FCC Radio Test Report

FCC ID	:	**TKZAW7688-WHM**
Contains FCC ID	:	**TKZMM610X-001**
Equipment	:	**Wi-Fi HaLow Gateway**
Brand Name	:	**AsiaRF**
Model Name	:	**AP7688-WHM**
Applicant	:	**AsiaRF Co., Ltd. 1F, 7, Houde Street, Yonghe Dist. New Taipei City Taiwan 23455**
Manufacturer	:	**AsiaRF Co., Ltd. 1F, 7, Houde Street, Yonghe Dist. New Taipei City Taiwan 23455**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Jun. 12, 2023, and testing was started from May 16, 2024 and completed on Jun. 27, 2024. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR2D2020AC	01	Initial issue of report	Aug. 07, 2024
FR2D2020AC	02	Add note in Section 1.1 (This report is the latest version replacing for the report issued on Aug. 07, 2024)	Aug. 13, 2024

Summary of Test Result

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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None

Reviewed by: Barry Hsiao

Report Producer: Ann Hou

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11n HT20	20	1TX
2.4-2.4835GHz	802.11n HT40	40	1TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.
- WiFi HaLow is certified module under FCC ID: TKZMM610X-001

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Support
1	1	AsiaRF Co., Ltd.	ANTSM900030 04001	Dipole	I-Pex	2.5	WiFi HaLow
2	2	AsiaRF Co., Ltd.	AP7688-WHM	PCB	I-Pex	1.2	2.4G

Note 1: The EUT has two antennas.

Note 2: The antenna 1 mentioned above will not be sold with the EUT in the market.

Note 3: WiFi HaLow is certified module under FCC ID: TKZMM610X-001

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

Ant. 2 (port 2) could transmit/receive.

For WiFi HaLow function:

For WiFi HaLow mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
Beamforming Function	☐	With beamforming	☒	Without beamforming

Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	…
☐	Other:	

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b_Nss1,(1Mbps)_1TX	0.991	0.04	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g_Nss1,(6Mbps)_1TX	0.935	0.29	1.398m	1k
802.11n HT20_Nss1,(MCS0)_1TX	0.937	0.28	1.311m	1k
802.11n HT40_Nss1,(MCS0)_1TX	0.879	0.56	650u	3k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF:

- KDB 558074 D01 v05r02
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (**TAF:** 3785)	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction	CO04-HY	Simon Cheng	22.2~23.7°C / 53~55%	20/May/2024
RF Conducted	TH06-HY	Billy Wang	22.2~23.5°C / 51~53%	20/May/2024
Radiated (Co-location)	03CH03-HY	CoCo Shang Kung	22.1~22.9°C / 51~52%	27/Jun/2024
☒ Wenhua 3rd. (**TAF:** 3785)	**ADD:** No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
Test site Designation No. TW0036 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
Radiated	03CH26-HY	Jack Tang	22.2~23.4°C / 50~52%	16/May/2024~17/May/2024

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	**Uncertainty**	**Remark**
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	MT7628 QA 0.0.0.96

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	14
2437MHz	10
2462MHz	10
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	1D
2437MHz	1C
2457MHz	1B
2462MHz	1B
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	1D
2437MHz	1D
2462MHz	1D
802.11n HT40_Nss1,(MCS0)_1TX	-
2422MHz	17
2427MHz	19
2437MHz	1E
2447MHz	1C
2452MHz	19

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	Adapter mode

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

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	Adapter mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	2.4G WLAN + WiFi HaLow mode
Refer to Sporton Test Report No.: FA2D2020 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

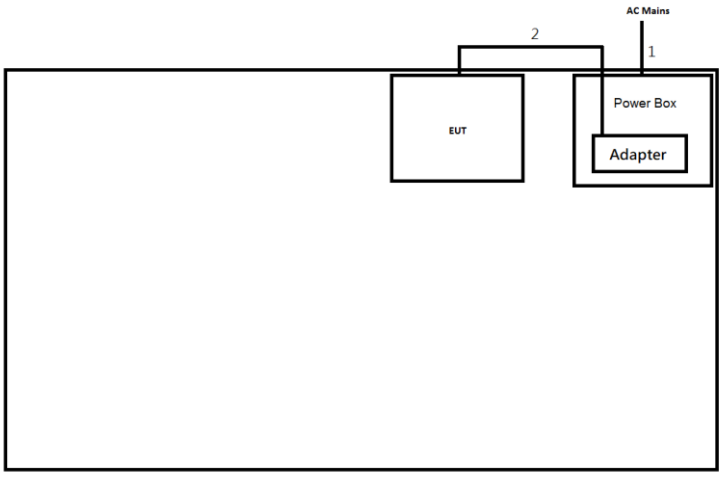
2.3 Accessories

Accessories				
AC Adapter	Brand Name	Idrc	Model Name	CW1201000
	Manufacturer	TWINTEX INSTRUMENT LTD.	SN	N/A
	Power Rating	I/P: 100-240Vac, 50/60Hz 0.4A, O/P: 12Vdc, 1000mA		
	Power Cord	1.5 meter, shielded cable, w/o ferrite core		
Antenna 1	Brand Name	AsiaRF Co., Ltd.	Model Name	ANTSM90003004001

Reminder: Regarding to more detail and other information, please refer to user manual.

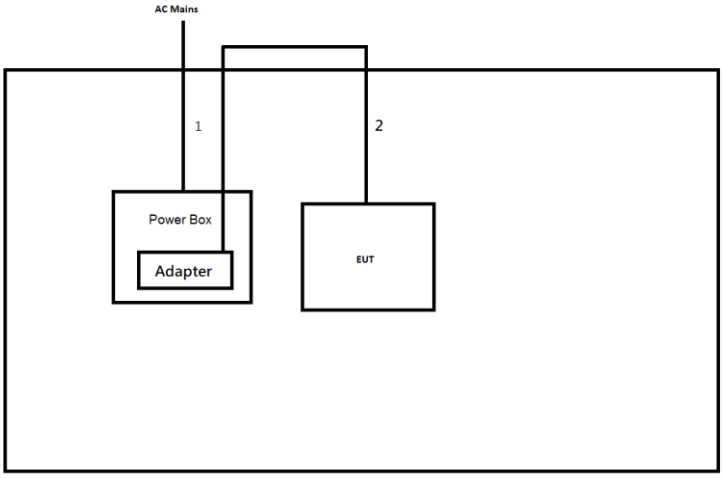
2.4 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	DC Power cable	Yes	1.5

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	DC Power cable	Yes	1.5

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

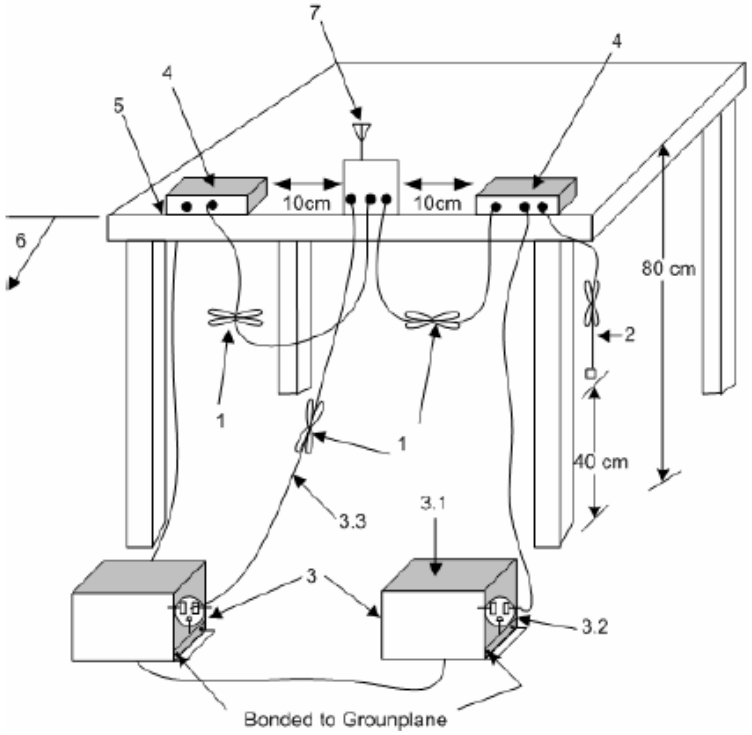
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) +LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

3.2.2 Measuring Instruments

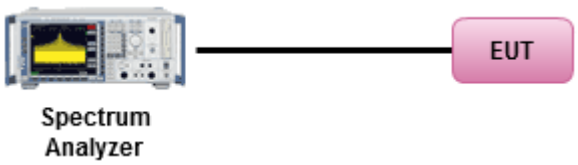
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
	☐ Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit			
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)		
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm		
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm		
	▪ Smart antenna system (SAS):		
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm	
e.i.r.p. Power Limit:			
▪ 2400-2483.5 MHz Band			
	▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)		
	▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm		
	▪ Smart antenna system (SAS)		
		- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm	
		- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm	
		- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ dBm	
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.			

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
	☐ Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
	☐ Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
▪ Maximum Average Conducted Output Power	
	☐ Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
	☒ Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

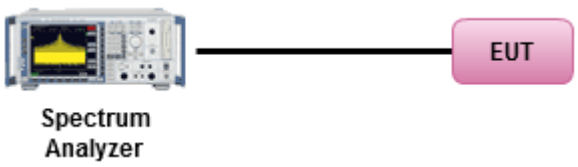
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		▪ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.	

3.5.2 Measuring Instruments

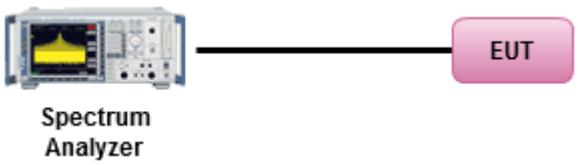
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

3.6.2 Measuring Instruments

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

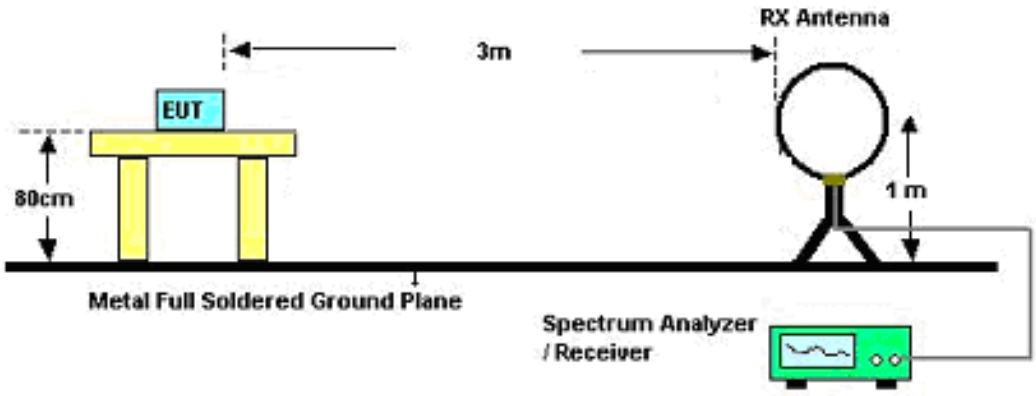
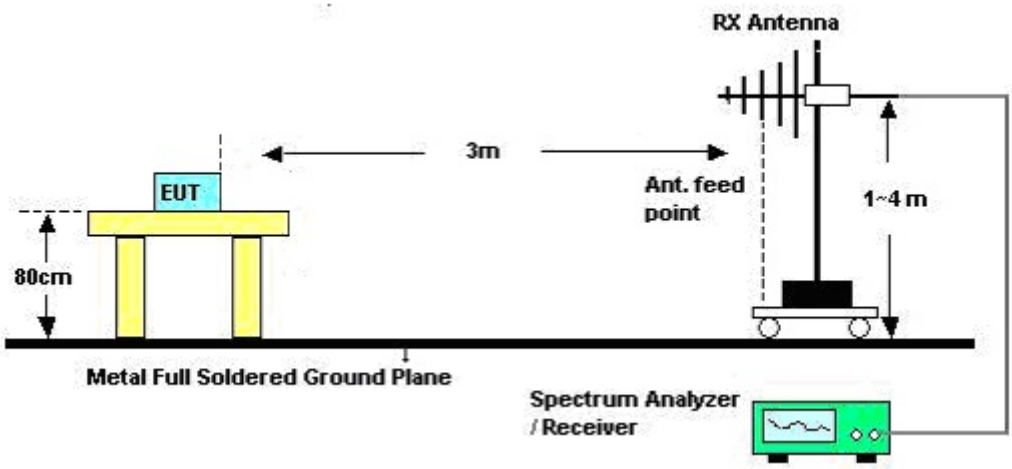
3.6.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
▪ For the transmitter band-edge emissions shall be measured using following options below:	
	▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
▪ Use the following spectrum analyzer settings:	
	▪ Set RBW=100 kHz for f < 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.
▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	▪ Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

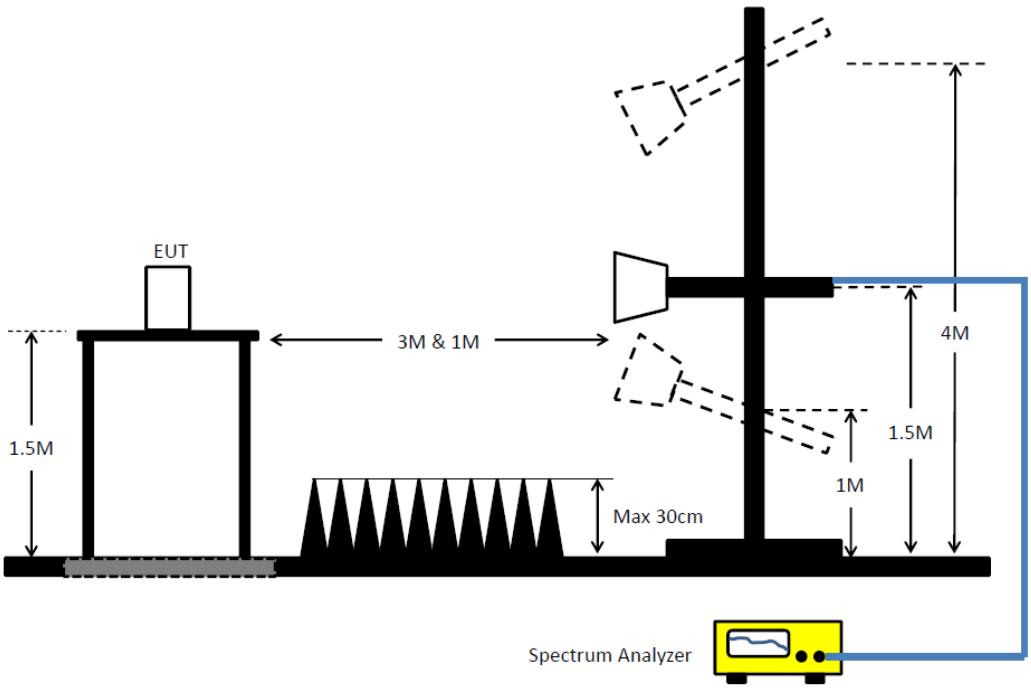
3.6.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

3.6.5 Test Setup

Emissions in Restricted Frequency Bands
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



3.6.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz ~ 3.6GHz	27/Dec/2023	26/Dec/2024
LISN(Artificial Mains Network)	SCHWARZBECK	NSLK 8127	8127477	9kHz ~ 30MHz	12/Apr/2024	11/Apr/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9kHz ~ 200MHz	27/Feb/2024	26/Feb/2025
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	18/Oct/2023	17/Oct/2024
SENSE-EMI	Sporton	V5.11.3	NCR	NCR	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV	101029	9kHz ~ 30GHz	30/Oct/2023	29/Oct/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	20/Oct/2023	19/Oct/2024
Power Meter	Anritsu	ML2495A	2105003	300MHz~40GHz	19/Sep/2023	18/Sep/2024
Power Sensor	Anritsu	MA2411B	1911254	300MHz~40GHz	19/Sep/2023	18/Sep/2024
SENSE-15247_DTS	Sporton	V5.11.18	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH26-HY	30MHz~1GHz 3m	08/Aug/2023	07/Aug/2024
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH26-HY	1GHz~18GHz 3m	08/Aug/2023	07/Aug/2024
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	27/Dec/2023	26/Dec/2024
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101411	10Hz~44GHz	06/Oct/2023	05/Oct/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63540/002	30MHz~1GHz	06/Jun/2023	05/Jun/2024
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02877	1GHz~18GHz	12/Jul/2023	11/Jul/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	21/Aug/2023	20/Aug/2024
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB009	9kHz~1GHz	18/Oct/2023	17/Oct/2024
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB009	1GHz~40GHz	18/Oct/2023	17/Oct/2024
Preamplifier	SGH	PRAMP 903	20230515-2	30MHz~1GHz	25/May/2023	24/May/2024
Preamplifier	SGH	PRAMP 118-H	20230515-4	1GHz ~18GHz	25/May/2023	24/May/2024
Amplifier	EM	EM18G40G	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-15247-DTS	Sporton	V5.11.18	NA	NA	NA	NA

Instrument for Radiated Test (Co-location)

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	28/Jul/2023	27/Jul/2024
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	26/Oct/2023	25/Oct/2024
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02267	1GHz~18GHz	04/Oct/2023	03/Oct/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz ~ 40GHz	21/Aug/2023	20/Aug/2024
RF CABLE 5+8 m	HUBER+SUHNER	SUOFLEX 104	03CH03-cable-03	1GHz~40GHz	20/Feb/2024	19/Feb/2025
Microwave Premplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	14/Jul/2023	13/Jul/2024
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	19/Apr/2024	18/Apr/2025
Software	Sporton	SENSE-EMI	V5.11.6	-	-	-

