FCC Test Report

FCC ID	:	**IPH-04951**
Equipment	:	**Fitness Product**
Model No.	:	**A04951**
Brand Name	:	**GARMIN**
Applicant	:	**Garmin International, Inc.**
Address	:	**1200 E. 151st Street Olathe, KS 66062 United States**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Aug. 27, 2024**
Tested Date	:	**Aug. 29 ~ Sep. 05, 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**

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Local Support Equipment List 7
1.3 Test Setup Chart 7
1.4 The Equipment List 8
1.5 Test Standards 9
1.6 Reference Guidance 9
1.7 Deviation from Test Standard and Measurement Procedure 9
1.8 Measurement Uncertainty 9

2 TEST CONFIGURATION 10

2.1 Testing Facility 10
2.2 The Worst Test Modes and Channel Details 10

3 TRANSMITTER TEST RESULTS 11

3.1 6dB and Occupied Bandwidth 11
3.2 Conducted Output Power 12
3.3 Power Spectral Density 13
3.4 Unwanted Emissions into Restricted Frequency Bands 14
3.5 Emissions in Non-Restricted Frequency Bands 16
3.6 AC Power Line Conducted Emissions 17

4 TEST LABORATORY INFORMATION 18

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
FR450901AC	Rev. 01	Initial issue	Oct. 25, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.489MHz 43.54 (Margin -12.65dB) - QP	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 12.06G 42.09 (Margin -11.91dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: 17.13	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 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
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: DSSS-DBPSK, DQPSK, CCK modulation OFDM - BPSK, QPSK, 16QAM and 64QAM modulation.					

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Connector	Gain (dBi)
1	Garmin	117-02243-2X	Slot	No	0.21

1.1.3 Configuration of Equipment under Test (EUT)

Power Type	5Vdc from host 3.87Vdc from battery

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Battery	Brand: Garmin Model: 361-00162-00 Rating: 3.87V, 220mAh
2	USB cable	Brand: GARMIN Model: 320-01602-00 0.56m shielded without core

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: 28.17 00		
Duty Cycle and Duty Factor	**Mode**	**Duty Cycle (%)**	**Duty Factor (dB)**
	11b	100.00%	0.00
	11g	100.00%	0.00
	HT20	100.00%	0.00

1.1.7 Power Index of Test Tool

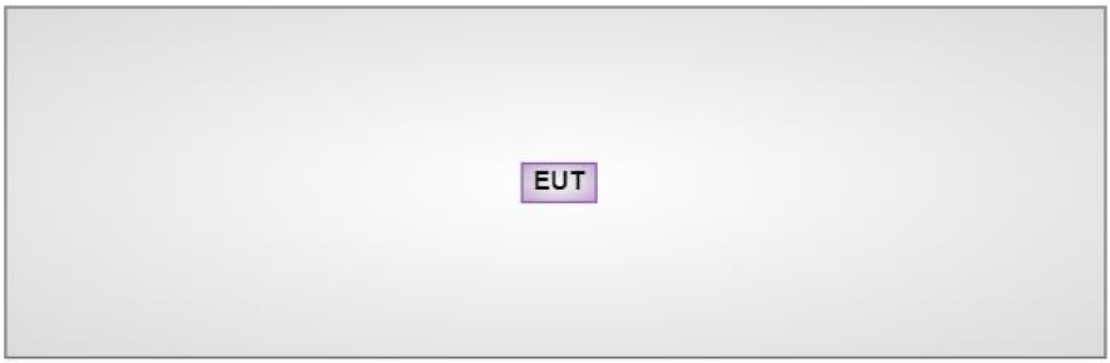
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	default
11b	2437	default
11b	2462	default
11g	2412	default
11g	2437	default
11g	2462	default
HT20	2412	default
HT20	2437	default
HT20	2462	default

1.2 Local Support Equipment List

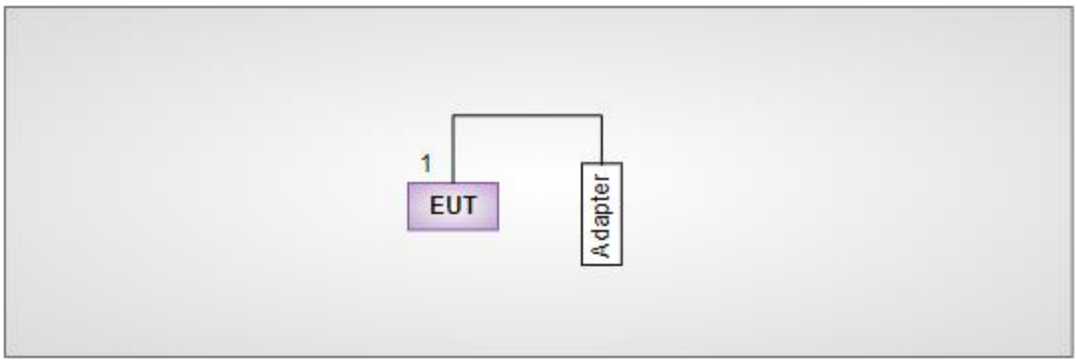
Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Adapter	Samsung	TA-800	---	---

1.3 Test Setup Chart

Test Setup Diagram (Battery Mode)



Test Setup Diagram (Charging Mode)



No.	Signal cable / Length (m)
1	USB, 0.56m shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Sep. 05, 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. 11, 2023	Oct. 10, 2024
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	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Aug. 29 ~ Sep. 02, 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. 03, 2023	Oct. 02, 2024
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 03, 2023	Oct. 02, 2024
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 03, 2023	Oct. 02, 2024
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 03, 2023	Oct. 02, 2024
Attenuator	Pasternack	PE7005-10	10-1	Oct. 05, 2023	Oct. 04, 2024
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 05, 2023	Oct. 04, 2024
Measurement Software	Sporton	SENSE-EMI	V5.11	NA	NA
Measurement Software	Sporton	SENSE-15247_FS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Sep. 03, 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. 05, 2023	Oct. 04, 2024
Measurement Software	Sporton	SENSE-15247_FS	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 ≤ 1GHz	±3.41 dB
Unwanted Emission > 1GHz	±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 Configuration
AC Power Line Conducted Emission	Charging mode	---	---	2
Unwanted Emissions ≤ 1GHz	HT20	2437	MCS 0	1
	Charging mode	---	---	2
Unwanted Emissions >1GHz Conducted Output Power 6dB bandwidth Power spectral density	11b 11g HT20	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps MCS 0	1

NOTE:
1. 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.
2. The test configurations are listed as follows:
   1) Mode 1: Battery mode
   2) Mode 2: Charging mode

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

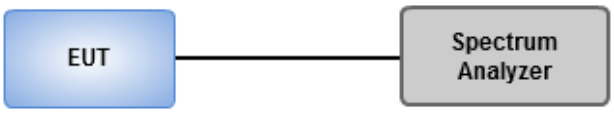
6dB Bandwidth

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	23°C / 65%	**Tested By**	Roger Lu

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 <= 6dBi, no any corresponding reduction is in output power limit.

Antenna gain > 6dBi

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	23°C / 65%	**Tested By**	Roger Lu

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.

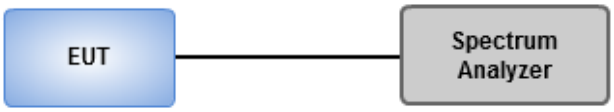
Average PSD, duty cycle ≥ 98%

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	23°C / 65%	**Tested By**	Roger Lu

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:
Qusai-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

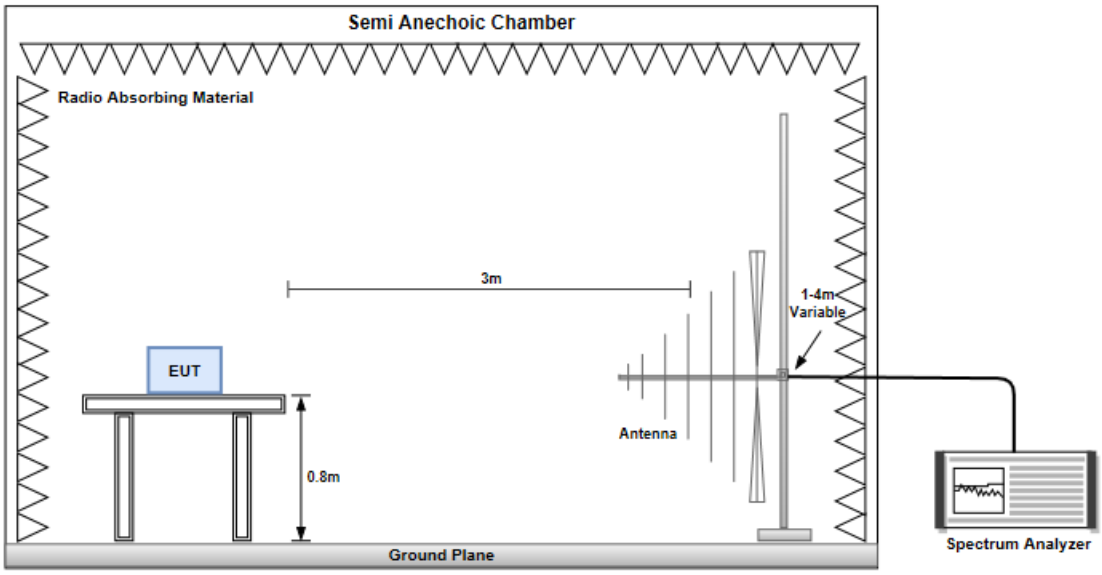
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

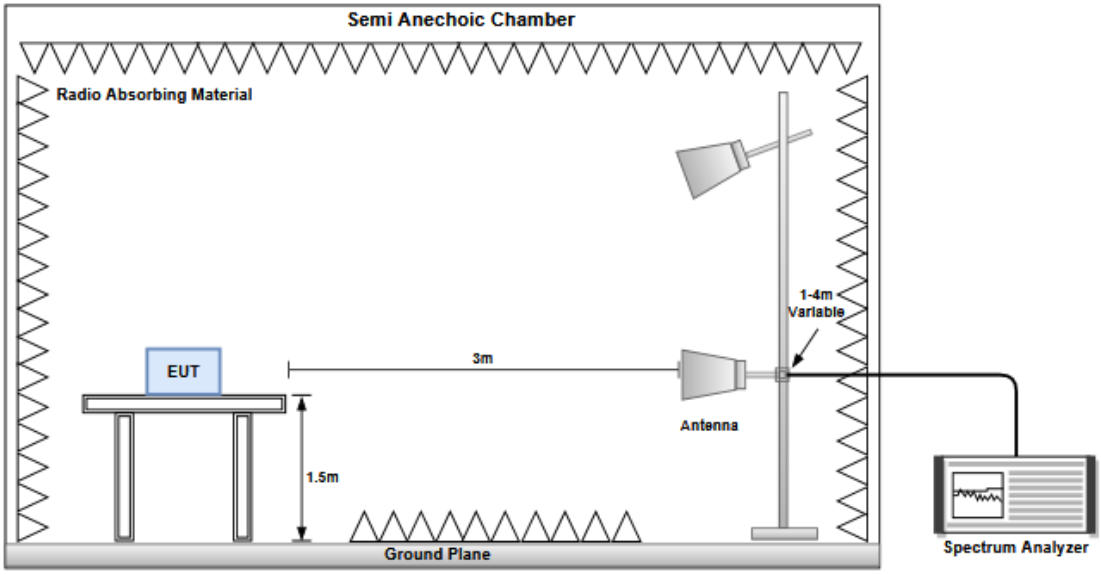
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

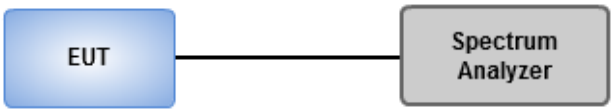
Reference level measurement

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	23°C / 65%	**Tested By**	Roger Lu

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

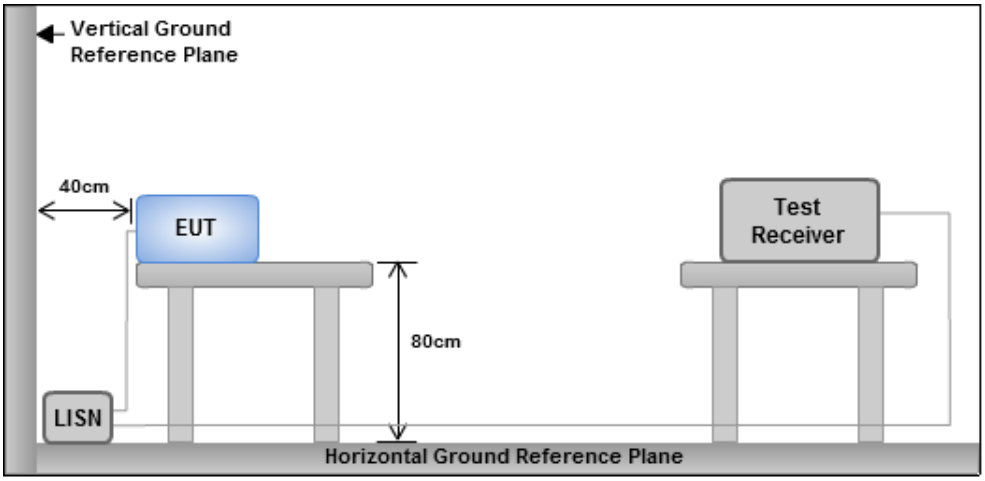
3.6.1 Limit of AC Power Line Conducted Emissions

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═

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	9.525M	14.858M	14M9G1D	9.025M	14.063M
802.11g_Nss1,(6Mbps)_1TX	16.45M	16.624M	16M6D1D	15.9M	16.008M
802.11n HT20_Nss1,(MCS0)_1TX	17.6M	17.491M	17M5D1D	15.45M	16.717M

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

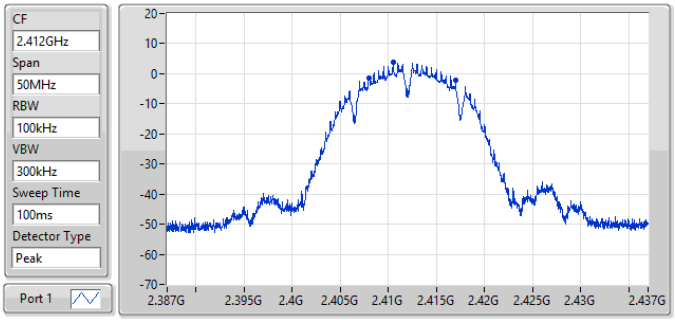
Result

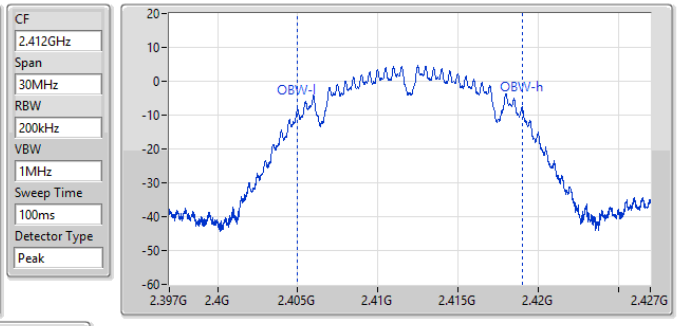
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	9.025M	14.063M
2437MHz	Pass	500k	9.05M	14.858M
2462MHz	Pass	500k	9.525M	14.768M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.9M	16.008M
2437MHz	Pass	500k	16.375M	16.624M
2462MHz	Pass	500k	16.45M	16.558M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	15.45M	16.717M
2437MHz	Pass	500k	17.6M	17.491M
2462MHz	Pass	500k	17.3M	17.441M

