

FCC Radio Test Report

FCC ID : XPYNORAB2

Equipment : NORA-B2 stand-alone Bluetooth Low Energy module

Brand Name : u-blox

Model Name : NORA-B201, NORA-B206, NORA-B211, NORA-B216, NORA-B261, NORA-B266, NORA-B221, NORA-B226, NORA-B271, NORA-B276, NORA-B281, NORA-B286

Applicant : u-blox AG
Zürcherstrasse 68, 8800 Thalwil, Switzerland

Manufacturer : u-blox AG
Zürcherstrasse 68, 8800 Thalwil, Switzerland

Standard : 47 CFR FCC Part 15.247

The product was received on Apr. 07, 2025, and testing was started from Apr. 16, 2025 and completed on May 01, 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

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History of this test report

[illegible]

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: Debby Hung

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std.	Ch. Frequency (MHz)	Channel Number
2400-2483.5	802.15.4	2405-2475	11-25 [15]

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.15.4	5	1TX

Note:.

- ♦ 802.15.4 uses a O-QPSK (250kbps) modulation for DSSS.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

External Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	ABRACON	PRO-EX-296	Monopole	u.fl	BLE + 802.15.4
2	ABRACON	PRO-IS-237	PCB Patch	u.fl	BLE + 802.15.4
3	ABRACON	PRO-IS-299	PCB Patch	u.fl	BLE + 802.15.4
4	molex	2144150011	Dipole	Reverse SMA	802.15.4

Ant.	Port	Gain (dBi)	
		BT	802.15.4
1	1	3	3
2	1	3	3
3	1	2.5	2.5
4	1	-	5.3

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

For BT function:

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

Ant. 1 (port 1) ~ Ant. 3 (port 1) could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 (port 1) ~Ant. 4 (port 1) could transmit/receive.

Integrated Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Support
1	U-Blox	NORA-B2	PCB trace	u.fl	3	BLE + 802.15.4

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

For BT function:

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

Ant. 1 could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 could transmit/receive.

1.1.3 EUT Information

Operational Condition			
EUT Power Type		From Host system	
EUT Function		☒ Point-to-multipoint	☐ Point-to-point
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
802.15.4_5MHz_Nss1_1TX	1	0	100.003m	10Hz (DC>=0.98)

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	Antenna	Memory	NVM/RAM	SW Varina
NORA-B201	RF-port available at solder land (antenna pin)	nRF54L15	1.5MB /256 KB	Open CPU version
NORA-B206	integrated PCB trace antenna	nRF54L15	1.5MB /256 KB	Open CPU version
NORA-B281	RF-port available at solder land (antenna pin)	nRF54L15	1.5MB /256 KB	UCX version
NORA-B286	integrated PCB trace antenna	nRF54L15	1.5MB /256 KB	UCX version
NORA-B211	RF-port available at solder land (antenna pin)	nRF54L10	1.0 MB /192 KB	Open CPU version
NORA-B216	integrated PCB trace antenna	nRF54L10	1.0 MB /192 KB	Open CPU version
NORA-B261	RF-port available at solder land (antenna pin)	nRF54L10	1.0 MB /192 KB	UCX version
NORA-B266	integrated PCB trace antenna	nRF54L10	1.0 MB /192 KB	UCX version
NORA-B221	RF-port available at solder land (antenna pin)	nRF54L05	0.5 MB /96 KB	Open CPU version
NORA-B226	integrated PCB trace antenna	nRF54L05	0.5 MB /96 KB	Open CPU version
NORA-B271	RF-port available at solder land (antenna pin)	nRF54L05	0.5 MB /96 KB	UCX version
NORA-B276	integrated PCB trace antenna	nRF54L05	0.5 MB /96 KB	UCX version

From the above models, model: NORA-B201, NORA-B206 was selected as representative model for the test and its data was recorded in this report.

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	Daniel Lin	22.5~24.6°C / 52~55%	01/May/2025
RF Conducted	TH01-HY	Sonic Li	23~26°C / 53~56%	29/Apr/2025
☒ Wenhua 3rd. (TAF: 3785)	ADD: No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH24-HY	Simon Cheng	22.2~23.4°C / 50~52%	16/Apr/2025~25/Apr/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
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 Tool Software Version	Tera Term v4.76
Test Software Version	SDK v2.9.0

Mode	Power Setting
802.15.4_5MHz_Nss1_1TX	-
2405MHz	8
2440MHz	8
2475MHz	8

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 (Integrated)		V (Monopole, PCB, Dipole)

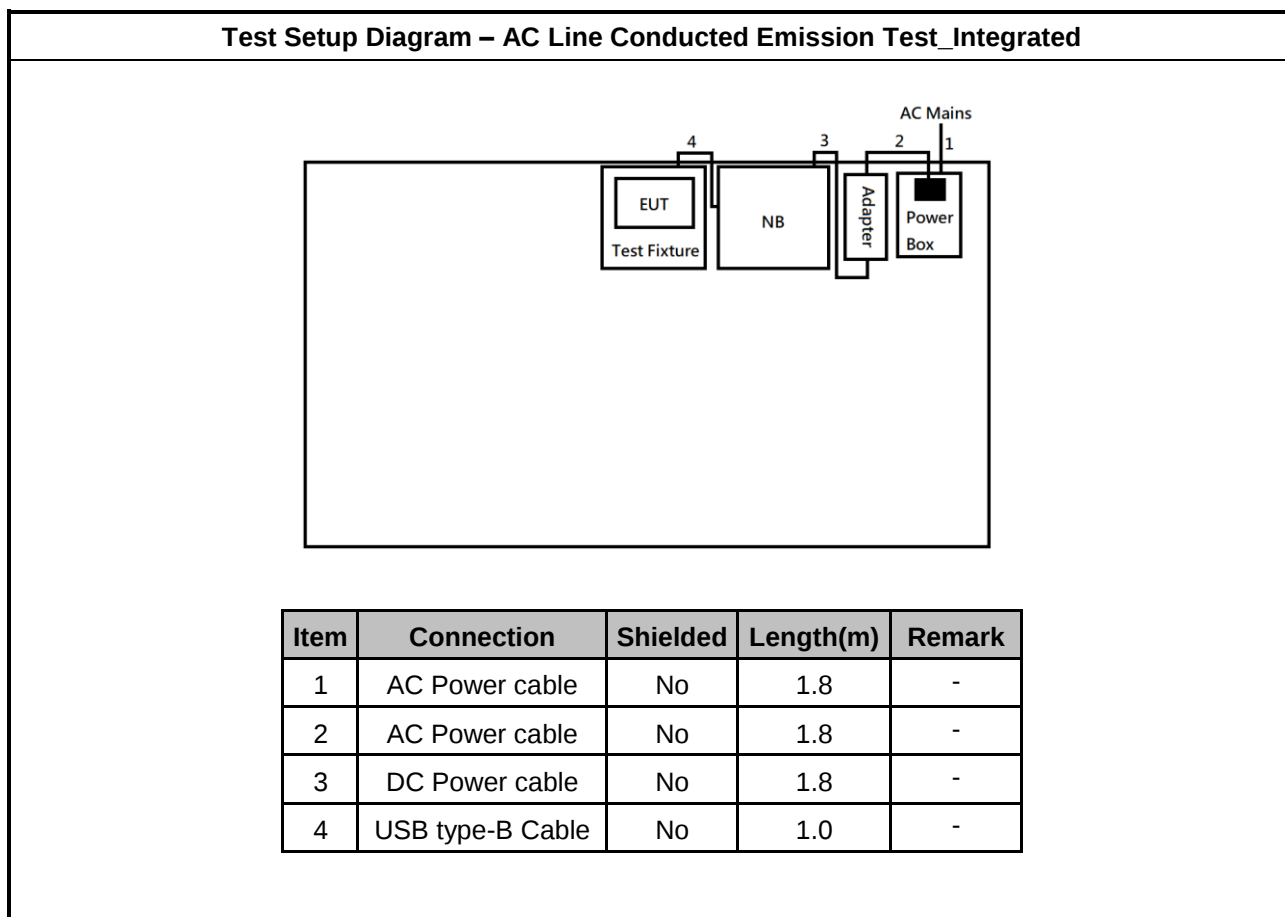
2.3 Support Equipment

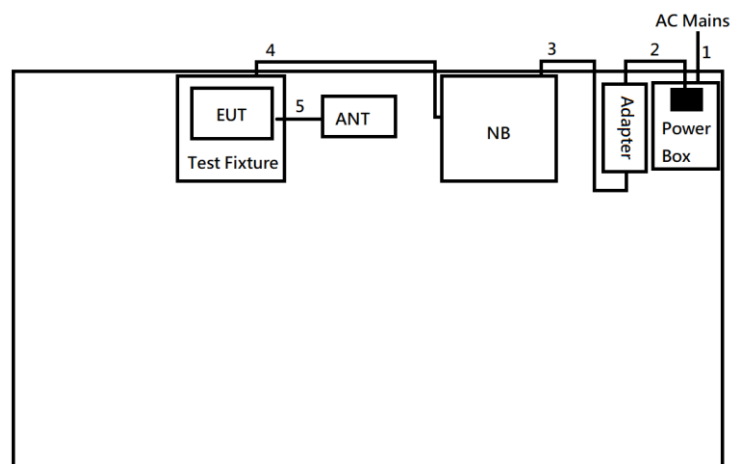
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	EVB-NORA-B2 Board	U-blox	NORA-B201	-	Provided by Customer
2	EVB-NORA-B2 Board	U-blox	NORA-B206	-	Provided by Customer
3	USB type-B Cable	U-blox	USB-01	-	Provided by Customer
4	Notebook	DELL	Latitude7290	-	-
5	Adapter For NB	DELL	HA65NM130	-	-
6	RF Cable	Sporton	Sporton	-	-
7	AC Power cable	Power Sync	TPCMRN0018	-	-
8	Antenna	ABRACON	PRO-EX-296	-	-
9	Antenna	ABRACON	PRO-IS-237	-	-
10	Antenna	ABRACON	2144150011	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	USB type-B Cable	U-blox	USB-01	-	Provided by Customer
4	EVB-NORA-B2 Board	U-blox	NORA-B201	-	Provided by Customer

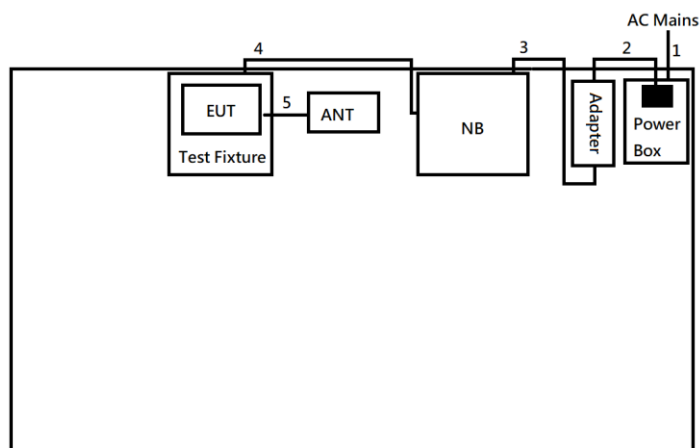
Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	EVB-NORA-B2 Board	U-blox	NORA-B201	-	Provided by Customer
2	EVB-NORA-B2 Board	U-blox	NORA-B206	-	Provided by Customer
3	USB type-B Cable	U-blox	USB-01	-	Provided by Customer
4	Notebook	DELL	Latitude7290	-	-
5	Adapter For NB	DELL	HA65NM130	-	-
6	RF Cable	Sporton	Sporton	-	-
7	AC Power cable	Power Sync	TPCMRN0018	-	-
8	Antenna	ABRACON	PRO-EX-296	-	-
9	Antenna	ABRACON	PRO-IS-237	-	-
10	Antenna	ABRACON	2144150011	-	-

2.4 Test Setup Diagram

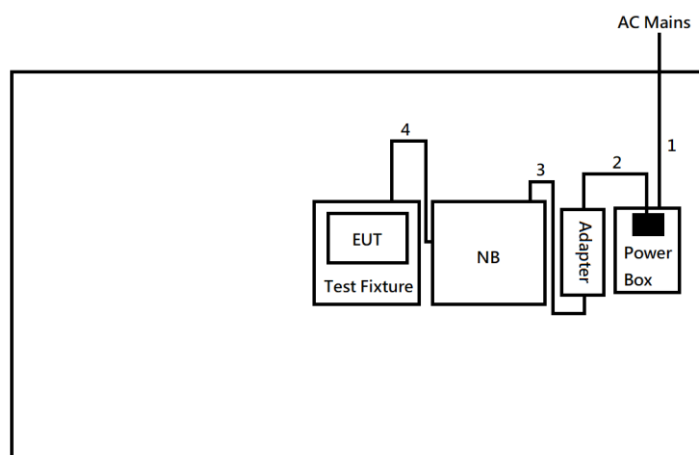


Test Setup Diagram – AC Line Conducted Emission Test_Monopole, PCB


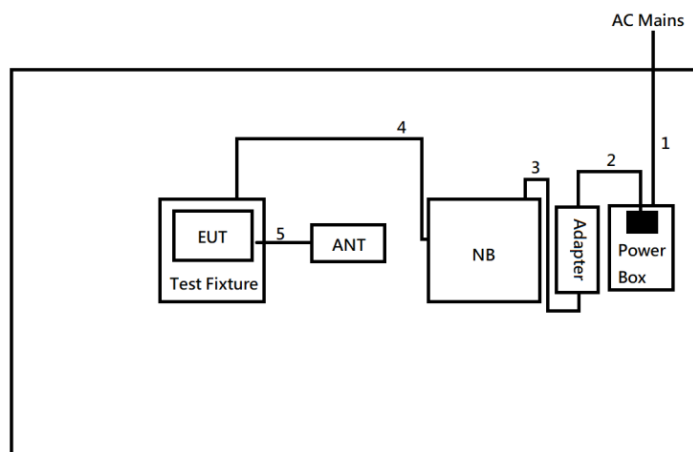
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	DC Power cable	No	1.8	-
4	USB type-B Cable	No	1.0	-
5	RF Cable	No	0.1	-

Test Setup Diagram – AC Line Conducted Emission Test_Dipole


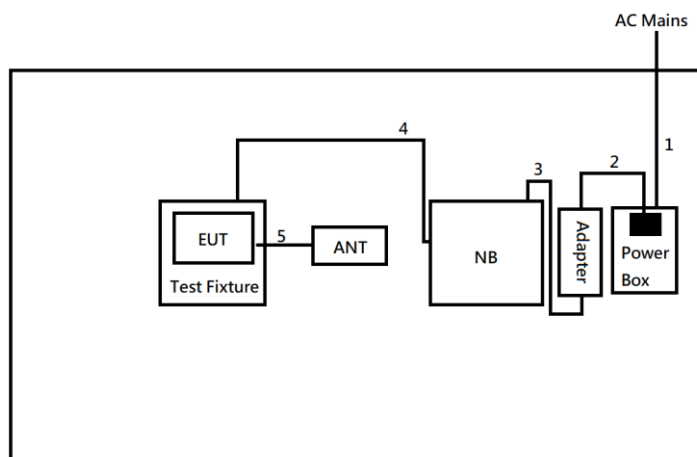
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	DC Power cable	No	1.8	-
4	USB type-B Cable	No	1.0	-
5	RF Cable	No	0.3	-

Test Setup Diagram - Radiated Test_Integrated


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	DC Power cable	No	1.8	-
4	USB type-B Cable	No	1.0	-

Test Setup Diagram - Radiated Test_Monopole, PCB


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	DC Power cable	No	1.8	-
4	USB type-B Cable	No	1.0	-
5	RF Cable	No	0.1	-

Test Setup Diagram - Radiated Test_Dipole


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	DC Power cable	No	1.8	-
4	USB type-B Cable	No	1.0	-
5	RF Cable	No	0.3	-

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

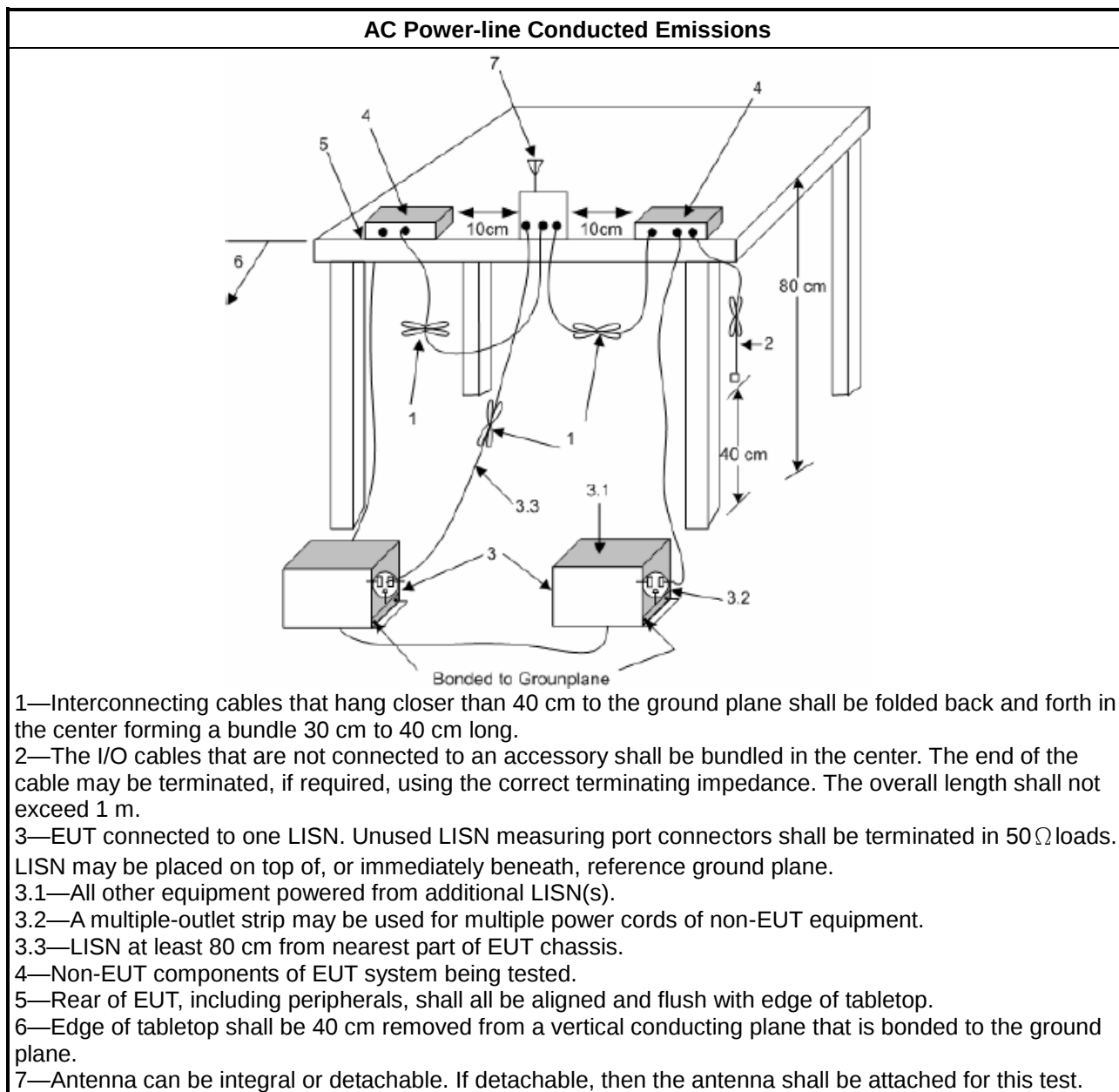
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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.

