

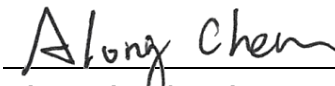
FCC Test Report

FCC ID : SQG-SONAIF513
Equipment : Sona IF513 802.11ax Wi-Fi 6E Module with Bluetooth 5.4
Model No. : Sona IF513
Brand Name : Ezurio
Applicant : Ezurio LLC
Address : W66N220 Commerce Court, Cedarburg, WI 53012 United States Of America
Standard : 47 CFR FCC Part 15.247
Received Date : Jun. 06, 2024
Tested Date : Oct. 04 ~ Oct. 25, 2024

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:


Along Chen / Assistant Manager

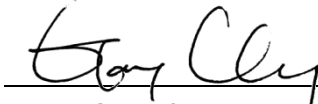

Gary Chang / Manager

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Appendix A. 6dB and Occupied Bandwidth

Appendix B. Conducted Output Power

Appendix C. Power Spectral Density

Appendix D. Unwanted Emissions into Restricted Frequency Bands

Appendix E. Emissions in Non-Restricted Frequency Bands

Appendix F. AC Power Line Conducted Emissions

Release Record

Report No.	Version	Description	Issued Date
FR460601AC	Rev. 01	Initial issue	Nov. 25, 2024
FR460601AC	Rev. 02	Modified antenna gain	Dec. 17, 2024
FR460601AC	Rev. 03	1. Modified antenna gain 2. Modified Appendix	Dec. 24, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.150MHz 47.69 (Margin -18.31dB) - QP	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 450.01MHz 42.93 (Margin -3.07dB) – QP	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: 25.35	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	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.

1 General Description

1.1 Information

1.1.1 Product Details

The four configurations of the EUT are shown on the following:

Model Name	Part No.	Description
Sona IF513	453-00184	Module, Sona IF513, MHF4L
	453-00185	Module, Sona IF513, Trace Pin
	453-00193	Module, Sona IF513, Antenna Diversity, MHF4L
	453-00194	Module, Sona IF513, Antenna Diversity, Trace Pin
	453-00186	Module, Sona IF513, M.2, Key E, SDIO, UART
	453-00195	Module, Sona IF513, Antenna Diversity, M.2, Key E, SDIO, UART
	453-00213	Module, Sona IF513, M.2, Key E, SDIO, UART, Ext. OSC
	453-00214	Module, Sona IF513, Antenna Diversity, M.2, Key E, SDIO, UART, Ext. OSC

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
2400-2483.5	b	2412-2462	1-11 [11]	1	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	1	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	1	MCS 0-7
2400-2483.5	ax (HE20)	2412-2462	1-11 [11]	1	MCS 0-11
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: DSSS-DBPSK, DQPSK, CCK modulation OFDM/OFDMA- BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM modulation. Note 3: 802.11ax supports full RU and partial RU configuration. Test results of full RU configuration are recorded in this report. Refers to report no.: FR460601-01AC for test results of partial RU configuration.					

1.1.3 Antenna Details

Ant. No.	Manufacturer	Model	Part Number	Type	Connector	Operating Frequencies / Gain (dBi)		
						2.4GHz	5GHz	6GHz
1	Joymax Inc.	TWX-100B RS3B	NA	Dipole	RP-SMA	2	4	4
2	Ezurio	FlexMIMO 6E	EFD2471A3 S-10MH4L	PIFA	MHF4L	2.2	3.8	3.3
3	Ezurio	Mini NanoBlade Flex 6 GHz	EMF2471A 3S-10MH4L	PCB Dipole	MHF4L	2.4	4.4	5.2
4	Ezurio	FlexPIFA 6E	EFB2471A3 S-10MH4L	PIFA	MHF4L	2.2	3.9	3.8

1.1.4 Configuration of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host	
Beamforming	☐ Support	☒ Not support
RU Configuration	☒ Full RU	☐ Partial RU

1.1.5 Channel List

Channel	Frequency(MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

1.1.6 Test Tool and Duty Cycle

Test Tool	Tera Term, V4.74		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	99.10%	0.04
	11g	99.50%	0.02
	ax HE20-OFDMA	98.17%	0.08

1.1.7 Power Index of Test Tool

Part No. 453-00184

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	78
11b	2437	80
11b	2462	76
11g	2412	73
11g	2437	82
11g	2462	70
ax HE20-OFDMA	2412	54
ax HE20-OFDMA	2437	74
ax HE20-OFDMA	2462	49

Part No. 453-00193

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	77
11b	2437	79
11b	2462	75
11g	2412	72
11g	2437	80
11g	2462	68
ax HE20-OFDMA	2412	52
ax HE20-OFDMA	2437	72
ax HE20-OFDMA	2462	47

Part No. 453-00213

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	74
11b	2437	77
11b	2462	73
11g	2412	69
11g	2437	78
11g	2462	65
ax HE20-OFDMA	2412	50
ax HE20-OFDMA	2437	70
ax HE20-OFDMA	2462	45

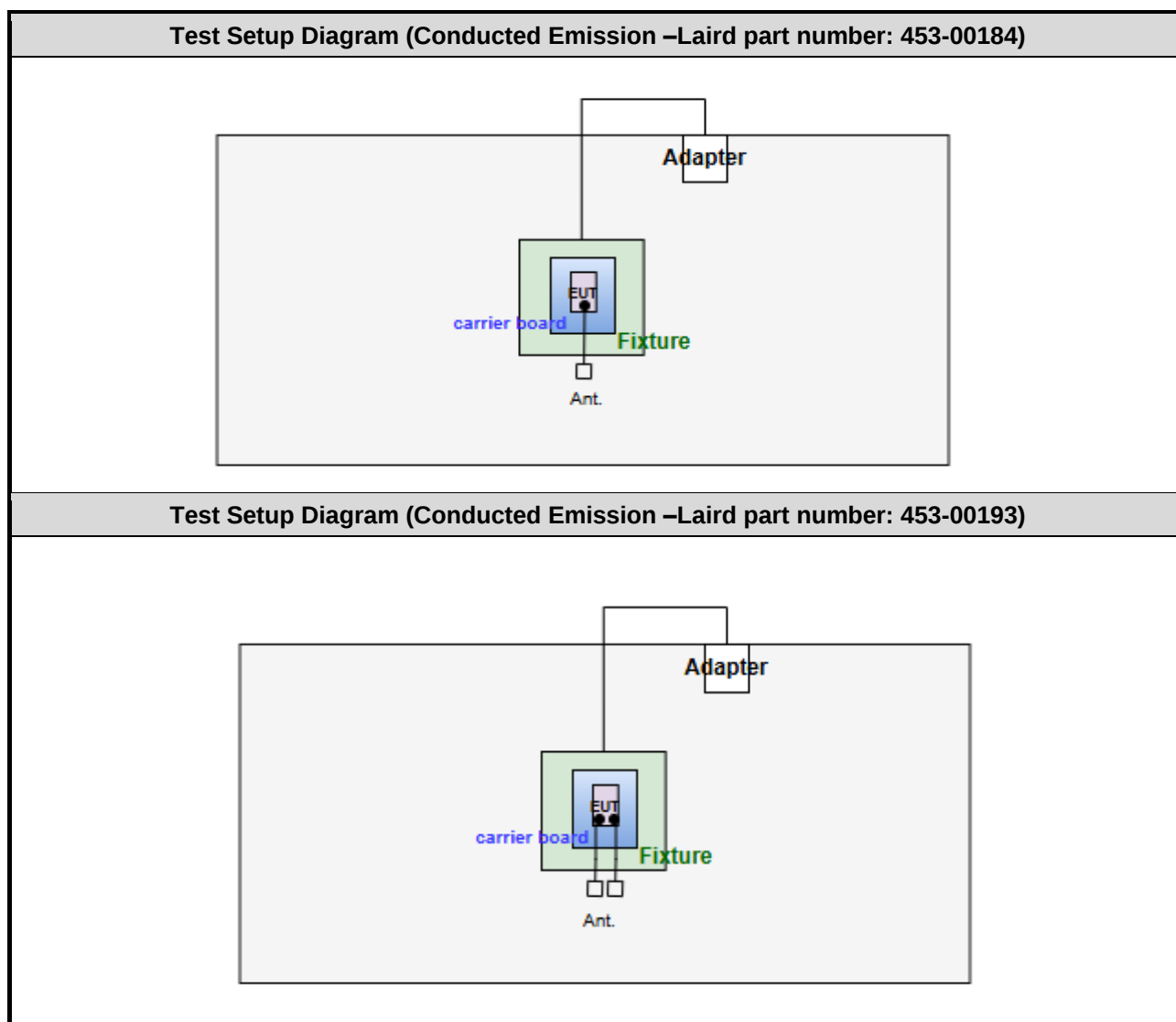
Part No. 453-00214

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	78
11b	2437	80
11b	2462	76
11g	2412	73
11g	2437	82
11g	2462	69
ax HE20-OFDMA	2412	54
ax HE20-OFDMA	2437	75
ax HE20-OFDMA	2462	49

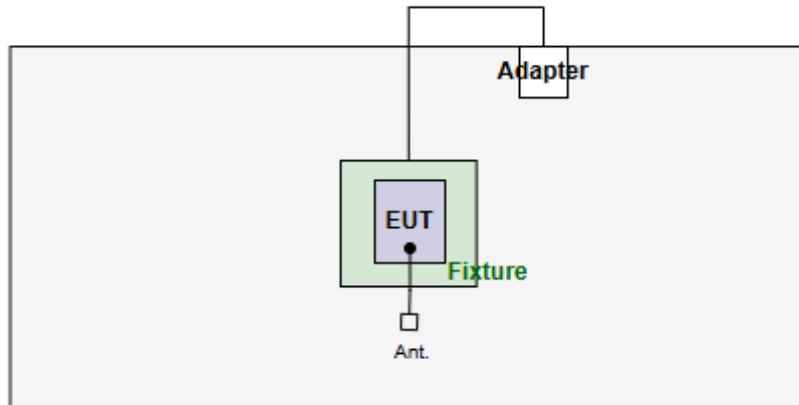
1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Laptop	DELL	Latitude 5400	DoC	---
2	Fixture	Ezurio	750-00001-2-0	---	Provided by applicant.
3	Fixture's adapter	Chenzhou Frecom Electronics Co.	F36L7-120300S PACP	---	Provided by applicant.
4	50Ω terminator	Woken	WTER-18S2	---	---

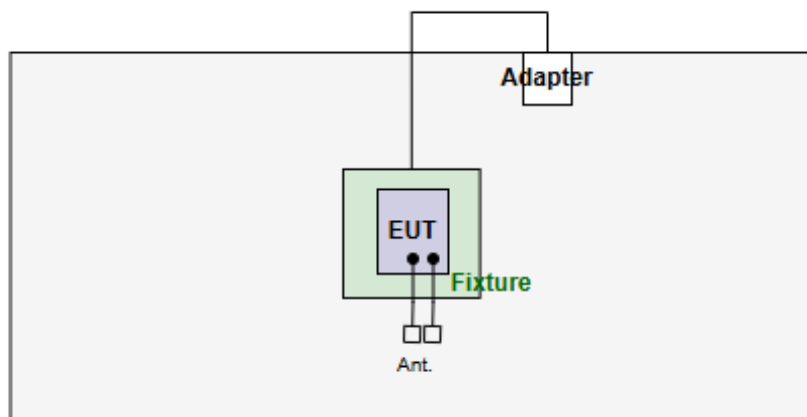
1.3 Test Setup Chart



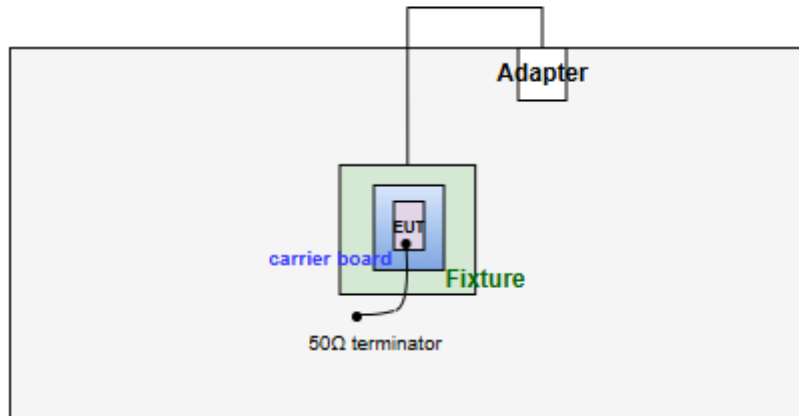
Test Setup Diagram (Conducted Emission –Laird part number: 453-00213)



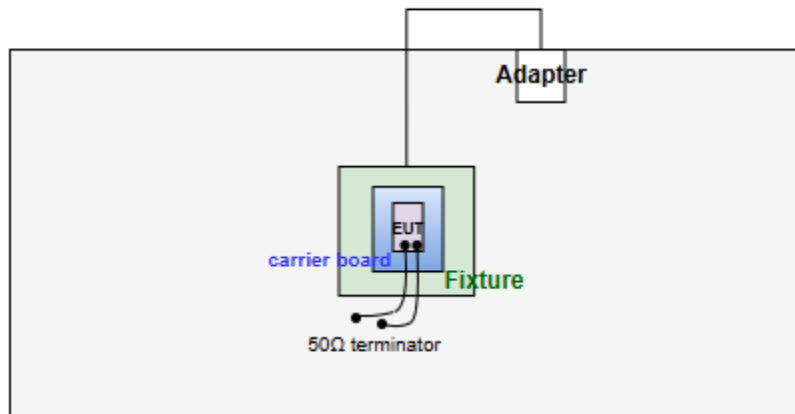
Test Setup Diagram (Conducted Emission – Laird part number: 453-00214)



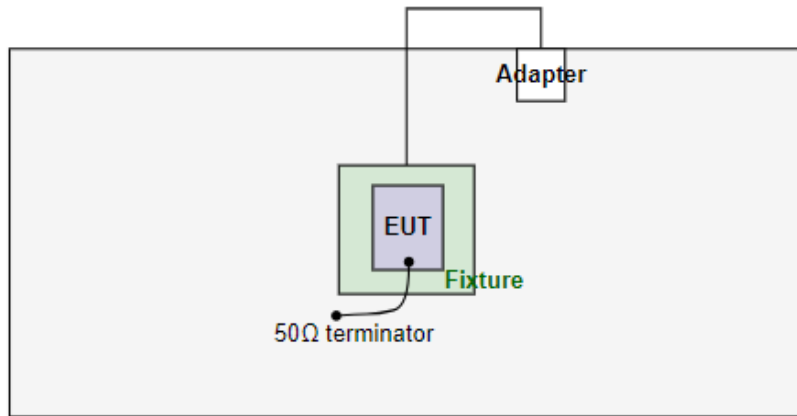
Test Setup Diagram (Radiated Emission – Laird part number: 453-00184)



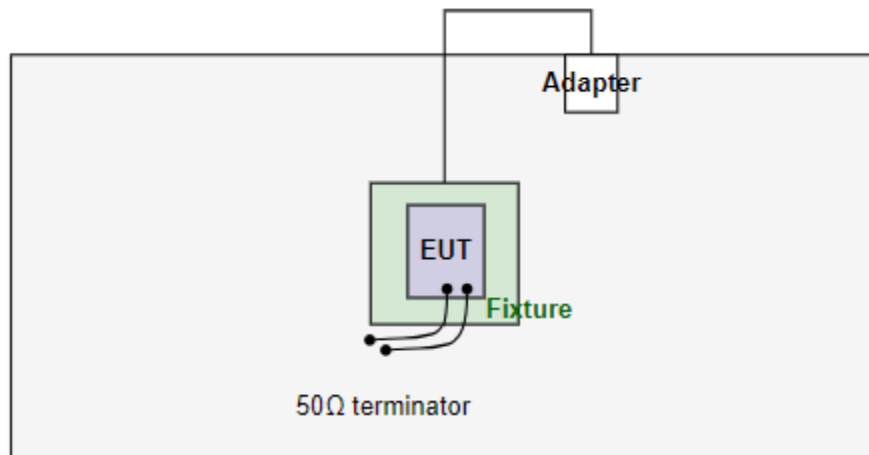
Test Setup Diagram (Radiated Emission –Laird part number: 453-00193)



Test Setup Diagram (Radiated Emission – Laird part number: 453-00213)



Test Setup Diagram (Radiated Emission –Laird part number: 453-00214)



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Oct. 21, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 23, 2024	Feb. 22, 2025
LISN	R&S	ENV216	101579	May 09, 2024	May 08, 2025
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan. 10, 2024	Jan. 09, 2025
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 07, 2024	Oct. 08, 2025
50 ohm terminal	NA	50	01	Jun. 19, 2024	Jun. 18, 2025
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Oct. 04 ~ Oct. 25, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241002	Nov. 21, 2023	Nov. 20, 2024
Power Sensor	Anritsu	MA2411B	1207366	Nov. 21, 2023	Nov. 20, 2024
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
LOWPASS FILTER	WI	WLKS1100-12SS	2	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Oct. 07 ~ Oct. 14, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 05, 2024	Mar. 04, 2025
Spectrum Analyzer	R&S	FSV40	101498	Nov. 23, 2023	Nov. 22, 2024
Loop Antenna	R&S	HFH2-Z2	100330	Oct. 31, 2023	Oct. 30, 2024
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 09, 2024	Aug. 08, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 27, 2023	Nov. 26, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 30, 2023	Oct. 29, 2024
Preamplifier	EMC	EMC02325	980225	Jun. 17, 2024	Jun. 16, 2025
Preamplifier	EMC	EMC118A45SE	980898	Jul. 05, 2024	Jul. 04, 2025
Preamplifier	EMC	EMC184045SE	980903	Jul. 30, 2024	Jul. 29, 2025
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 02, 2024	Oct. 01, 2025
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 02, 2024	Oct. 01, 2025
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 02, 2024	Oct. 01, 2025
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M- 8000	210920	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M- 3000	210922	Oct. 02, 2024	Oct. 01, 2025
Attenuator	Pasternack	PE7005-10	10-1	Oct. 02, 2024	Oct. 01, 2025
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA
Measurement Software	Sporton	SENSE-EMI	V5.11	NA	NA

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

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Unwanted Emission ≤ 1 GHz	± 3.41 dB
Unwanted Emission > 1 GHz	± 4.59 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test method	Mode	Test Configuration	Note
AC Power Line Conducted Emission	ax HE20-OFDMA	2437	MCS 0	Conducted	TX	1	---
Unwanted Emissions $\leq$ 1GHz	ax HE20-OFDMA	2437	MCS 0	Radiated	TX	1, 2, 3, 4	Note 2
Unwanted Emissions >1GHz	11b 11g ax HE20-OFDMA	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	Radiated	TX	1	Note 2
	11b	2412	1 Mbps	Radiated	TX	2, 3, 4	Note 2
Unwanted Emissions $\leq$ 1GHz	HE20-OFDMA	2437	MCS0	Conducted	TX	1, 2, 3, 4	---
Unwanted Emissions >1GHz	11b 11g ax HE20-OFDMA	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	Conducted	TX	1	---
	11g	2462	6 Mbps	Conducted	TX	2, 3, 4	
Conducted Output Power	11b 11g ax HE20-OFDMA	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	Conducted	TX	1, 2, 3, 4	---
6dB bandwidth	11b 11g ax HE20-OFDMA	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	Conducted	TX	1	---
Power spectral density	11b 11g ax HE20-OFDM	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	Conducted	TX	1	---

NOTE:

- The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** result was found as the worst case and was shown in this report.
- The 50 Ω terminator is connected to antenna port of EUT for radiated emission measurement.
- Test configurations are listed as below:
Configuration 1: Laird part number: 453-00184
Configuration 2: Laird part number: 453-00193
Configuration 3: Laird part number: 453-00213
Configuration 4: Laird part number: 453-00214

3 Transmitter Test Results

3.1 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.1.2 Test Procedures

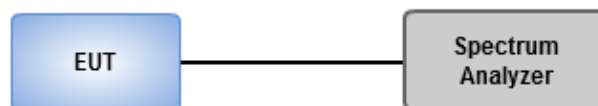
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	24-25°C / 61-62%	Tested By	Roger Lu
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Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Conducted power shall not exceed 1Watt.

Antenna gain $\leq 6\text{dBi}$, no any corresponding reduction is in output power limit.

Antenna gain $> 6\text{dBi}$

Non Fixed, point to point operations.

The conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dB

Fixed, point to point operations

Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point Operations, maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	24-25°C / 61-62%	Tested By	Roger Lu
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Refer to Appendix B.

3.3 Power Spectral Density

3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

Peak PSD

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

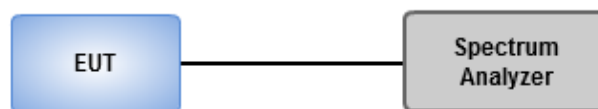
Average PSD, duty cycle $\geq 98\%$

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle $< 98\%$

1. Set the RBW = 3 kHz, VBW = 10 kHz
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.
6. Add $10 \log (1/x)$, where x is the duty cycle.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24-25°C / 61-62%	Tested By	Roger Lu
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Refer to Appendix C.

3.4 Unwanted Emissions into Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions into Restricted Frequency Bands

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:
Quasi-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.4.2 Test Procedures

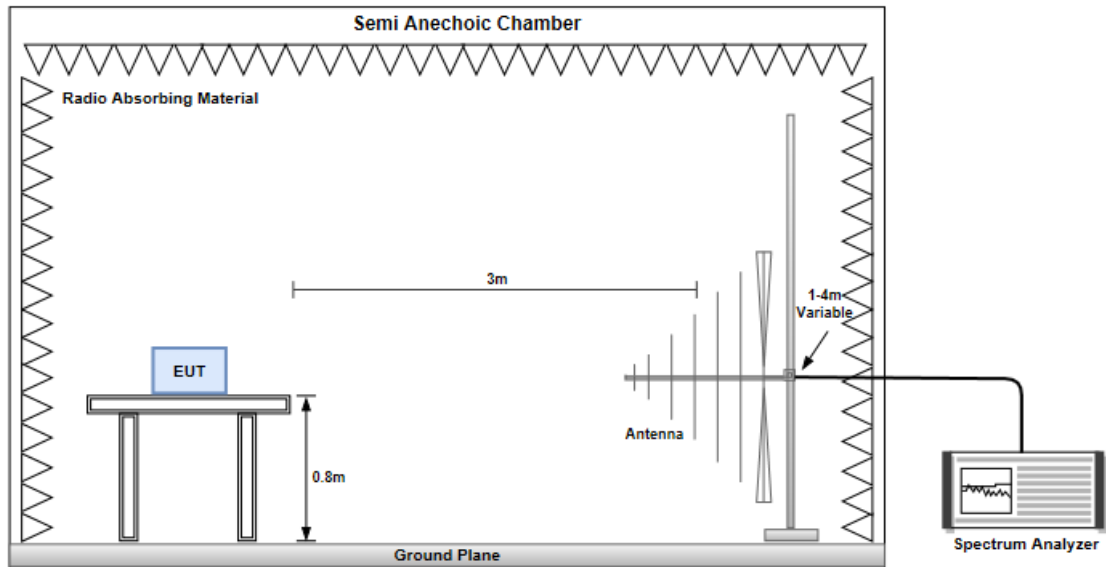
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

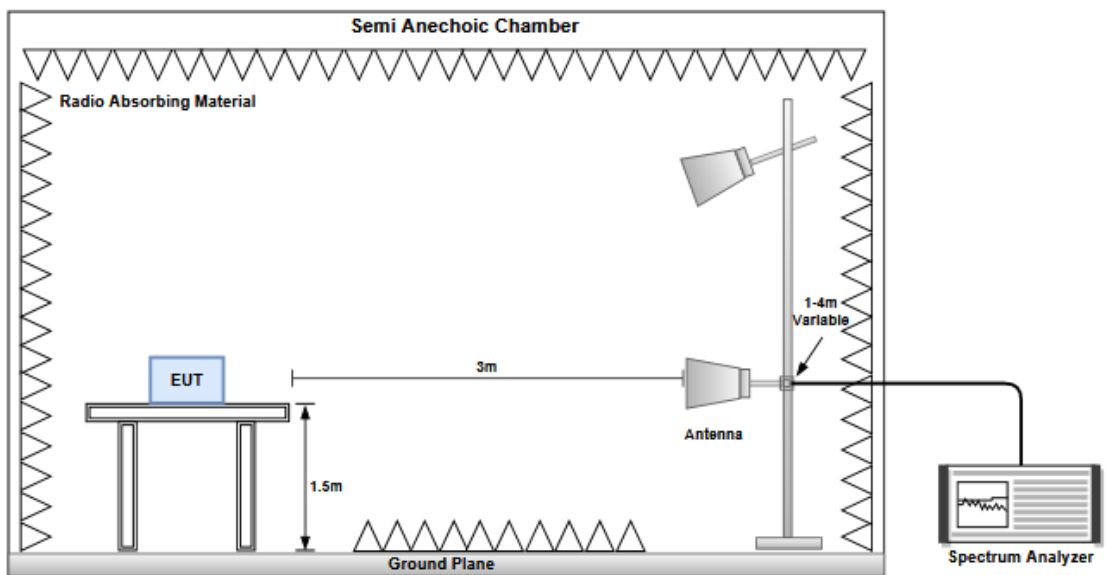
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Refer to Appendix D.

3.5 Emissions in Non-Restricted Frequency Bands

3.5.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

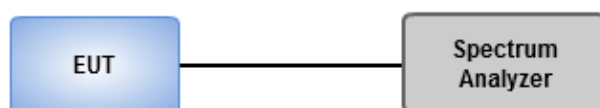
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	24-25°C / 61-62%	Tested By	Roger Lu
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Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

3.6.1 Limit of AC Power Line Conducted Emissions

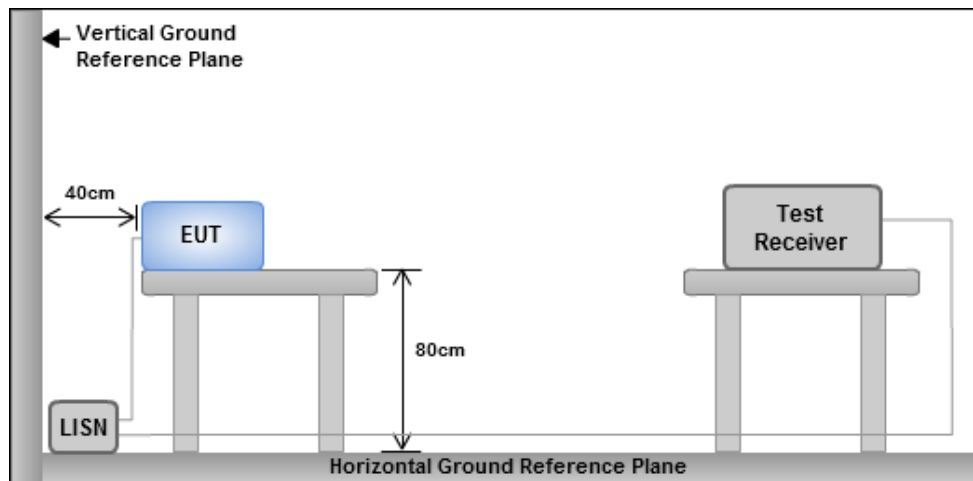
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.6.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.6.3 Test Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.6.4 Test Results

Refer to Appendix F.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan
(R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)
No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC_Service@icertifi.com.tw

==END==

Configuration 1: Laird part number: 453-00184

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)_1TX	7.55M	12.114M	12M1G1D	7.075M	11.769M
802.11g_Nss1,(6Mbps)_1TX	15.125M	16.668M	16M7D1D	15.05M	16.646M
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	19M	19.165M	19M2D1D	18.925M	19.015M

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

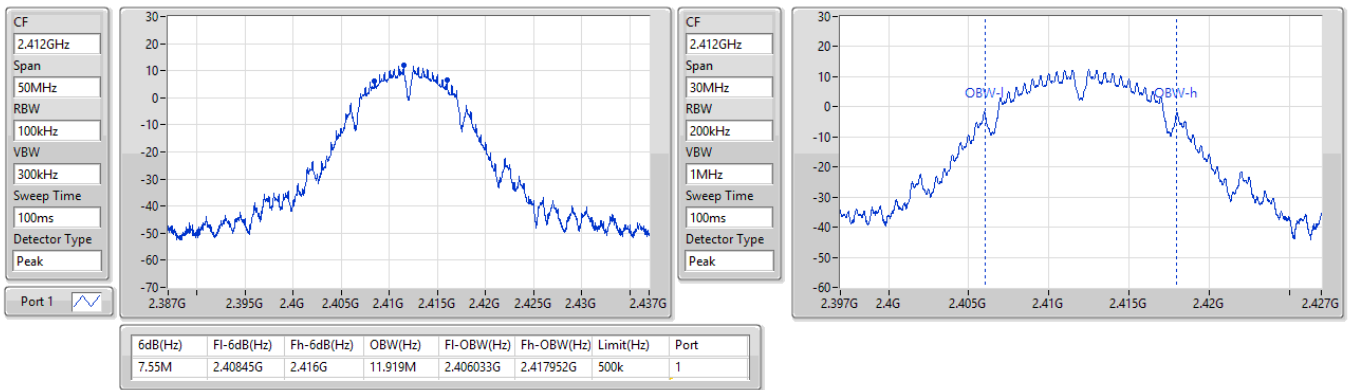
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.55M	11.919M
2437MHz	Pass	500k	7.55M	12.114M
2462MHz	Pass	500k	7.075M	11.769M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.125M	16.646M
2437MHz	Pass	500k	15.05M	16.668M
2462MHz	Pass	500k	15.05M	16.646M
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-
2412MHz	Pass	500k	19M	19.015M
2437MHz	Pass	500k	18.925M	19.165M
2462MHz	Pass	500k	18.975M	19.015M

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

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

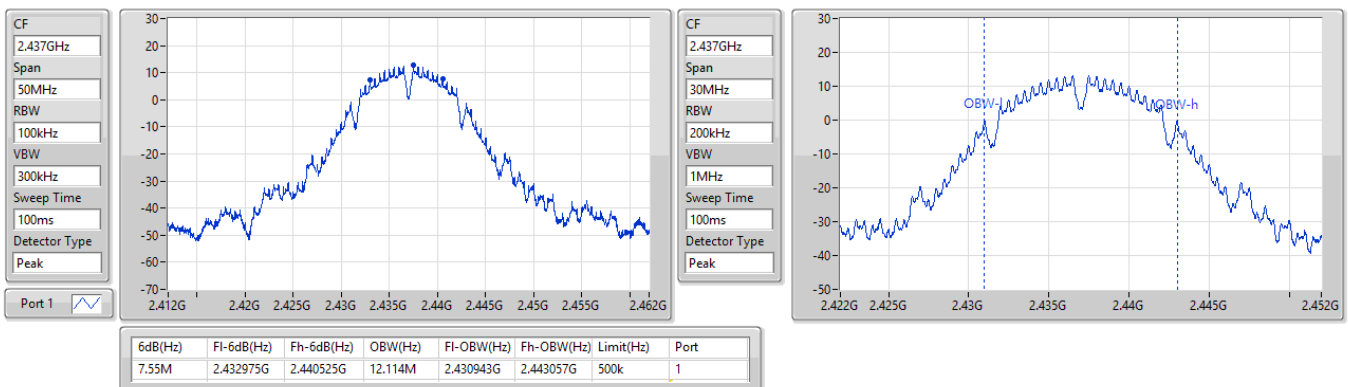
2412MHz



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

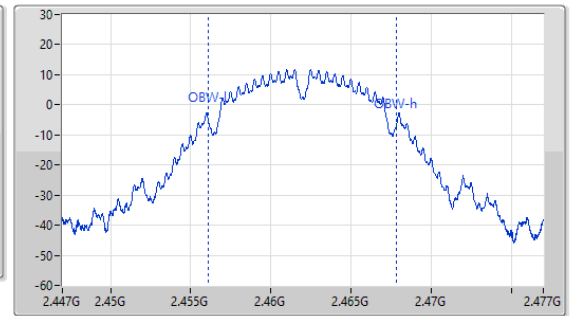
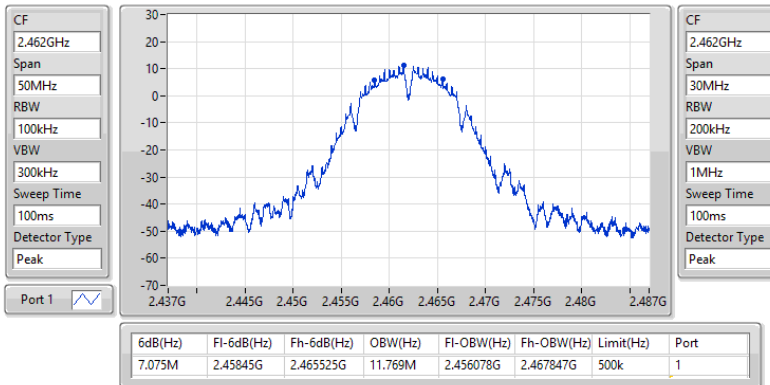
2437MHz



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

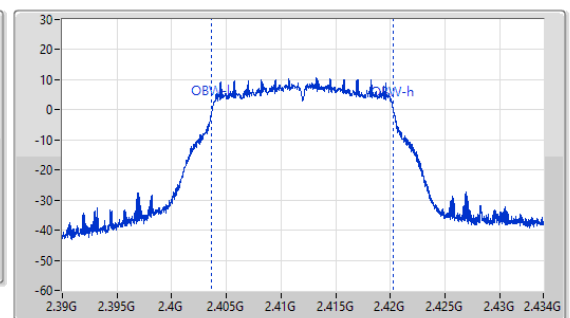
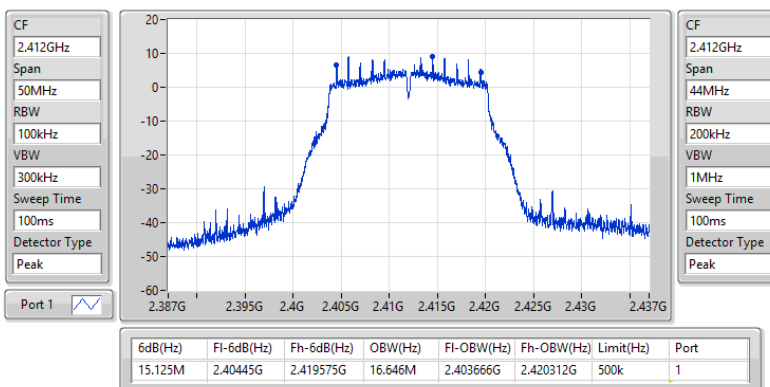
2462MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

