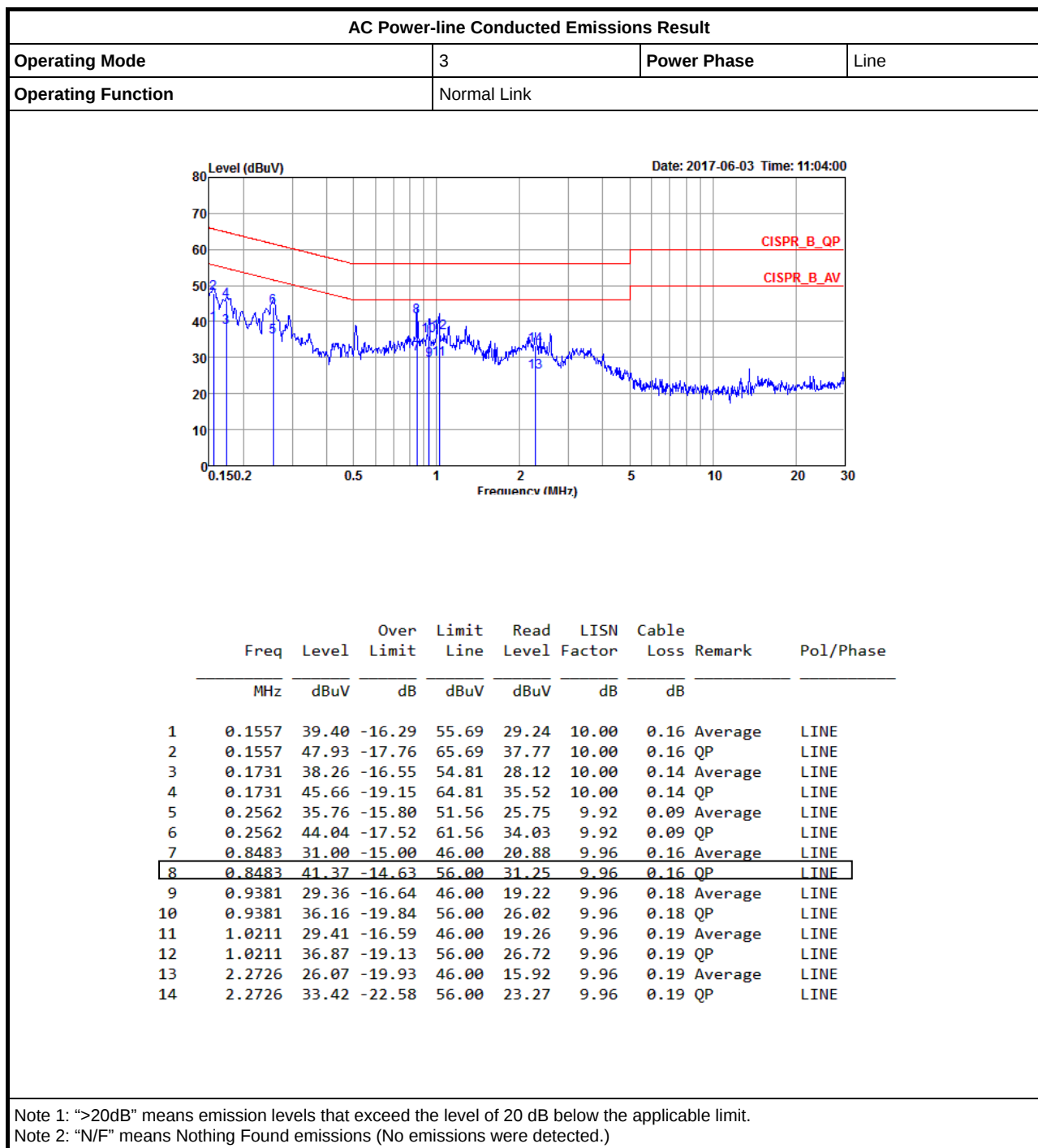
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 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 year.

N.C.R. 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	8.55M	13.093M	13M1G1D	7.55M	12.794M
802.11g_(6Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	16.325M	16.442M	16M4D1D	16.3M	16.367M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	17.575M	17.616M	17M6D1D	17.525M	17.591M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	35.1M	36.032M	36M0D1D	30.9M	35.832M

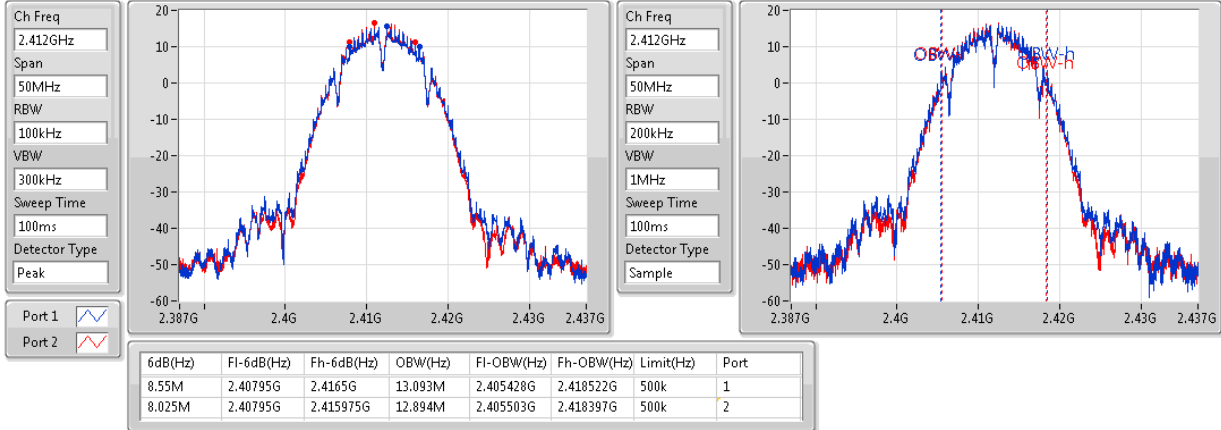
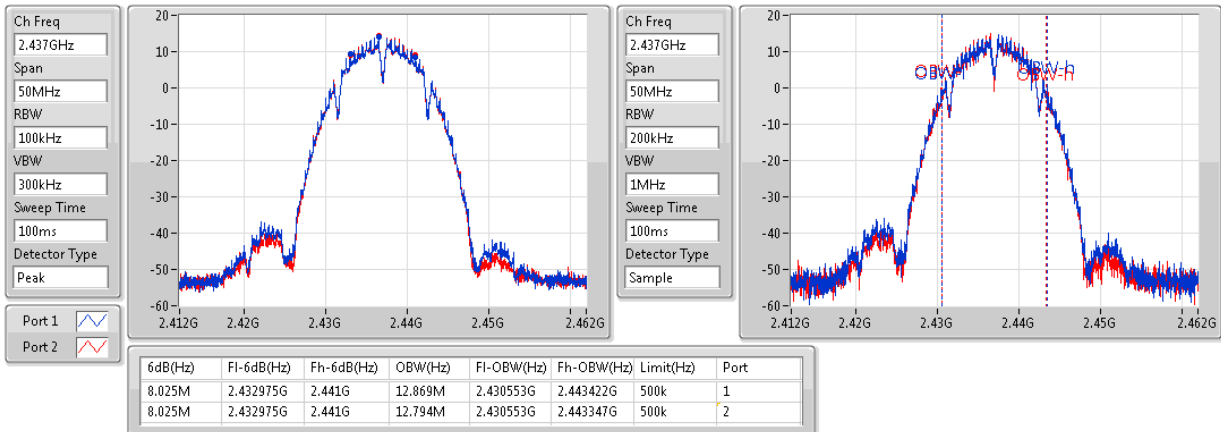
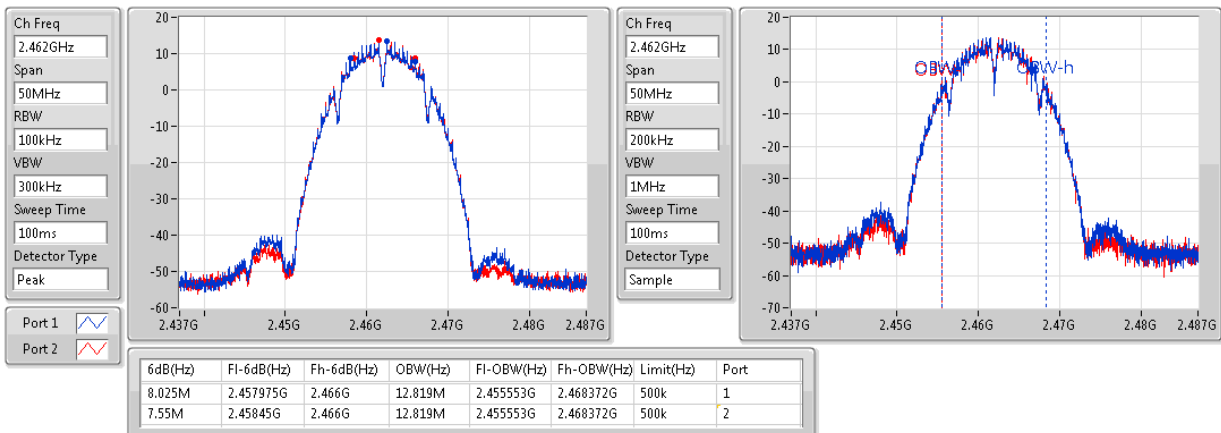
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

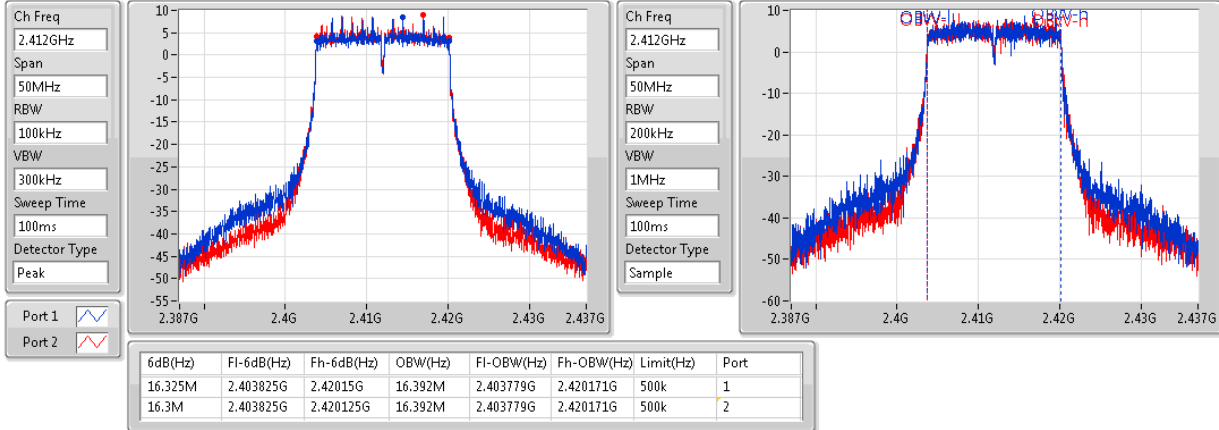
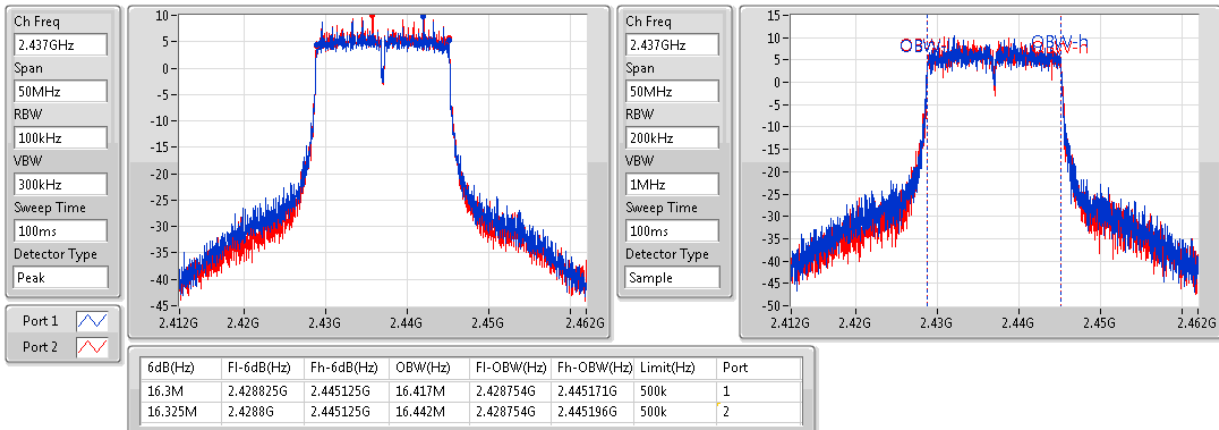
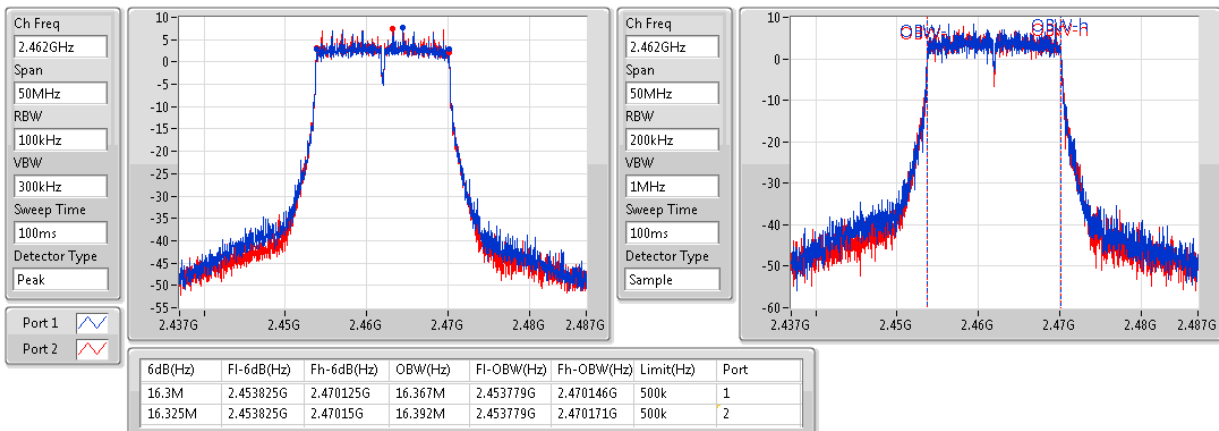
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

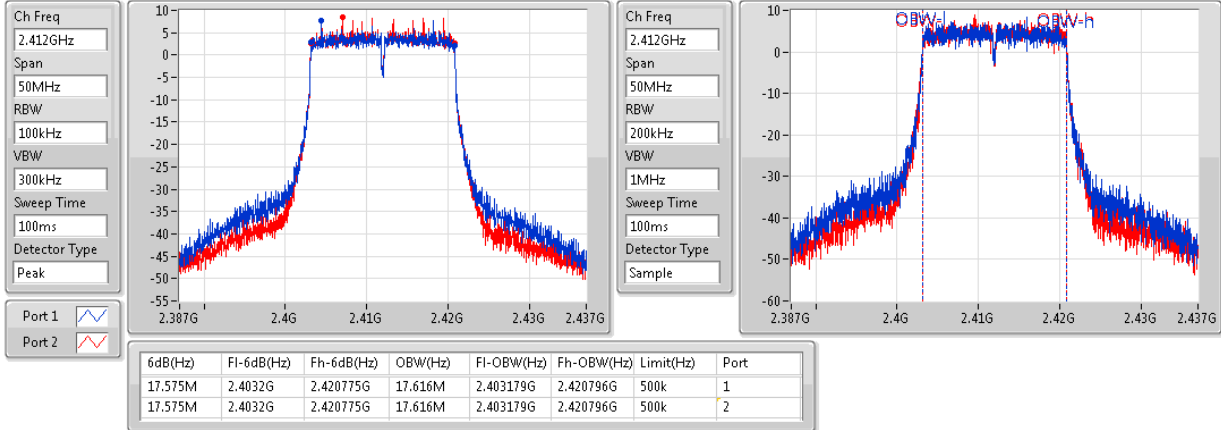
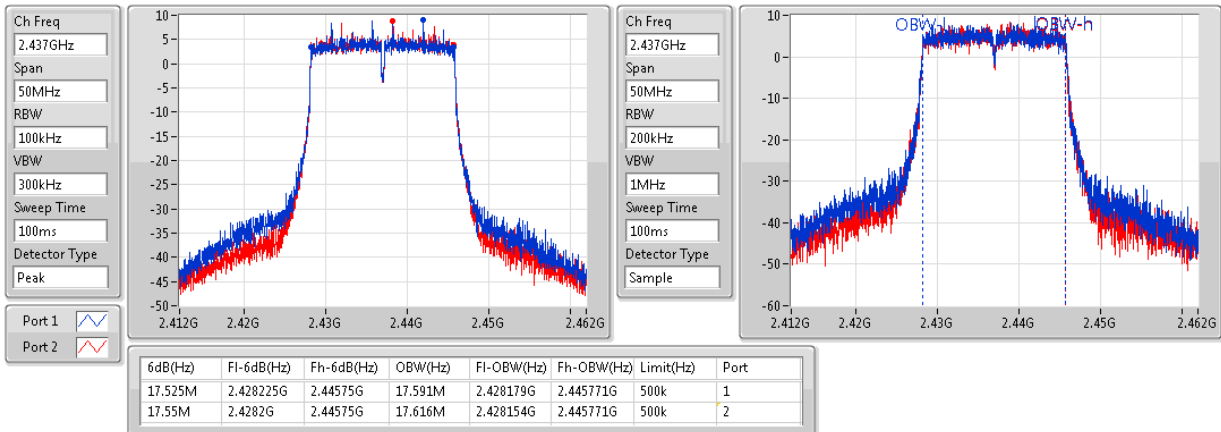
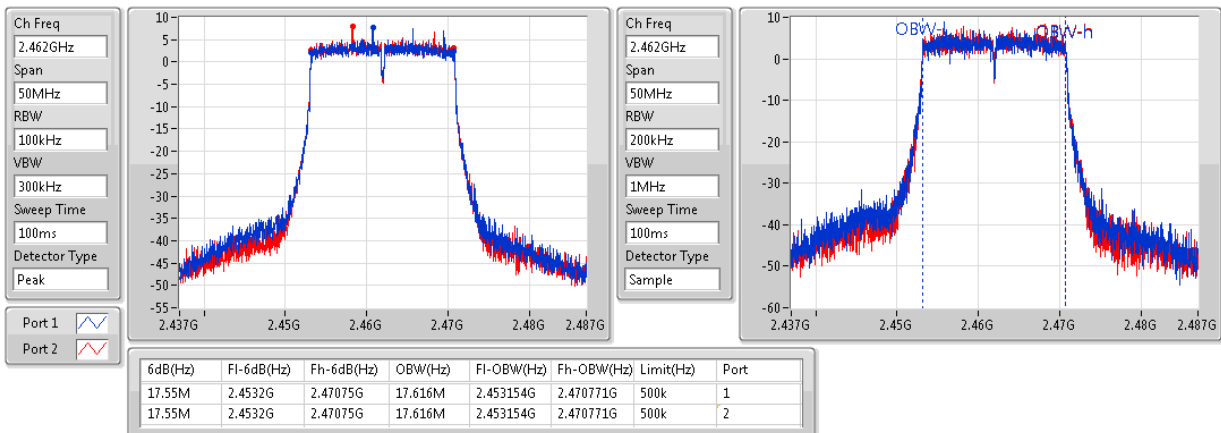
Result

