



FCC RADIO TEST REPORT

FCC ID : MSQ-RTAXJ300

Equipment : AX3000 Dual Band Wi-Fi Router, AX5400 Dual Band Wi-Fi Router

Brand Name : ASUS

Model Name : RT-AX58U, RT-AX82U

Applicant : ASUSTeK COMPUTER INC.
4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan

Manufacturer (1) : Datamax Electronics (DongGuan) Co., Ltd.
Niu Shan Foreign Economic Industrial Park, Dong Cheng District, Dong Guan City, Guang Dong, China

Manufacturer (2) : Compal Networking (KunShan) Co., LTD.
No. 520, Nabbang Rd., Economic & Technical Development Zone Kunshan, Jiangsu Province China

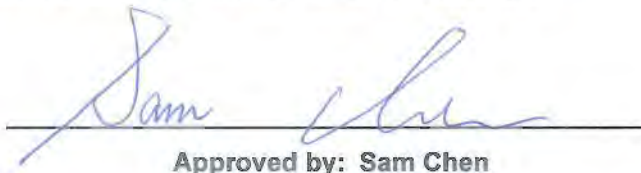
Manufacturer (3) : ARCADYAN TECHNOLOGY (VIETNAM) CO., LTD.
Ba Thien Industrial Park, Ba Hien commune, Binh Xuyen district, Vinh Phuc Province

Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 18, 2019, and testing was started from Jul. 01, 2019 and completed on Aug. 05, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

[illegible]



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Viola Huang



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), VHT20, ax (HEW20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), VHT40, ax (HEW40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT20-BF	20	2TX
2.4-2.4835GHz	VHT20	20	2TX
2.4-2.4835GHz	VHT20-BF	20	2TX
2.4-2.4835GHz	802.11ax HEW20	20	2TX
2.4-2.4835GHz	802.11ax HEW20-BF	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11n HT40-BF	40	2TX
2.4-2.4835GHz	VHT40	40	2TX
2.4-2.4835GHz	VHT40-BF	40	2TX
2.4-2.4835GHz	802.11ax HEW40	40	2TX
2.4-2.4835GHz	802.11ax HEW40-BF	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, 1024QAM modulation.
- ♦ HEW20, HEW40 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 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**

Set	Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	1	PSA	RFDPA161314IMLB701	Dipole Antenna	I-PEX	Note 1
	2	PSA	RFDPA161311IM5B702	Dipole Antenna	I-PEX	
	3	PSA	RFDPA161310IM5B701	Dipole Antenna	I-PEX	
	4	PSA	RFDPA161316IMLB701	Dipole Antenna	I-PEX	
2	1	M.gear	C660-510468-A	Dipole Antenna	I-PEX	
	2	M.gear	C660-510469-A	Dipole Antenna	I-PEX	
	3	M.gear	C660-510470-A	Dipole Antenna	I-PEX	
	4	M.gear	C660-510471-A	Dipole Antenna	I-PEX	
3	1	M.gear	C660-510472-A	Dipole Antenna	I-PEX	
	2	M.gear	C660-510473-A	Dipole Antenna	I-PEX	
	3	M.gear	C660-510474-A	Dipole Antenna	I-PEX	
	4	M.gear	C660-510475-A	Dipole Antenna	I-PEX	
4	1	PSA	RFDPA171314IMLB701	Dipole Antenna	I-PEX	
	2	PSA	RFDPA171311IM5B702	Dipole Antenna	I-PEX	
	3	PSA	RFDPA171310IM5B702	Dipole Antenna	I-PEX	
	4	PSA	RFDPA171316IMLB701	Dipole Antenna	I-PEX	



Note 1:

Set	Ant.	Port			2.4GHz	5GHz Band 1	5GHz Band 4
		2.4G 2TX	5G 2TX	5G 4TX			
1	1	2	-	2	1.71	1.75	1.70
	2	-	1	1	-	1.93	1.95
	3	-	2	4	-	1.75	1.89
	4	1	-	3	1.63	1.92	1.87
2	1	2	-	2	1.61	1.74	1.67
	2	-	1	1	-	1.76	1.87
	3	-	2	4	-	1.66	1.84
	4	1	-	3	1.6	1.88	1.86
3	1	2	-	2	1.7	1.71	1.68
	2	-	1	1	-	1.68	1.85
	3	-	2	4	-	1.63	1.77
	4	1	-	3	1.62	1.67	1.85
4	1	2	-	2	1.7	1.74	1.68
	2	-	1	1	-	1.86	1.9
	3	-	2	4	-	1.48	1.88
	4	1	-	3	1.61	1.63	1.86

Note 2: The above information was declared by manufacturer.

Note 3: The EUT has four sets of antennas and there are four antennas for each set.

Set 1~4 are the same type antenna. Only the highest gain Set 1 antenna was selected to test and record in this report.

For 2.4GHz WLAN function**IEEE 802.11b/g/n/VHT/ax mode (2TX/2RX):**

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

Port 1 and port 2 could transmit/receive simultaneously.

For 5GHz WLAN function**IEEE 802.11a/n/ac/ax mode (2TX, 4TX/4RX):**

For 2TX

Port 1 and port 2 can be used as transmitting antenna.

Port 1 and port 2 could transmit simultaneously.

For 4TX, 4RX

Port 1, port 2, port 3 and port 4 can be used as transmitting/receiving antenna.

Port 1, port 2, port 3 and port 4 could transmit/receive simultaneously.

**1.1.3 Mode Test Duty Cycle****For 2T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b	0.985	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11g	0.946	0.24	2.064m	1k
802.11ax HEW20-BF	0.976	0.11	1.148m	1k
802.11ax HEW40-BF	0.975	0.11	1.202m	1k

For 2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.976	0.11	1.168m	1k
802.11ax HEW40	0.975	0.11	1.209m	1k

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	For IEEE 802.11n/ax/VHT in 2.4GHz and IEEE 802.11n/ac/ax in 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	Mtool V3.1.0.3			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The Equipment and model names in the following table are all refer to the identical product.

Equipment	Model Name	Description
AX3000 Dual Band Wi-Fi Router, AX5400 Dual Band Wi-Fi Router	RT-AX82U, RT-AX58U	All the equipments and models are identical, the different equipment and model names served as marketing strategy.

From the above table, equipment: AX3000 Dual Band Wi-Fi Router and model: RT-AX82U was selected as representative model for the test and its data was recorded in this report.

1.1.6 Table for SKU information

SKU	Material	Housing	Brand	P/N
SKU 1	PJ-45 port was covered by plastic.	There are two different housings.	LAN port : ETSWAP / Mingtek	LAN port : NS773602 / HN36201CG
SKU 2	PJ-45 port was covered by metal.		WAN port : ETSWAP / Mingtek	WAN port: NS771802 / HN18101CG

1.1.7 Table for EUT supports functions

Function	Support Type
AP Router	Master
Bridge	Slave without radar detection
Repeater	Master



1.2 Applicable 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 v05r02
- ♦ FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	TEL : 886-3-327-3456	FAX : 886-3-327-0973
☒	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	TH02-CB	Owen Hsu	26.4~27.3°C / 61~63%	Jul. 18, 2019~Aug. 01, 2019
Radiated below 1GHz	03CH06-CB	KJ Chang	26.8~28.8°C / 52~56%	Jul. 31, 2019
Radiated above 1GHz	03CH06-CB	KJ Chang	25.8~28.2°C / 63~67%	Jul. 01, 2019~Aug. 01, 2019
AC Conduction	CO01-CB	Wei Li	24.3~24.8°C / 59~63%	Jul. 11, 2019~Aug. 05, 2019

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086B 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)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For 2T1S

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	106
2437MHz	108
2462MHz	109
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	85
2417MHz	94
2437MHz	109
2457MHz	97
2462MHz	87
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	78
2417MHz	91
2437MHz	109
2457MHz	91
2462MHz	87
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	73
2427MHz	79
2437MHz	88
2452MHz	82

**For 2T2S**

Mode	PowerSetting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
2412MHz	86
2417MHz	89
2437MHz	109
2457MHz	94
2462MHz	91
802.11ax HEW40_Nss2,(MCS0)_2TX	-
2422MHz	79
2437MHz	88
2452MHz	88

Note:

- ♦ After evaluating, 802.11ax mode has been evaluated to be the worst case, so it was selected to test and record in this test report.
- ♦ There are two modes of EUT for 802.11n/ax/VHT in 2.4GHz and 802.11n/ac/ax in 5GHz. One is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.

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	CTX
1	SKU 1 (2.4GHz) + adapter 1
2	SKU 1 (5GHz) + adapter 1
For operating mode 1 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	CTX
1	SKU 1 (2.4GHz) + adapter 1
2	SKU 1 (5GHz) + adapter 1
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	SKU 2 (2.4GHz) + adapter 1
For operating mode 3 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	SKU 1 (2.4GHz) + adapter 1



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	SKU 1 - WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA952922 for Co-location RF Exposure Evaluation.	

Note: The EUT only uses in Z axis.

2.3 EUT Operation during Test

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under telnet.
3. Executed "LanTest20" to link with the remote workstation to transmit and receive packet by Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	P/N	Rating
Adapter 1	PI	AD2088320	010LF	INPUT: 100-240V ~ 50/60Hz, 0.8A OUTPUT: 19V, 1.75A
Adapter 2	PI	AD2088320	010-5LF	INPUT: 100-240V ~ 50/60Hz, 0.8A OUTPUT: 19V, 1.75A
Other				
RJ-45 cable*1, Non-shielded, 1.5m				

Note: The power adapter 1~ adapter 2 do not affect the test result of RF tests, so only adapter 1 was tested and recorded in this report.

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN NB	DELL	E6430	N/A
B	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

For Radiated (above 1GHz): (For non beamforming mode)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

(For beamforming mode)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Device	ASUS	RT-AX88U	N/A
C	NB	DELL	E4300	N/A



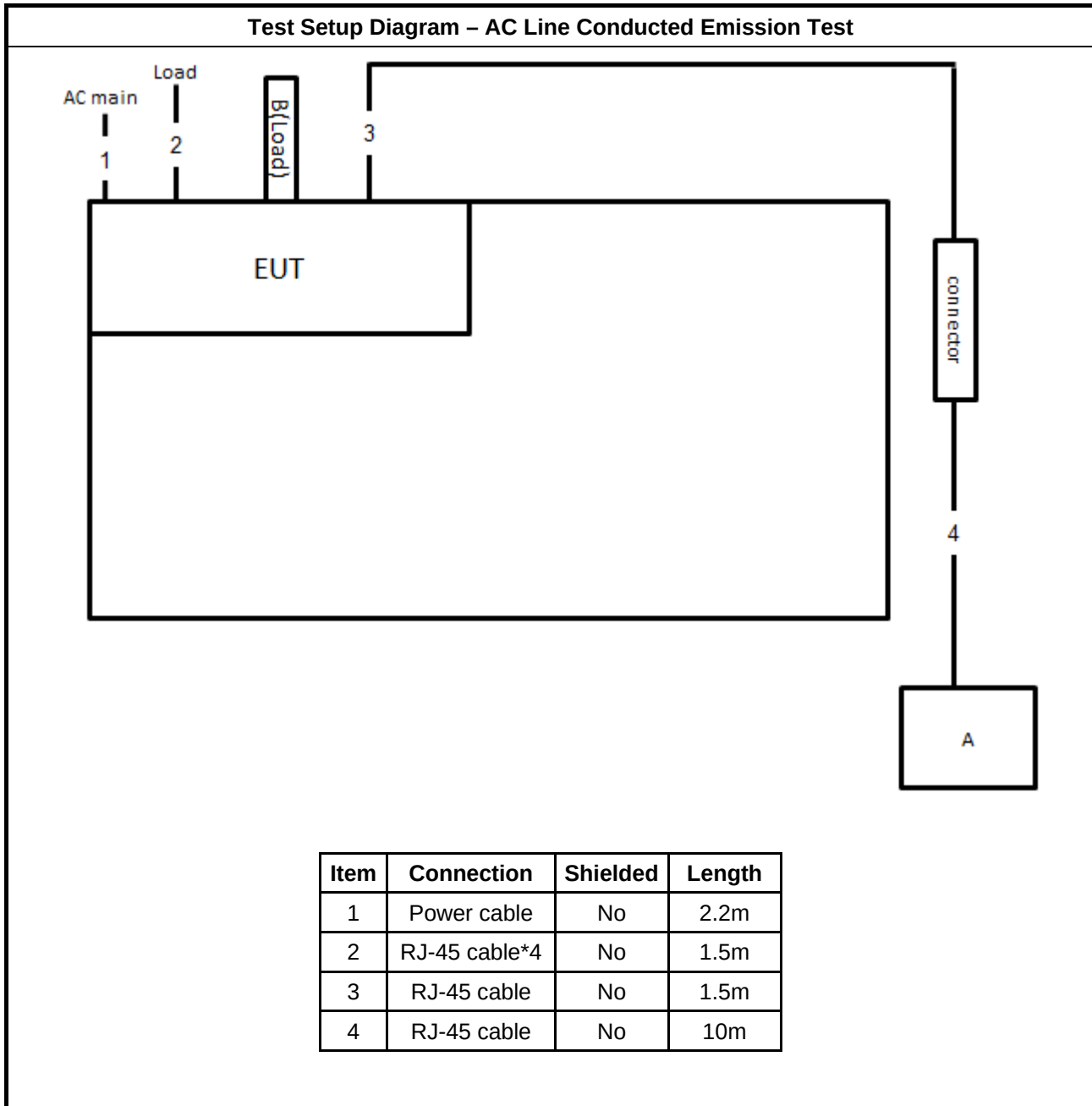
For RF Conducted:
(For non beamforming mode)

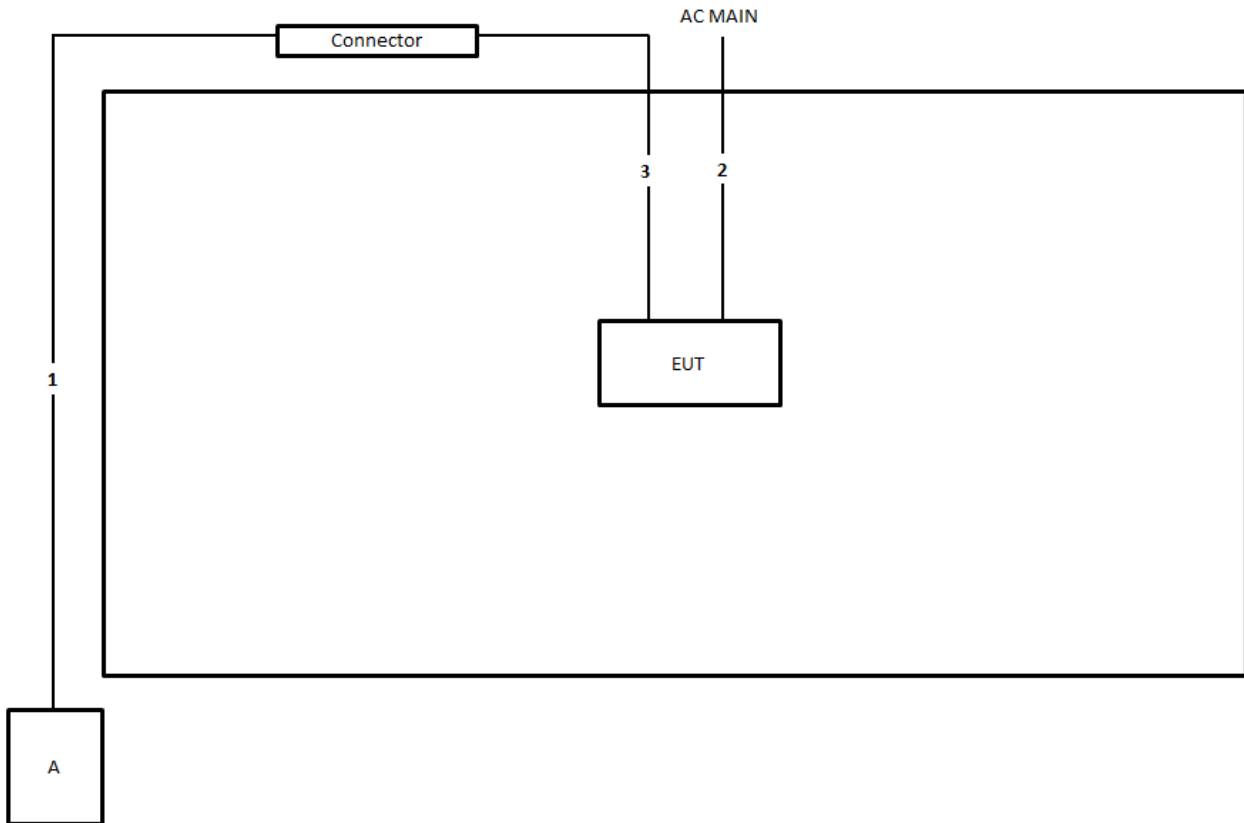
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

(For beamforming mode)

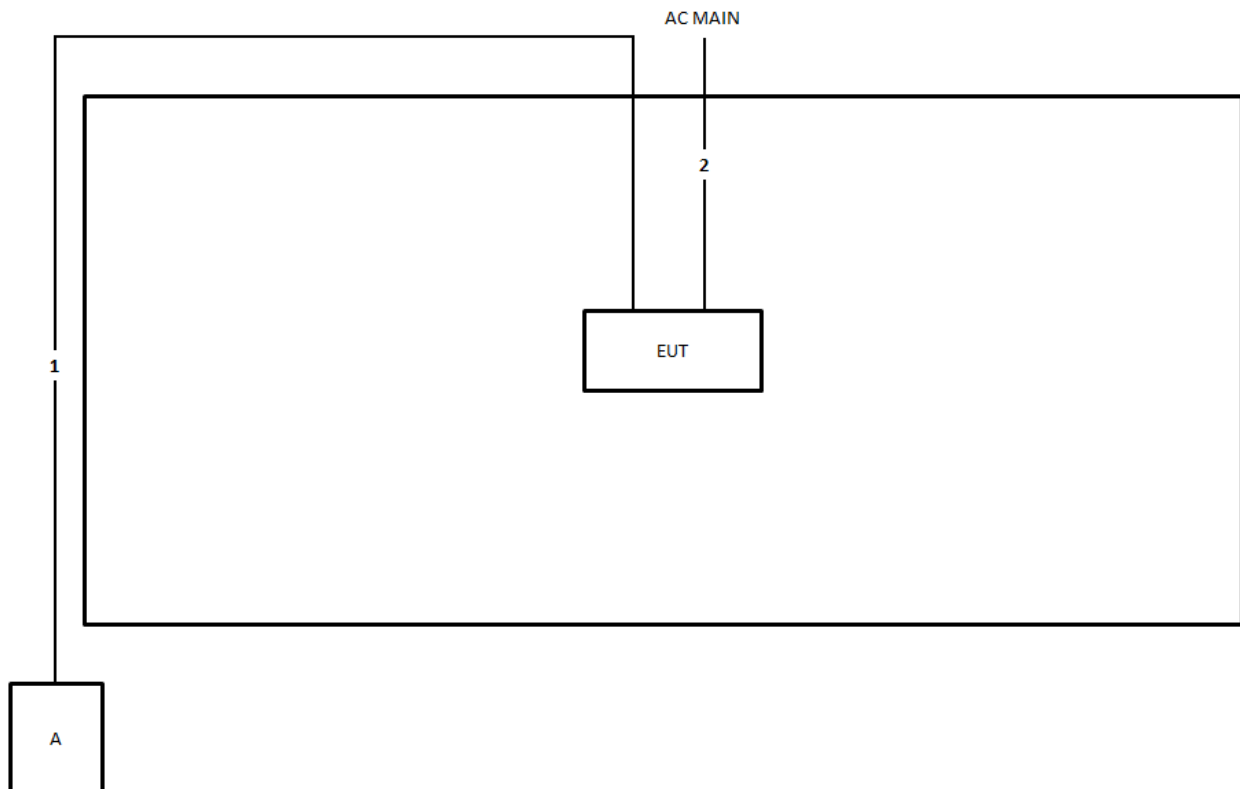
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	Device	ASUS	RT-AX82U	NA

2.6 Test Setup Diagram

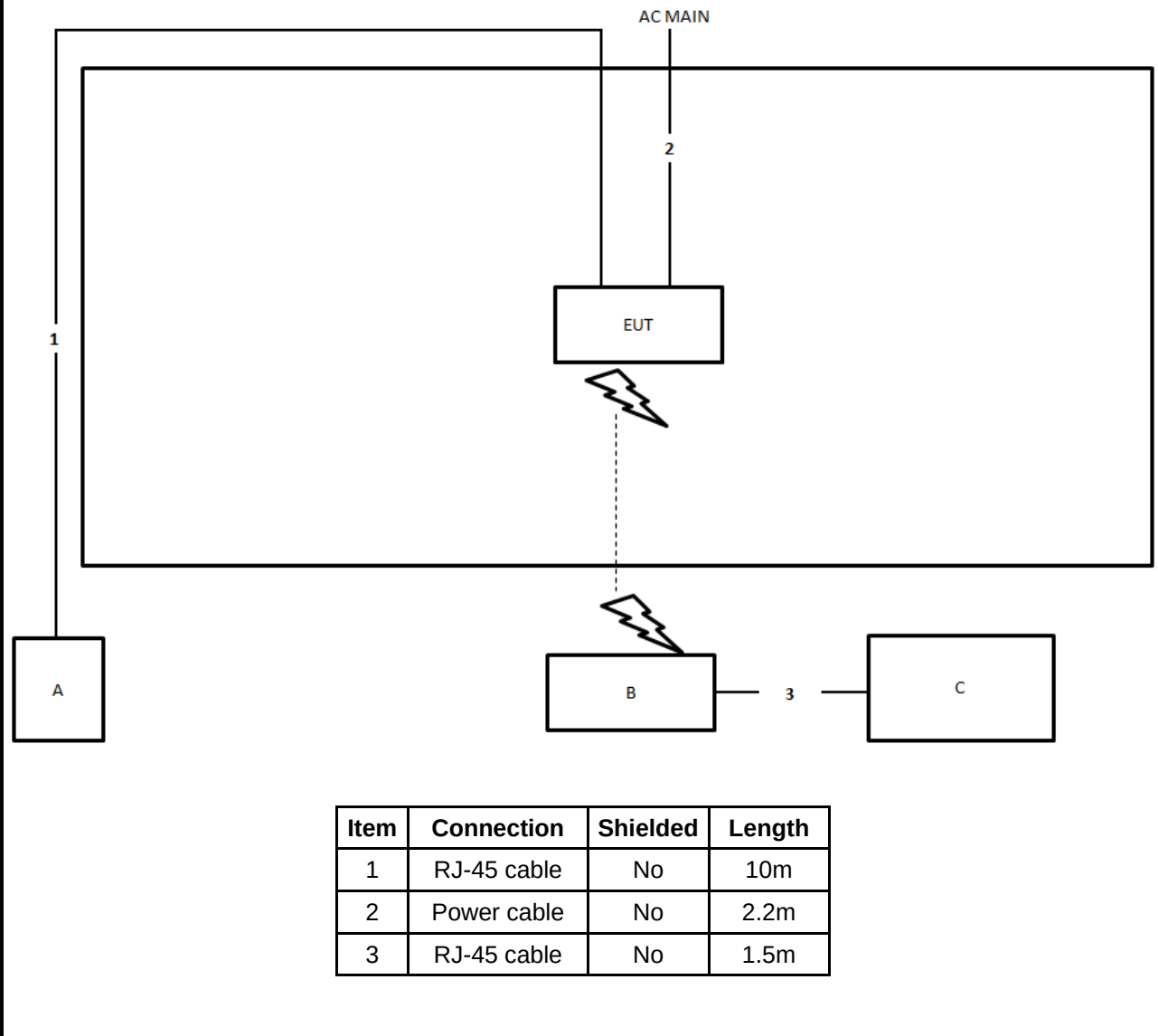


Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m
3	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz / For non-beamforming mode


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m

Test Setup Diagram - Radiated Test > 1GHz / For beamforming mode




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.

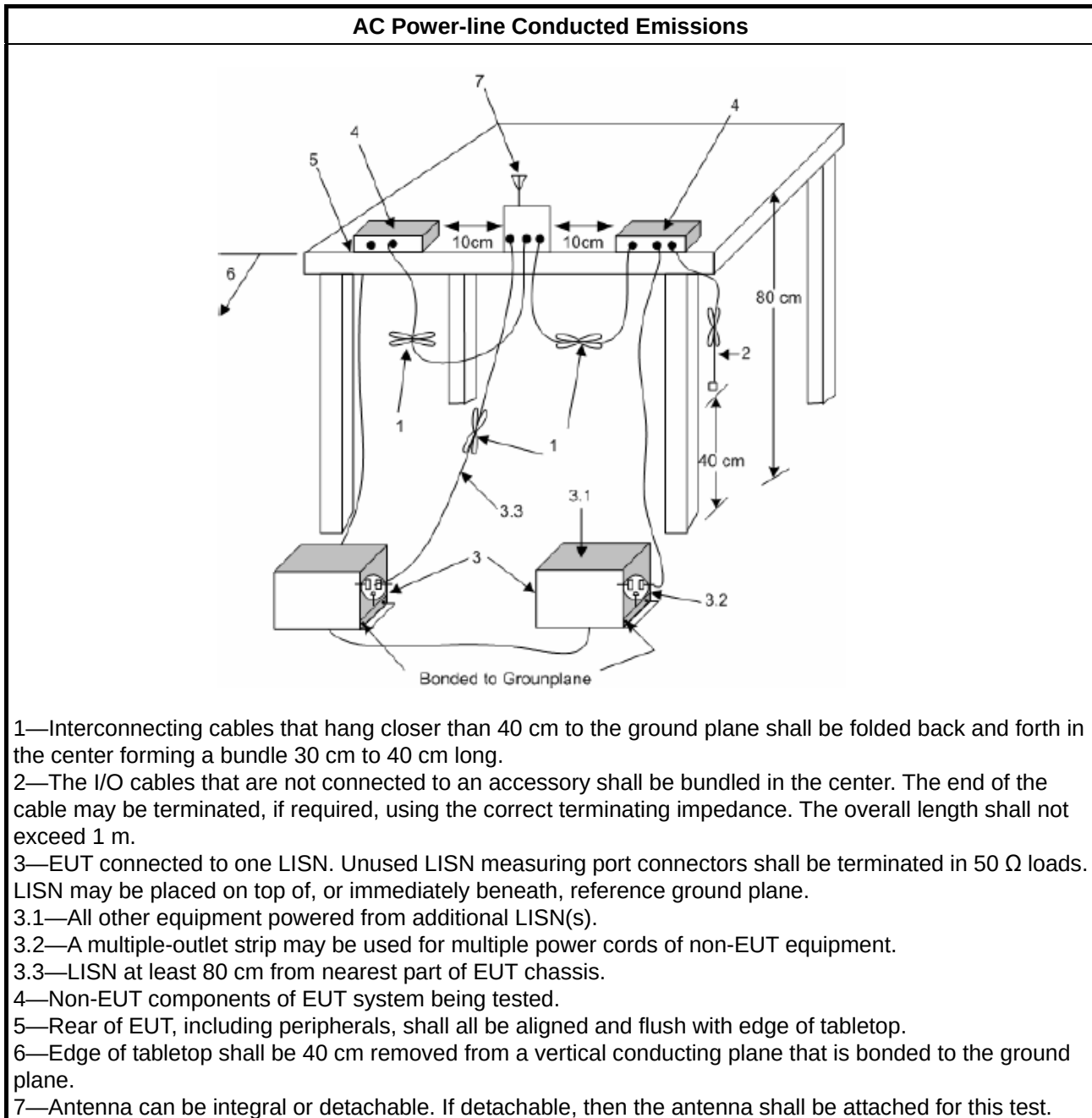
3.1.2 Measuring Instruments

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.

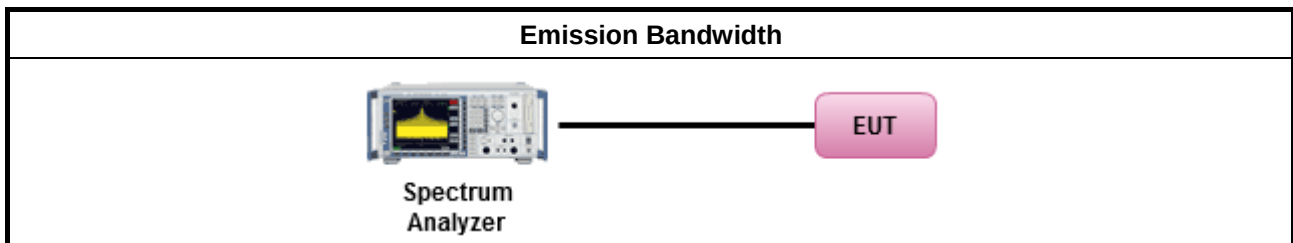
3.2.2 Measuring Instruments

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 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
☐	Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 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.	

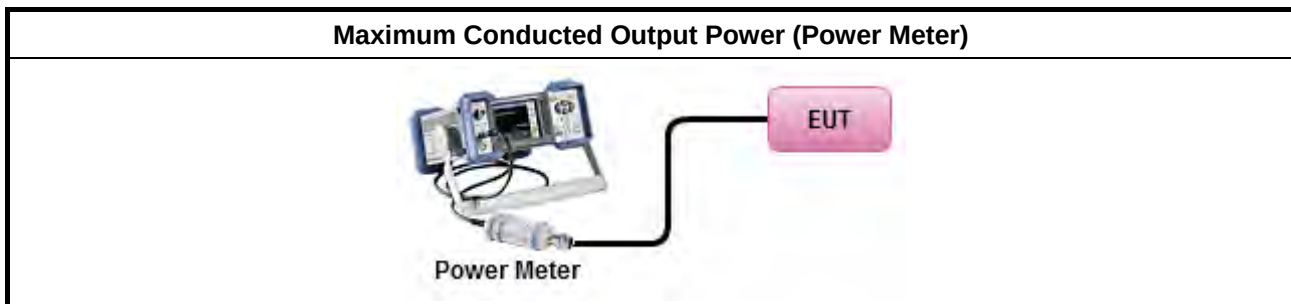
3.3.2 Measuring Instruments

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 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
☒	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
☐	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (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

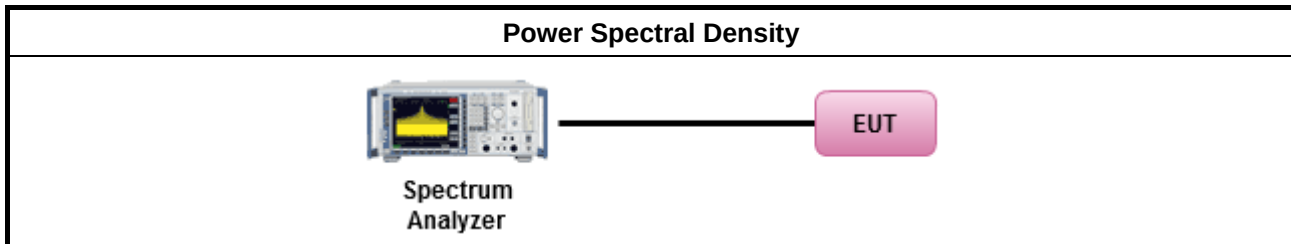
Refer a test equipment and calibration data table in this test report.

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 8.4 & C63.10 clause 11.10.2 Method PKPSD. [duty cycle $\geq 98\%$ or external video / power trigger]
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPS-1.
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPS-2.
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPS-3.
duty cycle $< 98\%$ and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPS-1A. (alternative).
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPS-2A. (alternative)
☐	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPS-3A. (alternative)
▪ 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 (dBc)
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.	

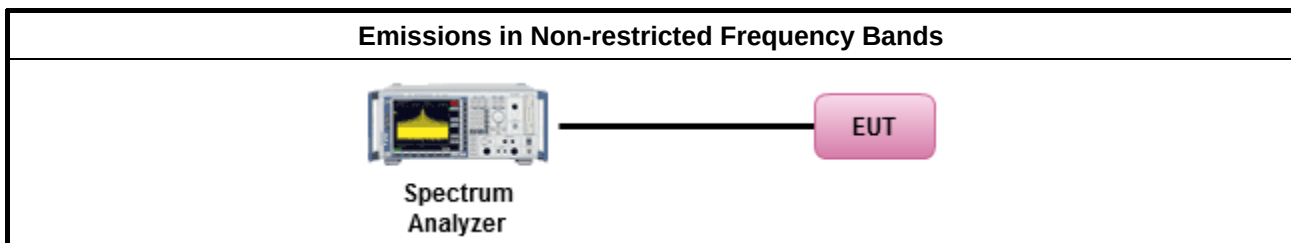
3.5.2 Measuring Instruments

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 8.5 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.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

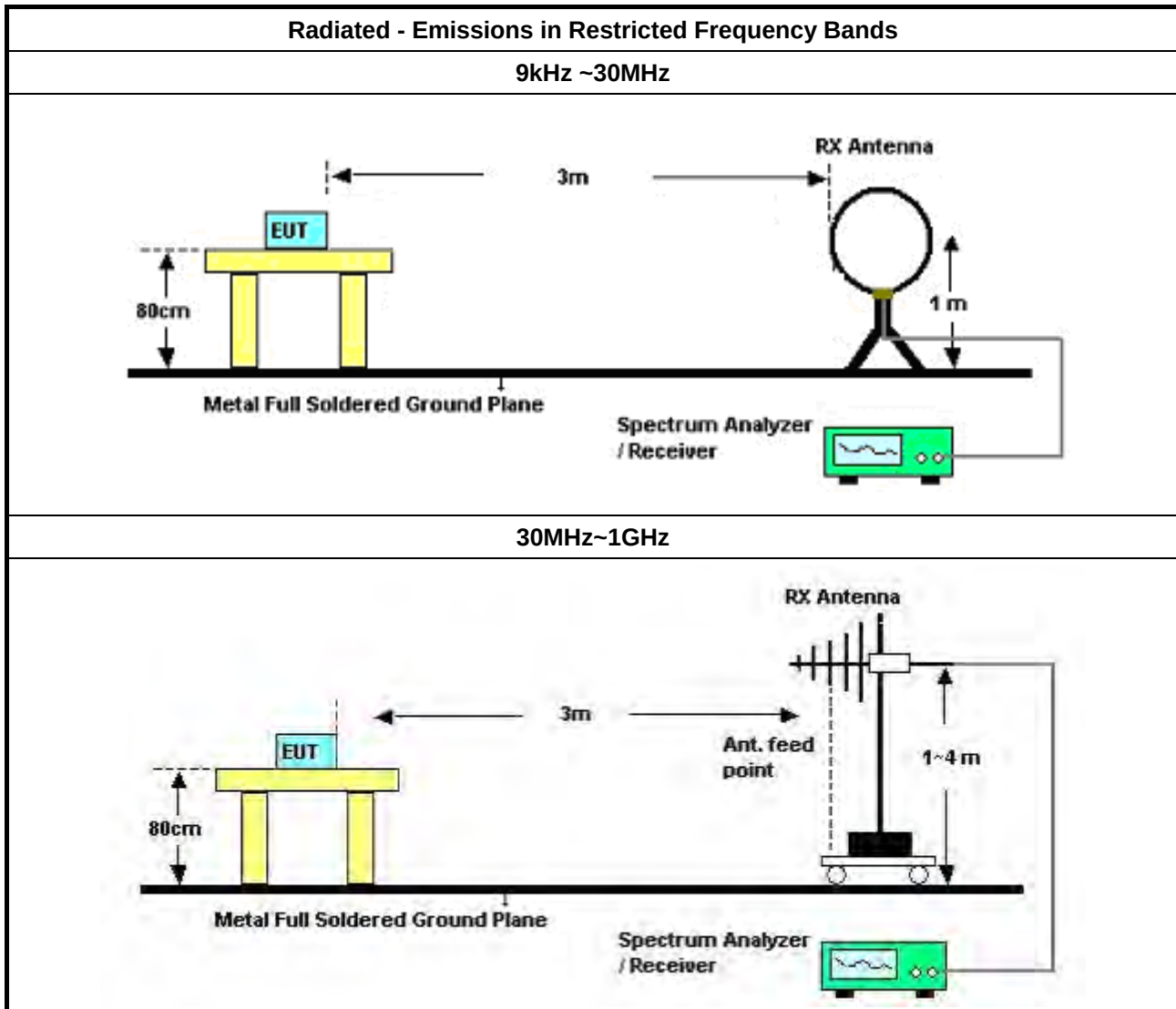
Refer a test equipment and calibration data table in this test report.