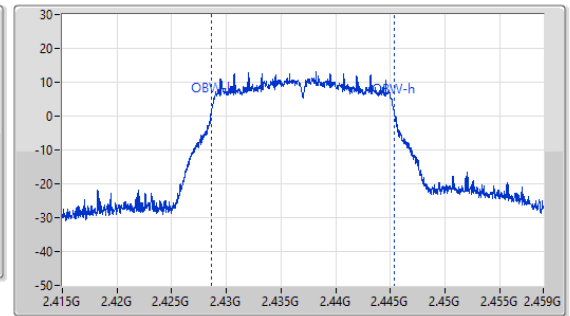
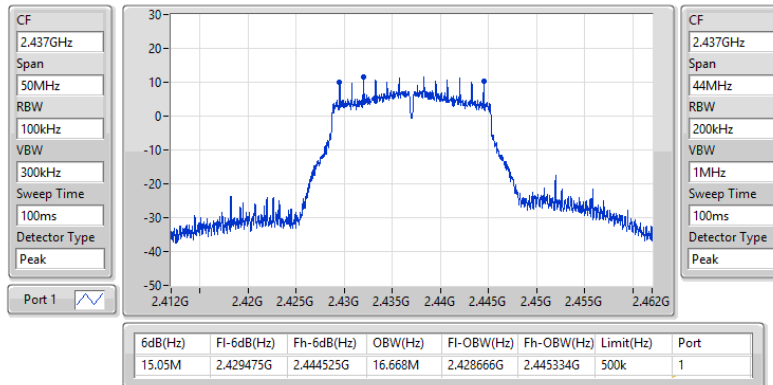
2412MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

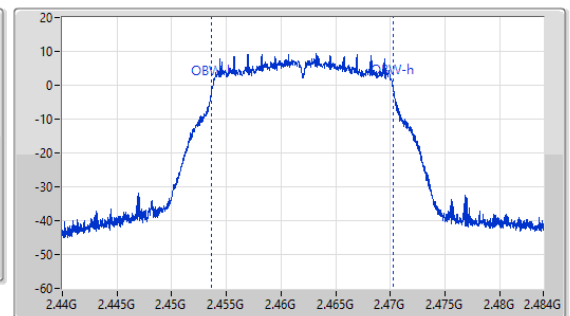
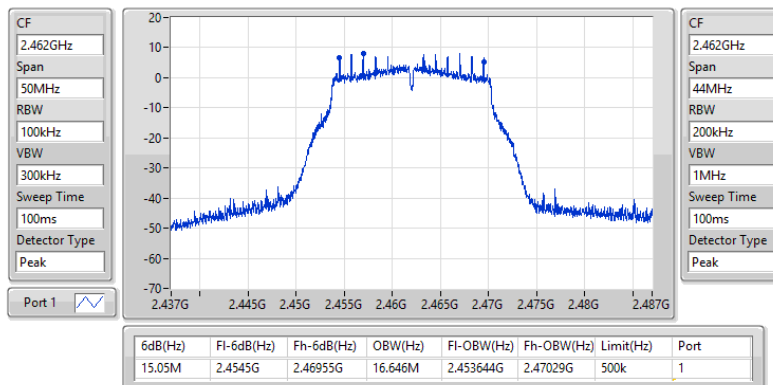
2437MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

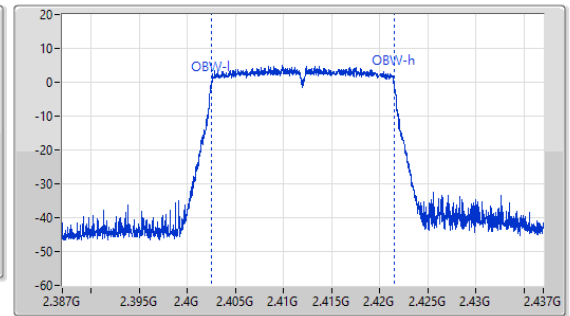
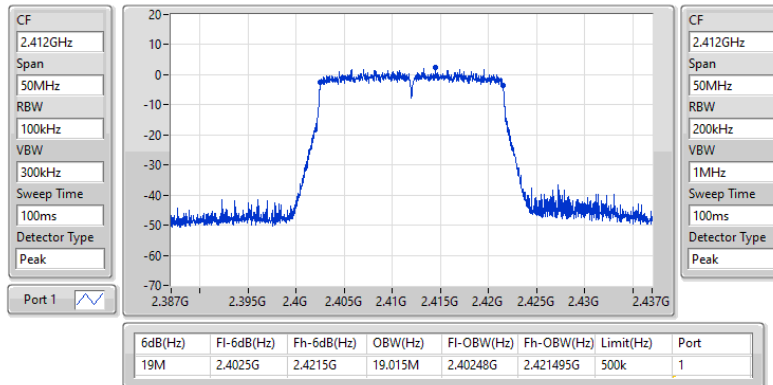
2462MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

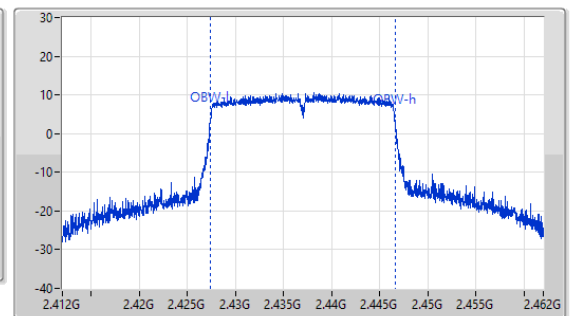
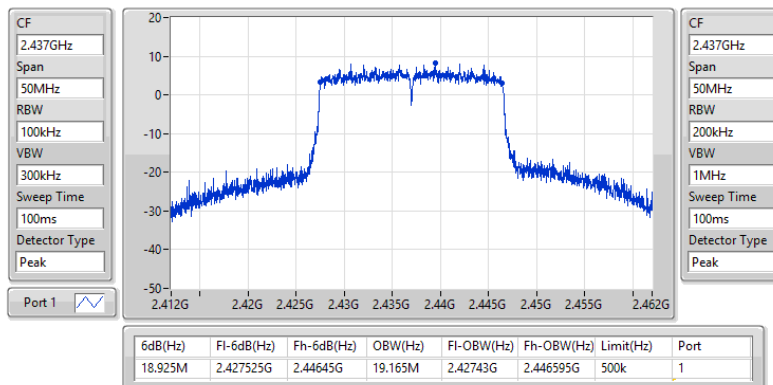
2412MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

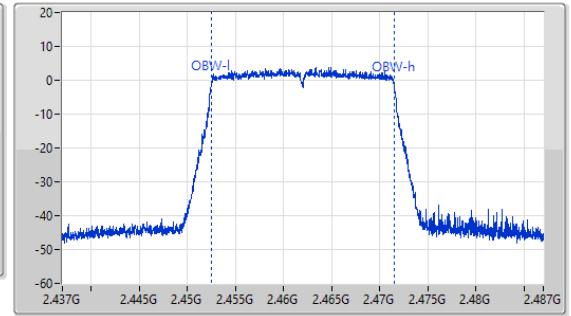
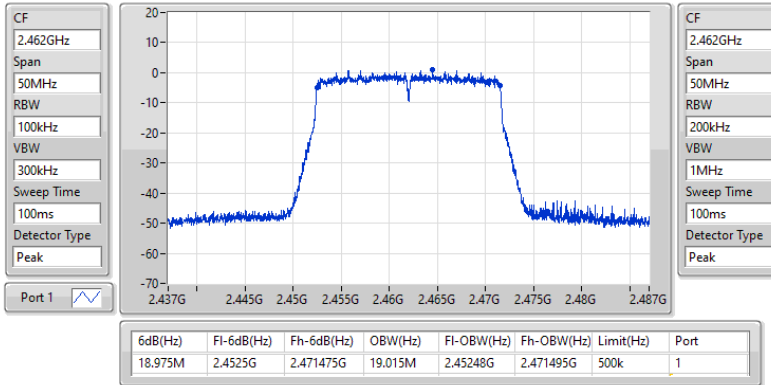
2437MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2462MHz



**Conducted Output Power(Peak)****Appendix B****Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.79	0.19011
802.11g_Nss1,(6Mbps)_1TX	24.83	0.30409
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	25.35	0.34277

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	22.14	22.14	30.00	24.54	36.00
2437MHz	Pass	2.40	22.79	22.79	30.00	25.19	36.00
2462MHz	Pass	2.40	21.55	21.55	30.00	23.95	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.41	23.41	30.00	25.81	36.00
2437MHz	Pass	2.40	24.83	24.83	30.00	27.23	36.00
2462MHz	Pass	2.40	22.85	22.85	30.00	25.25	36.00
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.81	23.81	30.00	26.21	36.00
2437MHz	Pass	2.40	25.35	25.35	30.00	27.75	36.00
2462MHz	Pass	2.40	22.55	22.55	30.00	24.95	36.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.26	0.10617
802.11g_Nss1,(6Mbps)_1TX	20.18	0.10423
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	18.54	0.07145

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.41	19.41	-	21.81	-
2437MHz	Pass	2.40	20.26	20.26	-	22.66	-
2462MHz	Pass	2.40	18.75	18.75	-	21.15	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	17.61	17.61	-	20.01	-
2437MHz	Pass	2.40	20.18	20.18	-	22.58	-
2462MHz	Pass	2.40	16.71	16.71	-	19.11	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	14.12	14.12	-	16.52	-
2437MHz	Pass	2.40	18.54	18.54	-	20.94	-
2462MHz	Pass	2.40	12.53	12.53	-	14.93	-

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

Note : Conducted average output power is for reference

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-1.40
802.11g_Nss1,(6Mbps)_1TX	-3.14
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDM	-5.90

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.40	-2.89	-2.89	8.00
2437MHz	Pass	2.40	-1.40	-1.40	8.00
2462MHz	Pass	2.40	-3.12	-3.12	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.40	-5.78	-5.78	8.00
2437MHz	Pass	2.40	-3.14	-3.14	8.00
2462MHz	Pass	2.40	-6.93	-6.93	8.00
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDM	-	-	-	-	-
2412MHz	Pass	2.40	-10.08	-10.08	8.00
2437MHz	Pass	2.40	-5.90	-5.90	8.00
2462MHz	Pass	2.40	-11.37	-11.37	8.00

DG = Directional Gain; RBW = 3kHz;

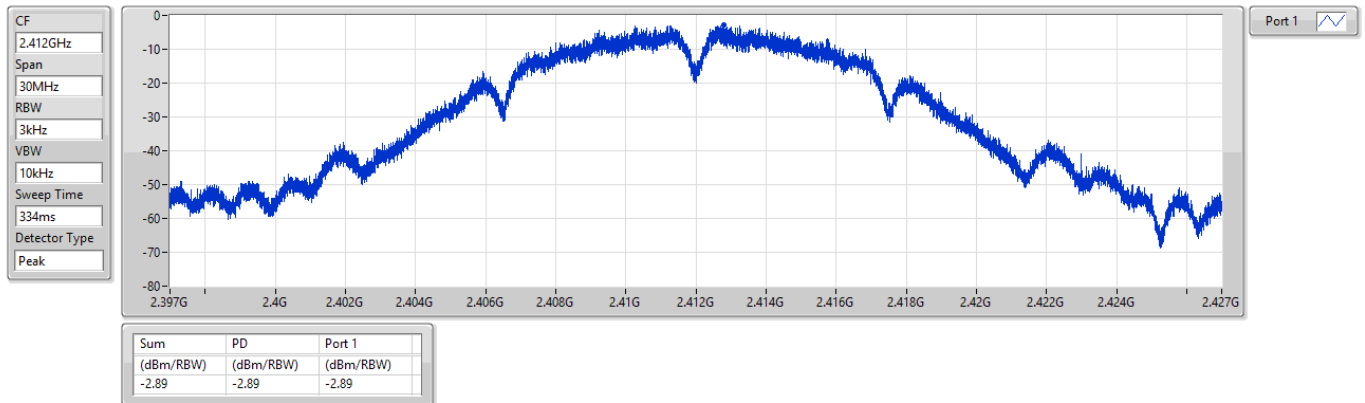
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

PSD

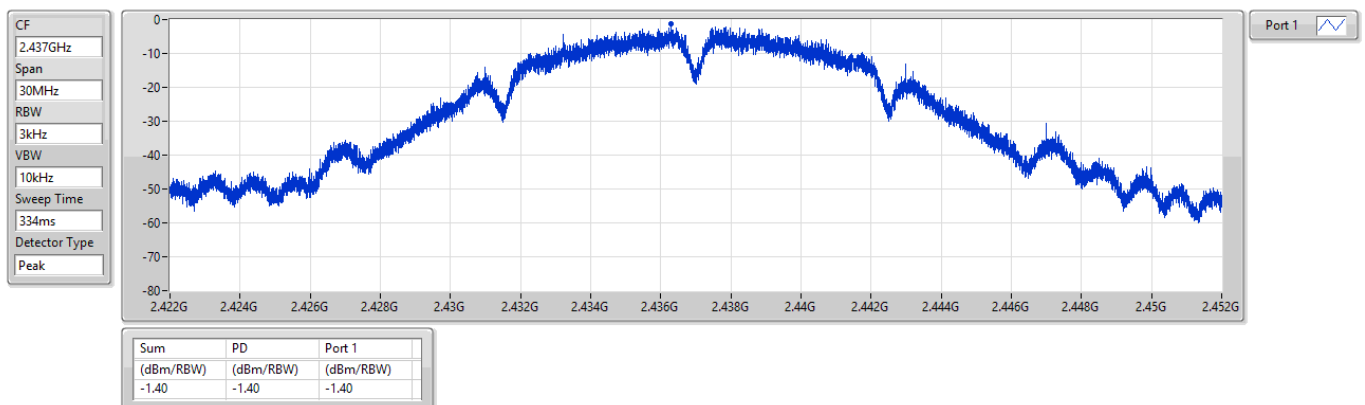
2412MHz



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

PSD

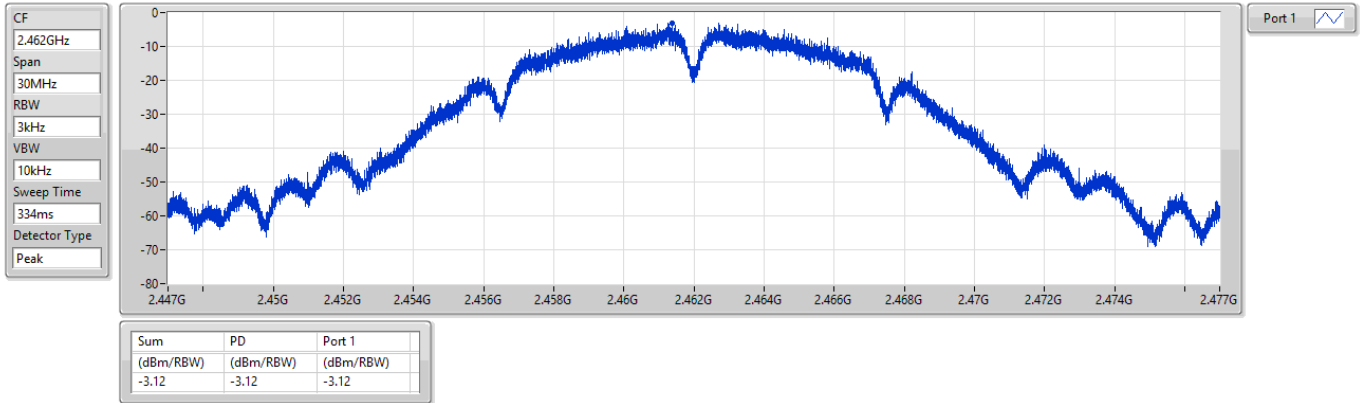
2437MHz



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

PSD

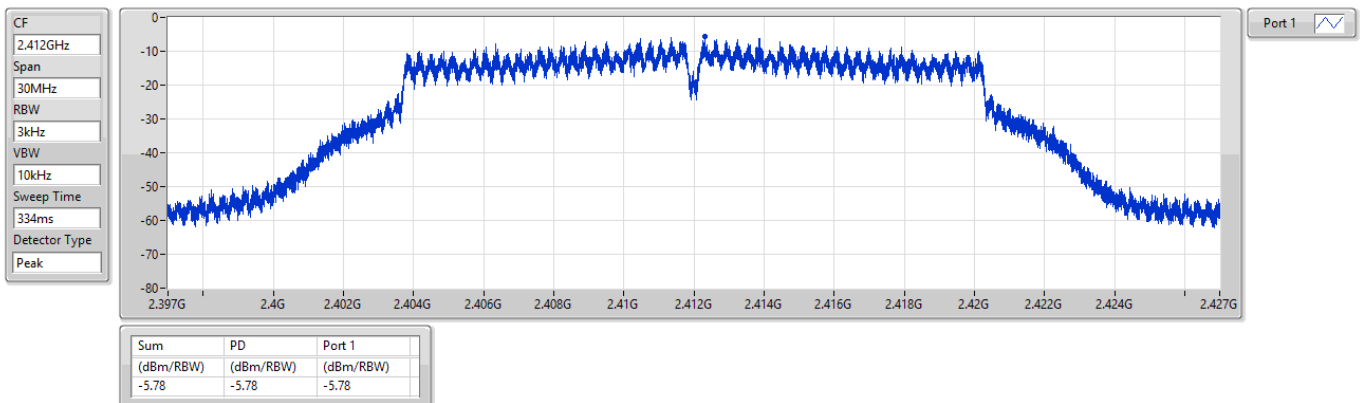
2462MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

PSD

2412MHz

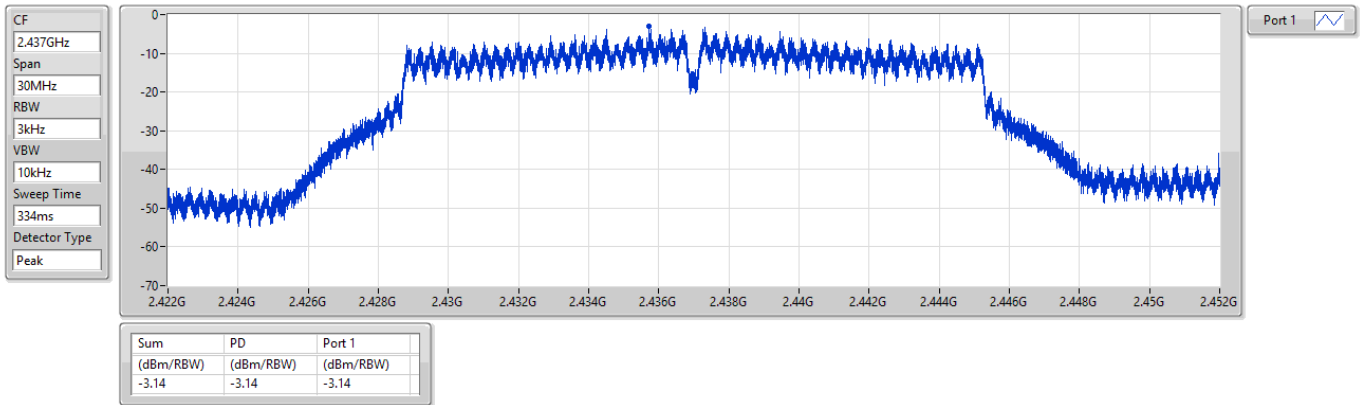




2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

PSD

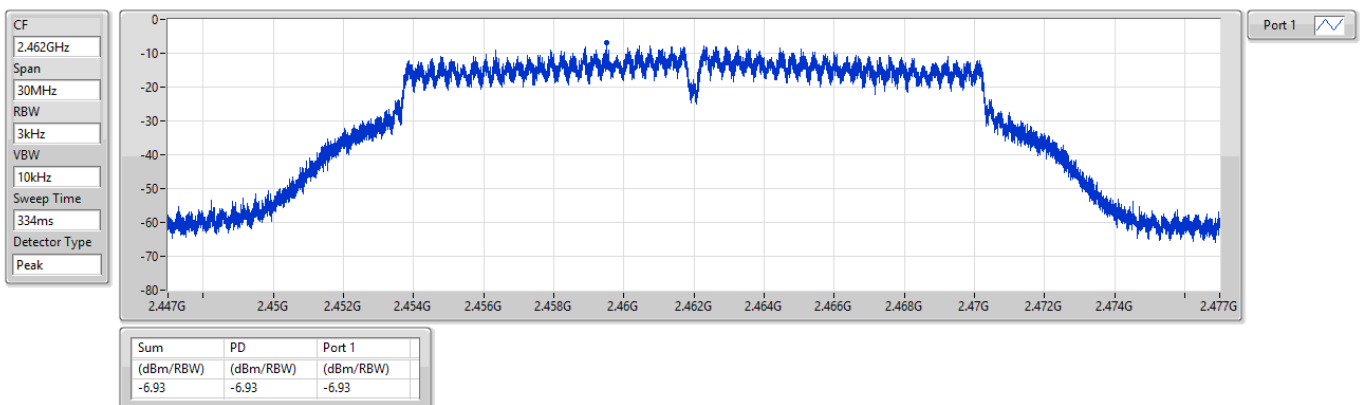
2437MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

PSD

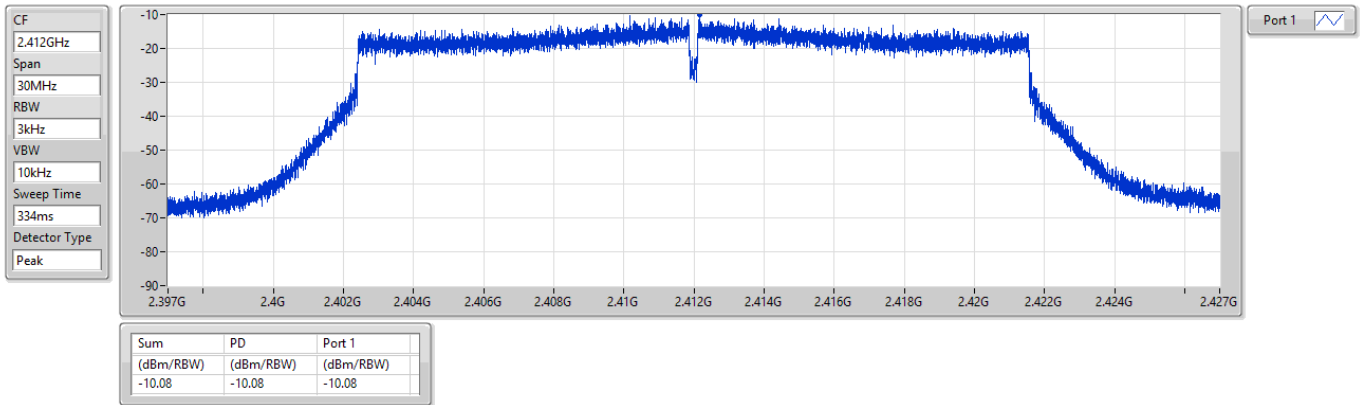
2462MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

PSD

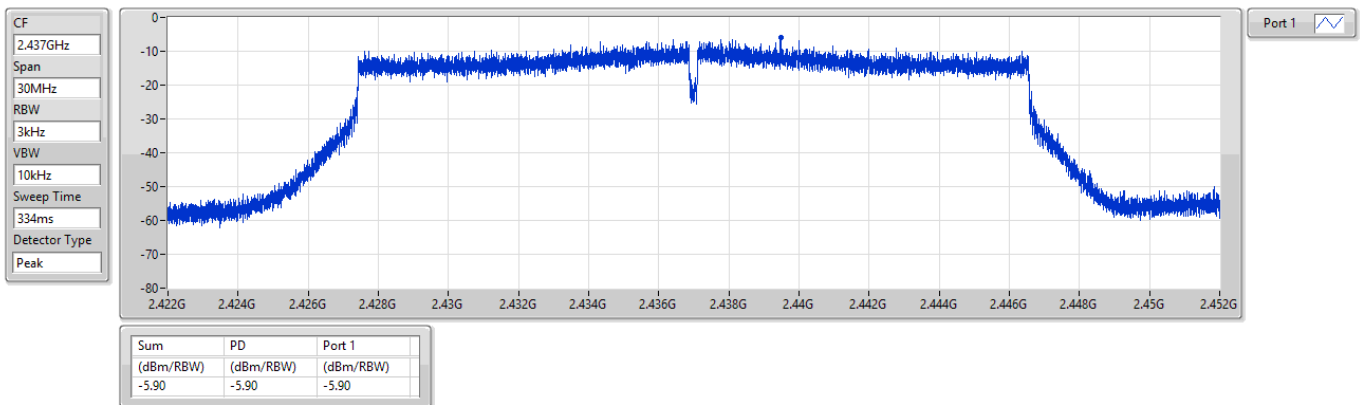
2412MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

PSD

2437MHz

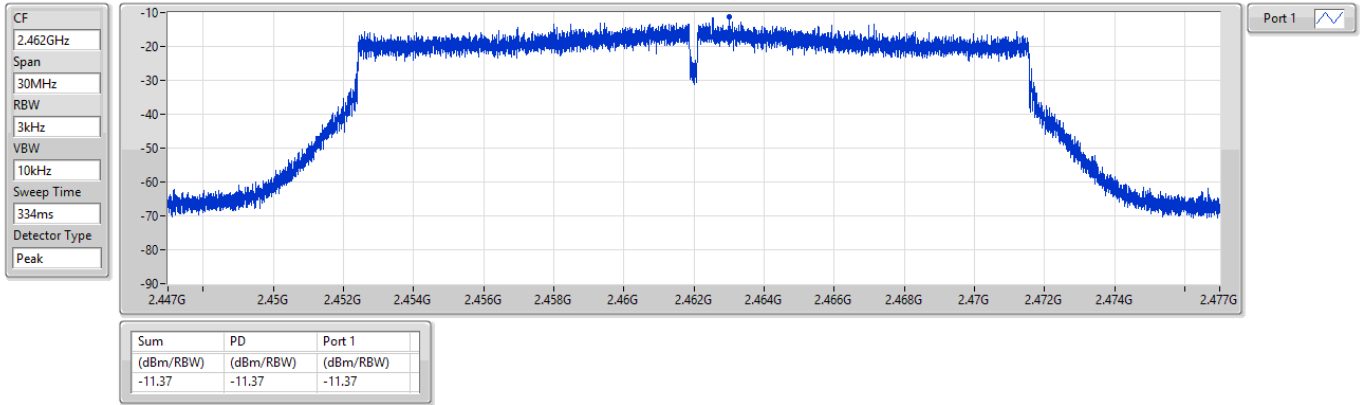




2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

PSD

2462MHz





Summary

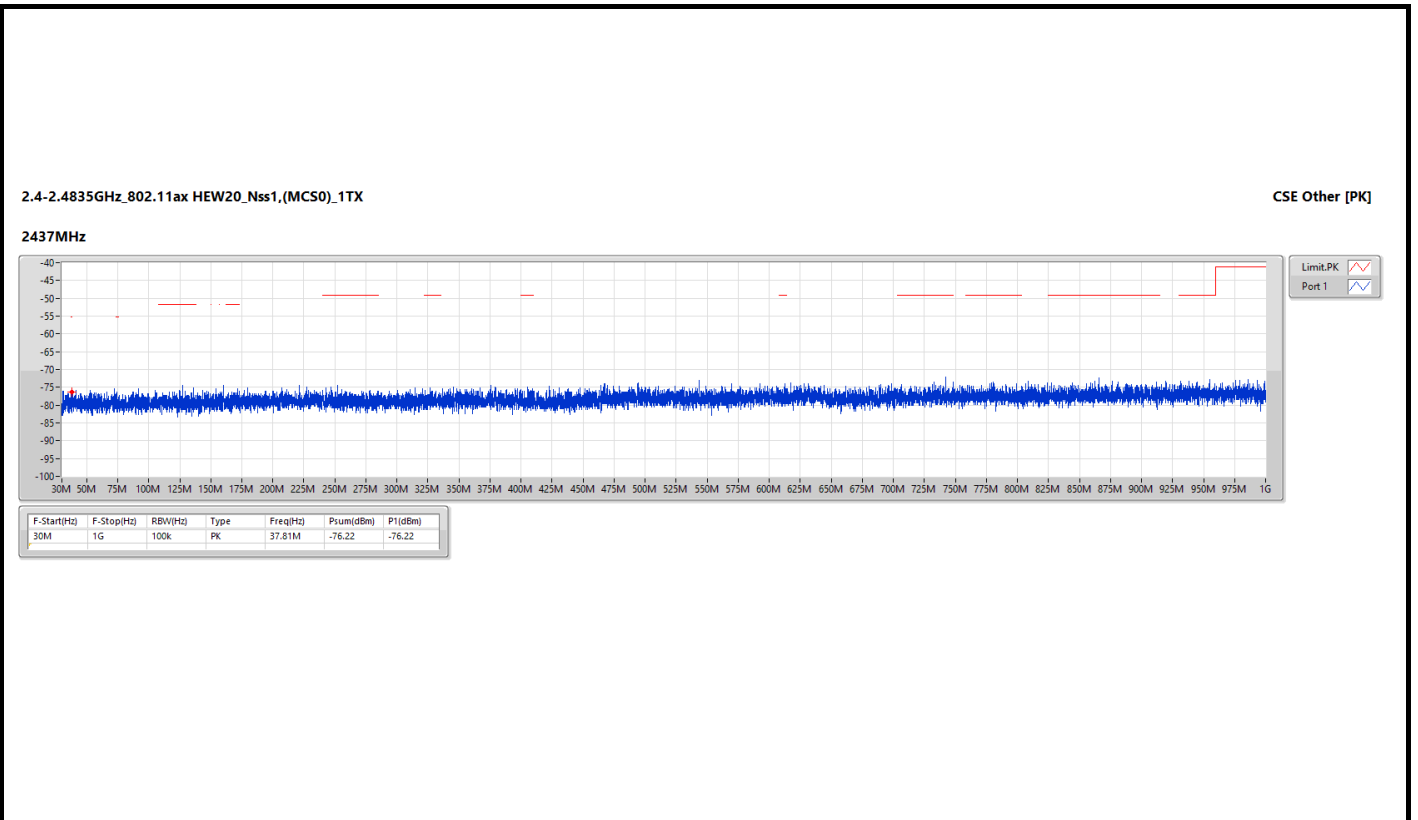
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	30M	1G	PK	37.81M	2.40	-76.22	-76.22	4.70	-69.12	-55.20	-13.92

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	30M	1G	PK	37.81M	2.40	-76.22	-76.22	4.70	-69.12	-55.20	-13.92

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.4835G	2.5G	AV	2.48869G	2.40	-47.06	-47.06	-44.66	-41.20	-3.46
802.11g_Nss1,(6Mbps)_1TX	Pass	2.4835G	2.5G	AV	2.4835G	2.40	-46.87	-46.87	-44.47	-41.20	-3.27
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	2.31G	2.39G	PK	2.38876G	2.40	-27.11	-27.11	-24.71	-21.20	-3.51

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.24	-60.24	-57.84	-41.20	-16.64
2412MHz	Pass	2.31G	2.39G	AV	2.38516G	2.40	-47.13	-47.13	-44.73	-41.20	-3.53
2412MHz	Pass	2.4835G	2.5G	AV	2.48799G	2.40	-58.85	-58.85	-56.45	-41.20	-15.25
2412MHz	Pass	2.5G	3.1G	AV	2.5105G	2.40	-59.86	-59.86	-57.46	-41.20	-16.26
2412MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.55	-51.55	-49.15	-21.20	-27.95
2412MHz	Pass	2.31G	2.39G	PK	2.38316G	2.40	-40.42	-40.42	-38.02	-21.20	-16.82
2412MHz	Pass	2.4835G	2.5G	PK	2.48508G	2.40	-47.52	-47.52	-45.12	-21.20	-23.92
2412MHz	Pass	2.5G	3.1G	PK	2.5411G	2.40	-50.07	-50.07	-47.67	-21.20	-26.47
2437MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.32	-60.32	-57.92	-41.20	-16.72
2437MHz	Pass	2.31G	2.39G	AV	2.38744G	2.40	-57.63	-57.63	-55.23	-41.20	-14.03
2437MHz	Pass	2.4835G	2.5G	AV	2.48547G	2.40	-57.46	-57.46	-55.06	-41.20	-13.86
2437MHz	Pass	2.5G	3.1G	AV	2.5093G	2.40	-58.56	-58.56	-56.16	-41.20	-14.96
2437MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.32	-51.32	-48.92	-21.20	-27.72
2437MHz	Pass	2.31G	2.39G	PK	2.38852G	2.40	-46.16	-46.16	-43.76	-21.20	-22.56
2437MHz	Pass	2.4835G	2.5G	PK	2.48819G	2.40	-46.45	-46.45	-44.05	-21.20	-22.85
2437MHz	Pass	2.5G	3.1G	PK	2.5174G	2.40	-48.95	-48.95	-46.55	-21.20	-25.35
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-61.50	-61.50	-59.10	-41.20	-17.90
2462MHz	Pass	2.31G	2.39G	AV	2.38128G	2.40	-58.86	-58.86	-56.46	-41.20	-15.26
2462MHz	Pass	2.4835G	2.5G	AV	2.48869G	2.40	-47.06	-47.06	-44.66	-41.20	-3.46
2462MHz	Pass	2.5G	3.1G	AV	2.5G	2.40	-57.42	-57.42	-55.02	-41.20	-13.82
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-53.68	-53.68	-51.28	-21.20	-30.08
2462MHz	Pass	2.31G	2.39G	PK	2.388G	2.40	-47.49	-47.49	-45.09	-21.20	-23.89
2462MHz	Pass	2.4835G	2.5G	PK	2.48353G	2.40	-40.90	-40.90	-38.50	-21.20	-17.30
2462MHz	Pass	2.5G	3.1G	PK	2.5009G	2.40	-47.91	-47.91	-45.51	-21.20	-24.31
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	1G	2.31G	AV	2.31G	2.40	-59.34	-59.34	-56.94	-41.20	-15.74
2412MHz	Pass	2.31G	2.39G	AV	2.38992G	2.40	-46.92	-46.92	-44.52	-41.20	-3.32
2412MHz	Pass	2.4835G	2.5G	AV	2.48372G	2.40	-57.68	-57.68	-55.28	-41.20	-14.08
2412MHz	Pass	2.5G	3.1G	AV	2.5018G	2.40	-58.37	-58.37	-55.97	-41.20	-14.77
2412MHz	Pass	1G	2.31G	PK	2.31G	2.40	-50.05	-50.05	-47.65	-21.20	-26.45
2412MHz	Pass	2.31G	2.39G	PK	2.38964G	2.40	-34.06	-34.06	-31.66	-21.20	-10.46
2412MHz	Pass	2.4835G	2.5G	PK	2.48554G	2.40	-45.77	-45.77	-43.37	-21.20	-22.17
2412MHz	Pass	2.5G	3.1G	PK	2.5405G	2.40	-48.59	-48.59	-46.19	-21.20	-24.99
2437MHz	Pass	1G	2.31G	AV	2.31G	2.40	-59.83	-59.83	-57.43	-41.20	-16.23
2437MHz	Pass	2.31G	2.39G	AV	2.38984G	2.40	-47.12	-47.12	-44.72	-41.20	-3.52
2437MHz	Pass	2.4835G	2.5G	AV	2.48366G	2.40	-47.45	-47.45	-45.05	-41.20	-3.85
2437MHz	Pass	2.5G	3.1G	AV	2.5G	2.40	-54.94	-54.94	-52.54	-41.20	-11.34
2437MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.59	-51.59	-49.19	-21.20	-27.99
2437MHz	Pass	2.31G	2.39G	PK	2.38972G	2.40	-33.61	-33.61	-31.21	-21.20	-10.01
2437MHz	Pass	2.4835G	2.5G	PK	2.48371G	2.40	-34.94	-34.94	-32.54	-21.20	-11.34
2437MHz	Pass	2.5G	3.1G	PK	2.5069G	2.40	-44.84	-44.84	-42.44	-21.20	-21.24
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.47	-60.47	-58.07	-41.20	-16.87

