

FCC Radio Test Report

FCC ID : TOR-C430
Equipment : Wireless Access Point
Brand Name : ARISTA
Model Name : C-430
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. 04, 2024, and testing was started from Dec. 19, 2024 and completed on Apr. 03, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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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: Michelle Tsai

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	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 (125kbps/500kbps/1Mbps/2Mbps) 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	C393-510334-A	PIFA	I-Pex	2.4G+5G+6G	Radio 0
2	WHAYU	C393-510334-A	PIFA	I-Pex	2.4G+5G	Radio 1+Radio 2
3	WHAYU	C393-510334-A	PIFA	I-Pex	2.4G+5G+6G	Radio 0
4	WHAYU	C393-510334-A	PIFA	I-Pex	2.4G+5G	Radio 1+Radio 2
5	WHAYU	C393-510334-A	PIFA	I-Pex	6G	Radio 2
6	WHAYU	C393-510334-A	PIFA	I-Pex	6G	Radio 2
7	WHAYU	C393-510334-A	Dipole	I-Pex	BT	-
8	WHAYU	C393-510334-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	2.17	3.62	4.17	3.45	3.23	3.66	2.36	2.59	3.98	-	-
2	1	3.09	2.82	3.72	5.11	4.06	-	-	-	-	-	-
3	2	4.51	3.8	4.19	4.45	3.96	4.44	4.62	2.8	2.9	-	-
4	2	2.66	3.25	3.16	4.34	3.02	-	-	-	-	-	-
5	1	-	-	-	-	-	5.22	5.01	4.4	5.77	-	-
6	2	-	-	-	-	-	5.01	5.22	4.67	5.86	-	-
7	1	-	-	-	-	-	-	-	-	-	5.92	-
8	1	-	-	-	-	-	-	-	-	-	-	2.4

Composite Gain (dBi)											
Ant.		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	
1+3	DG [1SS]	5.9	4.49	5.91	5.27	4.75	5.12	5.03	4.49	4.57	
	DG [2SS]	4.51	3.8	4.19	4.45	3.96	4.44	4.62	2.8	3.98	
2+4	DG [1SS]	5.24	4.78	4.64	6.09	4.28	-	-	-	-	
	DG [2SS]	3.09	3.25	3.72	5.11	4.06	-	-	-	-	
5~6	DG [1SS]	-	-	-	-	-	6.9	7.16	6.4	7.89	
	DG [2SS]	-	-	-	-	-	5.22	5.22	4.67	5.86	

Note 1: The EUT has eight antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v02 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP4N1424.

For 2.4GHz function:

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

Ant. 1 (port 1) and Ant. 3 (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. 4 (port 2) could transmit/receive simultaneously.

For 5GHz function:

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

Ant. 1 (port 1) and Ant. 3 (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. 4 (port 2) could transmit/receive simultaneously.

For 6GHz function:

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

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

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

Ant. 5 (port 1) and Ant. 6 (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.

**1.1.3 EUT Information**

Identify EUT	
EUT Power Type	From AC Adapter / PoE
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)	1	0	30.001m	10Hz (DC>=0.98)
BT-LE(2Mbps)	1	0	30.001m	10Hz (DC>=0.98)

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

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	CON04-HY	Lego Lin	22.1~23.6°C / 53~58%	21/Jan/2025
RF Conducted	TH07-HY	Yuna Lin	22.2~22.8°C / 52~56%	19/Feb/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	03CH25-HY	Rian Chung	19.2~21.2°C / 51~56%	19/Dec/2024~03/Apr/2025
Radiated (Co-location)	03CH26-HY	Andy Wang	19.5~22.2°C / 51~55%	21/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%
Receiver Radiated Unwanted Emissions	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
Test Condition	Radiated measurement
Operating Mode	CTX
1	Radio 1 + Radio 2 (5G) + Radio 0 (2.4G) + Bluetooth
2	Radio 1 + Radio 2 (5G) + Radio 0 (5G) + Bluetooth
Refer to Sporton Test Report No.: FA4N1424 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.

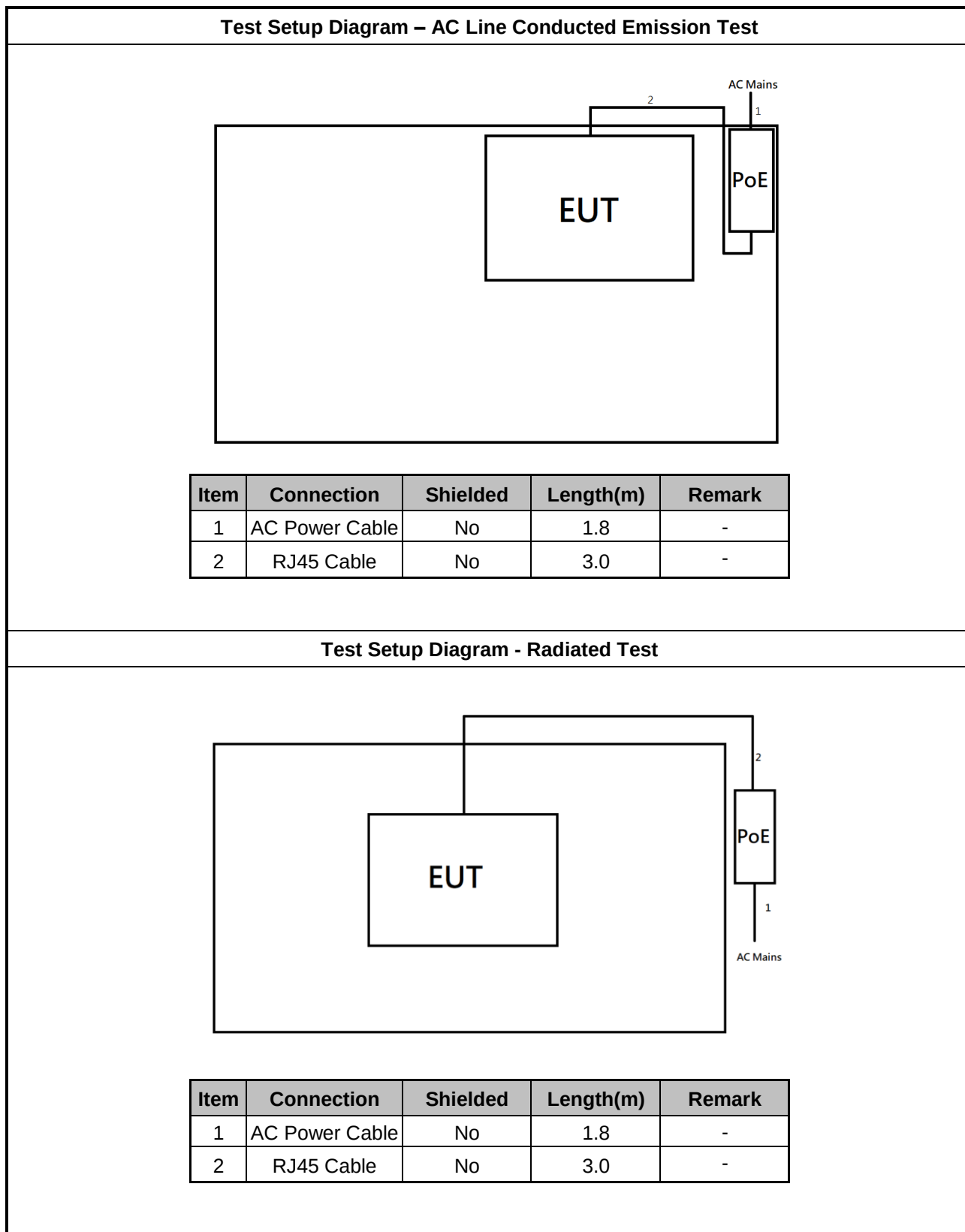
2.4 Support Equipment

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	-	Provided by Customer

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

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

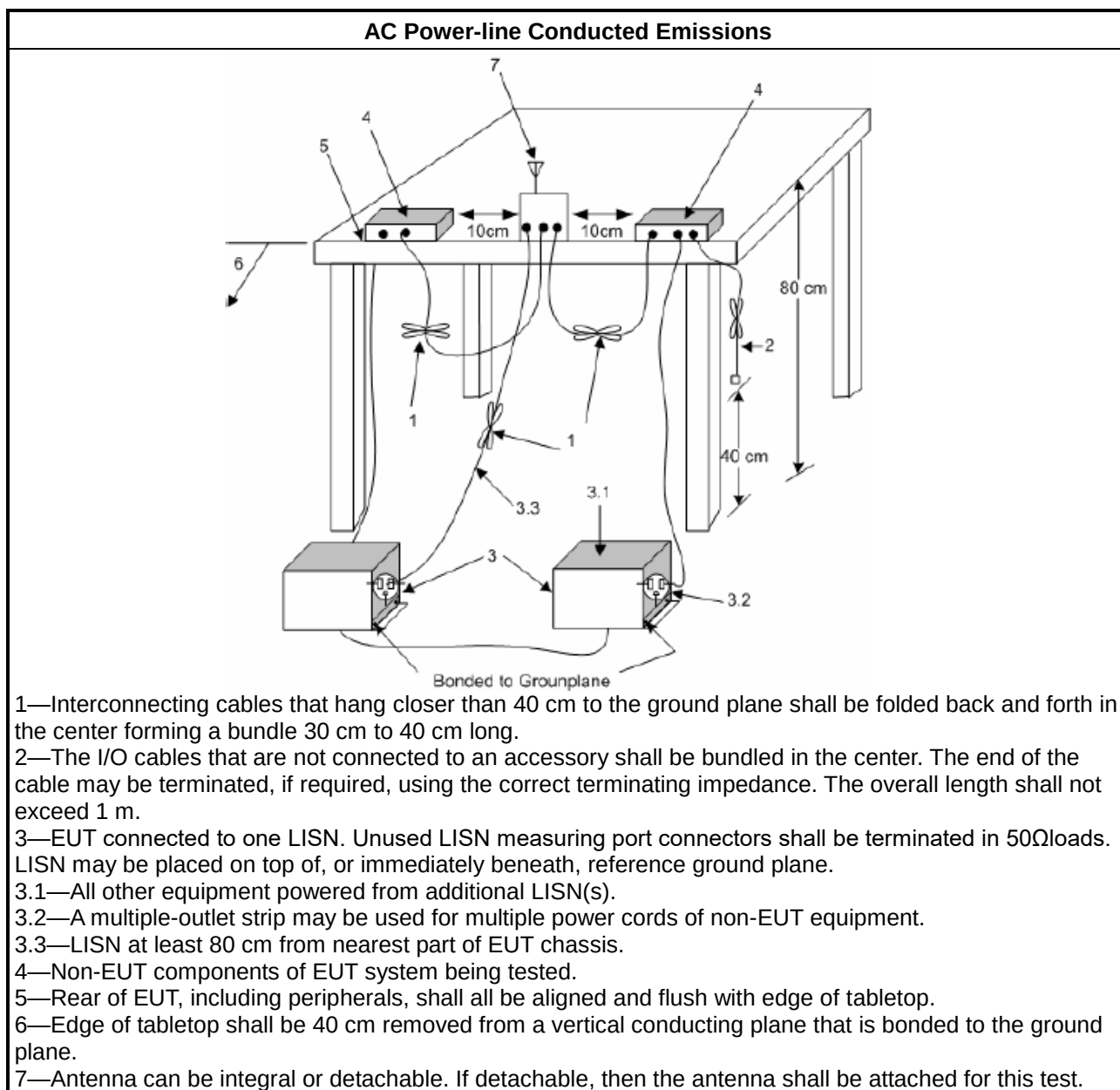
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

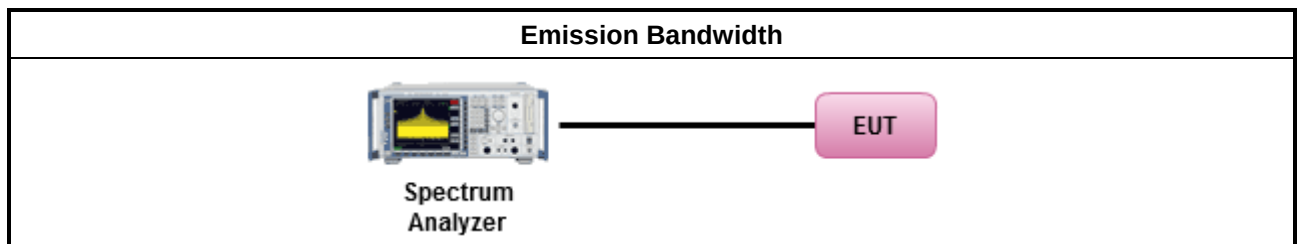
3.2.2 Measuring Instruments

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.	

