

FCC Radio Test Report

FCC ID : XPYMAW4A

Equipment : Host-based multi-radio modules with Wi-Fi 6, Bluetooth Low Energy 5.4 and 802.15.4

Brand Name : u-blox

Model Name : MAYA-W476-00B, MAYA-W466-00B, MAYA-W446-00B, MAYA-W436-00B, MAYA-W473-00B, MAYA-W463-00B, MAYA-W443-00B, MAYA-W433-00B

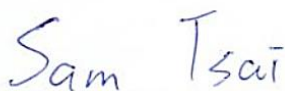
Applicant : u-Blox AG
Zürcherstrasse 68, 8800 Thalwil Switzerland

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

Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 28, 2024, and testing was started from Dec. 14, 2024 and completed on Jan. 09, 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: Sam 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: Ben Tseng

Report Producer: Julie Tseng

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(125kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(1Mbps)	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/2Mbps uses the same modulation, and 1Mbps/2Mbps was found to be the worst case scenario which was performed full test and recorded in this test report.

1.1.2 Antenna Information

MAYA-W476-00B

Ant.	Brand	Model Name	Antenna Type	Support
1	U-Blox	MAYA-W4 PCB	PCB Antenna	2.4G+5G+BLE+802.15.4

Ant.	Gain (dBi)							
	2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-4	BT	802.15.4
1	1.56	-1.74	1.56	1.56	-2.23	-0.95	1.56	1.56

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax mode (1TX/1RX)

Ant. 1 could transmit/receive.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (1TX/1RX)

Ant. 1 could transmit/receive.

For BT function:

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

Ant. 1 could transmit/receive.

For Zigbee function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 could transmit/receive.

MAYA-W473-00B

Ant.	Brand	Model Name	Antenna Type	Support
1	Linx	ANT-DB1-RAF-RPS	Dual-band dipole antenna	2.4G+5G+BLE+802.15.4
2	Chang Hong	DA-2458-02-SMR	Dual-band dipole antenna	2.4G+5G+BLE+802.15.4
3	Laird	001-0012	Dual-band dipole antenna	2.4G+5G+BLE+802.15.4
4	Taoglas	GW.59.3153	Dual-band dipole antenna	2.4G+5G+BLE+802.15.4
5	Laird	MAF94051	Dual-band dipole antenna	2.4G+5G+BLE+802.15.4
6	Unictron	H2B1PD1A1C385L	PCB antenna	2.4G+5G+BLE+802.15.4
7	Molex	1461530050	PCB antenna	2.4G+5G+BLE+802.15.4
8	Molex	2042810100	PCB antenna	2.4G+5G+BLE+802.15.4

Ant.	Gain (dBi)							
	2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-4	BT	802.15.4
1	4.1	5.1	5.1	5.1	5.1	5.1	4.1	4.1
2	2.85	1.52	0.36	1.35	2.17	1.49	2.85	2.85
3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
4	3.8	5.3	5.3	5.3	5.3	5.3	3.8	3.8
5	2.1	2.6	2.6	2.6	2.6	3.4	2.1	2.1
6	2.7	3.5	3.5	3.5	3.5	3.5	2.7	2.7
7	3.2	4.25	4.25	4.25	4.25	4.25	3.2	3.2
8	2.0	3.3	3.3	3.3	3.3	3.3	2.0	2.0

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax mode (1TX/1RX)

Ant. 1 ~ Ant. 8 could transmit/receive.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (1TX/1RX)

Ant. 1 ~ Ant. 8 could transmit/receive.

For BT function:

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

Ant. 1 ~ Ant. 8 could transmit/receive.

For Zigbee function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 ~ Ant. 8 could transmit/receive.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From Host system
EUT Function	☒ Point-to-multipoint ☐ Point-to-point
Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
☐	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
☐	Other:

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz) 1/T
BT-LE(1Mbps)	0.854	0.69	2.135m	1k
BT-LE(2Mbps)	0.432	3.65	1.079m	1k

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

1.1.5 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description	Chipset used	Radio Technologies	Antenna Type	Antenna item
MAYA-W476-00B	Product with integrated antenna	NXP IW610G	2.4G+5G Wi-Fi, BLE, 802.15.4	PCB Antenna	W9
MAYA-W466-00B	Product with integrated antenna	NXP IW610F	2.4G+5G Wi-Fi, BLE	PCB Antenna	W9
MAYA-W446-00B	Product with integrated antenna	NXP IW610C	2.4G Wi-Fi, BLE, 802.15.4	PCB Antenna	W9
MAYA-W436-00B	Product with integrated antenna	NXP IW610B	2.4G Wi-Fi, BLE	PCB Antenna	W9
MAYA-W473-00B	Product with antenna pin	NXP IW610G	2.4G+5G Wi-Fi, BLE, 802.15.4	External Antenna Dual-Band dipole Antenna or External PCB Antenna	W1~8
MAYA-W463-00B	Product with antenna pin	NXP IW610F	2.4G+5G Wi-Fi, BLE	External Antenna Dual-Band dipole Antenna or External PCB Antenna	W1~8
MAYA-W443-00B	Product with antenna pin	NXP IW610C	2.4G Wi-Fi, BLE, 802.15.4	External Antenna Dual-Band dipole Antenna or External PCB Antenna	W1~8
MAYA-W433-00B	Product with antenna pin	NXP IW610B	2.4G Wi-Fi, BLE	External Antenna Dual-Band dipole Antenna or External PCB Antenna	W1~8

From the above models, model: MAYA-W476-00B, MAYA-W473-00B was selected as representative model for the test and its data was recorded in this report.

