

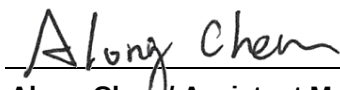
FCC Test Report

FCC ID : IPH-A04580
Equipment : Marine Stereo
Model No. : A04580
Brand Name : FUSION
Applicant : Garmin International, Inc.
Address : 1200 E. 151st Street Olathe, KS 66062 United States
Standard : 47 CFR FCC Part 15.247
Received Date : Dec. 18, 2024
Tested Date : Mar. 27 ~ Apr. 01, 2025

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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Release Record

Report No.	Version	Description	Issued Date
FR4D1802AC	Rev. 01	Initial issue	Jun. 04, 2025

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	Note ¹	N/A
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2.4835GHz 53.82 (Margin -0.18dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: 25.64	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
N/A means Not Applicable. Note ¹ : The EUT consumes DC power, so the test is not required.			

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 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 2	MCS 0-7 MCS 8-15

Note 1: RF output power specifies that Maximum Peak Conducted Output Power.
 Note 2: DSSS-DBPSK, DQPSK, CCK modulation
 OFDM-BPSK, QPSK, 16QAM, 64QAM modulation

1.1.2 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)
GARMIN	105-04581-00	Dipole	No	2.15
GARMIN	105-04581-00	Dipole	No	3.09

1.1.3 Configuration of Equipment under Test (EUT)

Power Supply Type	12 / 24 VDC
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1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	Power + Speaker Cable	0.2m non-shielded without core Brand: FUSION / Model: 320-01021-01
2	Audio Cable_1	0.2m shielded without core Brand: FUSION / Model: 320-01022-02
3	Audio Cable_2	0.2m shielded without core Brand: FUSION / Model: 320-01423-00
4	NMEA2000 Cable	2m shielded without core Brand: FUSION / Model: 320-00387-00

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	WIFI Test, version: 18.40.121		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	99.01%	0.04
	11g	93.70%	0.28
	HT20	87.90%	0.56

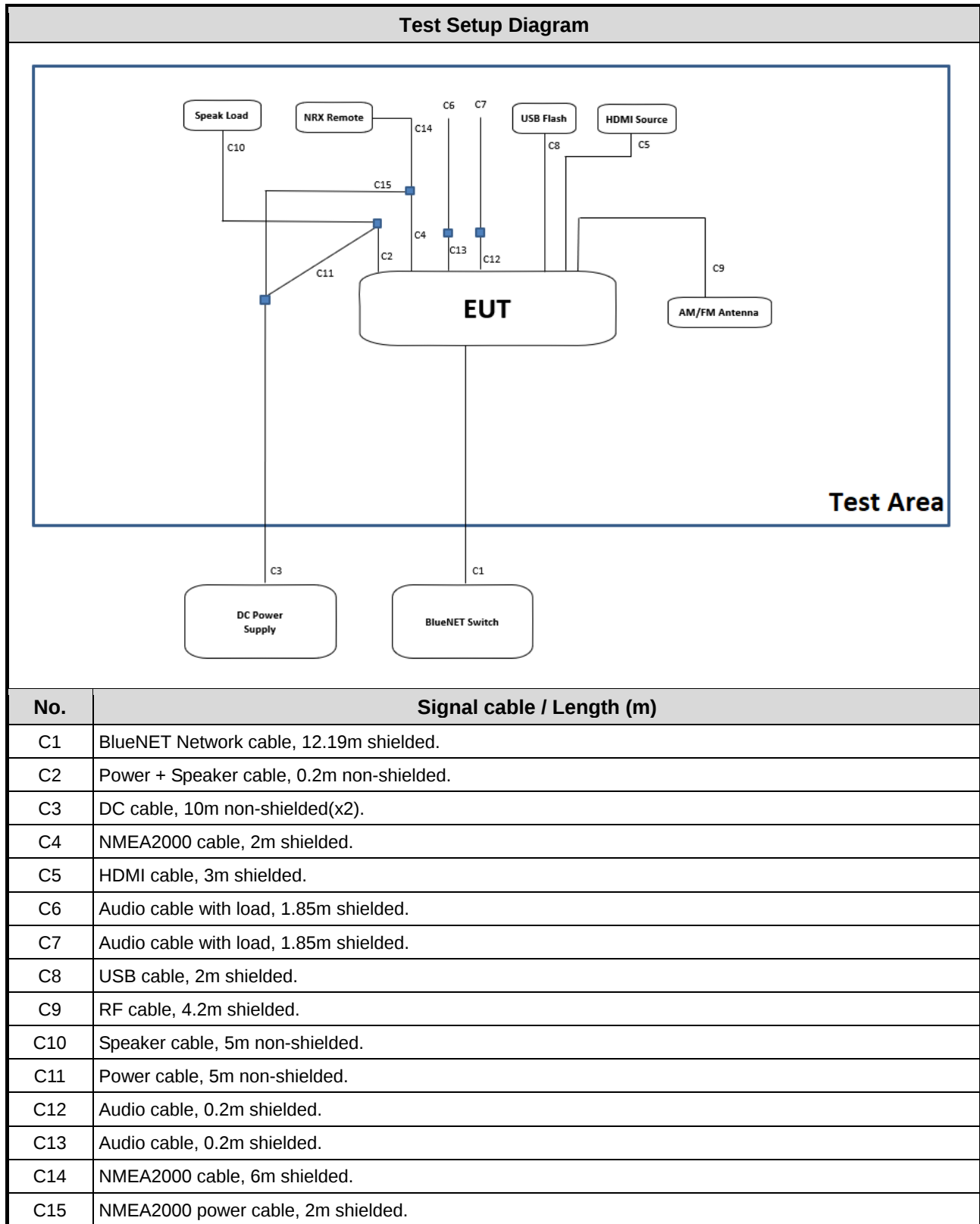
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	12
11b	2437	12
11b	2462	12
11g	2412	11
11g	2437	11
11g	2462	11
HT20	2412	13
HT20	2437	13
HT20	2462	13

1.2 Local Support Equipment List

Accessories					
No.	Equipment	Brand	Model	FCC ID	Remarks
C2	Power + Speaker Cable	FUSION	320-01021-01	---	Provided by applicant.
C12	Audio Cable	FUSION	320-01022-02	---	Provided by applicant.
C13	Audio Cable	FUSION	320-01423-00	---	Provided by applicant.
C4	NMEA2000 Cable	FUSION	320-00387-00	---	Provided by applicant.
Support Equipment List					
C1	BlueNET Network cable	GARMIN	320-01038-02	---	Provided by applicant.
C3	DC Cable *2	ICC	DCC-10m-R DCC-10m-B	---	---
C5	HDMI Cable	UNITEK	C1049GB	---	Provided by applicant.
C6	Audio cable with load	FUSION	CA_AUD_1.85M	---	Provided by applicant.
C7	Audio cable with load	FUSION	CA_AUD_1.85M	---	Provided by applicant.
C8	USB extended cable	GARMIN	320-01674-00	---	Provided by applicant.
C9	AM/FM Antenna	Techbrands	AR-3250	---	Provided by applicant.
C10	Speaker cable	FUSION	CA_SPK_5M	---	Provided by applicant.
C11	Power cable	FUSION	CA_PWR_5M	---	Provided by applicant.
C14	NMEA2000 Cable	FUSION	320-00387-05	---	Provided by applicant.
C15	NMEA2000 Cable	FUSION	320-00389-00	---	Provided by applicant.
1	HDMI source	PX	HA2-130eS	---	Provided by applicant.
2	USB Flash	SanDisk	SDDDC4-032G-G46	---	Provided by applicant.
3	NRX Remote	FUSION	MS-NRX300	---	Provided by applicant.
4	Speak load	FUSION	LD_4R100W-4C	---	Provided by applicant.
5	BlueNet Switch	GARMIN	A04222	---	Provided by applicant.
6	DC Power supply	GW INSTEK	GPC-6030D	---	---

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	Mar. 27, 2025				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 11, 2025	Mar. 10, 2026
Spectrum Analyzer	R&S	FSV40	101499	Mar. 27, 2025	Mar. 26, 2026
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 05, 2024	Nov. 04, 2025
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jul. 02, 2024	Jul. 01, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 20, 2024	Dec. 19, 2025
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 18, 2024	Nov. 17, 2025
Preamplifier	EMC	EMC02325	980187	Jun. 27, 2024	Jun. 26, 2025
Preamplifier	EMC	EMC118A45SE	980897	Aug. 05, 2024	Aug. 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-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 20, 2024	Sep. 19, 2025
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 20, 2024	Sep. 19, 2025
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 20, 2024	Sep. 19, 2025
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 20, 2024	Sep. 19, 2025
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 20, 2024	Sep. 19, 2025
Attenuator	Pasternack	PE7005-10	10-3	Sep. 20, 2024	Sep. 19, 2025
HIGHPASS FILTER	WI	WHK3.1-18G-10SS	43	Sep. 20, 2024	Sep. 19, 2025
Measurement Software	Sporton	SENSE-EMI	V5.11	NA	NA
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA

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

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Apr. 01, 2025				
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. 26, 2024	Nov. 25, 2025
Power Sensor	Anritsu	MA2411B	1207366	Nov. 26, 2024	Nov. 25, 2025
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
Measurement Software	Sporton	SENSE-15247_DTS	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	± 3.96 dB
Unwanted Emission > 1 GHz	± 4.51 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	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.)
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Unwanted Emissions ≤ 1GHz	HT20	2437	MCS 8	---
Unwanted Emissions >1GHz				---
Conducted Output Power	11b	2412 / 2437 / 2462	1 Mbps	
6dB bandwidth	11g	2412 / 2437 / 2462	6 Mbps	
Power spectral density	HT20	2412 / 2437 / 2462	MCS 8	
NOTE:				
1. The EUT supports DC 12V and 24V, both options were assessed and DC 12V was found to be the worst case and was selected for the final test.				
2. Antenna diversity function is supported in 1TX mode. Antenna port 1 and 2 were assessed and antenna port 2 was found to be the worst case and was selected for the final test.				

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

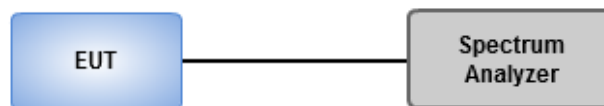
6dB Bandwidth

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	22°C / 66%	Tested By	Akun Chung
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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	22°C / 66%	Tested By	Akun Chung
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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.

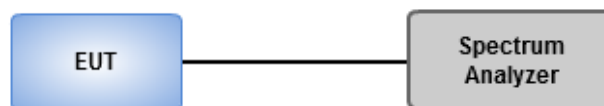
Average PSD, duty cycle $\geq 98\%$

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	22°C / 66%	Tested By	Akun Chung
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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

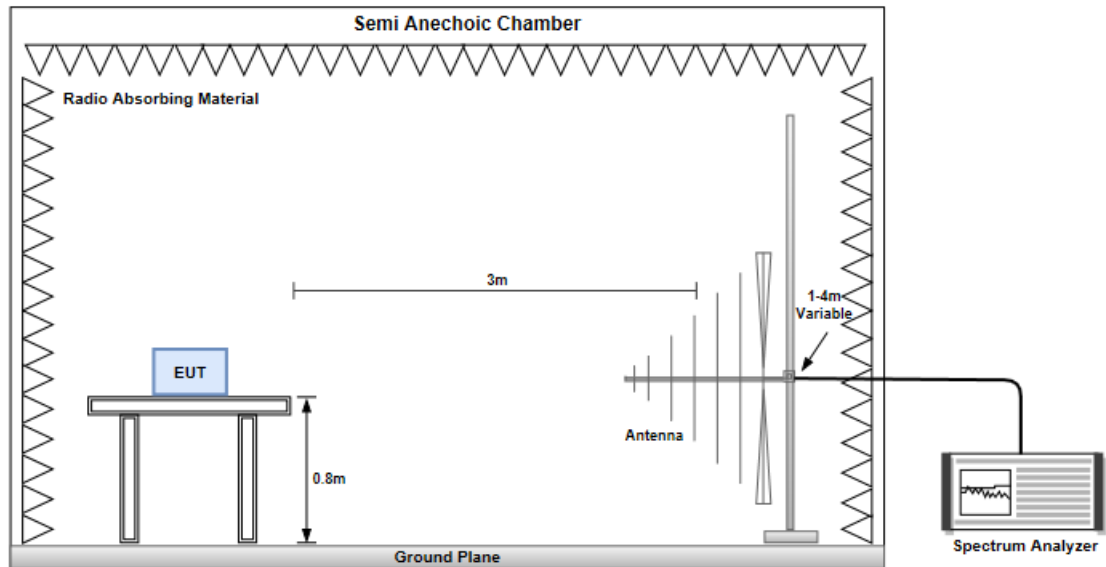
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

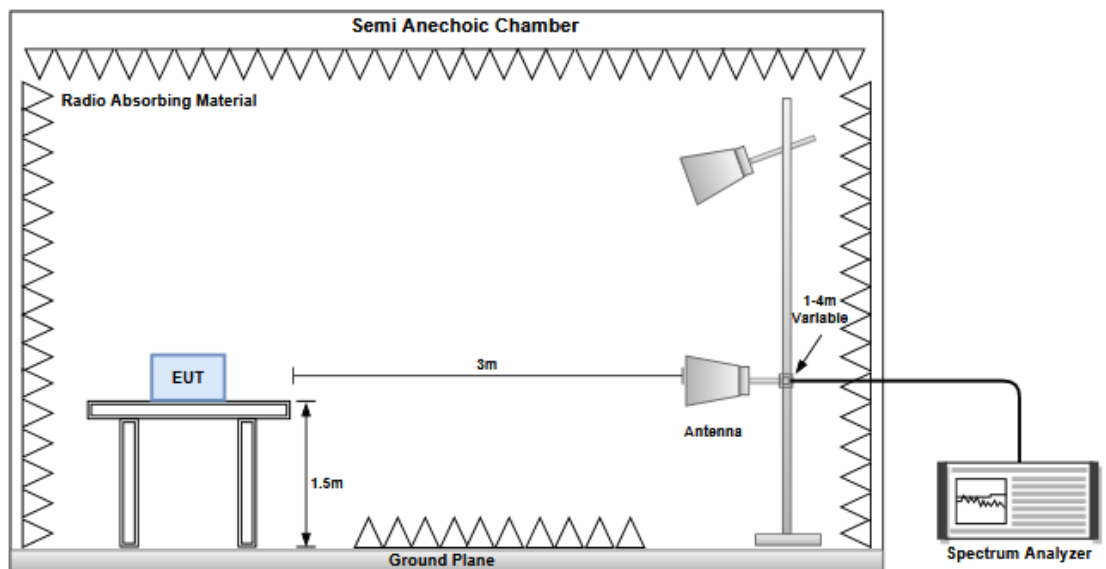
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Ambient Condition	24°C / 63%	Tested By	Sean Yu / Brad Wu
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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

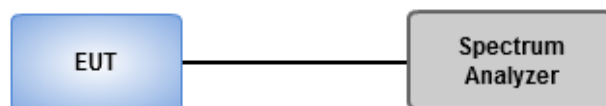
Reference level measurement

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	22°C / 66%	Tested By	Akun Chung
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Refer to Appendix E.