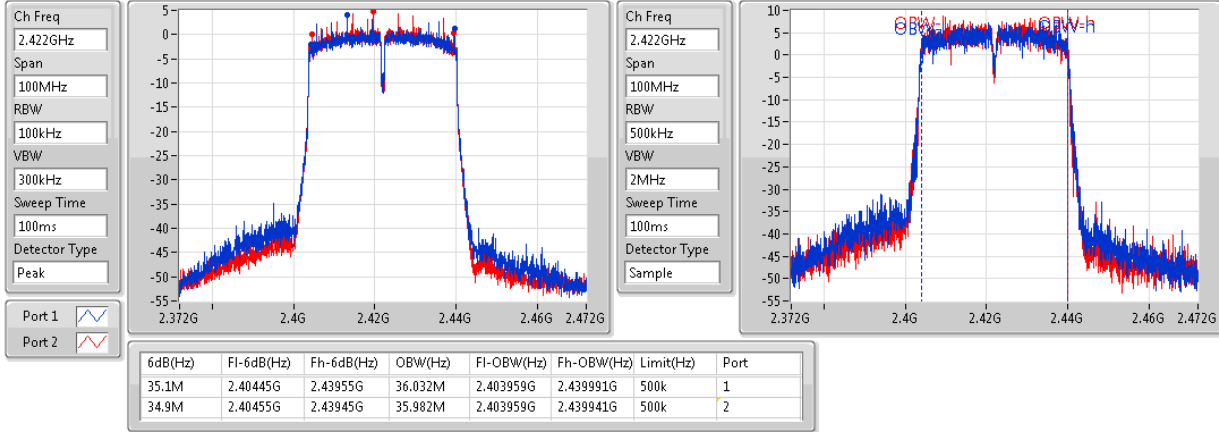
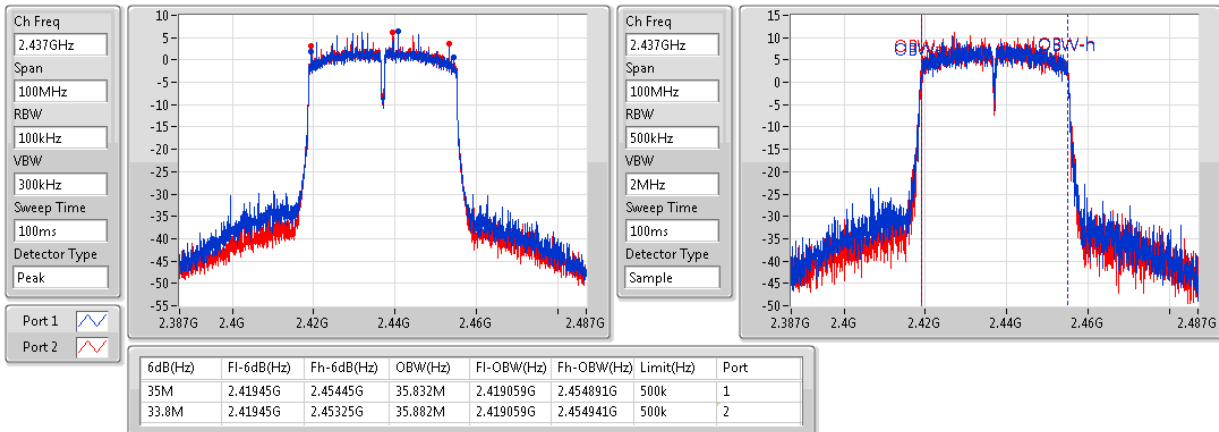
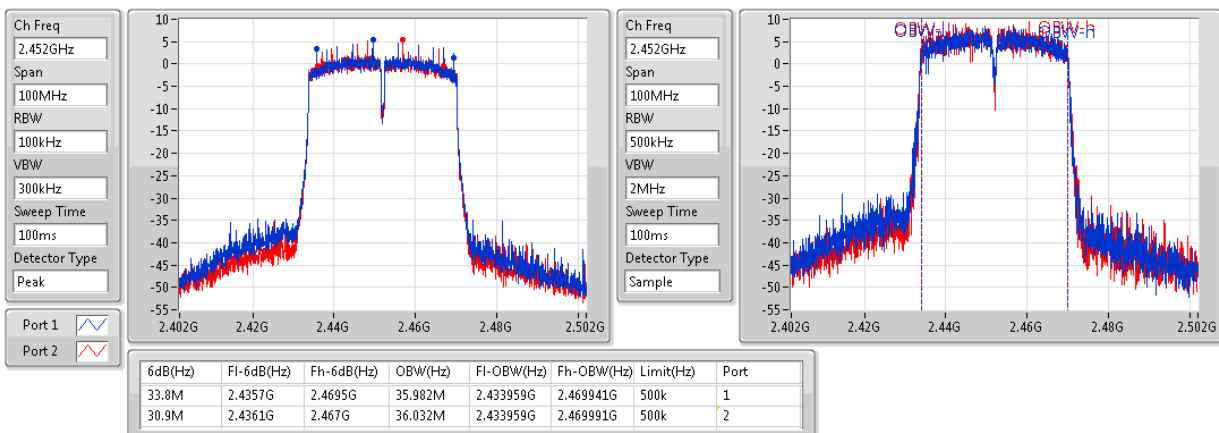
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.55M	13.093M	8.025M	12.894M
2437MHz	Pass	500k	8.025M	12.869M	8.025M	12.794M
2462MHz	Pass	500k	8.025M	12.819M	7.55M	12.819M
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.392M	16.3M	16.392M
2437MHz	Pass	500k	16.3M	16.417M	16.325M	16.442M
2462MHz	Pass	500k	16.3M	16.367M	16.325M	16.392M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.616M	17.575M	17.616M
2437MHz	Pass	500k	17.525M	17.591M	17.55M	17.616M
2462MHz	Pass	500k	17.55M	17.616M	17.55M	17.616M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35.1M	36.032M	34.9M	35.982M
2437MHz	Pass	500k	35M	35.832M	33.8M	35.882M
2452MHz	Pass	500k	33.8M	35.982M	30.9M	36.032M

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

802.11b_(1Mbps)_2TX
EBW
2412MHz

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


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
2412MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
2462MHz


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
2422MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
2452MHz


**Summary**

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_2TX	-	-
2.4-2.4835GHz	27.17	0.52119
802.11g_(6Mbps)_2TX	-	-
2.4-2.4835GHz	23.83	0.24155
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	23.04	0.20137
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	22.74	0.18793

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.50	24.06	24.25	27.17	29.50
2437MHz	Pass	6.50	22.34	22.55	25.45	29.50
2462MHz	Pass	6.50	21.58	21.40	24.50	29.50
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.50	19.70	19.96	22.85	29.50
2437MHz	Pass	6.50	20.69	20.95	23.83	29.50
2462MHz	Pass	6.50	18.63	18.92	21.79	29.50
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.50	19.68	19.90	22.80	29.50
2437MHz	Pass	6.50	19.99	20.07	23.04	29.50
2462MHz	Pass	6.50	19.09	19.28	22.20	29.50
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.50	18.01	18.25	21.14	29.50
2437MHz	Pass	6.50	19.62	19.85	22.74	29.50
2452MHz	Pass	6.50	18.64	18.97	21.82	29.50

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_2TX	-
2.4-2.4835GHz	3.05
802.11g_(6Mbps)_2TX	-
2.4-2.4835GHz	-2.94
802.11ac VHT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-4.42
802.11ac VHT40_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-6.72

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	9.41	0.88	0.50	3.05	4.59
2437MHz	Pass	9.41	-0.66	-1.09	0.76	4.59
2462MHz	Pass	9.41	-0.33	-0.47	0.44	4.59
802.11g_(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.41	-5.35	-5.05	-2.94	4.59
2437MHz	Pass	9.41	-4.37	-4.62	-3.54	4.59
2462MHz	Pass	9.41	-7.27	-6.78	-4.46	4.59
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.41	-6.49	-5.58	-4.42	4.59
2437MHz	Pass	9.41	-4.83	-5.78	-4.43	4.59
2462MHz	Pass	9.41	-6.38	-6.97	-5.48	4.59
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	9.41	-10.14	-10.34	-8.41	4.59
2437MHz	Pass	9.41	-9.35	-7.14	-6.72	4.59
2452MHz	Pass	9.41	-9.55	-8.87	-7.00	4.59

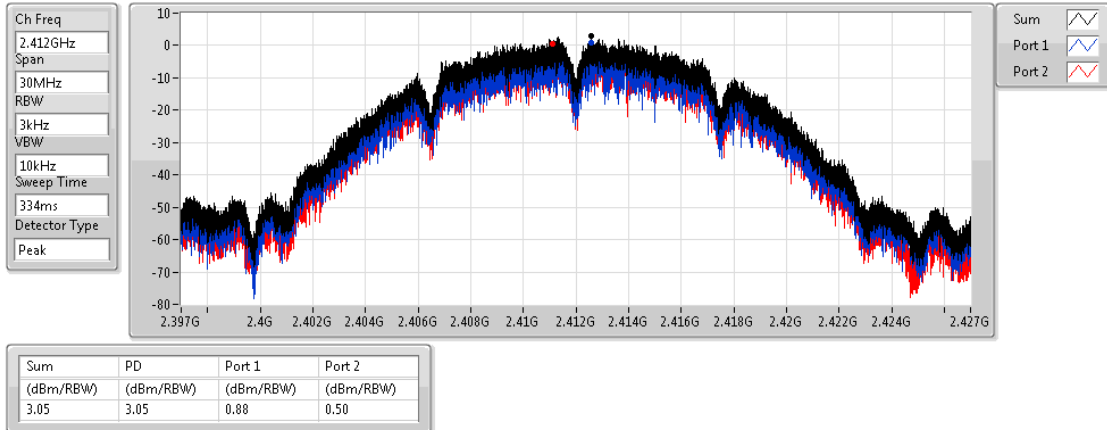
DG = Directional Gain; RBW=3kHz;

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

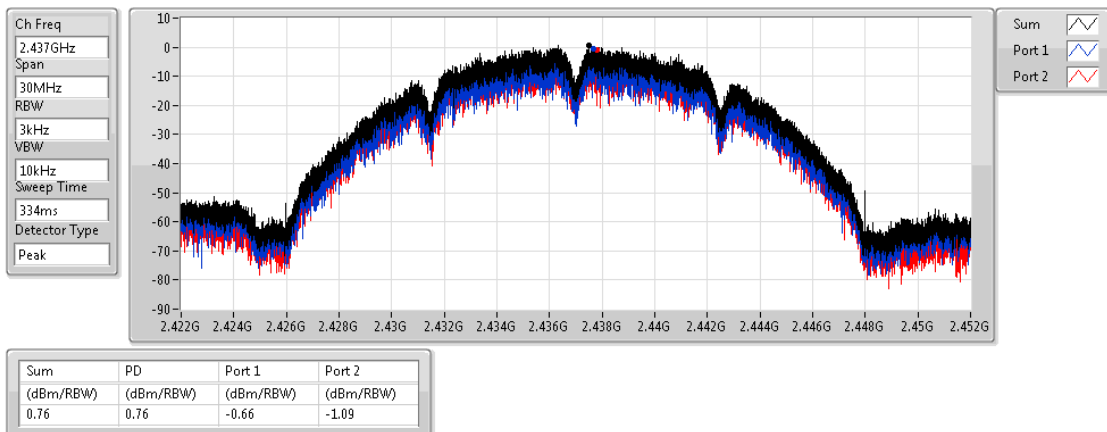
2412MHz



802.11b_(1Mbps)_2TX

PSD

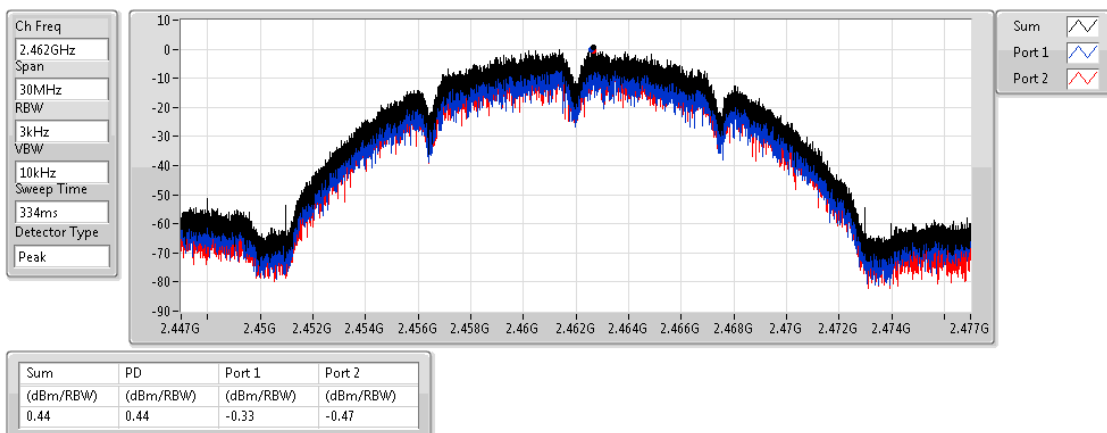
2437MHz



802.11b_(1Mbps)_2TX

PSD

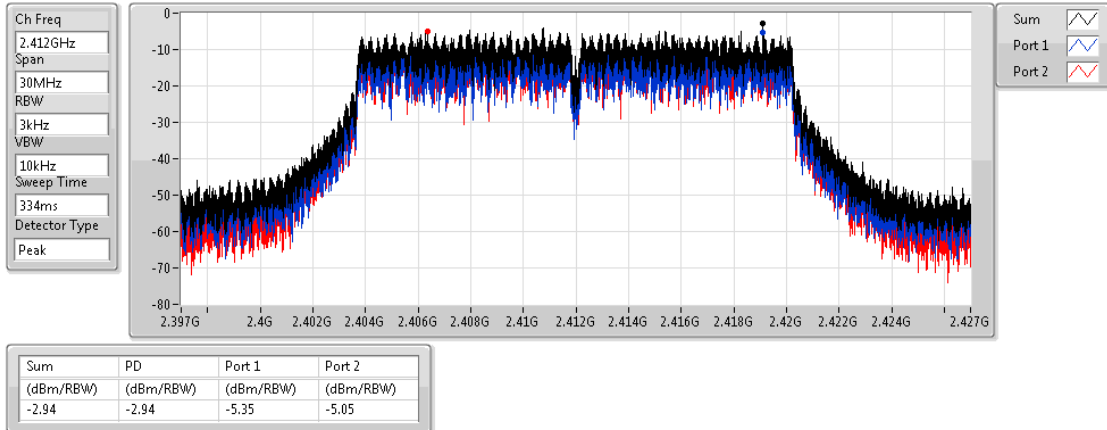
2462MHz



802.11g_(6Mbps)_2TX

PSD

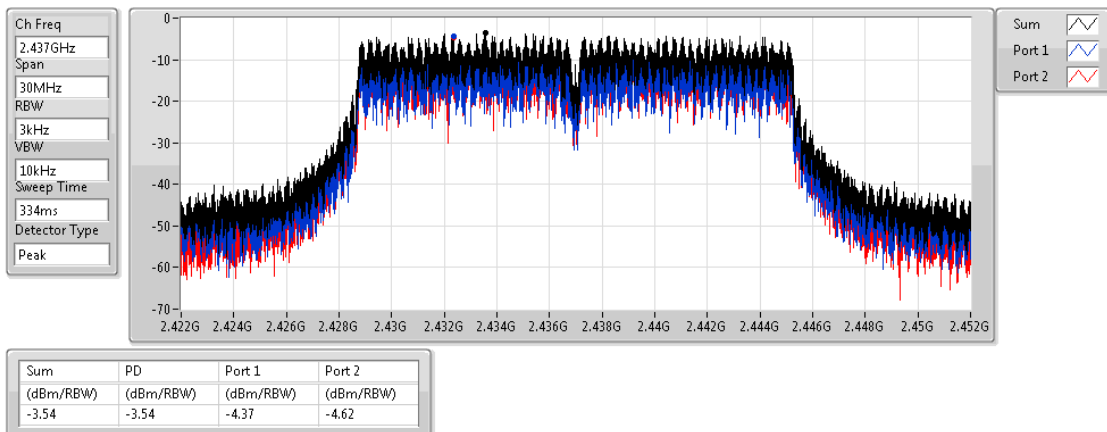
2412MHz



802.11g_(6Mbps)_2TX

PSD

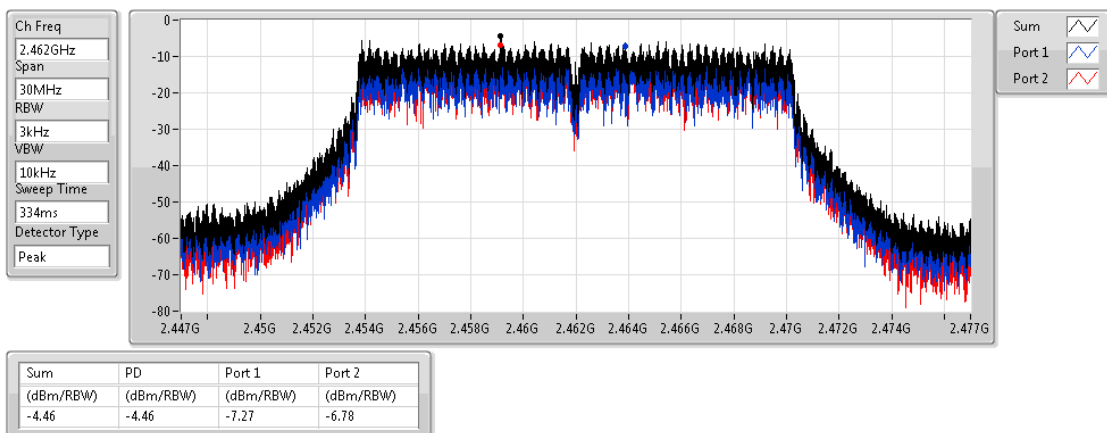
2437MHz



802.11g_(6Mbps)_2TX

PSD

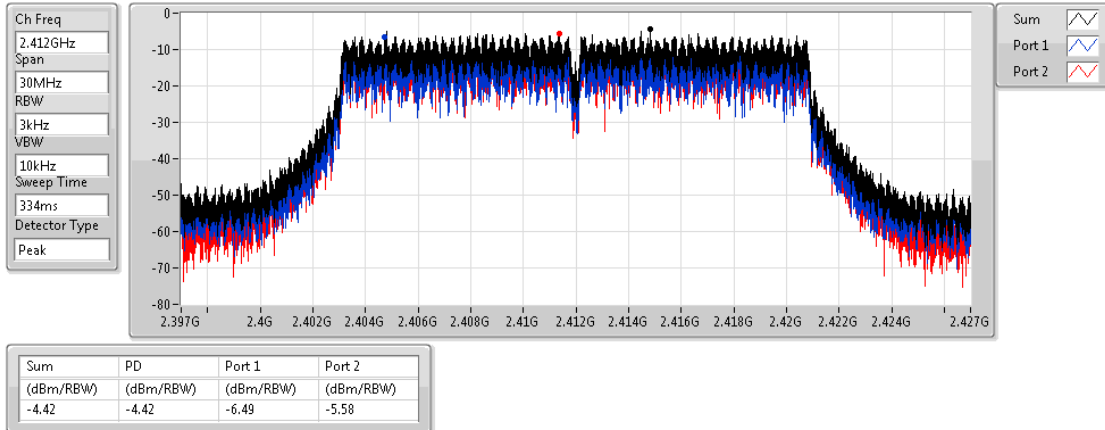
2462MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

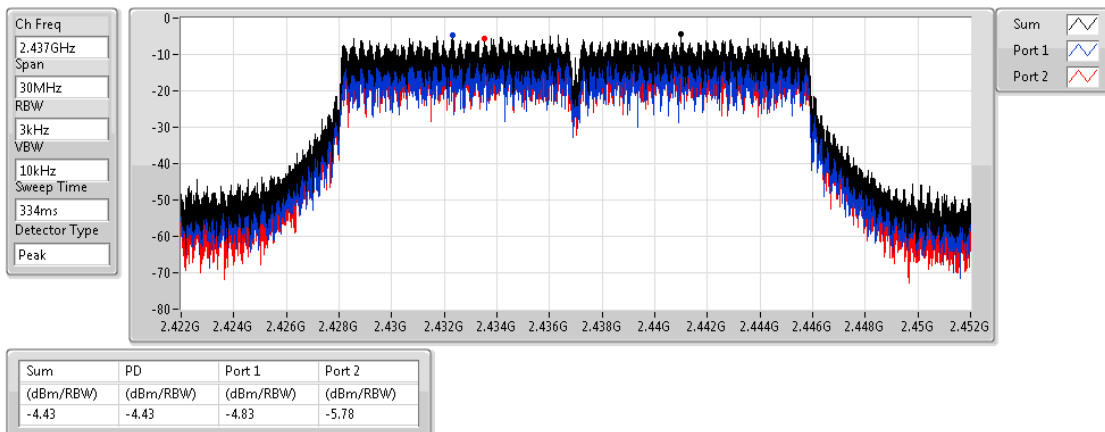
2412MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

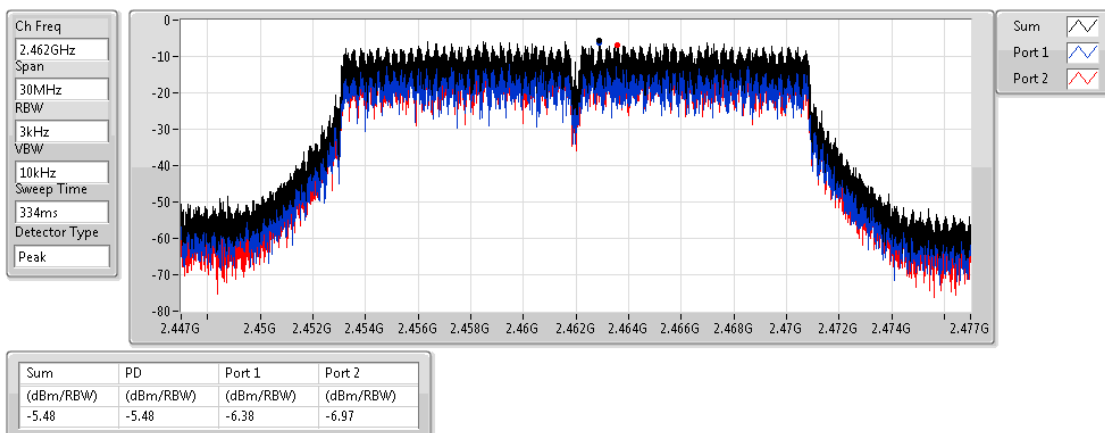
2437MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

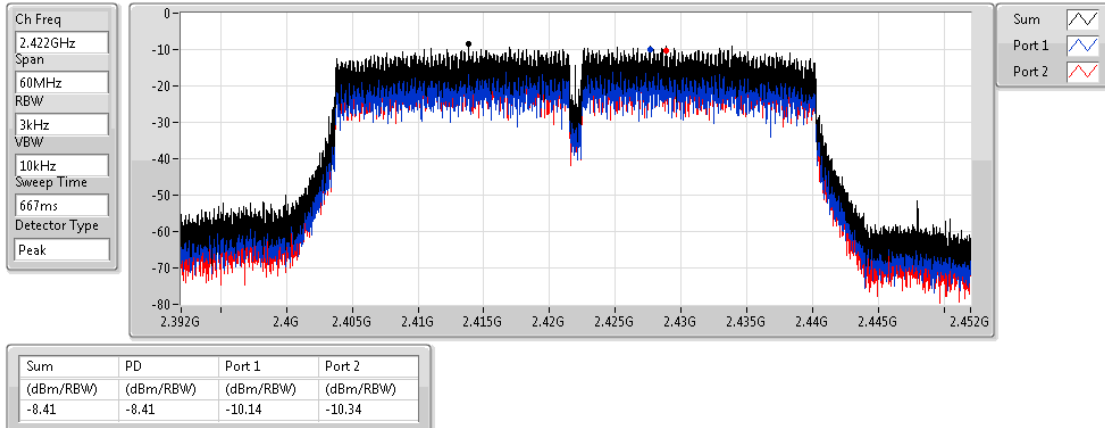
2462MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

