FCC Radio Test Report

FCC ID	:	**HDC-649B**
Equipment	:	**WiFi6 module**
Brand Name	:	ADTRAN®
Model Name	:	**W649bYYYYYY(Y can be 0-9, a-z, A-Z, blank, "+" or "-" or "#")**
Applicant	:	**Adtran** **901 Explorer Blvd., Huntsville, AL 35806, USA**
Manufacturer	:	**XAVi Technologies Corporation** **22F., No.69, Sec. 2, Guangfu Rd., Sanchong Dist., New Taipei City 241, Taiwan (R.O.C.)**
Standard	:	**47 CFR FCC Part 15.407**

The product was received on Nov. 18, 2024, and testing was started from Dec. 18, 2024 and completed on Jan. 07, 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 variant 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
FR182708-04AN	01	Initial issue of report	Mar. 04, 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	15.407(a)	Maximum Conducted Output Power	PASS	-
3.2	15.407(b)	Unwanted Emissions	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: Terry Chang

Report Producer: Julie Tseng

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5470-5725	a, n (HT20), ac (VHT20), ax(HEW20)	5500-5700	100-140 [11]
Straddle 5720		5720	144 [1]
5725-5850		5745-5825	149-165 [5]
5470-5725	n (HT40), ac (VHT40), ax(HEW40)	5510-5670	102-134 [5]
Straddle 5710		5710	142 [1]
5725-5850		5755-5795	151-159 [2]
5470-5725	ac (VHT80), ax(HEW80)	5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch	Nant
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX

Note:
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	GALTRONICS	60-3523-03-2	PCB	U.FL	3.99
2	GALTRONICS	60-2888-03-2	PCB	U.FL	3.99
3	GALTRONICS	60-2791-03	PCB	U.FL	2.12
4	GALTRONICS	60-2808-03	PCB	U.FL	2.12

Note 1: The EUT has four antennas.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (4TX/4RX)

Ant. 1~4 could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From Test Fixture			
EUT Function	☐	Outdoor AP	☒	Indoor AP
	☐	Fixed P2P AP	☐	Client
Beamforming Function	☒	With beamforming	☐	Without beamforming
TPC Function	☒	With TPC Function	☐	Without TPC Function
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Resource Unit	☒	Full RU	☐	Partial RU
	☐	MRU(static preamble puncturing)	☐	MRU(dynamic preamble puncturing)

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
802.11ax HEW20_Nss1,(MCS0)_4TX	0.612	2.13	315.625u	5k
802.11ax HEW80_Nss1,(MCS0)_4TX	0.599	2.23	298.125u	5k

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

1.1.5 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
W649bYYYYYY(Y can be 0-9, a-z, A-Z, blank, “+” or “-” or “#”)	All the models are identical, the difference model served as marketing strategy.

1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR182708-03AN
Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
The 841 motherboard 5G filter and 5G module filter were replaced with Qorvo alternative materials.	The worst case of Maximum Conducted Output Power, Radited emissions above 1GHz was evaluated.

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
- KDB 789033 D02 v02r01

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

- KDB 662911 D01 v02r01
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
(TAF: 3785**)**	**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**
RF Conducted	TH07-HY	Xun Hsieh	22.9~24.1°C / 52~60%	23/Dec/2024~07/Jan/2025
Radiated	03CH03-HY	Simon Cheng	22.2~23.4°C / 50~52%	18/Dec/2024~07/Jan/2025
☐ Wen 33rd.St.	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
(TAF: 3785**)**	**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**
Emission 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%
Unwanted Emissions	4.8 dB	Confidence levels of 95%
Receiver Radiated Unwanted Emissions	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	QATool_Dbg

Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5745MHz	22
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5530MHz	16.5

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Unwanted Emissions		
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	Test Fixture Mode		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT		V	