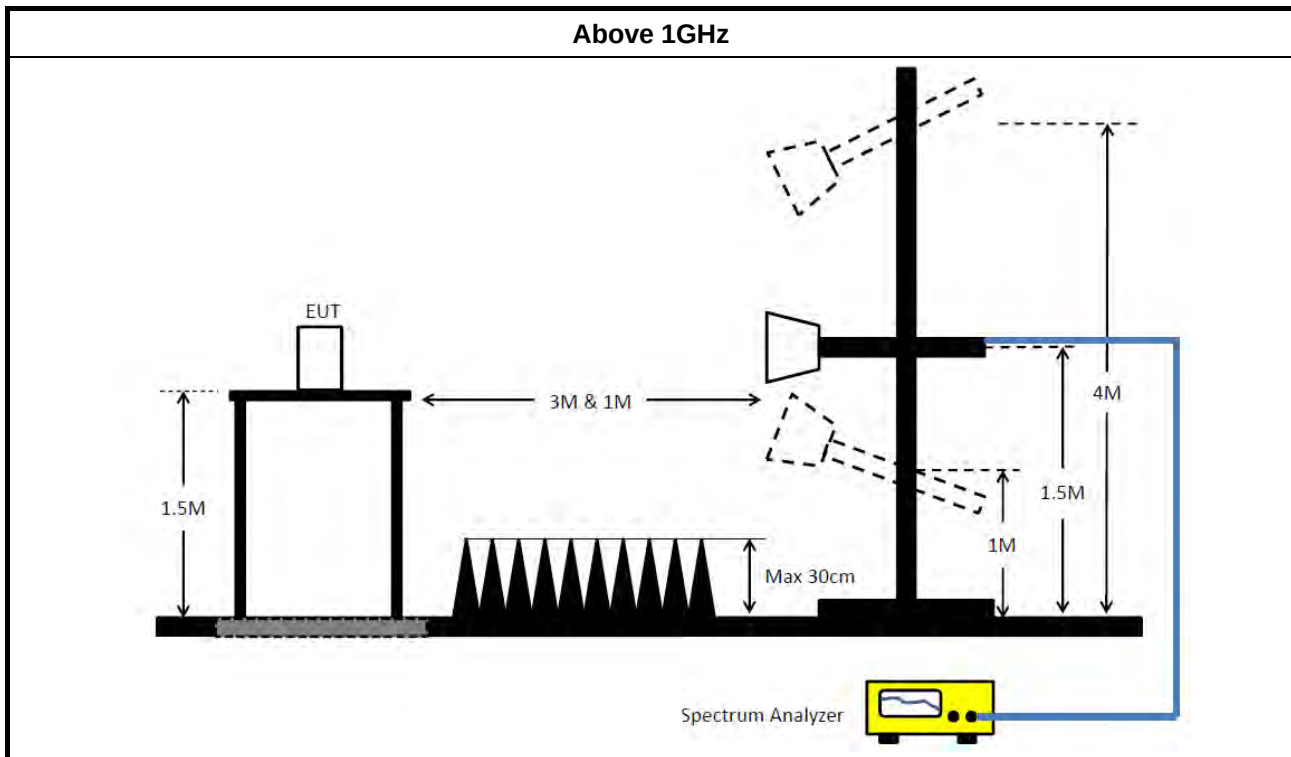


3.6.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 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 8.6 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:	
	▪ Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, 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 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	▪ 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 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.6.6 Emissions in Restricted Frequency Bands (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.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 21, 2019	May 20, 2020	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Aug. 04, 2018	Aug. 03, 2019	Radiation (03CH06-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 20, 2018	Jul. 19, 2019	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 17, 2019	Jul. 16, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	May 07, 2019	May 06, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 08, 2019	May 07, 2020	Radiation (03CH06-CB)
Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH06-CB)
RF Cable-low	HUBER+SUHNER	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05	1GHz~18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05+24	1GHz~18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH06-CB)



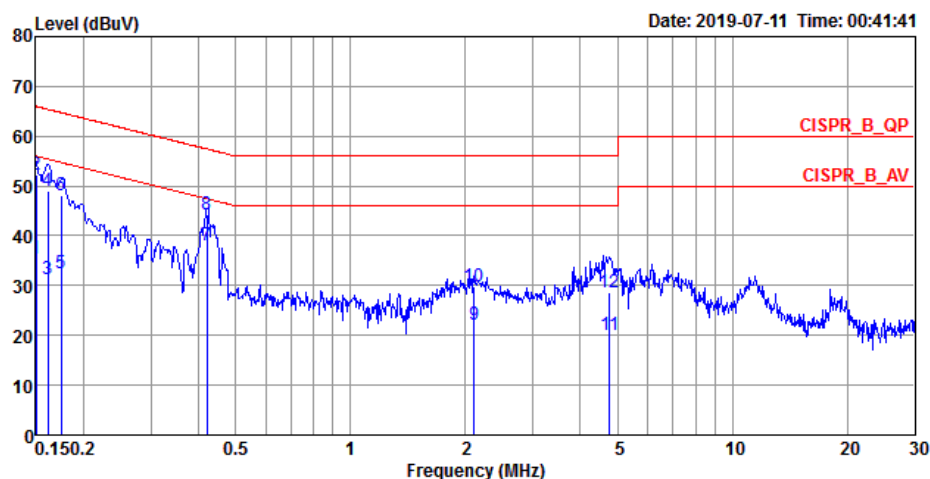
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 24, 2018	Oct. 23, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)

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

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

AC Power-line Conducted Emissions Result

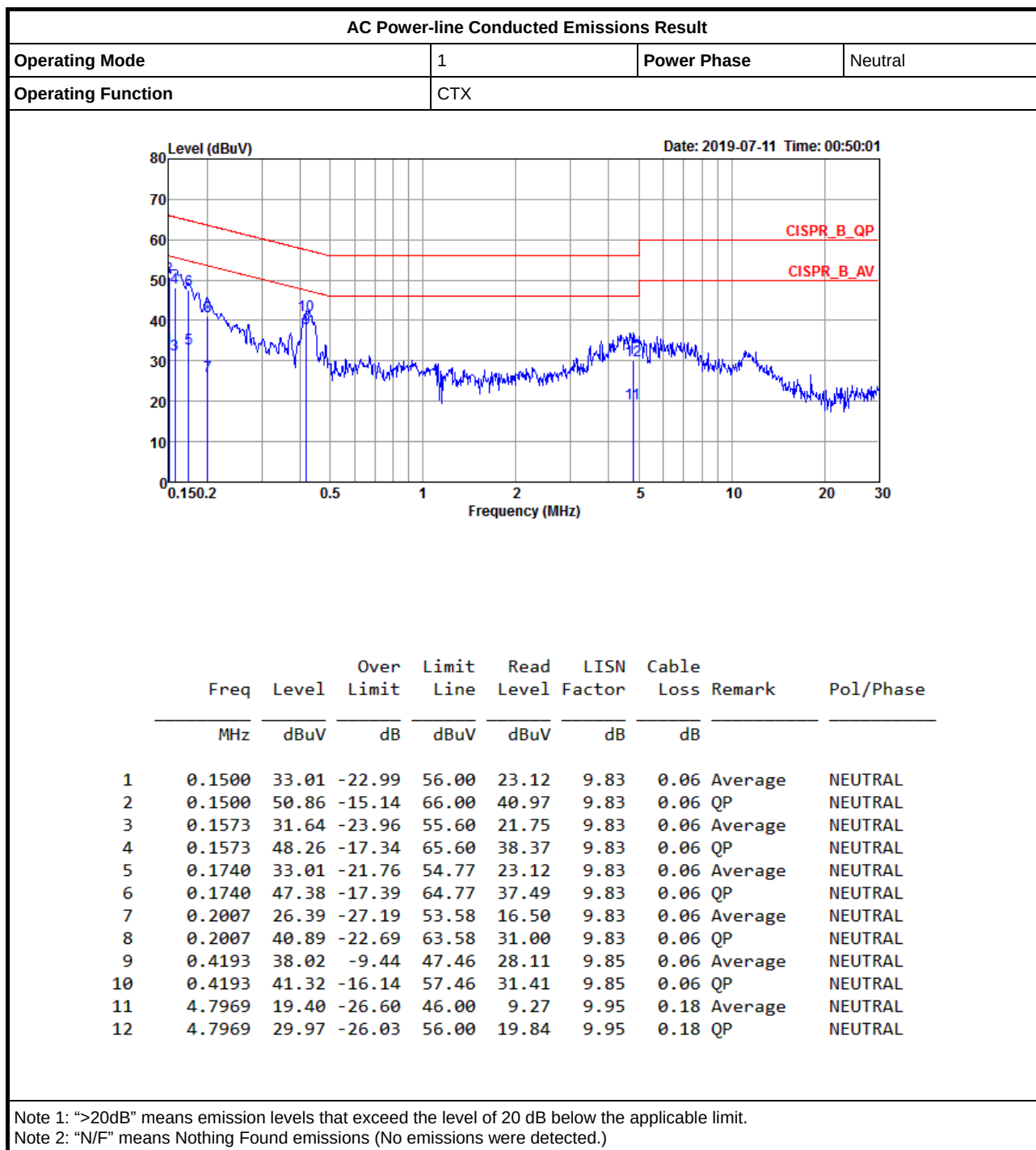
Operating Mode	1	Power Phase	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	35.34	-20.66	56.00	25.44	9.84	0.06	Average	LINE
2	0.1500	52.30	-13.70	66.00	42.40	9.84	0.06	QP	LINE
3	0.1616	31.29	-24.09	55.38	21.39	9.84	0.06	Average	LINE
4	0.1616	49.08	-16.30	65.38	39.18	9.84	0.06	QP	LINE
5	0.1749	32.50	-22.22	54.72	22.59	9.85	0.06	Average	LINE
6	0.1749	48.04	-16.68	64.72	38.13	9.85	0.06	QP	LINE
7	0.4215	38.13	-9.29	47.42	28.20	9.87	0.06	Average	LINE
8	0.4215	44.24	-13.18	57.42	34.31	9.87	0.06	QP	LINE
9	2.1101	22.22	-23.78	46.00	12.18	9.92	0.12	Average	LINE
10	2.1101	29.71	-26.29	56.00	19.67	9.92	0.12	QP	LINE
11	4.7716	20.06	-25.94	46.00	9.91	9.97	0.18	Average	LINE
12	4.7716	28.65	-27.35	56.00	18.50	9.97	0.18	QP	LINE

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)



For 2T1S Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	7.525M	10.545M	10M5G1D	6.075M	10.395M
802.11g_Nss1,(6Mbps)_2TX	16.35M	16.842M	16M8D1D	16.3M	16.542M
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	19.025M	19.115M	19M1D1D	18.925M	18.966M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	37.55M	37.581M	37M6D1D	37.15M	37.531M

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

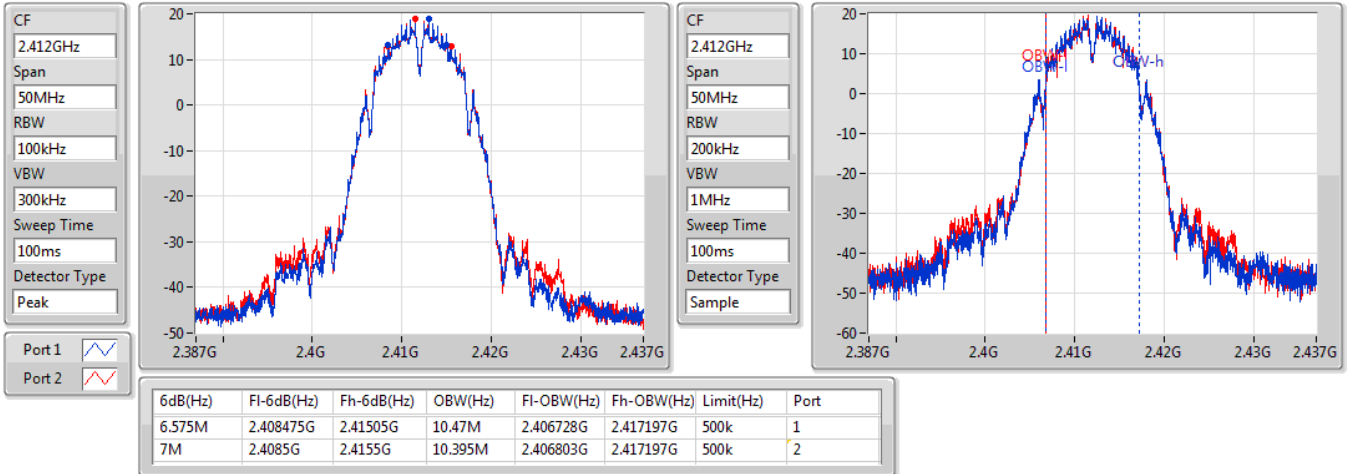
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	6.575M	10.47M	7M	10.395M
2437MHz	Pass	500k	6.075M	10.445M	7.525M	10.545M
2462MHz	Pass	500k	6.525M	10.545M	6.1M	10.395M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.617M	16.35M	16.567M
2437MHz	Pass	500k	16.325M	16.792M	16.3M	16.842M
2462MHz	Pass	500k	16.35M	16.592M	16.325M	16.542M
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.95M	19.04M	18.95M	18.966M
2437MHz	Pass	500k	18.95M	19.09M	18.925M	19.115M
2462MHz	Pass	500k	18.95M	18.966M	19.025M	18.966M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.2M	37.581M	37.15M	37.531M
2437MHz	Pass	500k	37.3M	37.531M	37.45M	37.531M
2452MHz	Pass	500k	37.55M	37.531M	37.5M	37.531M

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

802.11b_Nss1,(1Mbps)_2TX

EBW
2412MHz

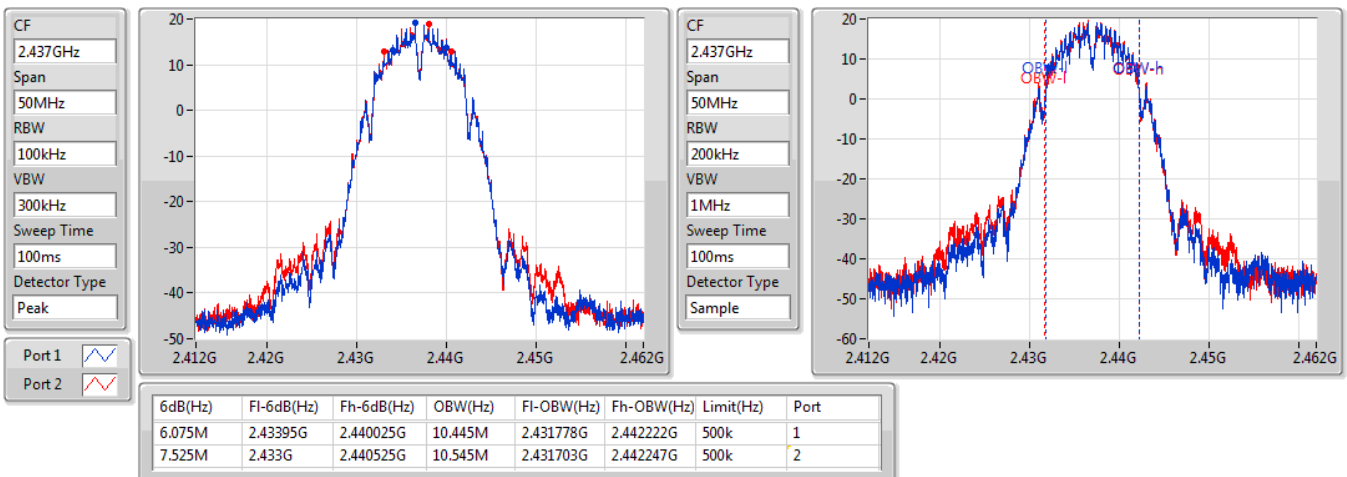
18/07/2019



802.11b_Nss1,(1Mbps)_2TX

EBW
2437MHz

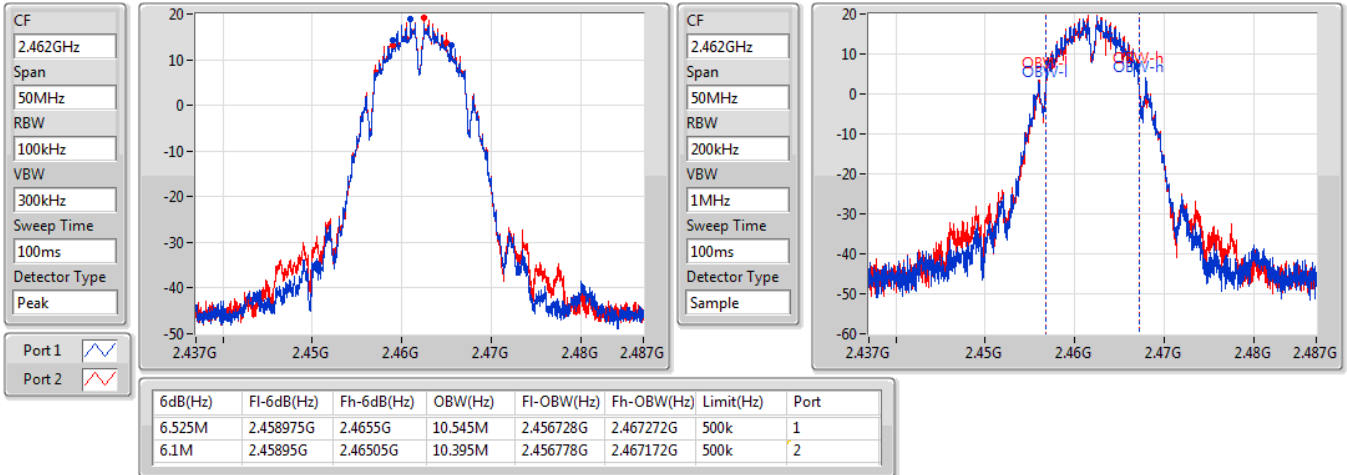
18/07/2019



802.11b_Nss1,(1Mbps)_2TX

EBW
2462MHz

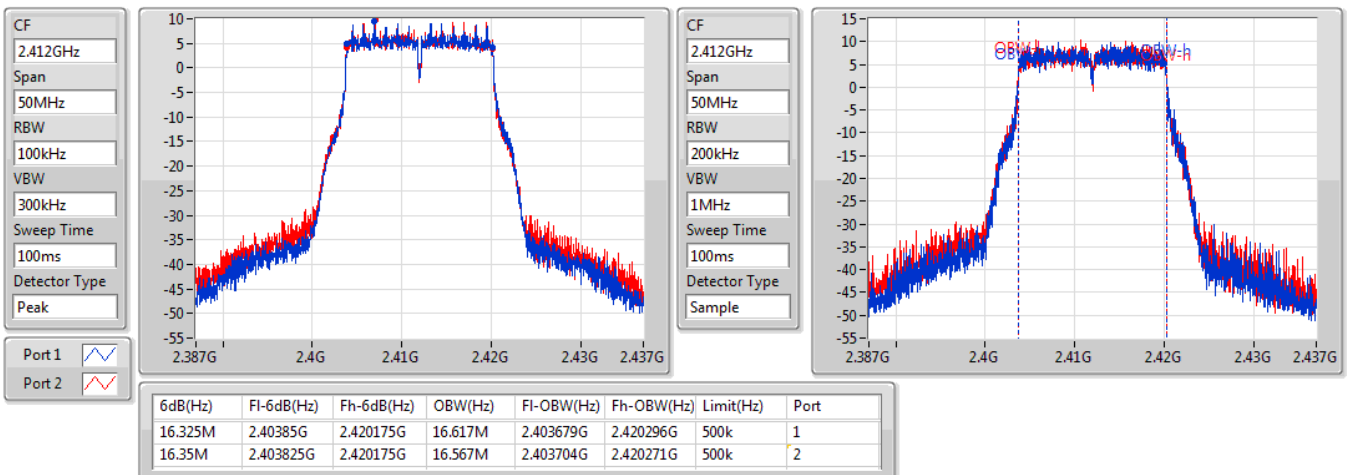
18/07/2019



802.11g_Nss1,(6Mbps)_2TX

EBW
2412MHz

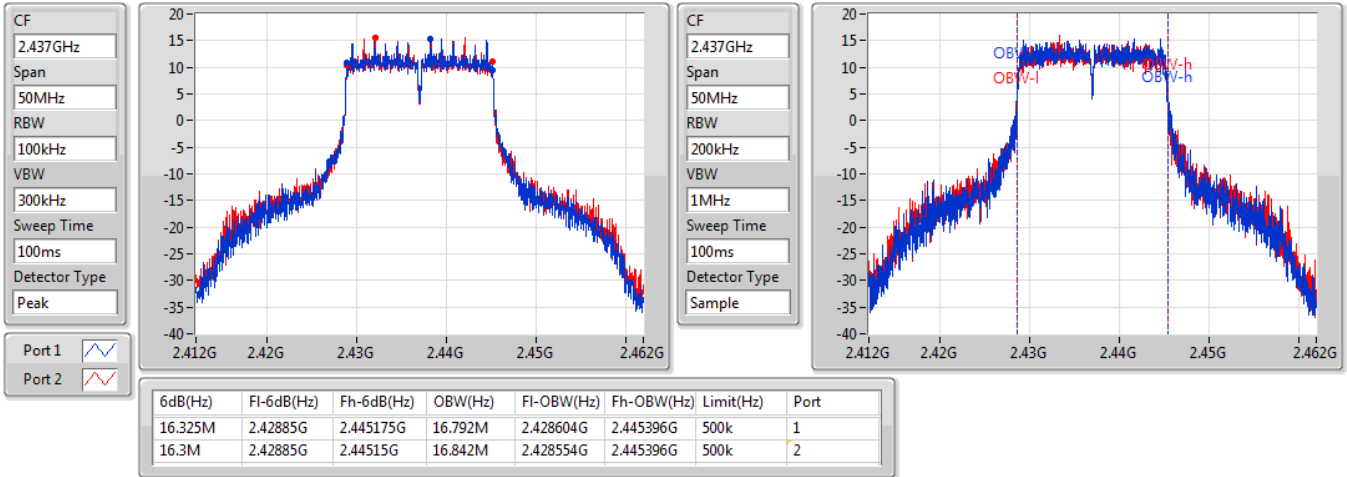
18/07/2019



802.11g_Nss1,(6Mbps)_2TX

2437MHz

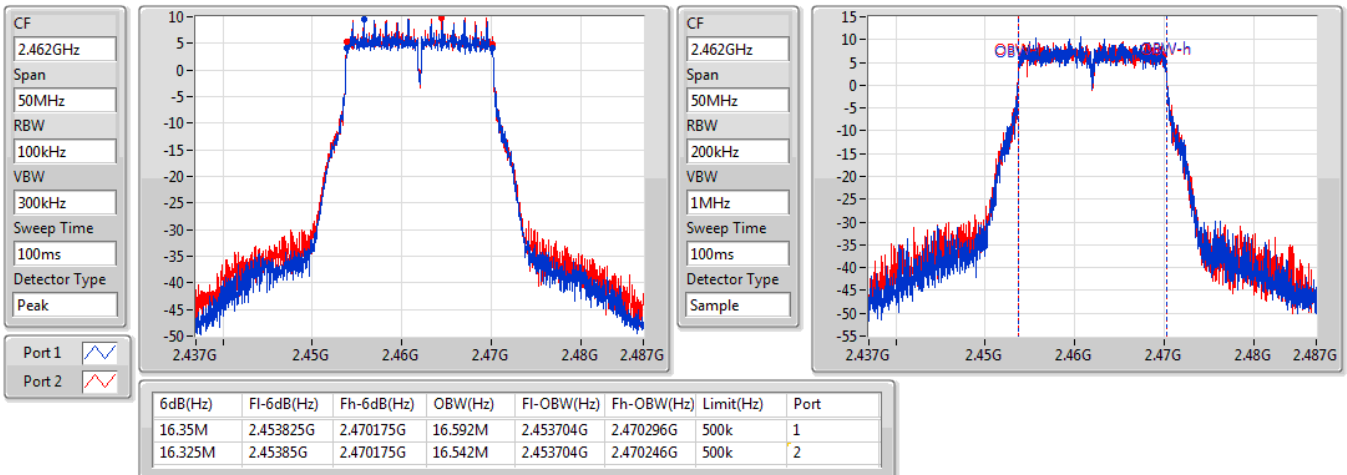
18/07/2019



802.11g_Nss1,(6Mbps)_2TX

2462MHz

18/07/2019

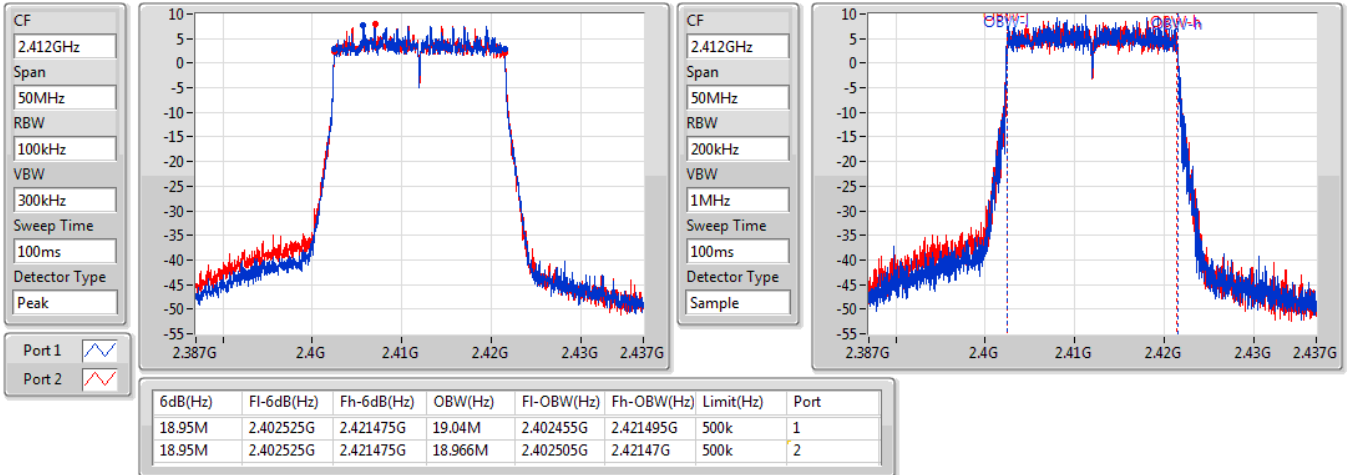


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

2412MHz

18/07/2019

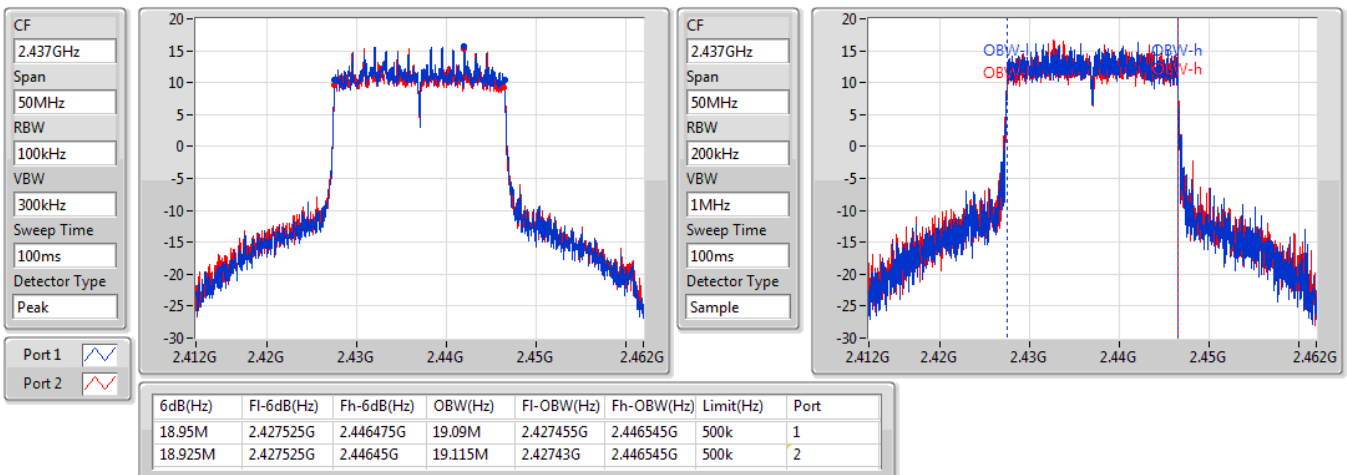


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

2437MHz

18/07/2019

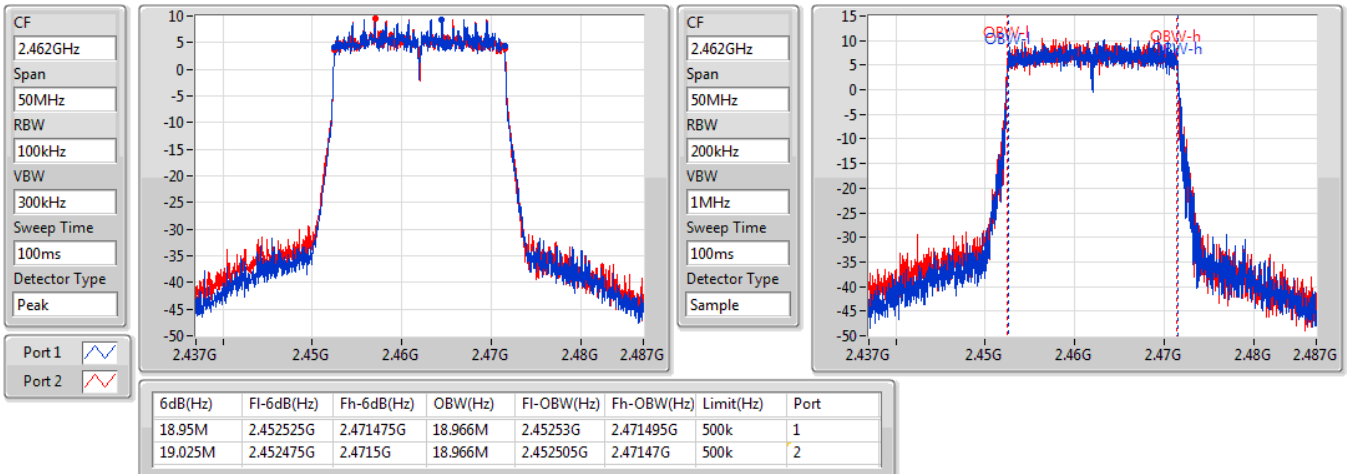


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

2462MHz

18/07/2019

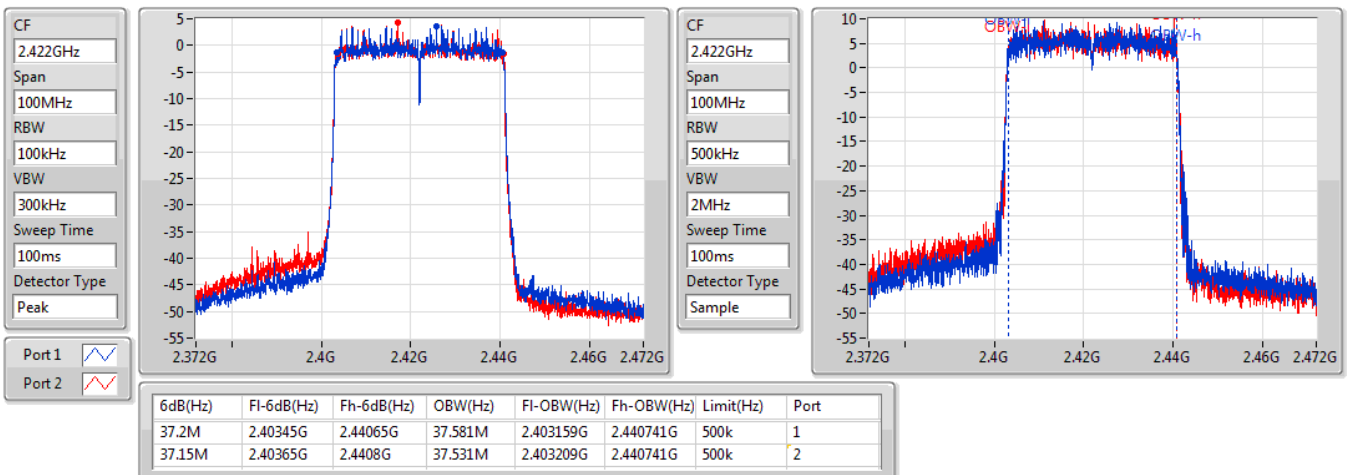


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

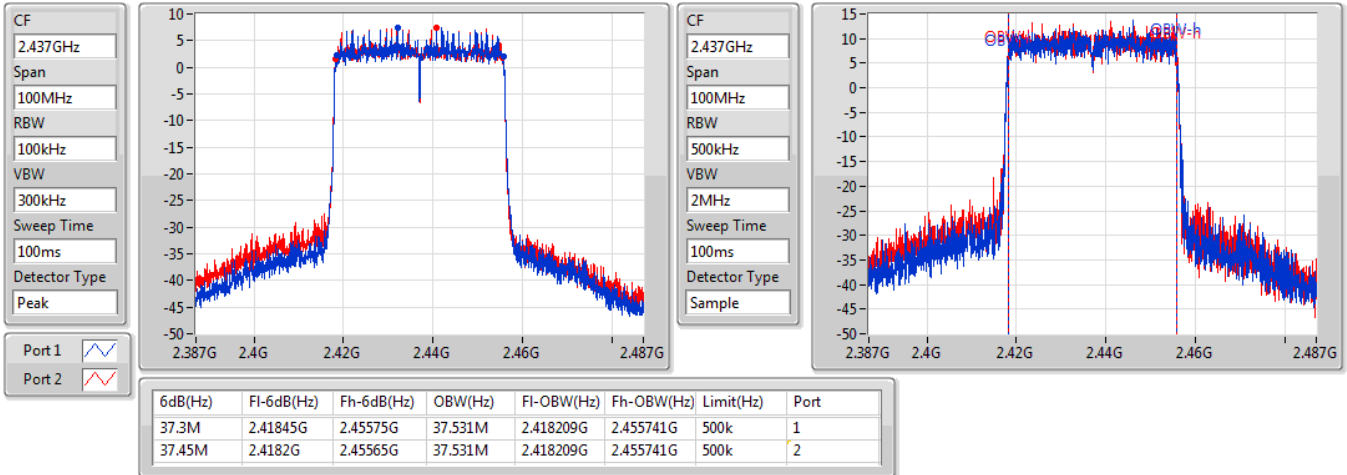
2422MHz

18/07/2019

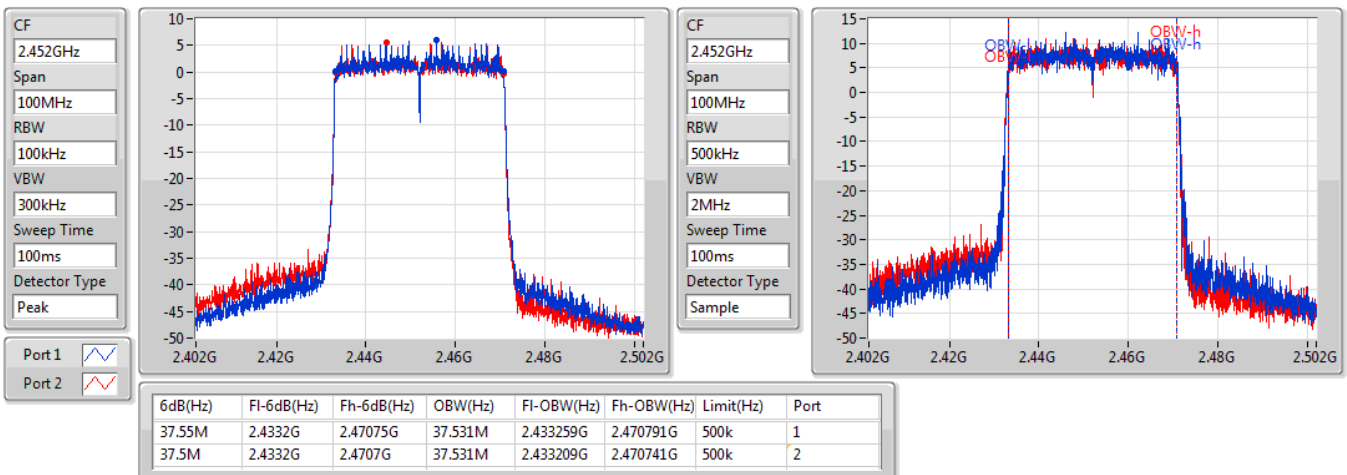


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

18/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2452MHz

18/07/2019



For 2T2S Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	19M	19.14M	19M1D1D	18.9M	18.941M
802.11ax HEW40_Nss2,(MCS0)_2TX	37.6M	37.631M	37M6D1D	37.5M	37.531M

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;

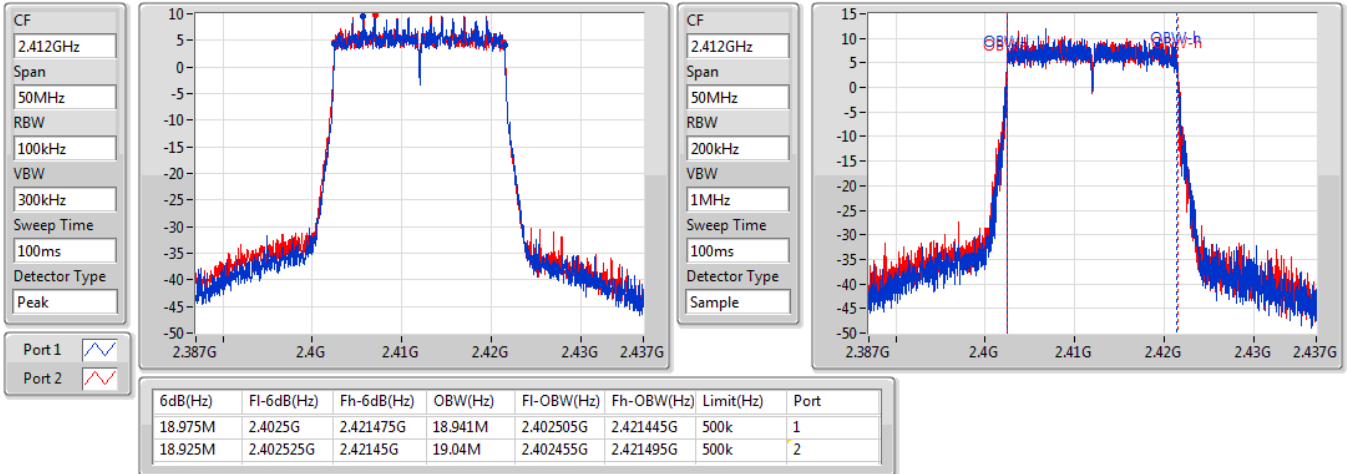
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.975M	18.941M	18.925M	19.04M
2437MHz	Pass	500k	18.925M	19.09M	18.9M	19.14M
2462MHz	Pass	500k	19M	18.966M	18.95M	18.991M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.55M	37.631M	37.5M	37.631M
2437MHz	Pass	500k	37.6M	37.531M	37.6M	37.531M
2452MHz	Pass	500k	37.6M	37.531M	37.6M	37.531M

