

FCC Radio Test Report

FCC ID : 2AIBX-VALUE
Equipment : 802.11 b/g/n/ax 1T1R 2.4GHz Wi-Fi + BLE 5.4 combo module
Brand Name : Electrolux
Model Name : VALUE
Applicant : Electrolux Italia S.p.A.
Corso Lino Zanussi 24 / 33080 Porcia (PN), Italy
Manufacturer : Electrolux Italia S.p.A.
Corso Lino Zanussi 24 / 33080 Porcia (PN), Italy
Standard : 47 CFR FCC Part 15.247

The product was received on Mar. 12, 2025, and testing was started from Mar. 25, 2025 and completed on Apr. 10, 2025. 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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History of this test report

Report No.	Version	Description	Issued Date
FR522808AC	01	Initial issue of report	Jun. 03, 2025
FR522808AC	02	Revised typo. (This report is the latest version replacing for the report issued on Jun. 03, 2025.)	Jun. 12, 2025

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: Ben Tseng

Report Producer: Michelle Tsai

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), ax(HEW20)	2412-2462	1-11 [11]

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11ax HEW20	20	1TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ HEW20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Evaluated HEW20 mode only due to the similar modulation. The power setting of HT20 mode are the same or lower than HEW20.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	LITEON	WCBN3602M_ANT	Printed Ant	N/A	2.4G+BT

Ant.	Port	Gain (dBi)	
		2.4G	BT
1	1	1.9	1.9

For 2.4GHz function:

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

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

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

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

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From Test Fixture		
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	0.999	0.01	17.259m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_1TX	0.991	0.04	1.437m	10Hz (DC>=0.98)
802.11ax HEW20_Nss1,(MCS0)_1TX	0.987	0.06	1.05m	10Hz (DC>=0.98)

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	Lego Lin	21.8~23.9°C / 53~57%	10/Apr/2025
RF Conducted	TH07-HY	Peng Huang	23.6~24.0°C / 53~57%	27/Mar/2025
Radiated	03CH03-HY	Ian Liou	22.2~23.4°C / 49~52%	25/Mar/2025~26/Mar/2025
Radiated (Co-Location)	03CH02-HY	Daniel Lin	23~25°C / 29~52%	25/Mar/2025
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				

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	DOS 6.1
------------------------------	---------

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	18
2417MHz	20.5
2437MHz	23
2457MHz	19
2462MHz	18.5
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	17
2417MHz	18
2437MHz	22
2457MHz	18.5
2462MHz	16.5
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	17
2417MHz	17
2437MHz	22
2457MHz	17.5
2462MHz	16
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	17
2417MHz	17
2437MHz	22
2457MHz	16.5
2462MHz	16

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	Fixture 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	Fixture 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	Bluetooth+WLAN 2.4GHz
Refer to Sporton Test Report No.: FA522808 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

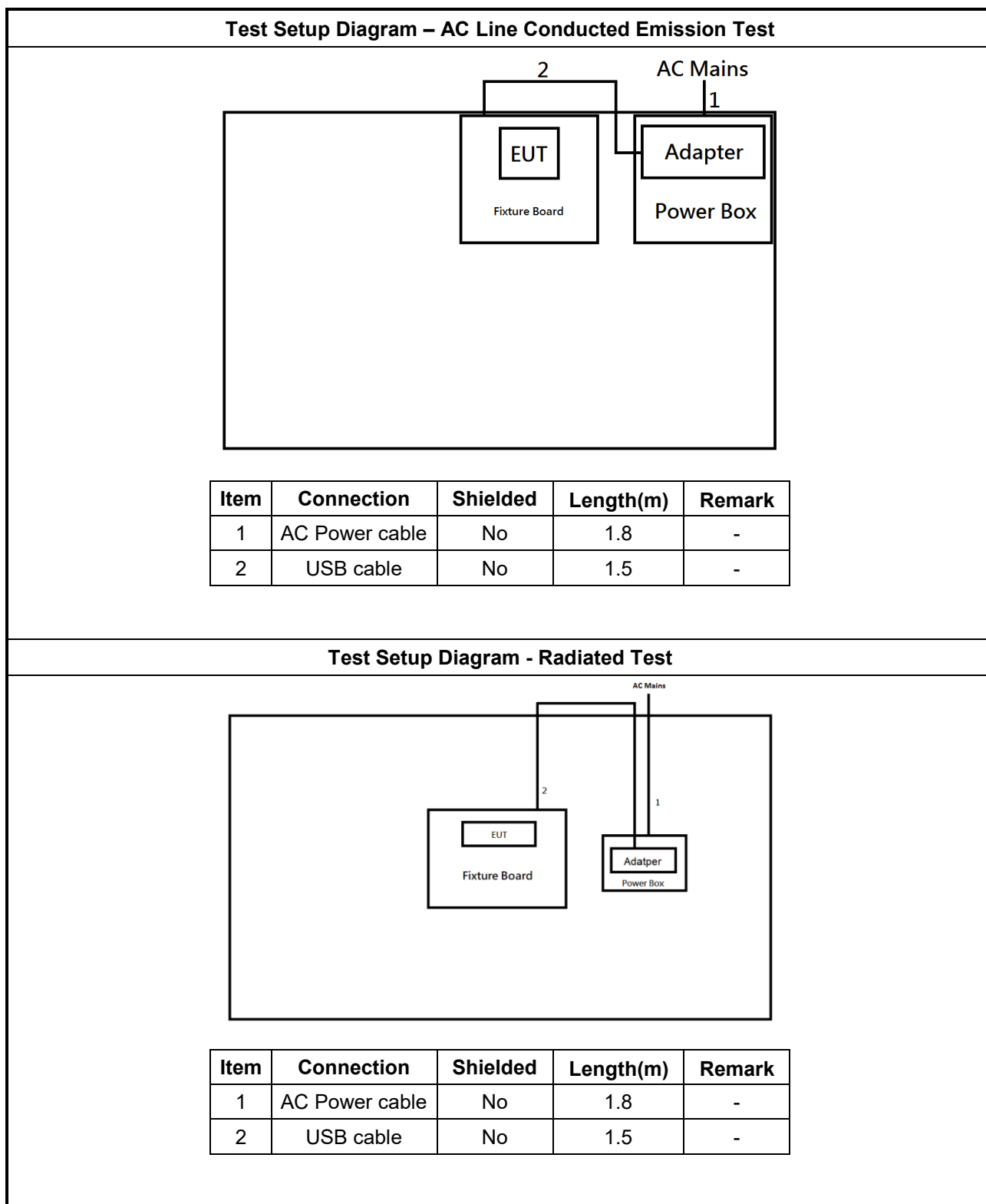
2.3 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	USB cable	UGREEN	60137	-	-
2	Adapter	ASUS	AD83531	-	-
3	Fixture Board	LITEON	WCBN3602M EVB	-	Provided by Customer

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Fixture	NA	NA	-	-
4	Fixture Board	LITEON	WCBN3602M EVB	-	-
5	Adapter	Phihong	PSAI10R-050Q	-	-
6	USB cable	Hawk	04-HTE120	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	USB cable	UGREEN	60137	-	-
2	Adapter	Shenzhen Sonida	S531	-	-
3	Fixture Board	LITEON	WCBN3602M EVB	-	Provided by Customer

2.4 Test Setup Diagram



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

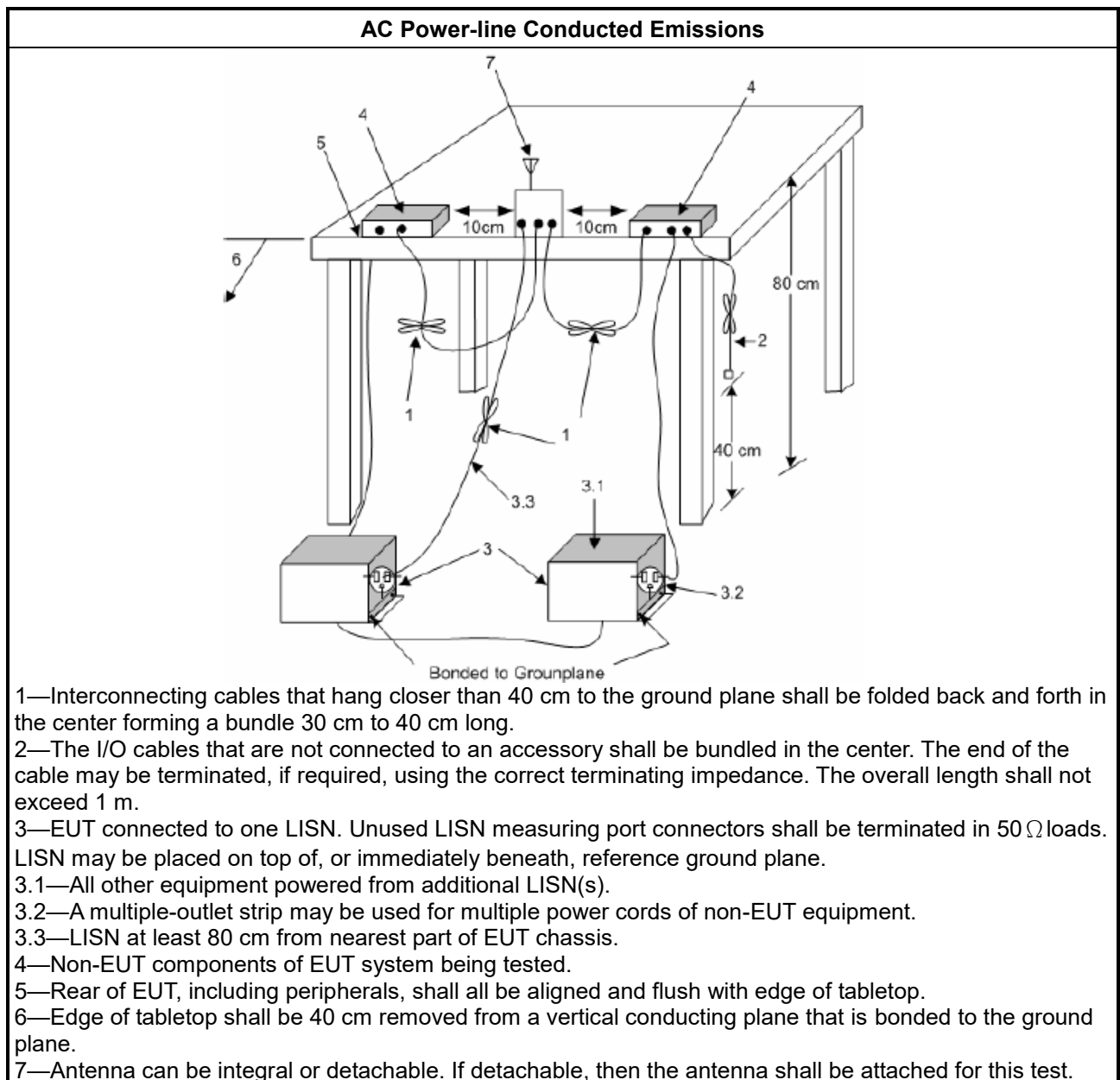
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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



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 $\geq$ 500 kHz.

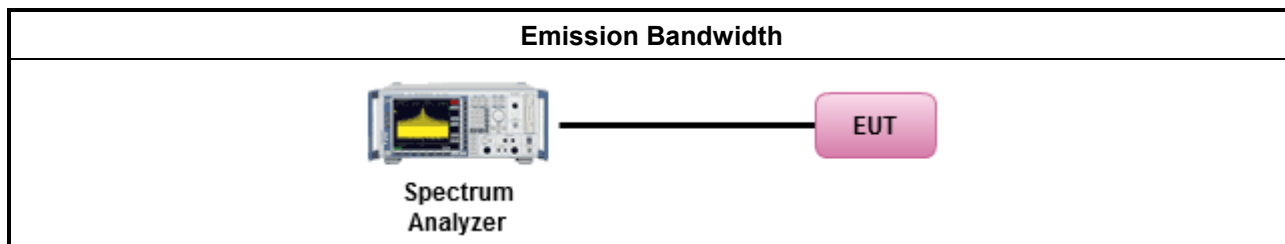
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as 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



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 $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ 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): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ 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.	