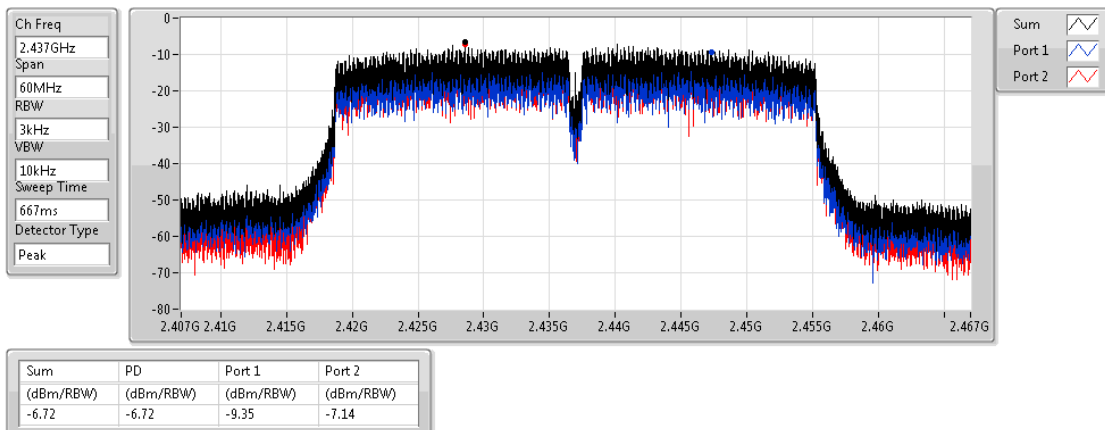
2422MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

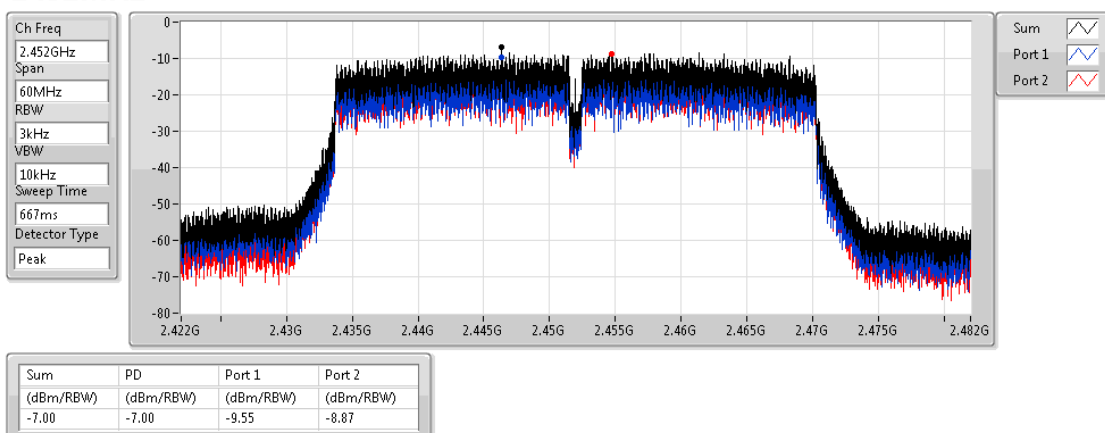
2437MHz



802.11ac VHT40_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
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.442084G	7.89	-22.11	2.160785G	-56.52	2.39768G	-30.60	2.49598G	-53.52	3.214652G	-41.29	1

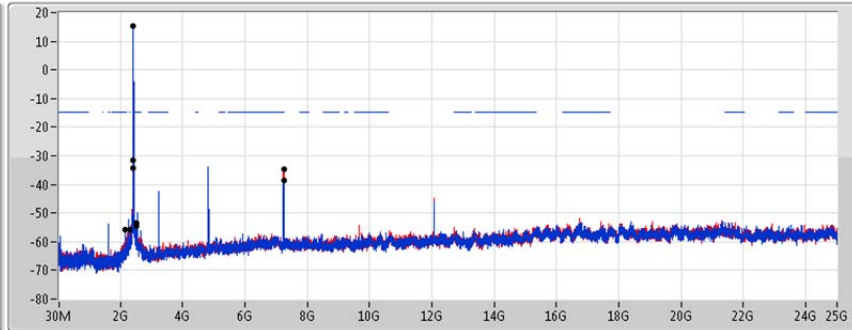
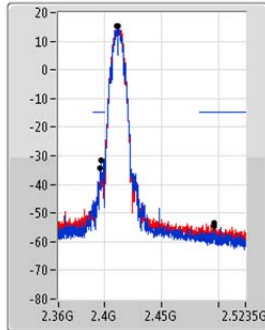
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.411523G	15.23	-14.77	2.160785G	-55.88	2.39752G	-31.60	2.49598G	-54.50	7.237946G	-38.65	1
2412MHz	Pass	2.411356G	15.23	-14.77	2.30408G	-55.83	2.396G	-34.31	2.49566G	-53.52	7.237946G	-34.50	2
2437MHz	Pass	2.437909G	15.23	-14.77	49.805M	-58.00	2.39136G	-54.39	2.49598G	-54.29	3.248367G	-44.12	1
2437MHz	Pass	2.437408G	15.23	-14.77	49.805M	-58.85	2.39128G	-53.16	2.49806G	-56.11	16.416787G	-53.31	2
2462MHz	Pass	2.462458G	15.23	-14.77	49.805M	-58.52	2.39696G	-56.66	2.49598G	-53.96	3.282082G	-43.52	1
2462MHz	Pass	2.461456G	15.23	-14.77	49.805M	-58.17	2.39488G	-56.93	2.49598G	-54.14	21.431856G	-53.09	2
802.11g_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.443253G	9.20	-20.80	2.160785G	-55.17	2.39704G	-31.16	2.49598G	-55.02	3.214652G	-41.35	1
2412MHz	Pass	2.443253G	9.20	-20.80	2.305245G	-55.99	2.39824G	-34.79	2.4879G	-53.23	7.232327G	-46.83	2
2437MHz	Pass	2.443253G	9.20	-20.80	2.160785G	-54.83	2.39768G	-49.98	2.49598G	-50.90	3.248367G	-41.76	1
2437MHz	Pass	2.443253G	9.20	-20.80	2.30408G	-53.88	2.39672G	-50.08	2.48382G	-51.94	21.423427G	-52.77	2
2462MHz	Pass	2.443253G	9.20	-20.80	2.160785G	-56.25	2.39344G	-53.04	2.48374G	-45.89	3.282082G	-40.93	1
2462MHz	Pass	2.443253G	9.20	-20.80	2.30408G	-57.12	2.39112G	-53.31	2.4851G	-45.75	3.282082G	-50.34	2
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442084G	7.89	-22.11	2.160785G	-56.52	2.39768G	-30.60	2.49598G	-53.52	3.214652G	-41.29	1
2412MHz	Pass	2.442084G	7.89	-22.11	2.305245G	-55.26	2.39824G	-36.07	2.49598G	-53.45	7.237946G	-50.05	2
2437MHz	Pass	2.442084G	7.89	-22.11	2.160785G	-54.33	2.39728G	-51.35	2.49598G	-51.19	3.248367G	-41.47	1
2437MHz	Pass	2.442084G	7.89	-22.11	2.30408G	-57.65	2.39344G	-51.59	2.4843G	-52.23	3.248367G	-52.74	2
2462MHz	Pass	2.442084G	7.89	-22.11	2.160785G	-53.63	2.396G	-51.90	2.48406G	-43.88	3.282082G	-41.04	1
2462MHz	Pass	2.442084G	7.89	-22.11	49.805M	-57.36	2.39536G	-53.66	2.48382G	-42.29	3.282082G	-50.27	2
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.440748G	6.37	-23.63	2.160845G	-55.97	2.3952G	-35.36	2.55998G	-48.64	3.228181G	-41.75	1
2422MHz	Pass	2.440748G	6.37	-23.63	49.465M	-57.21	2.39408G	-41.27	2.49998G	-53.14	3.228181G	-51.55	2
2437MHz	Pass	2.440748G	6.37	-23.63	2.160845G	-54.46	2.39552G	-37.65	2.48382G	-43.80	3.247813G	-41.72	1
2437MHz	Pass	2.440748G	6.37	-23.63	49.465M	-57.45	2.39536G	-41.12	2.48894G	-44.80	16.715322G	-53.00	2
2452MHz	Pass	2.440748G	6.37	-23.63	2.160845G	-55.61	2.39552G	-48.88	2.4851G	-38.95	3.267445G	-40.43	1
2452MHz	Pass	2.440748G	6.37	-23.63	49.465M	-59.08	2.3952G	-48.99	2.48414G	-42.02	3.267445G	-49.44	2

802.11b_(1Mbps)_2TX

CSE NdB

2412MHz

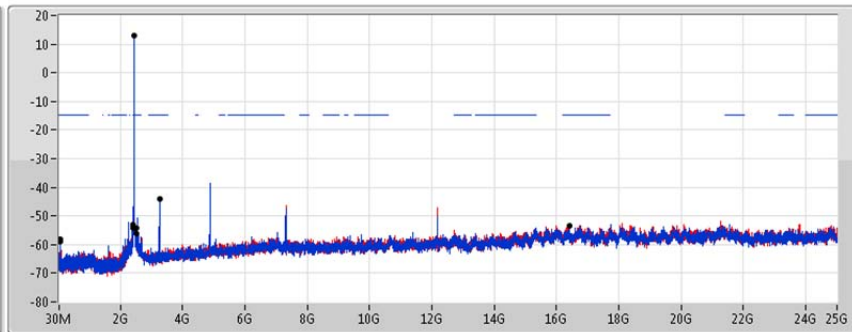
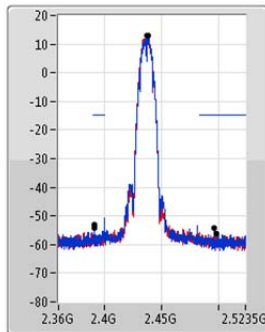

Port 1
Port 2

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.411523G	15.23	-14.77	2.160785G	-55.88	2.39752G	-31.60	2.49598G	-54.50	7.237946G	-38.65	1
2.411356G	15.23	-14.77	2.30408G	-55.83	2.396G	-34.31	2.49566G	-53.52	7.237946G	-34.50	2

802.11b_(1Mbps)_2TX

CSE NdB

2437MHz

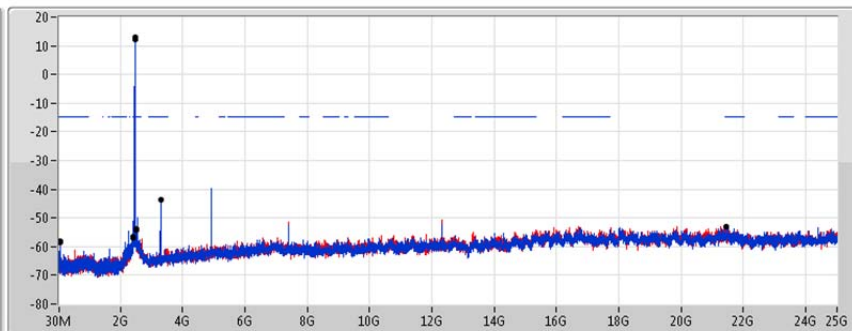
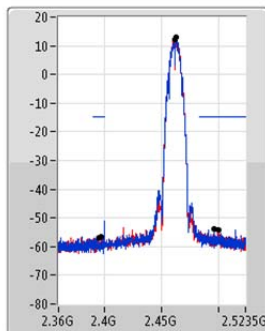

Port 1
Port 2

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437909G	15.23	-14.77	49.805M	-58.00	2.39136G	-54.39	2.49598G	-54.29	3.248367G	-44.12	1
2.437408G	15.23	-14.77	49.805M	-58.85	2.39128G	-53.16	2.49806G	-56.11	16.416787G	-53.31	2

802.11b_(1Mbps)_2TX

CSE NdB

2462MHz

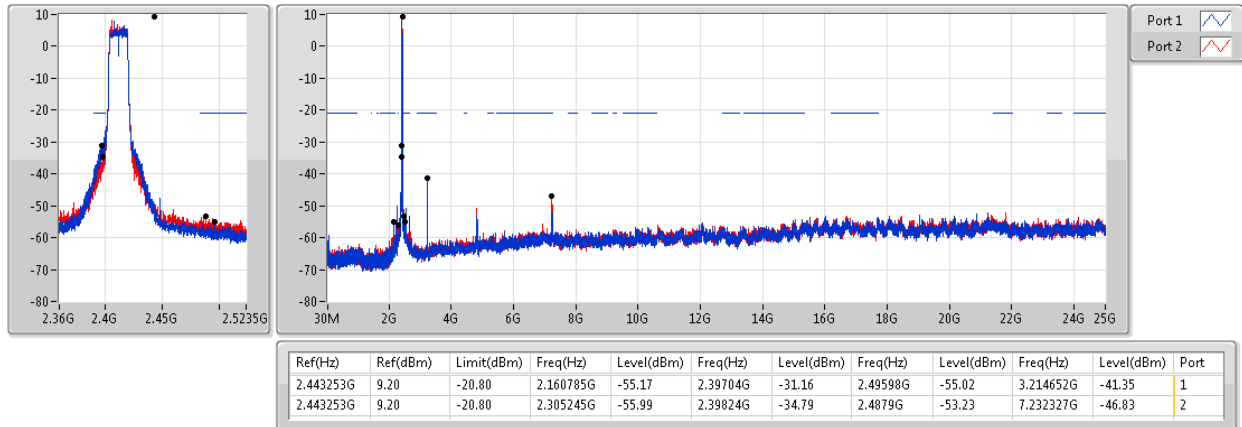

Port 1
Port 2

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.462458G	15.23	-14.77	49.805M	-58.52	2.39696G	-56.66	2.49598G	-53.96	3.282082G	-43.52	1
2.461456G	15.23	-14.77	49.805M	-58.17	2.39488G	-56.93	2.49958G	-54.14	21.431856G	-53.09	2

802.11g_(6Mbps)_2TX

CSE NdB

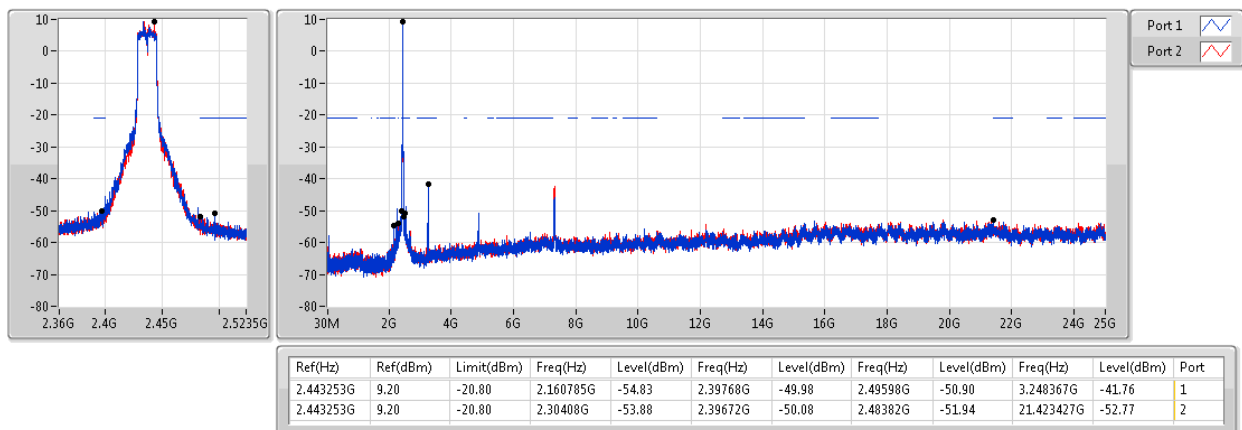
2412MHz



802.11g_(6Mbps)_2TX

CSE NdB

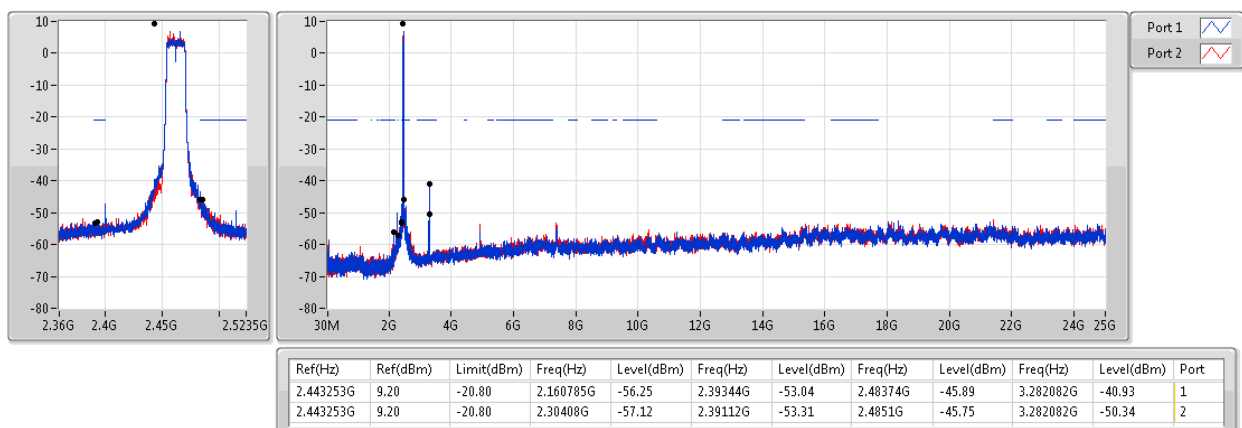
2437MHz



802.11g_(6Mbps)_2TX

CSE NdB

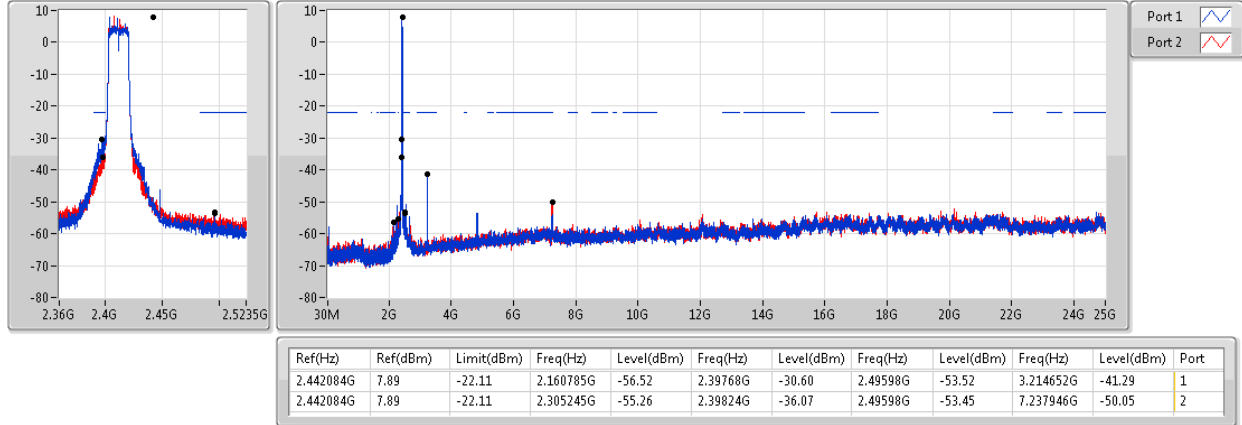
2462MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

CSE NdB

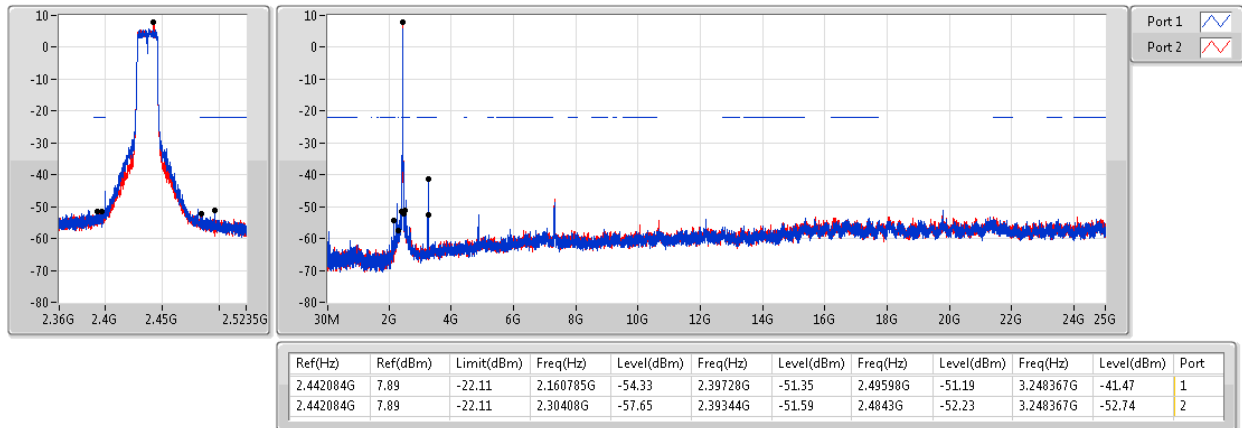
2412MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