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==

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	12.013M	12M0G1D	7.525M	11.932M
802.11g_Nss1,(6Mbps)_1TX	16.425M	16.889M	16M9D1D	15.95M	16.848M
802.11n HT20_Nss2,(MCS8)_2TX	17.6M	18.072M	18M1D1D	16.325M	17.879M

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

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	-	-	7.525M	11.932M
2437MHz	Pass	500k	-	-	7.525M	12.013M
2462MHz	Pass	500k	-	-	7.55M	11.961M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	-	-	16.425M	16.848M
2437MHz	Pass	500k	-	-	15.95M	16.848M
2462MHz	Pass	500k	-	-	16.375M	16.889M
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.6M	17.879M	16.325M	18.072M
2437MHz	Pass	500k	17.15M	17.883M	17.575M	17.998M
2462MHz	Pass	500k	17.6M	17.926M	17.55M	17.93M

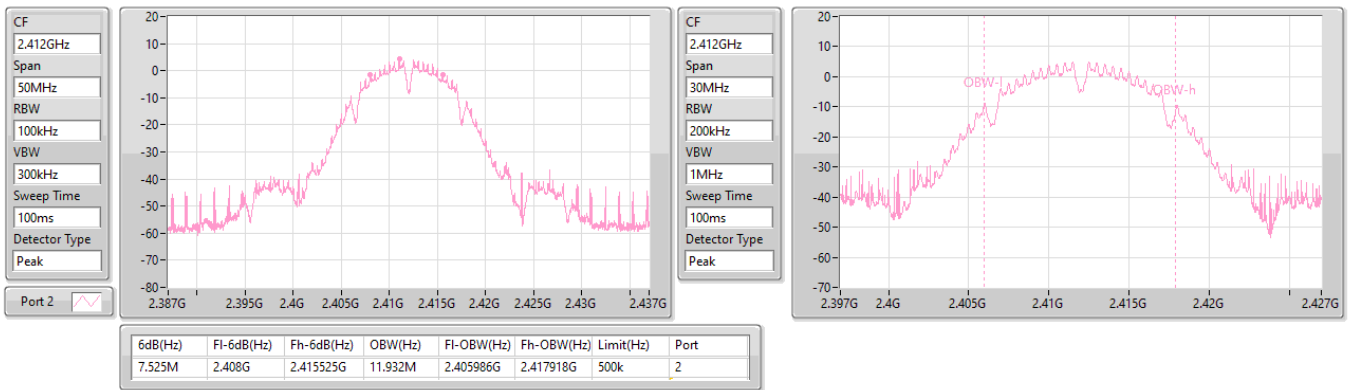
Port X-N dB = Port X 6dB down bandwidth;

Port X-OBW = Port X 99% occupied bandwidth

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

EBW

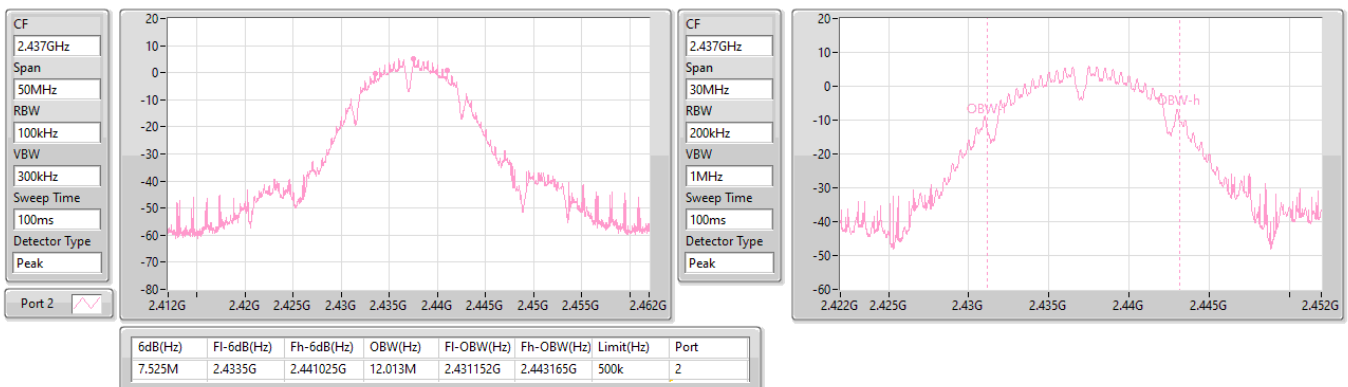
2412MHz



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

EBW

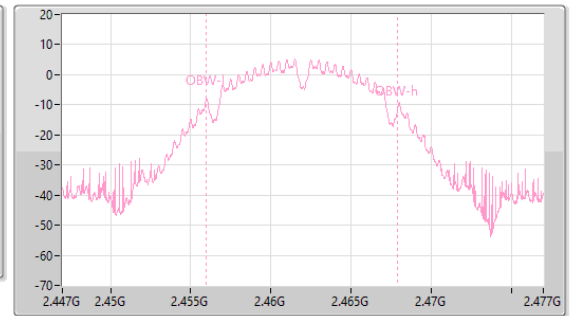
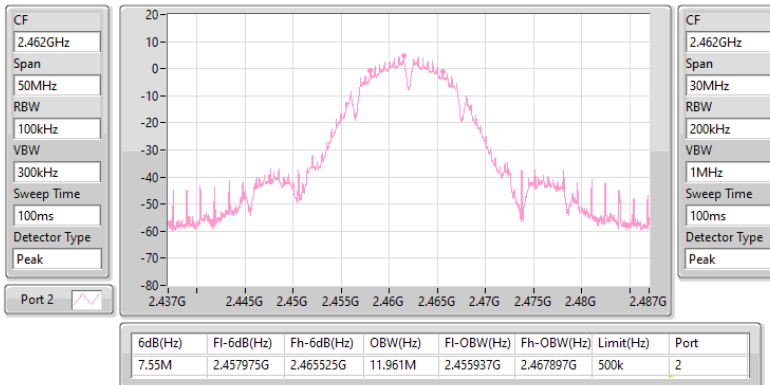
2437MHz



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

EBW

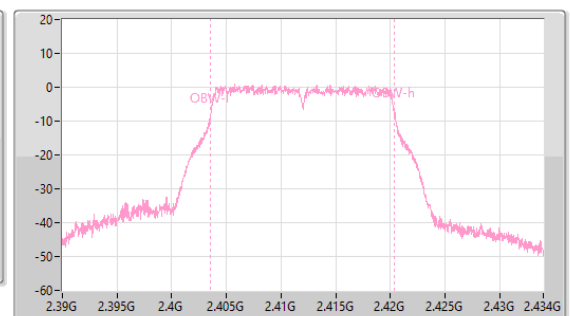
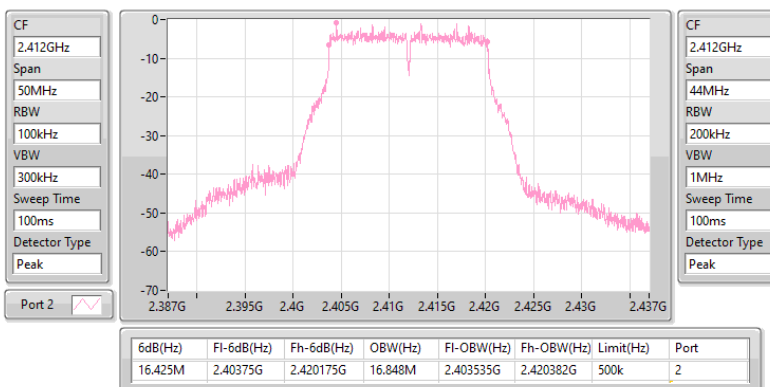
2462MHz



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

EBW

2412MHz

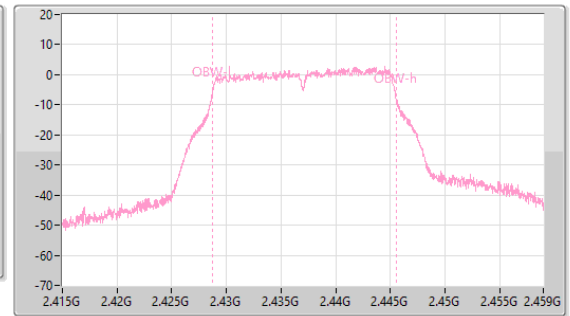
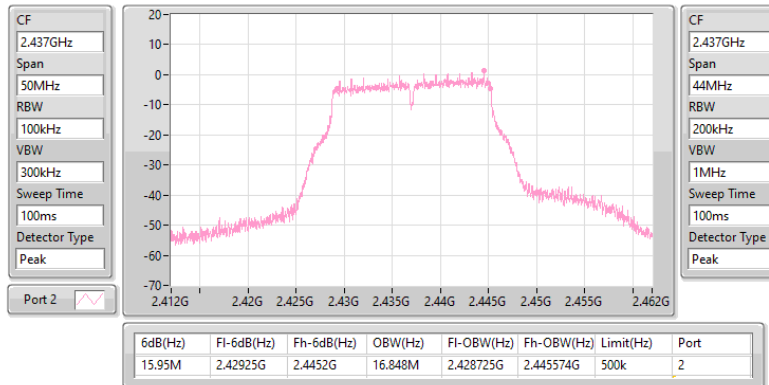




2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

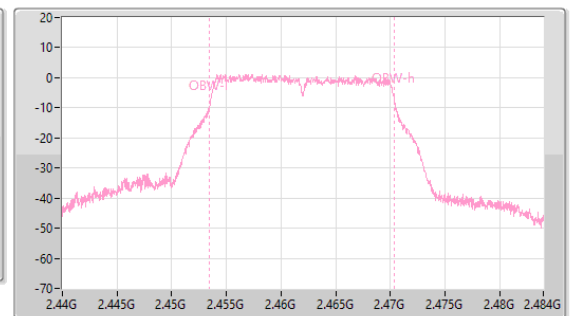
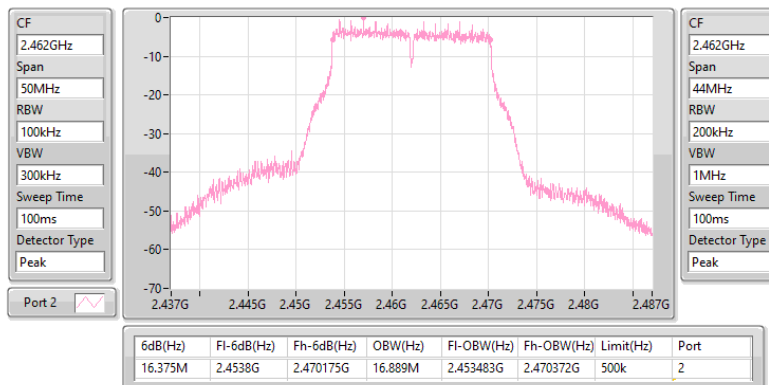
2437MHz



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

EBW

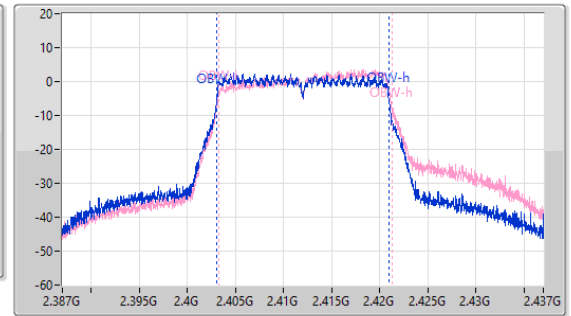
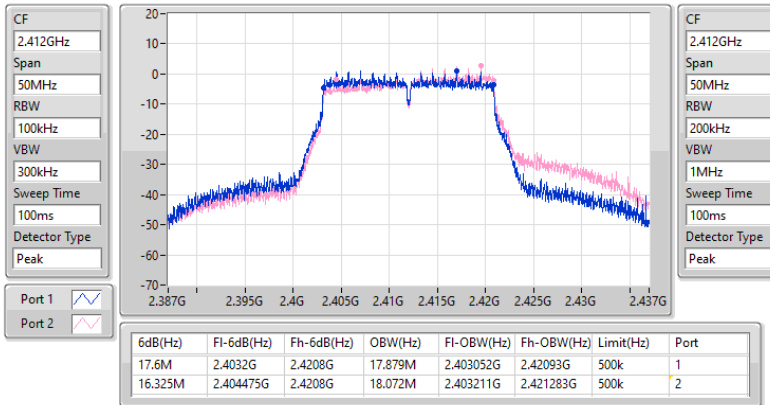
2462MHz



2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

EBW

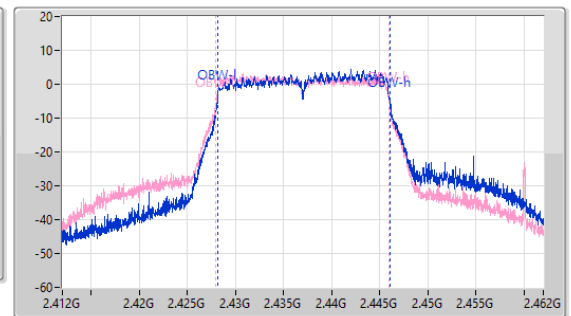
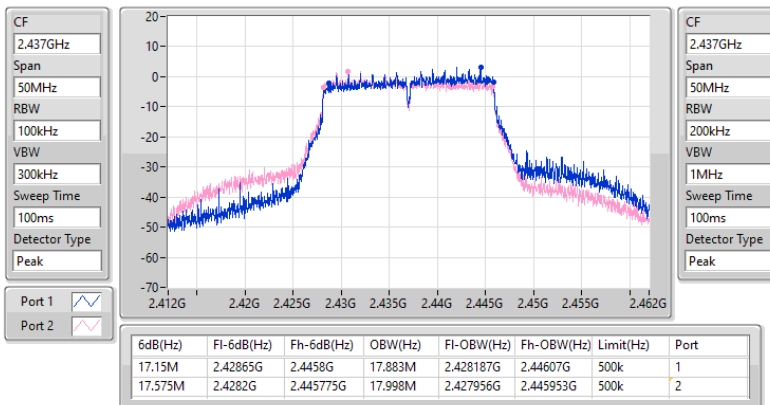
2412MHz