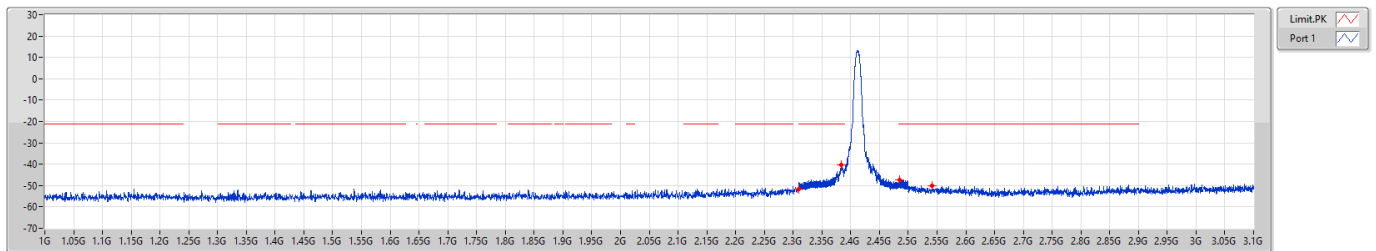
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2462MHz	Pass	2.31G	2.39G	AV	2.38088G	2.40	-58.25	-58.25	-55.85	-41.20	-14.65
2462MHz	Pass	2.4835G	2.5G	AV	2.4835G	2.40	-46.87	-46.87	-44.47	-41.20	-3.27
2462MHz	Pass	2.5G	3.1G	AV	2.5003G	2.40	-53.90	-53.90	-51.50	-41.20	-10.30
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.90	-51.90	-49.50	-21.20	-28.30
2462MHz	Pass	2.31G	2.39G	PK	2.3884G	2.40	-46.67	-46.67	-44.27	-21.20	-23.07
2462MHz	Pass	2.4835G	2.5G	PK	2.48433G	2.40	-32.26	-32.26	-29.86	-21.20	-8.66
2462MHz	Pass	2.5G	3.1G	PK	2.5021G	2.40	-43.69	-43.69	-41.29	-21.20	-20.09
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.53	-60.53	-58.13	-41.20	-16.93
2412MHz	Pass	2.31G	2.39G	AV	2.38956G	2.40	-50.89	-50.89	-48.49	-41.20	-7.29
2412MHz	Pass	2.4835G	2.5G	AV	2.48876G	2.40	-59.57	-59.57	-57.17	-41.20	-15.97
2412MHz	Pass	2.5G	3.1G	AV	2.5033G	2.40	-59.97	-59.97	-57.57	-41.20	-16.37
2412MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.78	-51.78	-49.38	-21.20	-28.18
2412MHz	Pass	2.31G	2.39G	PK	2.38876G	2.40	-27.11	-27.11	-24.71	-21.20	-3.51
2412MHz	Pass	2.4835G	2.5G	PK	2.48381G	2.40	-47.31	-47.31	-44.91	-21.20	-23.71
2412MHz	Pass	2.5G	3.1G	PK	2.5642G	2.40	-49.38	-49.38	-46.98	-21.20	-25.78
2437MHz	Pass	1G	2.31G	AV	2.31G	2.40	-59.84	-59.84	-57.44	-41.20	-16.24
2437MHz	Pass	2.31G	2.39G	AV	2.38936G	2.40	-47.12	-47.12	-44.72	-41.20	-3.52
2437MHz	Pass	2.4835G	2.5G	AV	2.48359G	2.40	-47.66	-47.66	-45.26	-41.20	-4.06
2437MHz	Pass	2.5G	3.1G	AV	2.5003G	2.40	-53.84	-53.84	-51.44	-41.20	-10.24
2437MHz	Pass	1G	2.31G	PK	2.31G	2.40	-50.56	-50.56	-48.16	-21.20	-26.96
2437MHz	Pass	2.31G	2.39G	PK	2.38612G	2.40	-27.28	-27.28	-24.88	-21.20	-3.68
2437MHz	Pass	2.4835G	2.5G	PK	2.4842G	2.40	-28.70	-28.70	-26.30	-21.20	-5.10
2437MHz	Pass	2.5G	3.1G	PK	2.5003G	2.40	-36.71	-36.71	-34.31	-21.20	-13.11
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-61.83	-61.83	-59.43	-41.20	-18.23
2462MHz	Pass	2.31G	2.39G	AV	2.3898G	2.40	-60.02	-60.02	-57.62	-41.20	-16.42
2462MHz	Pass	2.4835G	2.5G	AV	2.48526G	2.40	-53.68	-53.68	-51.28	-41.20	-10.08
2462MHz	Pass	2.5G	3.1G	AV	2.5006G	2.40	-57.85	-57.85	-55.45	-41.20	-14.25
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-52.52	-52.52	-50.12	-21.20	-28.92
2462MHz	Pass	2.31G	2.39G	PK	2.34112G	2.40	-48.68	-48.68	-46.28	-21.20	-25.08
2462MHz	Pass	2.4835G	2.5G	PK	2.48373G	2.40	-27.42	-27.42	-25.02	-21.20	-3.82
2462MHz	Pass	2.5G	3.1G	PK	2.5039G	2.40	-46.73	-46.73	-44.33	-21.20	-23.13

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [PK]

2412MHz

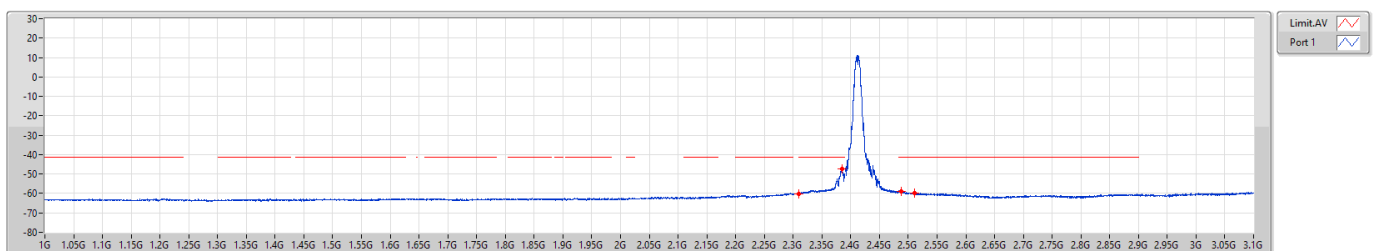


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-51.55	-51.55
2.31G	2.39G	1M	PK	2.38316G	-40.42	-40.42
2.4835G	2.5G	1M	PK	2.48508G	-47.52	-47.52
2.5G	3.1G	1M	PK	2.5411G	-50.07	-50.07

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [AV]

2412MHz

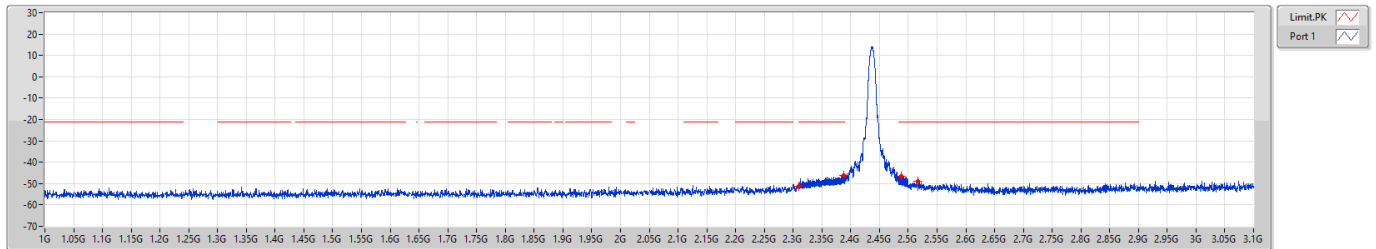


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.24	-60.24
2.31G	2.39G	1M	AV	2.38516G	-47.13	-47.13
2.4835G	2.5G	1M	AV	2.48799G	-58.85	-58.85
2.5G	3.1G	1M	AV	2.5105G	-59.86	-59.86

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [PK]

2437MHz

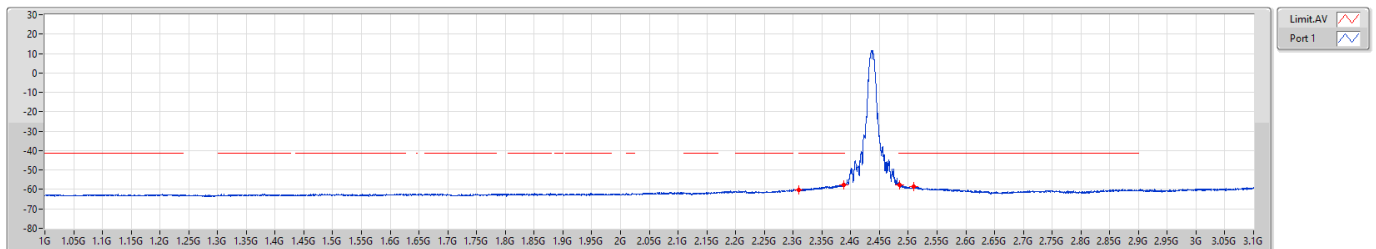


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-51.32	-51.32
2.31G	2.39G	1M	PK	2.38852G	-46.16	-46.16
2.4835G	2.5G	1M	PK	2.48819G	-46.45	-46.45
2.5G	3.1G	1M	PK	2.5174G	-48.95	-48.95

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [AV]

2437MHz

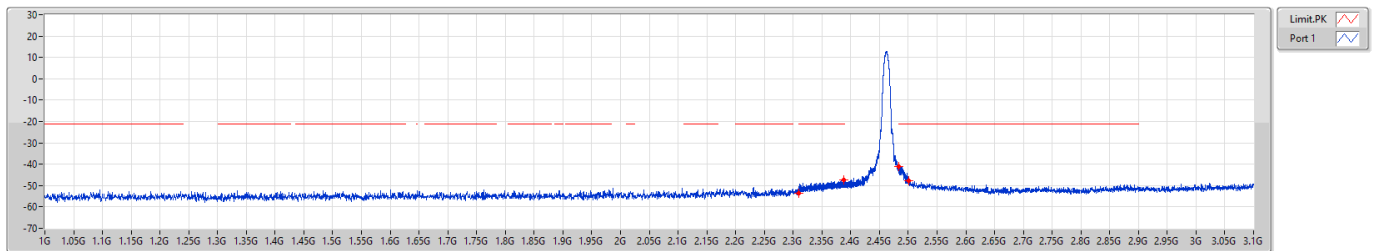


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.32	-60.32
2.31G	2.39G	1M	AV	2.38744G	-57.63	-57.63
2.4835G	2.5G	1M	AV	2.48547G	-57.46	-57.46
2.5G	3.1G	1M	AV	2.5099G	-58.56	-58.56

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [PK]

2462MHz

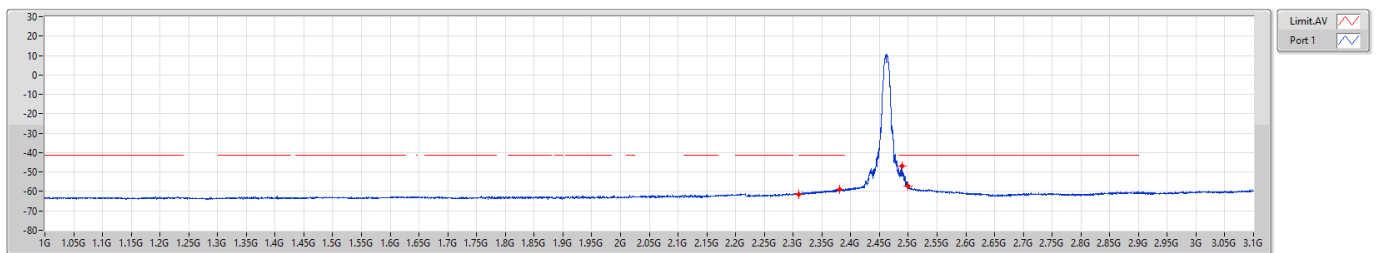


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-53.68	-53.68
2.31G	2.39G	1M	PK	2.388G	-47.49	-47.49
2.4835G	2.5G	1M	PK	2.48353G	-40.90	-40.90
2.5G	3.1G	1M	PK	2.5009G	-47.91	-47.91

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE Bandedge [AV]

2462MHz

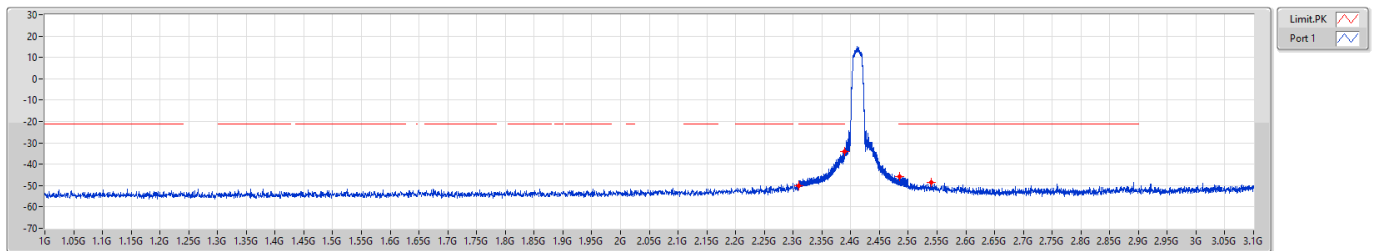


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-61.50	-61.50
2.31G	2.39G	1M	AV	2.38128G	-58.86	-58.86
2.4835G	2.5G	1M	AV	2.48869G	-47.06	-47.06
2.5G	3.1G	1M	AV	2.5G	-57.42	-57.42

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [PK]

2412MHz

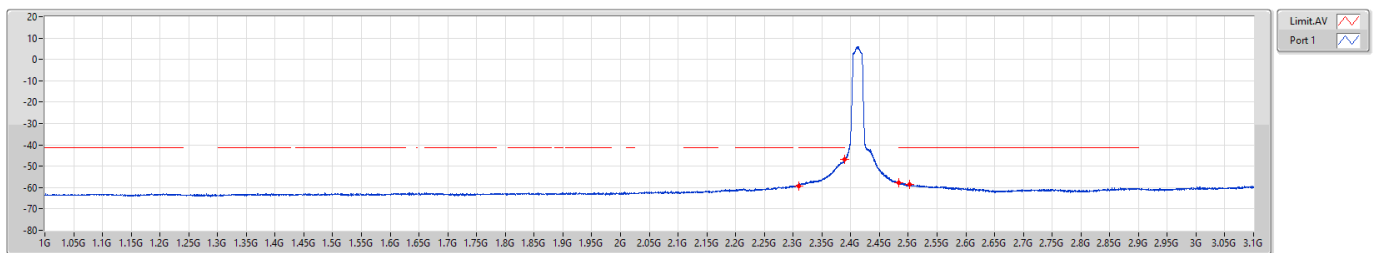


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-50.05	-50.05
2.31G	2.39G	1M	PK	2.38964G	-34.06	-34.06
2.4835G	2.5G	1M	PK	2.48554G	-45.77	-45.77
2.5G	3.1G	1M	PK	2.5405G	-48.59	-48.59

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [AV]

2412MHz

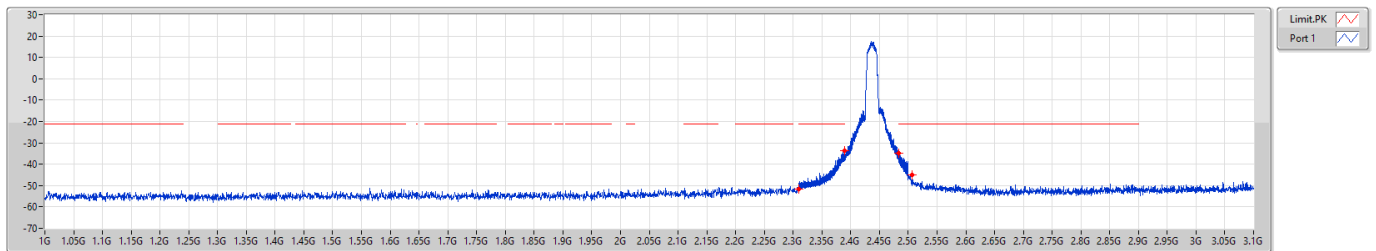


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-59.34	-59.34
2.31G	2.39G	1M	AV	2.38992G	-46.92	-46.92
2.4835G	2.5G	1M	AV	2.48372G	-57.68	-57.68
2.5G	3.1G	1M	AV	2.5018G	-58.37	-58.37

2.4-2.4835GHz_802.11g_Nss1_(6Mbps)_1TX

CSE Bandedge [PK]

2437MHz

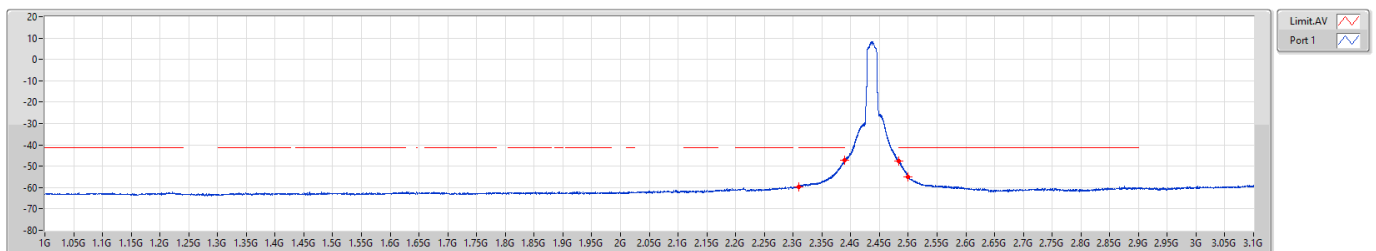


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-51.59	-51.59
2.31G	2.39G	1M	PK	2.38972G	-33.61	-33.61
2.4835G	2.5G	1M	PK	2.48371G	-34.94	-34.94
2.5G	3.1G	1M	PK	2.5069G	-44.84	-44.84

2.4-2.4835GHz_802.11g_Nss1_(6Mbps)_1TX

CSE Bandedge [AV]

2437MHz

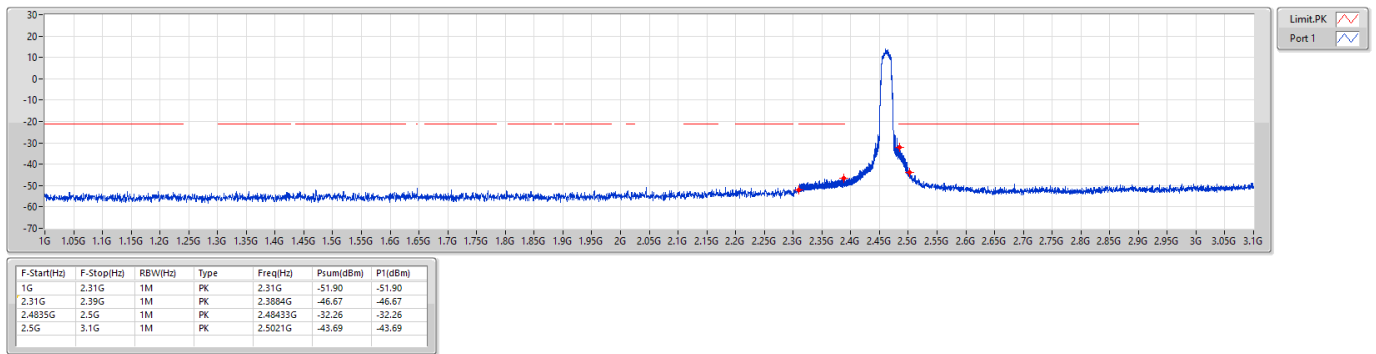


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-59.83	-59.83
2.31G	2.39G	1M	AV	2.38984G	-47.12	-47.12
2.4835G	2.5G	1M	AV	2.48366G	-47.45	-47.45
2.5G	3.1G	1M	AV	2.5G	-54.94	-54.94

2.4-2.4835GHz_802.11g_Nss1_(6Mbps)_1TX

CSE Bandedge [PK]

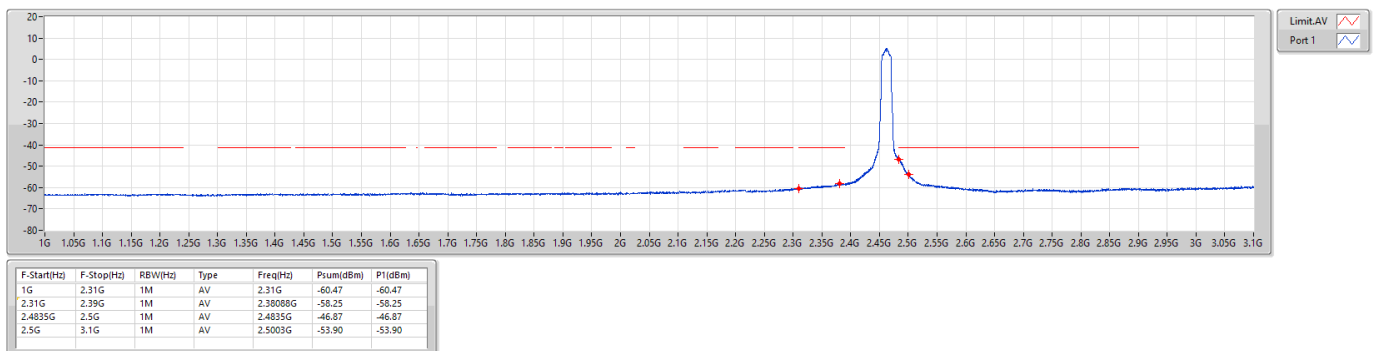
2462MHz



2.4-2.4835GHz_802.11g_Nss1_(6Mbps)_1TX

CSE Bandedge [AV]

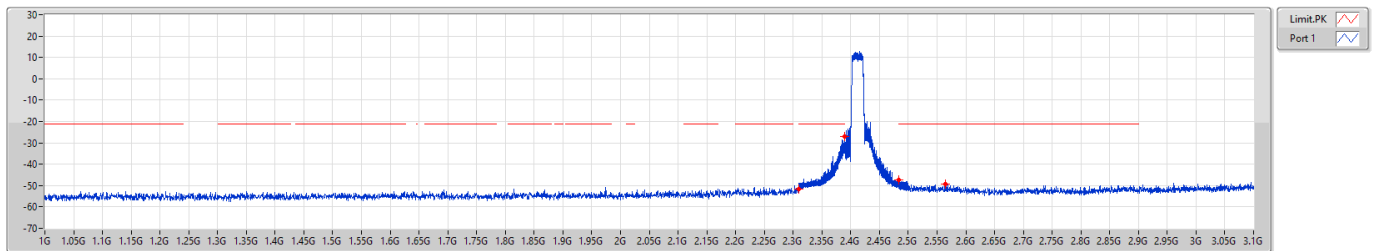
2462MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [PK]

2412MHz

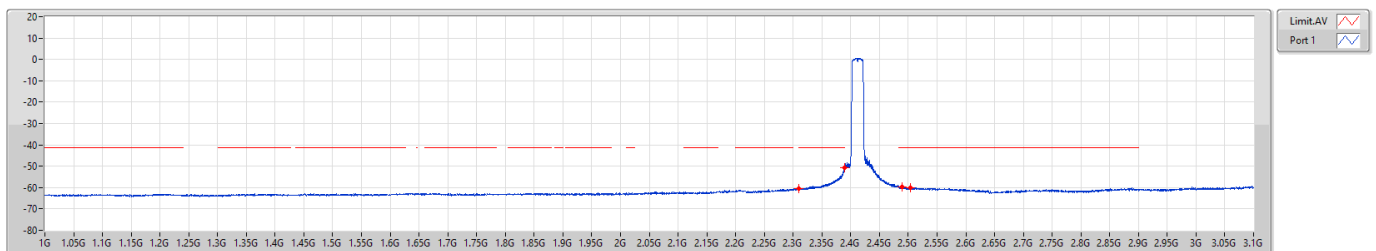


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-51.78	-51.78
2.31G	2.39G	1M	PK	2.38876G	-27.11	-27.11
2.4835G	2.5G	1M	PK	2.48381G	-47.31	-47.31
2.5G	3.1G	1M	PK	2.5642G	-49.38	-49.38

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [AV]

2412MHz

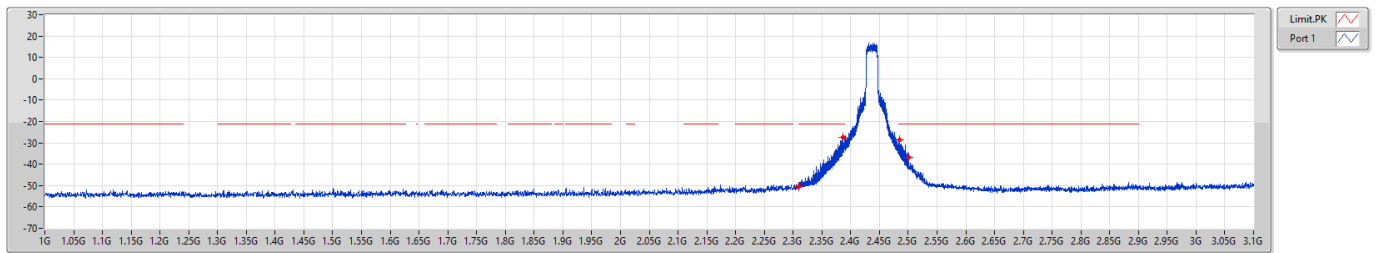


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.53	-60.53
2.31G	2.39G	1M	AV	2.38956G	-50.89	-50.89
2.4835G	2.5G	1M	AV	2.48876G	-59.57	-59.57
2.5G	3.1G	1M	AV	2.5033G	-59.97	-59.97

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [PK]

2437MHz

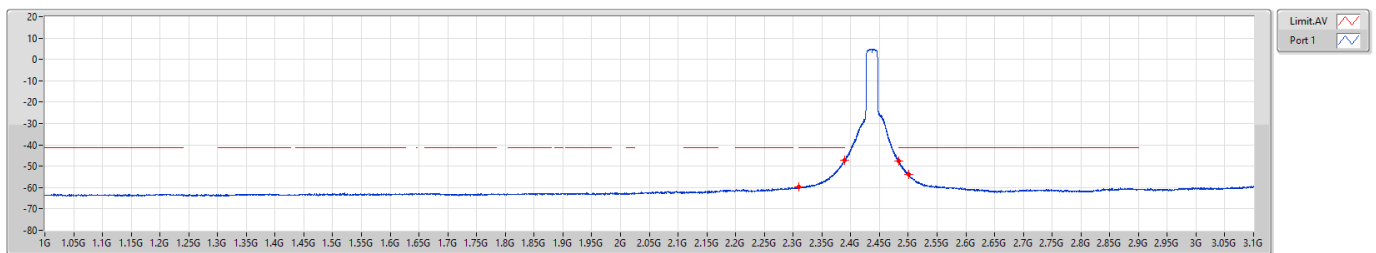


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-50.56	-50.56
2.31G	2.39G	1M	PK	2.38612G	-27.28	-27.28
2.4835G	2.5G	1M	PK	2.4842G	-28.70	-28.70
2.5G	3.1G	1M	PK	2.5003G	-36.71	-36.71

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [AV]

2437MHz

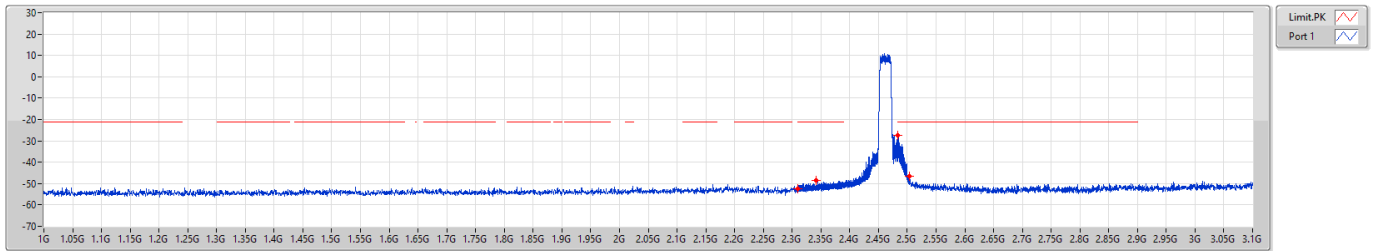


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-59.84	-59.84
2.31G	2.39G	1M	AV	2.38936G	-47.12	-47.12
2.4835G	2.5G	1M	AV	2.48359G	-47.66	-47.66
2.5G	3.1G	1M	AV	2.5003G	-53.84	-53.84

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [PK]

2462MHz

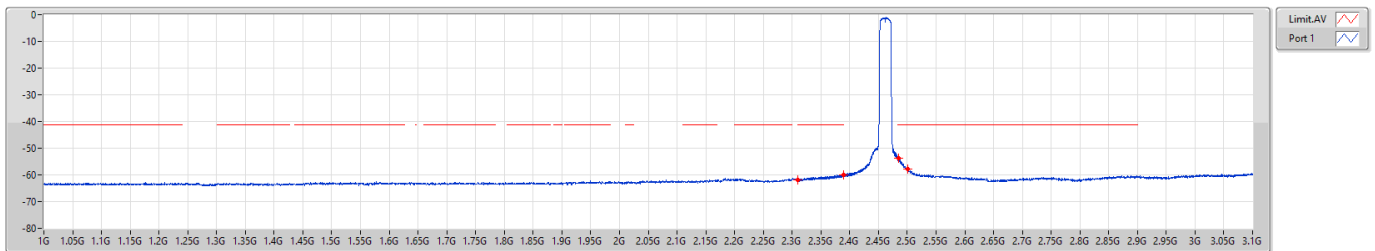


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-52.52	-52.52
2.31G	2.39G	1M	PK	2.34112G	-48.68	-48.68
2.4835G	2.5G	1M	PK	2.48373G	-27.42	-27.42
2.5G	3.1G	1M	PK	2.5039G	-46.73	-46.73

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE Bandedge [AV]

2462MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-61.83	-61.83
2.31G	2.39G	1M	AV	2.3898G	-60.02	-60.02
2.4835G	2.5G	1M	AV	2.48526G	-53.68	-53.68
2.5G	3.1G	1M	AV	2.5006G	-57.85	-57.85

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	4G	5G	AV	4.824G	2.40	-50.93	-50.93	-48.53	-41.20	-7.33
802.11g_Nss1,(6Mbps)_1TX	Pass	7G	8G	AV	7.3075G	2.40	-57.10	-57.10	-54.70	-41.20	-13.50
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	4G	5G	AV	4.924G	2.40	-58.63	-58.63	-56.23	-41.20	-15.03