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

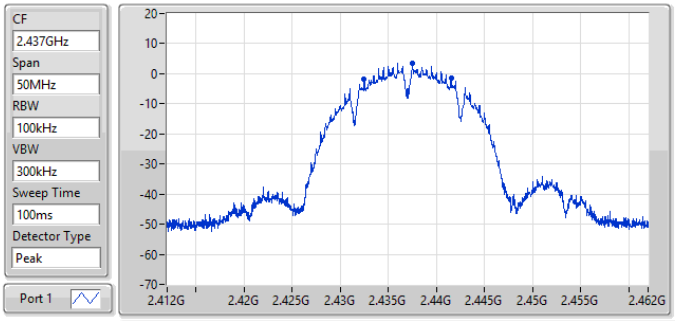


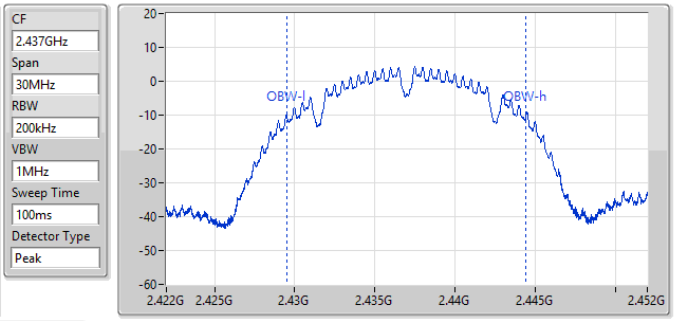


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.40795G	2.416975G	14.063M	2.404954G	2.419016G	500k	1

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

2437MHz

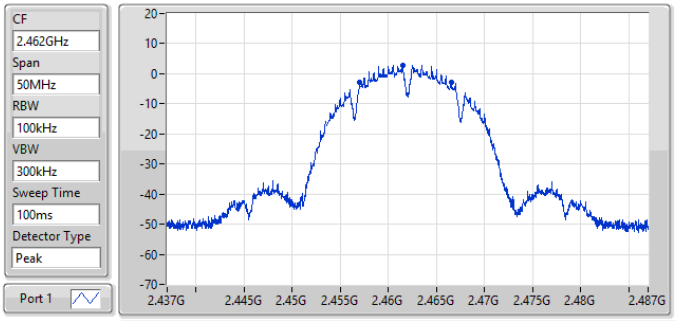


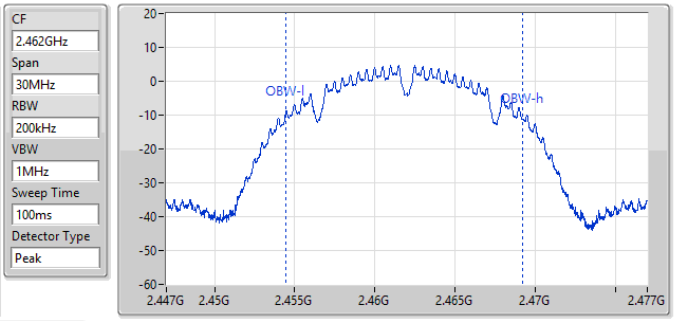


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.05M	2.432475G	2.441525G	14.858M	2.429549G	2.444406G	500k	1

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

2462MHz

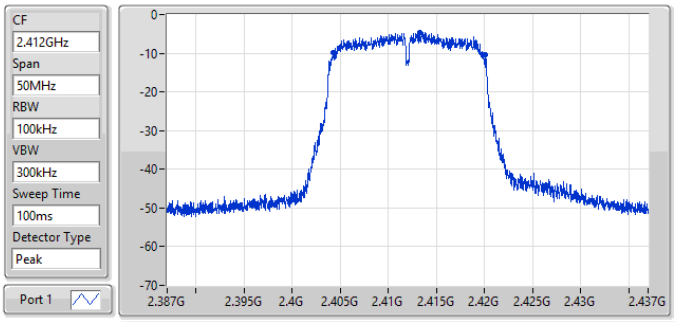


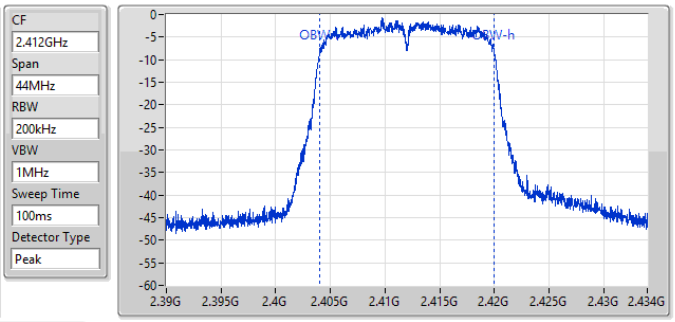


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.525M	2.457G	2.466525G	14.768M	2.454459G	2.469226G	500k	1

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

2412MHz

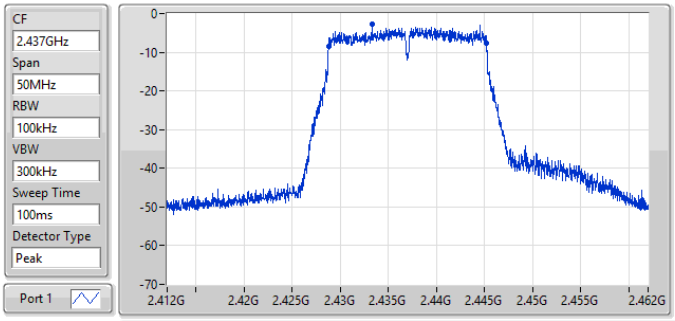


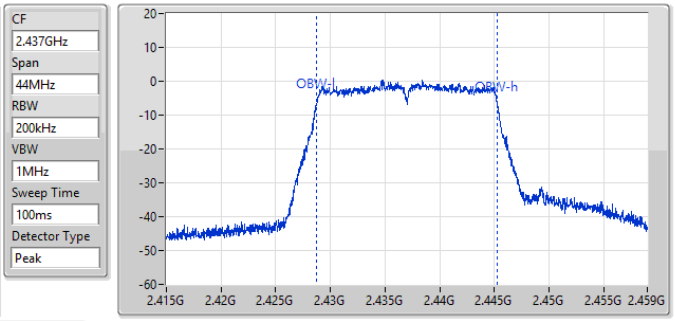


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.9M	2.404225G	2.420125G	16.008M	2.404018G	2.420026G	500k	1

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

2437MHz

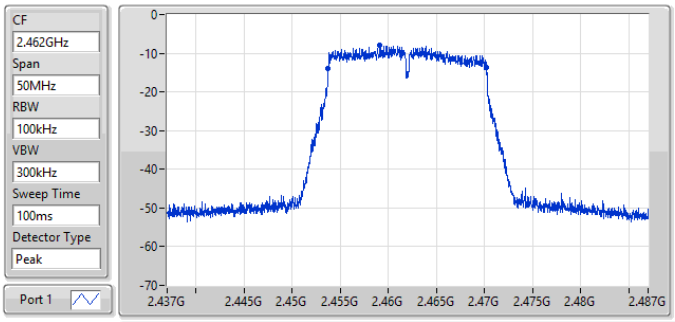


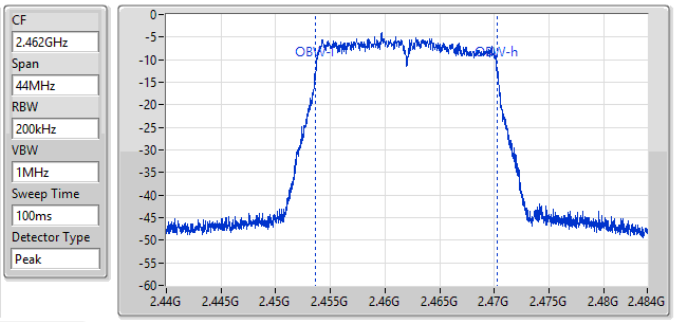


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.375M	2.4288G	2.445175G	16.624M	2.428688G	2.445312G	500k	1

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

2462MHz

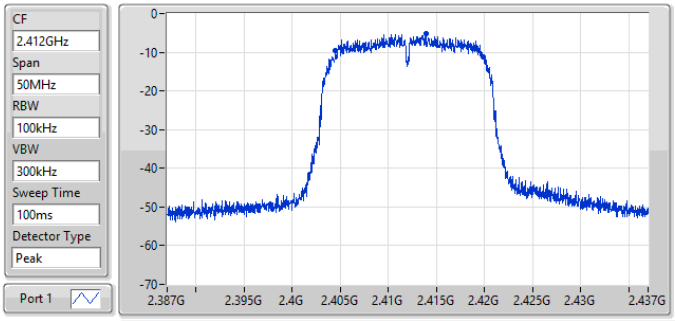


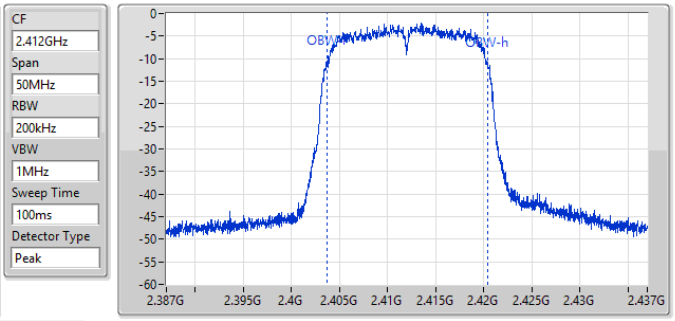


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.45M	2.453725G	2.470175G	16.558M	2.453666G	2.470224G	500k	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **EBW**

2412MHz

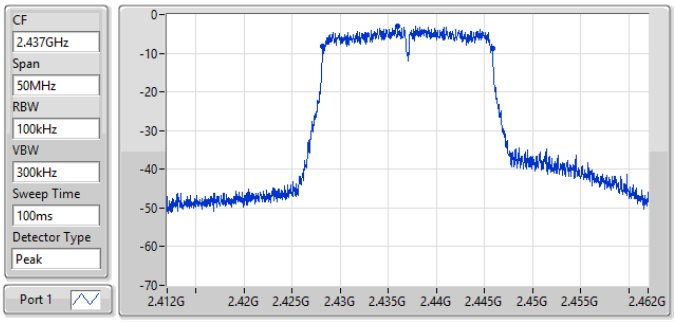


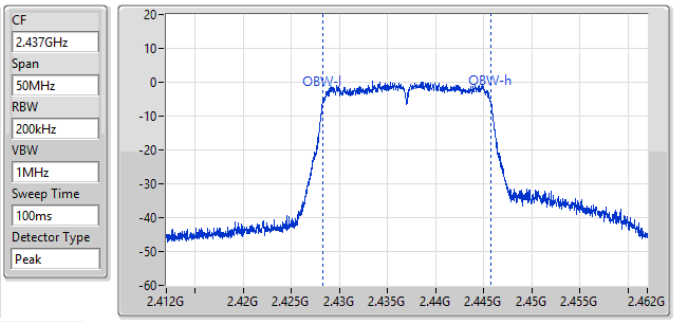


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.45M	2.40445G	2.4199G	16.717M	2.403654G	2.420371G	500k	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **EBW**

2437MHz

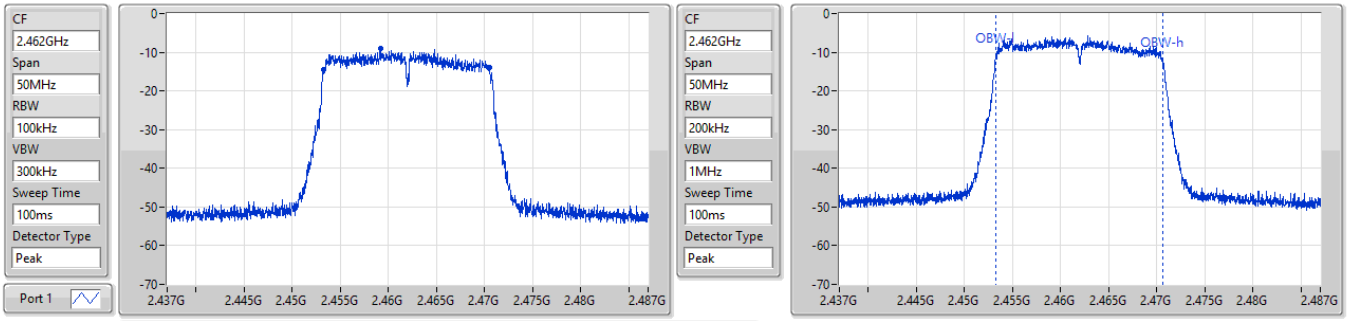




6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.6M	2.4282G	2.4458G	17.491M	2.428254G	2.445746G	500k	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **EBW**

2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.3M	2.453225G	2.470525G	17.441M	2.453229G	2.470671G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	12.89	0.01945
802.11g_Nss1,(6Mbps)_1TX	10.31	0.01074
802.11n HT20_Nss1,(MCS0)_1TX	10.41	0.01099

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	0.21	12.49	12.49	-	12.70	-
2437MHz	Pass	0.21	12.42	12.42	-	12.63	-
2462MHz	Pass	0.21	12.89	12.89	-	13.10	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	0.21	8.54	8.54	-	8.75	-
2437MHz	Pass	0.21	10.31	10.31	-	10.52	-
2462MHz	Pass	0.21	5.57	5.57	-	5.78	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	0.21	7.68	7.68	-	7.89	-
2437MHz	Pass	0.21	10.41	10.41	-	10.62	-
2462MHz	Pass	0.21	4.02	4.02	-	4.23	-

DG = Directional Gain; Port X = Port X output power
Note : Conducted average output power is for reference

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	15.16	0.03281
802.11g_Nss1,(6Mbps)_1TX	16.48	0.04446
802.11n HT20_Nss1,(MCS0)_1TX	17.13	0.05164

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	0.21	14.87	14.87	30.00	15.08	36.00
2437MHz	Pass	0.21	14.83	14.83	30.00	15.04	36.00
2462MHz	Pass	0.21	15.16	15.16	30.00	15.37	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	0.21	14.62	14.62	30.00	14.83	36.00
2437MHz	Pass	0.21	16.48	16.48	30.00	16.69	36.00
2462MHz	Pass	0.21	11.63	11.63	30.00	11.84	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	0.21	13.78	13.78	30.00	13.99	36.00
2437MHz	Pass	0.21	17.13	17.13	30.00	17.34	36.00
2462MHz	Pass	0.21	10.67	10.67	30.00	10.88	36.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-10.84
802.11g_Nss1,(6Mbps)_1TX	-16.45
802.11n HT20_Nss1,(MCS0)_1TX	-15.76

RBW = 3kHz;

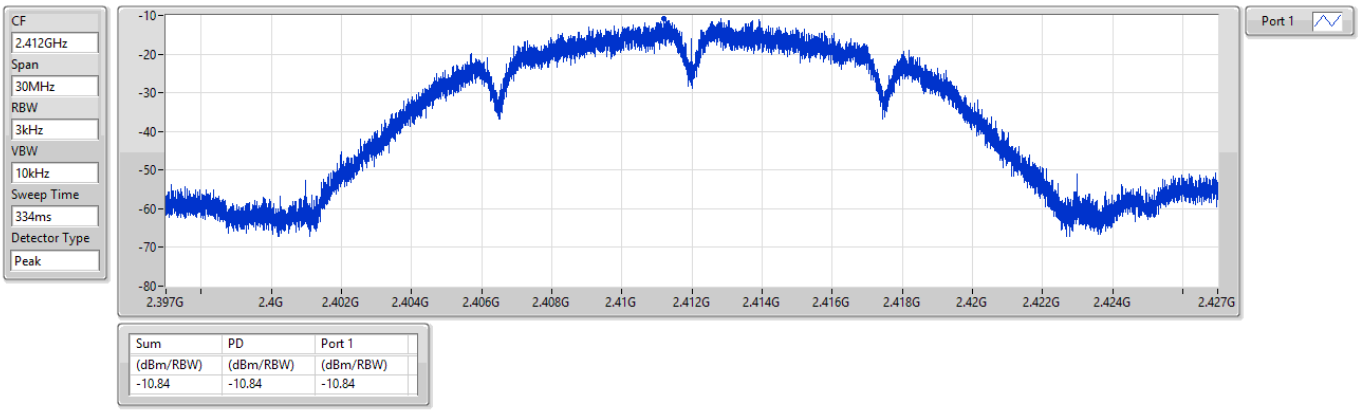
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	0.21	-10.84	-10.84	8.00
2437MHz	Pass	0.21	-11.04	-11.04	8.00
2462MHz	Pass	0.21	-11.32	-11.32	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	0.21	-17.10	-17.10	8.00
2437MHz	Pass	0.21	-16.45	-16.45	8.00
2462MHz	Pass	0.21	-20.57	-20.57	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	0.21	-18.27	-18.27	8.00
2437MHz	Pass	0.21	-15.76	-15.76	8.00
2462MHz	Pass	0.21	-21.79	-21.79	8.00

