

FCC Radio Test Report

FCC ID : 2AHBN-AP66
Equipment : Wi-Fi 7 Wireless Access Point
Brand Name : Juniper
Model Name : AP66E
Applicant : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089 USA
Manufacturer : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089 USA
Standard : 47 CFR FCC Part 15.247

The product was received on Aug. 19, 2025, and testing was started from Aug. 19, 2025 and completed on Jun. 06, 2026. 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 + Errata to C63.10a-2024 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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Report Template No.: HE1-C10 Ver4.5
FCC ID: 2AHBN-AP66

Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
0	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: Ryan Hsiao

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX
2.4-2.4835GHz	BT-LE(125kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500kbps)	1.0	1TX

Note:

- ♦ Bluetooth LE uses a GFSK (1Mbps/2Mbps/125kbps/500kbps) modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Bluetooth LE 125k/500k/1Mbps uses the same modulation, and 1Mbps was found to be the worst case scenario which was performed full test and recorded in this test report.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	AccelTex	ATS-OO-2456-466-4 NP-36	OMNI	N-Style Plug	2.4G+5G+6G	Radio2+1+0
2	AccelTex	ATS-OP-2456-81010 -4NP-36	PATCH	N-Style Plug	2.4G+5G+6G	Radio 2+1+0
3	Juniper	AP66	PIFA	I-Pex	2.4G+5G+6G	Radio 3
4	Juniper	AP66	PIFA	I-Pex	802.15.4	Radio 5
5	Juniper	AP66	PIFA	I-Pex	BT	Radio 4
6	Juniper	AP66	PIFA	I-Pex	GPS	Radio 6



Ant.	POL	Port	Gain (dBi)											
			2.4G	UNII-1	UNII-2 A	UNII-2 C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	802.15.4	BT	GPS
1	V-POL	1	4	6	6	6	6	6	6	6	6	-	-	-
	V-POL	2	4	6	6	6	6	6	6	6	6	-	-	-
	V-POL	3	4	6	6	6	6	6	6	6	6	-	-	-
	V-POL	4	4	6	6	6	6	6	6	6	6	-	-	-
2	H-POL	1	8	10	10	10	10	10	10	10	10	-	-	-
	V-POL	2	8	10	10	10	10	10	10	10	10	-	-	-
	H-POL	3	8	10	10	10	10	10	10	10	10	-	-	-
	V-POL	4	8	10	10	10	10	10	10	10	10	-	-	-
3		1	4.8	5.4	5.3	5.1	5	5.1	6.2	5.9	5.7	-	-	-
4		1	-	-	-	-	-	-	-	-	-	5.1	-	-
5		1	-	-	-	-	-	-	-	-	-	-	6.3	-
6		1	-	-	-	-	-	-	-	-	-	-	-	3.9

Note 1: The EUT has six antennas.

For 2.4GHz function:

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

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

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

For b20/g20 mode (1TX/1RX) < **Radio 3_Scan** >

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

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode(2TX/2RX) < **Radio 1** >

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

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

For a20 mode (1TX/1RX) < **Radio 3_Scan** >

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

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX) < **Radio 4** >

Ant. 5 (port 1) could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX) < **Radio 5** >

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

Note 2: 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 $N_{ANT} \leq 4$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{RF}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{RF}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{RF}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From 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
BT-LE(1Mbps)	0.849	0.71	2.124m	500
BT-LE(2Mbps)	0.556	2.55	1.069m	1k

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

1.1.5 Table for Multiple Listing

SKU	Difference
AP66	Wi-Fi Internal Omni Antenna
AP66D	Wi-Fi Internal Dynamic Directional Antenna
AP66E	Wi-Fi External OMNI & Patch Antenna

Note: The information presented above originates from the manufacturer.

**1.1.6 Table for Permissive Change**

This product is an extension of original one reported under Sporton project number: FR583005AL

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Add Model name (AP66E) (Service Radio (Radio 0/Radio 1/Radio 2) Wi-Fi Internal Antenna change to External Antenna)	Co-location was evaluated

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to 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	Lego Lin	23.7~24.9°C / 51~55%	09/Sep/2025
RF Conducted	TH01-HY	Sonic Li	23.4~24.4°C / 52~59%	01/Sep/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	Jack Tang	21.3~22.8°C / 53~62%	19/Aug/2025~20/Aug/2025
Radiated Co-location	03CH25-HY	Simon Cheng	22.2~23.4°C / 50~52%	06/Jun/2026

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 Date: 19/Aug/2025~09/Sep/2025

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%

Test Date: 06/Jun/2026

Test Items	Uncertainty	Remark
Radiated Emission (1 GHz ~ 18 GHz)	4.94 dB	Confidence levels of 95%
Radiated Emission (18 GHz ~ 40 GHz)	4.92 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	PuTTY 0.72
-----------------------	------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	00
2440MHz	00
2480MHz	00
BT-LE(2Mbps)	-
2402MHz	00
2440MHz	00
2480MHz	00

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
Test Condition	Radiated measurement
Operating Mode	CTX
1	R1 (5G)+R2 (2.4G)+R3 (2.4G)+BT
2	R1 (5G)+R2 (2.4G)+R3 (5G)+BT
3	R1 (5G)+R2 (2.4G)+R3 (2.4G)+802.15.4
4	R1 (5G)+R2 (2.4G)+R3 (5G)+802.15.4
Refer to Sporton Test Report No.: FA583005-06 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

Accessories
Bracket*1

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

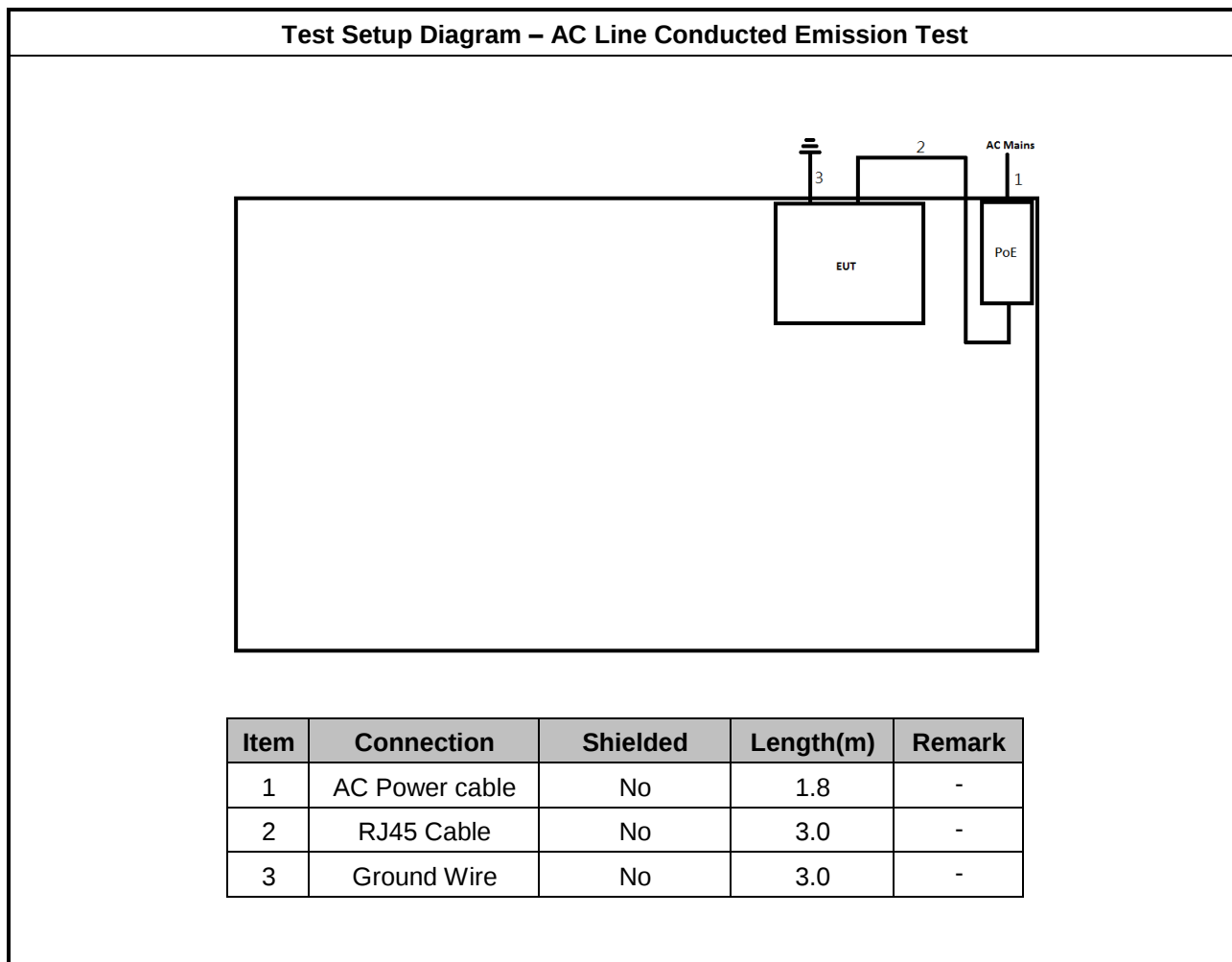
2.4 Support Equipment

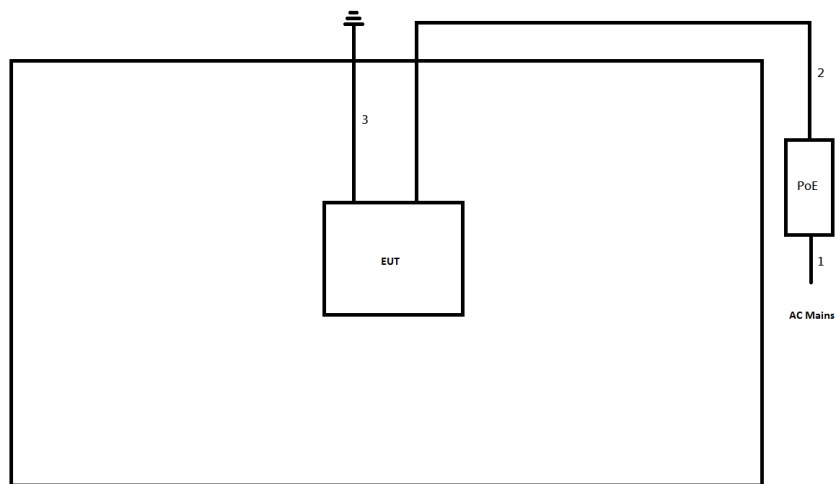
Support Equipment –AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 Cable	Power sync	CAT-6E-03	-	-
2	PoE	PHIHONG	POE60U-BTA(X460-R)	-	Provided by Customer
3	AC Power Cable	Power Sync	PW-GPC180-3	-	-
4	Ground Wire	Sporton	Sporton	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	PoE*2	PHIHONG	POE60U-BTA (X460-R)	-	Provided by Customer
4	AC Power Cable *2	Power Sync	PW-GPC180-3	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 Cable	Power sync	CAT-6E-03	-	-
2	Ground Wire	Sporton	Sporton	-	-
3	PoE (Remote)	PHIHONG	POE60U-BTA(X460-R)	-	Provided by Customer
4	AC Power Cable (Remote)	Power Sync	PW-GPC180-3	-	-

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	RJ45 Cable	No	3.0	-
3	Ground Wire	No	3.0	-