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.1G	4G	AV	3.61795G	2.40	-69.22	-69.22	-66.82	-41.20	-25.62
2412MHz	Pass	4G	5G	AV	4.824G	2.40	-50.93	-50.93	-48.53	-41.20	-7.33
2412MHz	Pass	5G	7G	AV	5.246G	2.40	-72.76	-72.76	-70.36	-41.20	-29.16
2412MHz	Pass	7G	8G	AV	7.75G	2.40	-72.32	-72.32	-69.92	-41.20	-28.72
2412MHz	Pass	8G	25G	AV	19.06753G	2.40	-64.12	-64.12	-61.72	-41.20	-20.52
2412MHz	Pass	3.1G	4G	PK	3.61795G	2.40	-62.72	-62.72	-60.32	-21.20	-39.12
2412MHz	Pass	4G	5G	PK	4.8245G	2.40	-49.88	-49.88	-47.48	-21.20	-26.28
2412MHz	Pass	5G	7G	PK	5.246G	2.40	-63.08	-63.08	-60.68	-21.20	-39.48
2412MHz	Pass	7G	8G	PK	7.368G	2.40	-62.32	-62.32	-59.92	-21.20	-38.72
2412MHz	Pass	8G	25G	PK	19.45588G	2.40	-55.17	-55.17	-52.77	-21.20	-31.57
2437MHz	Pass	3.1G	4G	AV	3.65575G	2.40	-69.13	-69.13	-66.73	-41.20	-25.53
2437MHz	Pass	4G	5G	AV	4.874G	2.40	-52.06	-52.06	-49.66	-41.20	-8.46
2437MHz	Pass	5G	7G	AV	5.24G	2.40	-73.03	-73.03	-70.63	-41.20	-29.43
2437MHz	Pass	7G	8G	AV	7.31G	2.40	-52.79	-52.79	-50.39	-41.20	-9.19
2437MHz	Pass	8G	25G	AV	15.74297G	2.40	-64.18	-64.18	-61.78	-41.20	-20.58
2437MHz	Pass	3.1G	4G	PK	3.33535G	2.40	-63.14	-63.14	-60.74	-21.20	-39.54
2437MHz	Pass	4G	5G	PK	4.8745G	2.40	-51.10	-51.10	-48.70	-21.20	-27.50
2437MHz	Pass	5G	7G	PK	5.444G	2.40	-61.84	-61.84	-59.44	-21.20	-38.24
2437MHz	Pass	7G	8G	PK	7.311G	2.40	-50.12	-50.12	-47.72	-21.20	-26.52
2437MHz	Pass	8G	25G	PK	19.40859G	2.40	-55.61	-55.61	-53.21	-21.20	-32.01
2462MHz	Pass	3.1G	4G	AV	3.69355G	2.40	-68.36	-68.36	-65.96	-41.20	-24.76
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-52.74	-52.74	-50.34	-41.20	-9.14
2462MHz	Pass	5G	7G	AV	5.2445G	2.40	-72.76	-72.76	-70.36	-41.20	-29.16
2462MHz	Pass	7G	8G	AV	7.385G	2.40	-59.80	-59.80	-57.40	-41.20	-16.20
2462MHz	Pass	8G	25G	AV	19.08878G	2.40	-64.06	-64.06	-61.66	-41.20	-20.46
2462MHz	Pass	3.1G	4G	PK	3.69355G	2.40	-62.64	-62.64	-60.24	-21.20	-39.04
2462MHz	Pass	4G	5G	PK	4.9245G	2.40	-51.71	-51.71	-49.31	-21.20	-28.11
2462MHz	Pass	5G	7G	PK	5.372G	2.40	-62.27	-62.27	-59.87	-21.20	-38.67
2462MHz	Pass	7G	8G	PK	7.3855G	2.40	-56.23	-56.23	-53.83	-21.20	-32.63
2462MHz	Pass	8G	25G	PK	19.06541G	2.40	-55.47	-55.47	-53.07	-21.20	-31.87
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.1G	4G	AV	3.61795G	2.40	-67.96	-67.96	-65.56	-41.20	-24.36
2412MHz	Pass	4G	5G	AV	4.824G	2.40	-58.57	-58.57	-56.17	-41.20	-14.97
2412MHz	Pass	5G	7G	AV	5.359G	2.40	-72.95	-72.95	-70.55	-41.20	-29.35
2412MHz	Pass	7G	8G	AV	7.25G	2.40	-67.28	-67.28	-64.88	-41.20	-23.68
2412MHz	Pass	8G	25G	AV	19.05531G	2.40	-63.97	-63.97	-61.57	-41.20	-20.37
2412MHz	Pass	3.1G	4G	PK	3.61795G	2.40	-62.05	-62.05	-59.65	-21.20	-38.45
2412MHz	Pass	4G	5G	PK	4.8245G	2.40	-54.04	-54.04	-51.64	-21.20	-30.44
2412MHz	Pass	5G	7G	PK	5.2455G	2.40	-62.52	-62.52	-60.12	-21.20	-38.92
2412MHz	Pass	7G	8G	PK	7.2505G	2.40	-59.33	-59.33	-56.93	-21.20	-35.73
2412MHz	Pass	8G	25G	PK	18.43588G	2.40	-56.30	-56.30	-53.90	-21.20	-32.70
2437MHz	Pass	3.1G	4G	AV	3.6553G	2.40	-68.28	-68.28	-65.88	-41.20	-24.68

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2437MHz	Pass	4G	5G	AV	4.874G	2.40	-58.61	-58.61	-56.21	-41.20	-15.01
2437MHz	Pass	5G	7G	AV	5.23G	2.40	-72.79	-72.79	-70.39	-41.20	-29.19
2437MHz	Pass	7G	8G	AV	7.3075G	2.40	-57.10	-57.10	-54.70	-41.20	-13.50
2437MHz	Pass	8G	25G	AV	19.10313G	2.40	-63.76	-63.76	-61.36	-41.20	-20.16
2437MHz	Pass	3.1G	4G	PK	3.61345G	2.40	-63.11	-63.11	-60.71	-21.20	-39.51
2437MHz	Pass	4G	5G	PK	4.8745G	2.40	-54.92	-54.92	-52.52	-21.20	-31.32
2437MHz	Pass	5G	7G	PK	5.3525G	2.40	-62.66	-62.66	-60.26	-21.20	-39.06
2437MHz	Pass	7G	8G	PK	7.3155G	2.40	-48.25	-48.25	-45.85	-21.20	-24.65
2437MHz	Pass	8G	25G	PK	18.43216G	2.40	-55.39	-55.39	-52.99	-21.20	-31.79
2462MHz	Pass	3.1G	4G	AV	3.6931G	2.40	-68.62	-68.62	-66.22	-41.20	-25.02
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-58.54	-58.54	-56.14	-41.20	-14.94
2462MHz	Pass	4G	5G	AV	4.9245G	2.40	-58.54	-58.54	-56.14	-41.20	-14.94
2462MHz	Pass	5G	7G	AV	5.2155G	2.40	-72.86	-72.86	-70.46	-41.20	-29.26
2462MHz	Pass	7G	8G	AV	7.3865G	2.40	-68.69	-68.69	-66.29	-41.20	-25.09
2462MHz	Pass	8G	25G	AV	19.08347G	2.40	-63.80	-63.80	-61.40	-41.20	-20.20
2462MHz	Pass	3.1G	4G	PK	3.69355G	2.40	-61.99	-61.99	-59.59	-21.20	-38.39
2462MHz	Pass	4G	5G	PK	4.9245G	2.40	-55.63	-55.63	-53.23	-21.20	-32.03
2462MHz	Pass	5G	7G	PK	5.2245G	2.40	-62.48	-62.48	-60.08	-21.20	-38.88
2462MHz	Pass	7G	8G	PK	7.3845G	2.40	-60.14	-60.14	-57.74	-21.20	-36.54
2462MHz	Pass	8G	25G	PK	18.43322G	2.40	-55.06	-55.06	-52.66	-21.20	-31.46
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.1G	4G	AV	3.61795G	2.40	-67.11	-67.11	-64.71	-41.20	-23.51
2412MHz	Pass	4G	5G	AV	4.824G	2.40	-58.76	-58.76	-56.36	-41.20	-15.16
2412MHz	Pass	5G	7G	AV	5.382G	2.40	-73.32	-73.32	-70.92	-41.20	-29.72
2412MHz	Pass	7G	8G	AV	7.744G	2.40	-72.33	-72.33	-69.93	-41.20	-28.73
2412MHz	Pass	8G	25G	AV	15.73766G	2.40	-64.43	-64.43	-62.03	-41.20	-20.83
2412MHz	Pass	3.1G	4G	PK	3.61795G	2.40	-61.58	-61.58	-59.18	-21.20	-37.98
2412MHz	Pass	4G	5G	PK	4.8245G	2.40	-55.73	-55.73	-53.33	-21.20	-32.13
2412MHz	Pass	5G	7G	PK	5.1845G	2.40	-62.92	-62.92	-60.52	-21.20	-39.32
2412MHz	Pass	7G	8G	PK	7.716G	2.40	-62.50	-62.50	-60.10	-21.20	-38.90
2412MHz	Pass	8G	25G	PK	15.75944G	2.40	-55.84	-55.84	-53.44	-21.20	-32.24
2437MHz	Pass	3.1G	4G	AV	3.65575G	2.40	-67.74	-67.74	-65.34	-41.20	-24.14
2437MHz	Pass	4G	5G	AV	4.874G	2.40	-58.75	-58.75	-56.35	-41.20	-15.15
2437MHz	Pass	5G	7G	AV	5.236G	2.40	-72.99	-72.99	-70.59	-41.20	-29.39
2437MHz	Pass	7G	8G	AV	7.312G	2.40	-61.84	-61.84	-59.44	-41.20	-18.24
2437MHz	Pass	8G	25G	AV	19.43303G	2.40	-64.08	-64.08	-61.68	-41.20	-20.48
2437MHz	Pass	3.1G	4G	PK	3.65575G	2.40	-62.57	-62.57	-60.17	-21.20	-38.97
2437MHz	Pass	4G	5G	PK	4.8745G	2.40	-53.98	-53.98	-51.58	-21.20	-30.38
2437MHz	Pass	5G	7G	PK	5.2035G	2.40	-63.08	-63.08	-60.68	-21.20	-39.48
2437MHz	Pass	7G	8G	PK	7.3185G	2.40	-48.81	-48.81	-46.41	-21.20	-25.21
2437MHz	Pass	8G	25G	PK	15.68878G	2.40	-55.40	-55.40	-53.00	-21.20	-31.80
2462MHz	Pass	3.1G	4G	AV	3.6931G	2.40	-67.39	-67.39	-64.99	-41.20	-23.79
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-58.63	-58.63	-56.23	-41.20	-15.03



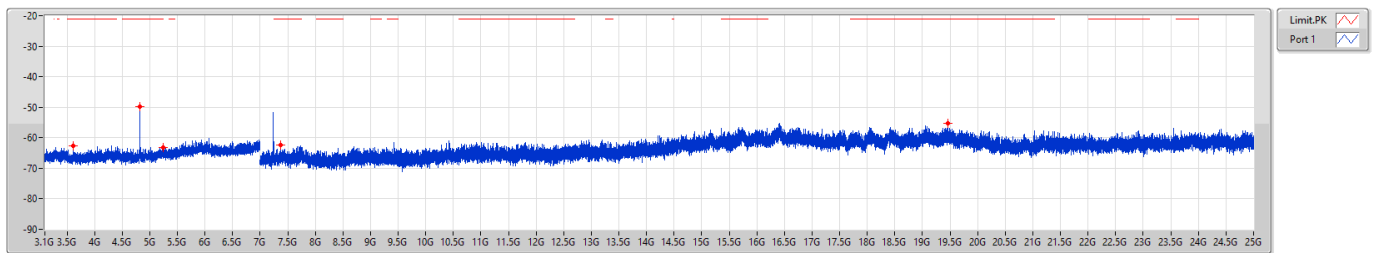
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2462MHz	Pass	5G	7G	AV	5.222G	2.40	-73.28	-73.28	-70.88	-41.20	-29.68
2462MHz	Pass	7G	8G	AV	7.7445G	2.40	-72.84	-72.84	-70.44	-41.20	-29.24
2462MHz	Pass	8G	25G	AV	19.50103G	2.40	-64.62	-64.62	-62.22	-41.20	-21.02
2462MHz	Pass	3.1G	4G	PK	3.6931G	2.40	-62.84	-62.84	-60.44	-21.20	-39.24
2462MHz	Pass	4G	5G	PK	4.9245G	2.40	-55.93	-55.93	-53.53	-21.20	-32.33
2462MHz	Pass	5G	7G	PK	5.2475G	2.40	-63.71	-63.71	-61.31	-21.20	-40.11
2462MHz	Pass	7G	8G	PK	7.7115G	2.40	-63.15	-63.15	-60.75	-21.20	-39.55
2462MHz	Pass	8G	25G	PK	19.067G	2.40	-55.50	-55.50	-53.10	-21.20	-31.90

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [PK]

2412MHz

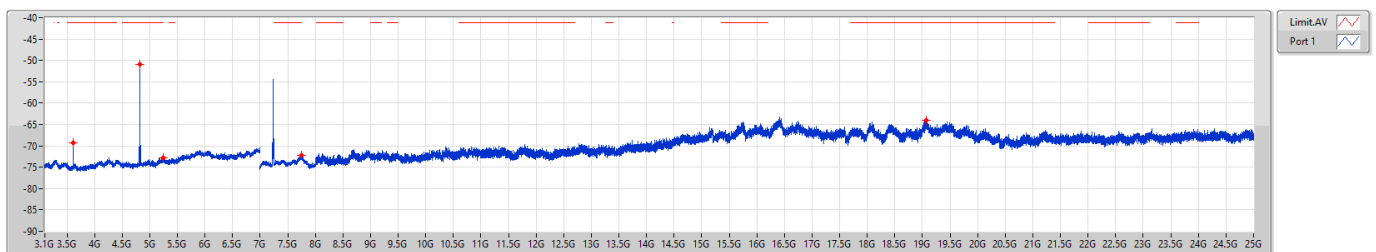


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.61795G	-62.72	-62.72
4G	5G	1M	PK	4.8245G	-49.88	-49.88
5G	7G	1M	PK	5.246G	-63.08	-63.08
7G	8G	1M	PK	7.368G	-62.32	-62.32
8G	25G	1M	PK	19.45588G	-55.17	-55.17

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [AV]

2412MHz

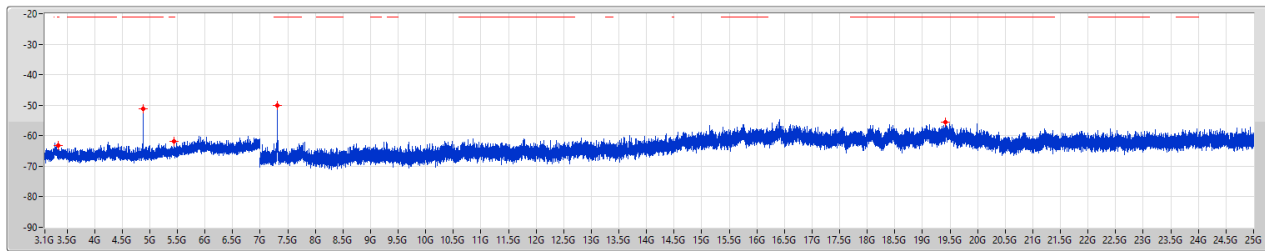


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.61795G	-69.22	-69.22
4G	5G	1M	AV	4.824G	-50.93	-50.93
5G	7G	1M	AV	5.246G	-72.76	-72.76
7G	8G	1M	AV	7.75G	-72.32	-72.32
8G	25G	1M	AV	19.06753G	-64.12	-64.12

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [PK]

2437MHz



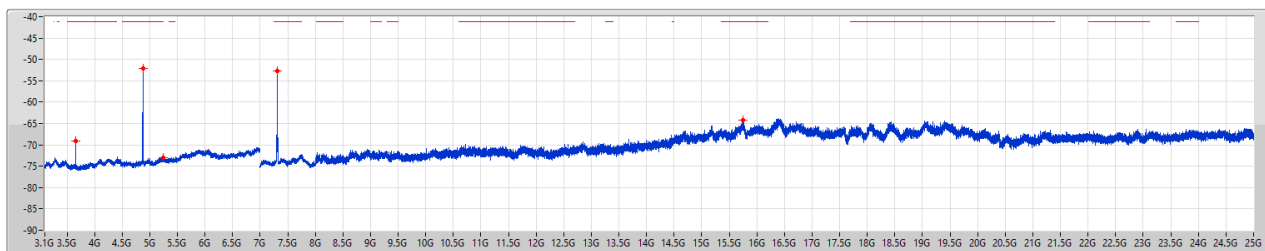
Limit PK
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.33535G	-63.14	-63.14
4G	5G	1M	PK	4.8745G	-51.10	-51.10
5G	7G	1M	PK	5.444G	-61.84	-61.84
7G	8G	1M	PK	7.311G	-50.12	-50.12
8G	25G	1M	PK	19.40859G	-55.61	-55.61

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [AV]

2437MHz



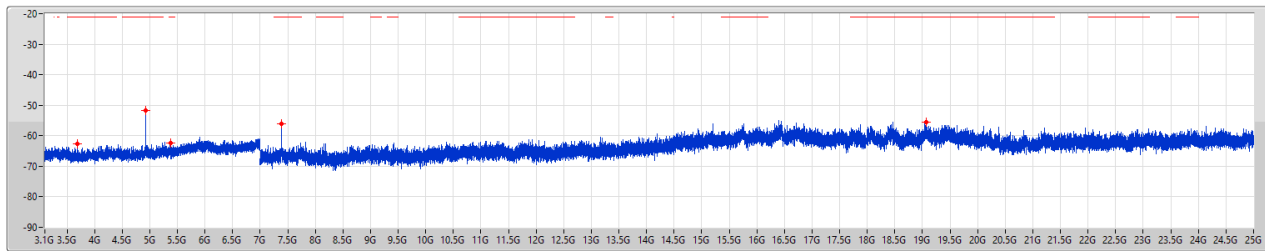
Limit AV
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.65575G	-69.13	-69.13
4G	5G	1M	AV	4.874G	-52.06	-52.06
5G	7G	1M	AV	5.24G	-73.03	-73.03
7G	8G	1M	AV	7.31G	-52.79	-52.79
8G	25G	1M	AV	15.74297G	-64.18	-64.18

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [PK]

2462MHz

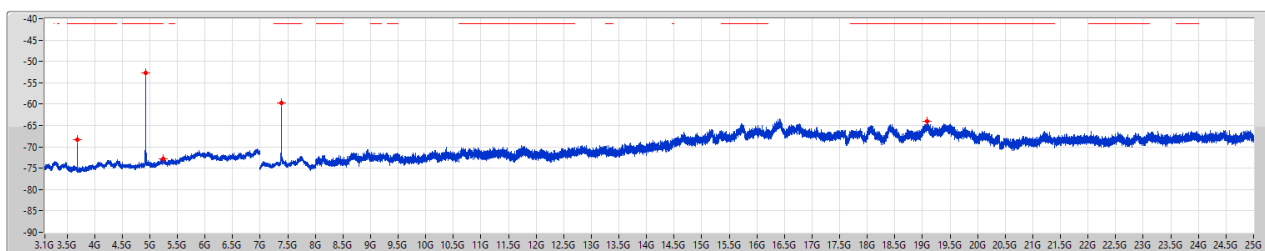


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.69355G	-62.64	-62.64
4G	5G	1M	PK	4.9245G	-51.71	-51.71
5G	7G	1M	PK	5.372G	-62.27	-62.27
7G	8G	1M	PK	7.3855G	-56.23	-56.23
8G	25G	1M	PK	19.06541G	-55.47	-55.47

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSE [AV]

2462MHz

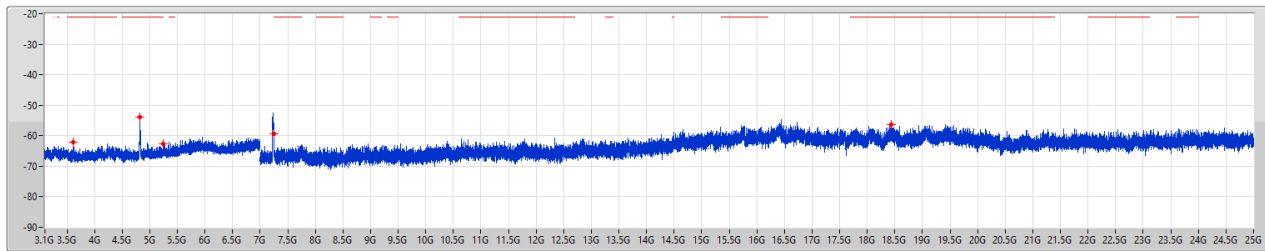


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.69355G	-68.36	-68.36
4G	5G	1M	AV	4.924G	-52.74	-52.74
5G	7G	1M	AV	5.3445G	-72.76	-72.76
7G	8G	1M	AV	7.385G	-59.80	-59.80
8G	25G	1M	AV	19.08878G	-64.06	-64.06

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

2412MHz

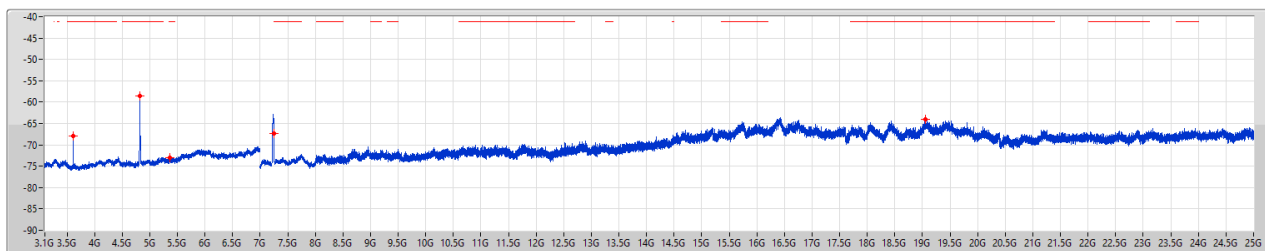


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.61795G	-62.05	-62.05
4G	5G	1M	PK	4.8245G	-54.04	-54.04
5G	7G	1M	PK	5.2455G	-62.52	-62.52
7G	8G	1M	PK	7.2505G	-59.33	-59.33
8G	25G	1M	PK	18.43588G	-56.30	-56.30

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

2412MHz

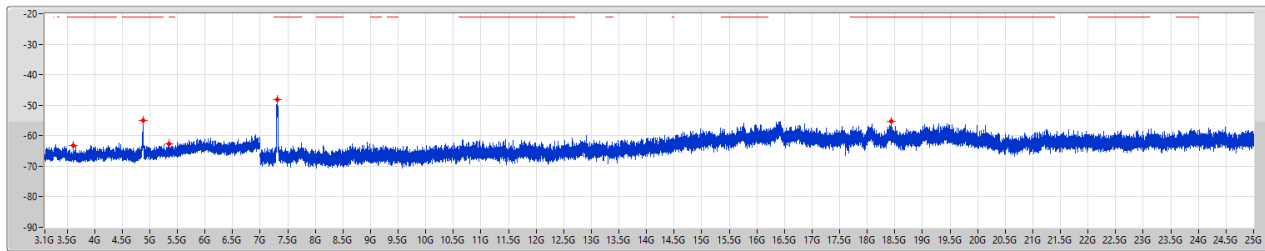


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.61795G	-67.96	-67.96
4G	5G	1M	AV	4.8245G	-58.57	-58.57
5G	7G	1M	AV	5.2455G	-72.95	-72.95
7G	8G	1M	AV	7.25G	-67.28	-67.28
8G	25G	1M	AV	19.05531G	-63.97	-63.97

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

2437MHz



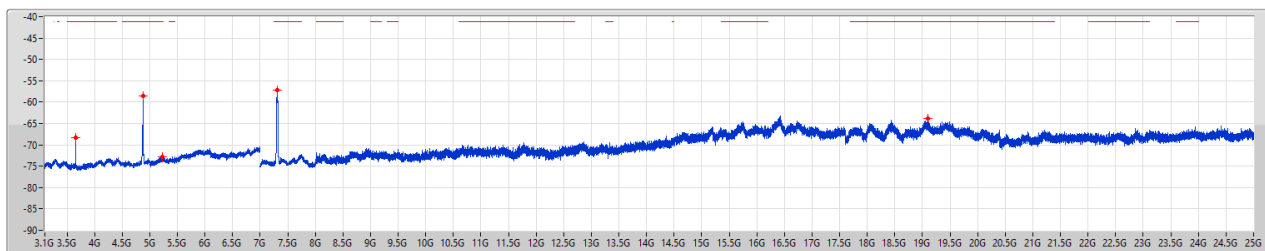
Limit PK
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.61345G	-63.11	-63.11
4G	5G	1M	PK	4.8745G	-54.92	-54.92
5G	7G	1M	PK	5.3525G	-62.66	-62.66
7G	8G	1M	PK	7.3155G	-48.25	-48.25
8G	25G	1M	PK	18.43216G	-55.39	-55.39

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

2437MHz



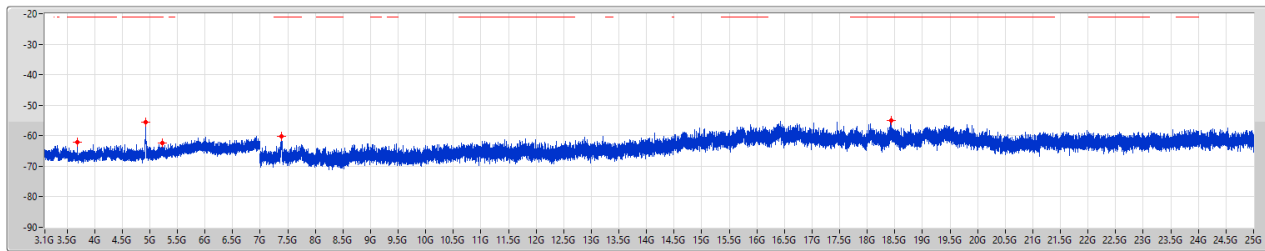
Limit AV
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.6553G	-68.28	-68.28
4G	5G	1M	AV	4.874G	-58.61	-58.61
5G	7G	1M	AV	5.23G	-72.79	-72.79
7G	8G	1M	AV	7.3075G	-57.10	-57.10
8G	25G	1M	AV	19.10313G	-63.76	-63.76

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

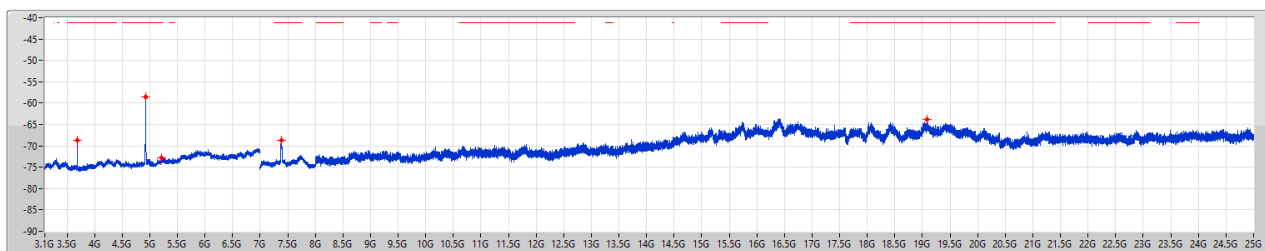
2462MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

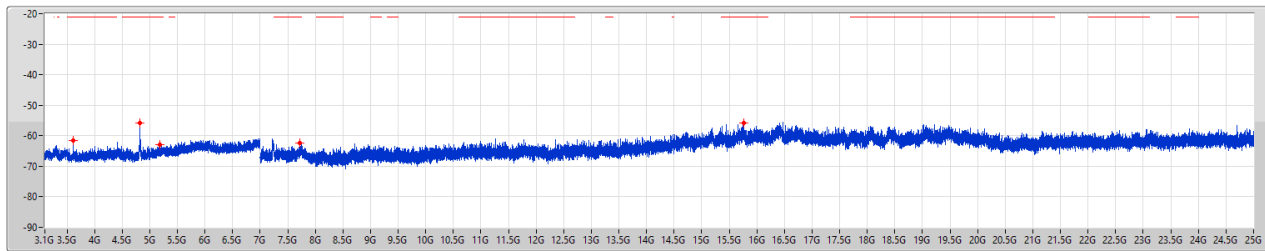
2462MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [PK]

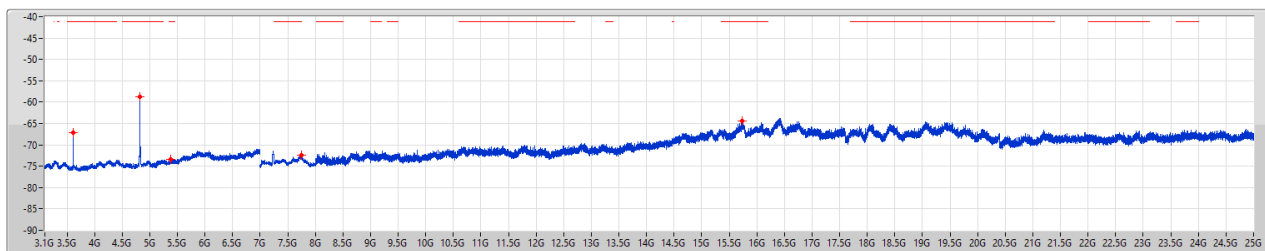
2412MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [AV]

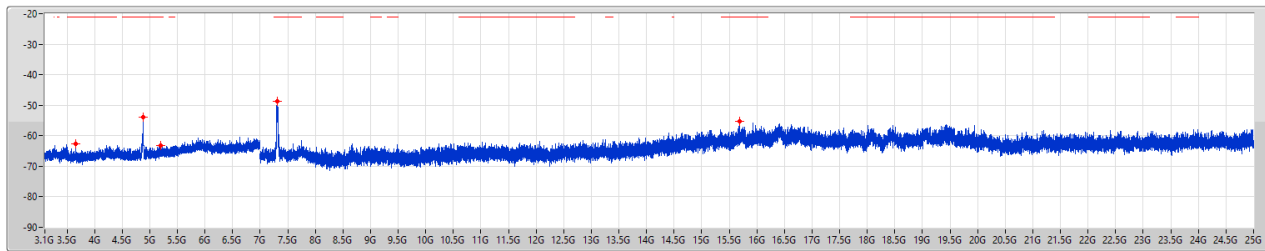
2412MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [PK]

2437MHz



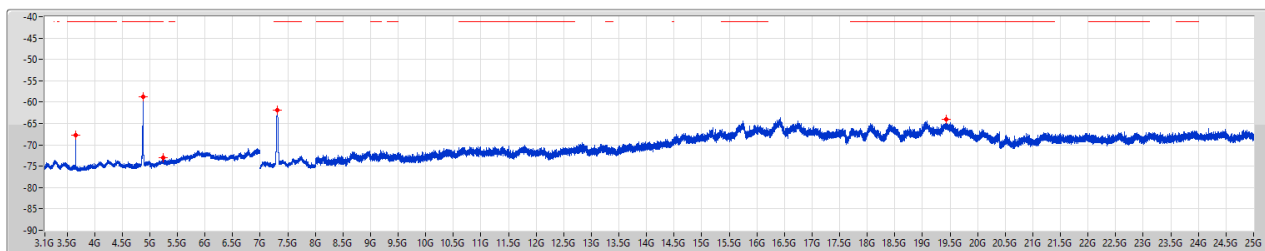
Limit,PK
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.65575G	-62.57	-62.57
4G	5G	1M	PK	4.8745G	-53.98	-53.98
5G	7G	1M	PK	5.2035G	-63.08	-63.08
7G	8G	1M	PK	7.3185G	-48.81	-48.81
8G	25G	1M	PK	15.68878G	-55.40	-55.40

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [AV]

2437MHz



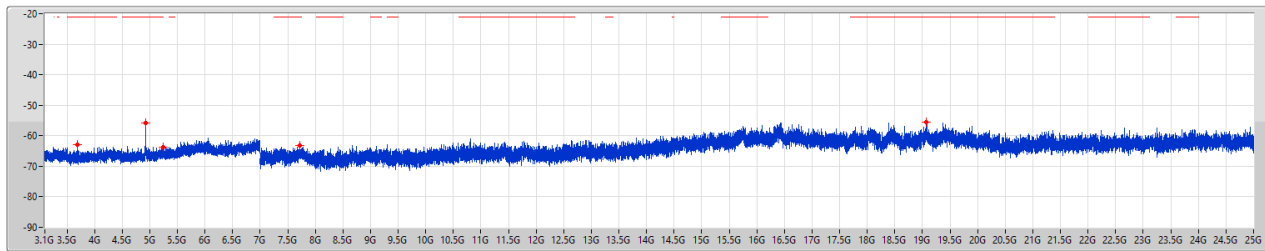
Limit,AV
Port 1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.65575G	-67.74	-67.74
4G	5G	1M	AV	4.874G	-58.75	-58.75
5G	7G	1M	AV	5.236G	-72.99	-72.99
7G	8G	1M	AV	7.312G	-61.84	-61.84
8G	25G	1M	AV	19.43303G	-64.08	-64.08

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [PK]

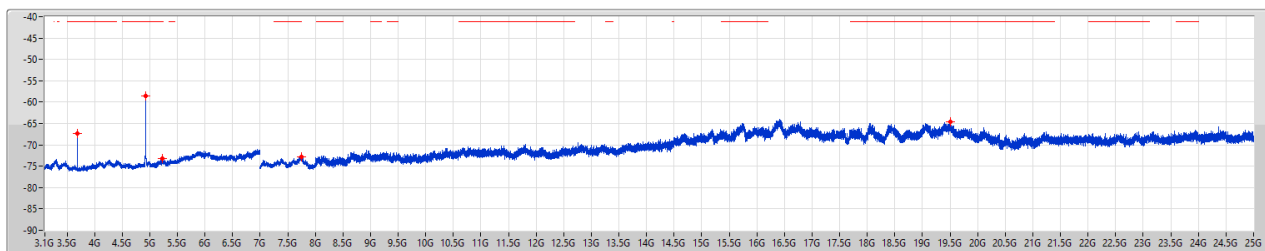
2462MHz



2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

CSE [AV]

2462MHz





Summary

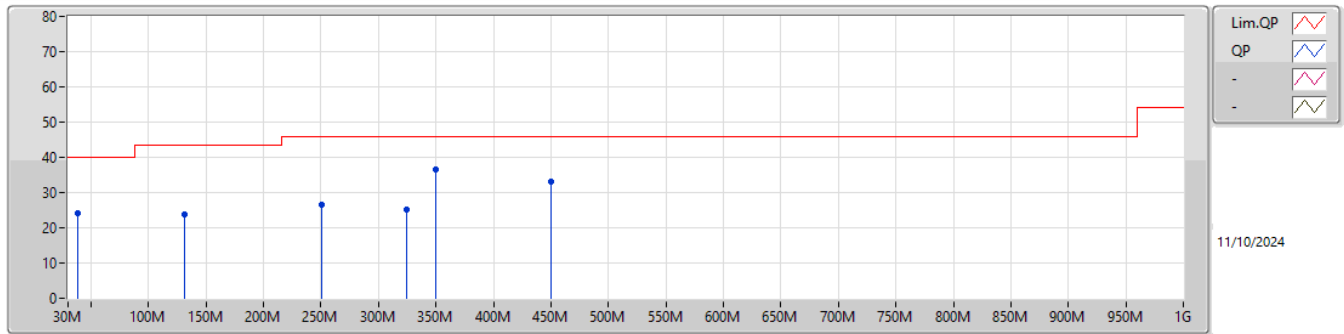
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.93	46.00	-3.07	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



