

FCC Radio Test Report

FCC ID : PPQ-WPB8326
Equipment : Indoor Wi-Fi 7 2x2 Tri-Band Enterprise Access Point
Brand Name : LITEON
Model Name : WPB8326
Applicant : LITE-ON TECHNOLOGY CORP.
22 F., No. 392, Ruiguang Rd., Neihu Dist., Taipei City
114753, Taiwan (R.O.C.)
Manufacturer : LITE-ON TECHNOLOGY CORP.
22 F., No. 392, Ruiguang Rd., Neihu Dist., Taipei City
114753, Taiwan (R.O.C.)
Standard : 47 CFR FCC Part 15.247

The product was received on Apr. 25, 2025, and testing was started from May 23, 2025 and completed on Jun. 10, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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History of this test report

[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: Amber Chiu

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	2405-2480	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	Zigbee	5	1

Note:..

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

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	LITEON	20301-004290A000	PIFA	I-Pex	2.4G+5G+6G	R5
2	LITEON	20301-004290A000	PIFA	I-Pex	2.4G+5G	R1+R2
3	LITEON	20301-004290A000	PIFA	I-Pex	2.4G+5G	R1+R2
4	LITEON	20301-004290A000	PIFA	I-Pex	2.4G+5G+6G	R5
5	LITEON	20301-004290A000	Dipole	I-Pex	6G	R3
6	LITEON	20301-004290A000	Dipole	I-Pex	6G	R3
7	LITEON	20301-004290A000	Dipole	I-Pex	BT/Zigbee/Thread	R4

Ant.	Port	Gain (dBi)									BT/Zigbee /Thread
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	
1	1	4.59	5.49	5.44	5.67	5.81	5.85	5.08	5.37	5.65	-
2	1	3.76	3.47	4.03	4.42	4.75	-	-	-	-	-
3	2	3.29	4.12	4.45	5.58	5.38	-	-	-	-	-
4	2	4.69	5.95	5.05	4.45	5.25	5.29	5.6	6.15	5.34	-
5	1	-	-	-	-	-	3.64	3.74	2.08	3.84	-
6	2	-	-	-	-	-	3.94	4.25	4.06	4.41	-
7	1	-	-	-	-	-	-	-	-	-	6.16

Ant.		Composite Gain (dBi)				
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3
2~3	DG [1SS]	6.25	6.14	6.2	7.28	7.5
	DG [2SS]	3.76	4.12	4.45	5.58	5.38

Note 1: The EUT has seven antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v02 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP542315.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) < **Radio 1** >

Ant. 2 (port 1) and Ant. 3 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 b/g/n/VHT/ax mode (2TX/2RX) < **Radio 5_Scan** >

Ant. 1 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode(2TX/2RX) < **Radio 2** >

Ant. 2 (port 1) and Ant. 3 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax/ mode (2TX/2RX) < **Radio 5_Scan** >

Ant. 1 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For 6GHz function:

For IEEE 802.11 ax/be mode(2TX/2RX) < **Radio 3** >

Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 ax mode(2TX/2RX) < **Radio 5_Scan** >

Ant. 1 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For BT function:

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

Ant. 7 (port 1) could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 7 (port 1) could transmit/receive.

Note 3: Directional gain information

	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter / PoE		
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	0.423	3.74	881.25u	2k

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

1.1.5 Table for Multiple Listing

Table for Explanation of 2nd Source

Object/part or Description	Location	main source	2nd source
Ethernet IC	GU7	Realtek, RTL8251B-CG	Realtek, RTL8251B-VB-CG
DDR	U4	NANYA, NT5AD512M16C4-JR	MICRON, MT40A512M16TB-062E:R

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 C63.10-2020 + Cor.1-2023 + C63.10a-2024

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

- ♦ KDB 558074 D01 v05r02
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Simon Cheng	22.1~23.6°C / 53~58%	10/Jun/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
RF Conducted	TH06-HY	Johnny Yu	22.7~23.1°C / 59~68%	03/Jun/2025
Radiated	03CH25-HY	Rian Chung	21.3~23.4°C / 50~55%	23/May/2025~02/Jun/2025
Radiated (Co-location)	03CH24-HY	Billy Wang	21.4~21.5°C / 50~51%	26/May/2025
Radiated (Co-location)	03CH25-HY	Rian Chung	21.1~24.7°C / 50~52%	01/Jun/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	3.44 dB	Confidence levels of 95%
Conducted Output Power	1.48 dB	Confidence levels of 95%
Bandwidth	0.05 MHz	Confidence levels of 95%
Conducted Emission	1.48 dB	Confidence levels of 95%
Power Spectral Density	1.22 dB	Confidence levels of 95%
Radiated Emission (9 kHz ~ 30 MHz)	2.9 dB	Confidence levels of 95%
Radiated Emission (30 MHz ~ 1 GHz)	5.64 dB	Confidence levels of 95%
Radiated Emission (1 GHz ~ 18 GHz)	5.02 dB	Confidence levels of 95%
Radiated Emission (18 GHz ~ 40 GHz)	5.28 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	PuTTY Release 0.62
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Mode	Power Setting
802.15.4	-
2405MHz	10
2440MHz	10
2480MHz	10

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	PoE 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	PoE Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT		V	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Operating Mode	CTX
1	WLAN 2.4GHz+ WLAN 5GHz+ WLAN 6GHz+Bluetooth
2	WLAN 2.4GHz+ WLAN 5GHz+ WLAN 6GHz+ 802.15.4
Refer to Sporton Test Report No.: FA542315 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

Accessories				
Mount_kit	Brand Name	SYSTEM GIANT	Model Name	none
Screw Kits	Brand Name	LONG FEI	Model Name	none

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

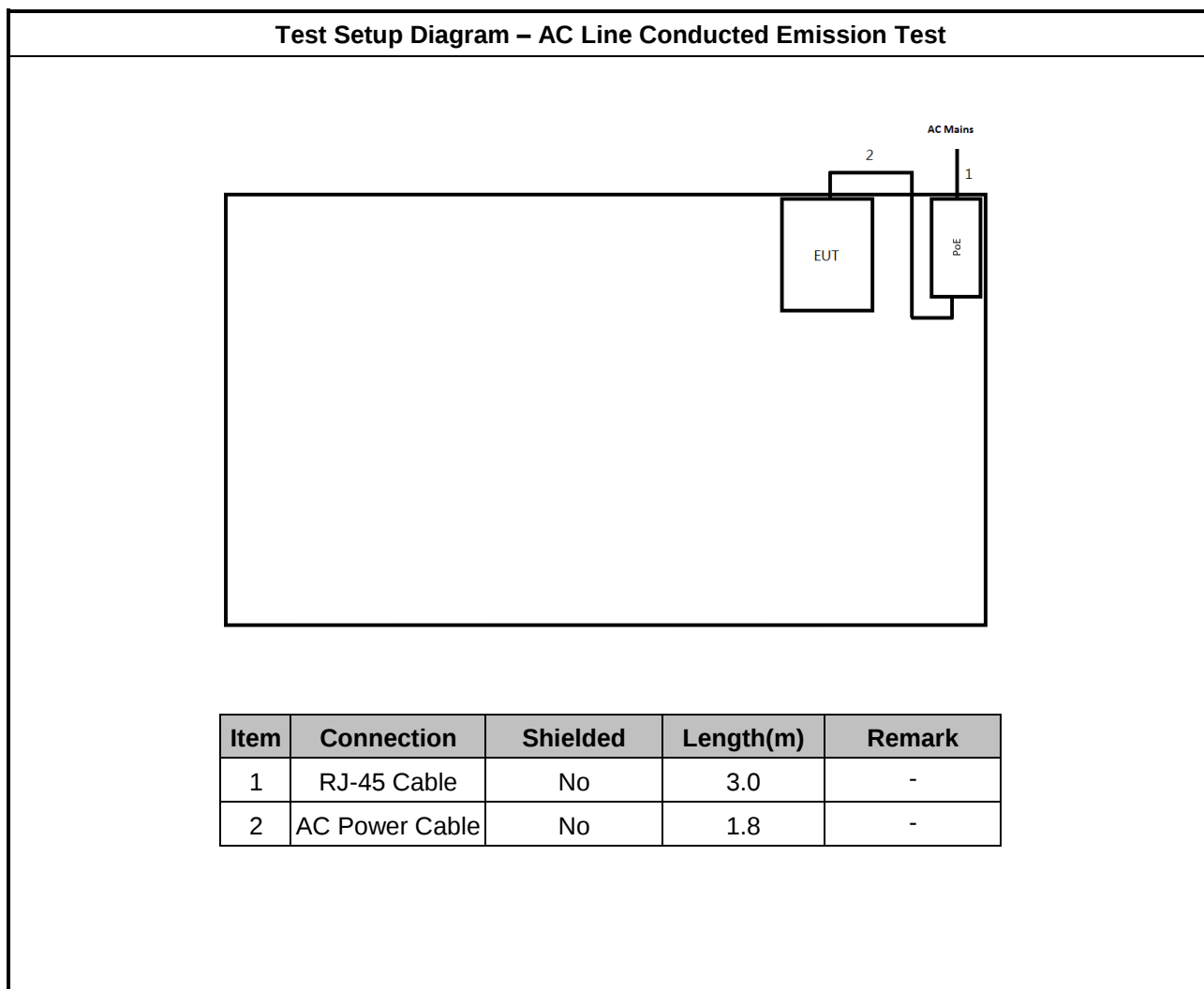
2.4 Support Equipment

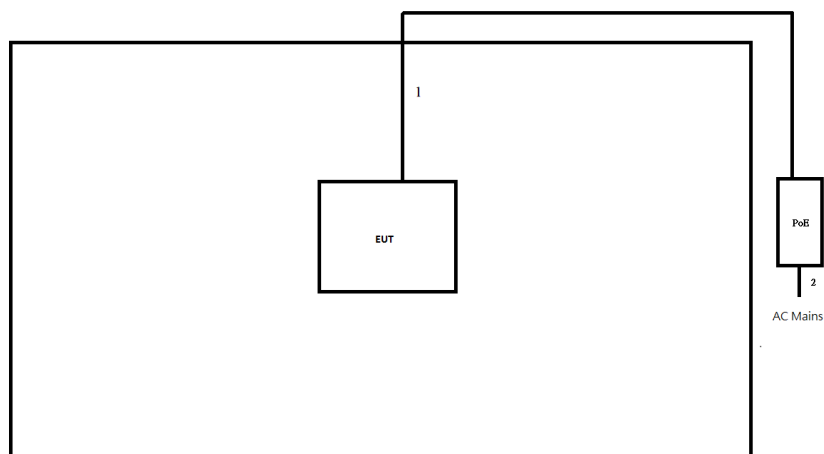
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-45 Cable	Power sync	CLN7VAF0015A	-	-
2	PoE	PHIHONG	POE20U-560(G)	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	PoE	Cambium	NET-P60-56IN	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-45 Cable	Power sync	CLN7VAF0015A	-	-
2	PoE	PHIHONG	POE20U-560(G)	-	Remote
3	AC Power cable	Power sync	TPCMRN0018	-	Remote
4	RJ-45 Cable	Power sync	CAT-6E-10	-	Remote