1.2 Testing Applied Standards

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

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

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

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

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Rian Chung	19.3~21.8°C / 53~56%	08/Jan/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		FAX: 886-3-318-0287	
Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH26-HY	Andy Wang	19.0~19.2°C / 60~63%	14/Dec/2024~30/Dec/2024
Radiated (Co-location)	03CH26-HY	Ivan Chung	19.1~19.4°C / 60~62%	09/Jan/2025
RF Conducted	TH06-HY	Johnny Yu	23.4~23.9°C / 52~55%	26/Dec/2024

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	Dut labtool v2.0.0.21
-----------------------	-----------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	13
2440MHz	13
2480MHz	13
BT-LE(2Mbps)	-
2402MHz	13
2440MHz	13
2480MHz	13

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	Fixture mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	Fixture mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	WLAN 5GHz+Bluetooth
2	WLAN 5GHz+802.15.4
Refer to Sporton Test Report No.: FA4O2915 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

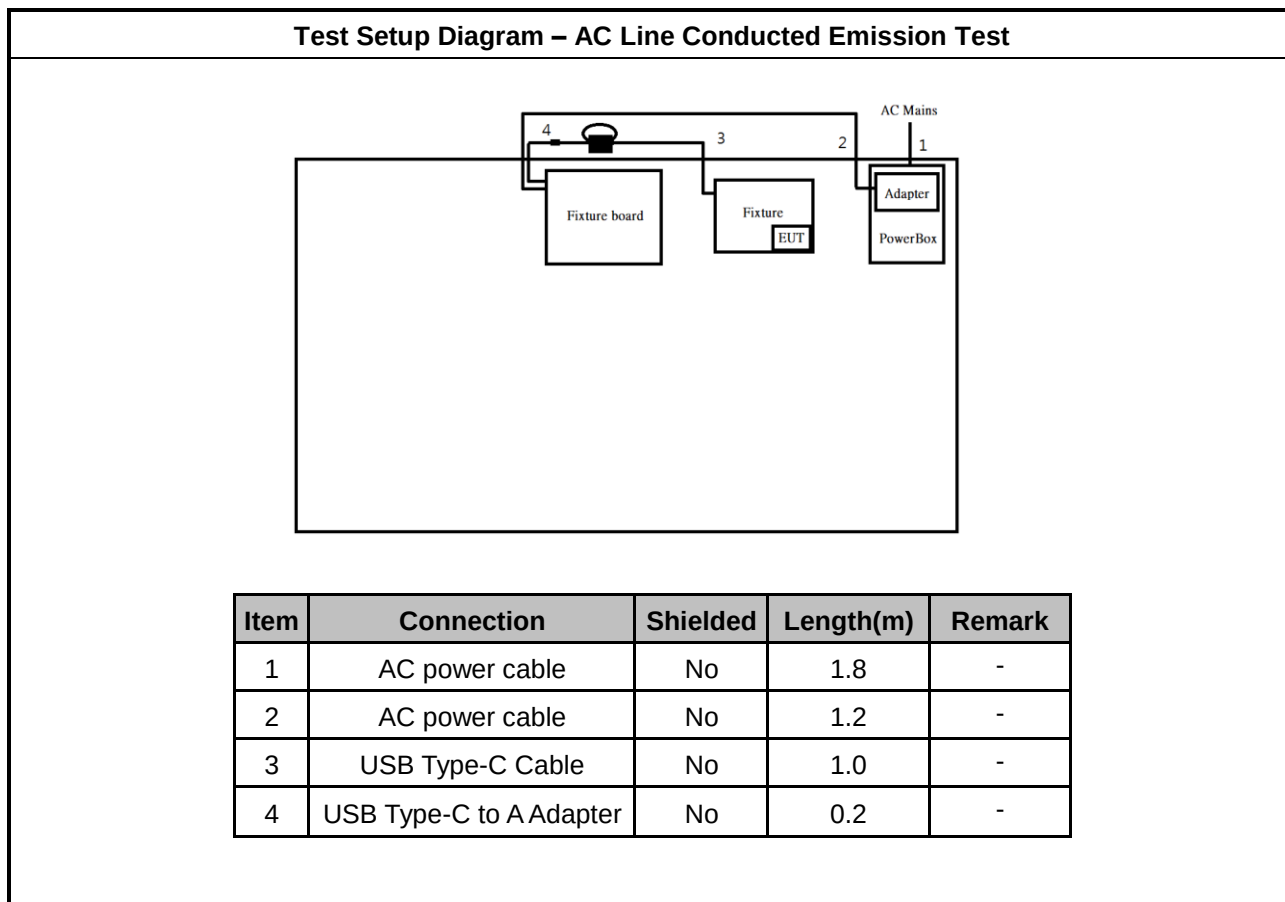
2.3 Support Equipment

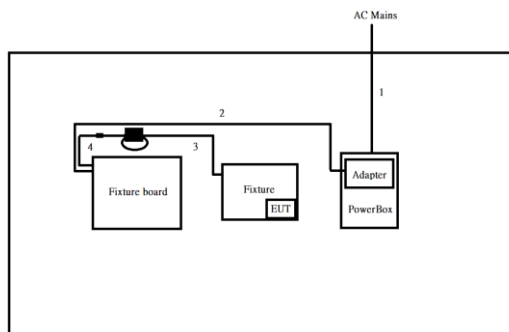
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	EVKB Board	NXP	8MMINILPDDR4-EVKB	-	-
2	Adapter	EDAC	EA1045CR	-	-
3	USB Type-C to A Adapter	Customer provide	Customer provide	-	-
4	USB Type-C Cable	Customer provide	Customer provide	-	-
5	Black Core	Sporton	Sporton	-	-
6	Fixture	U-blox	MAYA-W4 EUK	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Fixture	U-blox	MAYA-W4 EUK	-	-
4	EVKB Board	NXP	8MMINILPDDR4-EVKB	-	-