2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

EBW

2437MHz

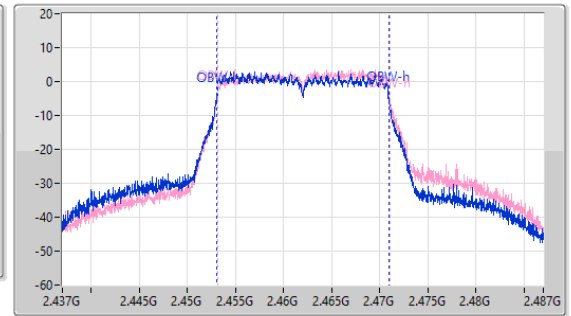
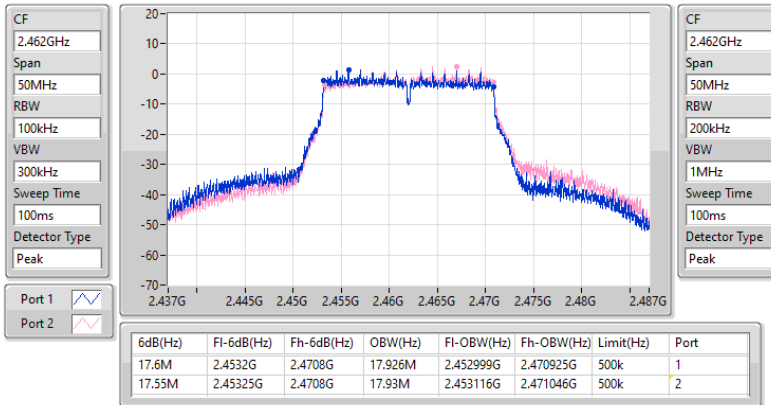




2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

EBW

2462MHz





Conducted Output Power(Peak)

Appendix B.1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	15.55	0.03589
802.11g_Nss1,(6Mbps)_1TX	21.50	0.14125
802.11n HT20_Nss2,(MCS8)_2TX	25.64	0.36644

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.09	-	15.08	15.08	30.00	18.17	36.00
2437MHz	Pass	3.09	-	15.55	15.55	30.00	18.64	36.00
2462MHz	Pass	3.09	-	15.08	15.08	30.00	18.17	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.09	-	21.5	21.50	30.00	24.59	36.00
2437MHz	Pass	3.09	-	21.27	21.27	30.00	24.36	36.00
2462MHz	Pass	3.09	-	20.69	20.69	30.00	23.78	36.00
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.65	21.45	21.68	24.58	30.00	27.23	36.00
2437MHz	Pass	2.65	22.61	22.65	25.64	30.00	28.29	36.00
2462MHz	Pass	2.65	21.76	21.51	24.65	30.00	27.30	36.00

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

Directional Gain for 802.11n = $10 \log[(10^{2.15/10} + 10^{3.09/10})/2] = 2.65$

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	12.87	0.01936
802.11g_Nss1,(6Mbps)_1TX	12.15	0.01641
802.11n HT20_Nss2,(MCS8)_2TX	16.78	0.04764

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.09	-	12.35	12.35	-	15.44	-
2437MHz	Pass	3.09	-	12.87	12.87	-	15.96	-
2462MHz	Pass	3.09	-	12.32	12.32	-	15.41	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.09	-	11.57	11.57	-	14.66	-
2437MHz	Pass	3.09	-	12.15	12.15	-	15.24	-
2462MHz	Pass	3.09	-	11.32	11.32	-	14.41	-
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.65	13.01	13.36	16.20	-	18.85	-
2437MHz	Pass	2.65	13.65	13.89	16.78	-	19.43	-
2462MHz	Pass	2.65	13.48	13.12	16.31	-	18.96	-

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

Directional Gain for 802.11n = $10 \log[(10^{2.15/10} + 10^{3.09/10})/2] = 2.65$

Note : Conducted average output power is for reference



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-8.57
802.11g_Nss1,(6Mbps)_1TX	-12.98
802.11n HT20_Nss2,(MCS8)_2TX	-9.70

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.09	-	-9.78	-9.78	8.00
2437MHz	Pass	3.09	-	-9.55	-9.55	8.00
2462MHz	Pass	3.09	-	-8.57	-8.57	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.09	-	-12.98	-12.98	8.00
2437MHz	Pass	3.09	-	-13.04	-13.04	8.00
2462MHz	Pass	3.09	-	-13.30	-13.30	8.00
802.11n HT20_Nss2,(MCS8)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.65	-12.29	-11.73	-10.65	8.00
2437MHz	Pass	2.65	-10.51	-12.12	-9.70	8.00
2462MHz	Pass	2.65	-12.56	-11.46	-10.42	8.00

DG = Directional Gain; RBW = 3kHz;

PD = Power density; Port X = Port X Power Density;

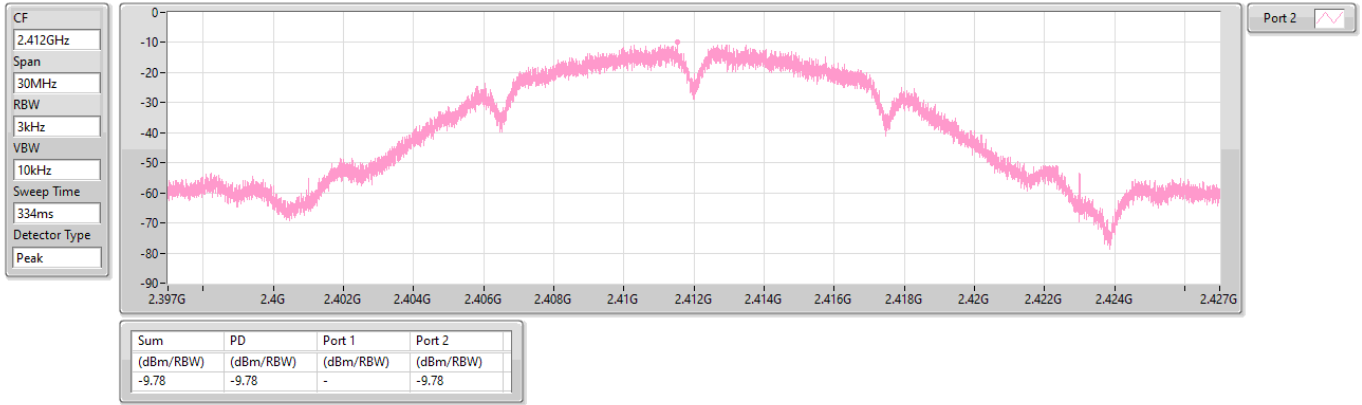
Directional Gain for 802.11n = $10 \log[(10^{2.15/10} + 10^{3.09/10})/2] = 2.65$