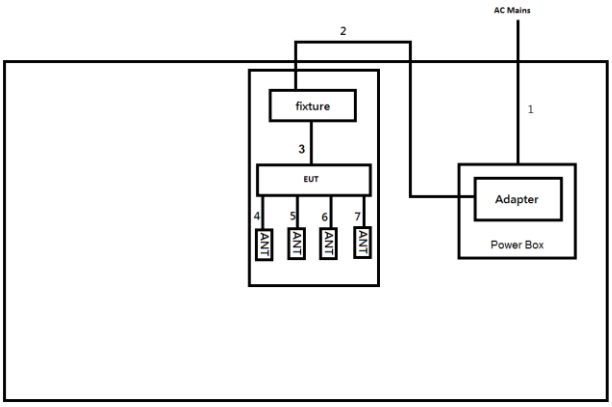
2.3 Support Equipment

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Fixture	ADTRAN	841-T6	-	-
4	Adapter for Fixture	MASS POWER	S050-1A120400B3	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Fixture	ADTRAN	841-T6	-	Provided by Customer
2	Adapter	MASS POWER	S042-1A120300VU	-	Provided by Customer

2.4 Test Setup Diagram

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.45	-
3	DATA cable	No	0.1	-
4	RF cable	No	0.2	-
5	RF cable	No	0.2	-
6	RF cable	No	0.2	-
7	RF cable	No	0.2	-

3 Transmitter Test Result

3.1 Maximum Conducted Output Power

3.1.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☐ For the 5.15-5.25 GHz band:	
	▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 23 dBi, then P_{Out} = 30 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☐ For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).	
☒ For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).	
☒ For the 5.725-5.85 GHz band:	
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed 1 W.
P_{Out} = maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

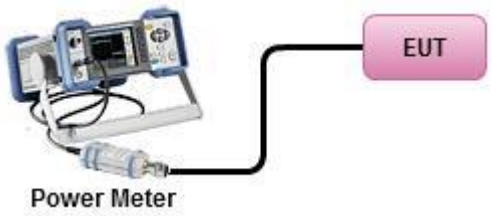
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Duty cycle ≥ 98%
	☐ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle < 98%
	☐ Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☒ Refer as KDB 789033, clause E Method PM (using an RF average 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]) $EIRP_{total} = P_{total} + DG$

3.1.4 Test Setup

RF Output Power (Power Meter)


3.1.5 Test Result of Maximum Conducted Output Power

Refer as Appendix A

3.2 Unwanted Emissions

3.2.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz 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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

Note 1: 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).

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

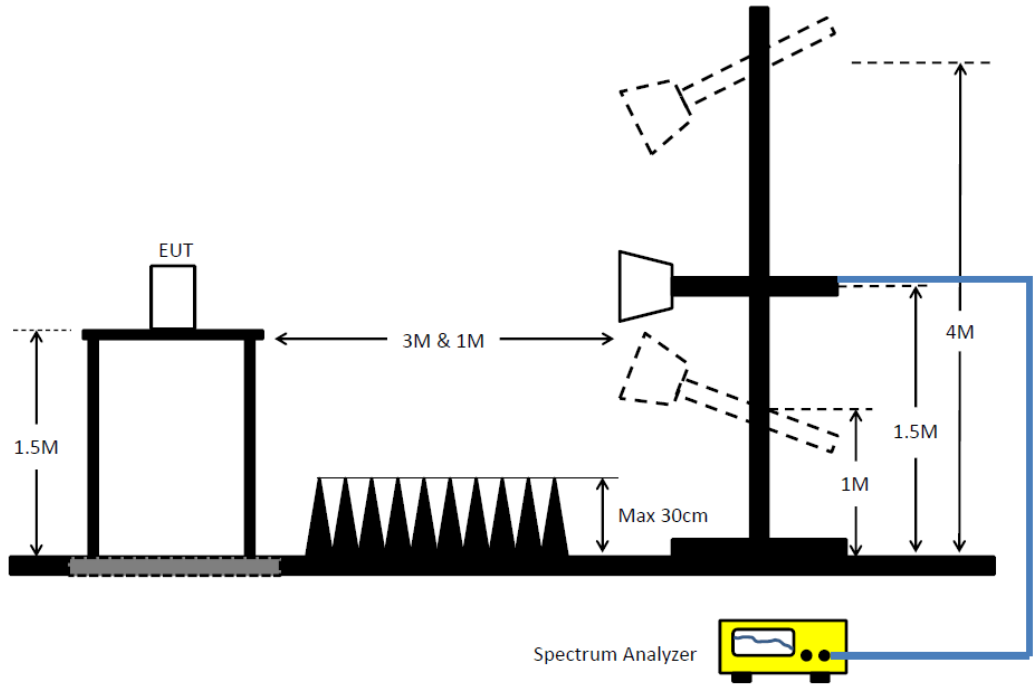
Test Method
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
▪ For the transmitter unwanted emissions shall be measured using following options below:
▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
☒ Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
☒ Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
▪ For radiated measurement.
▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
▪ The any unwanted emissions level shall not exceed the fundamental emission level.
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
▪ 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.

