



RADIO TEST REPORT

FCC ID : TLZ-AM510

Equipment : IEEE 802.11 1X1 a/b/g/n Wireless LAN + Bluetooth

5.1 Combo 12 x 12 LGA Module

Brand Name : AzureWave

Model Name : AW-AM510 ; AW-AM510-I

Applicant : AzureWave Technologies, Inc.

8F., No.94, Baozhong Rd., Xindian Dist., New

Taipei City, Taiwan 231

Manufacturer : AzureWave Technologies, Inc.

8F., No.94, Baozhong Rd., Xindian Dist., New

Taipei City, Taiwan 231

Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 14, 2024, and testing was started from Jan. 21, 2025 and completed on Jan. 23, 2025. We, Sporton International Inc. Hsinchu 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. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

TEL: 886-3-656-9065 FAX: 886-3-656-9085

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Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of Emissions in Restricted Frequency Bands

Appendix C. Test Photos

Photographs of EUT v01

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History of this test report

Report No. : FR131001-03AA

Report No.	Version	Description	Issued Date
FR131001-03AA	01	Initial issue of report	Feb. 05, 2025

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Summary of Test Result

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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(d)	Emissions in Restricted Frequency Bands	PASS	-

Conformity Assessment Condition:

- 1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- 2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Sophia Shiung

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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]

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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.

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1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	Molex	1461531050	Dipole	I-PEX	Note 1
2	1	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	Note 1
3	1	LYNwave	5-PP005421	PIFA	I-PEX	Note 1
4	1	California Eastern Laboratories	Dual-Band Planar Antenna 0033	Split Ring	N/A	Note 1

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Note 1:

Ant.		Antenna Gain (dBi)	
Ant.	WLAN 2.4GHz	WLAN 5GHz	Bluetooth
1	3.20	4.25	3.20
2	2.98	5.16	2.98
3	2.90	4.30	2.90
4	1.00	4.40	1.00

Note 2: The above information was declared by manufacturer.

Note 3: <For WLAN 2.4GHz>

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

Only Port 1 can be used as transmitting/receiving.

<For WLAN 5GHz>

For IEEE 802.11a/n mode (1TX/1RX)

Only Port 1 can be used as transmitting/receiving.

<For Bluetooth> (1TX/1RX)

Only Port 1 can be used as transmitting/receiving.

1.1.3 Antenna Trace Layout

Type of Antenna Trace Layout	Antenna
1	Ant. 1~3
2	Ant. 4

Note: The above information was declared by manufacturer.

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1.1.4 EUT Operational Condition

EUT Power Type	Fro	From host system		
Beamforming Function	□ With beamforming □ Without beamforming			Without beamforming
Function	\boxtimes	Point-to-multipoint		Point-to-point
Test Software Version	DO	S [ver 6.1.7601]		

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Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

Model Name	Operating Temperature
AW-AM510	0~70℃
AW-AM510-I	-40~85°C

Note 1: From the above models, model: AW-AM510 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR131001AA. Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
 Add the Split Ring antenna with new type of antenna trace layout (Please refer to section 1.1.2 and 1.1.3, Ant. 4 for detailed information.) Add new type of antenna trace layout, type 2, only for Ant. 4. 	AC Power-line Conducted Emissions Emissions in Restricted Frequency Bands (The measurement above 1GHz was based on the Output Power result in the original report.)
3. Remove model "AW-AM510MA".4. Revise the information in Table for Multiple Listing (Please refer to section 1.1.5 for detailed information.)	After evaluation, it does not need to re-test.

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1.2 Applicable Standards

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

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- 47 CFR FCC Part 15.247
- ANSI C63.10-2013

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

- FCC KDB 558074 D01 v05r02
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information

Test Lab.: Sporton International Inc. Hsinchu Laboratory

Hsinchu ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

(TAF: 3787) TEL: 886-3-656-9065 FAX: 886-3-656-9085

Test site Designation No. TW3787 with FCC.

Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	03CH05-CB	Black Lu	22.6~23.2 / 59~63	Jan. 21, 2025~ Jan. 22, 2025
AC Conduction	CO01-CB	Tim Chen	21~22 / 58~59	Jan. 23, 2025

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
Conducted Emission (150kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%

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2 Test Configuration of EUT

2.1 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	EUT + Ant. 4 with antenna trace layout type 2_Bluetooth				
2	EUT + Ant. 4 with antenna trace layout type 2_WLAN 2.4GHz				
3	EUT + Ant. 4 with antenna trace layout type 2_WLAN 5GHz				
For operating, mode 2 is the	For operating, mode 2 is the worst case and it was recorded in this test report.				

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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.				
	CTX				
Operating Mode < 1GHz	EUT in Y axis" for WLAN 2.4GHz and Bluetooth, and "EUT in X axis" for WLAN GHz generated the worst cases at Radiated measurement above 1GHz. onsequently, the measurement will follow these same test modes.				
1	EUT in Y axis + Ant. 4 with antenna trace layout type 2_Bluetooth				
2	EUT in Y axis + Ant. 4 with antenna trace layout type 2_WLAN 2.4GHz				
3	EUT in X axis + Ant. 4 with antenna trace layout type 2_WLAN 5GHz				
For operating, mode 1 is the	ne worst case and it was recorded in this test report.				
	СТХ				
Operating Mode > 1GHz	The EUT was performed at X axis, Y axis and Z axis positions, and the worst case was found at Y axis. Thus, the measurement will follow this same test configuration.				
1	EUT in Y axis + Ant. 4 with antenna trace layout type 2				

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The Worst Case Mode for Following Conformance Tests					
Tests Item Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation					
Operating Mode					
1	Bluetooth (Ant. 1 with antenna trace layout type 1) + WLAN 2.4GHz (Ant. 1 with antenna trace layout type 1)				
2	Bluetooth (Ant. 1 with antenna trace layout type 1) + WLAN 5GHz (Ant. 2 with antenna trace layout type 1)				
Refer to Sporton Test Report No.: FA131001-03 for Co-location RF Exposure Evaluation.					

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2.2 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.3 Accessories

N/A

2.4 Support Equipment

For AC Conduction:

	Support Equipment								
No.	Equipment	Brand Name	Model Name	FCC ID					
Α	Console NB	DELL	E4300	N/A					
В	Earphone	SHYARO CHI	MIC-04	N/A					
С	Mouse	Logitech	M-U0026	N/A					
D	Fixure 1	AzureWave	9007 112	N/A					
Е	Fixure 2	AzureWave	2510 I1	N/A					
F	ANT Fixure CEL		Variant 1	N/A					
G	Device NB	DELL	E4300	N/A					

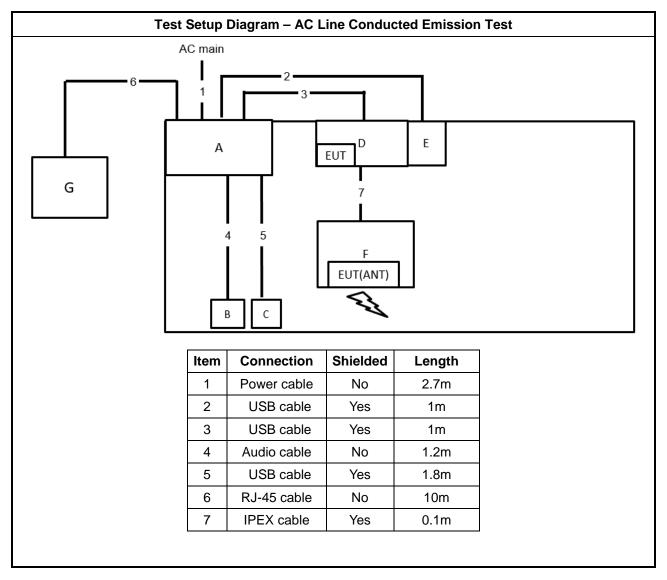
For Radiated:

	Support Equipment								
No.	Equipment	Model Name	FCC ID						
Α	Notebook	DELL	E4300	N/A					
В	Notebook	DELL	E4300	N/A					
С	Fixtrue 1	AzureWave	9007 112	N/A					
D	Fixtrue 2	AzureWave	2510 I1	N/A					
Е	ANT Fixture	CEL	Variant 1	N/A					

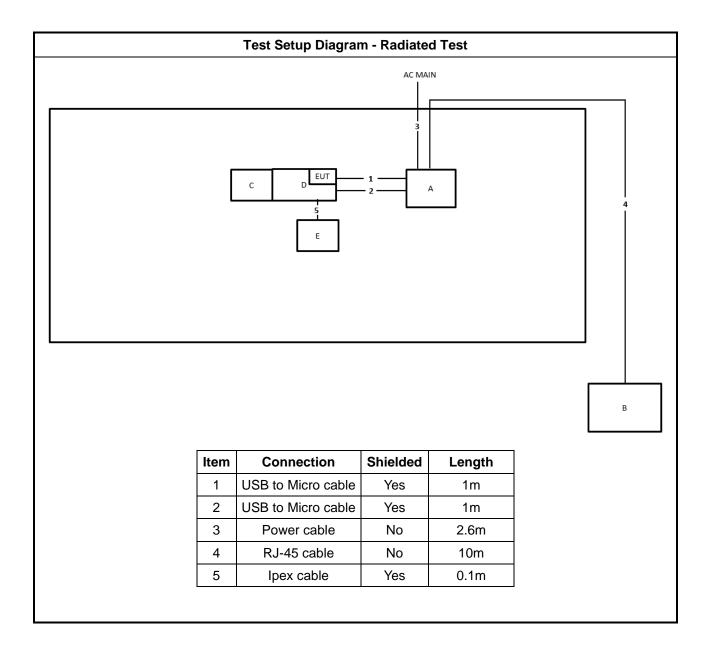
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2.5 Test Setup Diagram



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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 *						
56	46					
60	50					
	66 - 56 * 56					

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3.1.2 Measuring Instruments

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

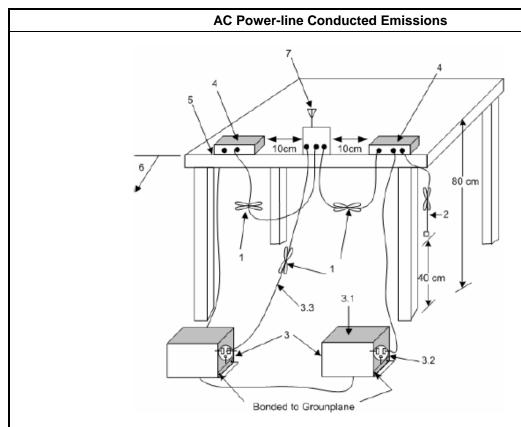
3.1.3 Test Procedures

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

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3.1.4 Test Setup



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.

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- 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 50 Ω 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.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

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3.2 Emissions in Restricted Frequency Bands

3.2.1 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 30~88 100		29	30				
		40					
88~216 150		43.5	3				
216~960 200 Above 960 500		46	3				
		54	3				

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- 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.

3.2.2 Measuring Instruments

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

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3.2.3 Test Procedures

		Test Method							
•	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].							
•		er as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency nnel and highest frequency channel within the allowed operating band.							
•	For	the transmitter unwanted emissions shall be measured using following options below:							
	•	Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.							
	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging cycle ≥98%).								
		Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).							
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).							
		Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.							
		Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.							
•	For	the transmitter band-edge emissions shall be measured using following options below:							
	•	Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, 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 FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.							
	•	Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).							
	•	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB							
	•	For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.							

