

FCC Radio Test Report

FCC ID : TOR-C430
Equipment : Wireless Access Point
Brand Name : ARISTA
Model Name : C-430E
Applicant : Arista Networks, Inc.
5453 Great America Parkway, Santa Clara, CA 95054 USA
Manufacturer : Arista Networks, Inc.
5453 Great America Parkway, Santa Clara, CA 95054 USA
Standard : 47 CFR FCC Part 15.247

The product was received on Dec. 11, 2024, and testing was started from Dec. 19, 2024 and completed on Jan. 24, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



Table of Contents

HISTORY OF THIS TEST REPORT	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Information.....	5
1.2 Testing Applied Standards	8
1.3 Testing Location Information	8
1.4 Measurement Uncertainty	8
2 TEST CONFIGURATION OF EUT.....	9
2.1 Test Channel Mode	9
2.2 The Worst Case Measurement Configuration.....	10
2.3 Accessories	11
2.4 Support Equipment.....	11
2.5 Test Setup Diagram	12
3 TRANSMITTER TEST RESULT	13
3.1 AC Power-line Conducted Emissions	13
3.2 DTS Bandwidth.....	15
3.3 Maximum Conducted Output Power	16
3.4 Power Spectral Density	18
3.5 Emissions in Non-restricted Frequency Bands	19
3.6 Emissions in Restricted Frequency Bands.....	20
4 TEST EQUIPMENT AND CALIBRATION DATA.....	24
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS	
APPENDIX B. TEST RESULTS OF DTS BANDWIDTH	
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER	
APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY	
APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS	
APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS	
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION	
APPENDIX H. TEST PHOTOS	
PHOTOGRAPHS OF EUT V01	



TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver4.3
FCC ID: TOR-C430

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: 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(125kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	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	WHAYU	C393-510225-A	Dipole	Reverse SMA	6G	Radio 2
2	WHAYU	C393-510225-A	Dipole	Reverse SMA	2.4G+5G	Radio 1+Radio 2
3	WHAYU	C393-510225-A	Dipole	Reverse SMA	2.4G+5G	Radio 1+Radio 2
4	WHAYU	C393-510225-A	Dipole	Reverse SMA	6G	Radio 2
5	WHAYU	C393-510225-A	Dipole	Reverse SMA	2.4G+5G+6G	Radio 0
6	WHAYU	C393-510225-A	Dipole	Reverse SMA	2.4G+5G+6G	Radio 0
7	WHAYU	C393-510335-A	Dipole	I-Pex	BT	-
8	WHAYU	C393-510335-A	PIFA	I-Pex	GPS	-

Ant.	Port	Gain (dBi)										
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	BT	GPS
1	1	-	-	-	-	-	5.1	5.1	5.1	5.1	-	-
2	1	5	5.8	5.8	5.8	5.8	-	-	-	-	-	-
3	2	6	5.4	5.4	5.4	5.4	-	-	-	-	-	-
4	2	-	-	-	-	-	5.4	5.4	5.4	5.4	-	-
5	1	4.7	6.7	6.7	6.7	6.7	6	6	6	6	-	-
6	2	5.4	5.6	5.6	5.6	5.6	5.5	5.5	5.5	5.5	-	-
7	1	-	-	-	-	-	-	-	-	-	5.6	-
8	1	-	-	-	-	-	-	-	-	-	-	3.4

Note 1: The EUT has eight antennas.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) < **Radio 0** >

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

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 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode(2TX/2RX) < **Radio 0** >

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

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 6GHz function:

For IEEE 802.11 ax/be mode(2TX/2RX) < **Radio 0** >

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

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

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.

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 ≤ 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) $\geq 1/T$
BT-LE(1Mbps)	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
BT-LE(2Mbps)	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

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

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR4N1424AL

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

Modifications	Performance Checking
Model name was added. (C-430E) (Wi-Fi Antenna change to External Antenna)	All test items

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

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

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

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Lego Lin	22.1~23.6°C / 53~58%	23/Jan/2025~24/Jan/2025
RF Conducted	TH01-HY	Jin Jing	22.4~22.6°C / 57~60%	25/Dec/2024
☒ 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	03CH25-HY	Rian Chung	19.7~22.9°C / 52~56%	19/Dec/2024~27/Dec/2024
Radiated (Co-location)	03CH25-HY	Rian Chung	18.6~20.9°C / 52~54%	17/Jan/2025

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	Tera Term Version 4.76
-----------------------	------------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	100
2440MHz	100
2480MHz	100
BT-LE(2Mbps)	-
2402MHz	100
2440MHz	100
2480MHz	100

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 measurement
Operating Mode	CTX
1	Radio 1 + Radio 2 (5GHz) + Radio 0 (2.4GHz) + Bluetooth
2	Radio 1 + Radio 2 (5GHz) + Radio 0 (5GHz) + Bluetooth
Refer to Sporton Test Report No.: FA4N1424-03 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

Accessories					
Ceiling	Brand Name	ARISTA	Model Name	MNP-AP-15MM	

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

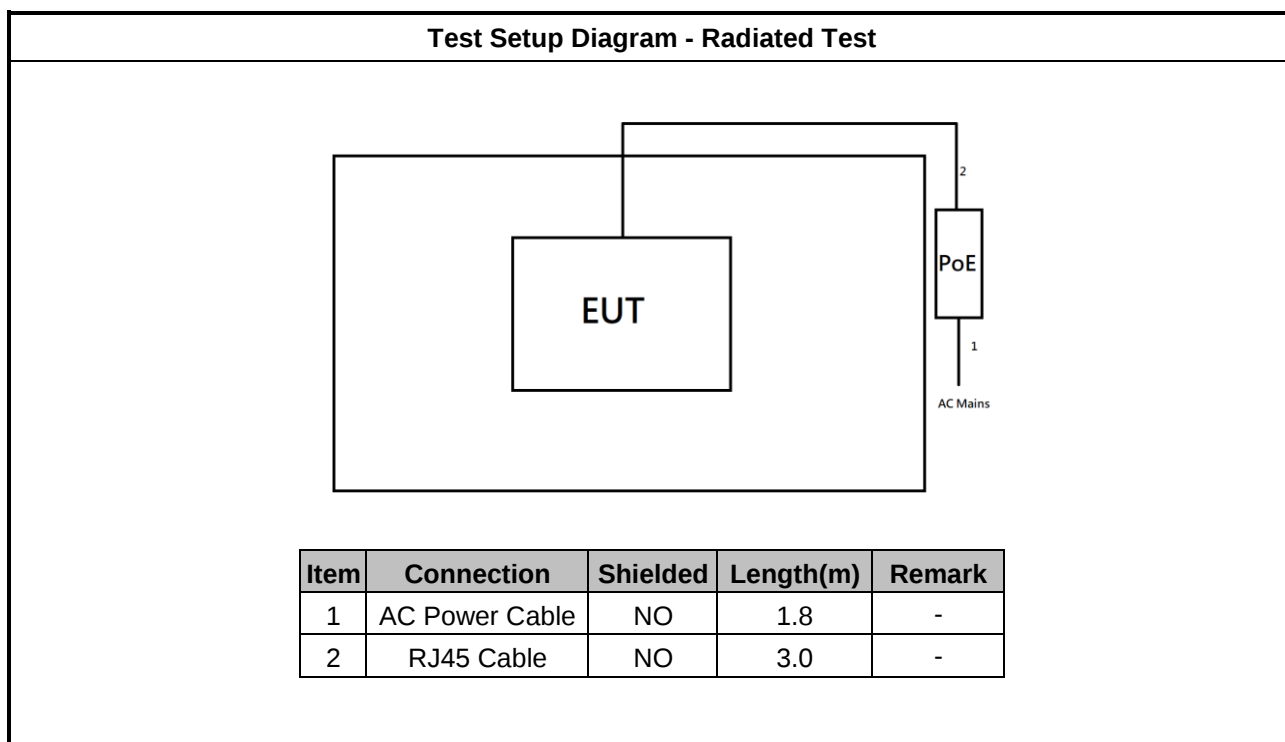
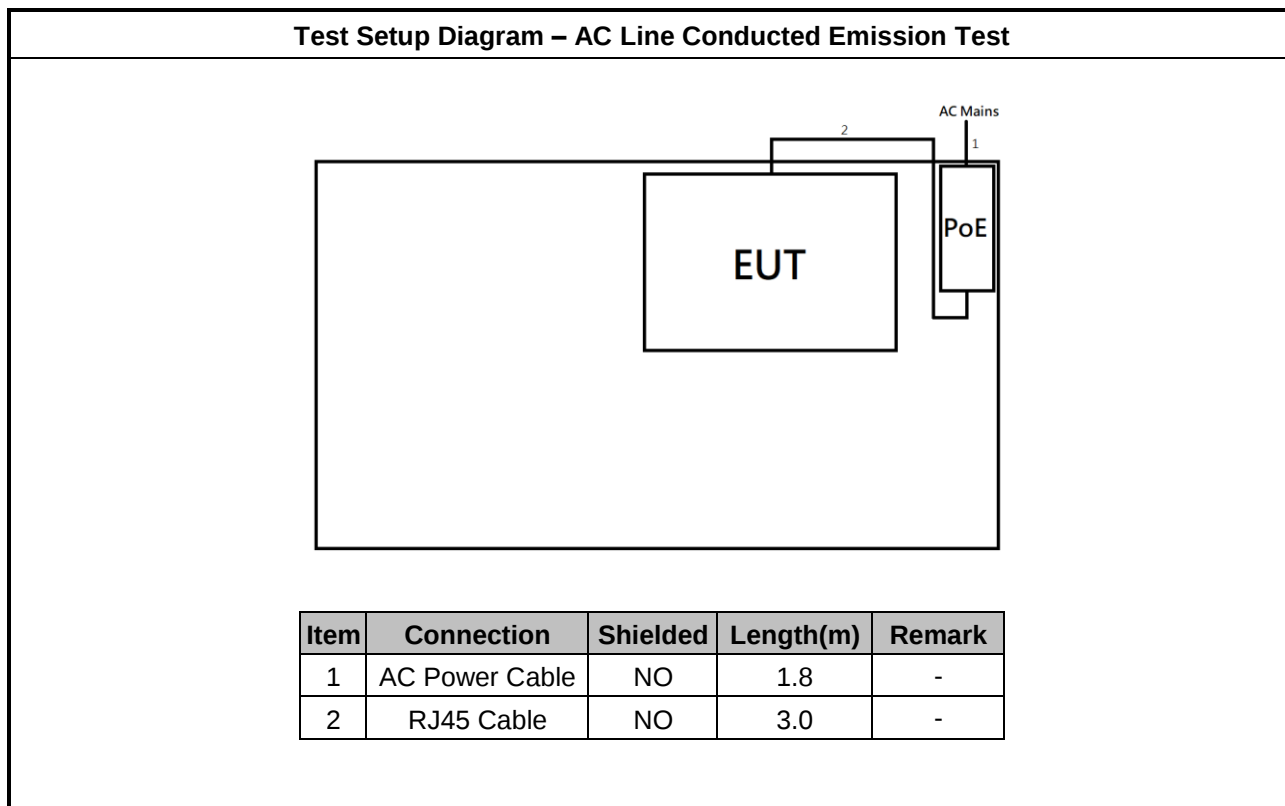
2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	PoE	PHIHONG	POE60U-1BT-X	-	-
2	AC Power Cable	Power sync	PW-GPC180-3	-	-
3	RJ-45 Cable	Power sync	CAT-6E-03	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	AC Adapter	ASIAN POWER DEVICES	WA-48B12R	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-45 Cable	Power sync	CAT-6E-03	-	-
2	PoE (Remote)	PHIHONG	POE60U-1BT-X	-	-
3	AC Power Cable (Remote)	Power sync	PW-GPC180-3	-	-