3.2.4 Measurement Results Calculation

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

3.2.5 Test Setup

Above 1GHz



3.2.6 Transmitter Unwanted Emissions (Below 30MHz)

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

3.2.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix B

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	9kHz~40GHz	02/Feb/2024	01/Feb/2025
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-15407_NII	Sporton	V5.11.22	N/A	N/A	N/A	N/A

Instrument for Radiated Test

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
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	01/Nov/2024	31/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 5+8m	HUBER+SUHNER	SUOFLEX_104	03CH03-cable-03	1GHz~40GHz	20/Feb/2024	19/Feb/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_NII	Sporton	V5.11.20	NA	NA	NA	NA

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.47-5.725GHz	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_4TX	23.59	0.22856	27.58	0.57280
5.725-5.85GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	29.57	0.90573	33.56	2.26986

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	3.99	23.70	23.51	23.39	23.58	29.57	30.00	33.56	Inf
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	3.99	18.12	17.54	17.68	16.85	23.59	23.98	27.58	Inf

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

Summary

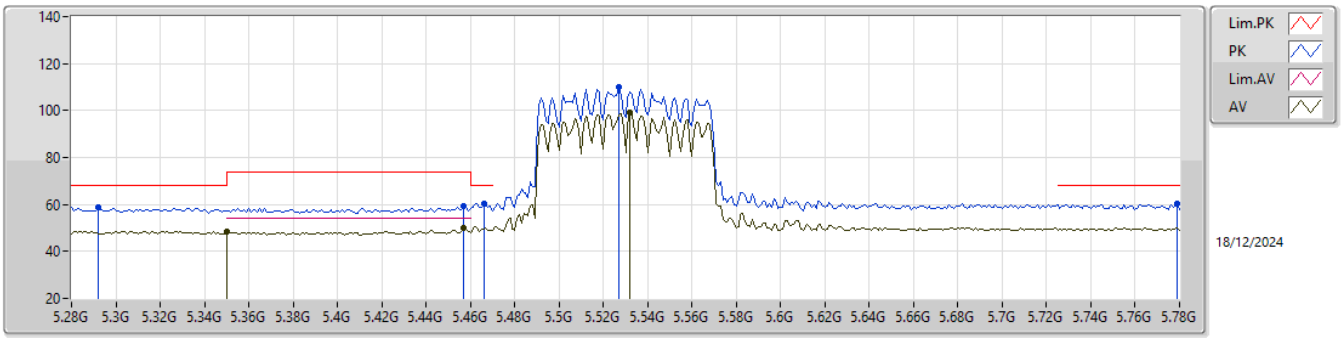
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_4TX	Pass	AV	5.457G	50.11	54.00	-3.89	3	Vertical	316	1.69
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	Pass	AV	5.445G	45.77	54.00	-8.23	3	Vertical	44	2.01