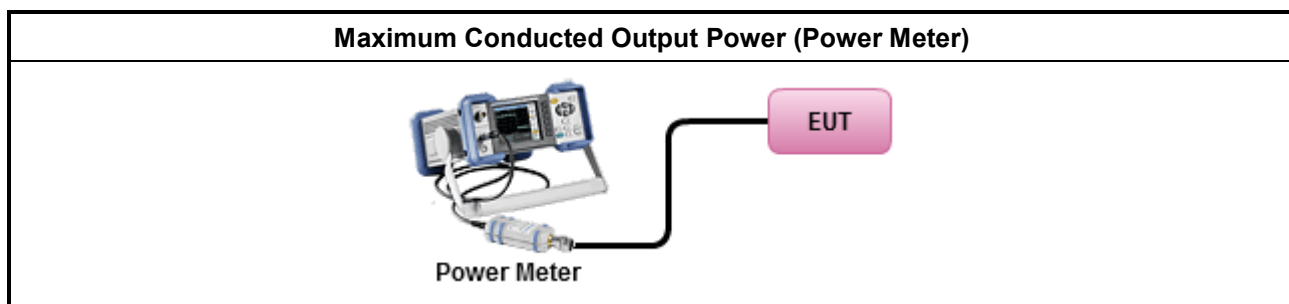
3.3.2 Measuring Instruments

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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

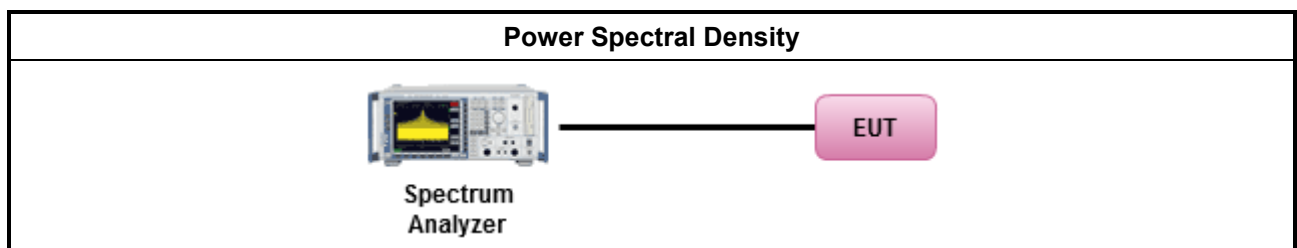
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒	Refer as 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



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.	

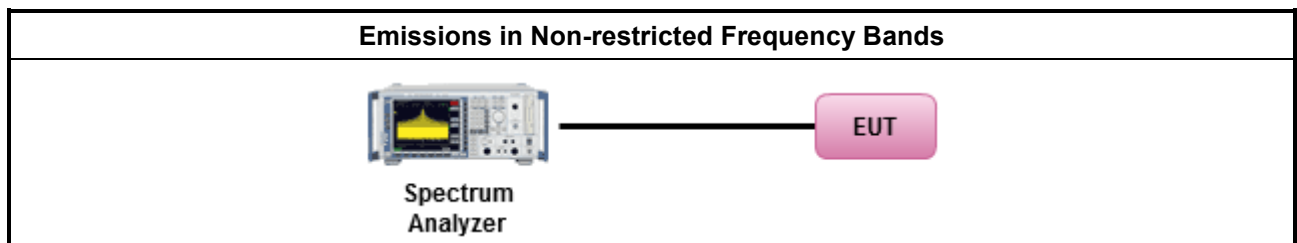
3.5.2 Measuring Instruments

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



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

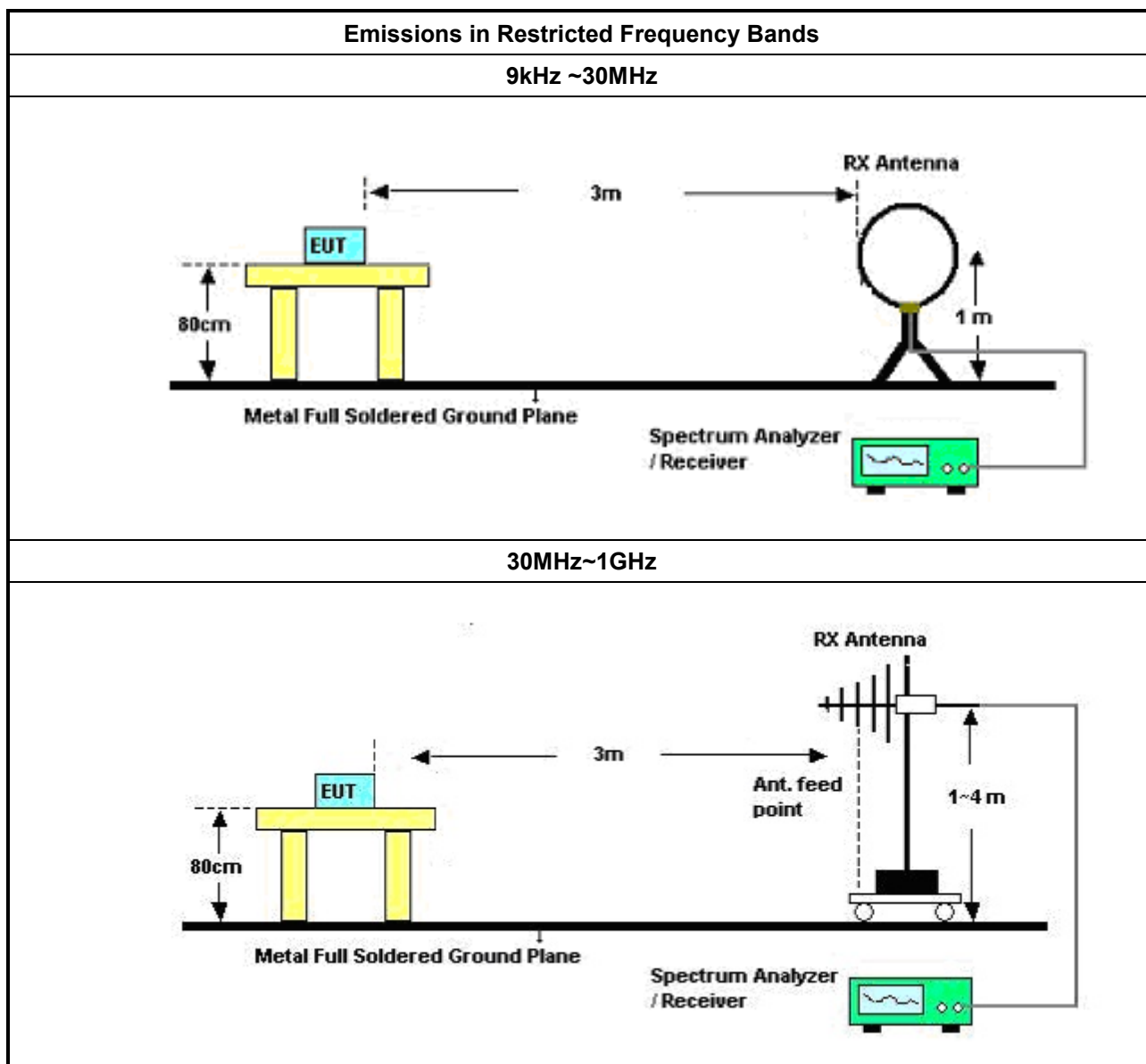
Test Method	
	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted 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 $f \geq 1$ 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.

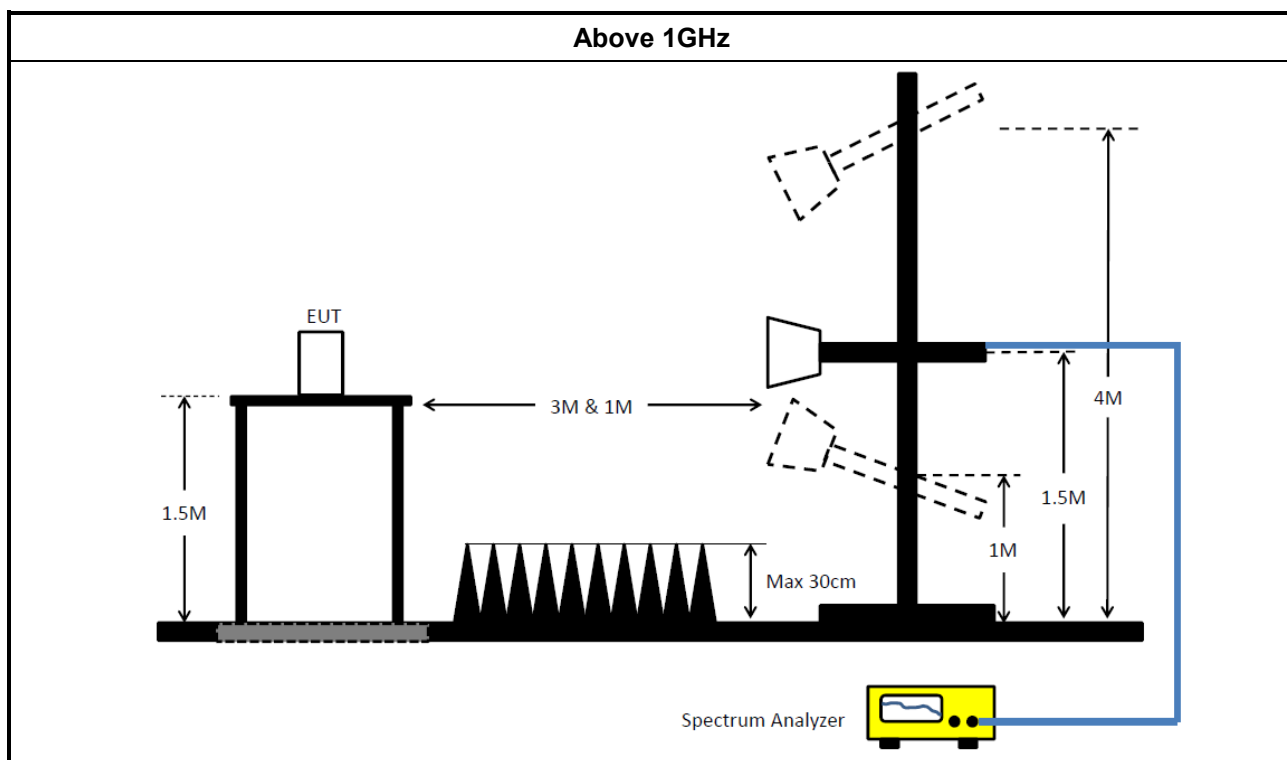
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.6.5 Test Setup





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	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR3	102051	9kHz ~ 3.6GHz	17/May/2024	16/May/2025
Two-Line V-Network	ROHDE & SCHWARZ	ENV 216	101578	9kHz ~ 30MHz	11/Oct/2024	10/Oct/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	26/Feb/2025	25/Feb/2026
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	17/Oct/2024	16/Oct/2025
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	10Hz~40GHz	23/Jan/2025	22/Jan/2026
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	18/Dec/2024	17/Dec/2025
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	18/Dec/2024	17/Dec/2025
SENSE-15247_DTS	Sporton	V5.11.23	N/A	N/A	N/A	N/A

Instrument for Radiated Test (Co-Location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Site V.S.W.R	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3M	14/Jul/2024	13/Jul/2025
Signal Analyzer	R&S	FSP 40	100305	9kHz~40GHz	18/Mar/2025	17/Mar/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz~18GHz	23/Sep/2024	22/Sep/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX 104	03CH02-cable-01	1GHz~40GHz	13/Feb/2025	12/Feb/2026
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	01/Oct/2024	30/Sep/2025
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~40GHz	19/Apr/2024	18/Apr/2025
SENSE-EMI	Sporton	V5.11.9	N/A	N/A	N/A	N/A