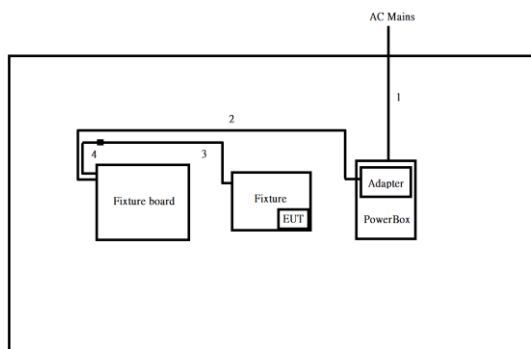
Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	EVKB Board	NXP	8MMINILPDDR4-EVKB	-	-
2	Adapter	EDAC	EA1045CR	-	-
3	USB Type-C to A Adapter	Customer provide	Customer provide	-	-
4	USB Type-C Cable	Customer provide	Customer provide	-	-
5	Black Core	Sporton	Sporton	-	-
6	Fixture	U-blox	MAYA-W4 EUK	-	-

2.4 Test Setup Diagram



Test Setup Diagram - Radiated Below 1G Test


Item	Connection	Shielded	Length(m)	Remark
1	AC power cable	No	1.8	-
2	AC power cable	No	1.2	-
3	USB Type-C Cable	No	1.0	-
4	USB Type-C to A Adapter	No	0.2	-

Test Setup Diagram - Radiated Above 1G Test


Item	Connection	Shielded	Length(m)	Remark
1	AC power cable	No	1.8	-
2	AC power cable	No	1.2	-
3	USB Type-C Cable	No	1.0	-
4	USB Type-C to A Adapter	No	0.2	-

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

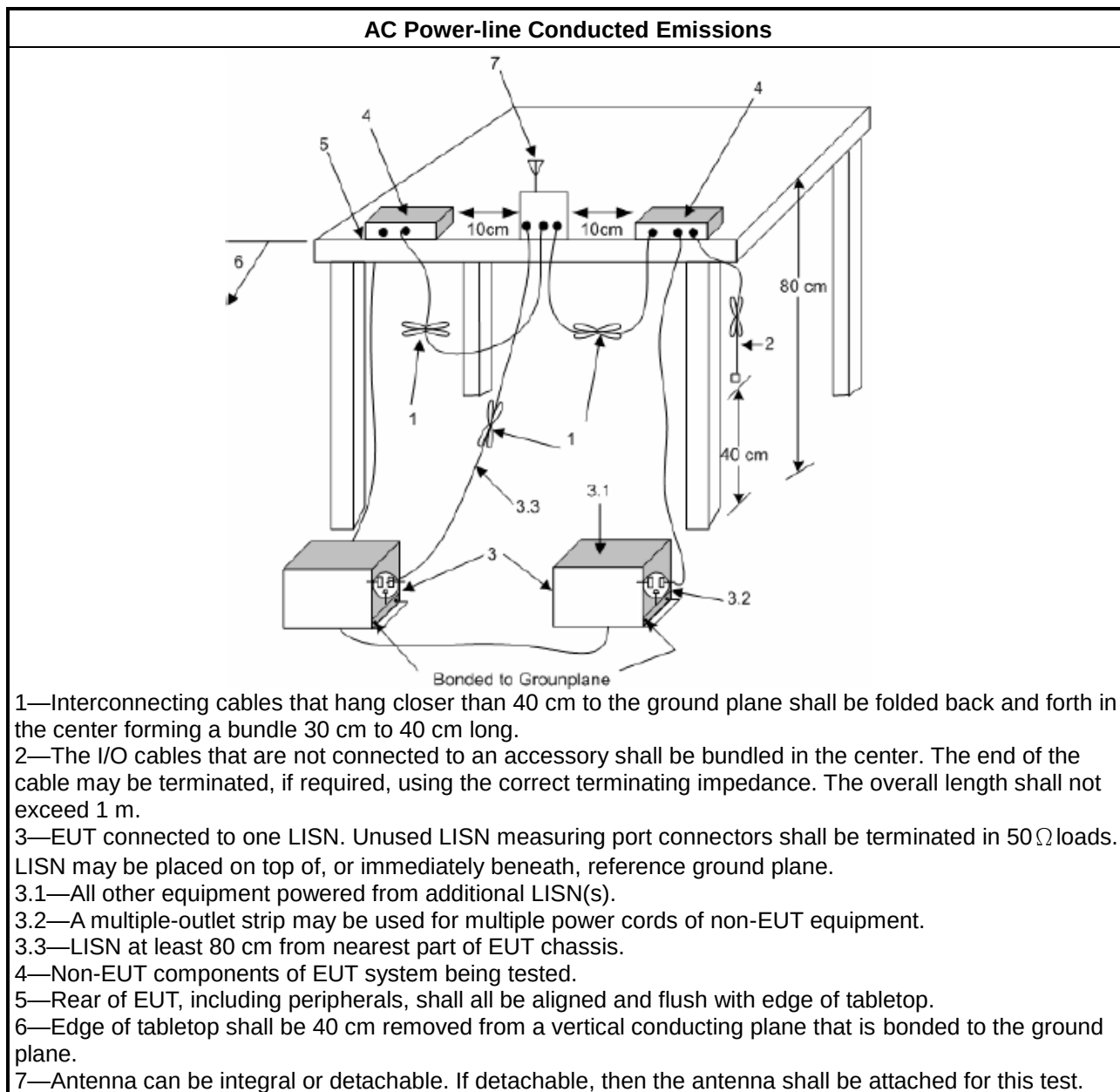
Test Method
Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