CSE NdB

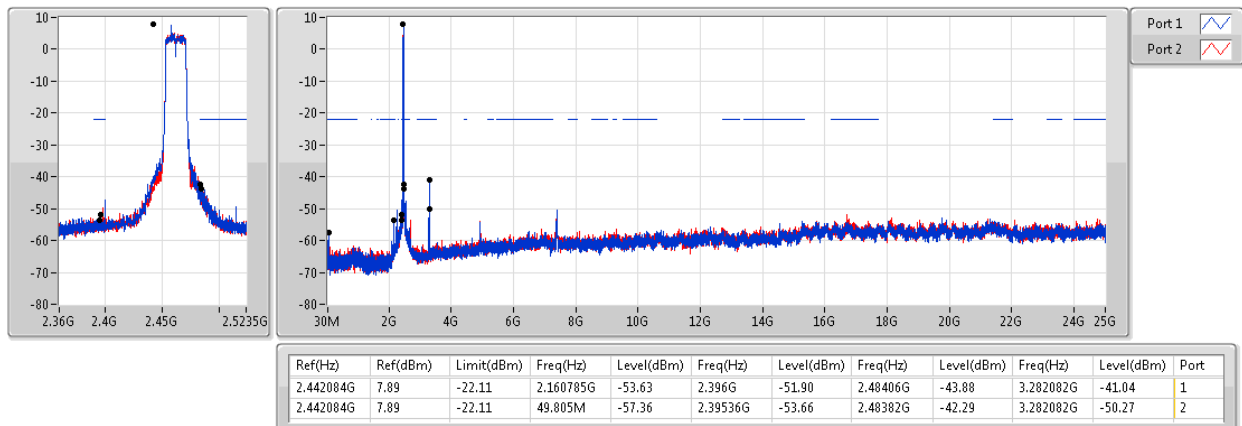
2437MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

CSE NdB

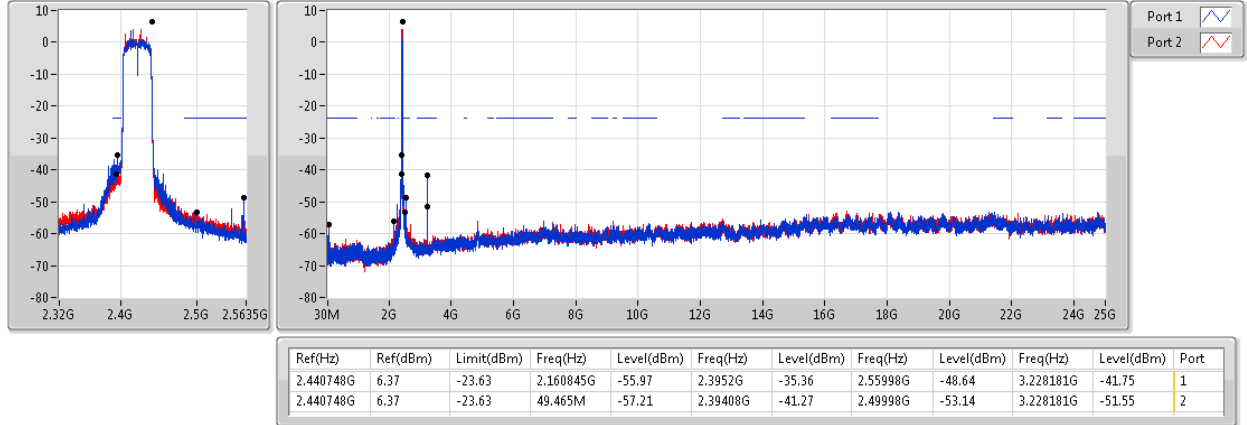
2462MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

CSE NdB

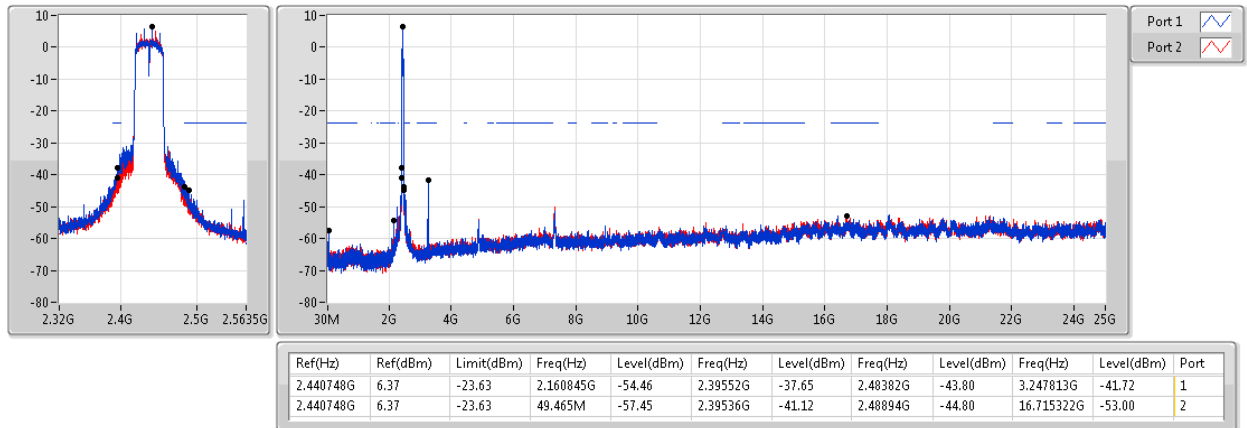
2422MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

CSE NdB

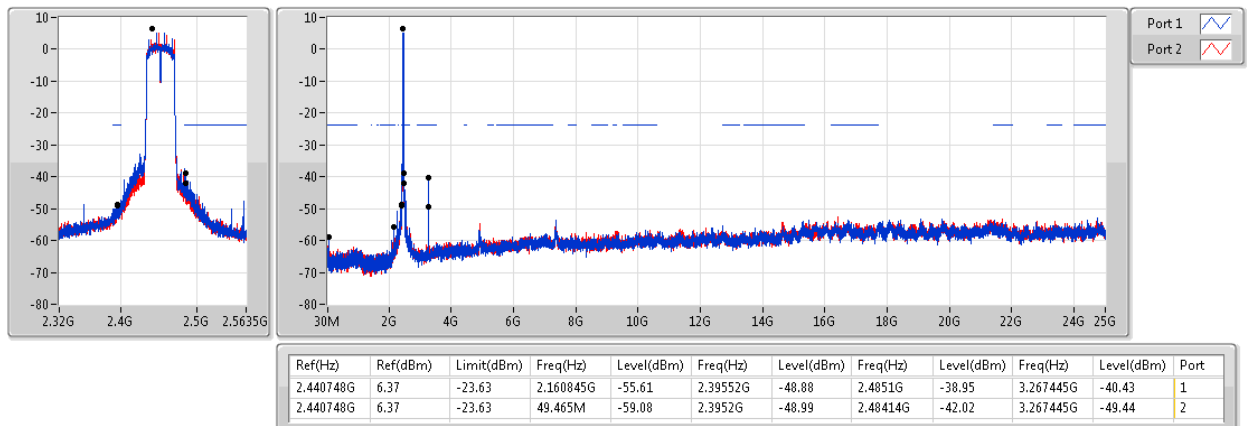
2437MHz

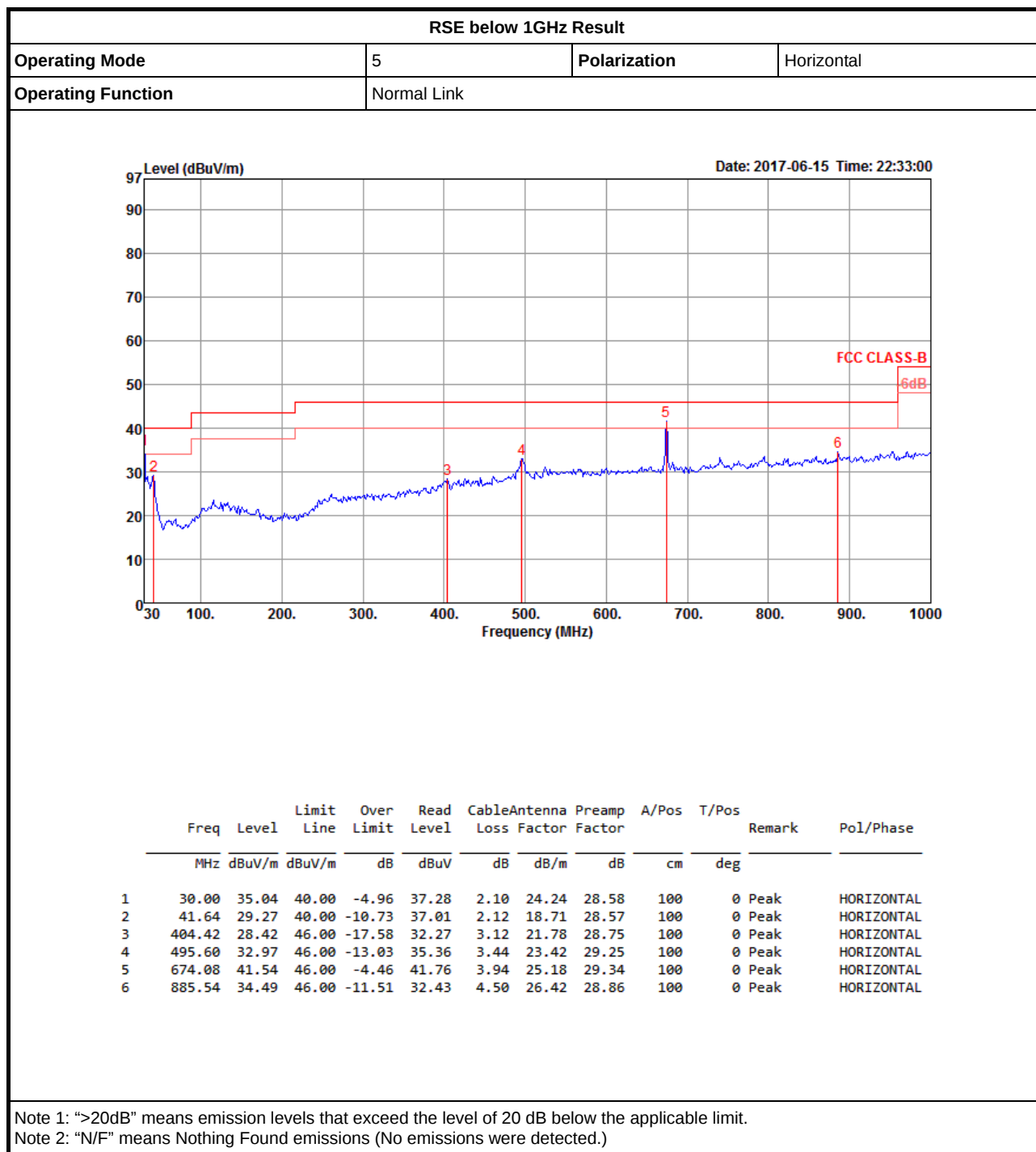


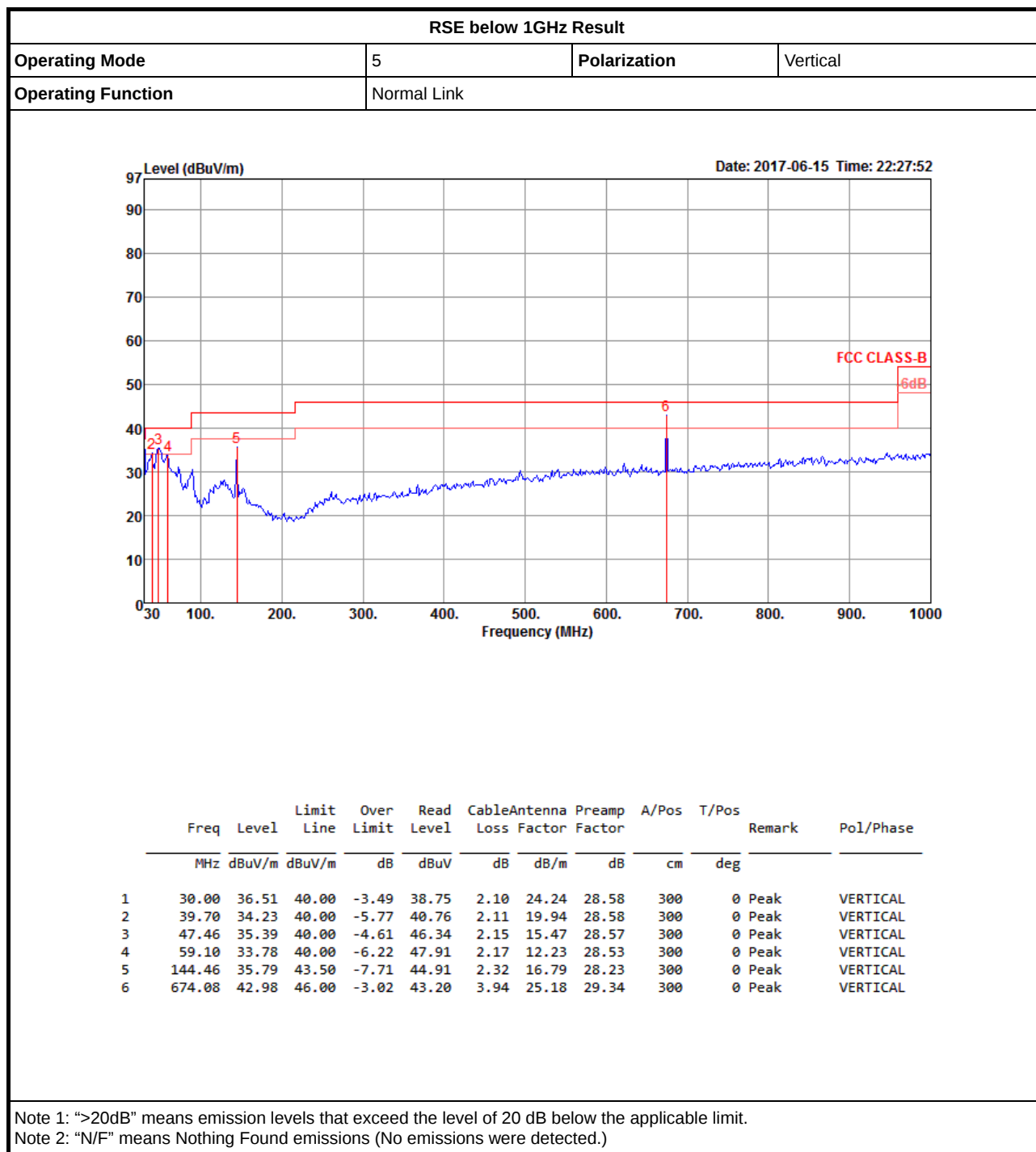
802.11ac VHT40_Nss1,(MCS0)_2TX

CSE NdB

2452MHz





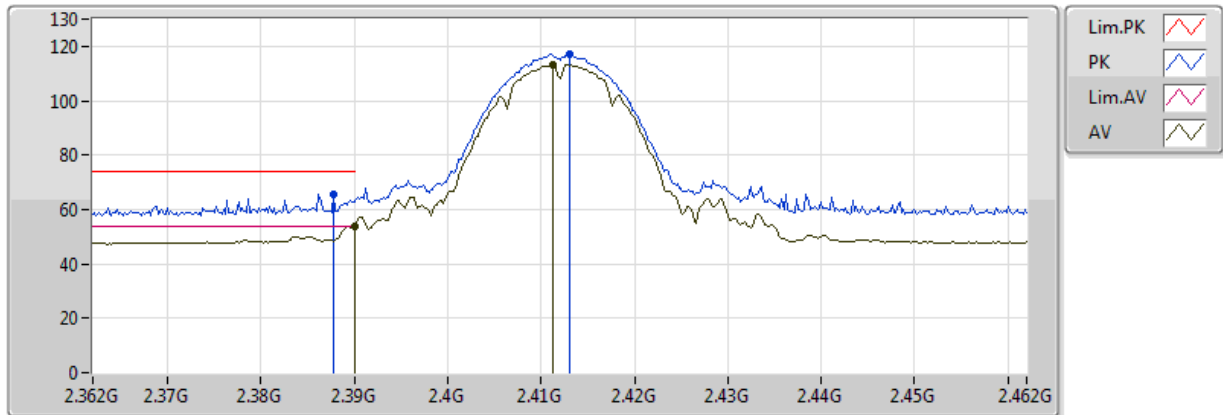


**Summary**

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	2.39G	53.98	54.00	-0.02	31.87	3	V	331	1.66	-

802.11b_(1Mbps)_2TX

2412MHz_TX

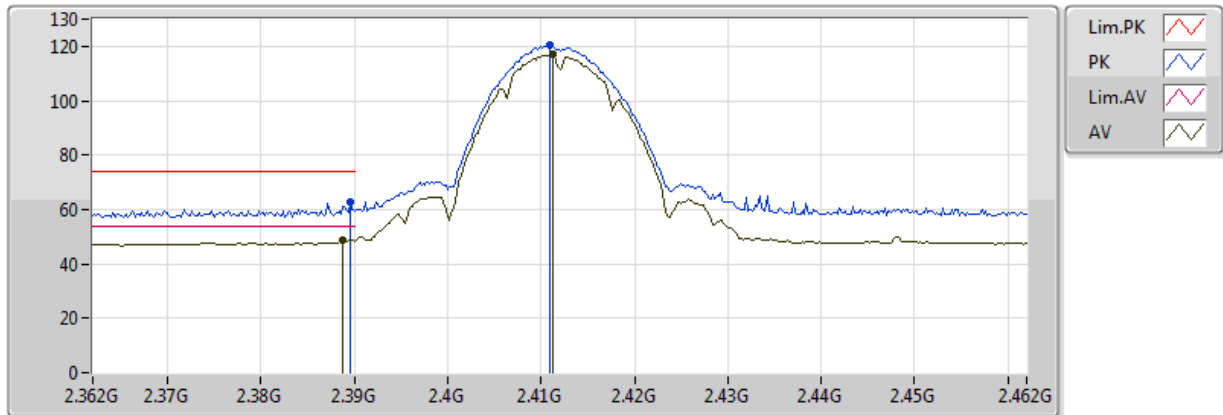


20170515
EUT Y 2TX
Setting 24
02-W-3
FSU

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	53.98	54.00	-0.02	31.87	3	V	331	1.66	-
AV	2.4112G	113.31	Inf	-Inf	31.93	3	V	331	1.66	-
PK	2.3878G	65.82	74.00	-8.18	31.87	3	V	331	1.66	-
PK	2.413G	116.97	Inf	-Inf	31.94	3	V	331	1.66	-

802.11b_(1Mbps)_2TX

2412MHz_TX

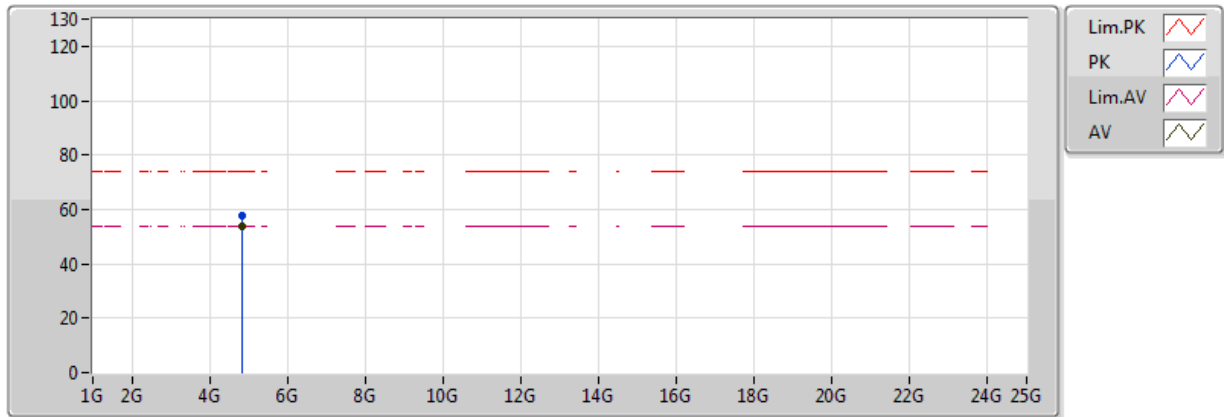


20170515
EUT Y 2TX
Setting 24
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	49.01	54.00	-4.99	31.87	3	H	0	1.21	-
AV	2.4112G	116.84	Inf	-Inf	31.93	3	H	0	1.21	-
PK	2.3896G	62.51	74.00	-11.49	31.87	3	H	0	1.21	-
PK	2.411G	120.45	Inf	-Inf	31.93	3	H	0	1.21	-

802.11b_(1Mbps)_2TX

2412MHz_TX

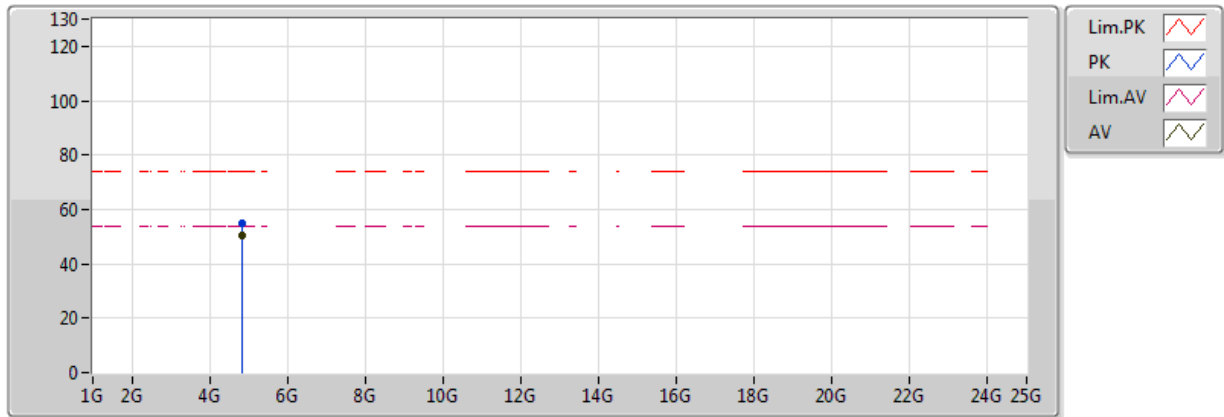


20170515
EUT Y 2TX
Setting 24
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823956G	53.71	54.00	-0.29	8.01	3	H	320	2.07	-
PK	4.823968G	57.47	74.00	-16.53	8.01	3	H	320	2.07	-