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

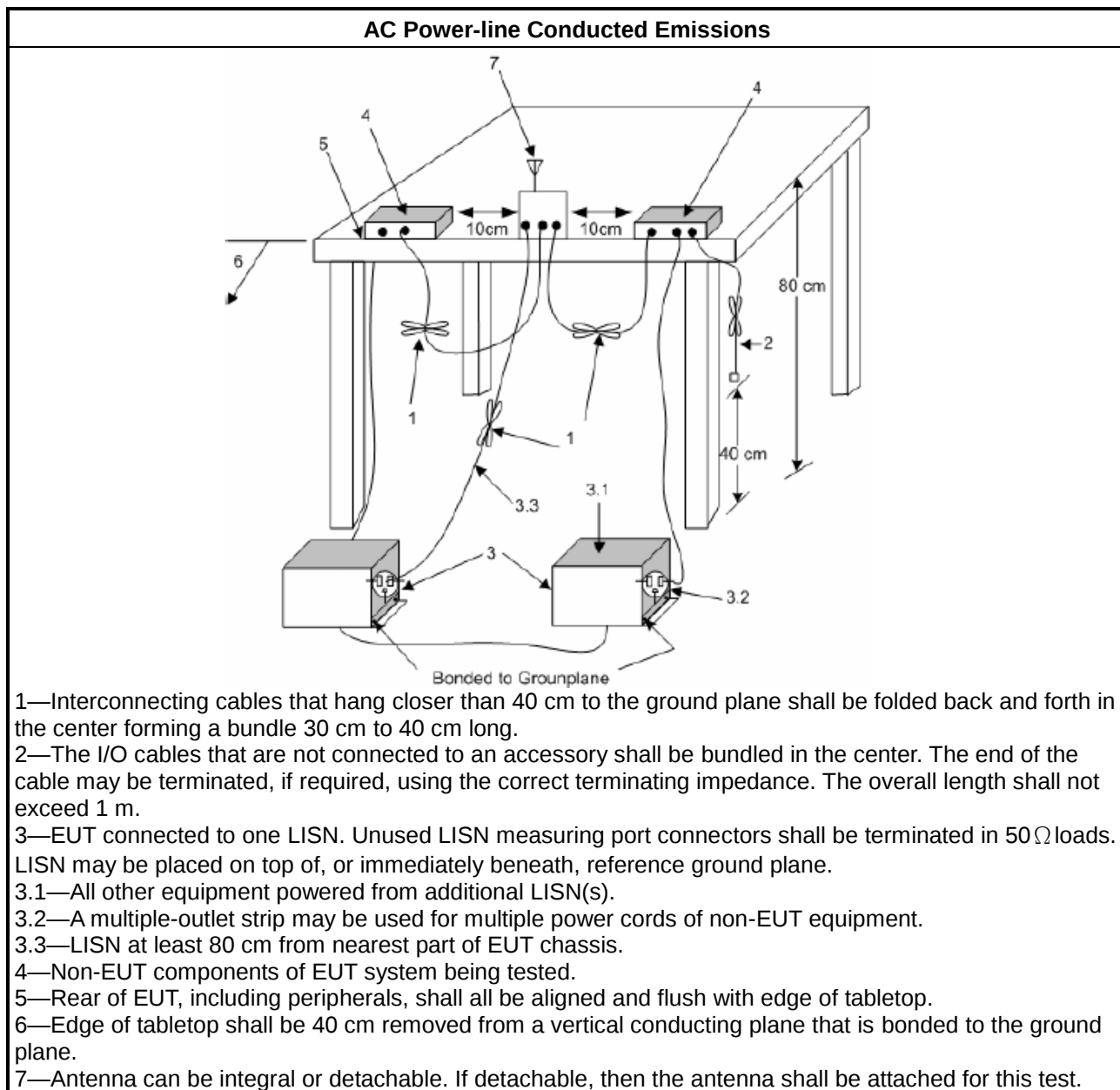
Test Method
▪ Refer as ANSI C63.10, clause 6.2 foray power-line conducted emissions.

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.

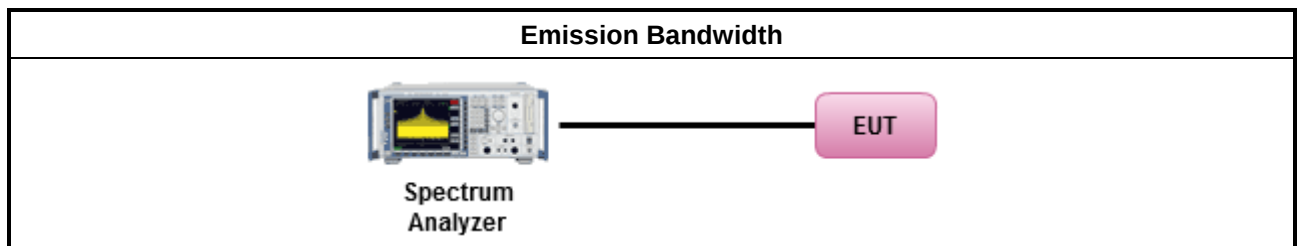
3.2.2 Measuring Instruments

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.	

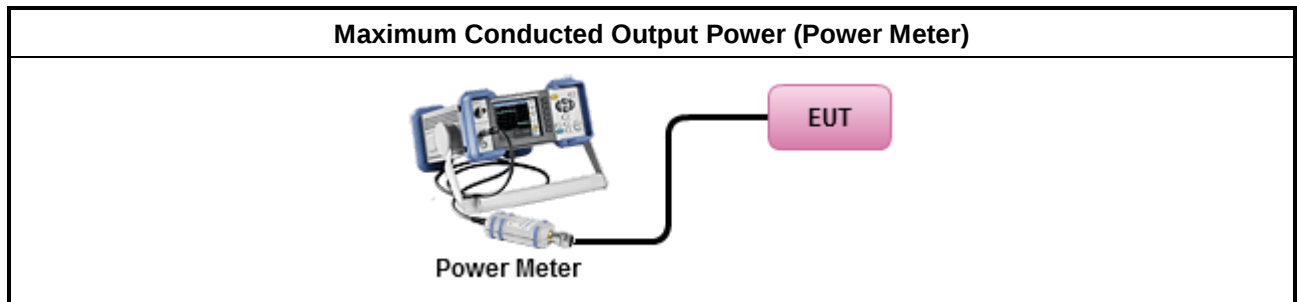
3.3.2 Measuring Instruments

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

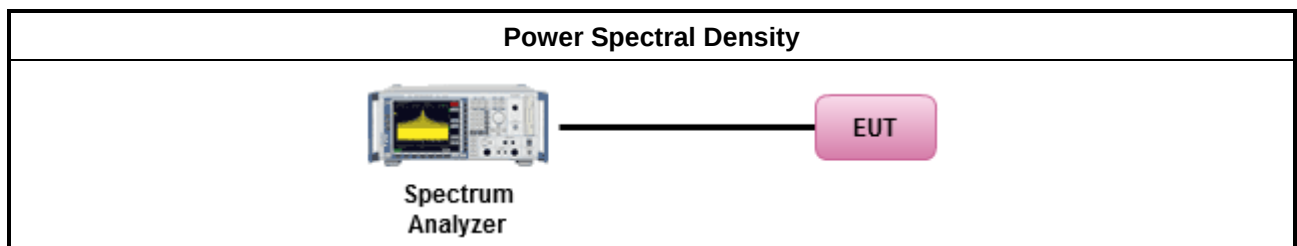
3.4.2 Measuring Instruments

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.	

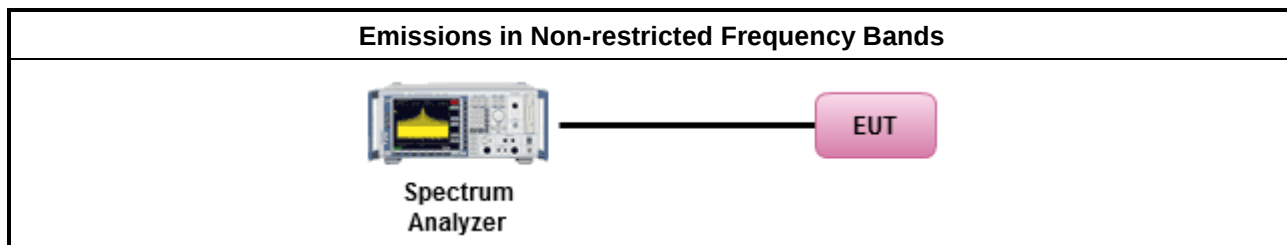
3.5.2 Measuring Instruments

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

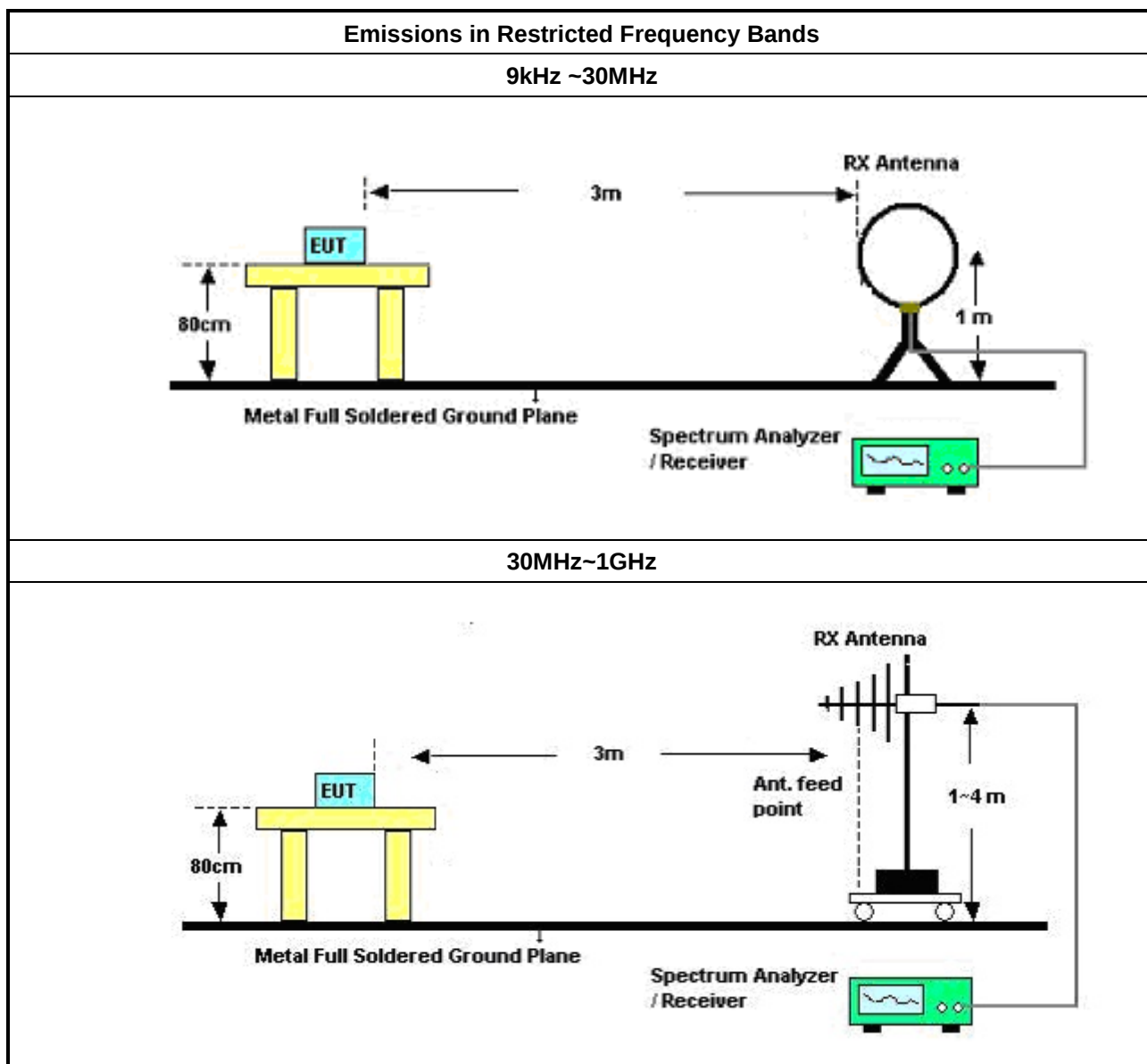
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted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

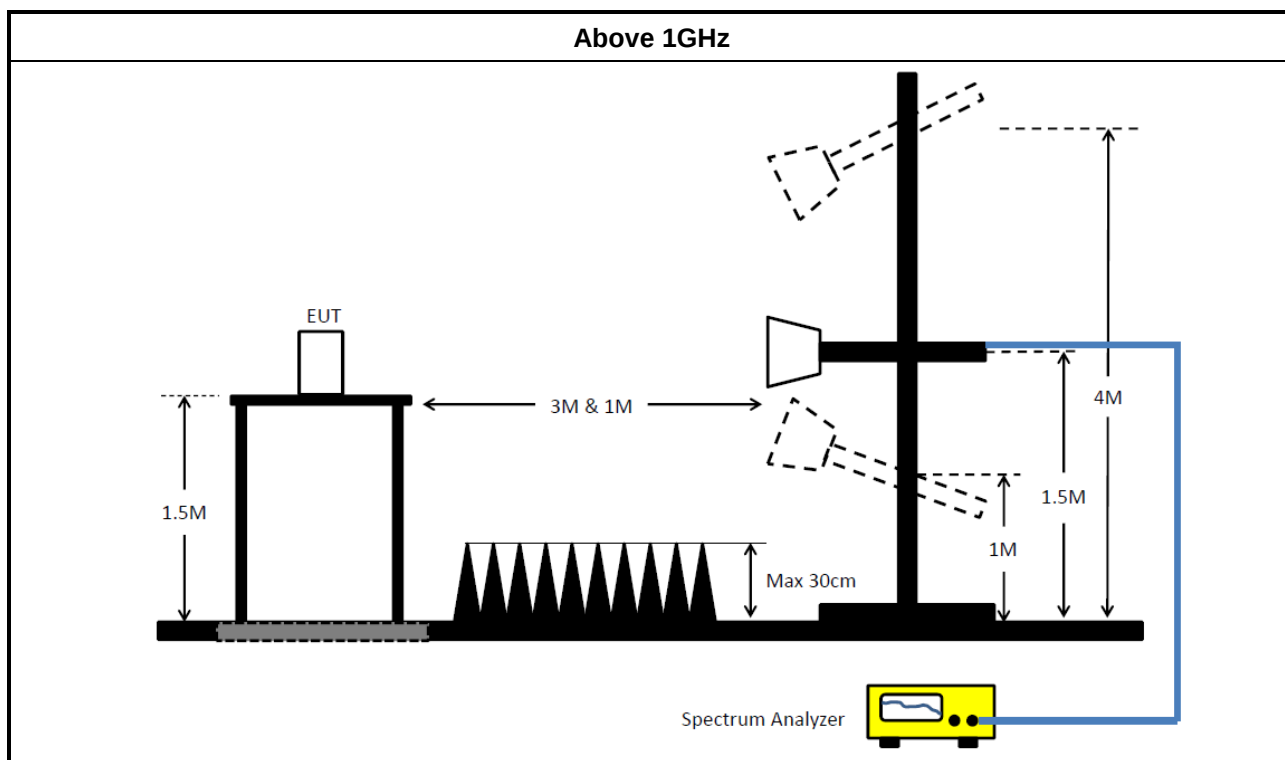
3.6.4 Measurement Results Calculation

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	V5.11.6	-	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	101013	10Hz~40GHz	22/Apr/2025	21/Apr/2026
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	949003	300MHz~40GHz	13/Feb/2025	12/Feb/2026
Pulse Sensor	Anritsu	MA2411B	917017	300MHz~40GHz	13/Feb/2025	12/Feb/2026
SENSE-15247_FS	Sporton	V5.11.27	N/A	N/A	N/A	N/A