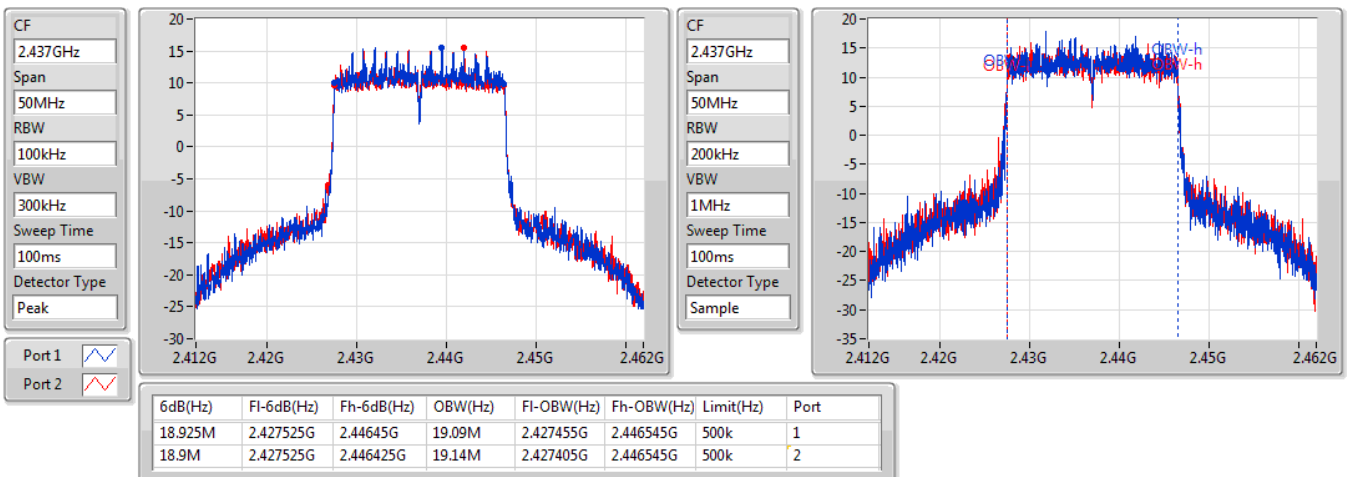
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
2412MHz

18/07/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
2437MHz

18/07/2019

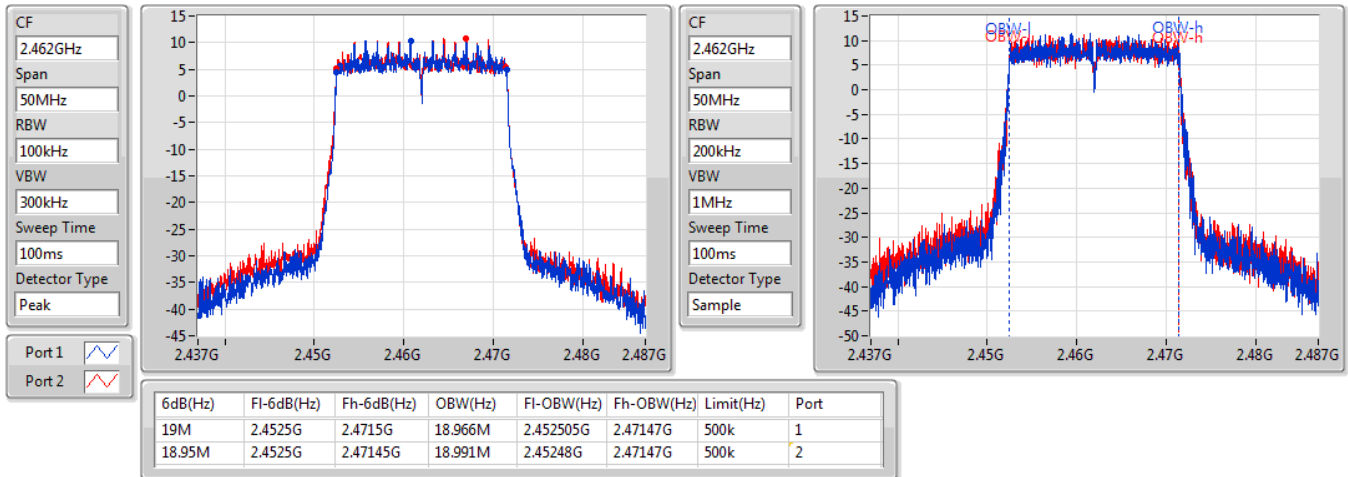


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

2462MHz

18/07/2019

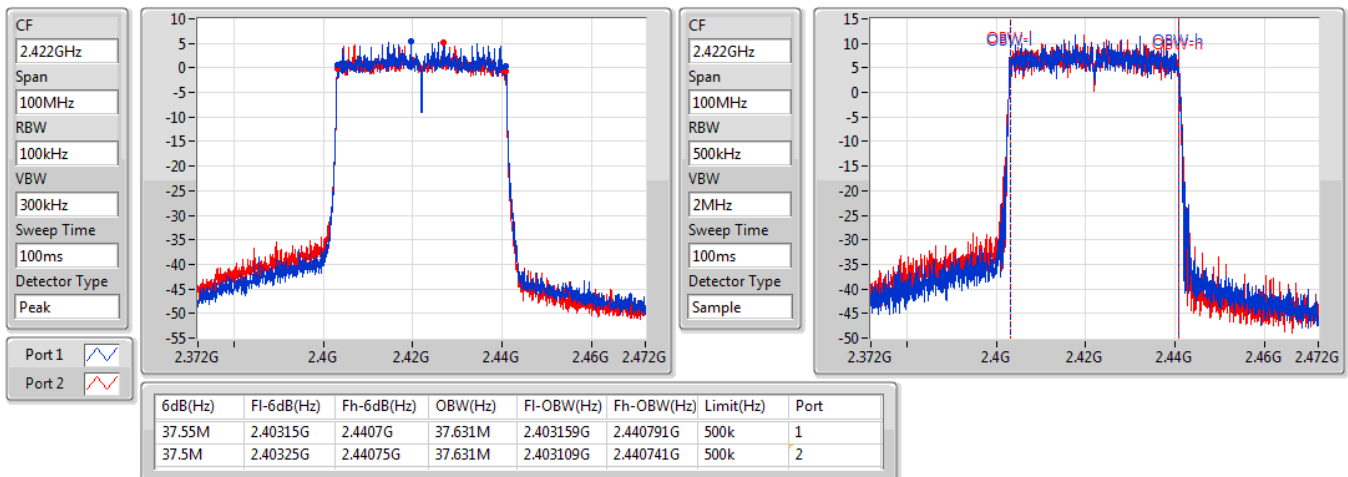


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

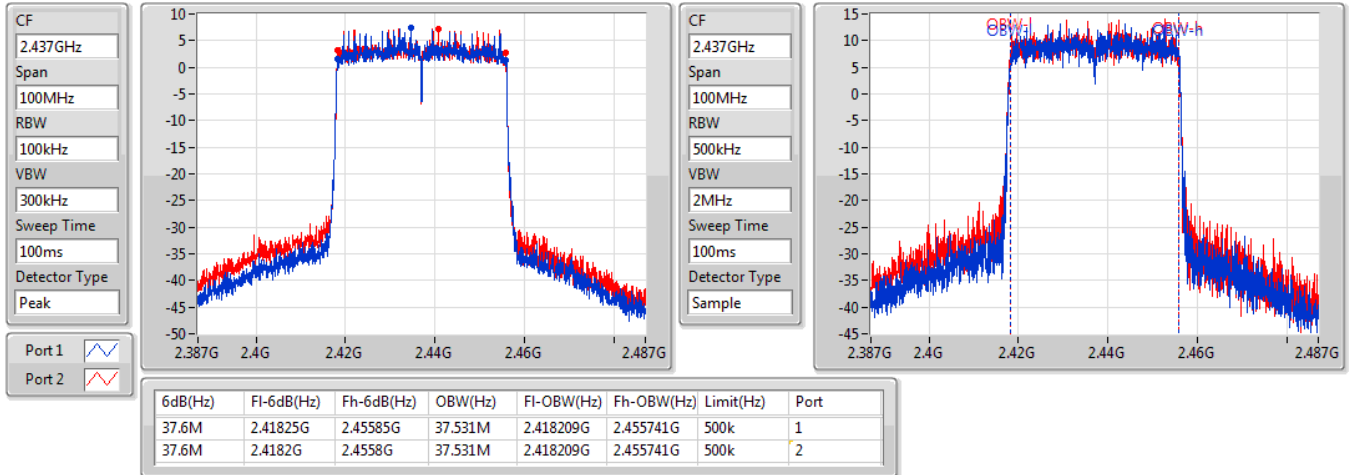
2422MHz

18/07/2019

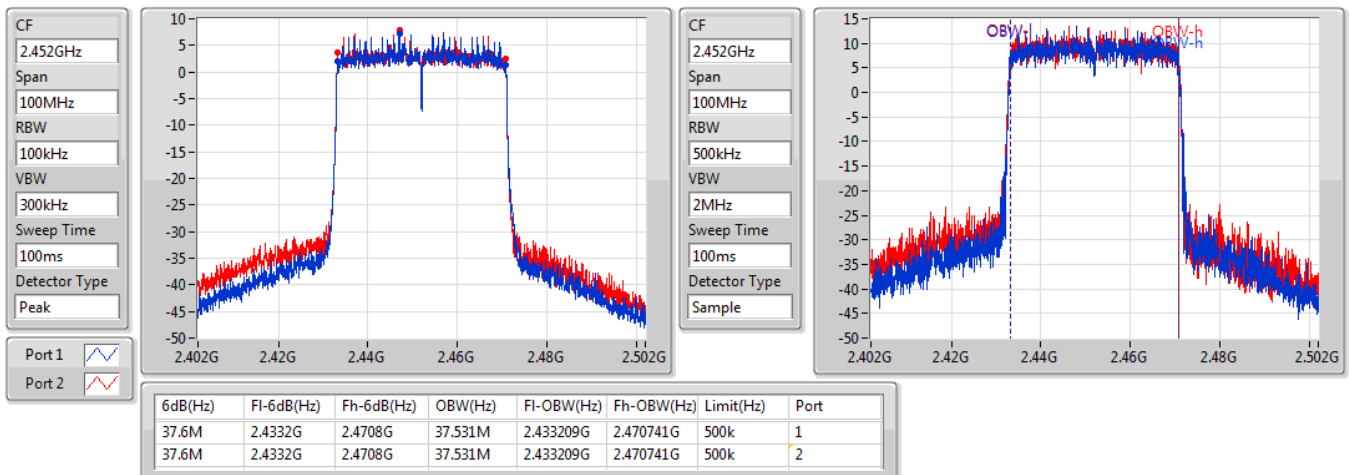


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
2437MHz

18/07/2019


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
2452MHz

18/07/2019





Average Power

Appendix C.1

For 2T1S Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	29.99	0.99770
802.11g_Nss1,(6Mbps)_2TX	29.89	0.97499
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	29.95	0.98855
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	25.14	0.32659

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.71	26.81	26.92	29.88	30.00
2437MHz	Pass	1.71	26.89	27.06	29.99	30.00
2462MHz	Pass	1.71	26.82	27.03	29.94	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.71	21.39	21.65	24.53	30.00
2417MHz	Pass	1.71	23.77	23.99	26.89	30.00
2437MHz	Pass	1.71	26.90	26.85	29.89	30.00
2457MHz	Pass	1.71	24.13	24.37	27.26	30.00
2462MHz	Pass	1.71	21.40	21.66	24.54	30.00
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.68	19.83	19.77	22.81	30.00
2417MHz	Pass	4.68	23.20	23.22	26.22	30.00
2437MHz	Pass	4.68	26.95	26.93	29.95	30.00
2457MHz	Pass	4.68	22.83	23.11	25.98	30.00
2462MHz	Pass	4.68	21.48	21.73	24.62	30.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.68	18.58	18.66	21.63	30.00
2427MHz	Pass	4.68	20.26	20.12	23.20	30.00
2437MHz	Pass	4.68	22.06	22.20	25.14	30.00
2452MHz	Pass	4.68	20.61	20.45	23.54	30.00

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



**For 2T2S
Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	29.92	0.98175
802.11ax HEW40_Nss2,(MCS0)_2TX	25.17	0.32885



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.71	21.72	21.69	24.72	30.00
2417MHz	Pass	1.71	22.25	22.57	25.42	30.00
2437MHz	Pass	1.71	27.07	26.74	29.92	30.00
2457MHz	Pass	1.71	23.50	23.50	26.51	30.00
2462MHz	Pass	1.71	22.61	22.76	25.70	30.00
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	1.71	20.12	19.88	23.01	30.00
2437MHz	Pass	1.71	22.08	22.24	25.17	30.00
2452MHz	Pass	1.71	21.87	22.18	25.04	30.00

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

**For 2T1S
Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	6.50
802.11g_Nss1,(6Mbps)_2TX	2.86
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	3.35
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-4.10

RBW=3 kHz.

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.68	3.64	4.25	5.90	8.00
2437MHz	Pass	4.68	4.10	4.09	6.50	8.00
2462MHz	Pass	4.68	3.62	3.99	6.11	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.68	-4.43	-3.12	-1.68	8.00
2437MHz	Pass	4.68	1.48	1.58	2.86	8.00
2462MHz	Pass	4.68	-4.23	-4.61	-2.02	8.00
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.68	-6.56	-6.64	-3.59	8.00
2437MHz	Pass	4.68	1.03	0.32	3.35	8.00
2462MHz	Pass	4.68	-4.89	-5.12	-2.29	8.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.68	-9.73	-10.71	-7.97	8.00
2437MHz	Pass	4.68	-6.25	-6.89	-4.10	8.00
2452MHz	Pass	4.68	-7.47	-7.21	-4.33	8.00

DG = Directional Gain; RBW=3 kHz;

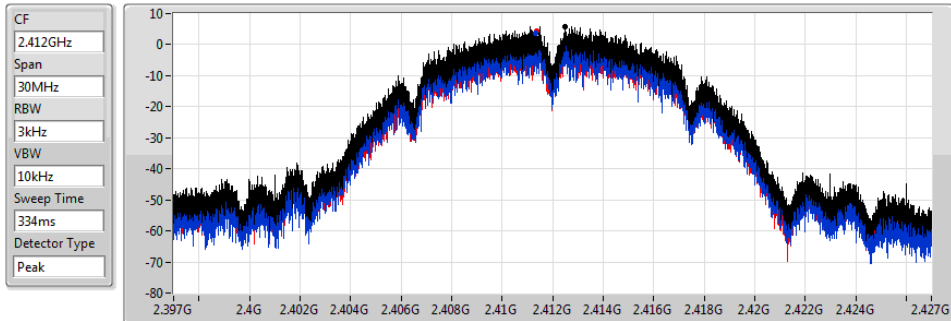
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_2TX

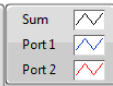
PSD

2412MHz

18/07/2019



Sum	PD	Port 1	Port 2
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
5.90	5.90	3.64	4.25

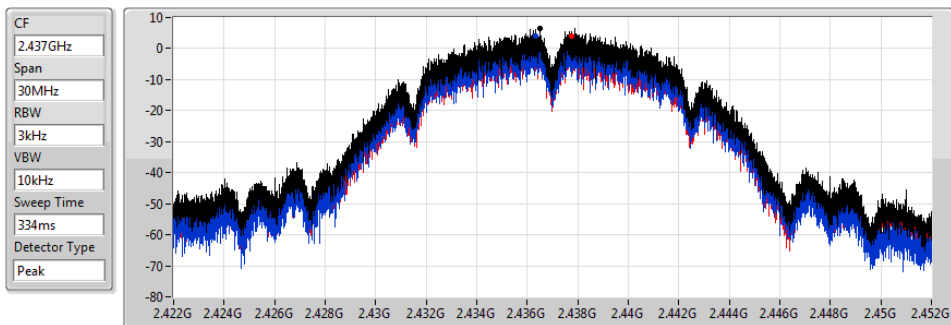


802.11b_Nss1,(1Mbps)_2TX

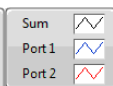
PSD

2437MHz

18/07/2019



Sum	PD	Port 1	Port 2
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
6.50	6.50	4.10	4.09

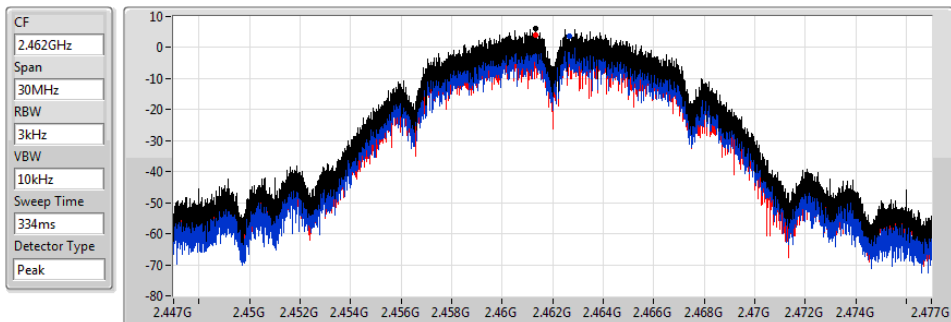


802.11b_Nss1,(1Mbps)_2TX

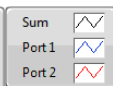
PSD

2462MHz

18/07/2019



Sum	PD	Port 1	Port 2
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
6.11	6.11	3.62	3.99

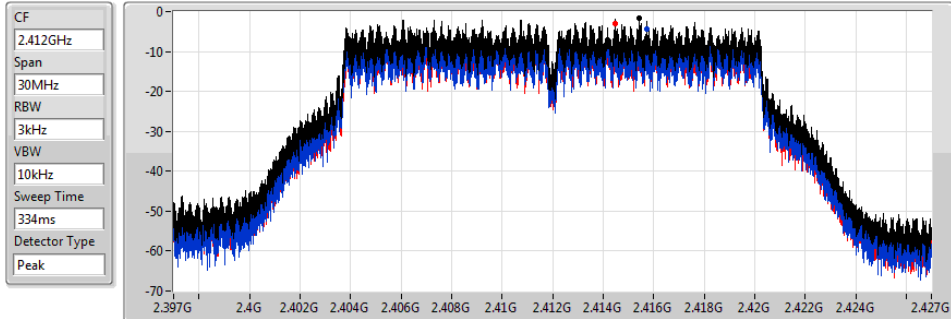


802.11g_Nss1,(6Mbps)_2TX

PSD

2412MHz

18/07/2019



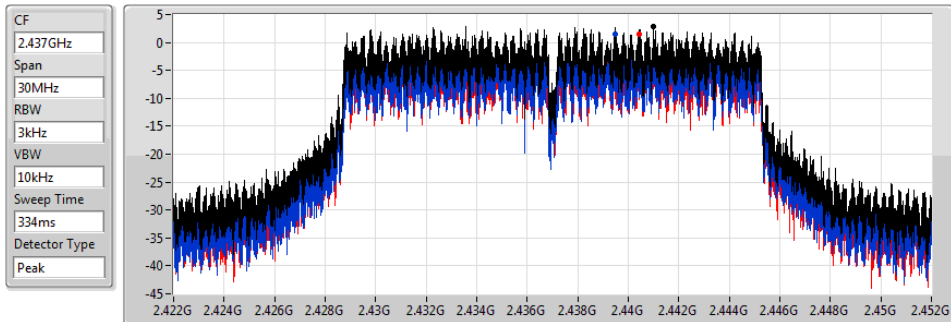
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.68	-1.68	-4.43	-3.12

802.11g_Nss1,(6Mbps)_2TX

PSD

2437MHz

18/07/2019



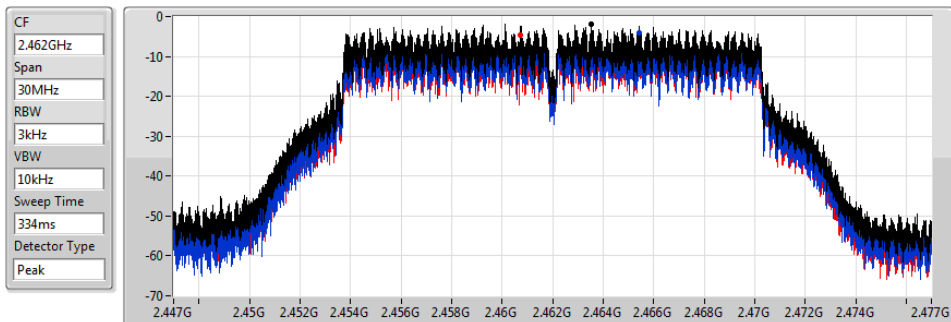
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.86	2.86	1.48	1.58

802.11g_Nss1,(6Mbps)_2TX

PSD

2462MHz

18/07/2019



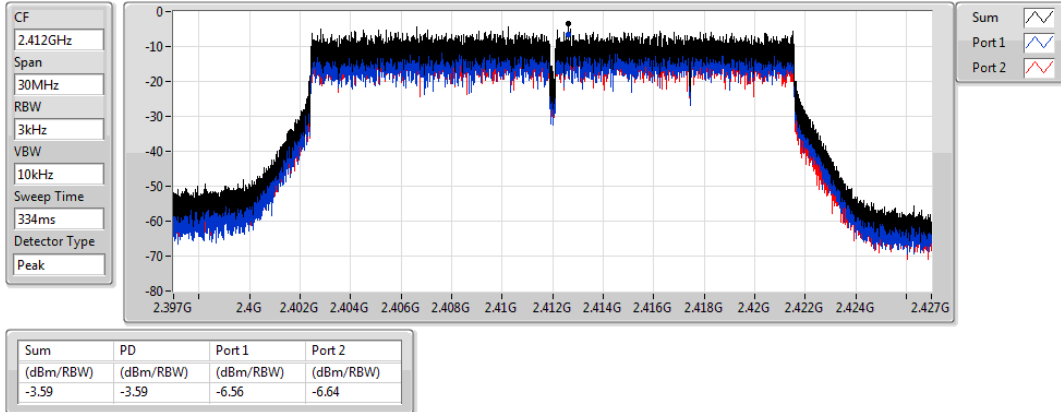
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.02	-2.02	-4.23	-4.61

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

PSD

2412MHz

18/07/2019

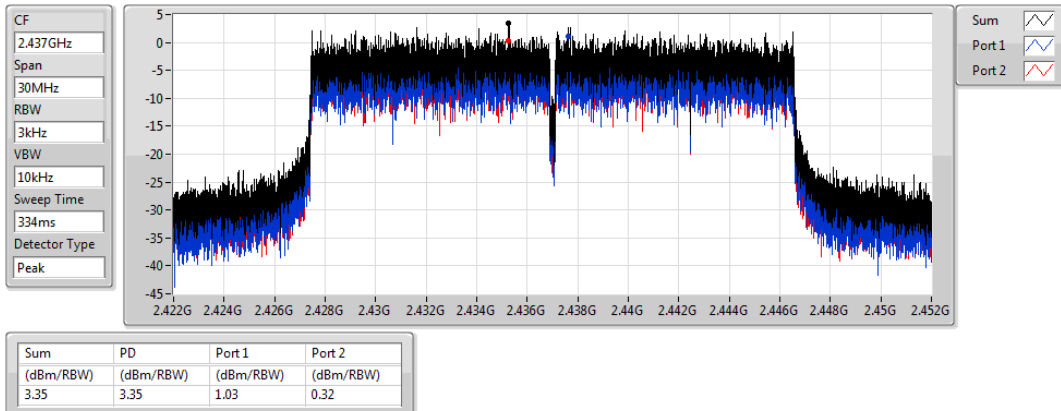


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

PSD

2437MHz

18/07/2019

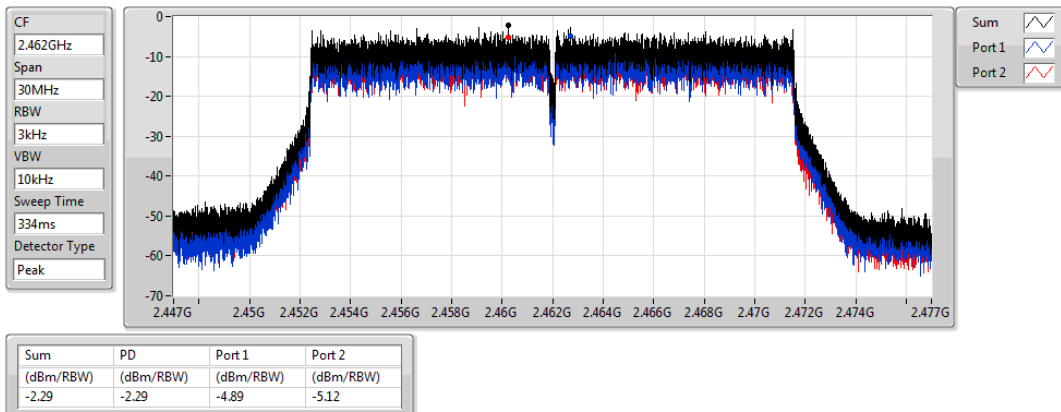


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

PSD

2462MHz

18/07/2019

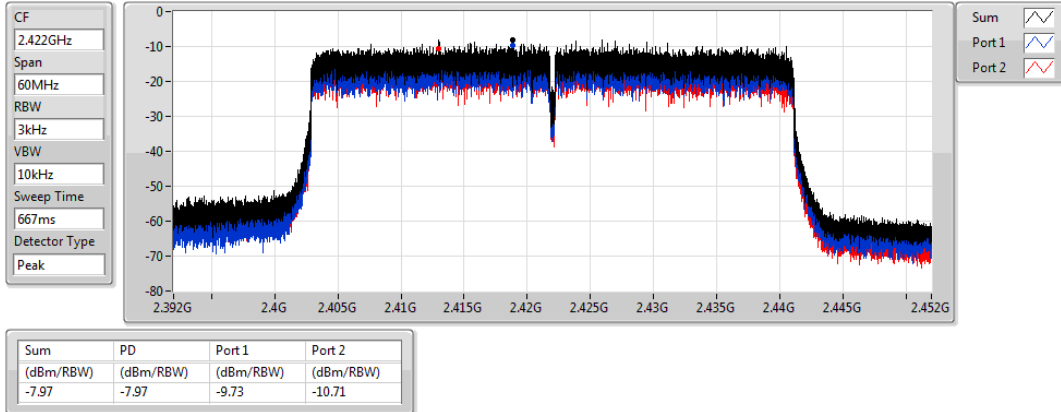


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

PSD

2422MHz

18/07/2019

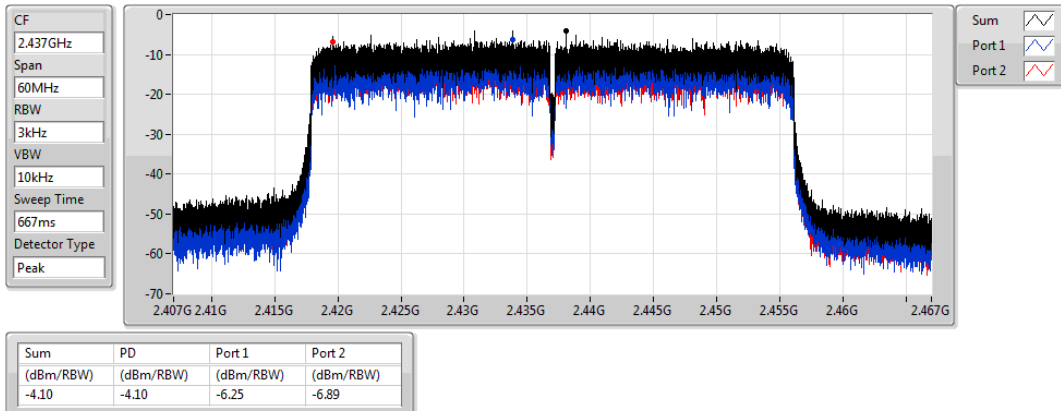


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

PSD

2437MHz

18/07/2019

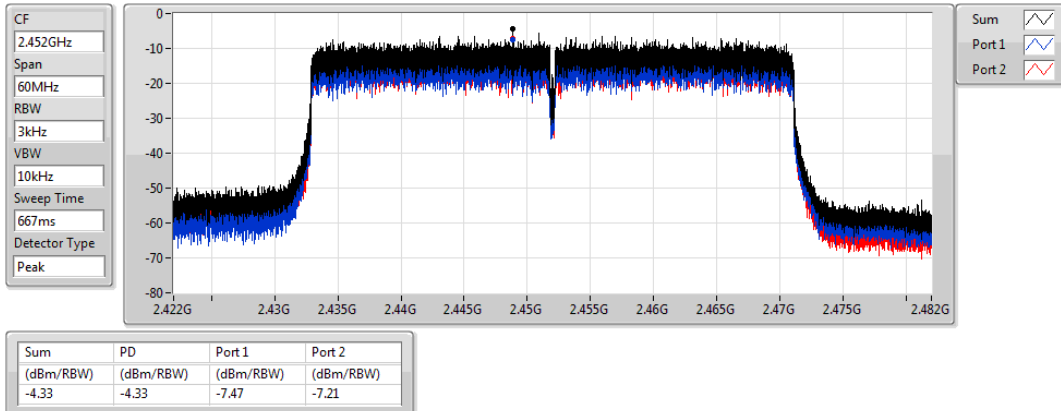


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

PSD

2452MHz

18/07/2019



**For 2T2S
Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20_Nss2,(MCS0)_2TX	1.93
802.11ax HEW40_Nss2,(MCS0)_2TX	-4.28

RBW=3 kHz.

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	1.67	-3.70	-3.97	-2.91	8.00
2437MHz	Pass	1.67	0.66	1.16	1.93	8.00
2462MHz	Pass	1.67	-5.45	-4.02	-2.11	8.00
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	1.67	-9.69	-7.95	-5.91	8.00
2437MHz	Pass	1.67	-7.52	-6.44	-4.28	8.00
2452MHz	Pass	1.67	-7.33	-6.80	-5.31	8.00

DG = Directional Gain; RBW=3 kHz;

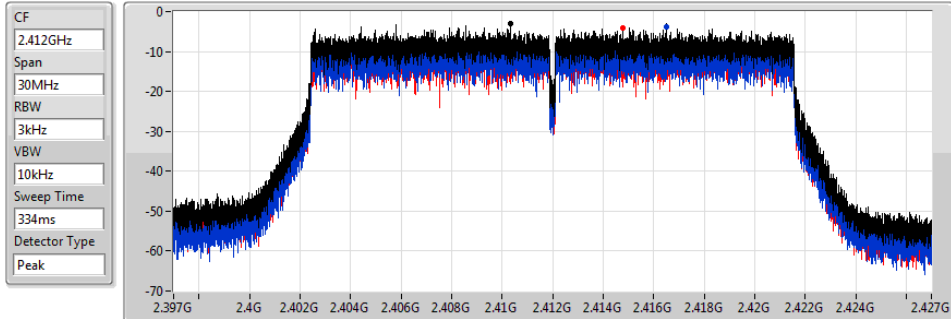
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ax HEW20_Nss2,(MCS0)_2TX

PSD

2412MHz

18/07/2019



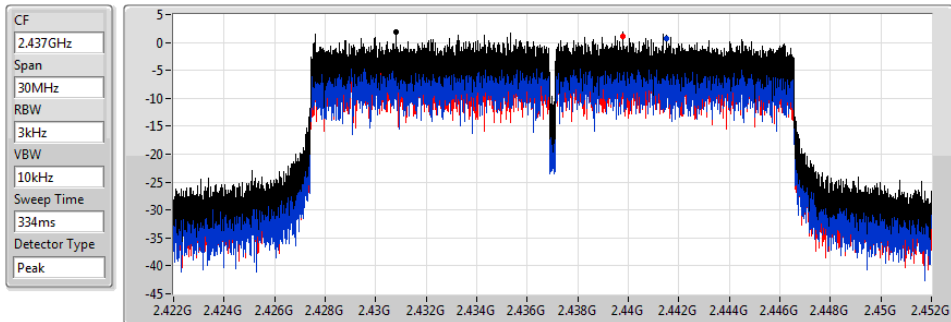
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-2.91	-2.91	-3.70	-3.97

802.11ax HEW20_Nss2,(MCS0)_2TX

PSD

2437MHz

18/07/2019



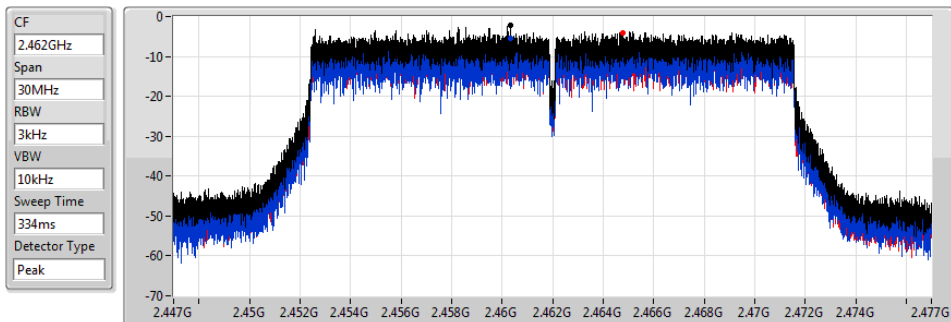
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
1.93	1.93	0.66	1.16

802.11ax HEW20_Nss2,(MCS0)_2TX

PSD

2462MHz

18/07/2019



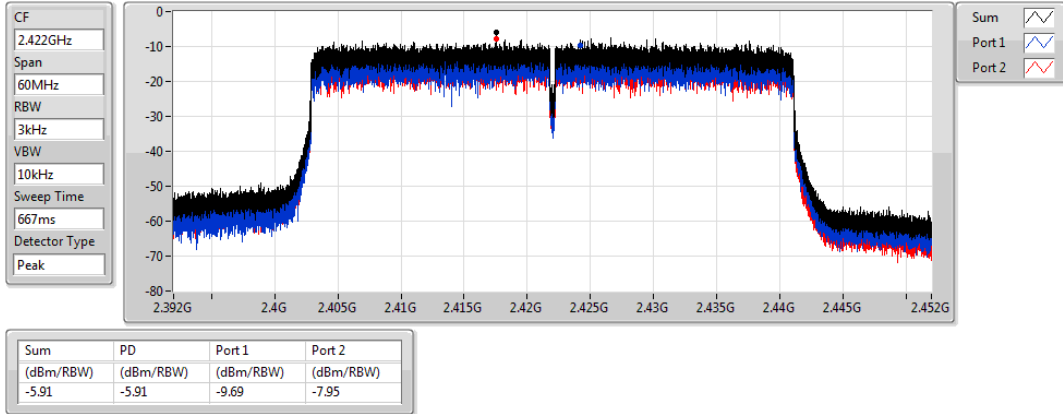
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-2.11	-2.11	-5.45	-4.02