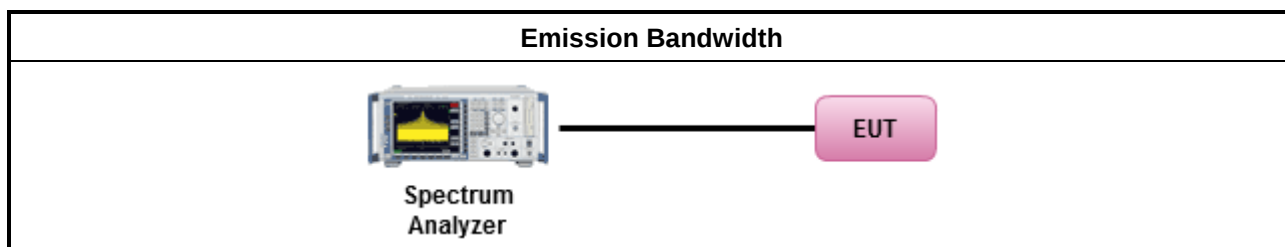
3.2.2 Measuring Instruments

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 $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
e.i.r.p. Power Limit:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ 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.	

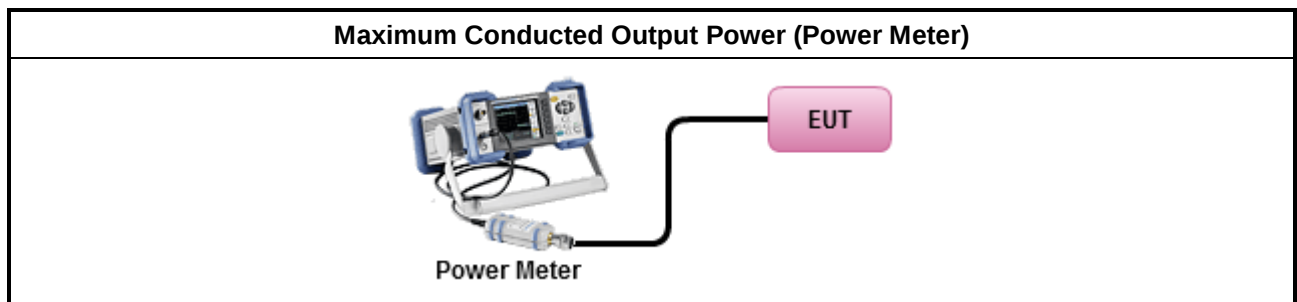
3.3.2 Measuring Instruments

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

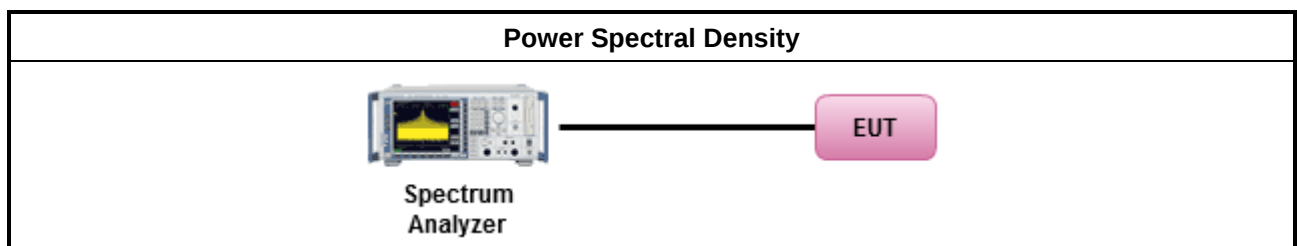
3.4.2 Measuring Instruments

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.	

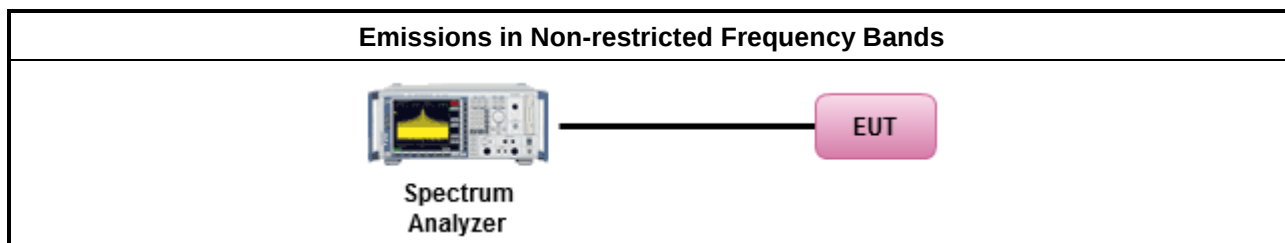
3.5.2 Measuring Instruments

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

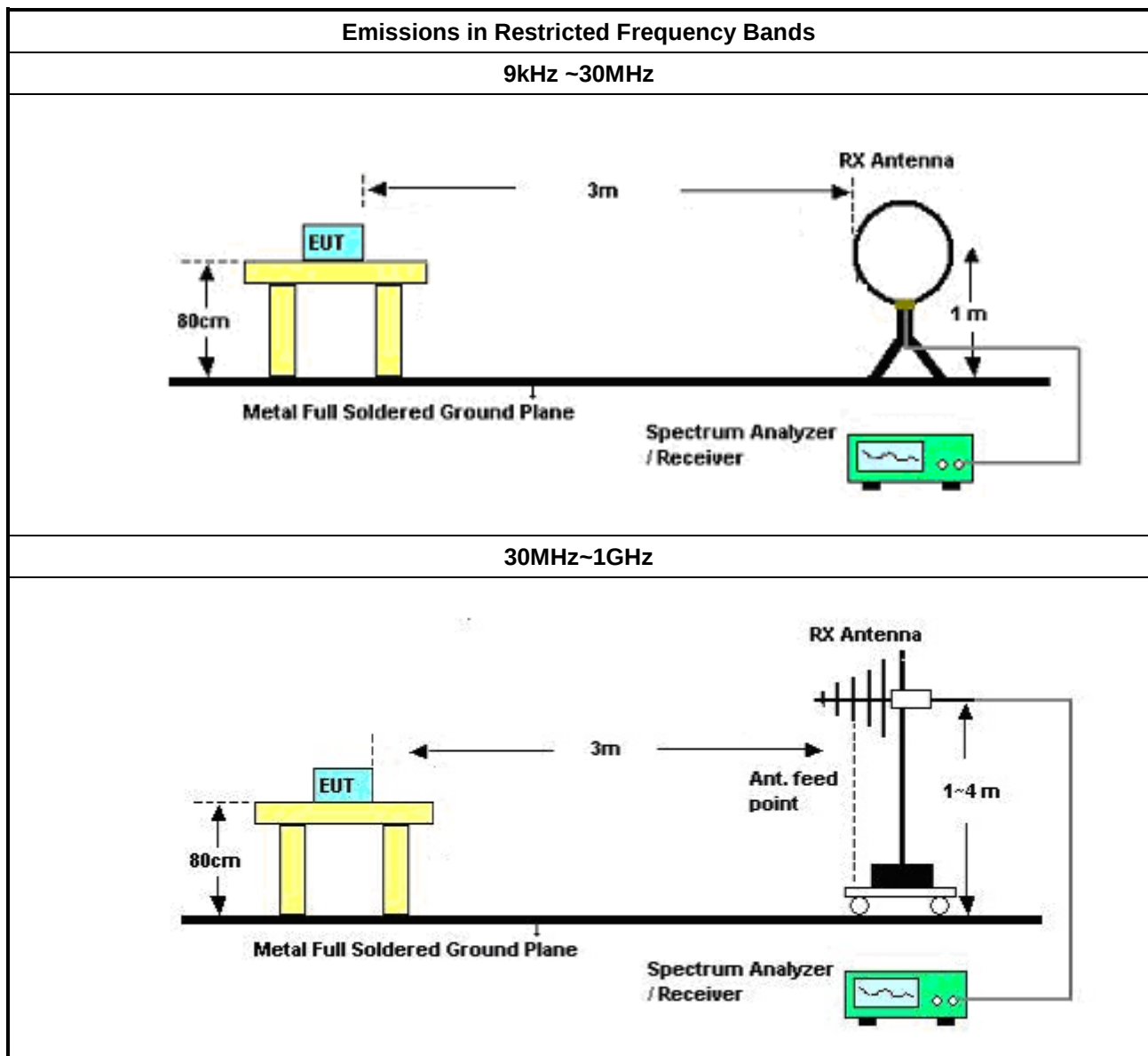
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted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

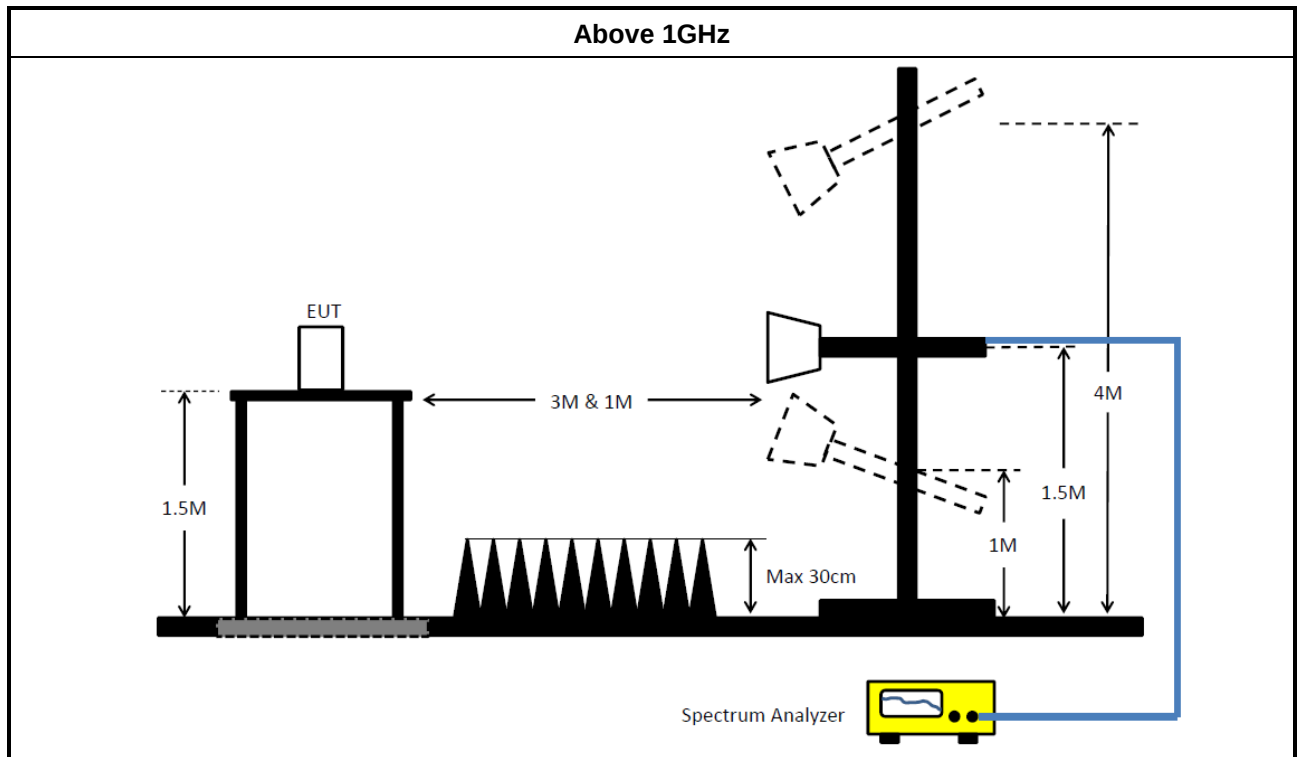
3.6.4 Measurement Results Calculation

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	100003	9kHz ~ 30MHz	18/Apr/2025	17/Apr/2026
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	FSV3044	101438	10Hz~44GHz	8/Nov/2024	7/Nov/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	13/Feb/2025	12/Feb/2026
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	13/Feb/2025	12/Feb/2026
SENSE-15247_DTS	Sporton	V5.11.23	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	TDK	SAC-3M	03CH24-HY	30MHz~1GHz 3m	16/Aug/2024	15/Aug/2025
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	1GHz~18GHz 3m	30/Jul/2024	29/Jul/2025
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	06/Dec/2024	05/Dec/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101345	10Hz~44GHz	27/Aug/2024	26/Aug/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	20/Mar/2025	19/Mar/2026
Bilog Antenna & 6dB Attenuator	TESEQ / Woken	CBL 6112D / 00800N1D01N-06	35376 / 02	30MHz~1GHz	13/Apr/2025	12/Apr/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02744	1GHz~18GHz	15/Aug/2024	14/Aug/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	03CH24-cable-01	9kHz~40GHz	01/Oct/2024	30/Sep/2025
Pre-Amplifier	Aglient	8447D	2944A06292	30MHz~1GHz	08/Apr/2025	07/Apr/2026
Amplifier	EM	EM01G18G	060870	1GHz ~18GHz	12/Aug/2024	11/Aug/2025
Amplifier	EM	EM18G40GA	060887	18GHz ~40GHz	07/Oct/2024	06/Oct/2025
SENSE-15247-DTS	Sporton	V5.11.20	NA	NA	NA	NA



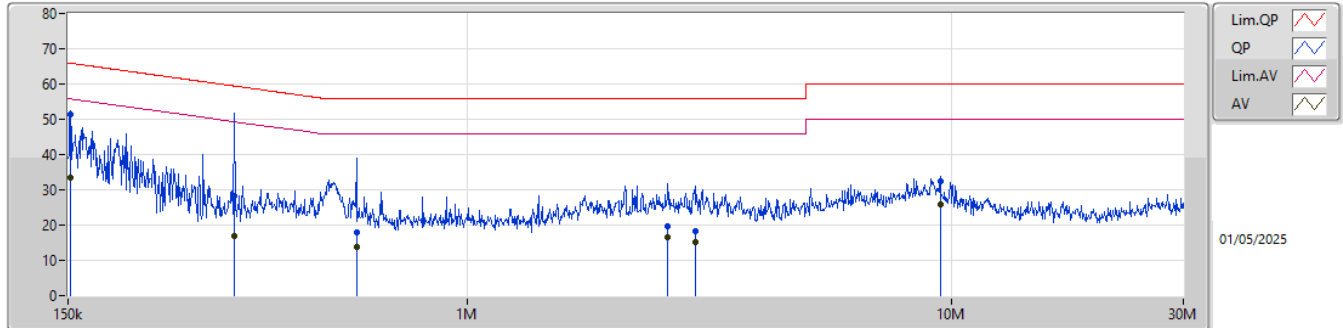
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	151.807k	51.32	65.90	-14.58	Line