2.5 Test Setup Diagram



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

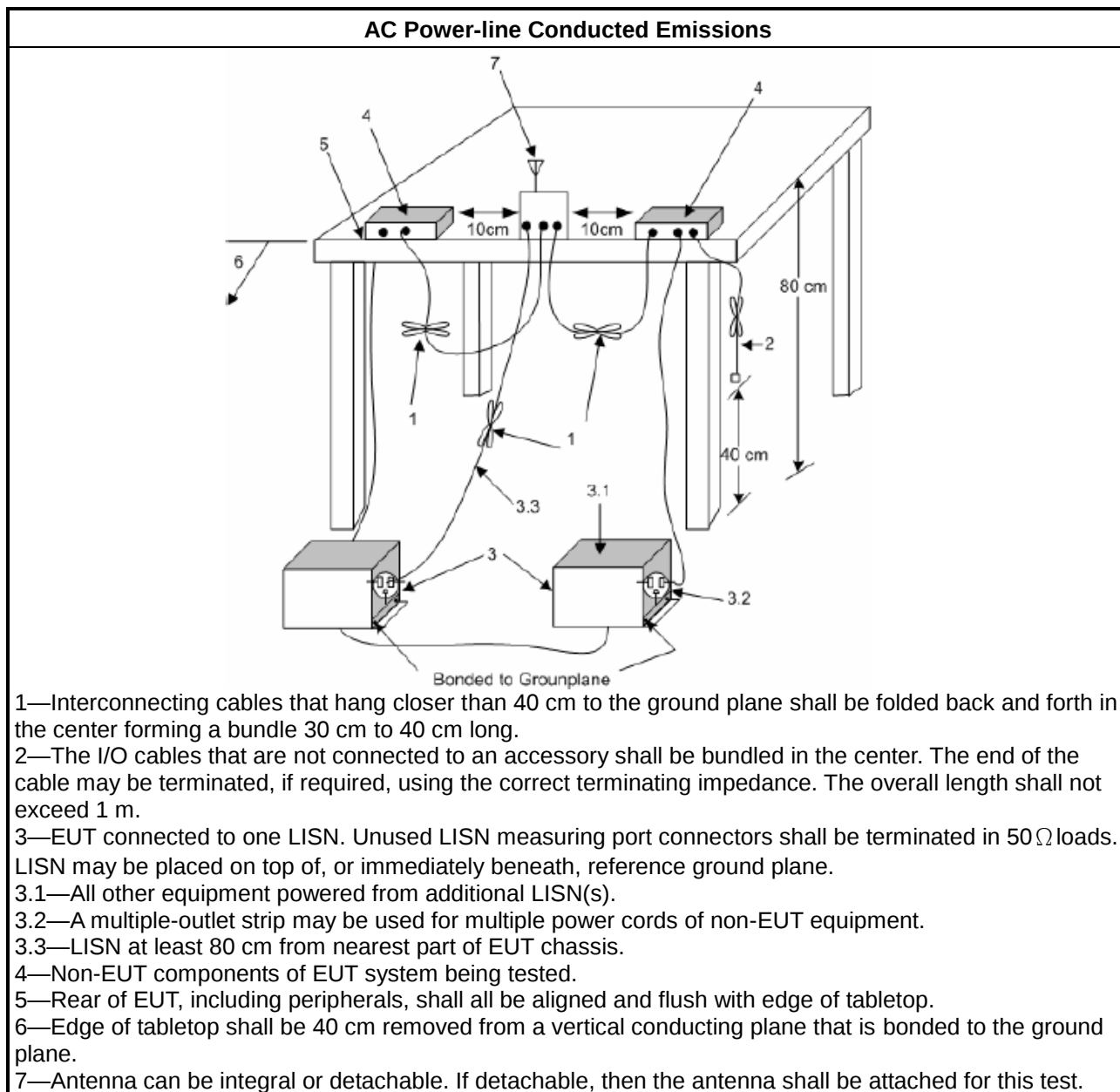
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

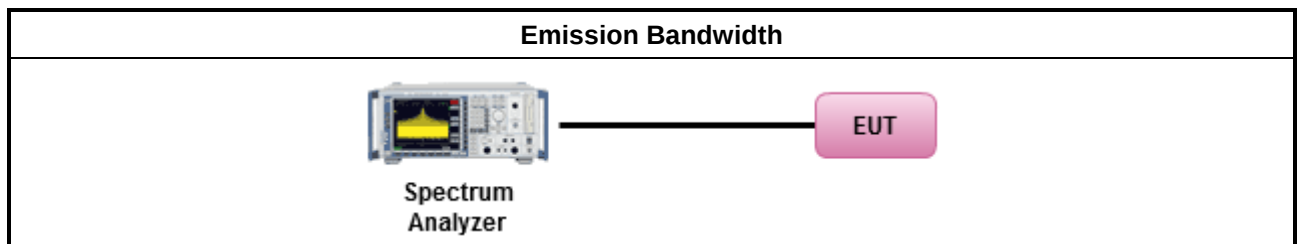
3.2.2 Measuring Instruments

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.	

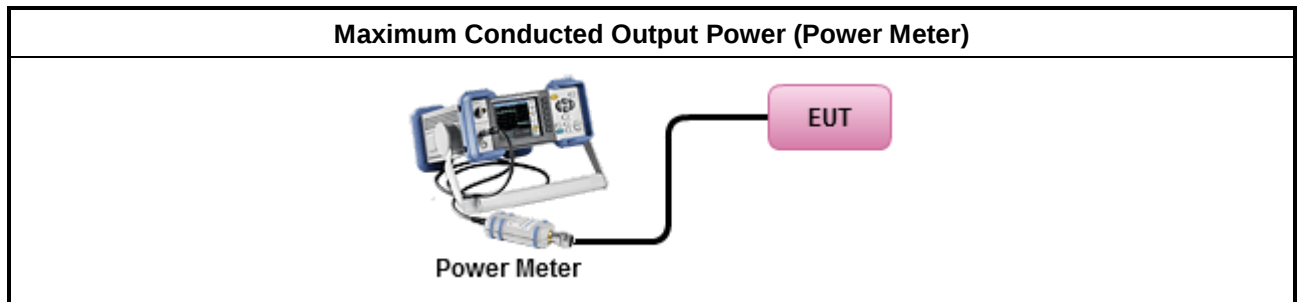
3.3.2 Measuring Instruments

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 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

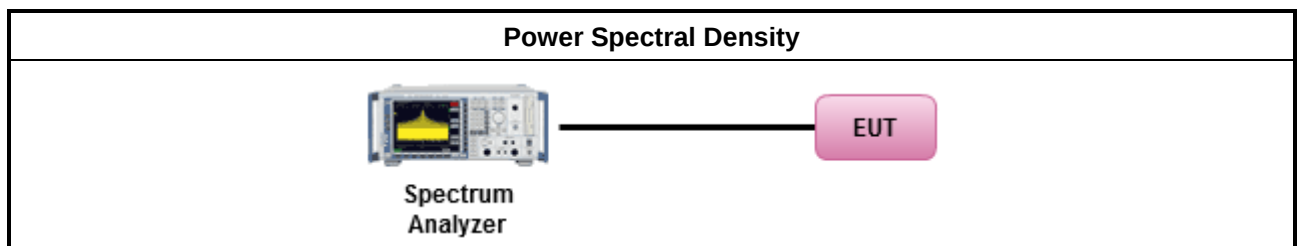
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒ Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
- For conducted measurement. - If The EUT supports multiple transmit chains using options given below: - Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.	

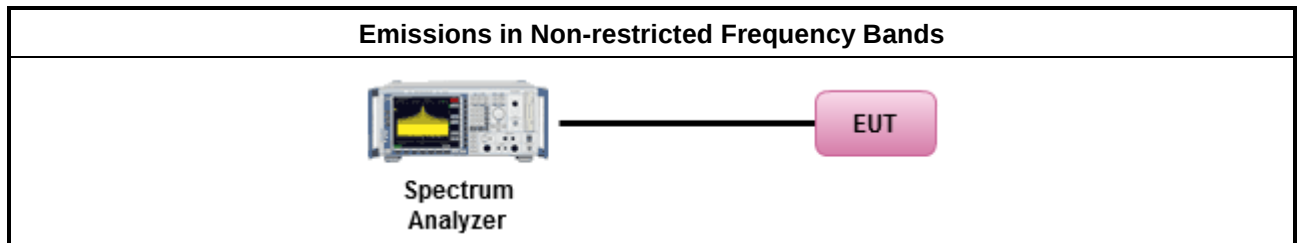
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

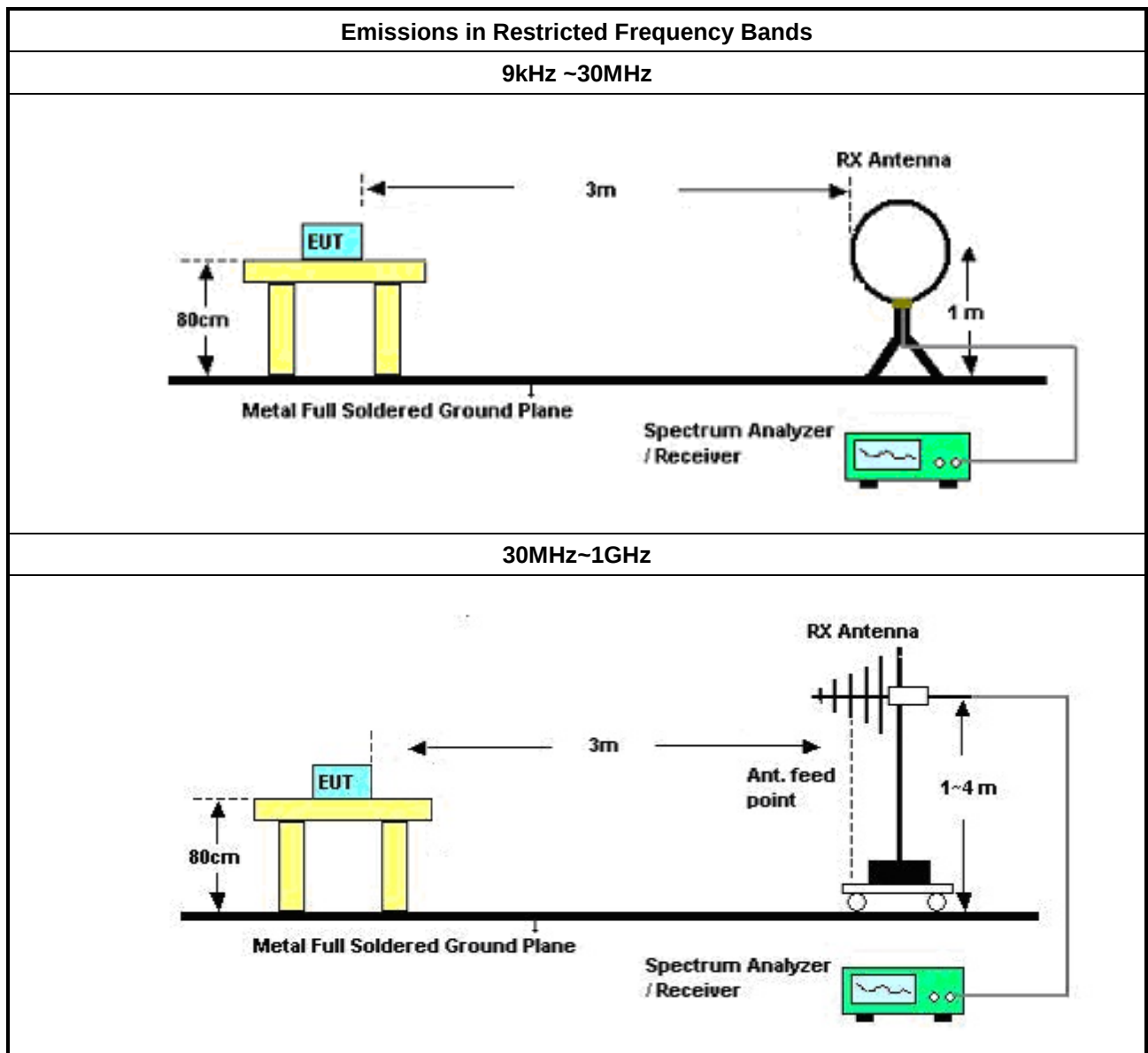
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