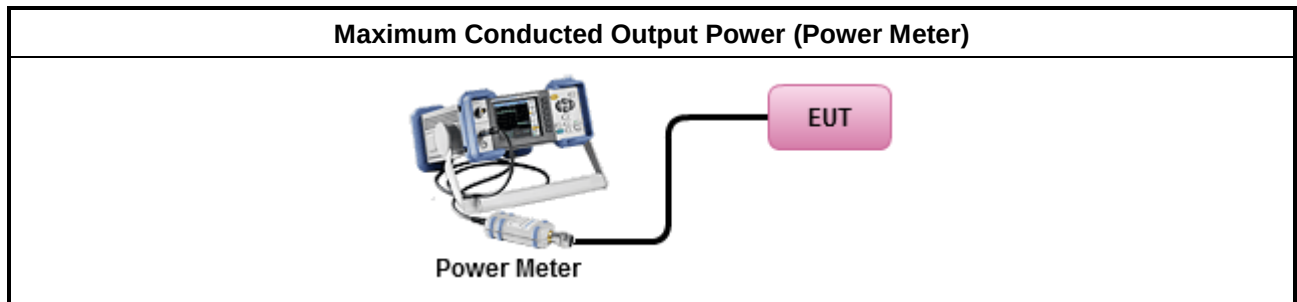
3.3.2 Measuring Instruments

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

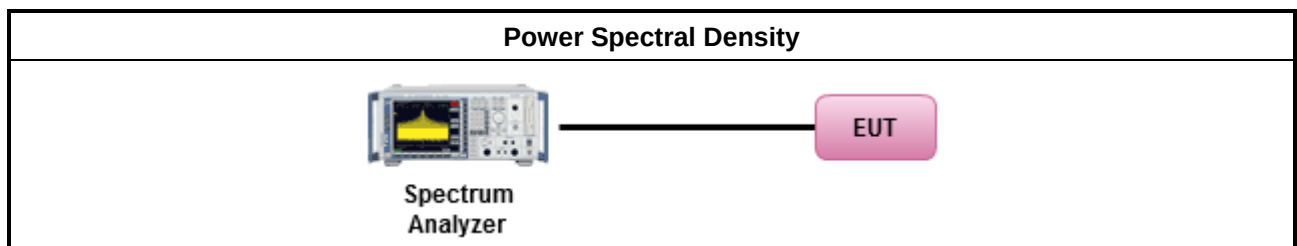
3.4.2 Measuring Instruments

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.	

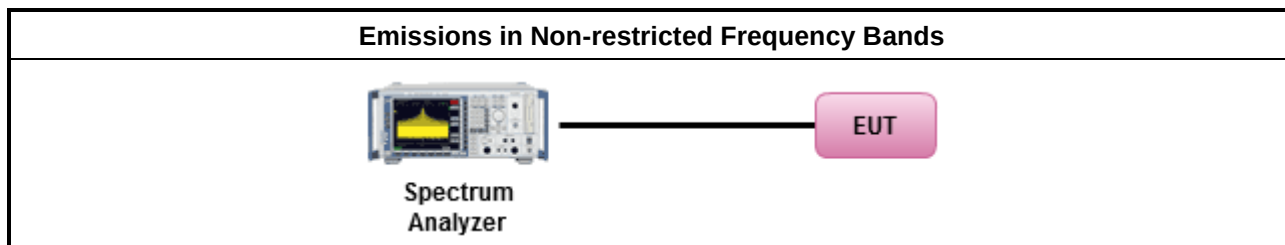
3.5.2 Measuring Instruments

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

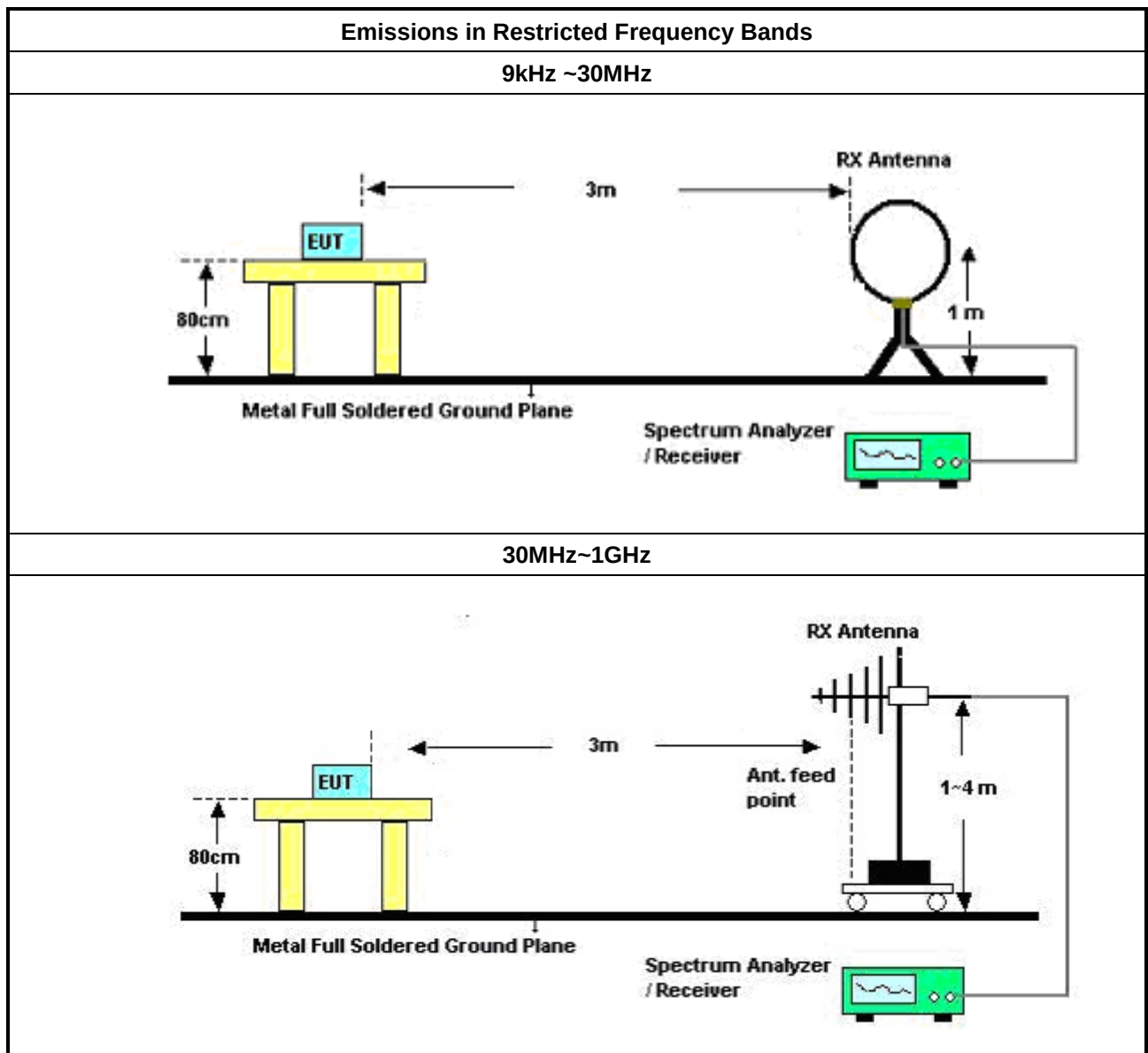
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted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

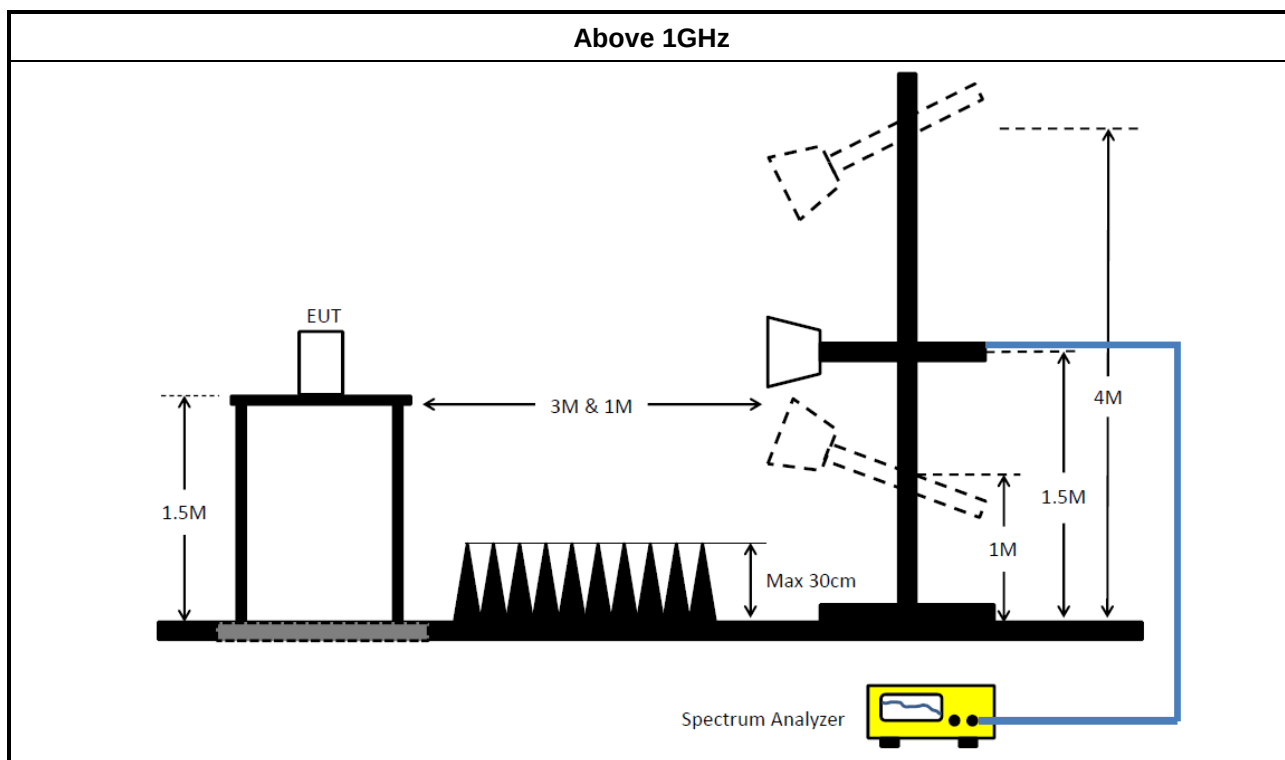
3.6.4 Measurement Results Calculation

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

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV3044	101439	10Hz~44GHz	23/Dec/2024	22/Dec/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	18/Dec/2024	17/Dec/2025
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	18/Dec/2024	17/Dec/2025
SENSE-15247_FS	Sporton	V5.11.23	N/A	N/A	N/A	N/A