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

PSD

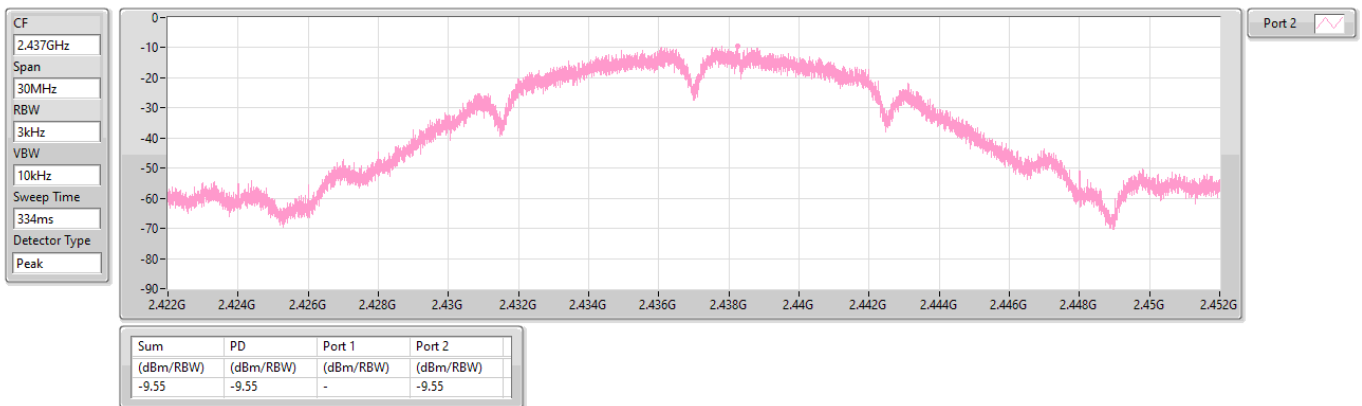
2412MHz



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

PSD

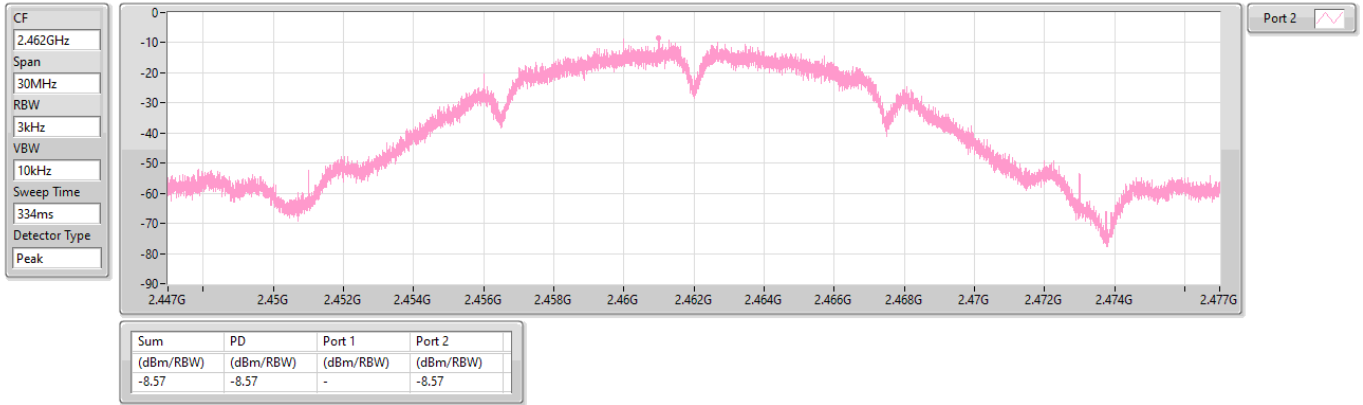
2437MHz



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

PSD

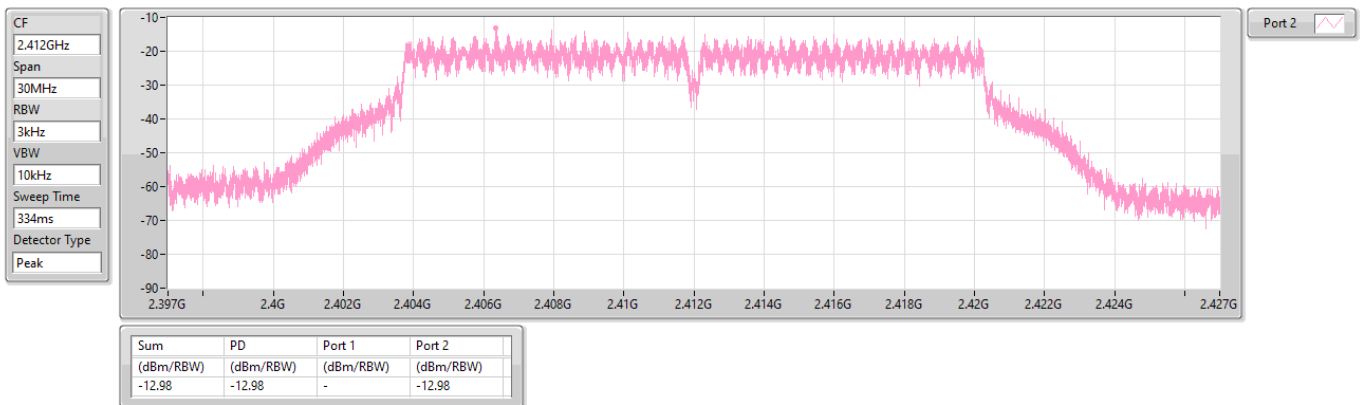
2462MHz



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

PSD

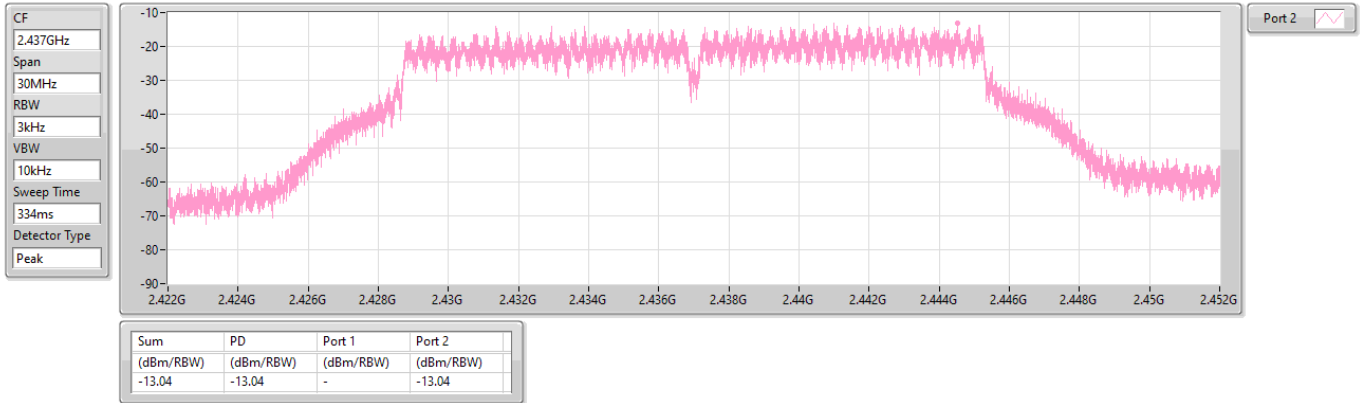
2412MHz



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

PSD

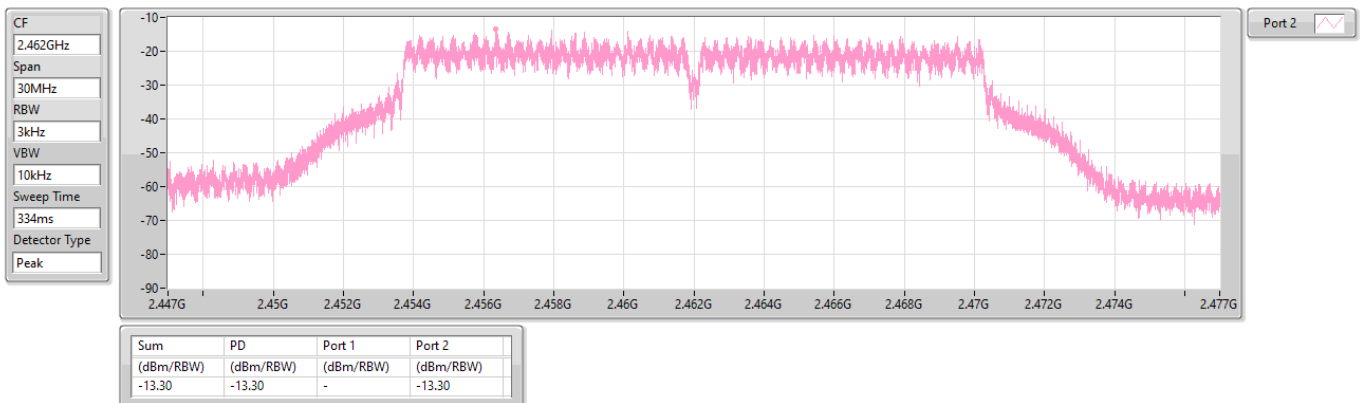
2437MHz



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

PSD

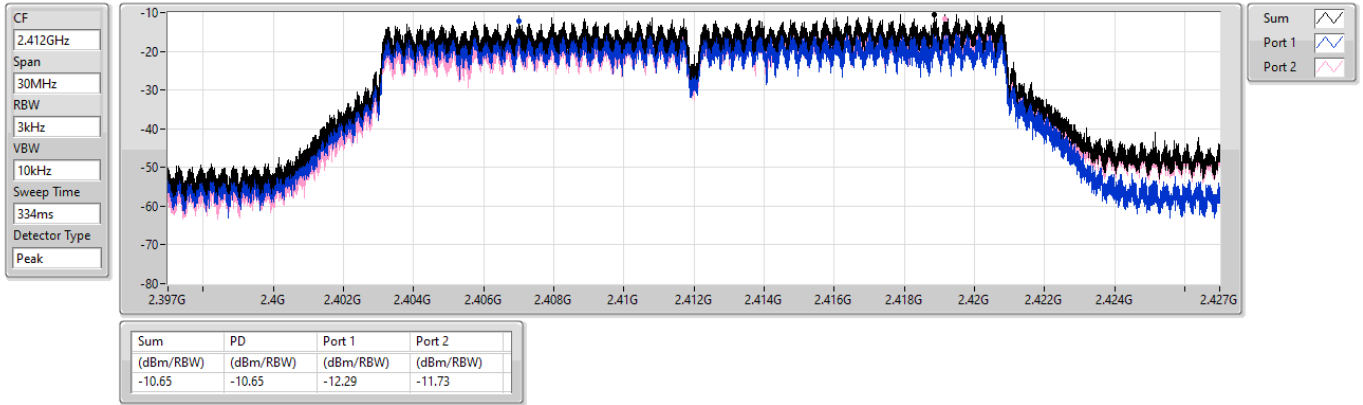
2462MHz



2.4-2.4835GHz_802.11n HT20_Nss2,(MCS8)_2TX

PSD

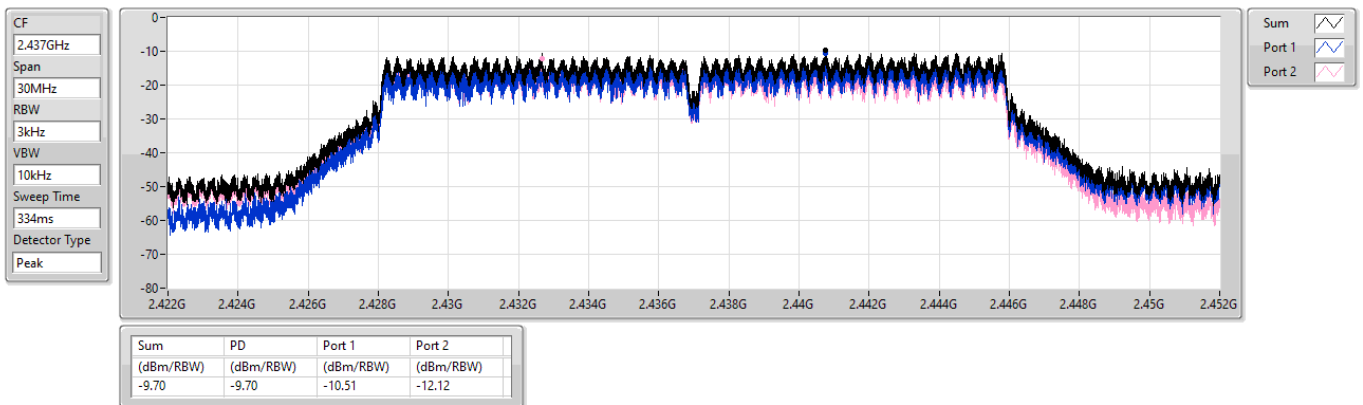
2412MHz



2.4-2.4835GHz_802.11n HT20_Nss2,(MCS8)_2TX

PSD

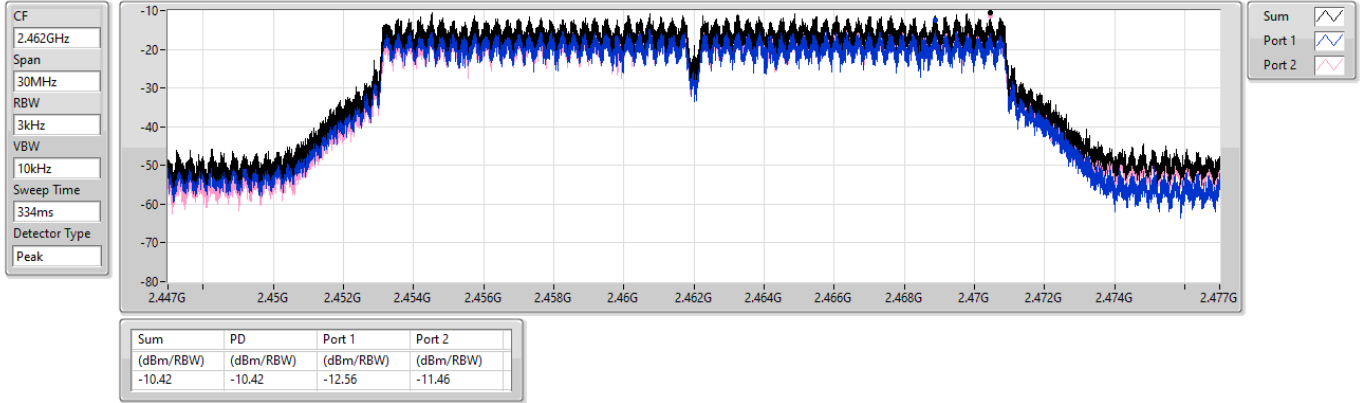
2437MHz



2.4-2.4835GHz_802.11n HT20_Nss2,(MCS8)_2TX

PSD

2462MHz





Summary

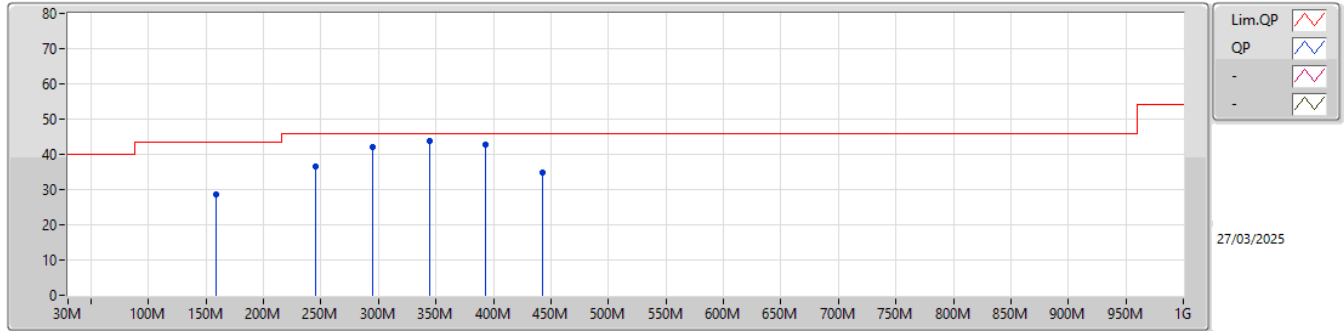
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	344.06M	43.74	46.00	-2.26	Horizontal



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.1

Mode 1



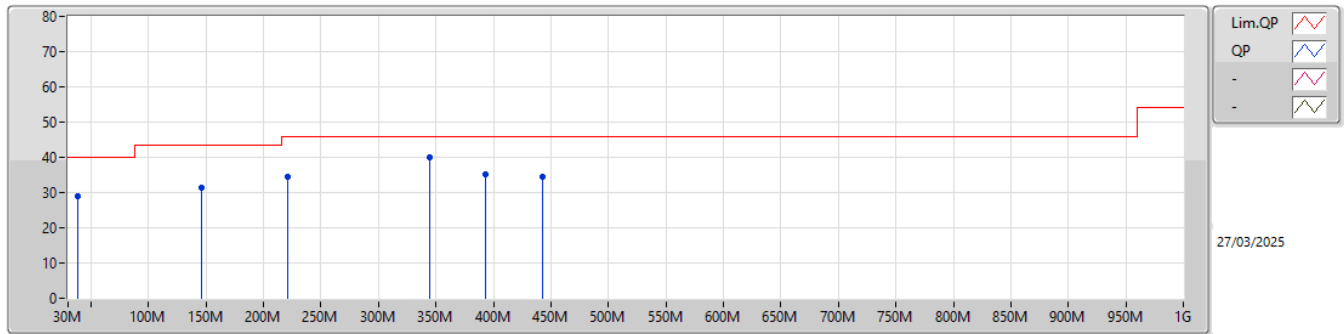
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	158.4M	28.70	43.50	-14.80	-8.52	3	Horizontal	-	-	-	37.22	18.34	1.24	28.10		
PK	245.7M	36.59	46.00	-9.41	-9.97	3	Horizontal	-	-	-	46.56	16.61	1.58	28.16		
PK	294.9M	42.11	46.00	-3.89	-8.32	3	Horizontal	-	-	-	50.43	18.10	1.78	28.20		
QP	344.06M	43.74	46.00	-2.26	-7.02	3	Horizontal	132	1.00	-	50.76	19.12	1.97	28.11		
PK	393.2M	42.79	46.00	-3.21	-5.43	3	Horizontal	-	-	-	48.22	20.36	2.21	28.00		
PK	442.4M	34.82	46.00	-11.18	-4.02	3	Horizontal	-	-	-	38.84	21.55	2.39	27.96		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.1

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	38.4M	29.11	40.00	-10.89	-9.55	3	Vertical	-	-	-	38.66	17.94	0.53	28.02		
PK	146.57M	31.51	43.50	-11.99	-8.60	3	Vertical	-	-	-	40.11	18.31	1.18	28.09		
PK	221.2M	34.61	46.00	-11.39	-11.96	3	Vertical	-	-	-	46.57	14.68	1.50	28.14		
PK	344.1M	40.01	46.00	-5.99	-7.02	3	Vertical	-	-	-	47.03	19.12	1.97	28.11		
PK	393.2M	35.21	46.00	-10.79	-5.43	3	Vertical	-	-	-	40.64	20.36	2.21	28.00		
PK	442.4M	34.49	46.00	-11.51	-4.02	3	Vertical	-	-	-	38.51	21.55	2.39	27.96		



Unwanted Emissions into Restricted Frequency Bands Above 1GHz

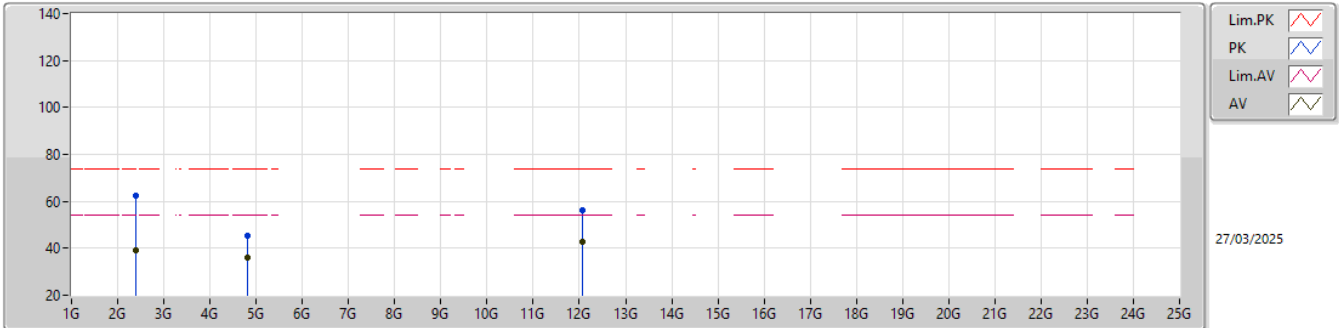
Appendix D.2

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	PK	2.39G	71.99	74.00	-2.01	3	Vertical	231	1.53	-
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	2.4835G	44.14	54.00	-9.86	3	Vertical	226	1.00	-
802.11n HT20_Nss2,(MCS8)_2TX	Pass	AV	2.4835G	53.82	54.00	-0.18	3	Vertical	224	1.00	-

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

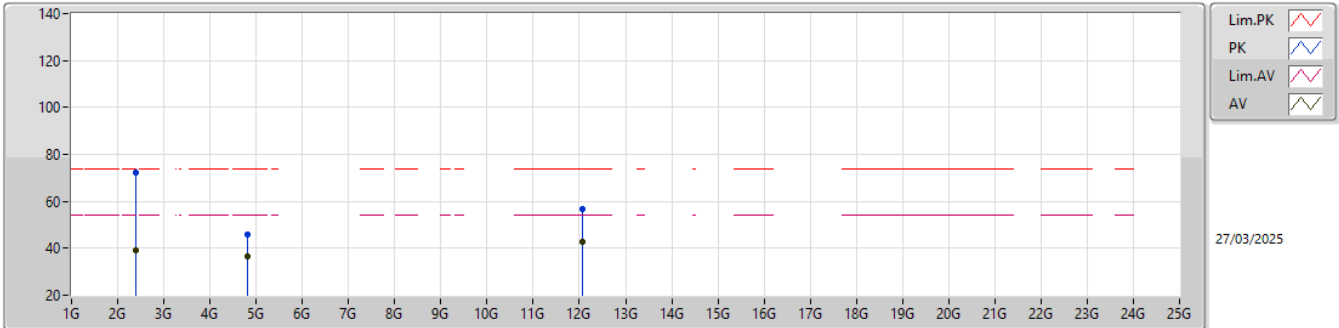
2412MHz_TX



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	2.39G	38.88	54.00	-15.12	42.75	3	Horizontal	311	2.86	-	27.60	4.95	36.42				
PK	2.39G	62.26	74.00	-11.74	66.13	3	Horizontal	311	2.86	-	27.60	4.95	36.42				
AV	4.824G	35.90	54.00	-18.10	36.16	3	Horizontal	4	1.00	-	31.20	6.75	38.21				
PK	4.824G	45.50	74.00	-28.50	45.76	3	Horizontal	4	1.00	-	31.20	6.75	38.21				
AV	12.06G	42.76	54.00	-11.24	35.46	3	Horizontal	120	1.00	-	38.92	10.56	42.18				
PK	12.06G	56.41	74.00	-17.59	49.11	3	Horizontal	120	1.00	-	38.92	10.56	42.18				