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length(m)	Remark
1	RJ-45 Cable	No	3.0	-
2	AC Power Cable	No	1.8	-

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

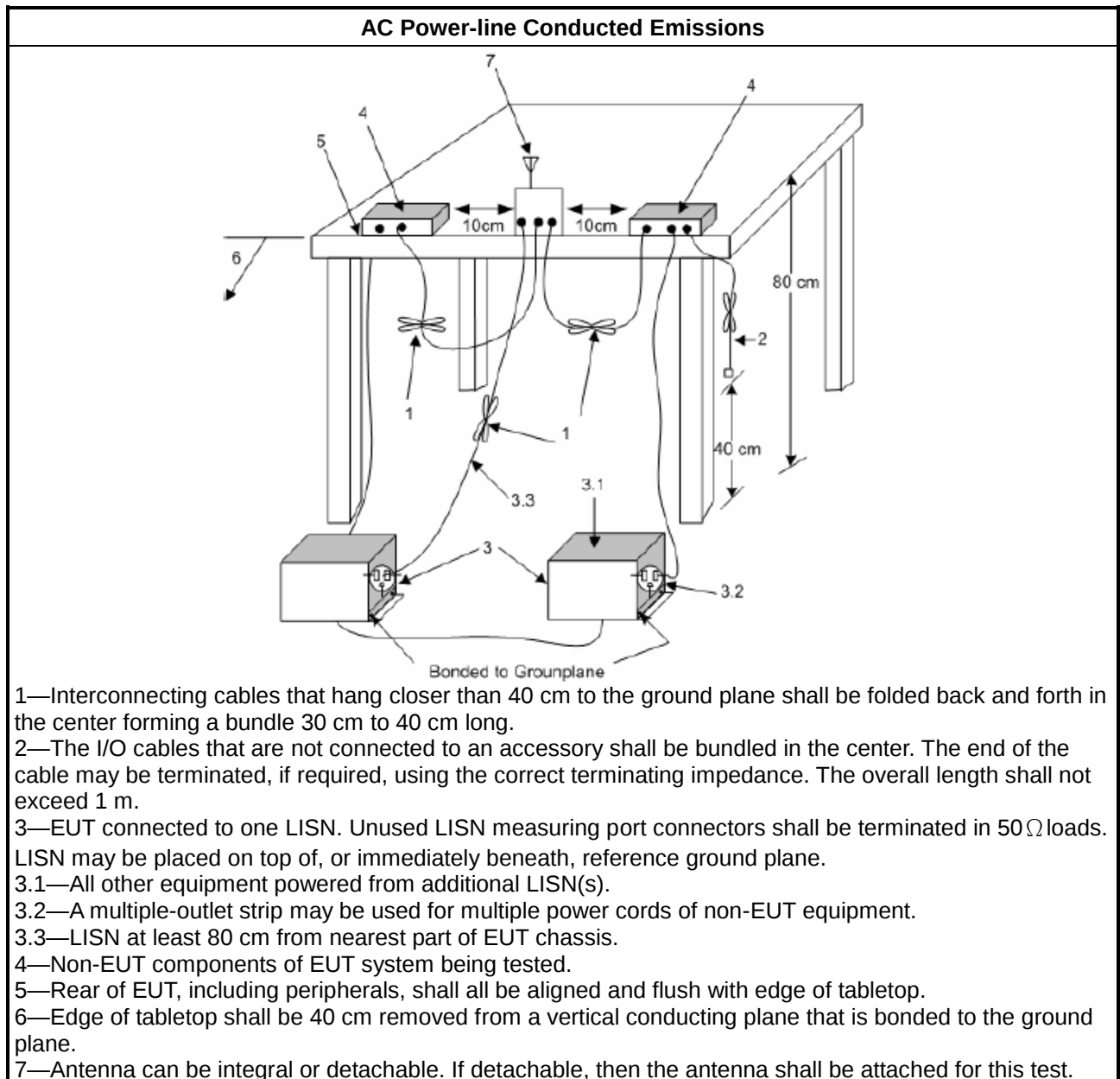
Test Method
☒ Refer as ANSI C63.10, clause 6.2 for AC power-line conducted emissions.

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.

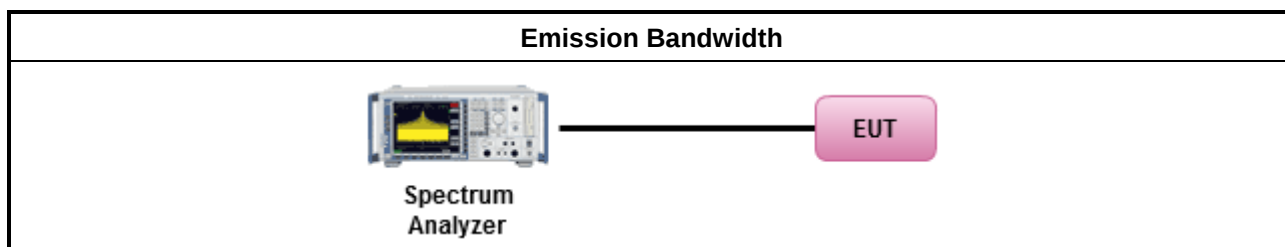
3.2.2 Measuring Instruments

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.	

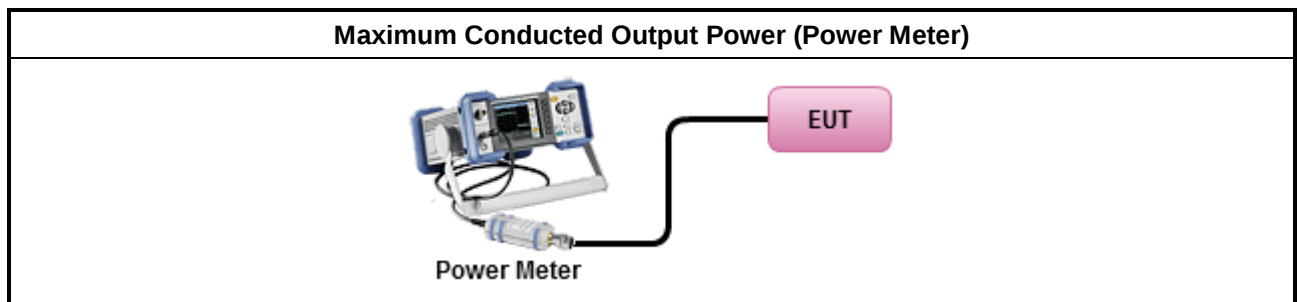
3.3.2 Measuring Instruments

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 integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.2 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

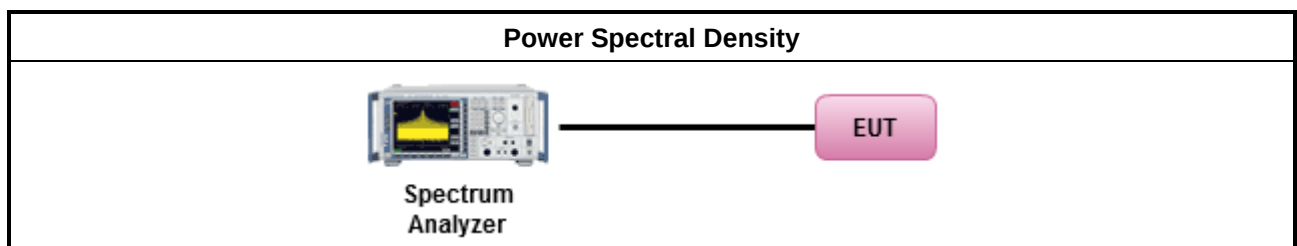
3.4.2 Measuring Instruments

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.	