Result

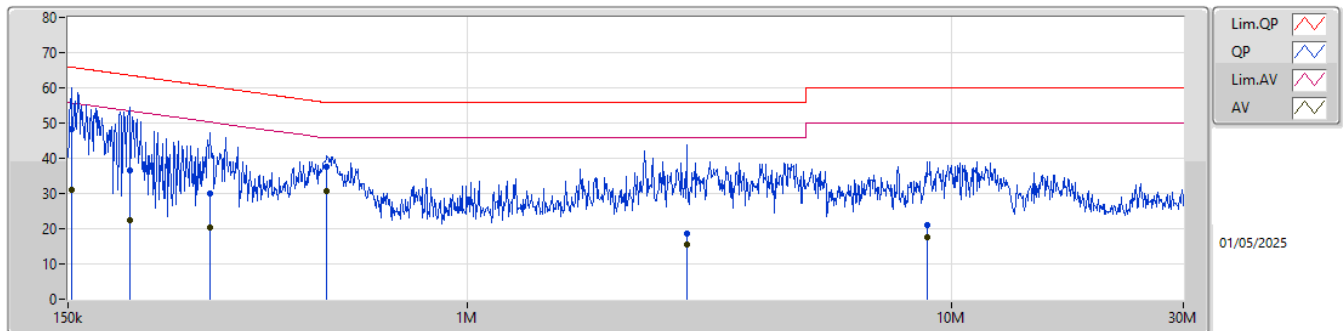
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	151.807k	51.32	65.90	-14.58	Line
Mode 1	Pass	AV	151.807k	33.35	55.90	-22.55	Line
Mode 1	Pass	QP	330.648k	28.18	59.44	-31.26	Line
Mode 1	Pass	AV	330.648k	16.87	49.44	-32.57	Line
Mode 1	Pass	QP	589.868k	17.90	56.00	-38.10	Line
Mode 1	Pass	AV	589.868k	13.70	46.00	-32.30	Line
Mode 1	Pass	QP	2.594M	19.81	56.00	-36.19	Line
Mode 1	Pass	AV	2.594M	16.48	46.00	-29.52	Line
Mode 1	Pass	QP	2.947M	18.18	56.00	-37.82	Line
Mode 1	Pass	AV	2.947M	15.31	46.00	-30.69	Line
Mode 1	Pass	QP	9.456M	32.29	60.00	-27.71	Line
Mode 1	Pass	AV	9.456M	26.03	50.00	-23.97	Line
Mode 1	Pass	QP	152.414k	48.12	65.87	-17.75	Neutral
Mode 1	Pass	AV	152.414k	31.05	55.87	-24.82	Neutral
Mode 1	Pass	QP	200.748k	36.48	63.57	-27.09	Neutral
Mode 1	Pass	AV	200.748k	22.58	53.57	-30.99	Neutral
Mode 1	Pass	QP	294.502k	29.94	60.40	-30.46	Neutral
Mode 1	Pass	AV	294.502k	20.50	50.40	-29.90	Neutral
Mode 1	Pass	QP	512.95k	37.53	56.00	-18.47	Neutral
Mode 1	Pass	AV	512.95k	30.76	46.00	-15.24	Neutral
Mode 1	Pass	QP	2.832M	18.61	56.00	-37.39	Neutral
Mode 1	Pass	AV	2.832M	15.41	46.00	-30.59	Neutral
Mode 1	Pass	QP	8.87M	20.89	60.00	-39.11	Neutral
Mode 1	Pass	AV	8.87M	17.53	50.00	-32.47	Neutral

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	151.807k	51.32	65.90	-14.58	19.61	Line	-	31.71	9.63	0.01	9.97						
AV	151.807k	33.35	55.90	-22.55	19.61	Line	-	13.74	9.63	0.01	9.97						
QP	330.648k	28.18	59.44	-31.26	19.63	Line	-	8.55	9.63	0.02	9.98						
AV	330.648k	16.87	49.44	-32.57	19.63	Line	-	-2.76	9.63	0.02	9.98						
QP	589.868k	17.90	56.00	-38.10	19.65	Line	-	-1.75	9.63	0.04	9.98						
AV	589.868k	13.70	46.00	-32.30	19.65	Line	-	-5.95	9.63	0.04	9.98						
QP	2.594M	19.81	56.00	-36.19	19.67	Line	-	0.14	9.66	0.04	9.97						
AV	2.594M	16.48	46.00	-29.52	19.67	Line	-	-3.19	9.66	0.04	9.97						
QP	2.947M	18.18	56.00	-37.82	19.69	Line	-	-1.51	9.67	0.04	9.98						
AV	2.947M	15.31	46.00	-30.69	19.69	Line	-	-4.38	9.67	0.04	9.98						
QP	9.456M	32.29	60.00	-27.71	19.98	Line	-	12.31	9.77	0.23	9.98						
AV	9.456M	26.03	50.00	-23.97	19.98	Line	-	6.05	9.77	0.23	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	152.414k	48.12	65.87	-17.75	19.71	Neutral	-	28.41	9.73	0.01	9.97						
AV	152.414k	31.05	55.87	-24.82	19.71	Neutral	-	11.34	9.73	0.01	9.97						
QP	200.748k	36.48	63.57	-27.09	19.70	Neutral	-	16.78	9.72	0.01	9.97						
AV	200.748k	22.58	53.57	-30.99	19.70	Neutral	-	2.88	9.72	0.01	9.97						
QP	294.502k	29.94	60.40	-30.46	19.71	Neutral	-	10.23	9.71	0.02	9.98						
AV	294.502k	20.50	50.40	-29.90	19.71	Neutral	-	0.79	9.71	0.02	9.98						
QP	512.95k	37.53	56.00	-18.47	19.73	Neutral	-	17.80	9.71	0.04	9.98						
AV	512.95k	30.76	46.00	-15.24	19.73	Neutral	-	11.03	9.71	0.04	9.98						
QP	2.832M	18.61	56.00	-37.39	19.79	Neutral	-	-1.18	9.77	0.04	9.98						
AV	2.832M	15.41	46.00	-30.59	19.79	Neutral	-	-4.38	9.77	0.04	9.98						
QP	8.87M	20.89	60.00	-39.11	20.14	Neutral	-	0.75	9.94	0.22	9.98						
AV	8.87M	17.53	50.00	-32.47	20.14	Neutral	-	-2.61	9.94	0.22	9.98						



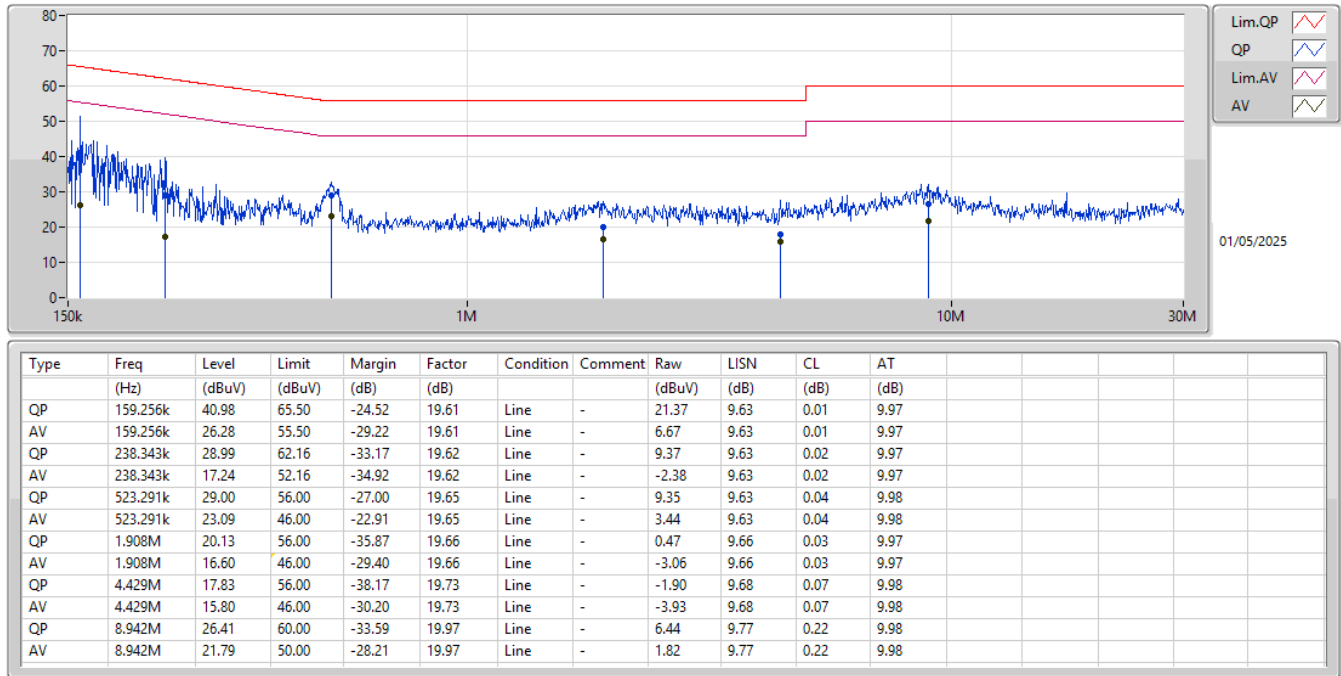
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	523.291k	31.78	46.00	-14.22	Neutral

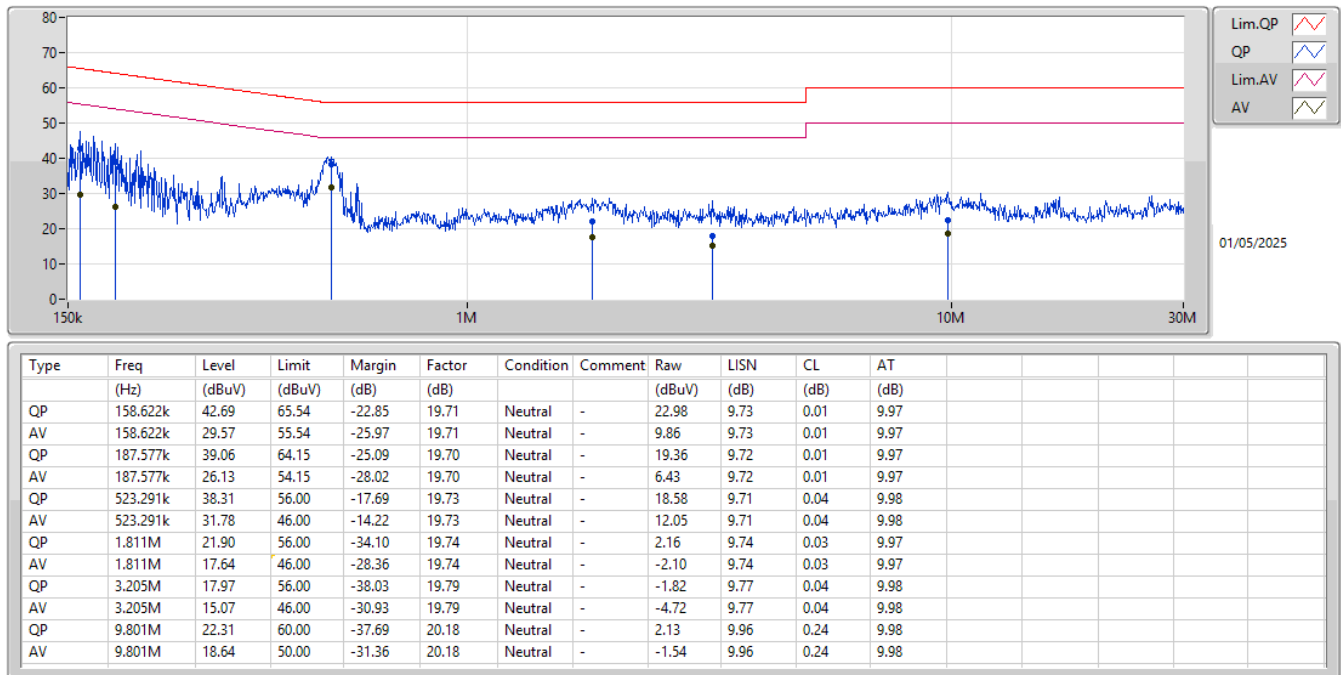
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	159.256k	40.98	65.50	-24.52	Line
Mode 1	Pass	AV	159.256k	26.28	55.50	-29.22	Line
Mode 1	Pass	QP	238.343k	28.99	62.16	-33.17	Line
Mode 1	Pass	AV	238.343k	17.24	52.16	-34.92	Line
Mode 1	Pass	QP	523.291k	29.00	56.00	-27.00	Line
Mode 1	Pass	AV	523.291k	23.09	46.00	-22.91	Line
Mode 1	Pass	QP	1.908M	20.13	56.00	-35.87	Line
Mode 1	Pass	AV	1.908M	16.60	46.00	-29.40	Line
Mode 1	Pass	QP	4.429M	17.83	56.00	-38.17	Line
Mode 1	Pass	AV	4.429M	15.80	46.00	-30.20	Line
Mode 1	Pass	QP	8.942M	26.41	60.00	-33.59	Line
Mode 1	Pass	AV	8.942M	21.79	50.00	-28.21	Line
Mode 1	Pass	QP	158.622k	42.69	65.54	-22.85	Neutral
Mode 1	Pass	AV	158.622k	29.57	55.54	-25.97	Neutral
Mode 1	Pass	QP	187.577k	39.06	64.15	-25.09	Neutral
Mode 1	Pass	AV	187.577k	26.13	54.15	-28.02	Neutral
Mode 1	Pass	QP	523.291k	38.31	56.00	-17.69	Neutral
Mode 1	Pass	AV	523.291k	31.78	46.00	-14.22	Neutral
Mode 1	Pass	QP	1.811M	21.90	56.00	-34.10	Neutral
Mode 1	Pass	AV	1.811M	17.64	46.00	-28.36	Neutral
Mode 1	Pass	QP	3.205M	17.97	56.00	-38.03	Neutral
Mode 1	Pass	AV	3.205M	15.07	46.00	-30.93	Neutral
Mode 1	Pass	QP	9.801M	22.31	60.00	-37.69	Neutral
Mode 1	Pass	AV	9.801M	18.64	50.00	-31.36	Neutral

Conducted Emissions at Powerline_Mode 1



Conducted Emissions at Powerline_Mode 1





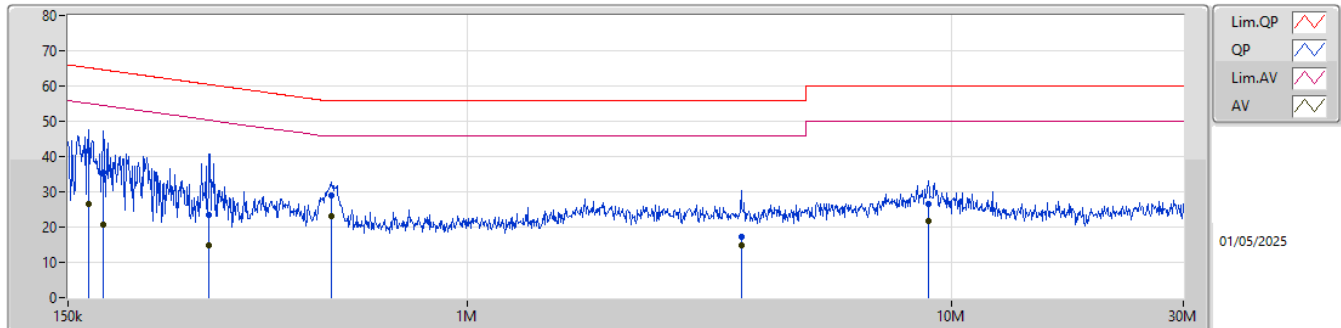
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	517.062k	31.40	46.00	-14.60	Neutral

Result

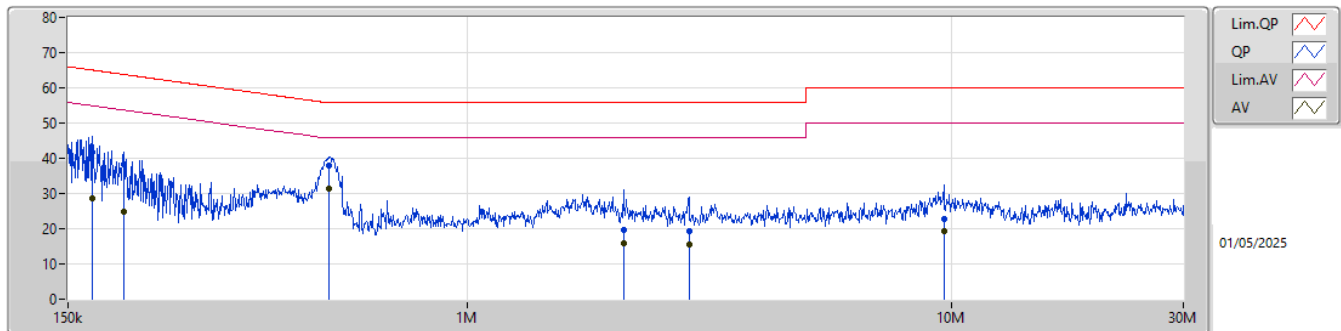
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	165.082k	41.73	65.20	-23.47	Line
Mode 1	Pass	AV	165.082k	26.51	55.20	-28.69	Line
Mode 1	Pass	QP	177.381k	35.46	64.60	-29.14	Line
Mode 1	Pass	AV	177.381k	20.60	54.60	-34.00	Line
Mode 1	Pass	QP	293.329k	23.35	60.44	-37.09	Line
Mode 1	Pass	AV	293.329k	14.80	50.44	-35.64	Line
Mode 1	Pass	QP	523.291k	28.98	56.00	-27.02	Line
Mode 1	Pass	AV	523.291k	23.14	46.00	-22.86	Line
Mode 1	Pass	QP	3.671M	17.27	56.00	-38.73	Line
Mode 1	Pass	AV	3.671M	14.91	46.00	-31.09	Line
Mode 1	Pass	QP	8.942M	26.64	60.00	-33.36	Line
Mode 1	Pass	AV	8.942M	21.80	50.00	-28.20	Line
Mode 1	Pass	QP	168.41k	41.59	65.04	-23.45	Neutral
Mode 1	Pass	AV	168.41k	28.63	55.04	-26.41	Neutral
Mode 1	Pass	QP	195.216k	38.11	63.80	-25.69	Neutral
Mode 1	Pass	AV	195.216k	24.78	53.80	-29.02	Neutral
Mode 1	Pass	QP	517.062k	38.00	56.00	-18.00	Neutral
Mode 1	Pass	AV	517.062k	31.40	46.00	-14.60	Neutral
Mode 1	Pass	QP	2.099M	19.51	56.00	-36.49	Neutral
Mode 1	Pass	AV	2.099M	15.70	46.00	-30.30	Neutral
Mode 1	Pass	QP	2.866M	19.17	56.00	-36.83	Neutral
Mode 1	Pass	AV	2.866M	15.52	46.00	-30.48	Neutral
Mode 1	Pass	QP	9.608M	22.70	60.00	-37.30	Neutral
Mode 1	Pass	AV	9.608M	19.35	50.00	-30.65	Neutral