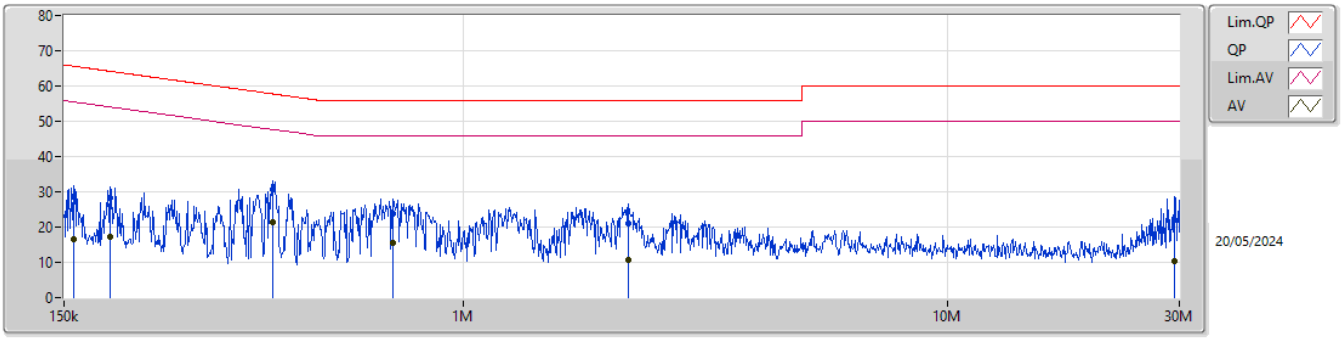
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	405.309k	21.55	47.74	-26.19	Line

Result

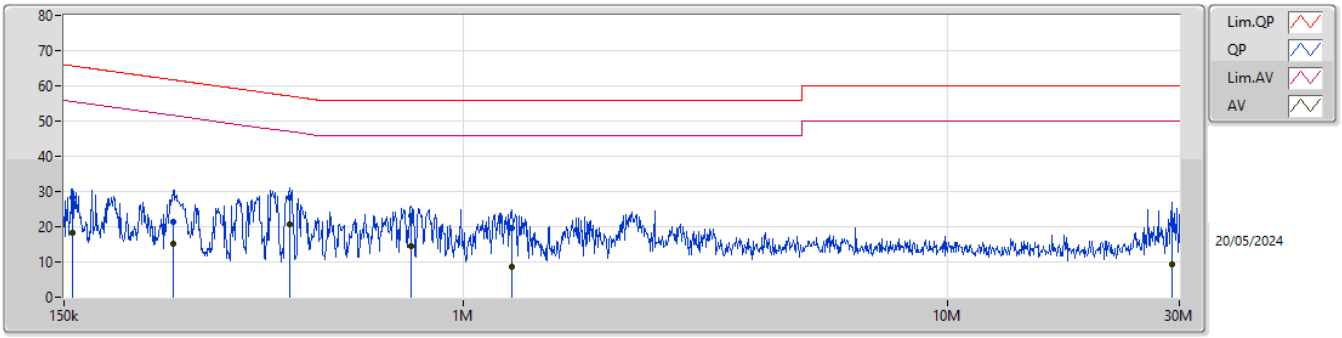
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	156.734k	28.55	65.64	-37.09	Line
Mode 1	Pass	AV	156.734k	16.59	55.64	-39.05	Line
Mode 1	Pass	QP	186.83k	28.20	64.18	-35.98	Line
Mode 1	Pass	AV	186.83k	17.07	54.18	-37.11	Line
Mode 1	Pass	QP	405.309k	30.73	57.74	-27.01	Line
Mode 1	Pass	AV	405.309k	21.55	47.74	-26.19	Line
Mode 1	Pass	QP	717.31k	23.71	56.00	-32.29	Line
Mode 1	Pass	AV	717.31k	15.48	46.00	-30.52	Line
Mode 1	Pass	QP	2.194M	21.18	56.00	-34.82	Line
Mode 1	Pass	AV	2.194M	10.66	46.00	-35.34	Line
Mode 1	Pass	QP	29.263M	21.93	60.00	-38.07	Line
Mode 1	Pass	AV	29.263M	10.26	50.00	-39.74	Line
Mode 1	Pass	QP	156.109k	28.12	65.67	-37.55	Neutral
Mode 1	Pass	AV	156.109k	18.37	55.67	-37.30	Neutral
Mode 1	Pass	QP	252.043k	21.40	61.70	-40.30	Neutral
Mode 1	Pass	AV	252.043k	15.26	51.70	-36.44	Neutral
Mode 1	Pass	QP	437.246k	28.42	57.11	-28.69	Neutral
Mode 1	Pass	AV	437.246k	20.65	47.11	-26.46	Neutral
Mode 1	Pass	QP	780.036k	22.97	56.00	-33.03	Neutral
Mode 1	Pass	AV	780.036k	14.60	46.00	-31.40	Neutral
Mode 1	Pass	QP	1.259M	19.61	56.00	-36.39	Neutral
Mode 1	Pass	AV	1.259M	8.73	46.00	-37.27	Neutral
Mode 1	Pass	QP	29.031M	20.68	60.00	-39.32	Neutral
Mode 1	Pass	AV	29.031M	9.36	50.00	-40.64	Neutral

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	156.734k	28.55	65.64	-37.09	9.86	Line	-	18.69	0.04	0.07	9.75
AV	156.734k	16.59	55.64	-39.05	9.86	Line	-	6.73	0.04	0.07	9.75
QP	186.83k	28.20	64.18	-35.98	9.82	Line	-	18.38	0.04	0.08	9.70
AV	186.83k	17.07	54.18	-37.11	9.82	Line	-	7.25	0.04	0.08	9.70
QP	405.309k	30.73	57.74	-27.01	9.93	Line	-	20.80	0.05	0.12	9.76
AV	405.309k	21.55	47.74	-26.19	9.93	Line	-	11.62	0.05	0.12	9.76
QP	717.31k	23.71	56.00	-32.29	9.95	Line	-	13.76	0.06	0.10	9.79
AV	717.31k	15.48	46.00	-30.52	9.95	Line	-	5.53	0.06	0.10	9.79
QP	2.194M	21.18	56.00	-34.82	9.97	Line	-	11.21	0.07	0.10	9.80
AV	2.194M	10.66	46.00	-35.34	9.97	Line	-	0.69	0.07	0.10	9.80
QP	29.263M	21.93	60.00	-38.07	10.48	Line	-	11.45	0.42	0.30	9.76
AV	29.263M	10.26	50.00	-39.74	10.48	Line	-	-0.22	0.42	0.30	9.76

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	156.109k	28.12	65.67	-37.55	9.88	Neutral	-	18.24	0.06	0.07	9.75
AV	156.109k	18.37	55.67	-37.30	9.88	Neutral	-	8.49	0.06	0.07	9.75
QP	252.043k	21.40	61.70	-40.30	9.87	Neutral	-	11.53	0.06	0.10	9.71
AV	252.043k	15.26	51.70	-36.44	9.87	Neutral	-	5.39	0.06	0.10	9.71
QP	437.246k	28.42	57.11	-28.69	9.95	Neutral	-	18.47	0.07	0.12	9.76
AV	437.246k	20.65	47.11	-26.46	9.95	Neutral	-	10.70	0.07	0.12	9.76
QP	780.036k	22.97	56.00	-33.03	9.97	Neutral	-	13.00	0.08	0.10	9.79
AV	780.036k	14.60	46.00	-31.40	9.97	Neutral	-	4.63	0.08	0.10	9.79
QP	1.259M	19.61	56.00	-36.39	9.98	Neutral	-	9.63	0.08	0.10	9.80
AV	1.259M	8.73	46.00	-37.27	9.98	Neutral	-	-1.25	0.08	0.10	9.80
QP	29.031M	20.68	60.00	-39.32	10.57	Neutral	-	10.11	0.52	0.29	9.76
AV	29.031M	9.36	50.00	-40.64	10.57	Neutral	-	-1.21	0.52	0.29	9.76

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	9.55M	14.048M	14M0G1D	8.725M	14.018M
802.11g_Nss1,(6Mbps)_1TX	16.15M	16.448M	16M4D1D	12.65M	16.316M
802.11n HT20_Nss1,(MCS0)_1TX	16.9M	17.666M	17M7D1D	15.075M	17.566M
802.11n HT40_Nss1,(MCS0)_1TX	35.7M	35.832M	35M8D1D	29.35M	35.782M

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

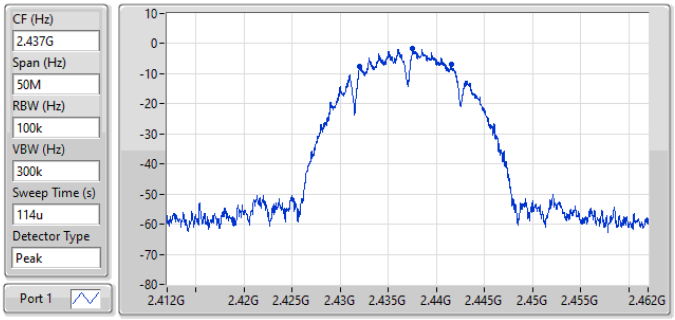
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8.725M	14.018M
2437MHz	Pass	500k	9.55M	14.033M
2462MHz	Pass	500k	9.075M	14.048M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.15M	16.382M
2437MHz	Pass	500k	12.65M	16.448M
2462MHz	Pass	500k	15.675M	16.316M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	16.9M	17.566M
2437MHz	Pass	500k	15.075M	17.666M
2462MHz	Pass	500k	15.075M	17.566M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	35.7M	35.782M
2437MHz	Pass	500k	29.35M	35.832M
2452MHz	Pass	500k	32.6M	35.782M

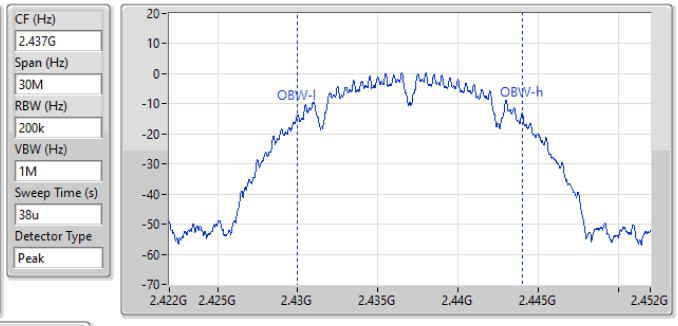
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

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

2437MHz

20/05/2024



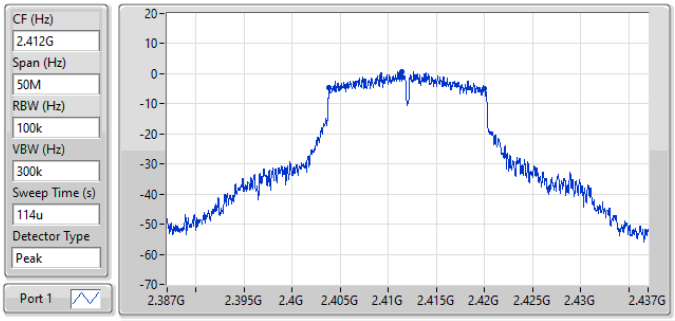


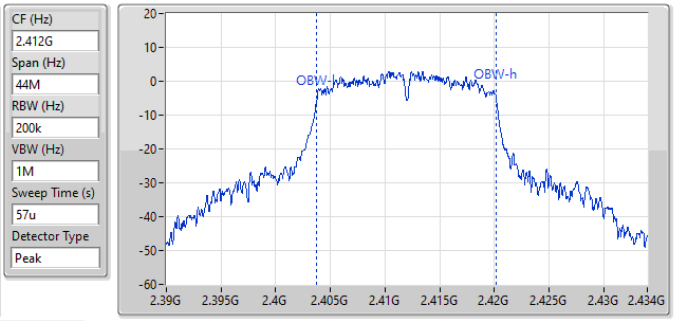
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.55M	2.431975G	2.441525G	14.033M	2.429969G	2.444001G	500k	1

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

2412MHz

20/05/2024



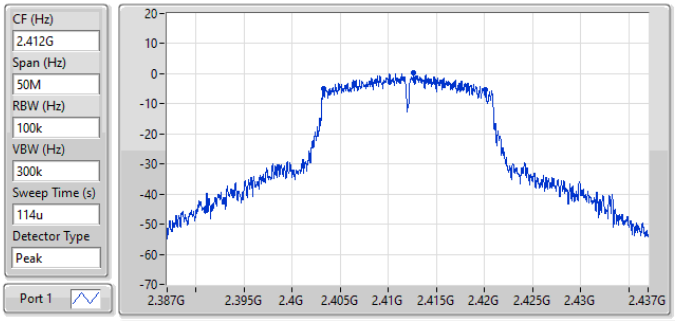


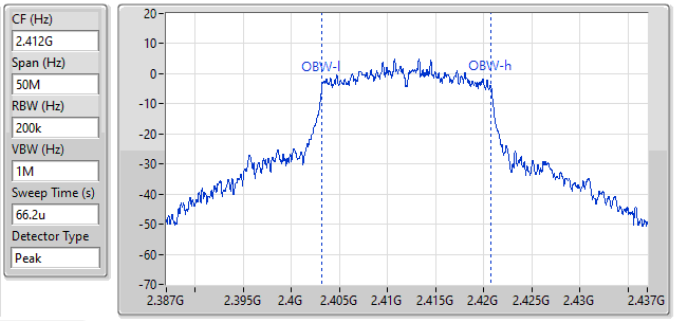
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.15M	2.40385G	2.42G	16.382M	2.403754G	2.420136G	500k	1

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

2412MHz

20/05/2024



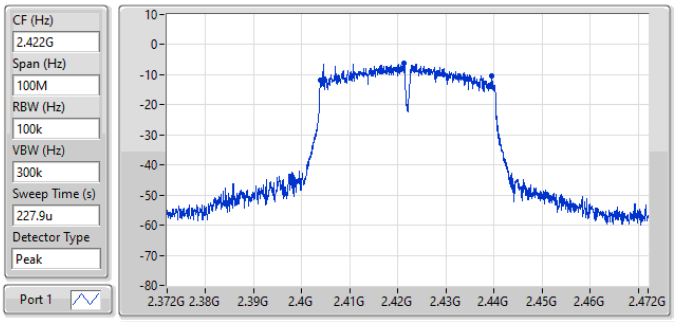


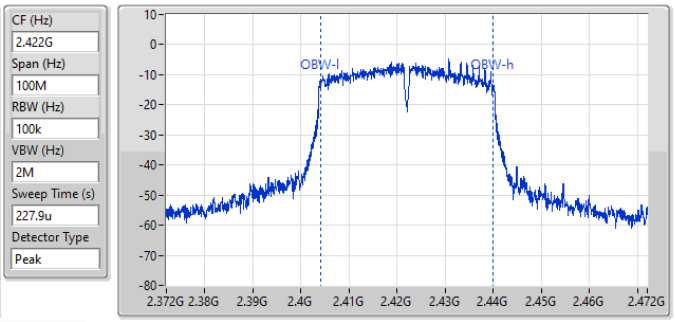
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.9M	2.403225G	2.420125G	17.566M	2.403179G	2.420746G	500k	1

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX **EBW**

2422MHz

20/05/2024





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.7M	2.40385G	2.43955G	35.782M	2.404059G	2.439841G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	10.89	0.01227
802.11g_Nss1,(6Mbps)_1TX	14.42	0.02767
802.11n HT20_Nss1,(MCS0)_1TX	14.68	0.02938
802.11n HT40_Nss1,(MCS0)_1TX	14.38	0.02742

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	10.89	10.89	30.00
2437MHz	Pass	1.20	9.30	9.30	30.00
2462MHz	Pass	1.20	8.90	8.90	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	14.42	14.42	30.00
2437MHz	Pass	1.20	14.25	14.25	30.00
2457MHz	Pass	1.20	13.85	13.85	30.00
2462MHz	Pass	1.20	13.45	13.45	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	14.21	14.21	30.00
2437MHz	Pass	1.20	14.68	14.68	30.00
2462MHz	Pass	1.20	14.10	14.10	30.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	1.20	10.58	10.58	30.00
2427MHz	Pass	1.20	11.60	11.60	30.00
2437MHz	Pass	1.20	14.38	14.38	30.00
2447MHz	Pass	1.20	13.49	13.49	30.00
2452MHz	Pass	1.20	11.99	11.99	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-17.07
802.11g_Nss1,(6Mbps)_1TX	-11.99
802.11n HT20_Nss1,(MCS0)_1TX	-10.94
802.11n HT40_Nss1,(MCS0)_1TX	-14.38

RBW = 3kHz;

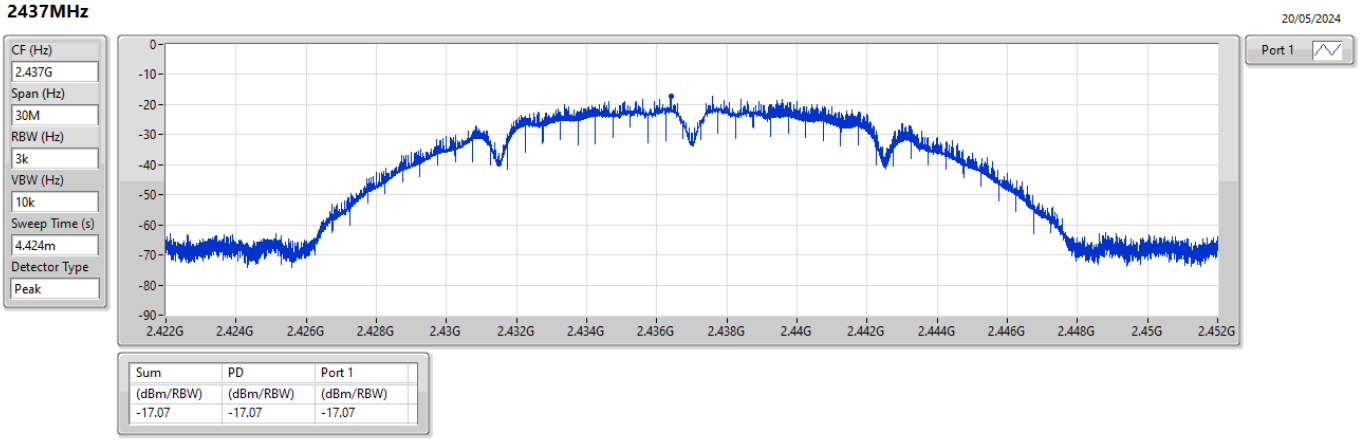
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	-17.41	-17.41	8.00
2437MHz	Pass	1.20	-17.07	-17.07	8.00
2462MHz	Pass	1.20	-17.26	-17.26	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	-11.99	-11.99	8.00
2437MHz	Pass	1.20	-12.07	-12.07	8.00
2462MHz	Pass	1.20	-14.26	-14.26	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	1.20	-10.94	-10.94	8.00
2437MHz	Pass	1.20	-12.58	-12.58	8.00
2462MHz	Pass	1.20	-11.20	-11.20	8.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	1.20	-18.22	-18.22	8.00
2437MHz	Pass	1.20	-14.38	-14.38	8.00
2452MHz	Pass	1.20	-17.46	-17.46	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