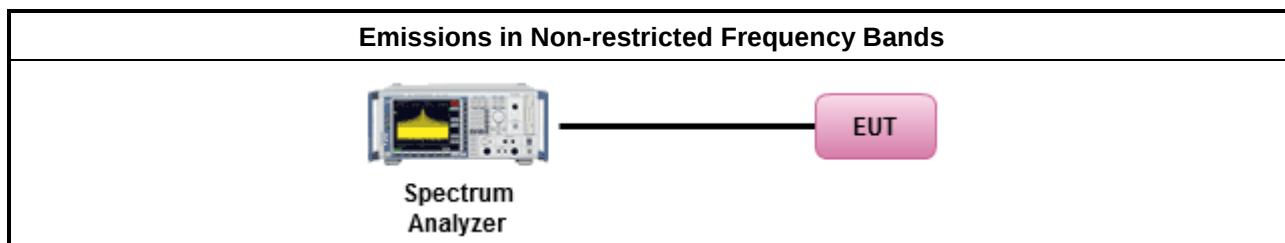
3.5.2 Measuring Instruments

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

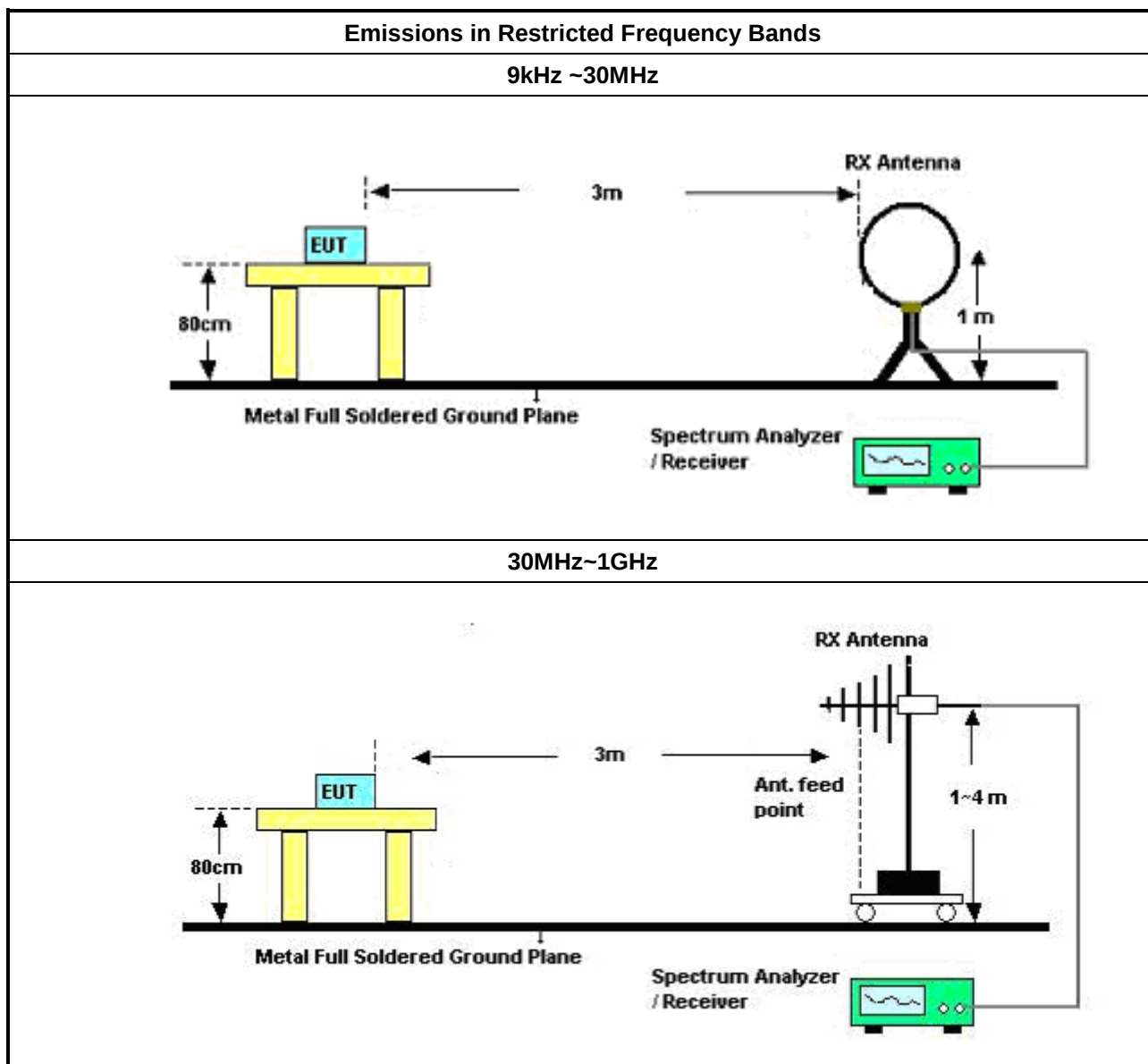
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted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

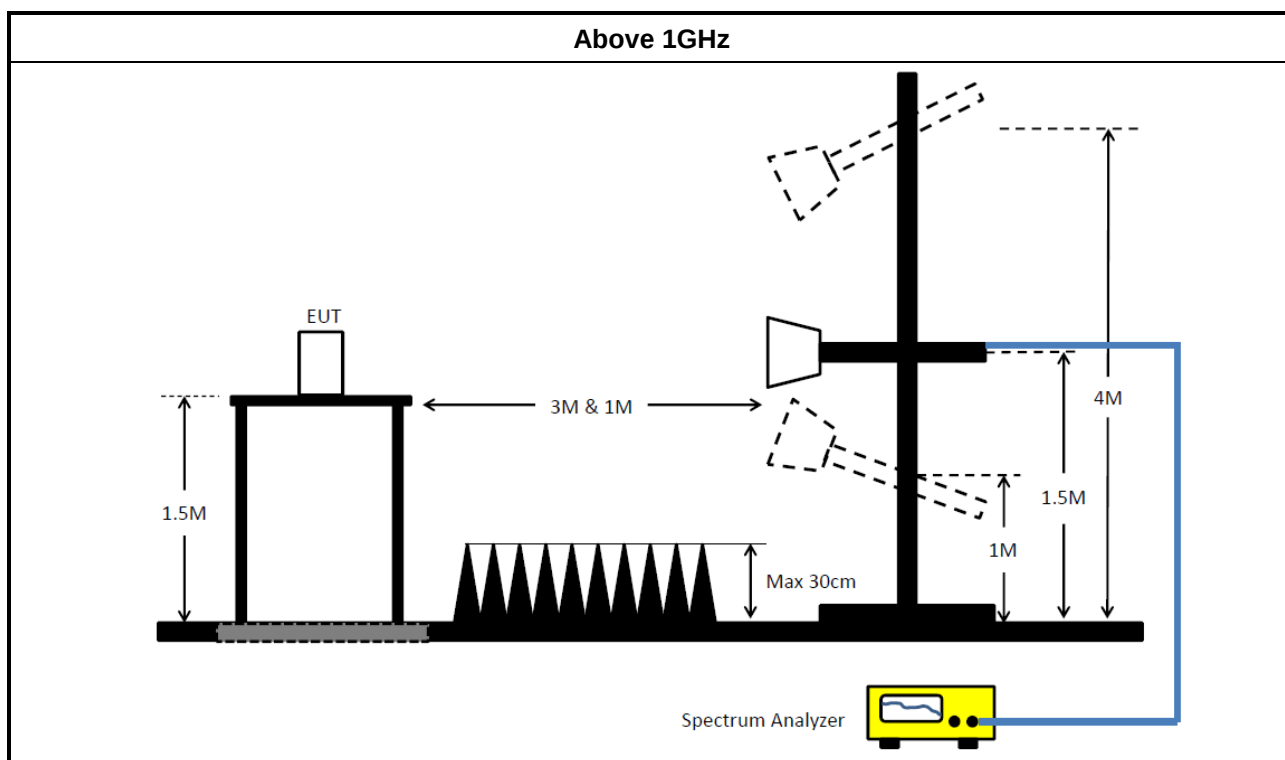
3.6.4 Measurement Results Calculation

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	21/May/2025	20/May/2026
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	FSV 40	101029	10Hz~40GHz	28/Oct/2024	27/Oct/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	28/Mar/2025	27/Mar/2026
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	28/Mar/2025	27/Mar/2026
SENSE-15247_DTS	Sporton	V5.11.23	N/A	N/A	N/A	N/A

**Instrument for Radiated Test (03CH25-HY)**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	30MHz~1GHz 3m	20/Jul/2024	19/Jul/2025
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
ESR7 EMI Test Receiver	ROHDE & SCHWARZ	ESR7	102956	9kHz~3.6GHz	27/Aug/2024	26/Aug/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	20/Mar/2025	19/Mar/2026
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63537/001	30MHz~1GHz	23/May/2025	22/May/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	11/Jul/2024	10/Jul/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	9kHz~1GHz	23/Apr/2025	22/Apr/2026
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	15/Feb/2025	14/Feb/2026
Preamplifier	SGH	PRAMP 903	20230515-1	25MHz~3GHz	21/May/2025	20/May/2026
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	21/May/2025	20/May/2026
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	18/Apr/2025	17/Apr/2026
SENSE-15247-DTS	Sporton	V5.11.23	NA	NA	NA	NA

Instrument for Radiated Test (Co-location 03CH24-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	1GHz~18GHz 3m	30/Jul/2024	29/Jul/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101345	10Hz~44GHz	27/Aug/2024	26/Aug/2025
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
Amplifier	EM	EM01G18G	060870	1GHz ~18GHz	12/Aug/2024	11/Aug/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~40GHz	18/Apr/2025	17/Apr/2026
SENSE-EMI	Sporton	V5.11.6	NA	NA	NA	NA

**Instrument for Radiated Test (Co-location 03CH25-HY)**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	11/Jul/2024	10/Jul/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	15/Feb/2025	14/Feb/2026
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	21/May/2025	20/May/2026
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	18/Apr/2025	17/Apr/2026
SENSE-EMI	Sporton	V5.11.6	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

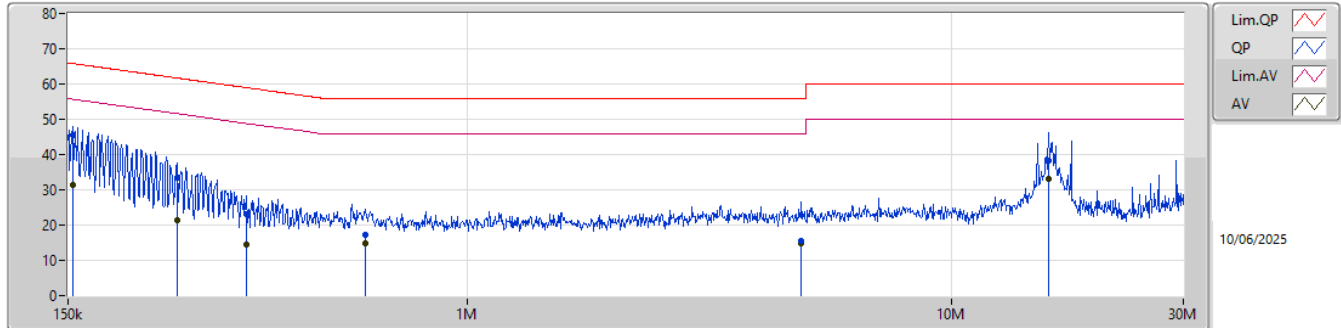
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	16.08M	37.22	50.00	-12.78	Neutral