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	165.082k	41.73	65.20	-23.47	19.61	Line	-	22.12	9.63	0.01	9.97						
AV	165.082k	26.51	55.20	-28.69	19.61	Line	-	6.90	9.63	0.01	9.97						
QP	177.381k	35.46	64.60	-29.14	19.61	Line	-	15.85	9.63	0.01	9.97						
AV	177.381k	20.60	54.60	-34.00	19.61	Line	-	0.99	9.63	0.01	9.97						
QP	293.329k	23.35	60.44	-37.09	19.63	Line	-	3.72	9.63	0.02	9.98						
AV	293.329k	14.80	50.44	-35.64	19.63	Line	-	-4.83	9.63	0.02	9.98						
QP	523.291k	28.98	56.00	-27.02	19.65	Line	-	9.33	9.63	0.04	9.98						
AV	523.291k	23.14	46.00	-22.86	19.65	Line	-	3.49	9.63	0.04	9.98						
QP	3.671M	17.27	56.00	-38.73	19.70	Line	-	-2.43	9.67	0.05	9.98						
AV	3.671M	14.91	46.00	-31.09	19.70	Line	-	-4.79	9.67	0.05	9.98						
QP	8.942M	26.64	60.00	-33.36	19.97	Line	-	6.67	9.77	0.22	9.98						
AV	8.942M	21.80	50.00	-28.20	19.97	Line	-	1.83	9.77	0.22	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	168.41k	41.59	65.04	-23.45	19.71	Neutral	-	21.88	9.73	0.01	9.97						
AV	168.41k	28.63	55.04	-26.41	19.71	Neutral	-	8.92	9.73	0.01	9.97						
QP	195.216k	38.11	63.80	-25.69	19.70	Neutral	-	18.41	9.72	0.01	9.97						
AV	195.216k	24.78	53.80	-29.02	19.70	Neutral	-	5.08	9.72	0.01	9.97						
QP	517.062k	38.00	56.00	-18.00	19.73	Neutral	-	18.27	9.71	0.04	9.98						
AV	517.062k	31.40	46.00	-14.60	19.73	Neutral	-	11.67	9.71	0.04	9.98						
QP	2.099M	19.51	56.00	-36.49	19.74	Neutral	-	-0.23	9.74	0.03	9.97						
AV	2.099M	15.70	46.00	-30.30	19.74	Neutral	-	-4.04	9.74	0.03	9.97						
QP	2.866M	19.17	56.00	-36.83	19.79	Neutral	-	-0.62	9.77	0.04	9.98						
AV	2.866M	15.52	46.00	-30.48	19.79	Neutral	-	-4.27	9.77	0.04	9.98						
QP	9.608M	22.70	60.00	-37.30	20.16	Neutral	-	2.54	9.95	0.23	9.98						
AV	9.608M	19.35	50.00	-30.65	20.16	Neutral	-	-0.81	9.95	0.23	9.98						



Conducted Emissions at Powerline_Dipole

Appendix A.4

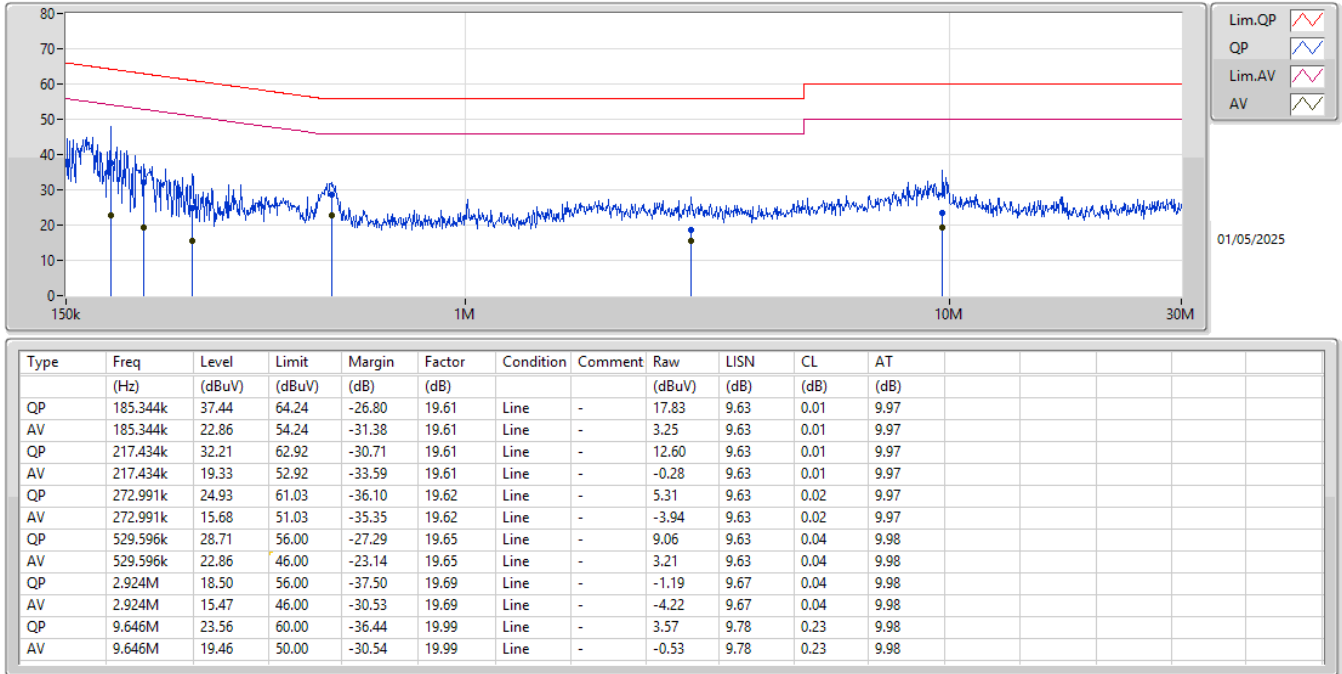
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	523.291k	31.77	46.00	-14.23	Neutral

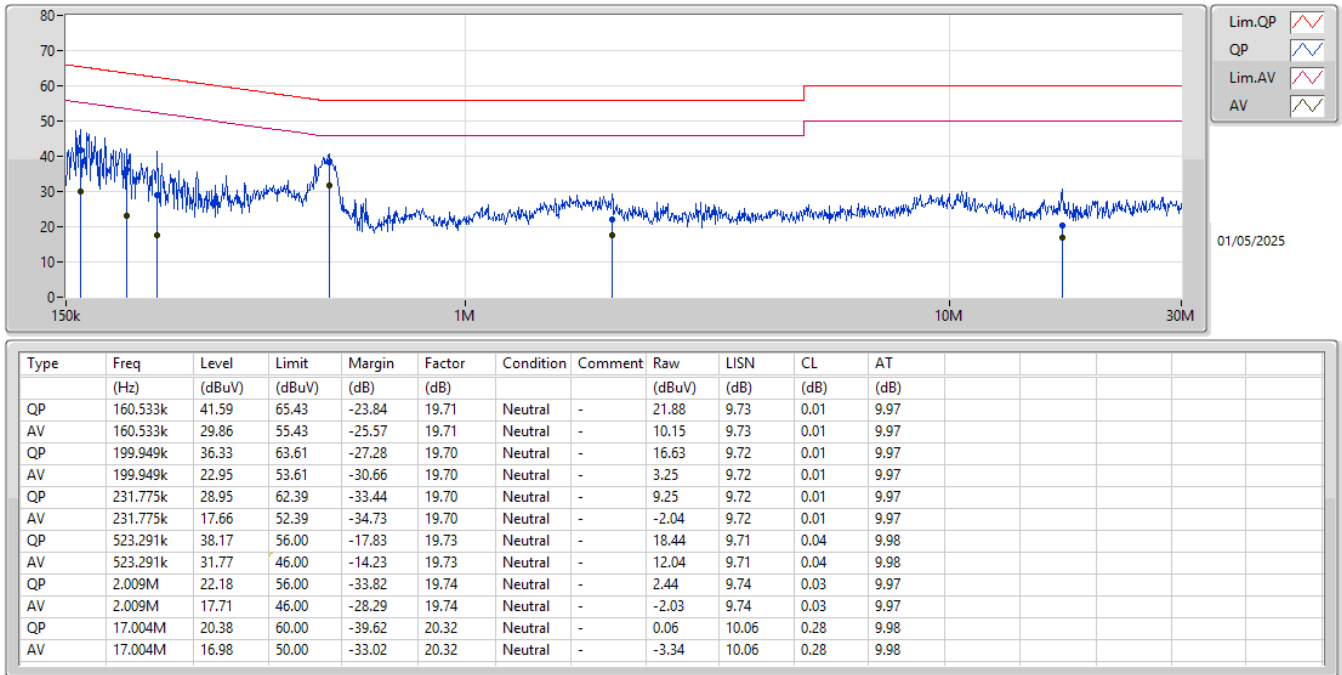
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	185.344k	37.44	64.24	-26.80	Line
Mode 1	Pass	AV	185.344k	22.86	54.24	-31.38	Line
Mode 1	Pass	QP	217.434k	32.21	62.92	-30.71	Line
Mode 1	Pass	AV	217.434k	19.33	52.92	-33.59	Line
Mode 1	Pass	QP	272.991k	24.93	61.03	-36.10	Line
Mode 1	Pass	AV	272.991k	15.68	51.03	-35.35	Line
Mode 1	Pass	QP	529.596k	28.71	56.00	-27.29	Line
Mode 1	Pass	AV	529.596k	22.86	46.00	-23.14	Line
Mode 1	Pass	QP	2.924M	18.50	56.00	-37.50	Line
Mode 1	Pass	AV	2.924M	15.47	46.00	-30.53	Line
Mode 1	Pass	QP	9.646M	23.56	60.00	-36.44	Line
Mode 1	Pass	AV	9.646M	19.46	50.00	-30.54	Line
Mode 1	Pass	QP	160.533k	41.59	65.43	-23.84	Neutral
Mode 1	Pass	AV	160.533k	29.86	55.43	-25.57	Neutral
Mode 1	Pass	QP	199.949k	36.33	63.61	-27.28	Neutral
Mode 1	Pass	AV	199.949k	22.95	53.61	-30.66	Neutral
Mode 1	Pass	QP	231.775k	28.95	62.39	-33.44	Neutral
Mode 1	Pass	AV	231.775k	17.66	52.39	-34.73	Neutral
Mode 1	Pass	QP	523.291k	38.17	56.00	-17.83	Neutral
Mode 1	Pass	AV	523.291k	31.77	46.00	-14.23	Neutral
Mode 1	Pass	QP	2.009M	22.18	56.00	-33.82	Neutral
Mode 1	Pass	AV	2.009M	17.71	46.00	-28.29	Neutral
Mode 1	Pass	QP	17.004M	20.38	60.00	-39.62	Neutral
Mode 1	Pass	AV	17.004M	16.98	50.00	-33.02	Neutral

Conducted Emissions at Powerline_Mode 1



Conducted Emissions at Powerline_Mode 1



**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.15.4_5MHz_Nss1_1TX	1.519M	2.16M	2M16D1D	1.431M	2.124M

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)
802.15.4_5MHz_Nss1_1TX	-	-	-	-
2405MHz	Pass	500k	1.431M	2.124M
2440MHz	Pass	500k	1.469M	2.16M
2475MHz	Pass	500k	1.519M	2.149M

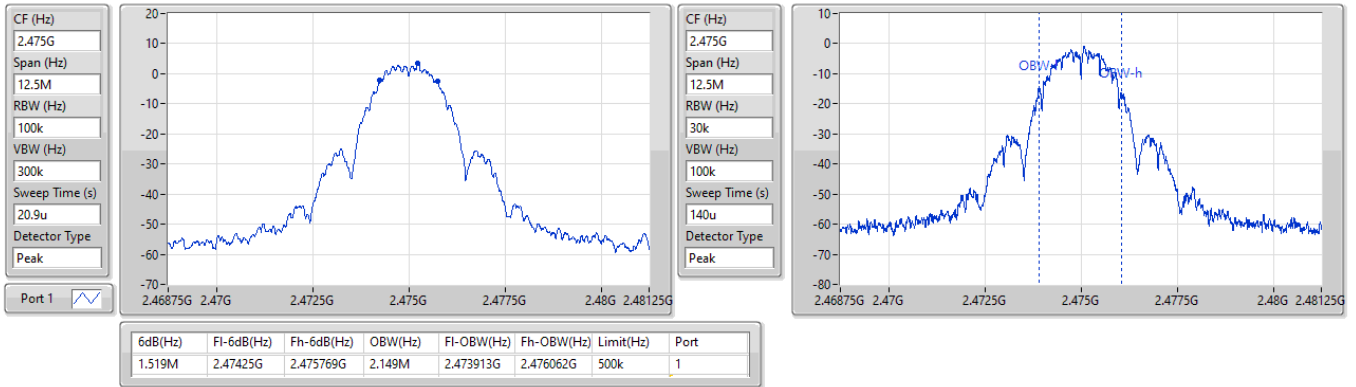
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_802.15.4_5MHz_Nss1_1TX

EBW

2475MHz

29/04/2025





Average Power

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.15.4_5MHz_Nss1_1TX	7.21	0.00526



Average Power

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.15.4_5MHz_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	5.30	7.21	7.21	30.00
2440MHz	Pass	5.30	7.18	7.18	30.00
2475MHz	Pass	5.30	7.09	7.09	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	-
802.15.4_5MHz_Nss1_1TX	-9.75

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.15.4_5MHz_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	5.30	-10.14	-10.14	8.00
2440MHz	Pass	5.30	-9.75	-9.75	8.00
2475MHz	Pass	5.30	-10.09	-10.09	8.00

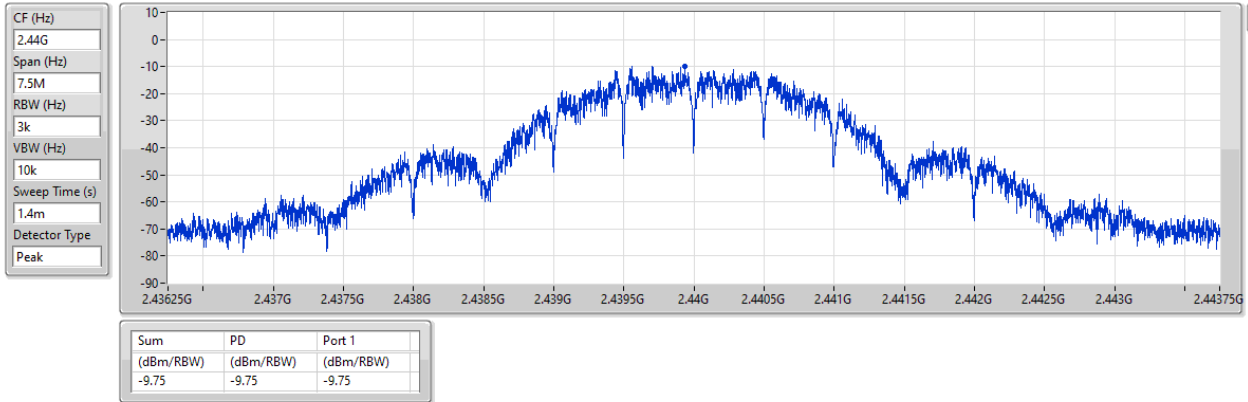
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_802.15.4_5MHz_Nss1_1TX