DG = Directional Gain; RBW = 3kHz;
PD = Power density; Port X = Port X Power Density;

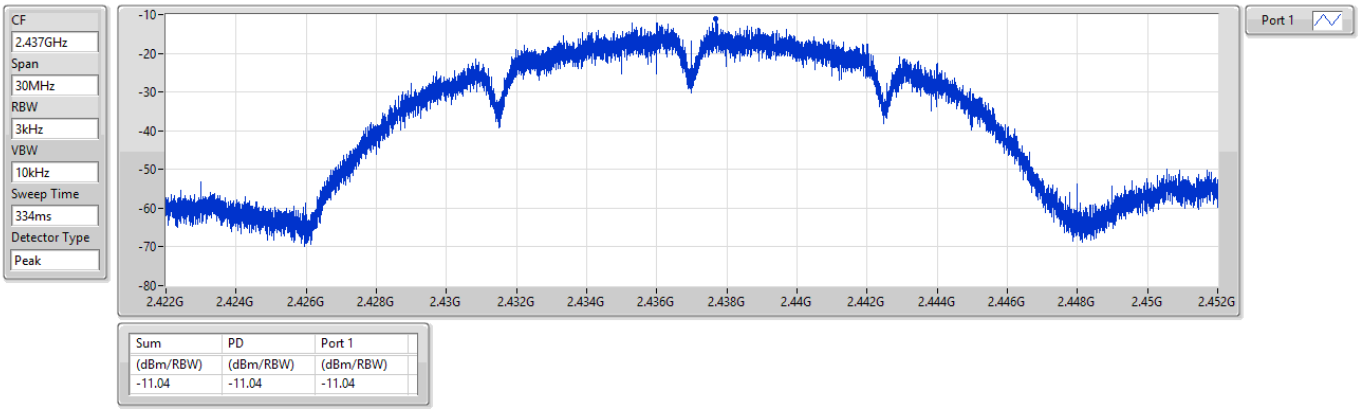
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX **PSD**

2412MHz



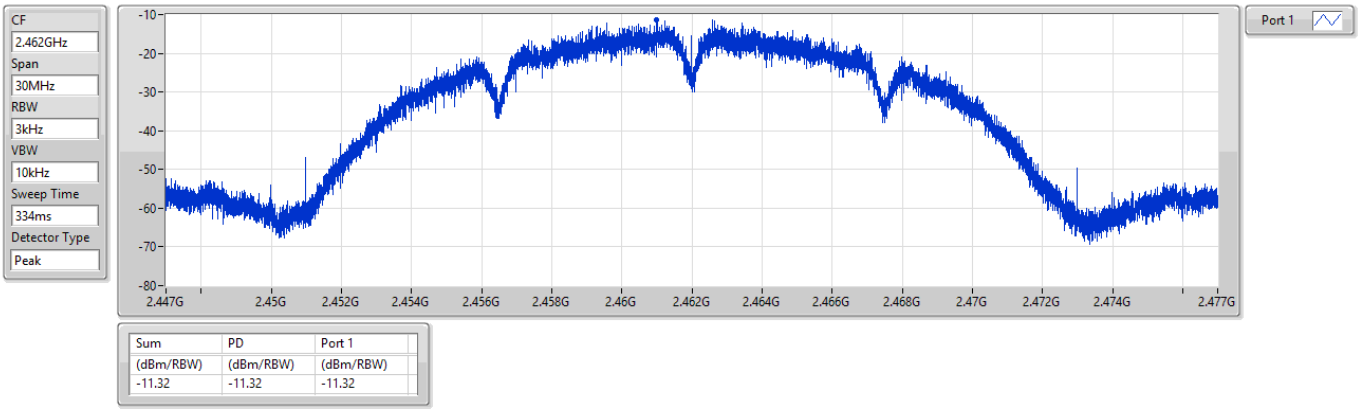
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX **PSD**

2437MHz



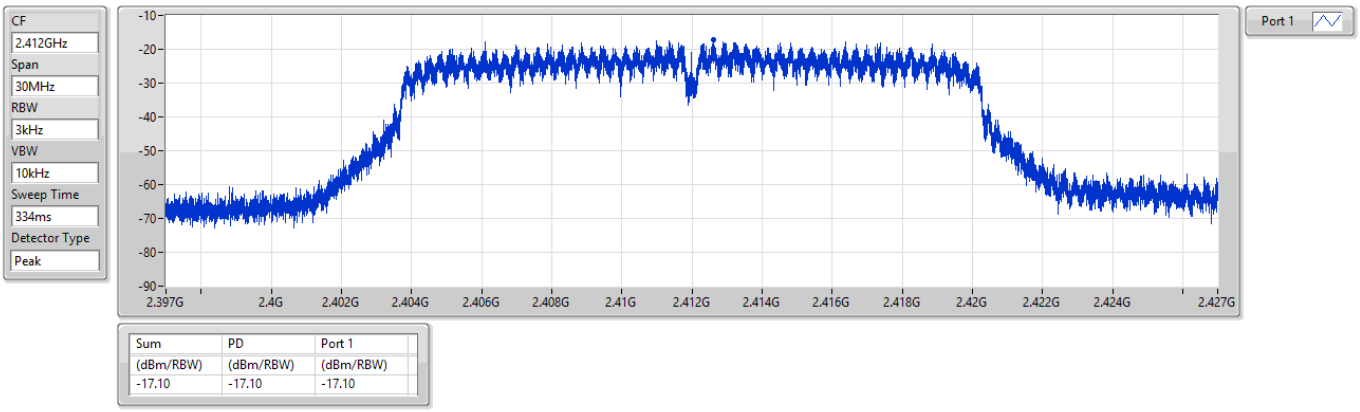
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX **PSD**

2462MHz



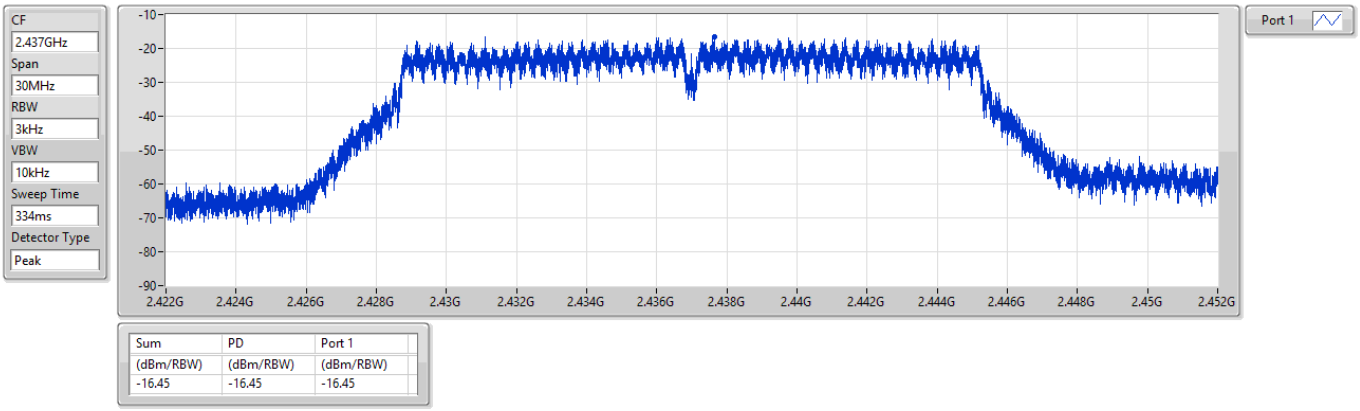
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX **PSD**

2412MHz



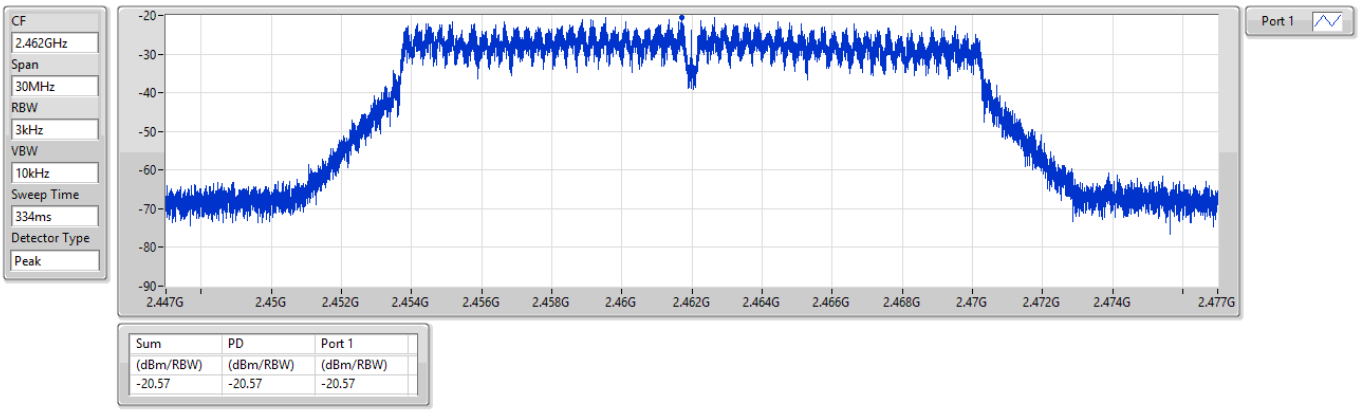
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX **PSD**

2437MHz



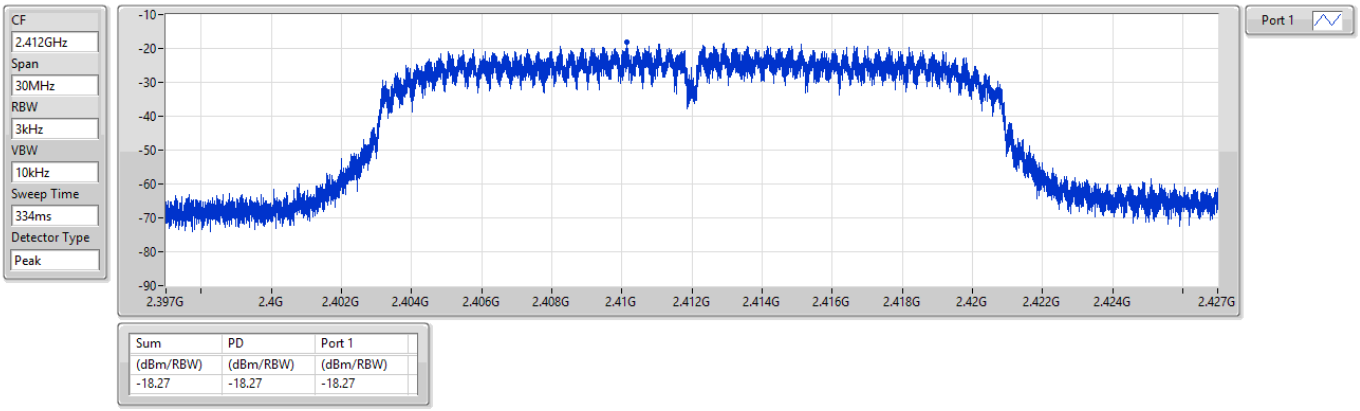
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX **PSD**

2462MHz



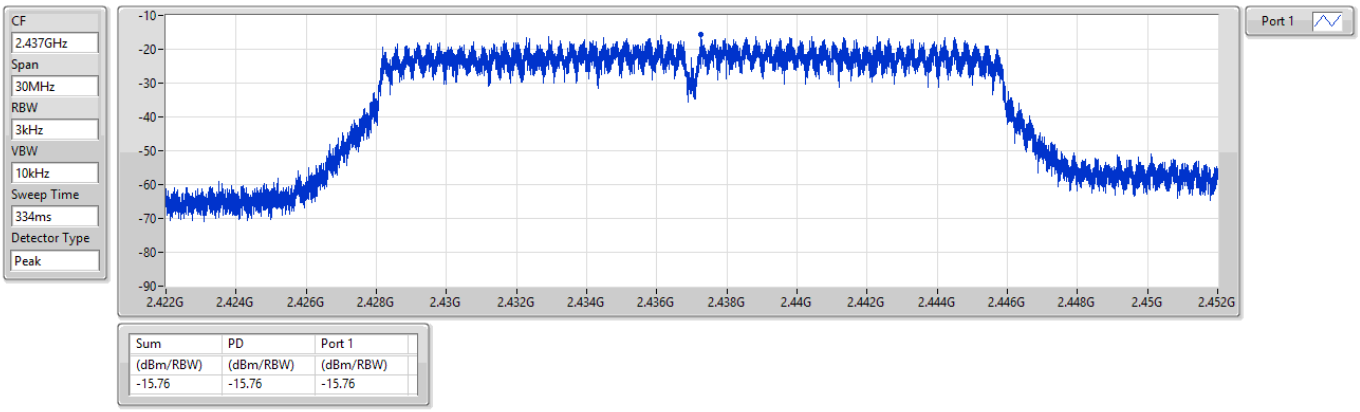
2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **PSD**

2412MHz



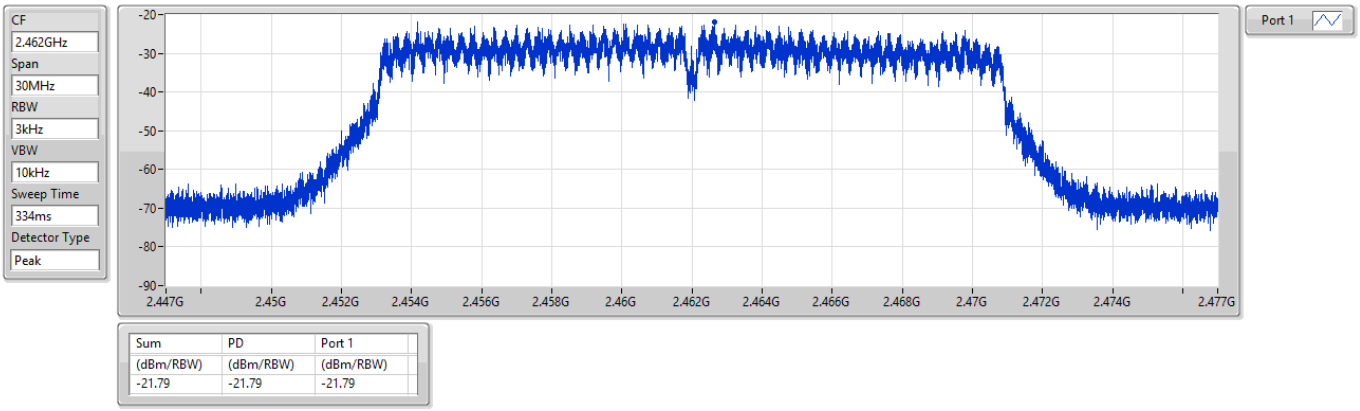
2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **PSD**