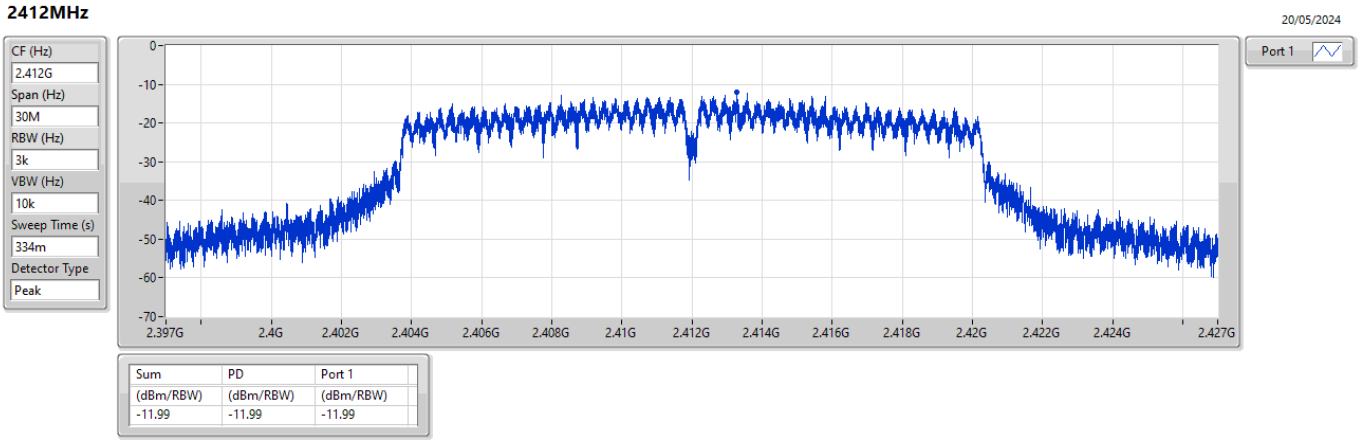
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX **PSD**

2437MHz



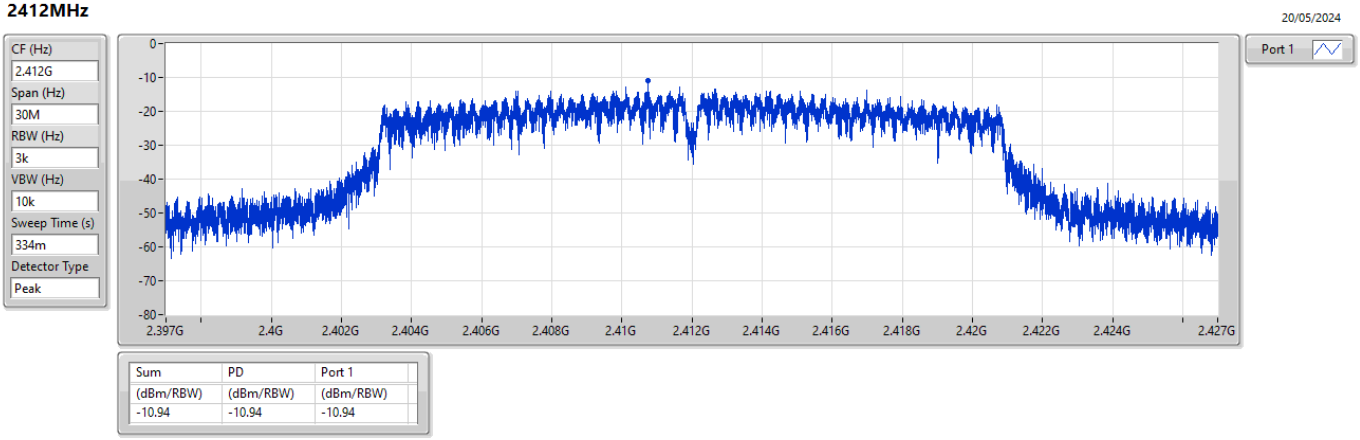
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX **PSD**

2412MHz



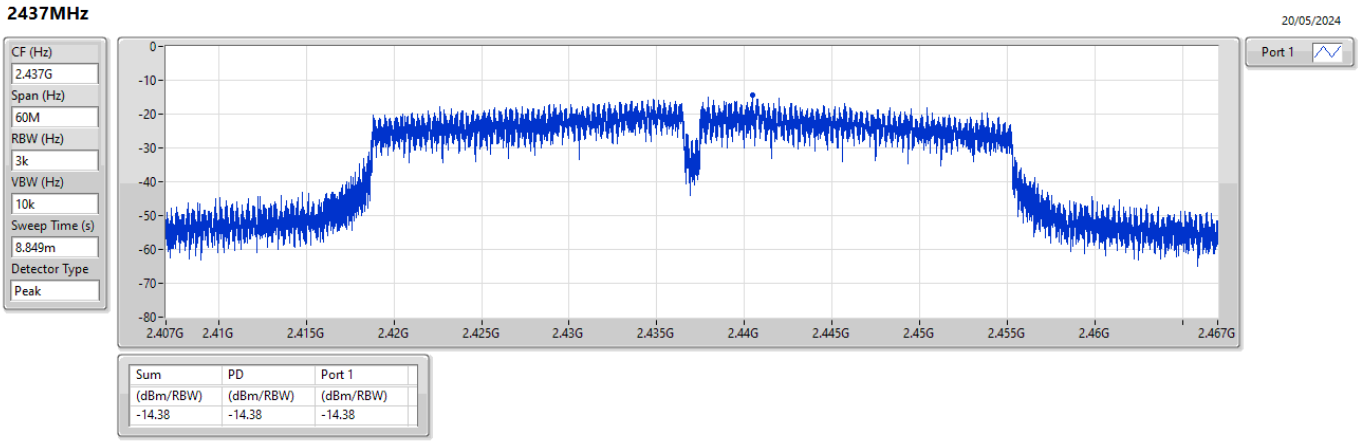
2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX **PSD**

2412MHz



2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX **PSD**

2437MHz



Summary

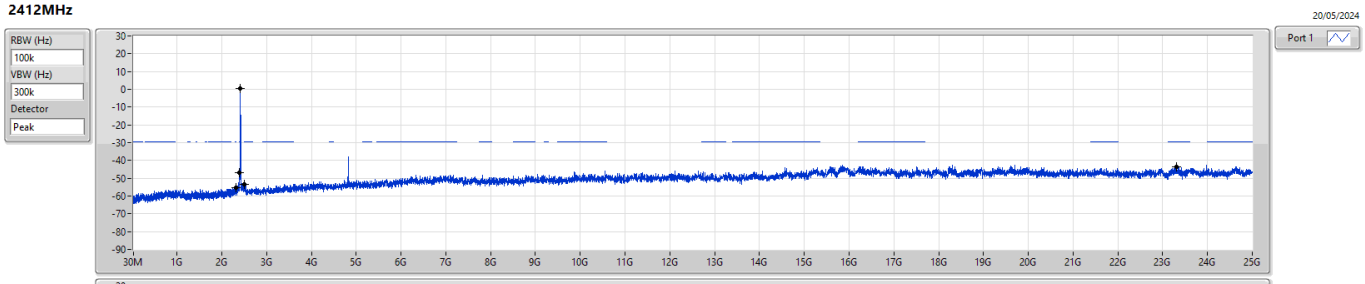
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.41136G	0.62	-29.38	2.30991G	-55.40	2.39704G	-46.75	2.4G	-46.82	2.50102G	-53.52	23.31145G	-43.50	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.41319G	4.01	-25.99	2.30059G	-53.66	2.39992G	-26.25	2.4G	-26.43	2.50638G	-51.39	16.94498G	-42.48	1
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.43574G	4.60	-25.40	2.30991G	-54.82	2.39992G	-26.50	2.4G	-27.67	2.52318G	-52.03	16.93375G	-42.83	1
802.11n HT40_Nss1,(MCS0)_1TX	Pass	2.4344G	1.71	-28.29	2.30283G	-53.87	2.39952G	-34.83	2.4G	-37.03	2.50542G	-51.37	16.29464G	-41.67	1

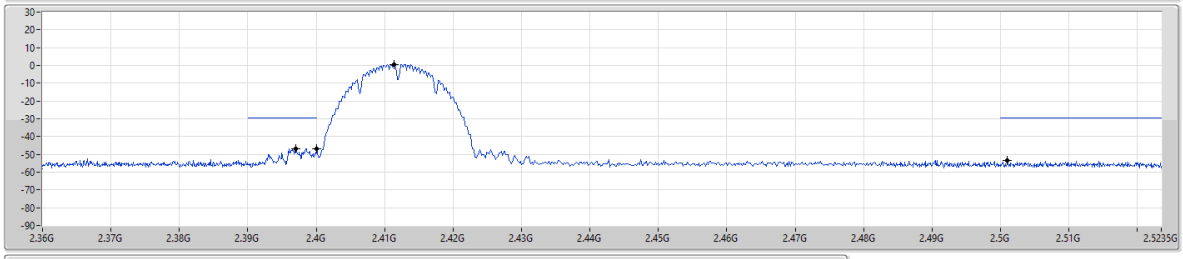
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41136G	0.62	-29.38	2.30991G	-55.40	2.39704G	-46.75	2.4G	-46.82	2.50102G	-53.52	23.31145G	-43.50	1
2437MHz	Pass	2.41136G	0.62	-29.38	1.92779G	-55.71	2.39936G	-53.70	2.4G	-55.36	2.52254G	-53.42	16.2145G	-42.33	1
2462MHz	Pass	2.41136G	0.62	-29.38	626.48M	-55.62	2.4G	-53.52	2.4G	-53.84	2.52222G	-52.86	16.22012G	-43.21	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41319G	4.01	-25.99	2.30059G	-53.66	2.39992G	-26.25	2.4G	-26.43	2.50638G	-51.39	16.94498G	-42.48	1
2437MHz	Pass	2.41319G	4.01	-25.99	2.30408G	-54.35	2.39448G	-46.69	2.4G	-49.75	2.50958G	-49.27	24.6488G	-42.79	1
2462MHz	Pass	2.41319G	4.01	-25.99	1.96274G	-55.05	2.39072G	-47.81	2.4G	-51.29	2.50742G	-50.65	24.98033G	-42.78	1
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43574G	4.60	-25.40	2.30991G	-54.82	2.39992G	-26.50	2.4G	-27.67	2.52318G	-52.03	16.93375G	-42.83	1
2437MHz	Pass	2.43574G	4.60	-25.40	2.30525G	-54.67	2.39328G	-47.71	2.4G	-49.83	2.5067G	-51.49	24.61509G	-42.25	1
2462MHz	Pass	2.43574G	4.60	-25.40	1.72391G	-48.58	2.39496G	-49.40	2.4G	-49.09	2.5095G	-50.16	23.28898G	-42.44	1
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.4344G	1.71	-28.29	2.30626G	-55.52	2.39824G	-40.26	2.4G	-41.11	2.54046G	-52.51	24.61297G	-42.22	1
2437MHz	Pass	2.4344G	1.71	-28.29	2.30283G	-53.87	2.39952G	-34.83	2.4G	-37.03	2.50542G	-51.37	16.29464G	-41.67	1
2452MHz	Pass	2.4344G	1.71	-28.29	2.30741G	-53.41	2.4G	-49.96	2.4G	-51.15	2.5043G	-51.49	16.23574G	-41.79	1

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

2412MHz

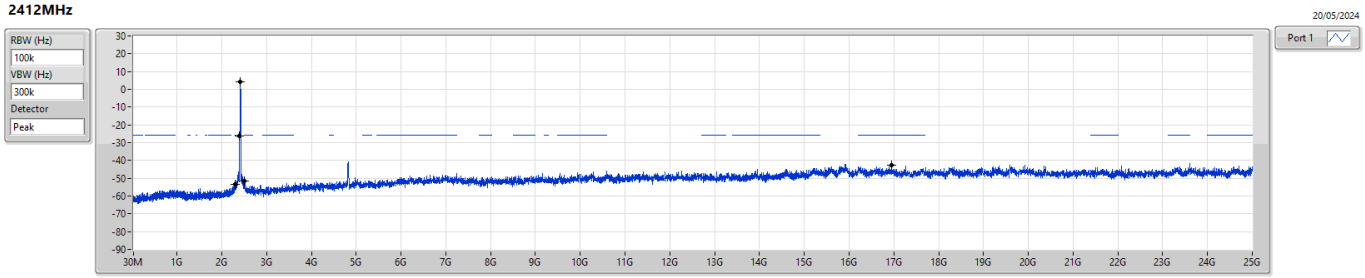


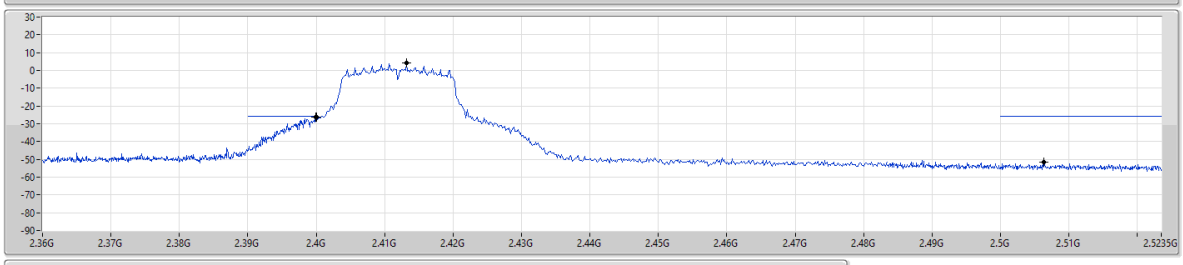


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41136G	0.62	-29.38	2.30991G	-55.40	2.39704G	-46.75	2.4G	-46.82	2.50102G	-53.52	23.31145G	-43.50	1

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

2412MHz

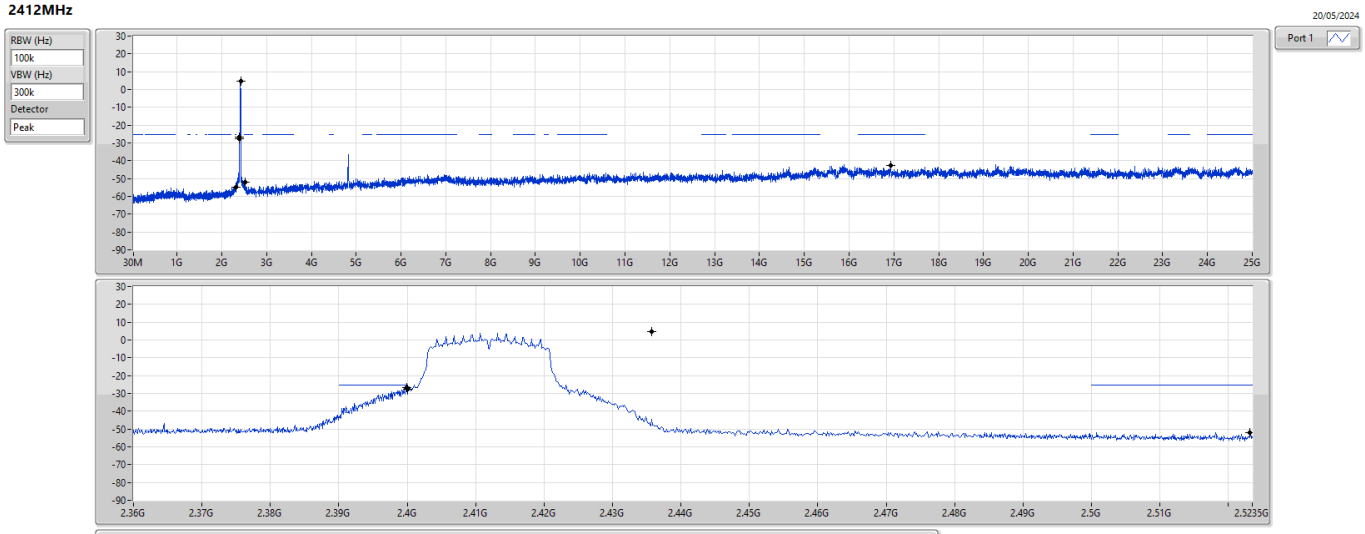




Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41319G	4.01	-25.99	2.30059G	-53.66	2.39992G	-26.25	2.4G	-26.43	2.50638G	-51.39	16.94498G	-42.48	1