Result

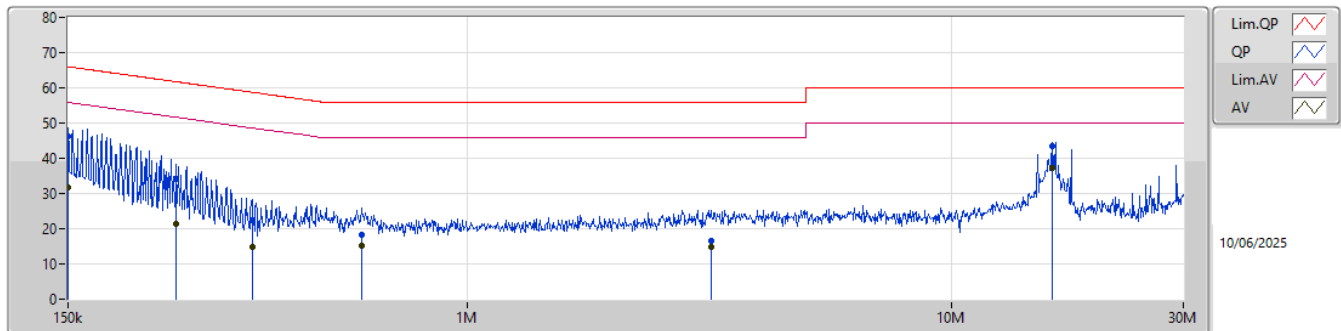
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	153.64k	45.40	65.81	-20.41	Line
Mode 1	Pass	AV	153.64k	31.34	55.81	-24.47	Line
Mode 1	Pass	QP	252.04k	33.38	61.70	-28.32	Line
Mode 1	Pass	AV	252.04k	21.22	51.70	-30.48	Line
Mode 1	Pass	QP	351.05k	23.16	58.94	-35.78	Line
Mode 1	Pass	AV	351.05k	14.50	48.94	-34.44	Line
Mode 1	Pass	QP	616.35k	17.13	56.00	-38.87	Line
Mode 1	Pass	AV	616.35k	14.71	46.00	-31.29	Line
Mode 1	Pass	QP	4.89M	15.63	56.00	-40.37	Line
Mode 1	Pass	AV	4.89M	14.67	46.00	-31.33	Line
Mode 1	Pass	QP	15.83M	38.40	60.00	-21.60	Line
Mode 1	Pass	AV	15.83M	33.13	50.00	-16.87	Line
Mode 1	Pass	QP	150k	46.12	66.00	-19.88	Neutral
Mode 1	Pass	AV	150k	31.86	56.00	-24.14	Neutral
Mode 1	Pass	QP	251.04k	34.00	61.72	-27.72	Neutral
Mode 1	Pass	AV	251.04k	21.35	51.72	-30.37	Neutral
Mode 1	Pass	QP	359.56k	22.34	58.73	-36.39	Neutral
Mode 1	Pass	AV	359.56k	14.86	48.73	-33.87	Neutral
Mode 1	Pass	QP	604.17k	18.35	56.00	-37.65	Neutral
Mode 1	Pass	AV	604.17k	15.28	46.00	-30.72	Neutral
Mode 1	Pass	QP	3.18M	16.67	56.00	-39.33	Neutral
Mode 1	Pass	AV	3.18M	14.79	46.00	-31.21	Neutral
Mode 1	Pass	QP	16.08M	43.32	60.00	-16.68	Neutral
Mode 1	Pass	AV	16.08M	37.22	50.00	-12.78	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	153.64k	45.40	65.81	-20.41	19.61	Line	-	25.79	9.63	0.01	9.97
AV	153.64k	31.34	55.81	-24.47	19.61	Line	-	11.73	9.63	0.01	9.97
QP	252.04k	33.38	61.70	-28.32	19.62	Line	-	13.76	9.63	0.02	9.97
AV	252.04k	21.22	51.70	-30.48	19.62	Line	-	1.60	9.63	0.02	9.97
QP	351.05k	23.16	58.94	-35.78	19.64	Line	-	3.52	9.63	0.03	9.98
AV	351.05k	14.50	48.94	-34.44	19.64	Line	-	-5.14	9.63	0.03	9.98
QP	616.35k	17.13	56.00	-38.87	19.65	Line	-	-2.52	9.63	0.04	9.98
AV	616.35k	14.71	46.00	-31.29	19.65	Line	-	-4.94	9.63	0.04	9.98
QP	4.89M	15.63	56.00	-40.37	19.76	Line	-	-4.13	9.69	0.09	9.98
AV	4.89M	14.67	46.00	-31.33	19.76	Line	-	-5.09	9.69	0.09	9.98
QP	15.83M	38.40	60.00	-21.60	20.05	Line	-	18.35	9.79	0.28	9.98
AV	15.83M	33.13	50.00	-16.87	20.05	Line	-	13.08	9.79	0.28	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	150k	46.12	66.00	-19.88	19.71	Neutral	-	26.41	9.73	0.01	9.97
AV	150k	31.86	56.00	-24.14	19.71	Neutral	-	12.15	9.73	0.01	9.97
QP	251.04k	34.00	61.72	-27.72	19.71	Neutral	-	14.29	9.72	0.02	9.97
AV	251.04k	21.35	51.72	-30.37	19.71	Neutral	-	1.64	9.72	0.02	9.97
QP	359.56k	22.34	58.73	-36.39	19.72	Neutral	-	2.62	9.71	0.03	9.98
AV	359.56k	14.86	48.73	-33.87	19.72	Neutral	-	-4.86	9.71	0.03	9.98
QP	604.17k	18.35	56.00	-37.65	19.73	Neutral	-	-1.38	9.71	0.04	9.98
AV	604.17k	15.28	46.00	-30.72	19.73	Neutral	-	-4.45	9.71	0.04	9.98
QP	3.18M	16.67	56.00	-39.33	19.79	Neutral	-	-3.12	9.77	0.04	9.98
AV	3.18M	14.79	46.00	-31.21	19.79	Neutral	-	-5.00	9.77	0.04	9.98
QP	16.08M	43.32	60.00	-16.68	20.31	Neutral	-	23.01	10.05	0.28	9.98
AV	16.08M	37.22	50.00	-12.78	20.31	Neutral	-	16.91	10.05	0.28	9.98

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.15.4_5MHz_Nss1_1TX	1.75M	2.286M	2M29D1D	1.65M	2.23M

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	1.75M	2.23M
2440MHz	Pass	500k	1.738M	2.261M
2480MHz	Pass	500k	1.65M	2.286M

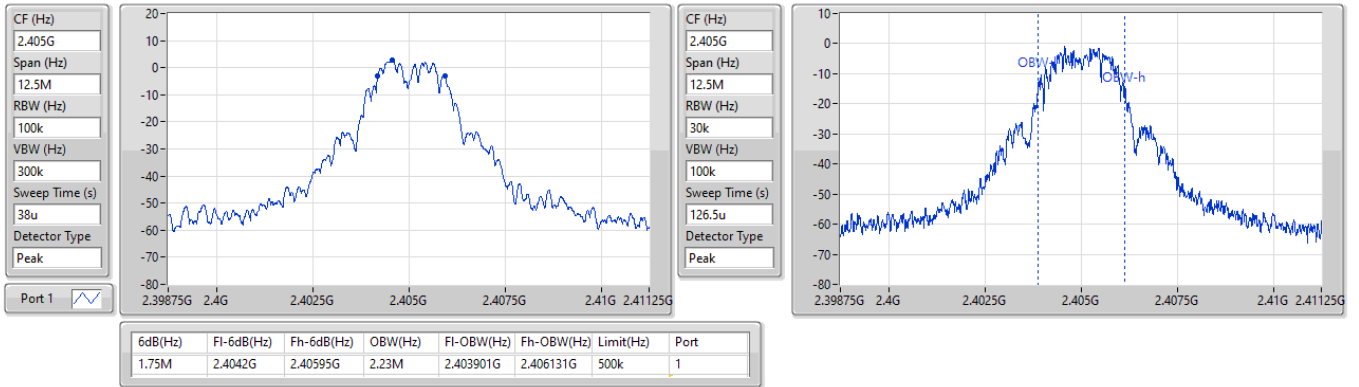
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_802.15.4_5MHz_Nss1_1TX

EBW

2405MHz

03/06/2025





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.15.4_5MHz_Nss1_1TX	8.77	0.00753



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.15.4_5MHz_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	6.16	8.77	8.77	29.84
2440MHz	Pass	6.16	8.67	8.67	29.84
2480MHz	Pass	6.16	8.57	8.57	29.84

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	-6.06

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	6.16	-6.06	-6.06	7.84
2440MHz	Pass	6.16	-6.22	-6.22	7.84
2480MHz	Pass	6.16	-6.31	-6.31	7.84

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.



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.15.4_5MHz_Nss1_1TX	Pass	2.40484G	6.51	-23.49	883.05M	-55.76	2.39988G	-49.50	2.4G	-49.56	2.5025G	-54.93	16.92938G	-41.90	1



Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.15.4_5MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.40484G	6.51	-23.49	883.05M	-55.76	2.39988G	-49.50	2.4G	-49.56	2.5025G	-54.93	16.92938G	-41.90	1
2440MHz	Pass	2.40484G	6.51	-23.49	904.2M	-56.32	2.39864G	-54.47	2.4G	-57.24	2.50138G	-54.55	23.29589G	-41.54	1
2480MHz	Pass	2.40484G	6.51	-23.49	2.19905G	-56.18	2.39512G	-54.43	2.4G	-55.49	2.50178G	-54.52	24.59506G	-42.08	1

2.4-2.4835GHz_802.15.4_Nss1_1TX

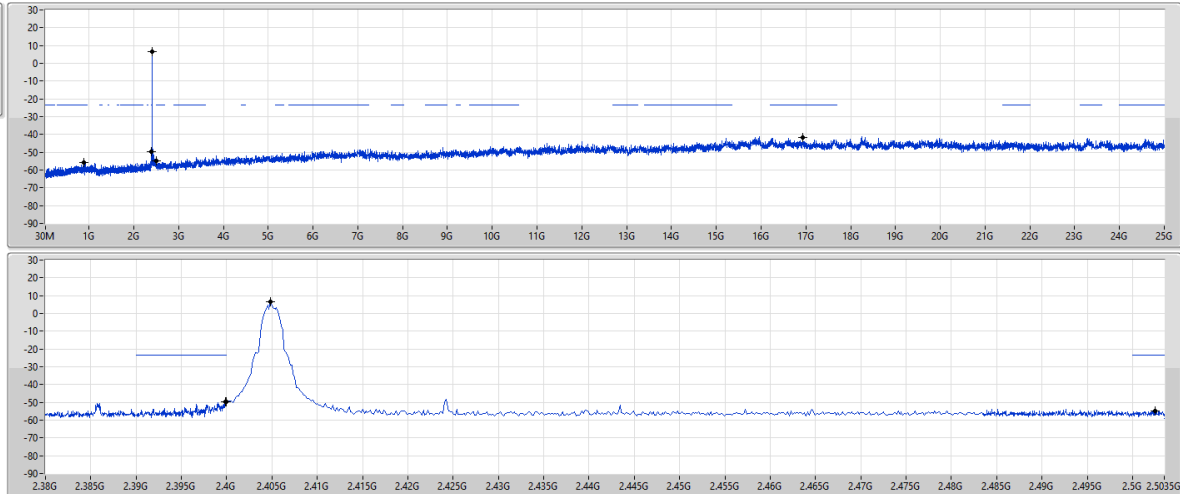
CSEndB

2405MHz

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

17/07/2025

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40484G	6.51	-23.49	883.05M	-55.76	2.39988G	-49.50	2.4G	-49.56	2.5025G	-54.93	16.92938G	-41.90	1