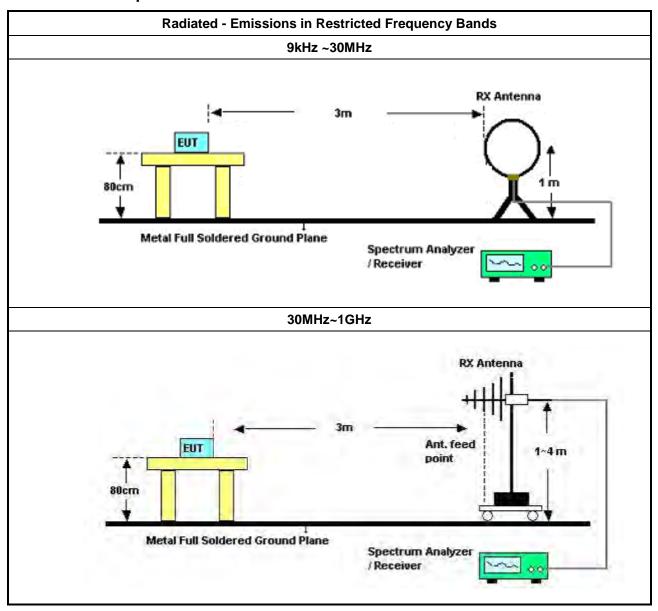
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3.2.4 Test Setup

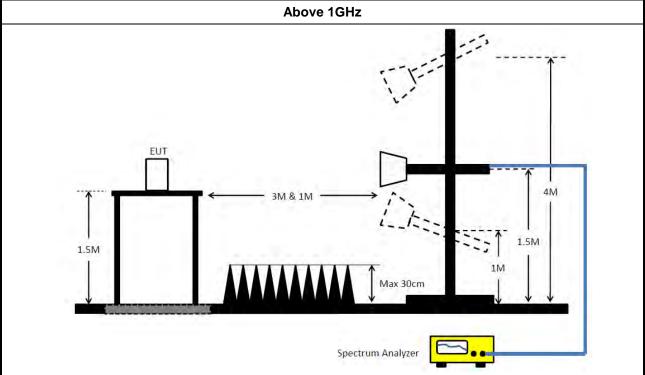


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Measurement Results Calculation 3.2.5

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.2.6 **Emissions in Restricted Frequency Bands (Below 30MHz)**

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix B

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4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 01, 2024	Feb. 28, 2025	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50- 16-2	04083	150kHz ~ 100MHz	Feb. 19, 2024	Feb. 18, 2025	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30MHz	Oct. 16, 2024	Oct. 15, 2025	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 01, 2024	Jul. 31, 2025	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Sep. 28, 2024	Sep. 27, 2025	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 23, 2024	Mar. 22, 2025	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH05-CB)
Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 02, 2024	May 01, 2025	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jun. 29, 2024	Jun. 28, 2025	Radiation (03CH05-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Apr. 17, 2024	Apr. 16, 2025	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 21, 2024	Oct. 20, 2025	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)

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Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE-15247 _DTS	V5.11.18	2.4GHz- 2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)

Report No.: FR131001-03AA

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

NCR means Non-Calibration required.

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 FAX: 886-3-656-9085
 Issued Date : Feb. 05, 2025



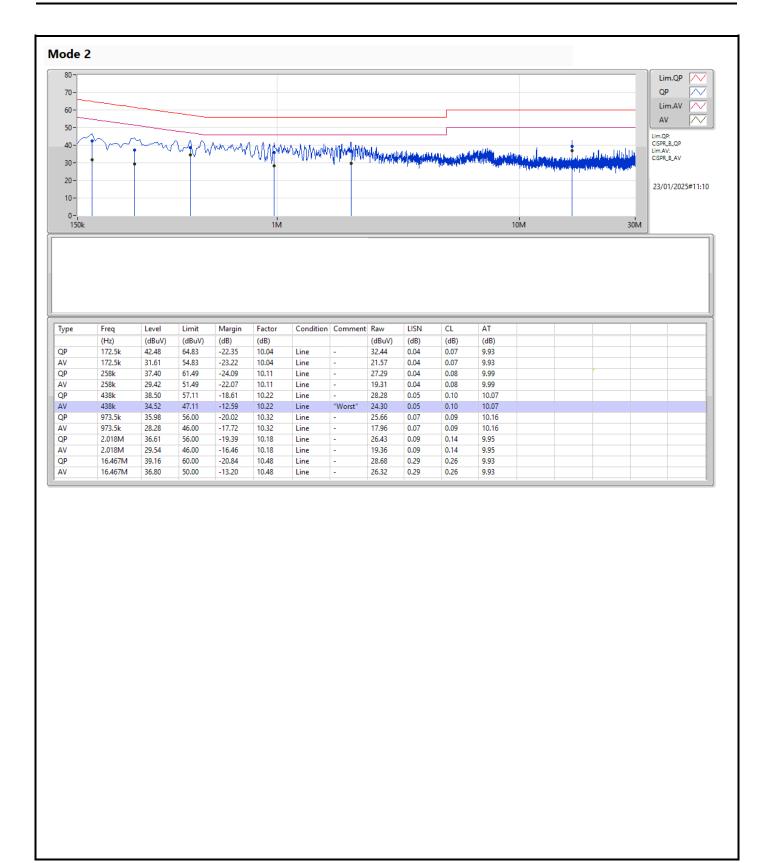
Conducted Emissions at Powerline

Appendix A

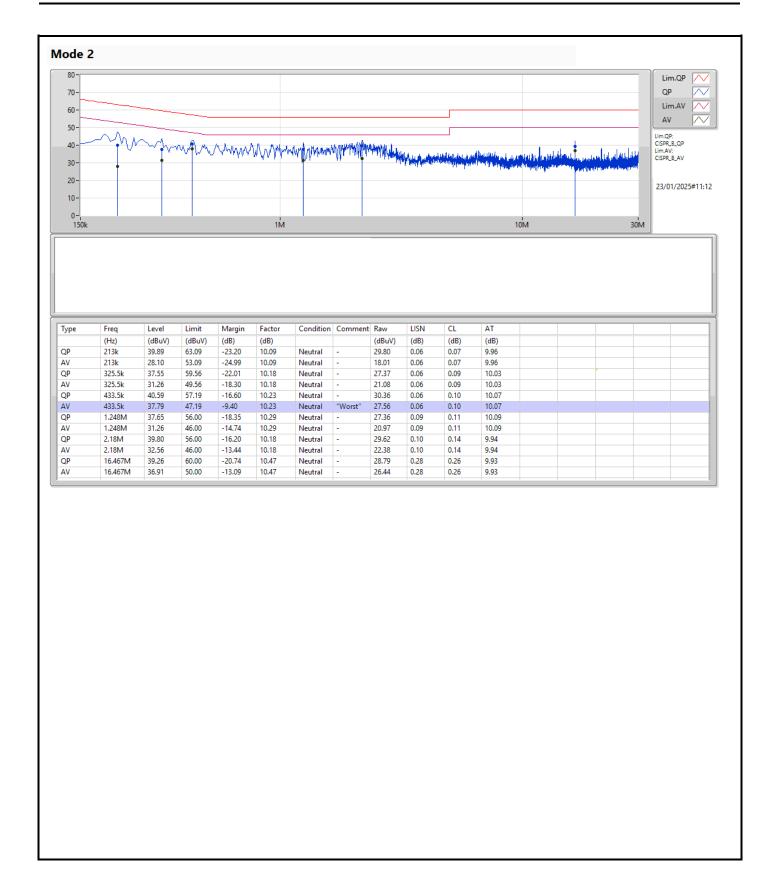
Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	
Mode 2	Pass	AV	433.5k	37.79	47.19	-9.40	Neutral	

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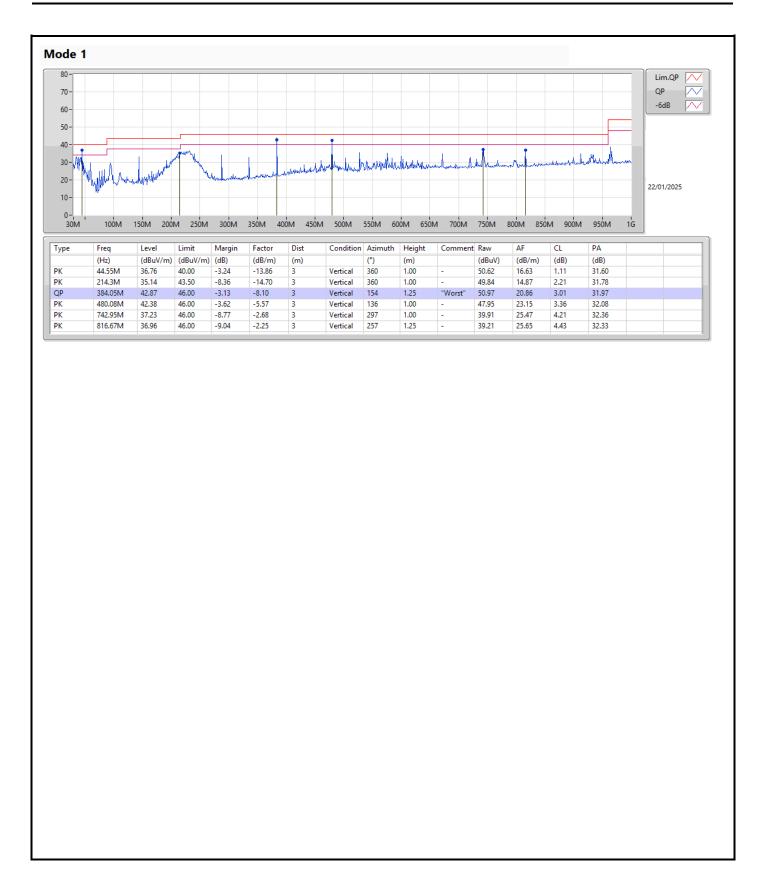
Radiated Emissions below 1GHz

Appendix B.1

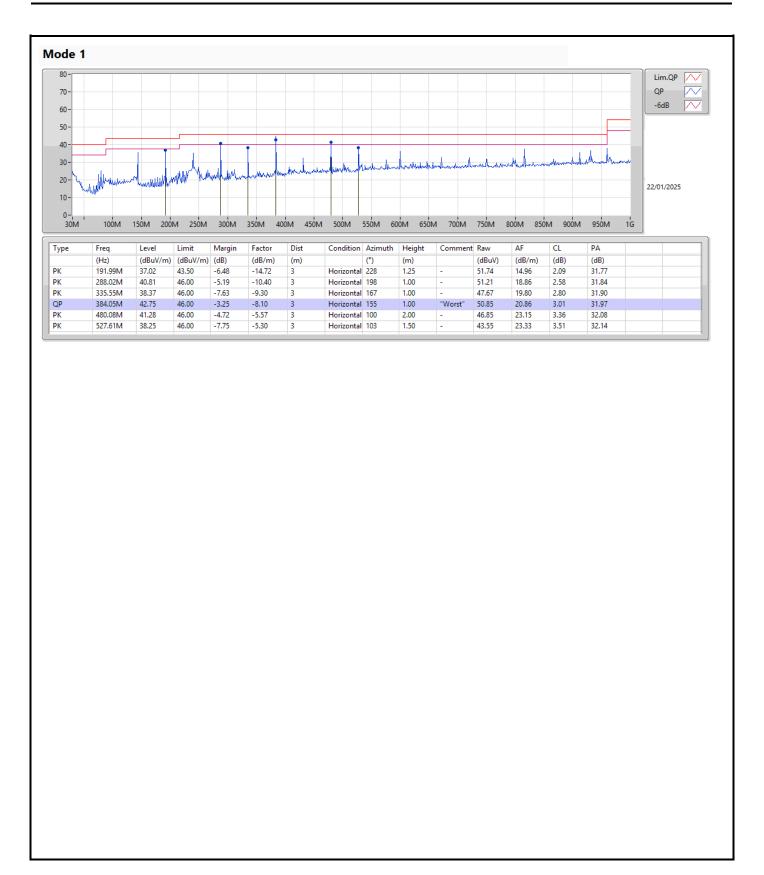
Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition	
Mode 1	Pass	QP	384.05M	42.87	46.00	-3.13	Vertical	

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RSE TX above 1GHz

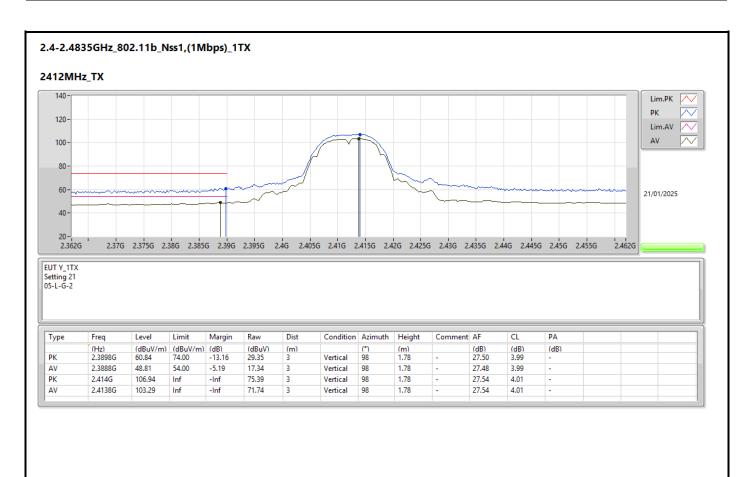
Appendix B.2

Summary

Mode	Result	Туре	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11n HT40_Nss1,(MCS0)_1TX	Pass	AV	2.3894G	52.93	54.00	-1.07	3	Horizontal	342.1	2.75	-