2437MHz



2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **PSD**

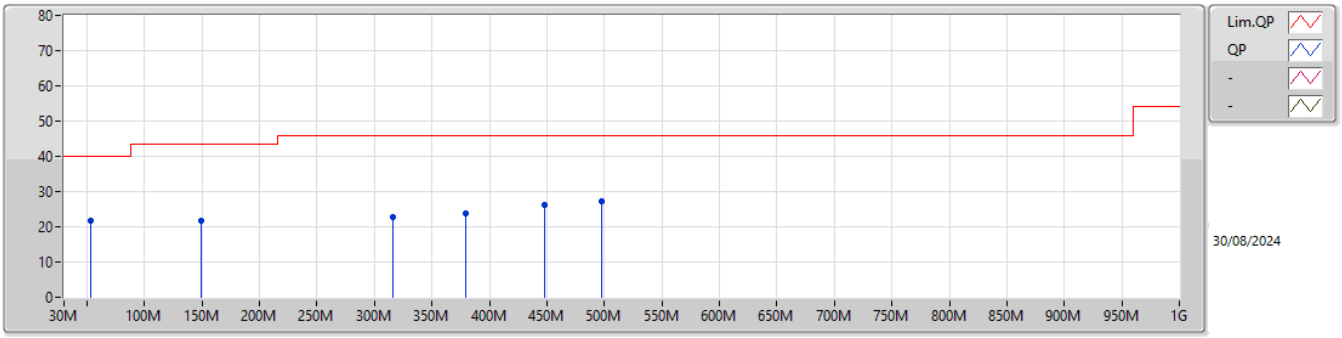
2462MHz



Summary

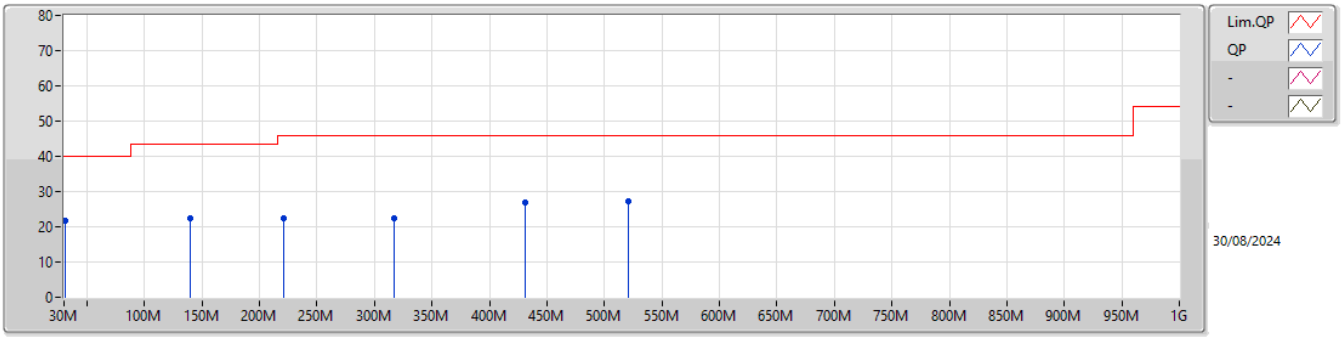
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	53.1M	21.72	40.00	-18.28	Horizontal
Mode 2	Pass	PK	51.1M	27.48	40.00	-12.52	Vertical

Mode 1



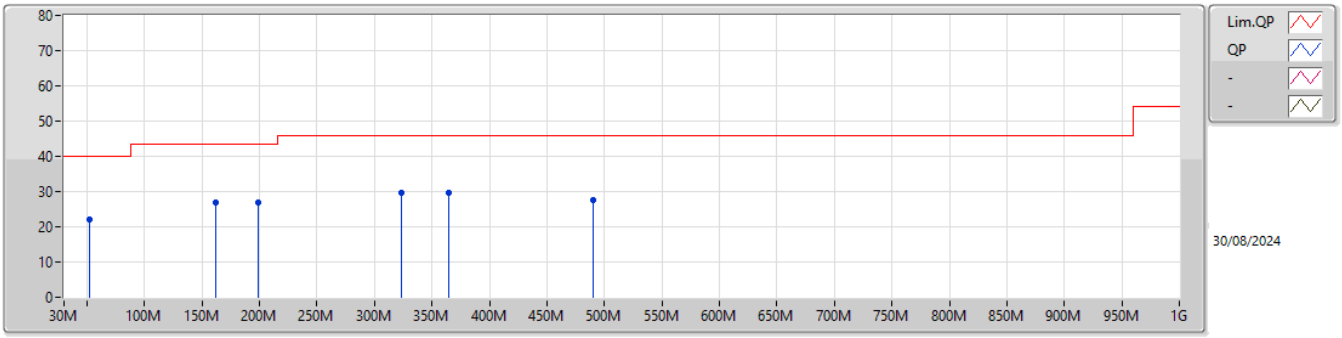
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	53.1M	21.72	40.00	-18.28	-8.31	3	Horizontal	-	-	-	30.03	19.19	0.65	28.15
PK	149.4M	21.71	43.50	-21.79	-8.83	3	Horizontal	-	-	-	30.54	18.28	1.14	28.25
PK	316M	22.74	46.00	-23.26	-7.43	3	Horizontal	-	-	-	30.17	19.10	1.69	28.22
PK	379.6M	23.71	46.00	-22.29	-5.89	3	Horizontal	-	-	-	29.60	20.48	1.81	28.18
PK	448.2M	26.19	46.00	-19.81	-4.17	3	Horizontal	-	-	-	30.36	22.03	1.98	28.18
PK	498M	27.23	46.00	-18.77	-3.24	3	Horizontal	-	-	-	30.47	22.80	2.16	28.20

Mode 1



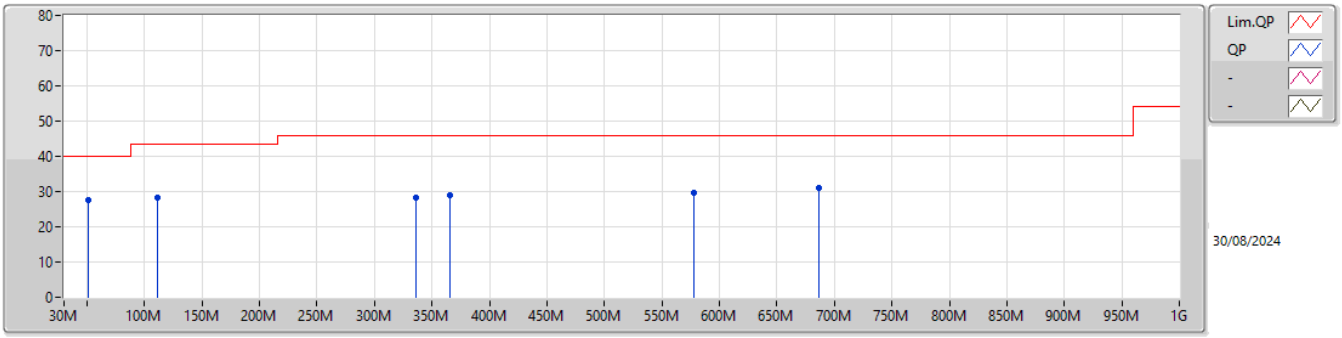
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31M	21.70	40.00	-18.30	-9.88	3	Vertical	-	-	-	31.58	17.70	0.50	28.08
PK	140.1M	22.26	43.50	-21.24	-9.33	3	Vertical	-	-	-	31.59	17.81	1.11	28.25
PK	220.8M	22.36	46.00	-23.64	-11.80	3	Vertical	-	-	-	34.16	15.08	1.39	28.27
PK	317.6M	22.55	46.00	-23.45	-7.43	3	Vertical	-	-	-	29.98	19.10	1.69	28.22
PK	431.5M	26.90	46.00	-19.10	-4.68	3	Vertical	-	-	-	31.58	21.56	1.94	28.18
PK	520.4M	27.10	46.00	-18.90	-2.69	3	Vertical	-	-	-	29.79	23.29	2.22	28.20

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	52.2M	21.98	40.00	-18.02	-8.37	3	Horizontal	-	-	-	30.35	19.12	0.65	28.14
PK	162.1M	26.75	43.50	-16.75	-8.87	3	Horizontal	-	-	-	35.62	18.20	1.19	28.26
PK	198.4M	26.82	43.50	-16.68	-11.55	3	Horizontal	-	-	-	38.37	15.40	1.33	28.28
PK	323.9M	29.67	46.00	-16.33	-7.34	3	Horizontal	-	-	-	37.01	19.18	1.70	28.22
PK	364.3M	29.70	46.00	-16.30	-6.52	3	Horizontal	-	-	-	36.22	19.89	1.78	28.19
PK	490.1M	27.46	46.00	-18.54	-3.37	3	Horizontal	-	-	-	30.83	22.70	2.13	28.20

Mode 2



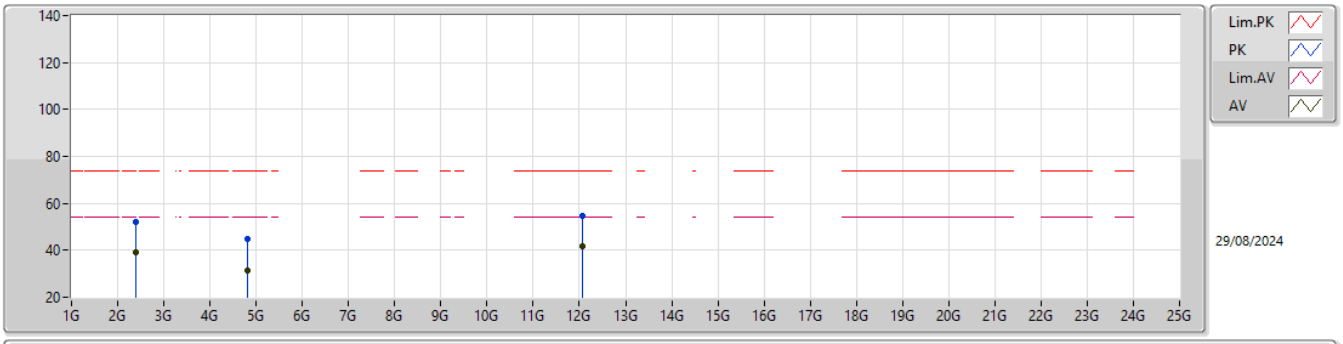
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	51.1M	27.48	40.00	-12.52	-8.22	3	Vertical	-	-	-	35.70	19.28	0.64	28.14
PK	111.6M	28.31	43.50	-15.19	-11.82	3	Vertical	-	-	-	40.13	15.42	1.00	28.24
PK	336.2M	28.29	46.00	-17.71	-7.18	3	Vertical	-	-	-	35.47	19.30	1.73	28.21
PK	366M	29.12	46.00	-16.88	-6.47	3	Vertical	-	-	-	35.59	19.94	1.78	28.19
PK	578.3M	29.62	46.00	-16.38	-1.45	3	Vertical	-	-	-	31.07	24.33	2.40	28.18
PK	686M	30.99	46.00	-15.01	0.58	3	Vertical	-	-	-	30.41	25.80	2.81	28.03

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	41.80	54.00	-12.20	3	Vertical	41	1.00	-
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	12.06G	42.09	54.00	-11.91	3	Vertical	35	1.00	-
802.11n HT20_Nss1,(MCS0)_1TX	Pass	AV	12.06G	41.95	54.00	-12.05	3	Vertical	28	1.00	-

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

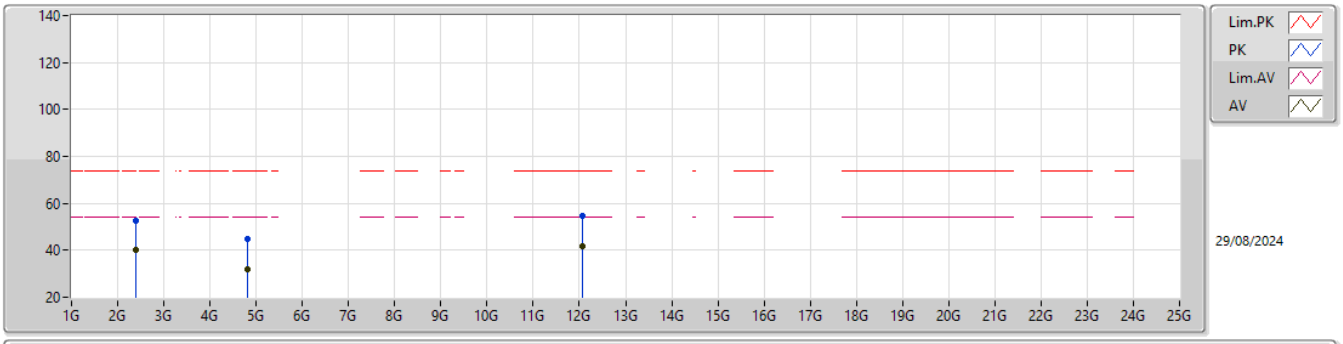
2412MHz_TX



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	2.39G	39.24	54.00	-14.76	43.58	3	Horizontal	291	1.00	-	27.60	4.95	36.89
PK	2.39G	51.86	74.00	-22.14	56.20	3	Horizontal	291	1.00	-	27.60	4.95	36.89
AV	4.824G	31.56	54.00	-22.44	31.97	3	Horizontal	29	1.00	-	31.25	6.87	38.53
PK	4.824G	44.94	74.00	-29.06	45.35	3	Horizontal	29	1.00	-	31.25	6.87	38.53
AV	12.06G	41.75	54.00	-12.25	35.34	3	Horizontal	36	1.00	-	39.22	10.03	42.84
PK	12.06G	54.59	74.00	-19.41	48.18	3	Horizontal	36	1.00	-	39.22	10.03	42.84

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

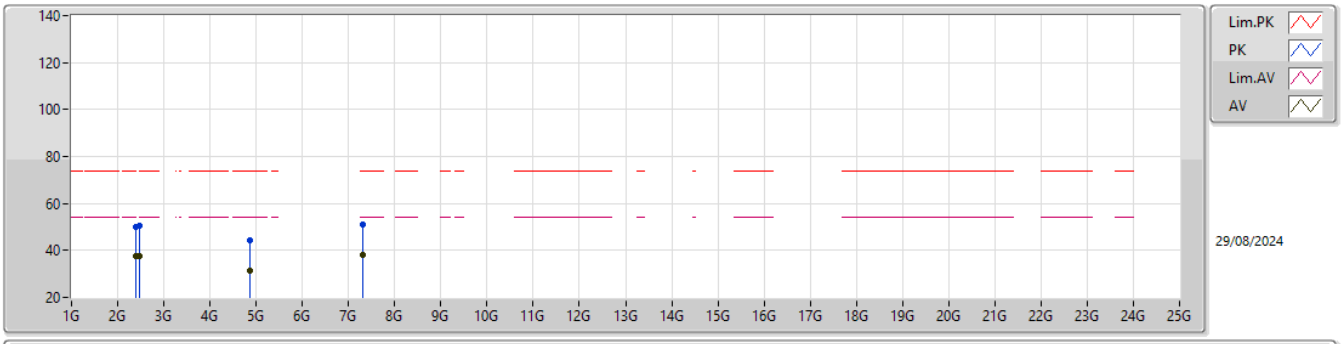
2412MHz_TX



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	2.39G	39.95	54.00	-14.05	44.29	3	Vertical	184	2.21	-	27.60	4.95	36.89
PK	2.39G	52.34	74.00	-21.66	56.68	3	Vertical	184	2.21	-	27.60	4.95	36.89
AV	4.824G	31.74	54.00	-22.26	32.15	3	Vertical	22	1.00	-	31.25	6.87	38.53
PK	4.824G	45.03	74.00	-28.97	45.44	3	Vertical	22	1.00	-	31.25	6.87	38.53
AV	12.06G	41.80	54.00	-12.20	35.39	3	Vertical	41	1.00	-	39.22	10.03	42.84
PK	12.06G	54.66	74.00	-19.34	48.25	3	Vertical	41	1.00	-	39.22	10.03	42.84

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

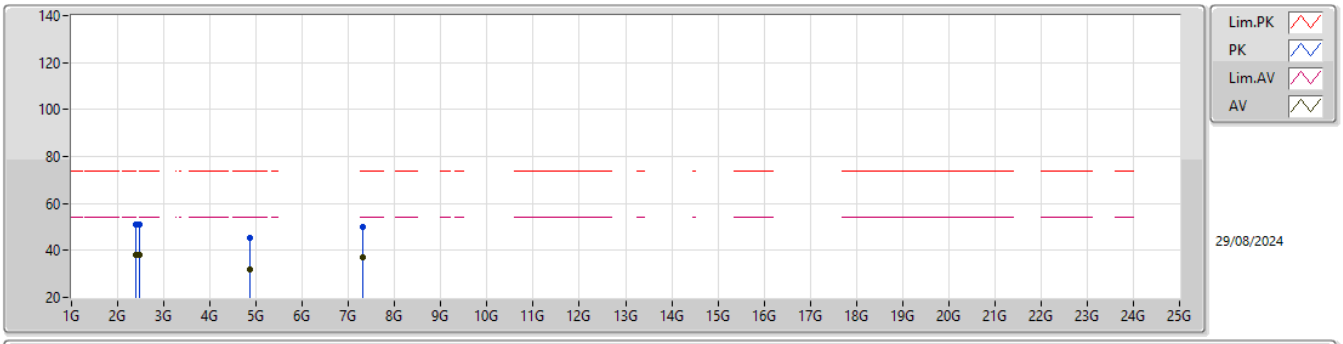
2437MHz_TX



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	2.39G	37.44	54.00	-16.56	41.78	3	Horizontal	293	1.00	-	27.60	4.95	36.89
PK	2.39G	50.25	74.00	-23.75	54.59	3	Horizontal	293	1.00	-	27.60	4.95	36.89
AV	2.4835G	37.61	54.00	-16.39	42.33	3	Horizontal	293	1.00	-	27.20	5.06	36.98
PK	2.4835G	50.64	74.00	-23.36	55.36	3	Horizontal	293	1.00	-	27.20	5.06	36.98
AV	4.874G	31.57	54.00	-22.43	32.06	3	Horizontal	24	1.00	-	31.15	6.92	38.56
PK	4.874G	44.54	74.00	-29.46	45.03	3	Horizontal	24	1.00	-	31.15	6.92	38.56
AV	7.311G	37.92	54.00	-16.08	32.69	3	Horizontal	235	1.00	-	36.18	8.43	39.38
PK	7.311G	50.81	74.00	-23.19	45.58	3	Horizontal	235	1.00	-	36.18	8.43	39.38