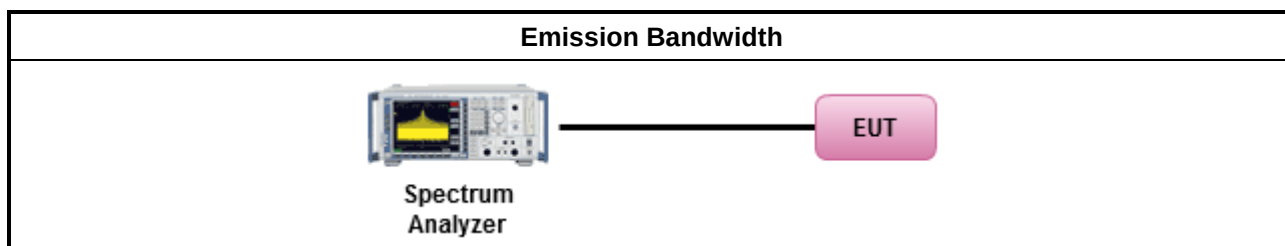
3.2.2 Measuring Instruments

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.	

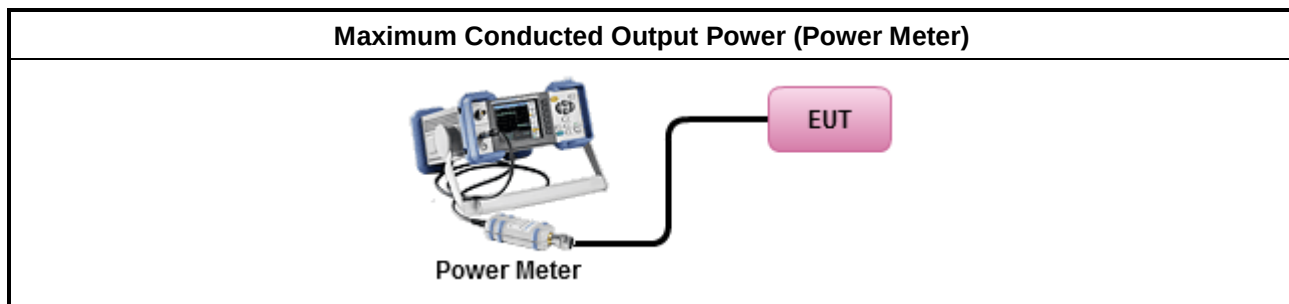
3.3.2 Measuring Instruments

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

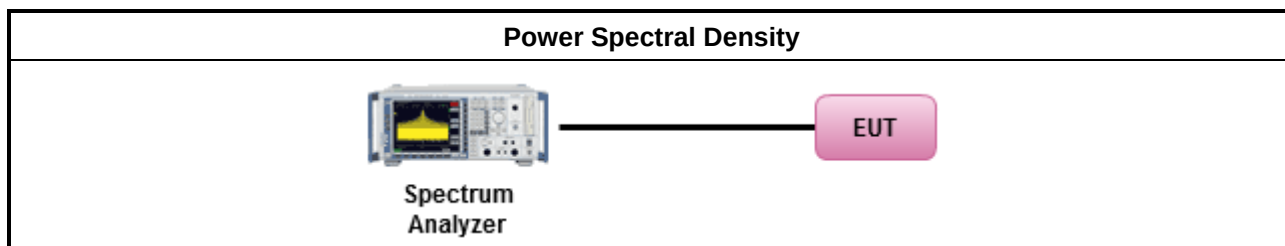
3.4.2 Measuring Instruments

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.	