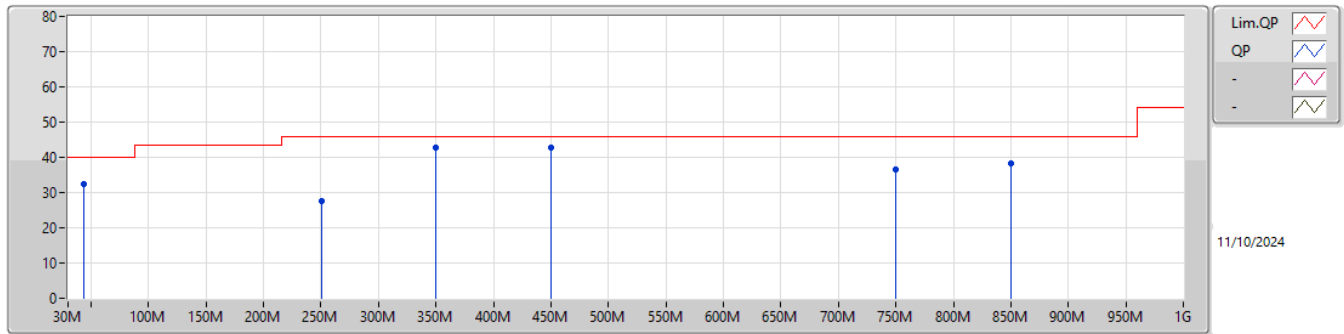
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.73M	24.08	40.00	-15.92	-9.16	3	Horizontal	-	-	-	33.24	18.37	0.58	28.11		
PK	131.85M	23.89	43.50	-19.61	-9.91	3	Horizontal	-	-	-	33.80	17.20	1.14	28.25		
PK	250.19M	26.67	46.00	-19.33	-9.77	3	Horizontal	-	-	-	36.44	16.91	1.57	28.25		
PK	324.88M	25.09	46.00	-20.91	-7.22	3	Horizontal	-	-	-	32.31	19.20	1.80	28.22		
PK	350.1M	36.45	46.00	-9.55	-6.88	3	Horizontal	-	-	-	43.33	19.50	1.82	28.20		
PK	450.01M	33.01	46.00	-12.99	-4.11	3	Horizontal	-	-	-	37.12	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	43.58M	32.42	40.00	-7.58	-8.69	3	Vertical	-	-	-	41.11	18.83	0.60	28.12		
PK	250.19M	27.63	46.00	-18.37	-9.77	3	Vertical	-	-	-	37.40	16.91	1.57	28.25		
QP	350.1M	42.59	46.00	-3.41	-6.88	3	Vertical	103	1.29	-	49.47	19.50	1.82	28.20		
QP	450.01M	42.93	46.00	-3.07	-4.11	3	Vertical	217	1.00	-	47.04	22.10	1.98	28.19		
PK	749.74M	36.64	46.00	-9.36	1.81	3	Vertical	-	-	-	34.83	26.99	2.75	27.93		
PK	849.65M	38.22	46.00	-7.78	3.12	3	Vertical	-	-	-	35.10	27.99	2.89	27.76		



Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	12.06G	41.83	54.00	-12.17	3	Horizontal	274	1.00	-
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	12.06G	41.82	54.00	-12.18	3	Vertical	208	1.00	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	AV	12.06G	41.75	54.00	-12.25	3	Horizontal	255	1.00	-

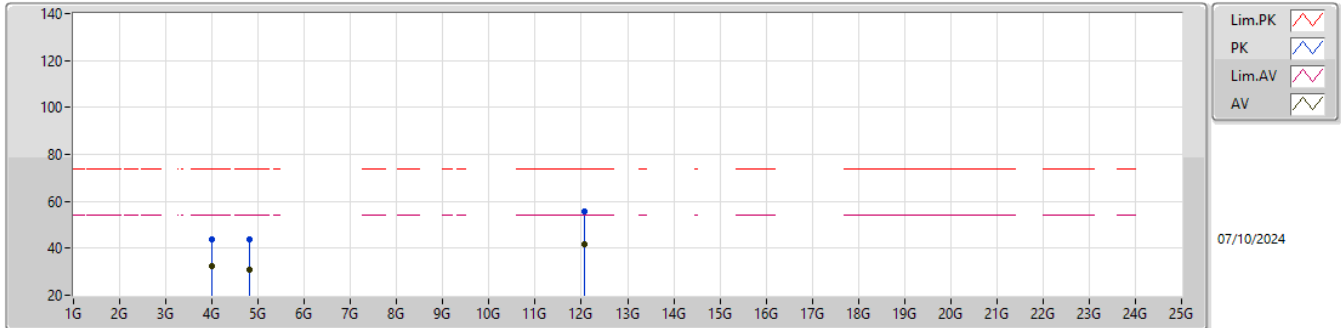


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.17	54.00	-21.83	34.19	3	Horizontal	201	1.82	-	29.70	6.28	38.00				
PK	4G	43.84	74.00	-30.16	45.86	3	Horizontal	201	1.82	-	29.70	6.28	38.00				
AV	4.824G	30.80	54.00	-23.20	31.21	3	Horizontal	188	1.00	-	31.25	6.87	38.53				
PK	4.824G	43.86	74.00	-30.14	44.27	3	Horizontal	188	1.00	-	31.25	6.87	38.53				
AV	12.06G	41.83	54.00	-12.17	35.57	3	Horizontal	274	1.00	-	39.22	10.03	42.99				
PK	12.06G	55.48	74.00	-18.52	49.22	3	Horizontal	274	1.00	-	39.22	10.03	42.99				

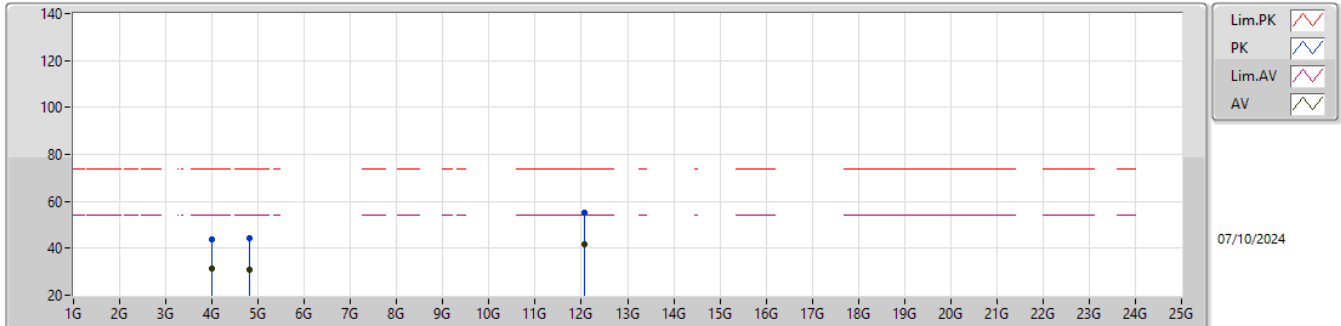


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	31.39	54.00	-22.61	33.41	3	Vertical	186	1.71	-	29.70	6.28	38.00				
PK	4G	43.84	74.00	-30.16	45.86	3	Vertical	186	1.71	-	29.70	6.28	38.00				
AV	4.824G	31.01	54.00	-22.99	31.42	3	Vertical	148	1.00	-	31.25	6.87	38.53				
PK	4.824G	44.45	74.00	-29.55	44.86	3	Vertical	148	1.00	-	31.25	6.87	38.53				
AV	12.06G	41.75	54.00	-12.25	35.49	3	Vertical	203	1.00	-	39.22	10.03	42.99				
PK	12.06G	55.29	74.00	-18.71	49.03	3	Vertical	203	1.00	-	39.22	10.03	42.99				

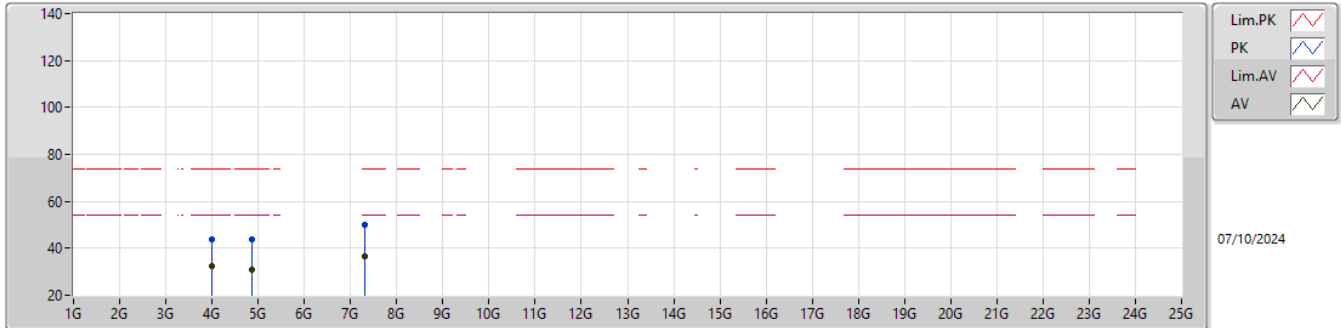


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.19	54.00	-21.81	34.46	3	Horizontal	198	1.82	-	29.70	6.02	37.99				
PK	4G	43.90	74.00	-30.10	46.17	3	Horizontal	198	1.82	-	29.70	6.02	37.99				
AV	4.874G	30.69	54.00	-23.31	31.33	3	Horizontal	186	1.00	-	31.15	6.77	38.56				
PK	4.874G	43.71	74.00	-30.29	44.35	3	Horizontal	186	1.00	-	31.15	6.77	38.56				
AV	7.311G	36.42	54.00	-17.58	30.99	3	Horizontal	221	1.00	-	36.18	8.63	39.38				
PK	7.311G	50.00	74.00	-24.00	44.57	3	Horizontal	221	1.00	-	36.18	8.63	39.38				

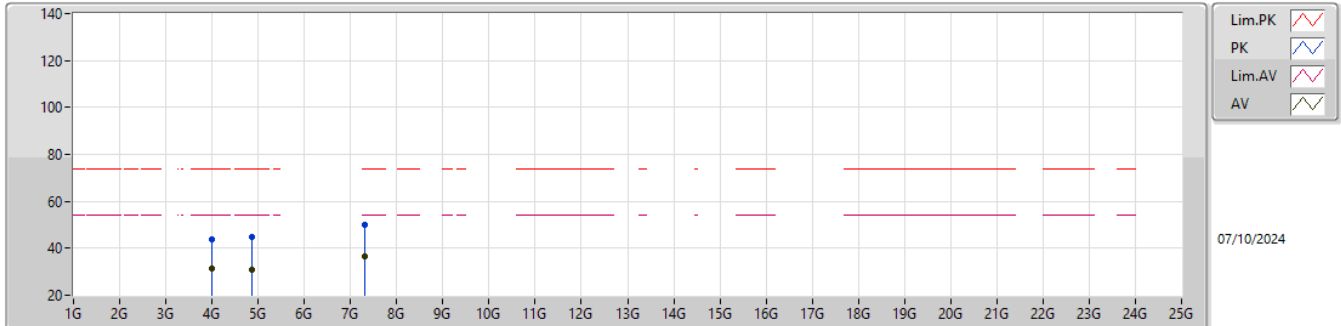


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.30	54.00	-22.70	33.57	3	Vertical	191	1.69	-	29.70	6.02	37.99			
PK	4G	43.77	74.00	-30.23	46.04	3	Vertical	191	1.69	-	29.70	6.02	37.99			
AV	4.874G	31.06	54.00	-22.94	31.70	3	Vertical	156	1.00	-	31.15	6.77	38.56			
PK	4.874G	44.72	74.00	-29.28	45.36	3	Vertical	156	1.00	-	31.15	6.77	38.56			
AV	7.311G	36.62	54.00	-17.38	31.19	3	Vertical	109	1.00	-	36.18	8.63	39.38			
PK	7.311G	49.92	74.00	-24.08	44.49	3	Vertical	109	1.00	-	36.18	8.63	39.38			

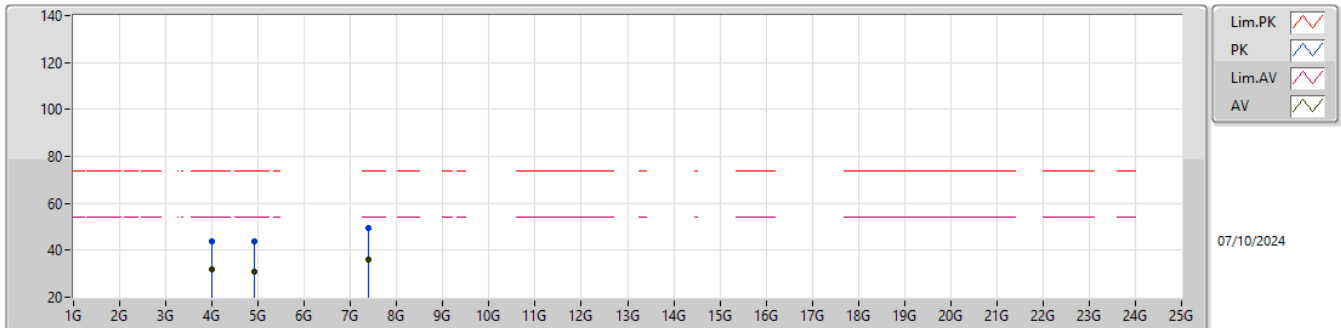


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.15	54.00	-21.85	34.42	3	Horizontal	199	1.78	-	29.70	6.02	37.99				
PK	4G	43.86	74.00	-30.14	46.13	3	Horizontal	199	1.78	-	29.70	6.02	37.99				
AV	4.924G	30.70	54.00	-23.30	31.28	3	Horizontal	188	1.00	-	31.20	6.82	38.60				
PK	4.924G	43.83	74.00	-30.17	44.41	3	Horizontal	188	1.00	-	31.20	6.82	38.60				
AV	7.386G	36.24	54.00	-17.76	30.97	3	Horizontal	203	1.00	-	36.10	8.65	39.48				
PK	7.386G	49.70	74.00	-24.30	44.43	3	Horizontal	203	1.00	-	36.10	8.65	39.48				

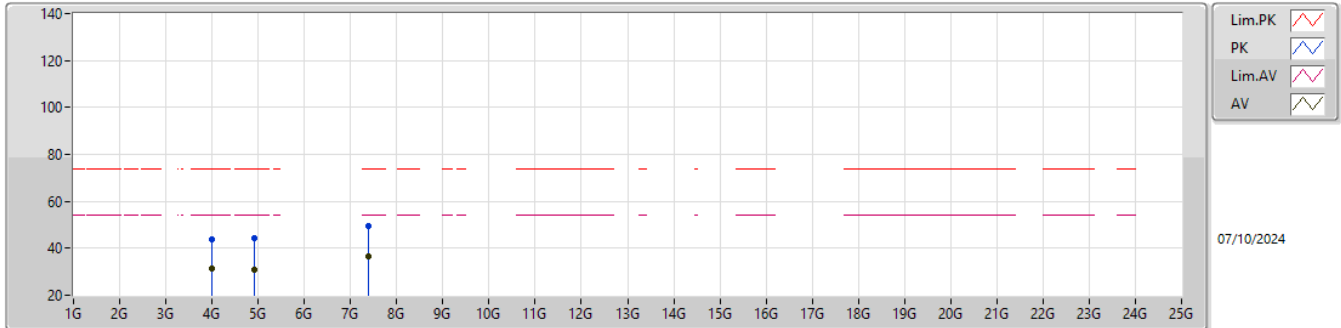


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.25	54.00	-22.75	33.52	3	Vertical	193	1.68	-	29.70	6.02	37.99			
PK	4G	43.75	74.00	-30.25	46.02	3	Vertical	193	1.68	-	29.70	6.02	37.99			
AV	4.924G	31.04	54.00	-22.96	31.62	3	Vertical	166	1.00	-	31.20	6.82	38.60			
PK	4.924G	44.20	74.00	-29.80	44.78	3	Vertical	166	1.00	-	31.20	6.82	38.60			
AV	7.386G	36.40	54.00	-17.60	31.13	3	Vertical	113	1.00	-	36.10	8.65	39.48			
PK	7.386G	49.61	74.00	-24.39	44.34	3	Vertical	113	1.00	-	36.10	8.65	39.48			

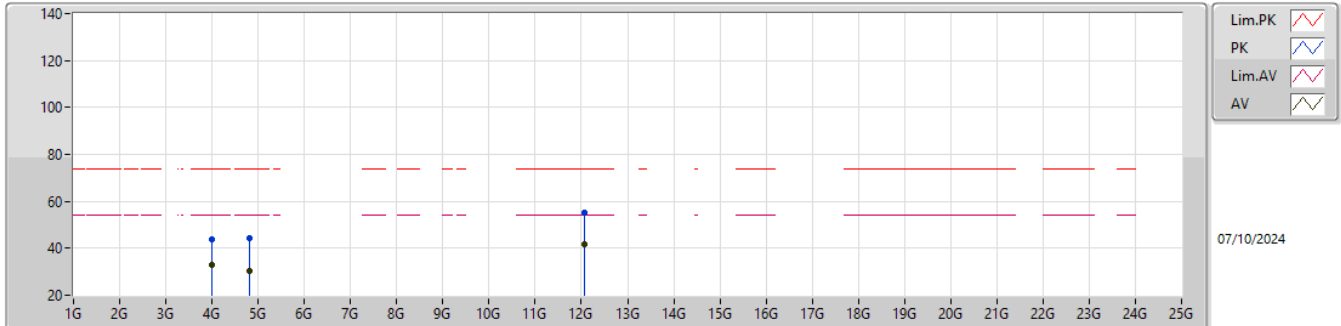


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.92	54.00	-21.08	35.19	3	Horizontal	201	1.72	-	29.70	6.02	37.99				
PK	4G	43.90	74.00	-30.10	46.17	3	Horizontal	201	1.72	-	29.70	6.02	37.99				
AV	4.824G	30.38	54.00	-23.62	30.95	3	Horizontal	106	1.00	-	31.25	6.71	38.53				
PK	4.824G	44.35	74.00	-29.65	44.92	3	Horizontal	106	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.77	54.00	-12.23	35.15	3	Horizontal	251	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.37	74.00	-18.63	48.75	3	Horizontal	251	1.00	-	39.22	10.24	42.84				

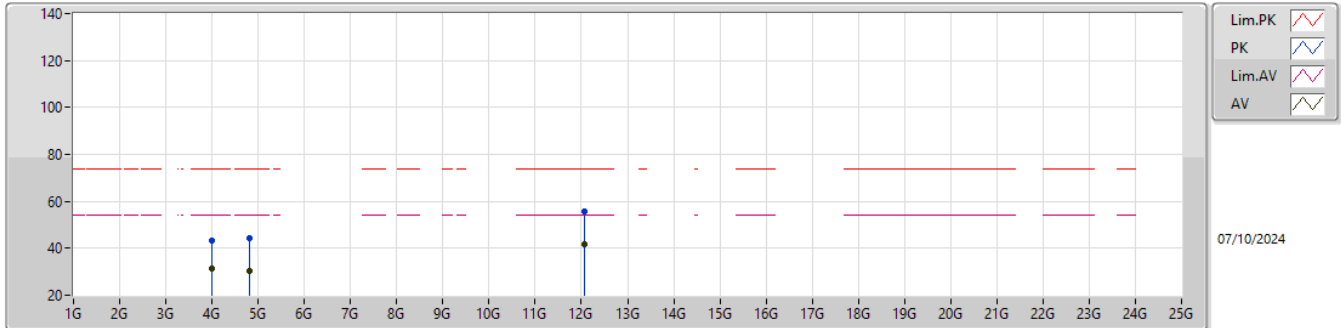


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.40	54.00	-22.60	33.67	3	Vertical	190	1.68	-	29.70	6.02	37.99			
PK	4G	43.47	74.00	-30.53	45.74	3	Vertical	190	1.68	-	29.70	6.02	37.99			
AV	4.824G	30.34	54.00	-23.66	30.91	3	Vertical	116	1.00	-	31.25	6.71	38.53			
PK	4.824G	44.36	74.00	-29.64	44.93	3	Vertical	116	1.00	-	31.25	6.71	38.53			
AV	12.06G	41.82	54.00	-12.18	35.20	3	Vertical	208	1.00	-	39.22	10.24	42.84			
PK	12.06G	55.46	74.00	-18.54	48.84	3	Vertical	208	1.00	-	39.22	10.24	42.84			

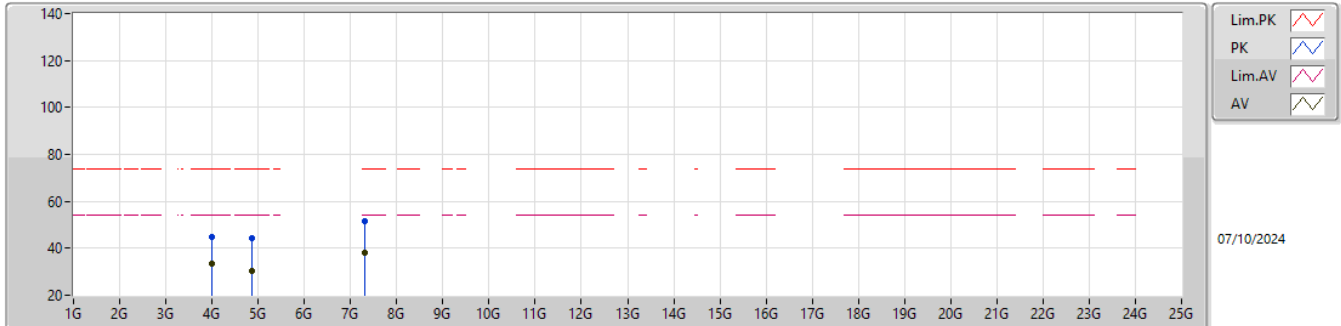


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	33.24	54.00	-20.76	35.51	3	Horizontal	196	1.89	-	29.70	6.02	37.99			
PK	4G	44.64	74.00	-29.36	46.91	3	Horizontal	196	1.89	-	29.70	6.02	37.99			
AV	4.874G	30.33	54.00	-23.67	30.97	3	Horizontal	16	1.00	-	31.15	6.77	38.56			
PK	4.874G	44.46	74.00	-29.54	45.10	3	Horizontal	16	1.00	-	31.15	6.77	38.56			
AV	7.311G	37.94	54.00	-16.06	32.51	3	Horizontal	132	1.00	-	36.18	8.63	39.38			
PK	7.311G	51.40	74.00	-22.60	45.97	3	Horizontal	132	1.00	-	36.18	8.63	39.38			

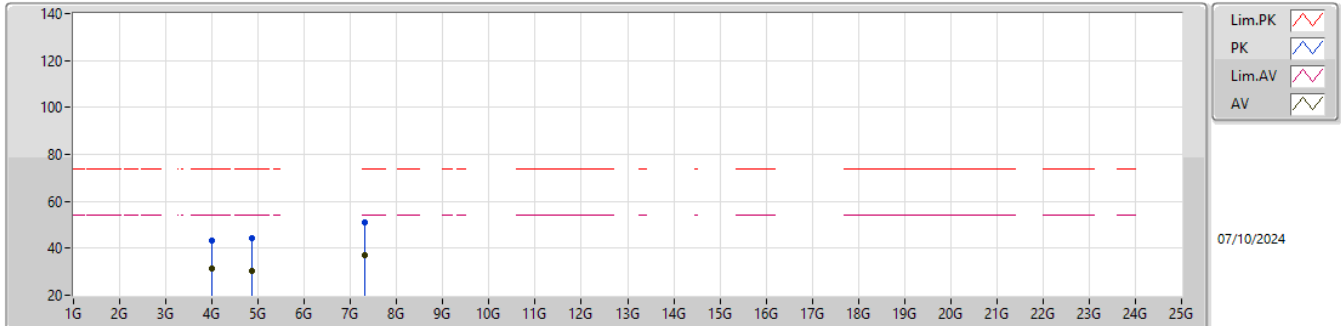


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.34	54.00	-22.66	33.61	3	Vertical	181	1.64	-	29.70	6.02	37.99			
PK	4G	43.49	74.00	-30.51	45.76	3	Vertical	181	1.64	-	29.70	6.02	37.99			
AV	4.874G	30.23	54.00	-23.77	30.87	3	Vertical	20	1.00	-	31.15	6.77	38.56			
PK	4.874G	44.24	74.00	-29.76	44.88	3	Vertical	20	1.00	-	31.15	6.77	38.56			
AV	7.311G	36.91	54.00	-17.09	31.48	3	Vertical	31	1.00	-	36.18	8.63	39.38			
PK	7.311G	50.97	74.00	-23.03	45.54	3	Vertical	31	1.00	-	36.18	8.63	39.38			

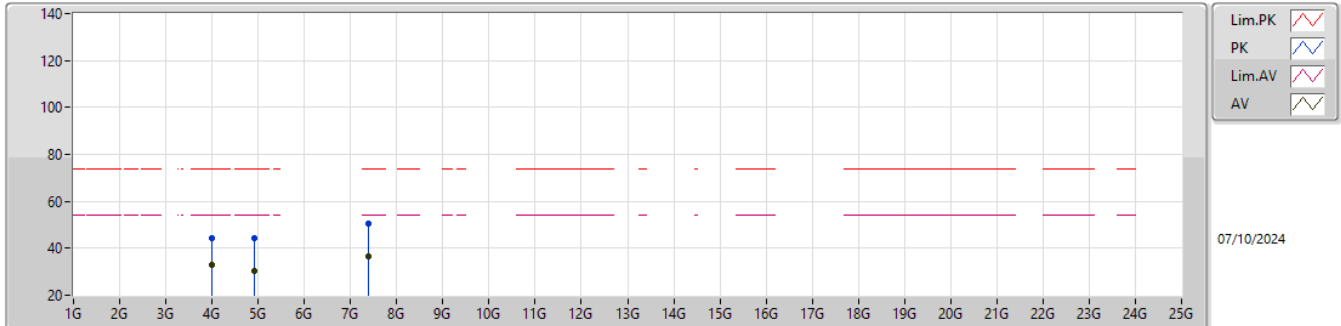


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.16	54.00	-20.84	35.43	3	Horizontal	198	1.91	-	29.70	6.02	37.99				
PK	4G	44.21	74.00	-29.79	46.48	3	Horizontal	198	1.91	-	29.70	6.02	37.99				
AV	4.924G	30.23	54.00	-23.77	30.81	3	Horizontal	155	1.00	-	31.20	6.82	38.60				
PK	4.924G	44.35	74.00	-29.65	44.93	3	Horizontal	155	1.00	-	31.20	6.82	38.60				
AV	7.386G	36.30	54.00	-17.70	31.03	3	Horizontal	223	1.00	-	36.10	8.65	39.48				
PK	7.386G	50.46	74.00	-23.54	45.19	3	Horizontal	223	1.00	-	36.10	8.65	39.48				

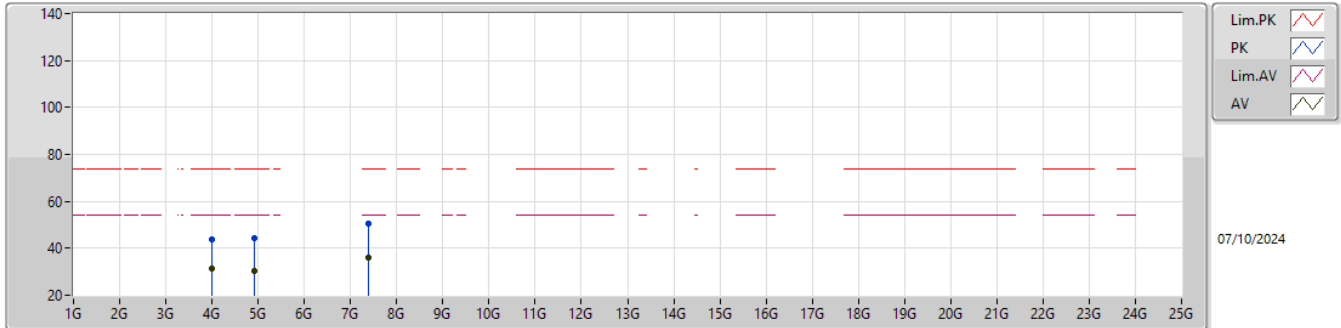


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.25	54.00	-22.75	33.52	3	Vertical	190	1.73	-	29.70	6.02	37.99			
PK	4G	43.74	74.00	-30.26	46.01	3	Vertical	190	1.73	-	29.70	6.02	37.99			
AV	4.924G	30.28	54.00	-23.72	30.86	3	Vertical	203	1.00	-	31.20	6.82	38.60			
PK	4.924G	44.44	74.00	-29.56	45.02	3	Vertical	203	1.00	-	31.20	6.82	38.60			
AV	7.386G	36.29	54.00	-17.71	31.02	3	Vertical	118	1.00	-	36.10	8.65	39.48			
PK	7.386G	50.54	74.00	-23.46	45.27	3	Vertical	118	1.00	-	36.10	8.65	39.48			

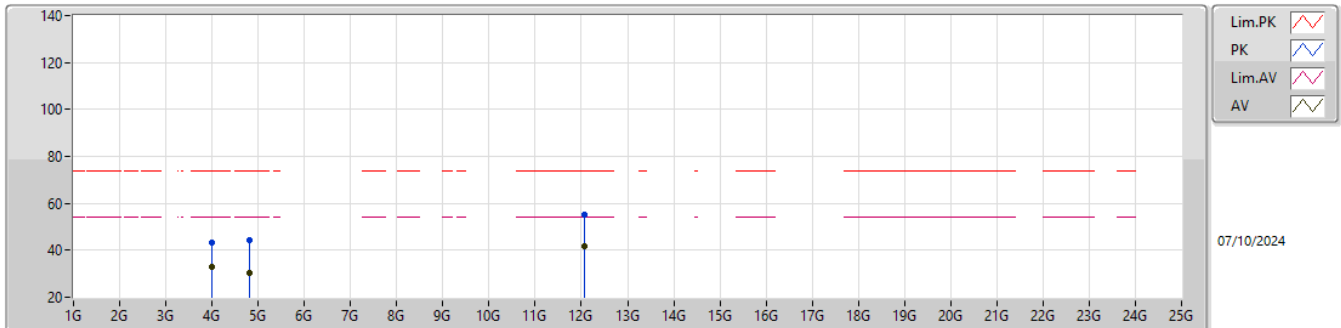


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.17	54.00	-20.83	35.44	3	Horizontal	200	1.55	-	29.70	6.02	37.99				
PK	4G	43.09	74.00	-30.91	45.36	3	Horizontal	200	1.55	-	29.70	6.02	37.99				
AV	4.824G	30.43	54.00	-23.57	31.00	3	Horizontal	111	1.00	-	31.25	6.71	38.53				
PK	4.824G	44.33	74.00	-29.67	44.90	3	Horizontal	111	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.75	54.00	-12.25	35.13	3	Horizontal	255	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.34	74.00	-18.66	48.72	3	Horizontal	255	1.00	-	39.22	10.24	42.84				

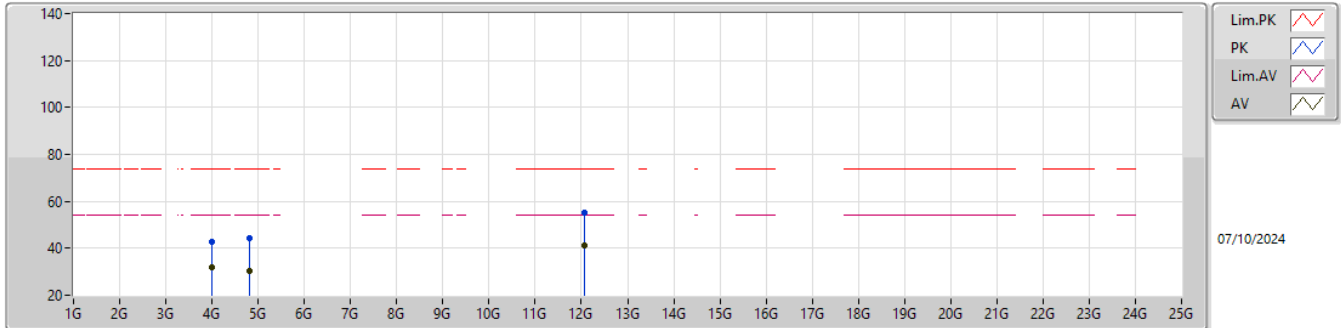


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.71	54.00	-22.29	33.98	3	Vertical	181	1.90	-	29.70	6.02	37.99			
PK	4G	42.74	74.00	-31.26	45.01	3	Vertical	181	1.90	-	29.70	6.02	37.99			
AV	4.824G	30.42	54.00	-23.58	30.99	3	Vertical	123	1.00	-	31.25	6.71	38.53			
PK	4.824G	44.53	74.00	-29.47	45.10	3	Vertical	123	1.00	-	31.25	6.71	38.53			
AV	12.06G	41.43	54.00	-12.57	34.81	3	Vertical	216	1.00	-	39.22	10.24	42.84			
PK	12.06G	55.33	74.00	-18.67	48.71	3	Vertical	216	1.00	-	39.22	10.24	42.84			

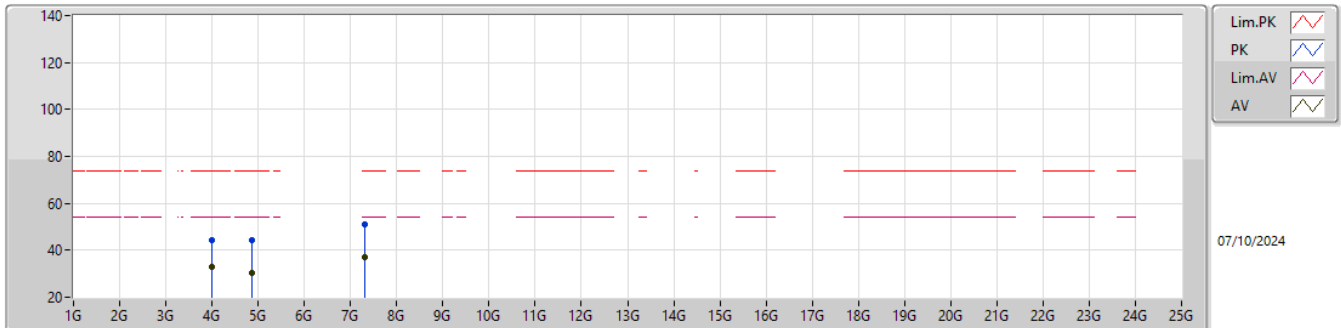


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	32.82	54.00	-21.18	35.09	3	Horizontal	204	1.71	-	29.70	6.02	37.99			
PK	4G	44.17	74.00	-29.83	46.44	3	Horizontal	204	1.71	-	29.70	6.02	37.99			
AV	4.874G	30.33	54.00	-23.67	30.97	3	Horizontal	12	1.00	-	31.15	6.77	38.56			
PK	4.874G	44.52	74.00	-29.48	45.16	3	Horizontal	12	1.00	-	31.15	6.77	38.56			
AV	7.311G	37.01	54.00	-16.99	31.58	3	Horizontal	112	1.00	-	36.18	8.63	39.38			
PK	7.311G	51.08	74.00	-22.92	45.65	3	Horizontal	112	1.00	-	36.18	8.63	39.38			