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	2.39G	39.20	54.00	-14.80	43.07	3	Vertical	231	1.53	-	27.60	4.95	36.42			
PK	2.39G	71.99	74.00	-2.01	75.86	3	Vertical	231	1.53	-	27.60	4.95	36.42			
AV	4.824G	36.31	54.00	-17.69	36.57	3	Vertical	88	1.00	-	31.20	6.75	38.21			
PK	4.824G	45.62	74.00	-28.38	45.88	3	Vertical	88	1.00	-	31.20	6.75	38.21			
AV	12.06G	42.81	54.00	-11.19	35.51	3	Vertical	102	1.00	-	38.92	10.56	42.18			
PK	12.06G	56.52	74.00	-17.48	49.22	3	Vertical	102	1.00	-	38.92	10.56	42.18			

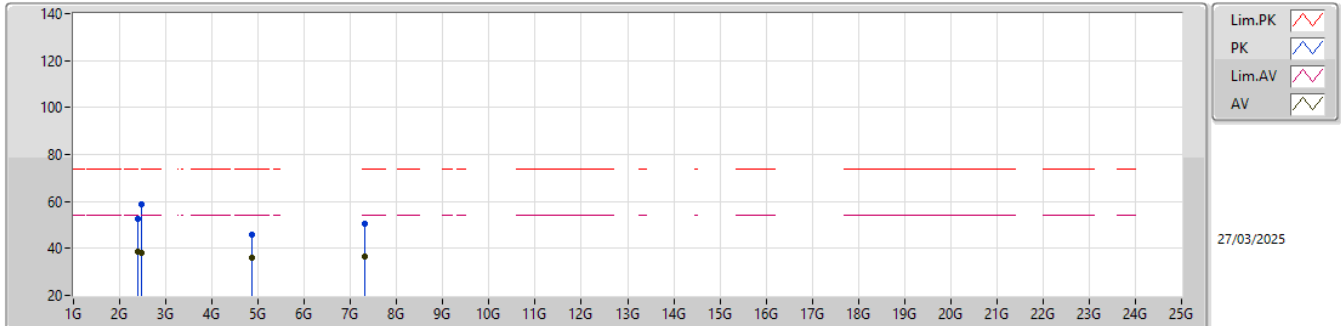


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.2

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

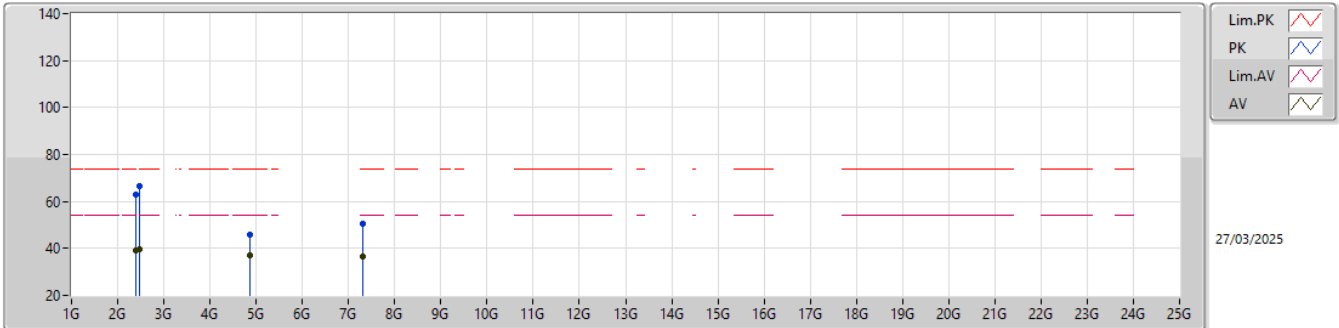
2437MHz_TX



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	2.39G	38.64	54.00	-15.36	42.51	3	Horizontal	302	2.93	-	27.60	4.95	36.42			
PK	2.39G	52.68	74.00	-21.32	56.55	3	Horizontal	302	2.93	-	27.60	4.95	36.42			
AV	2.4835G	38.28	54.00	-15.72	42.24	3	Horizontal	302	2.93	-	27.54	5.01	36.51			
PK	2.4835G	58.63	74.00	-15.37	62.59	3	Horizontal	302	2.93	-	27.54	5.01	36.51			
AV	4.874G	36.19	54.00	-17.81	36.45	3	Horizontal	5	1.00	-	31.20	6.78	38.24			
PK	4.874G	45.76	74.00	-28.24	46.02	3	Horizontal	5	1.00	-	31.20	6.78	38.24			
AV	7.311G	36.61	54.00	-17.39	31.12	3	Horizontal	108	1.00	-	36.40	8.24	39.15			
PK	7.311G	50.60	74.00	-23.40	45.11	3	Horizontal	108	1.00	-	36.40	8.24	39.15			

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

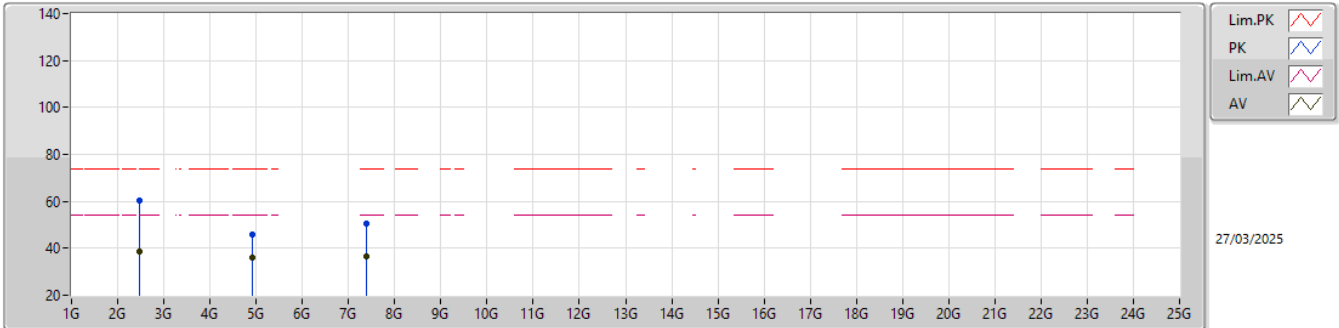
2437MHz_TX



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	2.39G	39.32	54.00	-14.68	43.19	3	Vertical	227	1.30	-	27.60	4.95	36.42			
PK	2.39G	63.12	74.00	-10.88	66.99	3	Vertical	227	1.30	-	27.60	4.95	36.42			
AV	2.4835G	39.73	54.00	-14.27	43.69	3	Vertical	227	1.30	-	27.54	5.01	36.51			
PK	2.4835G	66.56	74.00	-7.44	70.52	3	Vertical	227	1.30	-	27.54	5.01	36.51			
AV	4.874G	36.98	54.00	-17.02	37.24	3	Vertical	86	1.00	-	31.20	6.78	38.24			
PK	4.874G	46.06	74.00	-27.94	46.32	3	Vertical	86	1.00	-	31.20	6.78	38.24			
AV	7.311G	36.70	54.00	-17.30	31.21	3	Vertical	126	1.00	-	36.40	8.24	39.15			
PK	7.311G	50.65	74.00	-23.35	45.16	3	Vertical	126	1.00	-	36.40	8.24	39.15			

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

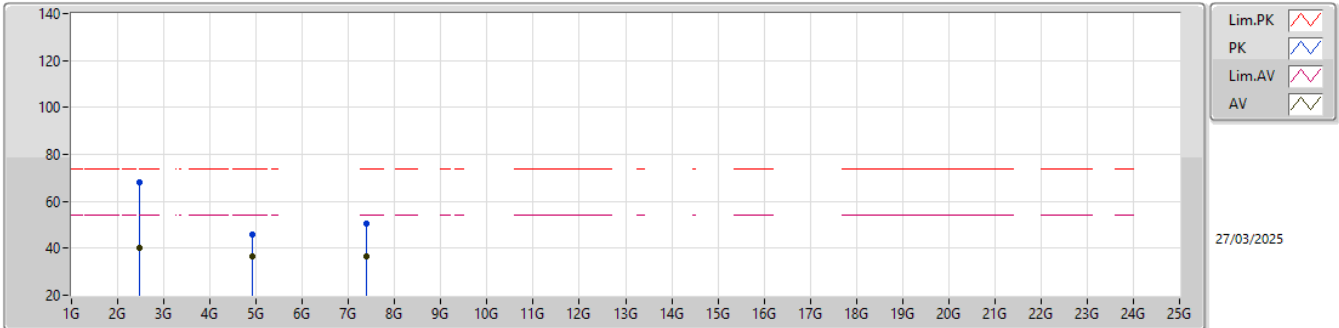
2462MHz_TX



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	2.4835G	38.61	54.00	-15.39	42.57	3	Horizontal	308	2.84	-	27.54	5.01	36.51			
PK	2.4835G	60.36	74.00	-13.64	64.32	3	Horizontal	308	2.84	-	27.54	5.01	36.51			
AV	4.924G	36.10	54.00	-17.90	36.27	3	Horizontal	24	1.00	-	31.30	6.81	38.28			
PK	4.924G	45.94	74.00	-28.06	46.11	3	Horizontal	24	1.00	-	31.30	6.81	38.28			
AV	7.386G	36.56	54.00	-17.44	31.20	3	Horizontal	123	1.00	-	36.33	8.27	39.24			
PK	7.386G	50.63	74.00	-23.37	45.27	3	Horizontal	123	1.00	-	36.33	8.27	39.24			

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

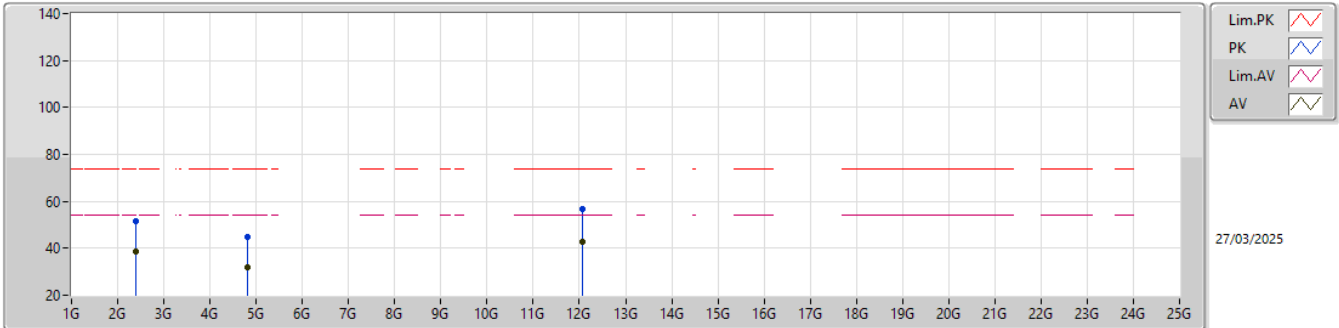
2462MHz_TX



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	2.4835G	39.97	54.00	-14.03	43.93	3	Vertical	228	1.45	-	27.54	5.01	36.51			
PK	2.4835G	68.19	74.00	-5.81	72.15	3	Vertical	228	1.45	-	27.54	5.01	36.51			
AV	4.924G	36.77	54.00	-17.23	36.94	3	Vertical	85	1.00	-	31.30	6.81	38.28			
PK	4.924G	46.10	74.00	-27.90	46.27	3	Vertical	85	1.00	-	31.30	6.81	38.28			
AV	7.386G	36.63	54.00	-17.37	31.27	3	Vertical	117	1.00	-	36.33	8.27	39.24			
PK	7.386G	50.59	74.00	-23.41	45.23	3	Vertical	117	1.00	-	36.33	8.27	39.24			

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

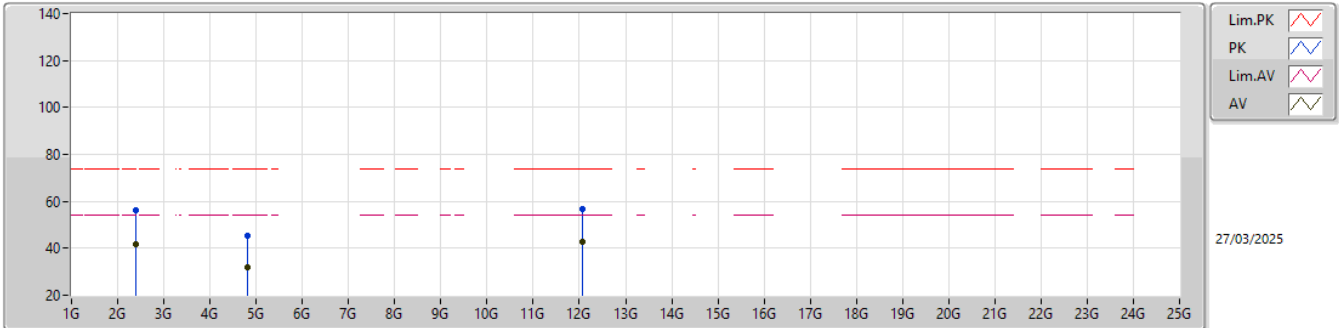
2412MHz_TX



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	2.39G	38.51	54.00	-15.49	42.38	3	Horizontal	316	2.99	-	27.60	4.95	36.42			
PK	2.39G	51.36	74.00	-22.64	55.23	3	Horizontal	316	2.99	-	27.60	4.95	36.42			
AV	4.824G	31.76	54.00	-22.24	32.02	3	Horizontal	108	1.00	-	31.20	6.75	38.21			
PK	4.824G	45.03	74.00	-28.97	45.29	3	Horizontal	108	1.00	-	31.20	6.75	38.21			
AV	12.06G	42.89	54.00	-11.11	35.59	3	Horizontal	245	1.00	-	38.92	10.56	42.18			
PK	12.06G	56.63	74.00	-17.37	49.33	3	Horizontal	245	1.00	-	38.92	10.56	42.18			