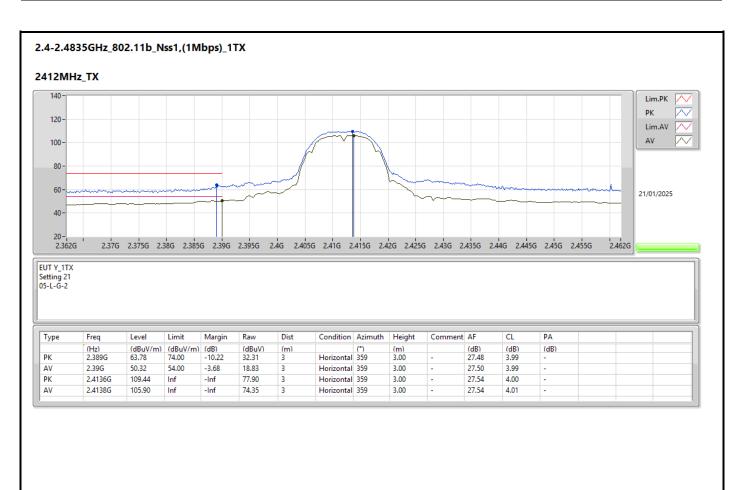
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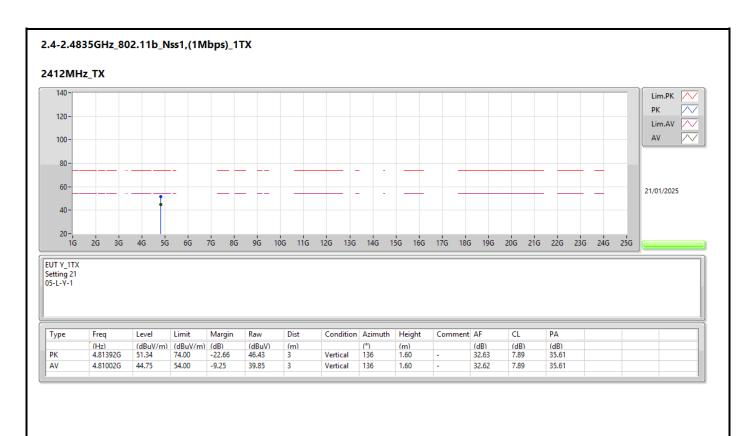
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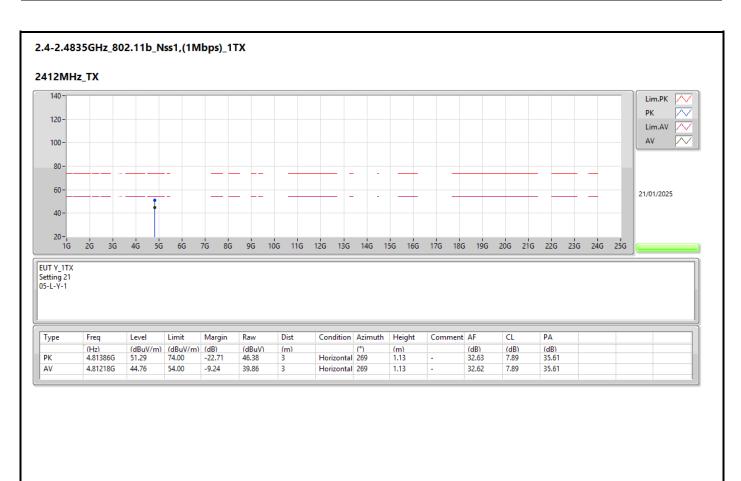
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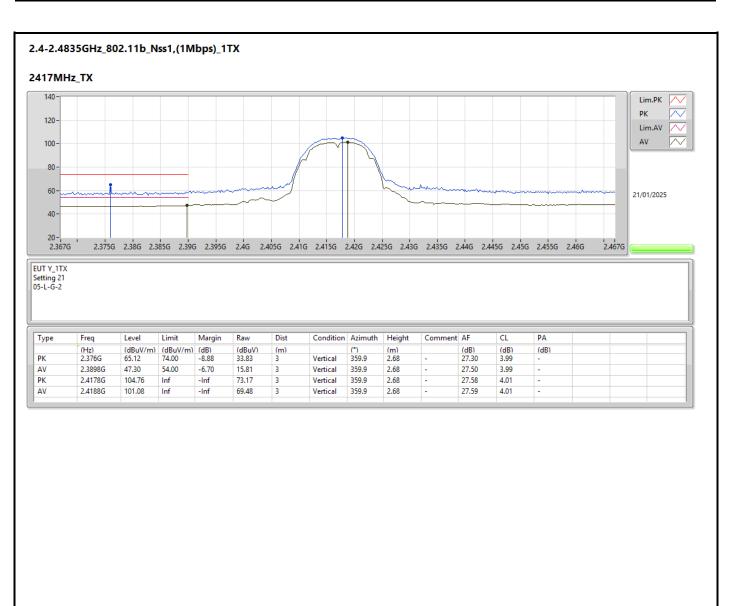
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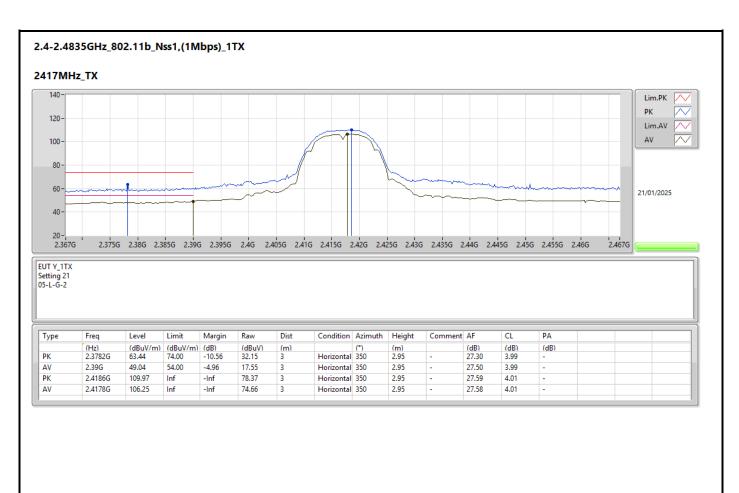
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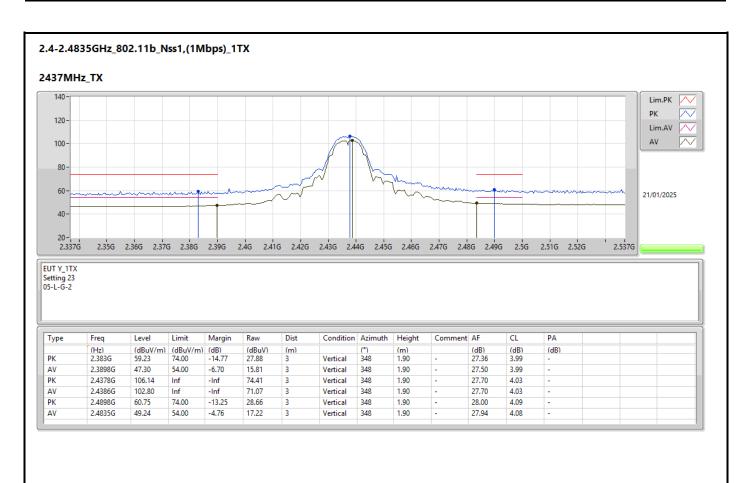
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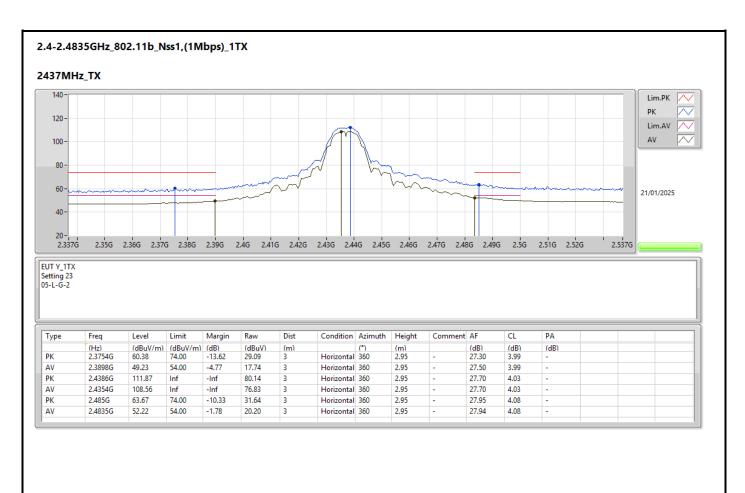
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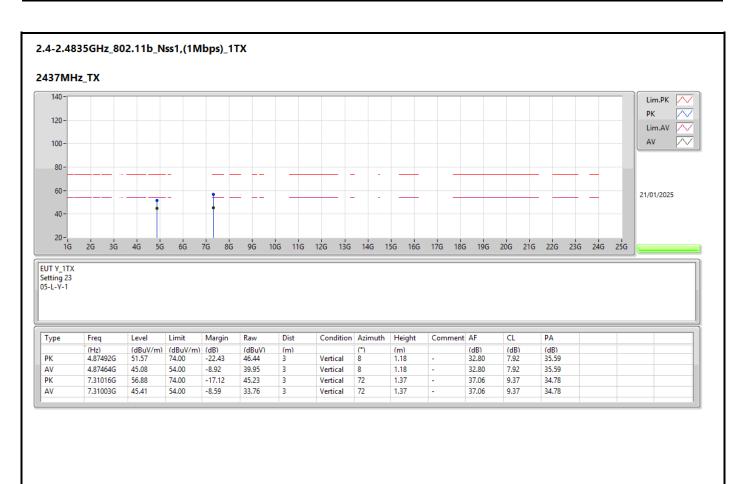
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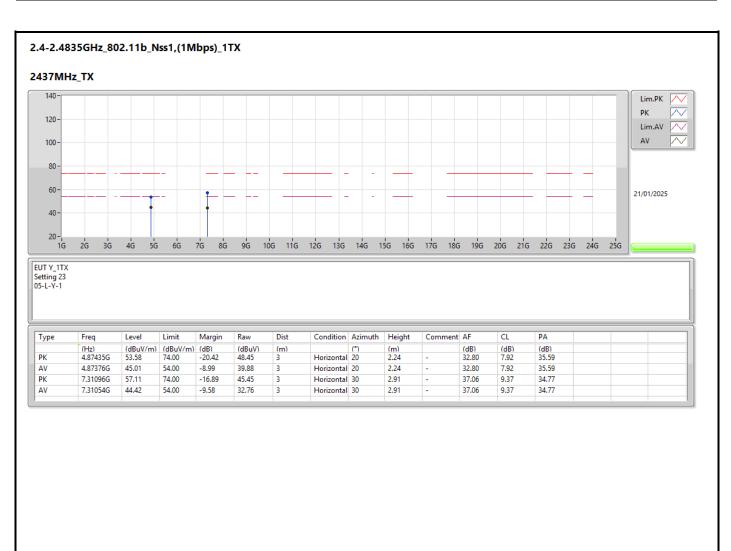
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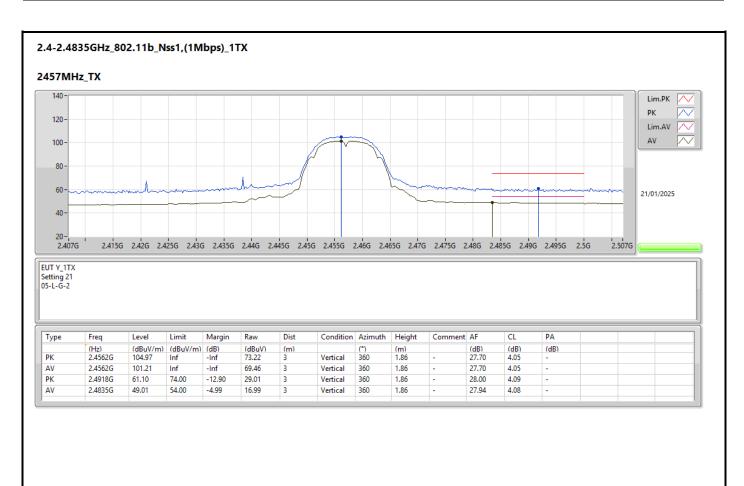
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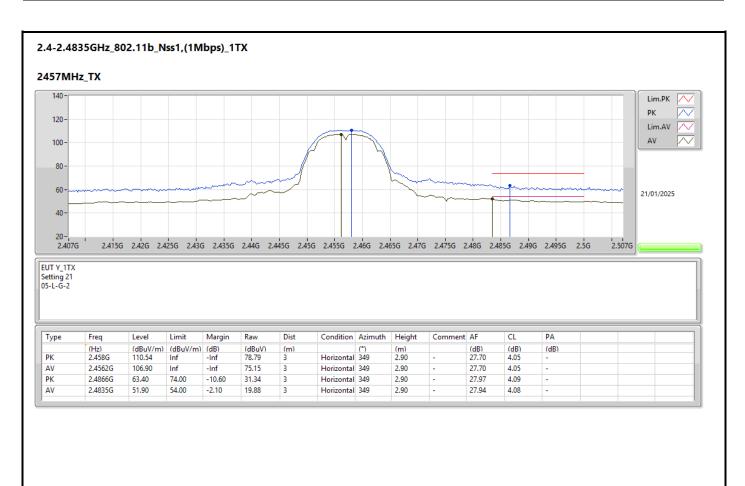