**Instrument for Radiated Test (03CH03-HY)**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	14/Jul/2024	13/Jul/2025
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	14/Jul/2024	13/Jul/2025
EMI Test Receiver	R&S	ESR	102052	9kHz~3.6GHz	03/May/2024	02/May/2025
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	01/Nov/2024	31/Oct/2025
Loop Antenna	TESEQ	HLA 6121	65417	9kHz~30MHz	17/Oct/2024	16/Oct/2025
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	14/Oct/2024	13/Oct/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02267	1GHz~18GHz	18/Oct/2024	17/Oct/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz ~ 40GHz	04/Jun/2024	03/Jun/2025
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	12/Jun/2024	11/Jun/2025
RF Cable-R03m	Jye Bao	RG142	03CH03-cable-02	30MHz~1GHz	12/Jun/2024	11/Jun/2025
RF CABLE 5+8m	HUBER+SUHNER	SUOFLEX_104	03CH03-cable-03	1GHz~40GHz	19/Feb/2025	18/Feb/2026
Amplifier	Agilent	8447D	2944A08033	100kHz~1.3GHz	13/Sep/2024	12/Sep/2025
Microwave Premplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	25/Jul/2024	24/Jul/2025
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	19/Apr/2024	18/Apr/2025
SENSE-15407_DTS	Sporton	V5.11.23	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

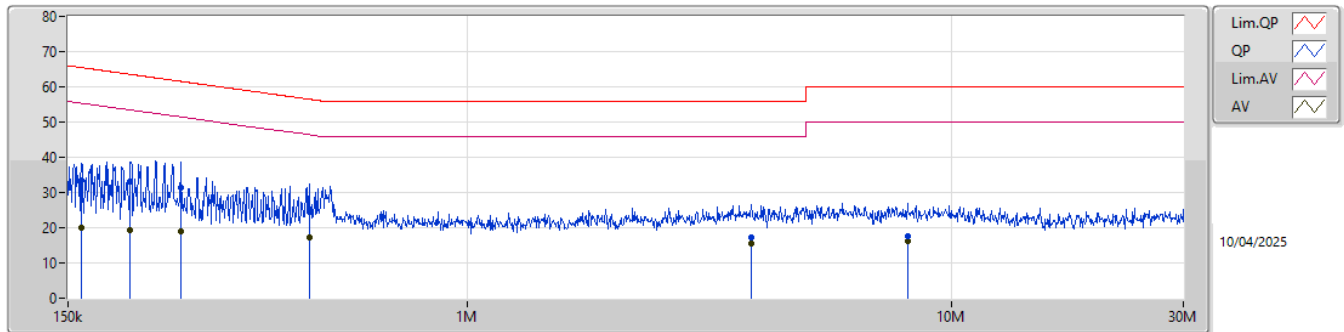
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	502.813k	25.71	46.00	-20.29	Neutral

Result

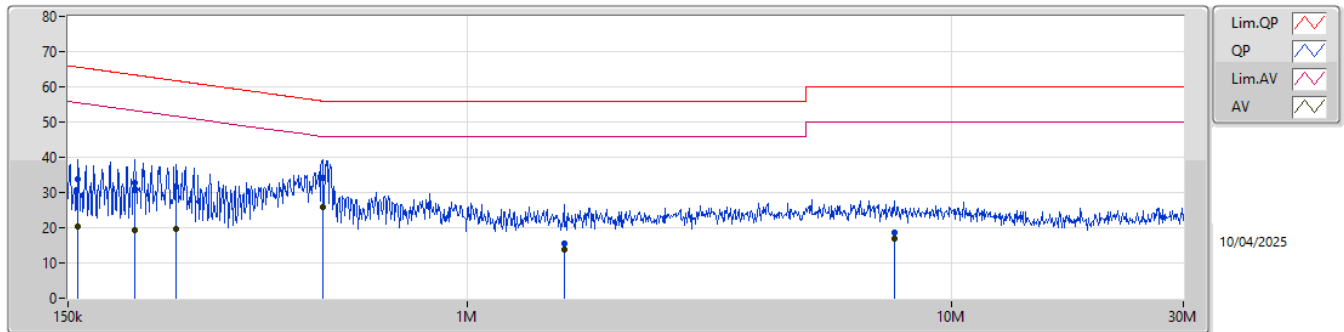
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	159.893k	33.58	65.46	-31.88	Line
Mode 1	Pass	AV	159.893k	20.04	55.46	-35.42	Line
Mode 1	Pass	QP	201.551k	33.05	63.55	-30.50	Line
Mode 1	Pass	AV	201.551k	19.24	53.55	-34.31	Line
Mode 1	Pass	QP	256.1k	31.32	61.56	-30.24	Line
Mode 1	Pass	AV	256.1k	19.07	51.56	-32.49	Line
Mode 1	Pass	QP	471.701k	24.38	56.48	-32.10	Line
Mode 1	Pass	AV	471.701k	17.07	46.48	-29.41	Line
Mode 1	Pass	QP	3.851M	17.12	56.00	-38.88	Line
Mode 1	Pass	AV	3.851M	15.59	46.00	-30.41	Line
Mode 1	Pass	QP	8.092M	17.61	60.00	-42.39	Line
Mode 1	Pass	AV	8.092M	16.14	50.00	-33.86	Line
Mode 1	Pass	QP	157.361k	33.79	65.60	-31.81	Neutral
Mode 1	Pass	AV	157.361k	20.24	55.60	-35.36	Neutral
Mode 1	Pass	QP	206.437k	32.80	63.34	-30.54	Neutral
Mode 1	Pass	AV	206.437k	19.26	53.34	-34.08	Neutral
Mode 1	Pass	QP	251.038k	31.82	61.72	-29.90	Neutral
Mode 1	Pass	AV	251.038k	19.57	51.72	-32.15	Neutral
Mode 1	Pass	QP	502.813k	34.11	56.00	-21.89	Neutral
Mode 1	Pass	AV	502.813k	25.71	46.00	-20.29	Neutral
Mode 1	Pass	QP	1.581M	15.67	56.00	-40.33	Neutral
Mode 1	Pass	AV	1.581M	13.85	46.00	-32.15	Neutral
Mode 1	Pass	QP	7.592M	18.74	60.00	-41.26	Neutral
Mode 1	Pass	AV	7.592M	16.86	50.00	-33.14	Neutral

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	159.893k	33.58	65.46	-31.88	20.09	Line	-	13.49	10.11	0.01	9.97						
AV	159.893k	20.04	55.46	-35.42	20.09	Line	-	-0.05	10.11	0.01	9.97						
QP	201.551k	33.05	63.55	-30.50	19.92	Line	-	13.13	9.94	0.01	9.97						
AV	201.551k	19.24	53.55	-34.31	19.92	Line	-	-0.68	9.94	0.01	9.97						
QP	256.1k	31.32	61.56	-30.24	19.66	Line	-	11.66	9.67	0.02	9.97						
AV	256.1k	19.07	51.56	-32.49	19.66	Line	-	-0.59	9.67	0.02	9.97						
QP	471.701k	24.38	56.48	-32.10	20.05	Line	-	4.33	10.04	0.03	9.98						
AV	471.701k	17.07	46.48	-29.41	20.05	Line	-	-2.98	10.04	0.03	9.98						
QP	3.851M	17.12	56.00	-38.88	19.72	Line	-	-2.60	9.69	0.05	9.98						
AV	3.851M	15.59	46.00	-30.41	19.72	Line	-	-4.13	9.69	0.05	9.98						
QP	8.092M	17.61	60.00	-42.39	19.86	Line	-	-2.25	9.68	0.20	9.98						
AV	8.092M	16.14	50.00	-33.86	19.86	Line	-	-3.72	9.68	0.20	9.98						

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	157.361k	33.79	65.60	-31.81	20.04	Neutral	-	13.75	10.06	0.01	9.97						
AV	157.361k	20.24	55.60	-35.36	20.04	Neutral	-	0.20	10.06	0.01	9.97						
QP	206.437k	32.80	63.34	-30.54	19.91	Neutral	-	12.89	9.93	0.01	9.97						
AV	206.437k	19.26	53.34	-34.08	19.91	Neutral	-	-0.65	9.93	0.01	9.97						
QP	251.038k	31.82	61.72	-29.90	19.66	Neutral	-	12.16	9.67	0.02	9.97						
AV	251.038k	19.57	51.72	-32.15	19.66	Neutral	-	-0.09	9.67	0.02	9.97						
QP	502.813k	34.11	56.00	-21.89	20.06	Neutral	-	14.05	10.05	0.03	9.98						
AV	502.813k	25.71	46.00	-20.29	20.06	Neutral	-	5.65	10.05	0.03	9.98						
QP	1.581M	15.67	56.00	-40.33	19.75	Neutral	-	-4.08	9.74	0.04	9.97						
AV	1.581M	13.85	46.00	-32.15	19.75	Neutral	-	-5.90	9.74	0.04	9.97						
QP	7.592M	18.74	60.00	-41.26	19.85	Neutral	-	-1.11	9.69	0.18	9.98						
AV	7.592M	16.86	50.00	-33.14	19.85	Neutral	-	-2.99	9.69	0.18	9.98						

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	10.075M	14.628M	14M6G1D	10.05M	13.41M
802.11g_Nss1,(6Mbps)_1TX	16.55M	21.459M	21M5D1D	16.475M	16.546M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.75M	21.405M	21M4D1D	18.5M	18.75M

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	10.05M	13.41M
2437MHz	Pass	500k	10.075M	14.628M
2462MHz	Pass	500k	10.075M	13.423M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.5M	16.555M
2437MHz	Pass	500k	16.475M	21.459M
2462MHz	Pass	500k	16.55M	16.546M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.75M	18.787M
2437MHz	Pass	500k	18.5M	21.405M
2462MHz	Pass	500k	18.575M	18.75M

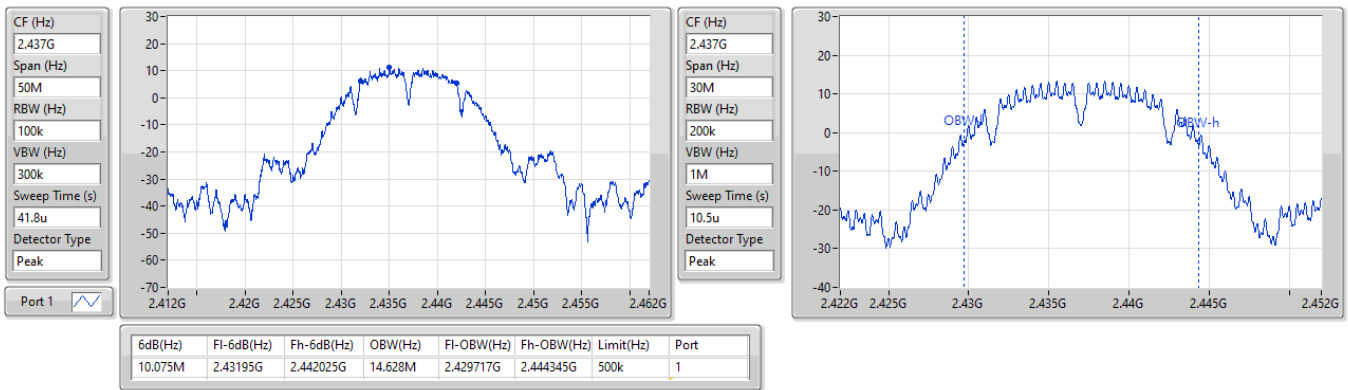
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