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	03CH26-HY	1GHz~18GHz 3m	07/Aug/2024	06/Aug/2025
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	06/Dec/2024	05/Dec/2025
Signal Analyzer	ROHDE & SCHWARZ	FSV3044	101411	10Hz~44GHz	09/Oct/2024	08/Oct/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02877	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	CB009	1GHz~40GHz	21/Oct/2024	20/Oct/2025
Preamplifier	SGH	PRAMP 118-H	20230515-4	1GHz ~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40G	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-EMI	Sporton	V5.11.8	NA	NA	NA	NA

**Instrument for Radiated Test**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	30MHz~1GHz 3m	20/Jul/2024	19/Jul/2025
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
ESR7 EMI Test Receiver	ROHDE & SCHWARZ	ESR7	102956	9kHz~3.6GHz	27/Aug/2024	26/Aug/2025
Signal Analyzer	ROHDE & SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	20/Mar/2025	19/Mar/2026
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63537/001	30MHz~1GHz	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



Conducted Emissions at Powerline

Appendix A

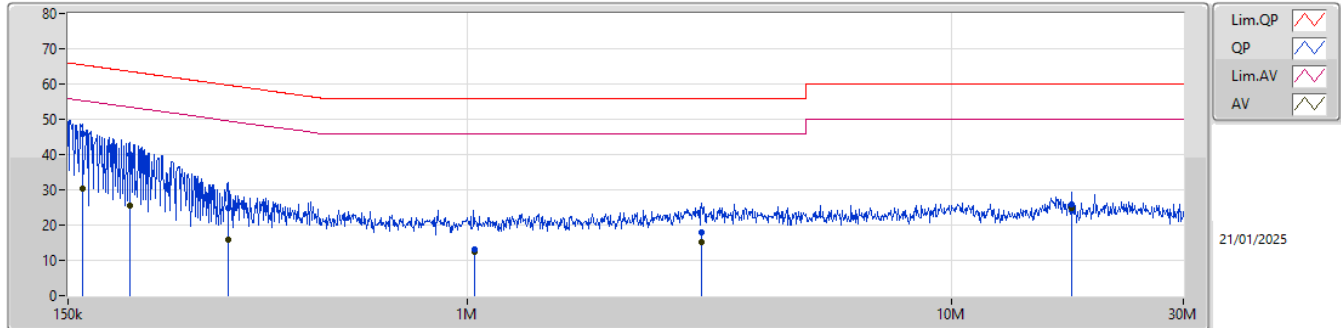
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150k	47.69	66.00	-18.31	Neutral

Result

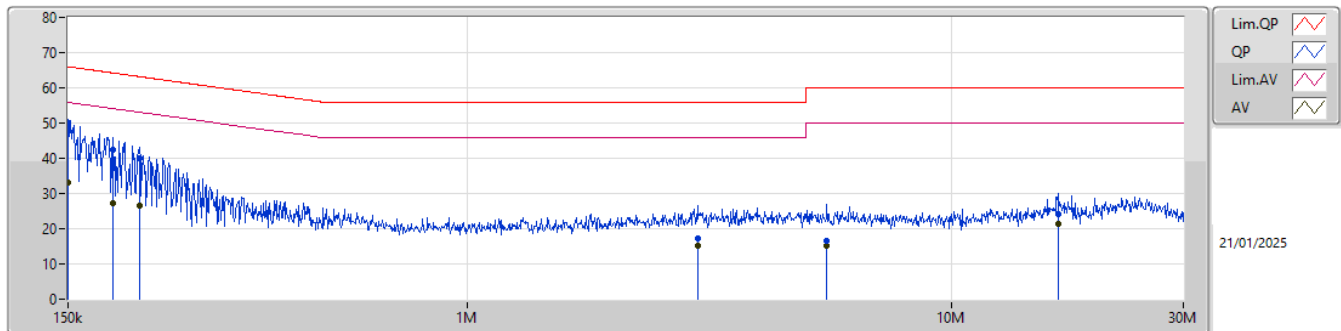
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	160.533k	45.75	65.43	-19.68	Line
Mode 1	Pass	AV	160.533k	30.36	55.43	-25.07	Line
Mode 1	Pass	QP	200.748k	40.17	63.57	-23.40	Line
Mode 1	Pass	AV	200.748k	25.57	53.57	-28.00	Line
Mode 1	Pass	QP	320.256k	24.69	59.71	-35.02	Line
Mode 1	Pass	AV	320.256k	15.90	49.71	-33.81	Line
Mode 1	Pass	QP	1.032M	13.08	56.00	-42.92	Line
Mode 1	Pass	AV	1.032M	12.36	46.00	-33.64	Line
Mode 1	Pass	QP	3.043M	17.83	56.00	-38.17	Line
Mode 1	Pass	AV	3.043M	15.28	46.00	-30.72	Line
Mode 1	Pass	QP	17.696M	25.72	60.00	-34.28	Line
Mode 1	Pass	AV	17.696M	24.77	50.00	-25.23	Line
Mode 1	Pass	QP	150k	47.69	66.00	-18.31	Neutral
Mode 1	Pass	AV	150k	33.02	56.00	-22.98	Neutral
Mode 1	Pass	QP	185.344k	42.34	64.24	-21.90	Neutral
Mode 1	Pass	AV	185.344k	27.36	54.24	-26.88	Neutral
Mode 1	Pass	QP	210.599k	39.88	63.19	-23.31	Neutral
Mode 1	Pass	AV	210.599k	26.49	53.19	-26.70	Neutral
Mode 1	Pass	QP	2.983M	17.35	56.00	-38.65	Neutral
Mode 1	Pass	AV	2.983M	15.32	46.00	-30.68	Neutral
Mode 1	Pass	QP	5.516M	16.40	60.00	-43.60	Neutral
Mode 1	Pass	AV	5.516M	15.28	50.00	-34.72	Neutral
Mode 1	Pass	QP	16.535M	24.28	60.00	-35.72	Neutral
Mode 1	Pass	AV	16.535M	21.30	50.00	-28.70	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	160.533k	45.75	65.43	-19.68	19.70	Line	-	26.05	9.66	0.07	9.97								
AV	160.533k	30.36	55.43	-25.07	19.70	Line	-	10.66	9.66	0.07	9.97								
QP	200.748k	40.17	63.57	-23.40	19.71	Line	-	20.46	9.65	0.09	9.97								
AV	200.748k	25.57	53.57	-28.00	19.71	Line	-	5.86	9.65	0.09	9.97								
QP	320.256k	24.69	59.71	-35.02	19.74	Line	-	4.95	9.65	0.11	9.98								
AV	320.256k	15.90	49.71	-33.81	19.74	Line	-	-3.84	9.65	0.11	9.98								
QP	1.032M	13.08	56.00	-42.92	19.73	Line	-	-6.65	9.66	0.09	9.98								
AV	1.032M	12.36	46.00	-33.64	19.73	Line	-	-7.37	9.66	0.09	9.98								
QP	3.043M	17.83	56.00	-38.17	19.75	Line	-	-1.92	9.68	0.09	9.98								
AV	3.043M	15.28	46.00	-30.72	19.75	Line	-	-4.47	9.68	0.09	9.98								
QP	17.696M	25.72	60.00	-34.28	19.78	Line	-	5.94	9.69	0.11	9.98								
AV	17.696M	24.77	50.00	-25.23	19.78	Line	-	4.99	9.69	0.11	9.98								

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)								
QP	150k	47.69	66.00	-18.31	19.64	Neutral	-	28.05	9.60	0.07	9.97								
AV	150k	33.02	56.00	-22.98	19.64	Neutral	-	13.38	9.60	0.07	9.97								
QP	185.344k	42.34	64.24	-21.90	19.65	Neutral	-	22.69	9.60	0.08	9.97								
AV	185.344k	27.36	54.24	-26.88	19.65	Neutral	-	7.71	9.60	0.08	9.97								
QP	210.599k	39.88	63.19	-23.31	19.66	Neutral	-	20.22	9.60	0.09	9.97								
AV	210.599k	26.49	53.19	-26.70	19.66	Neutral	-	6.83	9.60	0.09	9.97								
QP	2.983M	17.35	56.00	-38.65	19.69	Neutral	-	-2.34	9.62	0.09	9.98								
AV	2.983M	15.32	46.00	-30.68	19.69	Neutral	-	-4.37	9.62	0.09	9.98								
QP	5.516M	16.40	60.00	-43.60	19.67	Neutral	-	-3.27	9.63	0.06	9.98								
AV	5.516M	15.28	50.00	-34.72	19.67	Neutral	-	-4.39	9.63	0.06	9.98								
QP	16.535M	24.28	60.00	-35.72	19.75	Neutral	-	4.53	9.67	0.10	9.98								
AV	16.535M	21.30	50.00	-28.70	19.75	Neutral	-	1.55	9.67	0.10	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)	725k	1.049M	1M05F1D	641.25k	1.037M
BT-LE(2Mbps)	1.325M	2.114M	2M11F1D	1.17M	2.086M

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

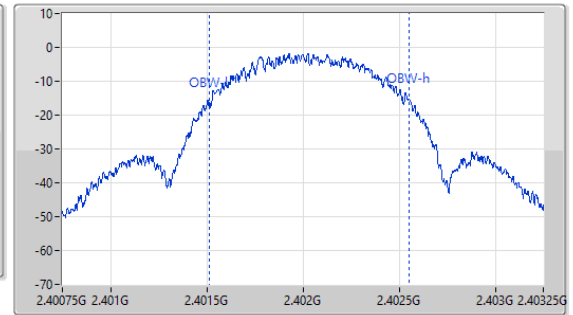
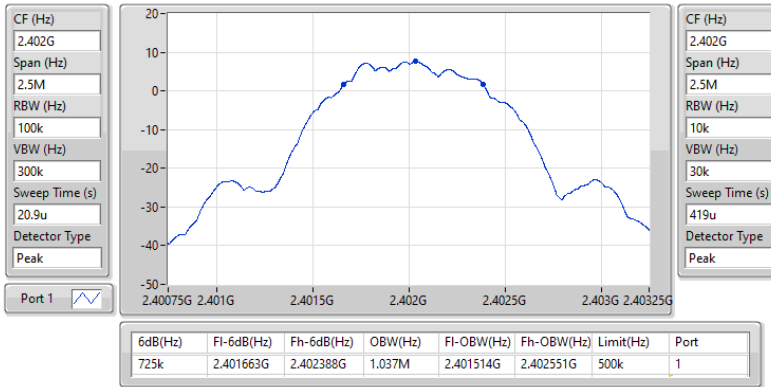
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	725k	1.037M
2440MHz	Pass	500k	696.25k	1.043M
2480MHz	Pass	500k	641.25k	1.049M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.325M	2.086M
2440MHz	Pass	500k	1.225M	2.114M
2480MHz	Pass	500k	1.17M	2.106M