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

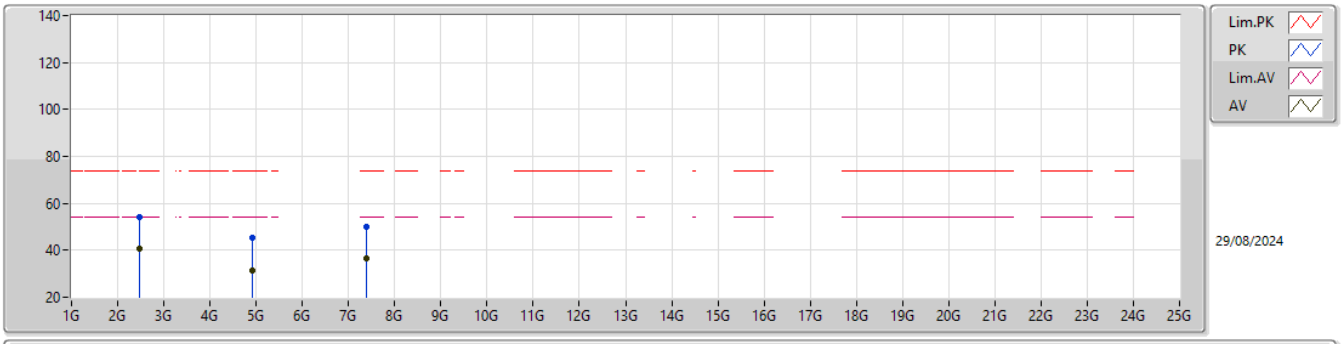
2437MHz_TX



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	2.39G	38.02	54.00	-15.98	42.36	3	Vertical	182	2.23	-	27.60	4.95	36.89
PK	2.39G	50.91	74.00	-23.09	55.25	3	Vertical	182	2.23	-	27.60	4.95	36.89
AV	2.4835G	38.14	54.00	-15.86	42.86	3	Vertical	182	2.23	-	27.20	5.06	36.98
PK	2.4835G	51.22	74.00	-22.78	55.94	3	Vertical	182	2.23	-	27.20	5.06	36.98
AV	4.874G	31.69	54.00	-22.31	32.18	3	Vertical	15	1.00	-	31.15	6.92	38.56
PK	4.874G	45.12	74.00	-28.88	45.61	3	Vertical	15	1.00	-	31.15	6.92	38.56
AV	7.311G	37.01	54.00	-16.99	31.78	3	Vertical	26	1.00	-	36.18	8.43	39.38
PK	7.311G	50.01	74.00	-23.99	44.78	3	Vertical	26	1.00	-	36.18	8.43	39.38

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

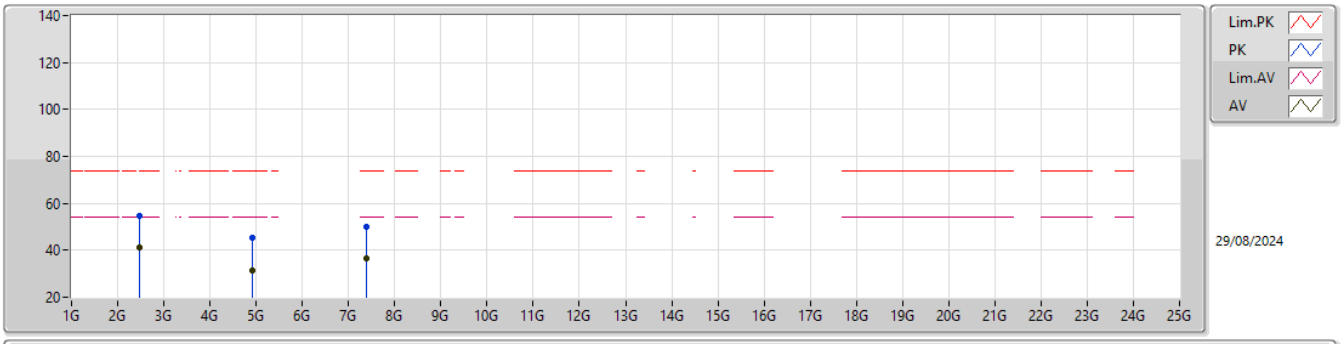
2462MHz_TX



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	40.93	54.00	-13.07	45.65	3	Horizontal	295	1.00	-	27.20	5.06	36.98
PK	2.4835G	53.96	74.00	-20.04	58.68	3	Horizontal	295	1.00	-	27.20	5.06	36.98
AV	4.924G	31.25	54.00	-22.75	31.69	3	Horizontal	28	1.00	-	31.20	6.96	38.60
PK	4.924G	45.11	74.00	-28.89	45.55	3	Horizontal	28	1.00	-	31.20	6.96	38.60
AV	7.386G	36.42	54.00	-17.58	31.33	3	Horizontal	31	1.00	-	36.10	8.47	39.48
PK	7.386G	49.75	74.00	-24.25	44.66	3	Horizontal	31	1.00	-	36.10	8.47	39.48

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

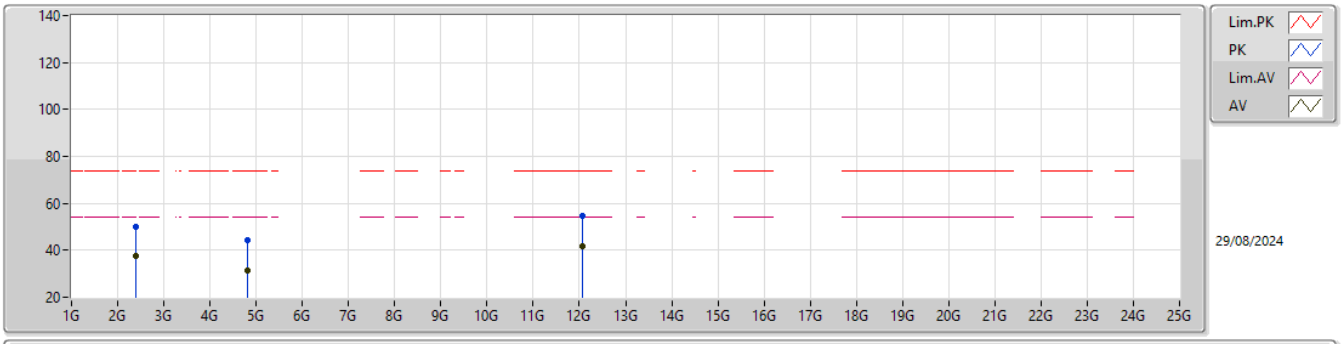
2462MHz_TX



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	41.12	54.00	-12.88	45.84	3	Vertical	180	2.24	-	27.20	5.06	36.98
PK	2.4835G	54.43	74.00	-19.57	59.15	3	Vertical	180	2.24	-	27.20	5.06	36.98
AV	4.924G	31.32	54.00	-22.68	31.76	3	Vertical	15	1.00	-	31.20	6.96	38.60
PK	4.924G	45.21	74.00	-28.79	45.65	3	Vertical	15	1.00	-	31.20	6.96	38.60
AV	7.386G	36.51	54.00	-17.49	31.42	3	Vertical	38	1.00	-	36.10	8.47	39.48
PK	7.386G	49.81	74.00	-24.19	44.72	3	Vertical	38	1.00	-	36.10	8.47	39.48

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

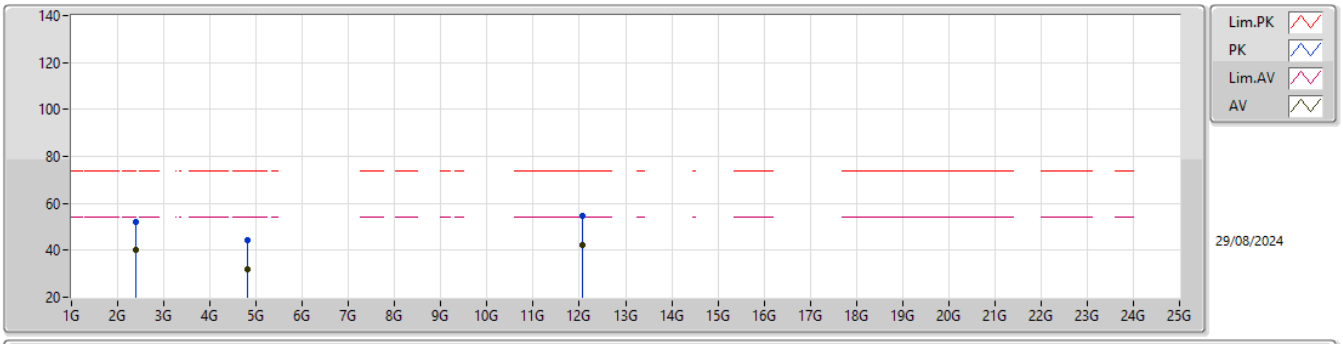
2412MHz_TX



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	2.39G	37.45	54.00	-16.55	41.79	3	Horizontal	291	1.00	-	27.60	4.95	36.89
PK	2.39G	49.99	74.00	-24.01	54.33	3	Horizontal	291	1.00	-	27.60	4.95	36.89
AV	4.824G	31.54	54.00	-22.46	31.95	3	Horizontal	22	1.00	-	31.25	6.87	38.53
PK	4.824G	44.36	74.00	-29.64	44.77	3	Horizontal	22	1.00	-	31.25	6.87	38.53
AV	12.06G	41.97	54.00	-12.03	35.56	3	Horizontal	19	1.00	-	39.22	10.03	42.84
PK	12.06G	54.74	74.00	-19.26	48.33	3	Horizontal	19	1.00	-	39.22	10.03	42.84

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

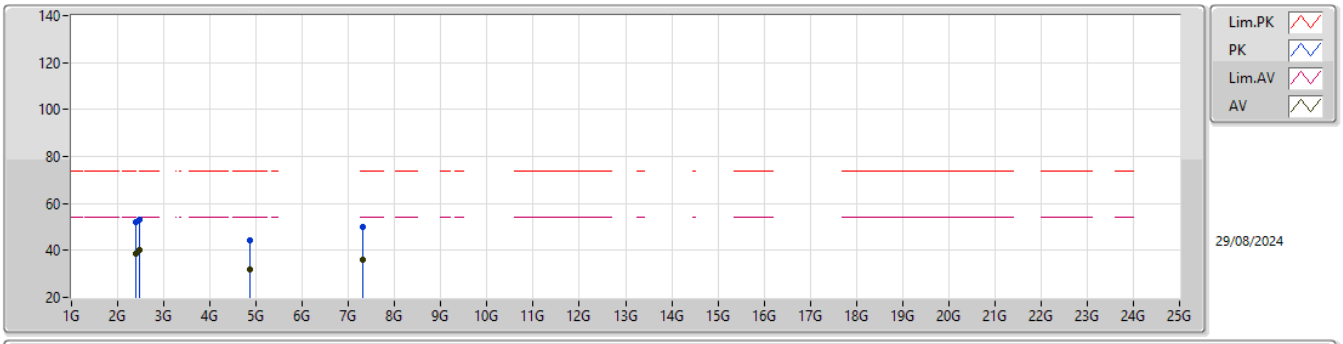
2412MHz_TX



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	2.39G	40.06	54.00	-13.94	44.40	3	Vertical	180	2.14	-	27.60	4.95	36.89
PK	2.39G	51.95	74.00	-22.05	56.29	3	Vertical	180	2.14	-	27.60	4.95	36.89
AV	4.824G	31.67	54.00	-22.33	32.08	3	Vertical	29	1.00	-	31.25	6.87	38.53
PK	4.824G	44.43	74.00	-29.57	44.84	3	Vertical	29	1.00	-	31.25	6.87	38.53
AV	12.06G	42.09	54.00	-11.91	35.68	3	Vertical	35	1.00	-	39.22	10.03	42.84
PK	12.06G	54.80	74.00	-19.20	48.39	3	Vertical	35	1.00	-	39.22	10.03	42.84

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

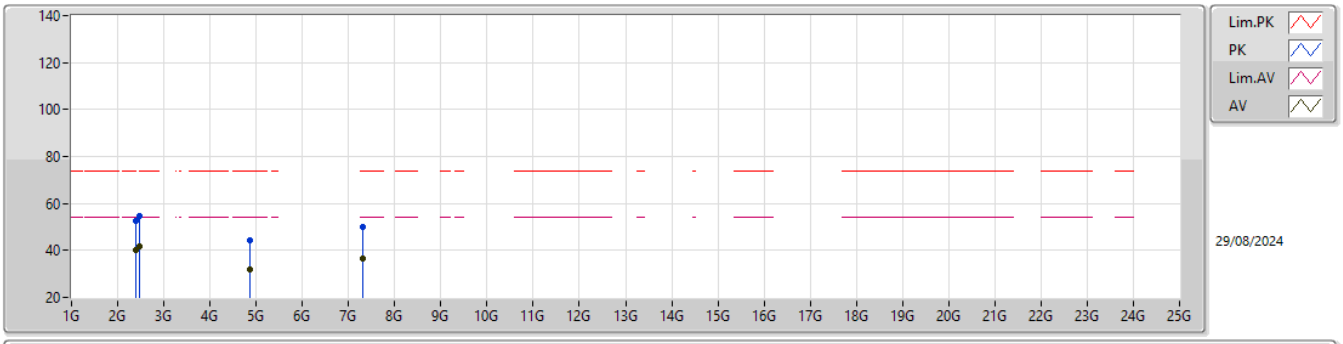
2437MHz_TX



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	2.39G	38.86	54.00	-15.14	43.20	3	Horizontal	294	1.00	-	27.60	4.95	36.89
PK	2.39G	51.99	74.00	-22.01	56.33	3	Horizontal	294	1.00	-	27.60	4.95	36.89
AV	2.4835G	40.32	54.00	-13.68	45.04	3	Horizontal	294	1.00	-	27.20	5.06	36.98
PK	2.4835G	53.21	74.00	-20.79	57.93	3	Horizontal	294	1.00	-	27.20	5.06	36.98
AV	4.874G	31.68	54.00	-22.32	32.17	3	Horizontal	29	1.00	-	31.15	6.92	38.56
PK	4.874G	44.45	74.00	-29.55	44.94	3	Horizontal	29	1.00	-	31.15	6.92	38.56
AV	7.311G	36.24	54.00	-17.76	31.01	3	Horizontal	33	1.00	-	36.18	8.43	39.38
PK	7.311G	49.81	74.00	-24.19	44.58	3	Horizontal	33	1.00	-	36.18	8.43	39.38