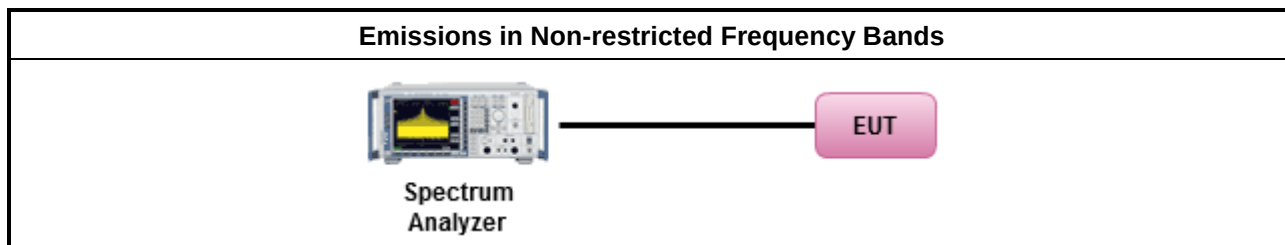
3.5.2 Measuring Instruments

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

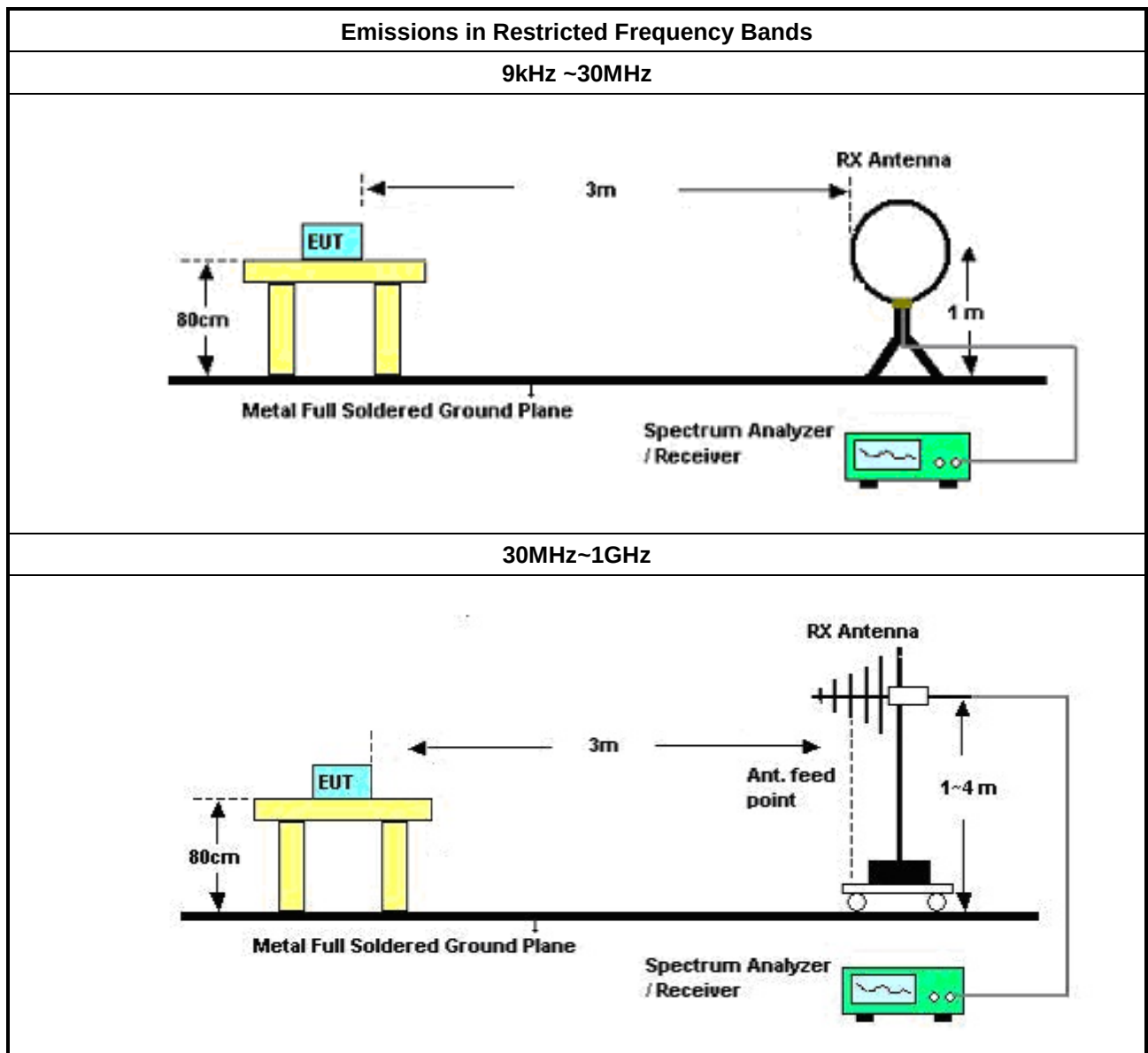
Test Method	
	- The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor]. - Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	- For the transmitter unwanted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

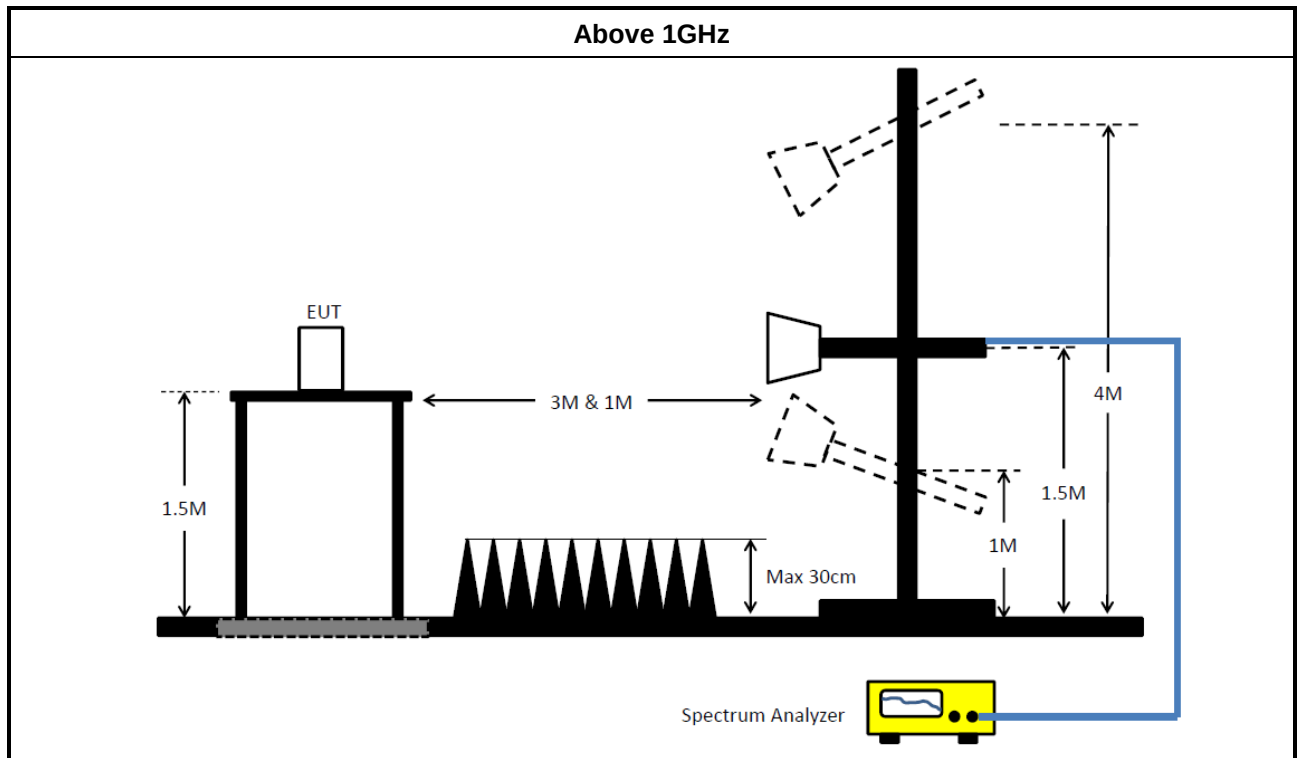
3.6.4 Measurement Results Calculation

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
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	28/Oct/2024	27/Oct/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	01/Apr/2024	31/Mar/2025
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	02/Apr/2024	01/Apr/2025
SENSE-15247_FS	Sporton	V5.11.18	N/A	N/A	N/A	N/A