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)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	AV	5.445G	45.77	54.00	-8.23	3	Vertical	44	2.01
5745MHz	Pass	AV	5.7462G	106.84	Inf	-Inf	3	Vertical	44	2.01
5745MHz	Pass	PK	5.6262G	59.55	68.20	-8.65	3	Vertical	44	2.01
5745MHz	Pass	PK	5.7462G	118.89	Inf	-Inf	3	Vertical	44	2.01
5745MHz	Pass	PK	5.9262G	59.22	68.20	-8.98	3	Vertical	44	2.01
5745MHz	Pass	AV	5.4546G	45.61	54.00	-8.39	3	Horizontal	193	1.52
5745MHz	Pass	AV	5.7438G	97.08	Inf	-Inf	3	Horizontal	193	1.52
5745MHz	Pass	PK	5.5374G	58.42	68.20	-9.78	3	Horizontal	193	1.52
5745MHz	Pass	PK	5.7438G	108.29	Inf	-Inf	3	Horizontal	193	1.52
5745MHz	Pass	PK	5.9346G	59.33	68.20	-8.87	3	Horizontal	193	1.52
5745MHz	Pass	AV	11.49184G	42.43	54.00	-11.57	3	Vertical	271	1.21
5745MHz	Pass	PK	11.47176G	56.28	74.00	-17.72	3	Vertical	271	1.21
5745MHz	Pass	AV	11.50096G	42.37	54.00	-11.63	3	Horizontal	43	1.14
5745MHz	Pass	PK	11.47456G	54.91	74.00	-19.09	3	Horizontal	43	1.14
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	AV	5.35G	48.21	54.00	-5.79	3	Vertical	316	1.69
5530MHz	Pass	AV	5.457G	50.11	54.00	-3.89	3	Vertical	316	1.69
5530MHz	Pass	AV	5.532G	99.32	Inf	-Inf	3	Vertical	316	1.69
5530MHz	Pass	PK	5.292G	58.64	68.20	-9.56	3	Vertical	316	1.69
5530MHz	Pass	PK	5.457G	59.15	74.00	-14.85	3	Vertical	316	1.69
5530MHz	Pass	PK	5.466G	60.28	68.20	-7.92	3	Vertical	316	1.69
5530MHz	Pass	PK	5.527G	110.05	Inf	-Inf	3	Vertical	316	1.69
5530MHz	Pass	PK	5.779G	60.41	68.20	-7.79	3	Vertical	316	1.69
5530MHz	Pass	AV	5.35G	47.35	54.00	-6.65	3	Horizontal	130	1.50
5530MHz	Pass	AV	5.369G	48.78	54.00	-5.22	3	Horizontal	130	1.50
5530MHz	Pass	AV	5.515G	91.53	Inf	-Inf	3	Horizontal	130	1.50
5530MHz	Pass	PK	5.343G	58.89	68.20	-9.31	3	Horizontal	130	1.50
5530MHz	Pass	PK	5.4G	58.75	74.00	-15.25	3	Horizontal	130	1.50
5530MHz	Pass	PK	5.47G	58.56	68.20	-9.64	3	Horizontal	130	1.50
5530MHz	Pass	PK	5.514G	101.16	Inf	-Inf	3	Horizontal	130	1.50
5530MHz	Pass	PK	5.726G	59.65	68.20	-8.55	3	Horizontal	130	1.50
5530MHz	Pass	AV	11.06302G	43.18	54.00	-10.82	3	Vertical	9	1.50
5530MHz	Pass	PK	11.06102G	54.27	74.00	-19.73	3	Vertical	9	1.50
5530MHz	Pass	AV	11.05948G	43.52	54.00	-10.48	3	Horizontal	50	1.50
5530MHz	Pass	PK	11.06132G	54.69	74.00	-19.31	3	Horizontal	50	1.50