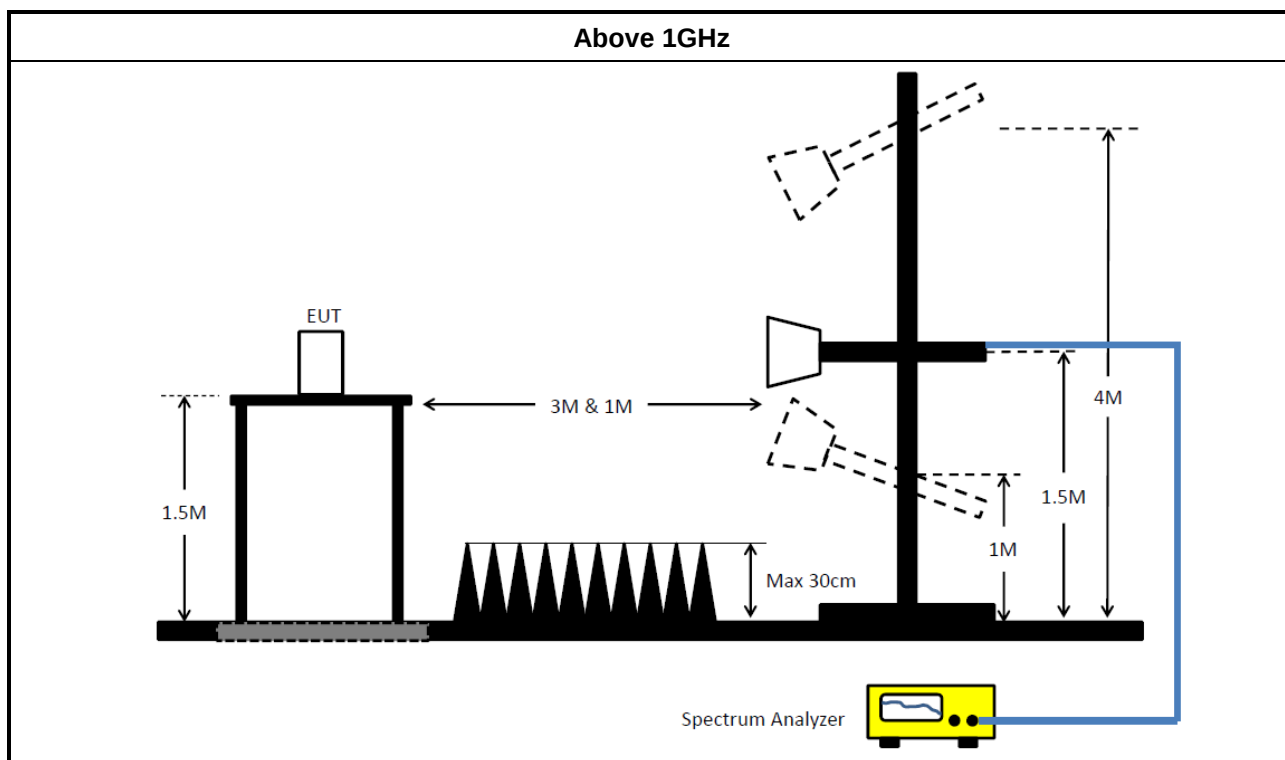
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.6.5 Test Setup





3.6.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR3	102051	9kHz ~ 3.6GHz	17/May/2024	16/May/2025
Two-Line V-Network	ROHDE & SCHWARZ	ENV 216	101274	9kHz ~ 30MHz	18/Jun/2024	17/Jun/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	27/Feb/2024	26/Feb/2025
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	17/Oct/2024	16/Oct/2025
SENSE-EMI	Sporton	V5.11.3	N/A	N/A	N/A	N/A

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	09/Apr/2024	08/Apr/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	17/Feb/2024	16/Feb/2025
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	17/Feb/2024	16/Feb/2025
SENSE-15247_FS	Sporton	V5.11.18	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	19/Mar/2024	18/Mar/2025
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63537/001	30MHz~1GHz	30/May/2024	29/May/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	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	9kHz~1GHz	24/Apr/2024	23/Apr/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	23/Apr/2024	22/Apr/2025
Preamplifier	SGH	PRAMP 903	20230515-1	25MHz~3GHz	24/May/2024	23/May/2025
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-15247_FS	Sporton	V5.11.20	NA	NA	NA	NA

Instrument for Radiated Test (Co-location)

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	23/Apr/2024	22/Apr/2025
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-EMI	Sporton	V5.11.9	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

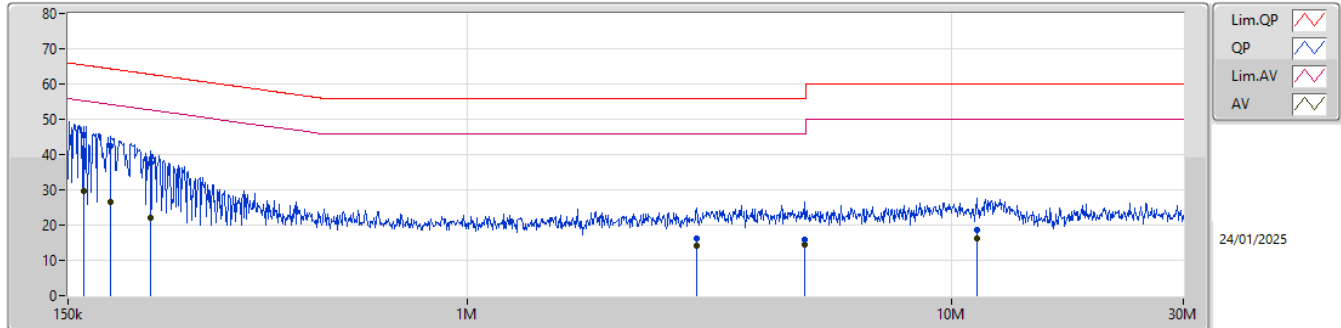
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	47.77	65.96	-18.19	Neutral

Result

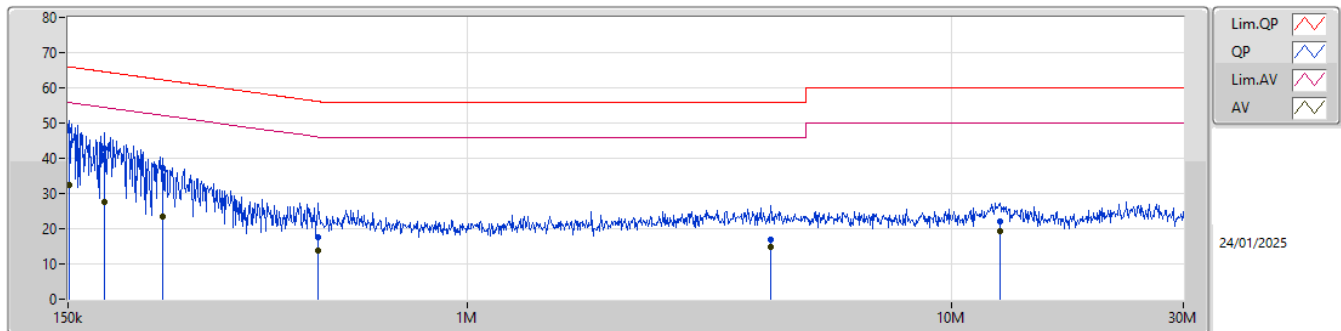
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	161.82k	45.63	65.37	-19.74	Line
Mode 1	Pass	AV	161.82k	29.72	55.37	-25.65	Line
Mode 1	Pass	QP	183.137k	42.30	64.34	-22.04	Line
Mode 1	Pass	AV	183.137k	26.39	54.34	-27.95	Line
Mode 1	Pass	QP	221.817k	37.67	62.75	-25.08	Line
Mode 1	Pass	AV	221.817k	22.19	52.75	-30.56	Line
Mode 1	Pass	QP	2.971M	16.34	56.00	-39.66	Line
Mode 1	Pass	AV	2.971M	14.19	46.00	-31.81	Line
Mode 1	Pass	QP	4.972M	15.91	56.00	-40.09	Line
Mode 1	Pass	AV	4.972M	14.44	46.00	-31.56	Line
Mode 1	Pass	QP	11.226M	18.68	60.00	-41.32	Line
Mode 1	Pass	AV	11.226M	16.32	50.00	-33.68	Line
Mode 1	Pass	QP	150.6k	47.77	65.96	-18.19	Neutral
Mode 1	Pass	AV	150.6k	32.36	55.96	-23.60	Neutral
Mode 1	Pass	QP	178.803k	42.89	64.55	-21.66	Neutral
Mode 1	Pass	AV	178.803k	27.75	54.55	-26.80	Neutral
Mode 1	Pass	QP	235.505k	37.12	62.25	-25.13	Neutral
Mode 1	Pass	AV	235.505k	23.38	52.25	-28.87	Neutral
Mode 1	Pass	QP	492.876k	17.61	56.11	-38.50	Neutral
Mode 1	Pass	AV	492.876k	13.63	46.11	-32.48	Neutral
Mode 1	Pass	QP	4.222M	16.79	56.00	-39.21	Neutral
Mode 1	Pass	AV	4.222M	14.99	46.00	-31.01	Neutral
Mode 1	Pass	QP	12.554M	21.97	60.00	-38.03	Neutral
Mode 1	Pass	AV	12.554M	19.18	50.00	-30.82	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	161.82k	45.63	65.37	-19.74	19.70	Line	-	25.93	9.66	0.07	9.97								
AV	161.82k	29.72	55.37	-25.65	19.70	Line	-	10.02	9.66	0.07	9.97								
QP	183.137k	42.30	64.34	-22.04	19.70	Line	-	22.60	9.65	0.08	9.97								
AV	183.137k	26.39	54.34	-27.95	19.70	Line	-	6.69	9.65	0.08	9.97								
QP	221.817k	37.67	62.75	-25.08	19.71	Line	-	17.96	9.65	0.09	9.97								
AV	221.817k	22.19	52.75	-30.56	19.71	Line	-	2.48	9.65	0.09	9.97								
QP	2.971M	16.34	56.00	-39.66	19.75	Line	-	-3.41	9.68	0.09	9.98								
AV	2.971M	14.19	46.00	-31.81	19.75	Line	-	-5.56	9.68	0.09	9.98								
QP	4.972M	15.91	56.00	-40.09	19.74	Line	-	-3.83	9.69	0.07	9.98								
AV	4.972M	14.44	46.00	-31.56	19.74	Line	-	-5.30	9.69	0.07	9.98								
QP	11.226M	18.68	60.00	-41.32	19.75	Line	-	-1.07	9.71	0.06	9.98								
AV	11.226M	16.32	50.00	-33.68	19.75	Line	-	-3.43	9.71	0.06	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	150.6k	47.77	65.96	-18.19	19.64	Neutral	-	28.13	9.60	0.07	9.97								
AV	150.6k	32.36	55.96	-23.60	19.64	Neutral	-	12.72	9.60	0.07	9.97								
QP	178.803k	42.89	64.55	-21.66	19.65	Neutral	-	23.24	9.60	0.08	9.97								
AV	178.803k	27.75	54.55	-26.80	19.65	Neutral	-	8.10	9.60	0.08	9.97								
QP	235.505k	37.12	62.25	-25.13	19.67	Neutral	-	17.45	9.60	0.10	9.97								
AV	235.505k	23.38	52.25	-28.87	19.67	Neutral	-	3.71	9.60	0.10	9.97								
QP	492.876k	17.61	56.11	-38.50	19.69	Neutral	-	-2.08	9.60	0.11	9.98								
AV	492.876k	13.63	46.11	-32.48	19.69	Neutral	-	-6.06	9.60	0.11	9.98								
QP	4.222M	16.79	56.00	-39.21	19.67	Neutral	-	-2.88	9.62	0.07	9.98								
AV	4.222M	14.99	46.00	-31.01	19.67	Neutral	-	-4.68	9.62	0.07	9.98								
QP	12.554M	21.97	60.00	-38.03	19.71	Neutral	-	2.26	9.66	0.07	9.98								
AV	12.554M	19.18	50.00	-30.82	19.71	Neutral	-	-0.53	9.66	0.07	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)	741.25k	1.042M	1M04F1D	675k	1.038M
BT-LE(2Mbps)	527.5k	1.527M	1M53F1D	502.5k	1.502M