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

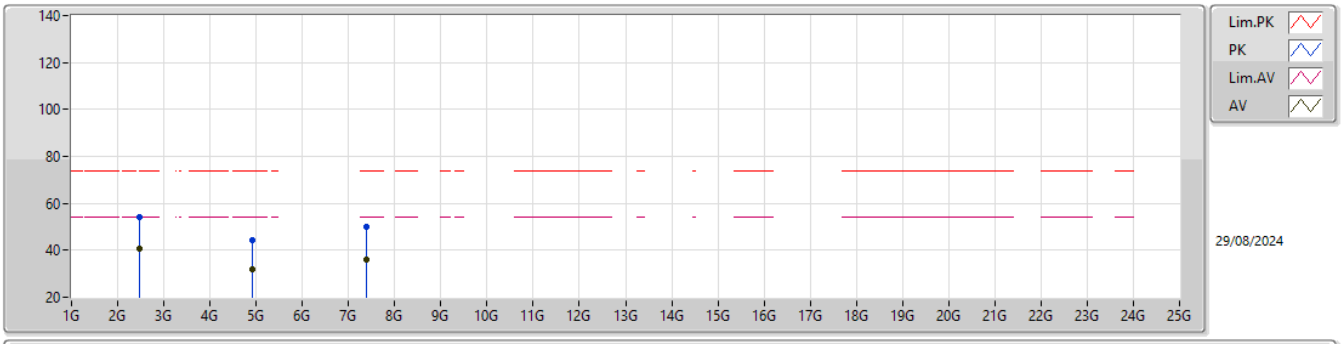
2437MHz_TX



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	2.39G	39.98	54.00	-14.02	44.32	3	Vertical	185	2.11	-	27.60	4.95	36.89
PK	2.39G	52.55	74.00	-21.45	56.89	3	Vertical	185	2.11	-	27.60	4.95	36.89
AV	2.4835G	41.47	54.00	-12.53	46.19	3	Vertical	185	2.11	-	27.20	5.06	36.98
PK	2.4835G	54.69	74.00	-19.31	59.41	3	Vertical	185	2.11	-	27.20	5.06	36.98
AV	4.874G	31.78	54.00	-22.22	32.27	3	Vertical	24	1.00	-	31.15	6.92	38.56
PK	4.874G	44.52	74.00	-29.48	45.01	3	Vertical	24	1.00	-	31.15	6.92	38.56
AV	7.311G	36.31	54.00	-17.69	31.08	3	Vertical	11	1.00	-	36.18	8.43	39.38
PK	7.311G	49.99	74.00	-24.01	44.76	3	Vertical	11	1.00	-	36.18	8.43	39.38

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

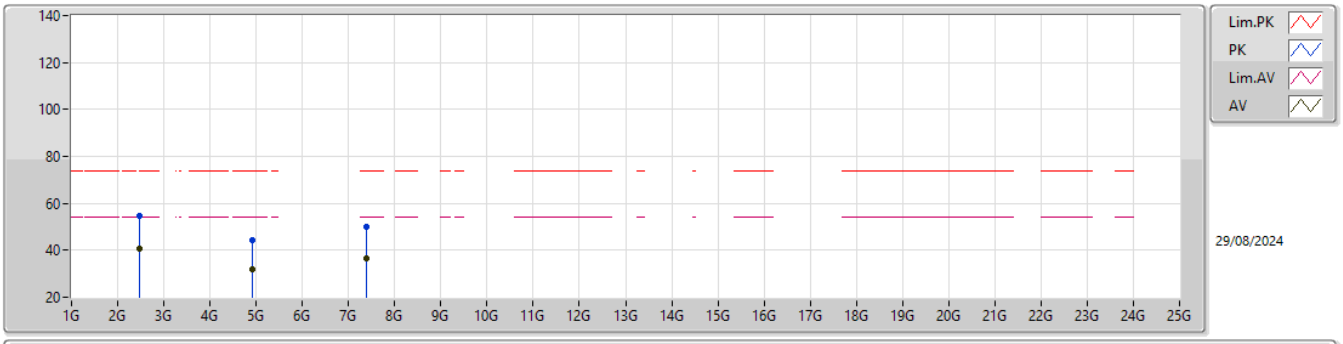
2462MHz_TX



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	40.52	54.00	-13.48	45.24	3	Horizontal	292	1.00	-	27.20	5.06	36.98
PK	2.4835G	53.91	74.00	-20.09	58.63	3	Horizontal	292	1.00	-	27.20	5.06	36.98
AV	4.924G	31.78	54.00	-22.22	32.22	3	Horizontal	36	1.00	-	31.20	6.96	38.60
PK	4.924G	44.45	74.00	-29.55	44.89	3	Horizontal	36	1.00	-	31.20	6.96	38.60
AV	7.386G	36.21	54.00	-17.79	31.12	3	Horizontal	14	1.00	-	36.10	8.47	39.48
PK	7.386G	50.04	74.00	-23.96	44.95	3	Horizontal	14	1.00	-	36.10	8.47	39.48

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

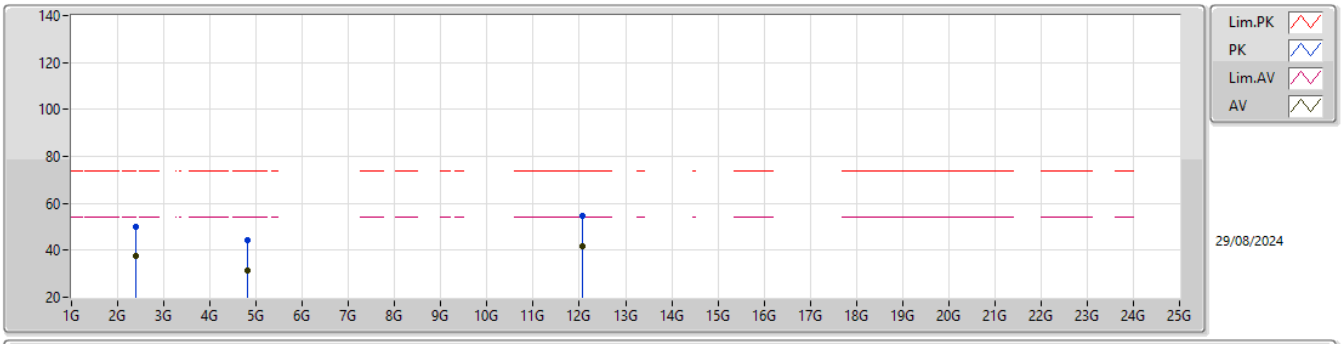
2462MHz_TX



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	40.74	54.00	-13.26	45.46	3	Vertical	183	2.10	-	27.20	5.06	36.98
PK	2.4835G	54.55	74.00	-19.45	59.27	3	Vertical	183	2.10	-	27.20	5.06	36.98
AV	4.924G	31.82	54.00	-22.18	32.26	3	Vertical	25	1.00	-	31.20	6.96	38.60
PK	4.924G	44.56	74.00	-29.44	45.00	3	Vertical	25	1.00	-	31.20	6.96	38.60
AV	7.386G	36.35	54.00	-17.65	31.26	3	Vertical	22	1.00	-	36.10	8.47	39.48
PK	7.386G	50.14	74.00	-23.86	45.05	3	Vertical	22	1.00	-	36.10	8.47	39.48

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

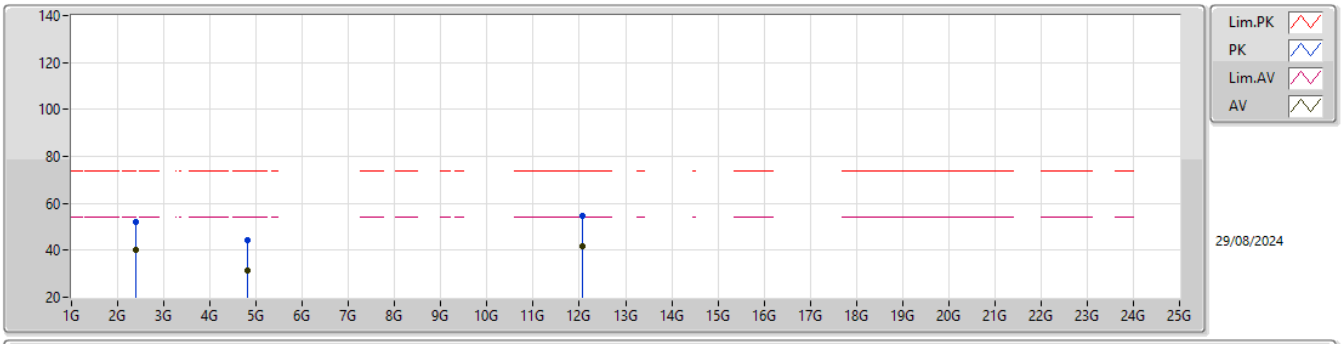
2412MHz_TX



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	2.39G	37.41	54.00	-16.59	41.75	3	Horizontal	294	1.00	-	27.60	4.95	36.89
PK	2.39G	49.86	74.00	-24.14	54.20	3	Horizontal	294	1.00	-	27.60	4.95	36.89
AV	4.824G	31.46	54.00	-22.54	31.87	3	Horizontal	25	1.00	-	31.25	6.87	38.53
PK	4.824G	44.32	74.00	-29.68	44.73	3	Horizontal	25	1.00	-	31.25	6.87	38.53
AV	12.06G	41.85	54.00	-12.15	35.44	3	Horizontal	31	1.00	-	39.22	10.03	42.84
PK	12.06G	54.69	74.00	-19.31	48.28	3	Horizontal	31	1.00	-	39.22	10.03	42.84

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

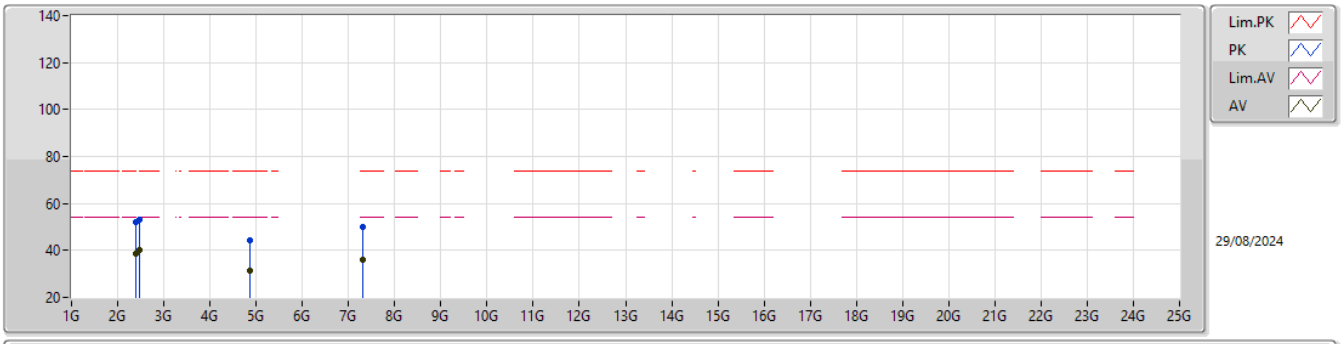
2412MHz_TX



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	2.39G	39.95	54.00	-14.05	44.29	3	Vertical	182	2.16	-	27.60	4.95	36.89
PK	2.39G	51.86	74.00	-22.14	56.20	3	Vertical	182	2.16	-	27.60	4.95	36.89
AV	4.824G	31.58	54.00	-22.42	31.99	3	Vertical	16	1.00	-	31.25	6.87	38.53
PK	4.824G	44.39	74.00	-29.61	44.80	3	Vertical	16	1.00	-	31.25	6.87	38.53
AV	12.06G	41.95	54.00	-12.05	35.54	3	Vertical	28	1.00	-	39.22	10.03	42.84
PK	12.06G	54.76	74.00	-19.24	48.35	3	Vertical	28	1.00	-	39.22	10.03	42.84

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

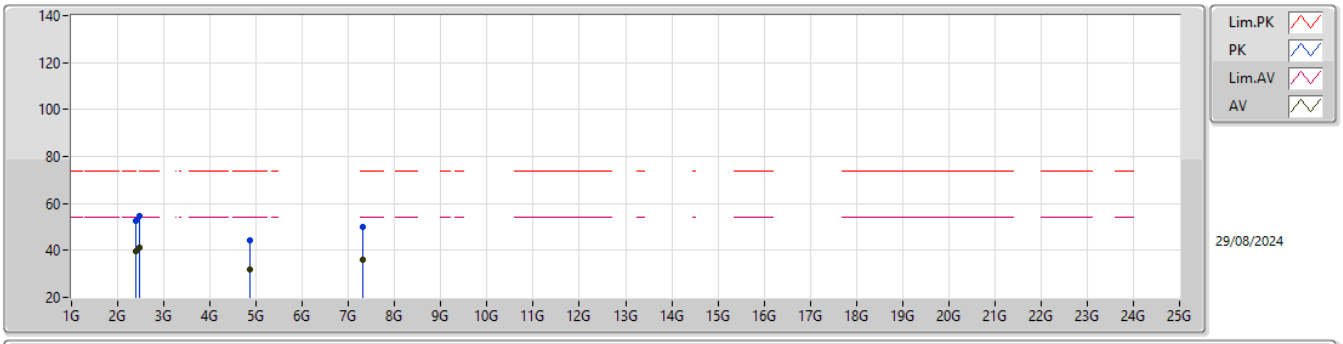
2437MHz_TX



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	2.39G	38.75	54.00	-15.25	43.09	3	Horizontal	289	1.00	-	27.60	4.95	36.89
PK	2.39G	51.86	74.00	-22.14	56.20	3	Horizontal	289	1.00	-	27.60	4.95	36.89
AV	2.4835G	40.28	54.00	-13.72	45.00	3	Horizontal	289	1.00	-	27.20	5.06	36.98
PK	2.4835G	53.16	74.00	-20.84	57.88	3	Horizontal	289	1.00	-	27.20	5.06	36.98
AV	4.874G	31.62	54.00	-22.38	32.11	3	Horizontal	31	1.00	-	31.15	6.92	38.56
PK	4.874G	44.39	74.00	-29.61	44.88	3	Horizontal	31	1.00	-	31.15	6.92	38.56
AV	7.311G	36.11	54.00	-17.89	30.88	3	Horizontal	26	1.00	-	36.18	8.43	39.38
PK	7.311G	49.75	74.00	-24.25	44.52	3	Horizontal	26	1.00	-	36.18	8.43	39.38

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

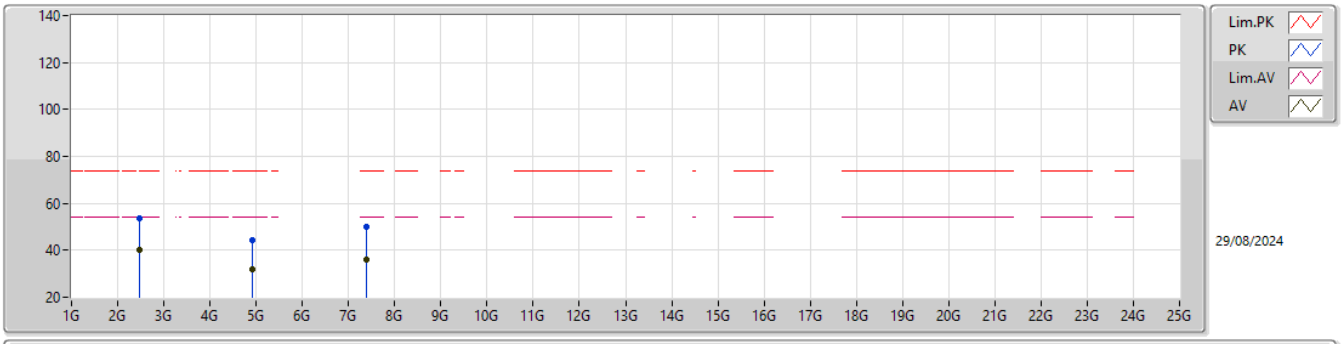
2437MHz_TX



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	2.39G	39.85	54.00	-14.15	44.19	3	Vertical	182	2.13	-	27.60	4.95	36.89
PK	2.39G	52.46	74.00	-21.54	56.80	3	Vertical	182	2.13	-	27.60	4.95	36.89
AV	2.4835G	41.41	54.00	-12.59	46.13	3	Vertical	182	2.13	-	27.20	5.06	36.98
PK	2.4835G	54.56	74.00	-19.44	59.28	3	Vertical	182	2.13	-	27.20	5.06	36.98
AV	4.874G	31.68	54.00	-22.32	32.17	3	Vertical	29	1.00	-	31.15	6.92	38.56
PK	4.874G	44.45	74.00	-29.55	44.94	3	Vertical	29	1.00	-	31.15	6.92	38.56
AV	7.311G	36.29	54.00	-17.71	31.06	3	Vertical	22	1.00	-	36.18	8.43	39.38
PK	7.311G	49.85	74.00	-24.15	44.62	3	Vertical	22	1.00	-	36.18	8.43	39.38