**Instrument for Radiated Test (03CH24-HY)**

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	15/Aug/2025	14/Aug/2026
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	1GHz~18GHz 3m	29/Jul/2025	28/Jul/2026
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 / 00800N1D01 N-06	35376 / 02	30MHz~1GHz	13/Apr/2025	12/Apr/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02744	1GHz~18GHz	07/Aug/2025	06/Aug/2026
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	08/Aug/2025	07/Aug/2026
Amplifier	EM	EM18G40GA	060874	18GHz ~40GHz	18/Apr/2025	17/Apr/2026
SENSE-15247-FS	Sporton	V5.11.24	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	07/Aug/2025	06/Aug/2026
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	19/Nov/2025	18/Nov/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	02/Jul/2025	01/Jul/2026
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	07/Oct/2025	06/Oct/2026
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	10/Feb/2026	09/Feb/2027
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	20/May/2026	19/May/2027
Preamplifier	EMCI	EM01G18G	060940	1GHz~18GHz	21/Oct/2025	20/Oct/2026
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	27/Apr/2026	26/Apr/2027
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	20/May/2026	19/May/2027
SENSE-EMI	Sporton	V5.11.6	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

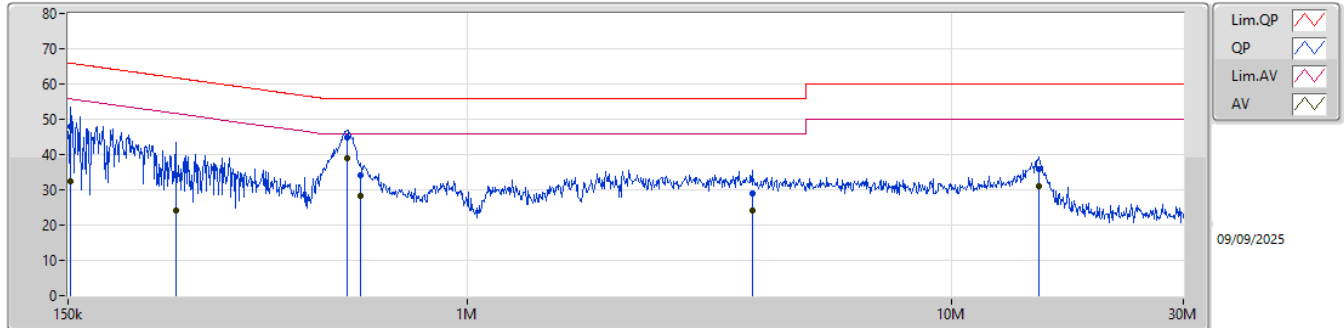
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	564.53k	38.82	46.00	-7.18	Line

Result

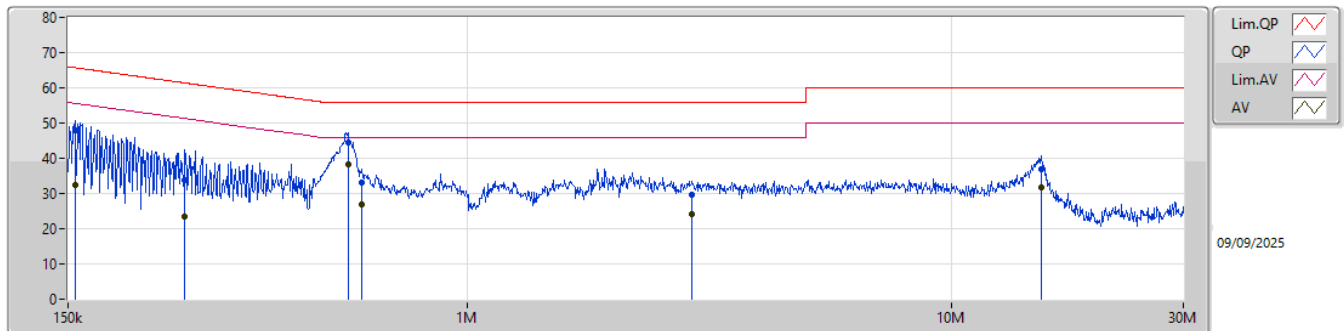
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	151.81k	47.79	65.90	-18.11	Line
Mode 1	Pass	AV	151.81k	32.45	55.90	-23.45	Line
Mode 1	Pass	QP	250.04k	34.22	61.76	-27.54	Line
Mode 1	Pass	AV	250.04k	24.09	51.76	-27.67	Line
Mode 1	Pass	QP	564.53k	44.81	56.00	-11.19	Line
Mode 1	Pass	AV	564.53k	38.82	46.00	-7.18	Line
Mode 1	Pass	QP	601.76k	34.25	56.00	-21.75	Line
Mode 1	Pass	AV	601.76k	28.32	46.00	-17.68	Line
Mode 1	Pass	QP	3.87M	29.05	56.00	-26.95	Line
Mode 1	Pass	AV	3.87M	24.19	46.00	-21.81	Line
Mode 1	Pass	QP	15.15M	35.95	60.00	-24.05	Line
Mode 1	Pass	AV	15.15M	31.03	50.00	-18.97	Line
Mode 1	Pass	QP	154.87k	47.82	65.73	-17.91	Neutral
Mode 1	Pass	AV	154.87k	32.56	55.73	-23.17	Neutral
Mode 1	Pass	QP	261.26k	33.64	61.39	-27.75	Neutral
Mode 1	Pass	AV	261.26k	23.45	51.39	-27.94	Neutral
Mode 1	Pass	QP	566.78k	44.55	56.00	-11.45	Neutral
Mode 1	Pass	AV	566.78k	38.28	46.00	-7.72	Neutral
Mode 1	Pass	QP	606.58k	33.05	56.00	-22.95	Neutral
Mode 1	Pass	AV	606.58k	26.78	46.00	-19.22	Neutral
Mode 1	Pass	QP	2.91M	29.49	56.00	-26.51	Neutral
Mode 1	Pass	AV	2.91M	24.22	46.00	-21.78	Neutral
Mode 1	Pass	QP	15.27M	36.79	60.00	-23.21	Neutral
Mode 1	Pass	AV	15.27M	31.83	50.00	-18.17	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	151.81k	47.79	65.90	-18.11	19.61	Line	-	28.18	9.63	0.01	9.97						
AV	151.81k	32.45	55.90	-23.45	19.61	Line	-	12.84	9.63	0.01	9.97						
QP	250.04k	34.22	61.76	-27.54	19.62	Line	-	14.60	9.63	0.02	9.97						
AV	250.04k	24.09	51.76	-27.67	19.62	Line	-	4.47	9.63	0.02	9.97						
QP	564.53k	44.81	56.00	-11.19	19.65	Line	-	25.16	9.63	0.04	9.98						
AV	564.53k	38.82	46.00	-7.18	19.65	Line	-	19.17	9.63	0.04	9.98						
QP	601.76k	34.25	56.00	-21.75	19.65	Line	-	14.60	9.63	0.04	9.98						
AV	601.76k	28.32	46.00	-17.68	19.65	Line	-	8.67	9.63	0.04	9.98						
QP	3.87M	29.05	56.00	-26.95	19.70	Line	-	9.35	9.67	0.05	9.98						
AV	3.87M	24.19	46.00	-21.81	19.70	Line	-	4.49	9.67	0.05	9.98						
QP	15.15M	35.95	60.00	-24.05	20.05	Line	-	15.90	9.79	0.28	9.98						
AV	15.15M	31.03	50.00	-18.97	20.05	Line	-	10.98	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	154.87k	47.82	65.73	-17.91	19.71	Neutral	-	28.11	9.73	0.01	9.97						
AV	154.87k	32.56	55.73	-23.17	19.71	Neutral	-	12.85	9.73	0.01	9.97						
QP	261.26k	33.64	61.39	-27.75	19.71	Neutral	-	13.93	9.72	0.02	9.97						
AV	261.26k	23.45	51.39	-27.94	19.71	Neutral	-	3.74	9.72	0.02	9.97						
QP	566.78k	44.55	56.00	-11.45	19.73	Neutral	-	24.82	9.71	0.04	9.98						
AV	566.78k	38.28	46.00	-7.72	19.73	Neutral	-	18.55	9.71	0.04	9.98						
QP	606.58k	33.05	56.00	-22.95	19.73	Neutral	-	13.32	9.71	0.04	9.98						
AV	606.58k	26.78	46.00	-19.22	19.73	Neutral	-	7.05	9.71	0.04	9.98						
QP	2.91M	29.49	56.00	-26.51	19.79	Neutral	-	9.70	9.77	0.04	9.98						
AV	2.91M	24.22	46.00	-21.78	19.79	Neutral	-	4.43	9.77	0.04	9.98						
QP	15.27M	36.79	60.00	-23.21	20.30	Neutral	-	16.49	10.04	0.28	9.98						
AV	15.27M	31.83	50.00	-18.17	20.30	Neutral	-	11.53	10.04	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	-	-	-	-	-
BT-LE(1Mbps)	712.5k	1.06M	1M06F1D	625k	1.036M
BT-LE(2Mbps)	1.37M	2.086M	2M09F1D	1.13M	2.035M

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

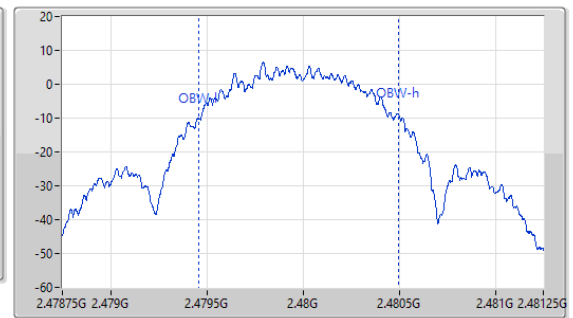
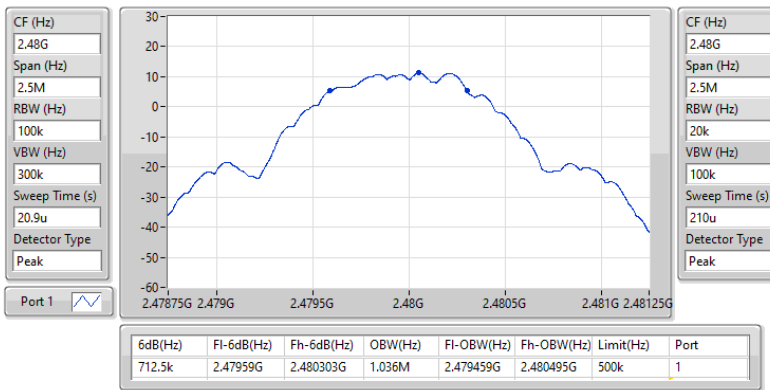
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	678.75k	1.06M
2440MHz	Pass	500k	625k	1.052M
2480MHz	Pass	500k	712.5k	1.036M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.31M	2.086M
2440MHz	Pass	500k	1.13M	2.077M
2480MHz	Pass	500k	1.37M	2.035M