**Instrument for Radiated Test**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH26-HY	30MHz~1GHz 3m	07/Aug/2024	06/Aug/2025
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
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	63540/002	30MHz~1GHz	05/Jun/2024	04/Jun/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	9kHz~1GHz	21/Oct/2024	20/Oct/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB009	1GHz~40GHz	21/Oct/2024	20/Oct/2025
Preamplifier	SGH	PRAMP 903	20230515-2	30MHz~1GHz	24/May/2024	23/May/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-15247-FS	Sporton	V5.11.21	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	03CH26-HY	1GHz~18GHz 3m	07/Aug/2024	06/Aug/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	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/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



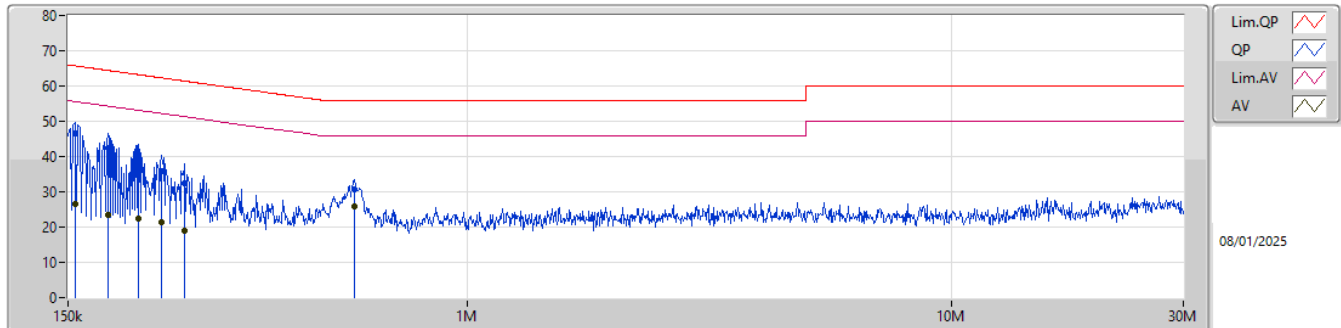
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	46.41	65.69	-19.28	Line