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

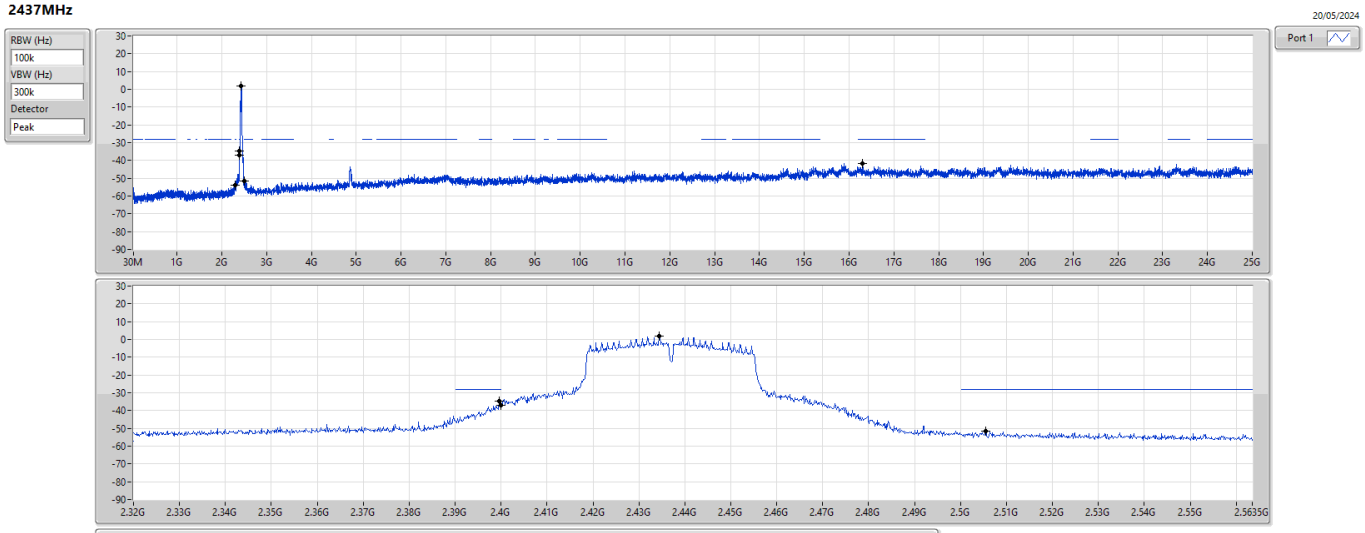
2412MHz



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
2.43574G	4.60	-25.40	2.30991G	-54.82	2.39992G	-26.50	2.4G	-27.67	2.52318G	-52.03	16.93375G	-42.83	1

2.4-2.4835GHz_802.11n HT40_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
2.4344G	1.71	-28.29	2.30283G	-53.87	2.39952G	-34.83	2.4G	-37.03	2.50542G	-51.37	16.29464G	-41.67	1

Summary

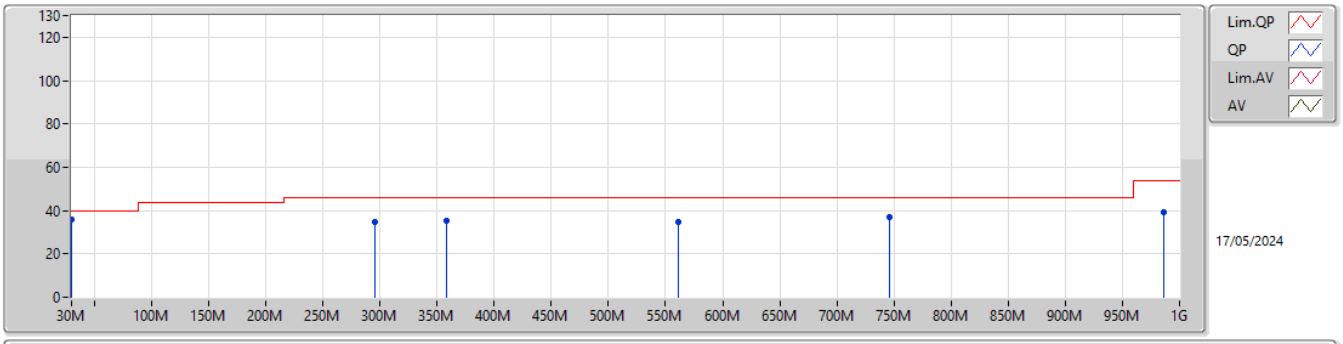
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.11n HT40_Nss1,(MCS0)_1TX	Pass	PK	30M	35.59	40.00	-4.41	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	30M	35.59	40.00	-4.41	3	Vertical	360	1.00
2437MHz	Pass	PK	295.78M	34.93	46.00	-11.07	3	Vertical	360	1.00
2437MHz	Pass	PK	357.86M	35.39	46.00	-10.61	3	Vertical	360	1.00
2437MHz	Pass	PK	561.56M	34.97	46.00	-11.03	3	Vertical	360	1.00
2437MHz	Pass	PK	745.86M	36.88	46.00	-9.12	3	Vertical	360	1.00
2437MHz	Pass	PK	986.42M	38.97	54.00	-15.03	3	Vertical	360	1.00
2437MHz	Pass	PK	30M	30.73	40.00	-9.27	3	Horizontal	0	1.00
2437MHz	Pass	PK	291.9M	38.91	46.00	-7.09	3	Horizontal	0	1.00
2437MHz	Pass	PK	359.8M	38.31	46.00	-7.69	3	Horizontal	0	1.00
2437MHz	Pass	PK	505.3M	32.60	46.00	-13.40	3	Horizontal	0	1.00
2437MHz	Pass	PK	761.38M	37.21	46.00	-8.79	3	Horizontal	0	1.00
2437MHz	Pass	PK	992.24M	38.74	54.00	-15.26	3	Horizontal	0	1.00

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

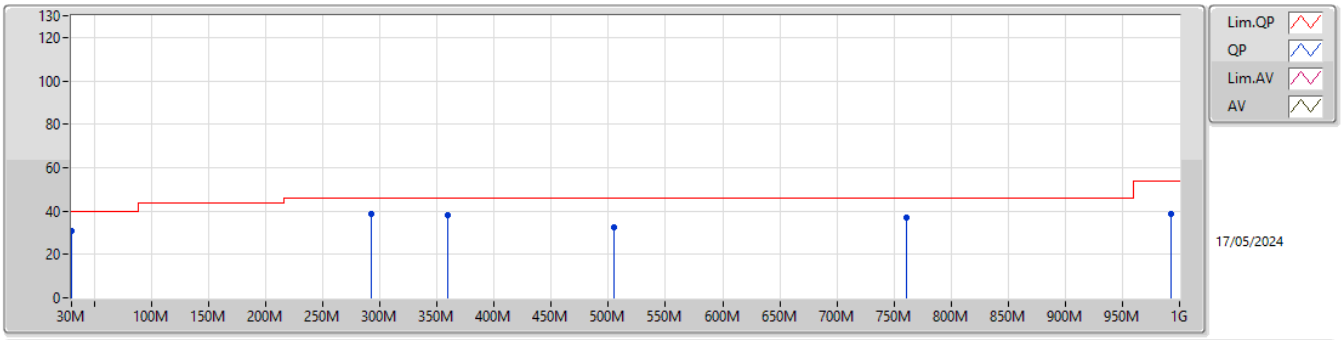
2437MHz_Adapter



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
PK	30M	35.59	40.00	-4.41	-18.35	3	Vertical	360	1.00	53.94	25.20	0.55	44.10
PK	295.78M	34.93	46.00	-11.07	-22.90	3	Vertical	360	1.00	57.83	19.50	1.62	44.02
PK	357.86M	35.39	46.00	-10.61	-21.37	3	Vertical	360	1.00	56.76	20.80	1.76	43.93
PK	561.56M	34.97	46.00	-11.03	-14.71	3	Vertical	360	1.00	49.68	26.74	2.20	43.65
PK	745.86M	36.88	46.00	-9.12	-12.49	3	Vertical	360	1.00	49.37	28.42	2.49	43.40
PK	986.42M	38.97	54.00	-15.03	-9.70	3	Vertical	360	1.00	48.67	30.67	2.91	43.28

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

2437MHz_Adapter



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
PK	30M	30.73	40.00	-9.27	-18.35	3	Horizontal	0	1.00	49.08	25.20	0.55	44.10
PK	291.9M	38.91	46.00	-7.09	-22.97	3	Horizontal	0	1.00	61.88	19.44	1.61	44.02
PK	359.8M	38.31	46.00	-7.69	-21.37	3	Horizontal	0	1.00	59.68	20.80	1.76	43.93
PK	505.3M	32.60	46.00	-13.40	-17.30	3	Horizontal	0	1.00	49.90	24.31	2.12	43.73
PK	761.38M	37.21	46.00	-8.79	-12.17	3	Horizontal	0	1.00	49.38	28.70	2.52	43.39
PK	992.24M	38.74	54.00	-15.26	-9.80	3	Horizontal	0	1.00	48.54	30.56	2.92	43.28

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	4.92396G	53.67	54.00	-0.33	3	Horizontal	353	1.24
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	4.91504G	53.90	54.00	-0.10	3	Horizontal	135	1.07
802.11n HT20_Nss1,(MCS0)_1TX	Pass	AV	4.92408G	53.84	54.00	-0.16	3	Horizontal	355	1.00
802.11n HT40_Nss1,(MCS0)_1TX	Pass	AV	2.3896G	53.90	54.00	-0.10	3	Horizontal	108	1.16

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3872G	45.02	54.00	-8.98	3	Vertical	254	3.00
2412MHz	Pass	AV	2.4112G	87.54	Inf	-Inf	3	Vertical	254	3.00
2412MHz	Pass	PK	2.3726G	56.58	74.00	-17.42	3	Vertical	254	3.00
2412MHz	Pass	PK	2.4112G	90.07	Inf	-Inf	3	Vertical	254	3.00
2412MHz	Pass	AV	2.3852G	45.28	54.00	-8.72	3	Horizontal	108	1.14
2412MHz	Pass	AV	2.4112G	96.31	Inf	-Inf	3	Horizontal	108	1.14
2412MHz	Pass	PK	2.3786G	58.74	74.00	-15.26	3	Horizontal	108	1.14
2412MHz	Pass	PK	2.4112G	98.77	Inf	-Inf	3	Horizontal	108	1.14
2412MHz	Pass	AV	4.824G	43.85	54.00	-10.15	3	Vertical	257	1.65
2412MHz	Pass	AV	12.0672G	40.77	54.00	-13.23	3	Vertical	33	2.16
2412MHz	Pass	AV	19.29592G	34.75	54.00	-19.25	3	Vertical	352	1.61
2412MHz	Pass	PK	4.82404G	48.28	74.00	-25.72	3	Vertical	257	1.65
2412MHz	Pass	PK	12.06744G	53.15	74.00	-20.85	3	Vertical	33	2.16
2412MHz	Pass	PK	19.2954G	45.70	74.00	-28.30	3	Vertical	352	1.61
2412MHz	Pass	AV	4.82396G	53.33	54.00	-0.67	3	Horizontal	134	1.04
2412MHz	Pass	AV	12.0662G	40.73	54.00	-13.27	3	Horizontal	98	1.21
2412MHz	Pass	AV	19.30588G	33.07	54.00	-20.93	3	Horizontal	358	2.59
2412MHz	Pass	PK	4.82404G	55.39	74.00	-18.61	3	Horizontal	134	1.04
2412MHz	Pass	PK	12.06748G	52.35	74.00	-21.65	3	Horizontal	98	1.21
2412MHz	Pass	PK	19.30036G	44.37	74.00	-29.63	3	Horizontal	358	2.59
2437MHz	Pass	AV	2.389G	45.04	54.00	-8.96	3	Vertical	266	2.80
2437MHz	Pass	AV	2.4362G	87.95	Inf	-Inf	3	Vertical	266	2.80
2437MHz	Pass	AV	2.4978G	45.73	54.00	-8.27	3	Vertical	266	2.80
2437MHz	Pass	PK	2.3462G	57.55	74.00	-16.45	3	Vertical	266	2.80
2437MHz	Pass	PK	2.4362G	90.46	Inf	-Inf	3	Vertical	266	2.80
2437MHz	Pass	PK	2.4958G	57.58	74.00	-16.42	3	Vertical	266	2.80
2437MHz	Pass	AV	2.3886G	45.11	54.00	-8.89	3	Horizontal	118	1.10
2437MHz	Pass	AV	2.4362G	94.88	Inf	-Inf	3	Horizontal	118	1.10
2437MHz	Pass	AV	2.495G	45.75	54.00	-8.25	3	Horizontal	118	1.10
2437MHz	Pass	PK	2.3782G	57.71	74.00	-16.29	3	Horizontal	118	1.10
2437MHz	Pass	PK	2.4362G	97.35	Inf	-Inf	3	Horizontal	118	1.10
2437MHz	Pass	PK	2.487G	58.08	74.00	-15.92	3	Horizontal	118	1.10
2437MHz	Pass	AV	4.87396G	46.26	54.00	-7.74	3	Vertical	260	1.50
2437MHz	Pass	AV	7.31512G	36.55	54.00	-17.45	3	Vertical	60	1.39
2437MHz	Pass	AV	12.19284G	41.13	54.00	-12.87	3	Vertical	263	2.45
2437MHz	Pass	AV	19.48644G	32.84	54.00	-21.16	3	Vertical	336	1.58
2437MHz	Pass	PK	4.874G	49.87	74.00	-24.13	3	Vertical	260	1.50
2437MHz	Pass	PK	7.30992G	48.58	74.00	-25.42	3	Vertical	60	1.39
2437MHz	Pass	PK	12.18328G	53.28	74.00	-20.72	3	Vertical	263	2.45
2437MHz	Pass	PK	19.49588G	45.43	74.00	-28.57	3	Vertical	336	1.58
2437MHz	Pass	AV	4.874G	53.28	54.00	-0.72	3	Horizontal	135	1.08
2437MHz	Pass	AV	7.31748G	36.57	54.00	-17.43	3	Horizontal	248	2.25
2437MHz	Pass	AV	12.19384G	41.09	54.00	-12.91	3	Horizontal	77	2.17
2437MHz	Pass	AV	19.48704G	32.85	54.00	-21.15	3	Horizontal	2	1.17
2437MHz	Pass	PK	4.87396G	55.42	74.00	-18.58	3	Horizontal	135	1.08
2437MHz	Pass	PK	7.31532G	49.40	74.00	-24.60	3	Horizontal	248	2.25
2437MHz	Pass	PK	12.17932G	53.28	74.00	-20.72	3	Horizontal	77	2.17
2437MHz	Pass	PK	19.49916G	44.76	74.00	-29.24	3	Horizontal	2	1.17
2462MHz	Pass	AV	2.4612G	83.24	Inf	-Inf	3	Vertical	103	1.16
2462MHz	Pass	AV	2.4976G	45.73	54.00	-8.27	3	Vertical	103	1.16
2462MHz	Pass	PK	2.4612G	86.02	Inf	-Inf	3	Vertical	103	1.16
2462MHz	Pass	PK	2.4894G	57.73	74.00	-16.27	3	Vertical	103	1.16
2462MHz	Pass	AV	2.4612G	95.18	Inf	-Inf	3	Horizontal	107	1.32
2462MHz	Pass	AV	2.4954G	45.83	54.00	-8.17	3	Horizontal	107	1.32
2462MHz	Pass	PK	2.4612G	97.64	Inf	-Inf	3	Horizontal	107	1.32
2462MHz	Pass	PK	2.4896G	57.02	74.00	-16.98	3	Horizontal	107	1.32
2462MHz	Pass	AV	4.924G	51.40	54.00	-2.60	3	Vertical	236	3.00
2462MHz	Pass	AV	7.3888G	36.12	54.00	-17.88	3	Vertical	71	2.39
2462MHz	Pass	AV	12.30924G	41.14	54.00	-12.86	3	Vertical	293	1.48
2462MHz	Pass	AV	19.69596G	37.12	54.00	-16.88	3	Vertical	352	1.61