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

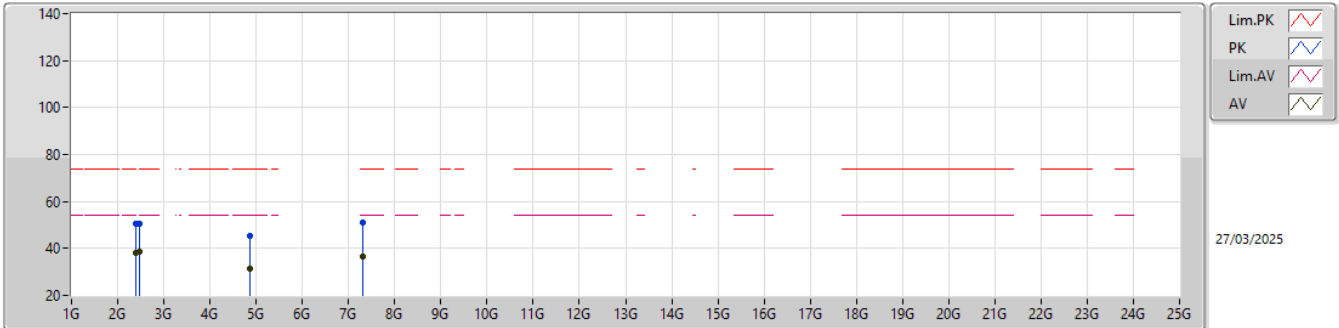
2412MHz_TX



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	2.39G	41.56	54.00	-12.44	45.43	3	Vertical	234	1.17	-	27.60	4.95	36.42			
PK	2.39G	56.11	74.00	-17.89	59.98	3	Vertical	234	1.17	-	27.60	4.95	36.42			
AV	4.824G	31.94	54.00	-22.06	32.20	3	Vertical	105	1.00	-	31.20	6.75	38.21			
PK	4.824G	45.32	74.00	-28.68	45.58	3	Vertical	105	1.00	-	31.20	6.75	38.21			
AV	12.06G	42.81	54.00	-11.19	35.51	3	Vertical	208	1.00	-	38.92	10.56	42.18			
PK	12.06G	56.51	74.00	-17.49	49.21	3	Vertical	208	1.00	-	38.92	10.56	42.18			

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

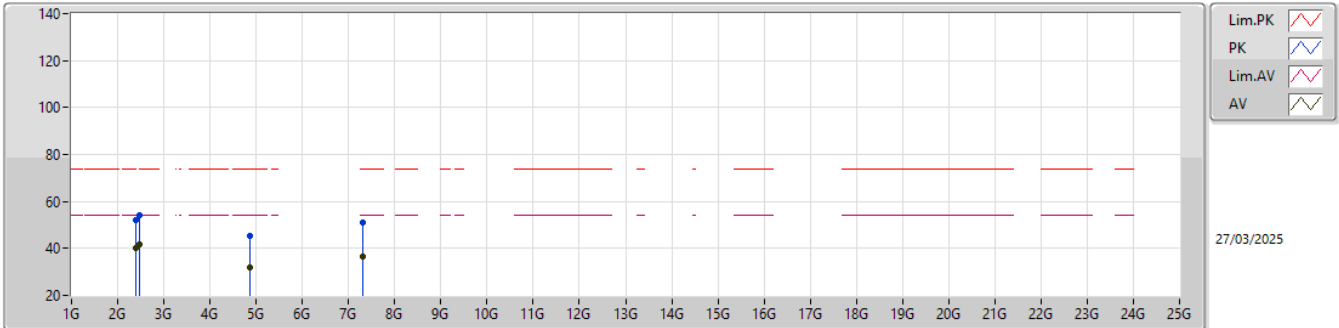
2437MHz_TX



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	2.39G	37.97	54.00	-16.03	41.84	3	Horizontal	310	2.90	-	27.60	4.95	36.42			
PK	2.39G	50.51	74.00	-23.49	54.38	3	Horizontal	310	2.90	-	27.60	4.95	36.42			
AV	2.4835G	38.66	54.00	-15.34	42.62	3	Horizontal	310	2.90	-	27.54	5.01	36.51			
PK	2.4835G	50.28	74.00	-23.72	54.24	3	Horizontal	310	2.90	-	27.54	5.01	36.51			
AV	4.874G	31.49	54.00	-22.51	31.75	3	Horizontal	205	1.00	-	31.20	6.78	38.24			
PK	4.874G	45.10	74.00	-28.90	45.36	3	Horizontal	205	1.00	-	31.20	6.78	38.24			
AV	7.311G	36.77	54.00	-17.23	31.28	3	Horizontal	103	1.00	-	36.40	8.24	39.15			
PK	7.311G	51.14	74.00	-22.86	45.65	3	Horizontal	103	1.00	-	36.40	8.24	39.15			

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

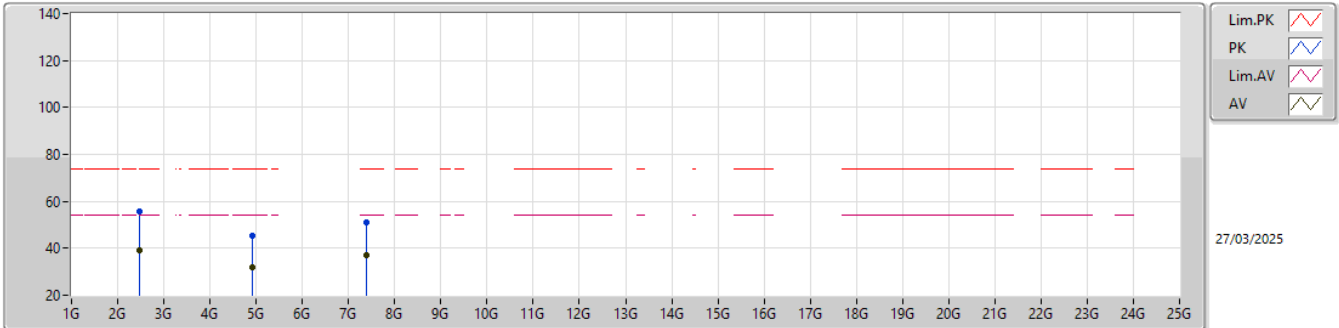
2437MHz_TX



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	2.39G	40.10	54.00	-13.90	43.97	3	Vertical	229	1.39	-	27.60	4.95	36.42			
PK	2.39G	51.85	74.00	-22.15	55.72	3	Vertical	229	1.39	-	27.60	4.95	36.42			
AV	2.4835G	41.62	54.00	-12.38	45.58	3	Vertical	229	1.39	-	27.54	5.01	36.51			
PK	2.4835G	53.93	74.00	-20.07	57.89	3	Vertical	229	1.39	-	27.54	5.01	36.51			
AV	4.874G	31.90	54.00	-22.10	32.16	3	Vertical	241	1.00	-	31.20	6.78	38.24			
PK	4.874G	45.41	74.00	-28.59	45.67	3	Vertical	241	1.00	-	31.20	6.78	38.24			
AV	7.311G	36.74	54.00	-17.26	31.25	3	Vertical	102	1.00	-	36.40	8.24	39.15			
PK	7.311G	51.00	74.00	-23.00	45.51	3	Vertical	102	1.00	-	36.40	8.24	39.15			

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

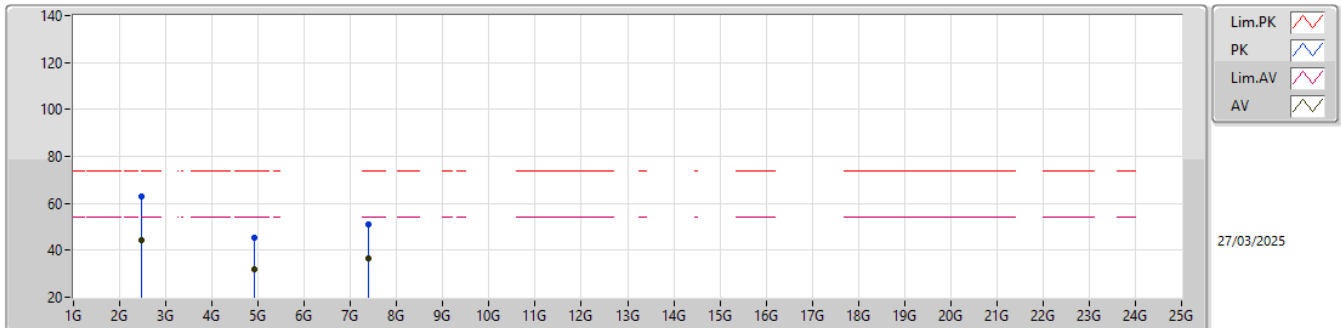
2462MHz_TX



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	2.4835G	39.30	54.00	-14.70	43.26	3	Horizontal	318	2.89	-	27.54	5.01	36.51			
PK	2.4835G	55.50	74.00	-18.50	59.46	3	Horizontal	318	2.89	-	27.54	5.01	36.51			
AV	4.924G	31.82	54.00	-22.18	31.99	3	Horizontal	248	1.00	-	31.30	6.81	38.28			
PK	4.924G	45.25	74.00	-28.75	45.42	3	Horizontal	248	1.00	-	31.30	6.81	38.28			
AV	7.386G	36.88	54.00	-17.12	31.52	3	Horizontal	103	1.00	-	36.33	8.27	39.24			
PK	7.386G	50.93	74.00	-23.07	45.57	3	Horizontal	103	1.00	-	36.33	8.27	39.24			

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

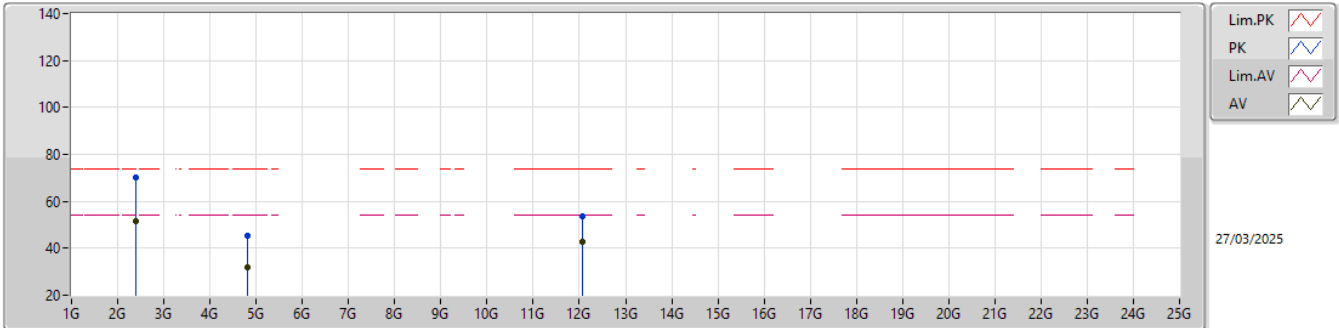
2462MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)				
AV	2.4835G	44.14	54.00	-9.86	48.10	3	Vertical	226	1.00	-	27.54	5.01	36.51				
PK	2.4835G	62.75	74.00	-11.25	66.71	3	Vertical	226	1.00	-	27.54	5.01	36.51				
AV	4.924G	31.96	54.00	-22.04	32.13	3	Vertical	104	1.00	-	31.30	6.81	38.28				
PK	4.924G	45.26	74.00	-28.74	45.43	3	Vertical	104	1.00	-	31.30	6.81	38.28				
AV	7.386G	36.66	54.00	-17.34	31.30	3	Vertical	235	1.00	-	36.33	8.27	39.24				
PK	7.386G	50.78	74.00	-23.22	45.42	3	Vertical	235	1.00	-	36.33	8.27	39.24				

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

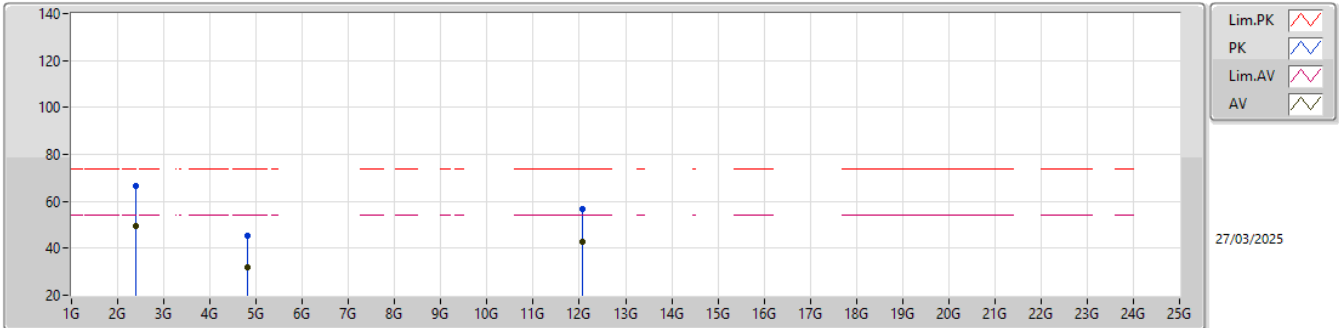
2412MHz_TX



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	2.39G	51.62	54.00	-2.38	55.49	3	Horizontal	41	2.63	-	27.60	4.95	36.42			
PK	2.39G	69.94	74.00	-4.06	73.81	3	Horizontal	41	2.63	-	27.60	4.95	36.42			
AV	4.824G	31.87	54.00	-22.13	32.13	3	Horizontal	158	1.00	-	31.20	6.75	38.21			
PK	4.824G	45.12	74.00	-28.88	45.38	3	Horizontal	158	1.00	-	31.20	6.75	38.21			
AV	12.06G	42.74	54.00	-11.26	35.44	3	Horizontal	223	1.00	-	38.92	10.56	42.18			
PK	12.06G	53.81	74.00	-20.19	46.51	3	Horizontal	223	1.00	-	38.92	10.56	42.18			

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

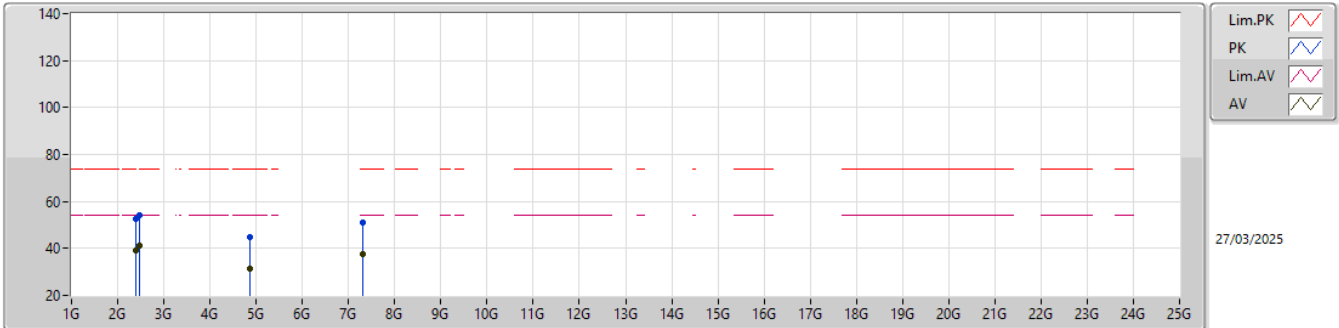
2412MHz_TX



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	2.39G	49.70	54.00	-4.30	53.57	3	Vertical	229	1.17	-	27.60	4.95	36.42			
PK	2.39G	66.65	74.00	-7.35	70.52	3	Vertical	229	1.17	-	27.60	4.95	36.42			
AV	4.824G	31.87	54.00	-22.13	32.13	3	Vertical	124	1.00	-	31.20	6.75	38.21			
PK	4.824G	45.38	74.00	-28.62	45.64	3	Vertical	124	1.00	-	31.20	6.75	38.21			
AV	12.06G	42.82	54.00	-11.18	35.52	3	Vertical	208	1.00	-	38.92	10.56	42.18			
PK	12.06G	56.96	74.00	-17.04	49.66	3	Vertical	208	1.00	-	38.92	10.56	42.18			