802.11b_(1Mbps)_2TX

2412MHz_TX

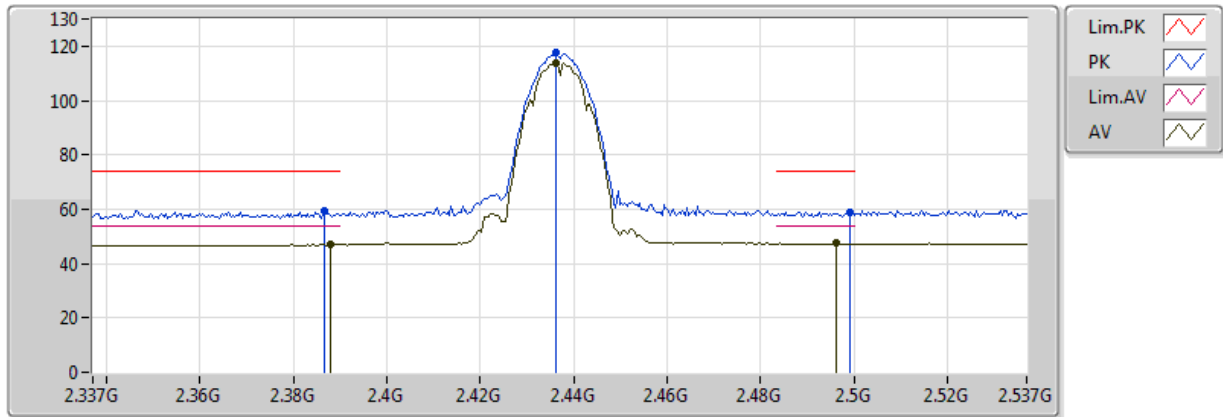


20170515
EUT Y 2TX
Setting 24
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82392G	50.51	54.00	-3.49	8.01	3	H	320	2.01	-
PK	4.823808G	54.72	74.00	-19.28	8.01	3	H	320	2.01	-

802.11b_(1Mbps)_2TX

2437MHz_TX

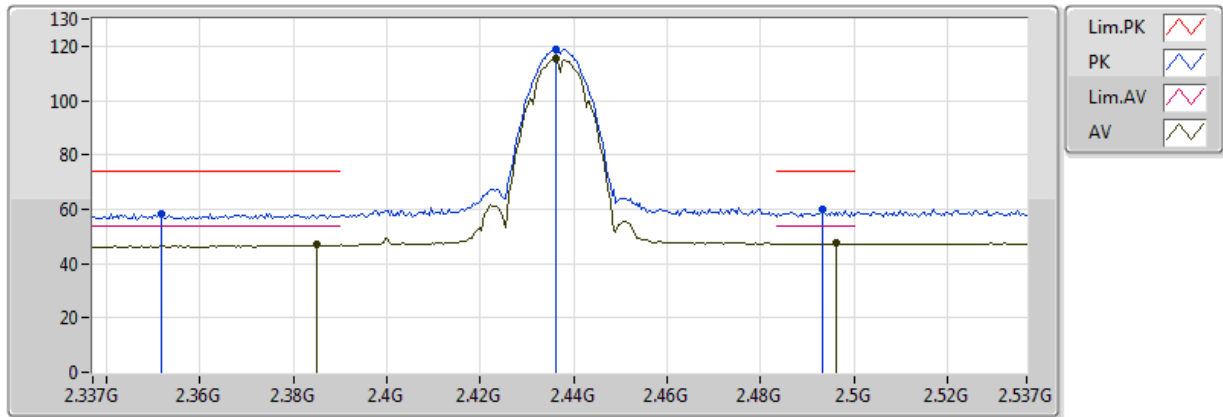


20170515
EUT Y 2TX
Setting 22
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3878G	46.92	54.00	-7.08	31.87	3	V	349	1.06	-
AV	2.4362G	113.79	Inf	-Inf	32.00	3	V	349	1.06	-
AV	2.4962G	47.36	54.00	-6.64	32.16	3	V	349	1.06	-
PK	2.3866G	59.47	74.00	-14.53	31.87	3	V	349	1.06	-
PK	2.4362G	117.42	Inf	-Inf	32.00	3	V	349	1.06	-
PK	2.499G	59.07	74.00	-14.93	32.17	3	V	349	1.06	-

802.11b_(1Mbps)_2TX

2437MHz_TX

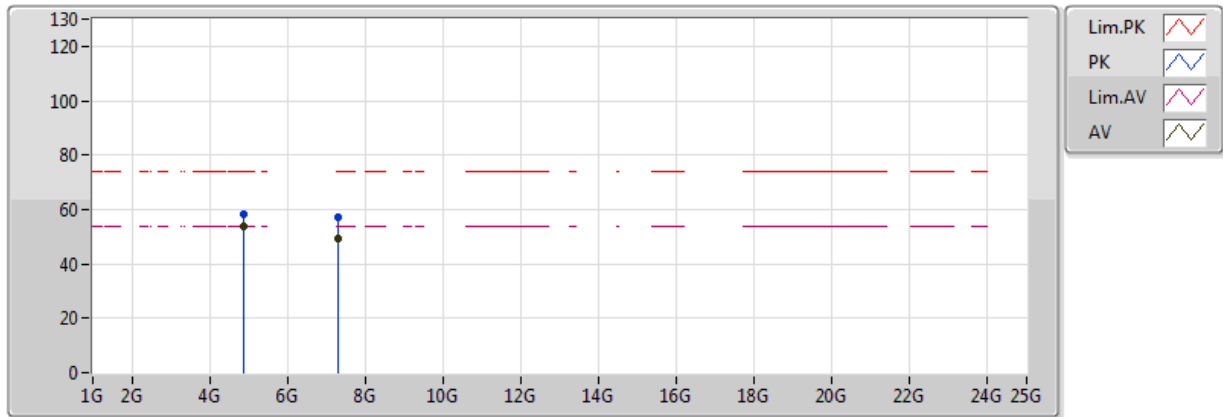


20170515
EUT Y 2TX
Setting 22
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.385G	46.82	54.00	-7.18	31.86	3	H	10	2.92	-
AV	2.4362G	115.25	Inf	-Inf	32.00	3	H	10	2.92	-
AV	2.4962G	47.40	54.00	-6.60	32.16	3	H	10	2.92	-
PK	2.3518G	58.36	74.00	-15.64	31.77	3	H	10	2.92	-
PK	2.4362G	118.87	Inf	-Inf	32.00	3	H	10	2.92	-
PK	2.4934G	60.04	74.00	-13.96	32.15	3	H	10	2.92	-

802.11b_(1Mbps)_2TX

2437MHz_TX

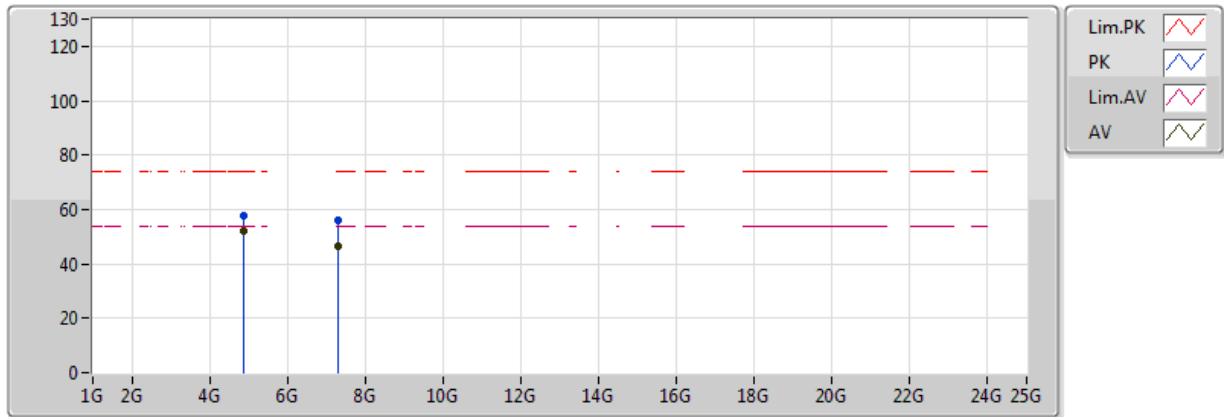


20170515
EUT Y 2TX
Setting 22
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873982G	53.89	54.00	-0.11	8.15	3	V	324	1.48	-
AV	7.31271G	49.27	54.00	-4.73	11.96	3	V	323	1.93	-
PK	4.873888G	58.40	74.00	-15.60	8.15	3	V	324	1.48	-
PK	7.311828G	57.12	74.00	-16.88	11.96	3	V	323	1.93	-

802.11b_(1Mbps)_2TX

2437MHz_TX

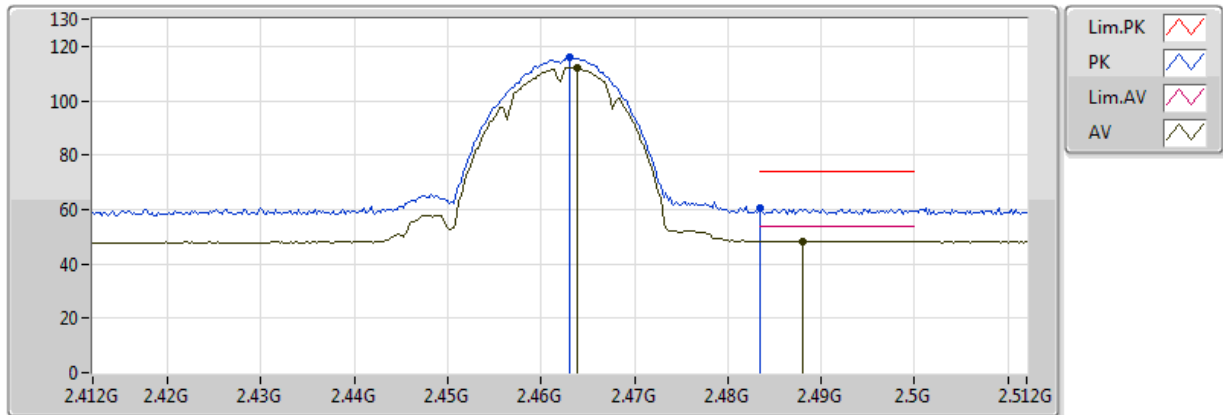


20170515
EUT Y 2TX
Setting 22
02-W-3
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873974G	52.10	54.00	-1.90	8.15	3	H	323	1.88	-
AV	7.309686G	46.24	54.00	-7.76	11.95	3	H	330	2.05	-
PK	4.87392G	57.84	74.00	-16.16	8.15	3	H	323	1.88	-
PK	7.312188G	56.30	74.00	-17.70	11.96	3	H	330	2.05	-

802.11b_(1Mbps)_2TX

2462MHz_TX

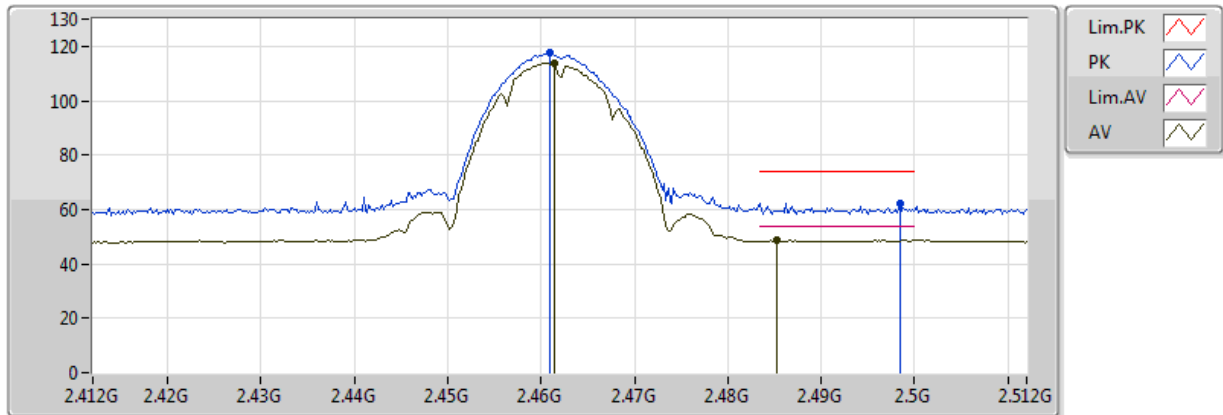


20170511
EUT Y 2TX
Setting 21
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4638G	112.33	Inf	-Inf	32.07	3	V	350	1.04	-
AV	2.488G	48.36	54.00	-5.64	32.14	3	V	350	1.04	-
PK	2.463G	116.17	Inf	-Inf	32.07	3	V	350	1.04	-
PK	2.483502G	60.30	74.00	-13.70	32.13	3	V	350	1.04	-

802.11b_(1Mbps)_2TX

2462MHz_TX

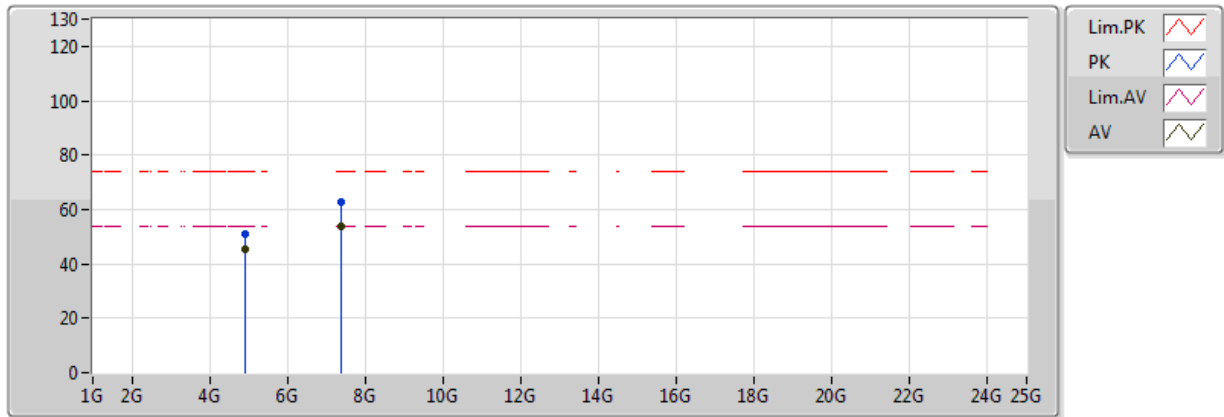


20170511
EUT Y 2TX
Setting 21
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4614G	113.79	Inf	-Inf	32.07	3	H	360	1.00	-
AV	2.4852G	48.64	54.00	-5.36	32.13	3	H	360	1.00	-
PK	2.461G	117.71	Inf	-Inf	32.06	3	H	360	1.00	-
PK	2.4984G	62.47	74.00	-11.53	32.17	3	H	360	1.00	-

802.11b_(1Mbps)_2TX

2462MHz_TX

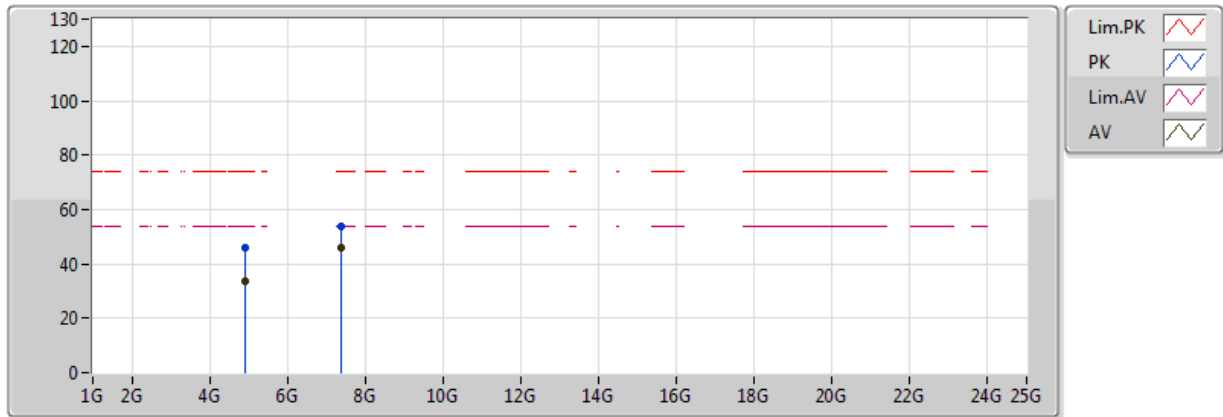


20170511
EUT Y 2TX
Setting 21
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924G	45.66	54.00	-8.34	8.29	3	V	0	2.17	-
AV	7.38772G	53.87	54.00	-0.13	12.13	3	V	327	1.95	-
PK	4.92404G	50.80	74.00	-23.20	8.29	3	V	0	2.17	-
PK	7.38444G	62.76	74.00	-11.24	12.12	3	V	327	1.95	-

802.11b_(1Mbps)_2TX

2462MHz_TX

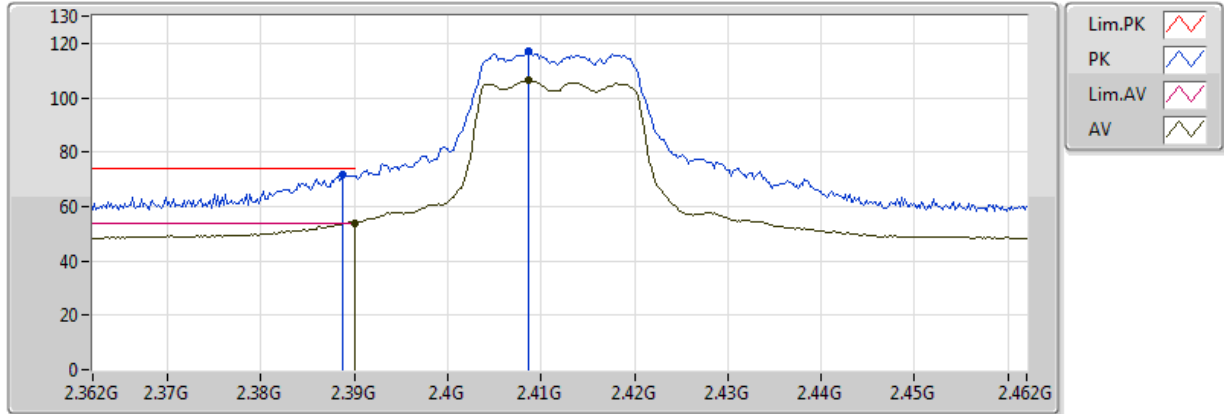


20170511
EUT Y 2TX
Setting 21
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92388G	33.71	54.00	-20.29	8.29	3	H	124	1.47	-
AV	7.38392G	45.87	54.00	-8.13	12.12	3	H	312	1.00	-
PK	4.92112G	46.06	74.00	-27.94	8.29	3	H	124	1.47	-
PK	7.38436G	54.07	74.00	-19.93	12.12	3	H	312	1.00	-

802.11g_(6Mbps)_2TX

2412MHz_TX

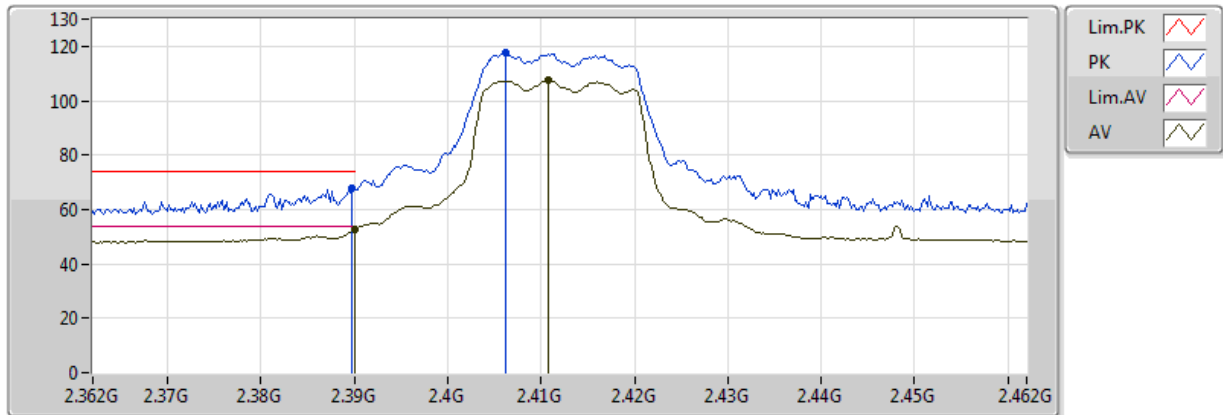


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

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	53.91	54.00	-0.09	31.87	3	V	359	1.50	-
AV	2.4086G	106.29	Inf	-Inf	31.92	3	V	359	1.50	-
PK	2.3888G	71.66	74.00	-2.34	31.87	3	V	359	1.50	-
PK	2.4086G	116.98	Inf	-Inf	31.92	3	V	359	1.50	-

802.11g_(6Mbps)_2TX

2412MHz_TX

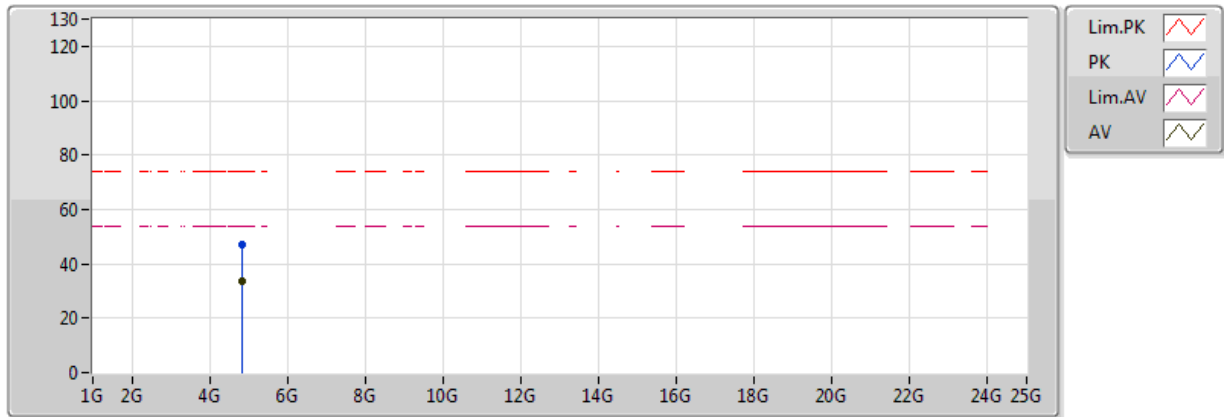


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

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	52.90	54.00	-1.10	31.87	3	H	359	1.09	-
AV	2.4108G	107.45	Inf	-Inf	31.93	3	H	359	1.09	-
PK	2.3898G	68.05	74.00	-5.95	31.87	3	H	359	1.09	-
PK	2.4062G	117.46	Inf	-Inf	31.92	3	H	359	1.09	-