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2462MHz	Pass	PK	4.92396G	53.71	74.00	-20.29	3	Vertical	236	3.00
2462MHz	Pass	PK	7.37728G	48.69	74.00	-25.31	3	Vertical	71	2.39
2462MHz	Pass	PK	12.3048G	53.99	74.00	-20.01	3	Vertical	293	1.48
2462MHz	Pass	PK	19.69604G	46.58	74.00	-27.42	3	Vertical	352	1.61
2462MHz	Pass	AV	4.92396G	53.67	54.00	-0.33	3	Horizontal	353	1.24
2462MHz	Pass	AV	7.3884G	36.07	54.00	-17.93	3	Horizontal	171	2.00
2462MHz	Pass	AV	12.31032G	41.14	54.00	-12.86	3	Horizontal	111	1.08
2462MHz	Pass	AV	19.6974G	32.83	54.00	-21.17	3	Horizontal	94	1.29
2462MHz	Pass	PK	4.92396G	55.73	74.00	-18.27	3	Horizontal	353	1.24
2462MHz	Pass	PK	7.38672G	48.89	74.00	-25.11	3	Horizontal	171	2.00
2462MHz	Pass	PK	12.31616G	53.71	74.00	-20.29	3	Horizontal	111	1.08
2462MHz	Pass	PK	19.68716G	44.19	74.00	-29.81	3	Horizontal	94	1.29
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	46.52	54.00	-7.48	3	Vertical	239	1.88
2412MHz	Pass	AV	2.4112G	87.23	Inf	-Inf	3	Vertical	239	1.88
2412MHz	Pass	PK	2.3884G	57.94	74.00	-16.06	3	Vertical	239	1.88
2412MHz	Pass	PK	2.4078G	95.32	Inf	-Inf	3	Vertical	239	1.88
2412MHz	Pass	AV	2.39G	53.52	54.00	-0.48	3	Horizontal	106	1.33
2412MHz	Pass	AV	2.4112G	97.03	Inf	-Inf	3	Horizontal	106	1.33
2412MHz	Pass	PK	2.3886G	67.93	74.00	-6.07	3	Horizontal	106	1.33
2412MHz	Pass	PK	2.4136G	105.34	Inf	-Inf	3	Horizontal	106	1.33
2412MHz	Pass	AV	4.82516G	47.35	54.00	-6.65	3	Vertical	247	2.74
2412MHz	Pass	AV	12.06644G	41.52	54.00	-12.48	3	Vertical	101	1.50
2412MHz	Pass	AV	19.29596G	36.04	54.00	-17.96	3	Vertical	352	1.61
2412MHz	Pass	PK	4.82252G	59.24	74.00	-14.76	3	Vertical	247	2.74
2412MHz	Pass	PK	12.05456G	53.91	74.00	-20.09	3	Vertical	101	1.50
2412MHz	Pass	PK	19.2958G	46.29	74.00	-27.71	3	Vertical	352	1.61
2412MHz	Pass	AV	4.8252G	51.90	54.00	-2.10	3	Horizontal	134	1.05
2412MHz	Pass	AV	12.0654G	41.40	54.00	-12.60	3	Horizontal	357	1.50
2412MHz	Pass	AV	19.29572G	33.72	54.00	-20.28	3	Horizontal	256	1.46
2412MHz	Pass	PK	4.82268G	63.98	74.00	-10.02	3	Horizontal	134	1.05
2412MHz	Pass	PK	12.0584G	52.90	74.00	-21.10	3	Horizontal	357	1.50
2412MHz	Pass	PK	19.28812G	44.44	74.00	-29.56	3	Horizontal	256	1.46
2437MHz	Pass	AV	2.3898G	46.02	54.00	-7.98	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4362G	89.73	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4938G	46.46	54.00	-7.54	3	Vertical	267	2.79
2437MHz	Pass	PK	2.379G	57.30	74.00	-16.70	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4386G	98.12	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4898G	58.15	74.00	-15.85	3	Vertical	267	2.79
2437MHz	Pass	AV	2.3862G	47.98	54.00	-6.02	3	Horizontal	118	1.09
2437MHz	Pass	AV	2.4358G	95.97	Inf	-Inf	3	Horizontal	118	1.09
2437MHz	Pass	AV	2.4846G	46.74	54.00	-7.26	3	Horizontal	118	1.09
2437MHz	Pass	PK	2.3834G	59.45	74.00	-14.55	3	Horizontal	118	1.09
2437MHz	Pass	PK	2.4382G	104.12	Inf	-Inf	3	Horizontal	118	1.09
2437MHz	Pass	PK	2.4906G	58.09	74.00	-15.91	3	Horizontal	118	1.09
2437MHz	Pass	AV	4.87404G	49.02	54.00	-4.98	3	Vertical	246	2.88
2437MHz	Pass	AV	7.31808G	37.44	54.00	-16.56	3	Vertical	90	1.05
2437MHz	Pass	AV	12.19092G	41.82	54.00	-12.18	3	Vertical	75	1.73
2437MHz	Pass	AV	19.49612G	36.59	54.00	-17.41	3	Vertical	348	1.62
2437MHz	Pass	PK	4.8704G	61.27	74.00	-12.73	3	Vertical	246	2.88
2437MHz	Pass	PK	7.31436G	49.13	74.00	-24.87	3	Vertical	90	1.05
2437MHz	Pass	PK	12.18392G	53.40	74.00	-20.60	3	Vertical	75	1.73
2437MHz	Pass	PK	19.49584G	45.42	74.00	-28.58	3	Vertical	348	1.62
2437MHz	Pass	AV	4.87528G	53.47	54.00	-0.53	3	Horizontal	134	1.05
2437MHz	Pass	AV	7.31732G	37.68	54.00	-16.32	3	Horizontal	223	1.44
2437MHz	Pass	AV	12.19224G	41.84	54.00	-12.16	3	Horizontal	112	1.00
2437MHz	Pass	AV	19.48816G	33.41	54.00	-20.59	3	Horizontal	201	1.06
2437MHz	Pass	PK	4.87048G	65.67	74.00	-8.33	3	Horizontal	134	1.05
2437MHz	Pass	PK	7.31664G	48.79	74.00	-25.21	3	Horizontal	223	1.44
2437MHz	Pass	PK	12.18372G	52.82	74.00	-21.18	3	Horizontal	112	1.00
2437MHz	Pass	PK	19.48952G	44.34	74.00	-29.66	3	Horizontal	201	1.06
2457MHz	Pass	AV	2.4578G	84.77	Inf	-Inf	3	Vertical	103	1.17

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2457MHz	Pass	AV	2.4948G	46.43	54.00	-7.57	3	Vertical	103	1.17
2457MHz	Pass	PK	2.4584G	93.12	Inf	-Inf	3	Vertical	103	1.17
2457MHz	Pass	PK	2.4908G	57.93	74.00	-16.07	3	Vertical	103	1.17
2457MHz	Pass	AV	2.4578G	96.32	Inf	-Inf	3	Horizontal	109	1.50
2457MHz	Pass	AV	2.4848G	47.70	54.00	-6.30	3	Horizontal	109	1.50
2457MHz	Pass	PK	2.4582G	104.27	Inf	-Inf	3	Horizontal	109	1.50
2457MHz	Pass	PK	2.4866G	59.12	74.00	-14.88	3	Horizontal	109	1.50
2457MHz	Pass	AV	4.9152G	50.86	54.00	-3.14	3	Vertical	237	3.00
2457MHz	Pass	AV	7.36532G	36.88	54.00	-17.12	3	Vertical	177	1.62
2457MHz	Pass	AV	12.28276G	41.65	54.00	-12.35	3	Vertical	236	2.94
2457MHz	Pass	AV	19.65596G	37.24	54.00	-16.76	3	Vertical	352	1.61
2457MHz	Pass	PK	4.91152G	63.52	74.00	-10.48	3	Vertical	237	3.00
2457MHz	Pass	PK	7.3614G	48.03	74.00	-25.97	3	Vertical	177	1.62
2457MHz	Pass	PK	12.28476G	52.52	74.00	-21.48	3	Vertical	236	2.94
2457MHz	Pass	PK	19.6504G	45.42	74.00	-28.58	3	Vertical	352	1.61
2457MHz	Pass	AV	4.91504G	53.90	54.00	-0.10	3	Horizontal	135	1.07
2457MHz	Pass	AV	7.3624G	36.87	54.00	-17.13	3	Horizontal	78	1.92
2457MHz	Pass	AV	12.29108G	41.76	54.00	-12.24	3	Horizontal	286	2.10
2457MHz	Pass	AV	19.65728G	33.35	54.00	-20.65	3	Horizontal	349	2.11
2457MHz	Pass	PK	4.91144G	65.71	74.00	-8.29	3	Horizontal	135	1.07
2457MHz	Pass	PK	7.36928G	47.86	74.00	-26.14	3	Horizontal	78	1.92
2457MHz	Pass	PK	12.29368G	53.11	74.00	-20.89	3	Horizontal	286	2.10
2457MHz	Pass	PK	19.66568G	44.90	74.00	-29.10	3	Horizontal	349	2.11
2462MHz	Pass	AV	2.4612G	85.33	Inf	-Inf	3	Vertical	102	1.17
2462MHz	Pass	AV	2.4838G	46.49	54.00	-7.51	3	Vertical	102	1.17
2462MHz	Pass	PK	2.4636G	93.59	Inf	-Inf	3	Vertical	102	1.17
2462MHz	Pass	PK	2.494G	57.89	74.00	-16.11	3	Vertical	102	1.17
2462MHz	Pass	AV	2.463G	97.41	Inf	-Inf	3	Horizontal	107	1.35
2462MHz	Pass	AV	2.4835G	49.78	54.00	-4.22	3	Horizontal	107	1.35
2462MHz	Pass	PK	2.4634G	105.54	Inf	-Inf	3	Horizontal	107	1.35
2462MHz	Pass	PK	2.4835G	63.34	74.00	-10.66	3	Horizontal	107	1.35
2462MHz	Pass	AV	4.92584G	50.22	54.00	-3.78	3	Vertical	236	3.00
2462MHz	Pass	AV	7.38852G	37.01	54.00	-16.99	3	Vertical	273	1.50
2462MHz	Pass	AV	12.30876G	41.89	54.00	-12.11	3	Vertical	16	1.50
2462MHz	Pass	AV	19.69584G	37.40	54.00	-16.60	3	Vertical	352	1.61
2462MHz	Pass	PK	4.92344G	62.64	74.00	-11.36	3	Vertical	236	3.00
2462MHz	Pass	PK	7.39252G	48.80	74.00	-25.20	3	Vertical	273	1.50
2462MHz	Pass	PK	12.31828G	53.77	74.00	-20.23	3	Vertical	16	1.50
2462MHz	Pass	PK	19.69596G	45.92	74.00	-28.08	3	Vertical	352	1.61
2462MHz	Pass	AV	4.925G	53.22	54.00	-0.78	3	Horizontal	356	1.01
2462MHz	Pass	AV	7.38276G	36.89	54.00	-17.11	3	Horizontal	134	2.34
2462MHz	Pass	AV	12.31124G	41.88	54.00	-12.12	3	Horizontal	290	1.57
2462MHz	Pass	AV	19.70468G	33.48	54.00	-20.52	3	Horizontal	72	1.43
2462MHz	Pass	PK	4.92044G	64.91	74.00	-9.09	3	Horizontal	356	1.01
2462MHz	Pass	PK	7.37664G	48.51	74.00	-25.49	3	Horizontal	134	2.34
2462MHz	Pass	PK	12.3108G	53.66	74.00	-20.34	3	Horizontal	290	1.57
2462MHz	Pass	PK	19.6966G	45.12	74.00	-28.88	3	Horizontal	72	1.43
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	48.64	54.00	-5.36	3	Vertical	256	3.00
2412MHz	Pass	AV	2.4106G	88.05	Inf	-Inf	3	Vertical	256	3.00
2412MHz	Pass	PK	2.3898G	61.44	74.00	-12.56	3	Vertical	256	3.00
2412MHz	Pass	PK	2.4108G	96.17	Inf	-Inf	3	Vertical	256	3.00
2412MHz	Pass	AV	2.39G	53.83	54.00	-0.17	3	Horizontal	107	1.50
2412MHz	Pass	AV	2.4108G	94.69	Inf	-Inf	3	Horizontal	107	1.50
2412MHz	Pass	PK	2.3892G	67.25	74.00	-6.75	3	Horizontal	107	1.50
2412MHz	Pass	PK	2.411G	102.79	Inf	-Inf	3	Horizontal	107	1.50
2412MHz	Pass	AV	4.82656G	45.06	54.00	-8.94	3	Vertical	245	2.75
2412MHz	Pass	AV	12.06776G	41.22	54.00	-12.78	3	Vertical	330	2.43
2412MHz	Pass	AV	19.29588G	36.08	54.00	-17.92	3	Vertical	362	1.61
2412MHz	Pass	PK	4.8256G	58.76	74.00	-15.24	3	Vertical	245	2.75
2412MHz	Pass	PK	12.0648G	52.07	74.00	-21.93	3	Vertical	330	2.43
2412MHz	Pass	PK	19.29592G	45.79	74.00	-28.21	3	Vertical	362	1.61

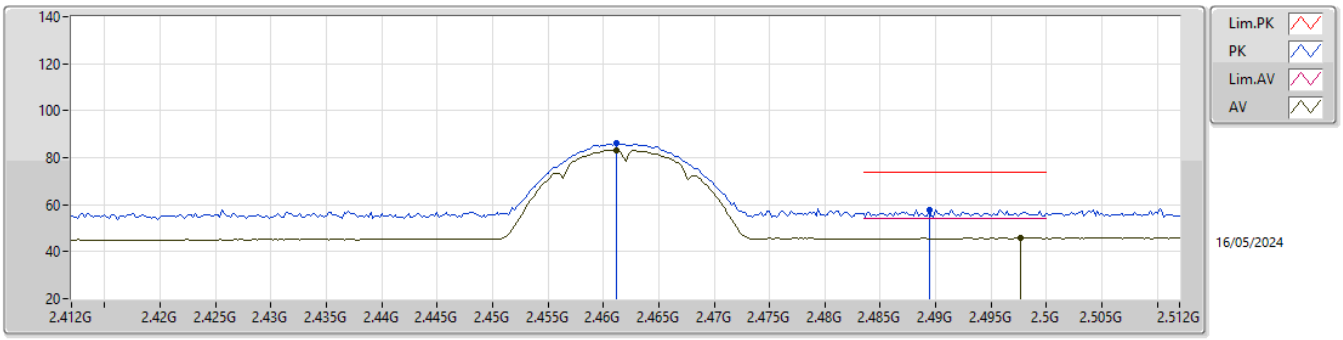
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2412MHz	Pass	AV	4.82416G	49.95	54.00	-4.05	3	Horizontal	132	1.05
2412MHz	Pass	AV	12.07168G	41.25	54.00	-12.75	3	Horizontal	44	1.44
2412MHz	Pass	AV	19.3058G	33.66	54.00	-20.34	3	Horizontal	146	2.91
2412MHz	Pass	PK	4.82432G	63.75	74.00	-10.25	3	Horizontal	132	1.05
2412MHz	Pass	PK	12.06232G	52.07	74.00	-21.93	3	Horizontal	44	1.44
2412MHz	Pass	PK	19.30144G	44.69	74.00	-29.31	3	Horizontal	146	2.91
2437MHz	Pass	AV	2.3866G	45.98	54.00	-8.02	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4354G	89.61	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4962G	46.39	54.00	-7.61	3	Vertical	267	2.79
2437MHz	Pass	PK	2.389G	58.10	74.00	-15.90	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4358G	97.53	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4898G	57.48	74.00	-16.52	3	Vertical	267	2.79
2437MHz	Pass	AV	2.3894G	48.15	54.00	-5.85	3	Horizontal	109	1.16
2437MHz	Pass	AV	2.4358G	96.00	Inf	-Inf	3	Horizontal	109	1.16
2437MHz	Pass	AV	2.497G	46.79	54.00	-7.21	3	Horizontal	109	1.16
2437MHz	Pass	PK	2.3866G	59.54	74.00	-14.46	3	Horizontal	109	1.16
2437MHz	Pass	PK	2.4358G	104.15	Inf	-Inf	3	Horizontal	109	1.16
2437MHz	Pass	PK	2.4994G	58.07	74.00	-15.93	3	Horizontal	109	1.16
2437MHz	Pass	AV	4.87416G	49.51	54.00	-4.49	3	Vertical	243	2.54
2437MHz	Pass	AV	7.31508G	37.52	54.00	-16.48	3	Vertical	0	1.00
2437MHz	Pass	AV	12.19292G	41.52	54.00	-12.48	3	Vertical	297	1.65
2437MHz	Pass	AV	19.49608G	36.20	54.00	-17.80	3	Vertical	357	1.63
2437MHz	Pass	PK	4.87592G	62.64	74.00	-11.36	3	Vertical	243	2.54
2437MHz	Pass	PK	7.31132G	50.96	74.00	-23.04	3	Vertical	0	1.00
2437MHz	Pass	PK	12.19604G	51.64	74.00	-22.36	3	Vertical	297	1.65
2437MHz	Pass	PK	19.49184G	45.43	74.00	-28.57	3	Vertical	357	1.63
2437MHz	Pass	AV	4.874G	53.54	54.00	-0.46	3	Horizontal	131	1.00
2437MHz	Pass	AV	7.31292G	37.63	54.00	-16.37	3	Horizontal	139	3.00
2437MHz	Pass	AV	12.19132G	41.71	54.00	-12.29	3	Horizontal	345	1.50
2437MHz	Pass	AV	19.49584G	35.92	54.00	-18.08	3	Horizontal	236	1.94
2437MHz	Pass	PK	4.87496G	66.70	74.00	-7.30	3	Horizontal	131	1.00
2437MHz	Pass	PK	7.31972G	49.56	74.00	-24.44	3	Horizontal	139	3.00
2437MHz	Pass	PK	12.16788G	52.59	74.00	-21.41	3	Horizontal	345	1.50
2437MHz	Pass	PK	19.49184G	45.42	74.00	-28.58	3	Horizontal	236	1.94
2462MHz	Pass	AV	2.4606G	87.30	Inf	-Inf	3	Vertical	185	3.00
2462MHz	Pass	AV	2.4835G	48.26	54.00	-5.74	3	Vertical	185	3.00
2462MHz	Pass	PK	2.4606G	95.28	Inf	-Inf	3	Vertical	185	3.00
2462MHz	Pass	PK	2.4835G	60.36	74.00	-13.64	3	Vertical	185	3.00
2462MHz	Pass	AV	2.4606G	96.16	Inf	-Inf	3	Horizontal	109	1.50
2462MHz	Pass	AV	2.4835G	53.14	54.00	-0.86	3	Horizontal	109	1.50
2462MHz	Pass	PK	2.4608G	104.14	Inf	-Inf	3	Horizontal	109	1.50
2462MHz	Pass	PK	2.4836G	67.60	74.00	-6.40	3	Horizontal	109	1.50
2462MHz	Pass	AV	4.92408G	51.92	54.00	-2.08	3	Vertical	236	3.00
2462MHz	Pass	AV	7.38792G	36.64	54.00	-17.36	3	Vertical	97	1.62
2462MHz	Pass	AV	12.29072G	41.60	54.00	-12.40	3	Vertical	33	2.14
2462MHz	Pass	AV	19.69596G	38.54	54.00	-15.46	3	Vertical	352	1.61
2462MHz	Pass	PK	4.92496G	65.30	74.00	-8.70	3	Vertical	236	3.00
2462MHz	Pass	PK	7.38448G	48.03	74.00	-25.97	3	Vertical	97	1.62
2462MHz	Pass	PK	12.32536G	52.23	74.00	-21.77	3	Vertical	33	2.14
2462MHz	Pass	PK	19.69624G	46.62	74.00	-27.38	3	Vertical	352	1.61
2462MHz	Pass	AV	4.92408G	53.84	54.00	-0.16	3	Horizontal	355	1.00
2462MHz	Pass	AV	7.38856G	36.72	54.00	-17.28	3	Horizontal	297	1.73
2462MHz	Pass	AV	12.2964G	41.54	54.00	-12.46	3	Horizontal	274	2.78
2462MHz	Pass	AV	19.69596G	38.38	54.00	-15.62	3	Horizontal	17	2.33
2462MHz	Pass	PK	4.92488G	67.34	74.00	-6.66	3	Horizontal	355	1.00
2462MHz	Pass	PK	7.37416G	48.67	74.00	-25.33	3	Horizontal	297	1.73
2462MHz	Pass	PK	12.29936G	52.45	74.00	-21.55	3	Horizontal	274	2.78
2462MHz	Pass	PK	19.69584G	46.53	74.00	-27.47	3	Horizontal	17	2.33
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	AV	2.39G	47.22	54.00	-6.78	3	Vertical	223	2.91
2422MHz	Pass	AV	2.42G	81.32	Inf	-Inf	3	Vertical	223	2.91
2422MHz	Pass	AV	2.4916G	47.12	54.00	-6.88	3	Vertical	223	2.91