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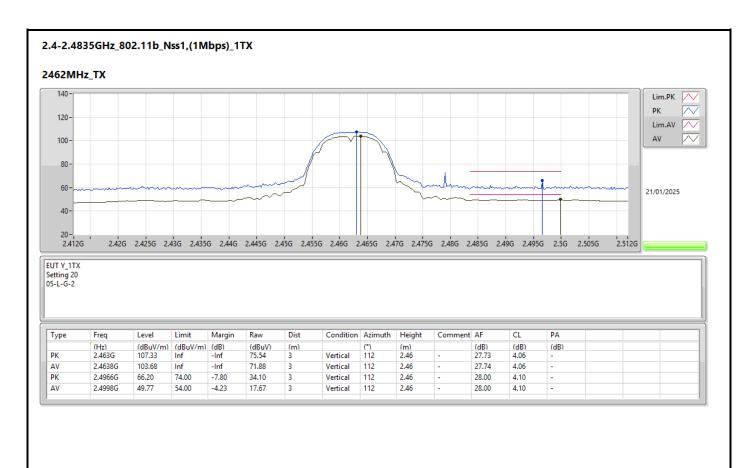
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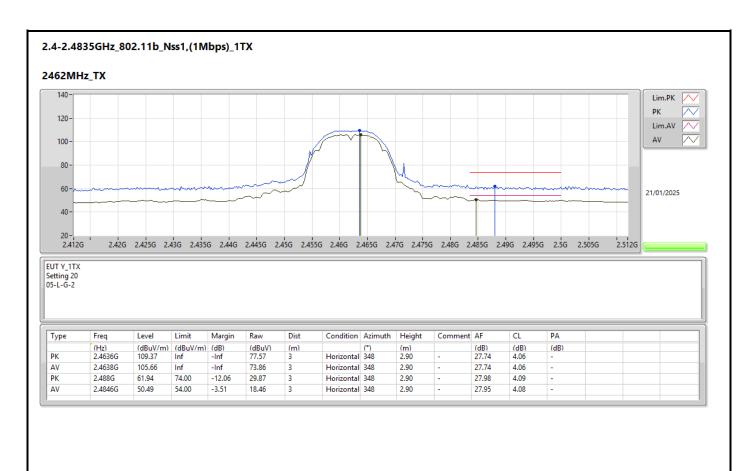
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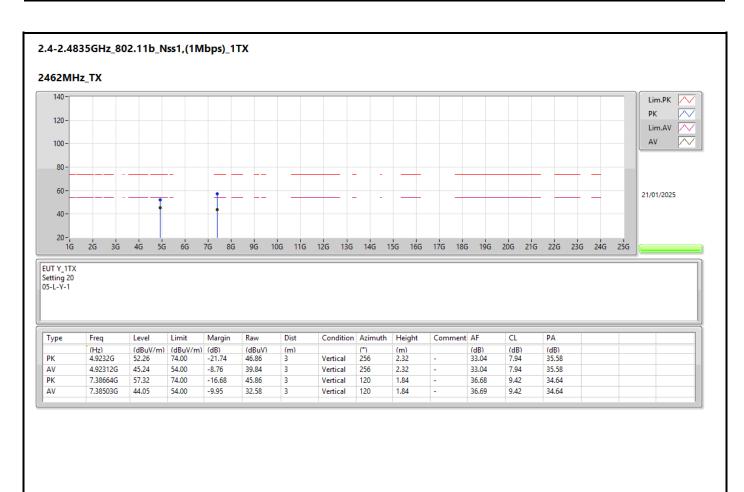
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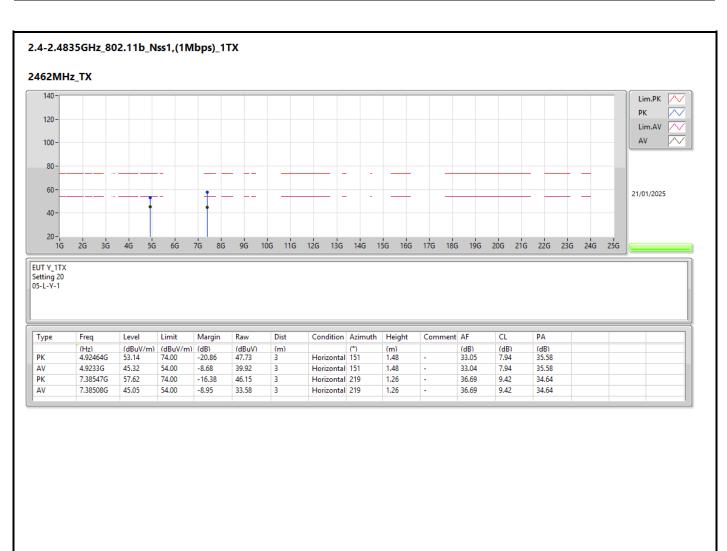
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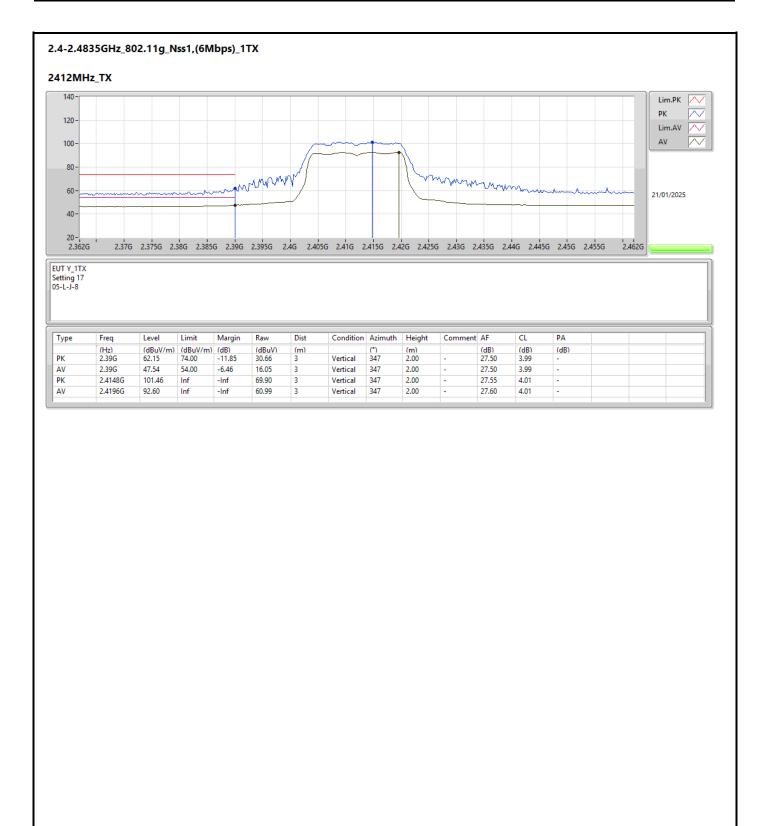
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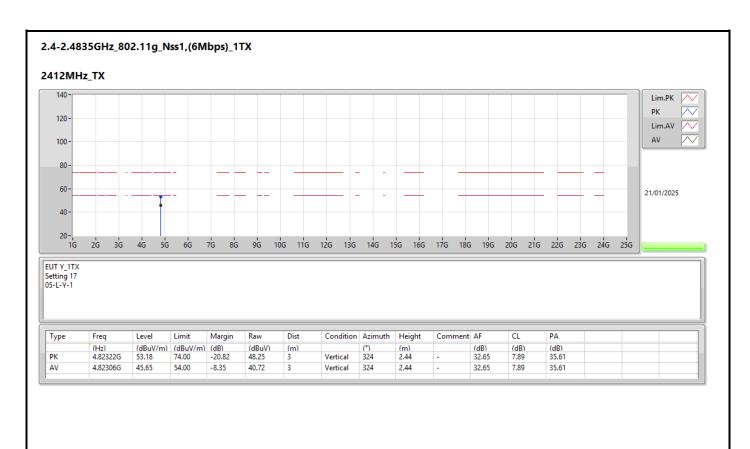
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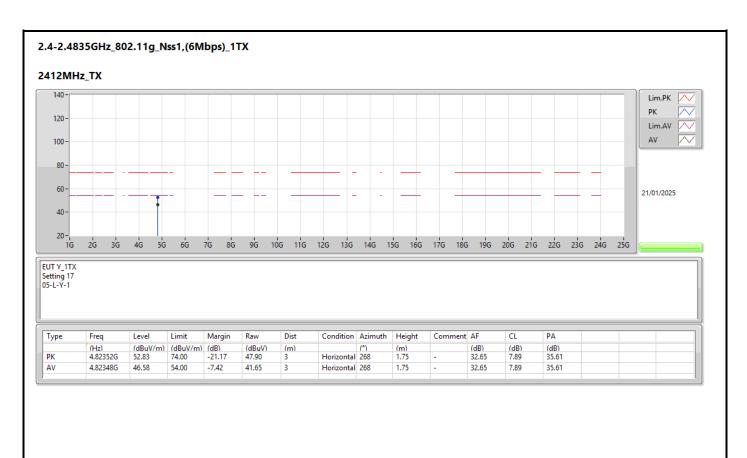
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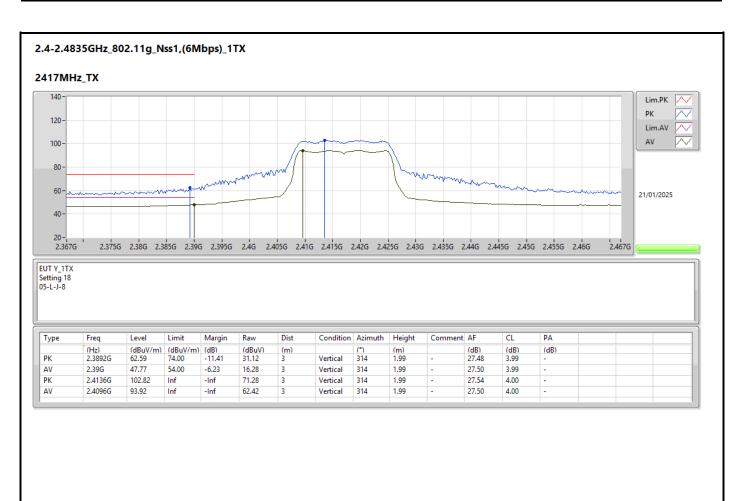
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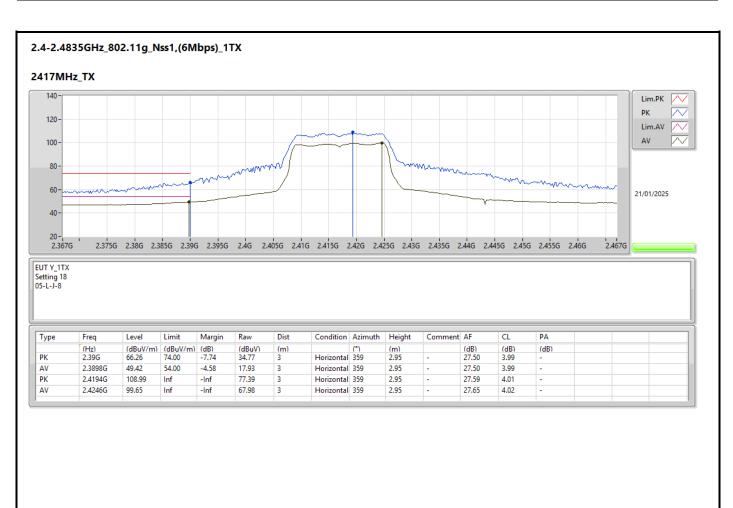
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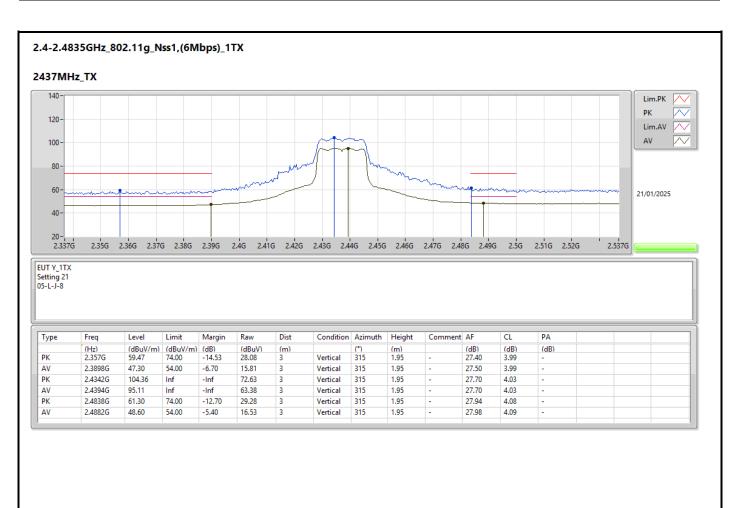