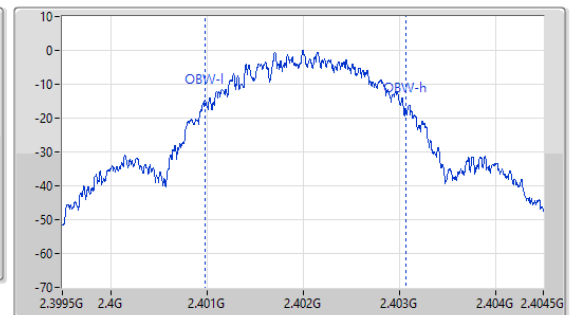
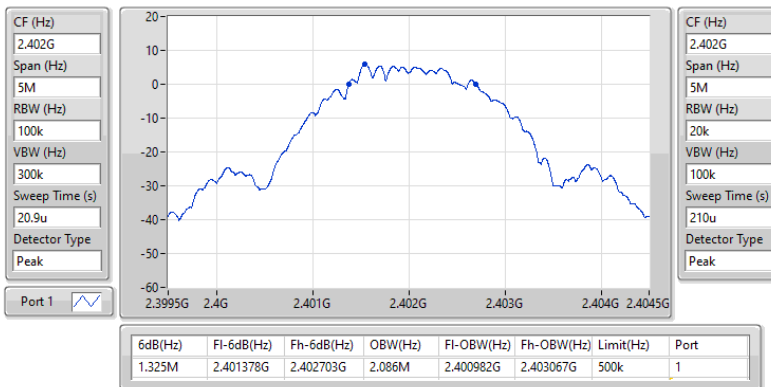
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

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

19/02/2025


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

19/02/2025





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	9.75	0.00944
BT-LE(2Mbps)	9.75	0.00944



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.92	9.45	30.00
2440MHz	Pass	5.92	9.66	30.00
2480MHz	Pass	5.92	9.75	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.92	9.45	30.00
2440MHz	Pass	5.92	9.66	30.00
2480MHz	Pass	5.92	9.75	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)	-8.16
BT-LE(2Mbps)	-7.87

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.92	-8.46	8.00
2440MHz	Pass	5.92	-8.31	8.00
2480MHz	Pass	5.92	-8.16	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.92	-8.20	8.00
2440MHz	Pass	5.92	-8.04	8.00
2480MHz	Pass	5.92	-7.87	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

2480MHz

19/02/2025

CF (Hz)
2.48G

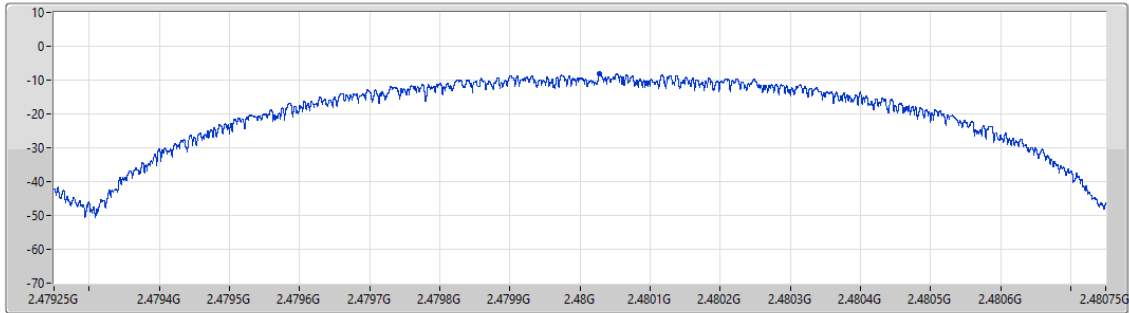
Span (Hz)
1.5M

RBW (Hz)
3k

VBW (Hz)
10k

Sweep Time (s)
1.4m

Detector Type
Peak



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.16	-8.16	-8.16

2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2480MHz

19/02/2025

CF (Hz)
2.48G

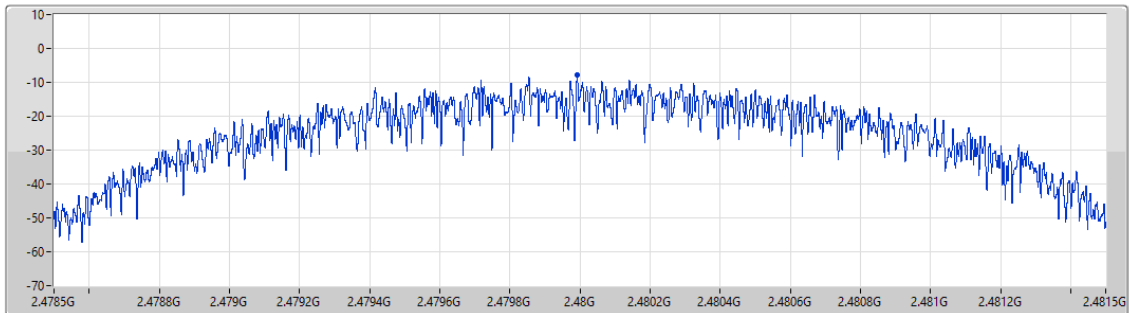
Span (Hz)
3M

RBW (Hz)
3k

VBW (Hz)
10k

Sweep Time (s)
1.4m

Detector Type
Peak



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.87	-7.87	-7.87

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	2.48033G	8.72	-21.28	2.1591G	-55.64	2.39996G	-43.98	2.4G	-43.82	2.50094G	-53.44	21.96578G	-45.41	1
BT-LE(2Mbps)	Pass	2.48033G	6.56	-23.44	1.75843G	-54.84	2.4G	-25.82	2.4G	-24.35	2.50334G	-53.65	21.49336G	-44.78	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	2.48033G	8.72	-21.28	2.1591G	-55.64	2.39996G	-43.98	2.4G	-43.82	2.50094G	-53.44	21.96578G	-45.41	1
2440MHz	Pass	2.48033G	8.72	-21.28	2.04513G	-55.92	2.39048G	-53.20	2.4G	-56.26	2.50286G	-53.71	21.57491G	-44.64	1
2480MHz	Pass	2.48033G	8.72	-21.28	2.11563G	-55.90	2.39932G	-53.38	2.4G	-58.27	2.50178G	-53.12	21.55522G	-44.63	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48033G	6.56	-23.44	1.75843G	-54.84	2.4G	-25.82	2.4G	-24.35	2.50334G	-53.65	21.49336G	-44.78	1
2440MHz	Pass	2.48033G	6.56	-23.44	2.30245G	-54.72	2.39924G	-52.58	2.4G	-56.56	2.50302G	-53.73	21.6199G	-45.56	1
2480MHz	Pass	2.48033G	6.56	-23.44	1.84655G	-55.41	2.39832G	-52.56	2.4G	-57.67	2.50234G	-53.49	21.98547G	-44.82	1

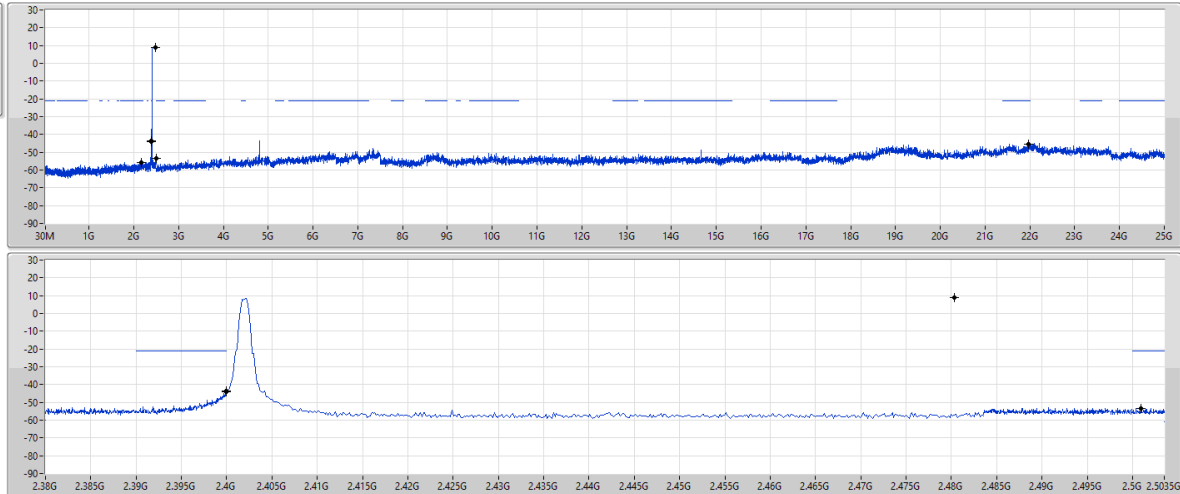
2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2402MHz

19/02/2025

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
2.48033G	8.72	-21.28	2.1591G	-55.64	2.39996G	-43.98	2.4G	-43.82	2.50094G	-53.44	2.196578G	-45.41	1

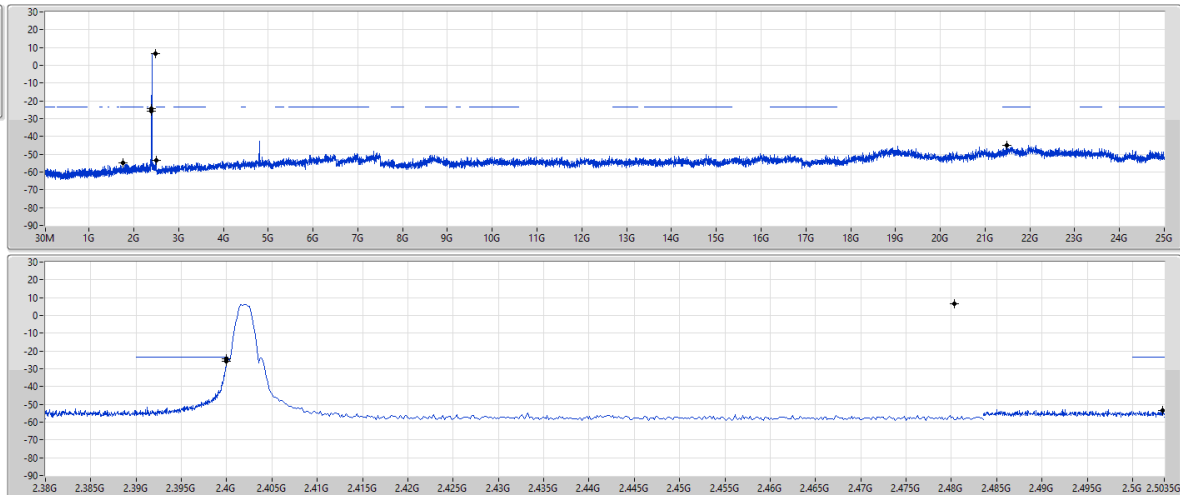
2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2402MHz

19/02/2025

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
2.48033G	6.56	-23.44	1.75843G	-54.84	2.4G	-25.82	2.4G	-24.35	2.50334G	-53.65	2.149336G	-44.78	1