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2422MHz	Pass	PK	2.3896G	58.61	74.00	-15.39	3	Vertical	223	2.91
2422MHz	Pass	PK	2.4164G	88.86	Inf	-Inf	3	Vertical	223	2.91
2422MHz	Pass	PK	2.4996G	57.99	74.00	-16.01	3	Vertical	223	2.91
2422MHz	Pass	AV	2.3896G	53.90	54.00	-0.10	3	Horizontal	108	1.16
2422MHz	Pass	AV	2.4236G	90.61	Inf	-Inf	3	Horizontal	108	1.16
2422MHz	Pass	AV	2.5G	47.19	54.00	-6.81	3	Horizontal	108	1.16
2422MHz	Pass	PK	2.3896G	67.70	74.00	-6.30	3	Horizontal	108	1.16
2422MHz	Pass	PK	2.4192G	98.05	Inf	-Inf	3	Horizontal	108	1.16
2422MHz	Pass	PK	2.4944G	57.97	74.00	-16.03	3	Horizontal	108	1.16
2422MHz	Pass	AV	4.84424G	38.24	54.00	-15.76	3	Vertical	241	2.77
2422MHz	Pass	AV	7.2764G	37.80	54.00	-16.20	3	Vertical	162	2.73
2422MHz	Pass	AV	12.12432G	41.97	54.00	-12.03	3	Vertical	144	1.83
2422MHz	Pass	AV	19.37596G	37.24	54.00	-16.76	3	Vertical	352	1.61
2422MHz	Pass	PK	4.84528G	49.55	74.00	-24.45	3	Vertical	241	2.77
2422MHz	Pass	PK	7.28032G	48.99	74.00	-25.01	3	Vertical	162	2.73
2422MHz	Pass	PK	12.11592G	51.72	74.00	-22.28	3	Vertical	144	1.83
2422MHz	Pass	PK	19.37592G	45.65	74.00	-28.35	3	Vertical	352	1.61
2422MHz	Pass	AV	4.84352G	42.16	54.00	-11.84	3	Horizontal	133	1.00
2422MHz	Pass	AV	7.27328G	37.80	54.00	-16.20	3	Horizontal	360	2.72
2422MHz	Pass	AV	12.10464G	42.02	54.00	-11.98	3	Horizontal	95	2.06
2422MHz	Pass	AV	19.37348G	34.59	54.00	-19.41	3	Horizontal	165	1.64
2422MHz	Pass	PK	4.84488G	53.87	74.00	-20.13	3	Horizontal	133	1.00
2422MHz	Pass	PK	7.2742G	48.30	74.00	-25.70	3	Horizontal	360	2.72
2422MHz	Pass	PK	12.0996G	53.03	74.00	-20.97	3	Horizontal	95	2.06
2422MHz	Pass	PK	19.37112G	44.91	74.00	-29.09	3	Horizontal	165	1.64
2427MHz	Pass	AV	2.3882G	47.00	54.00	-7.00	3	Vertical	222	2.82
2427MHz	Pass	AV	2.4254G	81.38	Inf	-Inf	3	Vertical	222	2.82
2427MHz	Pass	AV	2.499G	47.05	54.00	-6.95	3	Vertical	222	2.82
2427MHz	Pass	PK	2.3898G	58.41	74.00	-15.59	3	Vertical	222	2.82
2427MHz	Pass	PK	2.4214G	89.38	Inf	-Inf	3	Vertical	222	2.82
2427MHz	Pass	PK	2.4954G	58.17	74.00	-15.83	3	Vertical	222	2.82
2427MHz	Pass	AV	2.3894G	53.25	54.00	-0.75	3	Horizontal	108	1.16
2427MHz	Pass	AV	2.4258G	91.18	Inf	-Inf	3	Horizontal	108	1.16
2427MHz	Pass	AV	2.4978G	47.55	54.00	-6.45	3	Horizontal	108	1.16
2427MHz	Pass	PK	2.3898G	67.79	74.00	-6.21	3	Horizontal	108	1.16
2427MHz	Pass	PK	2.4214G	99.32	Inf	-Inf	3	Horizontal	108	1.16
2427MHz	Pass	PK	2.4838G	57.68	74.00	-16.32	3	Horizontal	108	1.16
2437MHz	Pass	AV	2.3898G	48.77	54.00	-5.23	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4386G	87.89	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	AV	2.4835G	47.34	54.00	-6.66	3	Vertical	267	2.79
2437MHz	Pass	PK	2.389G	59.88	74.00	-14.12	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4354G	95.50	Inf	-Inf	3	Vertical	267	2.79
2437MHz	Pass	PK	2.4994G	58.06	74.00	-15.94	3	Vertical	267	2.79
2437MHz	Pass	AV	2.3898G	53.90	54.00	-0.10	3	Horizontal	108	1.14
2437MHz	Pass	AV	2.4354G	94.08	Inf	-Inf	3	Horizontal	108	1.14
2437MHz	Pass	AV	2.4838G	49.81	54.00	-4.19	3	Horizontal	108	1.14
2437MHz	Pass	PK	2.3886G	65.59	74.00	-8.41	3	Horizontal	108	1.14
2437MHz	Pass	PK	2.4358G	101.58	Inf	-Inf	3	Horizontal	108	1.14
2437MHz	Pass	PK	2.4846G	61.33	74.00	-12.67	3	Horizontal	108	1.14
2437MHz	Pass	AV	4.87376G	48.63	54.00	-5.37	3	Vertical	245	2.89
2437MHz	Pass	AV	7.31812G	38.17	54.00	-15.83	3	Vertical	272	1.41
2437MHz	Pass	AV	12.19108G	42.29	54.00	-11.71	3	Vertical	308	2.62
2437MHz	Pass	AV	19.496G	37.62	54.00	-16.38	3	Vertical	366	1.61
2437MHz	Pass	PK	4.87488G	60.71	74.00	-13.29	3	Vertical	245	2.89
2437MHz	Pass	PK	7.3118G	49.43	74.00	-24.57	3	Vertical	272	1.41
2437MHz	Pass	PK	12.19212G	52.68	74.00	-21.32	3	Vertical	308	2.62
2437MHz	Pass	PK	19.49568G	45.65	74.00	-28.35	3	Vertical	366	1.61
2437MHz	Pass	AV	4.87384G	52.48	54.00	-1.52	3	Horizontal	134	1.07
2437MHz	Pass	AV	7.3174G	37.98	54.00	-16.02	3	Horizontal	103	1.91
2437MHz	Pass	AV	12.1802G	42.13	54.00	-11.87	3	Horizontal	105	2.77
2437MHz	Pass	AV	19.49168G	34.23	54.00	-19.77	3	Horizontal	235	2.22
2437MHz	Pass	PK	4.87488G	64.47	74.00	-9.53	3	Horizontal	134	1.07

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2437MHz	Pass	PK	7.32156G	48.70	74.00	-25.30	3	Horizontal	103	1.91
2437MHz	Pass	PK	12.1674G	52.04	74.00	-21.96	3	Horizontal	105	2.77
2437MHz	Pass	PK	19.4878G	45.62	74.00	-28.38	3	Horizontal	235	2.22
2447MHz	Pass	AV	2.3882G	46.50	54.00	-7.50	3	Vertical	226	1.47
2447MHz	Pass	AV	2.4454G	82.39	Inf	-Inf	3	Vertical	226	1.47
2447MHz	Pass	AV	2.4835G	47.54	54.00	-6.46	3	Vertical	226	1.47
2447MHz	Pass	PK	2.3814G	57.06	74.00	-16.94	3	Vertical	226	1.47
2447MHz	Pass	PK	2.4458G	90.08	Inf	-Inf	3	Vertical	226	1.47
2447MHz	Pass	PK	2.4974G	57.88	74.00	-16.12	3	Vertical	226	1.47
2447MHz	Pass	AV	2.389G	48.41	54.00	-5.59	3	Horizontal	108	1.32
2447MHz	Pass	AV	2.4486G	93.02	Inf	-Inf	3	Horizontal	108	1.32
2447MHz	Pass	AV	2.4835G	53.63	54.00	-0.37	3	Horizontal	108	1.32
2447MHz	Pass	PK	2.3846G	58.75	74.00	-15.25	3	Horizontal	108	1.32
2447MHz	Pass	PK	2.449G	100.38	Inf	-Inf	3	Horizontal	108	1.32
2447MHz	Pass	PK	2.4835G	65.86	74.00	-8.14	3	Horizontal	108	1.32
2452MHz	Pass	AV	2.3624G	46.47	54.00	-7.53	3	Vertical	103	1.26
2452MHz	Pass	AV	2.4508G	79.88	Inf	-Inf	3	Vertical	103	1.26
2452MHz	Pass	AV	2.4972G	47.29	54.00	-6.71	3	Vertical	103	1.26
2452MHz	Pass	PK	2.3892G	57.10	74.00	-16.90	3	Vertical	103	1.26
2452MHz	Pass	PK	2.4504G	87.45	Inf	-Inf	3	Vertical	103	1.26
2452MHz	Pass	PK	2.4984G	57.84	74.00	-16.16	3	Vertical	103	1.26
2452MHz	Pass	AV	2.3808G	47.20	54.00	-6.80	3	Horizontal	109	1.34
2452MHz	Pass	AV	2.4508G	92.09	Inf	-Inf	3	Horizontal	109	1.34
2452MHz	Pass	AV	2.4835G	53.12	54.00	-0.88	3	Horizontal	109	1.34
2452MHz	Pass	PK	2.3632G	57.81	74.00	-16.19	3	Horizontal	109	1.34
2452MHz	Pass	PK	2.45G	99.63	Inf	-Inf	3	Horizontal	109	1.34
2452MHz	Pass	PK	2.4844G	66.50	74.00	-7.50	3	Horizontal	109	1.34
2452MHz	Pass	AV	4.90384G	44.89	54.00	-9.11	3	Vertical	245	2.85
2452MHz	Pass	AV	7.35312G	37.56	54.00	-16.44	3	Vertical	268	1.00
2452MHz	Pass	AV	12.25952G	42.34	54.00	-11.66	3	Vertical	63	2.83
2452MHz	Pass	AV	19.61592G	38.29	54.00	-15.71	3	Vertical	352	1.61
2452MHz	Pass	PK	4.90496G	56.58	74.00	-17.42	3	Vertical	245	2.85
2452MHz	Pass	PK	7.3536G	48.17	74.00	-25.83	3	Vertical	268	1.00
2452MHz	Pass	PK	12.27488G	52.79	74.00	-21.21	3	Vertical	63	2.83
2452MHz	Pass	PK	19.616G	45.87	74.00	-28.13	3	Vertical	352	1.61
2452MHz	Pass	AV	4.90376G	47.39	54.00	-6.61	3	Horizontal	136	1.09
2452MHz	Pass	AV	7.35872G	37.92	54.00	-16.08	3	Horizontal	54	1.65
2452MHz	Pass	AV	12.256G	42.23	54.00	-11.77	3	Horizontal	203	2.55
2452MHz	Pass	AV	19.6108G	34.19	54.00	-19.81	3	Horizontal	300	1.77
2452MHz	Pass	PK	4.90496G	59.31	74.00	-14.69	3	Horizontal	136	1.09
2452MHz	Pass	PK	7.35952G	49.30	74.00	-24.70	3	Horizontal	54	1.65
2452MHz	Pass	PK	12.25672G	52.27	74.00	-21.73	3	Horizontal	203	2.55
2452MHz	Pass	PK	19.60872G	45.20	74.00	-28.80	3	Horizontal	300	1.77

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

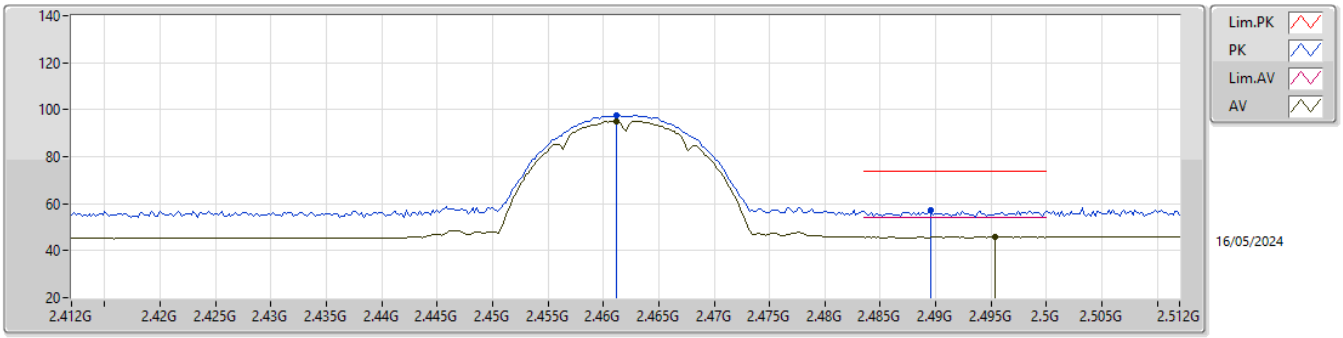
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4612G	83.24	Inf	-Inf	32.36	3	Vertical	103	1.16	50.88	27.71	4.65	-
AV	2.4976G	45.73	54.00	-8.27	32.66	3	Vertical	103	1.16	13.07	27.98	4.68	-
PK	2.4612G	86.02	Inf	-Inf	32.36	3	Vertical	103	1.16	53.66	27.71	4.65	-
PK	2.4894G	57.73	74.00	-16.27	32.57	3	Vertical	103	1.16	25.16	27.90	4.67	-

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

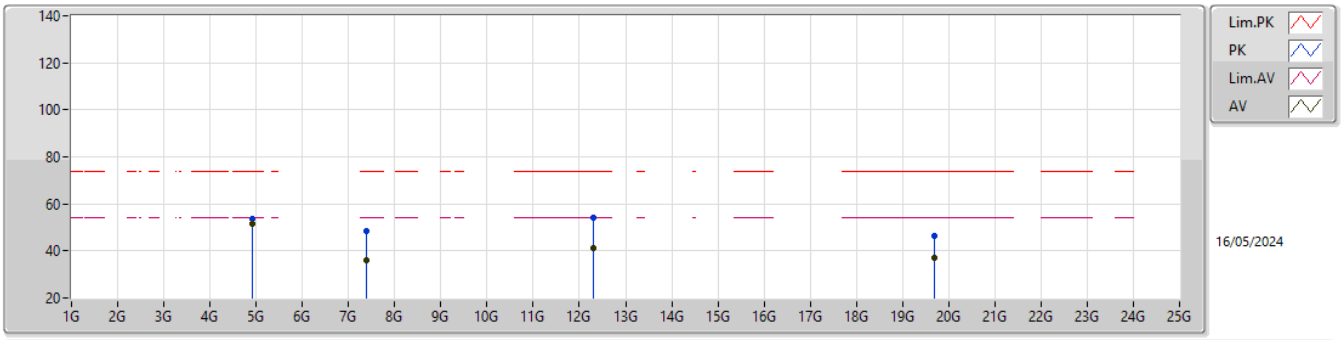
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4612G	95.18	Inf	-Inf	32.36	3	Horizontal	107	1.32	62.82	27.71	4.65	-
AV	2.4954G	45.83	54.00	-8.17	32.63	3	Horizontal	107	1.32	13.20	27.95	4.68	-
PK	2.4612G	97.64	Inf	-Inf	32.36	3	Horizontal	107	1.32	65.28	27.71	4.65	-
PK	2.4896G	57.02	74.00	-16.98	32.57	3	Horizontal	107	1.32	24.45	27.90	4.67	-

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

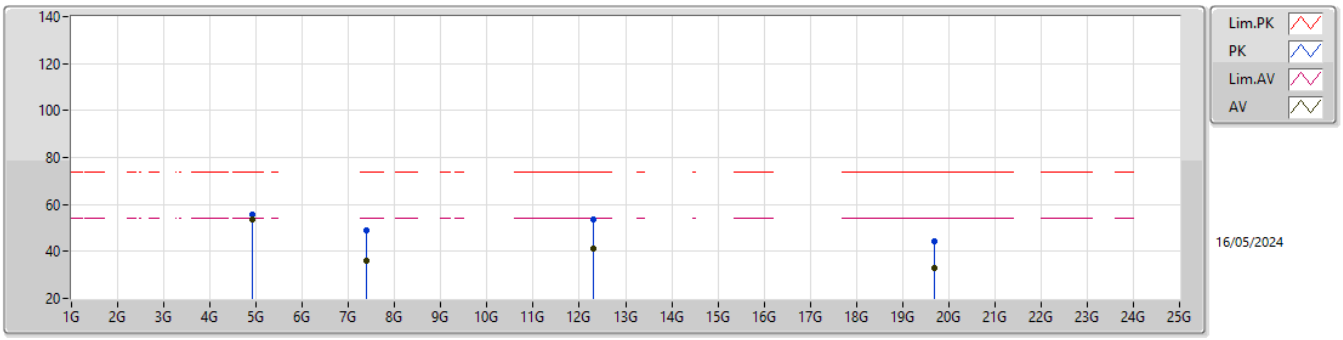
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.924G	51.40	54.00	-2.60	-5.96	3	Vertical	236	3.00	57.36	32.84	6.98	45.78
AV	7.3888G	36.12	54.00	-17.88	-0.60	3	Vertical	71	2.39	36.72	36.67	8.09	45.36
AV	12.30924G	41.14	54.00	-12.86	7.42	3	Vertical	293	1.48	33.72	39.08	10.79	42.45
AV	19.69596G	37.12	54.00	-16.88	-22.55	3	Vertical	352	1.61	59.67	38.20	13.57	64.78
PK	4.92396G	53.71	74.00	-20.29	-5.96	3	Vertical	236	3.00	59.67	32.84	6.98	45.78
PK	7.37728G	48.69	74.00	-25.31	-0.54	3	Vertical	71	2.39	49.23	36.74	8.09	45.37
PK	12.3048G	53.99	74.00	-20.01	7.41	3	Vertical	293	1.48	46.58	39.09	10.78	42.46
PK	19.69604G	46.58	74.00	-27.42	-22.55	3	Vertical	352	1.61	69.13	38.20	13.57	64.78