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

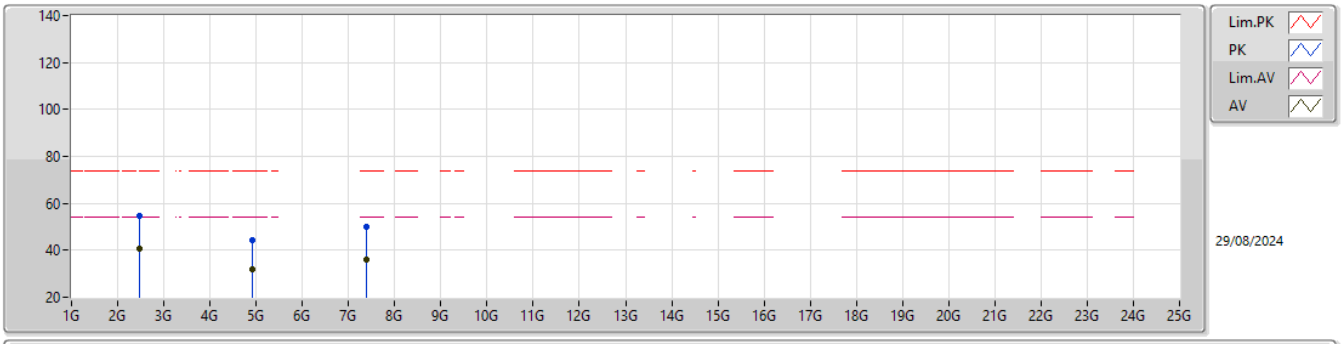
2462MHz_TX



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	40.41	54.00	-13.59	45.13	3	Horizontal	289	1.00	-	27.20	5.06	36.98
PK	2.4835G	53.82	74.00	-20.18	58.54	3	Horizontal	289	1.00	-	27.20	5.06	36.98
AV	4.924G	31.65	54.00	-22.35	32.09	3	Horizontal	21	1.00	-	31.20	6.96	38.60
PK	4.924G	44.36	74.00	-29.64	44.80	3	Horizontal	21	1.00	-	31.20	6.96	38.60
AV	7.386G	36.12	54.00	-17.88	31.03	3	Horizontal	15	1.00	-	36.10	8.47	39.48
PK	7.386G	49.95	74.00	-24.05	44.86	3	Horizontal	15	1.00	-	36.10	8.47	39.48

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

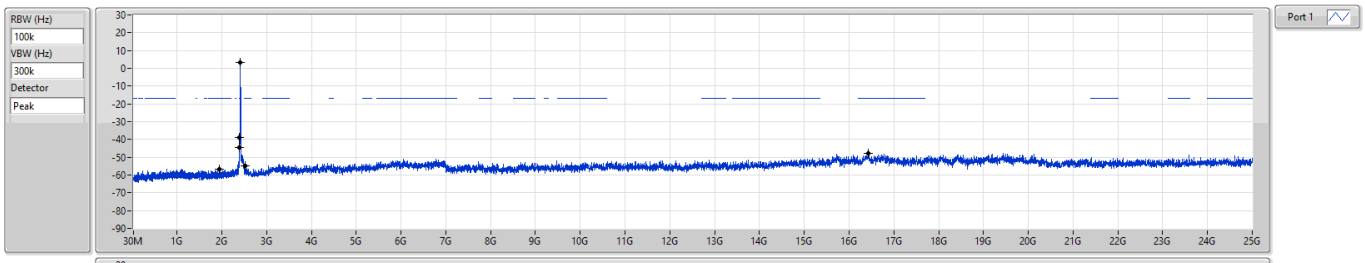
2462MHz_TX

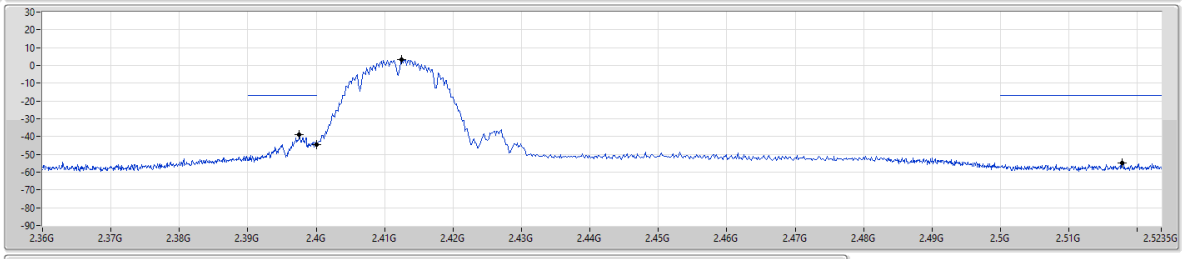


Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.4835G	40.62	54.00	-13.38	45.34	3	Vertical	188	2.16	-	27.20	5.06	36.98
PK	2.4835G	54.43	74.00	-19.57	59.15	3	Vertical	188	2.16	-	27.20	5.06	36.98
AV	4.924G	31.76	54.00	-22.24	32.20	3	Vertical	36	1.00	-	31.20	6.96	38.60
PK	4.924G	44.51	74.00	-29.49	44.95	3	Vertical	36	1.00	-	31.20	6.96	38.60
AV	7.386G	36.29	54.00	-17.71	31.20	3	Vertical	11	1.00	-	36.10	8.47	39.48
PK	7.386G	50.08	74.00	-23.92	44.99	3	Vertical	11	1.00	-	36.10	8.47	39.48

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

2412MHz

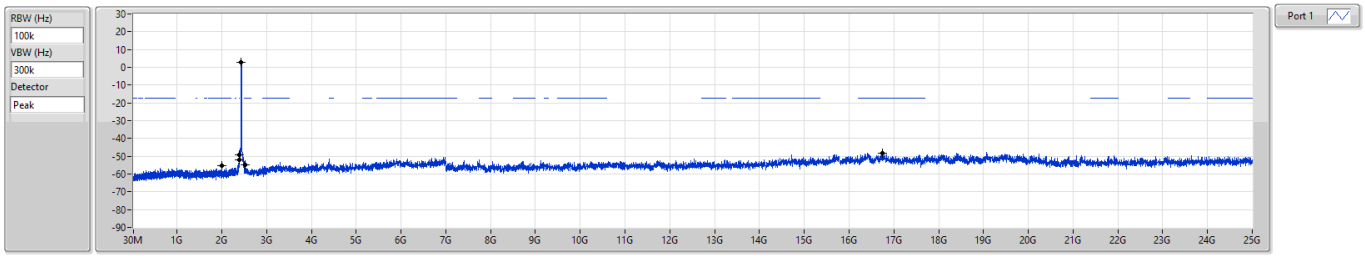


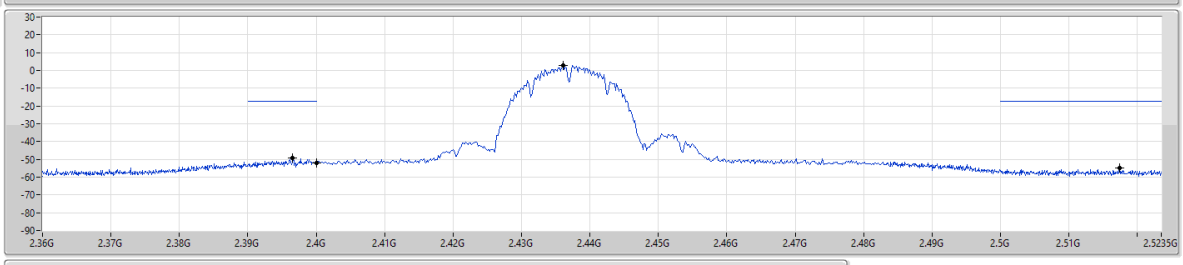


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41253G	3.16	-16.84	1.94992G	-56.57	2.39752G	-39.10	2.4G	-44.63	2.51774G	-54.99	16.43364G	-47.64	1

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

2437MHz

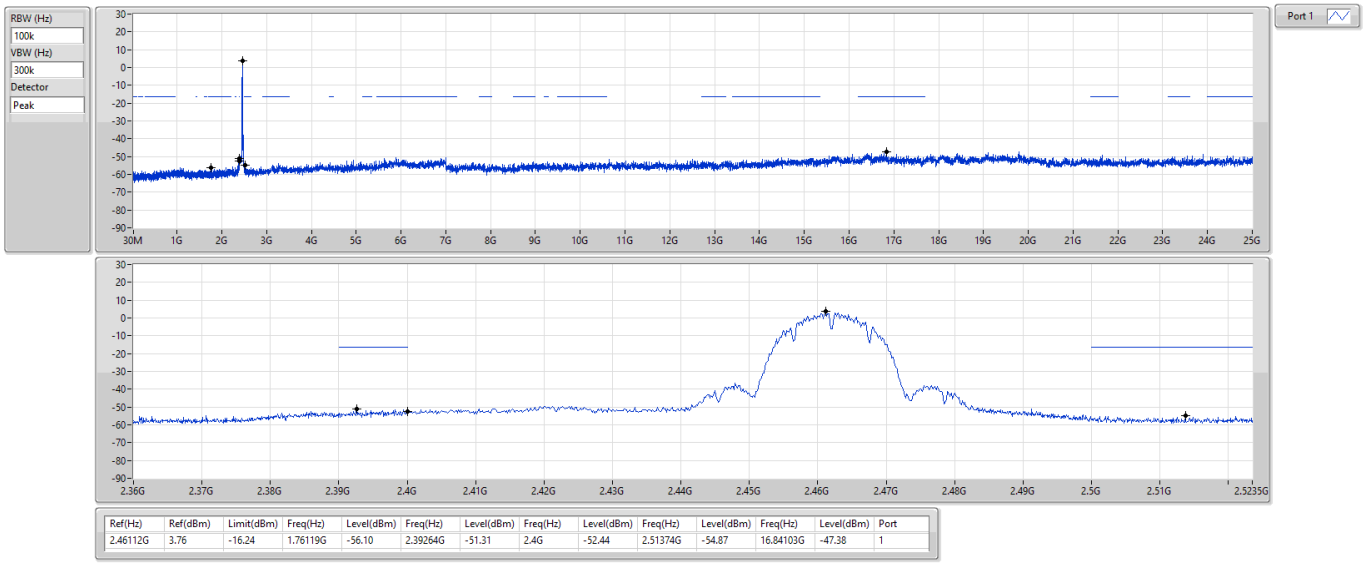




Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43607G	2.86	-17.14	1.99419G	-55.27	2.39656G	-49.34	2.4G	-52.01	2.51742G	-54.77	16.74551G	-48.13	1

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

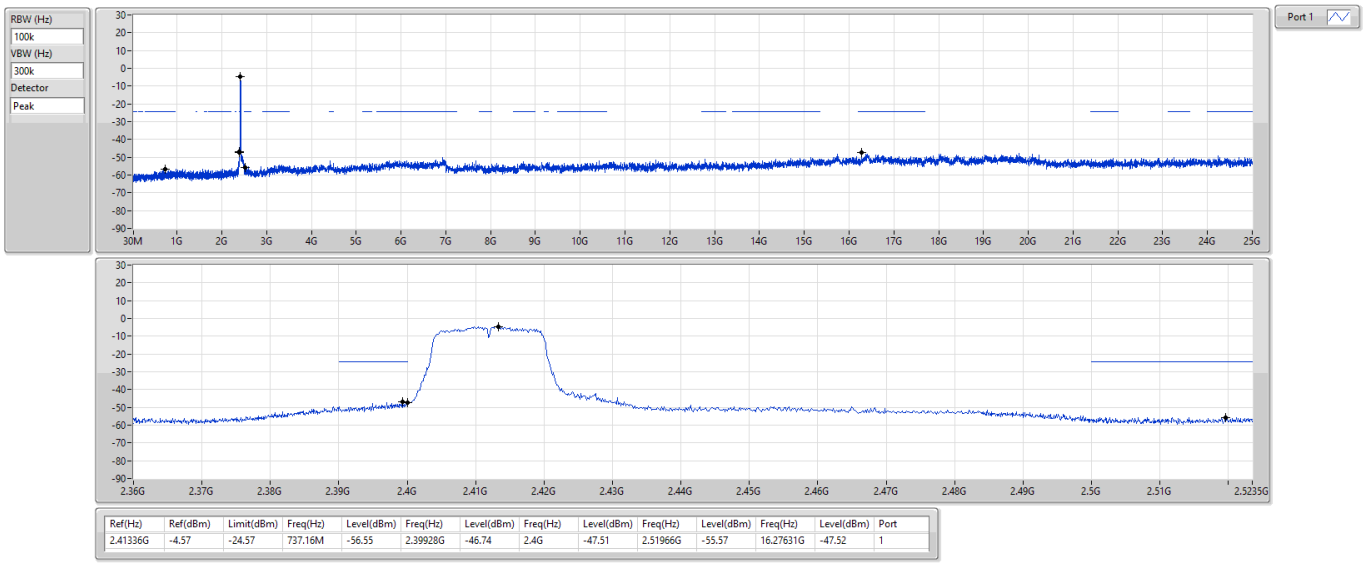
2462MHz



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
2.46112G	3.76	-16.24	1.76119G	-56.10	2.39264G	-51.31	2.4G	-52.44	2.51374G	-54.87	16.84103G	-47.38	1

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

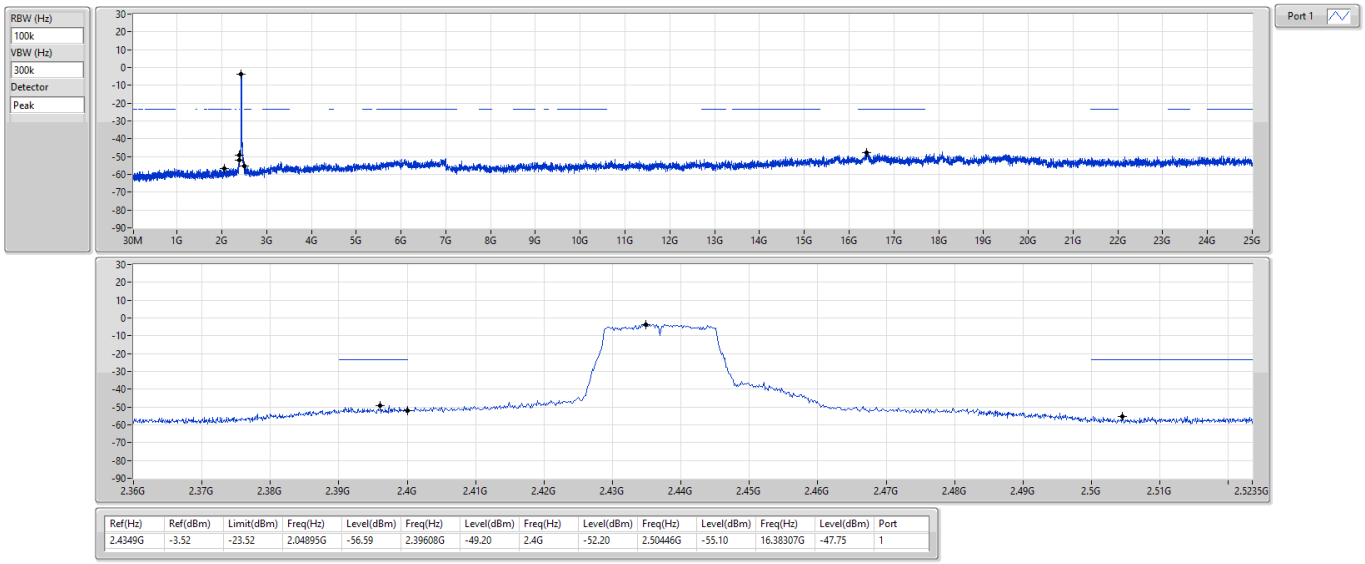
2412MHz



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
2.41336G	-4.57	-24.57	737.16M	-56.55	2.39928G	-46.74	2.4G	-47.51	2.51966G	-55.57	16.27631G	-47.52	1