802.11g_(6Mbps)_2TX

2412MHz_TX

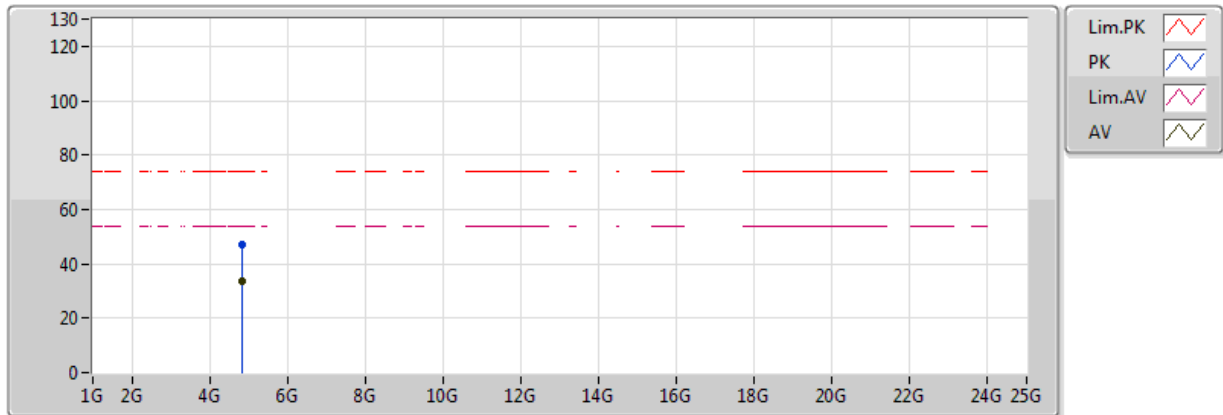


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82392G	33.75	54.00	-20.25	8.01	3	V	150	2.21	-
PK	4.82464G	47.09	74.00	-26.91	8.02	3	V	150	2.21	-

802.11g_(6Mbps)_2TX

2412MHz_TX

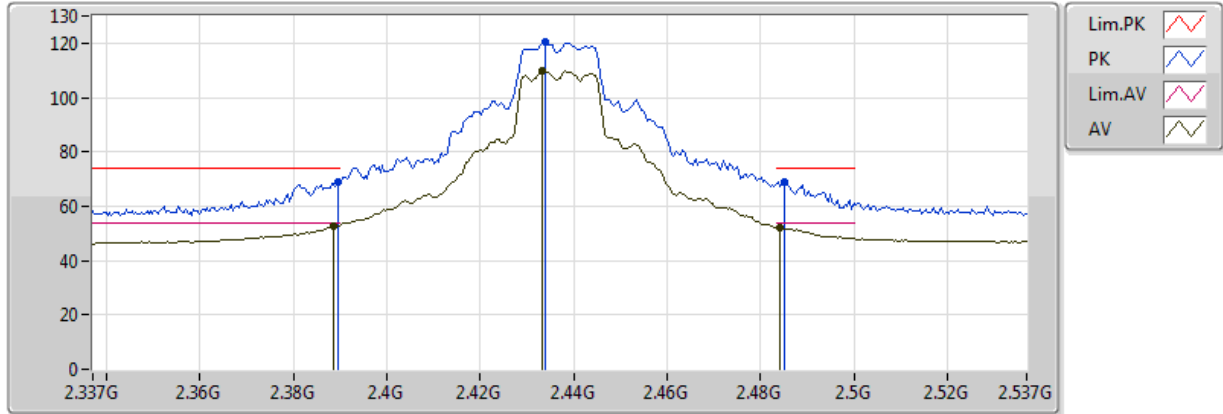


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82996G	33.51	54.00	-20.49	8.03	3	H	182	1.34	-
PK	4.83336G	47.22	74.00	-26.78	8.04	3	H	182	1.34	-

802.11g_(6Mbps)_2TX

2437MHz_TX

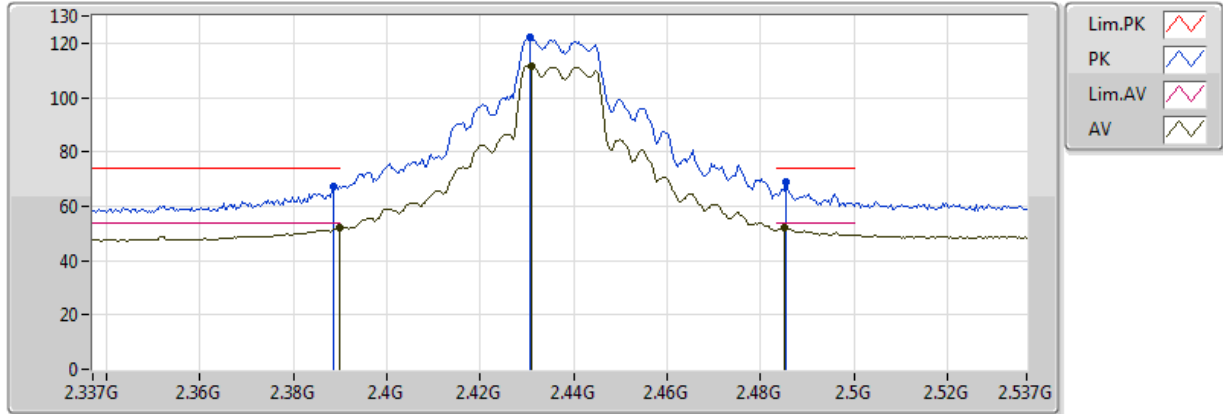


20170511
EUT Y 2TX
Setting 20.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3886G	52.94	54.00	-1.06	31.87	3	V	0	1.00	-
AV	2.4334G	109.75	Inf	-Inf	31.99	3	V	0	1.00	-
AV	2.4842G	52.07	54.00	-1.93	32.13	3	V	0	1.00	-
PK	2.3894G	69.09	74.00	-4.91	31.87	3	V	0	1.00	-
PK	2.4338G	120.40	Inf	-Inf	31.99	3	V	0	1.00	-
PK	2.485G	68.81	74.00	-5.19	32.13	3	V	0	1.00	-

802.11g_(6Mbps)_2TX

2437MHz_TX

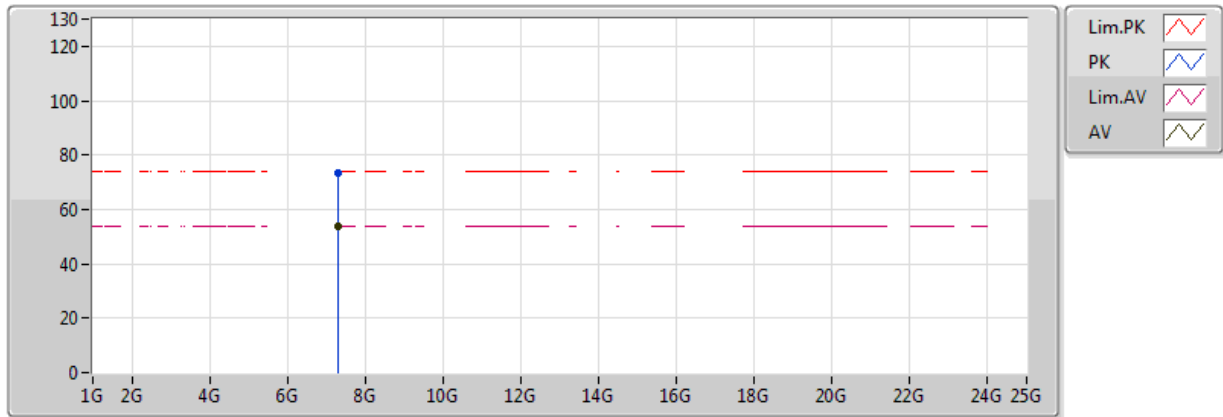


20170511
EUT Y 2TX
Setting 20.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	51.84	54.00	-2.16	31.87	3	H	0	1.59	-
AV	2.431G	111.78	Inf	-Inf	31.98	3	H	0	1.59	-
AV	2.485G	51.99	54.00	-2.01	32.13	3	H	0	1.59	-
PK	2.3886G	67.28	74.00	-6.72	31.87	3	H	0	1.59	-
PK	2.4306G	122.36	Inf	-Inf	31.98	3	H	0	1.59	-
PK	2.4854G	68.80	74.00	-5.20	32.13	3	H	0	1.59	-

802.11g_(6Mbps)_2TX

2437MHz_TX

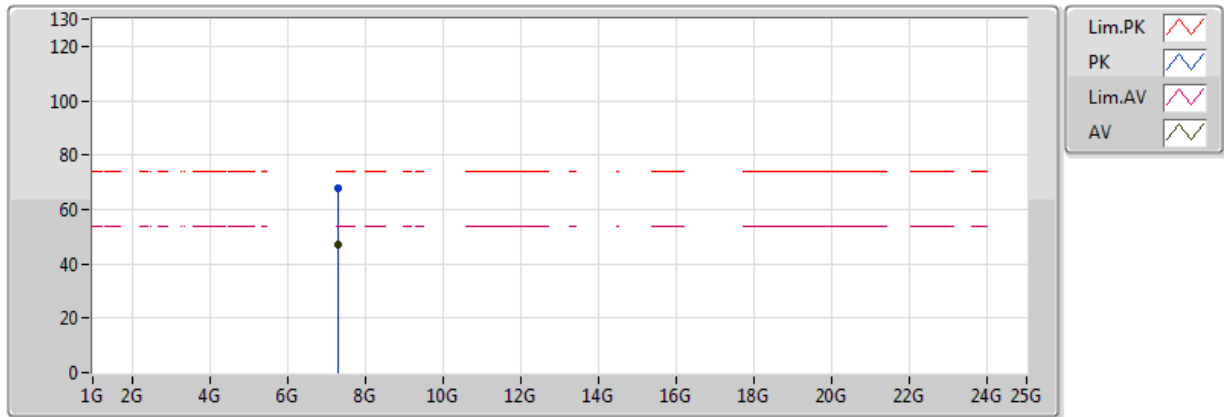


20170511
EUT Y 2TX
Setting 20.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.309G	53.75	54.00	-0.25	11.95	3	V	325	1.91	-
PK	7.30748G	73.33	74.00	-0.67	11.95	3	V	325	1.91	-

802.11g_(6Mbps)_2TX

2437MHz_TX

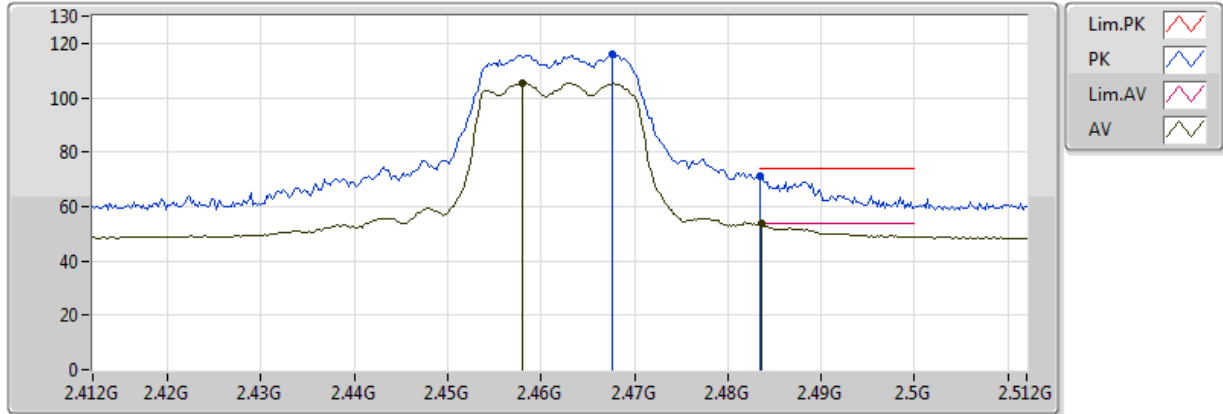


20170511
EUT Y 2TX
Setting 20.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.30812G	47.07	54.00	-6.93	11.95	3	H	153	1.88	-
PK	7.31428G	67.60	74.00	-6.40	11.96	3	H	153	1.88	-

802.11g_(6Mbps)_2TX

2462MHz_TX

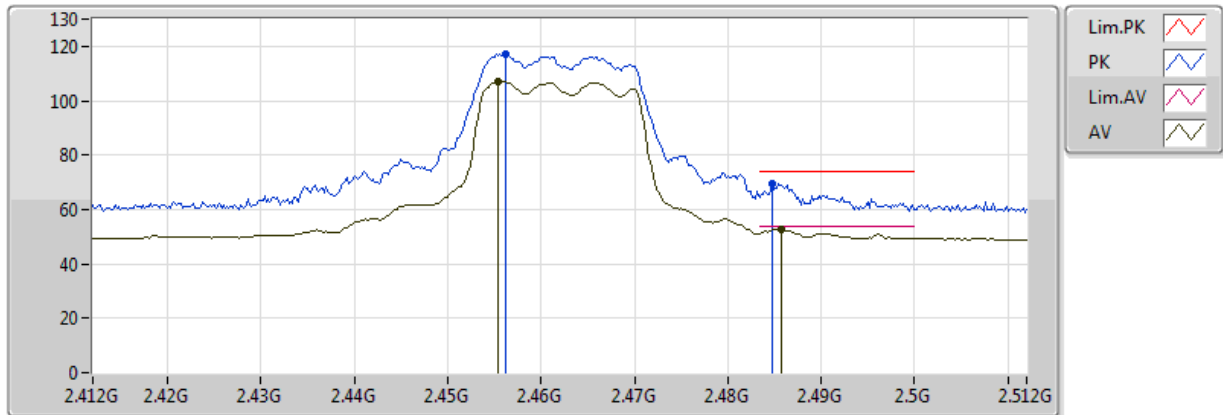


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.458G	105.48	Inf	-Inf	32.06	3	V	1	1.06	-
AV	2.4836G	53.72	54.00	-0.28	32.13	3	V	1	1.06	-
PK	2.4676G	116.25	Inf	-Inf	32.08	3	V	1	1.06	-
PK	2.483502G	71.03	74.00	-2.97	32.13	3	V	1	1.06	-

802.11g_(6Mbps)_2TX

2462MHz_TX

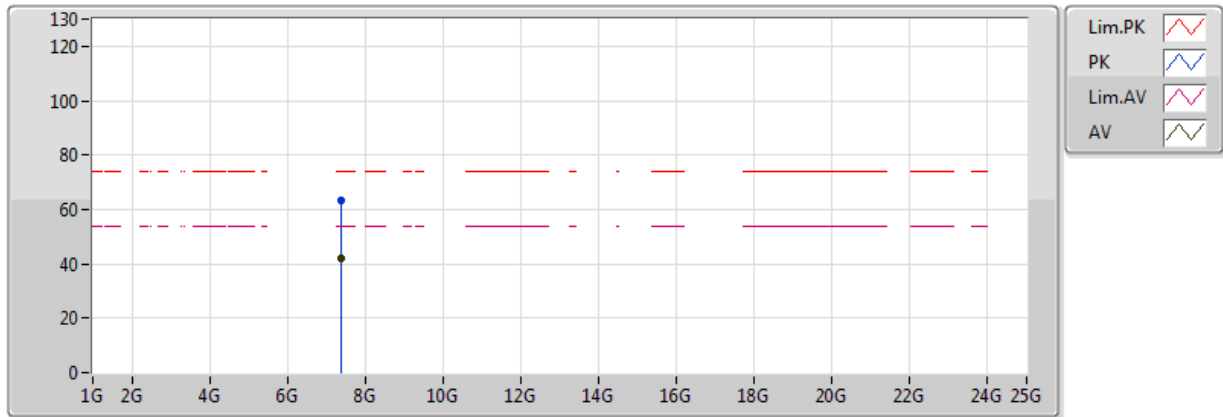


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4554G	107.23	Inf	-Inf	32.05	3	H	360	1.03	-
AV	2.4858G	52.82	54.00	-1.18	32.13	3	H	360	1.03	-
PK	2.4562G	117.04	Inf	-Inf	32.05	3	H	360	1.03	-
PK	2.4848G	69.58	74.00	-4.42	32.13	3	H	360	1.03	-

802.11g_(6Mbps)_2TX

2462MHz_TX

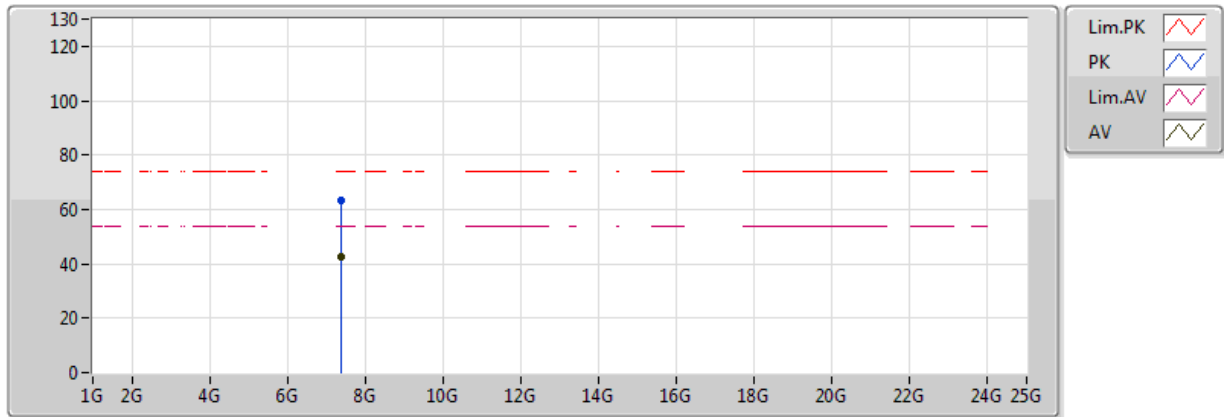


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.38516G	42.13	54.00	-11.87	12.13	3	V	50	1.59	-
PK	7.38832G	63.32	74.00	-10.68	12.13	3	V	50	1.59	-

802.11g_(6Mbps)_2TX

2462MHz_TX

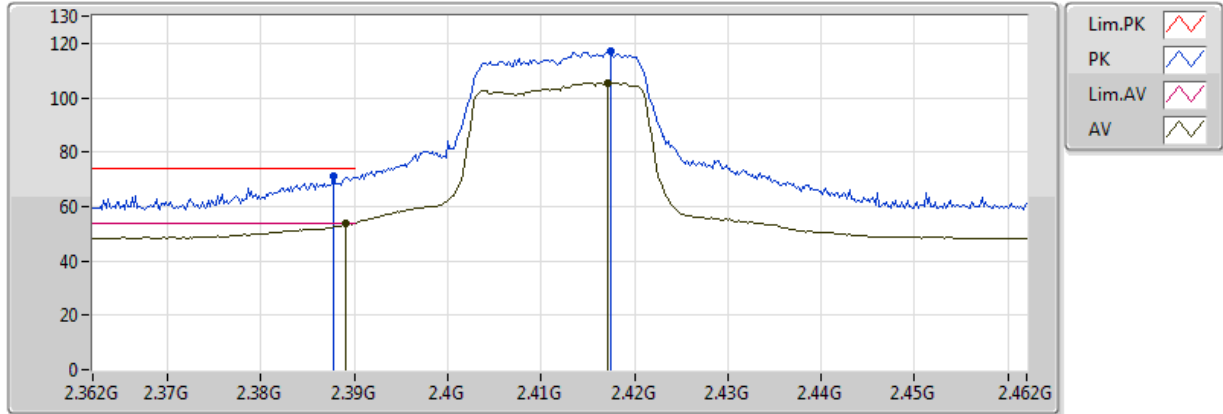


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.38584G	42.38	54.00	-11.62	12.13	3	H	62	1.71	-
PK	7.38876G	63.41	74.00	-10.59	12.13	3	H	62	1.71	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

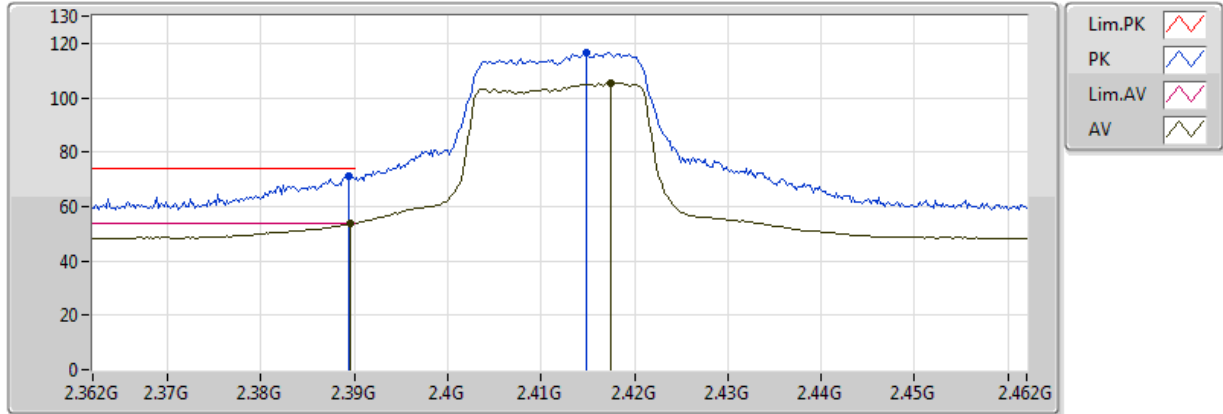


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3891G	53.84	54.00	-0.16	31.87	3	V	1	1.11	-
AV	2.4172G	105.40	Inf	-Inf	31.95	3	V	1	1.11	-
PK	2.3878G	71.34	74.00	-2.66	31.87	3	V	1	1.11	-
PK	2.4174G	116.91	Inf	-Inf	31.95	3	V	1	1.11	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