Summary

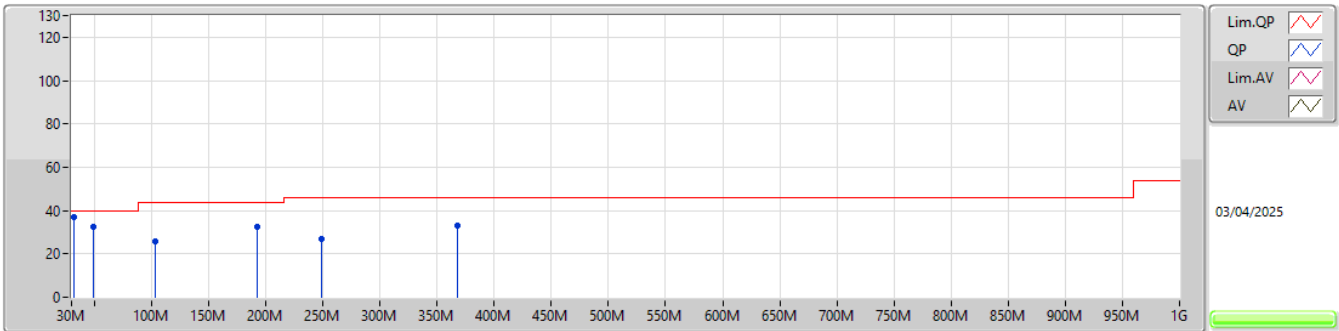
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	31.94M	36.84	40.00	-3.16	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_PoE	Pass	PK	31.94M	36.84	40.00	-3.16	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	49.4M	32.40	40.00	-7.60	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	103.72M	25.59	43.50	-17.91	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	192.96M	32.54	43.50	-10.96	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	249.22M	26.84	46.00	-19.16	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	367.56M	32.88	46.00	-13.12	3	Vertical	360	1.00
2440MHz_PoE	Pass	PK	31.94M	23.91	40.00	-16.09	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	90.14M	25.59	43.50	-17.91	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	212.36M	32.06	43.50	-11.44	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	332.64M	25.40	46.00	-20.60	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	367.56M	29.41	46.00	-16.59	3	Horizontal	0	1.00
2440MHz_PoE	Pass	PK	714.82M	36.45	46.00	-9.55	3	Horizontal	0	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

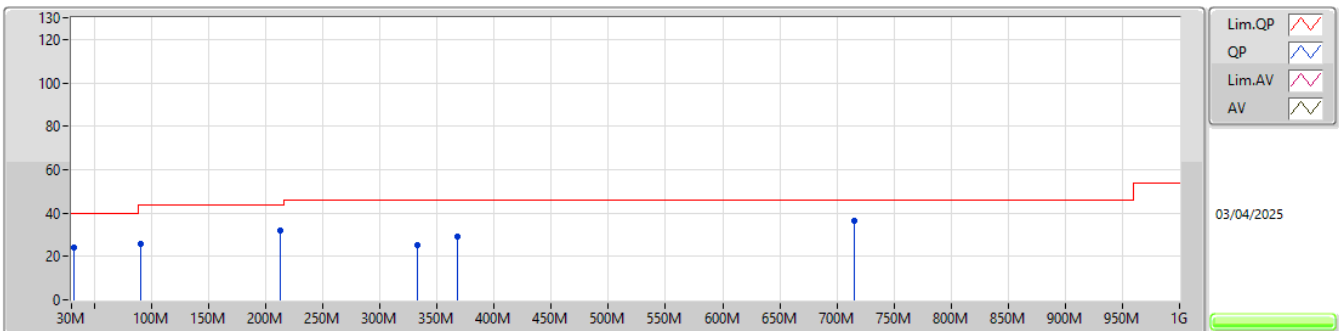
2440MHz_PoE



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)				
PK	31.94M	36.84	40.00	-3.16	-20.11	3	Vertical	360	1.00	56.95	23.74	0.45	44.30				
PK	49.4M	32.40	40.00	-7.60	-29.20	3	Vertical	360	1.00	61.60	14.89	0.48	44.57				
PK	103.72M	25.59	43.50	-17.91	-27.20	3	Vertical	360	1.00	52.79	16.51	0.82	44.53				
PK	192.96M	32.54	43.50	-10.96	-28.49	3	Vertical	360	1.00	61.03	14.91	1.09	44.49				
PK	249.22M	26.84	46.00	-19.16	-24.71	3	Vertical	360	1.00	51.55	18.51	1.15	44.37				
PK	367.56M	32.88	46.00	-13.12	-21.77	3	Vertical	360	1.00	54.65	20.98	1.35	44.10				

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_PoE



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)				
PK	31.94M	23.91	40.00	-16.09	-20.11	3	Horizontal	0	1.00	44.02	23.74	0.45	44.30				
PK	90.14M	25.59	43.50	-17.91	-28.68	3	Horizontal	0	1.00	54.27	15.09	0.84	44.61				
PK	212.36M	32.06	43.50	-11.44	-28.07	3	Horizontal	0	1.00	60.13	15.25	1.13	44.45				
PK	332.64M	25.40	46.00	-20.60	-22.98	3	Horizontal	0	1.00	48.38	19.93	1.27	44.18				
PK	367.56M	29.41	46.00	-16.59	-21.77	3	Horizontal	0	1.00	51.18	20.98	1.35	44.10				
PK	714.82M	36.45	46.00	-9.55	-14.64	3	Horizontal	0	1.00	51.09	27.23	1.96	43.83				



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	4.80402G	49.83	54.00	-4.17	3	Vertical	301	2.01
BT-LE(2Mbps)	Pass	AV	2.4835G	51.33	54.00	-2.67	3	Vertical	320	1.96

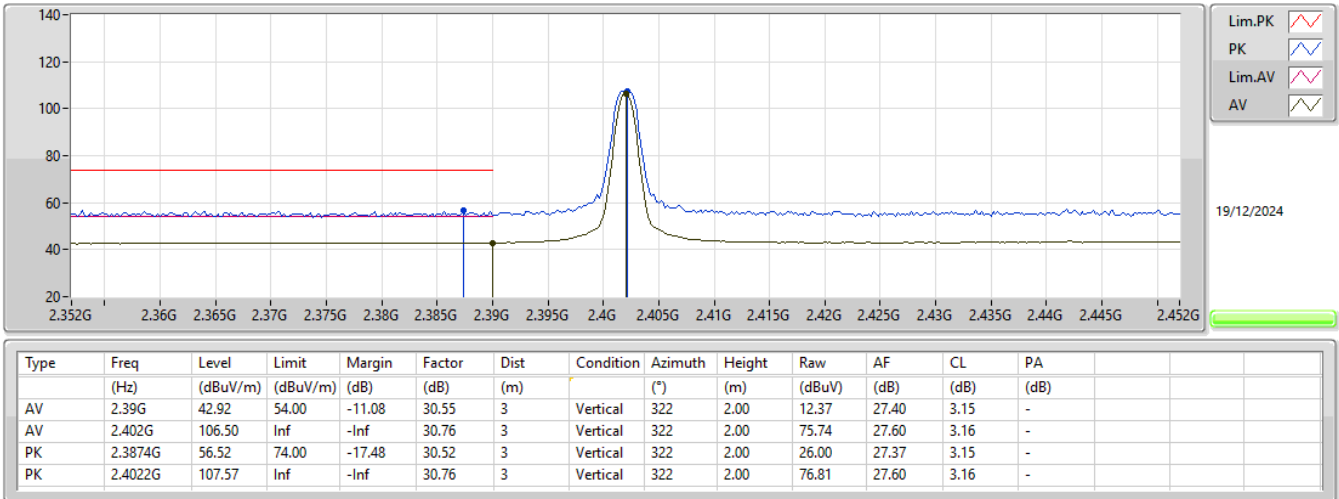
Result

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	2.39G	42.92	54.00	-11.08	3	Vertical	322	2.00
2402MHz	Pass	AV	2.402G	106.50	Inf	-Inf	3	Vertical	322	2.00
2402MHz	Pass	PK	2.3874G	56.52	74.00	-17.48	3	Vertical	322	2.00
2402MHz	Pass	PK	2.4022G	107.57	Inf	-Inf	3	Vertical	322	2.00
2402MHz	Pass	AV	2.3898G	42.77	54.00	-11.23	3	Horizontal	321	1.10
2402MHz	Pass	AV	2.402G	93.67	Inf	-Inf	3	Horizontal	321	1.10
2402MHz	Pass	PK	2.3884G	56.88	74.00	-17.12	3	Horizontal	321	1.10
2402MHz	Pass	PK	2.4022G	94.84	Inf	-Inf	3	Horizontal	321	1.10
2402MHz	Pass	AV	4.80402G	49.83	54.00	-4.17	3	Vertical	301	2.01
2402MHz	Pass	PK	4.80454G	55.01	74.00	-18.99	3	Vertical	301	2.01
2402MHz	Pass	AV	4.80403G	42.90	54.00	-11.10	3	Horizontal	37	3.00
2402MHz	Pass	PK	4.80352G	49.61	74.00	-24.39	3	Horizontal	37	3.00
2402MHz	Pass	AV	2.3684G	42.80	54.00	-11.20	3	Vertical	318	2.00
2440MHz	Pass	AV	2.44G	106.53	Inf	-Inf	3	Vertical	318	2.00
2440MHz	Pass	AV	2.4852G	43.60	54.00	-10.40	3	Vertical	318	2.00
2440MHz	Pass	PK	2.3716G	56.75	74.00	-17.25	3	Vertical	318	2.00
2440MHz	Pass	PK	2.4404G	107.58	Inf	-Inf	3	Vertical	318	2.00
2440MHz	Pass	PK	2.4856G	56.80	74.00	-17.20	3	Vertical	318	2.00
2440MHz	Pass	AV	2.3712G	42.82	54.00	-11.18	3	Horizontal	328	1.07
2440MHz	Pass	AV	2.44G	93.76	Inf	-Inf	3	Horizontal	328	1.07
2440MHz	Pass	AV	2.4884G	43.57	54.00	-10.43	3	Horizontal	328	1.07
2440MHz	Pass	PK	2.348G	56.83	74.00	-17.17	3	Horizontal	328	1.07
2440MHz	Pass	PK	2.4404G	94.85	Inf	-Inf	3	Horizontal	328	1.07
2440MHz	Pass	PK	2.4868G	58.24	74.00	-15.76	3	Horizontal	328	1.07
2440MHz	Pass	AV	4.88001G	46.68	54.00	-7.32	3	Vertical	298	1.00
2440MHz	Pass	PK	4.87956G	52.60	74.00	-21.40	3	Vertical	298	1.00
2440MHz	Pass	AV	4.88002G	41.05	54.00	-12.95	3	Horizontal	23	3.00
2440MHz	Pass	PK	4.8795G	48.58	74.00	-25.42	3	Horizontal	23	3.00
2480MHz	Pass	AV	2.48G	105.64	Inf	-Inf	3	Vertical	320	1.97
2480MHz	Pass	AV	2.4835G	47.50	54.00	-6.50	3	Vertical	320	1.97
2480MHz	Pass	PK	2.4798G	106.69	Inf	-Inf	3	Vertical	320	1.97
2480MHz	Pass	PK	2.4836G	60.33	74.00	-13.67	3	Vertical	320	1.97
2480MHz	Pass	AV	2.48G	95.94	Inf	-Inf	3	Horizontal	322	1.02
2480MHz	Pass	AV	2.4835G	44.04	54.00	-9.96	3	Horizontal	322	1.02
2480MHz	Pass	PK	2.4802G	97.02	Inf	-Inf	3	Horizontal	322	1.02
2480MHz	Pass	PK	2.4904G	57.56	74.00	-16.44	3	Horizontal	322	1.02
2480MHz	Pass	AV	4.96002G	42.13	54.00	-11.87	3	Vertical	300	2.10
2480MHz	Pass	PK	4.96047G	49.64	74.00	-24.36	3	Vertical	300	2.10
2480MHz	Pass	AV	4.95997G	34.47	54.00	-19.53	3	Horizontal	331	1.56
2480MHz	Pass	PK	4.96046G	45.40	74.00	-28.60	3	Horizontal	331	1.56
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3896G	42.97	54.00	-11.03	3	Vertical	321	1.40
2402MHz	Pass	AV	2.402G	104.30	Inf	-Inf	3	Vertical	321	1.40
2402MHz	Pass	PK	2.388G	57.18	74.00	-16.82	3	Vertical	321	1.40
2402MHz	Pass	PK	2.4024G	107.08	Inf	-Inf	3	Vertical	321	1.40
2402MHz	Pass	AV	2.3886G	42.86	54.00	-11.14	3	Horizontal	360	3.00
2402MHz	Pass	AV	2.402G	99.98	Inf	-Inf	3	Horizontal	360	3.00
2402MHz	Pass	PK	2.357G	56.33	74.00	-17.67	3	Horizontal	360	3.00
2402MHz	Pass	PK	2.4024G	102.76	Inf	-Inf	3	Horizontal	360	3.00
2402MHz	Pass	AV	4.80443G	45.37	54.00	-8.63	3	Vertical	303	1.98
2402MHz	Pass	PK	4.80494G	55.51	74.00	-18.49	3	Vertical	303	1.98
2402MHz	Pass	AV	4.80441G	38.49	54.00	-15.51	3	Horizontal	38	1.50
2402MHz	Pass	PK	4.80294G	49.32	74.00	-24.68	3	Horizontal	38	1.50
2440MHz	Pass	AV	2.3628G	42.77	54.00	-11.23	3	Vertical	324	2.00
2440MHz	Pass	AV	2.44G	105.12	Inf	-Inf	3	Vertical	324	2.00
2440MHz	Pass	AV	2.492G	43.61	54.00	-10.39	3	Vertical	324	2.00
2440MHz	Pass	PK	2.3636G	56.76	74.00	-17.24	3	Vertical	324	2.00
2440MHz	Pass	PK	2.4404G	107.88	Inf	-Inf	3	Vertical	324	2.00
2440MHz	Pass	PK	2.494G	56.92	74.00	-17.08	3	Vertical	324	2.00
2440MHz	Pass	AV	2.3672G	42.79	54.00	-11.21	3	Horizontal	329	1.07