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

EBW

2437MHz

27/03/2025

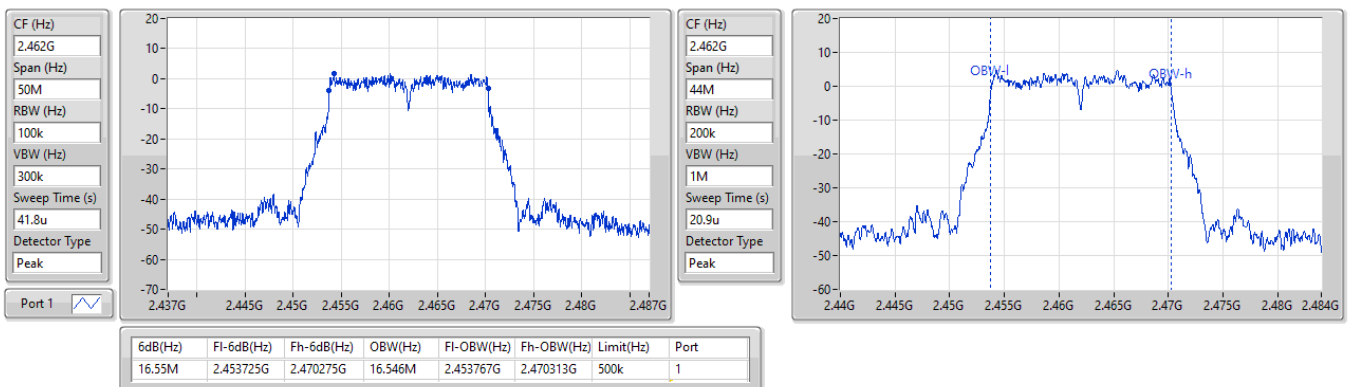


2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

2462MHz

27/03/2025

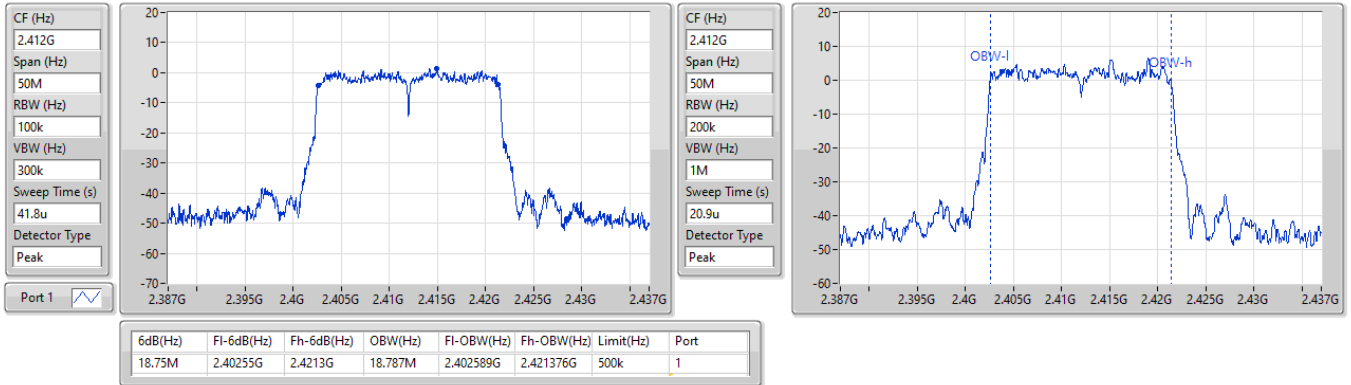


2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2412MHz

27/03/2025





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.33	0.17100
802.11g_Nss1,(6Mbps)_1TX	21.57	0.14355
802.11ax HEW20_Nss1,(MCS0)_1TX	21.62	0.14521



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.90	18.20	18.20	30.00
2417MHz	Pass	1.90	20.48	20.48	30.00
2437MHz	Pass	1.90	22.33	22.33	30.00
2457MHz	Pass	1.90	19.21	19.21	30.00
2462MHz	Pass	1.90	18.76	18.76	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.90	16.17	16.17	30.00
2417MHz	Pass	1.90	17.11	17.11	30.00
2437MHz	Pass	1.90	21.57	21.57	30.00
2457MHz	Pass	1.90	17.85	17.85	30.00
2462MHz	Pass	1.90	15.91	15.91	30.00
802.11ax_HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	1.90	16.23	16.23	30.00
2417MHz	Pass	1.90	16.20	16.20	30.00
2437MHz	Pass	1.90	21.62	21.62	30.00
2457MHz	Pass	1.90	16.51	16.51	30.00
2462MHz	Pass	1.90	15.53	15.53	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	-2.80
802.11g_Nss1,(6Mbps)_1TX	-4.51
802.11ax HEW20_Nss1,(MCS0)_1TX	-5.37

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	1.90	-8.04	-8.04	8.00
2437MHz	Pass	1.90	-2.80	-2.80	8.00
2462MHz	Pass	1.90	-6.14	-6.14	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.90	-10.66	-10.66	8.00
2437MHz	Pass	1.90	-4.51	-4.51	8.00
2462MHz	Pass	1.90	-11.11	-11.11	8.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	1.90	-11.75	-11.75	8.00
2437MHz	Pass	1.90	-5.37	-5.37	8.00
2462MHz	Pass	1.90	-12.18	-12.18	8.00

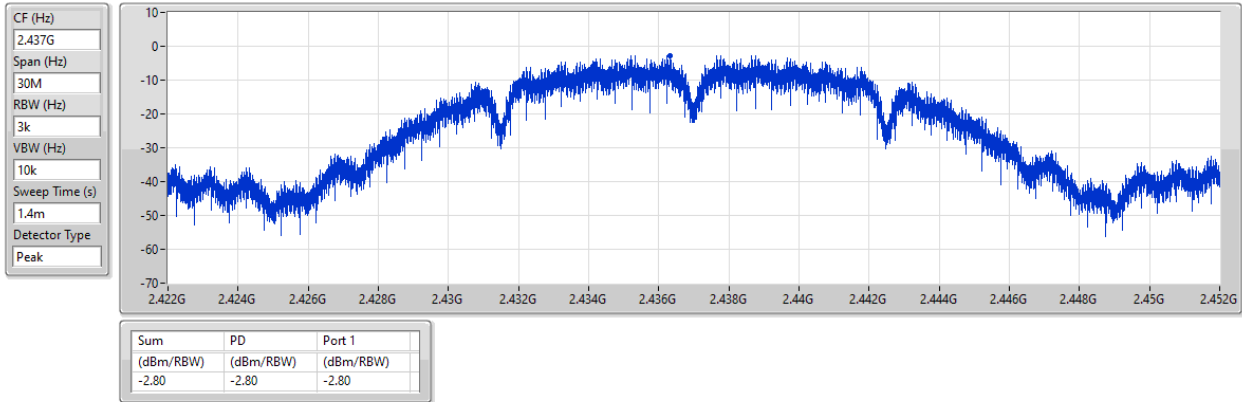
DG = Directional Gain; RBW = 3kHz;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
 Inf = There's no restriction for the limit.

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

PSD

2437MHz

27/03/2025

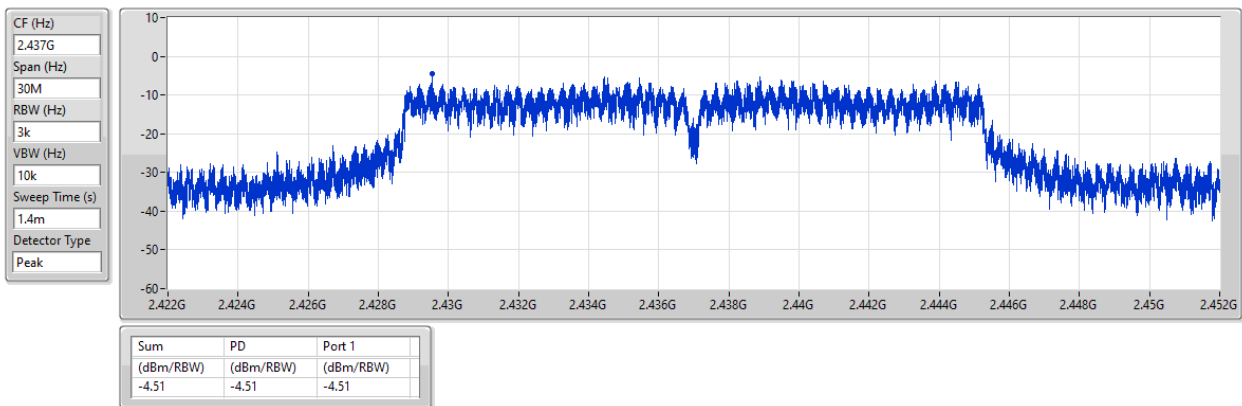


2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

PSD

2437MHz

27/03/2025

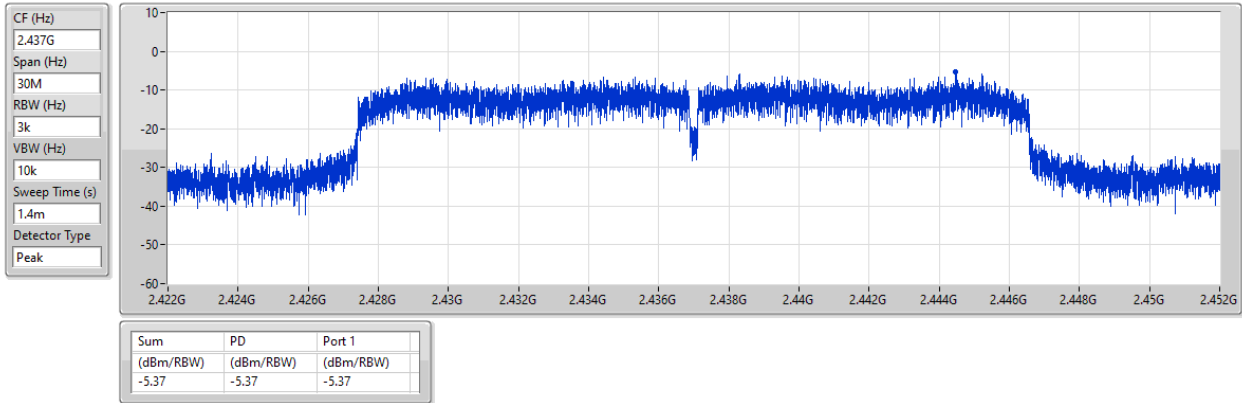


2.4-2.4835GHz_802.11ax_HEW20_Nss1,(MCS0)_1TX

PSD

2437MHz

27/03/2025





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	2.43758G	12.42	-17.58	2.30991G	-54.92	2.4G	-35.41	2.4G	-35.85	2.5135G	-50.46	9.74689G	-38.94	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43824G	11.01	-18.99	2.30525G	-54.33	2.39984G	-33.42	2.4G	-33.64	2.50102G	-42.79	21.50771G	-45.14	1
802.11ax HEW20_Nss1,(MCS0)_1TX	Pass	2.43958G	11.19	-18.81	2.30059G	-53.14	2.39936G	-30.50	2.4G	-33.10	2.50054G	-38.27	21.62853G	-44.45	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	2.43758G	12.42	-17.58	2.11186G	-55.19	2.39704G	-43.23	2.4G	-46.98	2.50494G	-55.05	9.64855G	-42.54	1
2437MHz	Pass	2.43758G	12.42	-17.58	2.30991G	-54.92	2.4G	-35.41	2.4G	-35.85	2.5135G	-50.46	9.74689G	-38.94	1
2462MHz	Pass	2.43758G	12.42	-17.58	1.99186G	-55.05	2.39112G	-54.46	2.4G	-56.05	2.50006G	-51.32	9.84803G	-43.84	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43824G	11.01	-18.99	2.12817G	-54.90	2.39704G	-37.05	2.4G	-40.97	2.50334G	-54.35	21.94601G	-45.21	1
2437MHz	Pass	2.43824G	11.01	-18.99	2.30525G	-54.33	2.39984G	-33.42	2.4G	-33.64	2.50102G	-42.79	21.50771G	-45.14	1
2462MHz	Pass	2.43824G	11.01	-18.99	1.64236G	-55.65	2.39736G	-53.76	2.4G	-55.40	2.50198G	-50.63	21.54424G	-45.68	1
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43958G	11.19	-18.81	2.19108G	-54.80	2.39736G	-34.95	2.4G	-41.23	2.50902G	-54.29	21.91229G	-45.02	1
2437MHz	Pass	2.43958G	11.19	-18.81	2.30059G	-53.14	2.39936G	-30.50	2.4G	-33.10	2.50054G	-38.27	21.62853G	-44.45	1
2462MHz	Pass	2.43958G	11.19	-18.81	2.30758G	-55.88	2.39584G	-54.64	2.4G	-56.34	2.50118G	-49.90	21.57233G	-44.65	1