PSD

2440MHz

29/04/2025



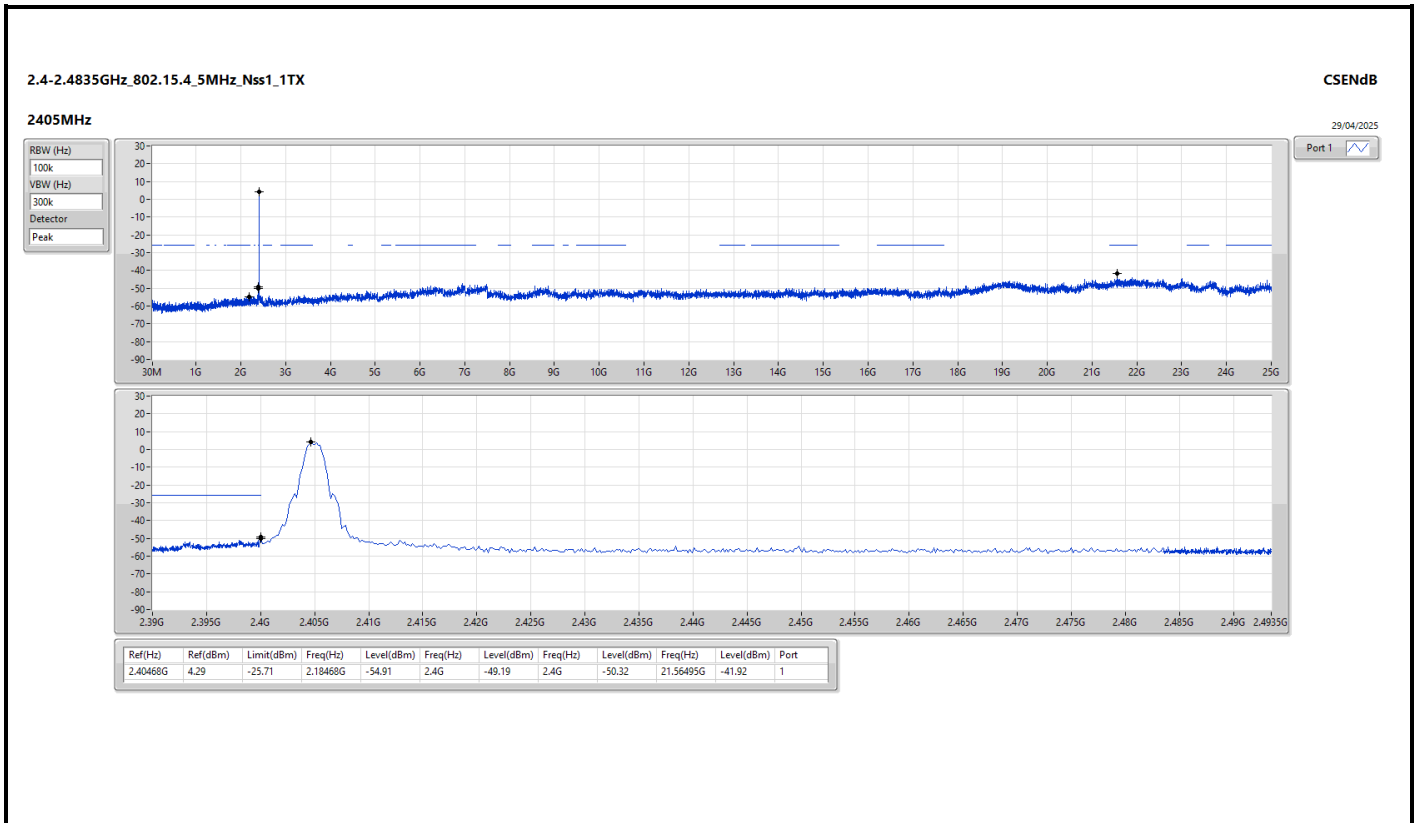


Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.15.4_5MHz_Nss1_1TX	Pass	2.40468G	4.29	-25.71	2.18468G	-54.91	2.4G	-49.19	2.4G	-50.32	21.56495G	-41.92	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)	Port
802.15.4_5MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.40468G	4.29	-25.71	2.18468G	-54.91	2.4G	-49.19	2.4G	-50.32	21.56495G	-41.92	1
2440MHz	Pass	2.40468G	4.29	-25.71	2.06432G	-54.71	2.39588G	-54.91	2.4G	-57.29	21.98694G	-44.01	1
2475MHz	Pass	2.40468G	4.29	-25.71	1.98172G	-54.56	2.39446G	-54.88	2.4G	-56.94	21.82096G	-44.96	1





Summary

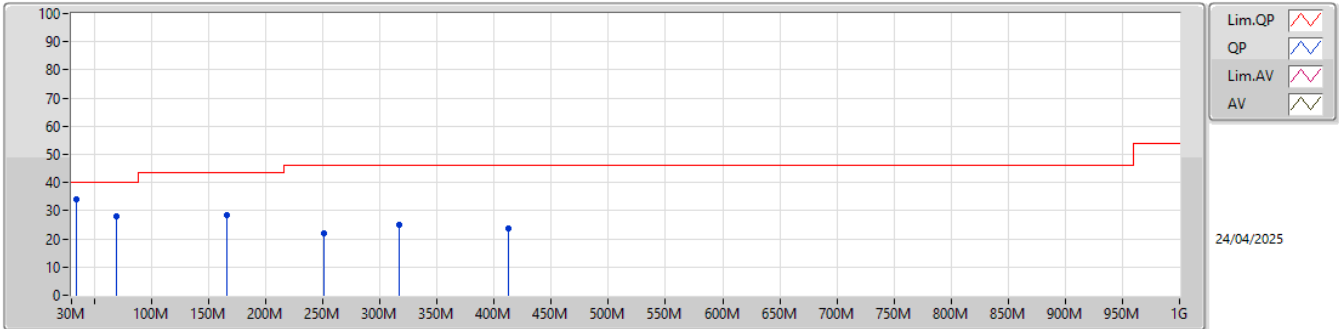
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	QP	33.78M	34.21	40.00	-5.79	3	Vertical	45	1.00

**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	68.8M	27.99	40.00	-12.01	3	Vertical	360	1.00
2440MHz	Pass	PK	165.8M	28.66	43.50	-14.84	3	Vertical	360	1.00
2440MHz	Pass	PK	251.16M	22.16	46.00	-23.84	3	Vertical	360	1.00
2440MHz	Pass	PK	317.12M	24.87	46.00	-21.13	3	Vertical	360	1.00
2440MHz	Pass	PK	412.18M	23.88	46.00	-22.12	3	Vertical	360	1.00
2440MHz	Pass	QP	33.78M	34.21	40.00	-5.79	3	Vertical	45	1.00
2440MHz	Pass	PK	68.8M	30.69	40.00	-9.31	3	Horizontal	0	1.00
2440MHz	Pass	PK	128.94M	29.13	43.50	-14.37	3	Horizontal	0	1.00
2440MHz	Pass	PK	167.74M	32.97	43.50	-10.53	3	Horizontal	0	1.00
2440MHz	Pass	PK	204.6M	26.57	43.50	-16.93	3	Horizontal	0	1.00
2440MHz	Pass	PK	315.18M	28.28	46.00	-17.72	3	Horizontal	0	1.00
2440MHz	Pass	PK	373.38M	23.72	46.00	-22.28	3	Horizontal	0	1.00

2.4-2.4835GHz_802.15.4

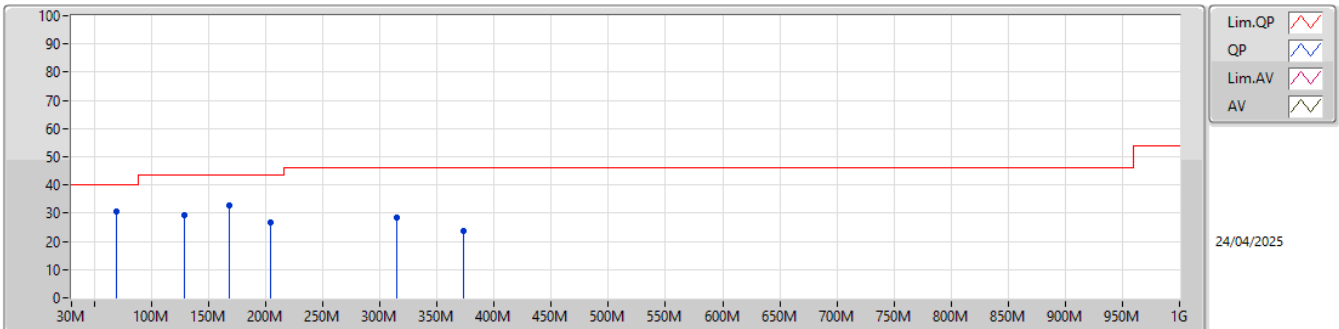
2440MHz_Test Fixture



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)
PK	68.8M	27.99	40.00	-12.01	-15.08	3	Vertical	360	1.00	43.07	11.61	0.62	27.31
PK	165.8M	28.66	43.50	-14.84	-11.01	3	Vertical	360	1.00	39.67	14.98	0.97	26.96
PK	251.16M	22.16	46.00	-23.84	-7.61	3	Vertical	360	1.00	29.77	17.76	1.21	26.58
PK	317.12M	24.87	46.00	-21.13	-6.58	3	Vertical	360	1.00	31.45	18.79	1.35	26.72
PK	412.18M	23.88	46.00	-22.12	-4.55	3	Vertical	360	1.00	28.43	21.41	1.54	27.50
QP	33.78M	34.21	40.00	-5.79	-5.90	3	Vertical	45	1.00	40.11	21.04	0.44	27.38

2.4-2.4835GHz_802.15.4

2440MHz_Test Fixture



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)
PK	68.8M	30.69	40.00	-9.31	-15.08	3	Horizontal	0	1.00	45.77	11.61	0.62	27.31
PK	128.94M	29.13	43.50	-14.37	-9.32	3	Horizontal	0	1.00	38.45	16.94	0.86	27.12
PK	167.74M	32.97	43.50	-10.53	-11.06	3	Horizontal	0	1.00	44.03	14.92	0.98	26.96
PK	204.6M	26.57	43.50	-16.93	-11.25	3	Horizontal	0	1.00	37.82	14.43	1.10	26.78
PK	315.18M	28.28	46.00	-17.72	-6.62	3	Horizontal	0	1.00	34.90	18.74	1.35	26.71
PK	373.38M	23.72	46.00	-22.28	-5.78	3	Horizontal	0	1.00	29.50	19.91	1.47	27.16



Summary

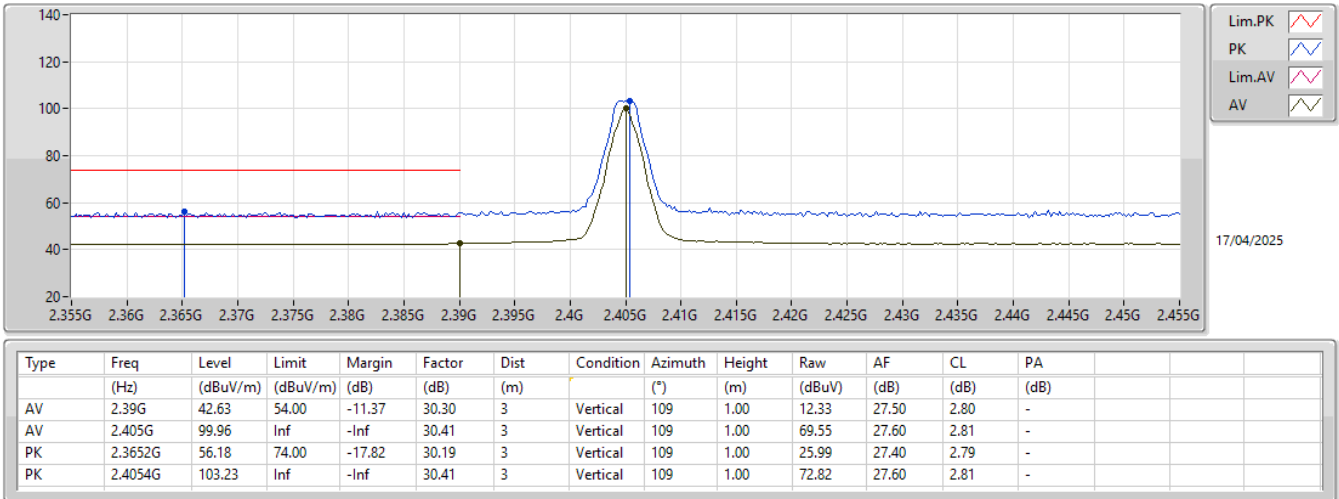
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	12.02722G	48.73	54.00	-5.27	3	Horizontal	301	2.06

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.39G	42.63	54.00	-11.37	3	Vertical	109	1.00
2405MHz	Pass	AV	2.405G	99.96	Inf	-Inf	3	Vertical	109	1.00
2405MHz	Pass	PK	2.3652G	56.18	74.00	-17.82	3	Vertical	109	1.00
2405MHz	Pass	PK	2.4054G	103.23	Inf	-Inf	3	Vertical	109	1.00
2405MHz	Pass	AV	4.8109G	28.28	54.00	-25.72	3	Vertical	161	1.61
2405MHz	Pass	AV	12.02734G	40.68	54.00	-13.32	3	Vertical	171	1.16
2405MHz	Pass	PK	4.80917G	42.79	74.00	-31.21	3	Vertical	161	1.61
2405MHz	Pass	PK	12.02276G	55.14	74.00	-18.86	3	Vertical	171	1.16
2405MHz	Pass	AV	4.81092G	29.00	54.00	-25.00	3	Horizontal	42	1.32
2405MHz	Pass	AV	12.02722G	48.73	54.00	-5.27	3	Horizontal	301	2.06
2405MHz	Pass	PK	4.81095G	42.22	74.00	-31.78	3	Horizontal	42	1.32
2405MHz	Pass	PK	12.02745G	60.54	74.00	-13.46	3	Horizontal	301	2.06
2440MHz	Pass	AV	2.3876G	42.35	54.00	-11.65	3	Vertical	111	1.13
2440MHz	Pass	AV	2.44G	100.73	Inf	-Inf	3	Vertical	111	1.13
2440MHz	Pass	AV	2.4892G	42.76	54.00	-11.24	3	Vertical	111	1.13
2440MHz	Pass	PK	2.3816G	56.26	74.00	-17.74	3	Vertical	111	1.13
2440MHz	Pass	PK	2.4396G	104.16	Inf	-Inf	3	Vertical	111	1.13
2440MHz	Pass	PK	2.4908G	55.78	74.00	-18.22	3	Vertical	111	1.13
2440MHz	Pass	AV	4.87899G	29.09	54.00	-24.91	3	Vertical	212	1.09
2440MHz	Pass	AV	12.19758G	40.09	54.00	-13.91	3	Vertical	30	1.90
2440MHz	Pass	PK	4.88114G	42.46	74.00	-31.54	3	Vertical	212	1.09
2440MHz	Pass	PK	12.19754G	53.21	74.00	-20.79	3	Vertical	30	1.90
2440MHz	Pass	AV	4.87898G	29.56	54.00	-24.44	3	Horizontal	43	1.10
2440MHz	Pass	AV	12.19762G	43.85	54.00	-10.15	3	Horizontal	10	2.04
2440MHz	Pass	PK	4.87905G	42.61	74.00	-31.39	3	Horizontal	43	1.10
2440MHz	Pass	PK	12.19751G	56.43	74.00	-17.57	3	Horizontal	10	2.04
2475MHz	Pass	AV	2.475G	99.68	Inf	-Inf	3	Vertical	112	1.14
2475MHz	Pass	AV	2.484G	43.95	54.00	-10.05	3	Vertical	112	1.14
2475MHz	Pass	PK	2.4746G	102.96	Inf	-Inf	3	Vertical	112	1.14
2475MHz	Pass	PK	2.4844G	57.47	74.00	-16.53	3	Vertical	112	1.14
2475MHz	Pass	AV	4.94906G	29.01	54.00	-24.99	3	Vertical	106	2.37
2475MHz	Pass	AV	12.37279G	39.44	54.00	-14.56	3	Vertical	21	1.73
2475MHz	Pass	PK	4.95022G	42.28	74.00	-31.72	3	Vertical	106	2.37
2475MHz	Pass	PK	12.37273G	53.27	74.00	-20.73	3	Vertical	21	1.73
2475MHz	Pass	AV	4.9509G	28.71	54.00	-25.29	3	Horizontal	346	1.01
2475MHz	Pass	AV	12.37725G	47.10	54.00	-6.90	3	Horizontal	300	2.02
2475MHz	Pass	PK	4.94891G	42.56	74.00	-31.44	3	Horizontal	346	1.01
2475MHz	Pass	PK	12.37262G	59.29	74.00	-14.71	3	Horizontal	300	2.02

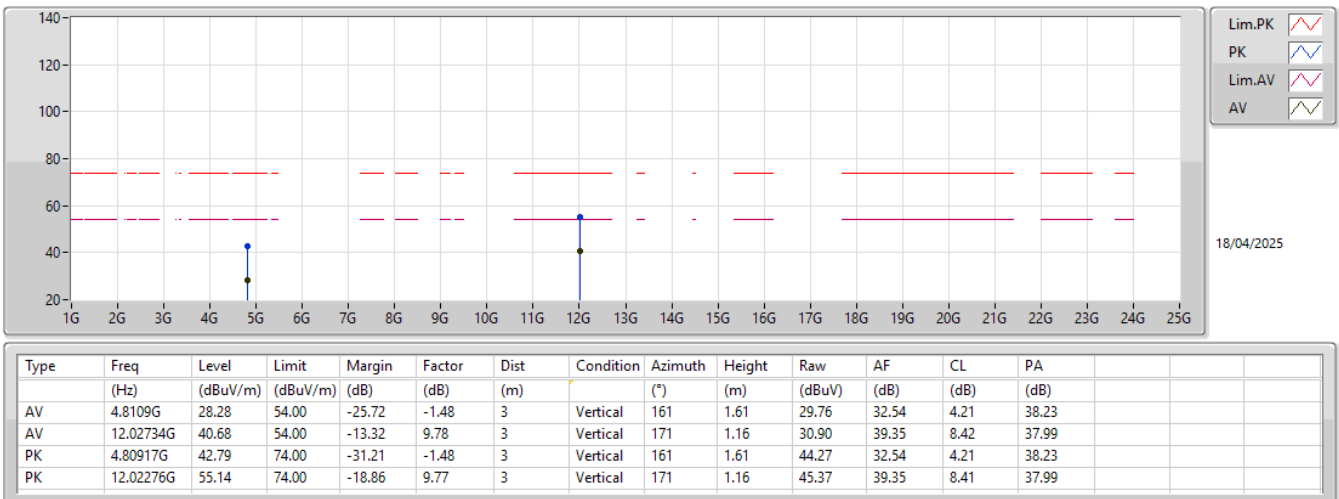
2.4-2.4835GHz_802.15.4

2405MHz_TX



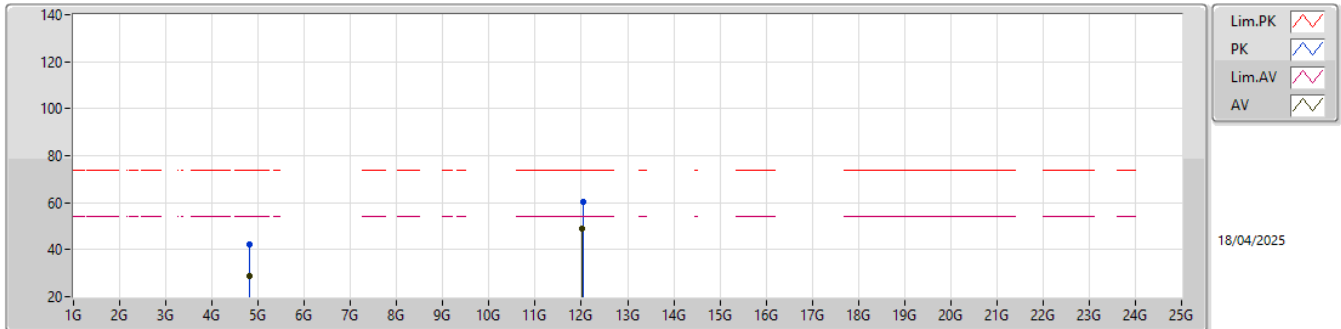
2.4-2.4835GHz_802.15.4

2405MHz_TX



2.4-2.4835GHz_802.15.4

2405MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)				
AV	4.81092G	29.00	54.00	-25.00	-1.48	3	Horizontal	42	1.32	30.48	32.54	4.21	38.23				
AV	12.02722G	48.73	54.00	-5.27	9.78	3	Horizontal	301	2.06	38.95	39.35	8.42	37.99				
PK	4.81095G	42.22	74.00	-31.78	-1.48	3	Horizontal	42	1.32	43.70	32.54	4.21	38.23				
PK	12.02745G	60.54	74.00	-13.46	9.78	3	Horizontal	301	2.06	50.76	39.35	8.42	37.99				