Summary

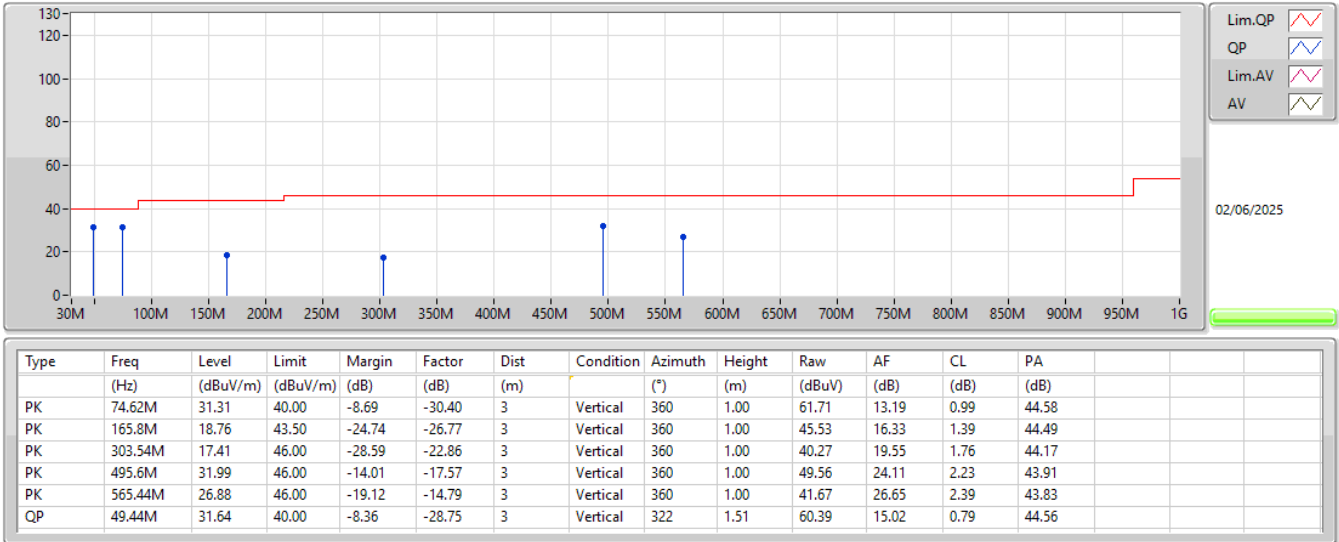
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	QP	49.44M	31.64	40.00	-8.36	3	Vertical	322	1.51

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	74.62M	31.31	40.00	-8.69	3	Vertical	360	1.00
2440MHz	Pass	PK	165.8M	18.76	43.50	-24.74	3	Vertical	360	1.00
2440MHz	Pass	PK	303.54M	17.41	46.00	-28.59	3	Vertical	360	1.00
2440MHz	Pass	PK	495.6M	31.99	46.00	-14.01	3	Vertical	360	1.00
2440MHz	Pass	PK	565.44M	26.88	46.00	-19.12	3	Vertical	360	1.00
2440MHz	Pass	QP	49.44M	31.64	40.00	-8.36	3	Vertical	322	1.51
2440MHz	Pass	PK	74.62M	27.28	40.00	-12.72	3	Horizontal	0	1.00
2440MHz	Pass	PK	90.14M	28.43	43.50	-15.07	3	Horizontal	0	1.00
2440MHz	Pass	PK	165.8M	20.75	43.50	-22.75	3	Horizontal	0	1.00
2440MHz	Pass	PK	497.54M	26.50	46.00	-19.50	3	Horizontal	0	1.00
2440MHz	Pass	PK	613.94M	28.62	46.00	-17.38	3	Horizontal	0	1.00
2440MHz	Pass	PK	846.74M	34.13	46.00	-11.87	3	Horizontal	0	1.00

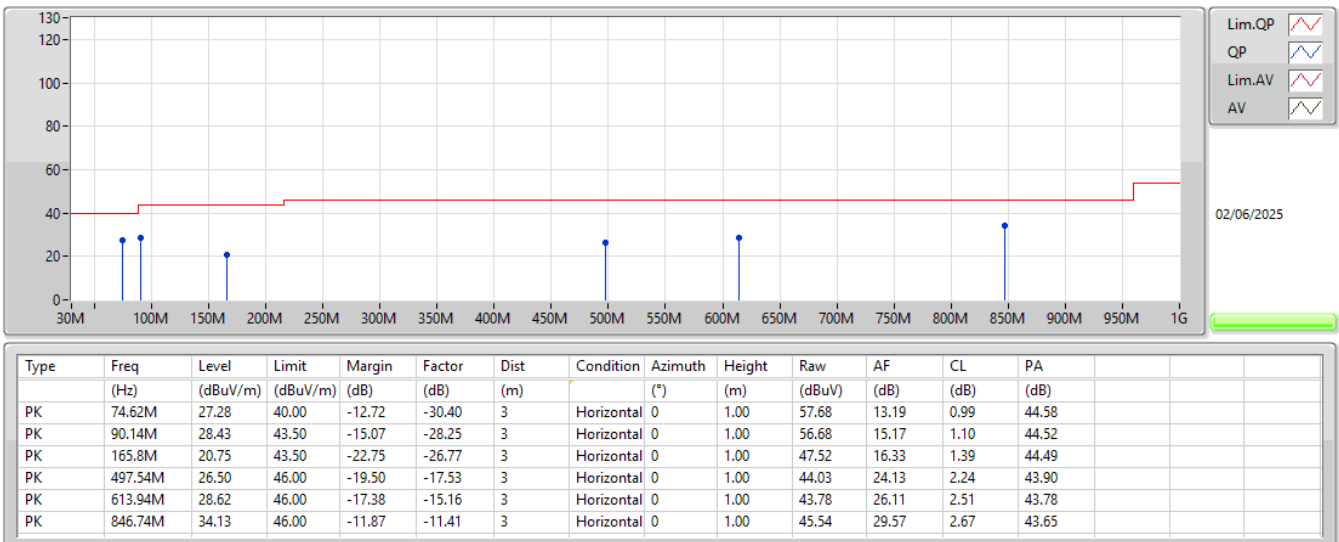
2.4-2.4835GHz_802.15.4

2440MHz_PoE



2.4-2.4835GHz_802.15.4

2440MHz_PoE





Summary

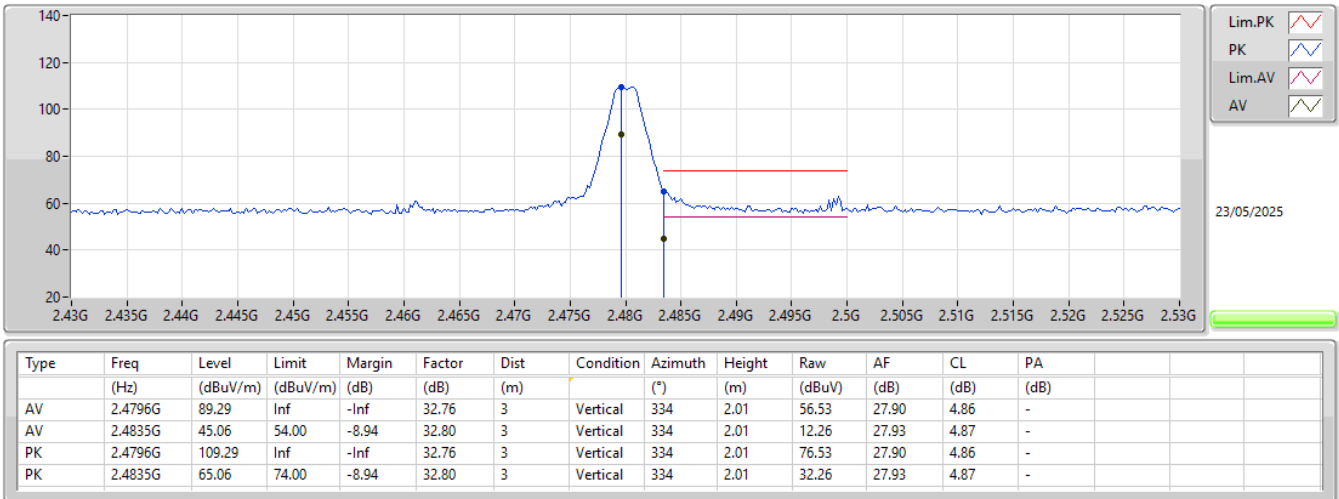
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	2.4835G	45.06	54.00	-8.94	3	Vertical	334	2.01