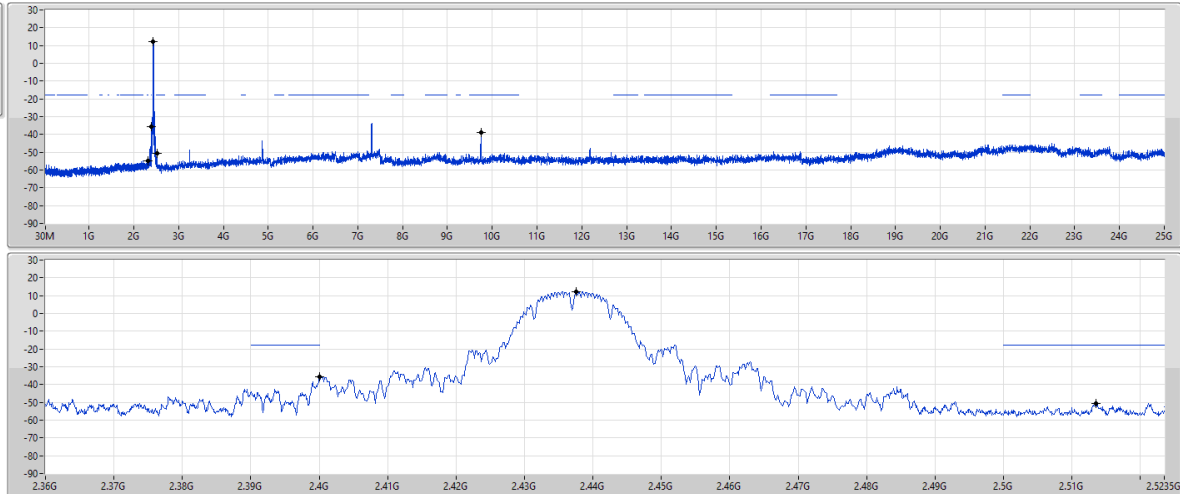
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

CSEndB

2437MHz

27/03/2025

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



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4375G	12.42	-17.58	2.30991G	-54.92	2.4G	-35.41	2.4G	-35.85	2.5135G	-50.46	9.74689G	-38.94	1

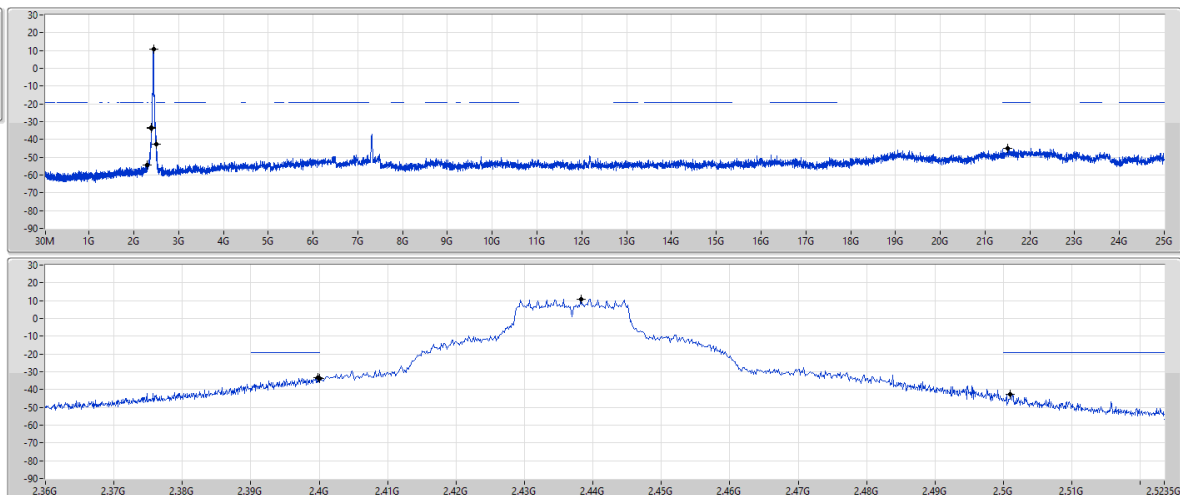
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

CSEndB

2437MHz

27/03/2025

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



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43824G	11.01	-18.99	2.30525G	-54.33	2.39984G	-33.42	2.4G	-33.64	2.50102G	-42.79	21.50771G	-45.14	1

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

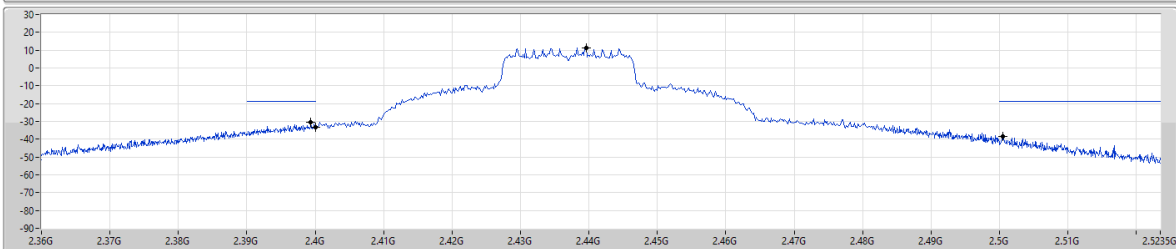
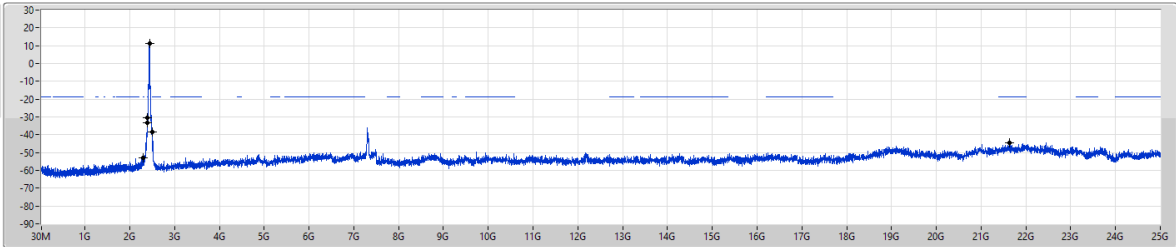
CSEndB

2437MHz

27/03/2025

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

Port 1



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
2.43958G	11.19	-18.81	2.30059G	-53.14	2.39936G	-30.50	2.4G	-33.10	2.50054G	-38.27	2.62853G	-44.45	1



Summary

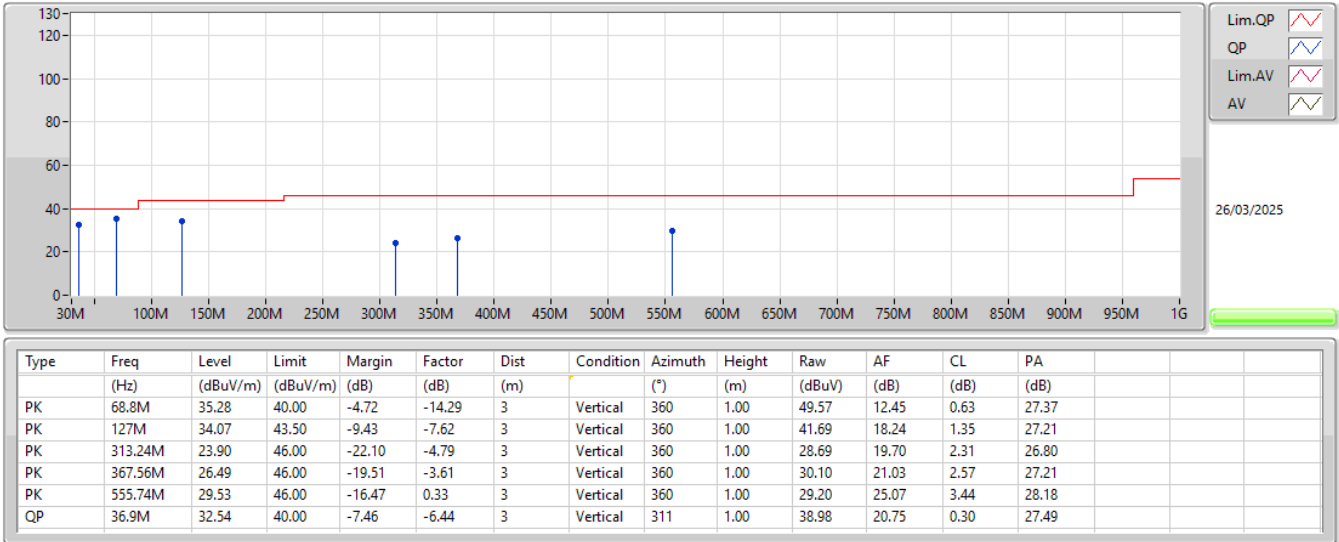
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	Pass	PK	68.8M	35.28	40.00	-4.72	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	68.8M	35.28	40.00	-4.72	3	Vertical	360	1.00
2437MHz	Pass	PK	127M	34.07	43.50	-9.43	3	Vertical	360	1.00
2437MHz	Pass	PK	313.24M	23.90	46.00	-22.10	3	Vertical	360	1.00
2437MHz	Pass	PK	367.56M	26.49	46.00	-19.51	3	Vertical	360	1.00
2437MHz	Pass	PK	555.74M	29.53	46.00	-16.47	3	Vertical	360	1.00
2437MHz	Pass	QP	36.9M	32.54	40.00	-7.46	3	Vertical	311	1.00
2437MHz	Pass	PK	41.64M	28.52	40.00	-11.48	3	Horizontal	0	1.00
2437MHz	Pass	PK	74.62M	27.53	40.00	-12.47	3	Horizontal	0	1.00
2437MHz	Pass	PK	109.54M	30.32	43.50	-13.18	3	Horizontal	0	1.00
2437MHz	Pass	PK	158.04M	34.57	43.50	-8.93	3	Horizontal	0	1.00
2437MHz	Pass	PK	350.1M	27.12	46.00	-18.88	3	Horizontal	0	1.00
2437MHz	Pass	PK	586.78M	29.50	46.00	-16.50	3	Horizontal	0	1.00

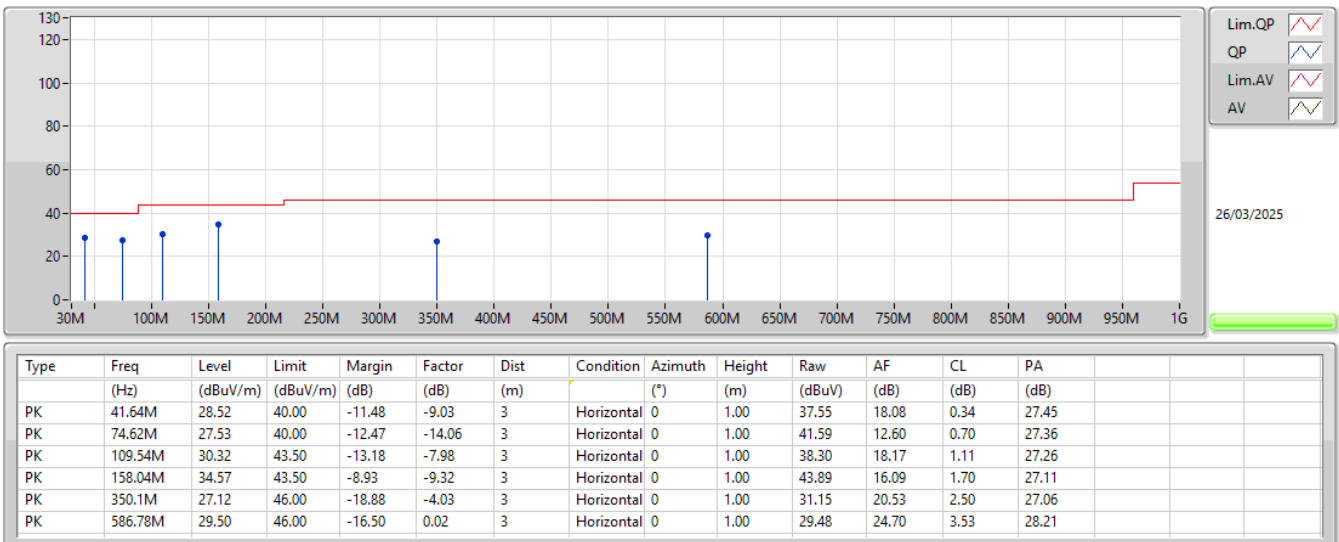
2.4-2.4835GHz_802.11ax HEW20_Nss1,(MCS0)_1TX