Summary

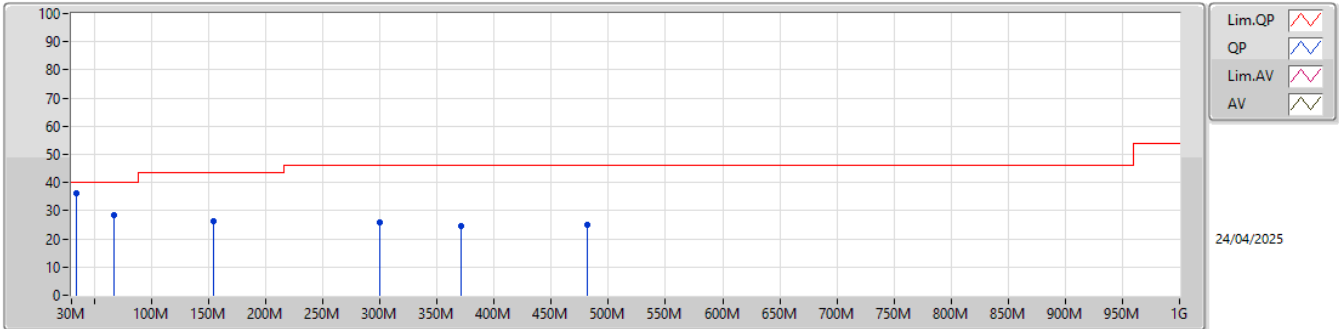
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	PK	33.88M	36.04	40.00	-3.96	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	33.88M	36.04	40.00	-3.96	3	Vertical	360	1.00
2440MHz	Pass	PK	66.86M	28.33	40.00	-11.67	3	Vertical	360	1.00
2440MHz	Pass	PK	154.16M	26.49	43.50	-17.01	3	Vertical	360	1.00
2440MHz	Pass	PK	299.66M	25.99	46.00	-20.01	3	Vertical	360	1.00
2440MHz	Pass	PK	371.44M	24.43	46.00	-21.57	3	Vertical	360	1.00
2440MHz	Pass	PK	482.02M	25.00	46.00	-21.00	3	Vertical	360	1.00
2440MHz	Pass	PK	66.86M	32.82	40.00	-7.18	3	Horizontal	0	1.00
2440MHz	Pass	PK	152.22M	35.56	43.50	-7.94	3	Horizontal	0	1.00
2440MHz	Pass	PK	239.52M	28.39	46.00	-17.61	3	Horizontal	0	1.00
2440MHz	Pass	PK	315.18M	29.13	46.00	-16.87	3	Horizontal	0	1.00
2440MHz	Pass	PK	433.52M	25.55	46.00	-20.45	3	Horizontal	0	1.00
2440MHz	Pass	PK	546.04M	25.92	46.00	-20.08	3	Horizontal	0	1.00

2.4-2.4835GHz_802.15.4

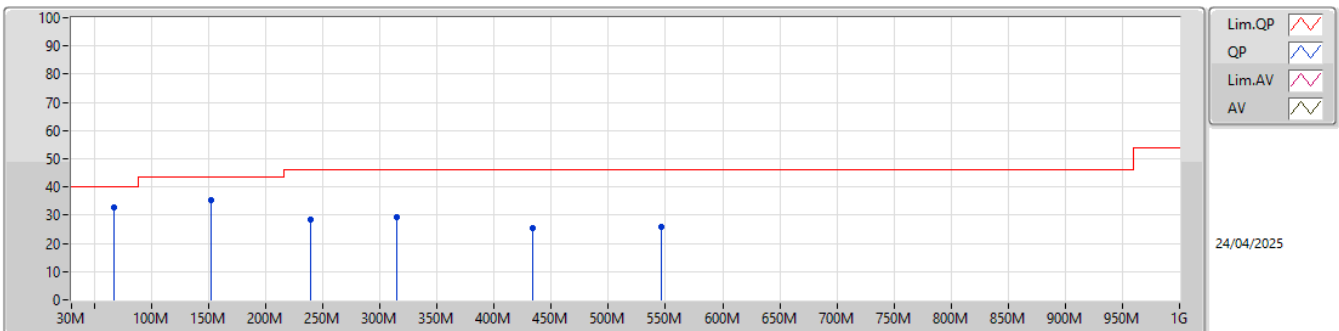
2440MHz_Test Fixture



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)
PK	33.88M	36.04	40.00	-3.96	-5.95	3	Vertical	360	1.00	41.99	20.99	0.44	27.38
PK	66.86M	28.33	40.00	-11.67	-15.23	3	Vertical	360	1.00	43.56	11.48	0.61	27.32
PK	154.16M	26.49	43.50	-17.01	-10.59	3	Vertical	360	1.00	37.08	15.48	0.94	27.01
PK	299.66M	25.99	46.00	-20.01	-6.95	3	Vertical	360	1.00	32.94	18.35	1.31	26.61
PK	371.44M	24.43	46.00	-21.57	-5.79	3	Vertical	360	1.00	30.22	19.88	1.47	27.14
PK	482.02M	25.00	46.00	-21.00	-3.98	3	Vertical	360	1.00	28.98	22.34	1.66	27.98

2.4-2.4835GHz_802.15.4

2440MHz_Test Fixture



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)
PK	66.86M	32.82	40.00	-7.18	-15.23	3	Horizontal	0	1.00	48.05	11.48	0.61	27.32
PK	152.22M	35.56	43.50	-7.94	-10.59	3	Horizontal	0	1.00	46.15	15.50	0.93	27.02
PK	239.52M	28.39	46.00	-17.61	-9.06	3	Horizontal	0	1.00	37.45	16.39	1.18	26.63
PK	315.18M	29.13	46.00	-16.87	-6.62	3	Horizontal	0	1.00	35.75	18.74	1.35	26.71
PK	433.52M	25.55	46.00	-20.45	-4.56	3	Horizontal	0	1.00	30.11	21.51	1.57	27.64
PK	546.04M	25.92	46.00	-20.08	-2.47	3	Horizontal	0	1.00	28.39	23.90	1.74	28.11



Summary

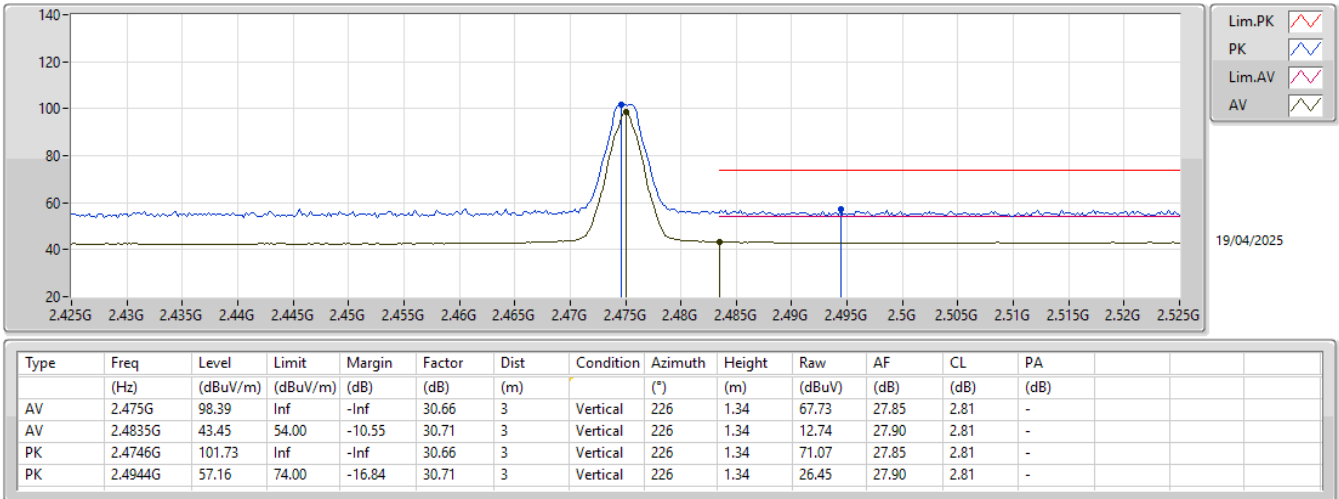
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	2.4835G	43.45	54.00	-10.55	3	Vertical	226	1.34

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.39G	42.49	54.00	-11.51	3	Vertical	78	1.02
2405MHz	Pass	AV	2.405G	98.78	Inf	-Inf	3	Vertical	78	1.02
2405MHz	Pass	PK	2.3648G	56.23	74.00	-17.77	3	Vertical	78	1.02
2405MHz	Pass	PK	2.4044G	102.13	Inf	-Inf	3	Vertical	78	1.02
2405MHz	Pass	AV	2.3832G	42.35	54.00	-11.65	3	Horizontal	60	1.18
2405MHz	Pass	AV	2.405G	96.28	Inf	-Inf	3	Horizontal	60	1.18
2405MHz	Pass	PK	2.365G	56.50	74.00	-17.50	3	Horizontal	60	1.18
2405MHz	Pass	PK	2.4044G	99.64	Inf	-Inf	3	Horizontal	60	1.18
2405MHz	Pass	AV	4.81095G	35.71	54.00	-18.29	3	Vertical	23	1.05
2405MHz	Pass	PK	4.81094G	46.81	74.00	-27.19	3	Vertical	23	1.05
2405MHz	Pass	AV	4.81087G	32.43	54.00	-21.57	3	Horizontal	343	1.46
2405MHz	Pass	PK	4.81095G	44.40	74.00	-29.60	3	Horizontal	343	1.46
2440MHz	Pass	AV	2.3892G	42.32	54.00	-11.68	3	Vertical	200	1.17
2440MHz	Pass	AV	2.44G	100.18	Inf	-Inf	3	Vertical	200	1.17
2440MHz	Pass	AV	2.4968G	42.77	54.00	-11.23	3	Vertical	200	1.17
2440MHz	Pass	PK	2.35G	56.51	74.00	-17.49	3	Vertical	200	1.17
2440MHz	Pass	PK	2.4396G	103.55	Inf	-Inf	3	Vertical	200	1.17
2440MHz	Pass	PK	2.4944G	56.75	74.00	-17.25	3	Vertical	200	1.17
2440MHz	Pass	AV	2.384G	42.31	54.00	-11.69	3	Horizontal	61	1.48
2440MHz	Pass	AV	2.44G	95.80	Inf	-Inf	3	Horizontal	61	1.48
2440MHz	Pass	AV	2.498G	42.80	54.00	-11.20	3	Horizontal	61	1.48
2440MHz	Pass	PK	2.3424G	55.78	74.00	-18.22	3	Horizontal	61	1.48
2440MHz	Pass	PK	2.4396G	99.14	Inf	-Inf	3	Horizontal	61	1.48
2440MHz	Pass	PK	2.484G	55.86	74.00	-18.14	3	Horizontal	61	1.48
2440MHz	Pass	AV	4.87914G	32.64	54.00	-21.36	3	Vertical	26	1.38
2440MHz	Pass	AV	7.31878G	37.98	54.00	-16.02	3	Vertical	279	1.03
2440MHz	Pass	PK	4.881G	44.77	74.00	-29.23	3	Vertical	26	1.38
2440MHz	Pass	PK	7.31841G	51.04	74.00	-22.96	3	Vertical	279	1.03
2440MHz	Pass	AV	4.87909G	31.07	54.00	-22.93	3	Horizontal	300	1.01
2440MHz	Pass	AV	7.31869G	38.21	54.00	-15.79	3	Horizontal	303	1.01
2440MHz	Pass	PK	4.881G	44.21	74.00	-29.79	3	Horizontal	300	1.01
2440MHz	Pass	PK	7.3185G	50.95	74.00	-23.05	3	Horizontal	303	1.01
2475MHz	Pass	AV	2.475G	98.39	Inf	-Inf	3	Vertical	226	1.34
2475MHz	Pass	AV	2.4835G	43.45	54.00	-10.55	3	Vertical	226	1.34
2475MHz	Pass	PK	2.4746G	101.73	Inf	-Inf	3	Vertical	226	1.34
2475MHz	Pass	PK	2.4944G	57.16	74.00	-16.84	3	Vertical	226	1.34
2475MHz	Pass	AV	2.475G	95.87	Inf	-Inf	3	Horizontal	62	1.09
2475MHz	Pass	AV	2.4872G	43.20	54.00	-10.80	3	Horizontal	62	1.09
2475MHz	Pass	PK	2.4744G	99.22	Inf	-Inf	3	Horizontal	62	1.09
2475MHz	Pass	PK	2.4972G	56.99	74.00	-17.01	3	Horizontal	62	1.09
2475MHz	Pass	AV	4.95097G	31.52	54.00	-22.48	3	Vertical	25	2.80
2475MHz	Pass	AV	7.42625G	38.99	54.00	-15.01	3	Vertical	298	2.61
2475MHz	Pass	PK	4.94902G	44.02	74.00	-29.98	3	Vertical	25	2.80
2475MHz	Pass	PK	7.42353G	51.17	74.00	-22.83	3	Vertical	298	2.61
2475MHz	Pass	AV	4.951G	29.66	54.00	-24.34	3	Horizontal	294	1.07
2475MHz	Pass	AV	7.42363G	36.72	54.00	-17.28	3	Horizontal	302	1.01
2475MHz	Pass	PK	4.94925G	42.46	74.00	-31.54	3	Horizontal	294	1.07
2475MHz	Pass	PK	7.42358G	49.56	74.00	-24.44	3	Horizontal	302	1.01

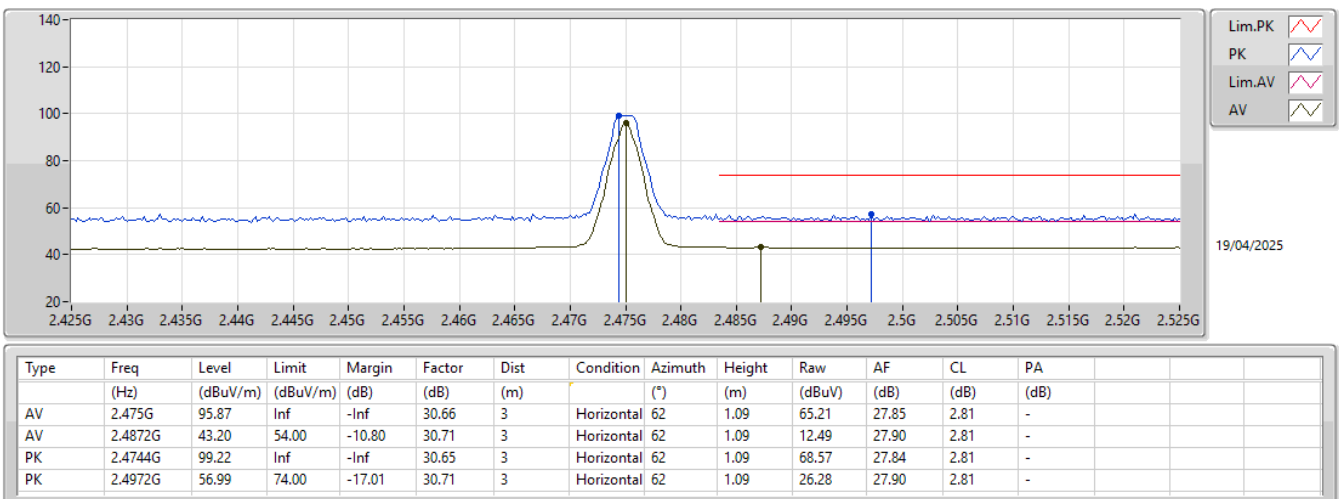
2.4-2.4835GHz_802.15.4

2475MHz_TX



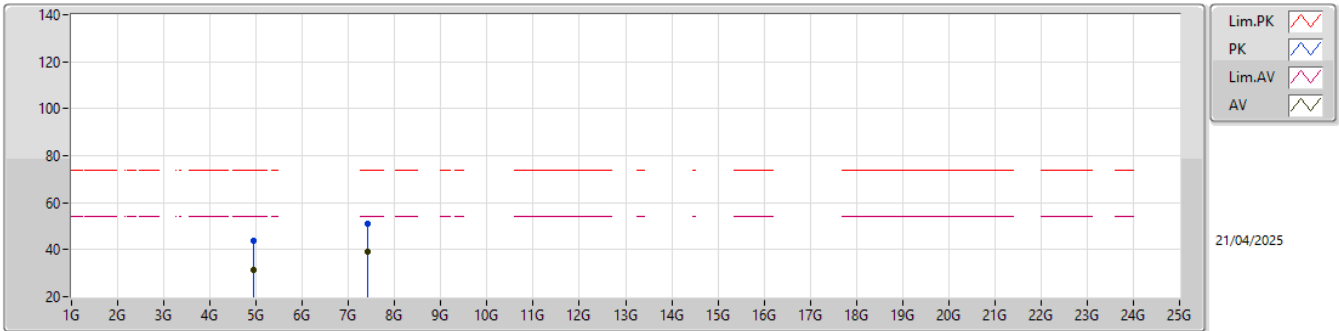
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2475MHz_TX