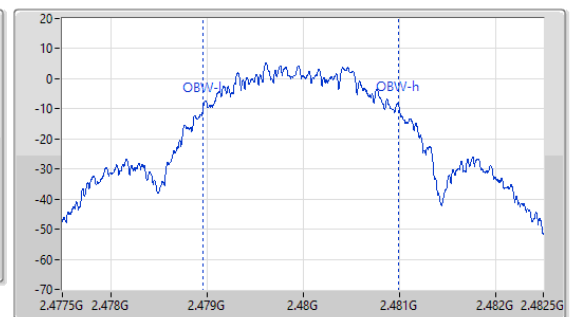
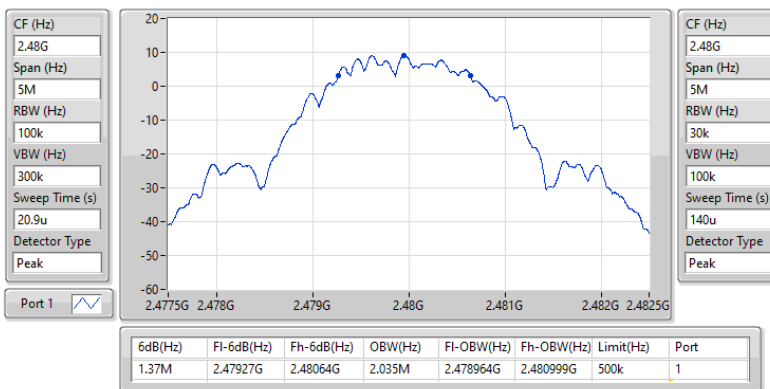
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2480MHz

01/09/2025


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2480MHz

01/09/2025





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	12.83	0.01919
BT-LE(2Mbps)	12.91	0.01954



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.30	12.83	29.70
2440MHz	Pass	6.30	12.82	29.70
2480MHz	Pass	6.30	12.61	29.70
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.30	12.91	29.70
2440MHz	Pass	6.30	12.86	29.70
2480MHz	Pass	6.30	12.67	29.70

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	-
BT-LE(1Mbps)	-4.00
BT-LE(2Mbps)	-6.16

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.30	-4.11	7.70
2440MHz	Pass	6.30	-4.00	7.70
2480MHz	Pass	6.30	-4.87	7.70
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.30	-6.16	7.70
2440MHz	Pass	6.30	-8.11	7.70
2480MHz	Pass	6.30	-9.12	7.70

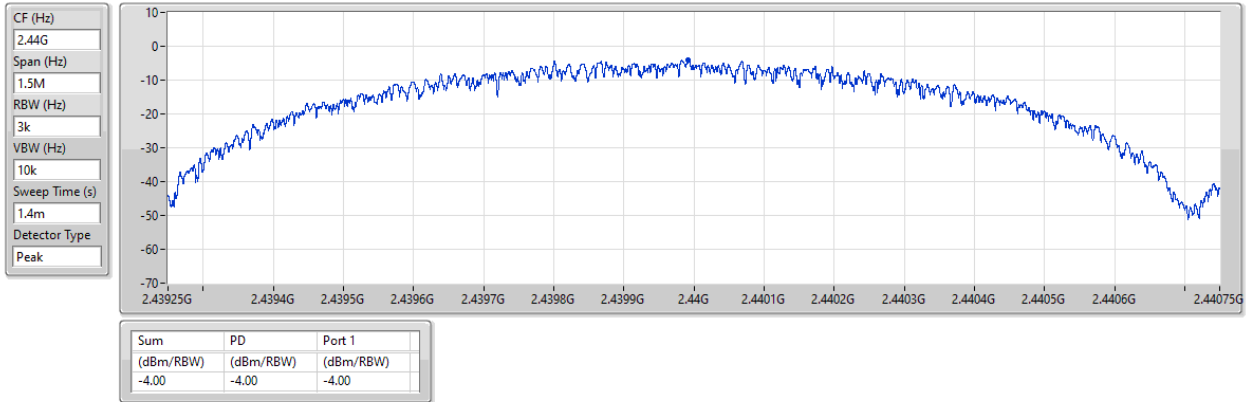
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2440MHz

01/09/2025

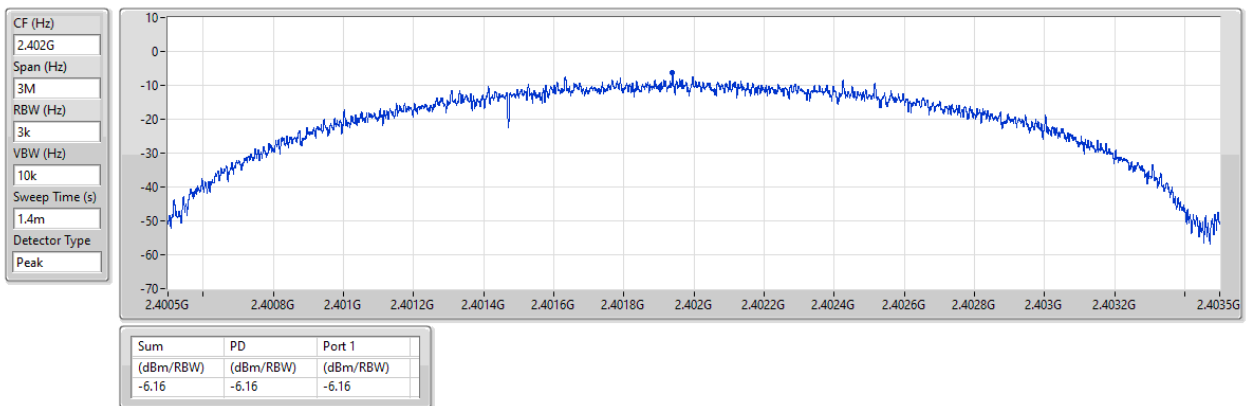


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

01/09/2025



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40217G	13.03	-16.97	2.14735G	-54.53	2.39996G	-45.49	2.4G	-43.65	2.5009G	-55.45	21.72395G	-44.59	1
BT-LE(2Mbps)	Pass	2.40234G	11.43	-18.57	2.16498G	-55.10	2.39996G	-21.11	2.4G	-20.56	2.50306G	-54.27	21.53835G	-43.52	1

Result

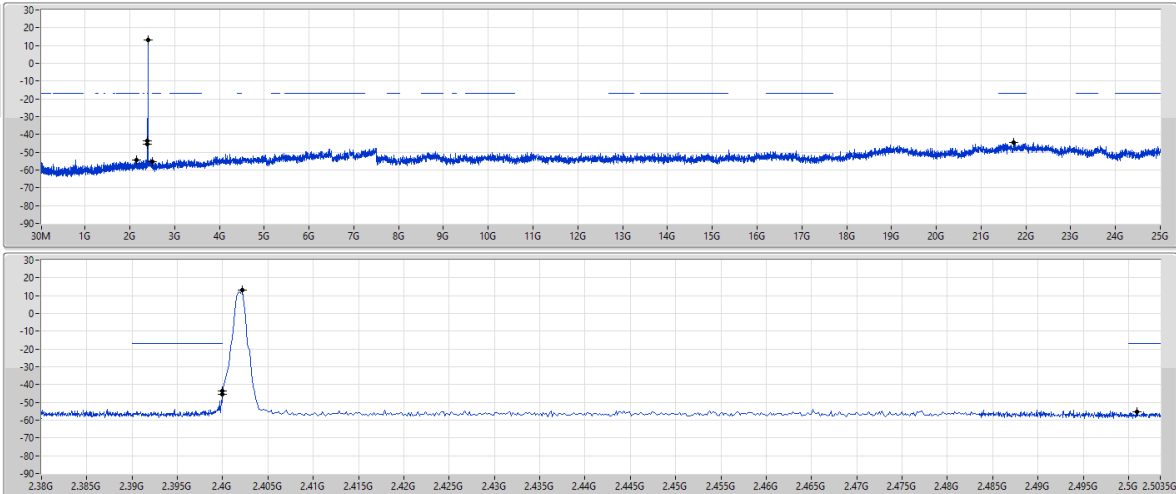
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	13.03	-16.97	2.14735G	-54.53	2.39996G	-45.49	2.4G	-43.65	2.5009G	-55.45	21.72395G	-44.59	1
2440MHz	Pass	2.40217G	13.03	-16.97	1.73258G	-54.90	2.39172G	-54.14	2.4G	-57.31	2.50162G	-54.99	21.96297G	-44.38	1
2480MHz	Pass	2.40217G	13.03	-16.97	2.3001G	-54.44	2.39008G	-54.00	2.4G	-55.99	2.50118G	-54.68	21.88705G	-43.68	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40234G	11.43	-18.57	2.16498G	-55.10	2.39996G	-21.11	2.4G	-20.56	2.50306G	-54.27	21.53835G	-43.52	1
2440MHz	Pass	2.40234G	11.43	-18.57	1.97815G	-54.04	2.39848G	-53.81	2.4G	-56.20	2.5033G	-54.44	21.96578G	-44.35	1
2480MHz	Pass	2.40234G	11.43	-18.57	2.02515G	-54.64	2.39572G	-54.50	2.4G	-57.17	2.50154G	-54.35	21.89267G	-44.17	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSNdB-DTS

2402MHz

01/09/2025

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

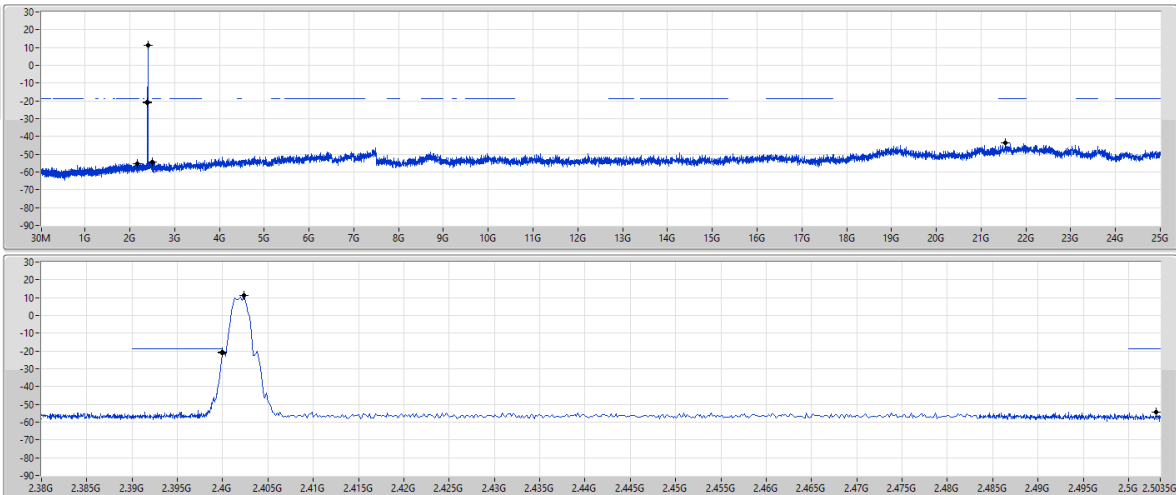
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	13.03	-16.97	2.14735G	-54.53	2.39996G	-45.49	2.4G	-43.65	2.5009G	-55.45	2.172395G	-44.59	1

2.4-2.4835GHz_BT-LE(2Mbps)

CSNdB-DTS

2402MHz

01/09/2025

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

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40234G	11.43	-18.57	2.16498G	-55.10	2.39996G	-21.11	2.4G	-20.56	2.50306G	-54.27	2.153835G	-43.52	1



Summary

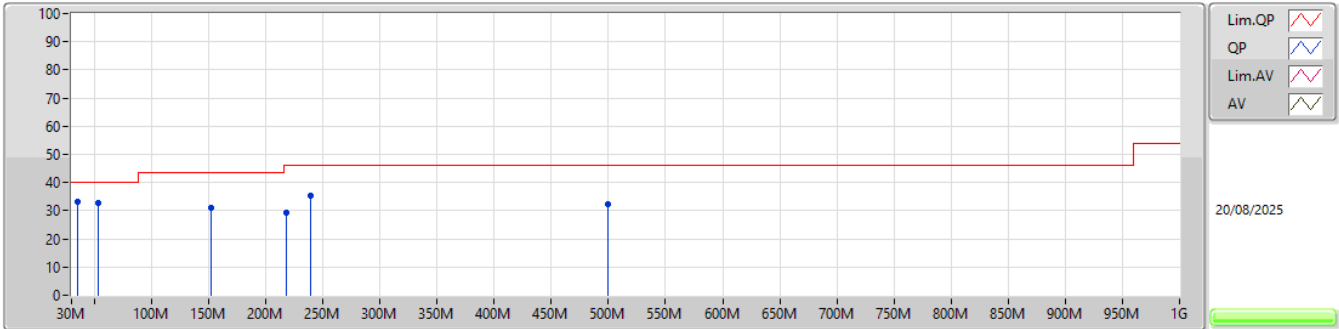
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	35.82M	33.00	40.00	-7.00	3	Vertical	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	35.82M	33.00	40.00	-7.00	3	Vertical	0	1.00
2440MHz	Pass	PK	53.28M	32.69	40.00	-7.31	3	Vertical	0	1.00
2440MHz	Pass	PK	152.22M	30.95	43.50	-12.55	3	Vertical	0	1.00
2440MHz	Pass	PK	218.18M	29.48	46.00	-16.52	3	Vertical	0	1.00
2440MHz	Pass	PK	239.52M	35.40	46.00	-10.60	3	Vertical	0	1.00
2440MHz	Pass	PK	499.48M	32.31	46.00	-13.69	3	Vertical	0	1.00
2440MHz	Pass	PK	30M	22.94	40.00	-17.06	3	Horizontal	360	1.00
2440MHz	Pass	PK	62.98M	23.30	40.00	-16.70	3	Horizontal	360	1.00
2440MHz	Pass	PK	90.14M	24.64	43.50	-18.86	3	Horizontal	360	1.00
2440MHz	Pass	PK	152.22M	30.82	43.50	-12.68	3	Horizontal	360	1.00
2440MHz	Pass	PK	245.34M	38.41	46.00	-7.59	3	Horizontal	360	1.00
2440MHz	Pass	PK	515M	27.41	46.00	-18.59	3	Horizontal	360	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