5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_4TX

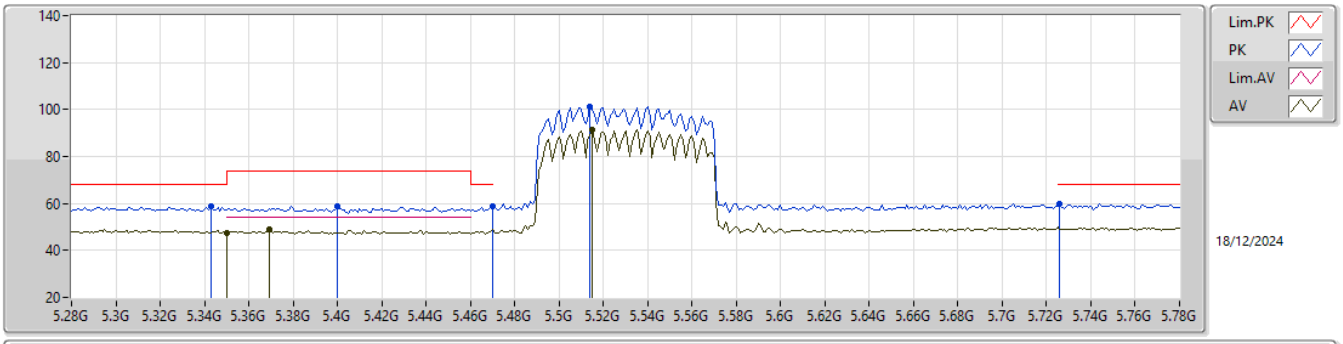
5530MHz_TX



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	5.35G	48.21	54.00	-5.79	7.12	3	Vertical	316	1.69	41.09	32.90	8.21	33.99
AV	5.457G	50.11	54.00	-3.89	7.12	3	Vertical	316	1.69	42.99	32.83	8.27	33.98
AV	5.532G	99.32	Inf	-Inf	7.26	3	Vertical	316	1.69	92.06	32.94	8.31	33.99
PK	5.292G	58.64	68.20	-9.56	7.11	3	Vertical	316	1.69	51.53	32.92	8.18	33.99
PK	5.457G	59.15	74.00	-14.85	7.12	3	Vertical	316	1.69	52.03	32.83	8.27	33.98
PK	5.466G	60.28	68.20	-7.92	7.16	3	Vertical	316	1.69	53.12	32.86	8.28	33.98
PK	5.527G	110.05	Inf	-Inf	7.27	3	Vertical	316	1.69	102.78	32.95	8.31	33.99
PK	5.779G	60.41	68.20	-7.79	8.25	3	Vertical	316	1.69	52.16	33.82	8.53	34.10