2.4-2.4835GHz_802.15.4

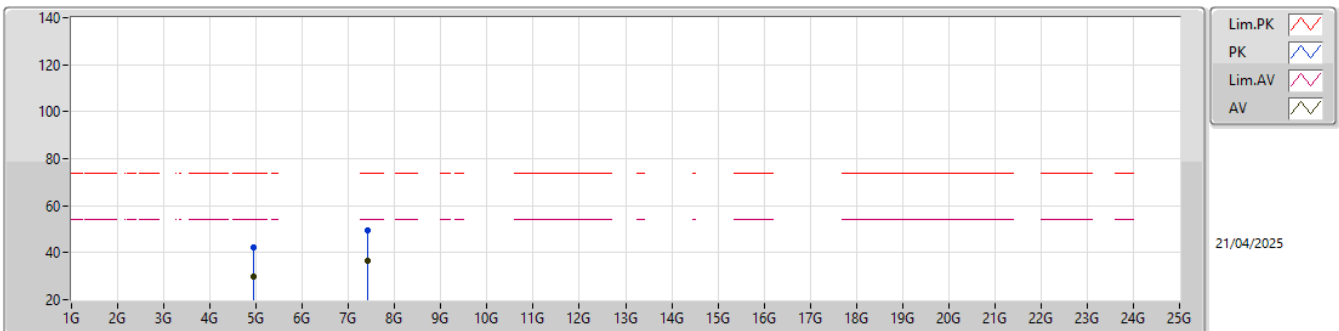
2475MHz_TX



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	4.95097G	31.52	54.00	-22.48	-0.69	3	Vertical	25	2.80	32.21	33.21	4.28	38.18
AV	7.42625G	38.99	54.00	-15.01	6.17	3	Vertical	298	2.61	32.82	36.90	6.09	36.82
PK	4.94902G	44.02	74.00	-29.98	-0.72	3	Vertical	25	2.80	44.74	33.19	4.28	38.19
PK	7.42353G	51.17	74.00	-22.83	6.16	3	Vertical	298	2.61	45.01	36.90	6.09	36.83

2.4-2.4835GHz_802.15.4

2475MHz_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	4.9511G	29.66	54.00	-24.34	-0.69	3	Horizontal	294	1.07	30.35	33.21	4.28	38.18
AV	7.42363G	36.72	54.00	-17.28	6.16	3	Horizontal	302	1.01	30.56	36.90	6.09	36.83
PK	4.94925G	42.46	74.00	-31.54	-0.71	3	Horizontal	294	1.07	43.17	33.20	4.28	38.19
PK	7.42358G	49.56	74.00	-24.44	6.16	3	Horizontal	302	1.01	43.40	36.90	6.09	36.83



Summary

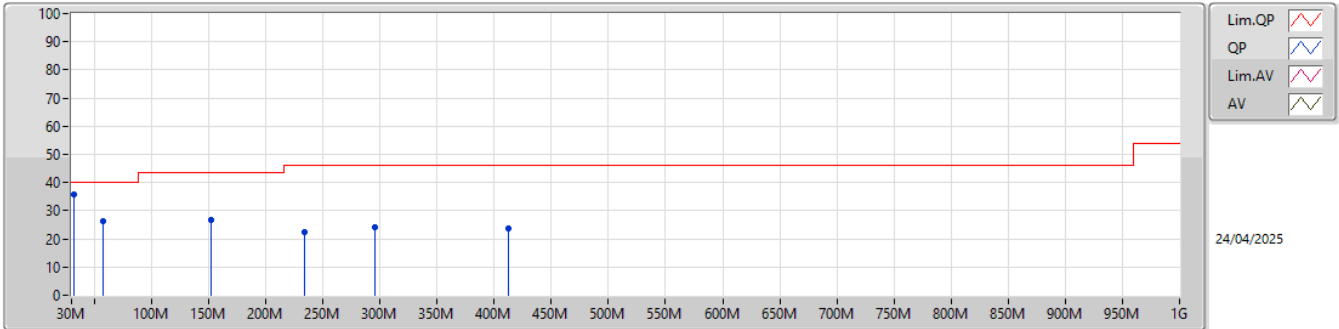
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	PK	31.94M	35.92	40.00	-4.08	3	Vertical	360	1.00

**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	31.94M	35.92	40.00	-4.08	3	Vertical	360	1.00
2440MHz	Pass	PK	57.16M	26.13	40.00	-13.87	3	Vertical	360	1.00
2440MHz	Pass	PK	152.22M	26.85	43.50	-16.65	3	Vertical	360	1.00
2440MHz	Pass	PK	233.7M	22.53	46.00	-23.47	3	Vertical	360	1.00
2440MHz	Pass	PK	295.78M	24.21	46.00	-21.79	3	Vertical	360	1.00
2440MHz	Pass	PK	412.18M	23.84	46.00	-22.16	3	Vertical	360	1.00
2440MHz	Pass	PK	68.8M	34.17	40.00	-5.83	3	Horizontal	0	1.00
2440MHz	Pass	PK	152.22M	35.14	43.50	-8.36	3	Horizontal	0	1.00
2440MHz	Pass	PK	241.46M	29.82	46.00	-16.18	3	Horizontal	0	1.00
2440MHz	Pass	PK	295.78M	25.90	46.00	-20.10	3	Horizontal	0	1.00
2440MHz	Pass	PK	404.42M	25.57	46.00	-20.43	3	Horizontal	0	1.00
2440MHz	Pass	PK	480.08M	31.31	46.00	-14.69	3	Horizontal	0	1.00

2.4-2.4835GHz_802.15.4

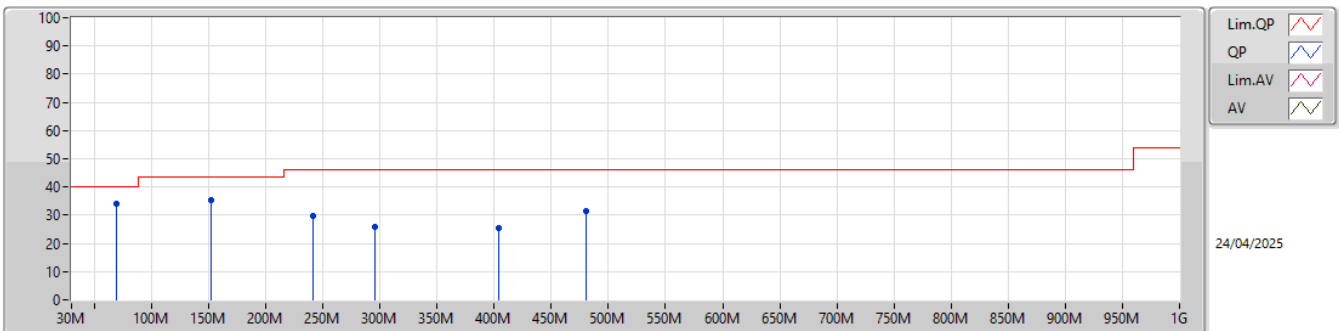
2440MHz_Test Fixture



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)
PK	31.94M	35.92	40.00	-4.08	-4.98	3	Vertical	360	1.00	40.90	21.98	0.43	27.39
PK	57.16M	26.13	40.00	-13.87	-15.30	3	Vertical	360	1.00	41.43	11.46	0.57	27.33
PK	152.22M	26.85	43.50	-16.65	-10.59	3	Vertical	360	1.00	37.44	15.50	0.93	27.02
PK	233.7M	22.53	46.00	-23.47	-9.74	3	Vertical	360	1.00	32.27	15.74	1.17	26.65
PK	295.78M	24.21	46.00	-21.79	-6.99	3	Vertical	360	1.00	31.20	18.32	1.30	26.61
PK	412.18M	23.84	46.00	-22.16	-4.55	3	Vertical	360	1.00	28.39	21.41	1.54	27.50

2.4-2.4835GHz_802.15.4

2440MHz_Test Fixture



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)
PK	68.8M	34.17	40.00	-5.83	-15.08	3	Horizontal	0	1.00	49.25	11.61	0.62	27.31
PK	152.22M	35.14	43.50	-8.36	-10.59	3	Horizontal	0	1.00	45.73	15.50	0.93	27.02
PK	241.46M	29.82	46.00	-16.18	-8.83	3	Horizontal	0	1.00	38.65	16.60	1.19	26.62
PK	295.78M	25.90	46.00	-20.10	-6.99	3	Horizontal	0	1.00	32.89	18.32	1.30	26.61
PK	404.42M	25.57	46.00	-20.43	-4.89	3	Horizontal	0	1.00	30.46	21.03	1.53	27.45
PK	480.08M	31.31	46.00	-14.69	-4.02	3	Horizontal	0	1.00	35.33	22.29	1.66	27.97



Summary

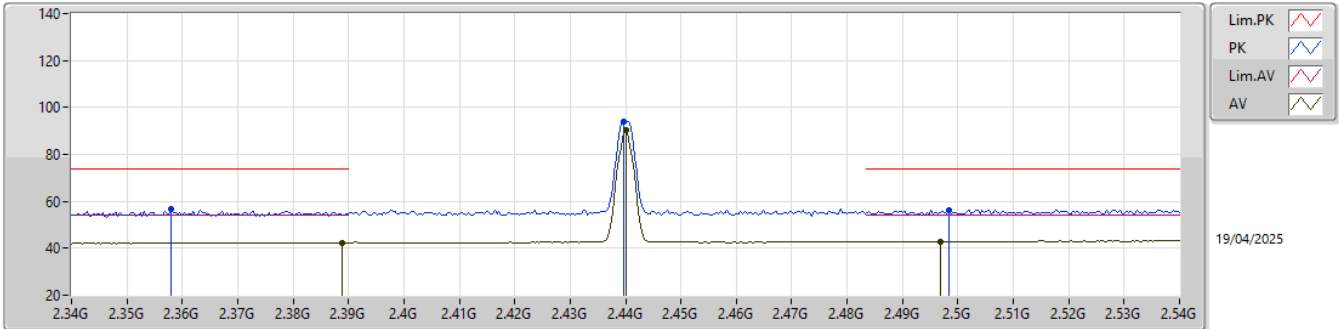
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	2.4968G	42.84	54.00	-11.16	3	Horizontal	25	1.14

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.3842G	42.43	54.00	-11.57	3	Horizontal	19	1.17
2405MHz	Pass	AV	2.405G	90.64	Inf	-Inf	3	Horizontal	19	1.17
2405MHz	Pass	PK	2.3564G	55.81	74.00	-18.19	3	Horizontal	19	1.17
2405MHz	Pass	PK	2.4044G	93.97	Inf	-Inf	3	Horizontal	19	1.17
2405MHz	Pass	AV	4.8109G	30.84	54.00	-23.16	3	Vertical	187	1.05
2405MHz	Pass	PK	4.81097G	42.99	74.00	-31.01	3	Vertical	187	1.05
2405MHz	Pass	AV	4.81088G	30.76	54.00	-23.24	3	Horizontal	311	1.01
2405MHz	Pass	PK	4.81078G	43.21	74.00	-30.79	3	Horizontal	311	1.01
2440MHz	Pass	AV	2.3888G	42.39	54.00	-11.61	3	Horizontal	25	1.14
2440MHz	Pass	AV	2.44G	90.53	Inf	-Inf	3	Horizontal	25	1.14
2440MHz	Pass	AV	2.4968G	42.84	54.00	-11.16	3	Horizontal	25	1.14
2440MHz	Pass	PK	2.358G	56.58	74.00	-17.42	3	Horizontal	25	1.14
2440MHz	Pass	PK	2.4396G	93.87	Inf	-Inf	3	Horizontal	25	1.14
2440MHz	Pass	PK	2.4984G	56.14	74.00	-17.86	3	Horizontal	25	1.14
2440MHz	Pass	AV	4.88097G	27.93	54.00	-26.07	3	Vertical	30	1.36
2440MHz	Pass	AV	7.31873G	38.33	54.00	-15.67	3	Vertical	334	3.00
2440MHz	Pass	PK	4.88081G	41.61	74.00	-32.39	3	Vertical	30	1.36
2440MHz	Pass	PK	7.31842G	51.35	74.00	-22.65	3	Vertical	334	3.00
2440MHz	Pass	AV	4.87904G	29.33	54.00	-24.67	3	Horizontal	308	1.04
2440MHz	Pass	AV	7.31874G	38.01	54.00	-15.99	3	Horizontal	306	1.01
2440MHz	Pass	PK	4.87931G	42.34	74.00	-31.66	3	Horizontal	308	1.04
2440MHz	Pass	PK	7.32151G	51.04	74.00	-22.96	3	Horizontal	306	1.01
2475MHz	Pass	AV	2.475G	91.65	Inf	-Inf	3	Horizontal	27	1.11
2475MHz	Pass	AV	2.4872G	42.78	54.00	-11.22	3	Horizontal	27	1.11
2475MHz	Pass	PK	2.4746G	95.06	Inf	-Inf	3	Horizontal	27	1.11
2475MHz	Pass	PK	2.4868G	57.84	74.00	-16.16	3	Horizontal	27	1.11
2475MHz	Pass	AV	4.949G	28.69	54.00	-25.31	3	Vertical	28	1.16
2475MHz	Pass	AV	7.42623G	38.92	54.00	-15.08	3	Vertical	303	2.86
2475MHz	Pass	PK	4.95046G	42.37	74.00	-31.63	3	Vertical	28	1.16
2475MHz	Pass	PK	7.42645G	51.12	74.00	-22.88	3	Vertical	303	2.86
2475MHz	Pass	AV	4.95095G	29.65	54.00	-24.35	3	Horizontal	306	1.01
2475MHz	Pass	AV	7.4263G	36.02	54.00	-17.98	3	Horizontal	307	1.12
2475MHz	Pass	PK	4.95137G	42.64	74.00	-31.36	3	Horizontal	306	1.01
2475MHz	Pass	PK	7.42651G	49.08	74.00	-24.92	3	Horizontal	307	1.12

2.4-2.4835GHz_802.15.4

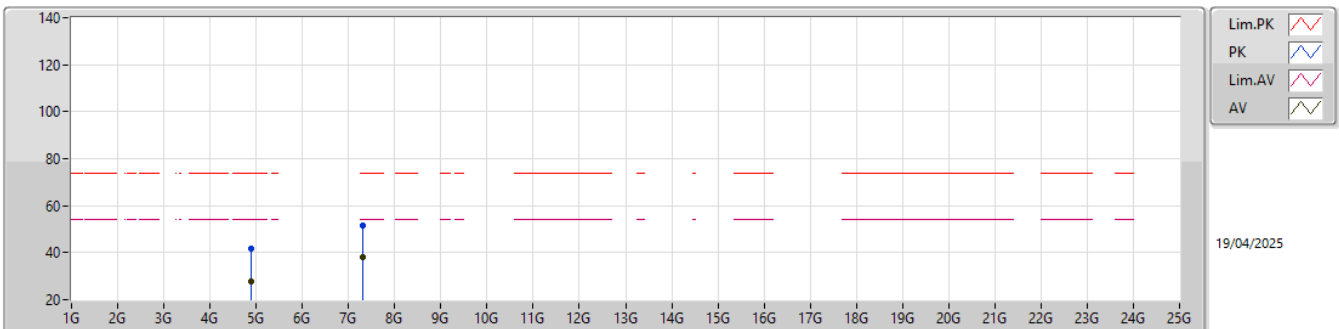
2440MHz_TX



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	2.3888G	42.39	54.00	-11.61	30.29	3	Horizontal	25	1.14	12.10	27.49	2.80	-
AV	2.44G	90.53	Inf	-Inf	30.51	3	Horizontal	25	1.14	60.02	27.70	2.81	-
AV	2.4968G	42.84	54.00	-11.16	30.71	3	Horizontal	25	1.14	12.13	27.90	2.81	-
PK	2.358G	56.58	74.00	-17.42	30.17	3	Horizontal	25	1.14	26.41	27.38	2.79	-
PK	2.4396G	93.87	Inf	-Inf	30.51	3	Horizontal	25	1.14	63.36	27.70	2.81	-
PK	2.4984G	56.14	74.00	-17.86	30.71	3	Horizontal	25	1.14	25.43	27.90	2.81	-

2.4-2.4835GHz_802.15.4

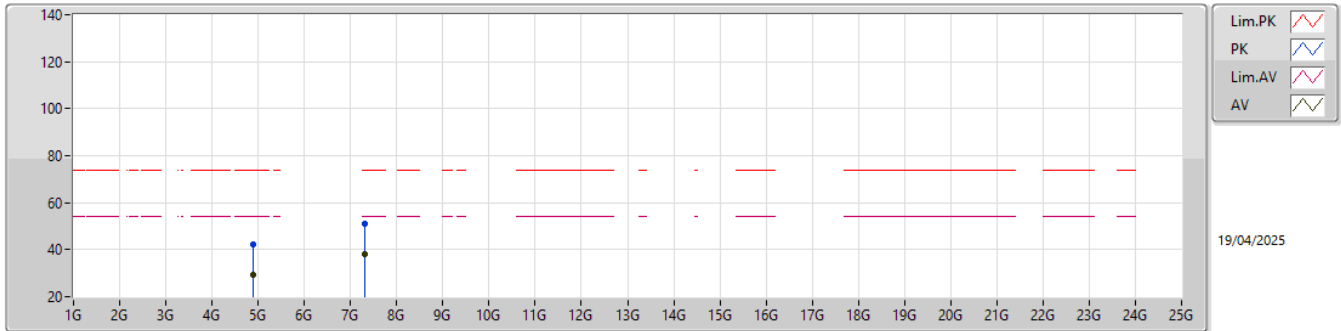
2440MHz_TX



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	4.88097G	27.93	54.00	-26.07	-1.14	3	Vertical	30	1.36	29.07	32.82	4.25	38.21
AV	7.31873G	38.33	54.00	-15.67	6.37	3	Vertical	334	3.00	31.96	37.33	6.00	36.96
PK	4.88081G	41.61	74.00	-32.39	-1.14	3	Vertical	30	1.36	42.75	32.82	4.25	38.21
PK	7.31842G	51.35	74.00	-22.65	6.37	3	Vertical	334	3.00	44.98	37.33	6.00	36.96