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

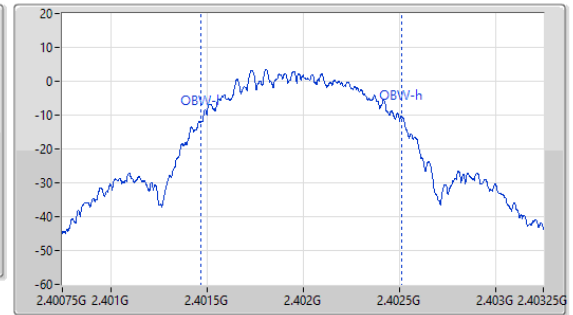
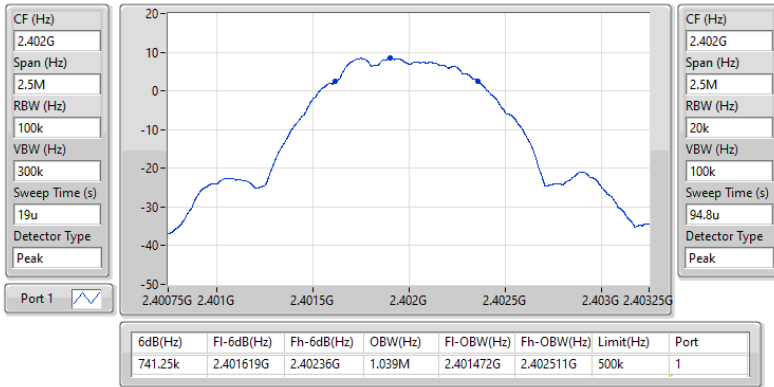
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	741.25k	1.039M
2440MHz	Pass	500k	675k	1.042M
2480MHz	Pass	500k	728.75k	1.038M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	527.5k	1.502M
2440MHz	Pass	500k	505k	1.502M
2480MHz	Pass	500k	502.5k	1.527M

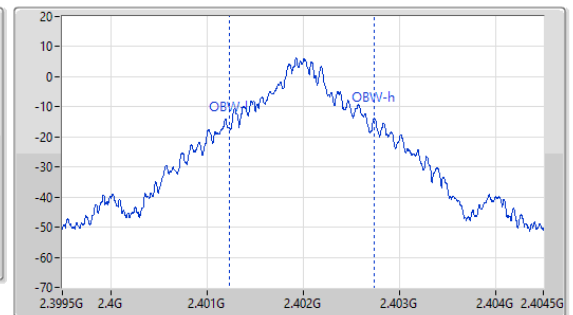
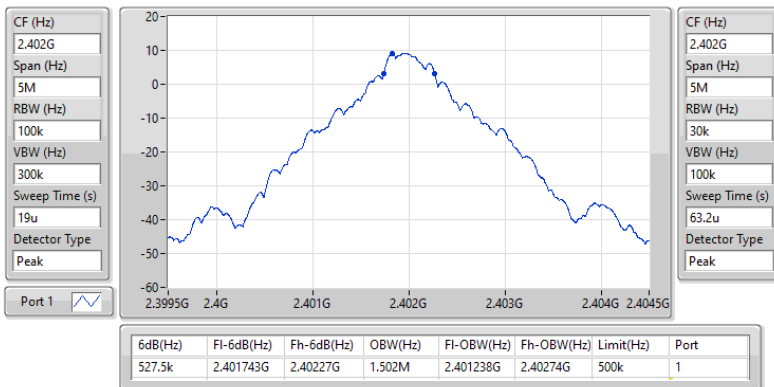
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2402MHz

25/12/2024


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2402MHz

25/12/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	9.97	0.00993
BT-LE(2Mbps)	9.97	0.00993



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.60	9.97	30.00
2440MHz	Pass	5.60	9.88	30.00
2480MHz	Pass	5.60	9.90	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.60	9.97	30.00
2440MHz	Pass	5.60	9.88	30.00
2480MHz	Pass	5.60	9.89	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-7.63
BT-LE(2Mbps)	-2.50

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.60	-7.63	8.00
2440MHz	Pass	5.60	-7.75	8.00
2480MHz	Pass	5.60	-7.71	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.60	-2.50	8.00
2440MHz	Pass	5.60	-2.60	8.00
2480MHz	Pass	5.60	-2.62	8.00

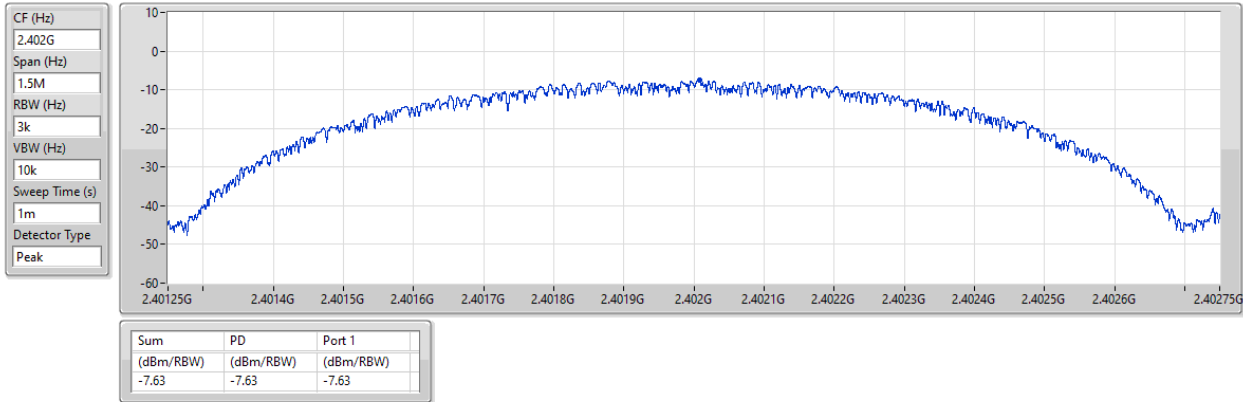
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2402MHz

25/12/2024

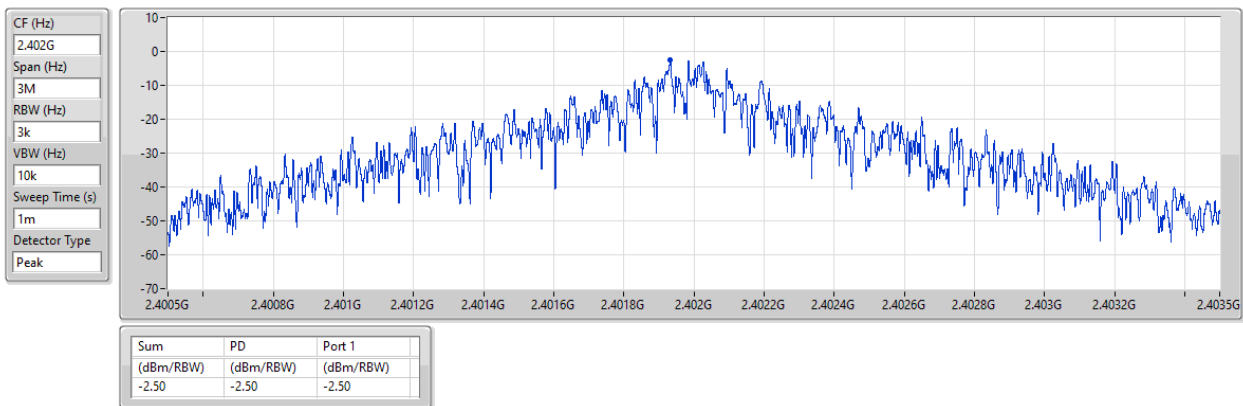


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

25/12/2024



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	9.26	-20.74	2.098G	-54.96	2.4G	-43.34	2.4G	-43.18	2.5033G	-52.38	15.18028G	-41.75	1
BT-LE(2Mbps)	Pass	2.40184G	9.18	-20.82	2.1262G	-54.95	2.39996G	-34.31	2.4G	-33.85	2.50054G	-53.03	24.84252G	-39.87	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	9.26	-20.74	2.098G	-54.96	2.4G	-43.34	2.4G	-43.18	2.5033G	-52.38	15.18028G	-41.75	1
2440MHz	Pass	2.40217G	9.26	-20.74	1.93233G	-54.94	2.39244G	-53.52	2.4G	-55.30	2.50274G	-53.57	24.45165G	-39.83	1
2480MHz	Pass	2.40217G	9.26	-20.74	2.09565G	-54.60	2.39428G	-53.76	2.4G	-54.49	2.50094G	-53.48	16.88439G	-42.07	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	9.18	-20.82	2.1262G	-54.95	2.39996G	-34.31	2.4G	-33.85	2.50054G	-53.03	24.84252G	-39.87	1
2440MHz	Pass	2.40184G	9.18	-20.82	2.30833G	-55.42	2.39144G	-54.30	2.4G	-55.84	2.50338G	-54.03	17.25277G	-41.77	1
2480MHz	Pass	2.40184G	9.18	-20.82	2.0134G	-54.74	2.3904G	-54.02	2.4G	-56.14	2.50274G	-52.54	15.19715G	-40.78	1

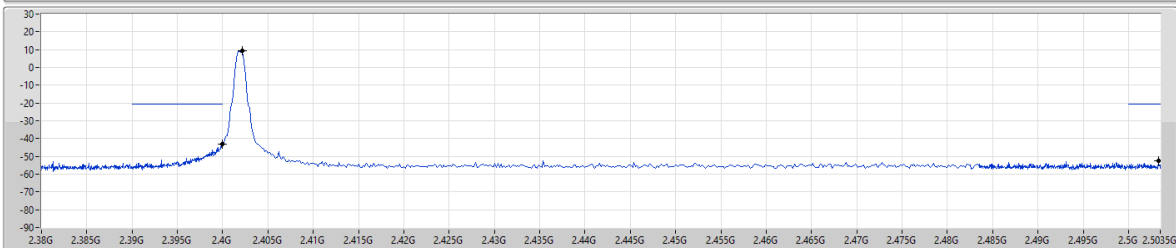
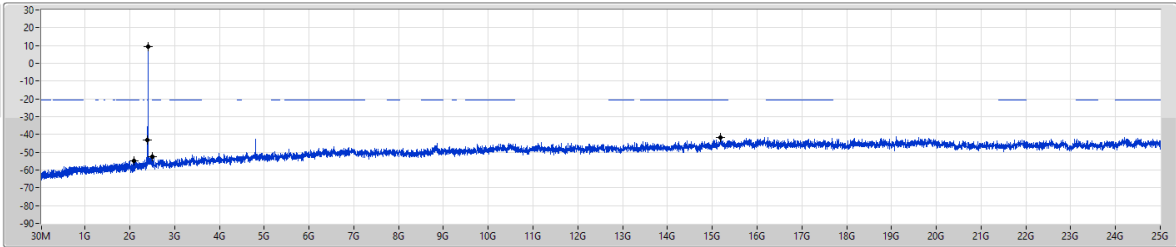
2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2402MHz

25/12/2024

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	9.26	-20.74	2.098G	-54.96	2.4G	-43.34	2.4G	-43.18	2.5033G	-52.38	15.18028G	-41.75	1