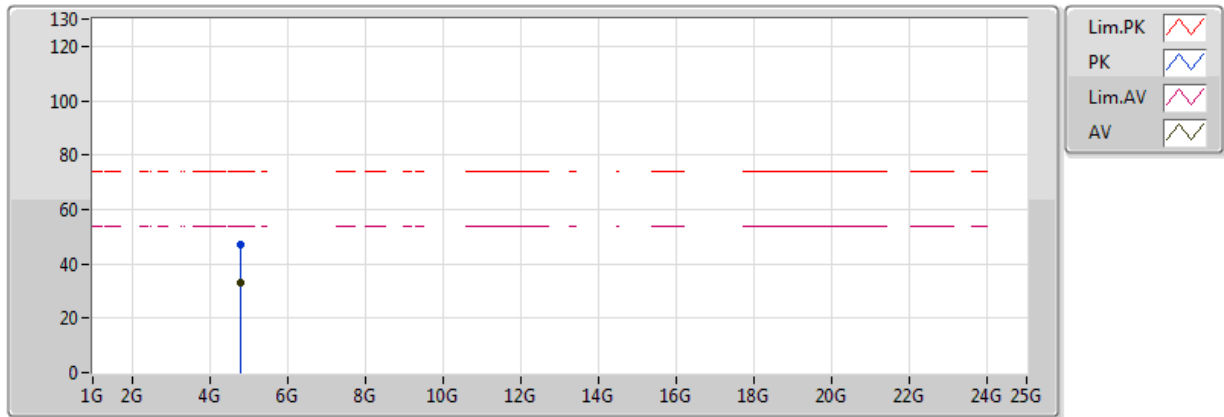


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	53.93	54.00	-0.07	31.87	3	H	360	1.08	-
AV	2.4174G	105.38	Inf	-Inf	31.95	3	H	360	1.08	-
PK	2.3894G	71.18	74.00	-2.82	31.87	3	H	360	1.08	-
PK	2.4148G	116.42	Inf	-Inf	31.94	3	H	360	1.08	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

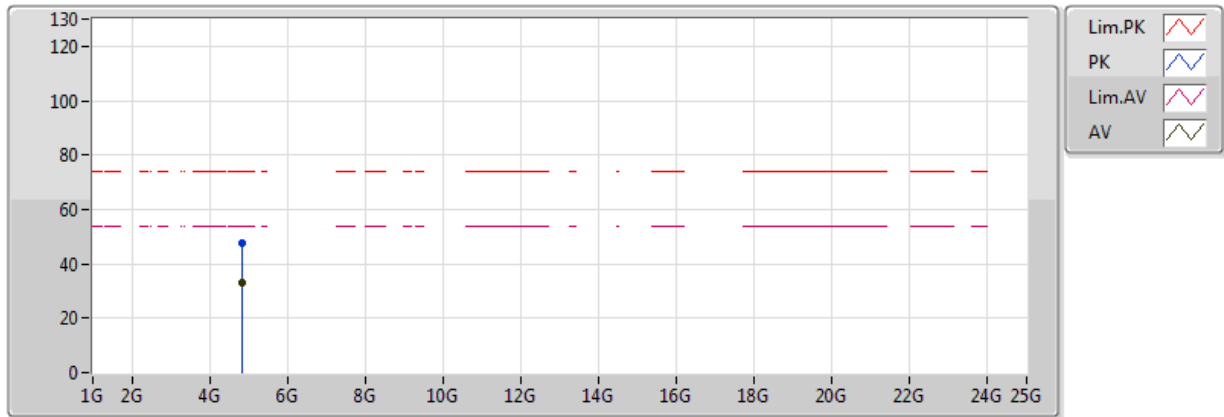


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81608G	32.91	54.00	-21.09	7.99	3	V	341	1.98	-
PK	4.81632G	47.13	74.00	-26.87	7.99	3	V	341	1.98	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

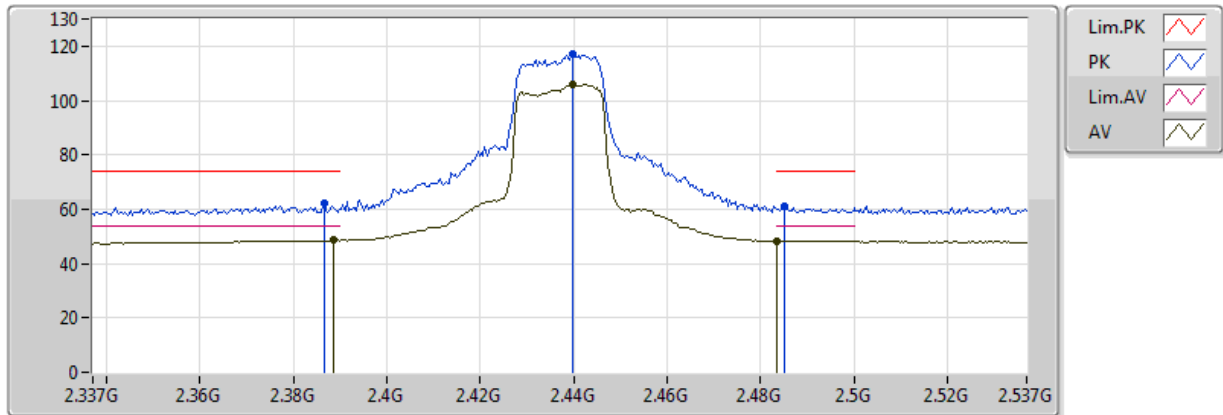


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82392G	33.24	54.00	-20.76	8.01	3	H	249	1.70	-
PK	4.82388G	47.84	74.00	-26.16	8.01	3	H	249	1.70	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

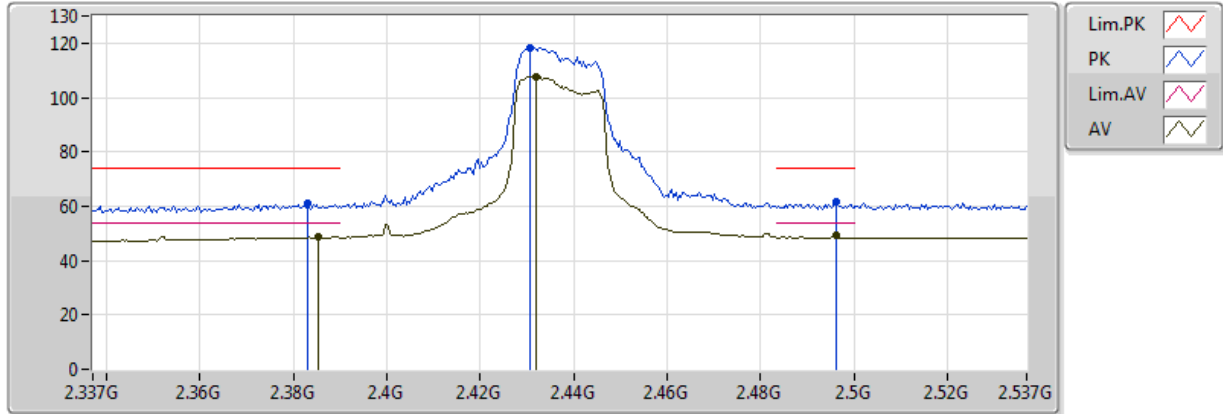


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3886G	48.59	54.00	-5.41	31.87	3	V	0	1.00	-
AV	2.4398G	105.93	Inf	-Inf	32.01	3	V	0	1.00	-
AV	2.483502G	48.40	54.00	-5.60	32.13	3	V	0	1.00	-
PK	2.3866G	62.20	74.00	-11.80	31.87	3	V	0	1.00	-
PK	2.4398G	116.92	Inf	-Inf	32.01	3	V	0	1.00	-
PK	2.485G	60.90	74.00	-13.10	32.13	3	V	0	1.00	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

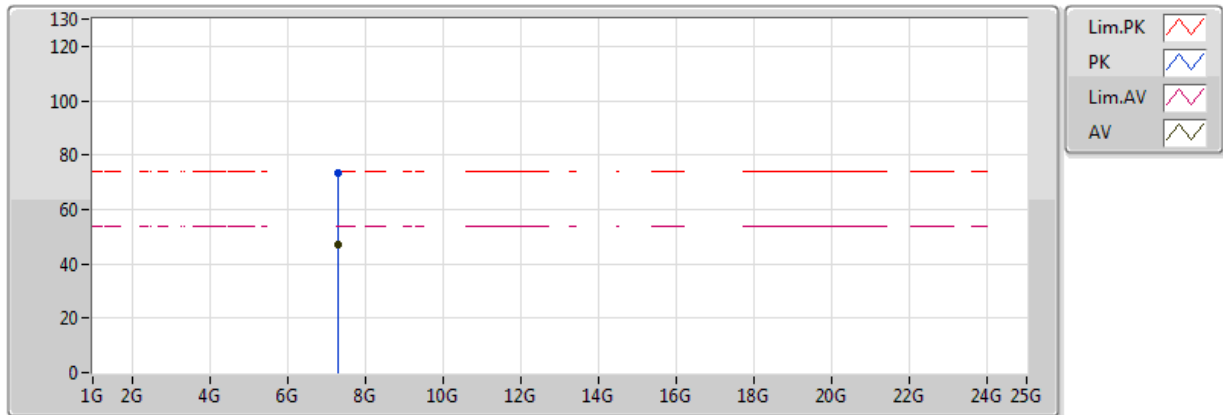


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3854G	49.00	54.00	-5.00	31.86	3	H	360	1.61	-
AV	2.4318G	107.82	Inf	-Inf	31.99	3	H	360	1.61	-
AV	2.4962G	49.52	54.00	-4.48	32.16	3	H	360	1.61	-
PK	2.383G	61.12	74.00	-12.88	31.86	3	H	360	1.61	-
PK	2.4306G	118.37	Inf	-Inf	31.98	3	H	360	1.61	-
PK	2.4962G	61.44	74.00	-12.56	32.16	3	H	360	1.61	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

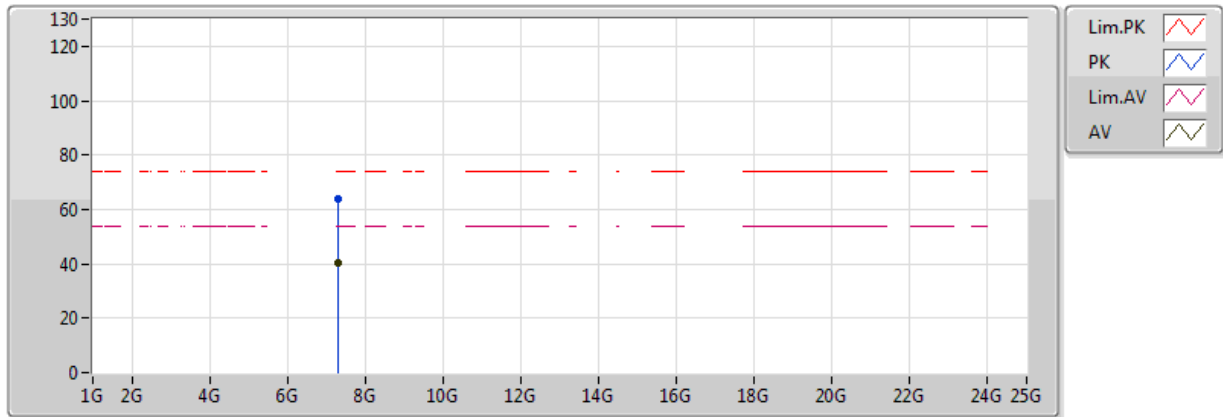


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.31188G	47.33	54.00	-6.67	11.96	3	V	325	1.88	-
PK	7.30956G	73.68	74.00	-0.32	11.95	3	V	325	1.88	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

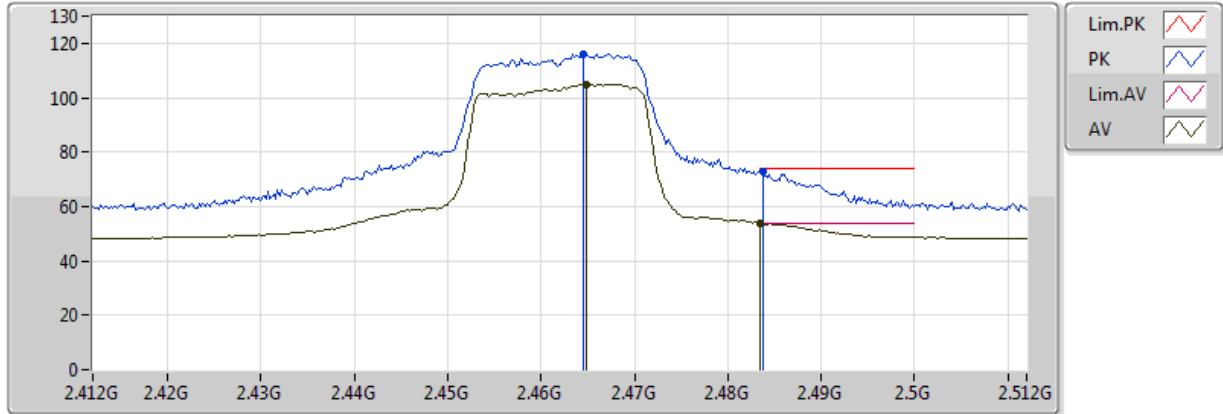


20170511
EUT Y 2TX
Setting 19.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.30948G	40.49	54.00	-13.51	11.95	3	H	311	1.74	-
PK	7.30972G	64.08	74.00	-9.92	11.95	3	H	311	1.74	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

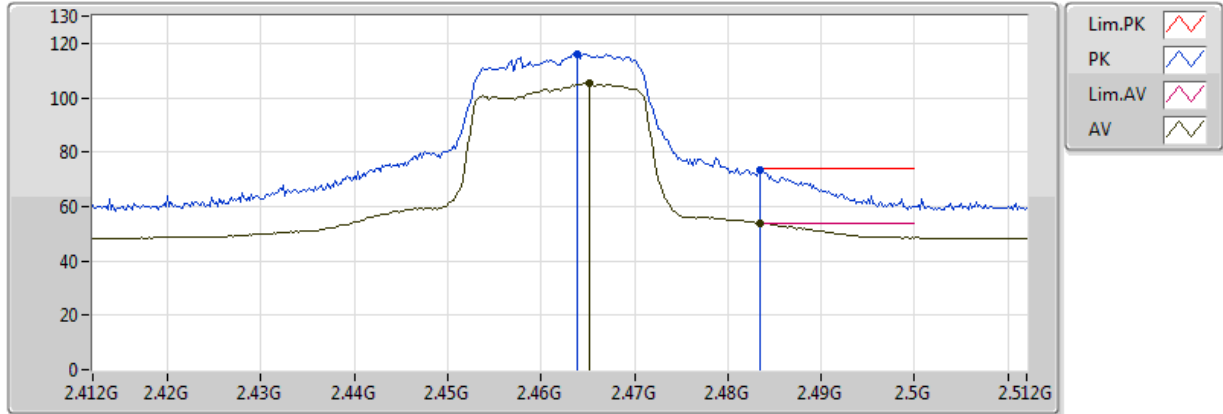


20170511
EUT Y 2TX
Setting 18.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4648G	105.04	Inf	-Inf	32.07	3	V	355	1.44	-
AV	2.483502G	53.87	54.00	-0.13	32.13	3	V	355	1.44	-
PK	2.4646G	116.16	Inf	-Inf	32.07	3	V	355	1.44	-
PK	2.4838G	73.06	74.00	-0.94	32.13	3	V	355	1.44	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

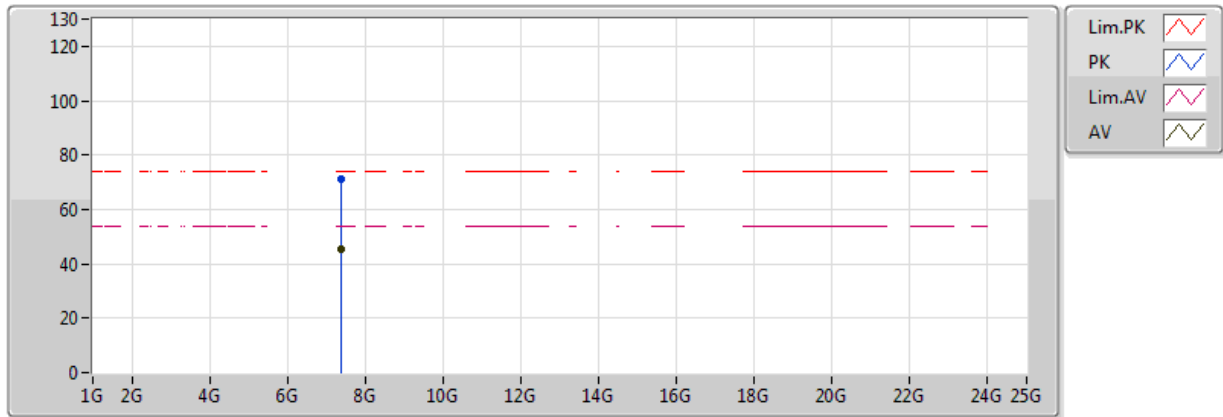


20170511
EUT Y 2TX
Setting 18.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4652G	105.19	Inf	-Inf	32.08	3	H	0	1.00	-
AV	2.483502G	53.73	54.00	-0.27	32.13	3	H	0	1.00	-
PK	2.4638G	116.23	Inf	-Inf	32.07	3	H	0	1.00	-
PK	2.483502G	73.41	74.00	-0.59	32.13	3	H	0	1.00	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

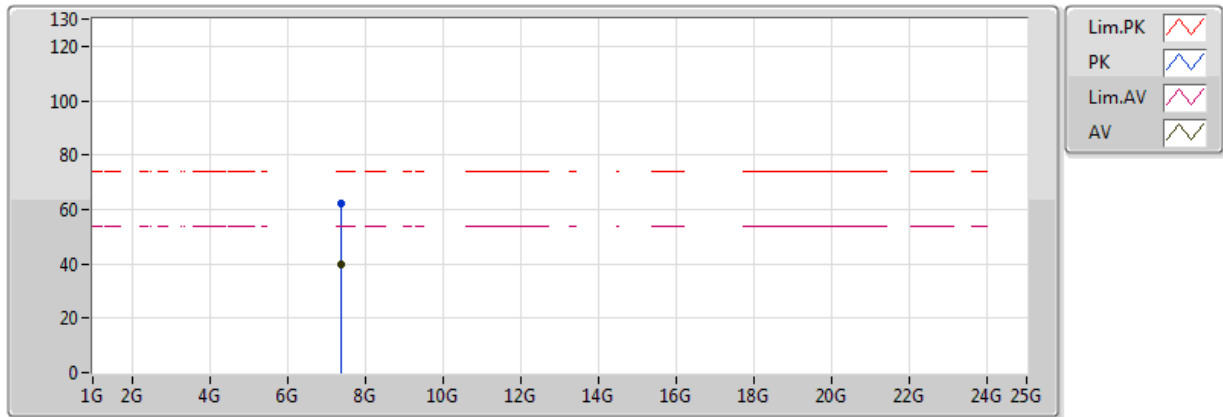


20170511
EUT Y 2TX
Setting 18.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.39G	45.21	54.00	-8.79	12.14	3	V	360	1.91	-
PK	7.38976G	71.32	74.00	-2.68	12.14	3	V	360	1.91	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

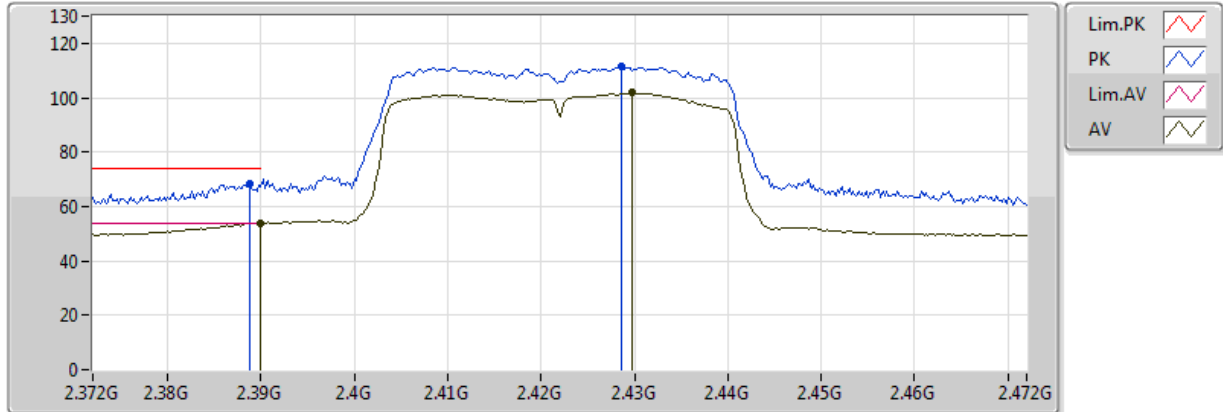


20170511
EUT Y 2TX
Setting 18.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.38728G	39.64	54.00	-14.36	12.13	3	H	253	1.84	-
PK	7.38392G	62.04	74.00	-11.96	12.12	3	H	253	1.84	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