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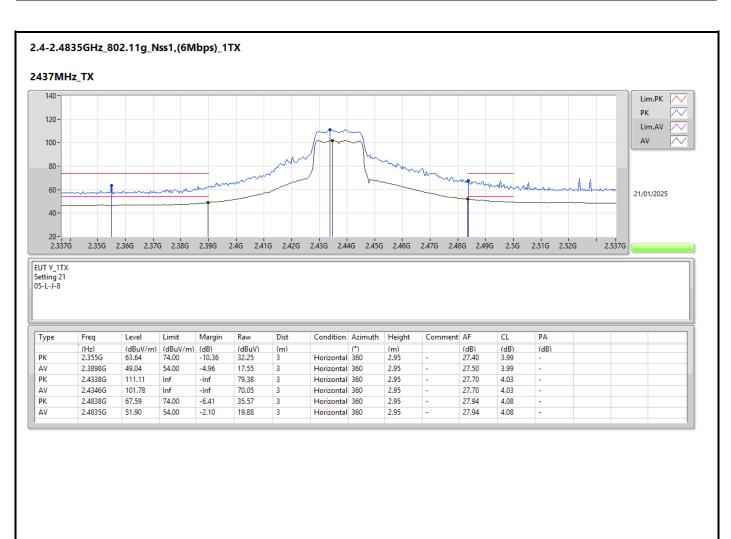
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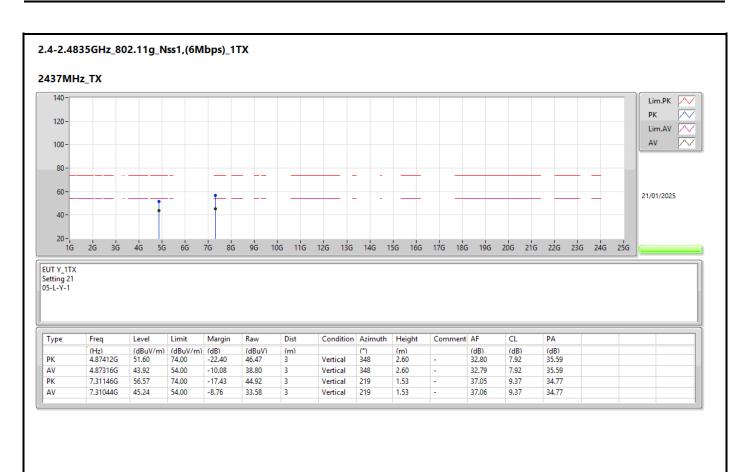
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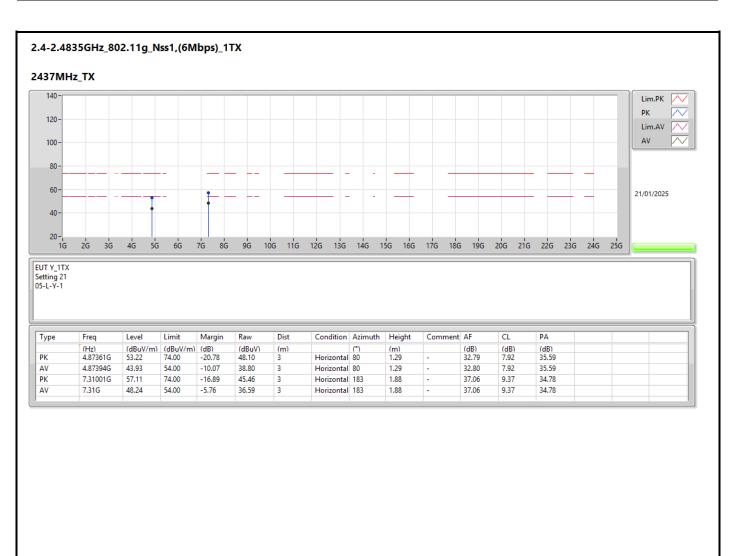
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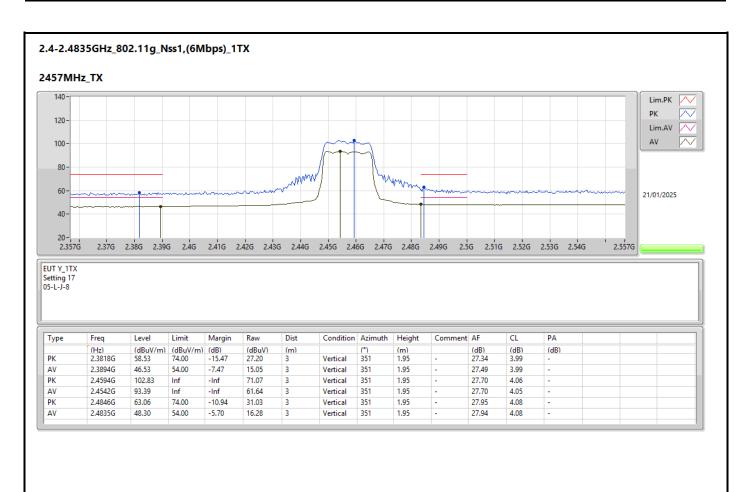
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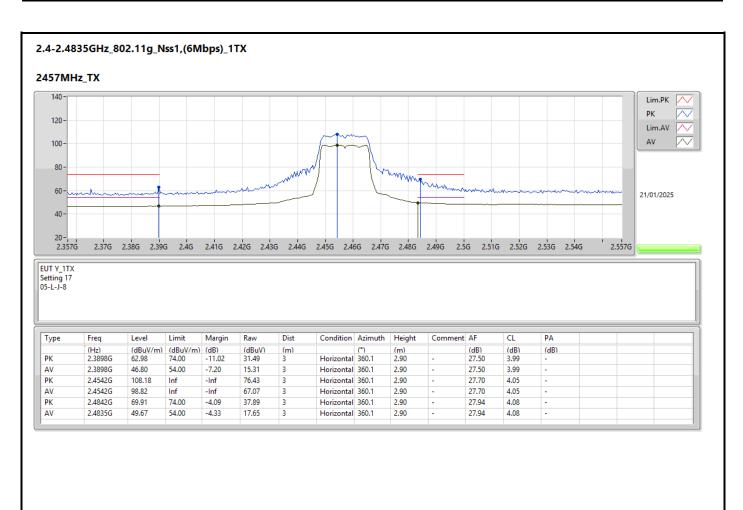
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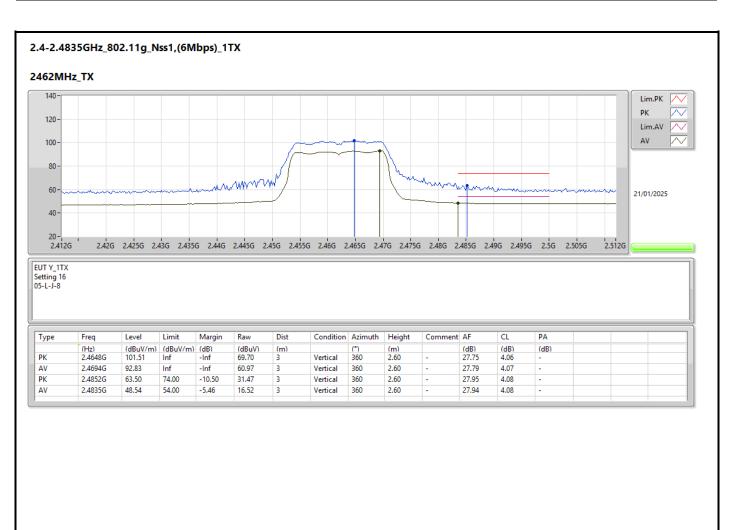
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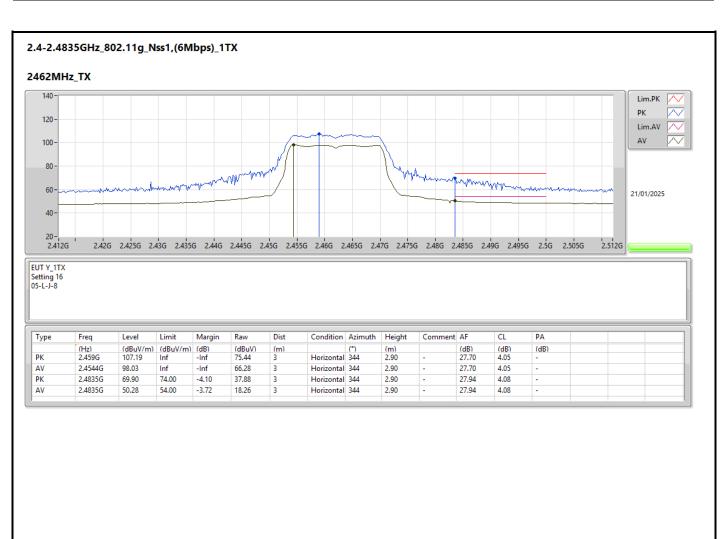
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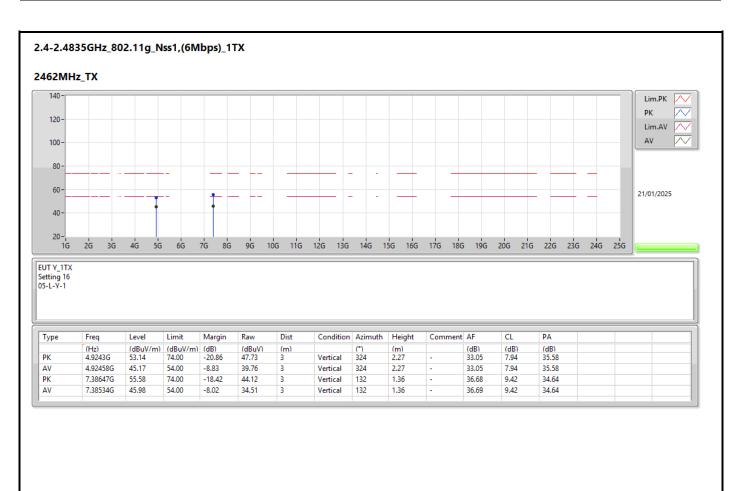
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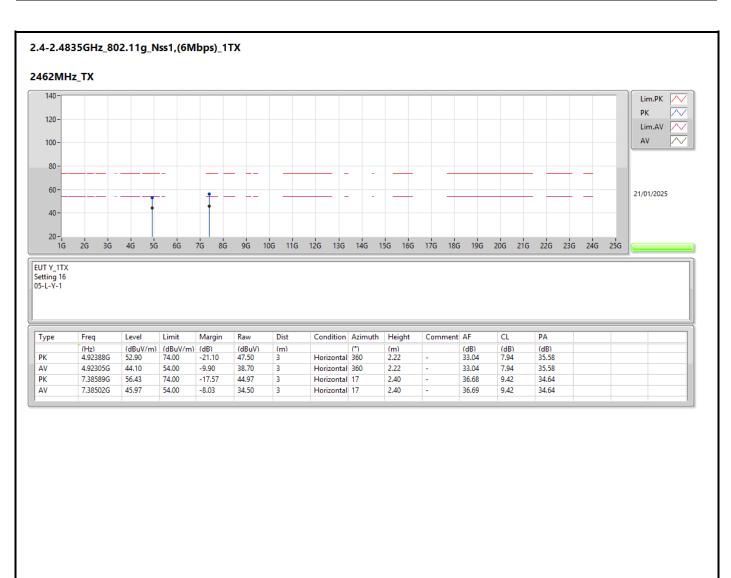
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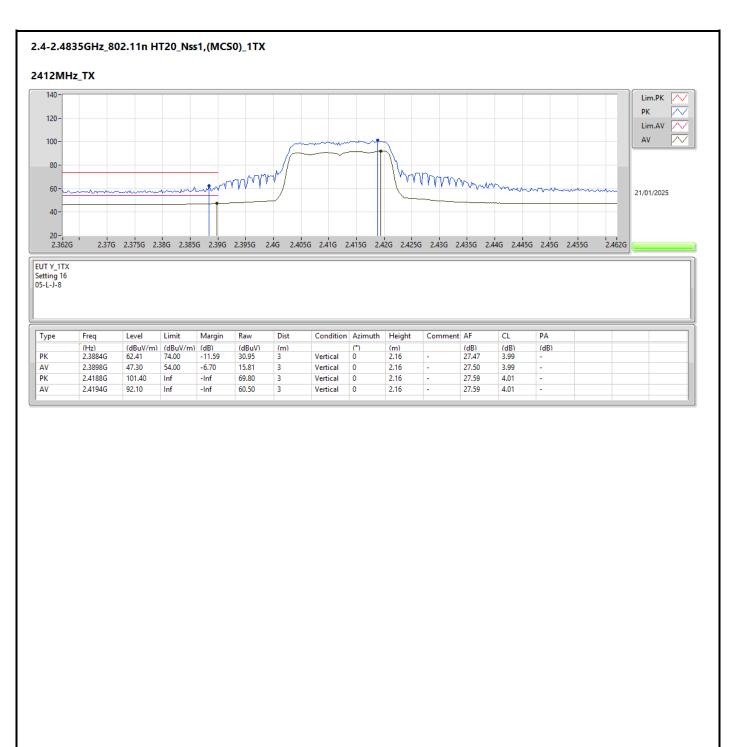