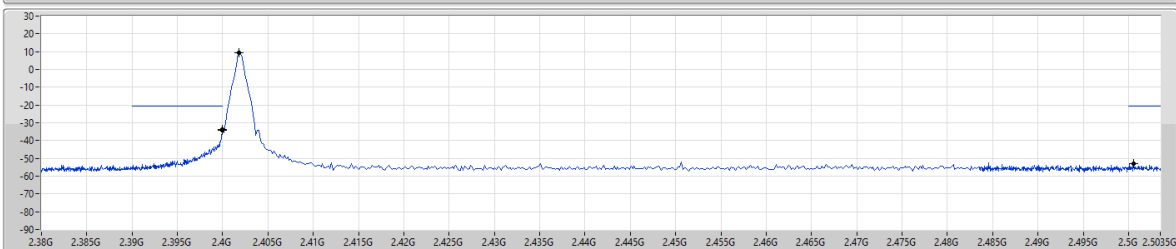
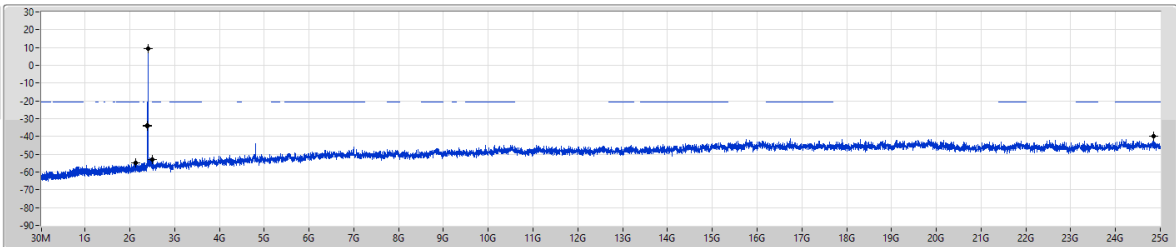
2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2402MHz

25/12/2024

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
2.40184G	9.18	-20.82	2.1262G	-54.95	2.39996G	-34.31	2.4G	-33.85	2.50054G	-53.03	24.84252G	-39.87	1



Summary

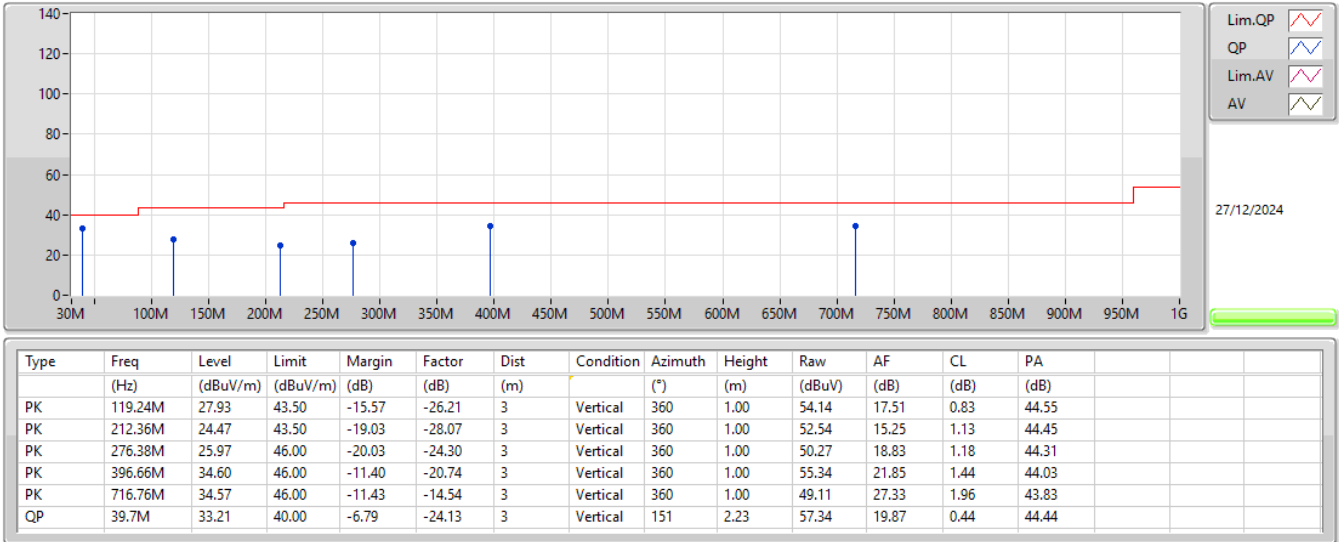
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	QP	39.7M	33.21	40.00	-6.79	3	Vertical	151	2.23

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_PoE	Pass	PK	119.24M	27.93	43.50	-15.57	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	212.36M	24.47	43.50	-19.03	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	276.38M	25.97	46.00	-20.03	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	396.66M	34.60	46.00	-11.40	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	716.76M	34.57	46.00	-11.43	3	Vertical	360	1.00
2440MHz_PoE	Pass	QP	39.7M	33.21	40.00	-6.79	3	Vertical	151	2.23
2440MHz_PoE	Pass	PK	31.94M	31.63	40.00	-8.37	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	74.62M	24.77	40.00	-15.23	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	249.22M	32.25	46.00	-13.75	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	332.64M	29.21	46.00	-16.79	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	404.42M	28.55	46.00	-17.45	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	472.32M	28.48	46.00	-17.52	3	Horizontal	0	1.00

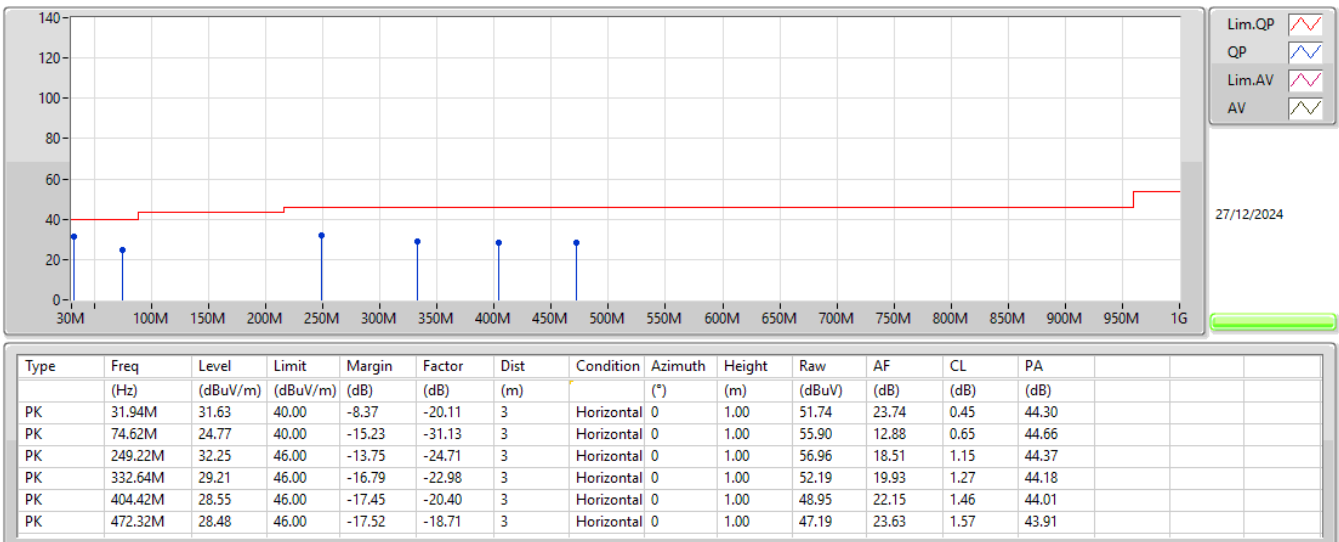
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_PoE



2.4-2.4835GHz_BT-LE(2Mbps)

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	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	47.92	54.00	-6.08	3	Vertical	325	2.26
BT-LE(2Mbps)	Pass	AV	2.4835G	51.58	54.00	-2.42	3	Vertical	324	2.25