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2440MHz	Pass	AV	2.44G	91.96	Inf	-Inf	3	Horizontal	329	1.07
2440MHz	Pass	AV	2.4936G	43.57	54.00	-10.43	3	Horizontal	329	1.07
2440MHz	Pass	PK	2.3656G	56.46	74.00	-17.54	3	Horizontal	329	1.07
2440MHz	Pass	PK	2.4404G	94.72	Inf	-Inf	3	Horizontal	329	1.07
2440MHz	Pass	PK	2.4944G	57.27	74.00	-16.73	3	Horizontal	329	1.07
2440MHz	Pass	AV	4.87957G	41.80	54.00	-12.20	3	Vertical	301	1.95
2440MHz	Pass	PK	4.88091G	52.12	74.00	-21.88	3	Vertical	301	1.95
2440MHz	Pass	AV	4.87915G	37.13	54.00	-16.87	3	Horizontal	22	3.00
2440MHz	Pass	PK	4.87911G	48.32	74.00	-25.68	3	Horizontal	22	3.00
2480MHz	Pass	AV	2.48G	103.81	Inf	-Inf	3	Vertical	320	1.96
2480MHz	Pass	AV	2.4835G	51.33	54.00	-2.67	3	Vertical	320	1.96
2480MHz	Pass	PK	2.4796G	106.57	Inf	-Inf	3	Vertical	320	1.96
2480MHz	Pass	PK	2.4835G	64.38	74.00	-9.62	3	Vertical	320	1.96
2480MHz	Pass	AV	2.48G	93.98	Inf	-Inf	3	Horizontal	322	1.01
2480MHz	Pass	AV	2.4835G	45.43	54.00	-8.57	3	Horizontal	322	1.01
2480MHz	Pass	PK	2.4804G	96.77	Inf	-Inf	3	Horizontal	322	1.01
2480MHz	Pass	PK	2.4835G	59.12	74.00	-14.88	3	Horizontal	322	1.01
2480MHz	Pass	AV	4.96095G	38.81	54.00	-15.19	3	Vertical	304	2.11
2480MHz	Pass	PK	4.95913G	49.80	74.00	-24.20	3	Vertical	304	2.11
2480MHz	Pass	AV	4.96093G	32.42	54.00	-21.58	3	Horizontal	333	1.58
2480MHz	Pass	PK	4.96124G	44.99	74.00	-29.01	3	Horizontal	333	1.58

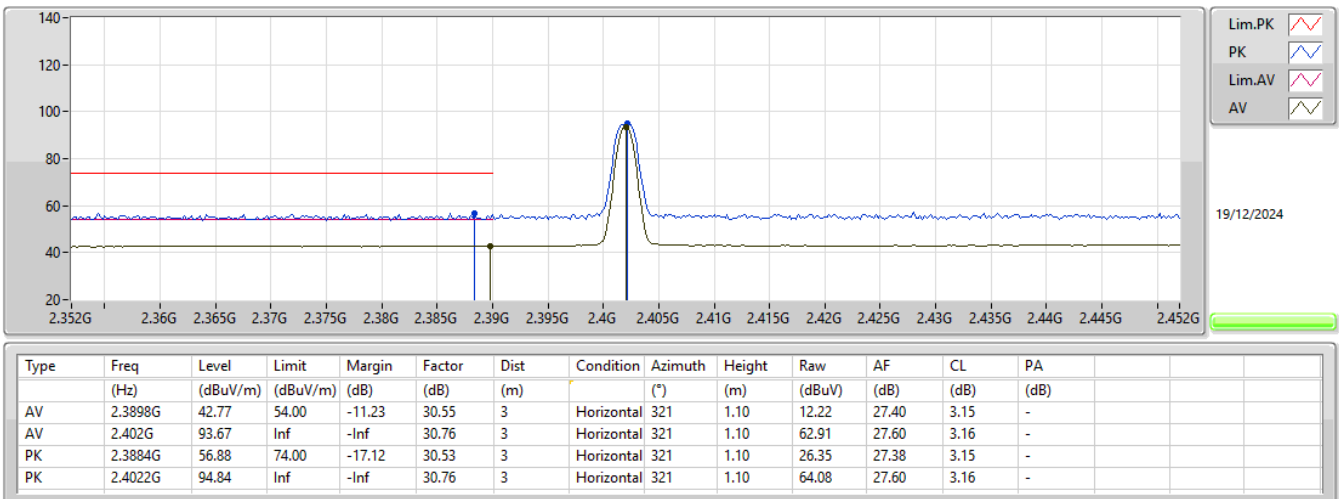
2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX



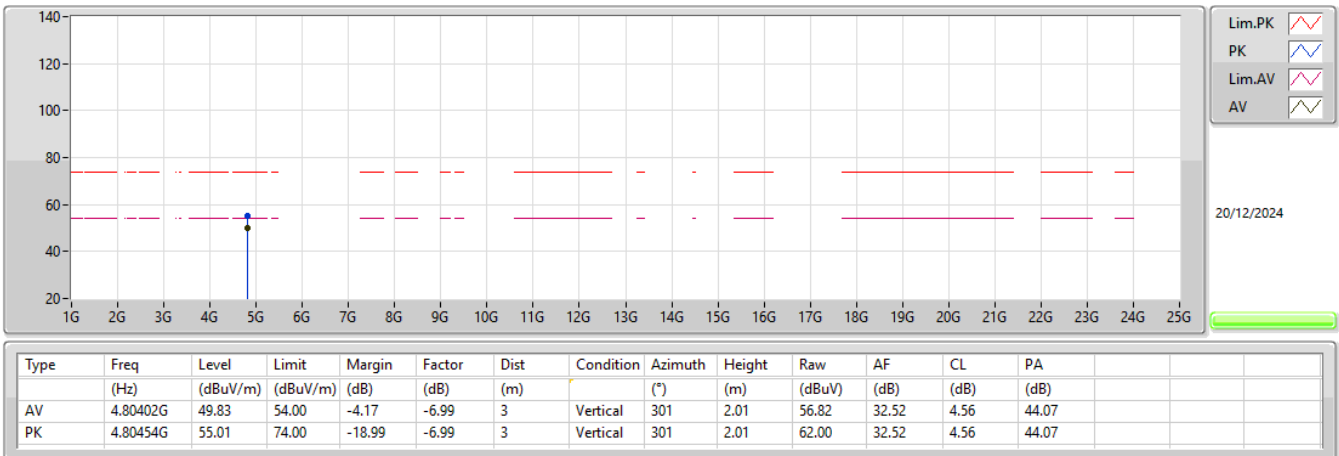
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2402MHz_TX



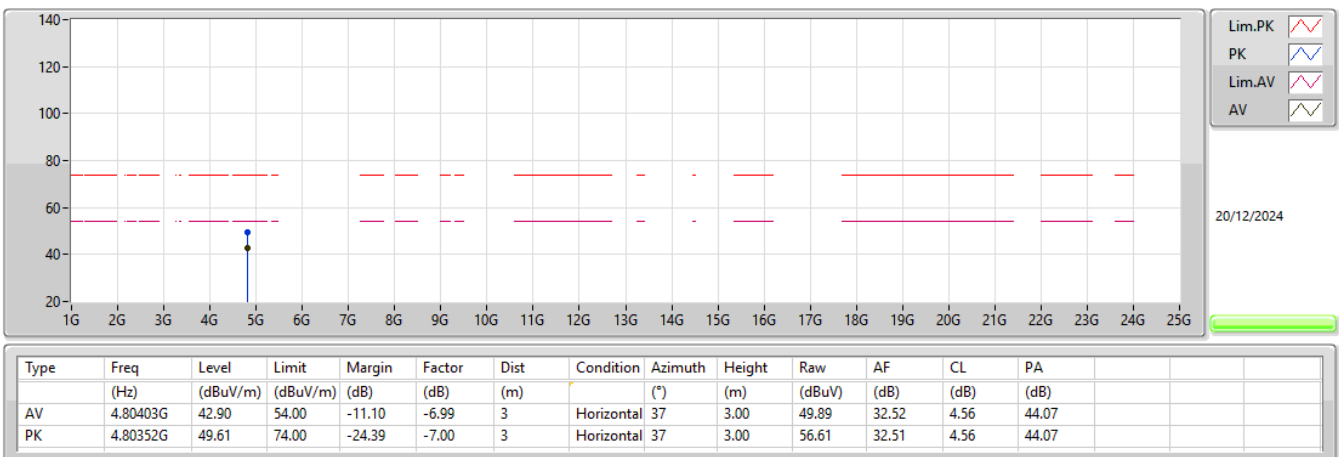
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2402MHz_TX