802.11ax HEW40_Nss2,(MCS0)_2TX

PSD

2422MHz

18/07/2019

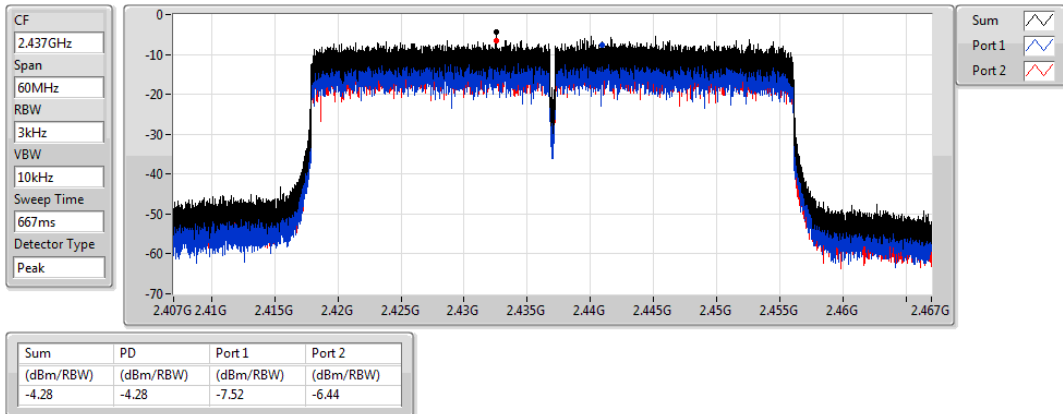


802.11ax HEW40_Nss2,(MCS0)_2TX

PSD

2437MHz

18/07/2019

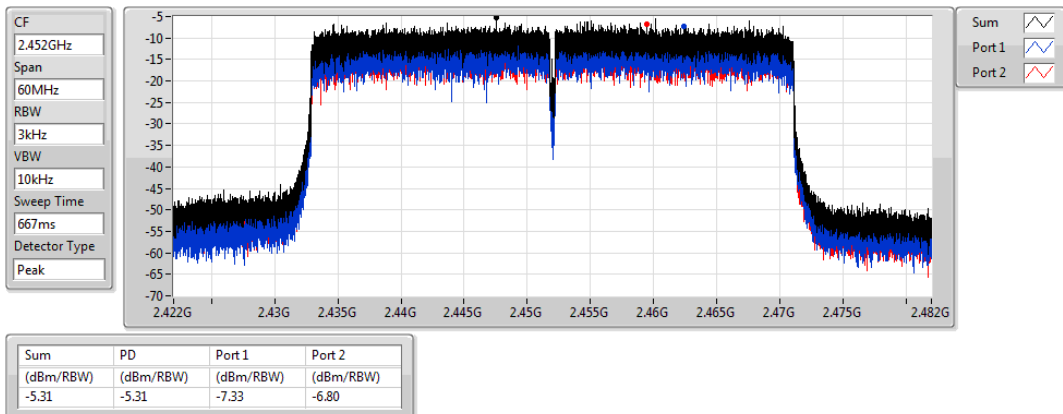


802.11ax HEW40_Nss2,(MCS0)_2TX

PSD

2452MHz

18/07/2019





For 2T1S
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
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43799G	19.25	-10.75	2.30175G	-49.67	2.39904G	-29.67	2.49194G	-48.21	24.91009G	-44.34	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.43574G	15.00	-15.00	2.30641G	-51.39	2.3992G	-31.10	2.49608G	-50.05	24.78366G	-44.41	1
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	Pass	2.44451G	15.05	-14.95	2.30758G	-51.86	2.39998G	-34.59	2.49752G	-51.33	24.87357G	-44.70	1
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	Pass	2.44952G	5.56	-24.44	2.30769G	-51.61	2.3994G	-35.48	2.48358G	-41.57	24.94952G	-44.92	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_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43799G	19.25	-10.75	2.30175G	-49.67	2.39904G	-29.67	2.49194G	-48.21	24.91009G	-44.34	1
2412MHz	Pass	2.43799G	19.25	-10.75	2.30204G	-48.82	2.39898G	-30.81	2.48368G	-48.05	7.23514G	-42.43	2
2437MHz	Pass	2.43799G	19.25	-10.75	2.30059G	-50.74	2.39452G	-45.37	2.4851G	-46.87	24.51395G	-44.71	1
2437MHz	Pass	2.43799G	19.25	-10.75	2.30932G	-51.63	2.39668G	-45.47	2.49732G	-46.53	24.90728G	-44.75	2
2462MHz	Pass	2.43799G	19.25	-10.75	2.30991G	-50.25	2.39828G	-46.41	2.489G	-43.28	24.86514G	-44.50	1
2462MHz	Pass	2.43799G	19.25	-10.75	2.30991G	-50.62	2.39276G	-45.81	2.48872G	-43.45	24.90728G	-44.43	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43574G	15.00	-15.00	2.30641G	-51.39	2.3992G	-31.10	2.49608G	-50.05	24.78366G	-44.41	1
2412MHz	Pass	2.43574G	15.00	-15.00	2.30408G	-51.83	2.39706G	-33.42	2.48628G	-50.89	24.95786G	-44.58	2
2437MHz	Pass	2.43574G	15.00	-15.00	2.30466G	-50.11	2.39824G	-38.36	2.48476G	-42.81	24.82019G	-44.41	1
2437MHz	Pass	2.43574G	15.00	-15.00	2.30641G	-50.97	2.39948G	-39.83	2.4842G	-43.82	24.89324G	-44.50	2
2462MHz	Pass	2.43574G	15.00	-15.00	2.30612G	-52.16	2.39344G	-49.33	2.48546G	-40.91	24.99157G	-44.80	1
2462MHz	Pass	2.43574G	15.00	-15.00	2.30292G	-52.84	2.39768G	-49.80	2.4845G	-42.58	24.92695G	-44.31	2
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44451G	15.05	-14.95	2.30758G	-51.86	2.39998G	-34.59	2.49752G	-51.33	24.87357G	-44.70	1
2412MHz	Pass	2.44451G	15.05	-14.95	2.30961G	-53.94	2.39998G	-36.75	2.48732G	-51.01	24.84828G	-44.71	2
2437MHz	Pass	2.44451G	15.05	-14.95	2.30961G	-50.06	2.3997G	-36.03	2.48546G	-42.58	24.92133G	-44.43	1
2437MHz	Pass	2.44451G	15.05	-14.95	2.30495G	-50.22	2.39976G	-37.45	2.48354G	-42.54	24.84547G	-44.21	2
2462MHz	Pass	2.44451G	15.05	-14.95	2.30816G	-51.88	2.39722G	-49.10	2.4844G	-40.56	24.42123G	-44.44	1
2462MHz	Pass	2.44451G	15.05	-14.95	2.30204G	-53.53	2.39548G	-49.57	2.4839G	-40.29	24.84547G	-45.11	2
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.44952G	5.56	-24.44	2.30225G	-52.67	2.39704G	-39.85	2.48458G	-50.70	24.80929G	-44.80	1
2422MHz	Pass	2.44952G	5.56	-24.44	2.30597G	-54.08	2.39808G	-43.23	2.48602G	-50.74	24.80929G	-44.56	2
2437MHz	Pass	2.44952G	5.56	-24.44	2.30769G	-51.61	2.3994G	-35.48	2.48358G	-41.57	24.94952G	-44.92	1
2437MHz	Pass	2.44952G	5.56	-24.44	2.30512G	-51.83	2.39976G	-36.70	2.48562G	-43.71	24.82051G	-44.82	2
2452MHz	Pass	2.44952G	5.56	-24.44	2.30941G	-52.83	2.39924G	-45.50	2.48642G	-44.12	24.88501G	-44.53	1
2452MHz	Pass	2.44952G	5.56	-24.44	2.3054G	-53.42	2.39756G	-47.45	2.48526G	-42.36	24.93269G	-44.81	2

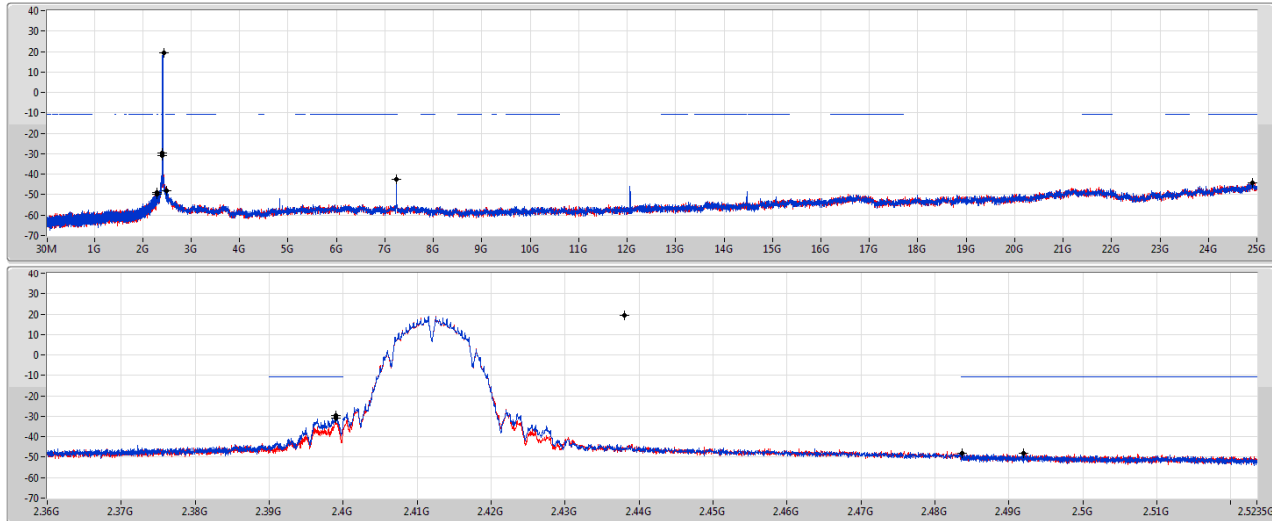
802.11b_Nss1,(1Mbps)_2TX

2412MHz

CSE NdB

01/08/2019

Port 1
Port 2



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43799G	19.25	-10.75	2.30175G	-49.67	2.39904G	-29.67	2.49194G	-48.21	2.491009G	-44.34	1
2.43799G	19.25	-10.75	2.30204G	-48.82	2.39898G	-30.81	2.48368G	-48.05	7.23514G	-42.43	2

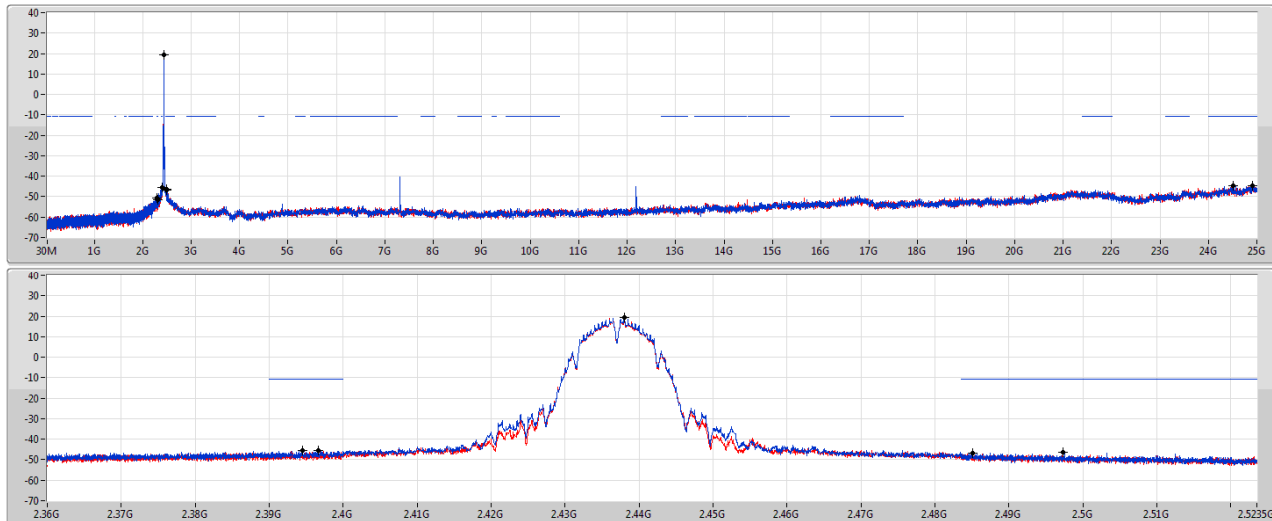
802.11b_Nss1,(1Mbps)_2TX

2437MHz

CSE NdB

01/08/2019

Port 1
Port 2



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

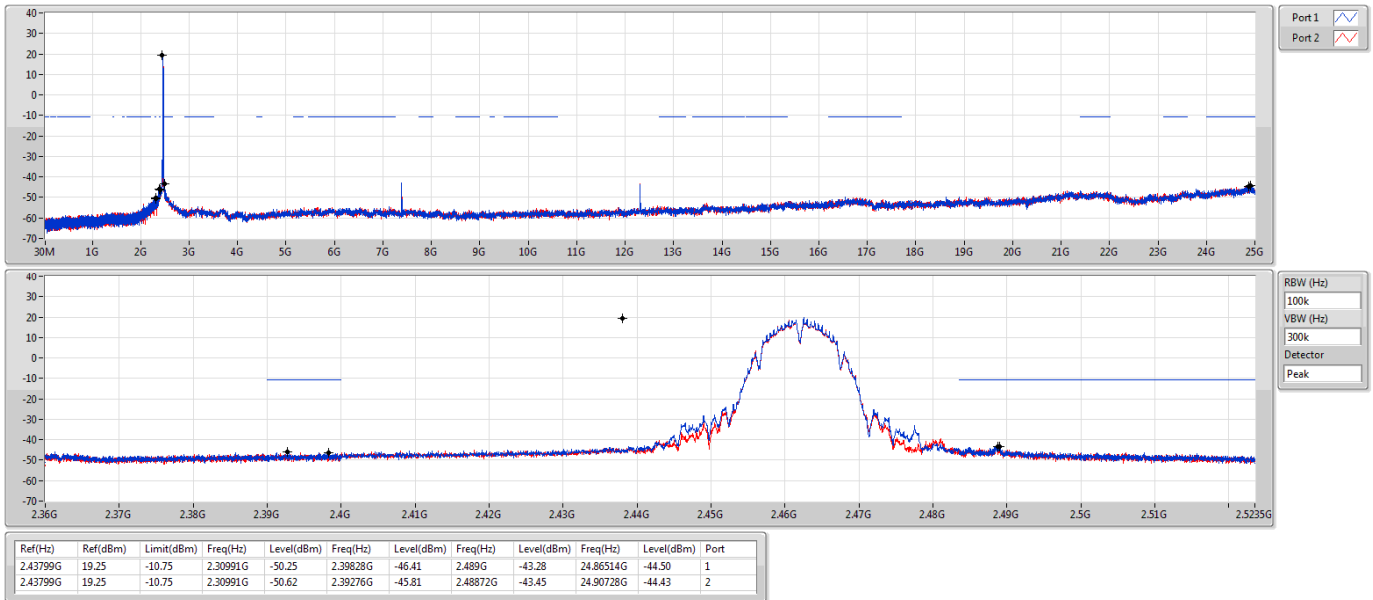
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43799G	19.25	-10.75	2.30059G	-50.74	2.39452G	-45.37	2.4851G	-46.87	24.51395G	-44.71	1
2.43799G	19.25	-10.75	2.30932G	-51.63	2.39668G	-45.47	2.49732G	-46.53	24.90728G	-44.75	2

802.11b_Nss1,(1Mbps)_2TX

2462MHz

CSE NdB

01/08/2019

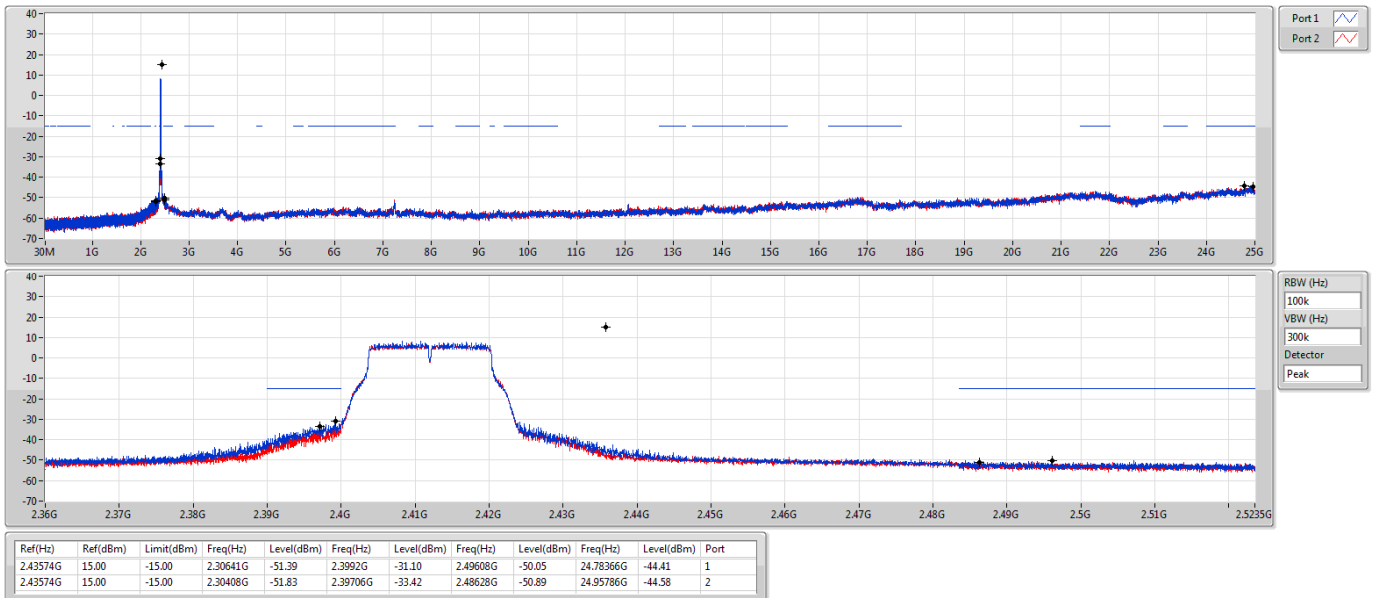


802.11g_Nss1,(6Mbps)_2TX

2412MHz

CSE NdB

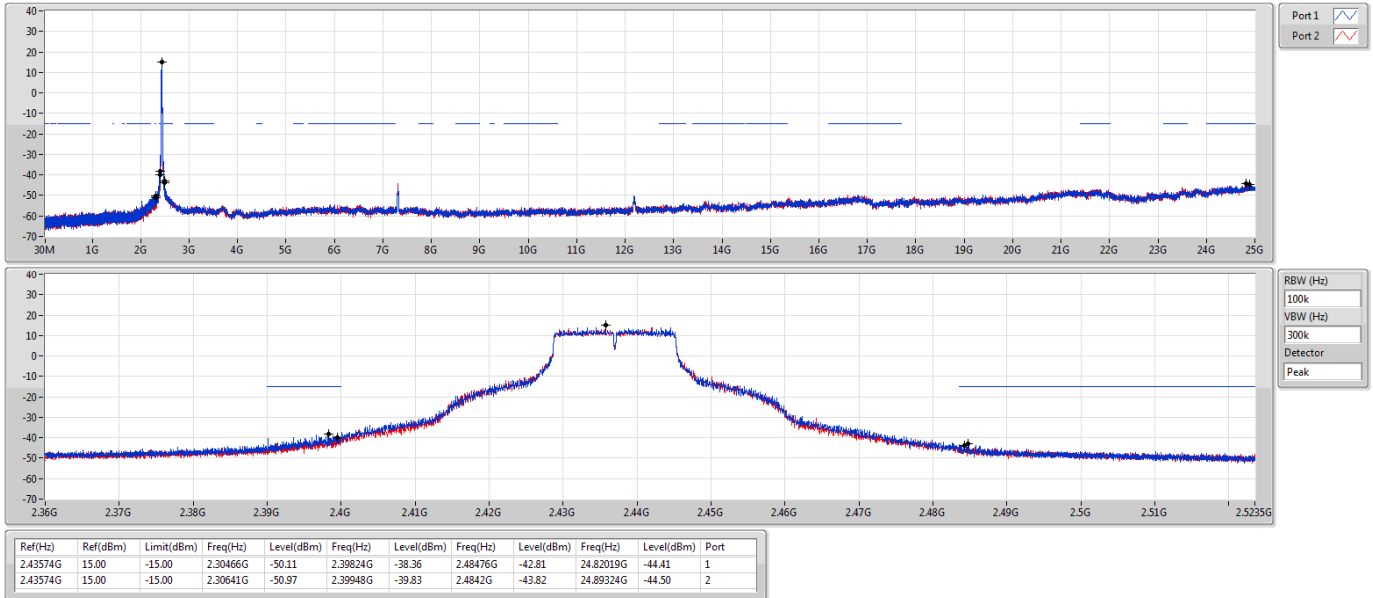
01/08/2019



802.11g_Nss1,(6Mbps)_2TX

CSE NdB

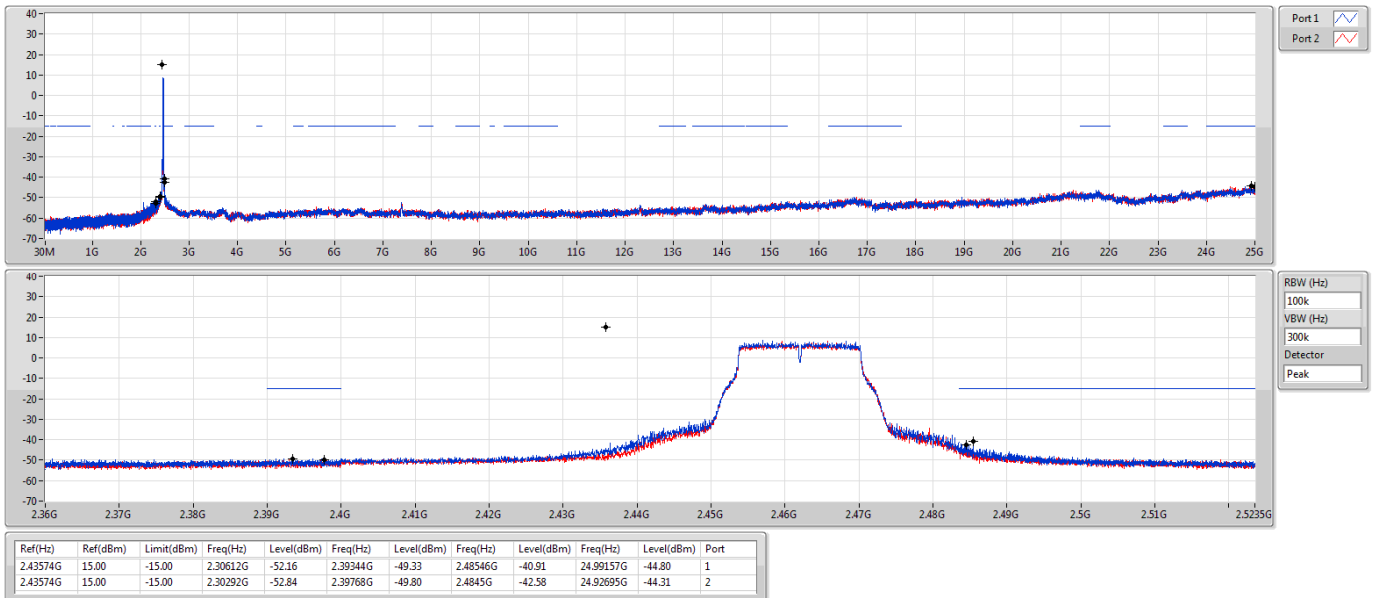
2437MHz



802.11g_Nss1,(6Mbps)_2TX

CSE NdB

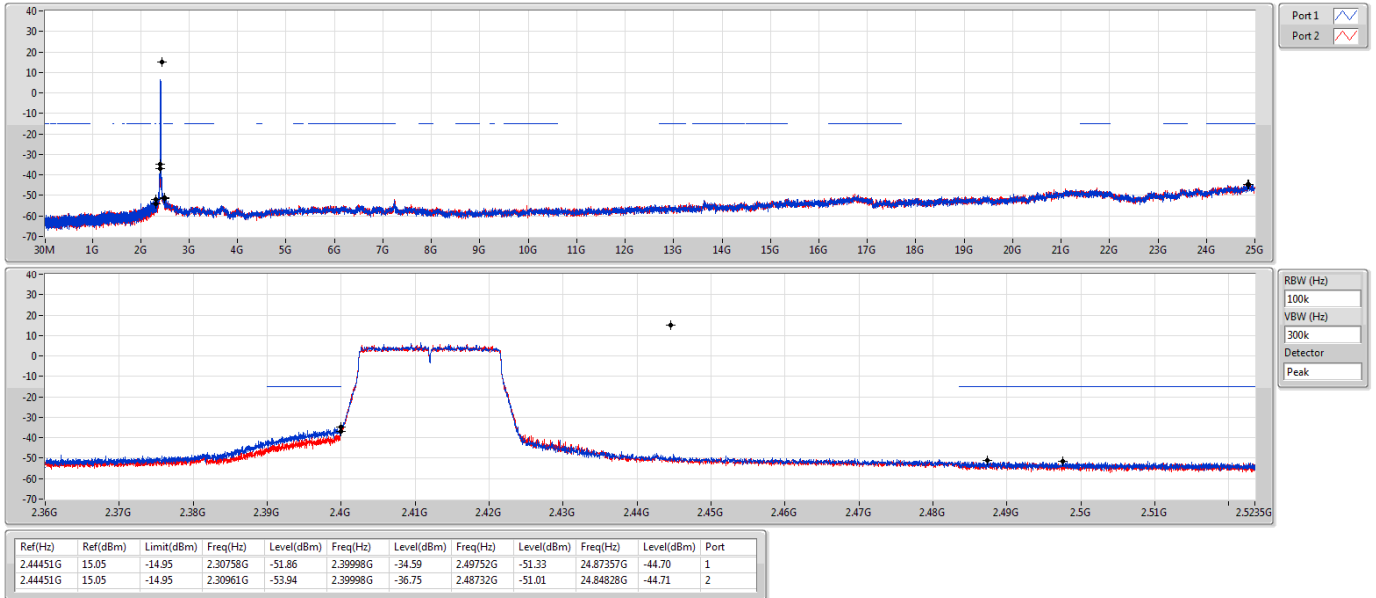
2462MHz



802.11ax HEW20-BF_Nss1,(MCS0)_2TX

CSE NdB

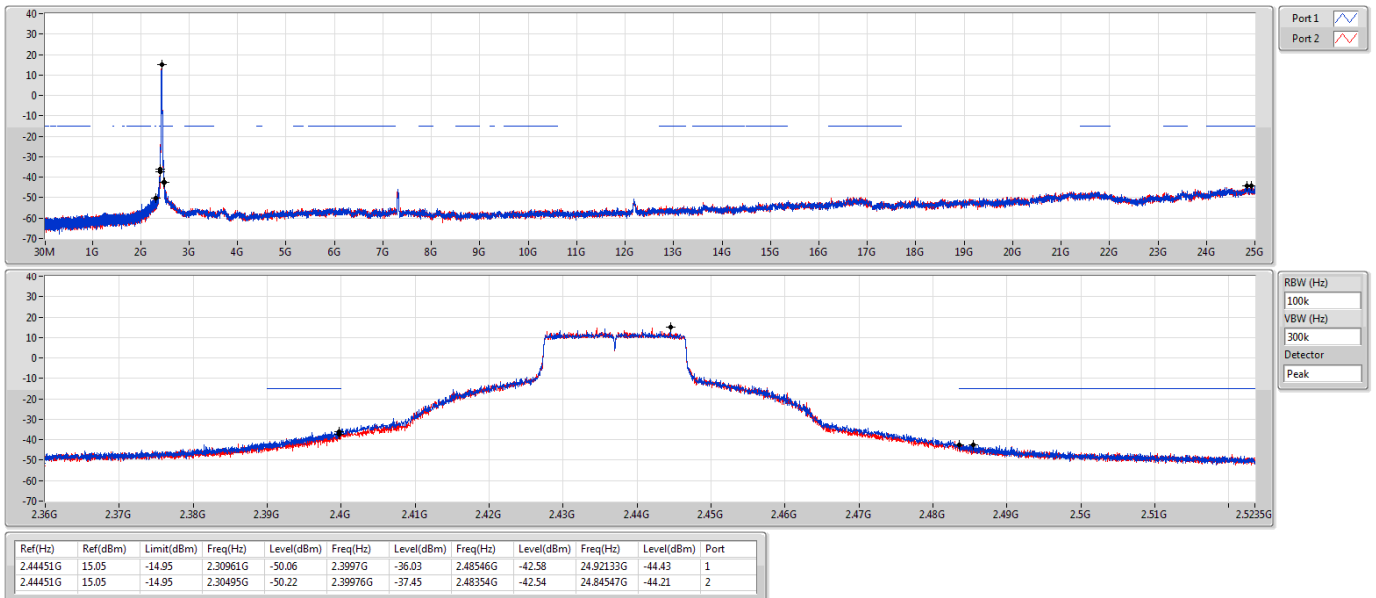
2412MHz



802.11ax HEW20-BF_Nss1,(MCS0)_2TX

CSE NdB

2437MHz

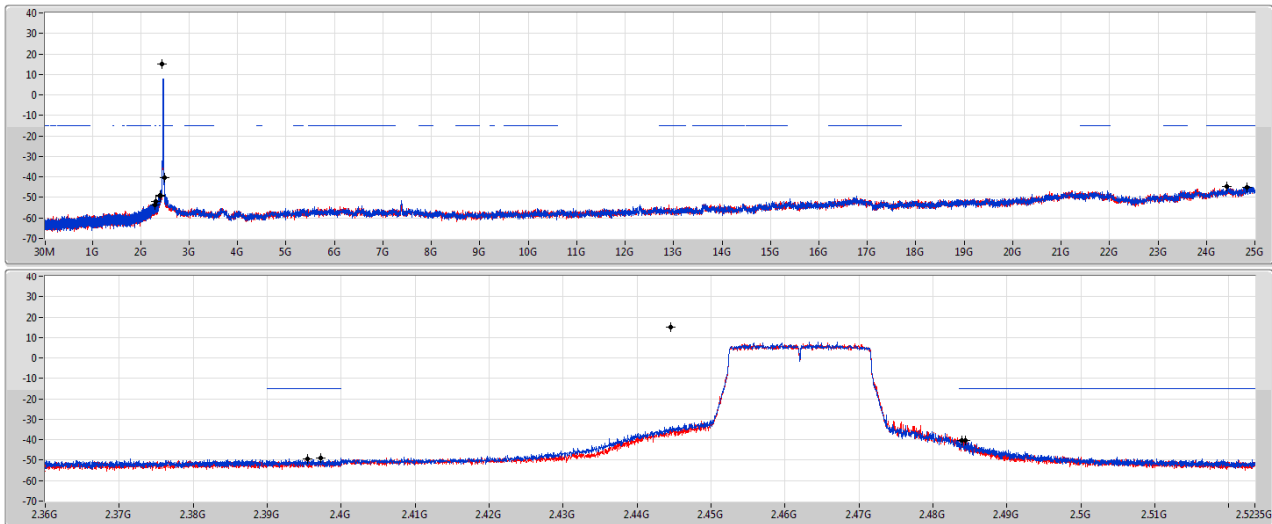


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2462MHz

CSE NdB

01/08/2019



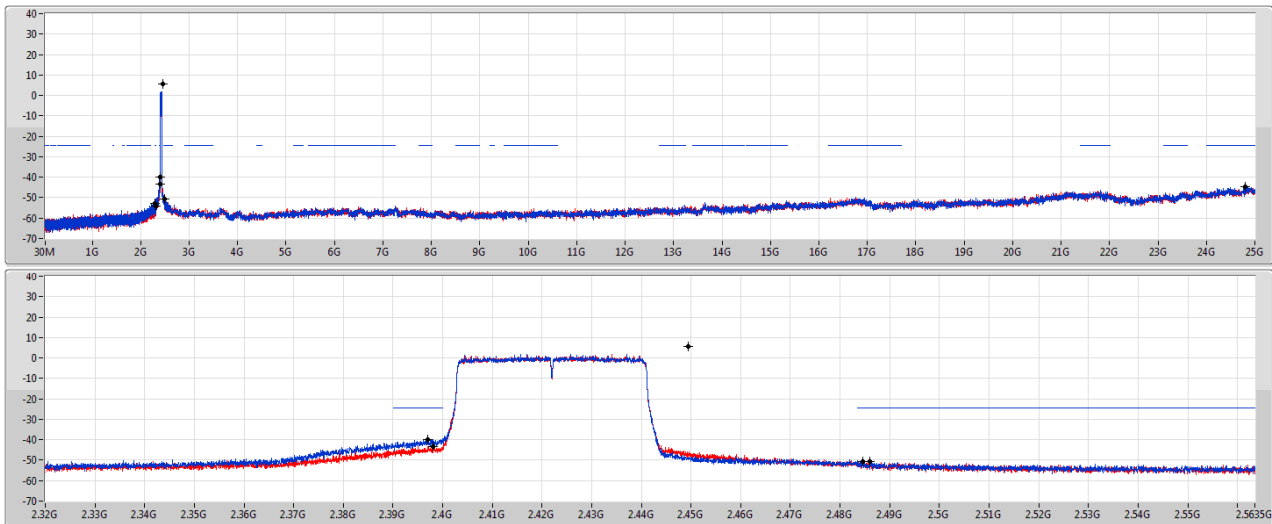
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44451G	15.05	-14.95	2.30816G	-51.88	2.39722G	-49.10	2.4844G	-40.56	24.42123G	-44.44	1
2.44451G	15.05	-14.95	2.30204G	-53.53	2.39548G	-49.57	2.4839G	-40.29	24.84547G	-45.11	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2422MHz

CSE NdB

01/08/2019

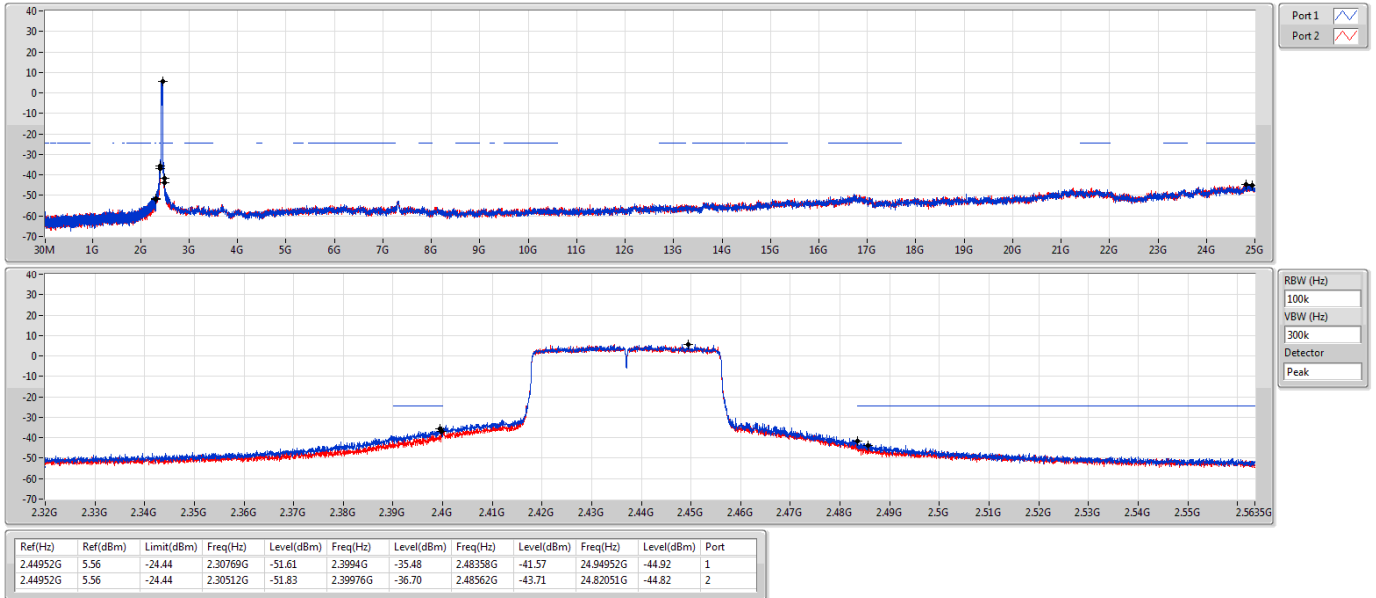


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44952G	5.56	-24.44	2.30225G	-52.67	2.39704G	-39.85	2.48458G	-50.70	24.80929G	-44.80	1
2.44952G	5.56	-24.44	2.30597G	-54.08	2.39808G	-43.23	2.48602G	-50.74	24.80929G	-44.56	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

CSE NdB

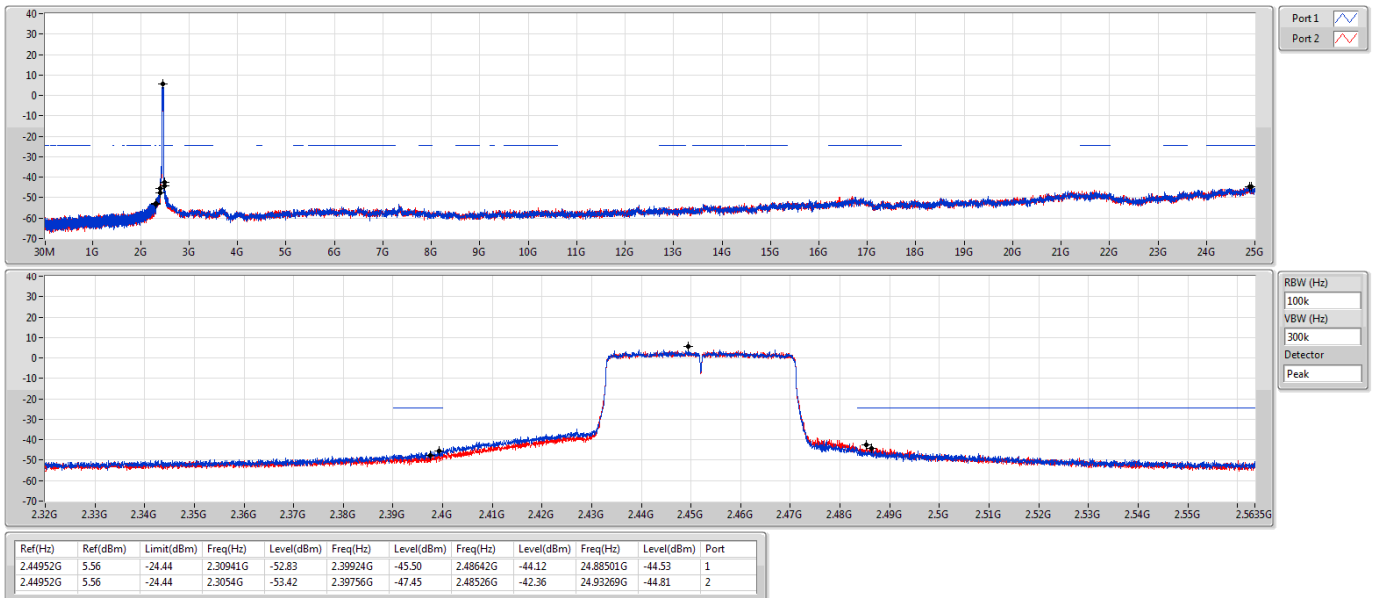
2437MHz



802.11ax HEW40-BF_Nss1,(MCS0)_2TX

CSE NdB

2452MHz





For 2T2S
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
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	Pass	2.43198G	16.25	-13.75	2.30932G	-51.55	2.39974G	-31.23	2.48378G	-50.09	24.79771G	-44.92	1
802.11ax HEW40_Nss2,(MCS0)_2TX	Pass	2.44075G	6.98	-23.02	2.3054G	-49.76	2.39824G	-35.12	2.48414G	-40.79	24.85977G	-44.65	1