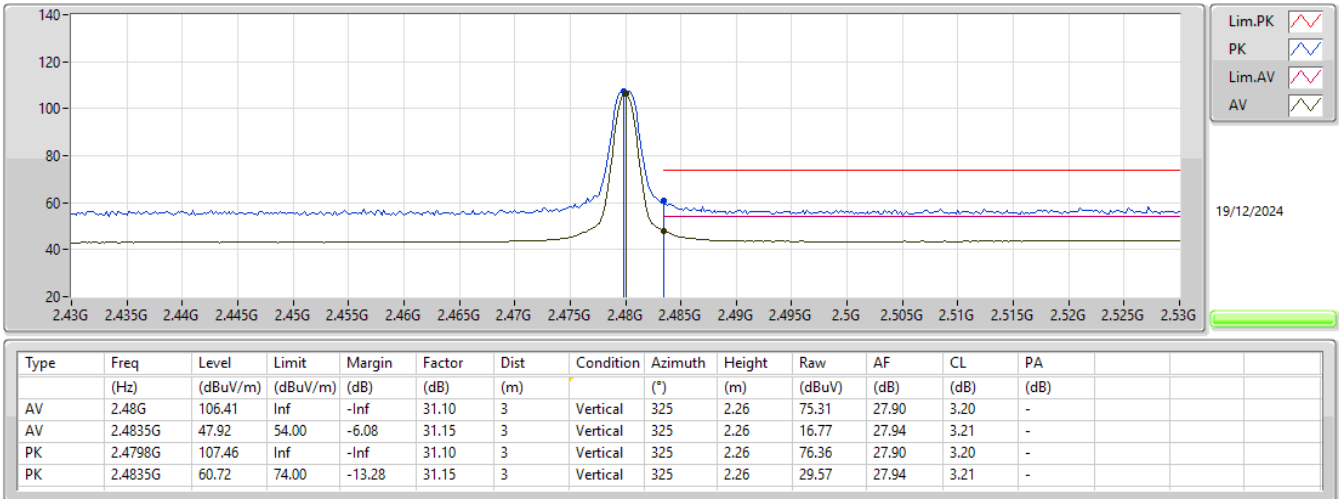
Result

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	2.3898G	42.82	54.00	-11.18	3	Vertical	324	2.13
2402MHz	Pass	AV	2.402G	106.23	Inf	-Inf	3	Vertical	324	2.13
2402MHz	Pass	PK	2.3632G	57.23	74.00	-16.77	3	Vertical	324	2.13
2402MHz	Pass	PK	2.4022G	107.34	Inf	-Inf	3	Vertical	324	2.13
2402MHz	Pass	AV	2.39G	42.71	54.00	-11.29	3	Horizontal	353	3.00
2402MHz	Pass	AV	2.402G	101.84	Inf	-Inf	3	Horizontal	353	3.00
2402MHz	Pass	PK	2.3568G	56.87	74.00	-17.13	3	Horizontal	353	3.00
2402MHz	Pass	PK	2.4022G	102.97	Inf	-Inf	3	Horizontal	353	3.00
2402MHz	Pass	AV	4.80397G	46.59	54.00	-7.41	3	Vertical	308	2.11
2402MHz	Pass	PK	4.80341G	52.52	74.00	-21.48	3	Vertical	308	2.11
2402MHz	Pass	AV	4.80398G	42.11	54.00	-11.89	3	Horizontal	32	2.95
2402MHz	Pass	PK	4.80347G	49.26	74.00	-24.74	3	Horizontal	32	2.95
2440MHz	Pass	AV	2.3876G	42.74	54.00	-11.26	3	Vertical	325	2.12
2440MHz	Pass	AV	2.44G	107.51	Inf	-Inf	3	Vertical	325	2.12
2440MHz	Pass	AV	2.4892G	43.52	54.00	-10.48	3	Vertical	325	2.12
2440MHz	Pass	PK	2.3544G	56.60	74.00	-17.40	3	Vertical	325	2.12
2440MHz	Pass	PK	2.4396G	108.56	Inf	-Inf	3	Vertical	325	2.12
2440MHz	Pass	PK	2.4916G	56.80	74.00	-17.20	3	Vertical	325	2.12
2440MHz	Pass	AV	2.39G	42.71	54.00	-11.29	3	Horizontal	345	3.00
2440MHz	Pass	AV	2.44G	103.15	Inf	-Inf	3	Horizontal	345	3.00
2440MHz	Pass	AV	2.4912G	43.55	54.00	-10.45	3	Horizontal	345	3.00
2440MHz	Pass	PK	2.3776G	56.60	74.00	-17.40	3	Horizontal	345	3.00
2440MHz	Pass	PK	2.4396G	104.22	Inf	-Inf	3	Horizontal	345	3.00
2440MHz	Pass	PK	2.4972G	56.85	74.00	-17.15	3	Horizontal	345	3.00
2440MHz	Pass	PK	4.8804G	52.28	74.00	-21.72	3	Vertical	306	2.08
2440MHz	Pass	AV	4.87998G	46.40	54.00	-7.60	3	Vertical	306	2.08
2440MHz	Pass	PK	7.32044G	47.24	74.00	-26.76	3	Vertical	292	1.50
2440MHz	Pass	AV	7.32054G	33.82	54.00	-20.18	3	Vertical	292	1.50
2440MHz	Pass	PK	4.88056G	49.54	74.00	-24.46	3	Horizontal	33	3.00
2440MHz	Pass	AV	4.87998G	42.36	54.00	-11.64	3	Horizontal	33	3.00
2440MHz	Pass	PK	7.32054G	47.87	74.00	-26.13	3	Horizontal	344	1.39
2440MHz	Pass	AV	7.32062G	33.02	54.00	-20.98	3	Horizontal	344	1.39
2480MHz	Pass	AV	2.48G	106.41	Inf	-Inf	3	Vertical	325	2.26
2480MHz	Pass	AV	2.4835G	47.92	54.00	-6.08	3	Vertical	325	2.26
2480MHz	Pass	PK	2.4798G	107.46	Inf	-Inf	3	Vertical	325	2.26
2480MHz	Pass	PK	2.4835G	60.72	74.00	-13.28	3	Vertical	325	2.26
2480MHz	Pass	AV	2.48G	101.74	Inf	-Inf	3	Horizontal	347	2.93
2480MHz	Pass	AV	2.4835G	45.57	54.00	-8.43	3	Horizontal	347	2.93
2480MHz	Pass	PK	2.4798G	102.80	Inf	-Inf	3	Horizontal	347	2.93
2480MHz	Pass	PK	2.4836G	59.69	74.00	-14.31	3	Horizontal	347	2.93
2480MHz	Pass	PK	4.95947G	52.58	74.00	-21.42	3	Vertical	307	2.26
2480MHz	Pass	AV	4.95998G	46.10	54.00	-7.90	3	Vertical	307	2.26
2480MHz	Pass	PK	7.43904G	47.92	74.00	-26.08	3	Vertical	294	1.50
2480MHz	Pass	AV	7.44048G	34.70	54.00	-19.30	3	Vertical	294	1.50
2480MHz	Pass	PK	4.96042G	49.75	74.00	-24.25	3	Horizontal	29	2.91
2480MHz	Pass	AV	4.95997G	42.58	54.00	-11.42	3	Horizontal	29	2.91
2480MHz	Pass	PK	7.44072G	47.37	74.00	-26.63	3	Horizontal	30	1.50
2480MHz	Pass	AV	7.43934G	33.12	54.00	-20.88	3	Horizontal	30	1.50
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3898G	43.02	54.00	-10.98	3	Vertical	324	2.12
2402MHz	Pass	AV	2.402G	105.63	Inf	-Inf	3	Vertical	324	2.12
2402MHz	Pass	PK	2.3898G	56.80	74.00	-17.20	3	Vertical	324	2.12
2402MHz	Pass	PK	2.4024G	108.39	Inf	-Inf	3	Vertical	324	2.12
2402MHz	Pass	AV	2.388G	42.76	54.00	-11.24	3	Horizontal	353	3.00
2402MHz	Pass	AV	2.402G	101.26	Inf	-Inf	3	Horizontal	353	3.00
2402MHz	Pass	PK	2.364G	56.91	74.00	-17.09	3	Horizontal	353	3.00
2402MHz	Pass	PK	2.4024G	104.07	Inf	-Inf	3	Horizontal	353	3.00
2402MHz	Pass	PK	4.803G	52.25	74.00	-21.75	3	Vertical	309	2.10
2402MHz	Pass	AV	4.80352G	41.88	54.00	-12.12	3	Vertical	309	2.10
2402MHz	Pass	PK	4.80492G	48.77	74.00	-25.23	3	Horizontal	32	2.96

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2402MHz	Pass	AV	4.80438G	37.72	54.00	-16.28	3	Horizontal	32	2.96
2440MHz	Pass	AV	2.3696G	42.76	54.00	-11.24	3	Vertical	325	2.11
2440MHz	Pass	AV	2.44G	105.91	Inf	-Inf	3	Vertical	325	2.11
2440MHz	Pass	AV	2.4916G	43.59	54.00	-10.41	3	Vertical	325	2.11
2440MHz	Pass	PK	2.3784G	56.40	74.00	-17.60	3	Vertical	325	2.11
2440MHz	Pass	PK	2.4396G	108.66	Inf	-Inf	3	Vertical	325	2.11
2440MHz	Pass	PK	2.4844G	56.46	74.00	-17.54	3	Vertical	325	2.11
2440MHz	Pass	AV	2.3832G	42.70	54.00	-11.30	3	Horizontal	346	3.00
2440MHz	Pass	AV	2.44G	101.49	Inf	-Inf	3	Horizontal	346	3.00
2440MHz	Pass	AV	2.4904G	43.52	54.00	-10.48	3	Horizontal	346	3.00
2440MHz	Pass	PK	2.3688G	56.43	74.00	-17.57	3	Horizontal	346	3.00
2440MHz	Pass	PK	2.4396G	104.24	Inf	-Inf	3	Horizontal	346	3.00
2440MHz	Pass	PK	2.4864G	57.44	74.00	-16.56	3	Horizontal	346	3.00
2440MHz	Pass	PK	4.88088G	52.06	74.00	-21.94	3	Vertical	305	2.10
2440MHz	Pass	AV	4.88038G	41.91	54.00	-12.09	3	Vertical	305	2.10
2440MHz	Pass	PK	7.31964G	46.79	74.00	-27.21	3	Vertical	293	1.50
2440MHz	Pass	AV	7.31872G	33.37	54.00	-20.63	3	Vertical	293	1.50
2440MHz	Pass	PK	4.879G	49.45	74.00	-24.55	3	Horizontal	32	3.00
2440MHz	Pass	AV	4.88042G	38.43	54.00	-15.57	3	Horizontal	32	3.00
2440MHz	Pass	PK	7.31932G	47.47	74.00	-26.53	3	Horizontal	334	1.50
2440MHz	Pass	AV	7.32126G	32.54	54.00	-21.46	3	Horizontal	334	1.50
2480MHz	Pass	AV	2.48G	104.73	Inf	-Inf	3	Vertical	324	2.25
2480MHz	Pass	AV	2.4835G	51.58	54.00	-2.42	3	Vertical	324	2.25
2480MHz	Pass	PK	2.4796G	107.47	Inf	-Inf	3	Vertical	324	2.25
2480MHz	Pass	PK	2.4835G	64.15	74.00	-9.85	3	Vertical	324	2.25
2480MHz	Pass	AV	2.48G	100.11	Inf	-Inf	3	Horizontal	347	2.93
2480MHz	Pass	AV	2.4835G	48.14	54.00	-5.86	3	Horizontal	347	2.93
2480MHz	Pass	PK	2.4796G	102.86	Inf	-Inf	3	Horizontal	347	2.93
2480MHz	Pass	PK	2.4836G	59.77	74.00	-14.23	3	Horizontal	347	2.93
2480MHz	Pass	PK	4.959G	52.31	74.00	-21.69	3	Vertical	308	2.27
2480MHz	Pass	AV	4.95956G	41.90	54.00	-12.10	3	Vertical	308	2.27
2480MHz	Pass	PK	7.44118G	47.78	74.00	-26.22	3	Vertical	292	1.44
2480MHz	Pass	AV	7.43876G	34.50	54.00	-19.50	3	Vertical	292	1.44
2480MHz	Pass	PK	4.96102G	50.04	74.00	-23.96	3	Horizontal	26	2.92
2480MHz	Pass	AV	4.95904G	39.14	54.00	-14.86	3	Horizontal	26	2.92
2480MHz	Pass	PK	7.44078G	46.74	74.00	-27.26	3	Horizontal	30	1.56
2480MHz	Pass	AV	7.4388G	32.93	54.00	-21.07	3	Horizontal	30	1.56

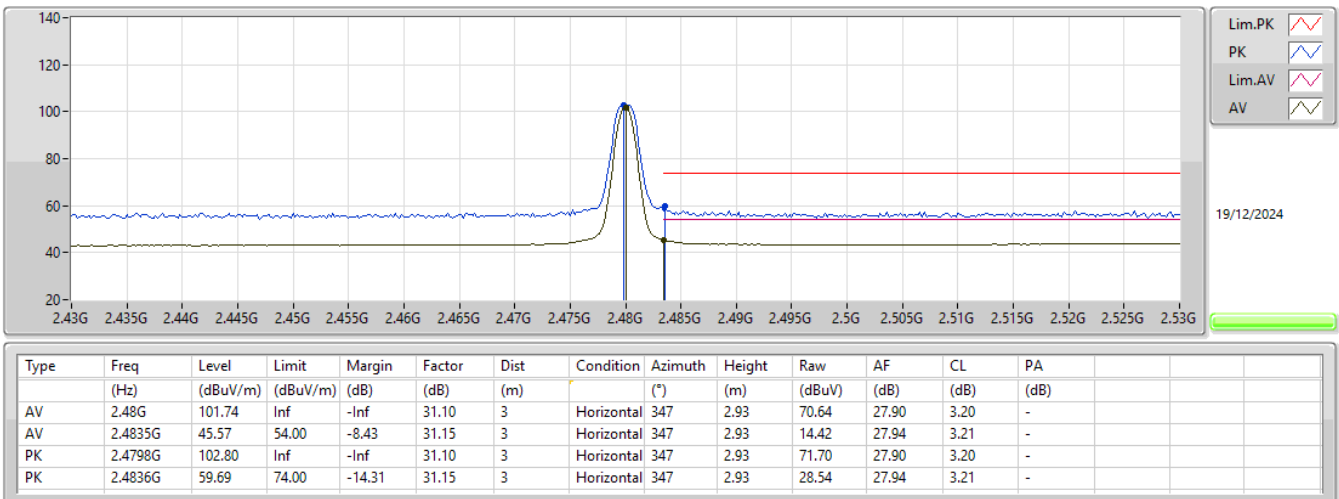
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



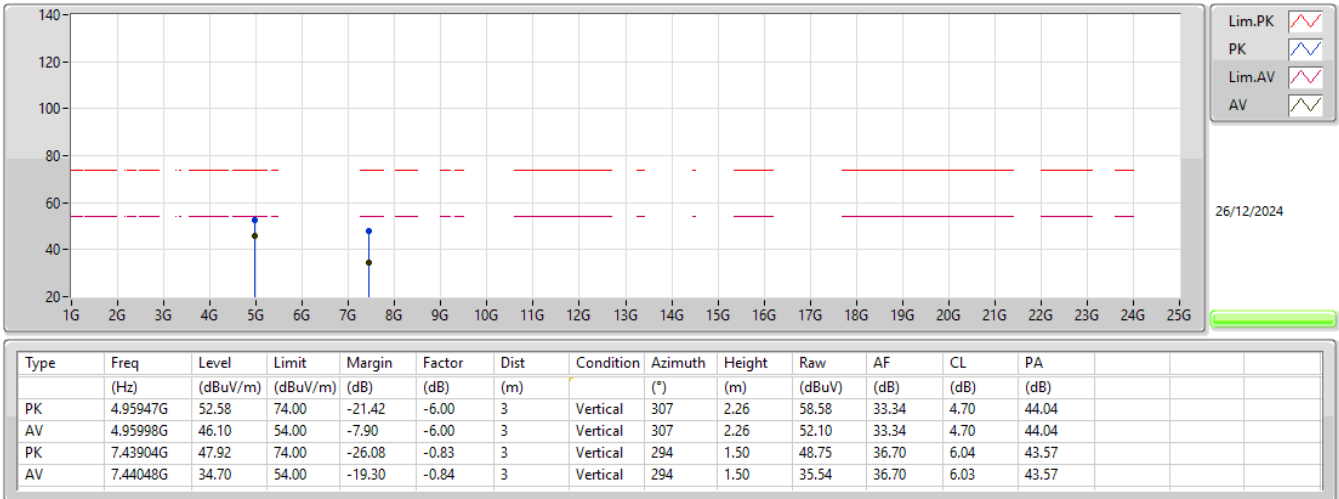
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2480MHz_TX