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

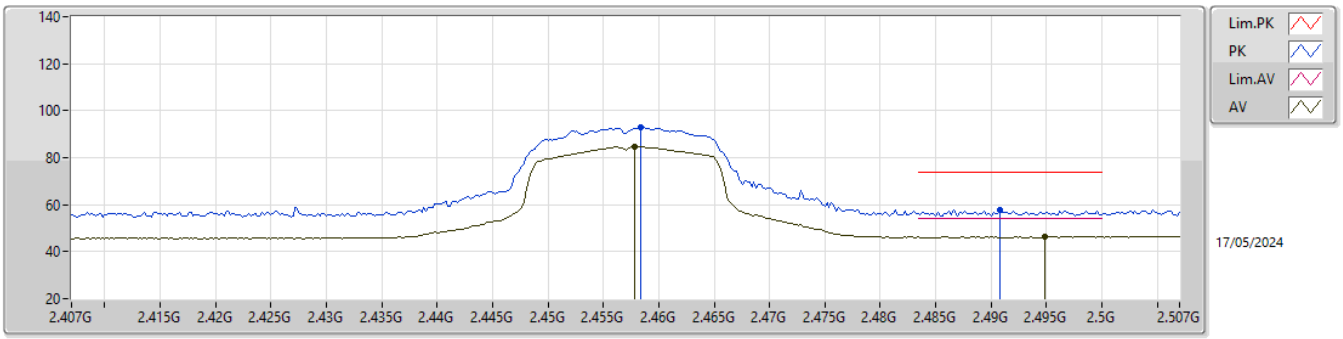
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.92396G	53.67	54.00	-0.33	-5.96	3	Horizontal	353	1.24	59.63	32.84	6.98	45.78
AV	7.3884G	36.07	54.00	-17.93	-0.60	3	Horizontal	171	2.00	36.67	36.67	8.09	45.36
AV	12.31032G	41.14	54.00	-12.86	7.42	3	Horizontal	111	1.08	33.72	39.08	10.79	42.45
AV	19.6974G	32.83	54.00	-21.17	-22.55	3	Horizontal	94	1.29	55.38	38.20	13.57	64.78
PK	4.92396G	55.73	74.00	-18.27	-5.96	3	Horizontal	353	1.24	61.69	32.84	6.98	45.78
PK	7.38672G	48.89	74.00	-25.11	-0.60	3	Horizontal	171	2.00	49.49	36.68	8.09	45.37
PK	12.31616G	53.71	74.00	-20.29	7.41	3	Horizontal	111	1.08	46.30	39.07	10.79	42.45
PK	19.68716G	44.19	74.00	-29.81	-22.56	3	Horizontal	94	1.29	66.75	38.20	13.57	64.79

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

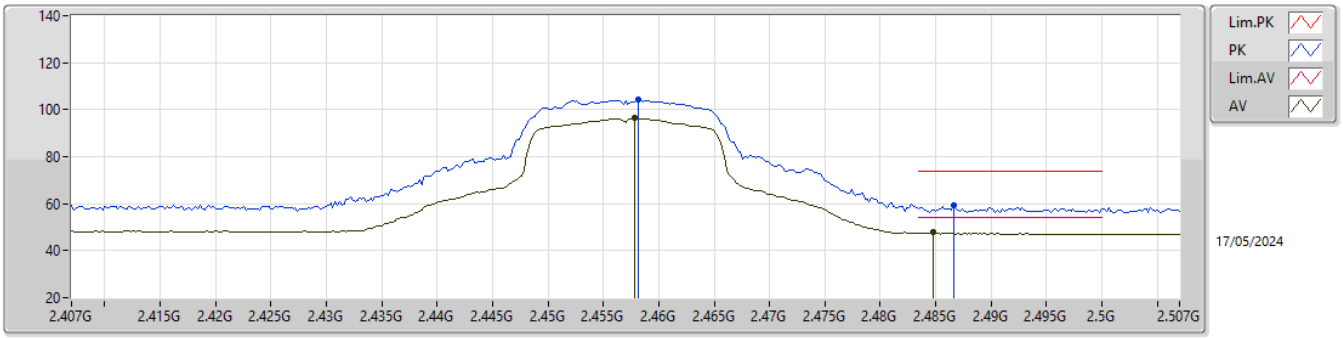
2457MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4578G	84.77	Inf	-Inf	32.35	3	Vertical	103	1.17	52.42	27.70	4.65	-
AV	2.4948G	46.43	54.00	-7.57	32.63	3	Vertical	103	1.17	13.80	27.95	4.68	-
PK	2.4584G	93.12	Inf	-Inf	32.35	3	Vertical	103	1.17	60.77	27.70	4.65	-
PK	2.4908G	57.93	74.00	-16.07	32.58	3	Vertical	103	1.17	25.35	27.91	4.67	-

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

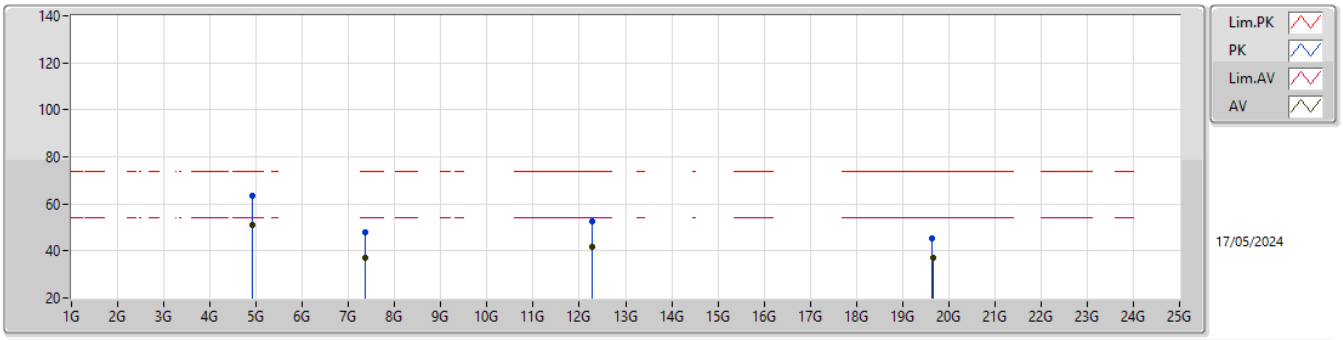
2457MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4578G	96.32	Inf	-Inf	32.35	3	Horizontal	109	1.50	63.97	27.70	4.65	-
AV	2.4848G	47.70	54.00	-6.30	32.57	3	Horizontal	109	1.50	15.13	27.90	4.67	-
PK	2.4582G	104.27	Inf	-Inf	32.35	3	Horizontal	109	1.50	71.92	27.70	4.65	-
PK	2.4866G	59.12	74.00	-14.88	32.57	3	Horizontal	109	1.50	26.55	27.90	4.67	-

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

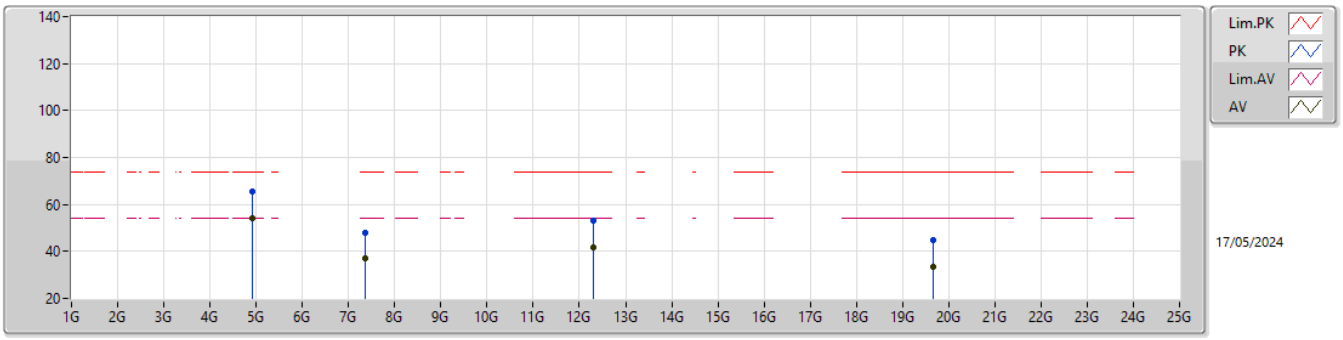
2457MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.9152G	50.86	54.00	-3.14	-6.02	3	Vertical	237	3.00	56.88	32.79	6.97	45.78
AV	7.36532G	36.88	54.00	-17.12	-0.49	3	Vertical	177	1.62	37.37	36.81	8.08	45.38
AV	12.28276G	41.65	54.00	-12.35	7.40	3	Vertical	236	2.94	34.25	39.10	10.77	42.47
AV	19.65596G	37.24	54.00	-16.76	-22.59	3	Vertical	352	1.61	59.83	38.20	13.56	64.81
PK	4.91152G	63.52	74.00	-10.48	-6.04	3	Vertical	237	3.00	69.56	32.77	6.97	45.78
PK	7.3614G	48.03	74.00	-25.97	-0.48	3	Vertical	177	1.62	48.51	36.83	8.08	45.39
PK	12.28476G	52.52	74.00	-21.48	7.41	3	Vertical	236	2.94	45.11	39.10	10.78	42.47
PK	19.6504G	45.42	74.00	-28.58	-22.59	3	Vertical	352	1.61	68.01	38.20	13.56	64.81

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

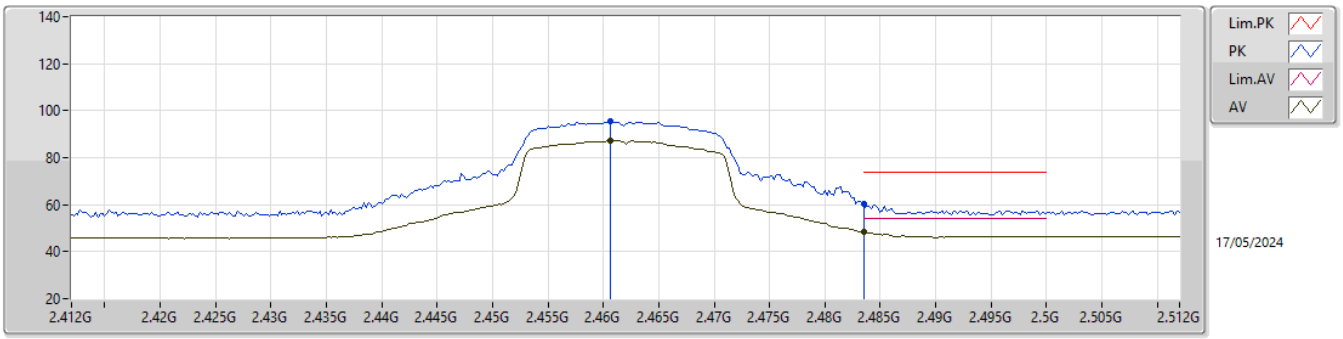
2457MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.91504G	53.90	54.00	-0.10	-6.02	3	Horizontal	135	1.07	59.92	32.79	6.97	45.78
AV	7.3624G	36.87	54.00	-17.13	-0.48	3	Horizontal	78	1.92	37.35	36.83	8.08	45.39
AV	12.29108G	41.76	54.00	-12.24	7.42	3	Horizontal	286	2.10	34.34	39.10	10.78	42.46
AV	19.65728G	33.35	54.00	-20.65	-22.59	3	Horizontal	349	2.11	55.94	38.20	13.56	64.81
PK	4.91144G	65.71	74.00	-8.29	-6.04	3	Horizontal	135	1.07	71.75	32.77	6.97	45.78
PK	7.36928G	47.86	74.00	-26.14	-0.52	3	Horizontal	78	1.92	48.38	36.78	8.08	45.38
PK	12.29368G	53.11	74.00	-20.89	7.42	3	Horizontal	286	2.10	45.69	39.10	10.78	42.46
PK	19.66568G	44.90	74.00	-29.10	-22.58	3	Horizontal	349	2.11	67.48	38.20	13.56	64.80

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

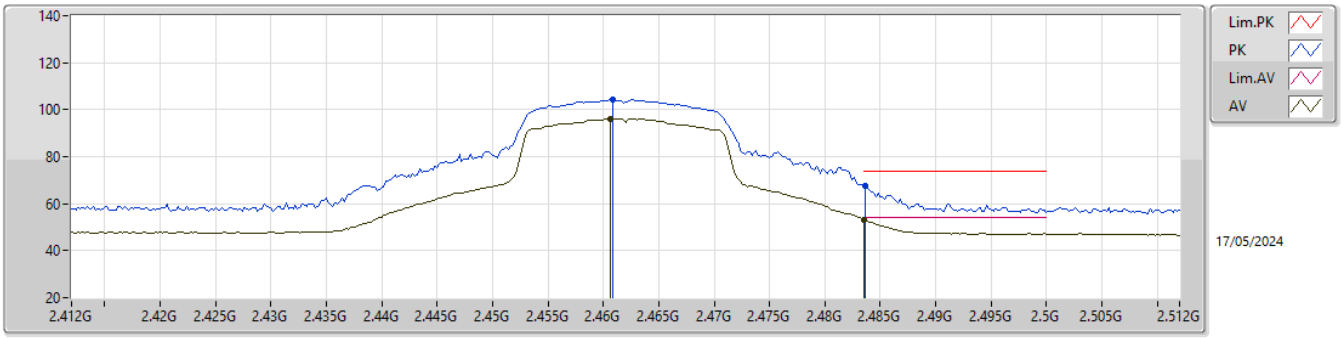
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4606G	87.30	Inf	-Inf	32.36	3	Vertical	185	3.00	54.94	27.71	4.65	-
AV	2.4835G	48.26	54.00	-5.74	32.57	3	Vertical	185	3.00	15.69	27.90	4.67	-
PK	2.4606G	95.28	Inf	-Inf	32.36	3	Vertical	185	3.00	62.92	27.71	4.65	-
PK	2.4835G	60.36	74.00	-13.64	32.57	3	Vertical	185	3.00	27.79	27.90	4.67	-

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

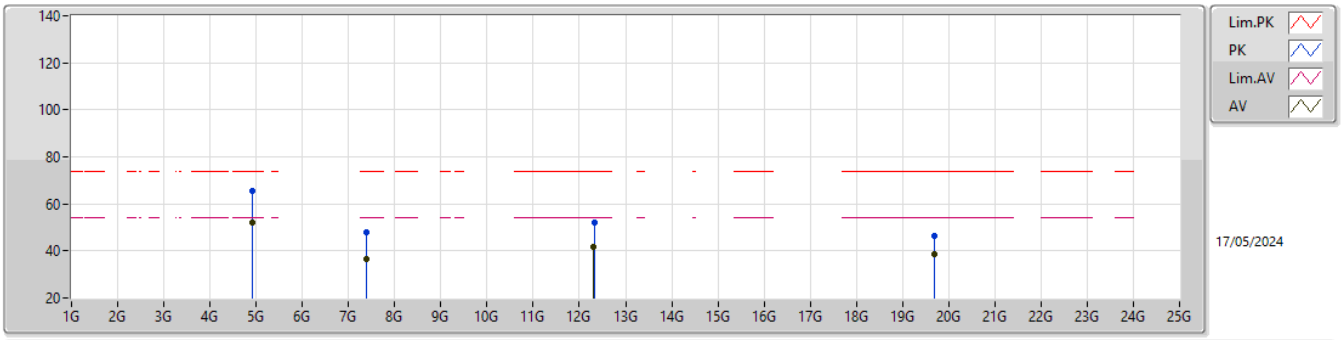
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.4606G	96.16	Inf	-Inf	32.36	3	Horizontal	109	1.50	63.80	27.71	4.65	-
AV	2.4835G	53.14	54.00	-0.86	32.57	3	Horizontal	109	1.50	20.57	27.90	4.67	-
PK	2.4608G	104.14	Inf	-Inf	32.36	3	Horizontal	109	1.50	71.78	27.71	4.65	-
PK	2.4836G	67.60	74.00	-6.40	32.57	3	Horizontal	109	1.50	35.03	27.90	4.67	-

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

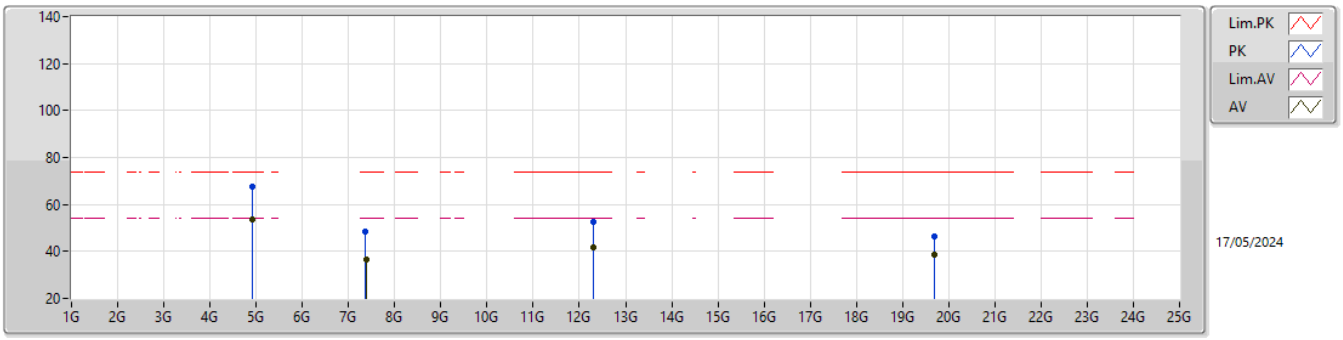
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.92408G	51.92	54.00	-2.08	-5.96	3	Vertical	236	3.00	57.88	32.84	6.98	45.78
AV	7.38792G	36.64	54.00	-17.36	-0.60	3	Vertical	97	1.62	37.24	36.67	8.09	45.36
AV	12.29072G	41.60	54.00	-12.40	7.42	3	Vertical	33	2.14	34.18	39.10	10.78	42.46
AV	19.69596G	38.54	54.00	-15.46	-22.55	3	Vertical	352	1.61	61.09	38.20	13.57	64.78
PK	4.92496G	65.30	74.00	-8.70	-5.95	3	Vertical	236	3.00	71.25	32.85	6.98	45.78
PK	7.38448G	48.03	74.00	-25.97	-0.59	3	Vertical	97	1.62	48.62	36.69	8.09	45.37
PK	12.32536G	52.23	74.00	-21.77	7.40	3	Vertical	33	2.14	44.83	39.05	10.79	42.44
PK	19.69624G	46.62	74.00	-27.38	-22.55	3	Vertical	352	1.61	69.17	38.20	13.57	64.78