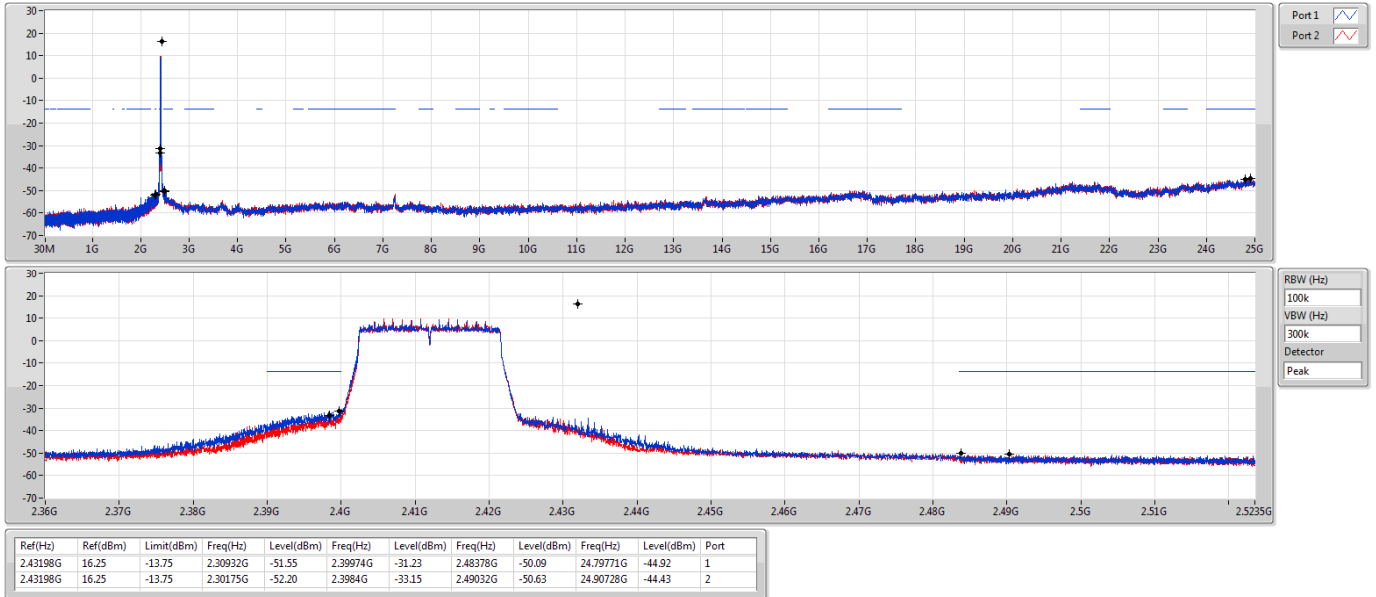
**Result**

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
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43198G	16.25	-13.75	2.30932G	-51.55	2.39974G	-31.23	2.48378G	-50.09	24.79771G	-44.92	1
2412MHz	Pass	2.43198G	16.25	-13.75	2.30175G	-52.20	2.3984G	-33.15	2.49032G	-50.63	24.90728G	-44.43	2
2437MHz	Pass	2.43198G	16.25	-13.75	2.30816G	-51.15	2.39938G	-35.64	2.48376G	-41.01	24.53642G	-45.03	1
2437MHz	Pass	2.43198G	16.25	-13.75	2.30321G	-50.49	2.39814G	-36.96	2.48706G	-42.76	24.8539G	-44.81	2
2462MHz	Pass	2.43198G	16.25	-13.75	2.30262G	-51.13	2.39336G	-48.25	2.48432G	-32.28	24.81457G	-45.13	1
2462MHz	Pass	2.43198G	16.25	-13.75	2.30292G	-50.79	2.39718G	-49.14	2.4856G	-36.22	24.88481G	-44.86	2
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.44075G	6.98	-23.02	2.30597G	-52.03	2.39948G	-35.69	2.48582G	-49.13	24.8149G	-44.34	1
2422MHz	Pass	2.44075G	6.98	-23.02	2.30855G	-52.52	2.3998G	-39.16	2.48542G	-49.20	24.90464G	-43.27	2
2437MHz	Pass	2.44075G	6.98	-23.02	2.3054G	-49.76	2.39824G	-35.12	2.48414G	-40.79	24.85977G	-44.65	1
2437MHz	Pass	2.44075G	6.98	-23.02	2.30168G	-51.05	2.3998G	-38.01	2.48398G	-43.72	24.94952G	-44.38	2
2452MHz	Pass	2.44075G	6.98	-23.02	2.30283G	-51.53	2.39876G	-40.66	2.4857G	-35.63	24.46152G	-45.03	1
2452MHz	Pass	2.44075G	6.98	-23.02	2.30368G	-52.15	2.39884G	-44.40	2.48362G	-37.78	24.84014G	-44.44	2

802.11ax HEW20_Nss2,(MCS0)_2TX

CSE NdB

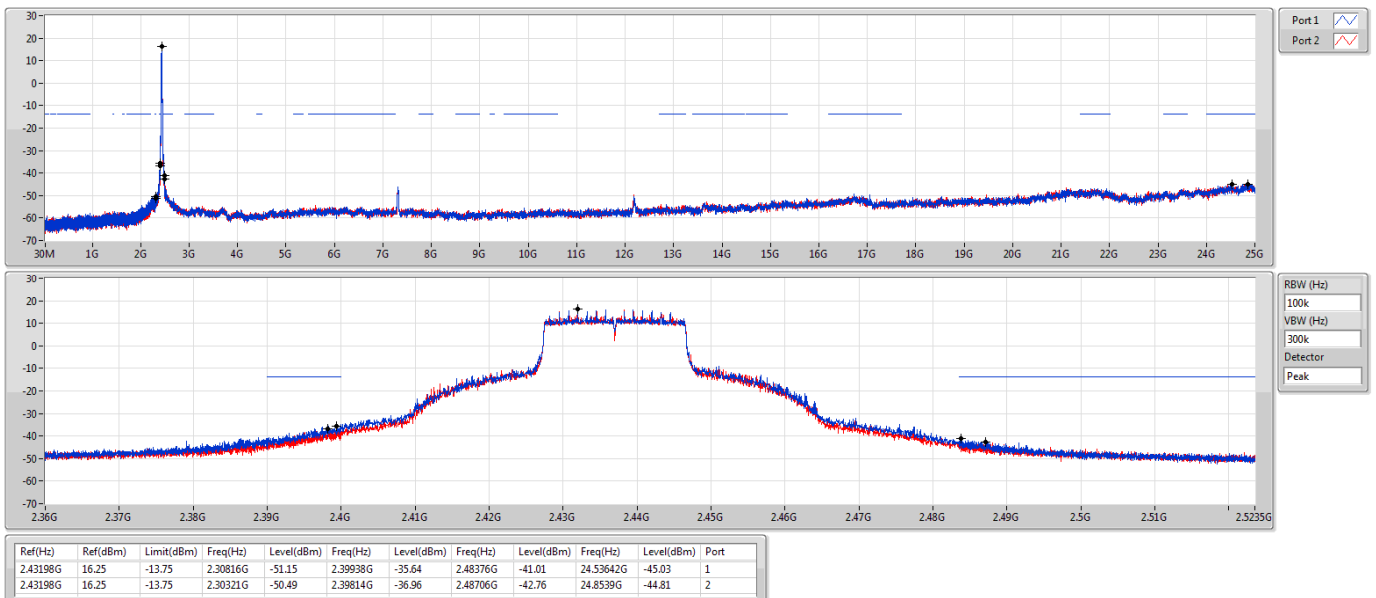
2412MHz



802.11ax HEW20_Nss2,(MCS0)_2TX

CSE NdB

2437MHz

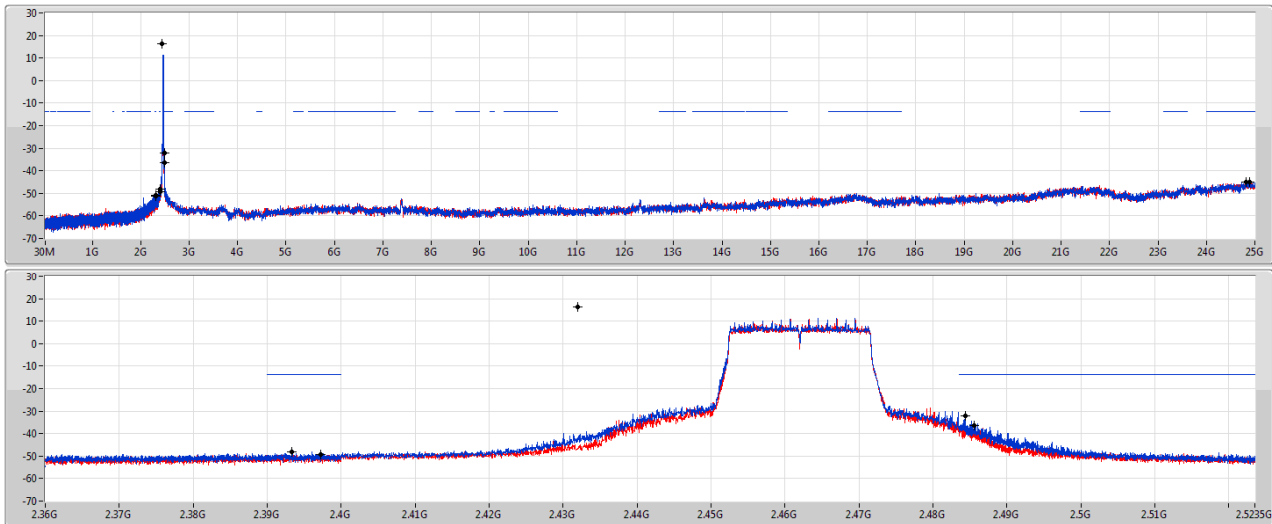


802.11ax HEW20_Nss2,(MCS0)_2TX

2462MHz

CSE NdB

01/08/2019



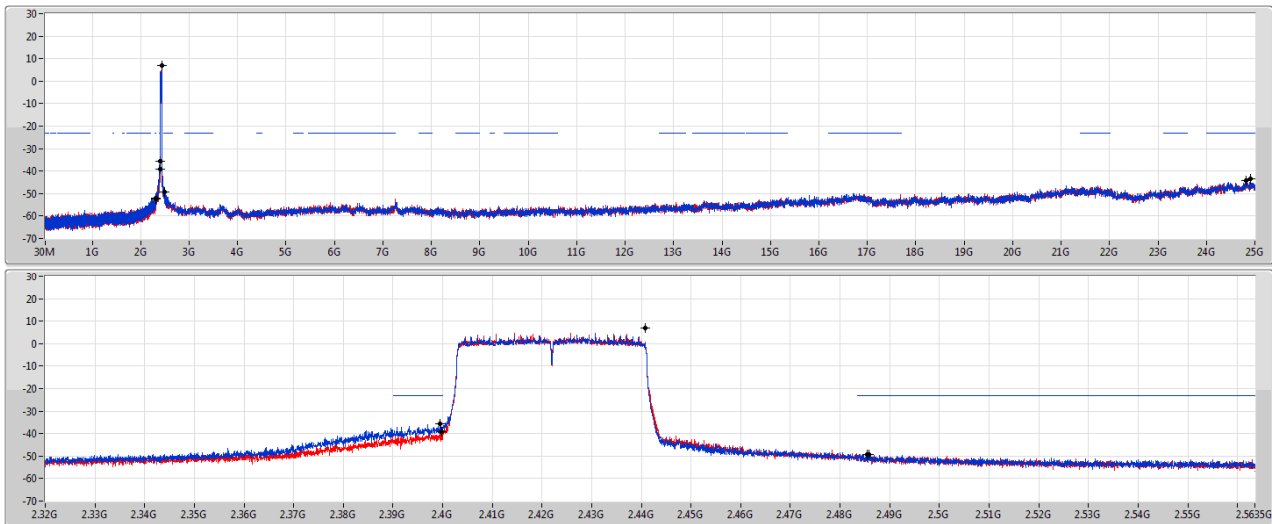
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43198G	16.25	-13.75	2.30262G	-51.13	2.39336G	-48.25	2.48432G	-32.28	2.481457G	-45.13	1
2.43198G	16.25	-13.75	2.30292G	-50.79	2.39718G	-49.14	2.4856G	-36.22	2.488481G	-44.86	2

802.11ax HEW40_Nss2,(MCS0)_2TX

2422MHz

CSE NdB

01/08/2019

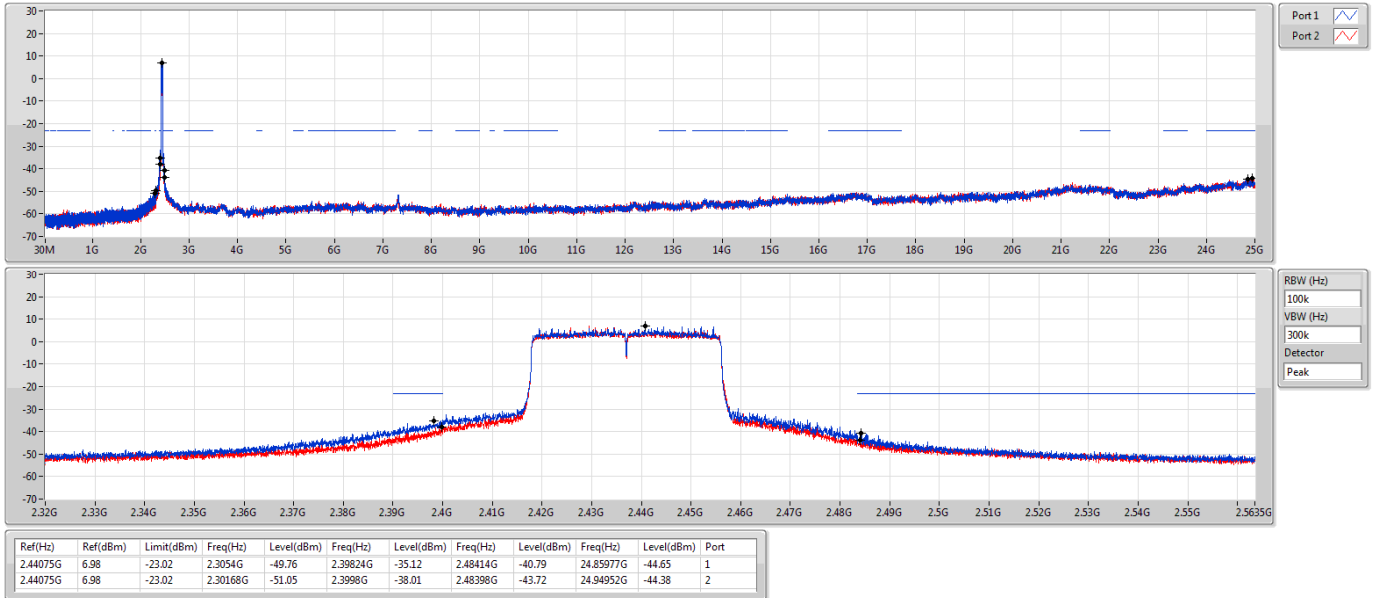


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	6.98	-23.02	2.30597G	-52.03	2.39948G	-35.69	2.48582G	-49.13	2.48149G	-44.34	1
2.44075G	6.98	-23.02	2.30855G	-52.52	2.3998G	-39.16	2.48542G	-49.20	2.490464G	-43.27	2

802.11ax HEW40_Nss2,(MCS0)_2TX

CSE NdB

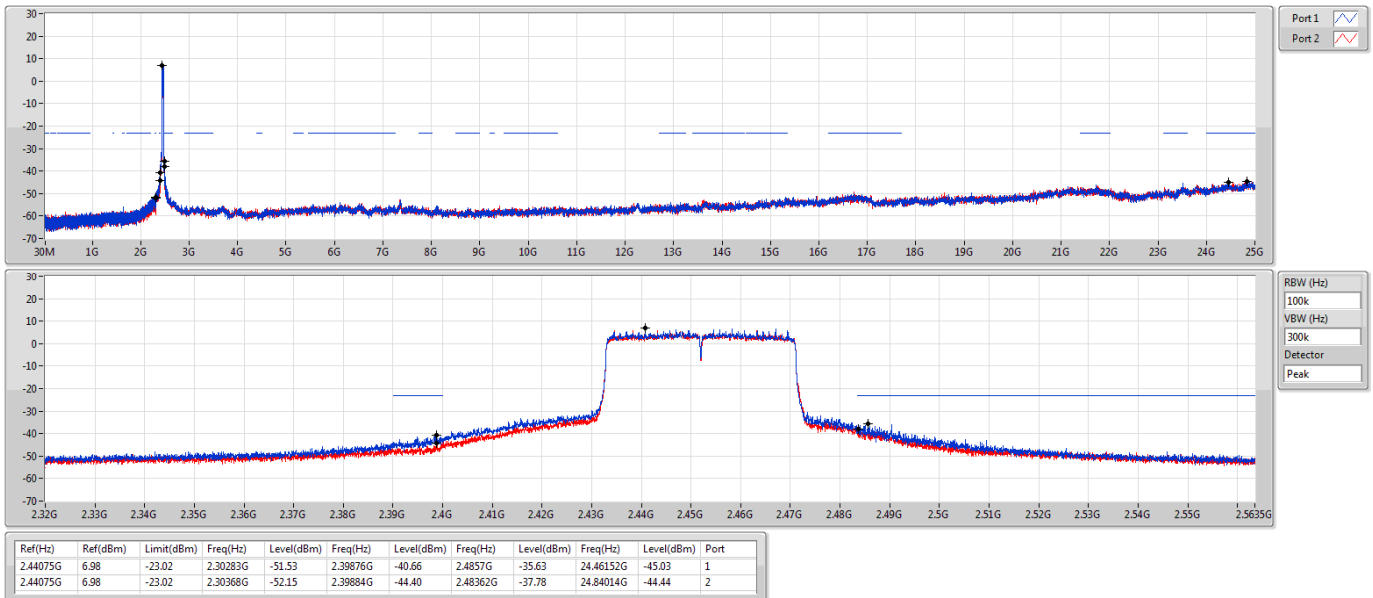
2437MHz

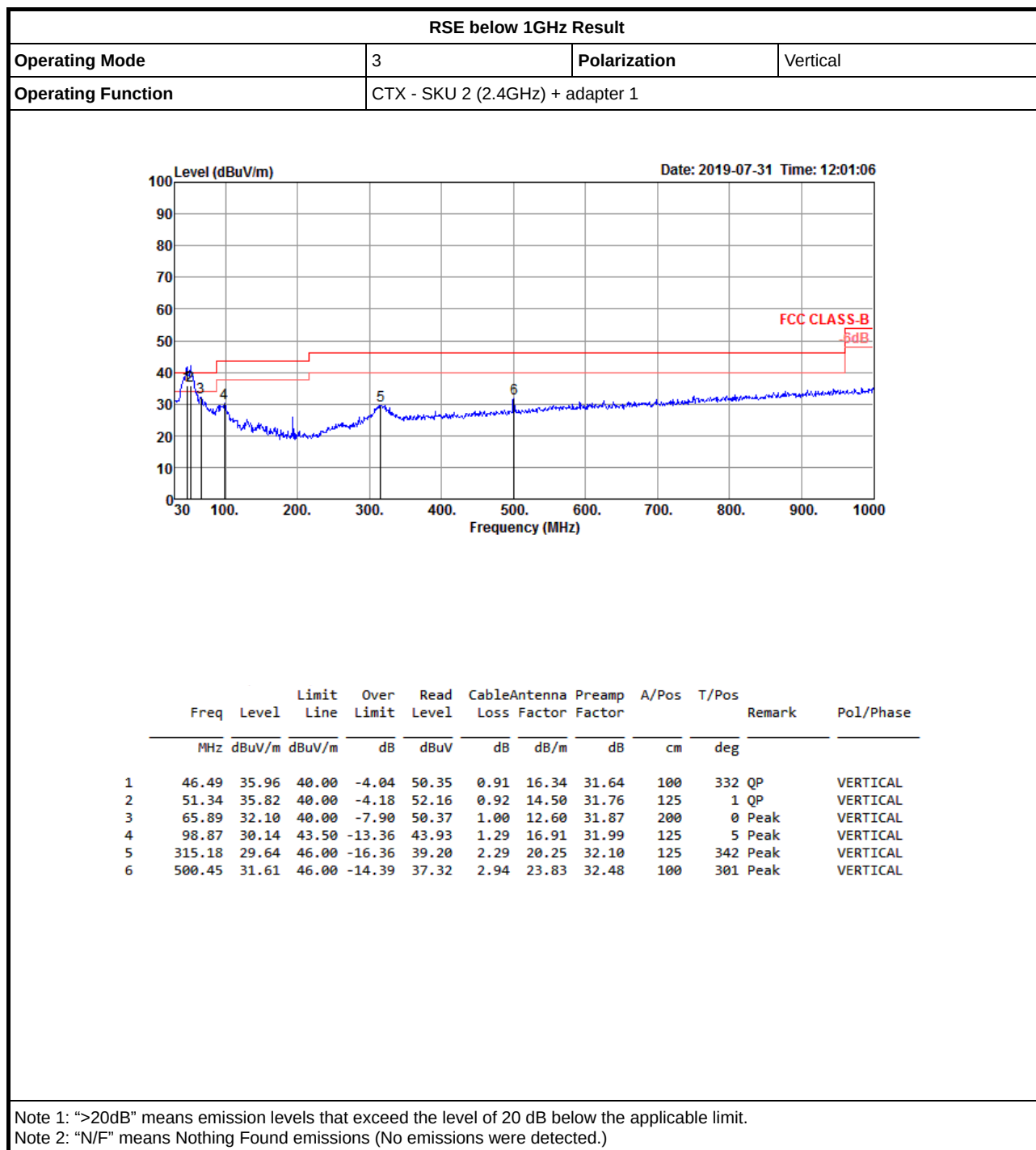


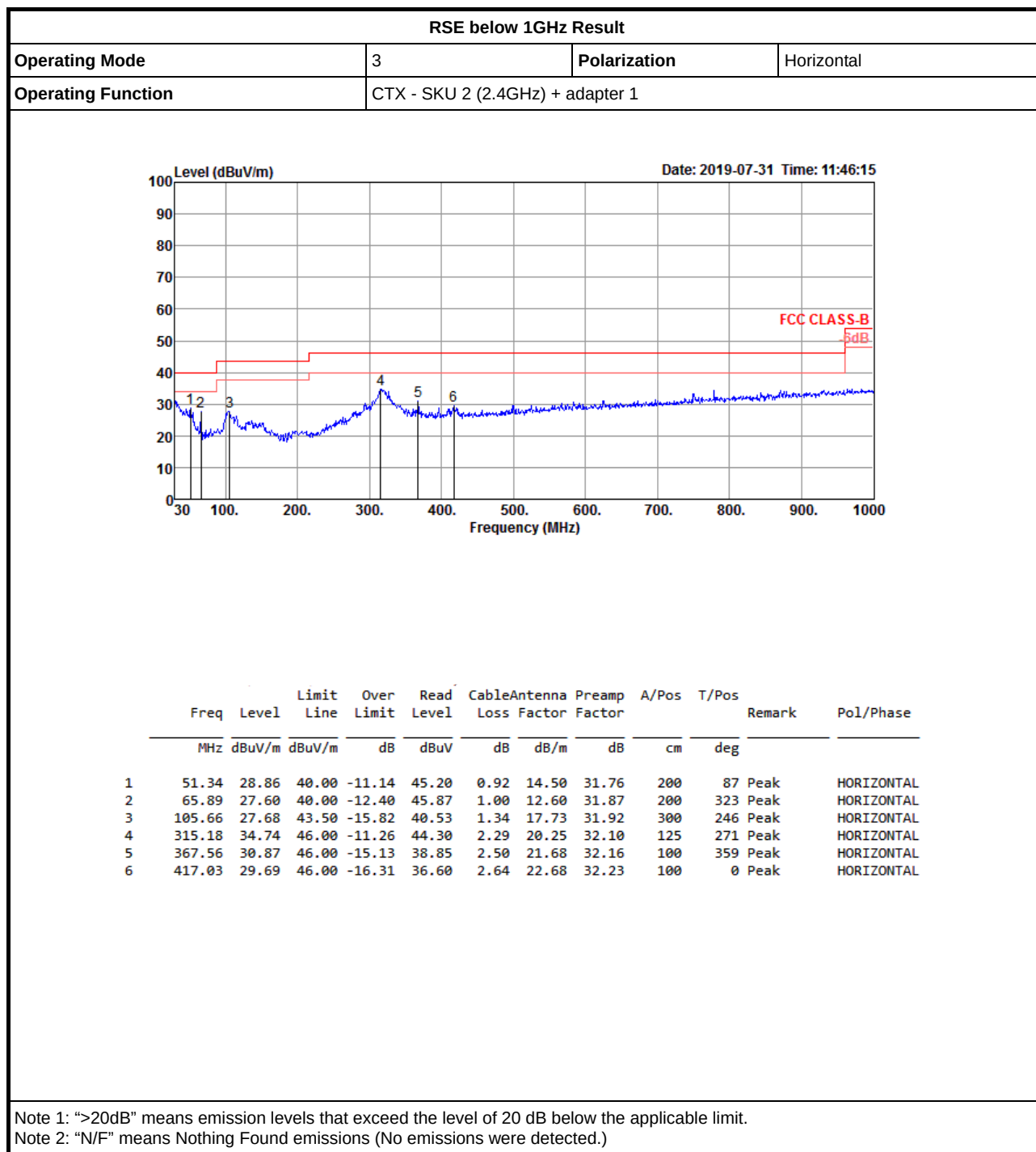
802.11ax HEW40_Nss2,(MCS0)_2TX

CSE NdB

2452MHz









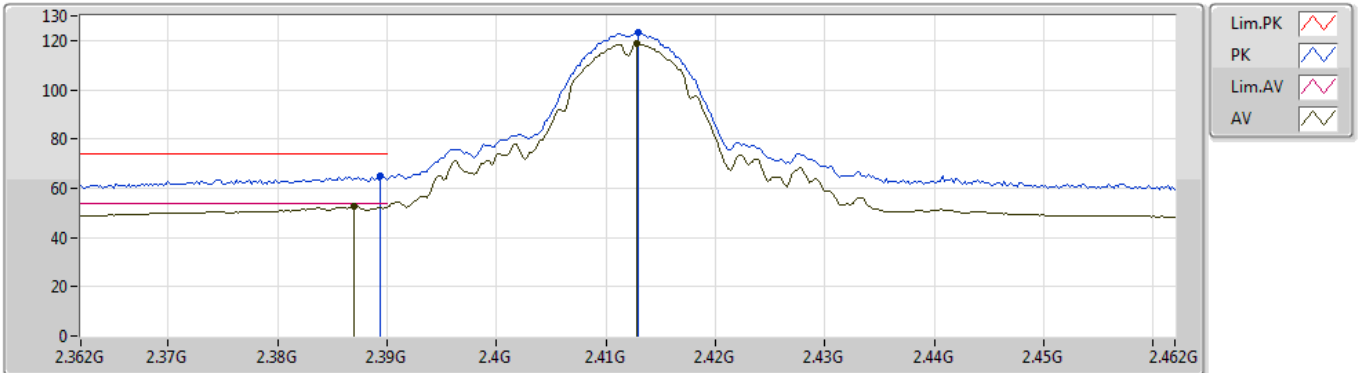
For 2T1S / 2T2S
Non-beamforming mode
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW40_Nss2,(MCS0)_2TX	Pass	AV	2.39G	53.98	54.00	-0.02	32.62	3	Vertical	323	2.60	-

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2412MHz_TX



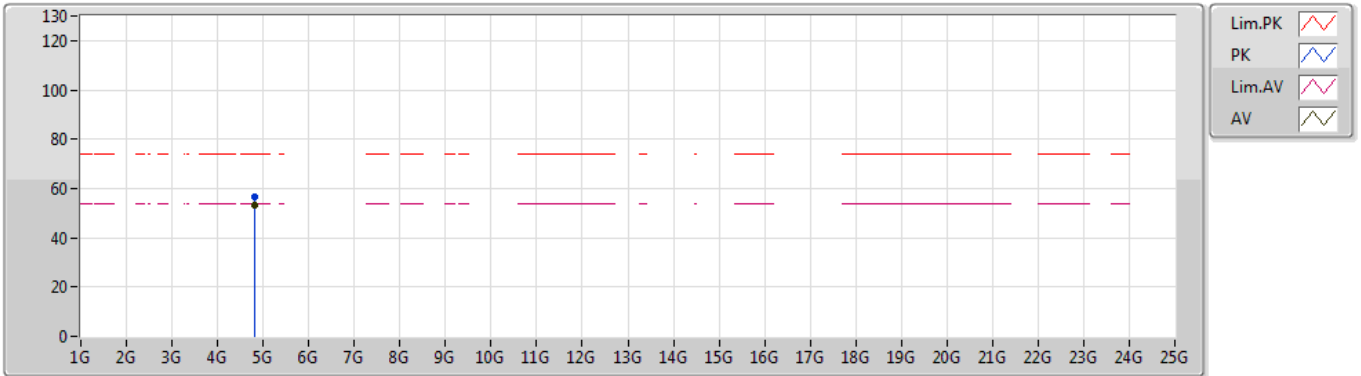
EUT_Z_2TX
Setting 114
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3894G	65.19	74.00	-8.81	32.13	3	Vertical	195	1.85	-				
AV	2.387G	52.66	54.00	-1.34	32.11	3	Vertical	195	1.85	-				
PK	2.413G	123.35	Inf	-Inf	32.20	3	Vertical	195	1.85	-				
AV	2.4128G	118.70	Inf	-Inf	32.20	3	Vertical	195	1.85	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2412MHz_TX



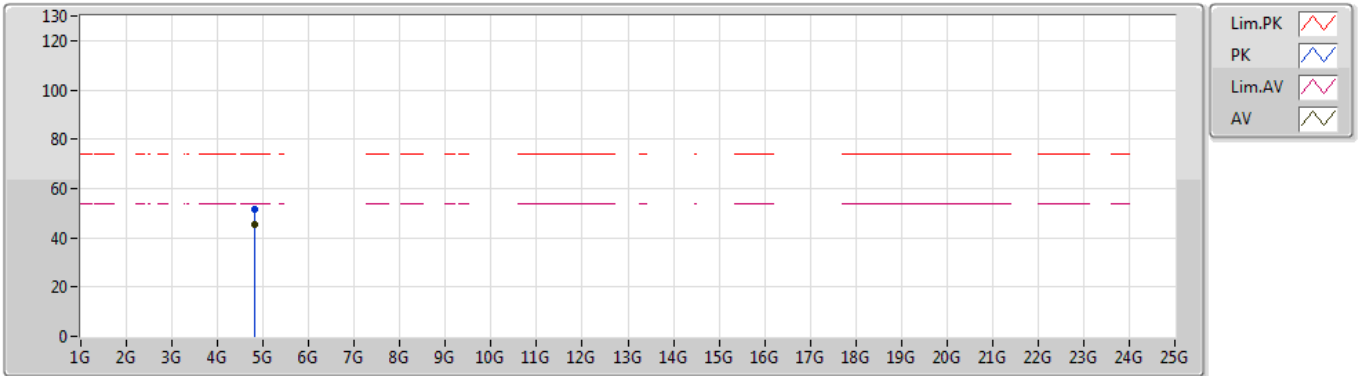
EUT_Z_2TX
Setting 114
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.82402G	56.83	74.00	-17.17	6.63	3	Vertical	320	2.76	-				
AV	4.824G	53.31	54.00	-0.69	6.63	3	Vertical	320	2.76	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2412MHz_TX



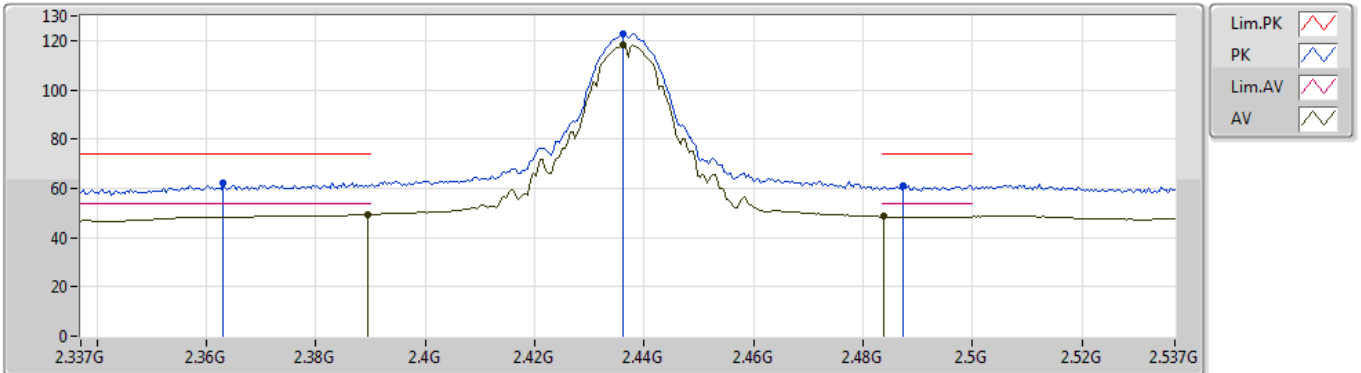
EUT Z_2TX
Setting 114
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.82392G	51.32	74.00	-22.68	6.63	3	Horizontal	335	1.06	-				
AV	4.824G	45.36	54.00	-8.64	6.63	3	Horizontal	335	1.06	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2437MHz_TX



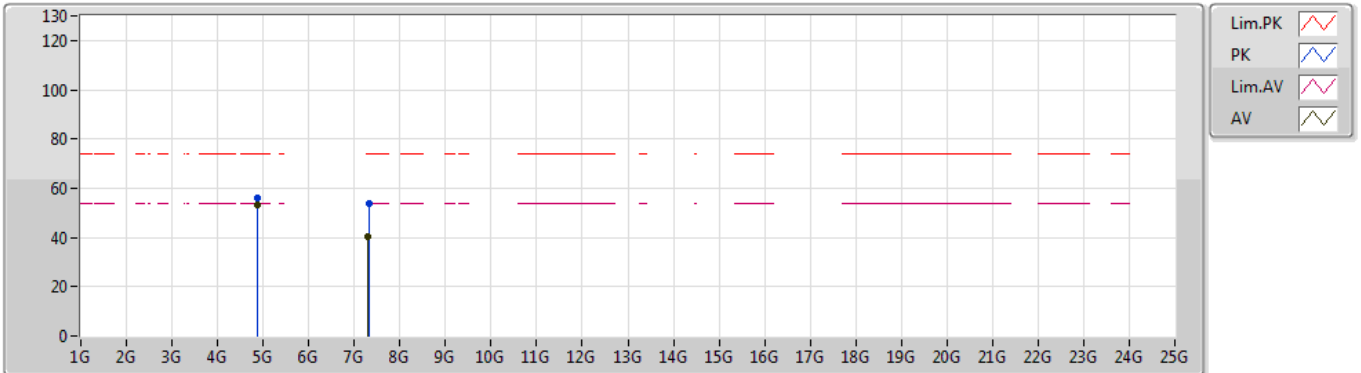
EUT_Z_2TX
Setting 116
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.363G	62.03	74.00	-11.97	32.02	3	Vertical	198	1.51	-
AV	2.3894G	49.39	54.00	-4.61	32.13	3	Vertical	198	1.51	-
PK	2.4362G	122.64	Inf	-Inf	32.27	3	Vertical	198	1.51	-
AV	2.4362G	118.33	Inf	-Inf	32.27	3	Vertical	198	1.51	-
PK	2.4874G	61.05	74.00	-12.95	32.42	3	Vertical	198	1.51	-
AV	2.4838G	48.51	54.00	-5.49	32.41	3	Vertical	198	1.51	-

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2437MHz_TX



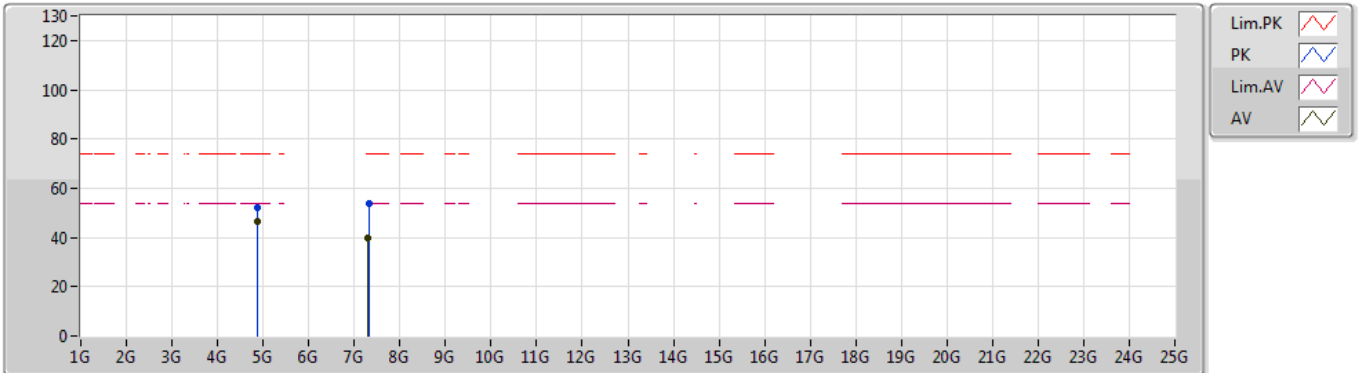
EUT_Z_2TX
Setting 116
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.87396G	56.12	74.00	-17.88	6.82	3	Vertical	314	2.63	-				
AV	4.87398G	53.04	54.00	-0.96	6.82	3	Vertical	314	2.63	-				
PK	7.31052G	53.72	74.00	-20.28	11.90	3	Vertical	11	2.99	-				
AV	7.30936G	40.28	54.00	-13.72	11.90	3	Vertical	11	2.99	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2437MHz_TX