5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_4TX

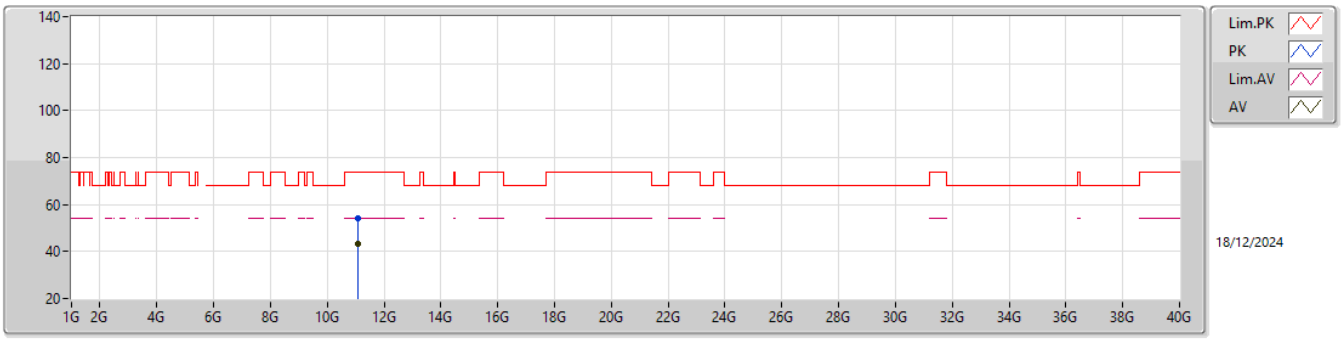
5530MHz_TX



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	5.35G	47.35	54.00	-6.65	7.12	3	Horizontal	130	1.50	40.23	32.90	8.21	33.99
AV	5.369G	48.78	54.00	-5.22	7.09	3	Horizontal	130	1.50	41.69	32.86	8.22	33.99
AV	5.515G	91.53	Inf	-Inf	7.28	3	Horizontal	130	1.50	84.25	32.97	8.30	33.99
PK	5.343G	58.89	68.20	-9.31	7.12	3	Horizontal	130	1.50	51.77	32.90	8.21	33.99
PK	5.4G	58.75	74.00	-15.25	7.05	3	Horizontal	130	1.50	51.70	32.80	8.24	33.99
PK	5.47G	58.56	68.20	-9.64	7.18	3	Horizontal	130	1.50	51.38	32.88	8.28	33.98
PK	5.514G	101.16	Inf	-Inf	7.28	3	Horizontal	130	1.50	93.88	32.97	8.30	33.99
PK	5.726G	59.65	68.20	-8.55	8.06	3	Horizontal	130	1.50	51.59	33.65	8.48	34.07

5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_4TX

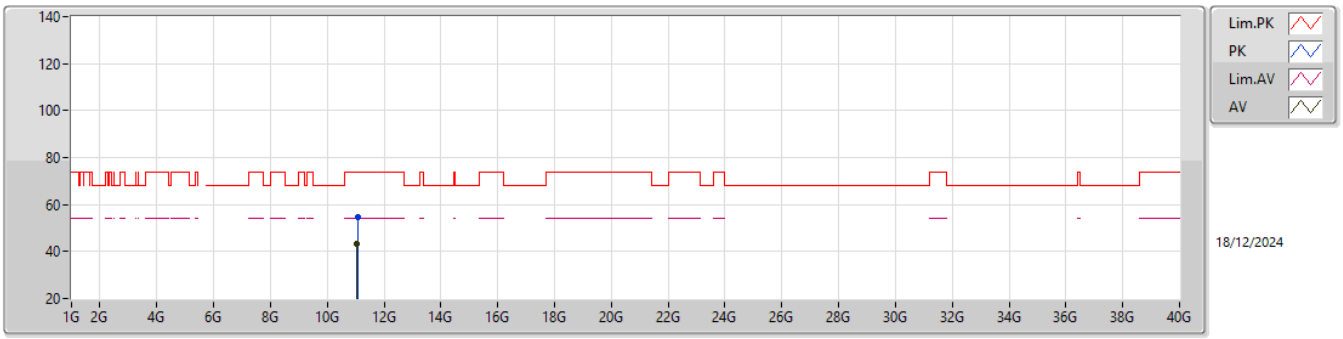
5530MHz_TX



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	11.06302G	43.18	54.00	-10.82	16.02	3	Vertical	9	1.50	27.16	38.70	11.63	34.31
PK	11.06102G	54.27	74.00	-19.73	16.02	3	Vertical	9	1.50	38.25	38.70	11.63	34.31