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	2.3858G	44.16	54.00	-9.84	3	Vertical	330	2.33
2405MHz	Pass	AV	2.405G	89.94	Inf	-Inf	3	Vertical	330	2.33
2405MHz	Pass	PK	2.3858G	64.16	74.00	-9.84	3	Vertical	330	2.33
2405MHz	Pass	PK	2.405G	109.94	Inf	-Inf	3	Vertical	330	2.33
2405MHz	Pass	AV	2.3856G	38.16	54.00	-15.84	3	Horizontal	0	2.80
2405MHz	Pass	AV	2.405G	85.11	Inf	-Inf	3	Horizontal	0	2.80
2405MHz	Pass	PK	2.3856G	58.16	74.00	-15.84	3	Horizontal	0	2.80
2405MHz	Pass	PK	2.405G	105.11	Inf	-Inf	3	Horizontal	0	2.80
2405MHz	Pass	AV	4.8124G	21.61	54.00	-32.39	3	Vertical	125	2.71
2405MHz	Pass	PK	4.8124G	41.61	74.00	-32.39	3	Vertical	125	2.71
2405MHz	Pass	AV	4.80824G	22.14	54.00	-31.86	3	Horizontal	125	2.71
2405MHz	Pass	PK	4.80824G	42.14	74.00	-31.86	3	Horizontal	125	2.71
2440MHz	Pass	AV	2.3792G	38.40	54.00	-15.60	3	Vertical	331	1.50
2440MHz	Pass	AV	2.4396G	90.11	Inf	-Inf	3	Vertical	331	1.50
2440MHz	Pass	AV	2.4984G	38.80	54.00	-15.20	3	Vertical	331	1.50
2440MHz	Pass	PK	2.3792G	58.40	74.00	-15.60	3	Vertical	331	1.50
2440MHz	Pass	PK	2.4396G	110.11	Inf	-Inf	3	Vertical	331	1.50
2440MHz	Pass	PK	2.4984G	58.80	74.00	-15.20	3	Vertical	331	1.50
2440MHz	Pass	AV	2.3428G	38.21	54.00	-15.79	3	Horizontal	23	3.00
2440MHz	Pass	AV	2.4404G	84.63	Inf	-Inf	3	Horizontal	23	3.00
2440MHz	Pass	AV	2.4924G	38.90	54.00	-15.10	3	Horizontal	23	3.00
2440MHz	Pass	PK	2.3428G	58.21	74.00	-15.79	3	Horizontal	23	3.00
2440MHz	Pass	PK	2.4404G	104.63	Inf	-Inf	3	Horizontal	23	3.00
2440MHz	Pass	PK	2.4924G	58.90	74.00	-15.10	3	Horizontal	23	3.00
2440MHz	Pass	AV	4.88268G	22.65	54.00	-31.35	3	Vertical	284	1.12
2440MHz	Pass	PK	4.88268G	42.65	74.00	-31.35	3	Vertical	284	1.12
2440MHz	Pass	AV	4.87568G	22.05	54.00	-31.95	3	Horizontal	118	1.50
2440MHz	Pass	PK	4.87568G	42.05	74.00	-31.95	3	Horizontal	118	1.50
2480MHz	Pass	AV	2.4796G	89.29	Inf	-Inf	3	Vertical	334	2.01
2480MHz	Pass	AV	2.4835G	45.06	54.00	-8.94	3	Vertical	334	2.01
2480MHz	Pass	PK	2.4796G	109.29	Inf	-Inf	3	Vertical	334	2.01
2480MHz	Pass	PK	2.4835G	65.06	74.00	-8.94	3	Vertical	334	2.01
2480MHz	Pass	AV	2.4806G	52.82	Inf	-Inf	3	Horizontal	24	3.00
2480MHz	Pass	AV	2.4835G	42.26	54.00	-11.74	3	Horizontal	24	3.00
2480MHz	Pass	PK	2.4806G	102.82	Inf	-Inf	3	Horizontal	24	3.00
2480MHz	Pass	PK	2.4835G	62.26	74.00	-11.74	3	Horizontal	24	3.00
2480MHz	Pass	AV	4.9614G	23.83	54.00	-30.17	3	Vertical	42	2.74
2480MHz	Pass	PK	4.9614G	43.83	74.00	-30.17	3	Vertical	42	2.74
2480MHz	Pass	AV	4.95926G	23.68	54.00	-30.32	3	Horizontal	95	1.50
2480MHz	Pass	PK	4.95926G	43.68	74.00	-30.32	3	Horizontal	95	1.50

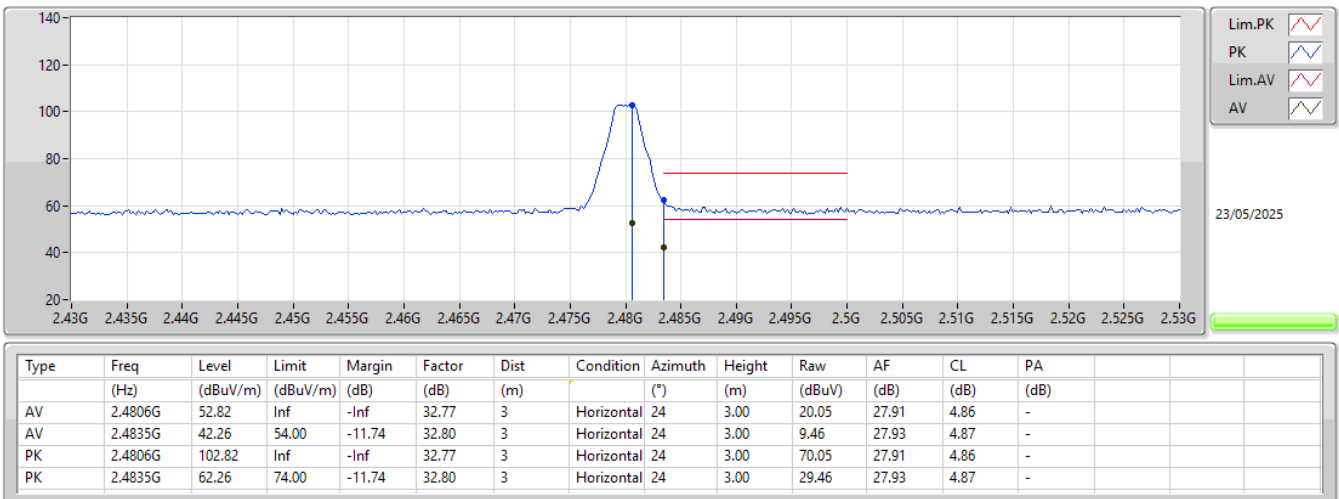
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2480MHz_TX



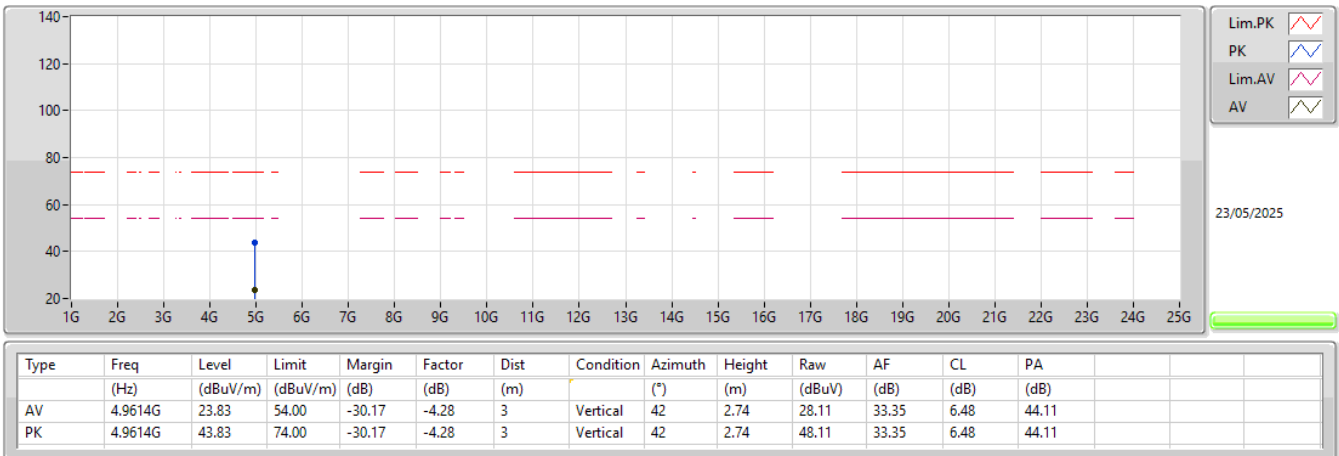
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2480MHz_TX



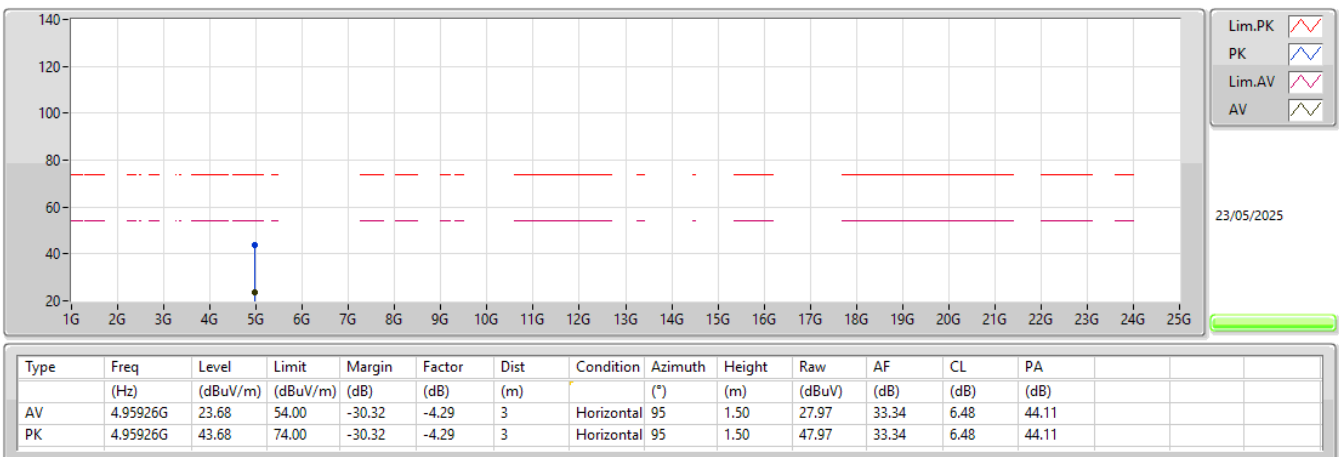
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2480MHz_TX



2.4-2.4835GHz_802.15.4

2480MHz_TX





Summary

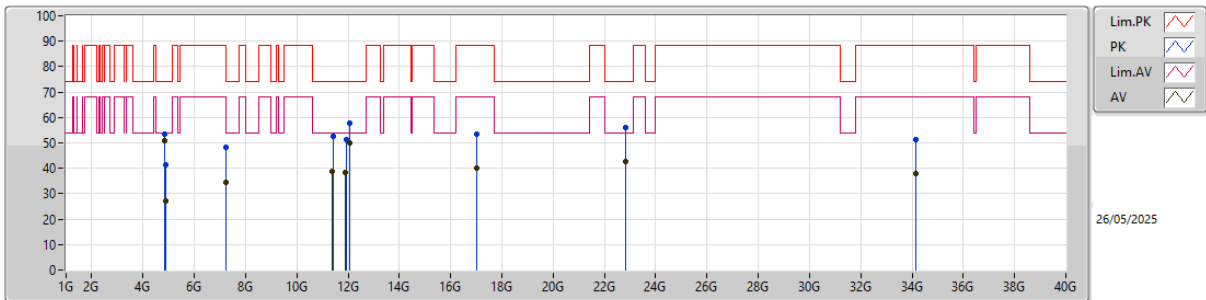
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.83396G	50.90	54.00	-3.10	Vertical
Mode 2	Pass	AV	12.08326G	53.87	54.00	-0.13	Horizontal