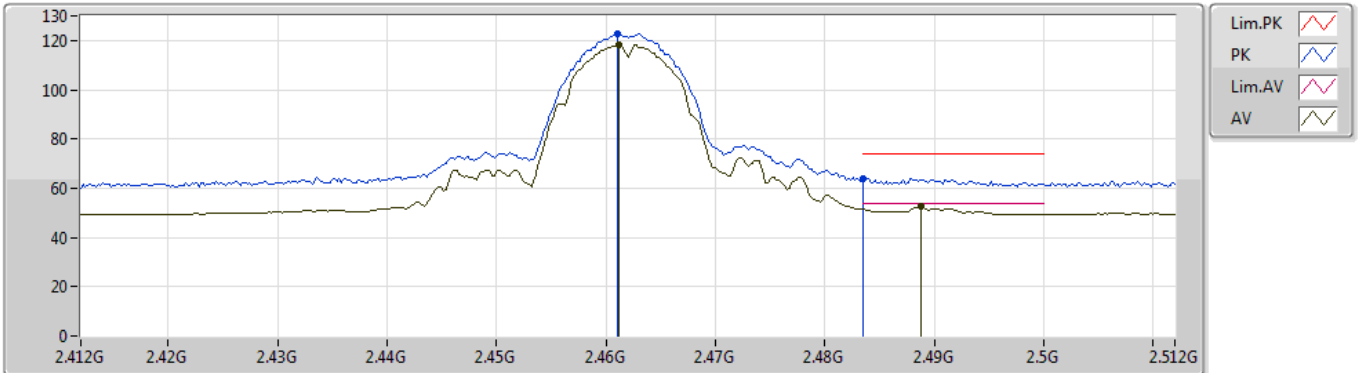
EUT_Z_2TX
Setting 116
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.87422G	51.99	74.00	-22.01	6.64	3	Horizontal	48	2.88	-				
AV	4.87398G	46.24	54.00	-7.76	6.64	3	Horizontal	48	2.88	-				
PK	7.31134G	53.85	74.00	-20.15	12.32	3	Horizontal	188	1.40	-				
AV	7.30642G	39.76	54.00	-14.24	12.33	3	Horizontal	188	1.40	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2462MHz_TX



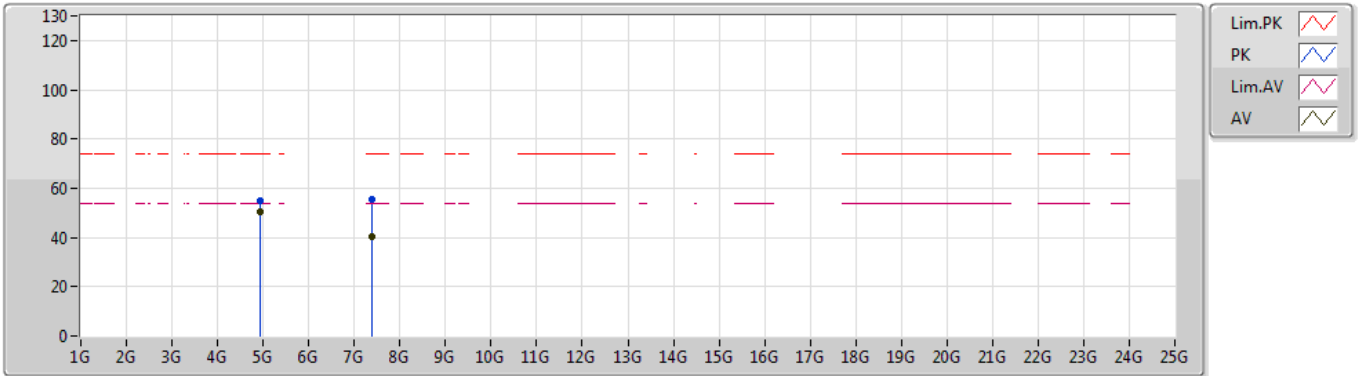
EUT_Z_2TX
Setting 113
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.461G	122.70	Inf	-Inf	32.34	3	Vertical	0	1.61	-				
AV	2.4612G	118.46	Inf	-Inf	32.34	3	Vertical	0	1.61	-				
PK	2.4835G	63.90	74.00	-10.10	32.41	3	Vertical	0	1.61	-				
AV	2.4888G	52.43	54.00	-1.57	32.43	3	Vertical	0	1.61	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2462MHz_TX



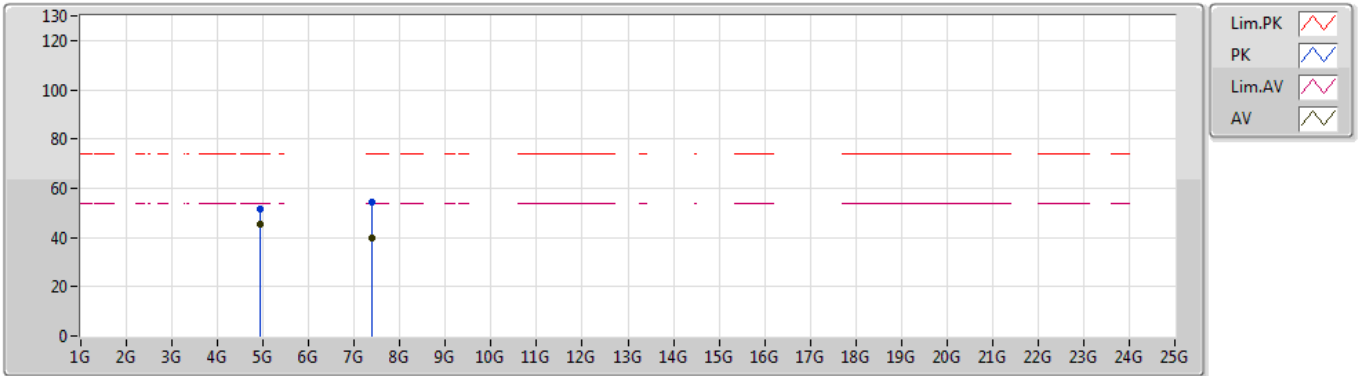
EUT_Z_2TX
Setting 113
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.92394G	54.69	74.00	-19.31	6.95	3	Vertical	311	2.42	-				
AV	4.92396G	50.37	54.00	-3.63	6.95	3	Vertical	311	2.42	-				
PK	7.38416G	55.67	74.00	-18.33	12.10	3	Vertical	11	2.98	-				
AV	7.38442G	40.52	54.00	-13.48	12.10	3	Vertical	11	2.98	-				

802.11b_Nss1,(1Mbps)_2TX

26/07/2019

2462MHz_TX



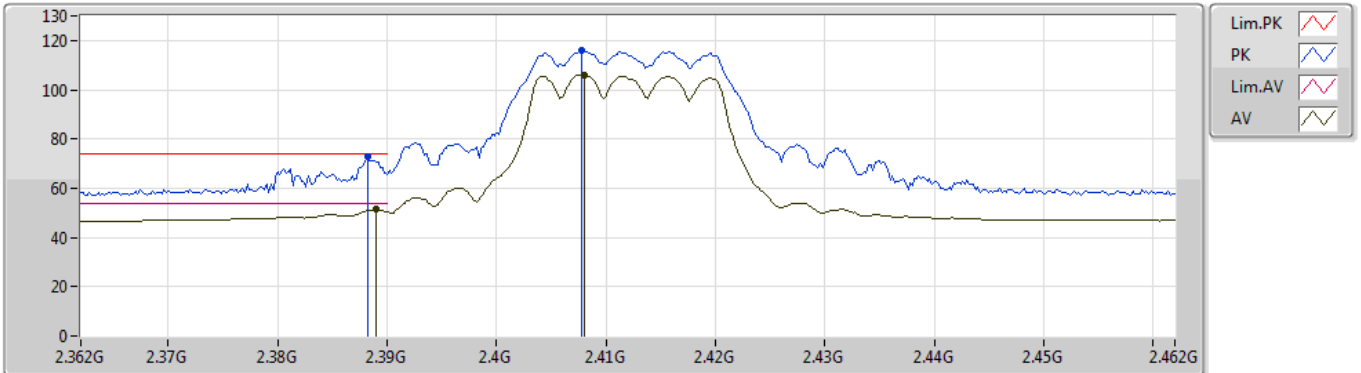
EUT_Z_2TX
Setting 113
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.92394G	51.81	74.00	-22.19	6.73	3	Horizontal	119	1.01	-				
AV	4.924G	45.39	54.00	-8.61	6.73	3	Horizontal	119	1.01	-				
PK	7.38858G	54.21	74.00	-19.79	12.30	3	Horizontal	242	1.50	-				
AV	7.38102G	40.03	54.00	-13.97	12.30	3	Horizontal	242	1.50	-				

802.11g_Nss1,(6Mbps)_2TX

12/07/2019

2412MHz_TX



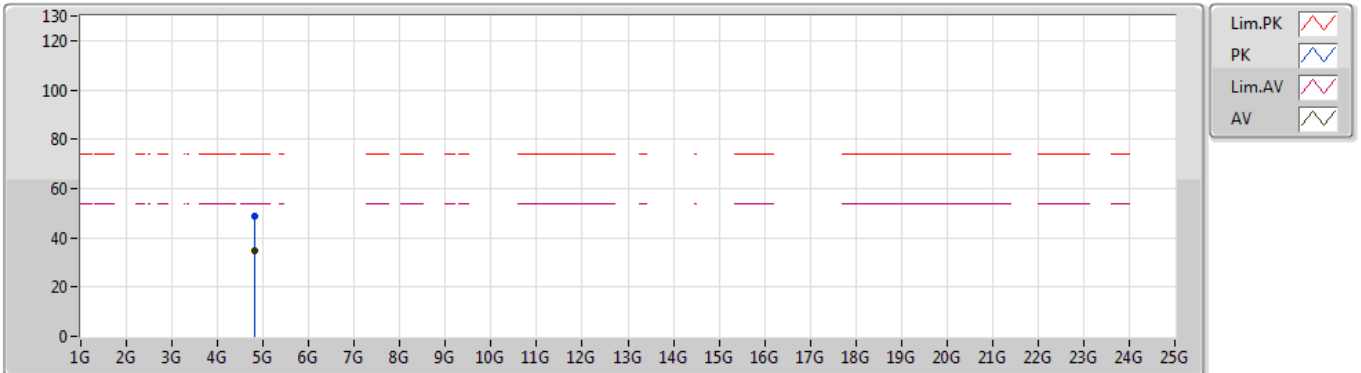
EUT_Z_2TX
Setting 85
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3882G	72.57	74.00	-1.43	32.62	3	Vertical	228	2.64	-				
AV	2.389G	51.30	54.00	-2.70	32.63	3	Vertical	228	2.64	-				
PK	2.4078G	116.12	Inf	-Inf	32.57	3	Vertical	228	2.64	-				
AV	2.408G	106.15	Inf	-Inf	32.57	3	Vertical	228	2.64	-				

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2412MHz_TX



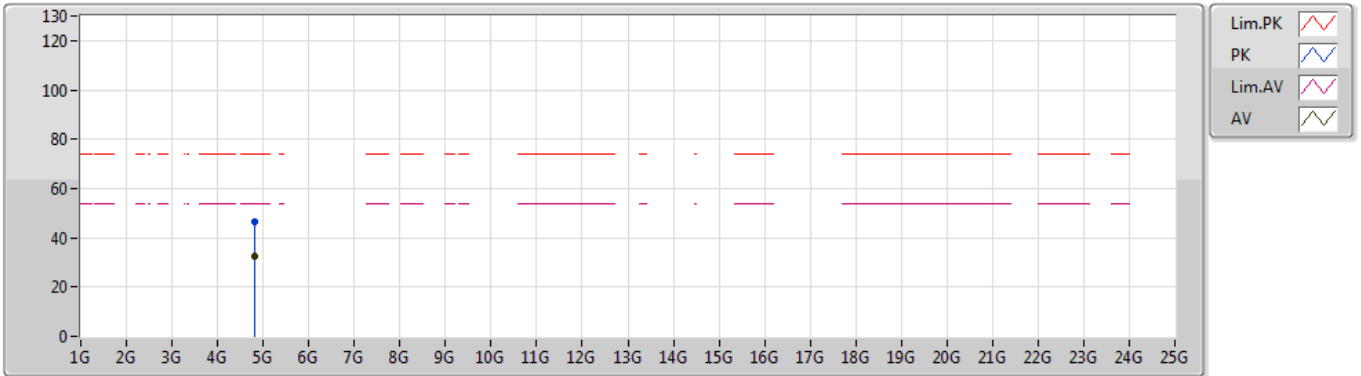
EUT Z_2TX
Setting 85
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8246G	48.70	74.00	-25.30	4.71	3	Vertical	298	2.91	-				
AV	4.8246G	34.64	54.00	-19.36	4.71	3	Vertical	298	2.91	-				

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2412MHz_TX



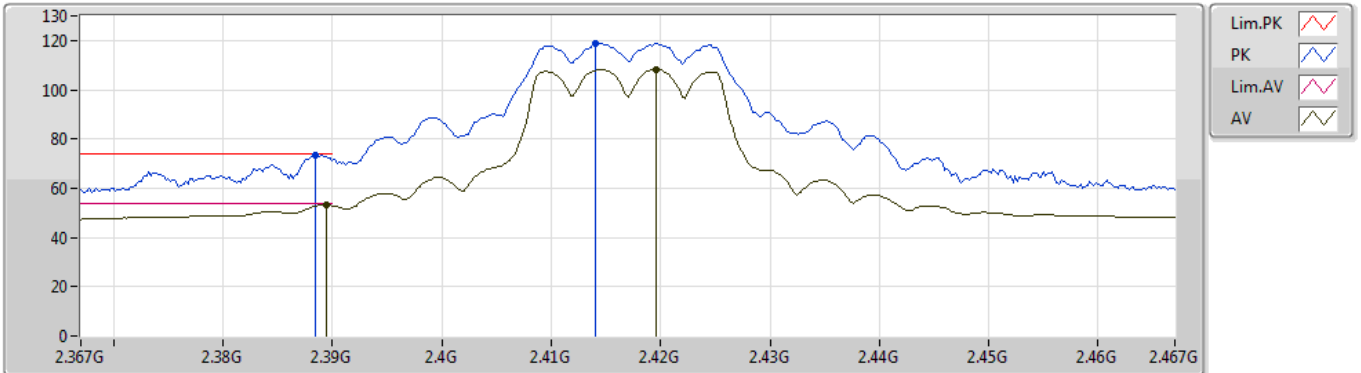
EUT Z_2TX
Setting 85
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8207G	46.29	74.00	-27.71	4.70	3	Horizontal	209	1.03	-				
AV	4.8245G	32.32	54.00	-21.68	4.71	3	Horizontal	209	1.03	-				

802.11g_Nss1,(6Mbps)_2TX

30/07/2019

2417MHz_TX



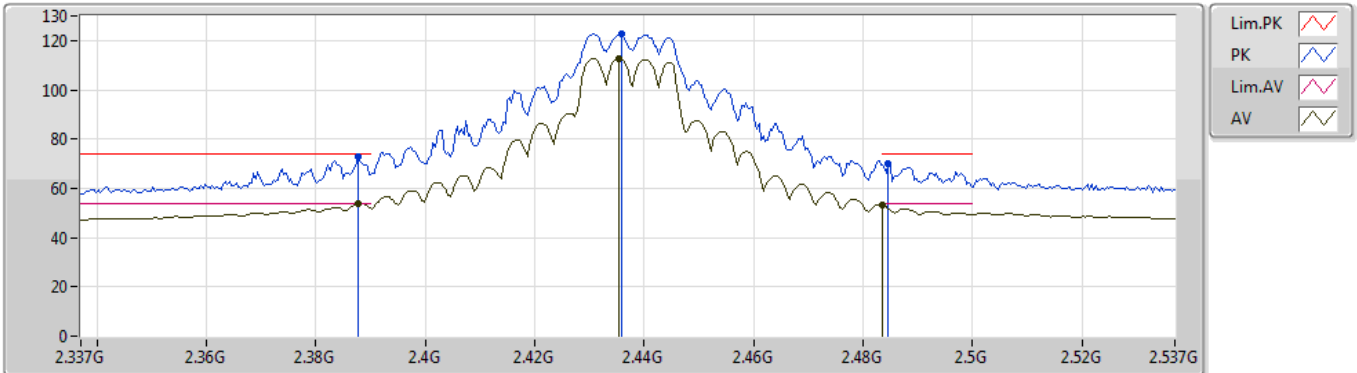
EUT_Z_2TX
Setting 94
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment			
PK	2.3884G	73.59	74.00	-0.41	32.62	3	Vertical	179	1.88	-			
AV	2.3894G	53.28	54.00	-0.72	32.62	3	Vertical	179	1.88	-			
PK	2.414G	118.75	Inf	-Inf	32.56	3	Vertical	179	1.88	-			
AV	2.4196G	108.22	Inf	-Inf	32.56	3	Vertical	179	1.88	-			

802.11g_Nss1,(6Mbps)_2TX

12/07/2019

2437MHz_TX



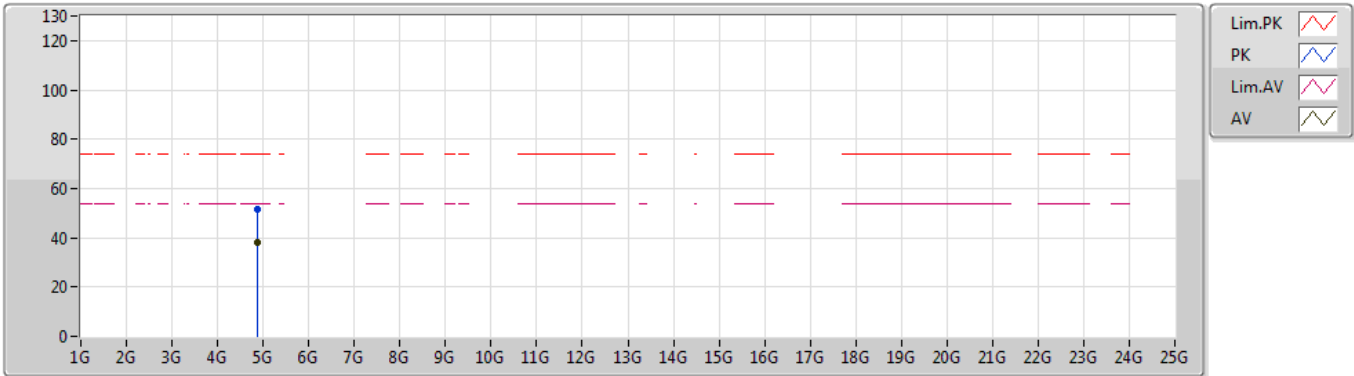
EUT_Z_2TX
Setting 116
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3878G	72.60	74.00	-1.40	32.62	3	Vertical	211	2.17	-
AV	2.3878G	53.79	54.00	-0.21	32.62	3	Vertical	211	2.17	-
PK	2.4358G	122.68	Inf	-Inf	32.54	3	Vertical	211	2.17	-
AV	2.4354G	112.78	Inf	-Inf	32.54	3	Vertical	211	2.17	-
PK	2.4846G	69.78	74.00	-4.22	32.48	3	Vertical	211	2.17	-
AV	2.4835G	53.33	54.00	-0.67	32.48	3	Vertical	211	2.17	-

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2437MHz_TX



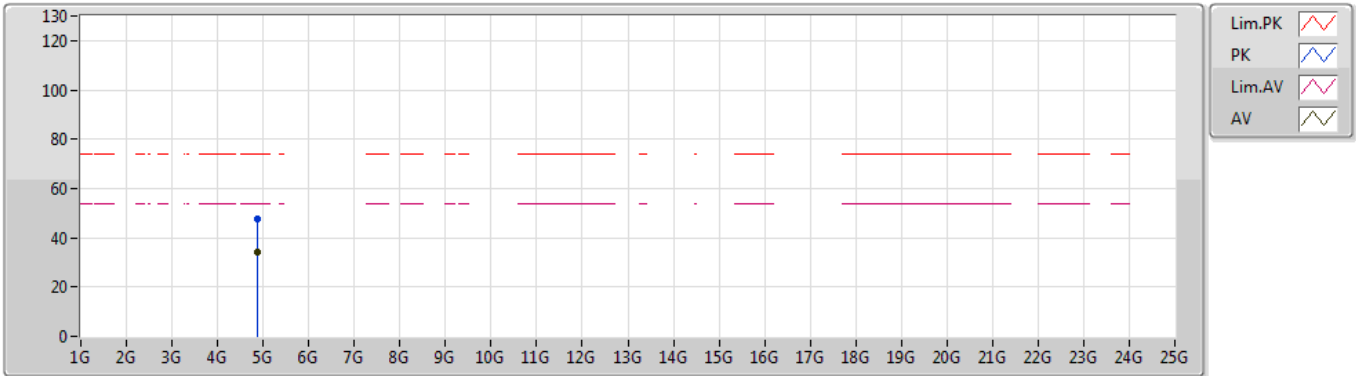
EUT Z_2TX
Setting 116
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8788G	51.82	74.00	-22.18	4.81	3	Vertical	313	2.58	-				
AV	4.8742G	37.95	54.00	-16.05	4.80	3	Vertical	313	2.58	-				

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2437MHz_TX



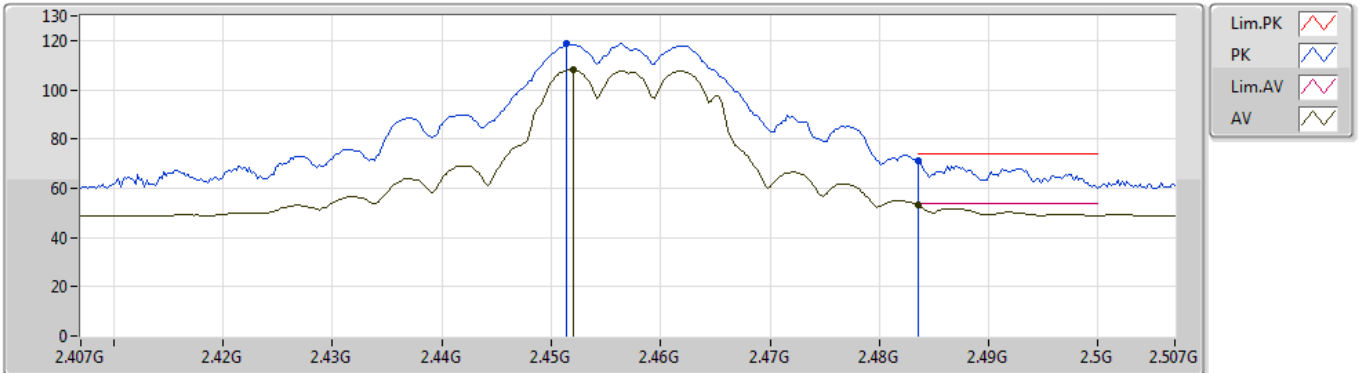
EUT Z_2TX
Setting 116
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8735G	47.86	74.00	-26.14	4.80	3	Horizontal	39	2.81	-				
AV	4.8737G	34.31	54.00	-19.69	4.80	3	Horizontal	39	2.81	-				

802.11g_Nss1,(6Mbps)_2TX

30/07/2019

2457MHz_TX



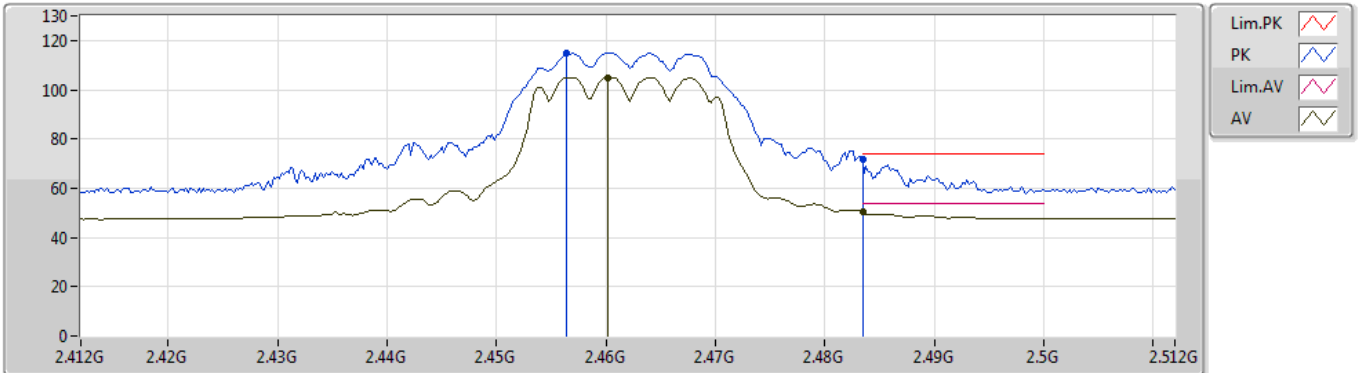
EUT_Z_2TX
Setting 97
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.4514G	119.02	Inf	-Inf	32.52	3	Vertical	1	2.09	-				
AV	2.452G	108.14	Inf	-Inf	32.52	3	Vertical	1	2.09	-				
PK	2.4835G	71.43	74.00	-2.57	32.48	3	Vertical	1	2.09	-				
AV	2.4835G	53.03	54.00	-0.97	32.48	3	Vertical	1	2.09	-				

802.11g_Nss1,(6Mbps)_2TX

12/07/2019

2462MHz_TX



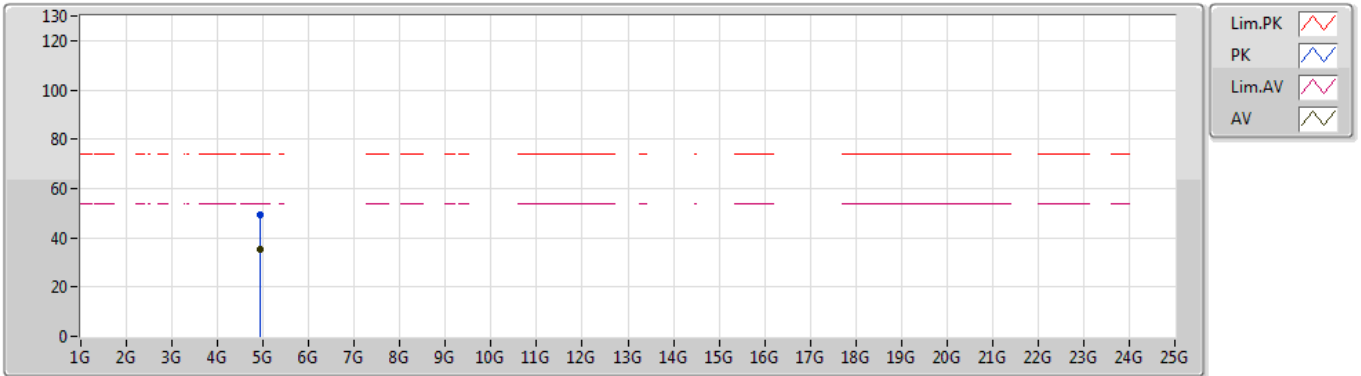
EUT_Z_2TX
Setting 87
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment			
PK	2.4564G	115.07	Inf	-Inf	32.33	3	Vertical	179	2.28	-			
AV	2.4602G	105.01	Inf	-Inf	32.34	3	Vertical	179	2.28	-			
PK	2.4835G	71.95	74.00	-2.05	32.41	3	Vertical	179	2.28	-			
AV	2.4835G	50.27	54.00	-3.73	32.41	3	Vertical	179	2.28	-			

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2462MHz_TX



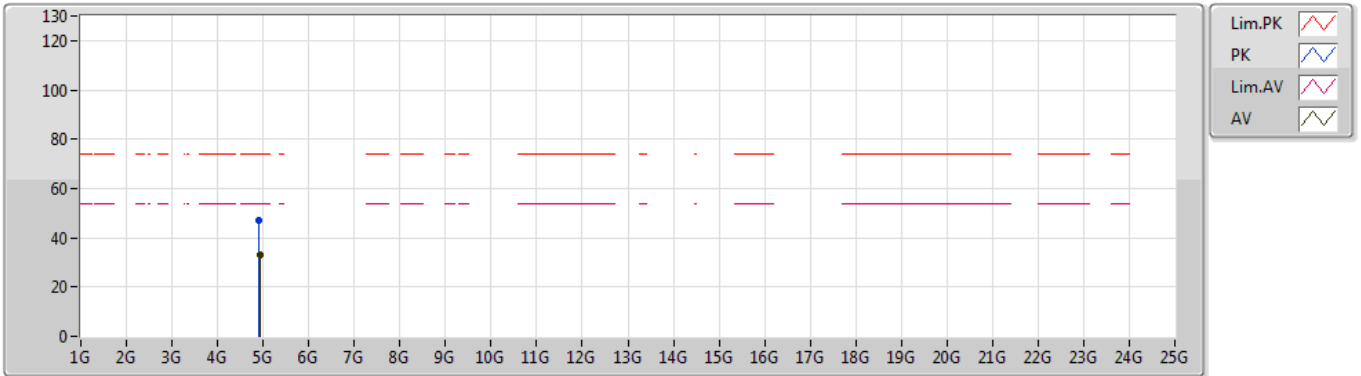
EUT_Z_2TX
Setting 87
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9246G	49.48	74.00	-24.52	4.90	3	Vertical	317	2.50	-				
AV	4.9241G	35.56	54.00	-18.44	4.90	3	Vertical	317	2.50	-				

802.11g_Nss1,(6Mbps)_2TX

25/07/2019

2462MHz_TX



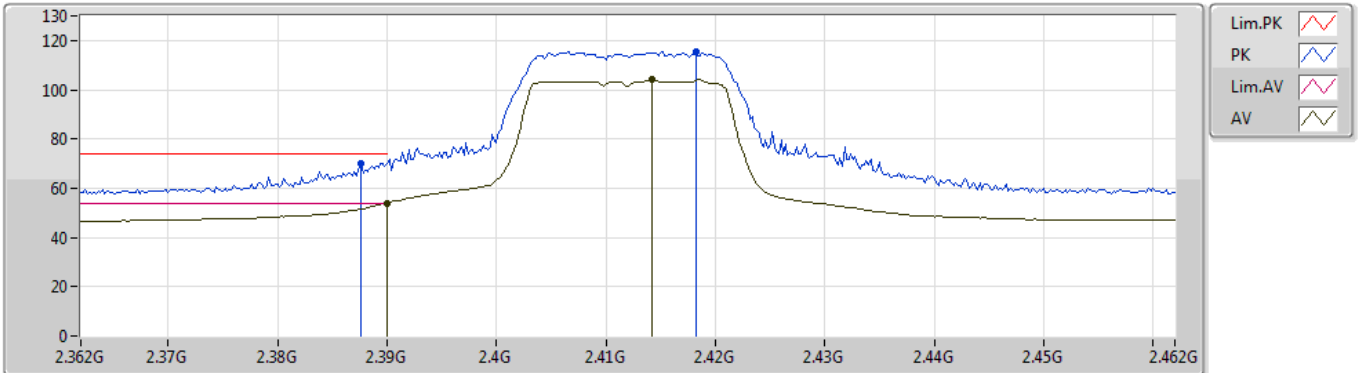
EUT Z_2TX
Setting 87
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9072G	47.02	74.00	-26.98	4.86	3	Horizontal	167	2.97	-				
AV	4.924G	33.24	54.00	-20.76	4.90	3	Horizontal	167	2.97	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

12/07/2019

2412MHz_TX



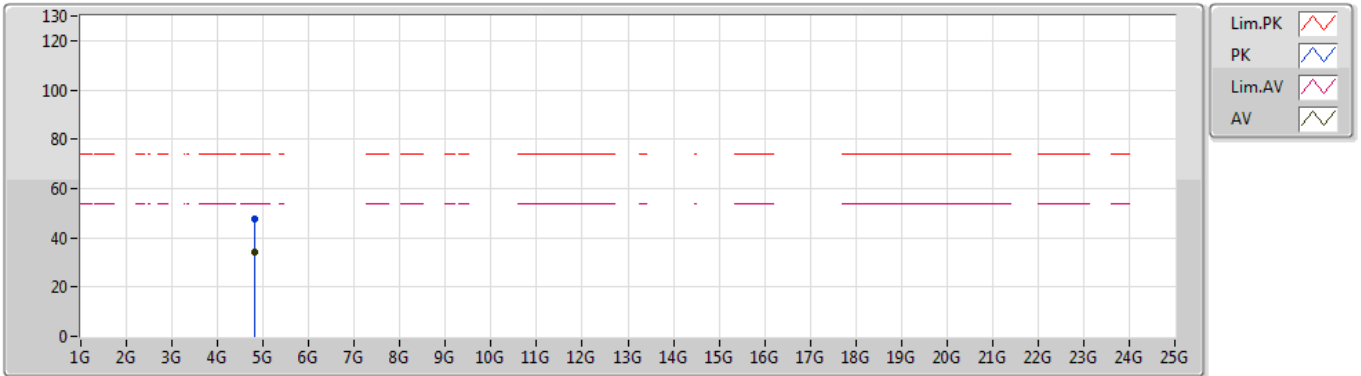
EUT_Z_2TX
Setting 86
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3876G	70.07	74.00	-3.93	32.11	3	Vertical	203	1.40	-				
AV	2.39G	53.88	54.00	-0.12	32.13	3	Vertical	203	1.40	-				
PK	2.4182G	115.56	Inf	-Inf	32.21	3	Vertical	203	1.40	-				
AV	2.4142G	104.17	Inf	-Inf	32.20	3	Vertical	203	1.40	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2412MHz_TX



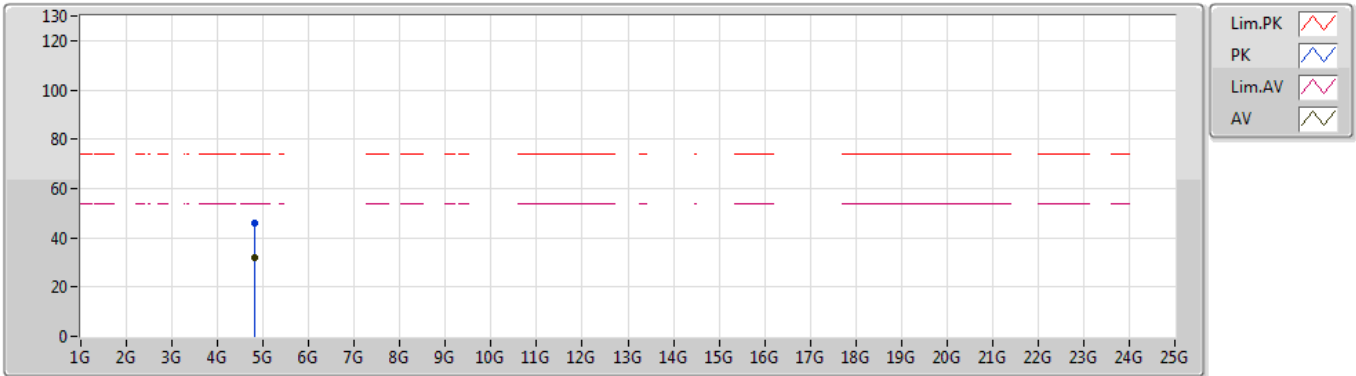
EUT Z_2TX
Setting 86
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.824G	47.74	74.00	-26.26	4.71	3	Vertical	307	2.45	-				
AV	4.8239G	34.10	54.00	-19.90	4.71	3	Vertical	307	2.45	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2412MHz_TX



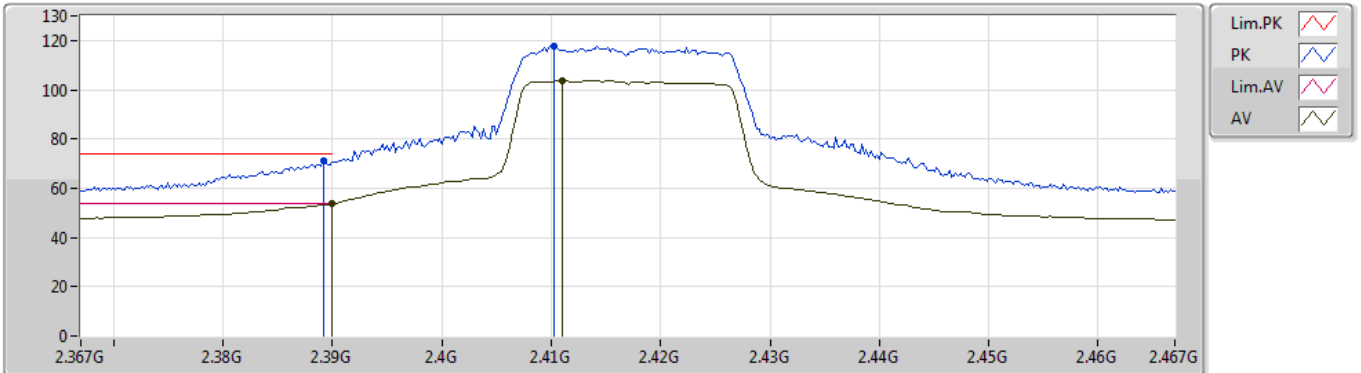
EUT Z_2TX
Setting 86
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8145G	45.79	74.00	-28.21	4.69	3	Horizontal	292	1.46	-				
AV	4.8233G	32.18	54.00	-21.82	4.71	3	Horizontal	292	1.46	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