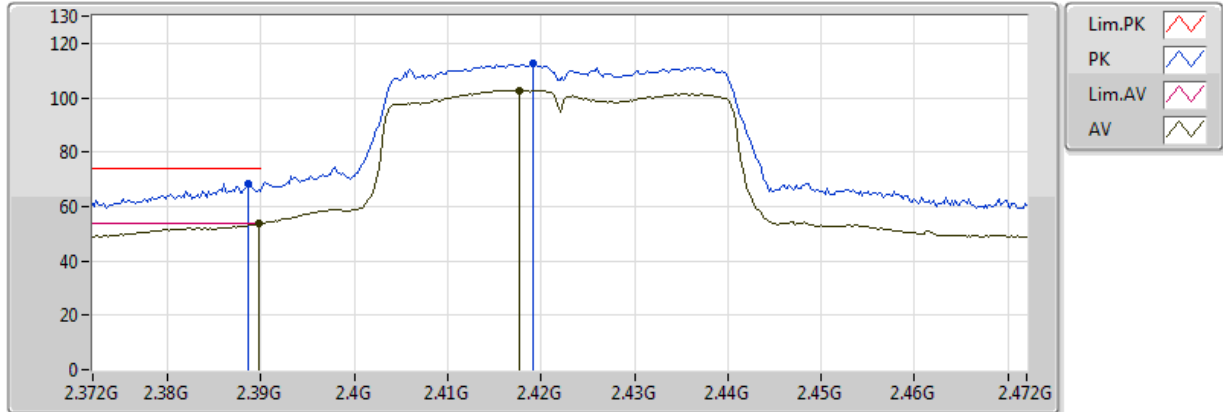


20170511
EUT Y 2TX
Setting 17.5
02-Z-1
FSU(100015)

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	53.95	54.00	-0.05	31.87	3	V	359	1.00	-
AV	2.4298G	101.79	Inf	-Inf	31.98	3	V	359	1.00	-
PK	2.3888G	68.14	74.00	-5.86	31.87	3	V	359	1.00	-
PK	2.4286G	111.38	Inf	-Inf	31.98	3	V	359	1.00	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

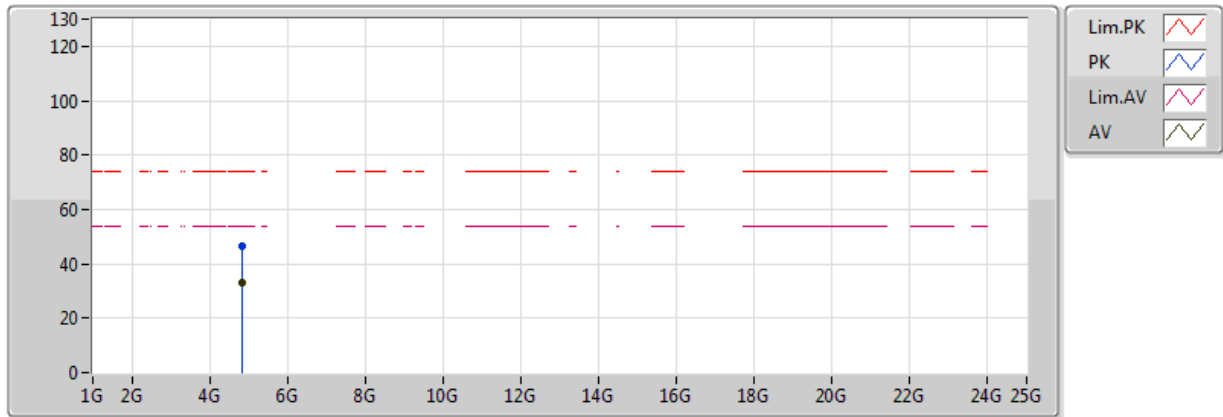


20170511
EUT Y 2TX
Setting 17.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	53.83	54.00	-0.17	31.87	3	H	2	1.05	-
AV	2.4176G	102.81	Inf	-Inf	31.95	3	H	2	1.05	-
PK	2.3886G	68.44	74.00	-5.56	31.87	3	H	2	1.05	-
PK	2.4192G	112.36	Inf	-Inf	31.95	3	H	2	1.05	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

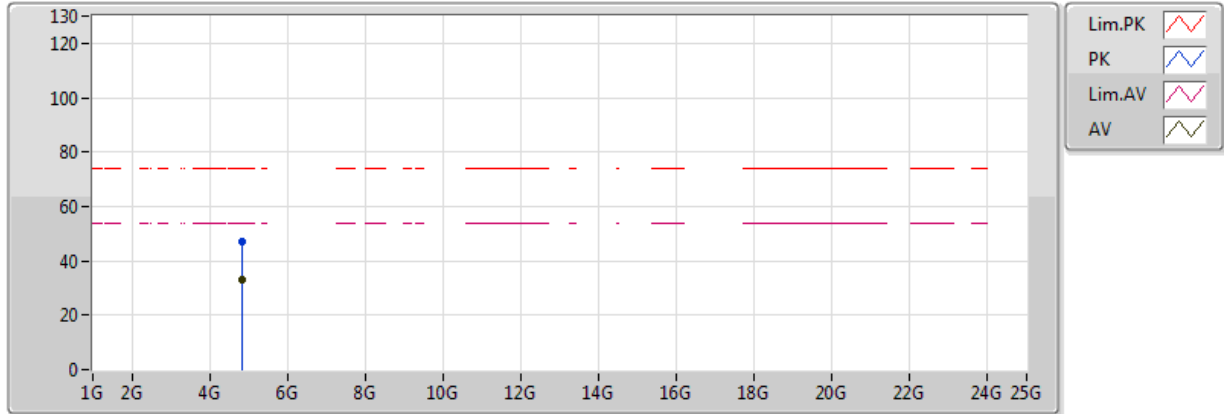


20170511
EUT Y 2TX
Setting 17.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82568G	33.27	54.00	-20.73	8.02	3	V	308	1.75	-
PK	4.84856G	46.43	74.00	-27.57	8.08	3	V	308	1.75	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

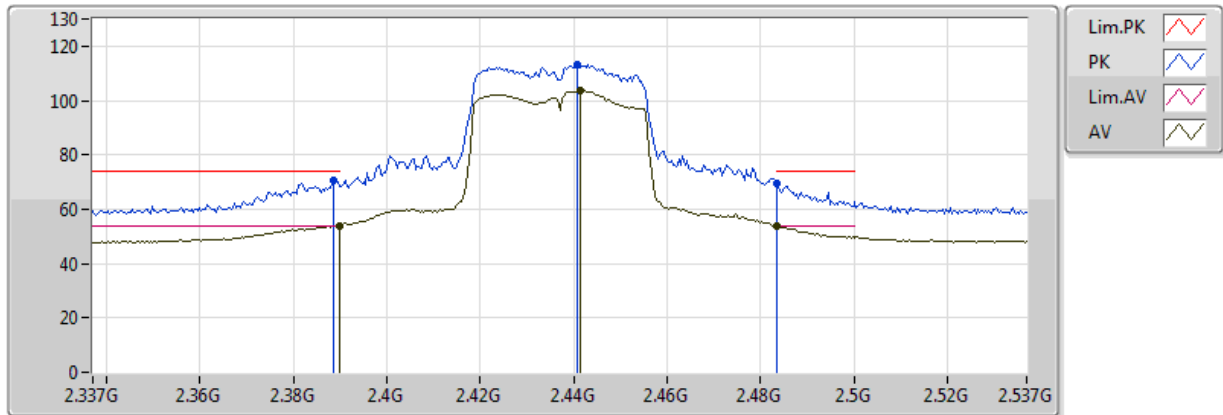


20170511
EUT Y 2TX
Setting 17.5
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83032G	33.31	54.00	-20.69	8.03	3	H	254	1.30	-
PK	4.83056G	46.90	74.00	-27.10	8.03	3	H	254	1.30	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

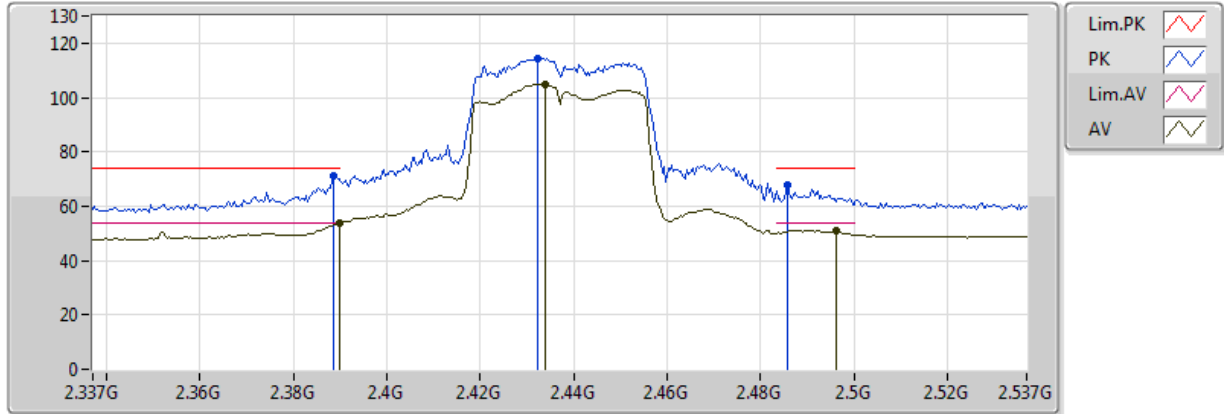


20170511
EUT Y 2TX
Setting 19
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	53.98	54.00	-0.02	31.87	3	V	1	1.30	-
AV	2.4414G	103.67	Inf	-Inf	32.01	3	V	1	1.30	-
AV	2.483502G	53.91	54.00	-0.09	32.13	3	V	1	1.30	-
PK	2.3886G	70.76	74.00	-3.24	31.87	3	V	1	1.30	-
PK	2.4406G	113.34	Inf	-Inf	32.01	3	V	1	1.30	-
PK	2.483502G	69.54	74.00	-4.46	32.13	3	V	1	1.30	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

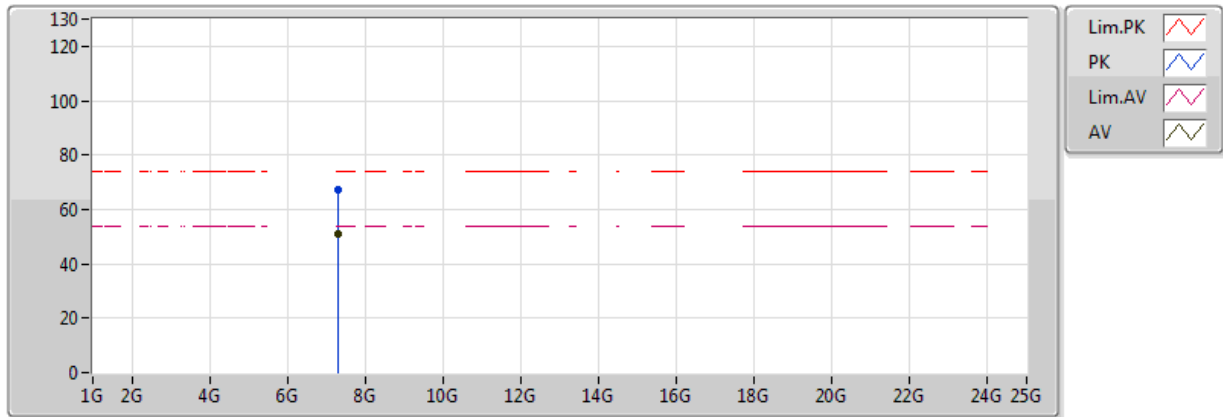


20170511
EUT Y 2TX
Setting 19
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	53.60	54.00	-0.40	31.87	3	H	360	1.31	-
AV	2.4338G	104.84	Inf	-Inf	31.99	3	H	360	1.31	-
AV	2.4962G	51.27	54.00	-2.73	32.16	3	H	360	1.31	-
PK	2.3886G	71.00	74.00	-3.00	31.87	3	H	360	1.31	-
PK	2.4322G	114.39	Inf	-Inf	31.99	3	H	360	1.31	-
PK	2.4858G	67.92	74.00	-6.08	32.13	3	H	360	1.31	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

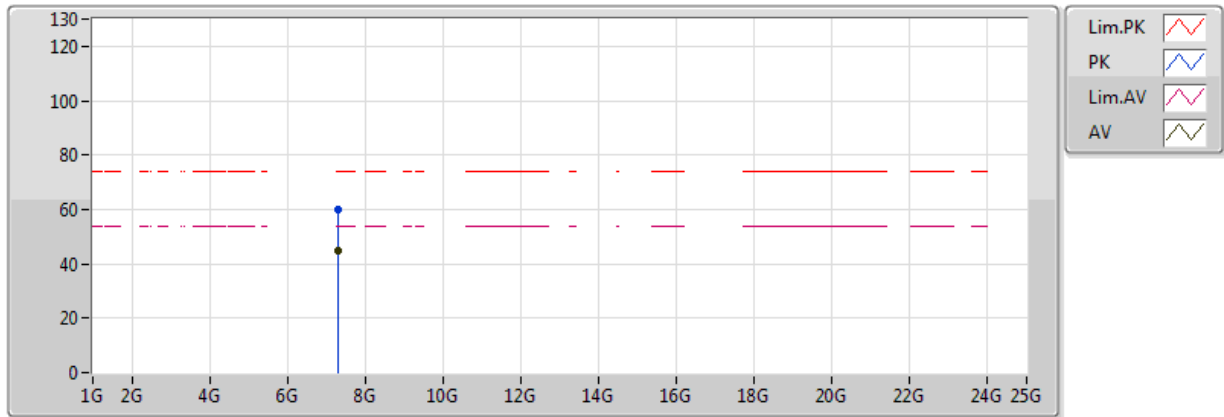


20170511
EUT Y 2TX
Setting 19
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.313G	50.73	54.00	-3.27	11.96	3	V	328	1.70	-
PK	7.31188G	66.99	74.00	-7.01	11.96	3	V	328	1.70	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

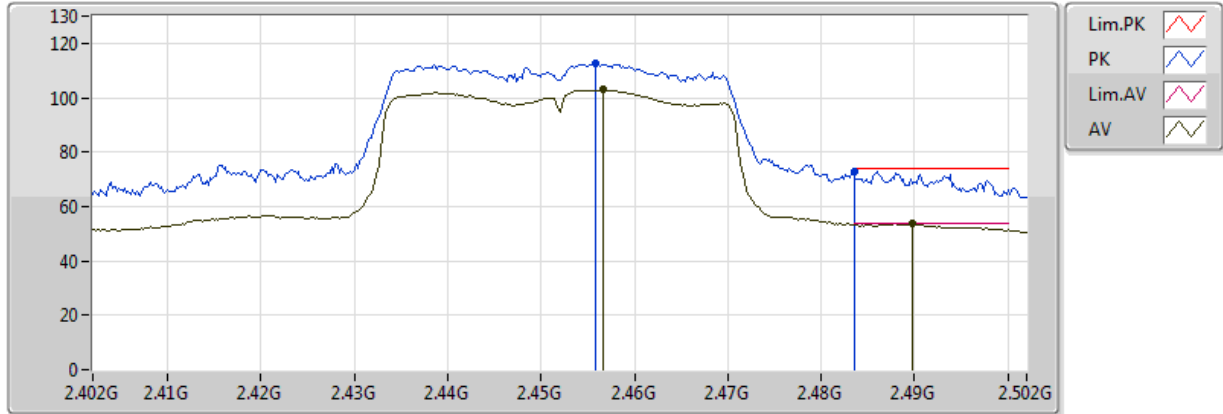


20170511
EUT Y 2TX
Setting 19
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.31676G	44.74	54.00	-9.26	11.97	3	H	306	2.01	-
PK	7.30428G	59.80	74.00	-14.20	11.94	3	H	306	2.01	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX

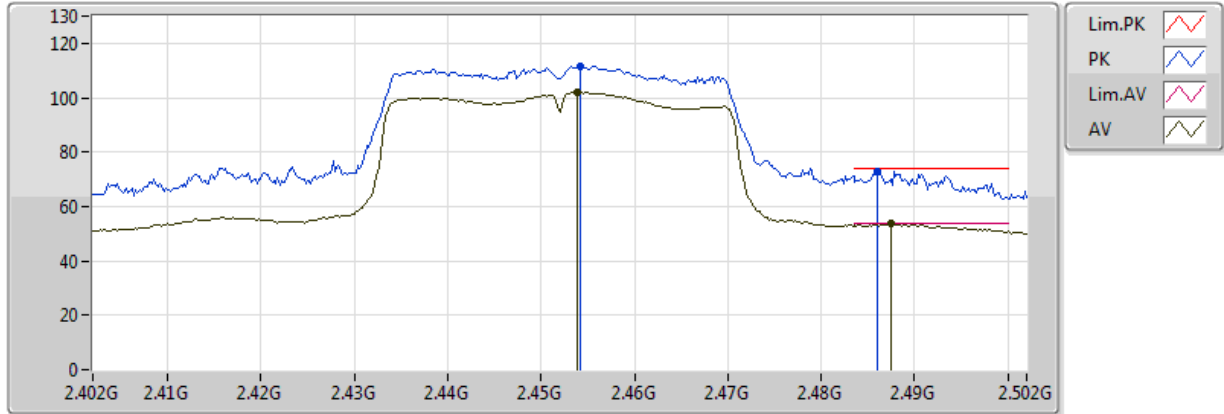


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4566G	102.95	Inf	-Inf	32.05	3	V	359	1.03	-
AV	2.4898G	53.96	54.00	-0.04	32.14	3	V	359	1.03	-
PK	2.4558G	112.64	Inf	-Inf	32.05	3	V	359	1.03	-
PK	2.483502G	72.84	74.00	-1.16	32.13	3	V	359	1.03	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX

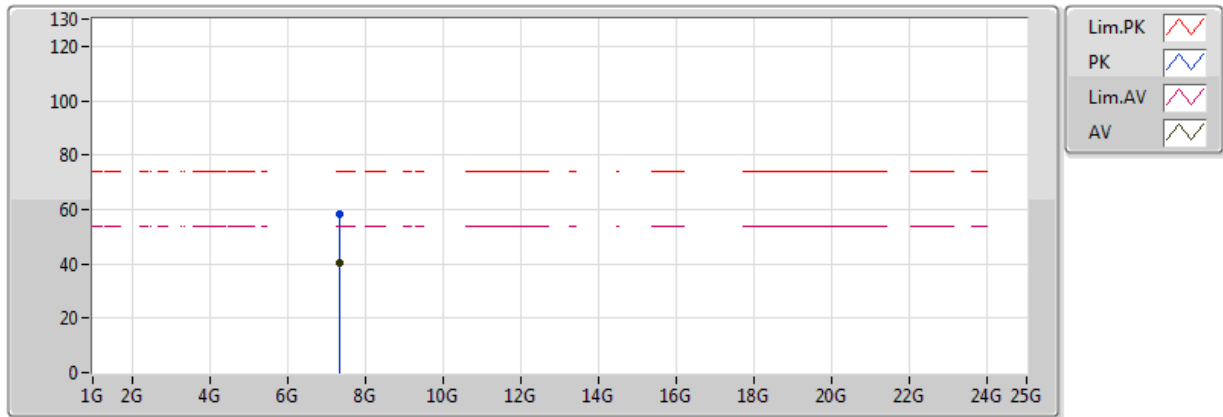


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4538G	102.11	Inf	-Inf	32.05	3	H	0	1.54	-
AV	2.4874G	53.55	54.00	-0.45	32.14	3	H	0	1.54	-
PK	2.4542G	111.43	Inf	-Inf	32.05	3	H	0	1.54	-
PK	2.486G	72.61	74.00	-1.39	32.13	3	H	0	1.54	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX

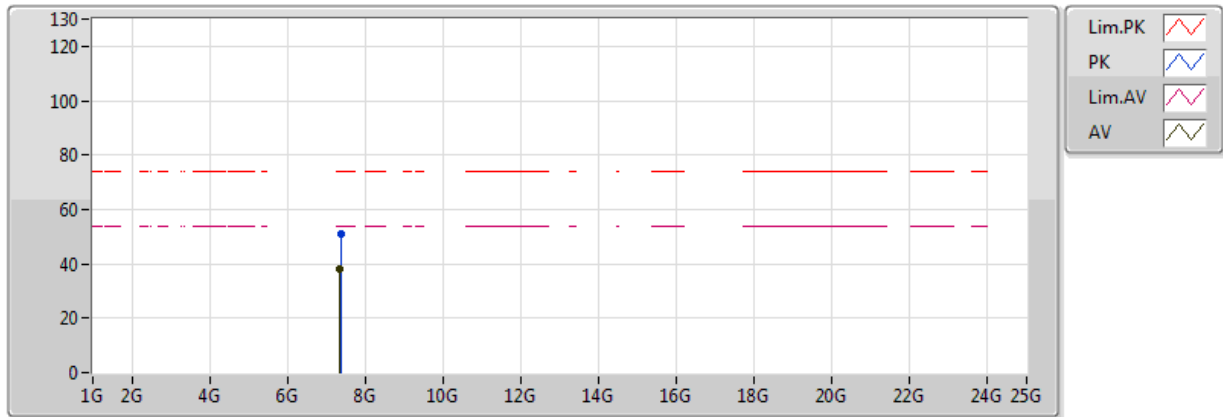


20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.35984G	40.07	54.00	-13.93	12.07	3	V	233	1.95	-
PK	7.3568G	58.19	74.00	-15.81	12.06	3	V	233	1.95	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX



20170511
EUT Y 2TX
Setting 18
02-Z-1
FSU(100015)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	7.34816G	37.92	54.00	-16.08	12.04	3	H	239	1.21	-
PK	7.36832G	51.06	74.00	-22.94	12.09	3	H	239	1.21	-