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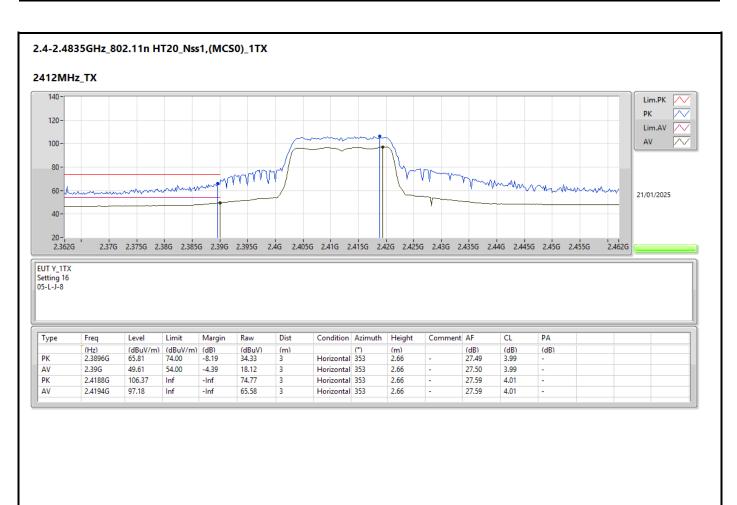
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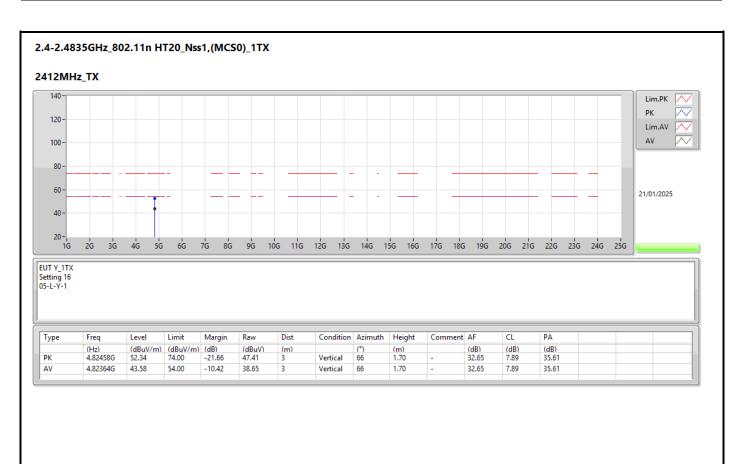
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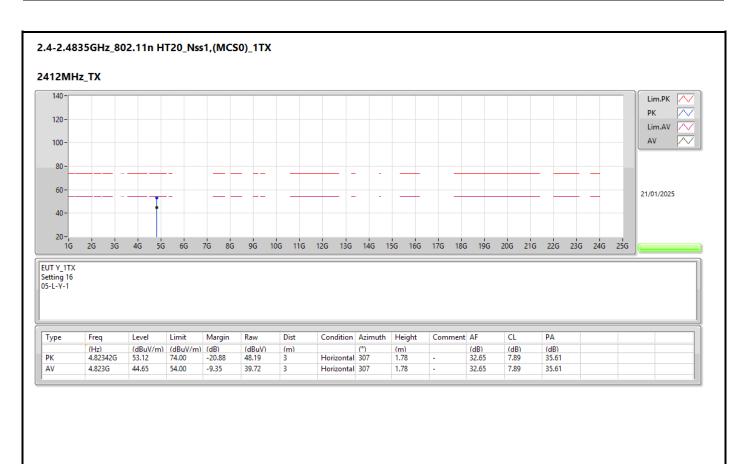
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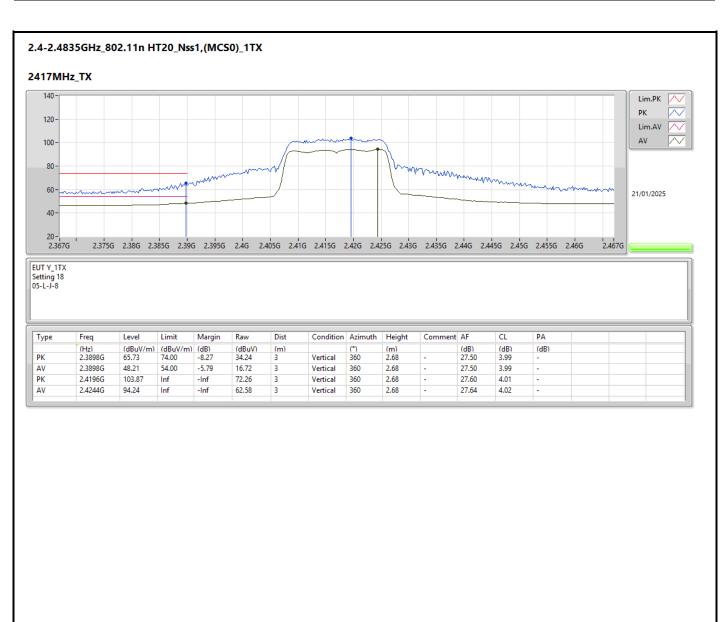
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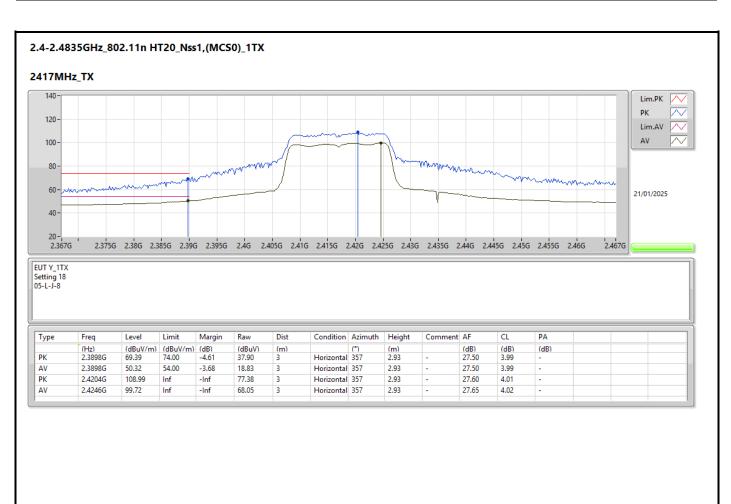
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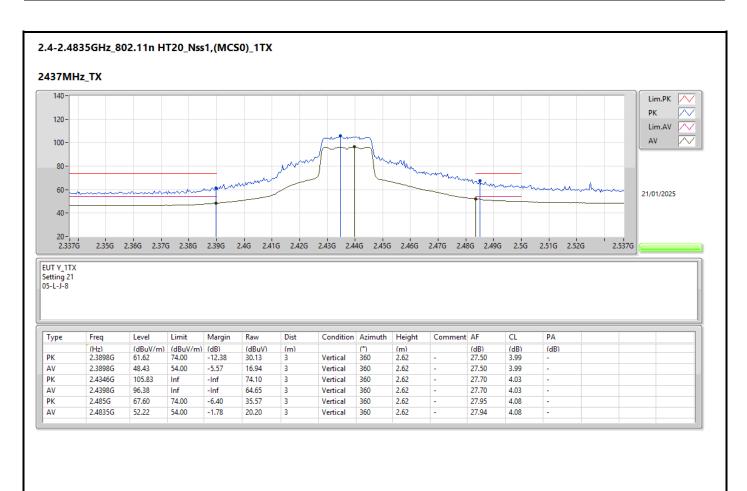
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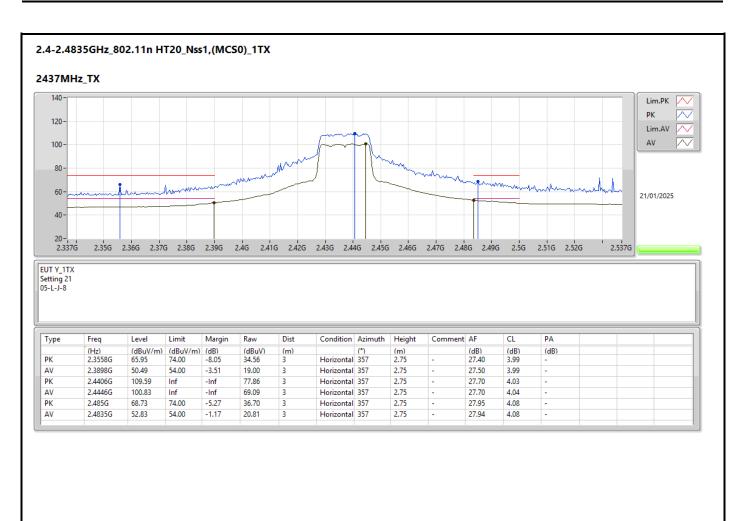
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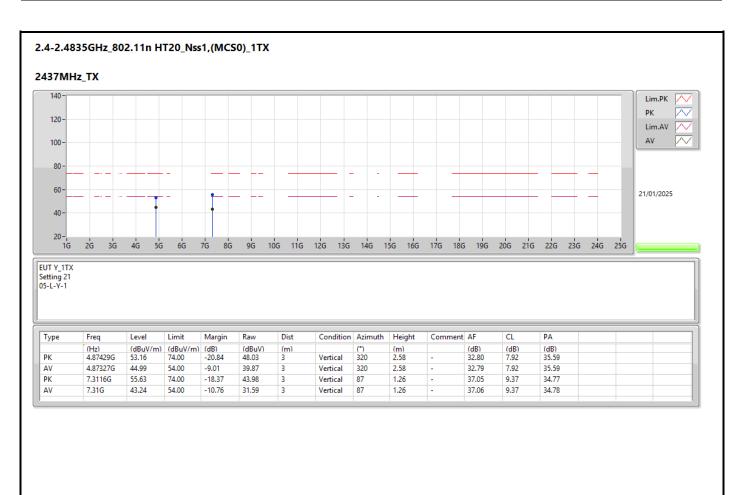
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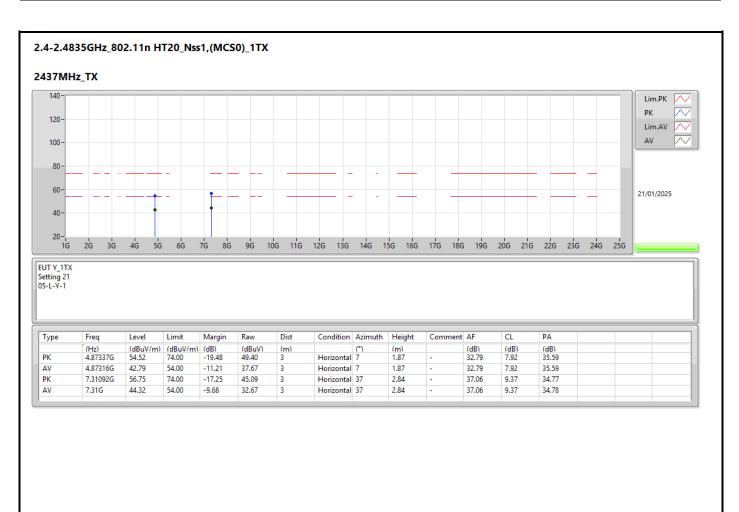
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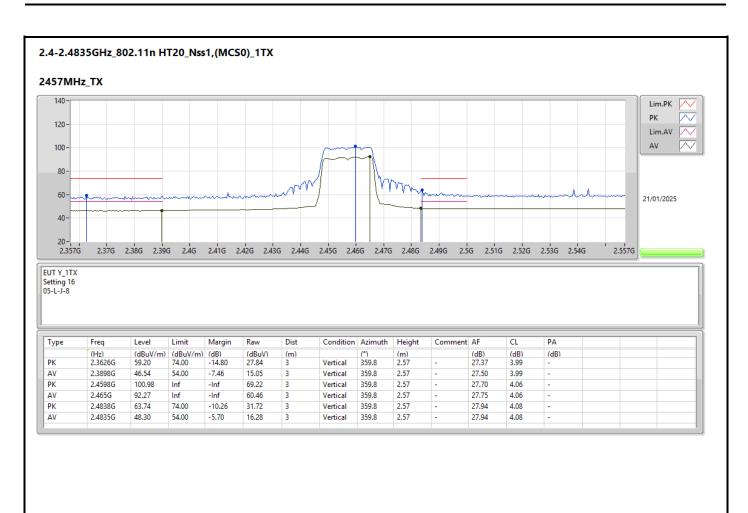