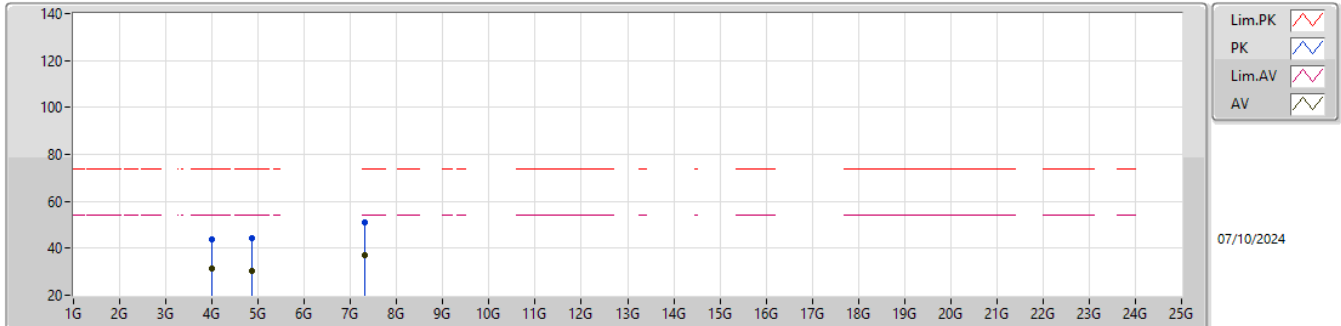


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.40	54.00	-22.60	33.67	3	Vertical	178	1.70	-	29.70	6.02	37.99			
PK	4G	43.76	74.00	-30.24	46.03	3	Vertical	178	1.70	-	29.70	6.02	37.99			
AV	4.874G	30.24	54.00	-23.76	30.88	3	Vertical	33	1.00	-	31.15	6.77	38.56			
PK	4.874G	44.35	74.00	-29.65	44.99	3	Vertical	33	1.00	-	31.15	6.77	38.56			
AV	7.311G	36.91	54.00	-17.09	31.48	3	Vertical	25	1.00	-	36.18	8.63	39.38			
PK	7.311G	51.10	74.00	-22.90	45.67	3	Vertical	25	1.00	-	36.18	8.63	39.38			

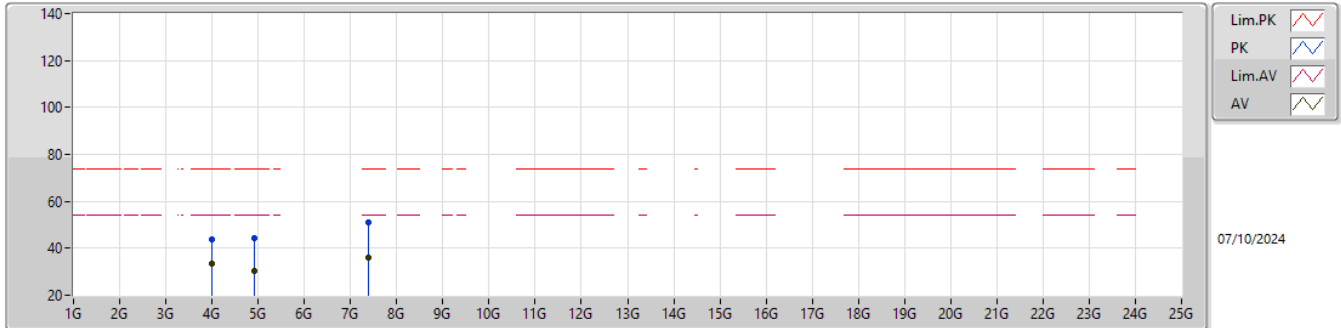


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

2462MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	33.29	54.00	-20.71	35.56	3	Horizontal	217	1.33	-	29.70	6.02	37.99			
PK	4G	43.56	74.00	-30.44	45.83	3	Horizontal	217	1.33	-	29.70	6.02	37.99			
AV	4.924G	30.35	54.00	-23.65	30.93	3	Horizontal	162	1.00	-	31.20	6.82	38.60			
PK	4.924G	44.49	74.00	-29.51	45.07	3	Horizontal	162	1.00	-	31.20	6.82	38.60			
AV	7.386G	36.28	54.00	-17.72	31.01	3	Horizontal	231	1.00	-	36.10	8.65	39.48			
PK	7.386G	50.84	74.00	-23.16	45.57	3	Horizontal	231	1.00	-	36.10	8.65	39.48			

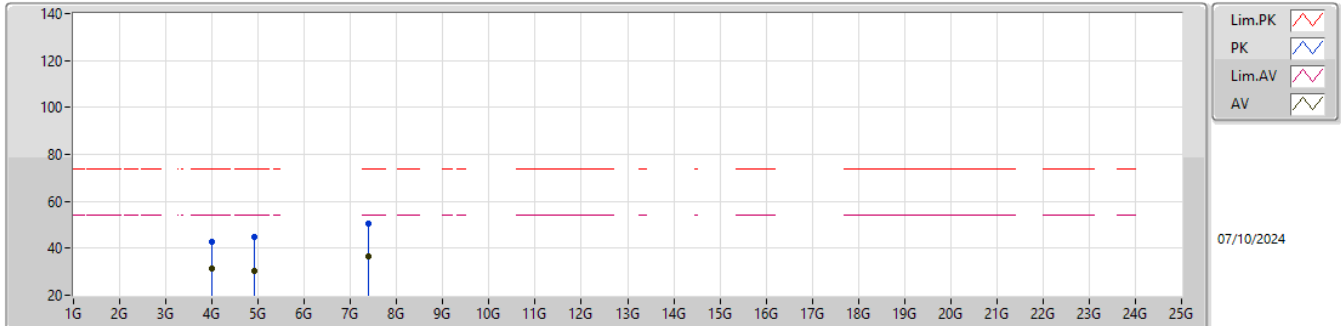


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

2462MHz_TX

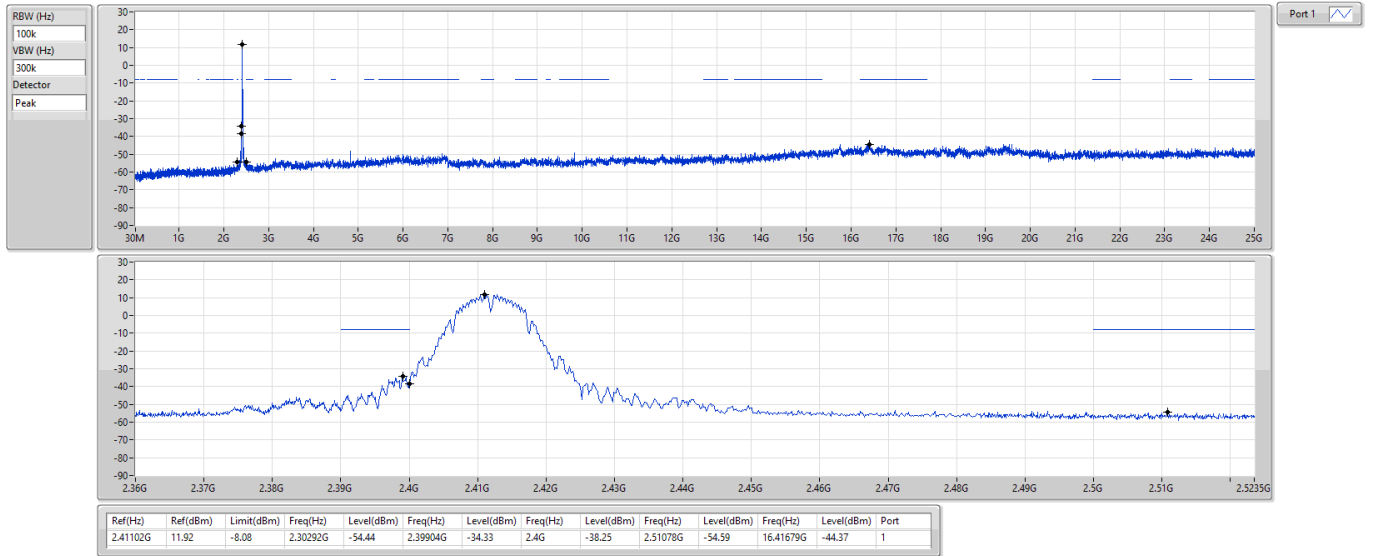


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.63	54.00	-22.37	33.90	3	Vertical	180	1.89	-	29.70	6.02	37.99			
PK	4G	42.82	74.00	-31.18	45.09	3	Vertical	180	1.89	-	29.70	6.02	37.99			
AV	4.924G	30.45	54.00	-23.55	31.03	3	Vertical	199	1.00	-	31.20	6.82	38.60			
PK	4.924G	44.63	74.00	-29.37	45.21	3	Vertical	199	1.00	-	31.20	6.82	38.60			
AV	7.386G	36.38	54.00	-17.62	31.11	3	Vertical	125	1.00	-	36.10	8.65	39.48			
PK	7.386G	50.77	74.00	-23.23	45.50	3	Vertical	125	1.00	-	36.10	8.65	39.48			

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSEndB

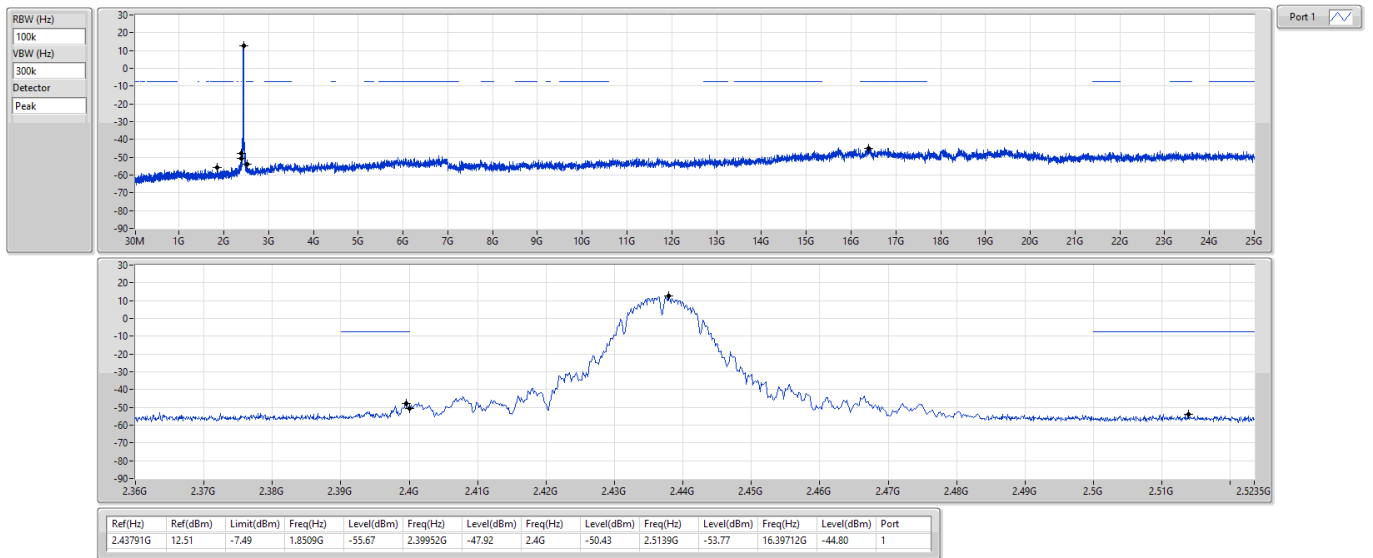
2412MHz



2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSEndB

2437MHz

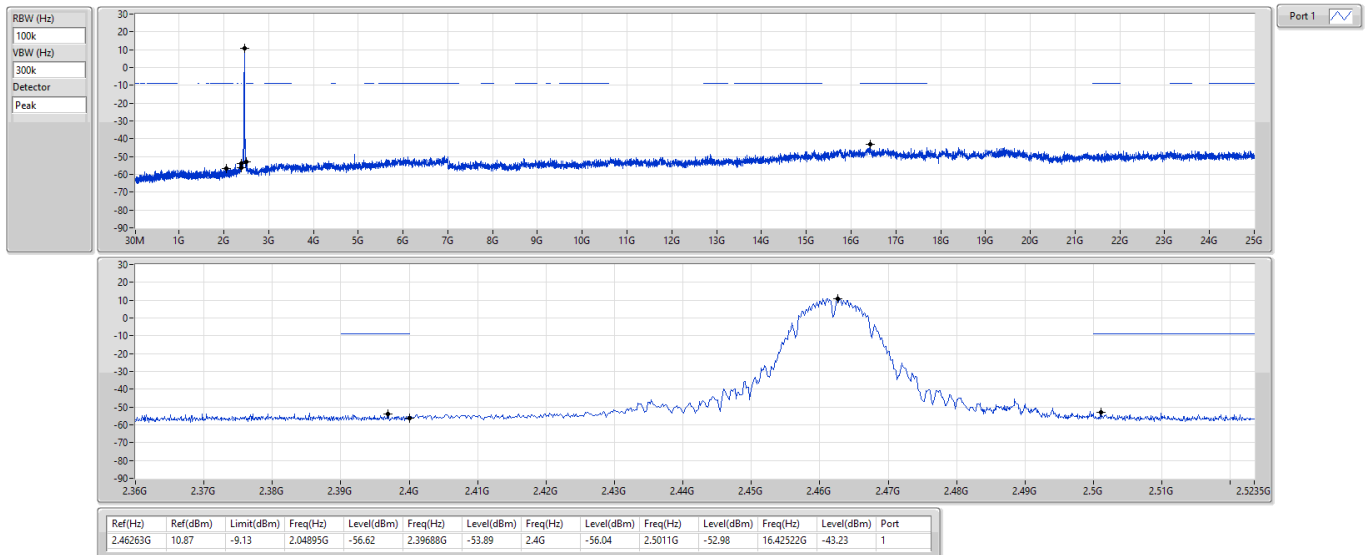




2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSEndB

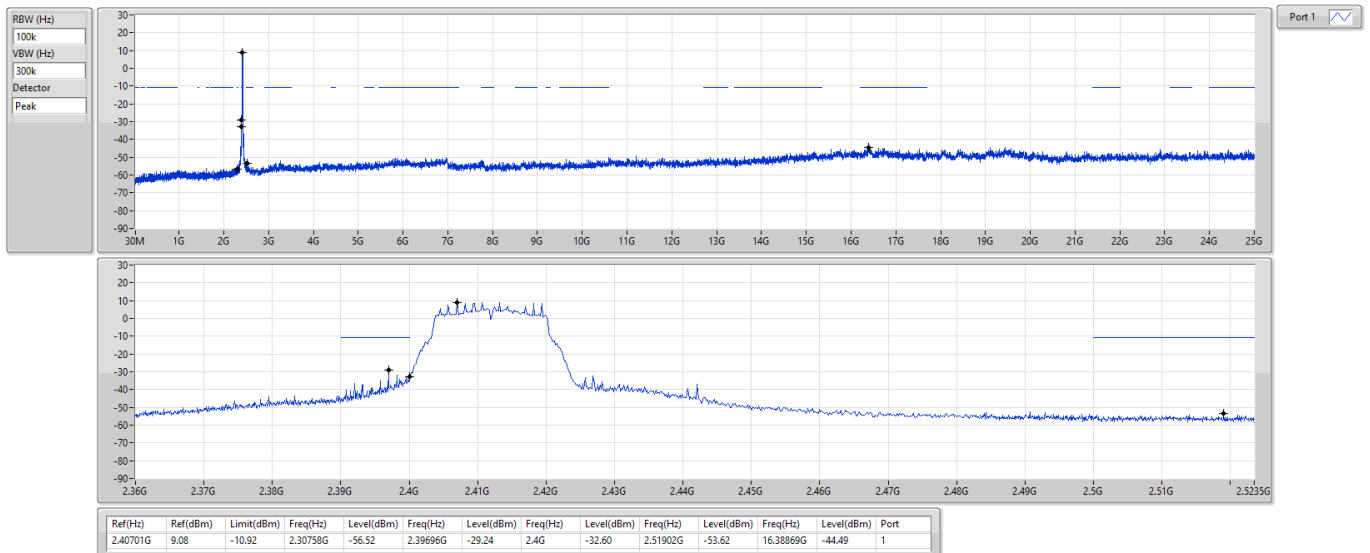
2462MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSEndB

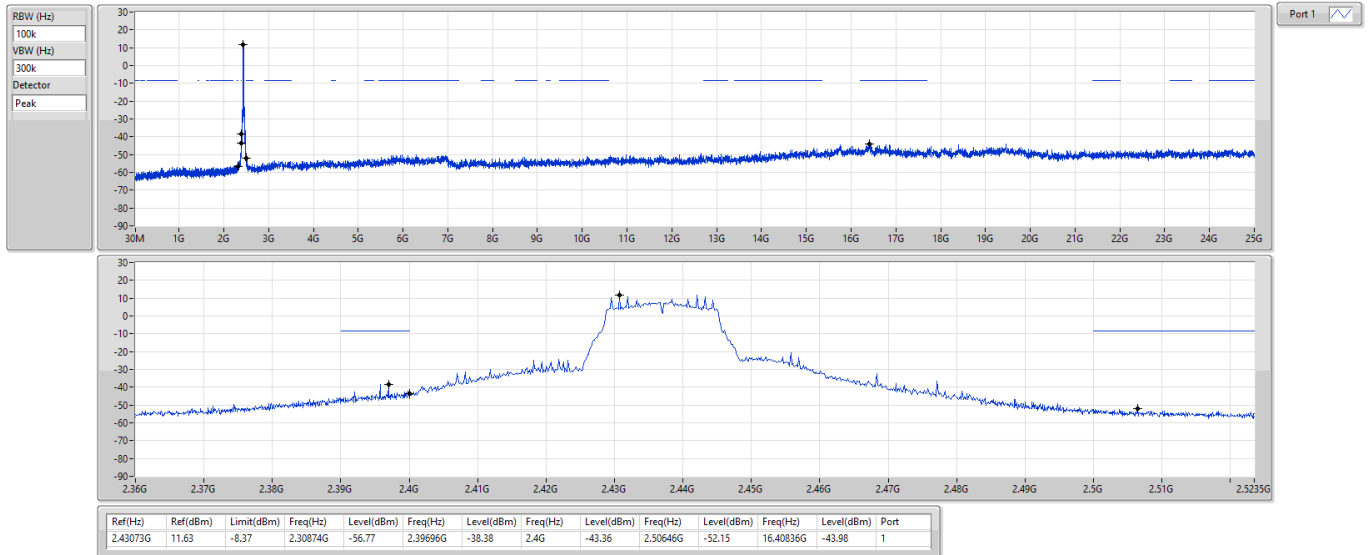
2412MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSEndB

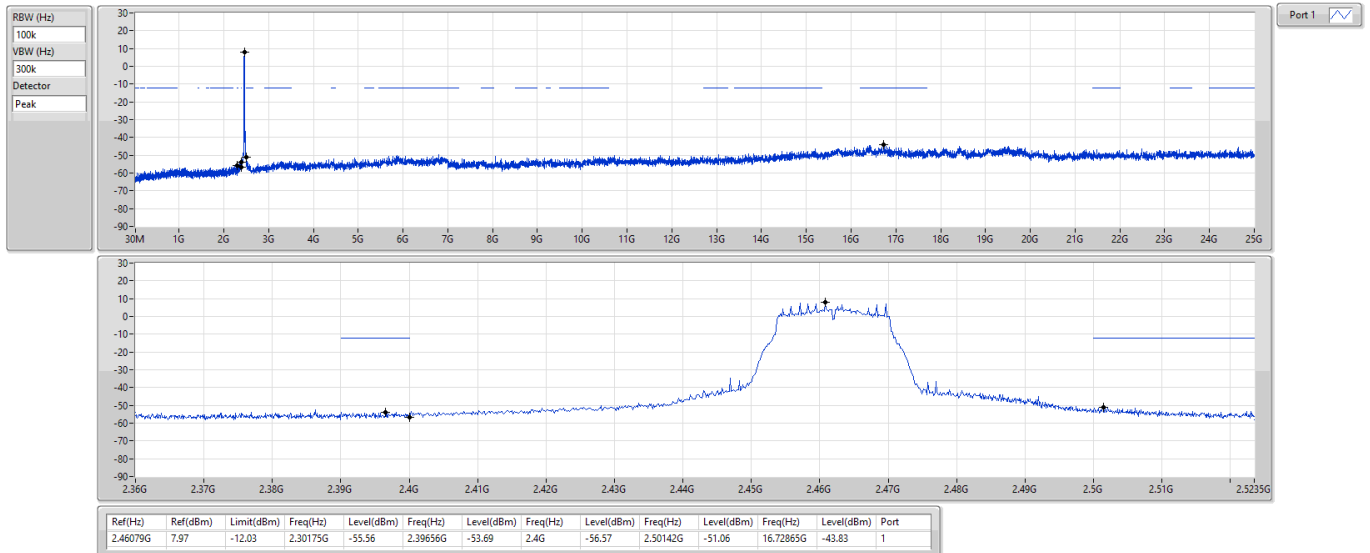
2437MHz



2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSEndB

2462MHz

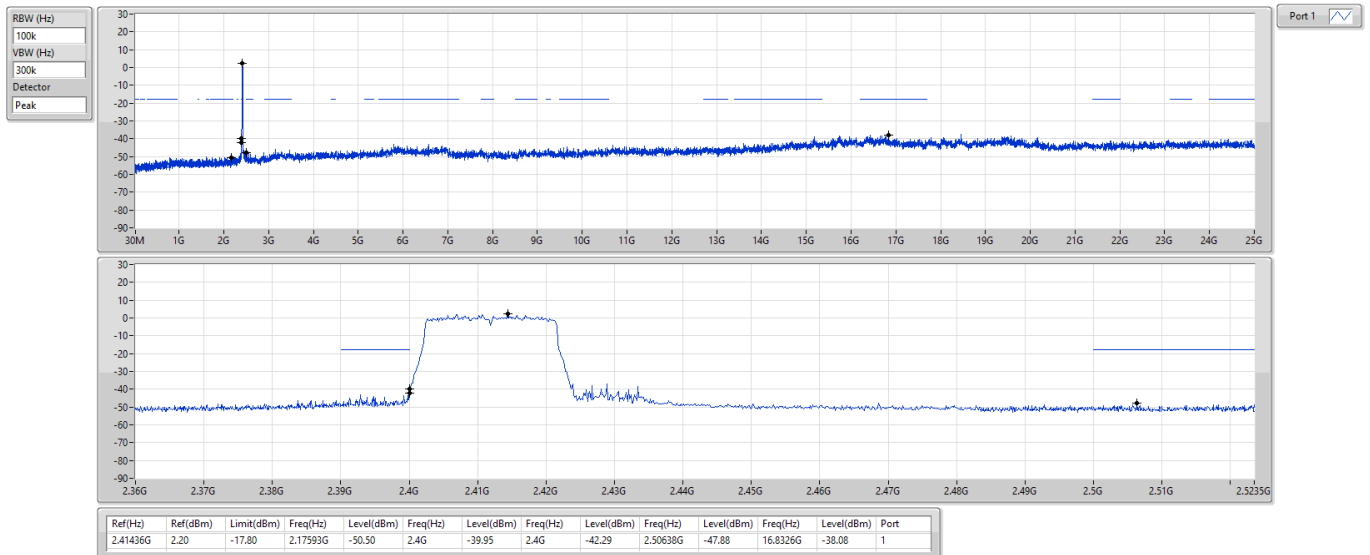




2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

CSEndB

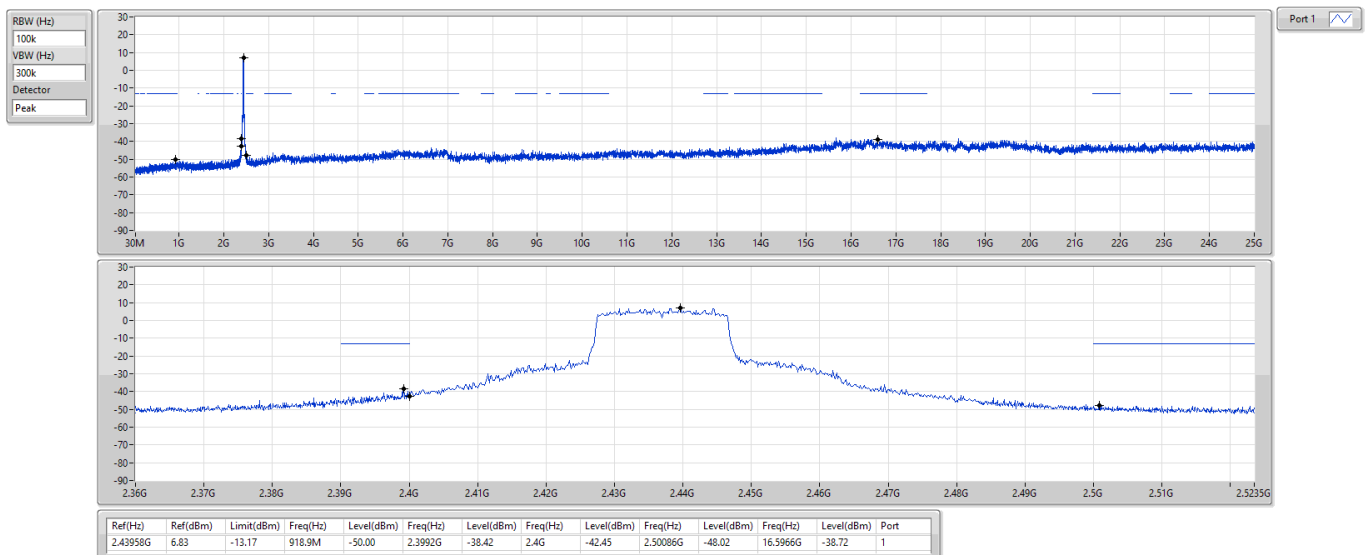
2412MHz



2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

CSEndB

2437MHz



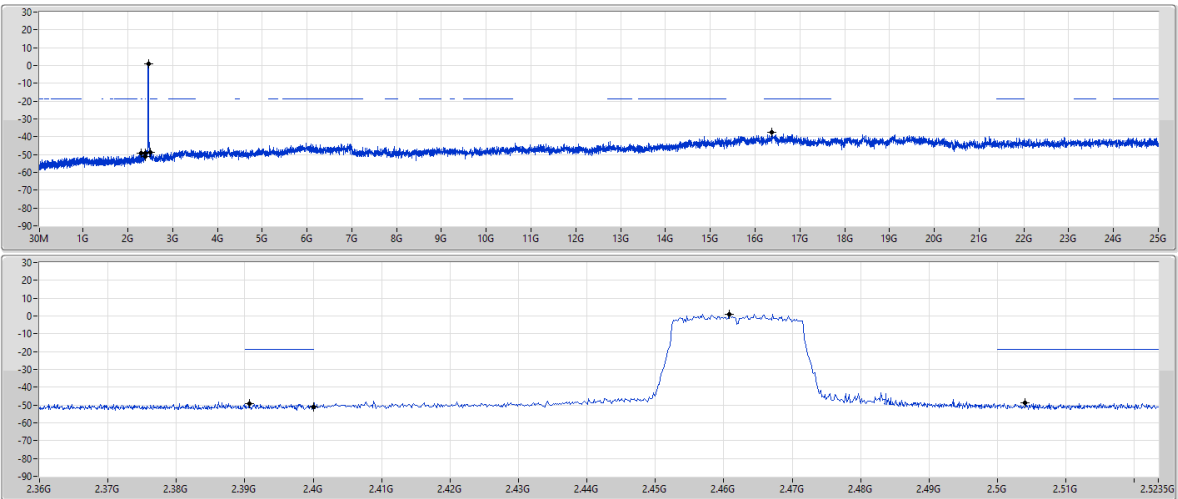


2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

CSEndB

2462MHz

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)	Freq(Hz)	Level(dBm)	Port
2.46079G	1.02	-18.98	2.30525G	-49.18	2.39064G	-49.24	2.4G	-50.87	2.50406G	-48.86	16.37745G	-37.47	1

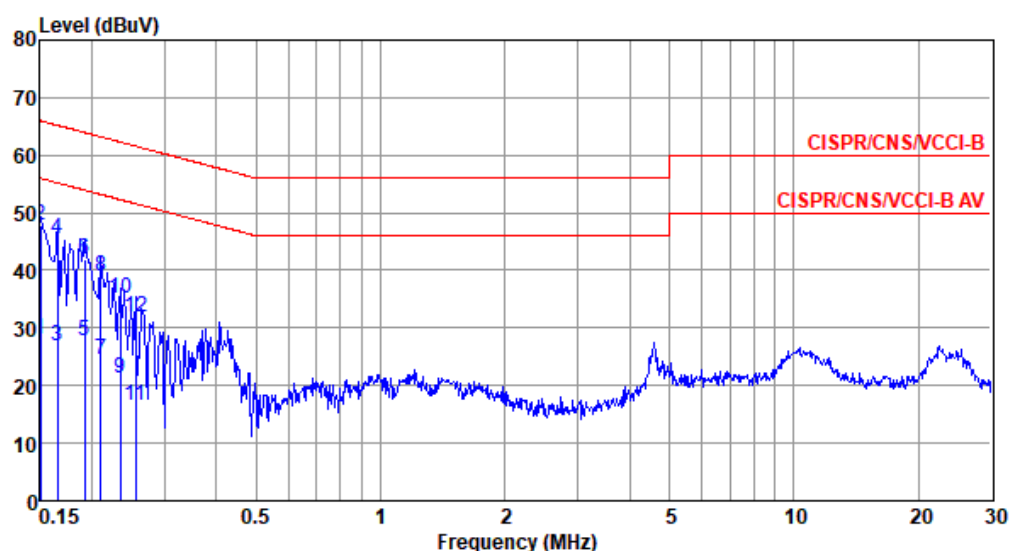


Modulation Mode	ax HE20-OFDMA	Test Freq. (MHz)	2437
Power Phase	Line		

Test by : Sean Yu

Temperature: 23°C

Humidity: 65%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.150	28.04	56.00	-27.96	18.11	9.65	0.08	0.20	Average
2*	0.150	47.69	66.00	-18.31	37.76	9.65	0.08	0.20	QP
3	0.165	26.99	55.21	-28.22	17.04	9.65	0.08	0.22	Average
4	0.165	45.36	65.21	-19.85	35.41	9.65	0.08	0.22	QP
5	0.192	27.65	53.93	-26.28	17.68	9.65	0.08	0.24	Average
6	0.192	42.05	63.93	-21.88	32.08	9.65	0.08	0.24	QP
7	0.211	24.62	53.18	-28.56	14.63	9.65	0.08	0.26	Average
8	0.211	38.91	63.18	-24.27	28.92	9.65	0.08	0.26	QP
9	0.234	21.36	52.30	-30.94	11.36	9.65	0.08	0.27	Average
10	0.234	35.22	62.30	-27.08	25.22	9.65	0.08	0.27	QP
11	0.255	16.65	51.60	-34.95	6.64	9.65	0.08	0.28	Average
12	0.255	31.76	61.60	-29.84	21.75	9.65	0.08	0.28	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

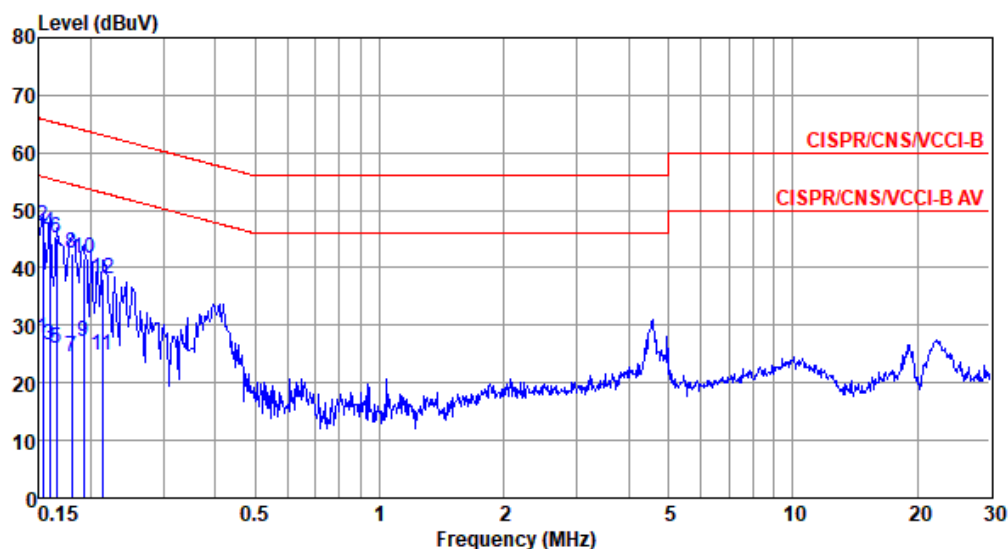
2: Over Limit (dB) = Level (dBUV) - Limit Line (dBUV).