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.83396G	50.90	54.00	-3.10	3	Vertical	42	1.84
Mode 1	Pass	AV	4.87946G	27.03	54.00	-26.97	3	Vertical	5	2.99
Mode 1	Pass	AV	7.24911G	34.30	68.20	-33.90	3	Vertical	7	1.75
Mode 1	Pass	AV	11.37224G	38.71	54.00	-15.29	3	Vertical	69	1.85
Mode 1	Pass	AV	11.91015G	38.46	54.00	-15.54	3	Vertical	10	1.59
Mode 1	Pass	AV	12.08314G	49.94	54.00	-4.06	3	Vertical	7	1.70
Mode 1	Pass	AV	17.0268G	39.99	68.20	-28.21	3	Vertical	100	2.89
Mode 1	Pass	AV	22.83928G	42.67	54.00	-11.33	3	Vertical	78	1.61
Mode 1	Pass	AV	34.14024G	38.05	68.20	-30.15	3	Vertical	326	1.50
Mode 1	Pass	PK	4.83393G	53.34	74.00	-20.66	3	Vertical	42	1.84
Mode 1	Pass	PK	4.88432G	41.35	74.00	-32.65	3	Vertical	5	2.99
Mode 1	Pass	PK	7.2492G	48.28	88.20	-39.92	3	Vertical	7	1.75
Mode 1	Pass	PK	11.43248G	52.56	74.00	-21.44	3	Vertical	69	1.85
Mode 1	Pass	PK	11.9181G	51.23	74.00	-22.77	3	Vertical	10	1.59
Mode 1	Pass	PK	12.0835G	57.57	74.00	-16.43	3	Vertical	7	1.70
Mode 1	Pass	PK	17.03016G	53.46	88.20	-34.74	3	Vertical	100	2.89
Mode 1	Pass	PK	22.81984G	55.82	74.00	-18.18	3	Vertical	78	1.61
Mode 1	Pass	PK	34.15968G	51.50	88.20	-36.70	3	Vertical	326	1.50
Mode 1	Pass	AV	4.834G	47.68	54.00	-6.32	3	Horizontal	172	1.55
Mode 1	Pass	AV	4.88051G	27.52	54.00	-26.48	3	Horizontal	18	1.49
Mode 1	Pass	AV	7.25019G	34.27	54.00	-19.73	3	Horizontal	80	2.40
Mode 1	Pass	AV	11.4968G	38.57	54.00	-15.43	3	Horizontal	59	1.50
Mode 1	Pass	AV	11.91006G	38.40	54.00	-15.60	3	Horizontal	345	1.51
Mode 1	Pass	AV	12.08314G	48.93	54.00	-5.07	3	Horizontal	20	1.49
Mode 1	Pass	AV	17.02536G	39.99	68.20	-28.21	3	Horizontal	125	3.00
Mode 1	Pass	AV	22.83232G	37.44	54.00	-16.56	3	Horizontal	189	1.66
Mode 1	Pass	AV	34.14096G	37.99	68.20	-30.21	3	Horizontal	316	1.15
Mode 1	Pass	PK	4.83391G	50.88	74.00	-23.12	3	Horizontal	172	1.55
Mode 1	Pass	PK	4.86782G	41.52	74.00	-32.48	3	Horizontal	18	1.49
Mode 1	Pass	PK	7.25004G	47.77	74.00	-26.23	3	Horizontal	80	2.40
Mode 1	Pass	PK	11.40992G	52.96	74.00	-21.04	3	Horizontal	59	1.50
Mode 1	Pass	PK	11.91525G	51.73	74.00	-22.27	3	Horizontal	345	1.51
Mode 1	Pass	PK	12.08362G	56.87	74.00	-17.13	3	Horizontal	20	1.49
Mode 1	Pass	PK	17.05704G	54.22	88.20	-33.98	3	Horizontal	125	3.00
Mode 1	Pass	PK	22.83304G	50.49	74.00	-23.51	3	Horizontal	189	1.66
Mode 1	Pass	PK	34.1676G	51.44	88.20	-36.76	3	Horizontal	316	1.15
Mode 2	Pass	AV	4.83394G	47.86	54.00	-6.14	3	Vertical	350	2.86
Mode 2	Pass	AV	4.96102G	24.28	54.00	-29.72	3	Vertical	27	1.39
Mode 2	Pass	AV	7.25172G	34.93	54.00	-19.07	3	Vertical	23	1.50
Mode 2	Pass	AV	11.40665G	38.24	54.00	-15.76	3	Vertical	113	1.50
Mode 2	Pass	AV	11.9061G	38.28	54.00	-15.72	3	Vertical	360	2.50
Mode 2	Pass	AV	12.08668G	52.75	54.00	-1.25	3	Vertical	15	1.50
Mode 2	Pass	AV	17.13038G	37.59	68.20	-30.61	3	Vertical	321	1.00
Mode 2	Pass	AV	22.85374G	37.20	54.00	-16.80	3	Vertical	30	1.55
Mode 2	Pass	AV	34.2613G	37.93	68.20	-30.27	3	Vertical	341	1.51
Mode 2	Pass	PK	4.83406G	51.14	74.00	-22.86	3	Vertical	350	2.86
Mode 2	Pass	PK	4.95682G	44.27	74.00	-29.73	3	Vertical	27	1.39
Mode 2	Pass	PK	7.25202G	48.74	74.00	-25.26	3	Vertical	23	1.50
Mode 2	Pass	PK	11.40845G	51.62	74.00	-22.38	3	Vertical	113	1.50
Mode 2	Pass	PK	11.91072G	51.13	74.00	-22.87	3	Vertical	360	2.50

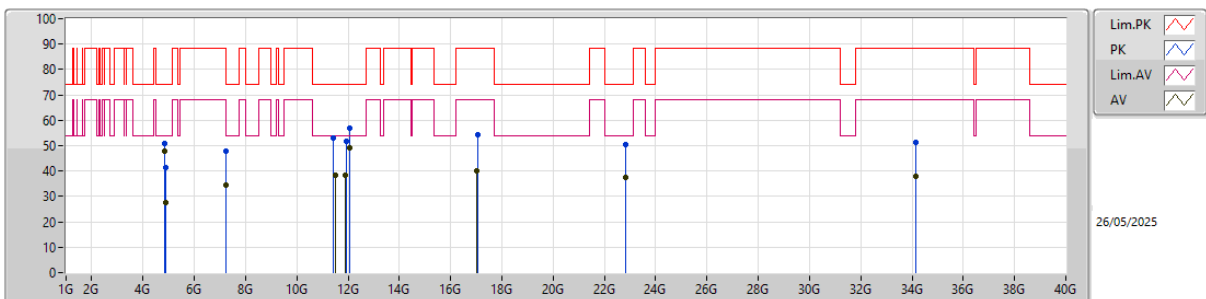
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 2	Pass	PK	12.08662G	58.94	74.00	-15.06	3	Vertical	15	1.50
Mode 2	Pass	PK	17.13033G	51.47	68.20	-16.73	3	Vertical	321	1.00
Mode 2	Pass	PK	22.85308G	55.79	74.00	-18.21	3	Vertical	30	1.55
Mode 2	Pass	PK	34.2627G	50.87	68.20	-17.33	3	Vertical	341	1.51
Mode 2	Pass	AV	4.83394G	47.87	54.00	-6.13	3	Horizontal	328	2.01
Mode 2	Pass	AV	4.95802G	23.91	54.00	-30.09	3	Horizontal	296	1.80
Mode 2	Pass	AV	7.25154G	35.06	54.00	-18.94	3	Horizontal	343	2.60
Mode 2	Pass	AV	11.43485G	38.77	54.00	-15.23	3	Horizontal	353	1.04
Mode 2	Pass	AV	11.90982G	38.54	54.00	-15.46	3	Horizontal	360	2.50
Mode 2	Pass	AV	12.08326G	53.87	54.00	-0.13	3	Horizontal	341	1.50
Mode 2	Pass	AV	17.1435G	37.97	68.20	-30.23	3	Horizontal	295	1.61
Mode 2	Pass	AV	22.85242G	36.21	54.00	-17.79	3	Horizontal	6	1.50
Mode 2	Pass	AV	34.2664G	38.08	68.20	-30.12	3	Horizontal	336	1.50
Mode 2	Pass	PK	4.834G	51.31	74.00	-22.69	3	Horizontal	328	2.01
Mode 2	Pass	PK	4.96102G	43.92	74.00	-30.08	3	Horizontal	296	1.80
Mode 2	Pass	PK	7.2516G	49.10	74.00	-24.90	3	Horizontal	343	2.60
Mode 2	Pass	PK	11.40875G	51.16	74.00	-22.84	3	Horizontal	353	1.04
Mode 2	Pass	PK	11.90661G	51.26	74.00	-22.74	3	Horizontal	360	2.50
Mode 2	Pass	PK	12.08362G	59.83	74.00	-14.17	3	Horizontal	341	1.50
Mode 2	Pass	PK	17.1441G	52.10	68.20	-16.10	3	Horizontal	295	1.61
Mode 2	Pass	PK	22.85248G	55.02	74.00	-18.98	3	Horizontal	6	1.50
Mode 2	Pass	PK	34.275G	51.23	68.20	-16.97	3	Horizontal	336	1.50

Radiated Emissions above 1GHz_Mode 1



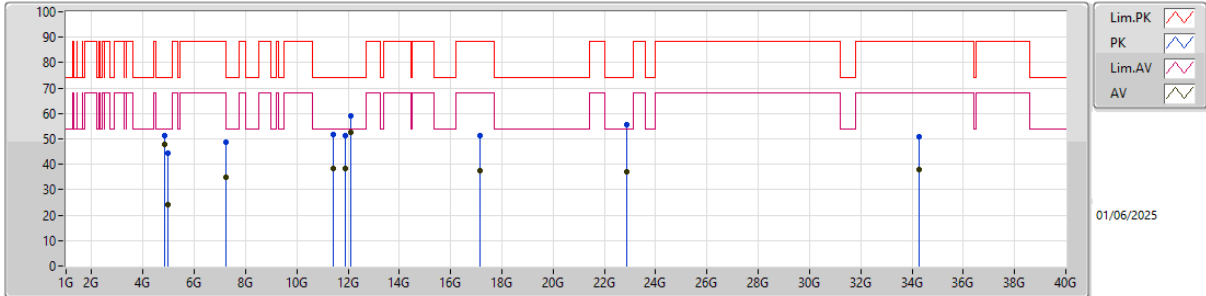
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.83396G	50.90	54.00	-3.10	-1.35	3	Vertical	42	1.84	52.25	32.64	4.23	38.22
AV	4.87946G	27.03	54.00	-26.97	-1.14	3	Vertical	5	2.99	28.17	32.82	4.25	38.21
AV	7.24911G	34.30	68.20	-33.90	6.28	3	Vertical	7	1.75	28.02	37.40	5.93	37.05
AV	11.37224G	38.71	54.00	-15.29	9.84	3	Vertical	69	1.85	28.87	39.46	8.08	37.70
AV	11.91015G	38.46	54.00	-15.54	9.54	3	Vertical	10	1.59	28.92	39.12	8.35	37.93
AV	12.08314G	49.94	54.00	-4.06	9.91	3	Vertical	7	1.70	40.03	39.47	8.45	38.01
AV	17.0268G	39.99	68.20	-28.21	10.08	3	Vertical	100	2.89	29.91	37.81	10.54	38.27
AV	22.83928G	42.67	54.00	-11.33	-19.29	3	Vertical	78	1.61	61.96	38.94	12.34	61.03
AV	34.14024G	38.05	68.20	-30.15	-8.97	3	Vertical	326	1.50	47.02	42.90	16.67	59.00
PK	4.83393G	53.34	74.00	-20.66	-1.35	3	Vertical	42	1.84	54.69	32.64	4.23	38.22
PK	4.88432G	41.35	74.00	-32.65	-1.11	3	Vertical	5	2.99	42.46	32.84	4.25	38.20
PK	7.2492G	48.28	88.20	-39.92	6.28	3	Vertical	7	1.75	42.00	37.40	5.93	37.05
PK	11.43248G	52.56	74.00	-21.44	9.75	3	Vertical	69	1.85	42.81	39.34	8.11	37.70
PK	11.9181G	51.23	74.00	-22.77	9.56	3	Vertical	10	1.59	41.67	39.14	8.36	37.94
PK	12.0835G	57.57	74.00	-16.43	9.90	3	Vertical	7	1.70	47.67	39.47	8.45	38.02
PK	17.03016G	53.46	88.20	-34.74	10.09	3	Vertical	100	2.89	43.37	37.82	10.54	38.27
PK	22.81984G	55.82	74.00	-18.18	-19.23	3	Vertical	78	1.61	75.05	39.02	12.33	61.04
PK	34.15968G	51.50	88.20	-36.70	-9.05	3	Vertical	326	1.50	60.55	42.79	16.68	58.98