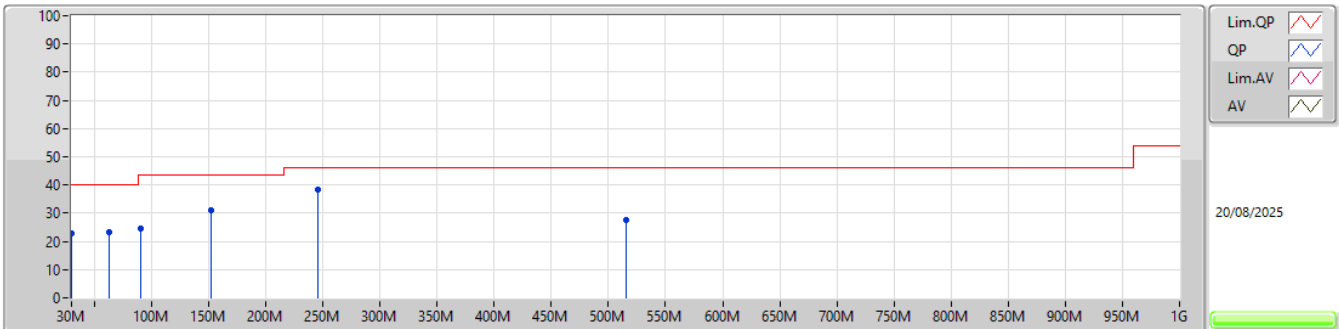
2440MHz_PoE



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	35.82M	33.00	40.00	-7.00	-6.86	3	Vertical	0	1.00	39.86	20.08	0.44	27.38
PK	53.28M	32.69	40.00	-7.31	-14.87	3	Vertical	0	1.00	47.56	11.91	0.55	27.33
PK	152.22M	30.95	43.50	-12.55	-10.59	3	Vertical	0	1.00	41.54	15.50	0.93	27.02
PK	218.18M	29.48	46.00	-16.52	-11.30	3	Vertical	0	1.00	40.78	14.29	1.13	26.72
PK	239.52M	35.40	46.00	-10.60	-9.06	3	Vertical	0	1.00	44.46	16.39	1.18	26.63
PK	499.48M	32.31	46.00	-13.69	-3.98	3	Vertical	0	1.00	36.29	22.43	1.70	28.11

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_PoE



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	30M	22.94	40.00	-17.06	-4.71	3	Horizontal	360	1.00	27.65	22.26	0.42	27.39
PK	62.98M	23.30	40.00	-16.70	-15.21	3	Horizontal	360	1.00	38.51	11.52	0.59	27.32
PK	90.14M	24.64	43.50	-18.86	-12.18	3	Horizontal	360	1.00	36.82	14.35	0.72	27.25
PK	152.22M	30.82	43.50	-12.68	-10.59	3	Horizontal	360	1.00	41.41	15.50	0.93	27.02
PK	245.34M	38.41	46.00	-7.59	-8.39	3	Horizontal	360	1.00	46.80	17.01	1.20	26.60
PK	515M	27.41	46.00	-18.59	-3.78	3	Horizontal	360	1.00	31.19	22.62	1.71	28.11



Summary

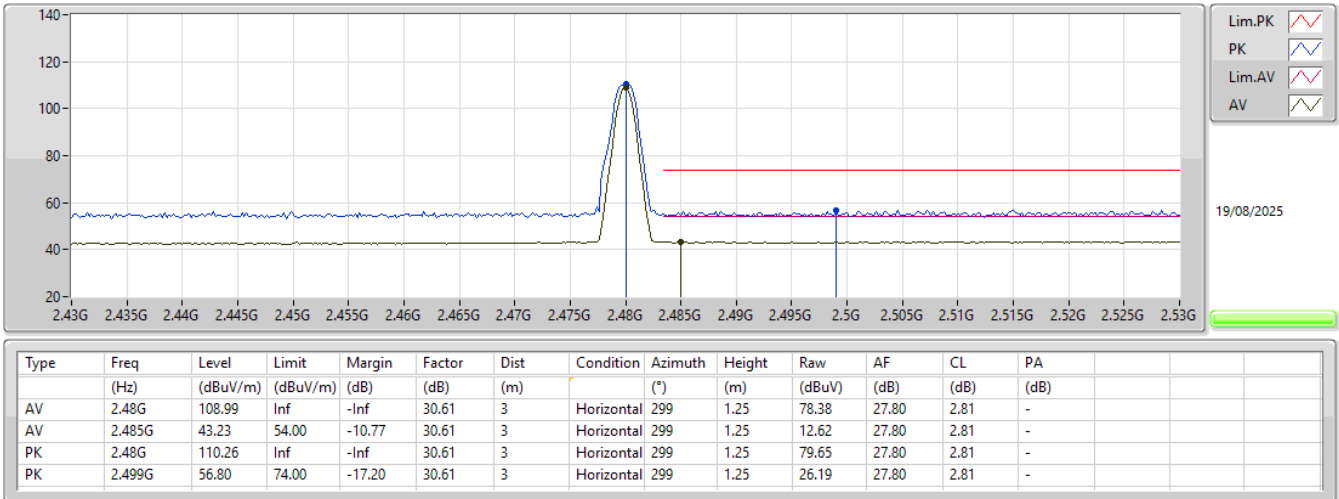
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.485G	43.23	54.00	-10.77	3	Horizontal	299	1.25
BT-LE(2Mbps)	Pass	AV	2.4835G	45.24	54.00	-8.76	3	Horizontal	300	1.25

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.368G	42.59	54.00	-11.41	3	Horizontal	302	2.77
2402MHz	Pass	AV	2.402G	109.92	Inf	-Inf	3	Horizontal	302	2.77
2402MHz	Pass	PK	2.3772G	56.24	74.00	-17.76	3	Horizontal	302	2.77
2402MHz	Pass	PK	2.4018G	111.11	Inf	-Inf	3	Horizontal	302	2.77
2402MHz	Pass	AV	4.80392G	26.56	54.00	-27.44	3	Vertical	335	1.26
2402MHz	Pass	PK	4.80396G	39.17	74.00	-34.83	3	Vertical	335	1.26
2402MHz	Pass	AV	4.80388G	26.98	54.00	-27.02	3	Horizontal	40	2.43
2402MHz	Pass	PK	4.80436G	39.88	74.00	-34.12	3	Horizontal	40	2.43
2440MHz	Pass	AV	2.3856G	42.74	54.00	-11.26	3	Horizontal	305	1.63
2440MHz	Pass	AV	2.44G	109.18	Inf	-Inf	3	Horizontal	305	1.63
2440MHz	Pass	AV	2.492G	43.09	54.00	-10.91	3	Horizontal	305	1.63
2440MHz	Pass	PK	2.3652G	56.29	74.00	-17.71	3	Horizontal	305	1.63
2440MHz	Pass	PK	2.4396G	110.47	Inf	-Inf	3	Horizontal	305	1.63
2440MHz	Pass	PK	2.4968G	56.55	74.00	-17.45	3	Horizontal	305	1.63
2440MHz	Pass	AV	4.8802G	28.15	54.00	-25.85	3	Vertical	31	1.47
2440MHz	Pass	PK	4.87964G	42.07	74.00	-31.93	3	Vertical	31	1.47
2440MHz	Pass	AV	4.88004G	30.88	54.00	-23.12	3	Horizontal	319	2.15
2440MHz	Pass	PK	4.88032G	43.09	74.00	-30.91	3	Horizontal	319	2.15
2480MHz	Pass	AV	2.48G	108.99	Inf	-Inf	3	Horizontal	299	1.25
2480MHz	Pass	AV	2.485G	43.23	54.00	-10.77	3	Horizontal	299	1.25
2480MHz	Pass	PK	2.48G	110.26	Inf	-Inf	3	Horizontal	299	1.25
2480MHz	Pass	PK	2.499G	56.80	74.00	-17.20	3	Horizontal	299	1.25
2480MHz	Pass	AV	4.95992G	29.72	54.00	-24.28	3	Vertical	50	1.65
2480MHz	Pass	PK	4.96032G	41.95	74.00	-32.05	3	Vertical	50	1.65
2480MHz	Pass	AV	4.96008G	30.73	54.00	-23.27	3	Horizontal	298	1.84
2480MHz	Pass	PK	4.96G	42.29	74.00	-31.71	3	Horizontal	298	1.84
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3766G	43.03	54.00	-10.97	3	Horizontal	303	2.78
2402MHz	Pass	AV	2.402G	108.24	Inf	-Inf	3	Horizontal	303	2.78
2402MHz	Pass	PK	2.3744G	56.05	74.00	-17.95	3	Horizontal	303	2.78
2402MHz	Pass	PK	2.4014G	111.27	Inf	-Inf	3	Horizontal	303	2.78
2402MHz	Pass	AV	4.8132G	26.33	54.00	-27.67	3	Vertical	190	1.50
2402MHz	Pass	PK	4.7944G	39.53	74.00	-34.47	3	Vertical	190	1.50
2402MHz	Pass	AV	4.80312G	26.78	54.00	-27.22	3	Horizontal	35	2.18
2402MHz	Pass	PK	4.8028G	39.41	74.00	-34.59	3	Horizontal	35	2.18
2440MHz	Pass	AV	2.3468G	42.86	54.00	-11.14	3	Horizontal	303	1.00
2440MHz	Pass	AV	2.44G	107.41	Inf	-Inf	3	Horizontal	303	1.00
2440MHz	Pass	AV	2.4908G	43.41	54.00	-10.59	3	Horizontal	303	1.00
2440MHz	Pass	PK	2.3752G	55.87	74.00	-18.13	3	Horizontal	303	1.00
2440MHz	Pass	PK	2.4396G	110.53	Inf	-Inf	3	Horizontal	303	1.00
2440MHz	Pass	PK	2.4916G	56.10	74.00	-17.90	3	Horizontal	303	1.00
2440MHz	Pass	AV	4.88088G	28.07	54.00	-25.93	3	Vertical	29	1.24
2440MHz	Pass	PK	4.8812G	41.65	74.00	-32.35	3	Vertical	29	1.24
2440MHz	Pass	AV	4.88088G	29.95	54.00	-24.05	3	Horizontal	317	2.06
2440MHz	Pass	PK	4.88112G	41.68	74.00	-32.32	3	Horizontal	317	2.06
2480MHz	Pass	AV	2.48G	107.38	Inf	-Inf	3	Horizontal	300	1.25
2480MHz	Pass	AV	2.4835G	45.24	54.00	-8.76	3	Horizontal	300	1.25
2480MHz	Pass	PK	2.4794G	110.33	Inf	-Inf	3	Horizontal	300	1.25
2480MHz	Pass	PK	2.4835G	57.44	74.00	-16.56	3	Horizontal	300	1.25
2480MHz	Pass	AV	4.959G	29.42	54.00	-24.58	3	Vertical	49	1.50
2480MHz	Pass	PK	4.9596G	41.43	74.00	-32.57	3	Vertical	49	1.50
2480MHz	Pass	AV	4.96072G	29.61	54.00	-24.39	3	Horizontal	17	1.88
2480MHz	Pass	PK	4.96084G	42.42	74.00	-31.58	3	Horizontal	17	1.88

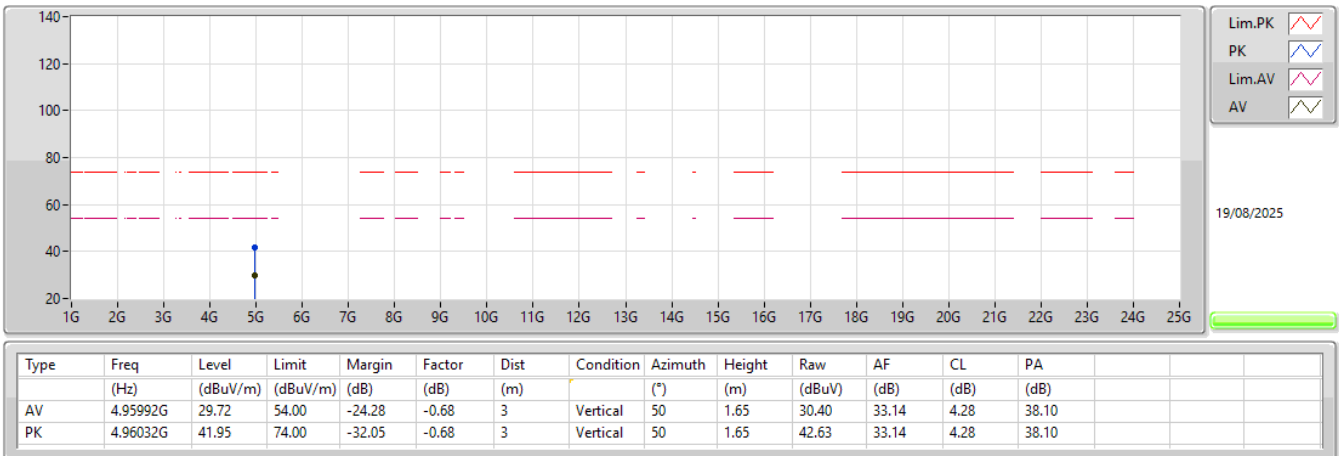
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