5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_4TX

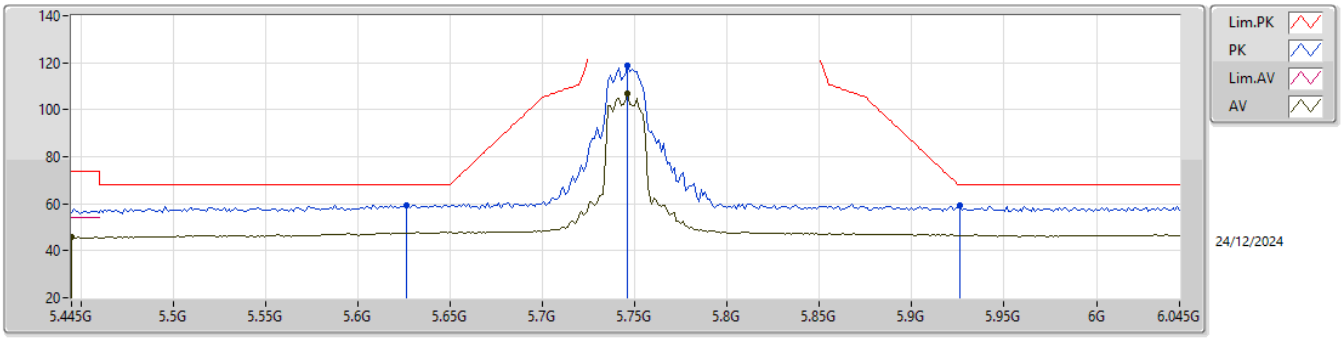
5530MHz_TX



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	11.05948G	43.52	54.00	-10.48	16.02	3	Horizontal	50	1.50	27.50	38.70	11.63	34.31
PK	11.06132G	54.69	74.00	-19.31	16.02	3	Horizontal	50	1.50	38.67	38.70	11.63	34.31

5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

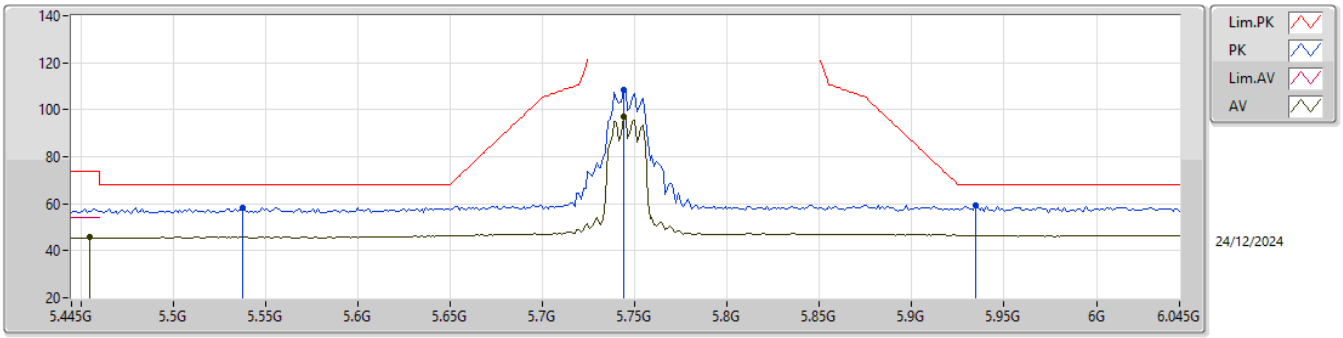
5745MHz_TX



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	5.445G	45.77	54.00	-8.23	7.08	3	Vertical	44	2.01	38.69	32.80	8.26	33.98
AV	5.7462G	106.84	Inf	-Inf	8.11	3	Vertical	44	2.01	98.73	33.69	8.50	34.08
PK	5.6262G	59.55	68.20	-8.65	7.41	3	Vertical	44	2.01	52.14	33.06	8.38	34.03
PK	5.7462G	118.89	Inf	-Inf	8.11	3	Vertical	44	2.01	110.78	33.69	8.50	34.08
PK	5.9262G	59.22	68.20	-8.98	8.60	3	Vertical	44	2.01	50.62	34.15	8.61	34.16