2437MHz_Test Fixture



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

2437MHz_Test Fixture



**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	2.4878G	53.89	54.00	-0.11	3	Horizontal	115	1.00
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	2.4838G	53.61	54.00	-0.39	3	Horizontal	132	1.50
802.11n HT20_Nss1,(MCS0)_1TX	Pass	AV	2.3898G	53.82	54.00	-0.18	3	Horizontal	129	1.02
802.11ax HEW20_Nss1,(MCS0)_1TX	Pass	AV	2.4835G	53.31	54.00	-0.69	3	Horizontal	99	1.49

Result

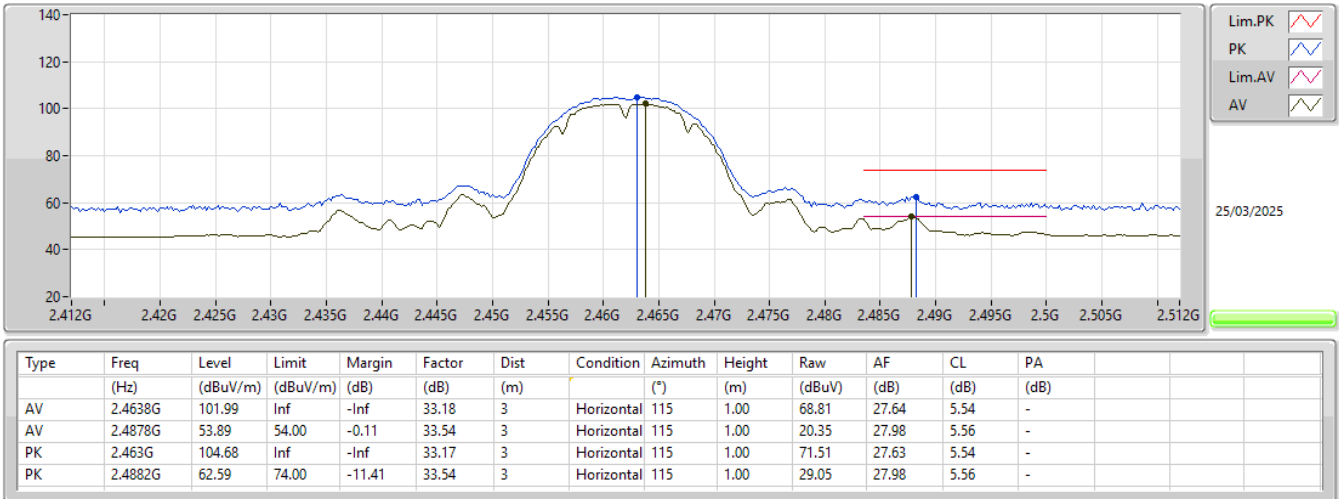
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.386G	48.79	54.00	-5.21	3	Horizontal	115	1.01
2412MHz	Pass	AV	2.4102G	102.32	Inf	-Inf	3	Horizontal	115	1.01
2412MHz	Pass	PK	2.3888G	60.75	74.00	-13.25	3	Horizontal	115	1.01
2412MHz	Pass	PK	2.4094G	104.98	Inf	-Inf	3	Horizontal	115	1.01
2412MHz	Pass	AV	4.82392G	38.18	54.00	-15.82	3	Vertical	31	1.00
2412MHz	Pass	PK	4.82416G	48.03	74.00	-25.97	3	Vertical	31	1.00
2412MHz	Pass	AV	4.82396G	41.44	54.00	-12.56	3	Horizontal	91	1.07
2412MHz	Pass	PK	4.82392G	49.15	74.00	-24.85	3	Horizontal	91	1.07
2417MHz	Pass	AV	2.3802G	52.75	54.00	-1.25	3	Horizontal	133	1.00
2417MHz	Pass	AV	2.4188G	103.96	Inf	-Inf	3	Horizontal	133	1.00
2417MHz	Pass	PK	2.3808G	61.12	74.00	-12.88	3	Horizontal	133	1.00
2417MHz	Pass	PK	2.4186G	106.66	Inf	-Inf	3	Horizontal	133	1.00
2437MHz	Pass	AV	2.389G	52.54	54.00	-1.46	3	Horizontal	116	1.01
2437MHz	Pass	AV	2.4354G	105.39	Inf	-Inf	3	Horizontal	116	1.01
2437MHz	Pass	AV	2.4914G	49.29	54.00	-4.71	3	Horizontal	116	1.01
2437MHz	Pass	PK	2.389G	60.93	74.00	-13.07	3	Horizontal	116	1.01
2437MHz	Pass	PK	2.4354G	107.98	Inf	-Inf	3	Horizontal	116	1.01
2437MHz	Pass	PK	2.4918G	60.40	74.00	-13.60	3	Horizontal	116	1.01
2437MHz	Pass	AV	4.87394G	36.43	54.00	-17.57	3	Vertical	58	1.49
2437MHz	Pass	PK	4.88354G	47.80	74.00	-26.20	3	Vertical	58	1.49
2437MHz	Pass	AV	4.87394G	37.19	54.00	-16.81	3	Horizontal	93	1.42
2437MHz	Pass	PK	4.87382G	47.12	74.00	-26.88	3	Horizontal	93	1.42
2457MHz	Pass	AV	2.4588G	102.31	Inf	-Inf	3	Horizontal	116	1.00
2457MHz	Pass	AV	2.4835G	53.70	54.00	-0.30	3	Horizontal	116	1.00
2457MHz	Pass	PK	2.4586G	104.95	Inf	-Inf	3	Horizontal	116	1.00
2457MHz	Pass	PK	2.4835G	61.91	74.00	-12.09	3	Horizontal	116	1.00
2462MHz	Pass	AV	2.4638G	101.99	Inf	-Inf	3	Horizontal	115	1.00
2462MHz	Pass	AV	2.4878G	53.89	54.00	-0.11	3	Horizontal	115	1.00
2462MHz	Pass	PK	2.463G	104.68	Inf	-Inf	3	Horizontal	115	1.00
2462MHz	Pass	PK	2.4882G	62.59	74.00	-11.41	3	Horizontal	115	1.00
2462MHz	Pass	AV	4.92394G	38.30	54.00	-15.70	3	Vertical	64	1.87
2462MHz	Pass	PK	4.92406G	49.01	74.00	-24.99	3	Vertical	64	1.87
2462MHz	Pass	AV	4.924G	43.59	54.00	-10.41	3	Horizontal	102	1.14
2462MHz	Pass	PK	4.924G	50.57	74.00	-23.43	3	Horizontal	102	1.14
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	49.82	54.00	-4.18	3	Horizontal	96	1.49
2412MHz	Pass	AV	2.4148G	95.69	Inf	-Inf	3	Horizontal	96	1.49
2412MHz	Pass	PK	2.3898G	64.48	74.00	-9.52	3	Horizontal	96	1.49
2412MHz	Pass	PK	2.4146G	105.85	Inf	-Inf	3	Horizontal	96	1.49
2412MHz	Pass	AV	4.81566G	32.69	54.00	-21.31	3	Vertical	66	1.21
2412MHz	Pass	PK	4.83282G	46.92	74.00	-27.08	3	Vertical	66	1.21
2412MHz	Pass	AV	4.81698G	32.95	54.00	-21.05	3	Horizontal	95	1.49
2412MHz	Pass	PK	4.82376G	46.78	74.00	-27.22	3	Horizontal	95	1.49
2417MHz	Pass	AV	2.3898G	52.86	54.00	-1.14	3	Horizontal	96	1.49
2417MHz	Pass	AV	2.4196G	96.87	Inf	-Inf	3	Horizontal	96	1.49
2417MHz	Pass	PK	2.3872G	68.13	74.00	-5.87	3	Horizontal	96	1.49
2417MHz	Pass	PK	2.4196G	107.45	Inf	-Inf	3	Horizontal	96	1.49
2437MHz	Pass	AV	2.3898G	51.40	54.00	-2.60	3	Horizontal	133	1.49
2437MHz	Pass	AV	2.4394G	99.00	Inf	-Inf	3	Horizontal	133	1.49
2437MHz	Pass	AV	2.4835G	52.15	54.00	-1.85	3	Horizontal	133	1.49
2437MHz	Pass	PK	2.3886G	67.02	74.00	-6.98	3	Horizontal	133	1.49
2437MHz	Pass	PK	2.4338G	110.12	Inf	-Inf	3	Horizontal	133	1.49
2437MHz	Pass	PK	2.495G	70.73	74.00	-3.27	3	Horizontal	133	1.49
2437MHz	Pass	AV	4.88392G	32.60	54.00	-21.40	3	Vertical	165	1.11
2437MHz	Pass	PK	4.87884G	46.44	74.00	-27.56	3	Vertical	165	1.11
2437MHz	Pass	AV	4.87496G	32.85	54.00	-21.15	3	Horizontal	221	1.48
2437MHz	Pass	PK	4.88068G	46.70	74.00	-27.30	3	Horizontal	221	1.48
2457MHz	Pass	AV	2.4496G	96.60	Inf	-Inf	3	Horizontal	132	1.50
2457MHz	Pass	AV	2.4838G	53.61	54.00	-0.39	3	Horizontal	132	1.50
2457MHz	Pass	PK	2.4538G	107.44	Inf	-Inf	3	Horizontal	132	1.50