30/07/2019

2417MHz_TX



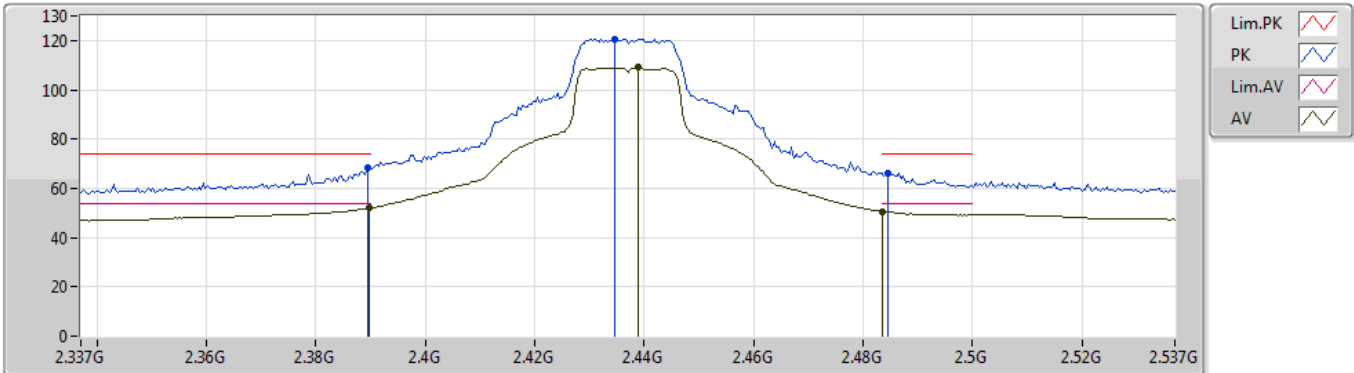
EUT_Z_2TX
Setting 89
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3892G	71.05	74.00	-2.95	32.62	3	Vertical	191	1.21	-
AV	2.39G	53.78	54.00	-0.22	32.62	3	Vertical	191	1.21	-
PK	2.4102G	117.89	Inf	-Inf	32.57	3	Vertical	191	1.21	-
AV	2.411G	103.59	Inf	-Inf	32.57	3	Vertical	191	1.21	-

802.11ax HEW20_Nss2,(MCS0)_2TX

12/07/2019

2437MHz_TX



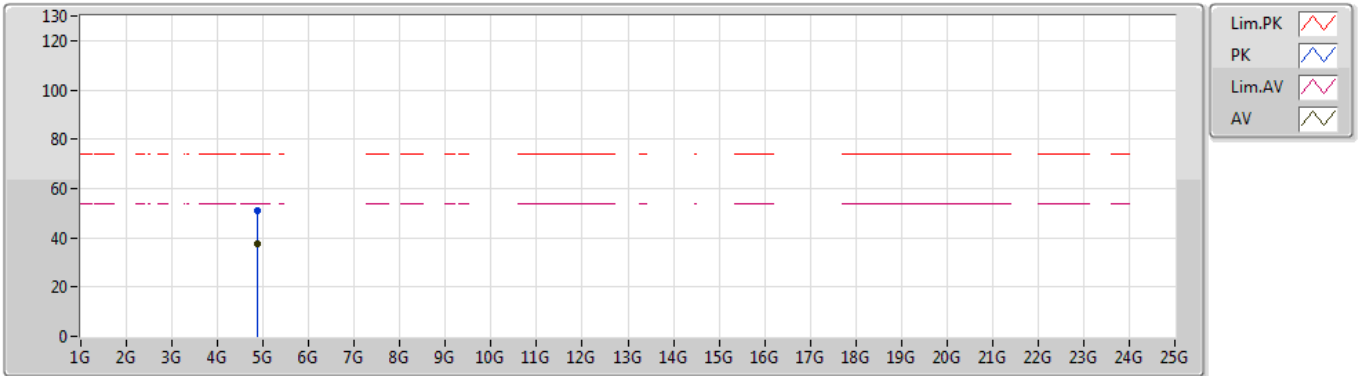
EUT Z_2TX
Setting 110
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3894G	68.35	74.00	-5.65	32.13	3	Vertical	206	1.50	-
AV	2.3898G	52.07	54.00	-1.93	32.13	3	Vertical	206	1.50	-
PK	2.4346G	120.74	Inf	-Inf	32.27	3	Vertical	206	1.50	-
AV	2.439G	109.09	Inf	-Inf	32.28	3	Vertical	206	1.50	-
PK	2.4846G	66.30	74.00	-7.70	32.42	3	Vertical	206	1.50	-
AV	2.4835G	50.69	54.00	-3.31	32.41	3	Vertical	206	1.50	-

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2437MHz_TX



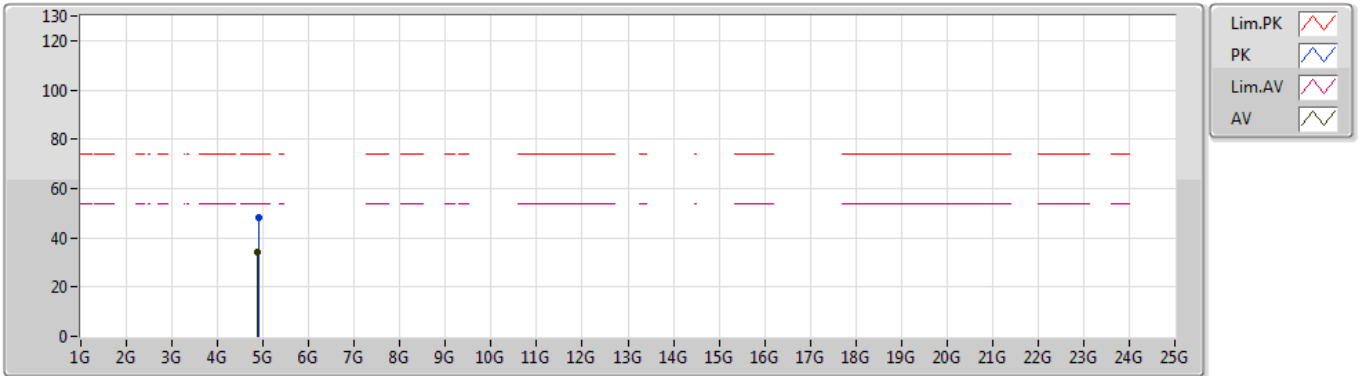
EUT Z_2TX
Setting 110
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8727G	51.27	74.00	-22.73	4.80	3	Vertical	313	2.38	-				
AV	4.8753G	37.36	54.00	-16.64	4.80	3	Vertical	313	2.38	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2437MHz_TX



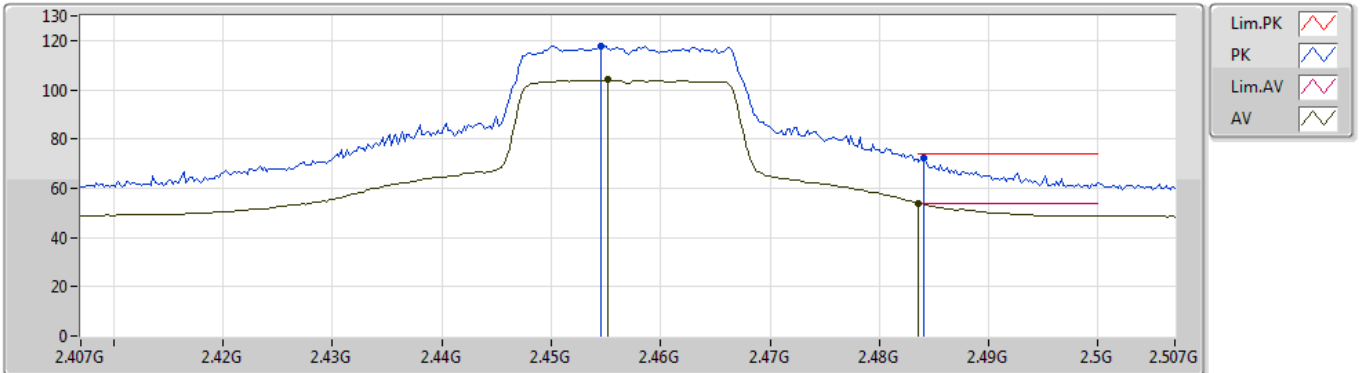
EUT Z_2TX
Setting 110
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8909G	47.93	74.00	-26.07	4.83	3	Horizontal	46	2.94	-				
AV	4.8748G	33.94	54.00	-20.06	4.80	3	Horizontal	46	2.94	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

30/07/2019

2457MHz_TX



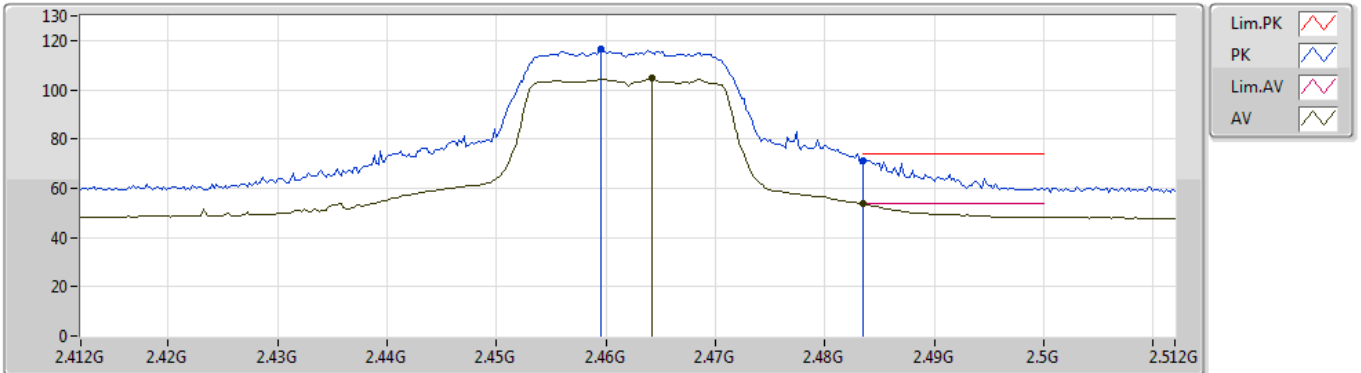
EUT_Z_2TX
Setting 94
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.4546G	117.80	Inf	-Inf	32.51	3	Vertical	187	1.42	-				
AV	2.4552G	104.04	Inf	-Inf	32.51	3	Vertical	187	1.42	-				
PK	2.484G	72.26	74.00	-1.74	32.48	3	Vertical	187	1.42	-				
AV	2.4835G	53.91	54.00	-0.09	32.48	3	Vertical	187	1.42	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

12/07/2019

2462MHz_TX



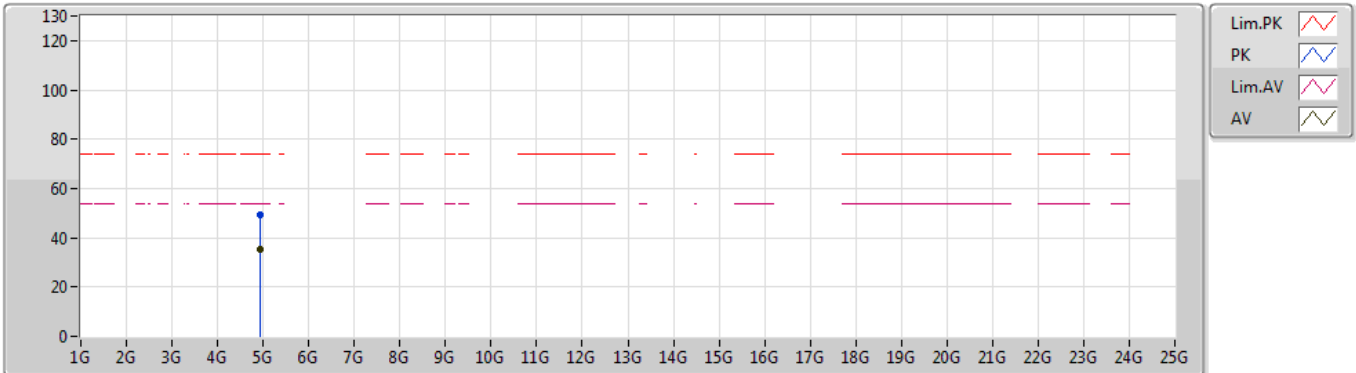
EUT_Z_2TX
Setting 91
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment			
PK	2.4596G	116.29	Inf	-Inf	32.51	3	Vertical	215	2.47	-			
AV	2.4642G	104.59	Inf	-Inf	32.50	3	Vertical	215	2.47	-			
PK	2.4835G	71.39	74.00	-2.61	32.48	3	Vertical	215	2.47	-			
AV	2.4835G	53.58	54.00	-0.42	32.48	3	Vertical	215	2.47	-			

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2462MHz_TX



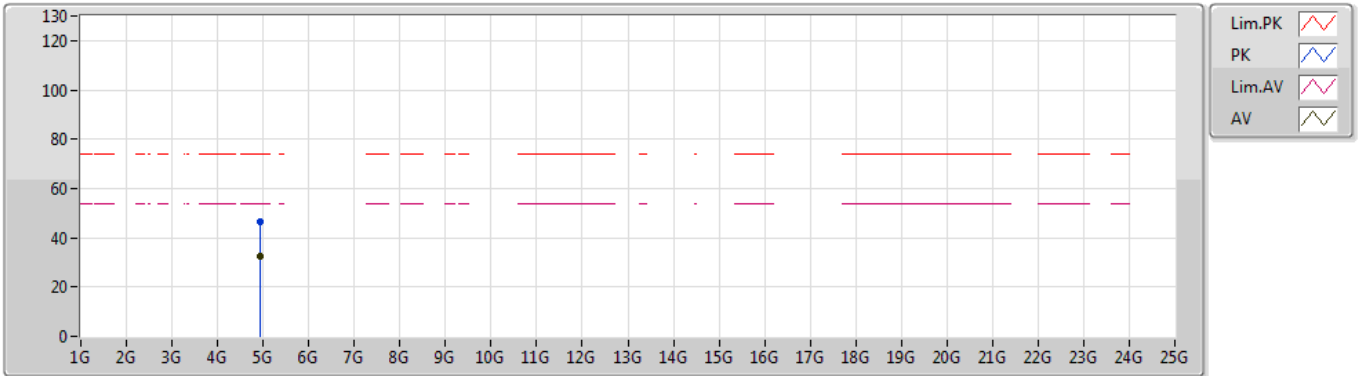
EUT Z_2TX
Setting 91
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9283G	49.09	74.00	-24.91	4.90	3	Vertical	310	2.92	-				
AV	4.9268G	35.51	54.00	-18.49	4.89	3	Vertical	310	2.92	-				

802.11ax HEW20_Nss2,(MCS0)_2TX

25/07/2019

2462MHz_TX



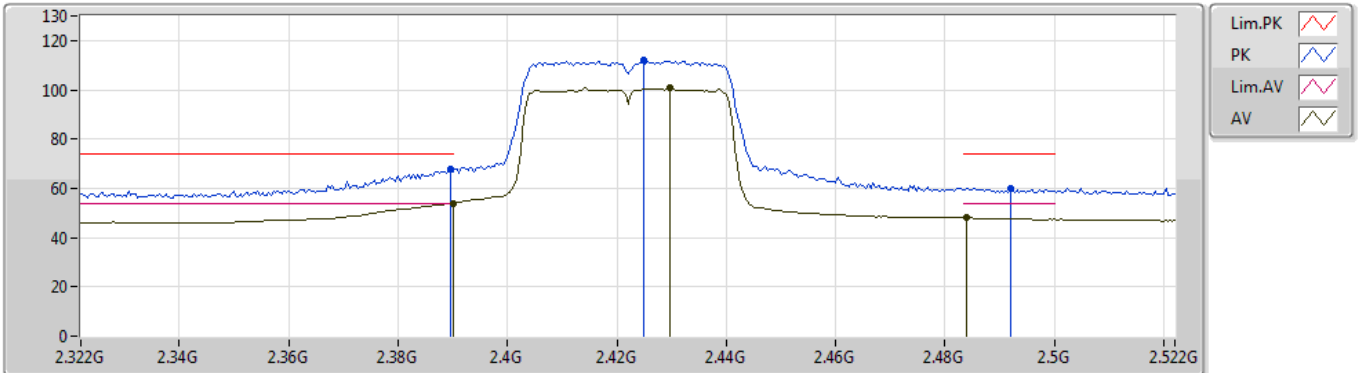
EUT Z_2TX
Setting 91
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.938G	46.45	74.00	-27.55	4.92	3	Horizontal	135	2.91	-				
AV	4.9402G	32.72	54.00	-21.28	4.92	3	Horizontal	135	2.91	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

12/07/2019

2422MHz_TX



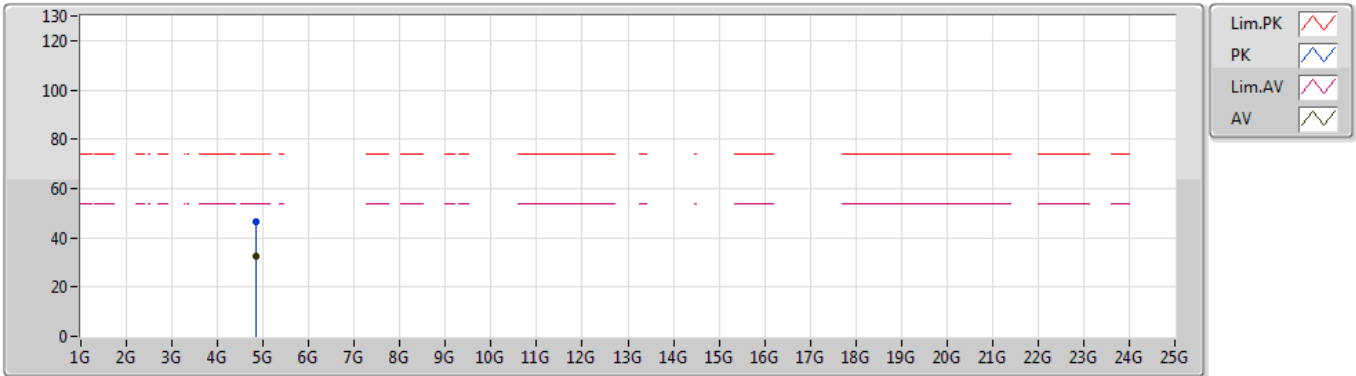
EUT_Z_2TX
Setting 79
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3896G	67.60	74.00	-6.40	32.62	3	Vertical	323	2.60	-				
AV	2.39G	53.98	54.00	-0.02	32.62	3	Vertical	323	2.60	-				
PK	2.4248G	112.33	Inf	-Inf	32.55	3	Vertical	323	2.60	-				
AV	2.4296G	100.81	Inf	-Inf	32.54	3	Vertical	323	2.60	-				
PK	2.492G	60.14	74.00	-13.86	32.47	3	Vertical	323	2.60	-				
AV	2.484G	47.97	54.00	-6.03	32.48	3	Vertical	323	2.60	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2422MHz_TX



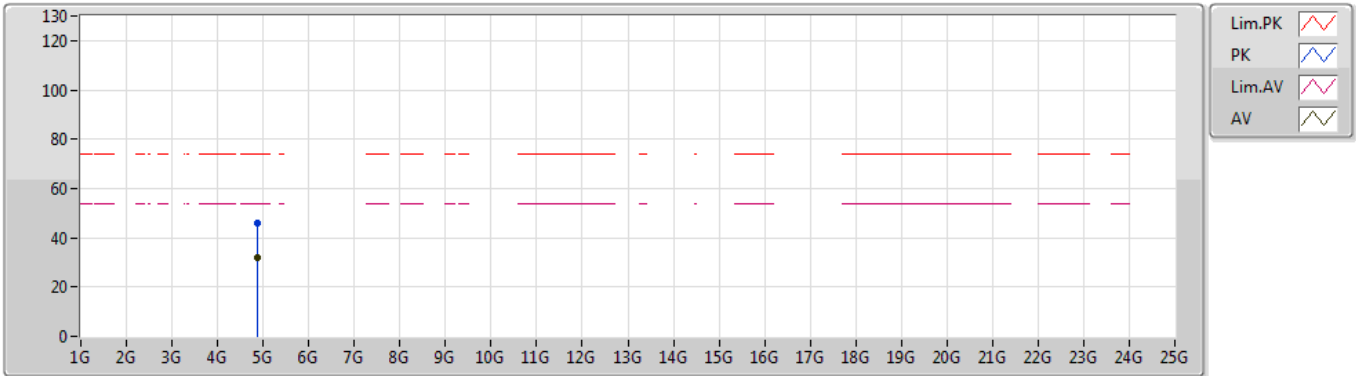
EUT Z_2TX
Setting 79
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8545G	46.40	74.00	-27.60	4.76	3	Vertical	298	2.97	-				
AV	4.8433G	32.45	54.00	-21.55	4.75	3	Vertical	298	2.97	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2422MHz_TX



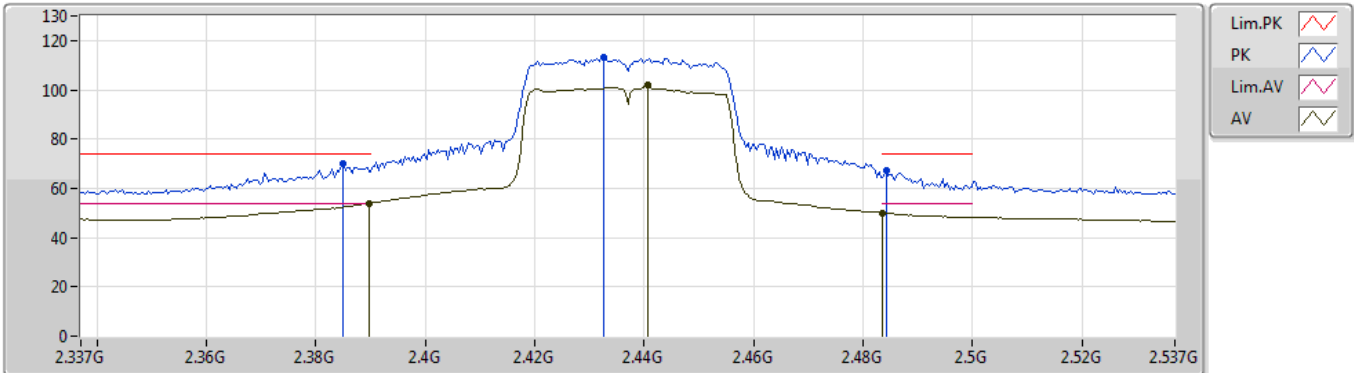
EUT Z_2TX
Setting 79
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8636G	46.01	74.00	-27.99	4.78	3	Horizontal	72	1.50	-				
AV	4.864G	32.14	54.00	-21.86	4.78	3	Horizontal	72	1.50	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

12/07/2019

2437MHz_TX



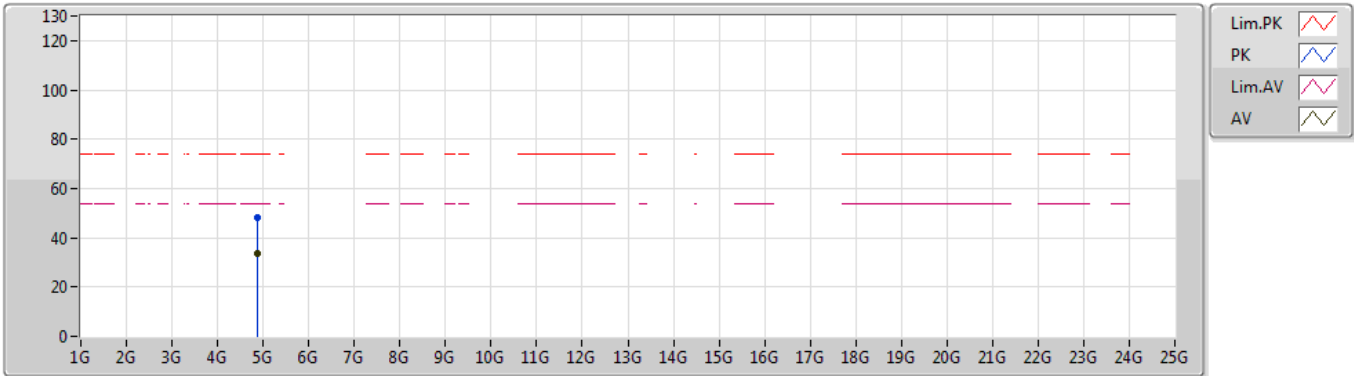
EUT_Z_2TX
Setting 88
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.385G	69.91	74.00	-4.09	32.64	3	Vertical	201	1.50	-
AV	2.3898G	53.91	54.00	-0.09	32.62	3	Vertical	201	1.50	-
PK	2.4326G	113.14	Inf	-Inf	32.54	3	Vertical	201	1.50	-
AV	2.4406G	102.01	Inf	-Inf	32.53	3	Vertical	201	1.50	-
PK	2.4842G	67.11	74.00	-6.89	32.48	3	Vertical	201	1.50	-
AV	2.4835G	50.02	54.00	-3.98	32.48	3	Vertical	201	1.50	-

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2437MHz_TX



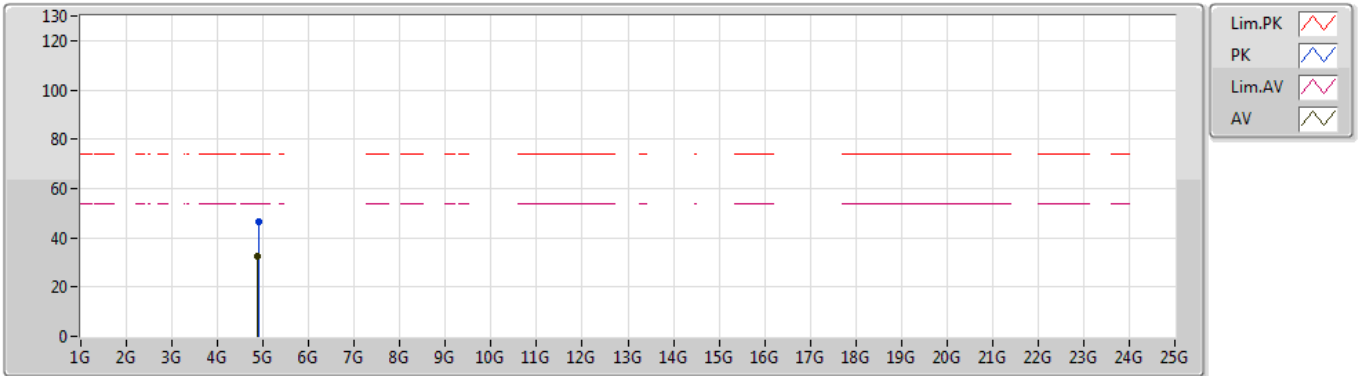
EUT Z_2TX
Setting 88
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8855G	48.10	74.00	-25.90	4.82	3	Vertical	305	2.87	-				
AV	4.874G	33.81	54.00	-20.19	4.80	3	Vertical	305	2.87	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2437MHz_TX



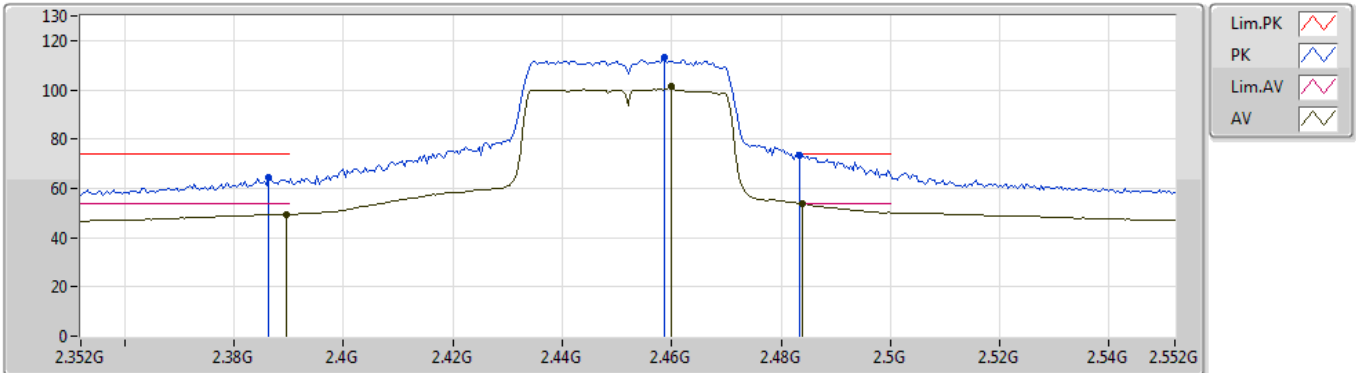
EUT Z_2TX
Setting 88
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8928G	46.78	74.00	-27.22	4.84	3	Horizontal	159	2.78	-				
AV	4.8737G	32.63	54.00	-21.37	4.80	3	Horizontal	159	2.78	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

12/07/2019

2452MHz_TX



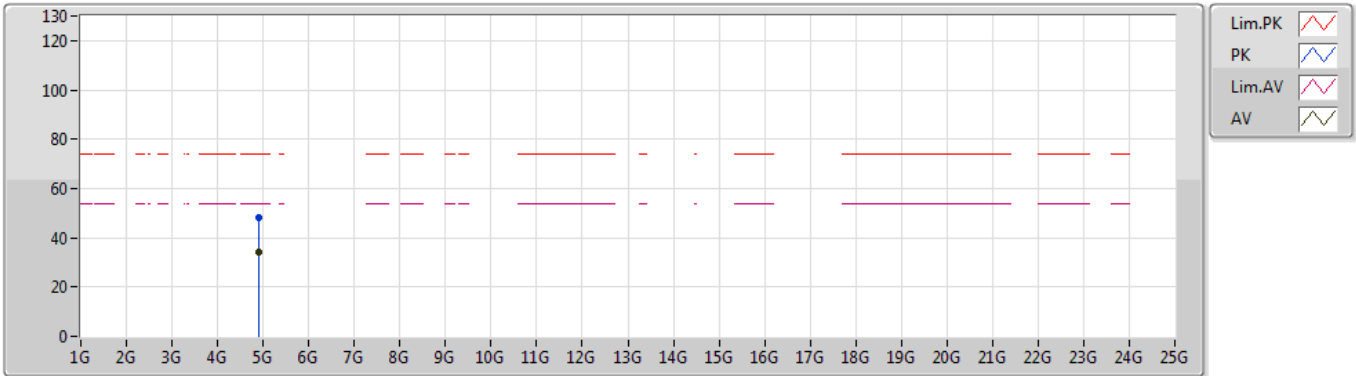
EUT_Z_2TX
Setting 88
06-K-3
FSP(100080)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3864G	64.34	74.00	-9.66	32.63	3	Vertical	216	2.47	-
AV	2.3896G	49.54	54.00	-4.46	32.62	3	Vertical	216	2.47	-
PK	2.4588G	113.24	Inf	-Inf	32.51	3	Vertical	216	2.47	-
AV	2.46G	101.60	Inf	-Inf	32.51	3	Vertical	216	2.47	-
PK	2.4835G	73.60	74.00	-0.40	32.48	3	Vertical	216	2.47	-
AV	2.484G	53.68	54.00	-0.32	32.48	3	Vertical	216	2.47	-

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2452MHz_TX



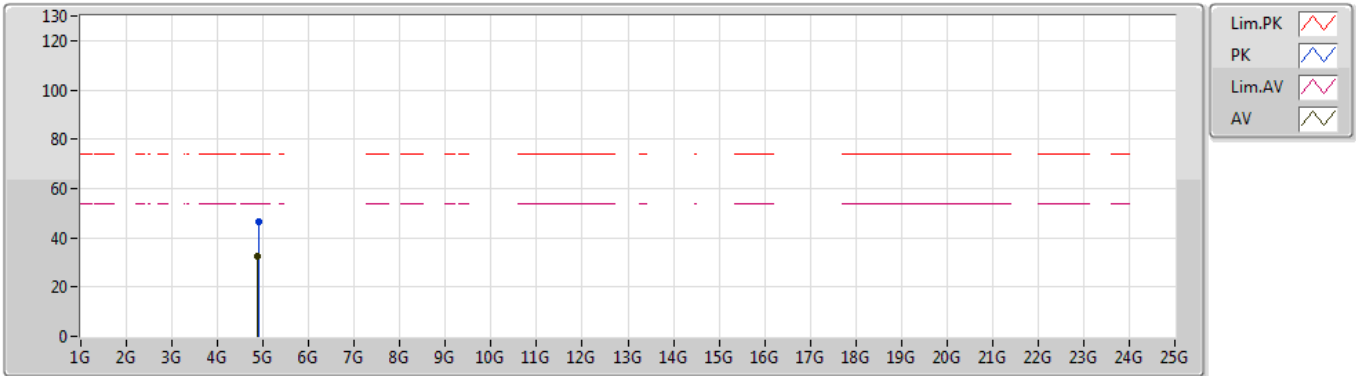
EUT Z_2TX
Setting 88
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9035G	48.13	74.00	-25.87	4.86	3	Vertical	312	2.61	-				
AV	4.9037G	33.99	54.00	-20.01	4.86	3	Vertical	312	2.61	-				

802.11ax HEW40_Nss2,(MCS0)_2TX

25/07/2019

2452MHz_TX



EUT Z_2TX
Setting 88
03-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9166G	46.75	74.00	-27.25	4.88	3	Horizontal	169	1.50	-				
AV	4.8821G	32.60	54.00	-21.40	4.81	3	Horizontal	169	1.50	-				



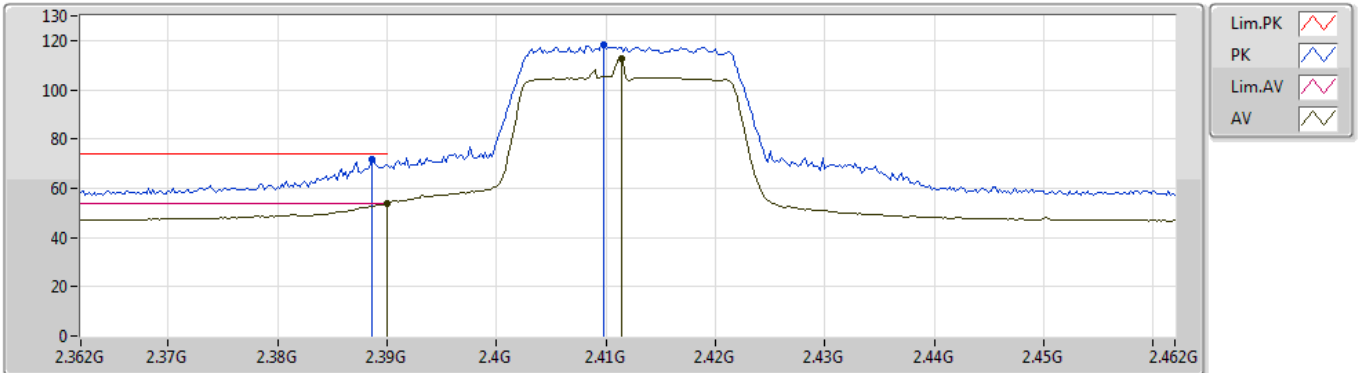
**For 2T1S / Beamforming mode
Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	Pass	AV	2.3856G	53.99	54.00	-0.01	32.63	3	Vertical	193	2.33	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2412MHz_TX



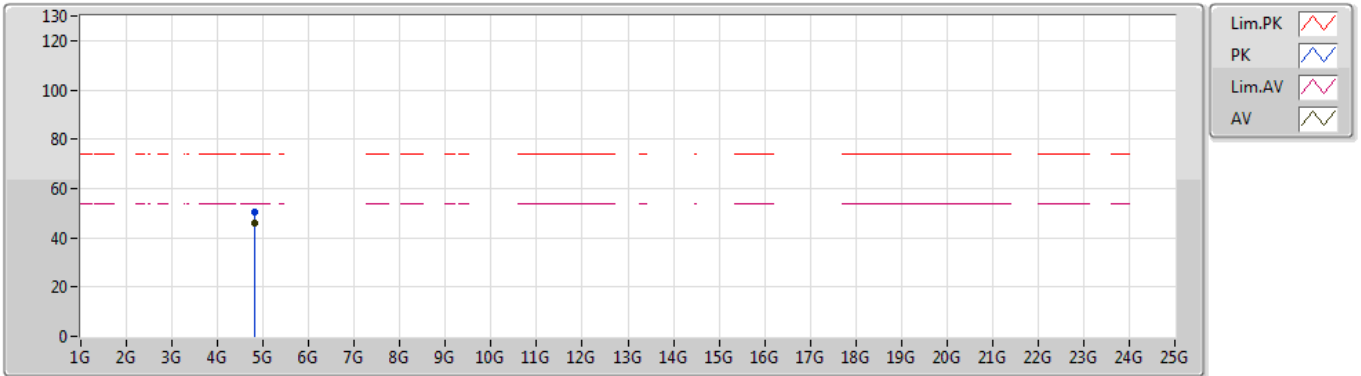
EUT_Z_2TX
Setting 78
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3886G	71.61	74.00	-2.39	32.63	3	Vertical	332	1.00	-				
AV	2.39G	53.76	54.00	-0.24	32.62	3	Vertical	332	1.00	-				
PK	2.4098G	118.18	Inf	-Inf	32.57	3	Vertical	332	1.00	-				
AV	2.4114G	112.58	Inf	-Inf	32.57	3	Vertical	332	1.00	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2412MHz_TX



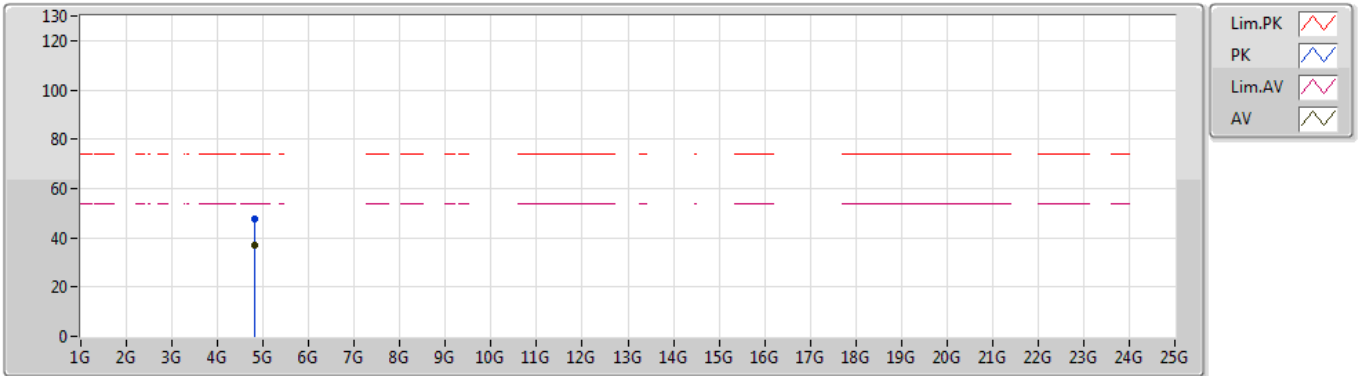
EUT Z_2TX
Setting 78
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.82376G	50.27	74.00	-23.73	6.63	3	Vertical	317	2.72	-				
AV	4.82406G	45.89	54.00	-8.11	6.63	3	Vertical	317	2.72	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2412MHz_TX