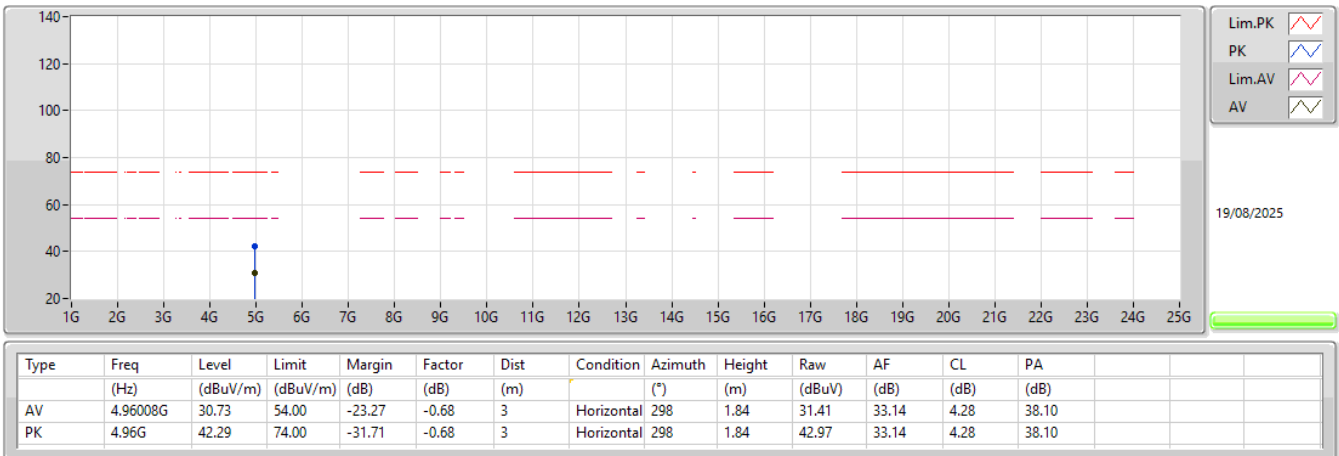
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



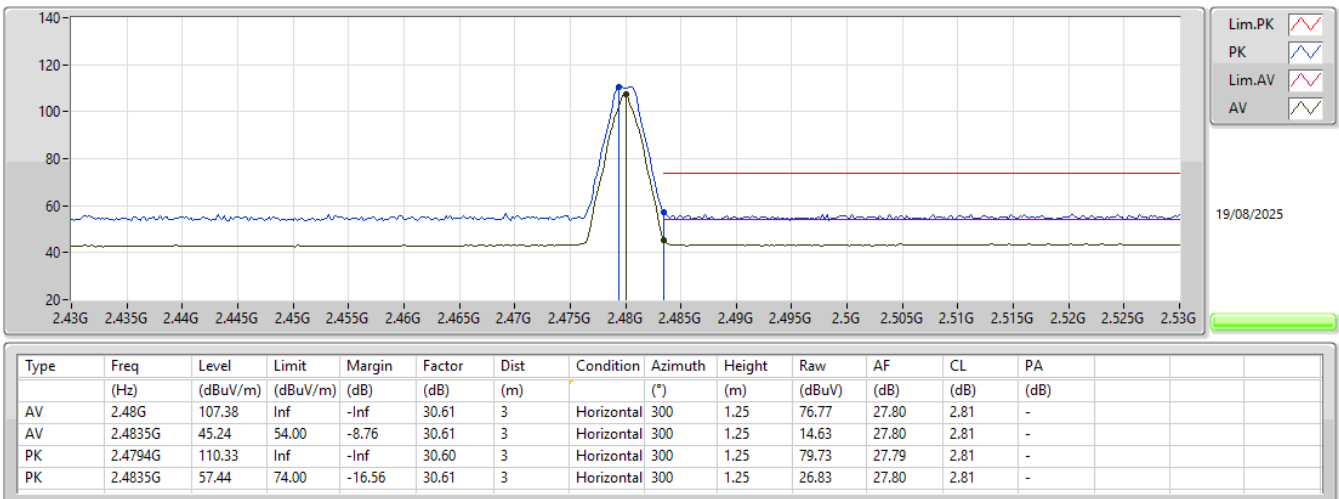
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



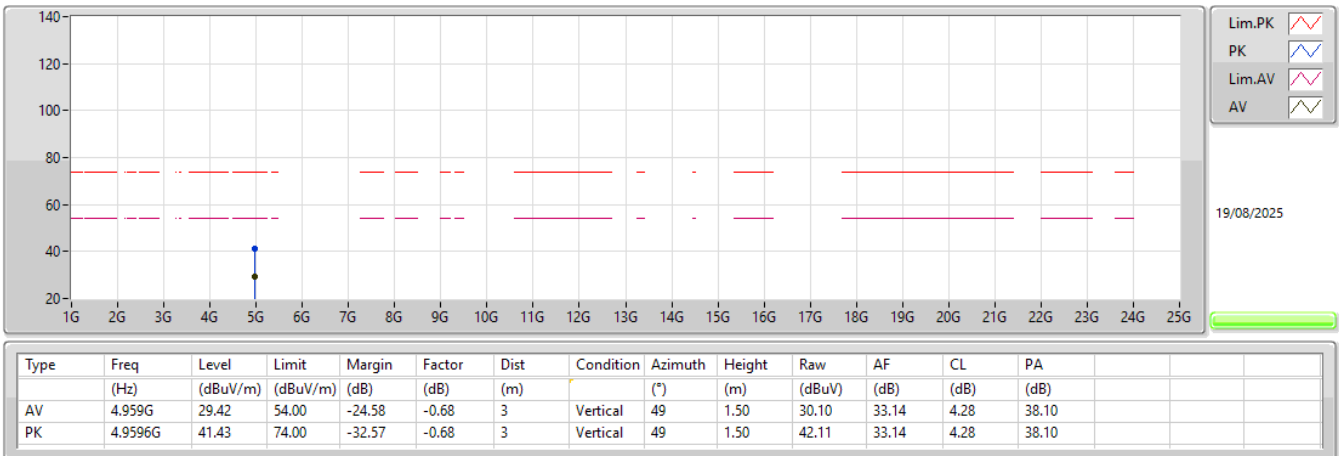
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



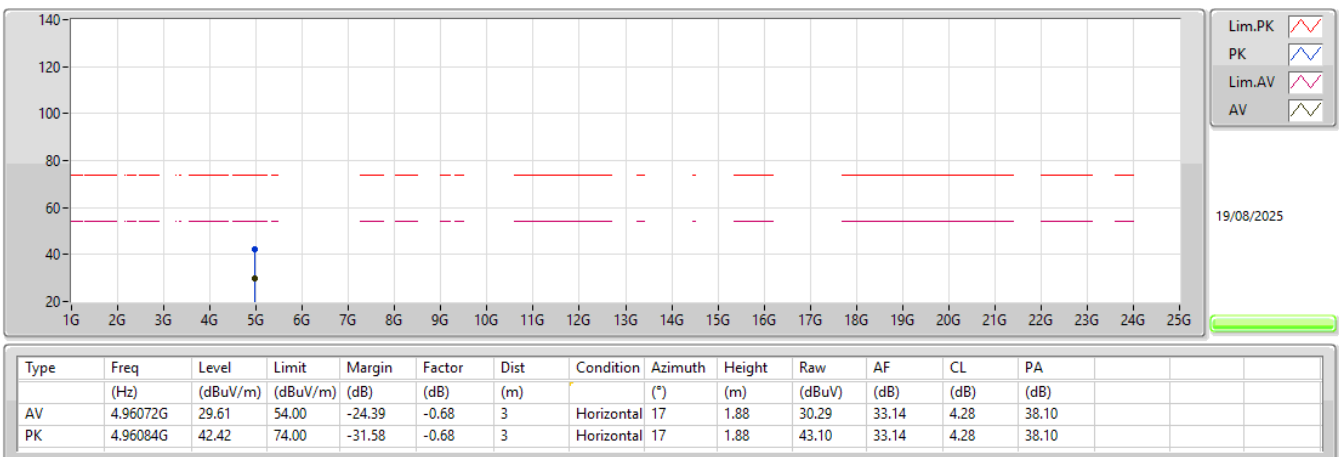
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



Summary

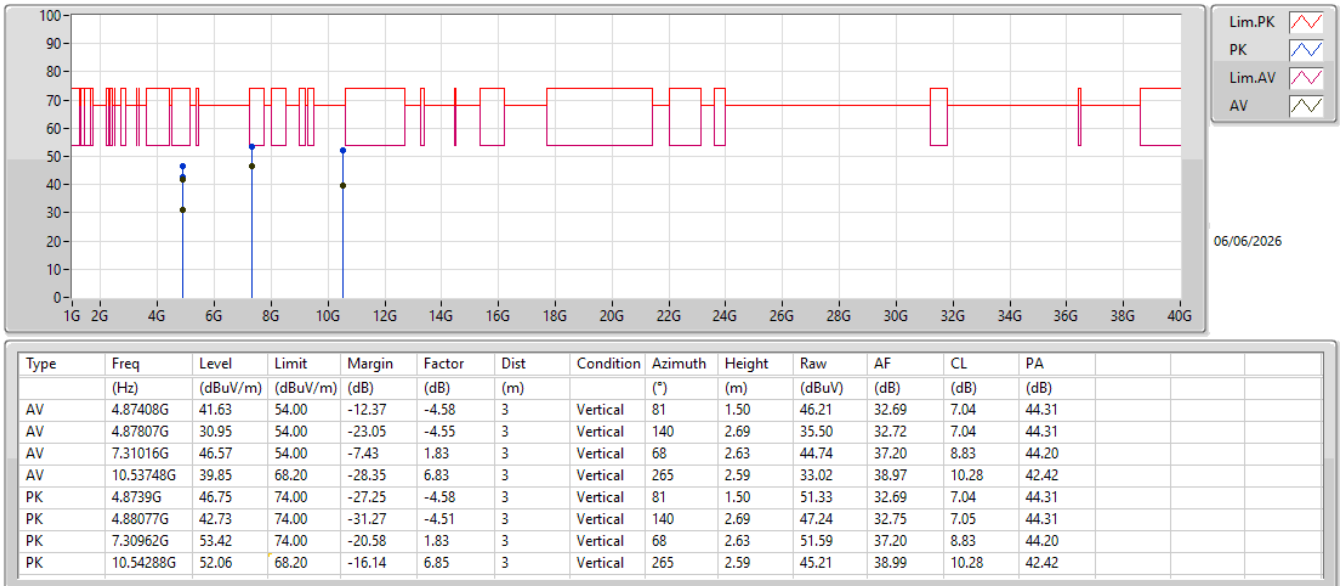
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	7.31016G	46.57	54.00	-7.43	Vertical
Mode 2	Pass	AV	7.31024G	48.67	54.00	-5.33	Vertical
Mode 3	Pass	AV	7.31176G	44.71	54.00	-9.29	Vertical
Mode 4	Pass	AV	7.3103G	48.70	54.00	-5.30	Vertical