Result

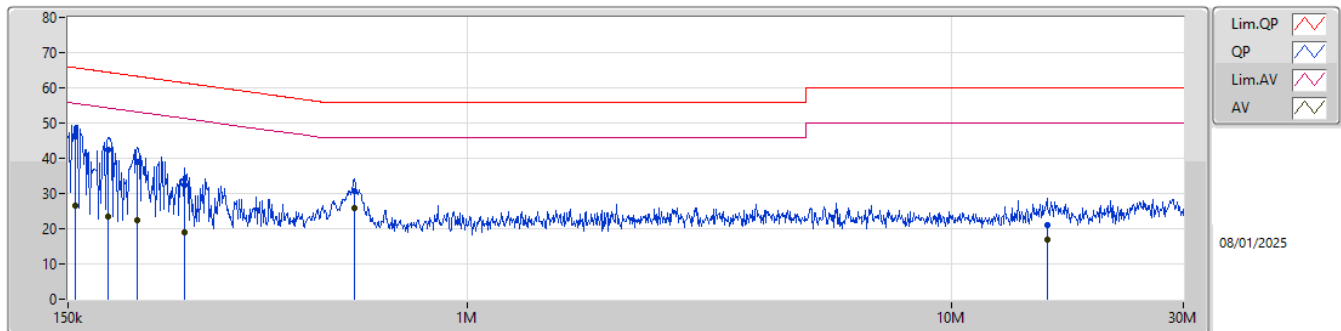
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	46.41	65.69	-19.28	Line
Mode 1	Pass	AV	155.487k	26.66	55.69	-29.03	Line
Mode 1	Pass	QP	181.681k	42.55	64.41	-21.86	Line
Mode 1	Pass	AV	181.681k	23.56	54.41	-30.85	Line
Mode 1	Pass	QP	209.76k	38.75	63.21	-24.46	Line
Mode 1	Pass	AV	209.76k	22.34	53.21	-30.87	Line
Mode 1	Pass	QP	233.633k	35.94	62.31	-26.37	Line
Mode 1	Pass	AV	233.633k	21.40	52.31	-30.91	Line
Mode 1	Pass	QP	261.263k	32.40	61.39	-28.99	Line
Mode 1	Pass	AV	261.263k	18.91	51.39	-32.48	Line
Mode 1	Pass	QP	585.177k	30.74	56.00	-25.26	Line
Mode 1	Pass	AV	585.177k	25.81	46.00	-20.19	Line
Mode 1	Pass	QP	154.868k	46.29	65.73	-19.44	Neutral
Mode 1	Pass	AV	154.868k	26.66	55.73	-29.07	Neutral
Mode 1	Pass	QP	180.957k	42.38	64.43	-22.05	Neutral
Mode 1	Pass	AV	180.957k	23.50	54.43	-30.93	Neutral
Mode 1	Pass	QP	208.092k	39.13	63.28	-24.15	Neutral
Mode 1	Pass	AV	208.092k	22.54	53.28	-30.74	Neutral
Mode 1	Pass	QP	261.263k	32.34	61.39	-29.05	Neutral
Mode 1	Pass	AV	261.263k	18.81	51.39	-32.58	Neutral
Mode 1	Pass	QP	585.177k	30.64	56.00	-25.36	Neutral
Mode 1	Pass	AV	585.177k	25.72	46.00	-20.28	Neutral
Mode 1	Pass	QP	15.699M	20.89	60.00	-39.11	Neutral
Mode 1	Pass	AV	15.699M	16.74	50.00	-33.26	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	155.487k	46.41	65.69	-19.28	19.70	Line	-	26.71	9.66	0.07	9.97						
AV	155.487k	26.66	55.69	-29.03	19.70	Line	-	6.96	9.66	0.07	9.97						
QP	181.681k	42.55	64.41	-21.86	19.70	Line	-	22.85	9.65	0.08	9.97						
AV	181.681k	23.56	54.41	-30.85	19.70	Line	-	3.86	9.65	0.08	9.97						
QP	209.76k	38.75	63.21	-24.46	19.71	Line	-	19.04	9.65	0.09	9.97						
AV	209.76k	22.34	53.21	-30.87	19.71	Line	-	2.63	9.65	0.09	9.97						
QP	233.633k	35.94	62.31	-26.37	19.72	Line	-	16.22	9.65	0.10	9.97						
AV	233.633k	21.40	52.31	-30.91	19.72	Line	-	1.68	9.65	0.10	9.97						
QP	261.263k	32.40	61.39	-28.99	19.72	Line	-	12.68	9.65	0.10	9.97						
AV	261.263k	18.91	51.39	-32.48	19.72	Line	-	-0.81	9.65	0.10	9.97						
QP	585.177k	30.74	56.00	-25.26	19.74	Line	-	11.00	9.65	0.11	9.98						
AV	585.177k	25.81	46.00	-20.19	19.74	Line	-	6.07	9.65	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	154.868k	46.29	65.73	-19.44	19.64	Neutral	-	26.65	9.60	0.07	9.97						
AV	154.868k	26.66	55.73	-29.07	19.64	Neutral	-	7.02	9.60	0.07	9.97						
QP	180.957k	42.38	64.43	-22.05	19.65	Neutral	-	22.73	9.60	0.08	9.97						
AV	180.957k	23.50	54.43	-30.93	19.65	Neutral	-	3.85	9.60	0.08	9.97						
QP	208.092k	39.13	63.28	-24.15	19.66	Neutral	-	19.47	9.60	0.09	9.97						
AV	208.092k	22.54	53.28	-30.74	19.66	Neutral	-	2.88	9.60	0.09	9.97						
QP	261.263k	32.34	61.39	-29.05	19.67	Neutral	-	12.67	9.60	0.10	9.97						
AV	261.263k	18.81	51.39	-32.58	19.67	Neutral	-	-0.86	9.60	0.10	9.97						
QP	585.177k	30.64	56.00	-25.36	19.69	Neutral	-	10.95	9.60	0.11	9.98						
AV	585.177k	25.72	46.00	-20.28	19.69	Neutral	-	6.03	9.60	0.11	9.98						
QP	15.699M	20.89	60.00	-39.11	19.74	Neutral	-	1.15	9.67	0.09	9.98						
AV	15.699M	16.74	50.00	-33.26	19.74	Neutral	-	-3.00	9.67	0.09	9.98						



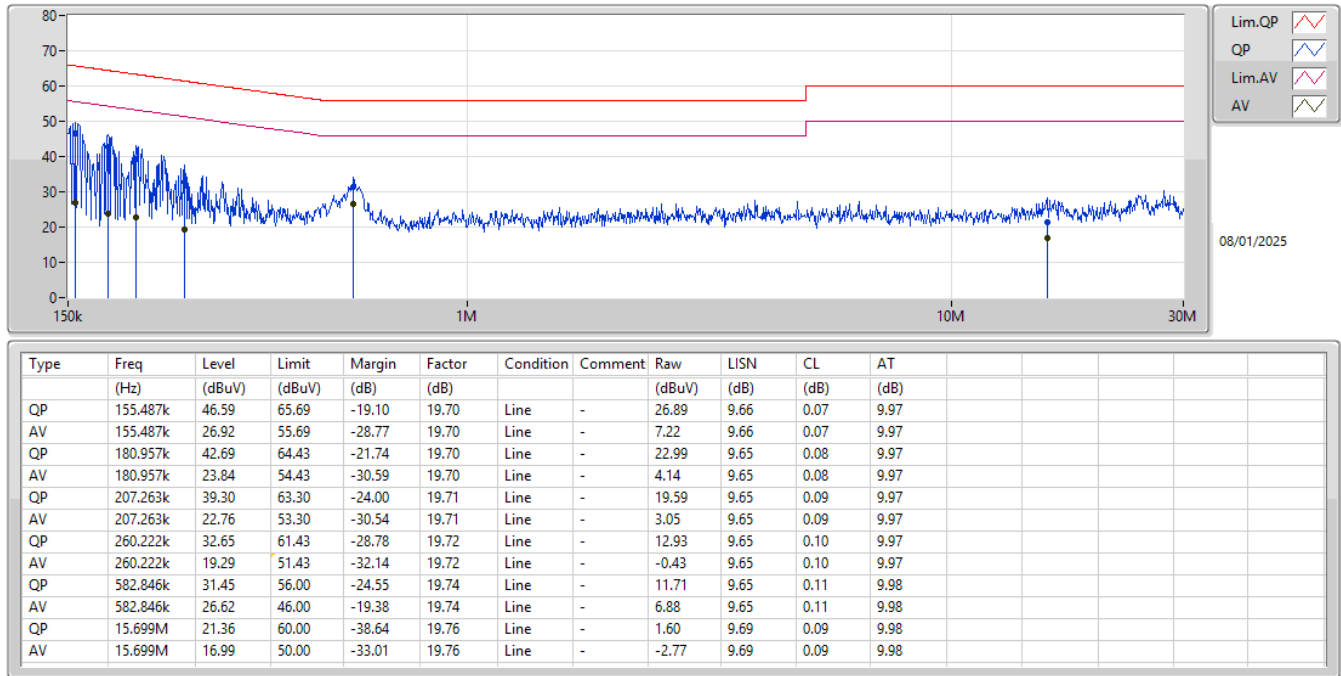
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	46.59	65.69	-19.10	Line