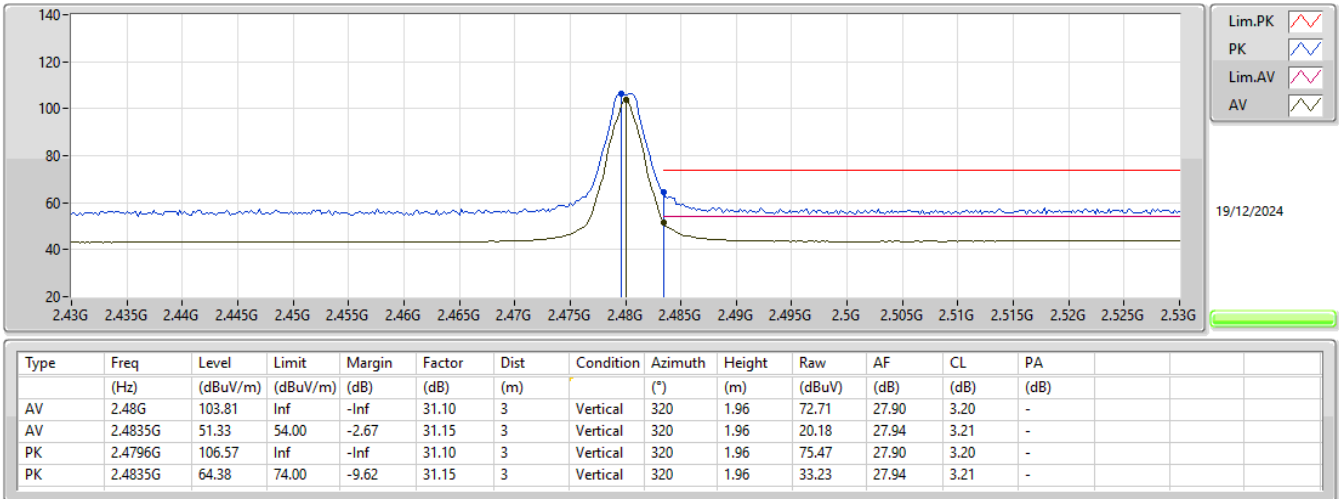
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2402MHz_TX



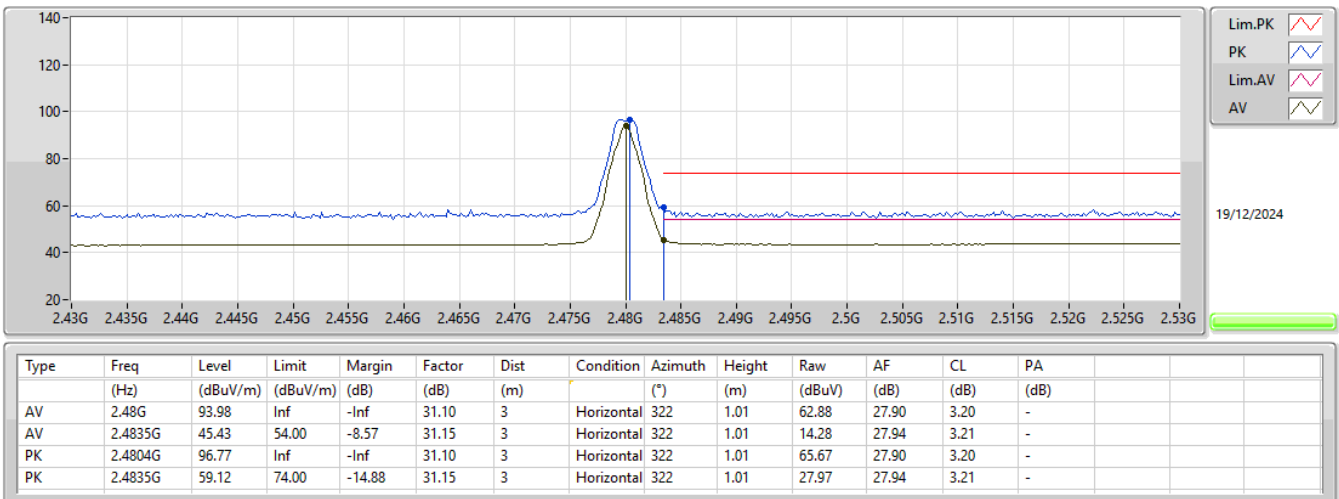
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2480MHz_TX



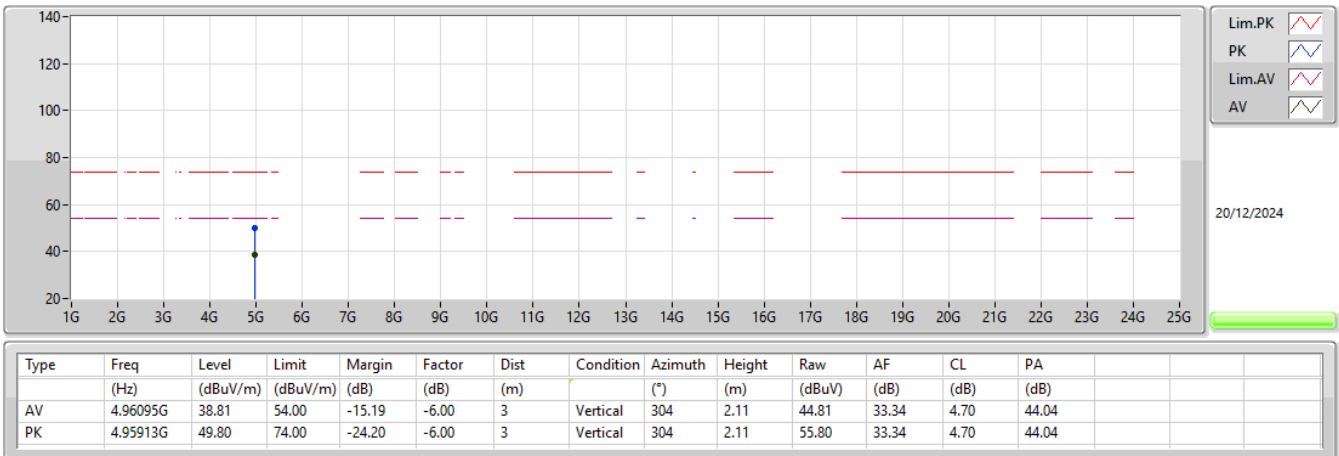
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2480MHz_TX



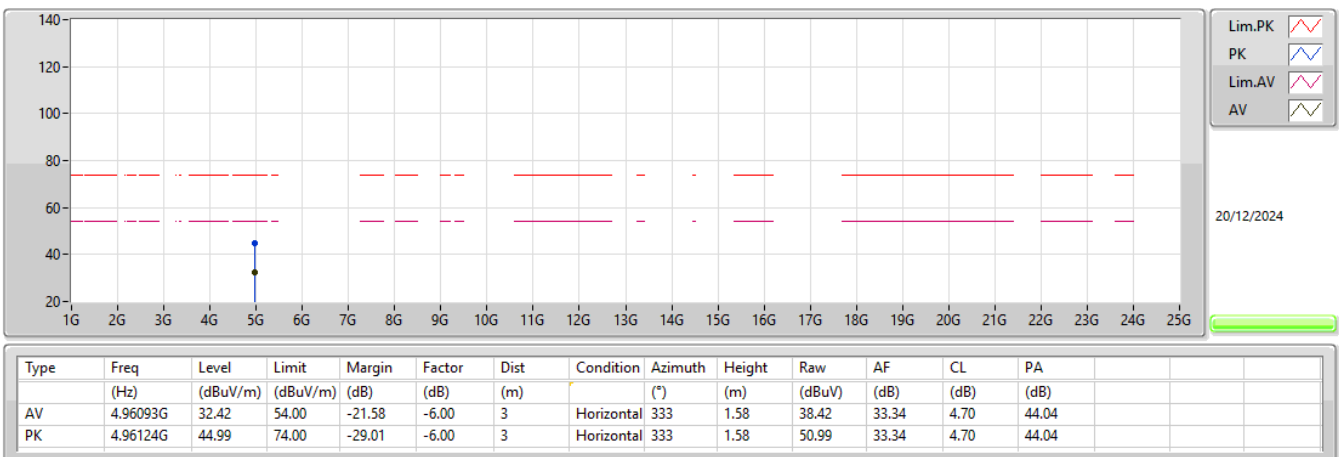
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





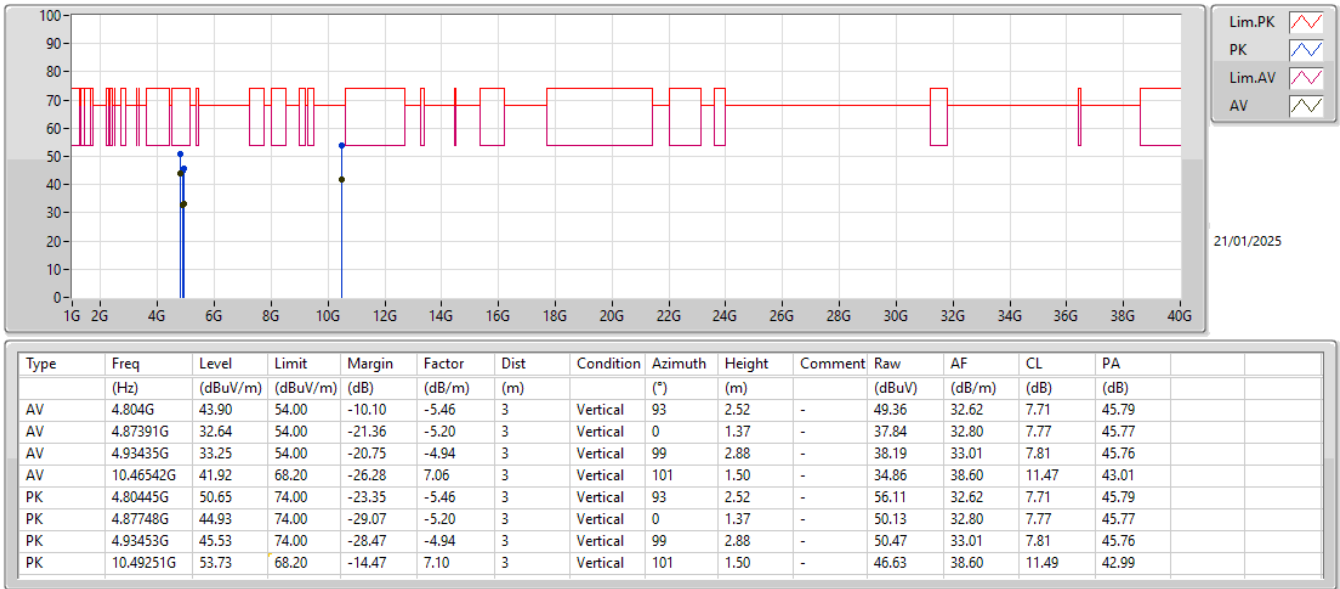
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.80394G	51.00	54.00	-3.00	Horizontal
Mode 2	Pass	AV	4.80394G	50.78	54.00	-3.22	Horizontal