Modulation Mode	ax HE20-OFDMA	Test Freq. (MHz)	2437
Power Phase	Neutral		

Test by : Sean Yu

Temperature: 23°C

Humidity: 65%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.153	27.62	55.82	-28.20	17.76	9.66	0.08	0.12	Average
2*	0.153	47.18	65.82	-18.64	37.32	9.66	0.08	0.12	QP
3	0.159	26.59	55.52	-28.93	16.72	9.66	0.08	0.13	Average
4	0.159	46.11	65.52	-19.41	36.24	9.66	0.08	0.13	QP
5	0.165	25.94	55.21	-29.27	16.06	9.66	0.08	0.14	Average
6	0.165	45.04	65.21	-20.17	35.16	9.66	0.08	0.14	QP
7	0.180	24.58	54.50	-29.92	14.70	9.65	0.08	0.15	Average
8	0.180	42.54	64.50	-21.96	32.66	9.65	0.08	0.15	QP
9	0.192	27.12	53.93	-26.81	17.23	9.65	0.08	0.16	Average
10	0.192	41.70	63.93	-22.23	31.81	9.65	0.08	0.16	QP
11	0.213	24.72	53.10	-28.38	14.81	9.65	0.08	0.18	Average
12	0.213	38.17	63.10	-24.93	28.26	9.65	0.08	0.18	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).

Configuration 2: Laird part number: 453-00193

**Conducted Output Power(Peak)****Appendix B****Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.77	0.18923
802.11g_Nss1,(6Mbps)_1TX	24.64	0.29107
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	25.15	0.32734

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	22.05	22.05	30.00	24.45	36.00
2437MHz	Pass	2.40	22.77	22.77	30.00	25.17	36.00
2462MHz	Pass	2.40	21.34	21.34	30.00	23.74	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.40	23.40	30.00	25.80	36.00
2437MHz	Pass	2.40	24.64	24.64	30.00	27.04	36.00
2462MHz	Pass	2.40	22.62	22.62	30.00	25.02	36.00
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.61	23.61	30.00	26.01	36.00
2437MHz	Pass	2.40	25.15	25.15	30.00	27.55	36.00
2462MHz	Pass	2.40	22.29	22.29	30.00	24.69	36.00

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



Conducted Output Power(Average)

Appendix B

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.21	0.10495
802.11g_Nss1,(6Mbps)_1TX	20.05	0.10116
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	18.37	0.06871

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.38	19.38	-	21.78	-
2437MHz	Pass	2.40	20.21	20.21	-	22.61	-
2462MHz	Pass	2.40	18.60	18.60	-	21.00	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	17.58	17.58	-	19.98	-
2437MHz	Pass	2.40	20.05	20.05	-	22.45	-
2462MHz	Pass	2.40	16.45	16.45	-	18.85	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	14.01	14.01	-	16.41	-
2437MHz	Pass	2.40	18.37	18.37	-	20.77	-
2462MHz	Pass	2.40	12.41	12.41	-	14.81	-

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

Note : Conducted average output power is for reference



Summary

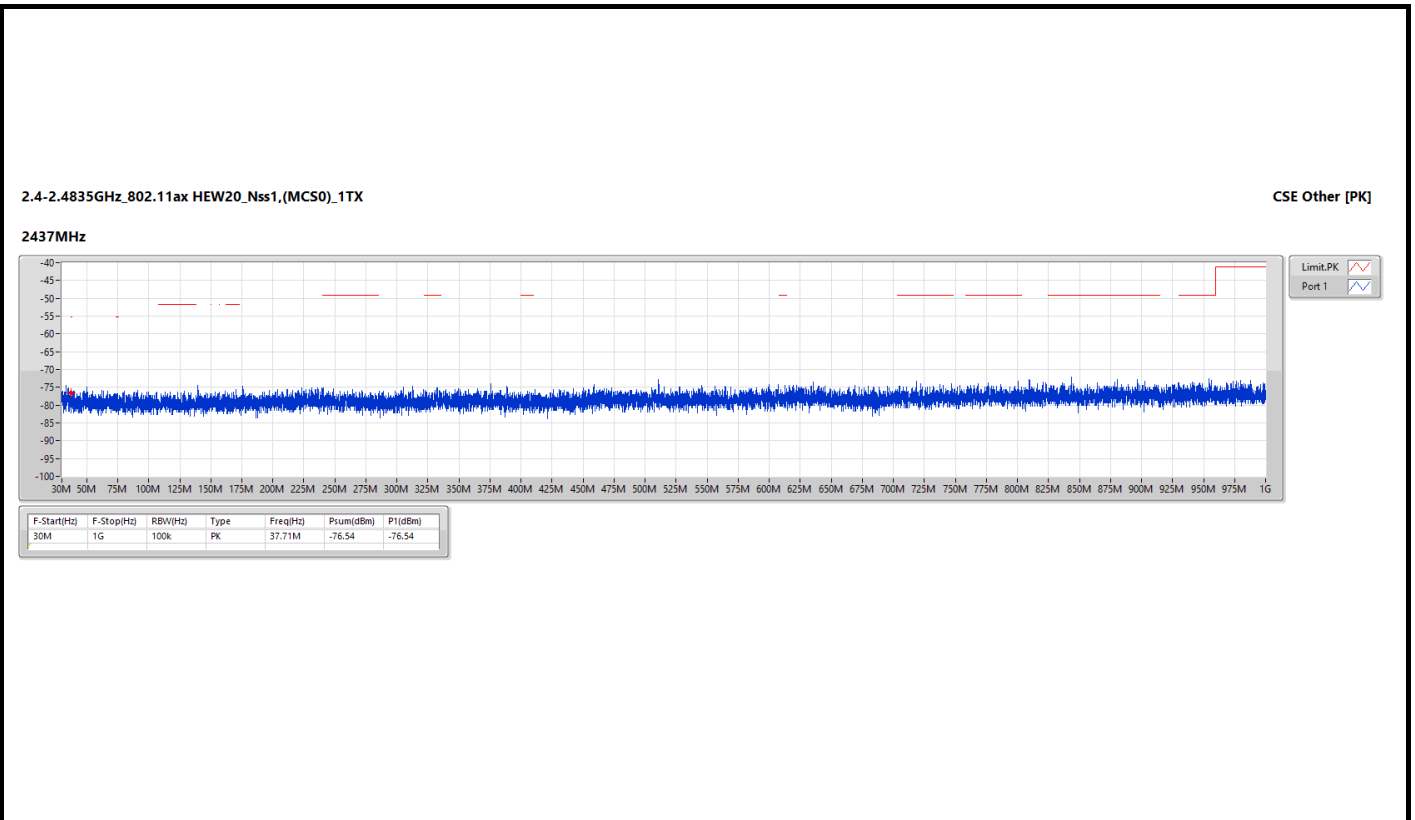
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	30M	1G	PK	37.71M	2.40	-76.54	-76.54	4.70	-69.44	-55.20	-14.24

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	30M	1G	PK	37.71M	2.40	-76.54	-76.54	4.70	-69.44	-55.20	-14.24

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	2.4835G	2.5G	AV	2.48362G	2.40	-47.00	-47.00	-44.60	-41.20	-3.40

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

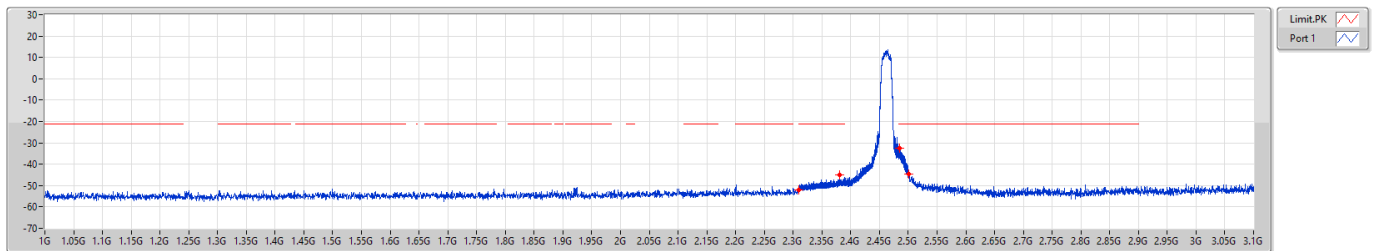
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.96	-60.96	-58.56	-41.20	-17.36
2462MHz	Pass	2.31G	2.39G	AV	2.38912G	2.40	-58.35	-58.35	-55.95	-41.20	-14.75
2462MHz	Pass	2.4835G	2.5G	AV	2.48362G	2.40	-47.00	-47.00	-44.60	-41.20	-3.40
2462MHz	Pass	2.5G	3.1G	AV	2.5G	2.40	-54.12	-54.12	-51.72	-41.20	-10.52
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-52.18	-52.18	-49.78	-21.20	-28.58
2462MHz	Pass	2.31G	2.39G	PK	2.38012G	2.40	-45.18	-45.18	-42.78	-21.20	-21.58
2462MHz	Pass	2.4835G	2.5G	PK	2.48432G	2.40	-32.47	-32.47	-30.07	-21.20	-8.87
2462MHz	Pass	2.5G	3.1G	PK	2.5009G	2.40	-44.79	-44.79	-42.39	-21.20	-21.19

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [PK]

2462MHz

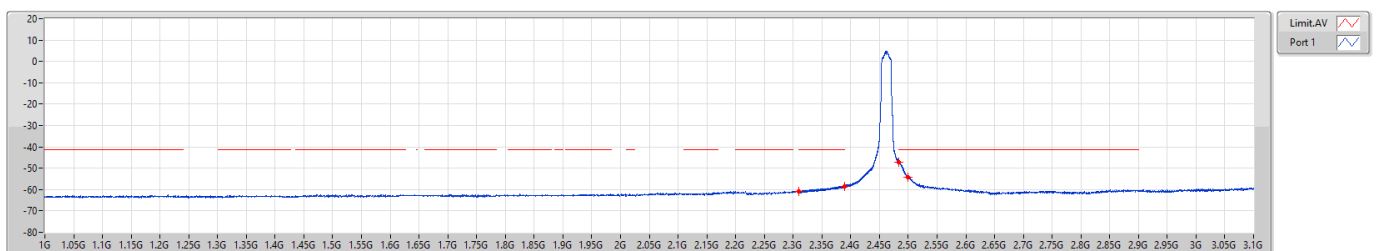


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-52.18	-52.18
2.31G	2.39G	1M	PK	2.38012G	-45.18	-45.18
2.4835G	2.5G	1M	PK	2.48432G	-32.47	-32.47
2.5G	3.1G	1M	PK	2.5009G	-44.79	-44.79

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [AV]

2462MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.96	-60.96
2.31G	2.39G	1M	AV	2.38912G	-58.35	-58.35
2.4835G	2.5G	1M	AV	2.48362G	-47.00	-47.00
2.5G	3.1G	1M	AV	2.5G	-54.12	-54.12

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	4G	5G	AV	4.924G	2.40	-59.59	-59.59	-57.19	-41.20	-15.99

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

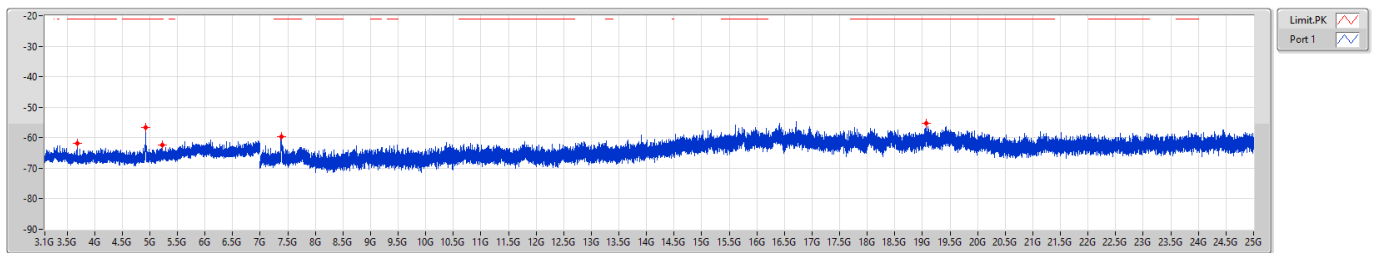
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	3.1G	4G	AV	3.6931G	2.40	-65.55	-65.55	-63.15	-41.20	-21.95
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-59.59	-59.59	-57.19	-41.20	-15.99
2462MHz	Pass	5G	7G	AV	5.249G	2.40	-73.14	-73.14	-70.74	-41.20	-29.54
2462MHz	Pass	7G	8G	AV	7.385G	2.40	-68.48	-68.48	-66.08	-41.20	-24.88
2462MHz	Pass	8G	25G	AV	15.75253G	2.40	-64.01	-64.01	-61.61	-41.20	-20.41
2462MHz	Pass	3.1G	4G	PK	3.69355G	2.40	-61.70	-61.70	-59.30	-21.20	-38.10
2462MHz	Pass	4G	5G	PK	4.924G	2.40	-56.63	-56.63	-54.23	-21.20	-33.03
2462MHz	Pass	5G	7G	PK	5.224G	2.40	-62.46	-62.46	-60.06	-21.20	-38.86
2462MHz	Pass	7G	8G	PK	7.3795G	2.40	-59.73	-59.73	-57.33	-21.20	-36.13
2462MHz	Pass	8G	25G	PK	19.06488G	2.40	-55.16	-55.16	-52.76	-21.20	-31.56

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

2462MHz

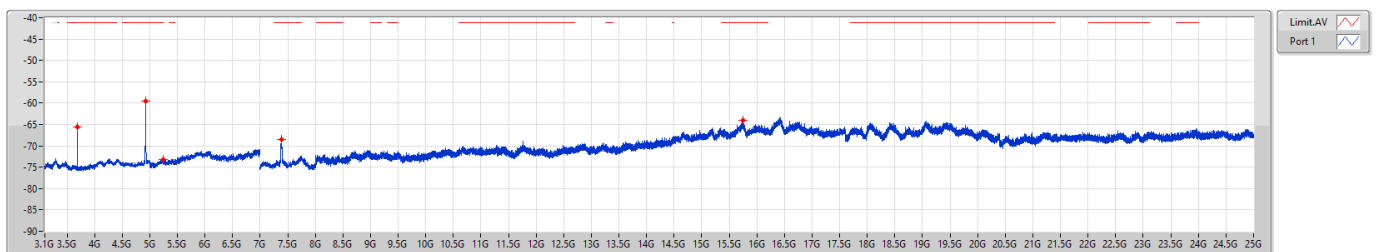


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.69355G	-61.70	-61.70
4G	5G	1M	PK	4.924G	-56.63	-56.63
5G	7G	1M	PK	5.224G	-62.46	-62.46
7G	8G	1M	PK	7.3795G	-59.73	-59.73
8G	25G	1M	PK	19.06488G	-55.16	-55.16

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

2462MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.6931G	-65.55	-65.55
4G	5G	1M	AV	4.924G	-59.59	-59.59
5G	7G	1M	AV	5.249G	-73.14	-73.14
7G	8G	1M	AV	7.385G	-68.48	-68.48
8G	25G	1M	AV	15.75253G	-64.01	-64.01



Summary

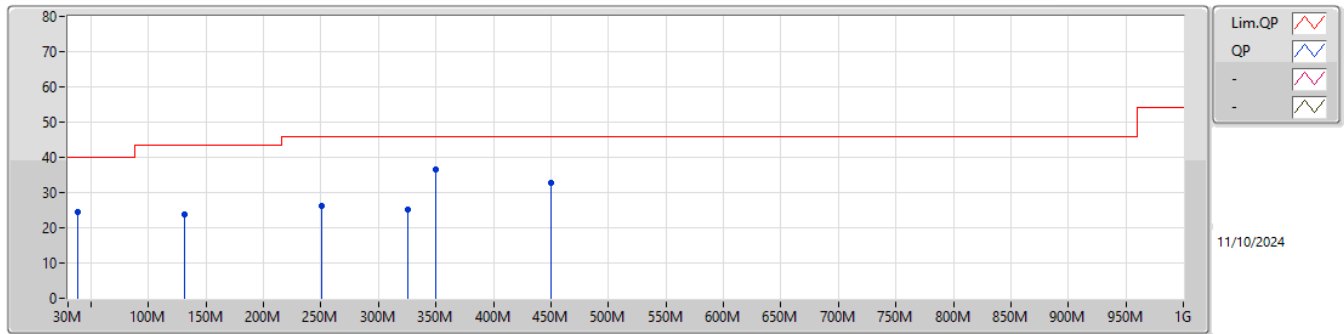
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.78	46.00	-3.22	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



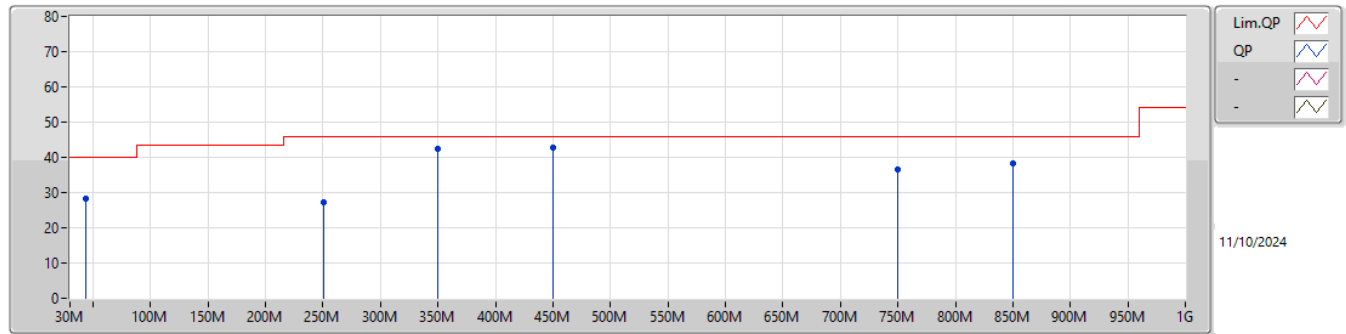
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.68M	24.40	40.00	-15.60	-9.16	3	Horizontal	-	-	-	33.56	18.37	0.58	28.11		
PK	131.67M	23.64	43.50	-19.86	-9.91	3	Horizontal	-	-	-	33.55	17.20	1.14	28.25		
PK	250.23M	26.34	46.00	-19.66	-9.77	3	Horizontal	-	-	-	36.11	16.91	1.57	28.25		
PK	325.17M	25.02	46.00	-20.98	-7.20	3	Horizontal	-	-	-	32.22	19.20	1.81	28.21		
PK	350.12M	36.39	46.00	-9.61	-6.88	3	Horizontal	-	-	-	43.27	19.50	1.82	28.20		
PK	450.12M	32.83	46.00	-13.17	-4.11	3	Horizontal	-	-	-	36.94	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	43.42M	28.29	40.00	-11.71	-8.65	3	Vertical	-	-	-	36.94	18.87	0.60	28.12		
PK	250.23M	27.17	46.00	-18.83	-9.77	3	Vertical	-	-	-	36.94	16.91	1.57	28.25		
QP	350.18M	42.46	46.00	-3.54	-6.87	3	Vertical	108	1.33	-	49.33	19.51	1.82	28.20		
QP	450.01M	42.78	46.00	-3.22	-4.11	3	Vertical	216	1.00	-	46.89	22.10	1.98	28.19		
PK	750.11M	36.60	46.00	-9.40	1.83	3	Vertical	-	-	-	34.77	27.00	2.75	27.92		
PK	849.86M	38.26	46.00	-7.74	3.13	3	Vertical	-	-	-	35.13	28.00	2.89	27.76		



**Unwanted Emissions into Restricted Frequency Bands Above
1GHz**

Appendix D.5

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	12.06G	41.75	54.00	-12.25	3	Horizontal	288	1.00	-

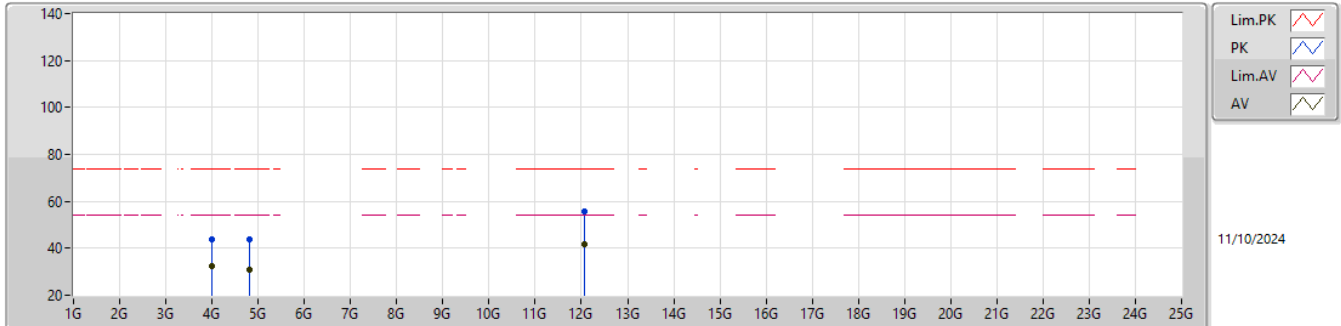


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.16	54.00	-21.84	34.43	3	Horizontal	198	1.87	-	29.70	6.02	37.99				
PK	4G	43.77	74.00	-30.23	46.04	3	Horizontal	198	1.87	-	29.70	6.02	37.99				
AV	4.824G	30.77	54.00	-23.23	31.34	3	Horizontal	203	1.00	-	31.25	6.71	38.53				
PK	4.824G	43.85	74.00	-30.15	44.42	3	Horizontal	203	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.75	54.00	-12.25	35.13	3	Horizontal	288	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.44	74.00	-18.56	48.82	3	Horizontal	288	1.00	-	39.22	10.24	42.84				

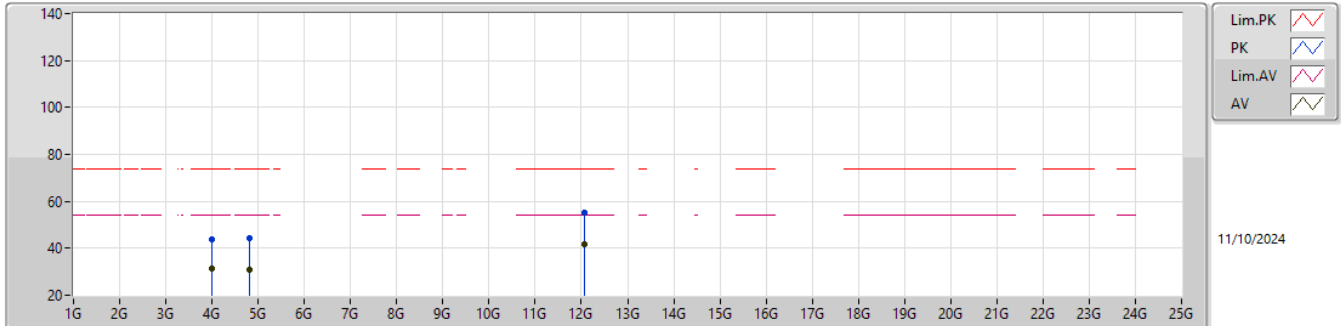


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.27	54.00	-22.73	33.54	3	Vertical	188	1.68	-	29.70	6.02	37.99			
PK	4G	43.75	74.00	-30.25	46.02	3	Vertical	188	1.68	-	29.70	6.02	37.99			
AV	4.824G	31.03	54.00	-22.97	31.60	3	Vertical	157	1.00	-	31.25	6.71	38.53			
PK	4.824G	44.51	74.00	-29.49	45.08	3	Vertical	157	1.00	-	31.25	6.71	38.53			
AV	12.06G	41.63	54.00	-12.37	35.01	3	Vertical	208	1.00	-	39.22	10.24	42.84			
PK	12.06G	55.22	74.00	-18.78	48.60	3	Vertical	208	1.00	-	39.22	10.24	42.84			

Configuration 3: Laird part number: 453-00213

**Conducted Output Power(Peak)****Appendix B****Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.77	0.18923
802.11g_Nss1,(6Mbps)_1TX	24.75	0.29854
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	25.27	0.33651

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	21.89	21.89	30.00	24.29	36.00
2437MHz	Pass	2.40	22.77	22.77	30.00	25.17	36.00
2462MHz	Pass	2.40	21.35	21.35	30.00	23.75	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.35	23.35	30.00	25.75	36.00
2437MHz	Pass	2.40	24.75	24.75	30.00	27.15	36.00
2462MHz	Pass	2.40	22.54	22.54	30.00	24.94	36.00
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.77	23.77	30.00	26.17	36.00
2437MHz	Pass	2.40	25.27	25.27	30.00	27.67	36.00
2462MHz	Pass	2.40	22.44	22.44	30.00	24.84	36.00

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

**Conducted Output Power(Average)****Appendix B****Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.23	0.10544
802.11g_Nss1,(6Mbps)_1TX	20.05	0.10116
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	18.43	0.06966

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.21	19.21	-	21.61	-
2437MHz	Pass	2.40	20.23	20.23	-	22.63	-
2462MHz	Pass	2.40	18.68	18.68	-	21.08	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	17.56	17.56	-	19.96	-
2437MHz	Pass	2.40	20.05	20.05	-	22.45	-
2462MHz	Pass	2.40	16.42	16.42	-	18.82	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	14.08	14.08	-	16.48	-
2437MHz	Pass	2.40	18.43	18.43	-	20.83	-
2462MHz	Pass	2.40	12.52	12.52	-	14.92	-

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

Note : Conducted average output power is for reference



Summary

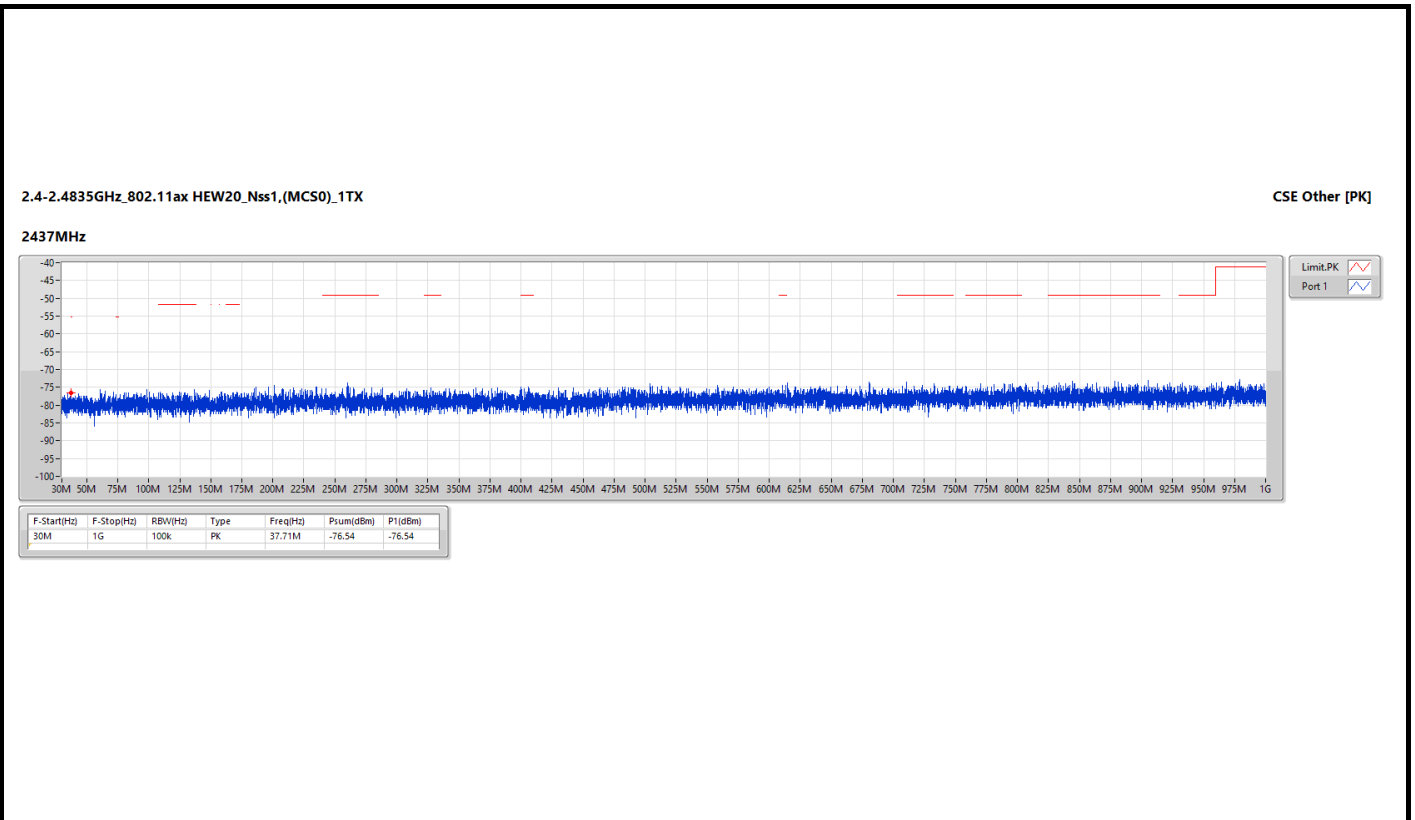
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	30M	1G	PK	37.71M	2.40	-76.54	-76.54	4.70	-69.44	-55.20	-14.24

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	30M	1G	PK	37.71M	2.40	-76.54	-76.54	4.70	-69.44	-55.20	-14.24

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	2.4835G	2.5G	AV	2.48393G	2.40	-47.27	-47.27	-44.87	-41.20	-3.67

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

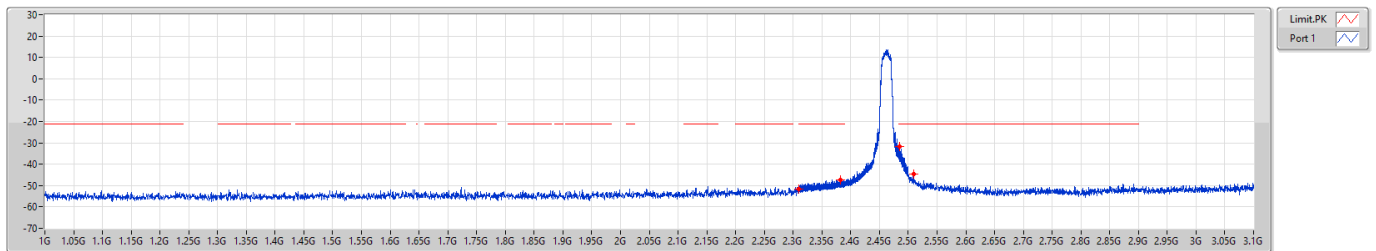
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.70	-60.70	-58.30	-41.20	-17.10
2462MHz	Pass	2.31G	2.39G	AV	2.38428G	2.40	-58.37	-58.37	-55.97	-41.20	-14.77
2462MHz	Pass	2.4835G	2.5G	AV	2.48393G	2.40	-47.27	-47.27	-44.87	-41.20	-3.67
2462MHz	Pass	2.5G	3.1G	AV	2.5003G	2.40	-54.65	-54.65	-52.25	-41.20	-11.05
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-51.63	-51.63	-49.23	-21.20	-28.03
2462MHz	Pass	2.31G	2.39G	PK	2.38244G	2.40	-47.24	-47.24	-44.84	-21.20	-23.64
2462MHz	Pass	2.4835G	2.5G	PK	2.48547G	2.40	-31.54	-31.54	-29.14	-21.20	-7.94
2462MHz	Pass	2.5G	3.1G	PK	2.509G	2.40	-44.49	-44.49	-42.09	-21.20	-20.89

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [PK]

2462MHz

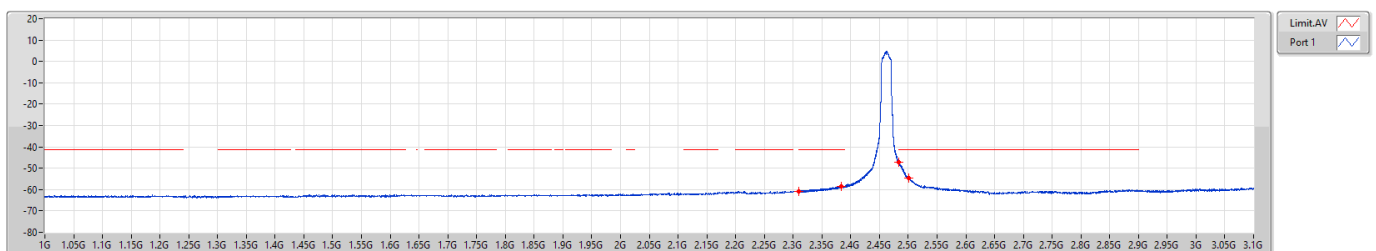


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-51.63	-51.63
2.31G	2.39G	1M	PK	2.38244G	-47.24	-47.24
2.4835G	2.5G	1M	PK	2.48547G	-31.54	-31.54
2.5G	3.1G	1M	PK	2.509G	-44.49	-44.49

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [AV]

2462MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.70	-60.70
2.31G	2.39G	1M	AV	2.38428G	-58.37	-58.37
2.4835G	2.5G	1M	AV	2.48393G	-47.27	-47.27
2.5G	3.1G	1M	AV	2.5009G	-54.65	-54.65

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	4G	5G	AV	4.924G	2.40	-56.68	-56.68	-54.28	-41.20	-13.08

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

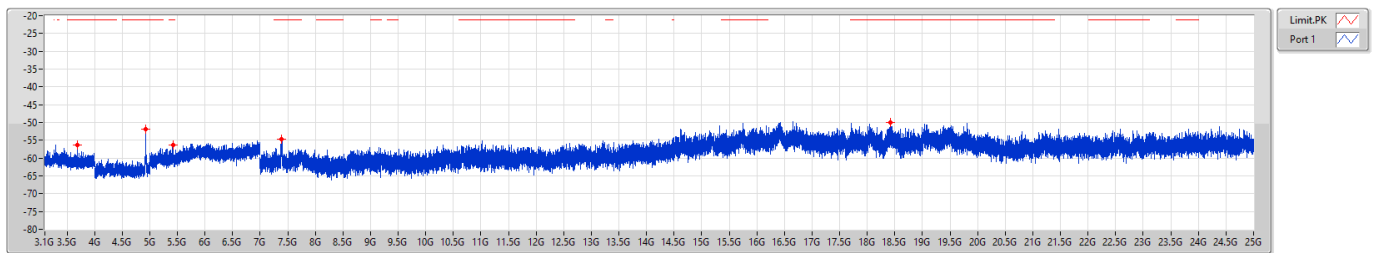
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	3.1G	4G	AV	3.6931G	2.40	-61.86	-61.86	-59.46	-41.20	-18.26
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-56.68	-56.68	-54.28	-41.20	-13.08
2462MHz	Pass	5G	7G	AV	5.45G	2.40	-67.05	-67.05	-64.65	-41.20	-23.45
2462MHz	Pass	7G	8G	AV	7.385G	2.40	-64.36	-64.36	-61.96	-41.20	-20.76
2462MHz	Pass	8G	25G	AV	19.0585G	2.40	-58.23	-58.23	-55.83	-41.20	-14.63
2462MHz	Pass	3.1G	4G	PK	3.69355G	2.40	-56.25	-56.25	-53.85	-21.20	-32.65
2462MHz	Pass	4G	5G	PK	4.9245G	2.40	-51.83	-51.83	-49.43	-21.20	-28.23
2462MHz	Pass	5G	7G	PK	5.424G	2.40	-56.25	-56.25	-53.85	-21.20	-32.65
2462MHz	Pass	7G	8G	PK	7.3845G	2.40	-54.67	-54.67	-52.27	-21.20	-31.07
2462MHz	Pass	8G	25G	PK	18.4125G	2.40	-50.11	-50.11	-47.71	-21.20	-26.51