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

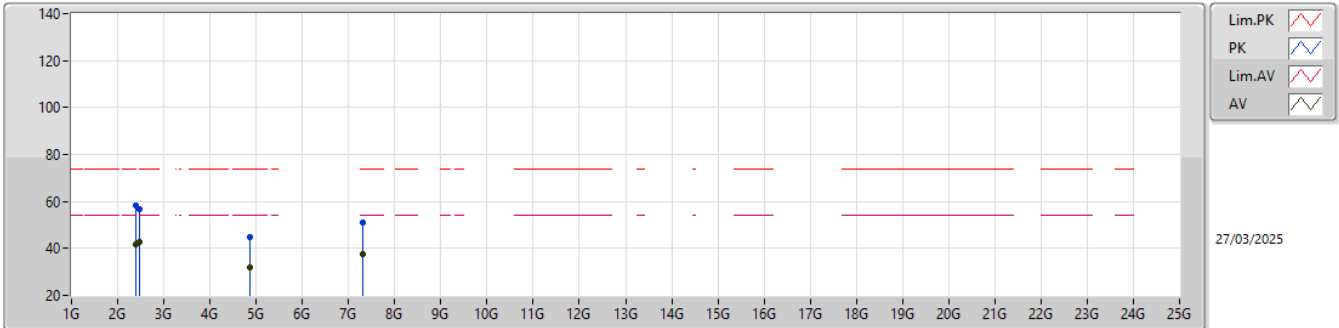
2437MHz_TX



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	2.39G	39.17	54.00	-14.83	43.04	3	Horizontal	50	2.90	-	27.60	4.95	36.42			
PK	2.39G	52.34	74.00	-21.66	56.21	3	Horizontal	50	2.90	-	27.60	4.95	36.42			
AV	2.4835G	41.12	54.00	-12.88	45.08	3	Horizontal	50	2.90	-	27.54	5.01	36.51			
PK	2.4835G	54.18	74.00	-19.82	58.14	3	Horizontal	50	2.90	-	27.54	5.01	36.51			
AV	4.874G	31.58	54.00	-22.42	31.84	3	Horizontal	115	1.00	-	31.20	6.78	38.24			
PK	4.874G	45.03	74.00	-28.97	45.29	3	Horizontal	115	1.00	-	31.20	6.78	38.24			
AV	7.311G	37.62	54.00	-16.38	32.13	3	Horizontal	203	1.00	-	36.40	8.24	39.15			
PK	7.311G	51.06	74.00	-22.94	45.57	3	Horizontal	203	1.00	-	36.40	8.24	39.15			

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

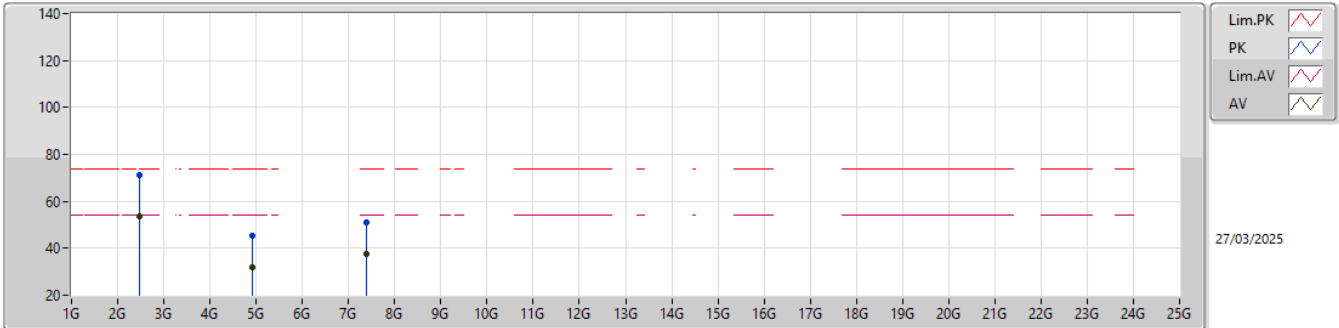
2437MHz_TX



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	2.39G	41.93	54.00	-12.07	45.80	3	Vertical	232	1.38	-	27.60	4.95	36.42			
PK	2.39G	58.34	74.00	-15.66	62.21	3	Vertical	232	1.38	-	27.60	4.95	36.42			
AV	2.4835G	42.90	54.00	-11.10	46.86	3	Vertical	232	1.38	-	27.54	5.01	36.51			
PK	2.4835G	56.85	74.00	-17.15	60.81	3	Vertical	232	1.38	-	27.54	5.01	36.51			
AV	4.874G	31.86	54.00	-22.14	32.12	3	Vertical	126	1.00	-	31.20	6.78	38.24			
PK	4.874G	45.03	74.00	-28.97	45.29	3	Vertical	126	1.00	-	31.20	6.78	38.24			
AV	7.311G	37.57	54.00	-16.43	32.08	3	Vertical	228	1.00	-	36.40	8.24	39.15			
PK	7.311G	51.13	74.00	-22.87	45.64	3	Vertical	228	1.00	-	36.40	8.24	39.15			

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

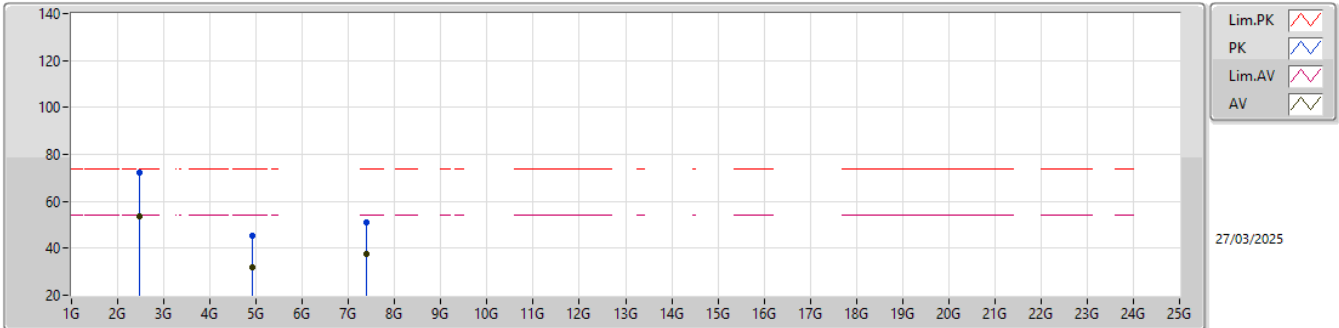
2462MHz_TX



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	2.4835G	53.41	54.00	-0.59	57.37	3	Horizontal	45	2.90	-	27.54	5.01	36.51			
PK	2.4835G	71.14	74.00	-2.86	75.10	3	Horizontal	45	2.90	-	27.54	5.01	36.51			
AV	4.924G	31.94	54.00	-22.06	32.11	3	Horizontal	125	1.00	-	31.30	6.81	38.28			
PK	4.924G	45.19	74.00	-28.81	45.36	3	Horizontal	125	1.00	-	31.30	6.81	38.28			
AV	7.386G	37.61	54.00	-16.39	32.25	3	Horizontal	248	1.00	-	36.33	8.27	39.24			
PK	7.386G	50.93	74.00	-23.07	45.57	3	Horizontal	248	1.00	-	36.33	8.27	39.24			

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

2462MHz_TX

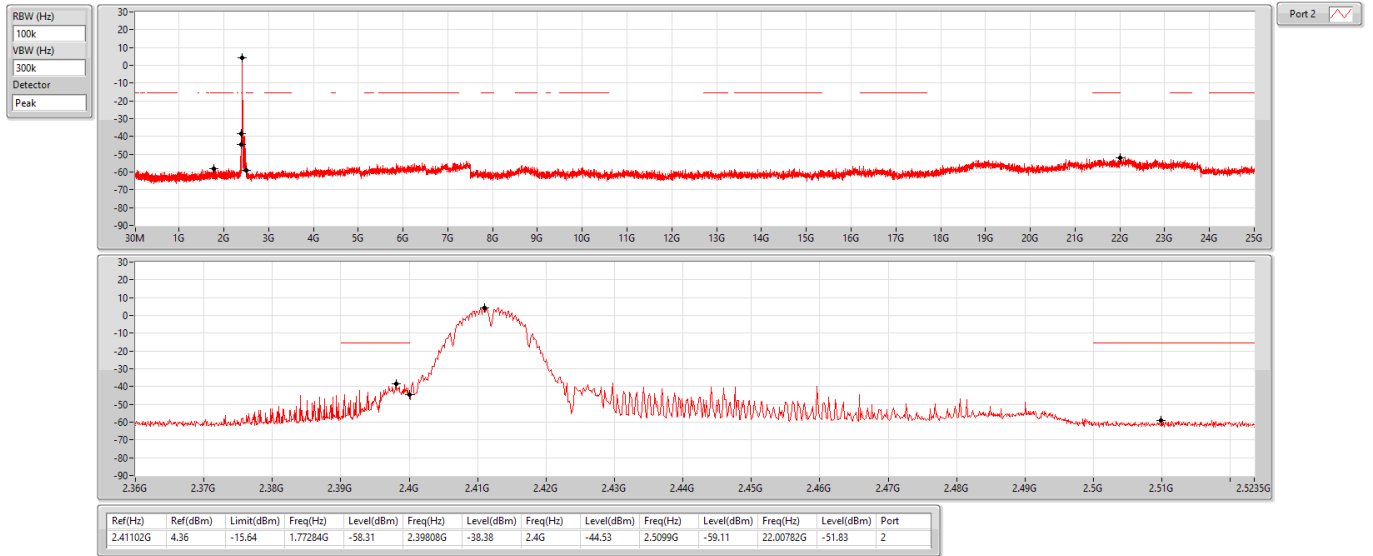


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	2.4835G	53.82	54.00	-0.18	57.78	3	Vertical	224	1.00	-	27.54	5.01	36.51			
PK	2.4835G	72.44	74.00	-1.56	76.40	3	Vertical	224	1.00	-	27.54	5.01	36.51			
AV	4.924G	32.09	54.00	-21.91	32.26	3	Vertical	156	1.00	-	31.30	6.81	38.28			
PK	4.924G	45.34	74.00	-28.66	45.51	3	Vertical	156	1.00	-	31.30	6.81	38.28			
AV	7.386G	37.47	54.00	-16.53	32.11	3	Vertical	271	1.00	-	36.33	8.27	39.24			
PK	7.386G	50.94	74.00	-23.06	45.58	3	Vertical	271	1.00	-	36.33	8.27	39.24			