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

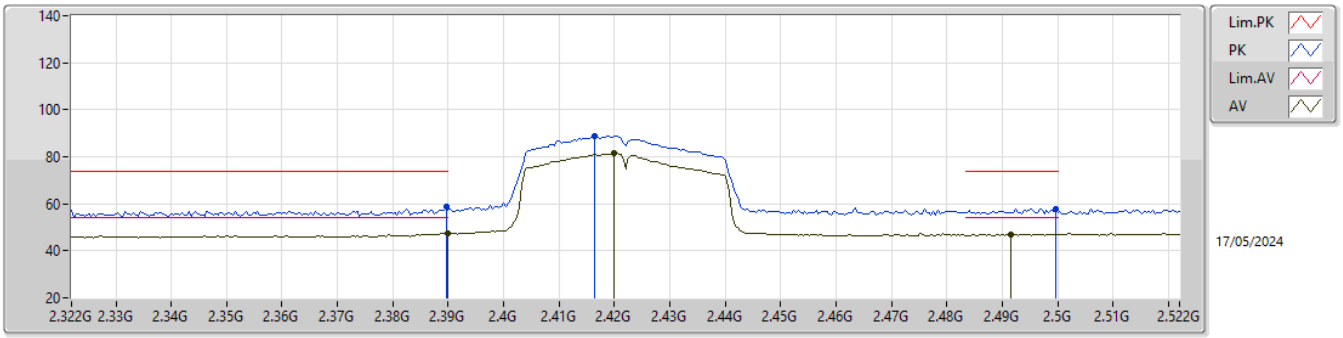
2462MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.92408G	53.84	54.00	-0.16	-5.96	3	Horizontal	355	1.00	59.80	32.84	6.98	45.78
AV	7.38856G	36.72	54.00	-17.28	-0.60	3	Horizontal	297	1.73	37.32	36.67	8.09	45.36
AV	12.2964G	41.54	54.00	-12.46	7.42	3	Horizontal	274	2.78	34.12	39.10	10.78	42.46
AV	19.69596G	38.38	54.00	-15.62	-22.55	3	Horizontal	17	2.33	60.93	38.20	13.57	64.78
PK	4.92488G	67.34	74.00	-6.66	-5.95	3	Horizontal	355	1.00	73.29	32.85	6.98	45.78
PK	7.37416G	48.67	74.00	-25.33	-0.54	3	Horizontal	297	1.73	49.21	36.76	8.08	45.38
PK	12.29936G	52.45	74.00	-21.55	7.42	3	Horizontal	274	2.78	45.03	39.10	10.78	42.46
PK	19.69584G	46.53	74.00	-27.47	-22.55	3	Horizontal	17	2.33	69.08	38.20	13.57	64.78

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

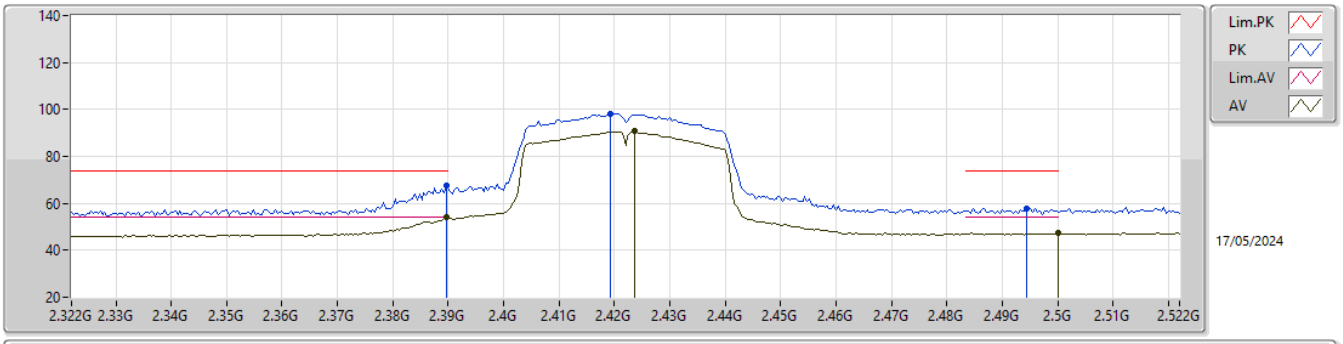
2422MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.39G	47.22	54.00	-6.78	32.09	3	Vertical	223	2.91	15.13	27.50	4.59	-
AV	2.42G	81.32	Inf	-Inf	32.12	3	Vertical	223	2.91	49.20	27.50	4.62	-
AV	2.4916G	47.12	54.00	-6.88	32.59	3	Vertical	223	2.91	14.53	27.92	4.67	-
PK	2.3896G	58.61	74.00	-15.39	32.09	3	Vertical	223	2.91	26.52	27.50	4.59	-
PK	2.4164G	88.86	Inf	-Inf	32.11	3	Vertical	223	2.91	56.75	27.50	4.61	-
PK	2.4996G	57.99	74.00	-16.01	32.68	3	Vertical	223	2.91	25.31	28.00	4.68	-

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

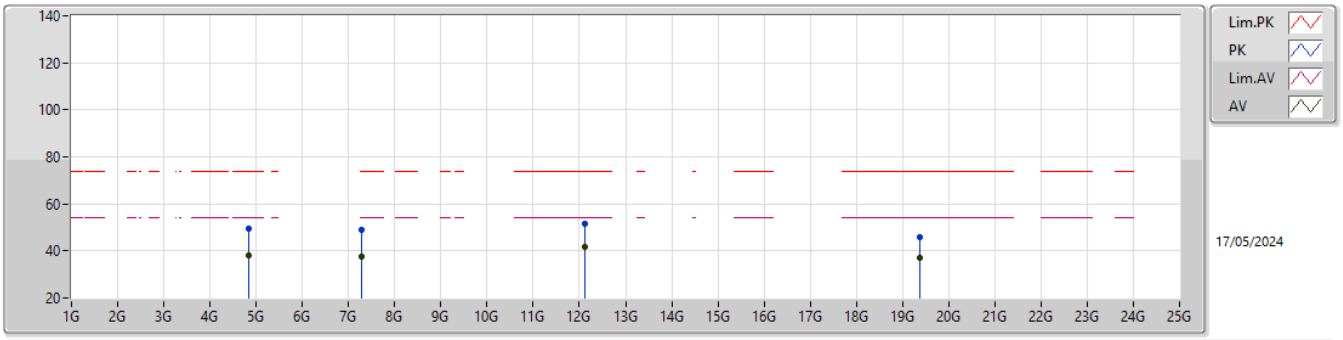
2422MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.3896G	53.90	54.00	-0.10	32.09	3	Horizontal	108	1.16	21.81	27.50	4.59	-
AV	2.4236G	90.61	Inf	-Inf	32.16	3	Horizontal	108	1.16	58.45	27.54	4.62	-
AV	2.5G	47.19	54.00	-6.81	32.68	3	Horizontal	108	1.16	14.51	28.00	4.68	-
PK	2.3896G	67.70	74.00	-6.30	32.09	3	Horizontal	108	1.16	35.61	27.50	4.59	-
PK	2.4192G	98.05	Inf	-Inf	32.12	3	Horizontal	108	1.16	65.93	27.50	4.62	-
PK	2.4944G	57.97	74.00	-16.03	32.62	3	Horizontal	108	1.16	25.35	27.94	4.68	-

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

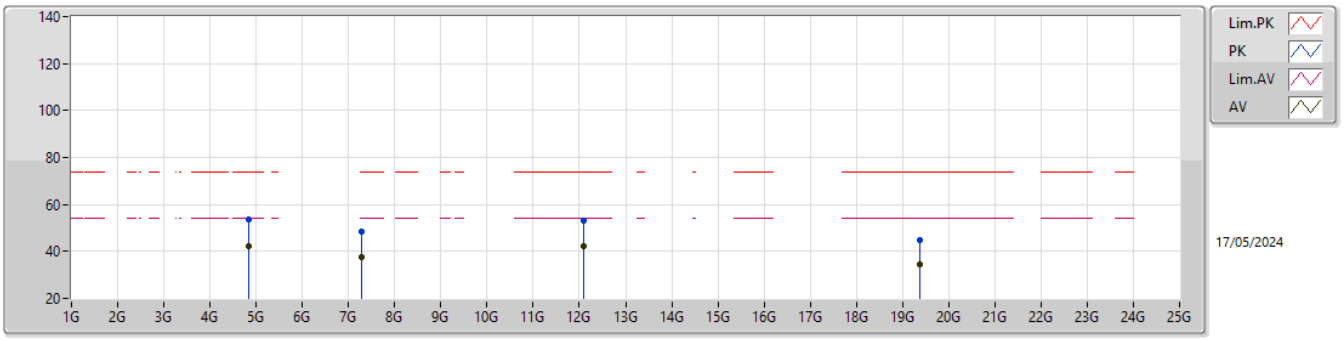
2422MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.84424G	38.24	54.00	-15.76	-6.26	3	Vertical	241	2.77	44.50	32.58	6.93	45.77
AV	7.2764G	37.80	54.00	-16.20	-0.23	3	Vertical	162	2.73	38.03	37.20	8.03	45.46
AV	12.12432G	41.97	54.00	-12.03	7.36	3	Vertical	144	1.83	34.61	39.20	10.71	42.55
AV	19.37596G	37.24	54.00	-16.76	-22.65	3	Vertical	352	1.61	59.89	38.35	13.49	64.95
PK	4.84528G	49.55	74.00	-24.45	-6.26	3	Vertical	241	2.77	55.81	32.58	6.93	45.77
PK	7.28032G	48.99	74.00	-25.01	-0.22	3	Vertical	162	2.73	49.21	37.20	8.03	45.45
PK	12.11592G	51.72	74.00	-22.28	7.35	3	Vertical	144	1.83	44.37	39.20	10.71	42.56
PK	19.37592G	45.65	74.00	-28.35	-22.65	3	Vertical	352	1.61	68.30	38.35	13.49	64.95

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_1TX

2422MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.84352G	42.16	54.00	-11.84	-6.27	3	Horizontal	133	1.00	48.43	32.57	6.93	45.77
AV	7.27328G	37.80	54.00	-16.20	-0.24	3	Horizontal	360	2.72	38.04	37.20	8.02	45.46
AV	12.10464G	42.02	54.00	-11.98	7.34	3	Horizontal	95	2.06	34.68	39.20	10.70	42.56
AV	19.37348G	34.59	54.00	-19.41	-22.65	3	Horizontal	165	1.64	57.24	38.35	13.49	64.95
PK	4.84488G	53.87	74.00	-20.13	-6.26	3	Horizontal	133	1.00	60.13	32.58	6.93	45.77
PK	7.2742G	48.30	74.00	-25.70	-0.24	3	Horizontal	360	2.72	48.54	37.20	8.02	45.46
PK	12.0996G	53.03	74.00	-20.97	7.33	3	Horizontal	95	2.06	45.70	39.20	10.70	42.57
PK	19.37112G	44.91	74.00	-29.09	-22.66	3	Horizontal	165	1.64	67.57	38.34	13.49	64.95

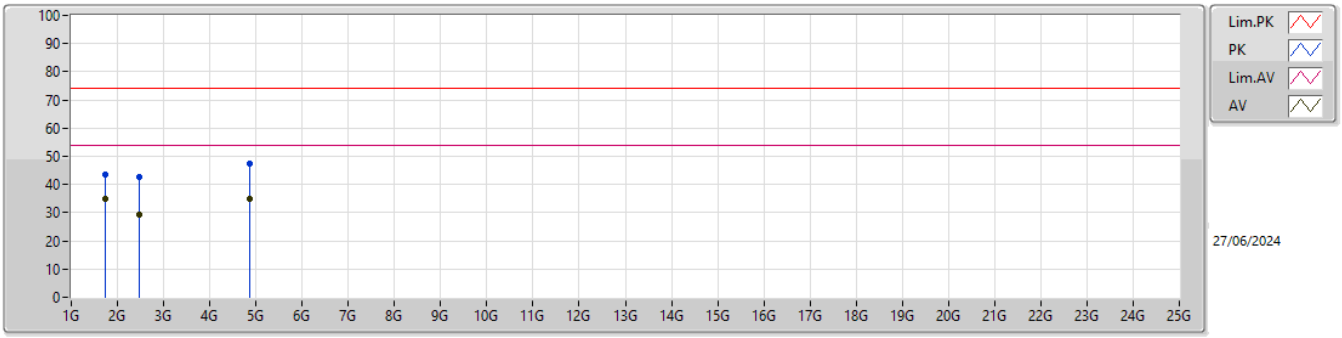
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.99448G	34.94	54.00	-19.06	Horizontal

Result

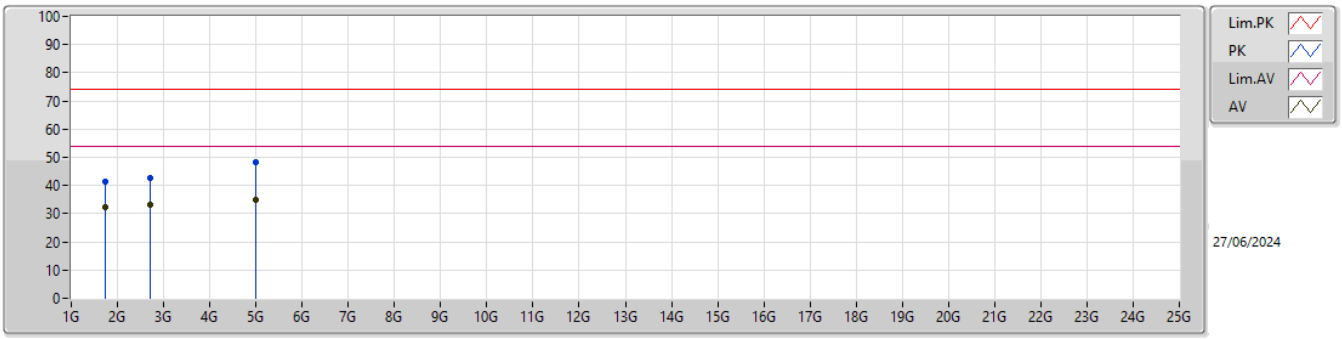
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	1.73997G	34.80	54.00	-19.20	3	Vertical	121	2.13
Mode 1	Pass	AV	2.48359G	29.37	54.00	-24.63	3	Vertical	98	1.50
Mode 1	Pass	AV	4.8621G	34.91	54.00	-19.09	3	Vertical	71	1.93
Mode 1	Pass	PK	1.74G	43.42	74.00	-30.58	3	Vertical	121	2.13
Mode 1	Pass	PK	2.48425G	42.50	74.00	-31.50	3	Vertical	98	1.50
Mode 1	Pass	PK	4.85703G	47.60	74.00	-26.40	3	Vertical	71	1.93
Mode 1	Pass	AV	1.74002G	32.19	54.00	-21.81	3	Horizontal	0	1.50
Mode 1	Pass	AV	2.70669G	33.09	54.00	-20.91	3	Horizontal	181	1.50
Mode 1	Pass	AV	4.99448G	34.94	54.00	-19.06	3	Horizontal	194	1.64
Mode 1	Pass	PK	1.74012G	41.21	74.00	-32.79	3	Horizontal	0	1.50
Mode 1	Pass	PK	2.70681G	42.84	74.00	-31.16	3	Horizontal	181	1.50
Mode 1	Pass	PK	4.99928G	48.36	74.00	-25.64	3	Horizontal	194	1.64

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)	(dBuV/m)	(dB/m)	(dB)	(dB)
AV	1.73997G	34.80	54.00	-19.20	-4.22	3	Vertical	121	2.13	39.02	25.00	4.42	33.64
AV	2.48359G	29.37	54.00	-24.63	-0.40	3	Vertical	98	1.50	29.77	27.74	5.51	33.65
AV	4.8621G	34.91	54.00	-19.09	6.33	3	Vertical	71	1.93	28.58	32.37	7.97	34.01
PK	1.74G	43.42	74.00	-30.58	-4.22	3	Vertical	121	2.13	47.64	25.00	4.42	33.64
PK	2.48425G	42.50	74.00	-31.50	-0.39	3	Vertical	98	1.50	42.89	27.74	5.52	33.65
PK	4.85703G	47.60	74.00	-26.40	6.30	3	Vertical	71	1.93	41.30	32.34	7.97	34.01

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)	(dBuV/m)	(dB/m)	(dB)	(dB)
AV	1.74002G	32.19	54.00	-21.81	-4.22	3	Horizontal	0	1.50	36.41	25.00	4.42	33.64
AV	2.70669G	33.09	54.00	-20.91	0.26	3	Horizontal	181	1.50	32.83	28.27	5.80	33.81
AV	4.99448G	34.94	54.00	-19.06	7.06	3	Horizontal	194	1.64	27.88	33.07	7.98	33.99
PK	1.74012G	41.21	74.00	-32.79	-4.22	3	Horizontal	0	1.50	45.43	25.00	4.42	33.64
PK	2.70681G	42.84	74.00	-31.16	0.26	3	Horizontal	181	1.50	42.58	28.27	5.80	33.81
PK	4.99928G	48.36	74.00	-25.64	7.09	3	Horizontal	194	1.64	41.27	33.10	7.98	33.99