Radiated Emissions above 1GHz_Mode 1



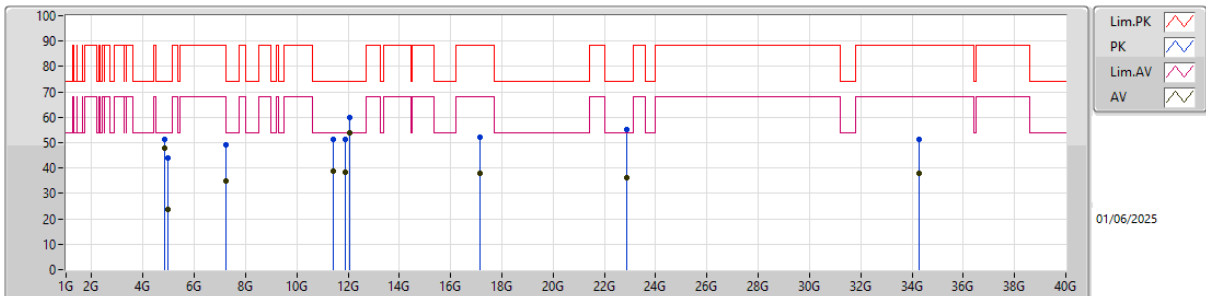
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.834G	47.68	54.00	-6.32	-1.35	3	Horizontal	172	1.55	49.03	32.64	4.23	38.22
AV	4.88051G	27.52	54.00	-26.48	-1.14	3	Horizontal	18	1.49	28.66	32.82	4.25	38.21
AV	7.25019G	34.27	54.00	-19.73	6.28	3	Horizontal	80	2.40	27.99	37.40	5.93	37.05
AV	11.4968G	38.57	54.00	-15.43	9.82	3	Horizontal	59	1.50	28.75	39.39	8.14	37.71
AV	11.91006G	38.40	54.00	-15.60	9.54	3	Horizontal	345	1.51	28.86	39.12	8.35	37.93
AV	12.08314G	48.93	54.00	-5.07	9.91	3	Horizontal	20	1.49	39.02	39.47	8.45	38.01
AV	17.02536G	39.99	68.20	-28.21	10.07	3	Horizontal	125	3.00	29.92	37.80	10.54	38.27
AV	22.83232G	37.44	54.00	-16.56	-19.26	3	Horizontal	189	1.66	56.70	38.97	12.34	61.03
AV	34.14096G	37.99	68.20	-30.21	-8.96	3	Horizontal	316	1.15	46.95	42.91	16.67	59.00
PK	4.83391G	50.88	74.00	-23.12	-1.35	3	Horizontal	172	1.55	52.23	32.64	4.23	38.22
PK	4.86782G	41.52	74.00	-32.48	-1.20	3	Horizontal	18	1.49	42.72	32.77	4.24	38.21
PK	7.25004G	47.77	74.00	-26.23	6.28	3	Horizontal	80	2.40	41.49	37.40	5.93	37.05
PK	11.40992G	52.96	74.00	-21.04	9.78	3	Horizontal	59	1.50	43.18	39.38	8.10	37.70
PK	11.91525G	51.73	74.00	-22.27	9.56	3	Horizontal	345	1.51	42.17	39.13	8.36	37.93
PK	12.08362G	56.87	74.00	-17.13	9.90	3	Horizontal	20	1.49	46.97	39.47	8.45	38.02
PK	17.05704G	54.22	88.20	-33.98	10.17	3	Horizontal	125	3.00	44.05	37.90	10.54	38.27
PK	22.83304G	50.49	74.00	-23.51	-19.26	3	Horizontal	189	1.66	69.75	38.97	12.34	61.03
PK	34.1676G	51.44	88.20	-36.76	-9.22	3	Horizontal	316	1.15	60.66	42.61	16.68	58.97

Radiated Emissions above 1GHz_Mode 2



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	4.83394G	47.86	54.00	-6.14	-5.15	3	Vertical	350	2.86	53.01	32.64	6.33	44.12
AV	4.96102G	24.28	54.00	-29.72	-4.29	3	Vertical	27	1.39	28.57	33.34	6.48	44.11
AV	7.25172G	34.93	54.00	-19.07	0.97	3	Vertical	23	1.50	33.96	37.30	7.62	43.95
AV	11.40665G	38.24	54.00	-15.76	6.25	3	Vertical	113	1.50	31.99	39.29	9.50	42.54
AV	11.9061G	38.28	54.00	-15.72	6.51	3	Vertical	360	2.50	31.77	39.11	9.55	42.15
AV	12.08668G	52.75	54.00	-1.25	6.57	3	Vertical	15	1.50	46.18	39.47	9.57	42.47
AV	17.13038G	37.59	68.20	-30.61	5.35	3	Vertical	321	1.00	32.24	37.56	11.36	43.57
AV	22.85374G	37.20	54.00	-16.80	-18.14	3	Vertical	30	1.55	55.34	38.92	13.50	61.02
AV	34.2613G	37.93	68.20	-30.27	-8.42	3	Vertical	341	1.51	46.35	41.78	18.17	58.83
PK	4.83406G	51.14	74.00	-22.86	-5.15	3	Vertical	350	2.86	56.29	32.64	6.33	44.12
PK	4.95682G	44.27	74.00	-29.73	-4.30	3	Vertical	27	1.39	48.57	33.33	6.48	44.11
PK	7.25202G	48.74	74.00	-25.26	0.97	3	Vertical	23	1.50	47.77	37.30	7.62	43.95
PK	11.40845G	51.62	74.00	-22.38	6.24	3	Vertical	113	1.50	45.38	39.28	9.50	42.54
PK	11.91072G	51.13	74.00	-22.87	6.52	3	Vertical	360	2.50	44.61	39.12	9.55	42.15
PK	12.08662G	58.94	74.00	-15.06	6.57	3	Vertical	15	1.50	52.37	39.47	9.57	42.47
PK	17.13033G	51.47	68.20	-16.73	5.35	3	Vertical	321	1.00	46.12	37.56	11.36	43.57
PK	22.85308G	55.79	74.00	-18.21	-18.14	3	Vertical	30	1.55	73.93	38.92	13.50	61.02
PK	34.2627G	50.87	68.20	-17.33	-8.43	3	Vertical	341	1.51	59.30	41.77	18.17	58.83

Radiated Emissions above 1GHz_Mode 2



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	4.83394G	47.87	54.00	-6.13	-5.15	3	Horizontal	328	2.01	53.02	32.64	6.33	44.12
AV	4.95802G	23.91	54.00	-30.09	-4.30	3	Horizontal	296	1.80	28.21	33.33	6.48	44.11
AV	7.25154G	35.06	54.00	-18.94	0.97	3	Horizontal	343	2.60	34.09	37.30	7.62	43.95
AV	11.43485G	38.77	54.00	-15.23	6.18	3	Horizontal	353	1.04	32.59	39.23	9.51	42.56
AV	11.90982G	38.54	54.00	-15.46	6.52	3	Horizontal	360	2.50	32.02	39.12	9.55	42.15
AV	12.08326G	53.87	54.00	-0.13	6.57	3	Horizontal	341	1.50	47.30	39.47	9.57	42.47
AV	17.1435G	37.97	68.20	-30.23	5.39	3	Horizontal	295	1.61	32.58	37.59	11.37	43.57
AV	22.85242G	36.21	54.00	-17.79	-18.15	3	Horizontal	6	1.50	54.36	38.91	13.50	61.02
AV	34.2664G	38.08	68.20	-30.12	-8.43	3	Horizontal	336	1.50	46.51	41.77	18.17	58.83
PK	4.834G	51.31	74.00	-22.69	-5.15	3	Horizontal	328	2.01	56.46	32.64	6.33	44.12
PK	4.96102G	43.92	74.00	-30.08	-4.29	3	Horizontal	296	1.80	48.21	33.34	6.48	44.11
PK	7.2516G	49.10	74.00	-24.90	0.97	3	Horizontal	343	2.60	48.13	37.30	7.62	43.95
PK	11.40875G	51.16	74.00	-22.84	6.24	3	Horizontal	353	1.04	44.92	39.28	9.50	42.54
PK	11.90661G	51.26	74.00	-22.74	6.51	3	Horizontal	360	2.50	44.75	39.11	9.55	42.15
PK	12.08362G	59.83	74.00	-14.17	6.57	3	Horizontal	341	1.50	53.26	39.47	9.57	42.47
PK	17.1441G	52.10	68.20	-16.10	5.39	3	Horizontal	295	1.61	46.71	37.59	11.37	43.57
PK	22.85248G	55.02	74.00	-18.98	-18.15	3	Horizontal	6	1.50	73.17	38.91	13.50	61.02
PK	34.275G	51.23	68.20	-16.97	-8.43	3	Horizontal	336	1.50	59.66	41.75	18.18	58.82