Result

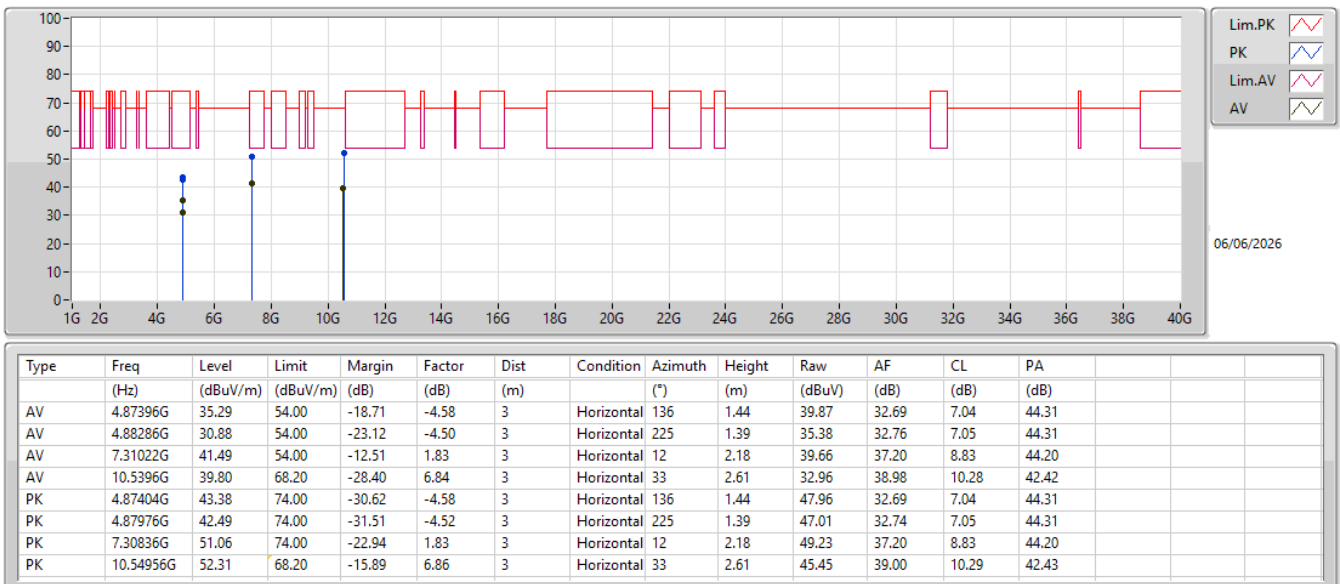
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.87408G	41.63	54.00	-12.37	3	Vertical	81	1.50
Mode 1	Pass	AV	4.87807G	30.95	54.00	-23.05	3	Vertical	140	2.69
Mode 1	Pass	AV	7.31016G	46.57	54.00	-7.43	3	Vertical	68	2.63
Mode 1	Pass	AV	10.53748G	39.85	68.20	-28.35	3	Vertical	265	2.59
Mode 1	Pass	PK	4.8739G	46.75	74.00	-27.25	3	Vertical	81	1.50
Mode 1	Pass	PK	4.88077G	42.73	74.00	-31.27	3	Vertical	140	2.69
Mode 1	Pass	PK	7.30962G	53.42	74.00	-20.58	3	Vertical	68	2.63
Mode 1	Pass	PK	10.54288G	52.06	68.20	-16.14	3	Vertical	265	2.59
Mode 1	Pass	AV	4.87396G	35.29	54.00	-18.71	3	Horizontal	136	1.44
Mode 1	Pass	AV	4.88286G	30.88	54.00	-23.12	3	Horizontal	225	1.39
Mode 1	Pass	AV	7.31022G	41.49	54.00	-12.51	3	Horizontal	12	2.18
Mode 1	Pass	AV	10.5396G	39.80	68.20	-28.40	3	Horizontal	33	2.61
Mode 1	Pass	PK	4.87404G	43.38	74.00	-30.62	3	Horizontal	136	1.44
Mode 1	Pass	PK	4.87976G	42.49	74.00	-31.51	3	Horizontal	225	1.39
Mode 1	Pass	PK	7.30836G	51.06	74.00	-22.94	3	Horizontal	12	2.18
Mode 1	Pass	PK	10.54956G	52.31	68.20	-15.89	3	Horizontal	33	2.61
Mode 2	Pass	AV	4.87396G	41.30	54.00	-12.70	3	Vertical	81	1.50
Mode 2	Pass	AV	4.87995G	30.97	54.00	-23.03	3	Vertical	58	1.11
Mode 2	Pass	AV	7.31024G	48.67	54.00	-5.33	3	Vertical	69	3.00
Mode 2	Pass	AV	10.53848G	40.01	68.20	-28.19	3	Vertical	203	1.50
Mode 2	Pass	AV	11.16304G	40.19	54.00	-13.81	3	Vertical	273	2.58
Mode 2	Pass	PK	4.87398G	47.95	74.00	-26.05	3	Vertical	81	1.50
Mode 2	Pass	PK	4.88142G	43.52	74.00	-30.48	3	Vertical	58	1.11
Mode 2	Pass	PK	7.31028G	54.53	74.00	-19.47	3	Vertical	69	3.00
Mode 2	Pass	PK	10.5486G	52.89	68.20	-15.31	3	Vertical	203	1.50
Mode 2	Pass	PK	11.1618G	52.45	74.00	-21.55	3	Vertical	273	2.58
Mode 2	Pass	AV	4.87397G	35.54	54.00	-18.46	3	Horizontal	136	1.35
Mode 2	Pass	AV	4.88069G	30.99	54.00	-23.01	3	Horizontal	307	1.83
Mode 2	Pass	AV	7.31176G	42.85	54.00	-11.15	3	Horizontal	13	2.42
Mode 2	Pass	AV	10.5372G	39.98	68.20	-28.22	3	Horizontal	359	1.50
Mode 2	Pass	AV	11.16752G	40.22	54.00	-13.78	3	Horizontal	359	1.78
Mode 2	Pass	PK	4.87398G	44.75	74.00	-29.25	3	Horizontal	136	1.35
Mode 2	Pass	PK	4.87815G	42.34	74.00	-31.66	3	Horizontal	307	1.83
Mode 2	Pass	PK	7.31012G	52.02	74.00	-21.98	3	Horizontal	13	2.42
Mode 2	Pass	PK	10.5386G	52.18	68.20	-16.02	3	Horizontal	359	1.50
Mode 2	Pass	PK	11.16488G	52.60	74.00	-21.40	3	Horizontal	359	1.78
Mode 3	Pass	AV	4.87392G	38.70	54.00	-15.30	3	Vertical	75	2.62
Mode 3	Pass	AV	4.87763G	30.83	54.00	-23.17	3	Vertical	218	2.23
Mode 3	Pass	AV	7.31176G	44.71	54.00	-9.29	3	Vertical	67	2.25
Mode 3	Pass	AV	10.54052G	39.78	68.20	-28.42	3	Vertical	310	1.56
Mode 3	Pass	PK	4.874G	45.24	74.00	-28.76	3	Vertical	75	2.62
Mode 3	Pass	PK	4.88081G	42.12	74.00	-31.88	3	Vertical	218	2.23
Mode 3	Pass	PK	7.3106G	52.62	74.00	-21.38	3	Vertical	67	2.25
Mode 3	Pass	PK	10.5368G	52.06	68.20	-16.14	3	Vertical	310	1.56
Mode 3	Pass	AV	4.87404G	36.42	54.00	-17.58	3	Horizontal	88	2.28
Mode 3	Pass	AV	4.87797G	30.83	54.00	-23.17	3	Horizontal	0	1.28
Mode 3	Pass	AV	7.31176G	40.61	54.00	-13.39	3	Horizontal	8	2.01
Mode 3	Pass	AV	10.54192G	39.84	68.20	-28.36	3	Horizontal	323	2.53
Mode 3	Pass	PK	4.87392G	44.54	74.00	-29.46	3	Horizontal	88	2.28
Mode 3	Pass	PK	4.88177G	42.72	74.00	-31.28	3	Horizontal	0	1.28

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 3	Pass	PK	7.31184G	50.77	74.00	-23.23	3	Horizontal	8	2.01
Mode 3	Pass	PK	10.5496G	51.93	68.20	-16.27	3	Horizontal	323	2.53
Mode 4	Pass	AV	4.87399G	44.54	54.00	-9.46	3	Vertical	130	2.79
Mode 4	Pass	AV	4.87751G	30.81	54.00	-23.19	3	Vertical	288	1.80
Mode 4	Pass	AV	7.3103G	48.70	54.00	-5.30	3	Vertical	68	2.33
Mode 4	Pass	AV	10.53823G	39.88	68.20	-28.32	3	Vertical	81	1.85
Mode 4	Pass	AV	11.16201G	40.38	54.00	-13.62	3	Vertical	277	2.14
Mode 4	Pass	PK	4.8738G	49.59	74.00	-24.41	3	Vertical	130	2.79
Mode 4	Pass	PK	4.8807G	42.74	74.00	-31.26	3	Vertical	288	1.80
Mode 4	Pass	PK	7.31024G	54.87	74.00	-19.13	3	Vertical	68	2.33
Mode 4	Pass	PK	10.53999G	51.65	68.20	-16.55	3	Vertical	81	1.85
Mode 4	Pass	PK	11.15869G	52.49	74.00	-21.51	3	Vertical	277	2.14
Mode 4	Pass	AV	4.874G	36.06	54.00	-17.94	3	Horizontal	136	1.35
Mode 4	Pass	AV	4.8784G	30.85	54.00	-23.15	3	Horizontal	359	2.72
Mode 4	Pass	AV	7.31014G	43.65	54.00	-10.35	3	Horizontal	9	2.03
Mode 4	Pass	AV	10.54144G	39.87	68.20	-28.33	3	Horizontal	2	1.89
Mode 4	Pass	AV	11.1581G	40.28	54.00	-13.72	3	Horizontal	68	2.33
Mode 4	Pass	PK	4.87396G	44.96	74.00	-29.04	3	Horizontal	136	1.35
Mode 4	Pass	PK	4.88G	42.88	74.00	-31.12	3	Horizontal	359	2.72
Mode 4	Pass	PK	7.31066G	51.76	74.00	-22.24	3	Horizontal	9	2.03
Mode 4	Pass	PK	10.53896G	51.68	68.20	-16.52	3	Horizontal	2	1.89
Mode 4	Pass	PK	11.15929G	52.66	74.00	-21.34	3	Horizontal	68	2.33

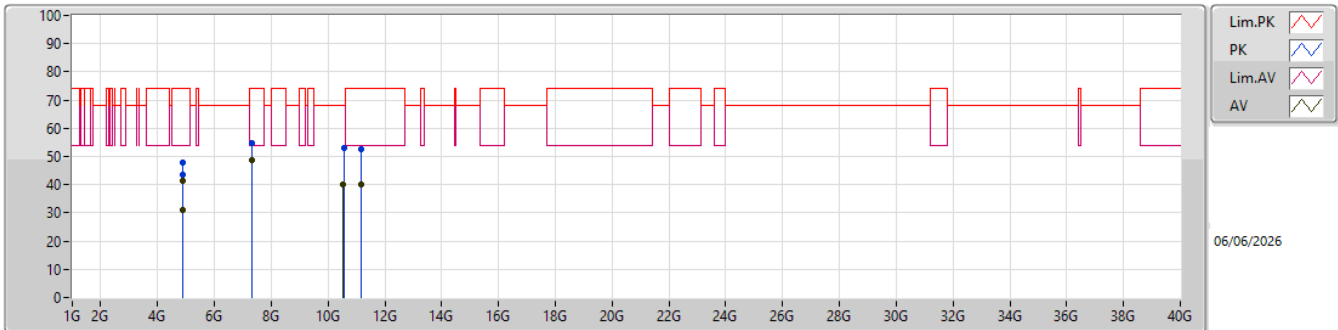
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1