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

CSEndB

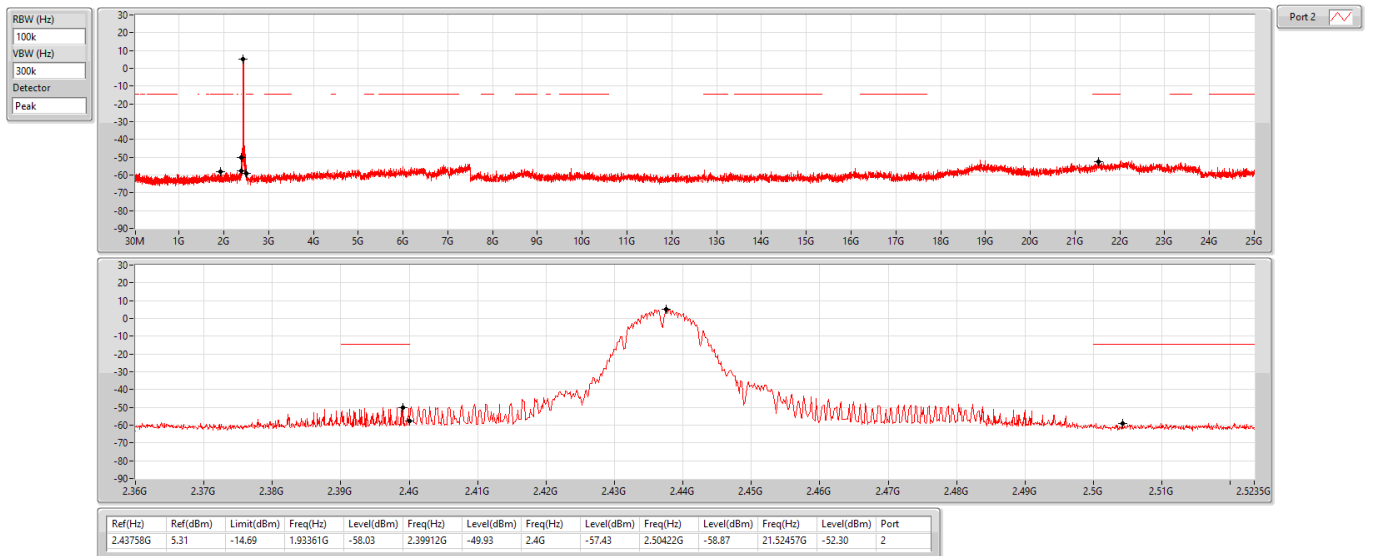
2412MHz



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

CSEndB

2437MHz

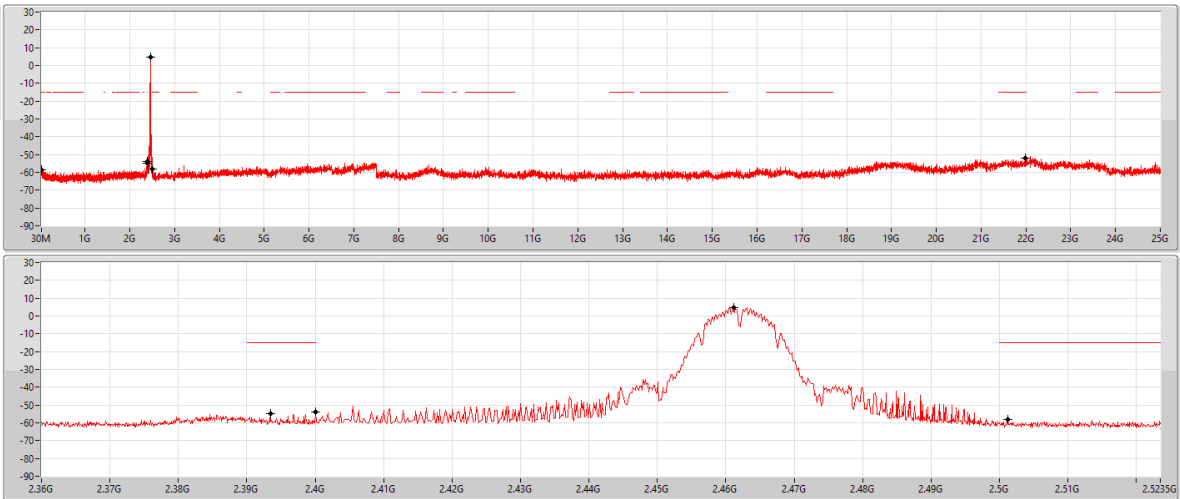


2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSEndB

2462MHz

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



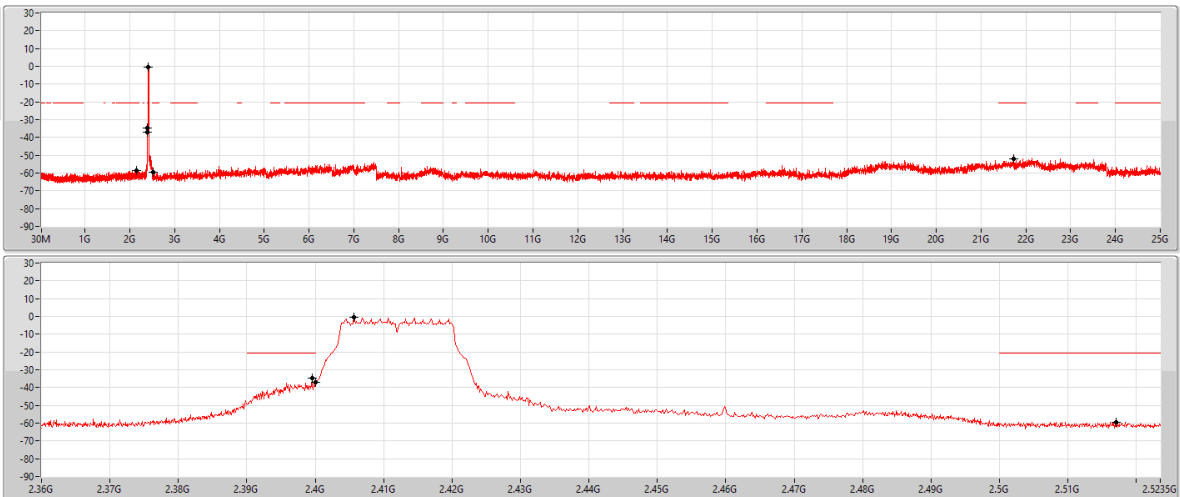
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2.46112G	4.78	-15.22	33.5M	-58.43	2.39344G	-54.92	2.4G	-53.75	2.50118G	-58.06	21.99658G	-52.25	2

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

CSEndB

2412MHz

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

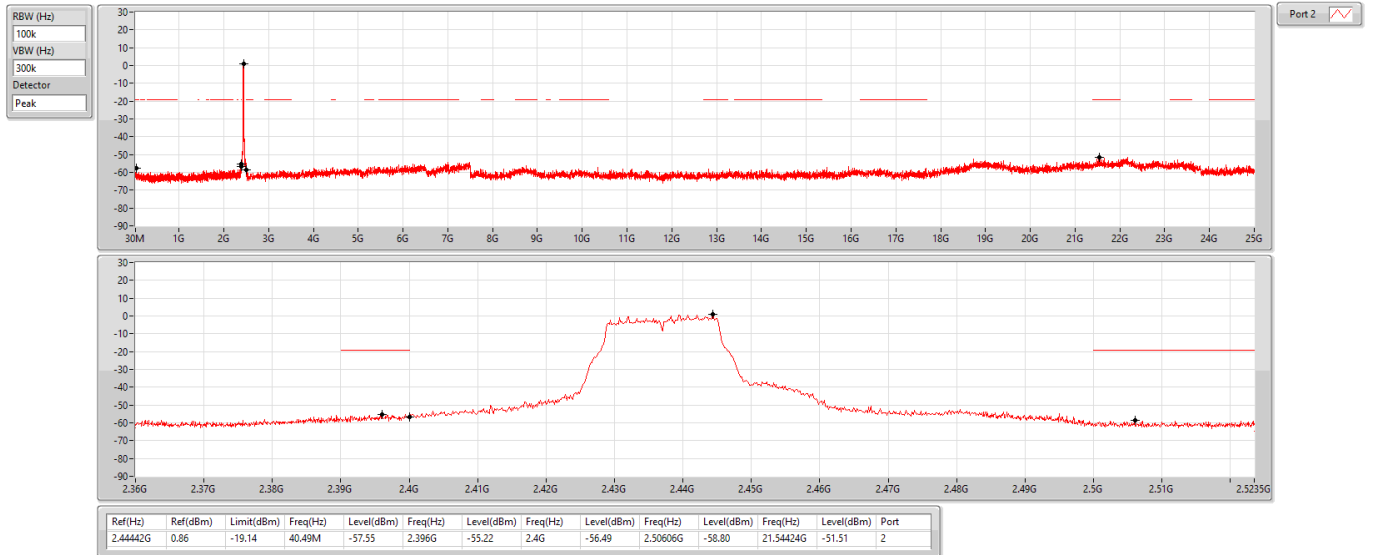


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40568G	-0.53	-20.53	2.14448G	-58.73	2.39952G	-34.89	2.4G	-36.92	2.5171G	-59.34	21.72405G	-52.12	2

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

CSEndB

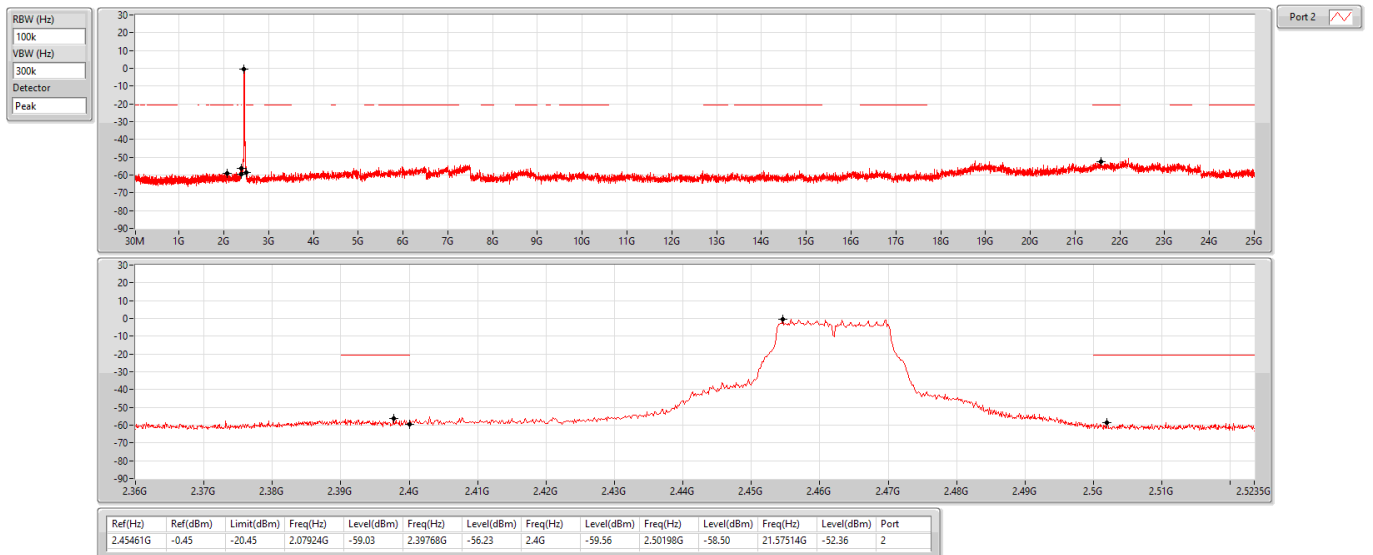
2437MHz



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

CSEndB

2462MHz

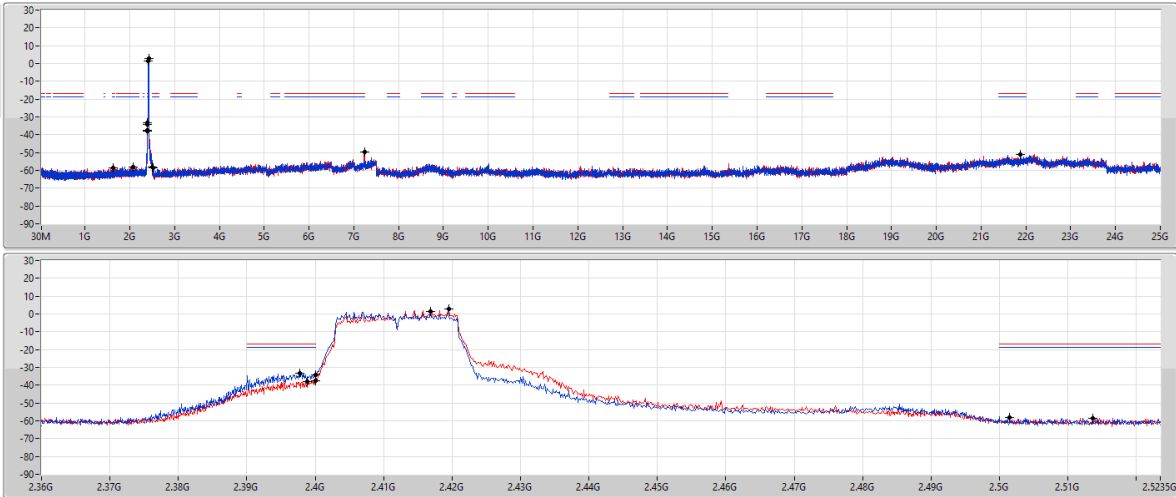


2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

CSEndB

2412MHz

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



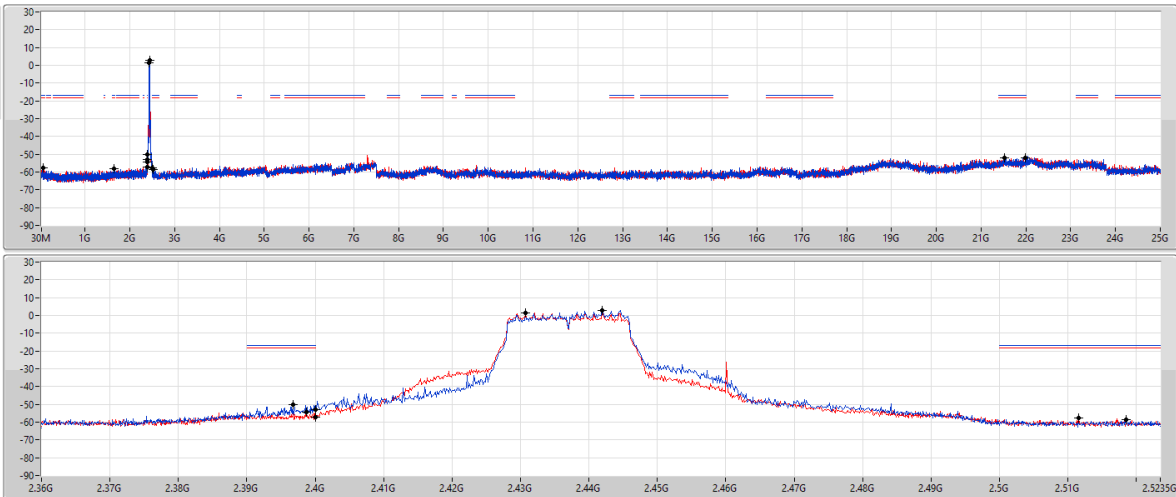
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41687G	1.26	-18.74	2.06875G	-58.27	2.39768G	-33.44	2.4G	-34.21	2.51358G	-58.44	21.86734G	-50.98	1
2.41954G	2.92	-17.08	1.62023G	-58.51	2.39888G	-37.85	2.4G	-37.41	2.5015G	-58.17	7.23514G	-49.68	2

2.4-2.4835GHz_802.11n_HT20_Nss2,(MCS8)_2TX

CSEndB

2437MHz

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
2.44192G	2.91	-17.09	1.64469G	-58.21	2.39672G	-50.17	2.4G	-53.05	2.51846G	-58.45	21.52457G	-51.89	1
2.43073G	1.49	-18.51	66.43M	-57.59	2.39872G	-54.46	2.4G	-57.25	2.51158G	-57.73	21.88334G	-52.09	2

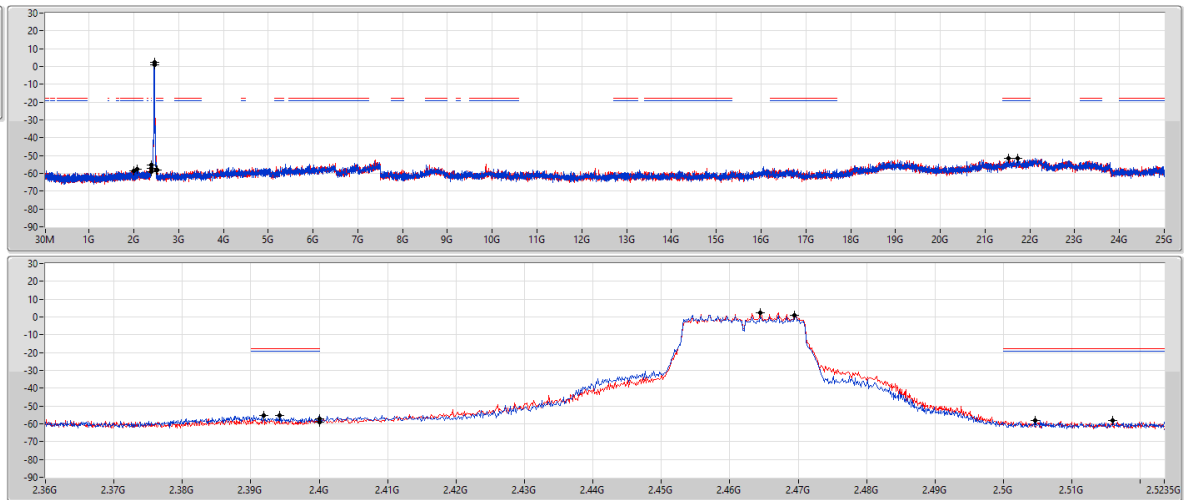
2.4-2.4835GHz_802.11n_HT20_Nss2_(MCS8)_2TX

CSEndB

2462MHz

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

Port 1
Port 2



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46947G	0.87	-19.13	2.00235G	-58.52	2.39424G	-55.38	2.4G	-57.14	2.51598G	-58.26	21.51614G	-51.49	1
2.46446G	2.26	-17.74	2.0804G	-57.87	2.39192G	-55.40	2.4G	-59.23	2.50462G	-57.99	21.72886G	-51.71	2