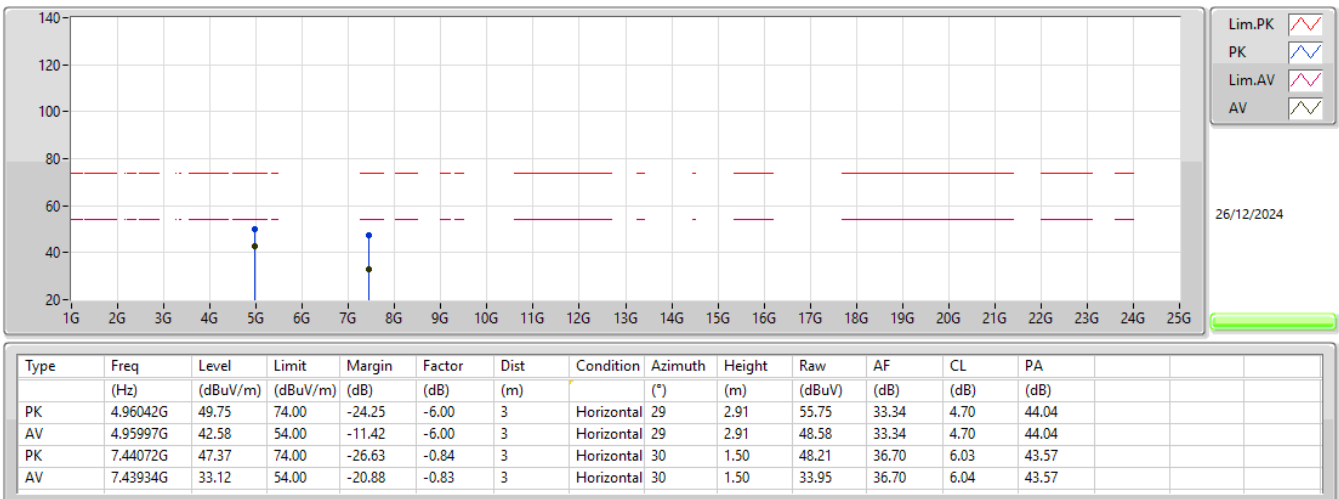
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



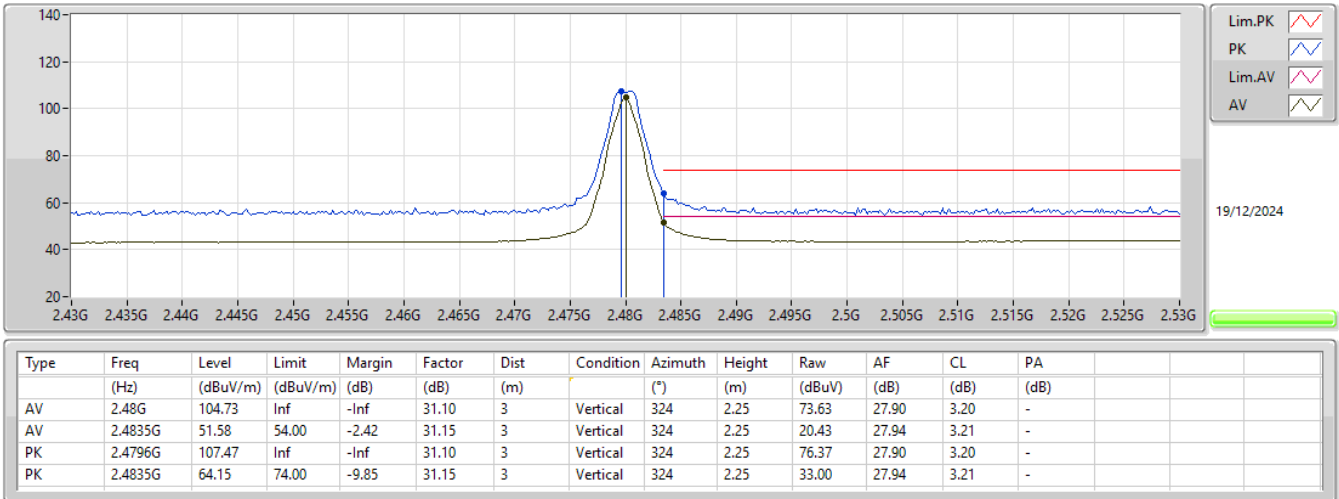
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2480MHz_TX



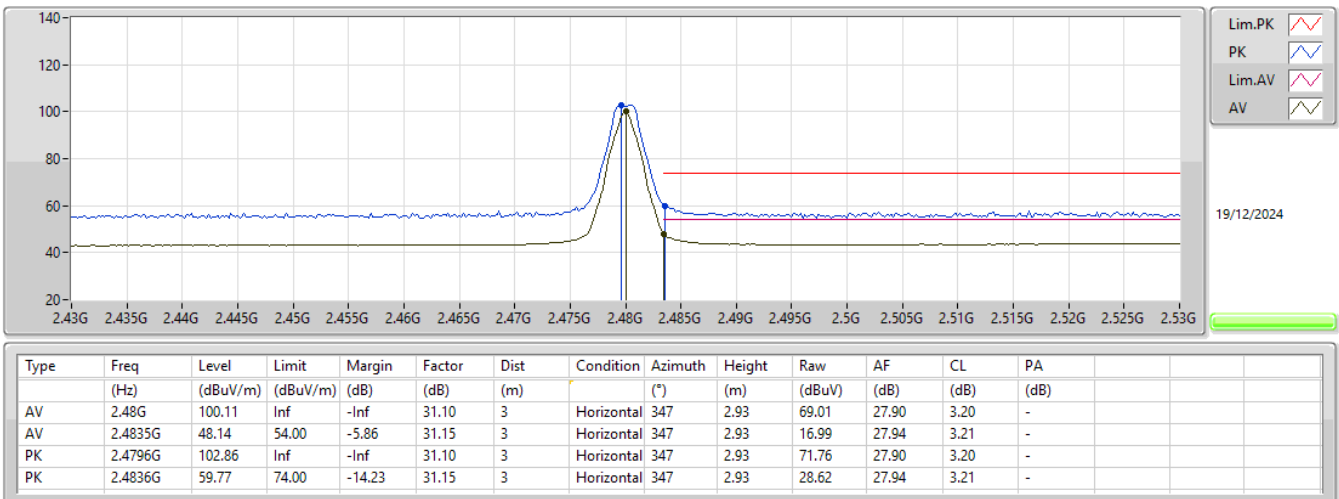
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2480MHz_TX



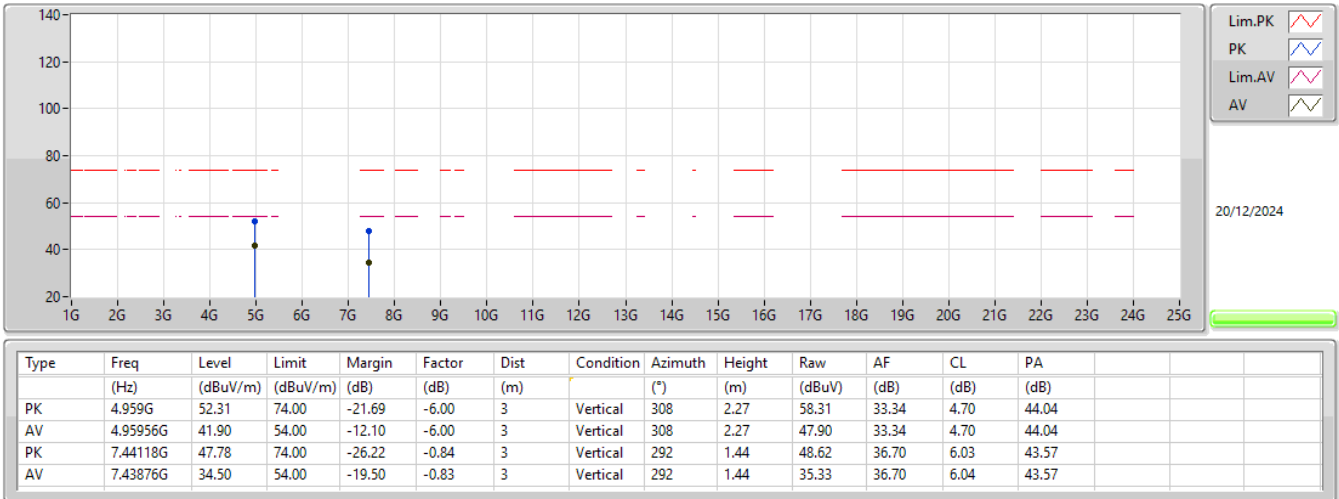
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



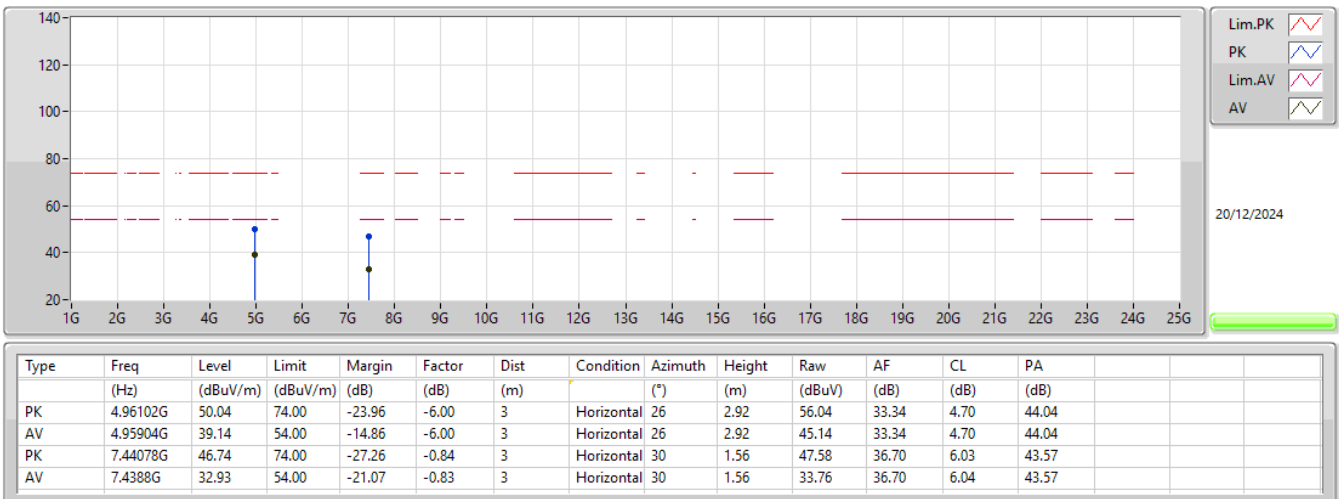
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