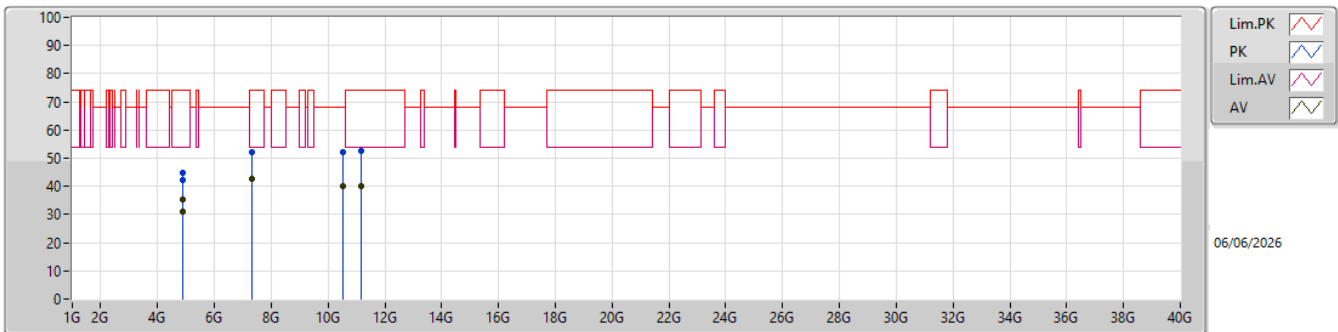


Radiated Emissions above 1GHz_Mode 2



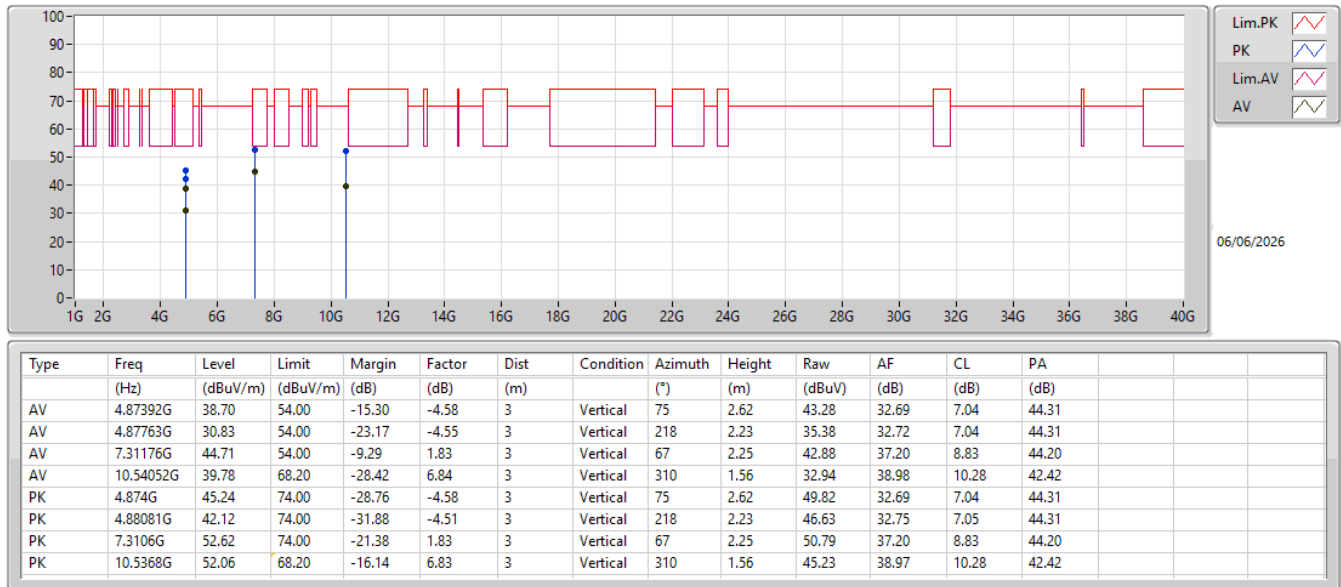
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87396G	41.30	54.00	-12.70	-4.58	3	Vertical	81	1.50	45.88	32.69	7.04	44.31
AV	4.87995G	30.97	54.00	-23.03	-4.52	3	Vertical	58	1.11	35.49	32.74	7.05	44.31
AV	7.31024G	48.67	54.00	-5.33	1.83	3	Vertical	69	3.00	46.84	37.20	8.83	44.20
AV	10.53848G	40.01	68.20	-28.19	6.84	3	Vertical	203	1.50	33.17	38.98	10.28	42.42
AV	11.16304G	40.19	54.00	-13.81	6.97	3	Vertical	273	2.58	33.22	39.10	10.50	42.63
PK	4.87398G	47.95	74.00	-26.05	-4.58	3	Vertical	81	1.50	52.53	32.69	7.04	44.31
PK	4.88142G	43.52	74.00	-30.48	-4.51	3	Vertical	58	1.11	48.03	32.75	7.05	44.31
PK	7.31028G	54.53	74.00	-19.47	1.83	3	Vertical	69	3.00	52.70	37.20	8.83	44.20
PK	10.5486G	52.89	68.20	-15.31	6.85	3	Vertical	203	1.50	46.04	39.00	10.28	42.43
PK	11.1618G	52.45	74.00	-21.55	6.97	3	Vertical	273	2.58	45.48	39.10	10.50	42.63

Radiated Emissions above 1GHz_Mode 2

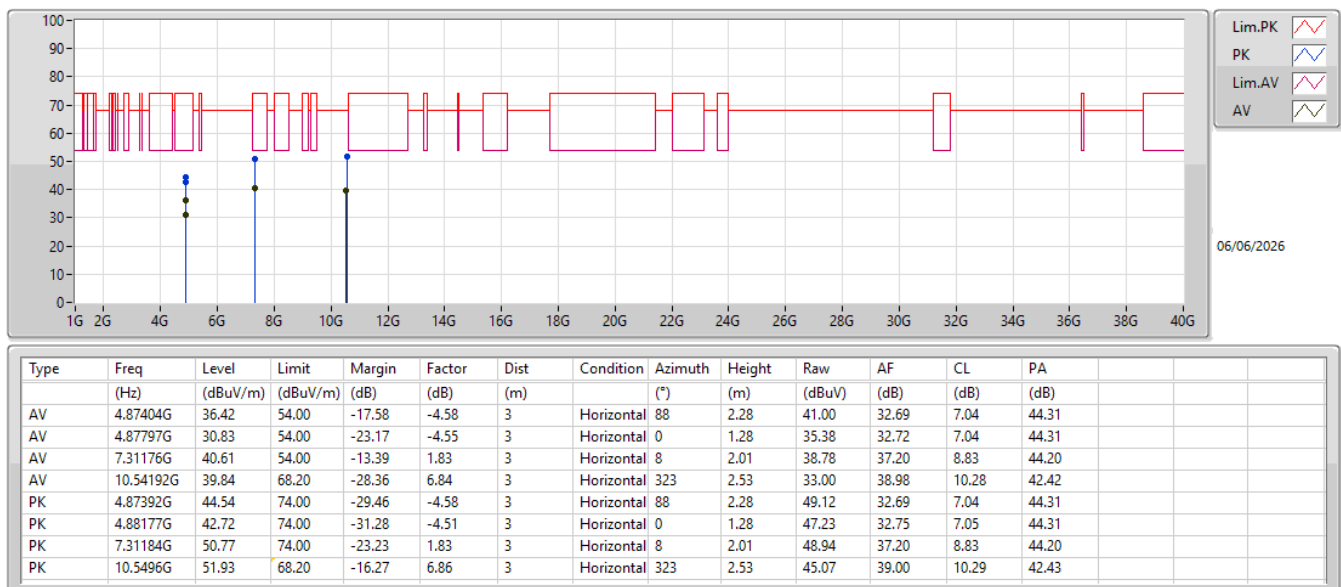


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87397G	35.54	54.00	-18.46	-4.58	3	Horizontal	136	1.35	40.12	32.69	7.04	44.31
AV	4.88069G	30.99	54.00	-23.01	-4.51	3	Horizontal	307	1.83	35.50	32.75	7.05	44.31
AV	7.31176G	42.85	54.00	-11.15	1.83	3	Horizontal	13	2.42	41.02	37.20	8.83	44.20
AV	10.5372G	39.98	68.20	-28.22	6.83	3	Horizontal	359	1.50	33.15	38.97	10.28	42.42
AV	11.16752G	40.22	54.00	-13.78	6.98	3	Horizontal	359	1.78	33.24	39.10	10.50	42.62
PK	4.87398G	44.75	74.00	-29.25	-4.58	3	Horizontal	136	1.35	49.33	32.69	7.04	44.31
PK	4.87815G	42.34	74.00	-31.66	-4.54	3	Horizontal	307	1.83	46.88	32.73	7.04	44.31
PK	7.31012G	52.02	74.00	-21.98	1.83	3	Horizontal	13	2.42	50.19	37.20	8.83	44.20
PK	10.5386G	52.18	68.20	-16.02	6.84	3	Horizontal	359	1.50	45.34	38.98	10.28	42.42
PK	11.16488G	52.60	74.00	-21.40	6.98	3	Horizontal	359	1.78	45.62	39.10	10.50	42.62

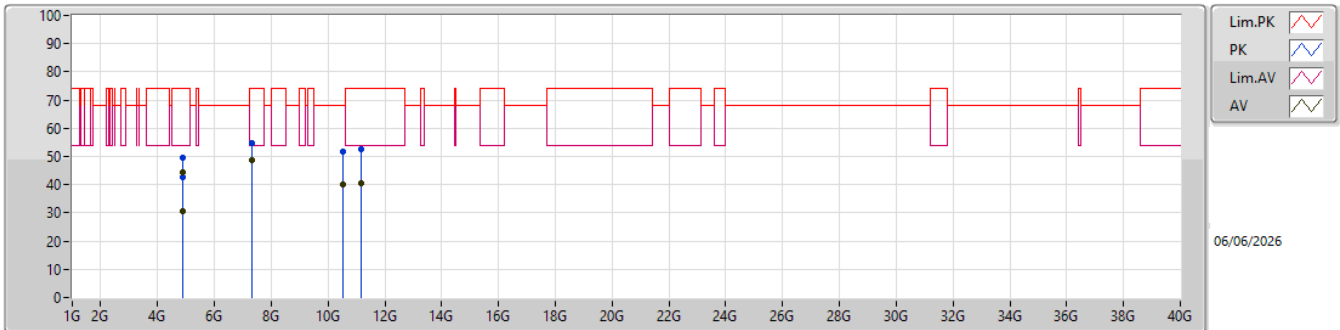
Radiated Emissions above 1GHz_Mode 3



Radiated Emissions above 1GHz_Mode 3

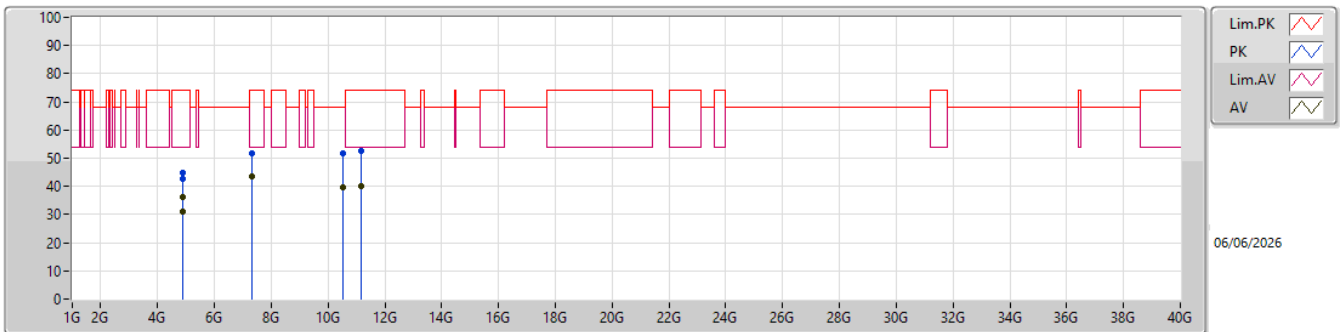


Radiated Emissions above 1GHz_Mode 4



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	4.87399G	44.54	54.00	-9.46	-4.58	3	Vertical	130	2.79	49.12	32.69	7.04	44.31
AV	4.87751G	30.81	54.00	-23.19	-4.55	3	Vertical	288	1.80	35.36	32.72	7.04	44.31
AV	7.3103G	48.70	54.00	-5.30	1.83	3	Vertical	68	2.33	46.87	37.20	8.83	44.20
AV	10.53823G	39.88	68.20	-28.32	6.84	3	Vertical	81	1.85	33.04	38.98	10.28	42.42
AV	11.16201G	40.38	54.00	-13.62	6.97	3	Vertical	277	2.14	33.41	39.10	10.50	42.63
PK	4.8738G	49.59	74.00	-24.41	-4.58	3	Vertical	130	2.79	54.17	32.69	7.04	44.31
PK	4.8807G	42.74	74.00	-31.26	-4.51	3	Vertical	288	1.80	47.25	32.75	7.05	44.31
PK	7.31024G	54.87	74.00	-19.13	1.83	3	Vertical	68	2.33	53.04	37.20	8.83	44.20
PK	10.53999G	51.65	68.20	-16.55	6.84	3	Vertical	81	1.85	44.81	38.98	10.28	42.42
PK	11.15869G	52.49	74.00	-21.51	6.97	3	Vertical	277	2.14	45.52	39.10	10.50	42.63

Radiated Emissions above 1GHz_Mode 4



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	4.874G	36.06	54.00	-17.94	-4.58	3	Horizontal	136	1.35	40.64	32.69	7.04	44.31
AV	4.8784G	30.85	54.00	-23.15	-4.54	3	Horizontal	359	2.72	35.39	32.73	7.04	44.31
AV	7.31014G	43.65	54.00	-10.35	1.83	3	Horizontal	9	2.03	41.82	37.20	8.83	44.20
AV	10.54144G	39.87	68.20	-28.33	6.84	3	Horizontal	2	1.89	33.03	38.98	10.28	42.42
AV	11.1581G	40.28	54.00	-13.72	6.97	3	Horizontal	68	2.33	33.31	39.10	10.50	42.63
PK	4.87396G	44.96	74.00	-29.04	-4.58	3	Horizontal	136	1.35	49.54	32.69	7.04	44.31
PK	4.88G	42.88	74.00	-31.12	-4.52	3	Horizontal	359	2.72	47.40	32.74	7.05	44.31
PK	7.31066G	51.76	74.00	-22.24	1.83	3	Horizontal	9	2.03	49.93	37.20	8.83	44.20
PK	10.53896G	51.68	68.20	-16.52	6.84	3	Horizontal	2	1.89	44.84	38.98	10.28	42.42
PK	11.15929G	52.66	74.00	-21.34	6.97	3	Horizontal	68	2.33	45.69	39.10	10.50	42.63