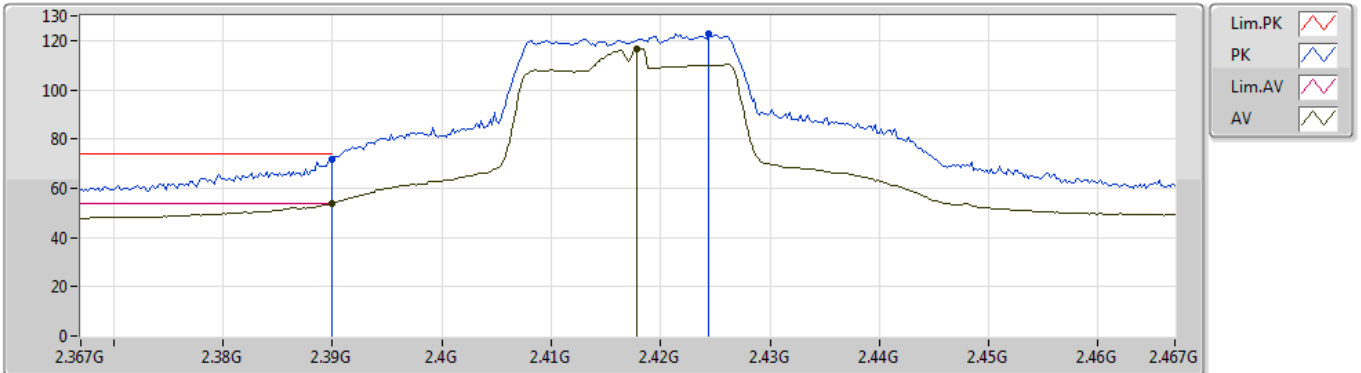
EUT_Z_2TX
Setting 78
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.82492G	47.77	74.00	-26.23	6.63	3	Horizontal	295	1.05	-				
AV	4.8239G	37.17	54.00	-16.83	6.63	3	Horizontal	295	1.05	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2417MHz_TX



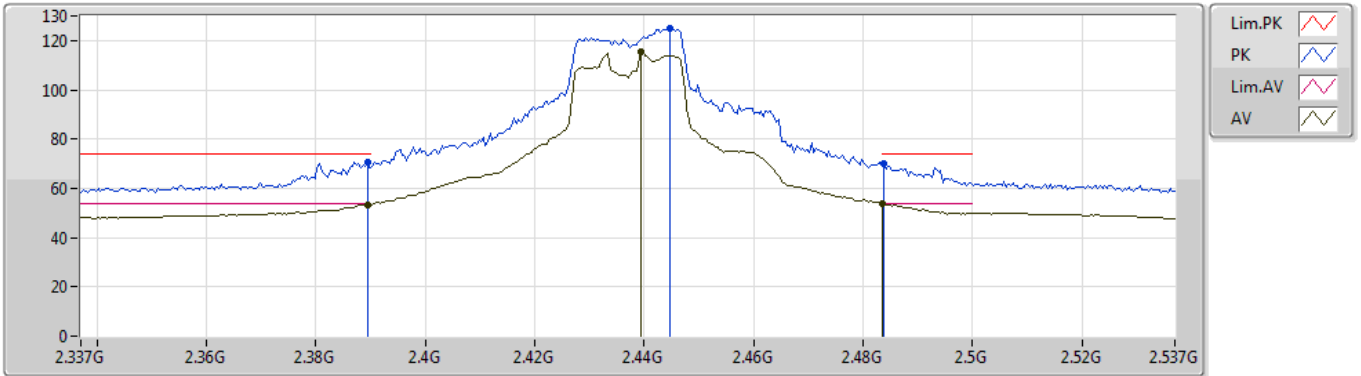
EUT_Z_2TX
Setting 91
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.39G	71.84	74.00	-2.16	32.62	3	Vertical	325	2.55	-				
AV	2.39G	53.98	54.00	-0.02	32.62	3	Vertical	325	2.55	-				
PK	2.4244G	122.75	Inf	-Inf	32.55	3	Vertical	325	2.55	-				
AV	2.4178G	116.45	Inf	-Inf	32.55	3	Vertical	325	2.55	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



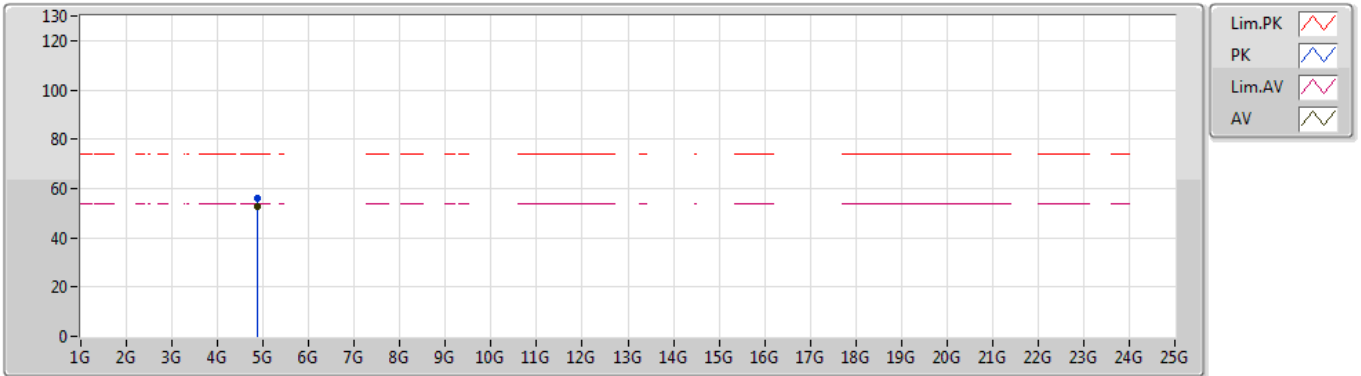
EUT Z_2TX
Setting 109
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3894G	70.51	74.00	-3.49	32.62	3	Vertical	206	1.28	-
AV	2.3894G	53.38	54.00	-0.62	32.62	3	Vertical	206	1.28	-
PK	2.4446G	125.16	Inf	-Inf	32.53	3	Vertical	206	1.28	-
AV	2.4394G	115.30	Inf	-Inf	32.53	3	Vertical	206	1.28	-
PK	2.4838G	70.01	74.00	-3.99	32.48	3	Vertical	206	1.28	-
AV	2.4835G	53.83	54.00	-0.17	32.48	3	Vertical	206	1.28	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



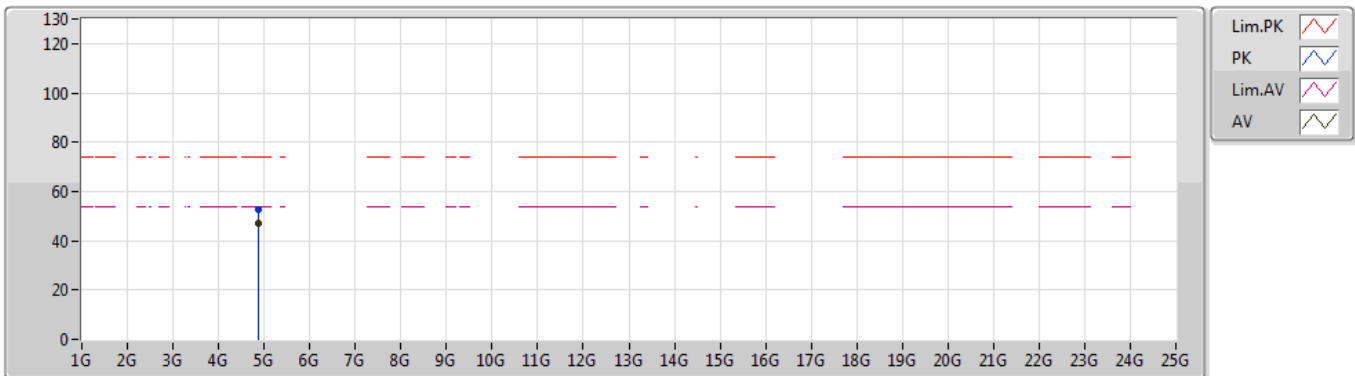
EUT Z_2TX
Setting 109
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.87396G	56.27	74.00	-17.73	6.64	3	Vertical	305	2.75	-				
AV	4.87396G	52.58	54.00	-1.42	6.64	3	Vertical	305	2.75	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



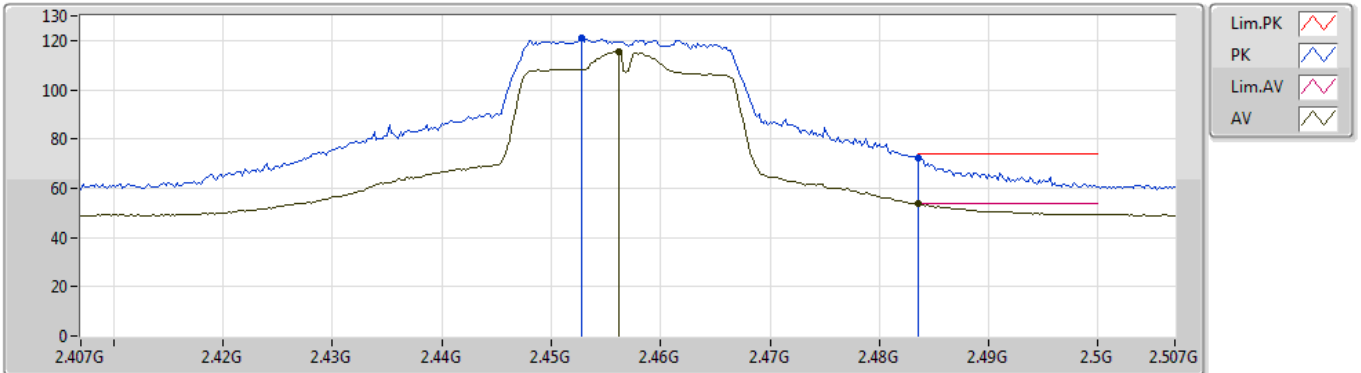
EUT Z_2TX
Setting 109
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.87396G	52.46	74.00	-21.54	6.64	3	Horizontal	47	2.87	-				
AV	4.874G	47.10	54.00	-6.90	6.64	3	Horizontal	47	2.87	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2457MHz_TX



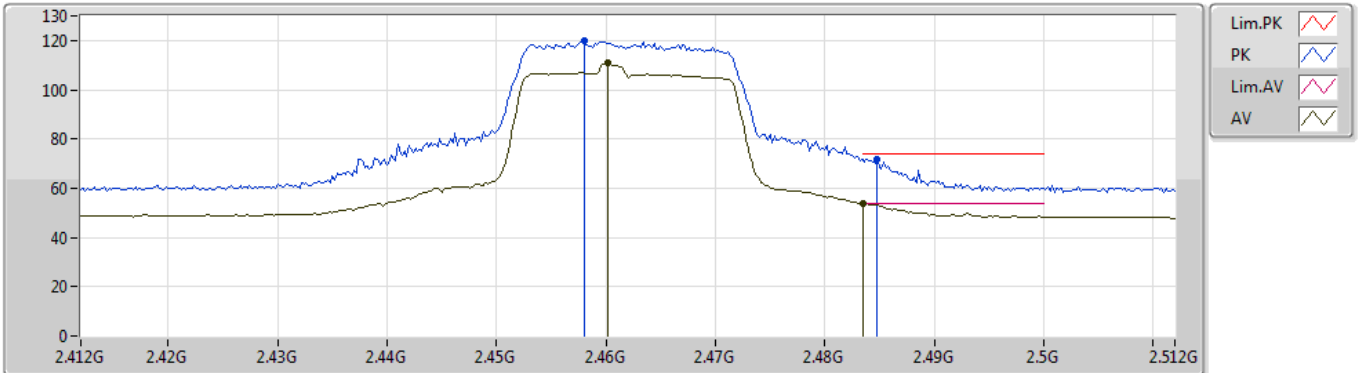
EUT_Z_2TX
Setting 91
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.4528G	121.15	Inf	-Inf	32.51	3	Vertical	0	2.06	-				
AV	2.4562G	115.64	Inf	-Inf	32.51	3	Vertical	0	2.06	-				
PK	2.4835G	72.41	74.00	-1.59	32.48	3	Vertical	0	2.06	-				
AV	2.4835G	53.52	54.00	-0.48	32.48	3	Vertical	0	2.06	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2462MHz_TX



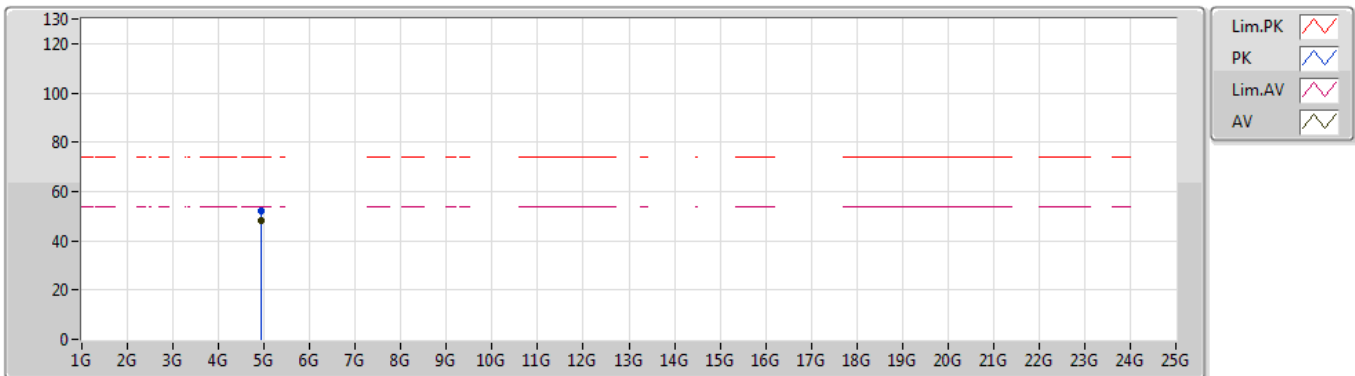
EUT_Z_2TX
Setting 87
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.458G	119.81	Inf	-Inf	32.51	3	Vertical	212	1.83	-				
AV	2.4602G	110.68	Inf	-Inf	32.51	3	Vertical	212	1.83	-				
PK	2.4848G	71.61	74.00	-2.39	32.48	3	Vertical	212	1.83	-				
AV	2.4835G	53.61	54.00	-0.39	32.48	3	Vertical	212	1.83	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2462MHz_TX



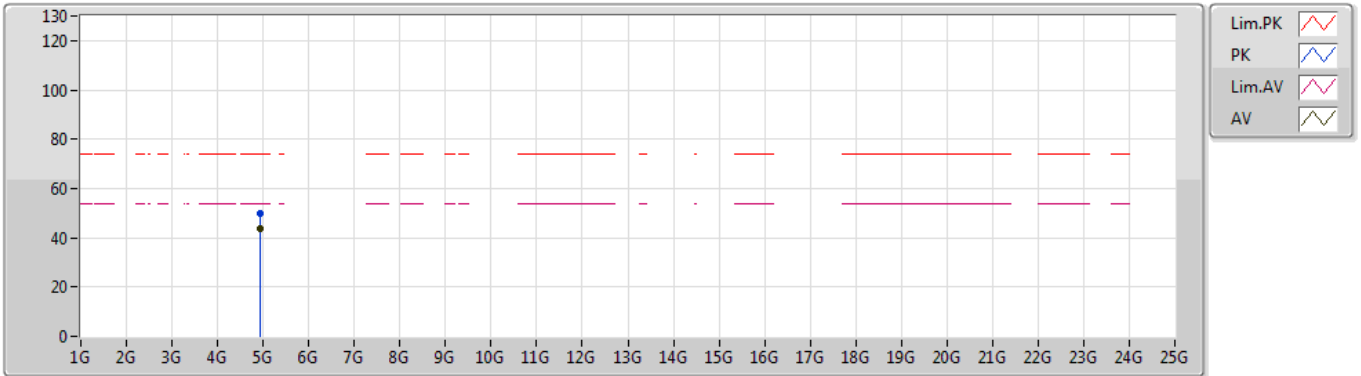
EUT Z_2TX
Setting 87
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.924G	51.93	74.00	-22.07	6.73	3	Vertical	299	1.23	-				
AV	4.924G	47.99	54.00	-6.01	6.73	3	Vertical	299	1.23	-				

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

01/08/2019

2462MHz_TX



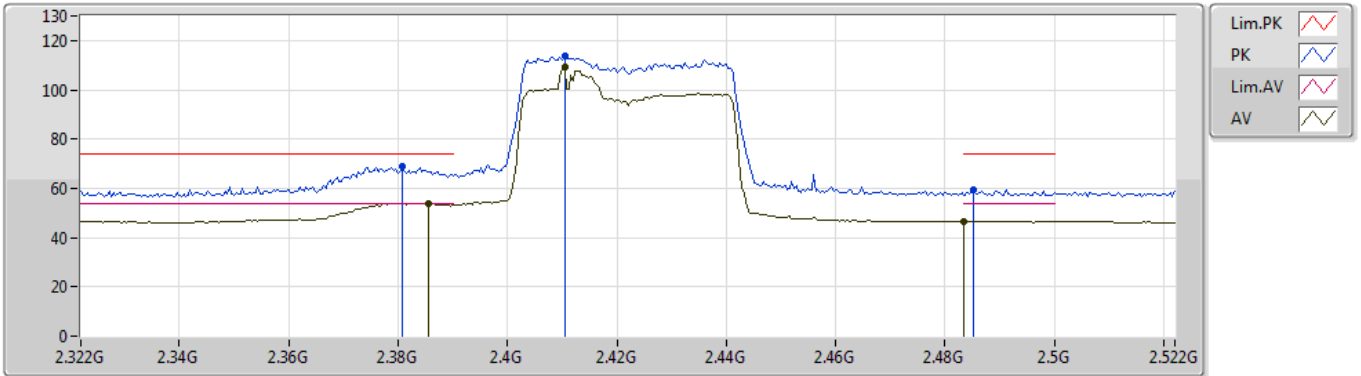
EUT Z_2TX
Setting 87
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.92388G	49.81	74.00	-24.19	6.73	3	Horizontal	162	2.71	-				
AV	4.924G	43.85	54.00	-10.15	6.73	3	Horizontal	162	2.71	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2422MHz_TX



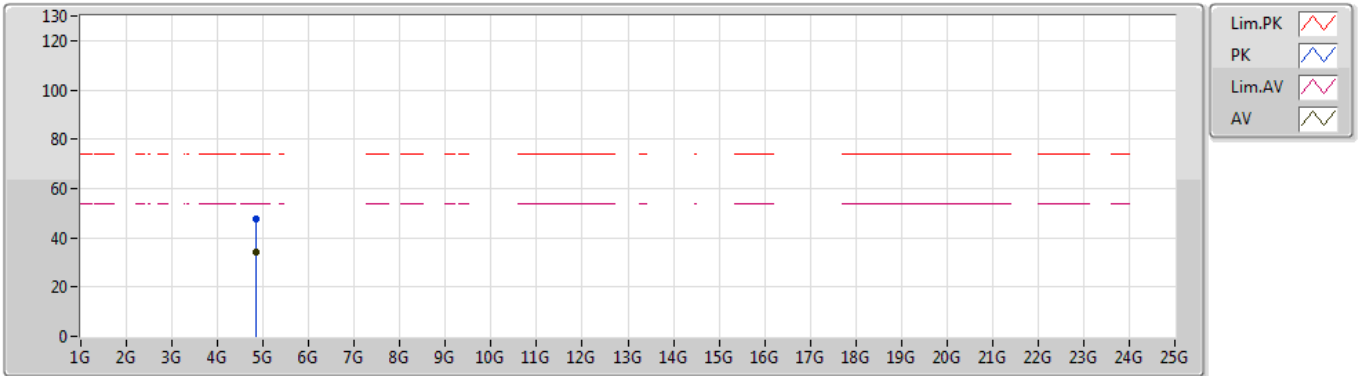
EUT_Z_2TX
Setting 73
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	2.3808G	68.98	74.00	-5.02	32.66	3	Vertical	193	2.33	-				
AV	2.3856G	53.99	54.00	-0.01	32.63	3	Vertical	193	2.33	-				
PK	2.4104G	113.68	Inf	-Inf	32.57	3	Vertical	193	2.33	-				
AV	2.4104G	109.00	Inf	-Inf	32.57	3	Vertical	193	2.33	-				
PK	2.4852G	59.36	74.00	-14.64	32.48	3	Vertical	193	2.33	-				
AV	2.4835G	46.65	54.00	-7.35	32.48	3	Vertical	193	2.33	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2422MHz_TX



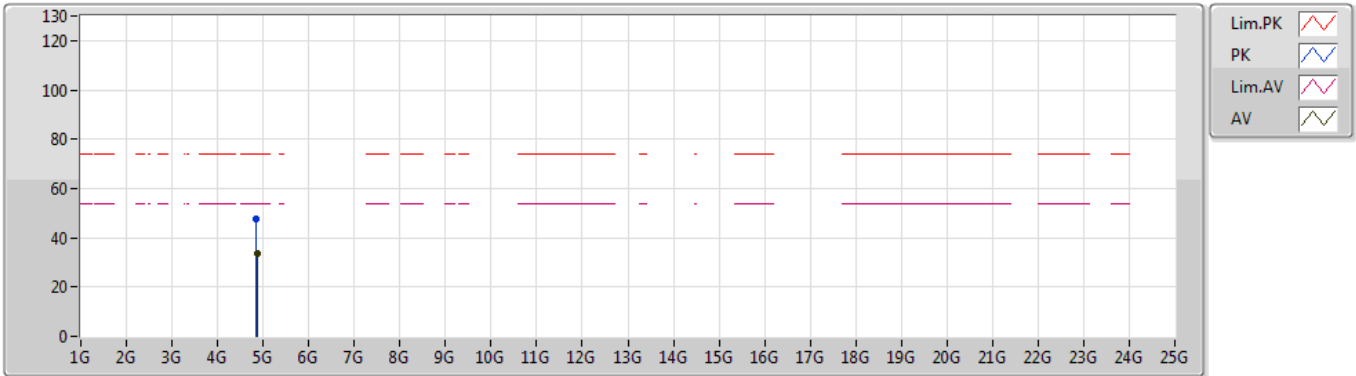
EUT Z_2TX
Setting 73
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.83998G	47.74	74.00	-26.26	6.63	3	Vertical	97	2.69	-				
AV	4.84844G	34.00	54.00	-20.00	6.63	3	Vertical	97	2.69	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2422MHz_TX



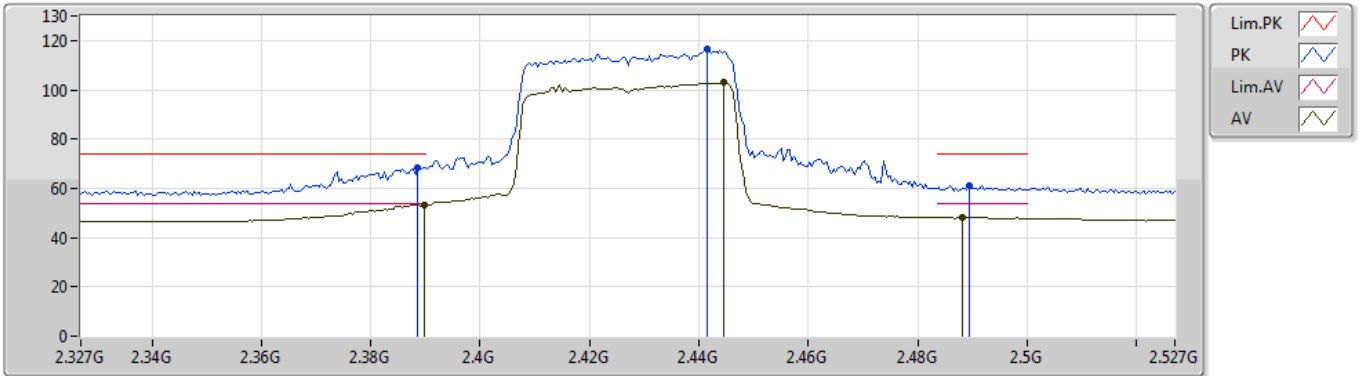
EUT_Z_2TX
Setting 73
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.85516G	47.66	74.00	-26.34	6.63	3	Horizontal	293	1.45	-				
AV	4.85894G	33.67	54.00	-20.33	6.64	3	Horizontal	293	1.45	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2427MHz_TX



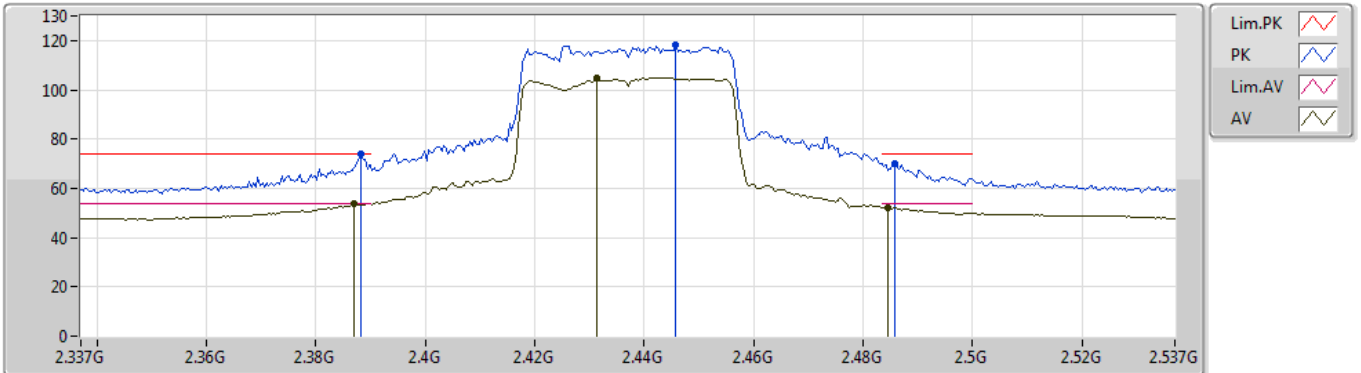
EUT Z_2TX
Setting 79
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3886G	68.56	74.00	-5.44	32.63	3	Vertical	358	1.20	-
AV	2.3898G	53.45	54.00	-0.55	32.62	3	Vertical	358	1.20	-
PK	2.4414G	116.47	Inf	-Inf	32.53	3	Vertical	358	1.20	-
AV	2.4446G	102.92	Inf	-Inf	32.53	3	Vertical	358	1.20	-
PK	2.4894G	61.19	74.00	-12.81	32.47	3	Vertical	358	1.20	-
AV	2.4882G	48.12	54.00	-5.88	32.47	3	Vertical	358	1.20	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



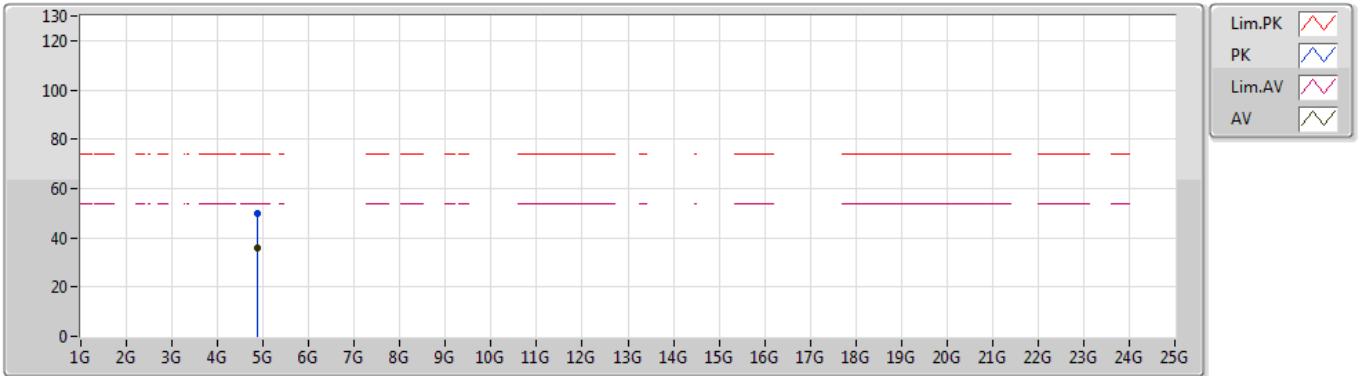
EUT_Z_2TX
Setting 88
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.3882G	73.83	74.00	-0.17	32.62	3	Vertical	217	2.51	-
AV	2.387G	53.77	54.00	-0.23	32.62	3	Vertical	217	2.51	-
PK	2.4458G	117.98	Inf	-Inf	32.53	3	Vertical	217	2.51	-
AV	2.4314G	105.01	Inf	-Inf	32.55	3	Vertical	217	2.51	-
PK	2.4858G	69.98	74.00	-4.02	32.48	3	Vertical	217	2.51	-
AV	2.4846G	52.29	54.00	-1.71	32.48	3	Vertical	217	2.51	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



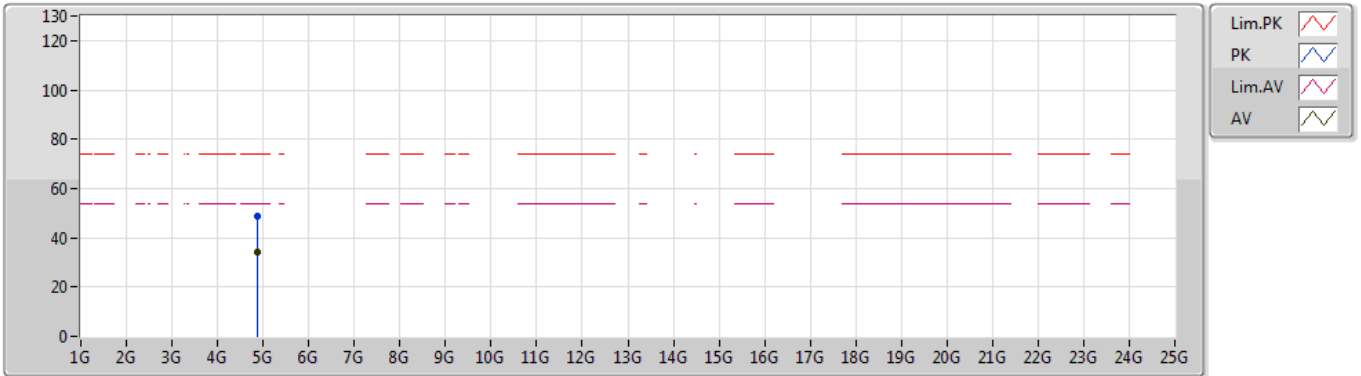
EUT_Z_2TX
Setting 88
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.8743G	50.04	74.00	-23.96	6.64	3	Vertical	301	2.47	-				
AV	4.87964G	35.82	54.00	-18.18	6.64	3	Vertical	301	2.47	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2437MHz_TX



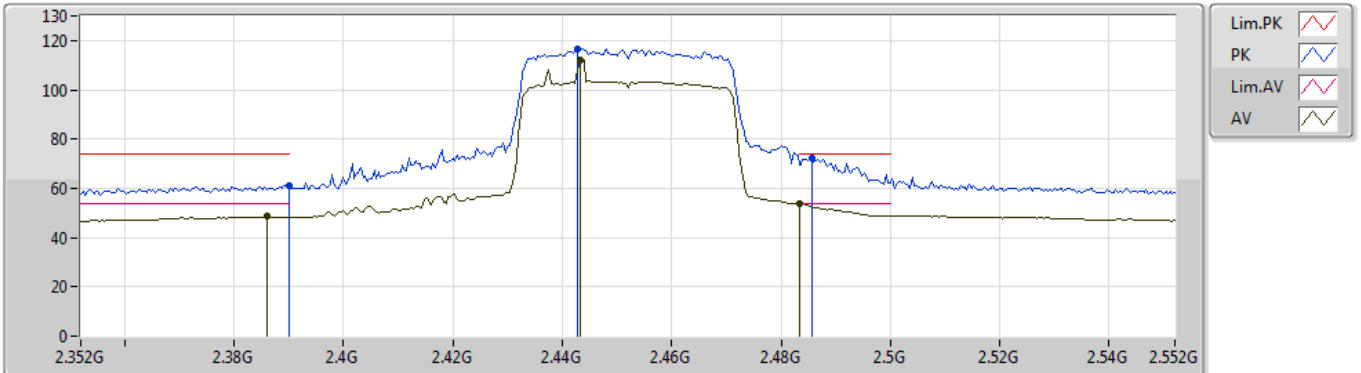
EUT Z_2TX
Setting 88
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.87706G	48.56	74.00	-25.44	6.64	3	Horizontal	6	2.72	-				
AV	4.87958G	34.45	54.00	-19.55	6.64	3	Horizontal	6	2.72	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2452MHz_TX



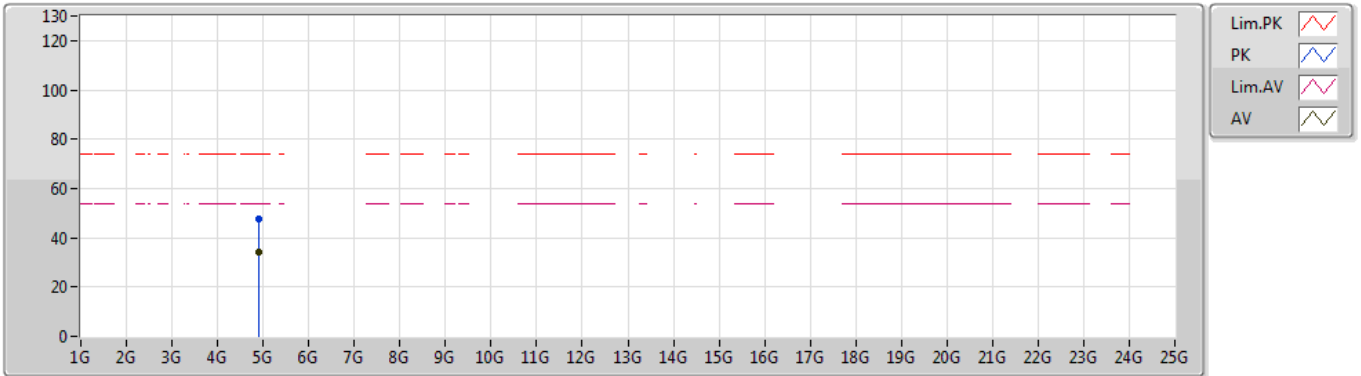
EUT_Z_2TX
Setting 82
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	2.39G	61.13	74.00	-12.87	32.62	3	Vertical	212	1.83	-
AV	2.386G	48.47	54.00	-5.53	32.63	3	Vertical	212	1.83	-
PK	2.4428G	116.69	Inf	-Inf	32.52	3	Vertical	212	1.83	-
AV	2.4432G	112.29	Inf	-Inf	32.52	3	Vertical	212	1.83	-
PK	2.4856G	72.01	74.00	-1.99	32.48	3	Vertical	212	1.83	-
AV	2.4835G	53.71	54.00	-0.29	32.48	3	Vertical	212	1.83	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2452MHz_TX



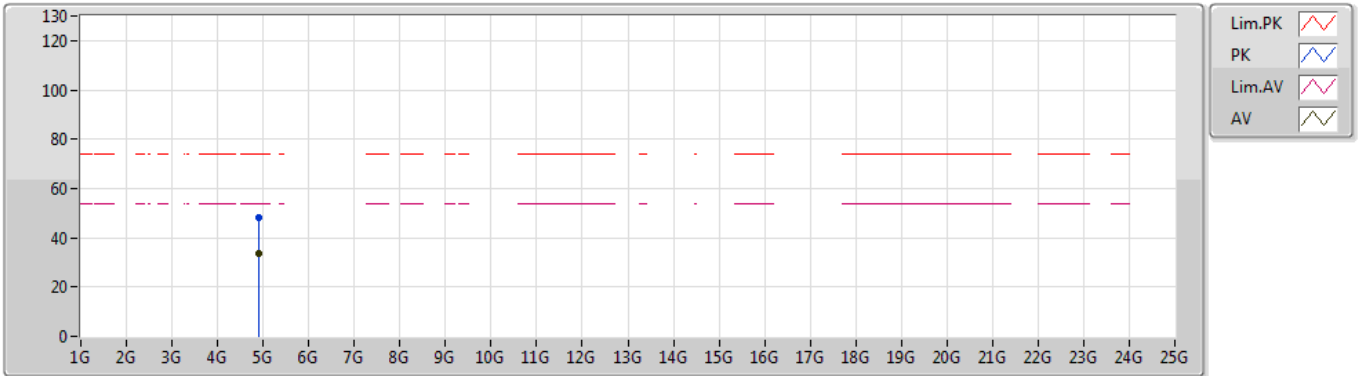
EUT Z_2TX
Setting 82
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.90046G	47.64	74.00	-26.36	6.64	3	Vertical	235	1.48	-				
AV	4.8989G	33.94	54.00	-20.06	6.64	3	Vertical	235	1.48	-				

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

01/08/2019

2452MHz_TX



EUT Z_2TX
Setting 82
06-K-3
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
PK	4.9001G	48.19	74.00	-25.81	6.64	3	Horizontal	219	2.00	-				
AV	4.89716G	33.83	54.00	-20.17	6.64	3	Horizontal	219	2.00	-				