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

2462MHz

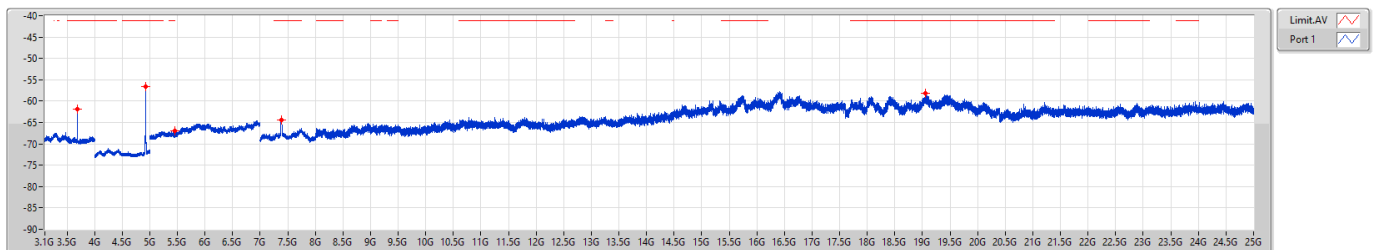


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.69355G	-56.25	-56.25
4G	5G	1M	PK	4.9245G	-51.83	-51.83
5G	7G	1M	PK	5.424G	-56.25	-56.25
7G	8G	1M	PK	7.3845G	-54.67	-54.67
8G	25G	1M	PK	18.4125G	-50.11	-50.11

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

2462MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.6931G	-61.86	-61.86
4G	5G	1M	AV	4.924G	-56.68	-56.68
5G	7G	1M	AV	5.45G	-67.05	-67.05
7G	8G	1M	AV	7.385G	-64.36	-64.36
8G	25G	1M	AV	19.0585G	-58.23	-58.23



Summary

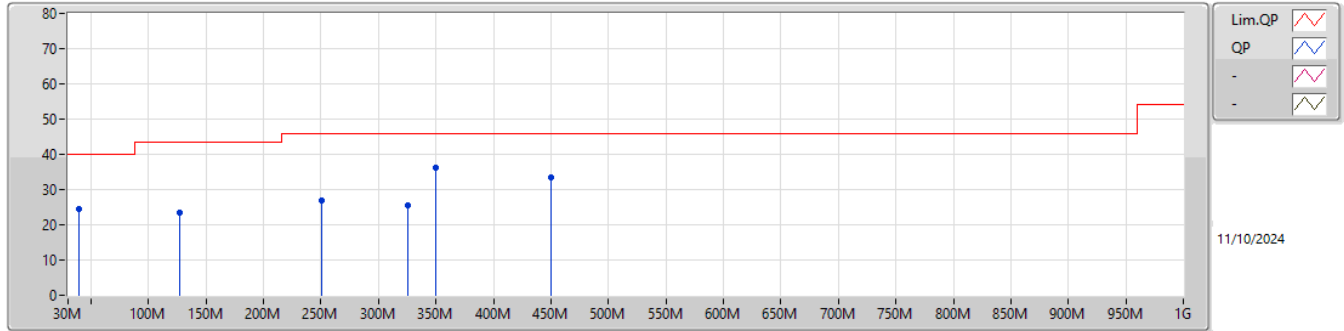
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.12M	42.72	46.00	-3.28	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



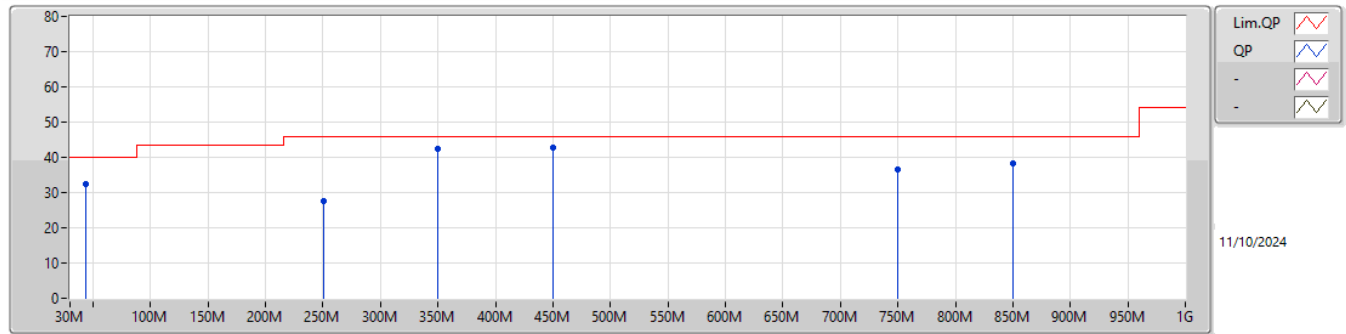
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	39.16M	24.46	40.00	-15.54	-9.11	3	Horizontal	-	-	-	33.57	18.42	0.58	28.11		
PK	126.88M	23.55	43.50	-19.95	-10.33	3	Horizontal	-	-	-	33.88	16.79	1.12	28.24		
PK	250.23M	26.81	46.00	-19.19	-9.77	3	Horizontal	-	-	-	36.58	16.91	1.57	28.25		
PK	325.11M	25.64	46.00	-20.36	-7.20	3	Horizontal	-	-	-	32.84	19.20	1.81	28.21		
PK	350.11M	36.22	46.00	-9.78	-6.88	3	Horizontal	-	-	-	43.10	19.50	1.82	28.20		
PK	450.23M	33.45	46.00	-12.55	-4.11	3	Horizontal	-	-	-	37.56	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	43.68M	32.57	40.00	-7.43	-8.72	3	Vertical	-	-	-	41.29	18.80	0.60	28.12		
PK	250.23M	27.74	46.00	-18.26	-9.77	3	Vertical	-	-	-	37.51	16.91	1.57	28.25		
QP	350.13M	42.41	46.00	-3.59	-6.87	3	Vertical	106	1.27	-	49.28	19.51	1.82	28.20		
QP	450.12M	42.72	46.00	-3.28	-4.11	3	Vertical	220	1.00	-	46.83	22.10	1.98	28.19		
PK	749.88M	36.48	46.00	-9.52	1.82	3	Vertical	-	-	-	34.66	27.00	2.75	27.93		
PK	850.1M	38.26	46.00	-7.74	3.13	3	Vertical	-	-	-	35.13	28.00	2.89	27.76		



**Unwanted Emissions into Restricted Frequency Bands Above
1GHz**

Appendix D.5

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	12.06G	41.72	54.00	-12.28	3	Vertical	213	1.00	-

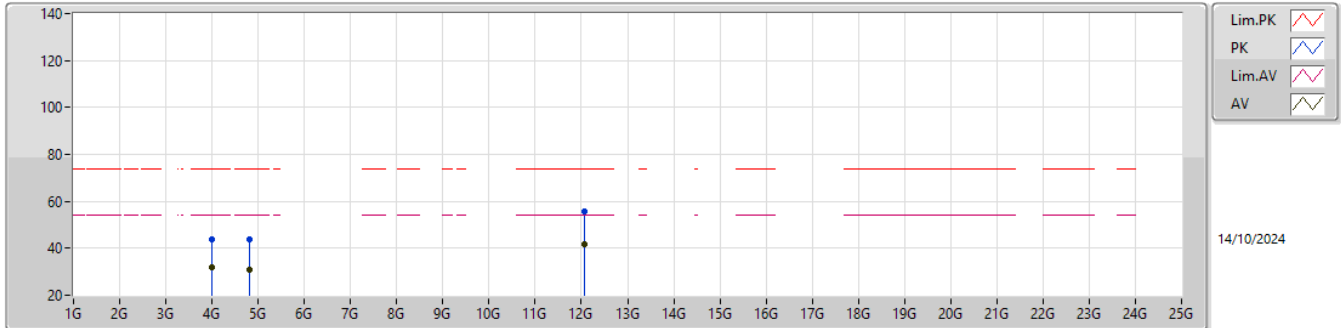


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.11	54.00	-21.89	34.38	3	Horizontal	199	1.86	-	29.70	6.02	37.99				
PK	4G	43.69	74.00	-30.31	45.96	3	Horizontal	199	1.86	-	29.70	6.02	37.99				
AV	4.824G	30.68	54.00	-23.32	31.25	3	Horizontal	208	1.00	-	31.25	6.71	38.53				
PK	4.824G	43.84	74.00	-30.16	44.41	3	Horizontal	208	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.69	54.00	-12.31	35.07	3	Horizontal	286	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.51	74.00	-18.49	48.89	3	Horizontal	286	1.00	-	39.22	10.24	42.84				

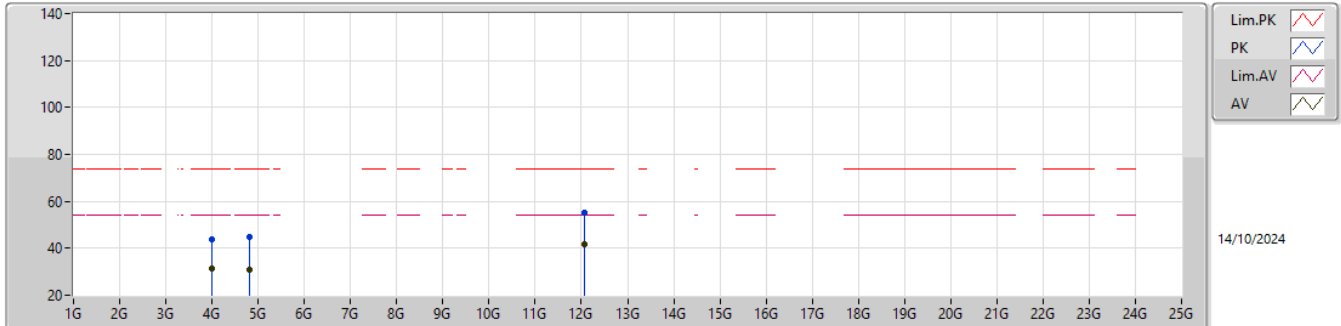


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	31.33	54.00	-22.67	33.60	3	Vertical	189	1.68	-	29.70	6.02	37.99				
PK	4G	43.86	74.00	-30.14	46.13	3	Vertical	189	1.68	-	29.70	6.02	37.99				
AV	4.824G	31.11	54.00	-22.89	31.68	3	Vertical	166	1.00	-	31.25	6.71	38.53				
PK	4.824G	44.66	74.00	-29.34	45.23	3	Vertical	166	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.72	54.00	-12.28	35.10	3	Vertical	213	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.28	74.00	-18.72	48.66	3	Vertical	213	1.00	-	39.22	10.24	42.84				

Configuration 4: Laird part number: 453-00214

**Conducted Output Power(Peak)****Appendix B****Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.61	0.18239
802.11g_Nss1,(6Mbps)_1TX	24.56	0.28576
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	25.23	0.33343

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	22.01	22.01	30.00	24.41	36.00
2437MHz	Pass	2.40	22.61	22.61	30.00	25.01	36.00
2462MHz	Pass	2.40	21.41	21.41	30.00	23.81	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.33	23.33	30.00	25.73	36.00
2437MHz	Pass	2.40	24.56	24.56	30.00	26.96	36.00
2462MHz	Pass	2.40	22.67	22.67	30.00	25.07	36.00
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	23.72	23.72	30.00	26.12	36.00
2437MHz	Pass	2.40	25.23	25.23	30.00	27.63	36.00
2462MHz	Pass	2.40	22.53	22.53	30.00	24.93	36.00

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



Conducted Output Power(Average)

Appendix B

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.12	0.10280
802.11g_Nss1,(6Mbps)_1TX	20.15	0.10351
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	18.48	0.07047

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.32	19.32	-	21.72	-
2437MHz	Pass	2.40	20.12	20.12	-	22.52	-
2462MHz	Pass	2.40	18.63	18.63	-	21.03	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.40	17.56	17.56	-	19.96	-
2437MHz	Pass	2.40	20.15	20.15	-	22.55	-
2462MHz	Pass	2.40	16.55	16.55	-	18.95	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-
2412MHz	Pass	2.40	14.02	14.02	-	16.42	-
2437MHz	Pass	2.40	18.48	18.48	-	20.88	-
2462MHz	Pass	2.40	12.52	12.52	-	14.92	-

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

Note : Conducted average output power is for reference



Summary

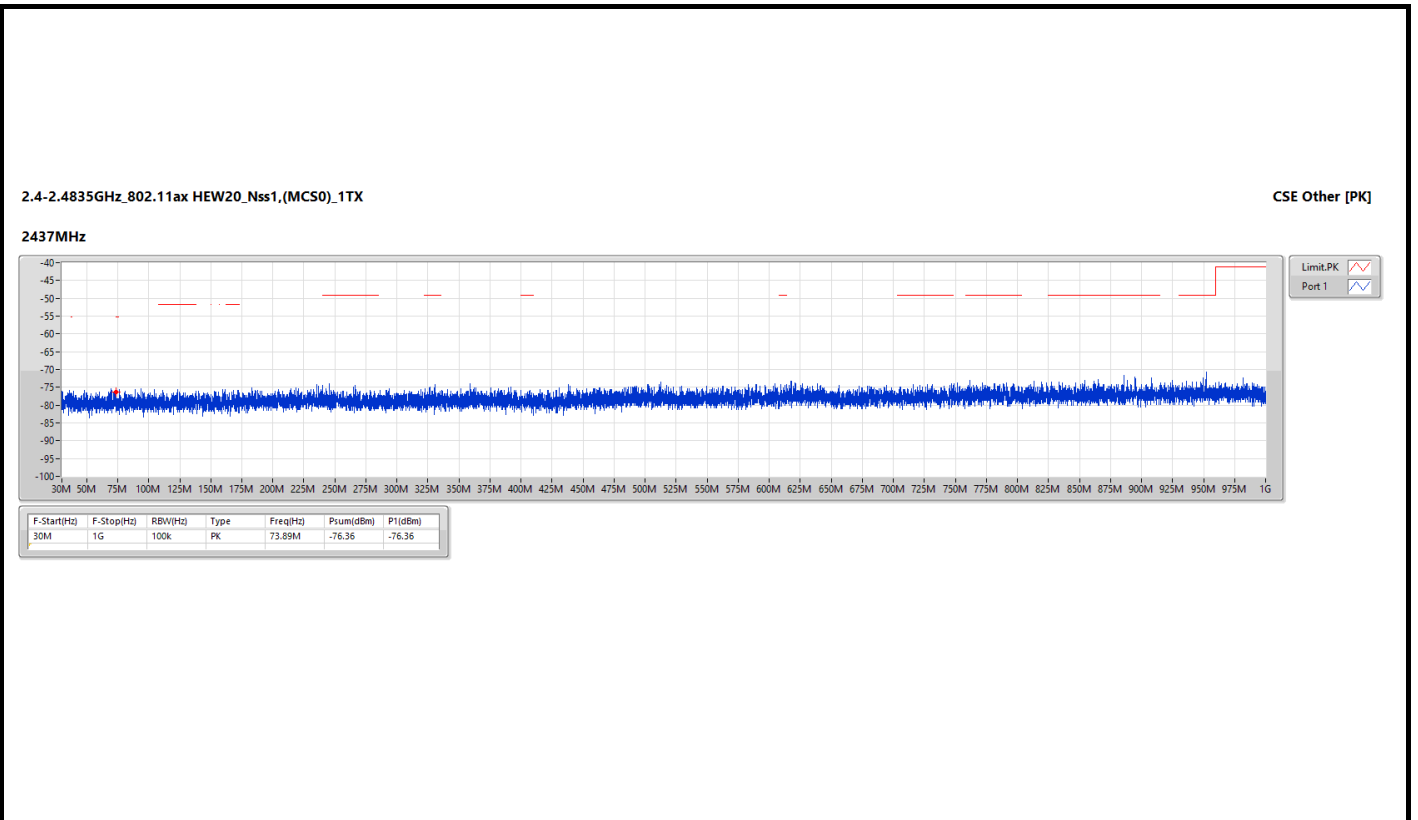
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	Pass	30M	1G	PK	73.89M	2.40	-76.36	-76.36	4.70	-69.26	-55.20	-14.06

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ax HEW20_Nss1,(MCS0)_1TX-OFDMA	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	30M	1G	PK	73.89M	2.40	-76.36	-76.36	4.70	-69.26	-55.20	-14.06

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	2.4835G	2.5G	AV	2.48362G	2.40	-47.24	-47.24	-44.84	-41.20	-3.64

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

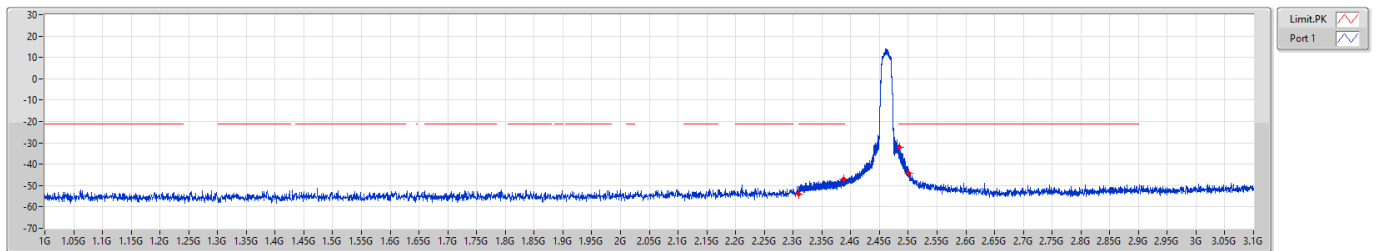
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	1G	2.31G	AV	2.31G	2.40	-60.80	-60.80	-58.40	-41.20	-17.20
2462MHz	Pass	2.31G	2.39G	AV	2.38944G	2.40	-57.98	-57.98	-55.58	-41.20	-14.38
2462MHz	Pass	2.4835G	2.5G	AV	2.48362G	2.40	-47.24	-47.24	-44.84	-41.20	-3.64
2462MHz	Pass	2.5G	3.1G	AV	2.5003G	2.40	-54.22	-54.22	-51.82	-41.20	-10.62
2462MHz	Pass	1G	2.31G	PK	2.31G	2.40	-53.82	-53.82	-51.42	-21.20	-30.22
2462MHz	Pass	2.31G	2.39G	PK	2.38808G	2.40	-47.06	-47.06	-44.66	-21.20	-23.46
2462MHz	Pass	2.4835G	2.5G	PK	2.48531G	2.40	-32.08	-32.08	-29.68	-21.20	-8.48
2462MHz	Pass	2.5G	3.1G	PK	2.5003G	2.40	-44.29	-44.29	-41.89	-21.20	-20.69

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [PK]

2462MHz

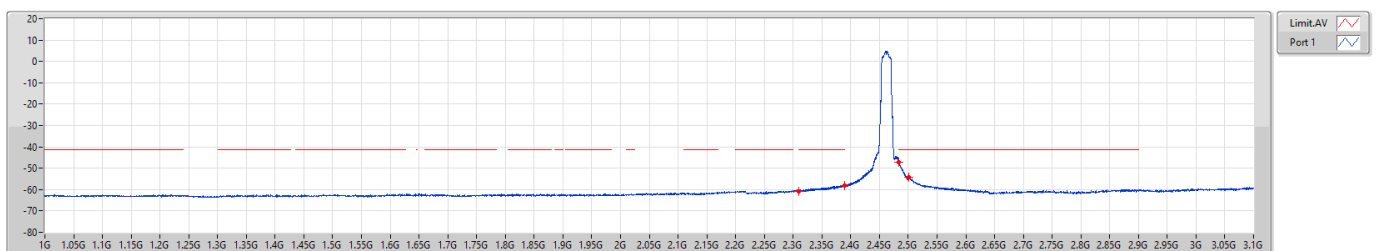


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.31G	-53.82	-53.82
2.31G	2.39G	1M	PK	2.38808G	-47.06	-47.06
2.4835G	2.5G	1M	PK	2.48531G	-32.08	-32.08
2.5G	3.1G	1M	PK	2.5003G	-44.29	-44.29

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE Bandedge [AV]

2462MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.31G	-60.80	-60.80
2.31G	2.39G	1M	AV	2.38944G	-57.98	-57.98
2.4835G	2.5G	1M	AV	2.48362G	-47.24	-47.24
2.5G	3.1G	1M	AV	2.5003G	-54.22	-54.22

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_1TX	Pass	4G	5G	AV	4.924G	2.40	-59.19	-59.19	-56.79	-41.20	-15.59

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

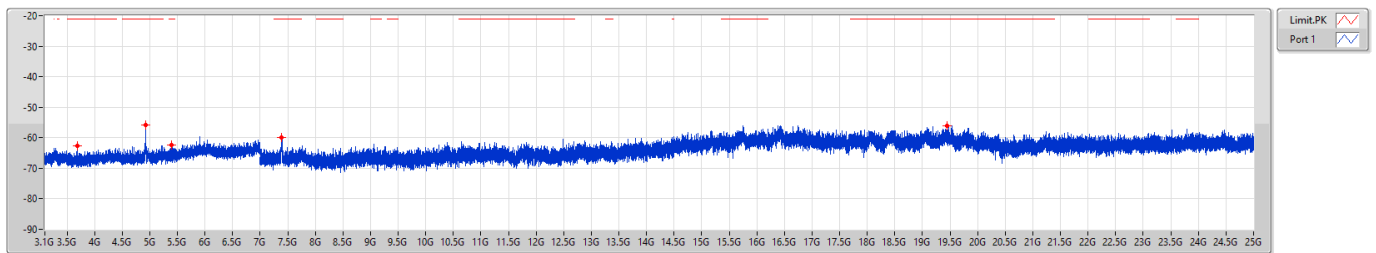
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2462MHz	Pass	3.1G	4G	AV	3.6931G	2.40	-66.98	-66.98	-64.58	-41.20	-23.38
2462MHz	Pass	4G	5G	AV	4.924G	2.40	-59.19	-59.19	-56.79	-41.20	-15.59
2462MHz	Pass	5G	7G	AV	5.4195G	2.40	-73.02	-73.02	-70.62	-41.20	-29.42
2462MHz	Pass	7G	8G	AV	7.381G	2.40	-68.67	-68.67	-66.27	-41.20	-25.07
2462MHz	Pass	8G	25G	AV	19.067G	2.40	-64.21	-64.21	-61.81	-41.20	-20.61
2462MHz	Pass	3.1G	4G	PK	3.6931G	2.40	-62.65	-62.65	-60.25	-21.20	-39.05
2462MHz	Pass	4G	5G	PK	4.924G	2.40	-55.73	-55.73	-53.33	-21.20	-32.13
2462MHz	Pass	5G	7G	PK	5.3915G	2.40	-62.31	-62.31	-59.91	-21.20	-38.71
2462MHz	Pass	7G	8G	PK	7.386G	2.40	-59.89	-59.89	-57.49	-21.20	-36.29
2462MHz	Pass	8G	25G	PK	19.44366G	2.40	-56.06	-56.06	-53.66	-21.20	-32.46

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [PK]

2462MHz

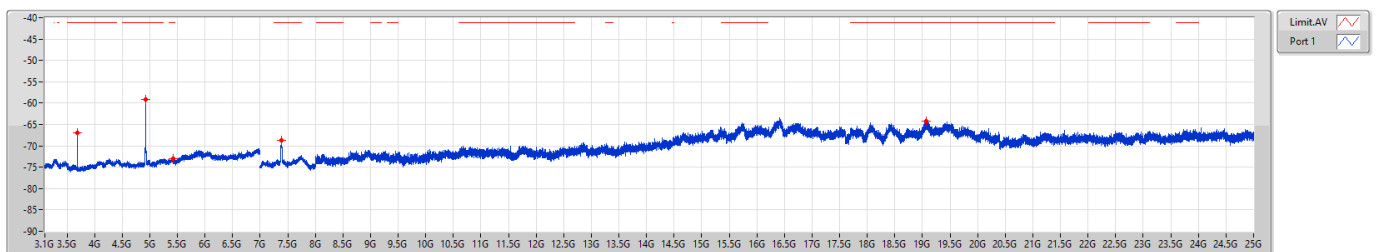


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.6931G	-62.65	-62.65
4G	5G	1M	PK	4.924G	-55.73	-55.73
5G	7G	1M	PK	5.3915G	-62.31	-62.31
7G	8G	1M	PK	7.386G	-59.89	-59.89
8G	25G	1M	PK	19.44366G	-56.06	-56.06

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSE [AV]

2462MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.6931G	-66.98	-66.98
4G	5G	1M	AV	4.924G	-59.19	-59.19
5G	7G	1M	AV	5.4195G	-73.02	-73.02
7G	8G	1M	AV	7.381G	-68.67	-68.67
8G	25G	1M	AV	19.067G	-64.21	-64.21



Summary

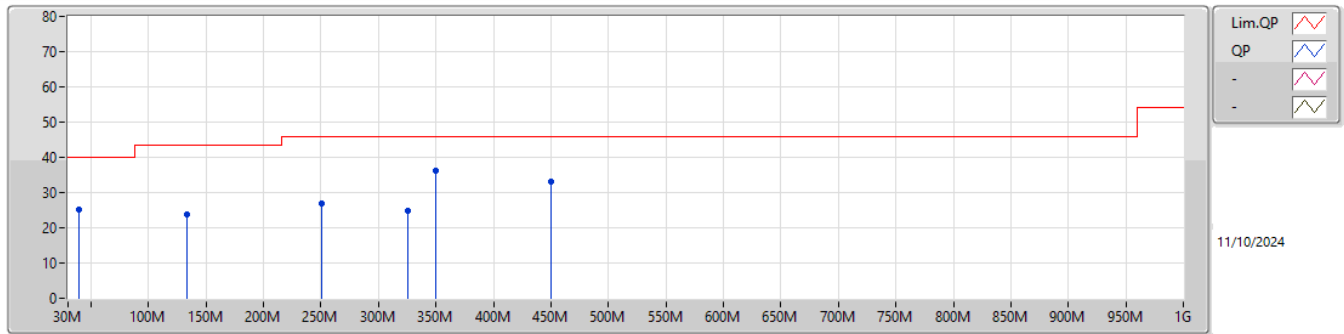
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.81	46.00	-3.19	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



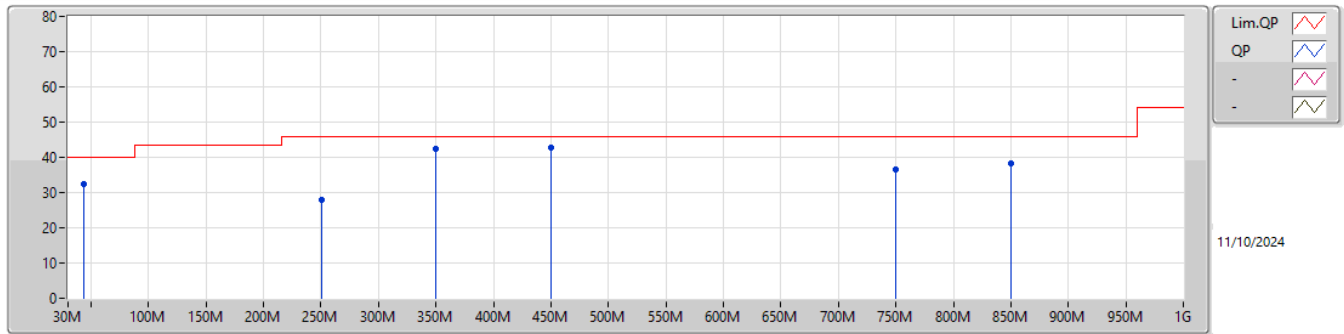
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	39.12M	25.14	40.00	-14.86	-9.12	3	Horizontal	-	-	-	34.26	18.41	0.58	28.11		
PK	133.54M	23.82	43.50	-19.68	-9.76	3	Horizontal	-	-	-	33.58	17.35	1.14	28.25		
PK	250.22M	26.80	46.00	-19.20	-9.77	3	Horizontal	-	-	-	36.57	16.91	1.57	28.25		
PK	325.16M	24.91	46.00	-21.09	-7.20	3	Horizontal	-	-	-	32.11	19.20	1.81	28.21		
PK	350.11M	36.33	46.00	-9.67	-6.88	3	Horizontal	-	-	-	43.21	19.50	1.82	28.20		
PK	450.11M	32.97	46.00	-13.03	-4.11	3	Horizontal	-	-	-	37.08	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	43.66M	32.54	40.00	-7.46	-8.72	3	Vertical	-	-	-	41.26	18.80	0.60	28.12		
PK	250.22M	27.91	46.00	-18.09	-9.77	3	Vertical	-	-	-	37.68	16.91	1.57	28.25		
QP	350.1M	42.45	46.00	-3.55	-6.88	3	Vertical	106	1.31	-	49.33	19.50	1.82	28.20		
QP	450.01M	42.81	46.00	-3.19	-4.11	3	Vertical	218	1.00	-	46.92	22.10	1.98	28.19		
PK	750.16M	36.62	46.00	-9.38	1.83	3	Vertical	-	-	-	34.79	27.00	2.75	27.92		
PK	849.66M	38.35	46.00	-7.65	3.12	3	Vertical	-	-	-	35.23	27.99	2.89	27.76		



**Unwanted Emissions into Restricted Frequency Bands Above
1GHz**

Appendix D.5

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	12.06G	41.69	54.00	-12.31	3	Horizontal	279	1.00	-

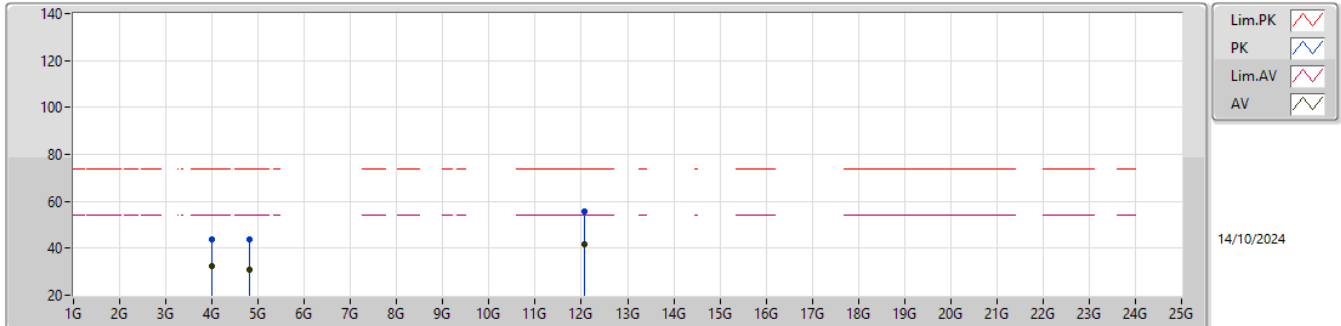


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	32.22	54.00	-21.78	34.49	3	Horizontal	200	1.89	-	29.70	6.02	37.99				
PK	4G	43.85	74.00	-30.15	46.12	3	Horizontal	200	1.89	-	29.70	6.02	37.99				
AV	4.824G	30.84	54.00	-23.16	31.41	3	Horizontal	218	1.00	-	31.25	6.71	38.53				
PK	4.824G	43.99	74.00	-30.01	44.56	3	Horizontal	218	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.69	54.00	-12.31	35.07	3	Horizontal	279	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.51	74.00	-18.49	48.89	3	Horizontal	279	1.00	-	39.22	10.24	42.84				

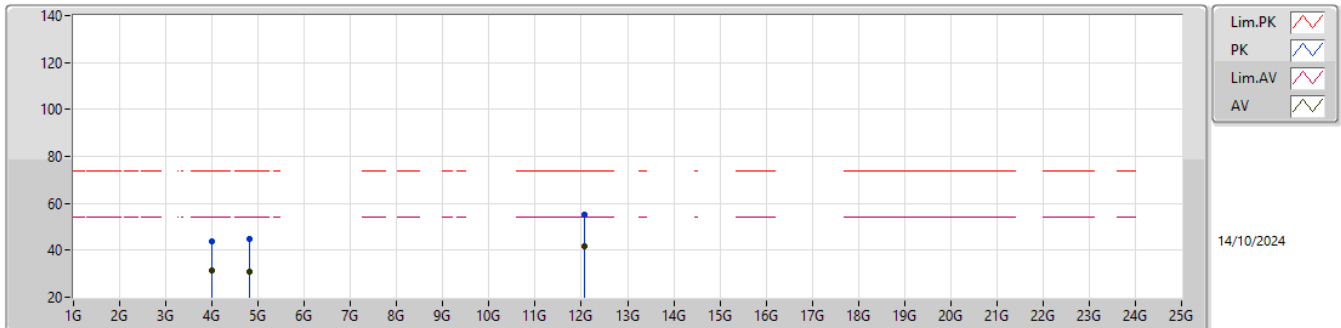


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	31.26	54.00	-22.74	33.53	3	Vertical	186	1.66	-	29.70	6.02	37.99				
PK	4G	43.77	74.00	-30.23	46.04	3	Vertical	186	1.66	-	29.70	6.02	37.99				
AV	4.824G	31.12	54.00	-22.88	31.69	3	Vertical	160	1.00	-	31.25	6.71	38.53				
PK	4.824G	44.64	74.00	-29.36	45.21	3	Vertical	160	1.00	-	31.25	6.71	38.53				
AV	12.06G	41.68	54.00	-12.32	35.06	3	Vertical	211	1.00	-	39.22	10.24	42.84				
PK	12.06G	55.31	74.00	-18.69	48.69	3	Vertical	211	1.00	-	39.22	10.24	42.84				