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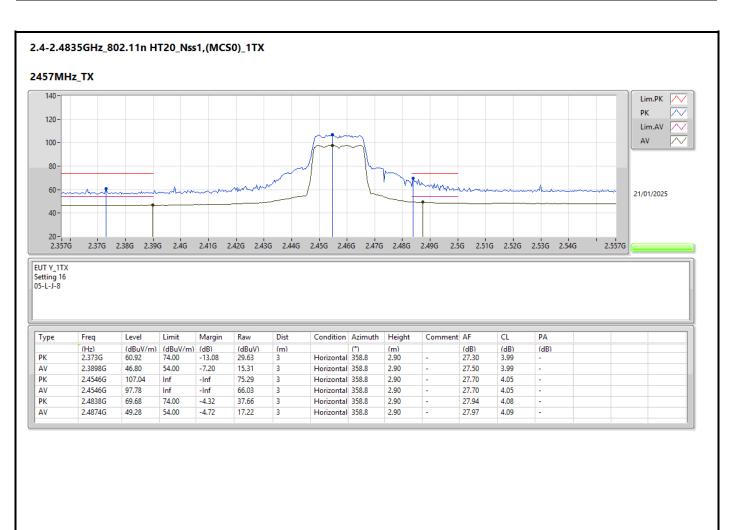