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2457MHz	Pass	PK	2.4835G	69.13	74.00	-4.87	3	Horizontal	132	1.50
2462MHz	Pass	AV	2.4548G	95.20	Inf	-Inf	3	Horizontal	133	1.49
2462MHz	Pass	AV	2.4835G	52.99	54.00	-1.01	3	Horizontal	133	1.49
2462MHz	Pass	PK	2.459G	106.01	Inf	-Inf	3	Horizontal	133	1.49
2462MHz	Pass	PK	2.4838G	68.27	74.00	-5.73	3	Horizontal	133	1.49
2462MHz	Pass	AV	4.91432G	33.04	54.00	-20.96	3	Vertical	120	1.58
2462MHz	Pass	PK	4.916G	46.96	74.00	-27.04	3	Vertical	120	1.58
2462MHz	Pass	AV	4.91452G	33.06	54.00	-20.94	3	Horizontal	214	2.92
2462MHz	Pass	PK	4.92608G	47.17	74.00	-26.83	3	Horizontal	214	2.92
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3872G	48.25	54.00	-5.75	3	Horizontal	91	1.48
2412MHz	Pass	AV	2.4144G	94.52	Inf	-Inf	3	Horizontal	91	1.48
2412MHz	Pass	PK	2.3804G	63.28	74.00	-10.72	3	Horizontal	91	1.48
2412MHz	Pass	PK	2.4144G	105.80	Inf	-Inf	3	Horizontal	91	1.48
2412MHz	Pass	AV	4.8123G	32.68	54.00	-21.32	3	Vertical	173	1.50
2412MHz	Pass	PK	4.83324G	46.69	74.00	-27.31	3	Vertical	173	1.50
2412MHz	Pass	AV	4.82436G	33.32	54.00	-20.68	3	Horizontal	102	1.28
2412MHz	Pass	PK	4.82202G	47.39	74.00	-26.61	3	Horizontal	102	1.28
2417MHz	Pass	AV	2.39G	48.02	54.00	-5.98	3	Horizontal	94	1.49
2417MHz	Pass	AV	2.4194G	94.87	Inf	-Inf	3	Horizontal	94	1.49
2417MHz	Pass	PK	2.3884G	63.38	74.00	-10.62	3	Horizontal	94	1.49
2417MHz	Pass	PK	2.4192G	106.18	Inf	-Inf	3	Horizontal	94	1.49
2437MHz	Pass	AV	2.3898G	53.82	54.00	-0.18	3	Horizontal	129	1.02
2437MHz	Pass	AV	2.4346G	100.06	Inf	-Inf	3	Horizontal	129	1.02
2437MHz	Pass	AV	2.4835G	53.50	54.00	-0.50	3	Horizontal	129	1.02
2437MHz	Pass	PK	2.3886G	70.09	74.00	-3.91	3	Horizontal	129	1.02
2437MHz	Pass	PK	2.4338G	111.13	Inf	-Inf	3	Horizontal	129	1.02
2437MHz	Pass	PK	2.4842G	71.29	74.00	-2.71	3	Horizontal	129	1.02
2437MHz	Pass	AV	4.8791G	33.25	54.00	-20.75	3	Vertical	74	2.74
2437MHz	Pass	PK	4.86524G	46.74	74.00	-27.26	3	Vertical	74	2.74
2437MHz	Pass	AV	4.88654G	33.05	54.00	-20.95	3	Horizontal	213	1.50
2437MHz	Pass	PK	4.86944G	47.18	74.00	-26.82	3	Horizontal	213	1.50
2457MHz	Pass	AV	2.4594G	96.93	Inf	-Inf	3	Horizontal	129	1.00
2457MHz	Pass	AV	2.4835G	53.48	54.00	-0.52	3	Horizontal	129	1.00
2457MHz	Pass	PK	2.459G	108.45	Inf	-Inf	3	Horizontal	129	1.00
2457MHz	Pass	PK	2.4876G	69.21	74.00	-4.79	3	Horizontal	129	1.00
2462MHz	Pass	AV	2.4596G	94.86	Inf	-Inf	3	Horizontal	129	1.01
2462MHz	Pass	AV	2.4835G	48.85	54.00	-5.15	3	Horizontal	129	1.01
2462MHz	Pass	PK	2.459G	105.55	Inf	-Inf	3	Horizontal	129	1.01
2462MHz	Pass	PK	2.4902G	63.44	74.00	-10.56	3	Horizontal	129	1.01
2462MHz	Pass	AV	4.9108G	33.35	54.00	-20.65	3	Vertical	241	1.50
2462MHz	Pass	PK	4.93378G	47.82	74.00	-26.18	3	Vertical	241	1.50
2462MHz	Pass	AV	4.92292G	34.00	54.00	-20.00	3	Horizontal	101	1.50
2462MHz	Pass	PK	4.93006G	48.69	74.00	-25.31	3	Horizontal	101	1.50
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	50.22	54.00	-3.78	3	Horizontal	99	1.49
2412MHz	Pass	AV	2.4148G	95.42	Inf	-Inf	3	Horizontal	99	1.49
2412MHz	Pass	PK	2.3878G	66.24	74.00	-7.76	3	Horizontal	99	1.49
2412MHz	Pass	PK	2.4156G	108.63	Inf	-Inf	3	Horizontal	99	1.49
2412MHz	Pass	AV	4.8141G	32.84	54.00	-21.16	3	Vertical	35	1.50
2412MHz	Pass	PK	4.83216G	46.90	74.00	-27.10	3	Vertical	35	1.50
2412MHz	Pass	AV	4.8192G	33.15	54.00	-20.85	3	Horizontal	95	1.39
2412MHz	Pass	PK	4.81524G	46.96	74.00	-27.04	3	Horizontal	95	1.39
2417MHz	Pass	AV	2.3888G	48.55	54.00	-5.45	3	Horizontal	101	1.50
2417MHz	Pass	AV	2.4196G	95.04	Inf	-Inf	3	Horizontal	101	1.50
2417MHz	Pass	PK	2.3876G	63.36	74.00	-10.64	3	Horizontal	101	1.50
2417MHz	Pass	PK	2.4204G	108.69	Inf	-Inf	3	Horizontal	101	1.50
2437MHz	Pass	AV	2.389G	52.66	54.00	-1.34	3	Horizontal	144	1.49
2437MHz	Pass	AV	2.4294G	98.42	Inf	-Inf	3	Horizontal	144	1.49
2437MHz	Pass	AV	2.4835G	53.28	54.00	-0.72	3	Horizontal	144	1.49
2437MHz	Pass	PK	2.3866G	68.80	74.00	-5.20	3	Horizontal	144	1.49
2437MHz	Pass	PK	2.4334G	111.51	Inf	-Inf	3	Horizontal	144	1.49

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2437MHz	Pass	PK	2.4866G	69.82	74.00	-4.18	3	Horizontal	144	1.49
2437MHz	Pass	AV	4.88372G	33.09	54.00	-20.91	3	Vertical	339	2.46
2437MHz	Pass	PK	4.86386G	47.10	74.00	-26.90	3	Vertical	339	2.46
2437MHz	Pass	AV	4.8737G	33.22	54.00	-20.78	3	Horizontal	98	1.21
2437MHz	Pass	PK	4.8782G	47.40	74.00	-26.60	3	Horizontal	98	1.21
2457MHz	Pass	AV	2.4494G	97.08	Inf	-Inf	3	Horizontal	99	1.49
2457MHz	Pass	AV	2.4835G	53.31	54.00	-0.69	3	Horizontal	99	1.49
2457MHz	Pass	PK	2.4556G	110.27	Inf	-Inf	3	Horizontal	99	1.49
2457MHz	Pass	PK	2.4854G	70.44	74.00	-3.56	3	Horizontal	99	1.49
2462MHz	Pass	AV	2.4596G	94.33	Inf	-Inf	3	Horizontal	100	1.50
2462MHz	Pass	AV	2.4836G	49.89	54.00	-4.11	3	Horizontal	100	1.50
2462MHz	Pass	PK	2.4552G	107.32	Inf	-Inf	3	Horizontal	100	1.50
2462MHz	Pass	PK	2.4872G	63.01	74.00	-10.99	3	Horizontal	100	1.50
2462MHz	Pass	AV	4.9126G	33.33	54.00	-20.67	3	Vertical	344	1.50
2462MHz	Pass	PK	4.927G	47.34	74.00	-26.66	3	Vertical	344	1.50
2462MHz	Pass	AV	4.9249G	33.83	54.00	-20.17	3	Horizontal	96	1.31
2462MHz	Pass	PK	4.9237G	48.14	74.00	-25.86	3	Horizontal	96	1.31

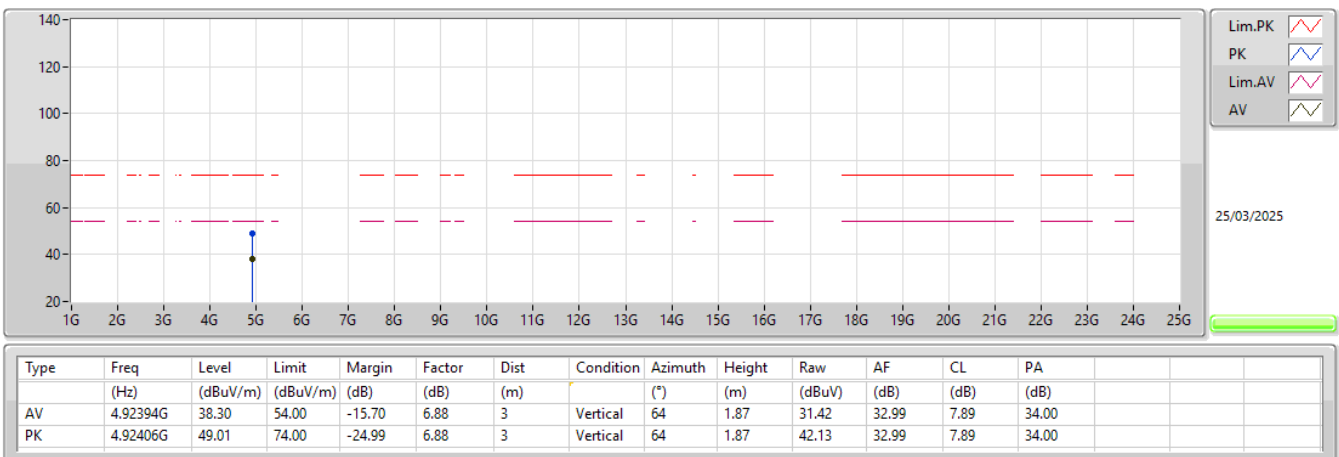
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2462MHz_TX



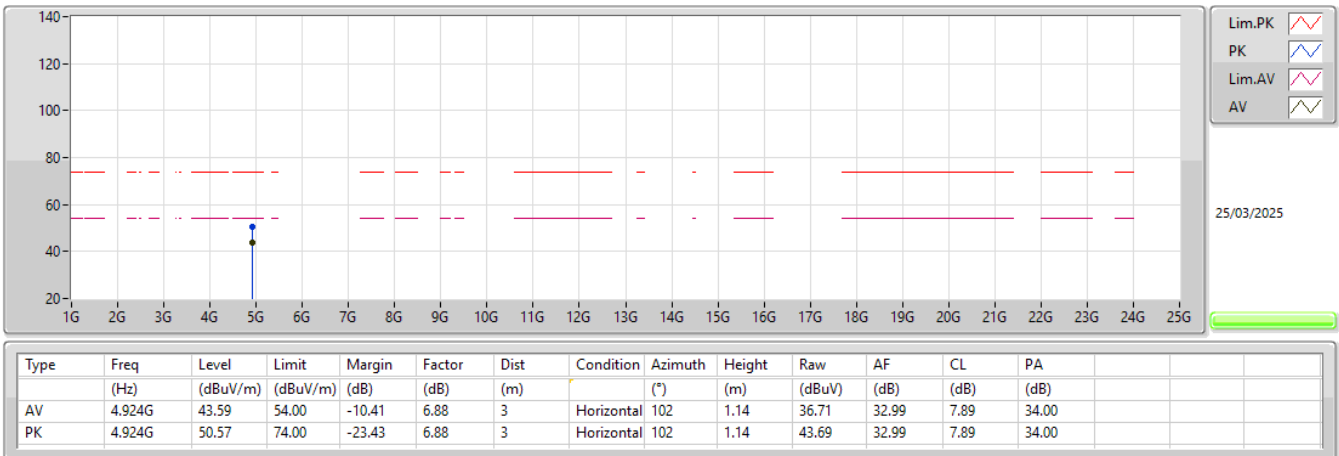
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX



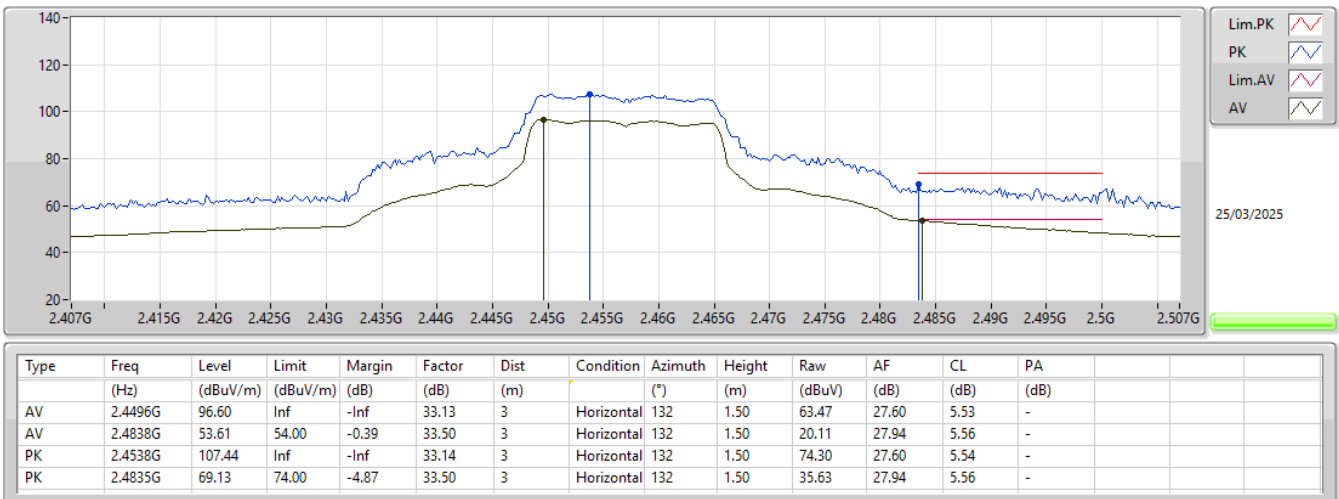
2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX



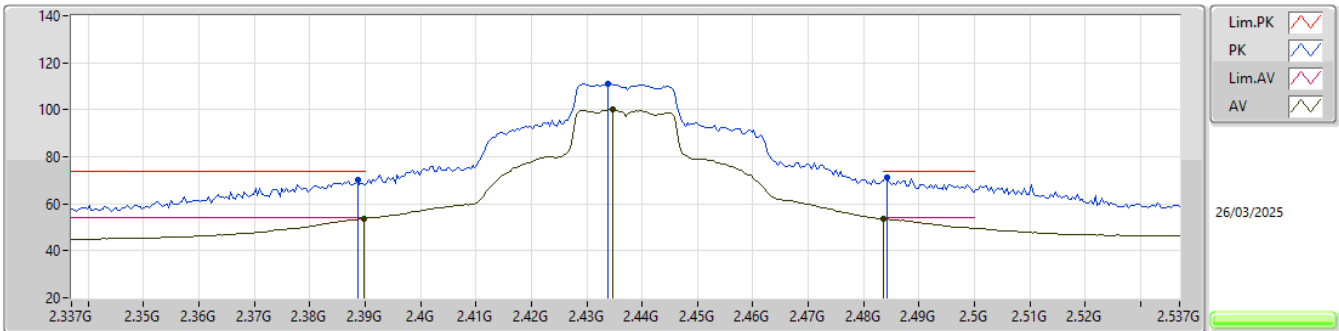
2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2457MHz_TX



2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_1TX

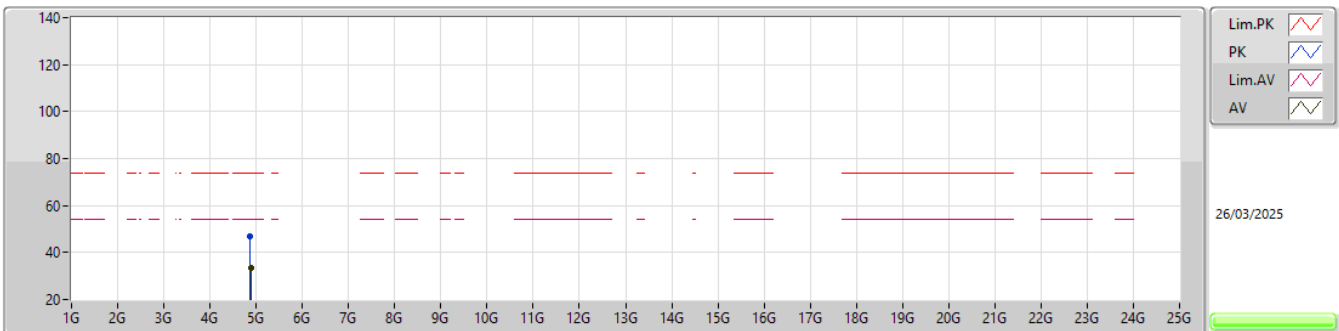
2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3898G	53.82	54.00	-0.18	32.87	3	Horizontal	129	1.02	20.95	27.40	5.47	-
AV	2.4346G	100.06	Inf	-Inf	33.12	3	Horizontal	129	1.02	66.94	27.60	5.52	-
AV	2.4835G	53.50	54.00	-0.50	33.50	3	Horizontal	129	1.02	20.00	27.94	5.56	-
PK	2.3886G	70.09	74.00	-3.91	32.86	3	Horizontal	129	1.02	37.23	27.39	5.47	-
PK	2.4338G	111.13	Inf	-Inf	33.12	3	Horizontal	129	1.02	78.01	27.60	5.52	-
PK	2.4842G	71.29	74.00	-2.71	33.50	3	Horizontal	129	1.02	37.79	27.94	5.56	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_1TX

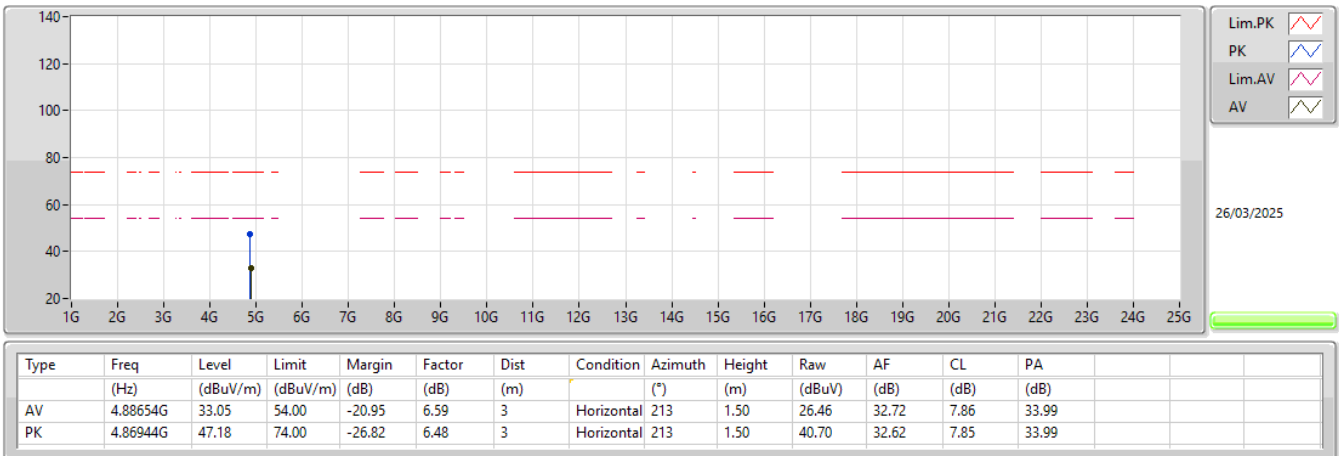
2437MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8791G	33.25	54.00	-20.75	6.53	3	Vertical	74	2.74	26.72	32.67	7.85	33.99
PK	4.86524G	46.74	74.00	-27.26	6.44	3	Vertical	74	2.74	40.30	32.59	7.84	33.99

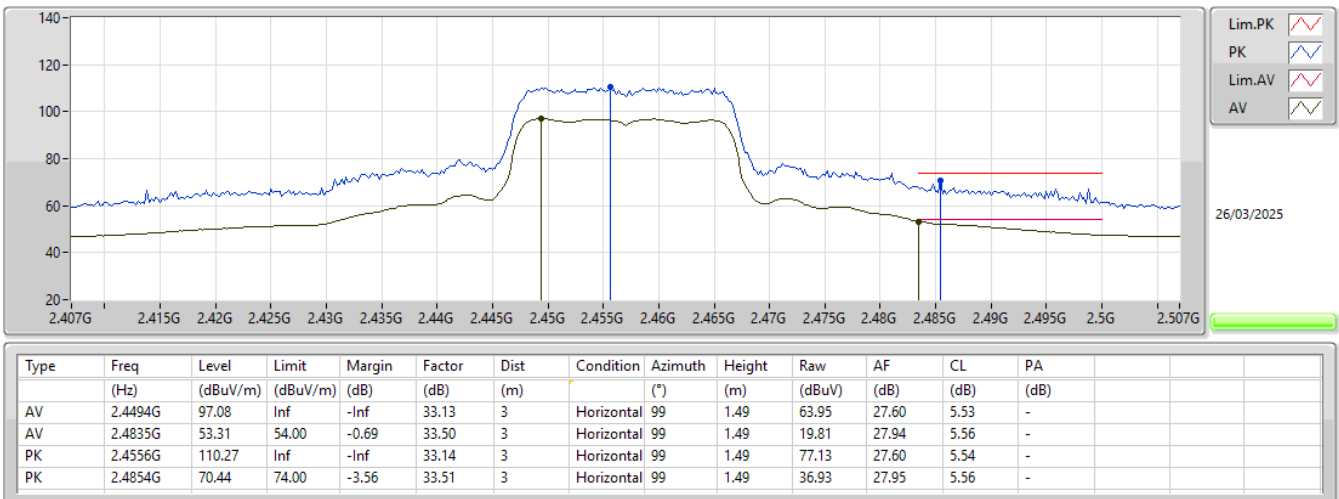
2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_1TX

2437MHz_TX



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

2457MHz_TX





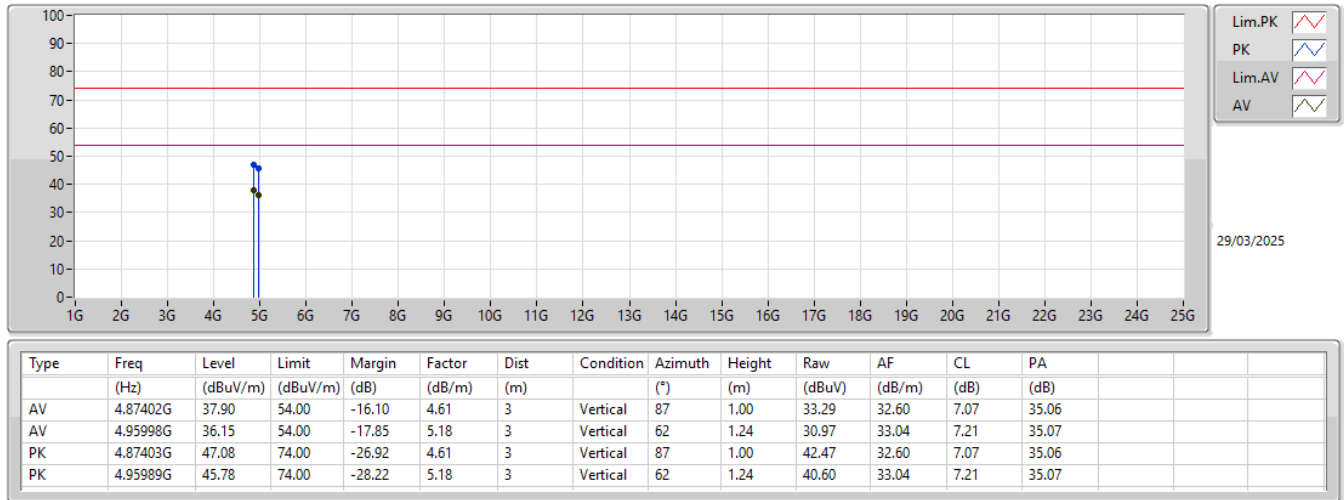
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.87402G	37.90	54.00	-16.10	Vertical

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.87402G	37.90	54.00	-16.10	3	Vertical	87	1.00	-
Mode 1	Pass	AV	4.95998G	36.15	54.00	-17.85	3	Vertical	62	1.24	-
Mode 1	Pass	PK	4.87403G	47.08	74.00	-26.92	3	Vertical	87	1.00	-
Mode 1	Pass	PK	4.95989G	45.78	74.00	-28.22	3	Vertical	62	1.24	-
Mode 1	Pass	AV	4.87393G	35.22	54.00	-18.78	3	Horizontal	133	1.50	-
Mode 1	Pass	AV	4.95993G	34.46	54.00	-19.54	3	Horizontal	209	2.74	-
Mode 1	Pass	PK	4.87392G	44.82	74.00	-29.18	3	Horizontal	133	1.50	-
Mode 1	Pass	PK	4.95946G	44.38	74.00	-29.62	3	Horizontal	209	2.74	-

Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1