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

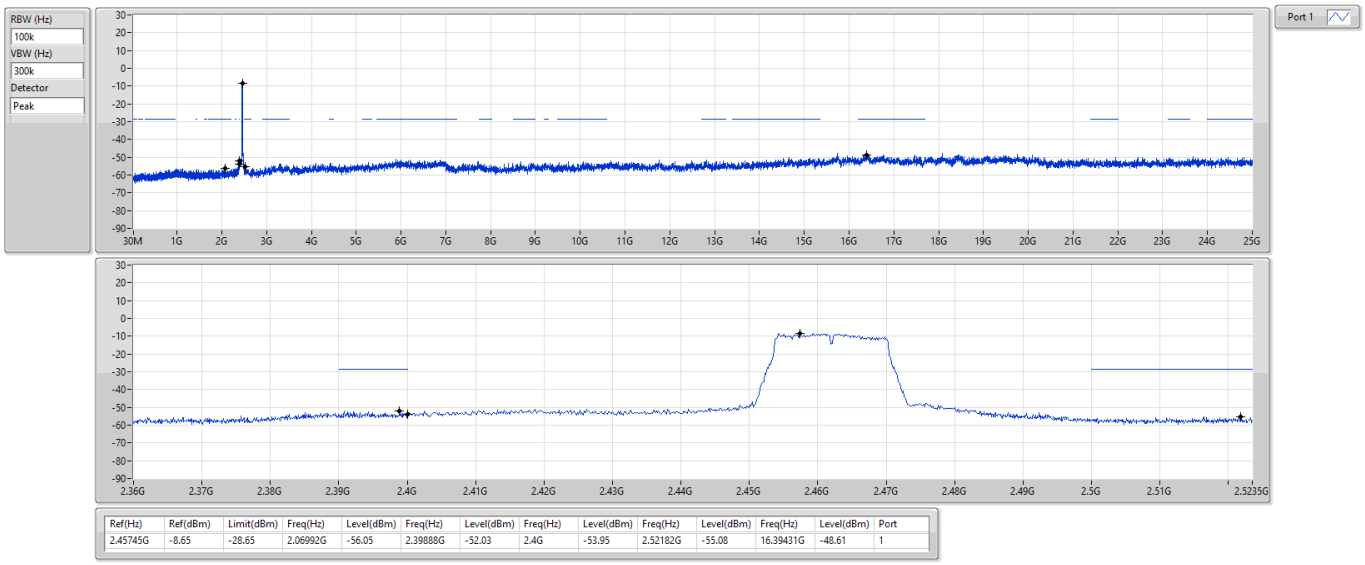
2437MHz



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
2.4349G	-3.52	-23.52	2.04895G	-56.59	2.39608G	-49.20	2.4G	-52.20	2.50446G	-55.10	16.38307G	-47.75	1

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

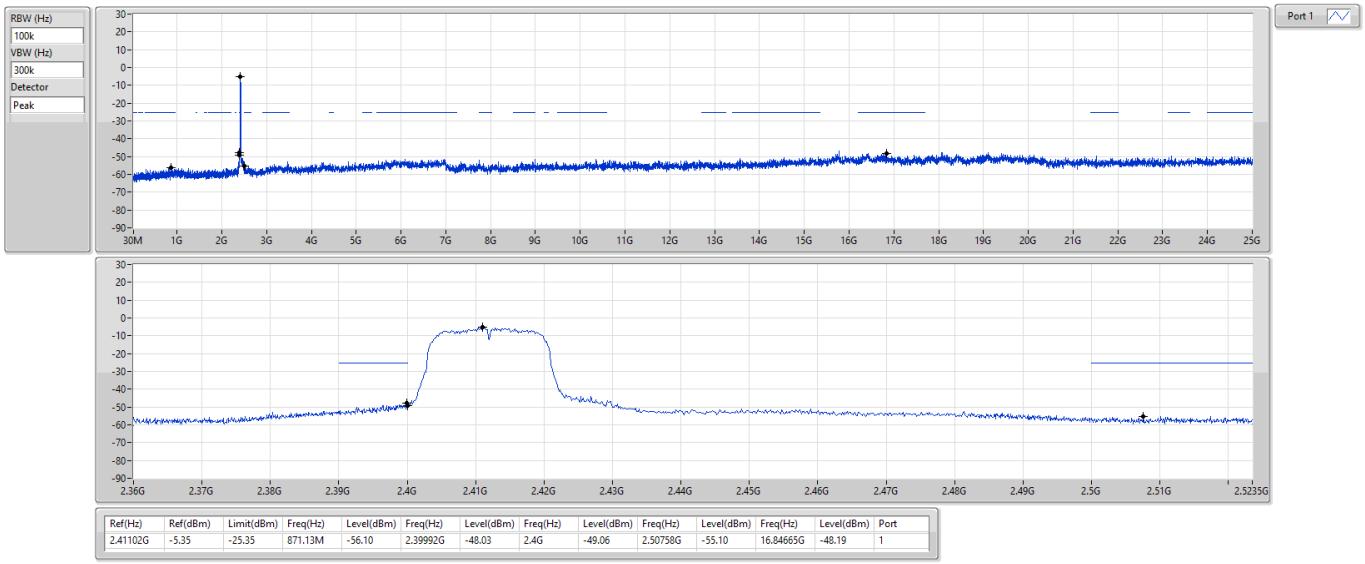
2462MHz



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
2.45745G	-8.65	-28.65	2.06992G	-56.05	2.39888G	-52.03	2.4G	-53.95	2.52182G	-55.08	16.39431G	-48.61	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **CSENdB**

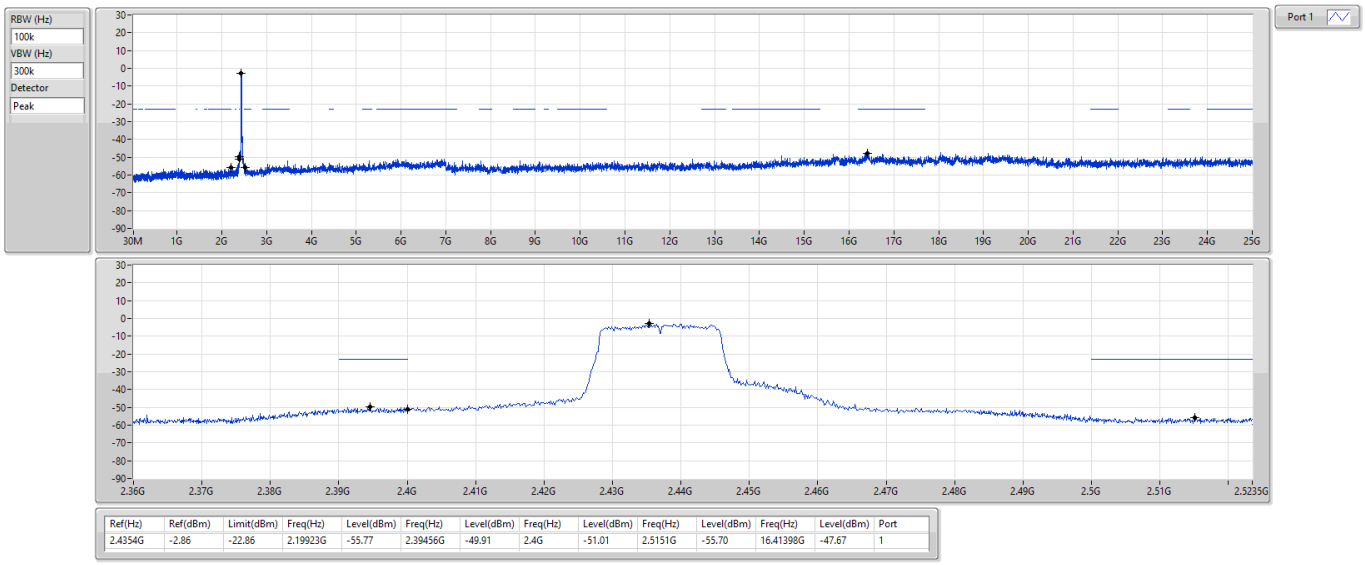
2412MHz



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
2.41102G	-5.35	-25.35	871.13M	-56.10	2.39992G	-48.03	2.4G	-49.06	2.50758G	-55.10	16.84665G	-48.19	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **CSENdB**

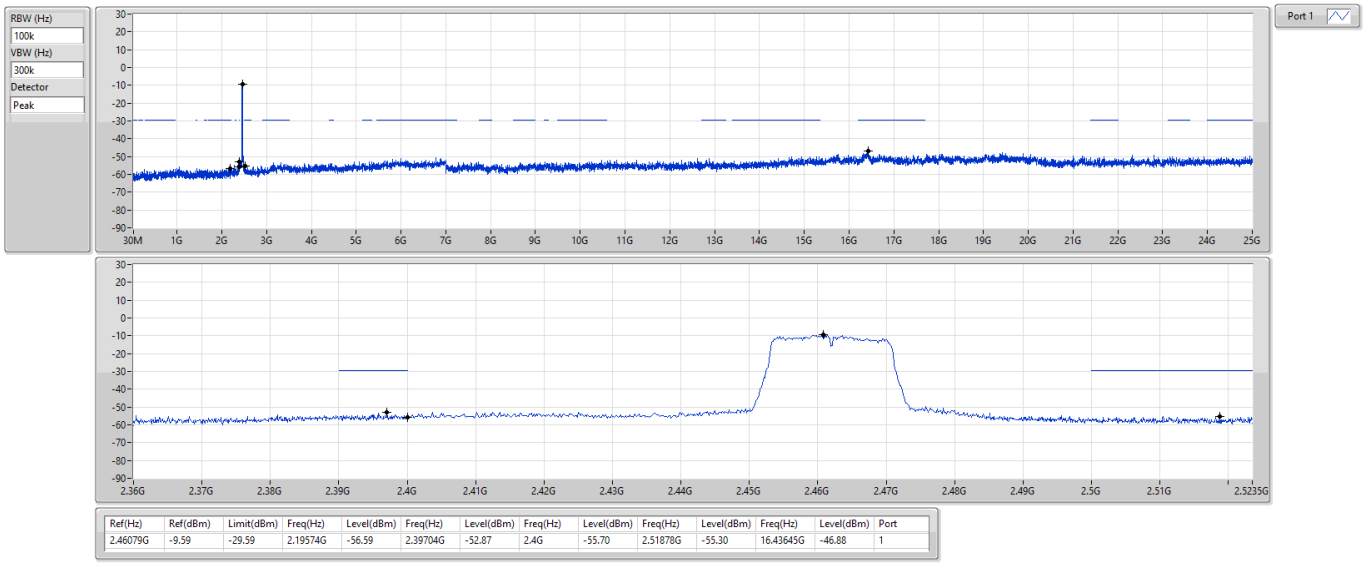
2437MHz



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
2.4354G	-2.86	-22.86	2.19923G	-55.77	2.39456G	-49.91	2.4G	-51.01	2.5151G	-55.70	16.41398G	-47.67	1

2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **CSENdB**

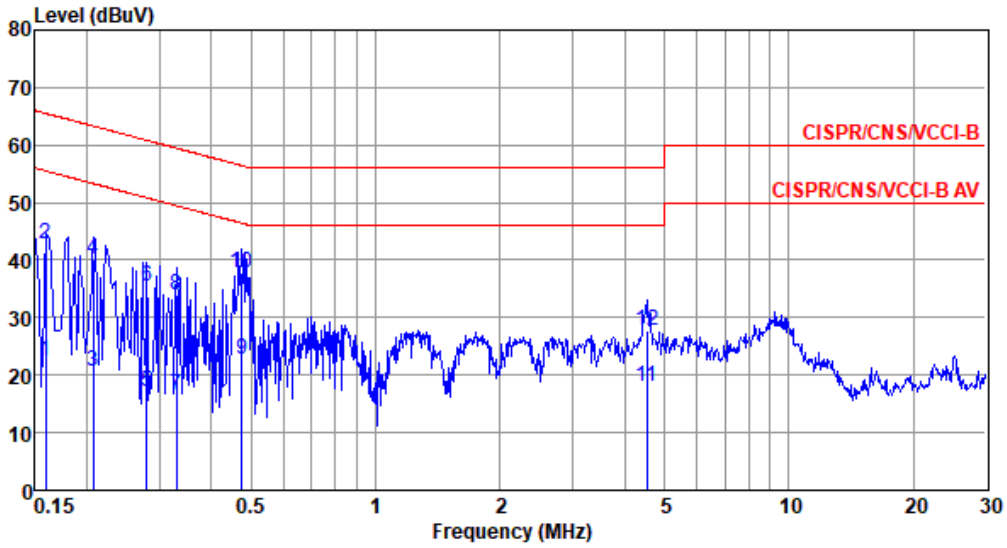
2462MHz



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	-9.59	-29.59	2.19574G	-56.59	2.39704G	-52.87	2.4G	-55.70	2.51878G	-55.30	16.43645G	-46.88	1

Modulation Mode	Charging Mode
Power Phase	Line

Test by : Joe Liao_AN Temperature: 25°C Humidity: 64%

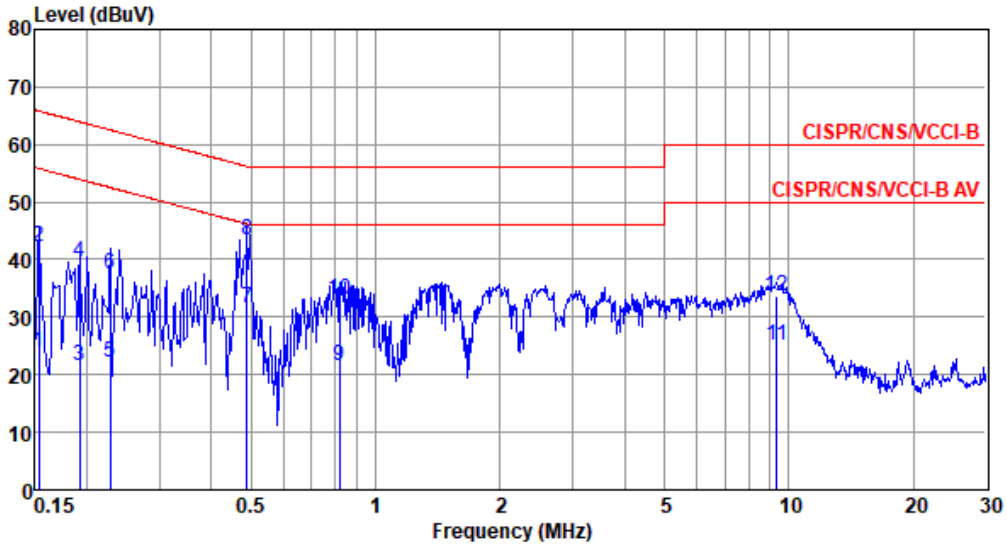


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.159	22.55	55.52	-32.97	12.69	9.65	0.08	0.13	Average
2	0.159	42.69	65.52	-22.83	32.83	9.65	0.08	0.13	QP
3	0.207	20.68	53.32	-32.64	10.80	9.65	0.06	0.17	Average
4	0.207	40.18	63.32	-23.14	30.30	9.65	0.06	0.17	QP
5	0.279	17.09	50.85	-33.76	7.16	9.65	0.07	0.21	Average
6	0.279	35.42	60.85	-25.43	25.49	9.65	0.07	0.21	QP
7	0.330	16.44	49.44	-33.00	6.50	9.64	0.07	0.23	Average
8	0.330	34.07	59.44	-25.37	24.13	9.64	0.07	0.23	QP
9	0.474	22.82	46.45	-23.63	12.84	9.64	0.08	0.26	Average
10*	0.474	37.74	56.45	-18.71	27.76	9.64	0.08	0.26	QP
11	4.525	18.02	46.00	-27.98	7.74	9.68	0.20	0.40	Average
12	4.525	27.70	56.00	-28.30	17.42	9.68	0.20	0.40	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	Charging Mode
Power Phase	Neutral

Test by : Joe Liao_AN Temperature: 25°C Humidity: 64%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.153	23.82	55.82	-32.00	13.96	9.66	0.08	0.12	Average
2	0.153	42.15	65.82	-23.67	32.29	9.66	0.08	0.12	QP
3	0.192	21.58	53.93	-32.35	11.71	9.65	0.06	0.16	Average
4	0.192	39.45	63.93	-24.48	29.58	9.65	0.06	0.16	QP
5	0.228	22.20	52.52	-30.32	12.31	9.65	0.06	0.18	Average
6	0.228	37.49	62.52	-25.03	27.60	9.65	0.06	0.18	QP
7	0.489	31.54	46.19	-14.65	21.56	9.64	0.08	0.26	Average
8*	0.489	43.54	56.19	-12.65	33.56	9.64	0.08	0.26	QP
9	0.817	21.57	46.00	-24.43	11.54	9.65	0.09	0.29	Average
10	0.817	33.16	56.00	-22.84	23.13	9.65	0.09	0.29	QP
11	9.352	25.03	50.00	-24.97	14.53	9.74	0.34	0.42	Average
12	9.352	33.70	60.00	-26.30	23.20	9.74	0.34	0.42	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).