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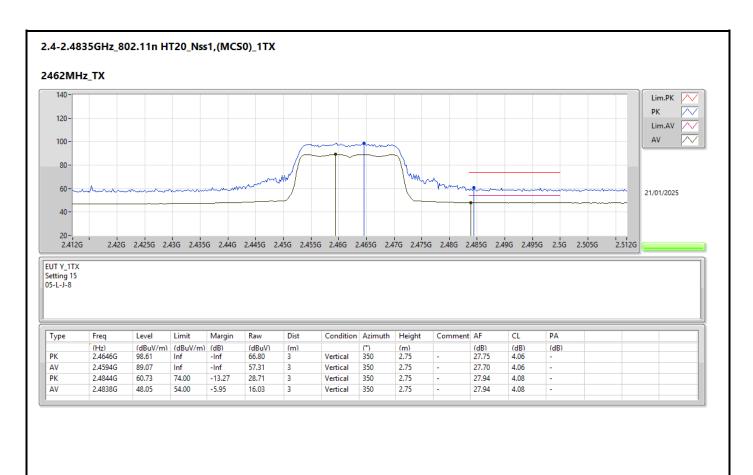
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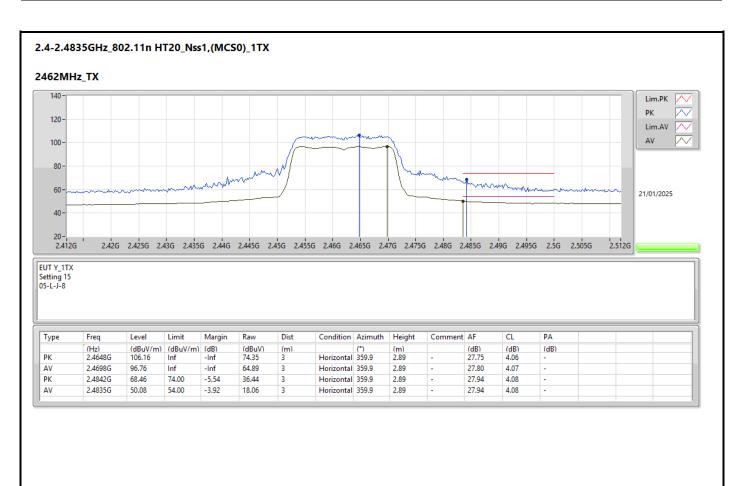
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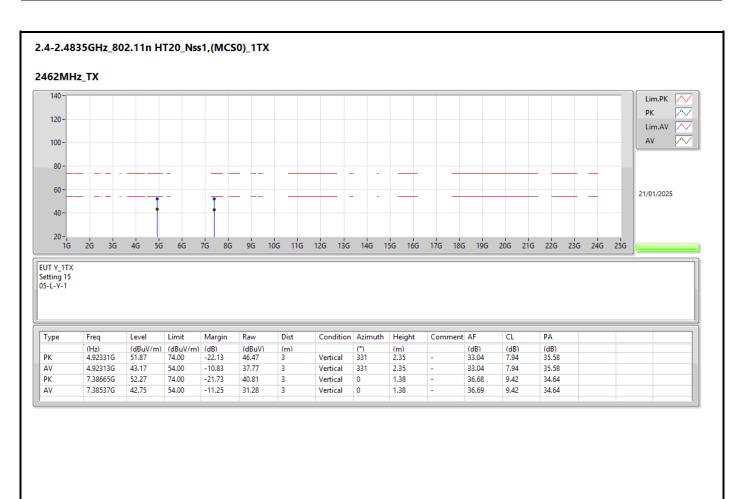
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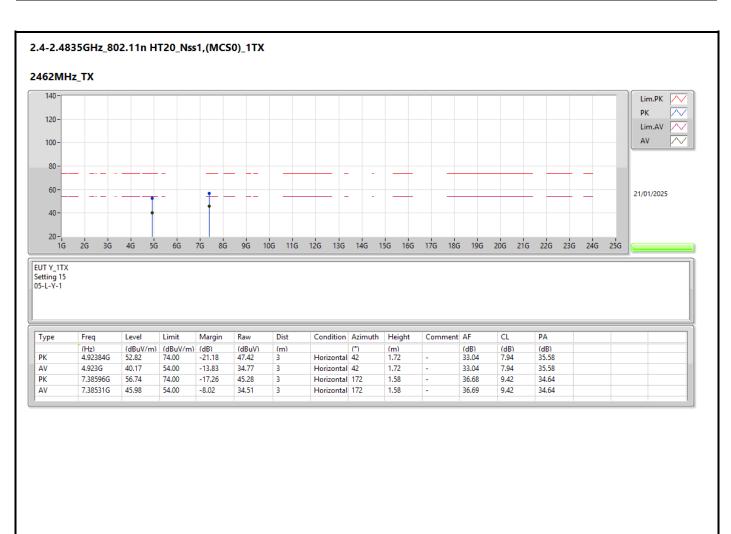
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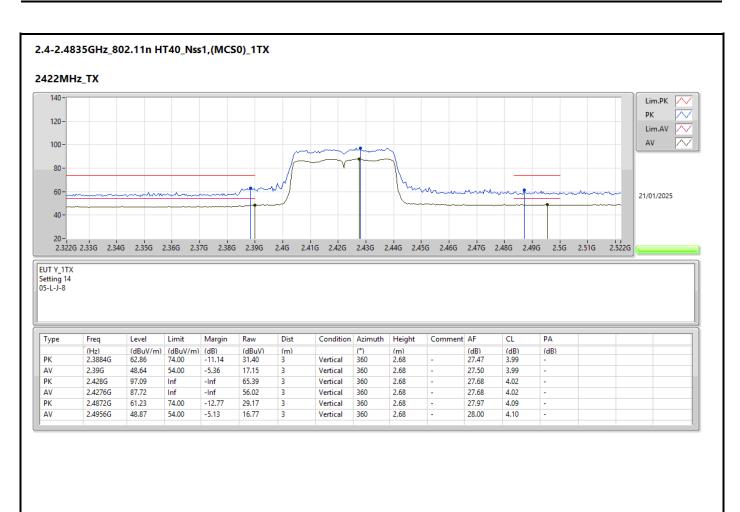
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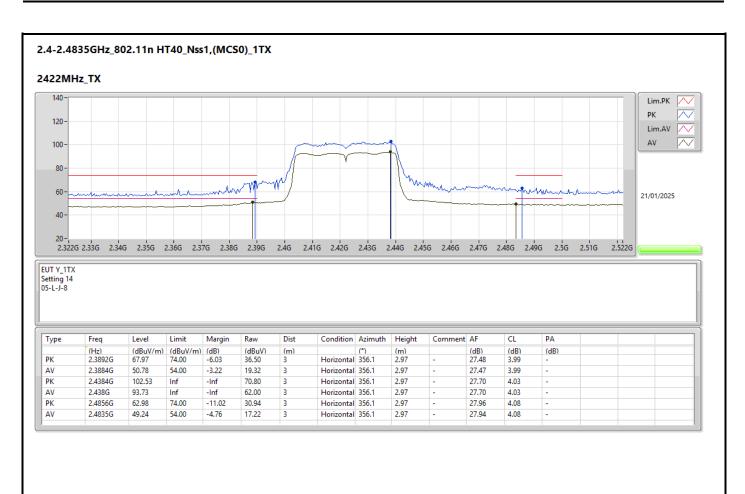
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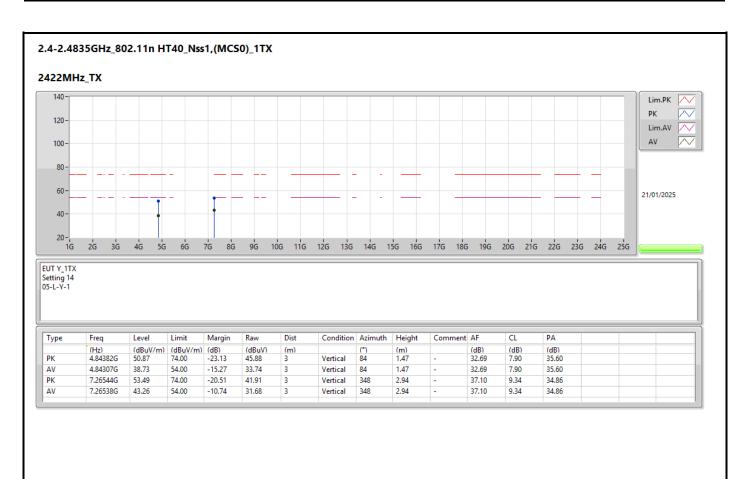
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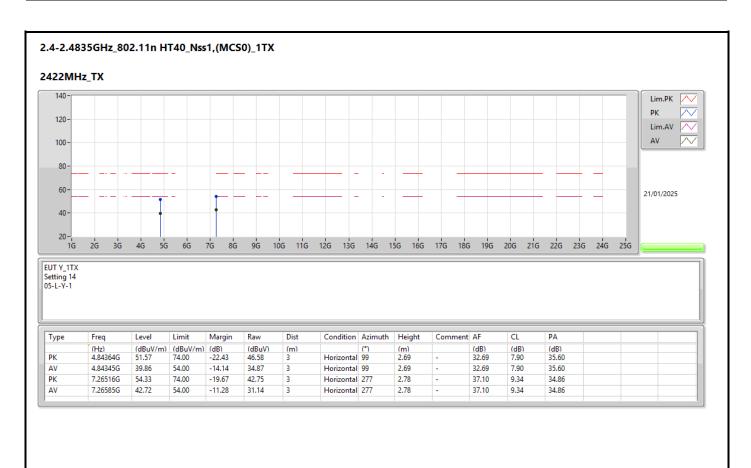
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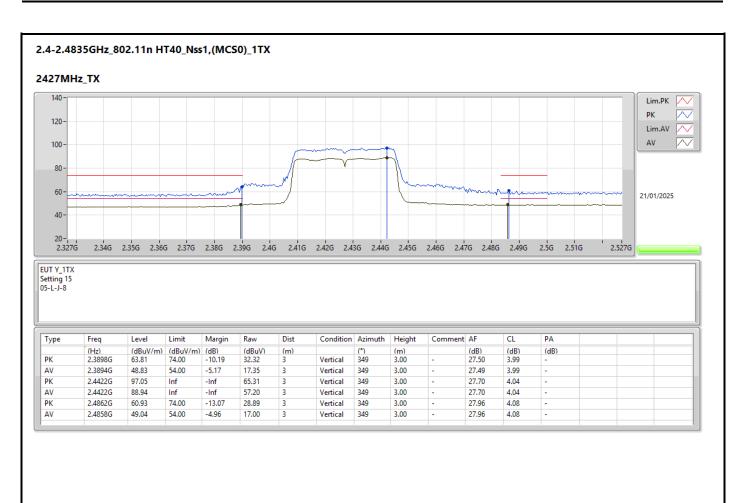
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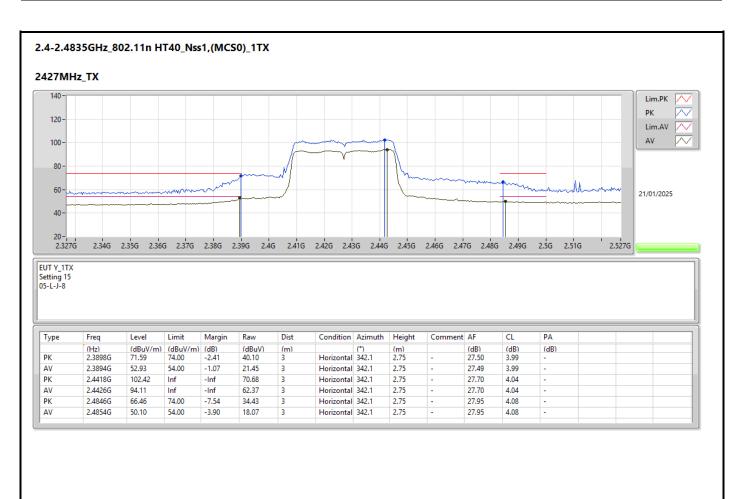
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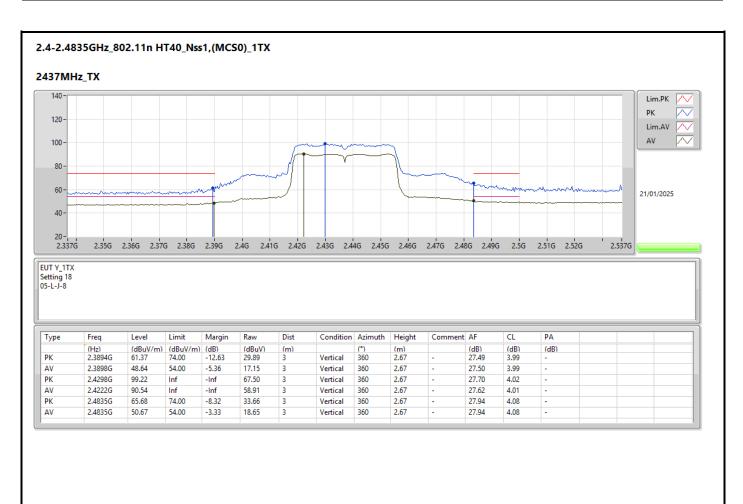
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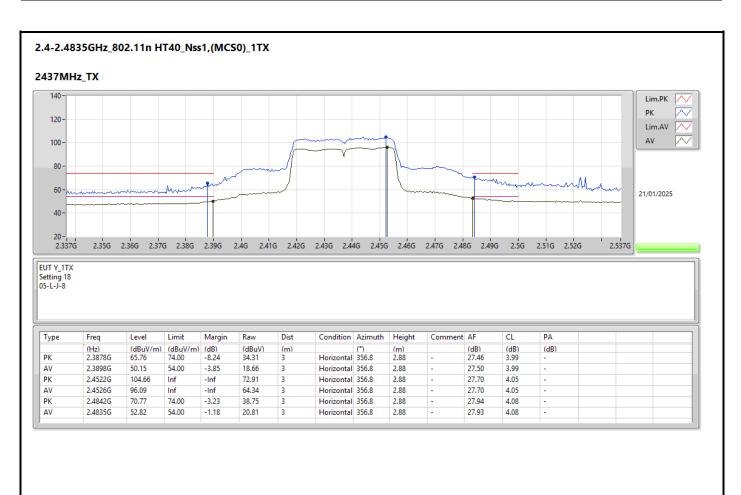
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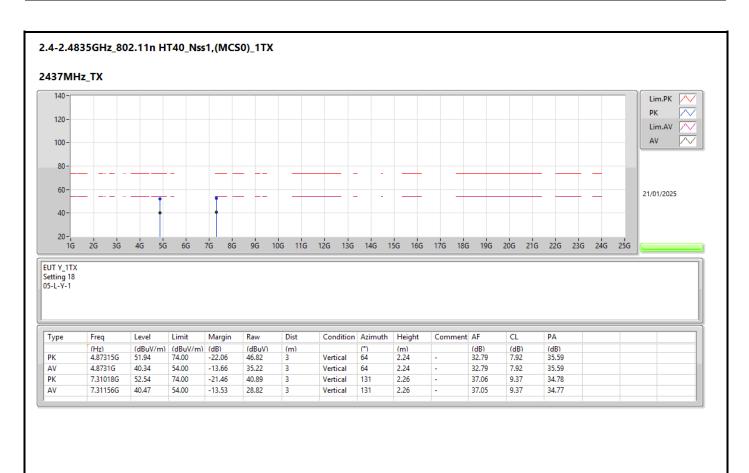
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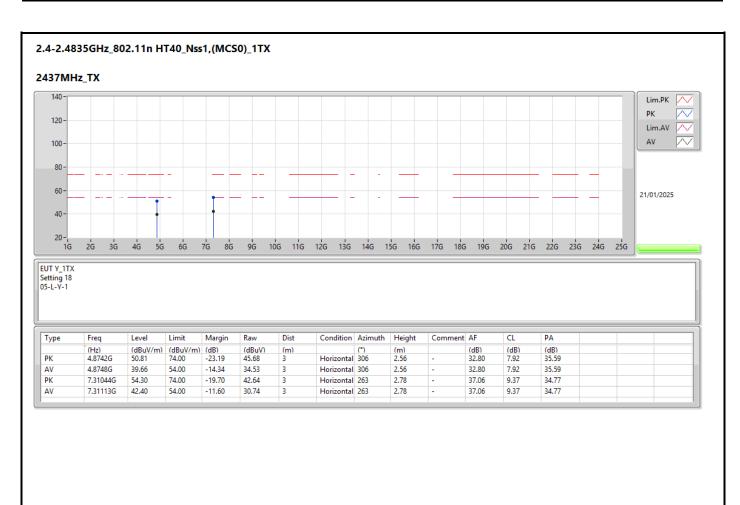
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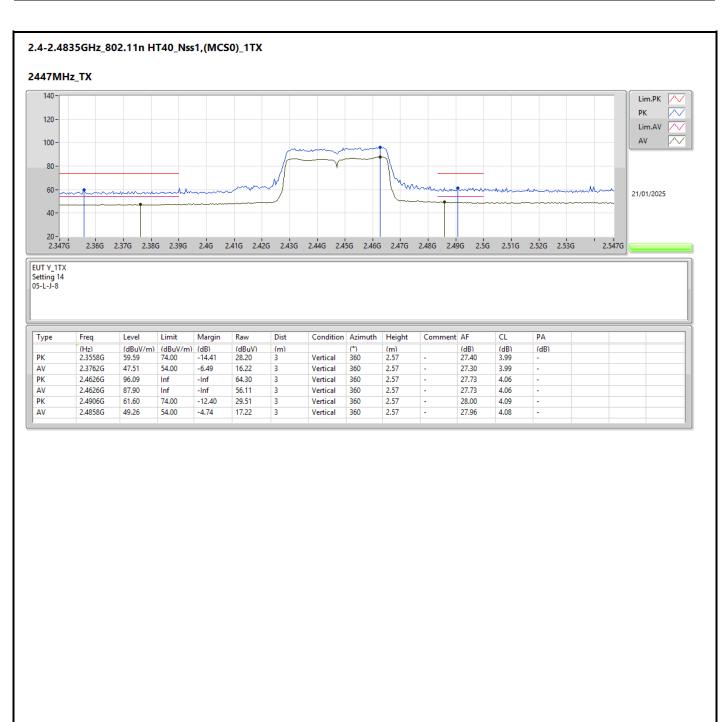
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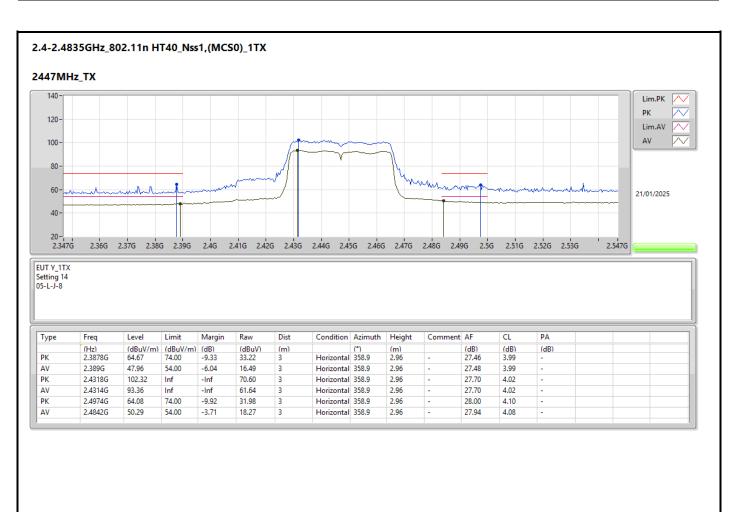
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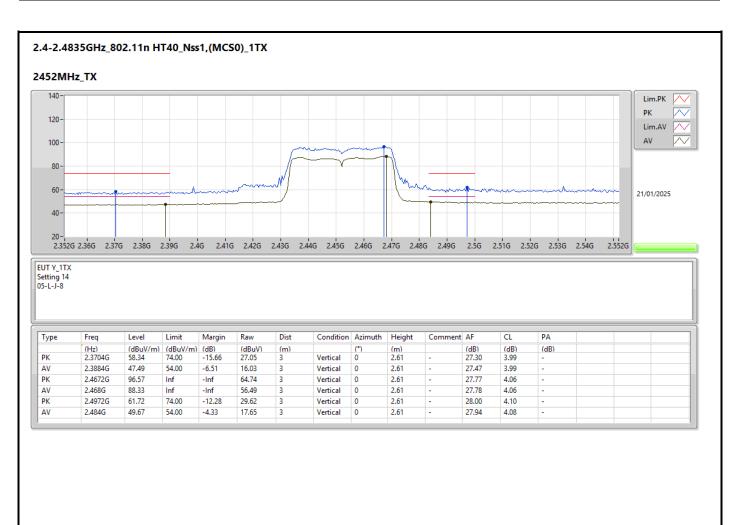
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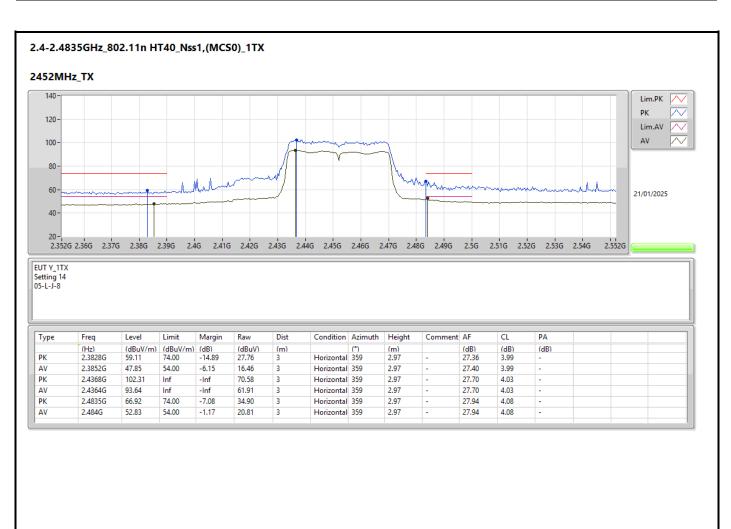
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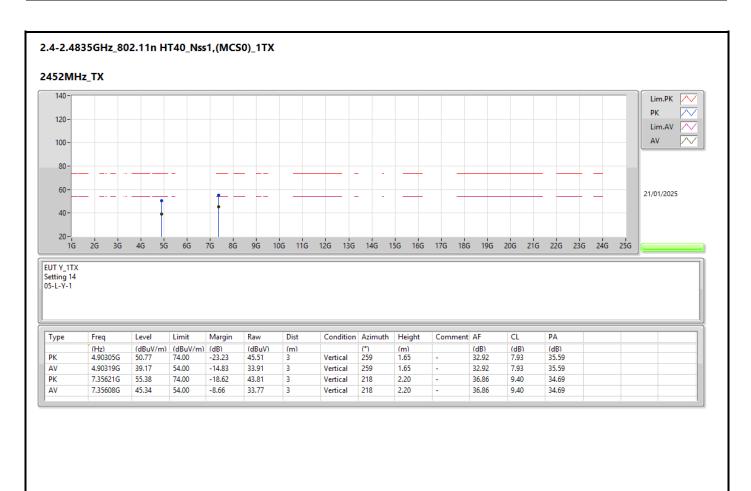
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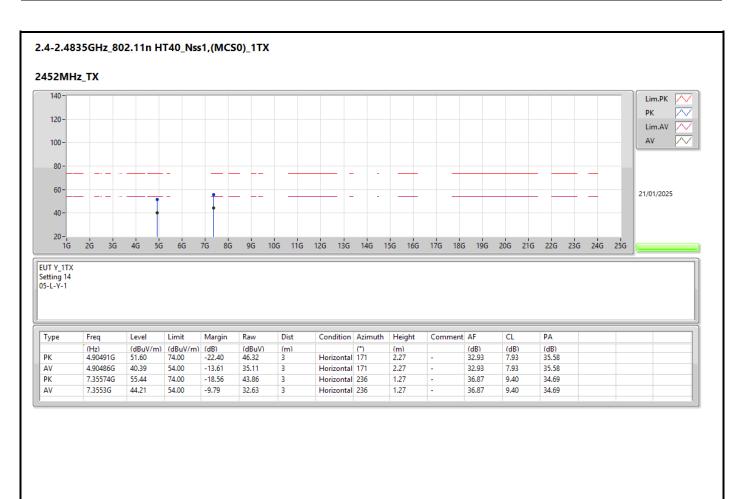
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