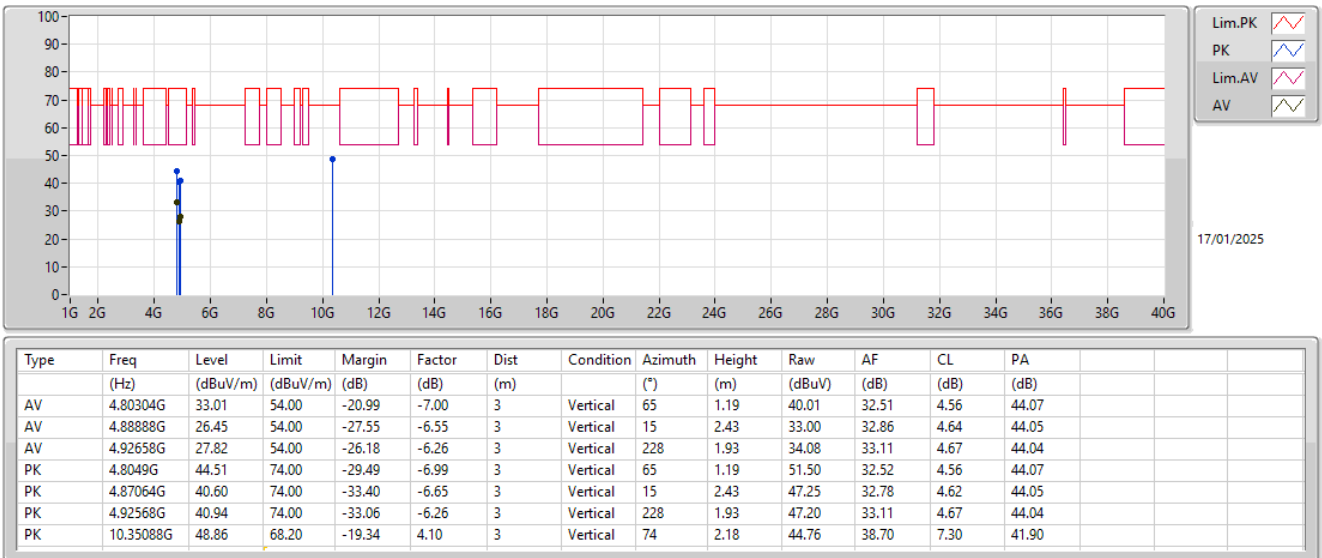
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.80304G	38.95	54.00	-15.05	Horizontal
Mode 2	Pass	AV	4.80484G	37.65	54.00	-16.35	Horizontal

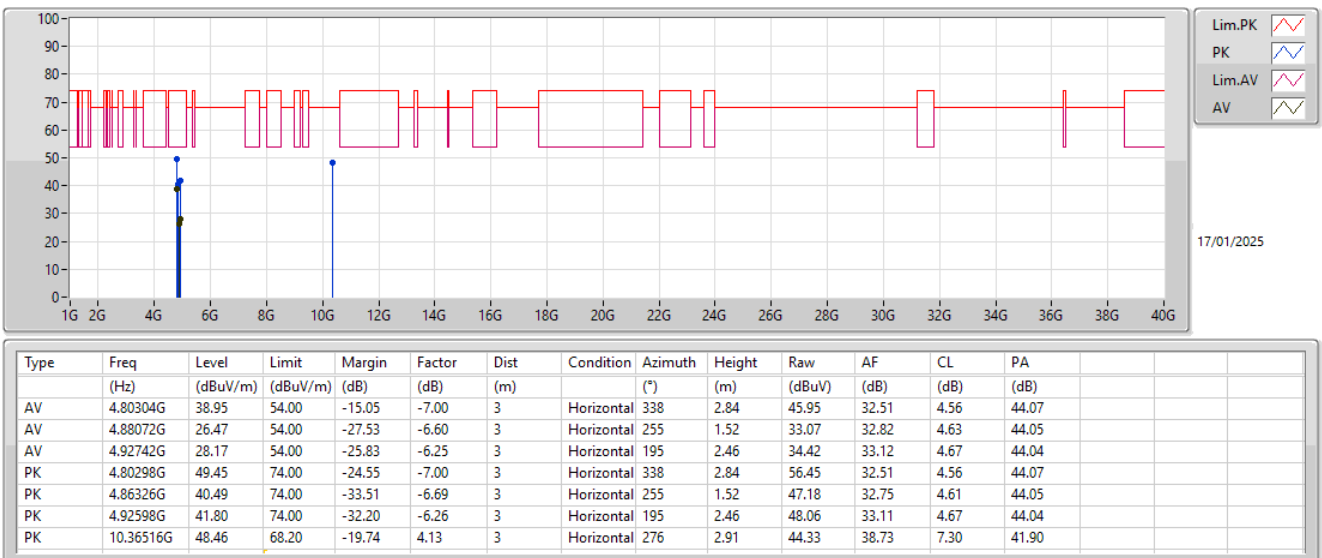
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.80304G	33.01	54.00	-20.99	3	Vertical	65	1.19
Mode 1	Pass	AV	4.88888G	26.45	54.00	-27.55	3	Vertical	15	2.43
Mode 1	Pass	AV	4.92658G	27.82	54.00	-26.18	3	Vertical	228	1.93
Mode 1	Pass	PK	4.8049G	44.51	74.00	-29.49	3	Vertical	65	1.19
Mode 1	Pass	PK	4.87064G	40.60	74.00	-33.40	3	Vertical	15	2.43
Mode 1	Pass	PK	4.92568G	40.94	74.00	-33.06	3	Vertical	228	1.93
Mode 1	Pass	PK	10.35088G	48.86	68.20	-19.34	3	Vertical	74	2.18
Mode 1	Pass	AV	4.80304G	38.95	54.00	-15.05	3	Horizontal	338	2.84
Mode 1	Pass	AV	4.88072G	26.47	54.00	-27.53	3	Horizontal	255	1.52
Mode 1	Pass	AV	4.92742G	28.17	54.00	-25.83	3	Horizontal	195	2.46
Mode 1	Pass	PK	4.80298G	49.45	74.00	-24.55	3	Horizontal	338	2.84
Mode 1	Pass	PK	4.86326G	40.49	74.00	-33.51	3	Horizontal	255	1.52
Mode 1	Pass	PK	4.92598G	41.80	74.00	-32.20	3	Horizontal	195	2.46
Mode 1	Pass	PK	10.36516G	48.46	68.20	-19.74	3	Horizontal	276	2.91
Mode 2	Pass	AV	4.80298G	33.63	54.00	-20.37	3	Vertical	66	1.18
Mode 2	Pass	AV	4.87982G	26.75	54.00	-27.25	3	Vertical	354	1.74
Mode 2	Pass	PK	4.80304G	44.63	74.00	-29.37	3	Vertical	66	1.18
Mode 2	Pass	PK	4.8773G	40.63	74.00	-33.37	3	Vertical	354	1.74
Mode 2	Pass	PK	10.34674G	48.54	68.20	-19.66	3	Vertical	43	1.12
Mode 2	Pass	PK	10.34866G	47.97	68.20	-20.23	3	Vertical	314	1.99
Mode 2	Pass	AV	4.80484G	37.65	54.00	-16.35	3	Horizontal	97	2.52
Mode 2	Pass	AV	4.87718G	26.86	54.00	-27.14	3	Horizontal	58	1.38
Mode 2	Pass	PK	4.80502G	48.07	74.00	-25.93	3	Horizontal	97	2.52
Mode 2	Pass	PK	4.87316G	41.19	74.00	-32.81	3	Horizontal	58	1.38
Mode 2	Pass	PK	10.35034G	48.96	68.20	-19.24	3	Horizontal	106	2.55
Mode 2	Pass	PK	10.37116G	49.27	68.20	-18.93	3	Horizontal	56	1.06

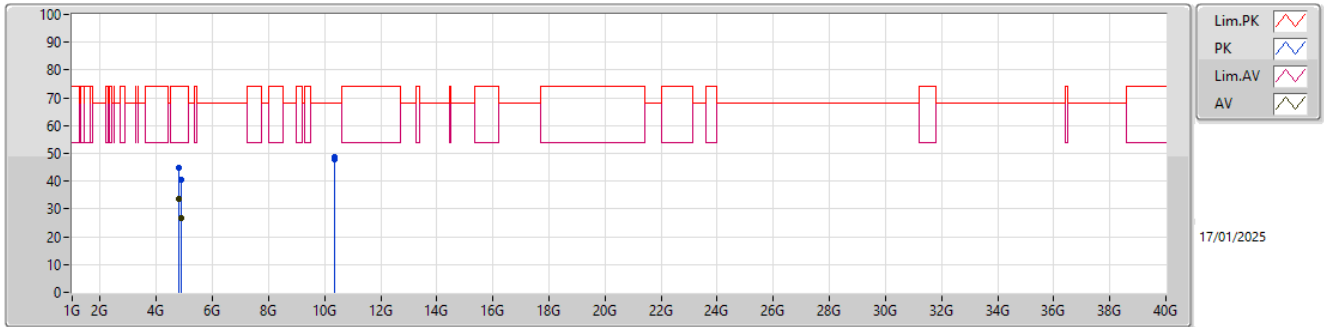
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1

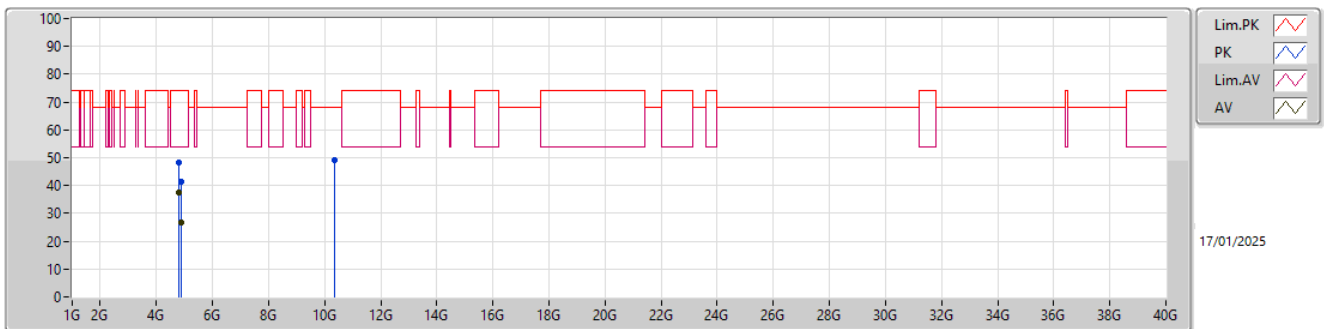


Radiated Emissions above 1GHz_Mode 2



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	4.80298G	33.63	54.00	-20.37	-7.00	3	Vertical	66	1.18	40.63	32.51	4.56	44.07
AV	4.87982G	26.75	54.00	-27.25	-6.60	3	Vertical	354	1.74	33.35	32.82	4.63	44.05
PK	4.80304G	44.63	74.00	-29.37	-7.00	3	Vertical	66	1.18	51.63	32.51	4.56	44.07
PK	4.8773G	40.63	74.00	-33.37	-6.61	3	Vertical	354	1.74	47.24	32.81	4.63	44.05
PK	10.34674G	48.54	68.20	-19.66	4.10	3	Vertical	43	1.12	44.44	38.70	7.30	41.90
PK	10.34866G	47.97	68.20	-20.23	4.10	3	Vertical	314	1.99	43.87	38.70	7.30	41.90

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	4.80484G	37.65	54.00	-16.35	-6.99	3	Horizontal	97	2.52	44.64	32.52	4.56	44.07
AV	4.87718G	26.86	54.00	-27.14	-6.61	3	Horizontal	58	1.38	33.47	32.81	4.63	44.05
PK	4.80502G	48.07	74.00	-25.93	-6.99	3	Horizontal	97	2.52	55.06	32.52	4.56	44.07
PK	4.87316G	41.19	74.00	-32.81	-6.64	3	Horizontal	58	1.38	47.83	32.79	4.62	44.05
PK	10.35034G	48.96	68.20	-19.24	4.10	3	Horizontal	106	2.55	44.86	38.70	7.30	41.90
PK	10.37116G	49.27	68.20	-18.93	4.14	3	Horizontal	56	1.06	45.13	38.74	7.31	41.91