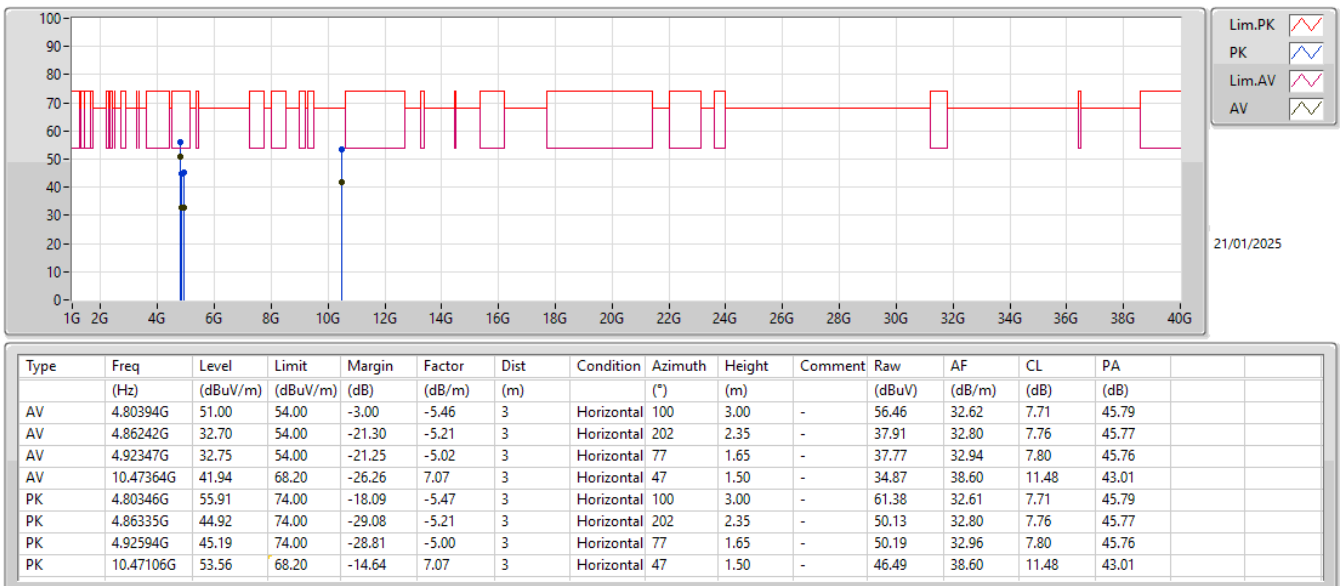
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.804G	43.90	54.00	-10.10	3	Vertical	93	2.52	-
Mode 1	Pass	AV	4.87391G	32.64	54.00	-21.36	3	Vertical	0	1.37	-
Mode 1	Pass	AV	4.93435G	33.25	54.00	-20.75	3	Vertical	99	2.88	-
Mode 1	Pass	AV	10.46542G	41.92	68.20	-26.28	3	Vertical	101	1.50	-
Mode 1	Pass	PK	4.80445G	50.65	74.00	-23.35	3	Vertical	93	2.52	-
Mode 1	Pass	PK	4.87748G	44.93	74.00	-29.07	3	Vertical	0	1.37	-
Mode 1	Pass	PK	4.93453G	45.53	74.00	-28.47	3	Vertical	99	2.88	-
Mode 1	Pass	PK	10.49251G	53.73	68.20	-14.47	3	Vertical	101	1.50	-
Mode 1	Pass	AV	4.80394G	51.00	54.00	-3.00	3	Horizontal	100	3.00	-
Mode 1	Pass	AV	4.86242G	32.70	54.00	-21.30	3	Horizontal	202	2.35	-
Mode 1	Pass	AV	4.92347G	32.75	54.00	-21.25	3	Horizontal	77	1.65	-
Mode 1	Pass	AV	10.47364G	41.94	68.20	-26.26	3	Horizontal	47	1.50	-
Mode 1	Pass	PK	4.80346G	55.91	74.00	-18.09	3	Horizontal	100	3.00	-
Mode 1	Pass	PK	4.86335G	44.92	74.00	-29.08	3	Horizontal	202	2.35	-
Mode 1	Pass	PK	4.92594G	45.19	74.00	-28.81	3	Horizontal	77	1.65	-
Mode 1	Pass	PK	10.47106G	53.56	68.20	-14.64	3	Horizontal	47	1.50	-
Mode 2	Pass	AV	4.80403G	43.52	54.00	-10.48	3	Vertical	91	2.50	-
Mode 2	Pass	AV	4.87299G	33.12	54.00	-21.35	3	Vertical	152	2.13	-
Mode 2	Pass	AV	10.37104G	42.05	68.20	-26.15	3	Vertical	161	1.00	-
Mode 2	Pass	AV	10.48915G	42.14	68.20	-26.06	3	Vertical	96	1.16	-
Mode 2	Pass	PK	4.8034G	50.22	74.00	-23.78	3	Vertical	91	2.50	-
Mode 2	Pass	PK	4.87412G	44.97	74.00	-29.03	3	Vertical	152	2.13	-
Mode 2	Pass	PK	10.34563G	54.39	68.20	-13.81	3	Vertical	161	1.00	-
Mode 2	Pass	PK	10.47796G	54.46	68.20	-13.74	3	Vertical	96	1.16	-
Mode 2	Pass	AV	4.80394G	50.78	54.00	-3.22	3	Horizontal	99	3.00	-
Mode 2	Pass	AV	4.87549G	32.66	54.00	-21.34	3	Horizontal	53	1.77	-
Mode 2	Pass	AV	10.3735G	42.20	68.20	-26.00	3	Horizontal	106	1.84	-
Mode 2	Pass	AV	10.47787G	42.18	68.20	-26.02	3	Horizontal	315	1.50	-
Mode 2	Pass	PK	4.80445G	55.66	74.00	-18.34	3	Horizontal	99	3.00	-
Mode 2	Pass	PK	4.87394G	45.03	74.00	-28.97	3	Horizontal	53	1.77	-
Mode 2	Pass	PK	10.37467G	54.12	68.20	-14.08	3	Horizontal	106	1.84	-
Mode 2	Pass	PK	10.48957G	53.81	68.20	-14.39	3	Horizontal	315	1.50	-

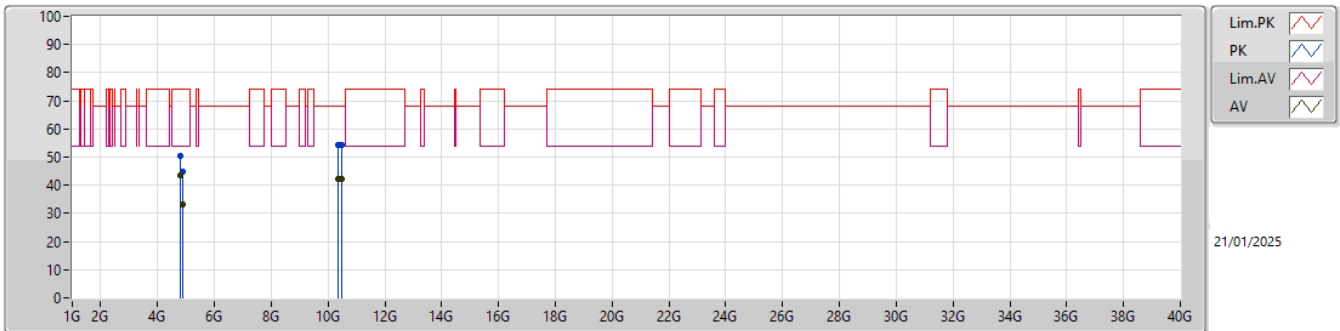
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1

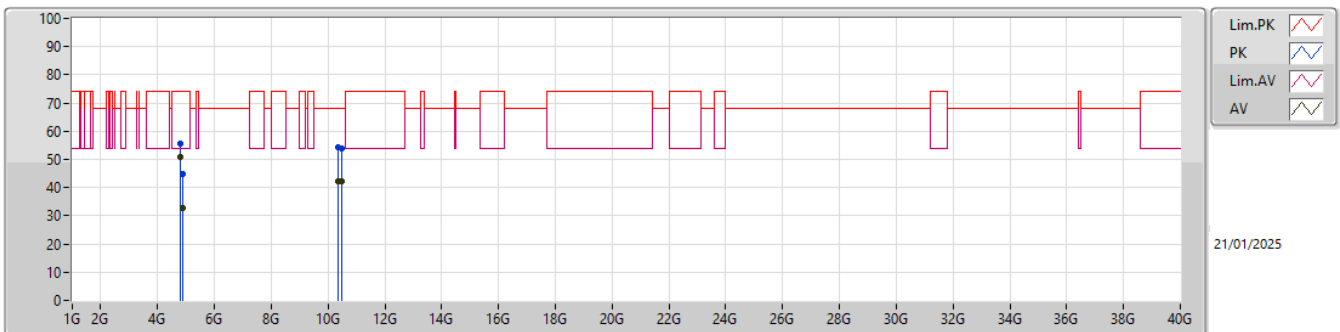


Radiated Emissions above 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80403G	43.52	54.00	-10.48	-5.46	3	Vertical	91	2.50	-	48.98	32.62	7.71	45.79
AV	4.87299G	33.12	54.00	-21.35	-5.21	3	Vertical	152	2.13	-	37.86	32.80	7.76	45.77
AV	10.37104G	42.05	68.20	-26.15	7.05	3	Vertical	161	1.00	-	35.00	38.70	11.42	43.07
AV	10.48915G	42.14	68.20	-26.06	7.09	3	Vertical	96	1.16	-	35.05	38.60	11.49	43.00
PK	4.8034G	50.22	74.00	-23.78	-5.47	3	Vertical	91	2.50	-	55.69	32.61	7.71	45.79
PK	4.87412G	44.97	74.00	-29.03	-5.20	3	Vertical	152	2.13	-	50.17	32.80	7.77	45.77
PK	10.34563G	54.39	68.20	-13.81	7.02	3	Vertical	161	1.00	-	47.37	38.69	11.41	43.08
PK	10.47796G	54.46	68.20	-13.74	7.08	3	Vertical	96	1.16	-	47.38	38.60	11.48	43.00

Radiated Emissions above 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80394G	50.78	54.00	-3.22	-5.46	3	Horizontal	99	3.00	-	56.24	32.62	7.71	45.79
AV	4.87549G	32.66	54.00	-21.34	-5.20	3	Horizontal	53	1.77	-	37.86	32.80	7.77	45.77
AV	10.3735G	42.20	68.20	-26.00	7.05	3	Horizontal	106	1.84	-	35.15	38.70	11.42	43.07
AV	10.47787G	42.18	68.20	-26.02	7.08	3	Horizontal	315	1.50	-	35.10	38.60	11.48	43.00
PK	4.80445G	55.66	74.00	-18.34	-5.46	3	Horizontal	99	3.00	-	61.12	32.62	7.71	45.79
PK	4.87394G	45.03	74.00	-28.97	-5.20	3	Horizontal	53	1.77	-	50.23	32.80	7.77	45.77
PK	10.37467G	54.12	68.20	-14.08	7.05	3	Horizontal	106	1.84	-	47.07	38.70	11.42	43.07
PK	10.48957G	53.81	68.20	-14.39	7.09	3	Horizontal	315	1.50	-	46.72	38.60	11.49	43.00