2.4-2.4835GHz_802.15.4

2440MHz_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	4.87904G	29.33	54.00	-24.67	-1.14	3	Horizontal	308	1.04	30.47	32.82	4.25	38.21			
AV	7.31874G	38.01	54.00	-15.99	6.37	3	Horizontal	306	1.01	31.64	37.33	6.00	36.96			
PK	4.87931G	42.34	74.00	-31.66	-1.14	3	Horizontal	308	1.04	43.48	32.82	4.25	38.21			
PK	7.32151G	51.04	74.00	-22.96	6.36	3	Horizontal	306	1.01	44.68	37.31	6.01	36.96			



Summary

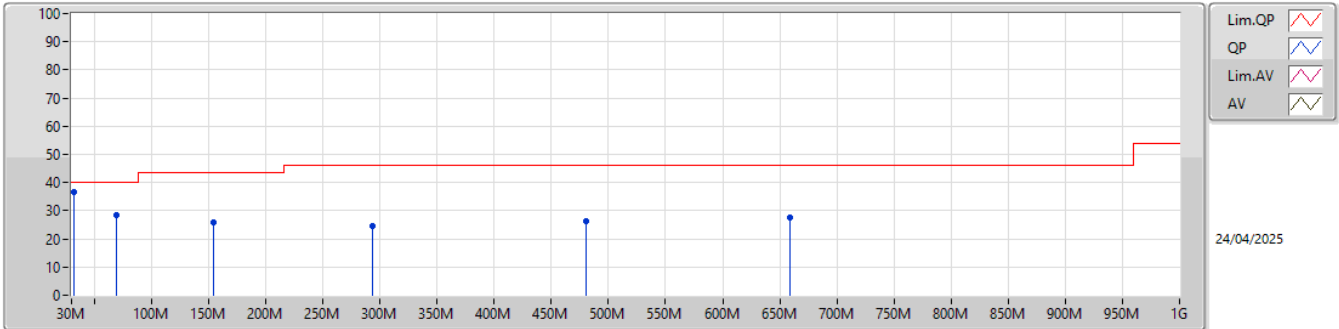
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	PK	31.94M	36.84	40.00	-3.16	3	Vertical	0	1.00

**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	31.94M	36.84	40.00	-3.16	3	Vertical	0	1.00
2440MHz	Pass	PK	68.8M	28.40	40.00	-11.60	3	Vertical	0	1.00
2440MHz	Pass	PK	154.16M	25.70	43.50	-17.80	3	Vertical	0	1.00
2440MHz	Pass	PK	293.84M	24.47	46.00	-21.53	3	Vertical	0	1.00
2440MHz	Pass	PK	480.08M	26.32	46.00	-19.68	3	Vertical	0	1.00
2440MHz	Pass	PK	658.56M	27.40	46.00	-18.60	3	Vertical	0	1.00
2440MHz	Pass	PK	68.8M	34.19	40.00	-5.81	3	Horizontal	360	1.00
2440MHz	Pass	PK	152.22M	36.14	43.50	-7.36	3	Horizontal	360	1.00
2440MHz	Pass	PK	237.58M	30.43	46.00	-15.57	3	Horizontal	360	1.00
2440MHz	Pass	PK	404.42M	26.46	46.00	-19.54	3	Horizontal	360	1.00
2440MHz	Pass	PK	547.98M	25.52	46.00	-20.48	3	Horizontal	360	1.00
2440MHz	Pass	PK	639.16M	26.38	46.00	-19.62	3	Horizontal	360	1.00

2.4-2.4835GHz_802.15.4

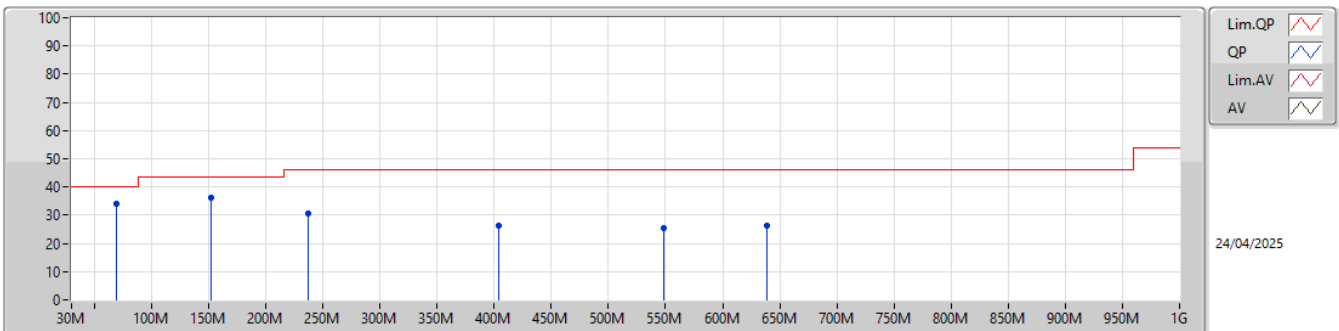
2440MHz_Test fixture



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)
PK	31.94M	36.84	40.00	-3.16	-4.98	3	Vertical	0	1.00	41.82	21.98	0.43	27.39
PK	68.8M	28.40	40.00	-11.60	-15.08	3	Vertical	0	1.00	43.48	11.61	0.62	27.31
PK	154.16M	25.70	43.50	-17.80	-10.59	3	Vertical	0	1.00	36.29	15.48	0.94	27.01
PK	293.84M	24.47	46.00	-21.53	-7.06	3	Vertical	0	1.00	31.53	18.25	1.30	26.61
PK	480.08M	26.32	46.00	-19.68	-4.02	3	Vertical	0	1.00	30.34	22.29	1.66	27.97
PK	658.56M	27.40	46.00	-18.60	-2.08	3	Vertical	0	1.00	29.48	24.20	1.93	28.21

2.4-2.4835GHz_802.15.4

2440MHz_Test fixture



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)
PK	68.8M	34.19	40.00	-5.81	-15.08	3	Horizontal	360	1.00	49.27	11.61	0.62	27.31
PK	152.22M	36.14	43.50	-7.36	-10.59	3	Horizontal	360	1.00	46.73	15.50	0.93	27.02
PK	237.58M	30.43	46.00	-15.57	-9.28	3	Horizontal	360	1.00	39.71	16.17	1.18	26.63
PK	404.42M	26.46	46.00	-19.54	-4.89	3	Horizontal	360	1.00	31.35	21.03	1.53	27.45
PK	547.98M	25.52	46.00	-20.48	-2.38	3	Horizontal	360	1.00	27.90	23.99	1.74	28.11
PK	639.16M	26.38	46.00	-19.62	-1.88	3	Horizontal	360	1.00	28.26	24.43	1.90	28.21



Summary

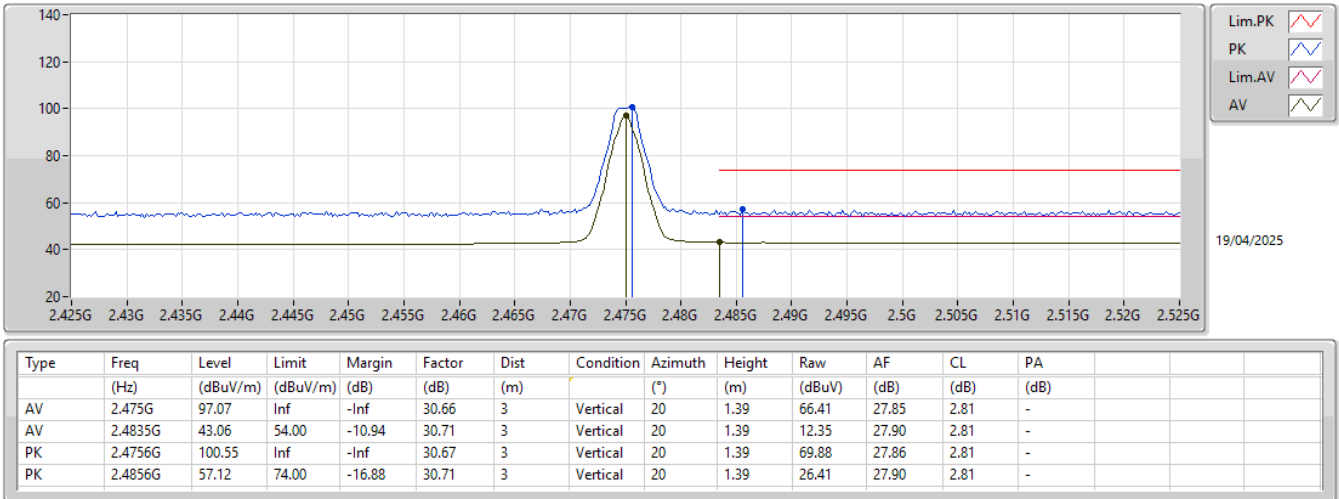
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	2.4835G	43.06	54.00	-10.94	3	Vertical	20	1.39

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
802.15.4	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.39G	42.28	54.00	-11.72	3	Vertical	103	2.95
2405MHz	Pass	AV	2.405G	96.78	Inf	-Inf	3	Vertical	103	2.95
2405MHz	Pass	PK	2.388G	56.65	74.00	-17.35	3	Vertical	103	2.95
2405MHz	Pass	PK	2.4056G	100.27	Inf	-Inf	3	Vertical	103	2.95
2405MHz	Pass	AV	4.80905G	36.58	54.00	-17.42	3	Vertical	44	1.01
2405MHz	Pass	PK	4.80908G	47.89	74.00	-26.11	3	Vertical	44	1.01
2405MHz	Pass	AV	4.80905G	33.69	54.00	-20.31	3	Horizontal	258	1.09
2405MHz	Pass	PK	4.81087G	45.54	74.00	-28.46	3	Horizontal	258	1.09
2440MHz	Pass	AV	2.3892G	42.16	54.00	-11.84	3	Vertical	179	1.27
2440MHz	Pass	AV	2.44G	97.69	Inf	-Inf	3	Vertical	179	1.27
2440MHz	Pass	AV	2.5G	42.64	54.00	-11.36	3	Vertical	179	1.27
2440MHz	Pass	PK	2.388G	56.13	74.00	-17.87	3	Vertical	179	1.27
2440MHz	Pass	PK	2.4404G	101.22	Inf	-Inf	3	Vertical	179	1.27
2440MHz	Pass	PK	2.4996G	56.20	74.00	-17.80	3	Vertical	179	1.27
2440MHz	Pass	AV	4.88091G	35.59	54.00	-18.41	3	Vertical	41	1.33
2440MHz	Pass	AV	7.3213G	38.75	54.00	-15.25	3	Vertical	288	2.54
2440MHz	Pass	PK	4.88099G	46.93	74.00	-27.07	3	Vertical	41	1.33
2440MHz	Pass	PK	7.31867G	51.18	74.00	-22.82	3	Vertical	288	2.54
2440MHz	Pass	AV	4.88095G	34.17	54.00	-19.83	3	Horizontal	260	1.05
2440MHz	Pass	AV	7.32131G	37.72	54.00	-16.28	3	Horizontal	294	1.01
2440MHz	Pass	PK	4.87907G	45.97	74.00	-28.03	3	Horizontal	260	1.05
2440MHz	Pass	PK	7.31856G	50.59	74.00	-23.41	3	Horizontal	294	1.01
2475MHz	Pass	AV	2.475G	97.07	Inf	-Inf	3	Vertical	20	1.39
2475MHz	Pass	AV	2.4835G	43.06	54.00	-10.94	3	Vertical	20	1.39
2475MHz	Pass	PK	2.4756G	100.55	Inf	-Inf	3	Vertical	20	1.39
2475MHz	Pass	PK	2.4856G	57.12	74.00	-16.88	3	Vertical	20	1.39
2475MHz	Pass	AV	4.9509G	33.85	54.00	-20.15	3	Vertical	14	2.61
2475MHz	Pass	AV	7.42623G	40.08	54.00	-13.92	3	Vertical	286	2.86
2475MHz	Pass	PK	4.95118G	45.49	74.00	-28.51	3	Vertical	14	2.61
2475MHz	Pass	PK	7.42347G	52.19	74.00	-21.81	3	Vertical	286	2.86
2475MHz	Pass	AV	4.9509G	31.32	54.00	-22.68	3	Horizontal	262	2.77
2475MHz	Pass	AV	7.42624G	36.83	54.00	-17.17	3	Horizontal	297	1.00
2475MHz	Pass	PK	4.95103G	43.81	74.00	-30.19	3	Horizontal	262	2.77
2475MHz	Pass	PK	7.4266G	50.08	74.00	-23.92	3	Horizontal	297	1.00

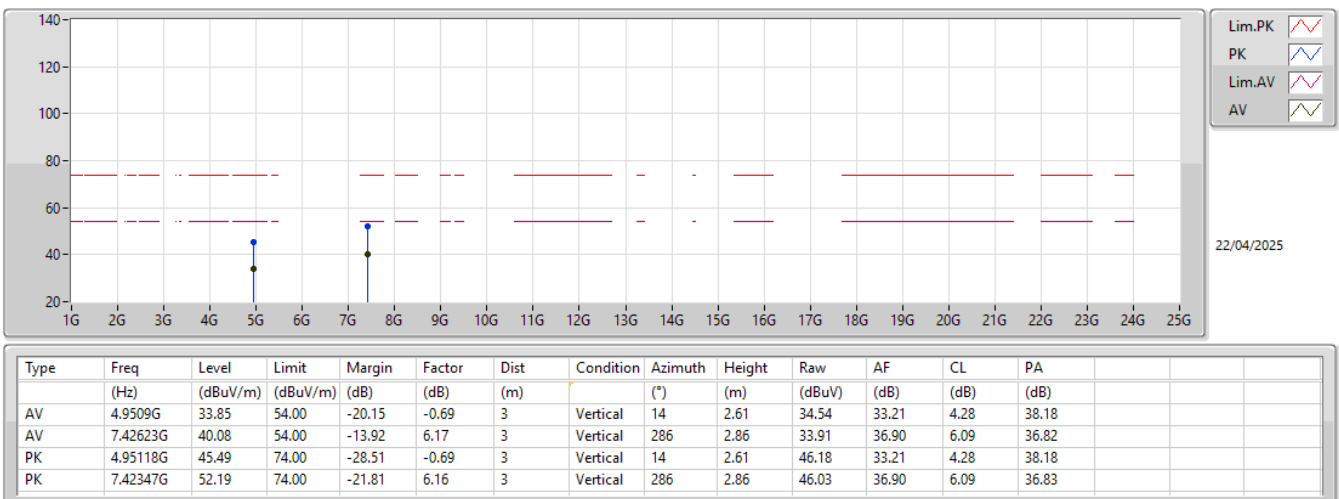
2.4-2.4835GHz_802.15.4

2475MHz_TX



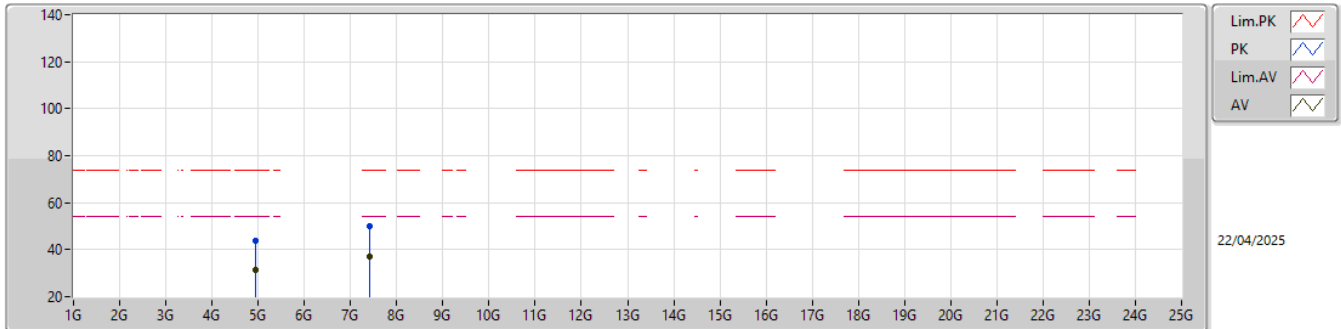
2.4-2.4835GHz_802.15.4

2475MHz_TX



2.4-2.4835GHz_802.15.4

2475MHz_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	4.9509G	31.32	54.00	-22.68	-0.69	3	Horizontal	262	2.77	32.01	33.21	4.28	38.18			
AV	7.42624G	36.83	54.00	-17.17	6.17	3	Horizontal	297	1.00	30.66	36.90	6.09	36.82			
PK	4.95103G	43.81	74.00	-30.19	-0.69	3	Horizontal	262	2.77	44.50	33.21	4.28	38.18			
PK	7.4266G	50.08	74.00	-23.92	6.17	3	Horizontal	297	1.00	43.91	36.90	6.09	36.82			