5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

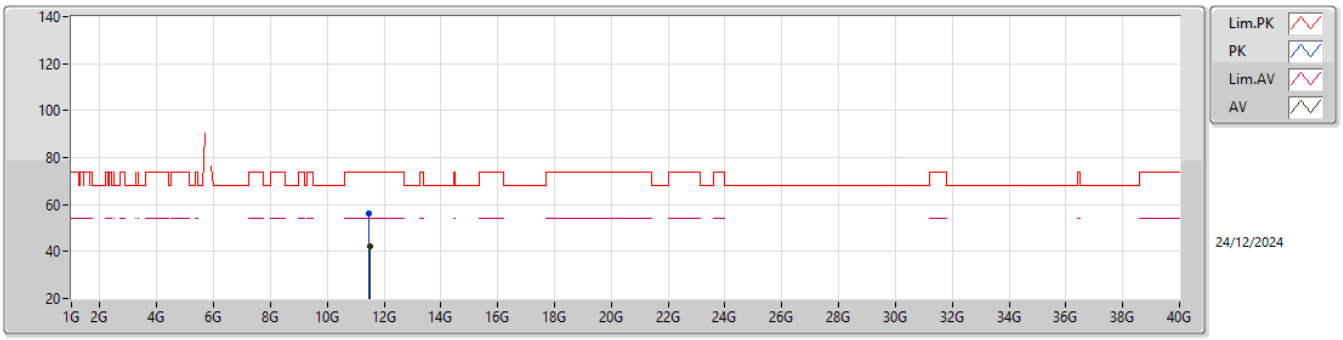
5745MHz_TX



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	5.4546G	45.61	54.00	-8.39	7.11	3	Horizontal	193	1.52	38.50	32.82	8.27	33.98
AV	5.7438G	97.08	Inf	-Inf	8.10	3	Horizontal	193	1.52	88.98	33.69	8.49	34.08
PK	5.5374G	58.42	68.20	-9.78	7.25	3	Horizontal	193	1.52	51.17	32.93	8.32	34.00
PK	5.7438G	108.29	Inf	-Inf	8.10	3	Horizontal	193	1.52	100.19	33.69	8.49	34.08
PK	5.9346G	59.33	68.20	-8.87	8.58	3	Horizontal	193	1.52	50.75	34.13	8.61	34.16

5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

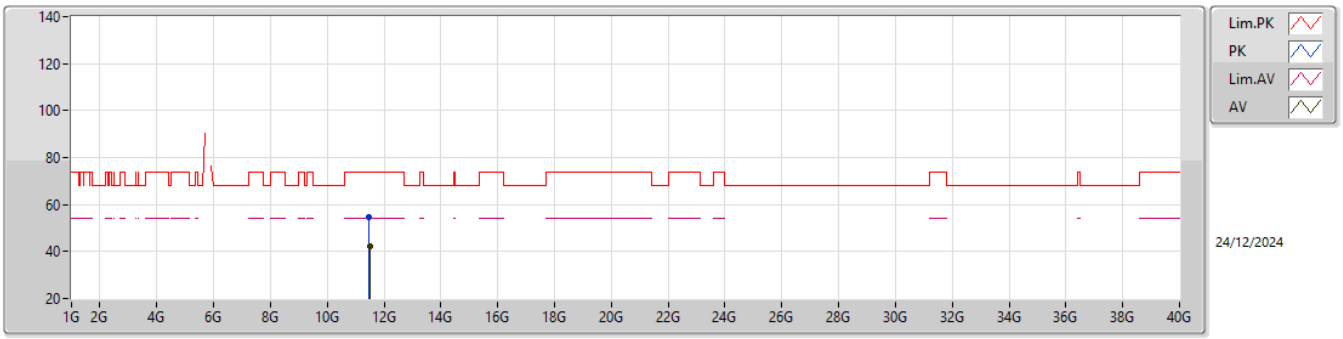
5745MHz_TX



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	11.49184G	42.43	54.00	-11.57	16.74	3	Vertical	271	1.21	25.69	39.00	11.83	34.09
PK	11.47176G	56.28	74.00	-17.72	16.72	3	Vertical	271	1.21	39.56	39.00	11.82	34.10

5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

5745MHz_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	11.50096G	42.37	54.00	-11.63	16.74	3	Horizontal	43	1.14	25.63	39.00	11.83	34.09
PK	11.47456G	54.91	74.00	-19.09	16.72	3	Horizontal	43	1.14	38.19	39.00	11.82	34.10