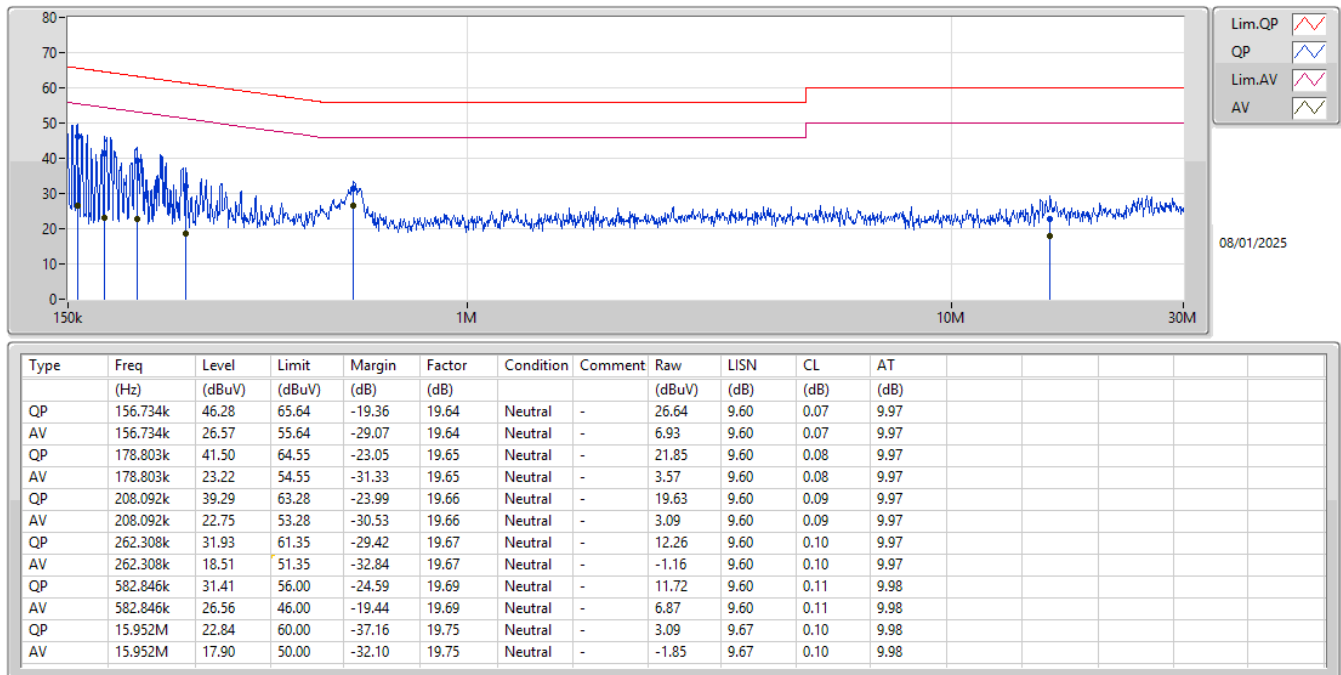
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	46.59	65.69	-19.10	Line
Mode 1	Pass	AV	155.487k	26.92	55.69	-28.77	Line
Mode 1	Pass	QP	180.957k	42.69	64.43	-21.74	Line
Mode 1	Pass	AV	180.957k	23.84	54.43	-30.59	Line
Mode 1	Pass	QP	207.263k	39.30	63.30	-24.00	Line
Mode 1	Pass	AV	207.263k	22.76	53.30	-30.54	Line
Mode 1	Pass	QP	260.222k	32.65	61.43	-28.78	Line
Mode 1	Pass	AV	260.222k	19.29	51.43	-32.14	Line
Mode 1	Pass	QP	582.846k	31.45	56.00	-24.55	Line
Mode 1	Pass	AV	582.846k	26.62	46.00	-19.38	Line
Mode 1	Pass	QP	15.699M	21.36	60.00	-38.64	Line
Mode 1	Pass	AV	15.699M	16.99	50.00	-33.01	Line
Mode 1	Pass	QP	156.734k	46.28	65.64	-19.36	Neutral
Mode 1	Pass	AV	156.734k	26.57	55.64	-29.07	Neutral
Mode 1	Pass	QP	178.803k	41.50	64.55	-23.05	Neutral
Mode 1	Pass	AV	178.803k	23.22	54.55	-31.33	Neutral
Mode 1	Pass	QP	208.092k	39.29	63.28	-23.99	Neutral
Mode 1	Pass	AV	208.092k	22.75	53.28	-30.53	Neutral
Mode 1	Pass	QP	262.308k	31.93	61.35	-29.42	Neutral
Mode 1	Pass	AV	262.308k	18.51	51.35	-32.84	Neutral
Mode 1	Pass	QP	582.846k	31.41	56.00	-24.59	Neutral
Mode 1	Pass	AV	582.846k	26.56	46.00	-19.44	Neutral
Mode 1	Pass	QP	15.952M	22.84	60.00	-37.16	Neutral
Mode 1	Pass	AV	15.952M	17.90	50.00	-32.10	Neutral

Conducted Emissions at Powerline_Mode 1



Conducted Emissions at Powerline_Mode 1





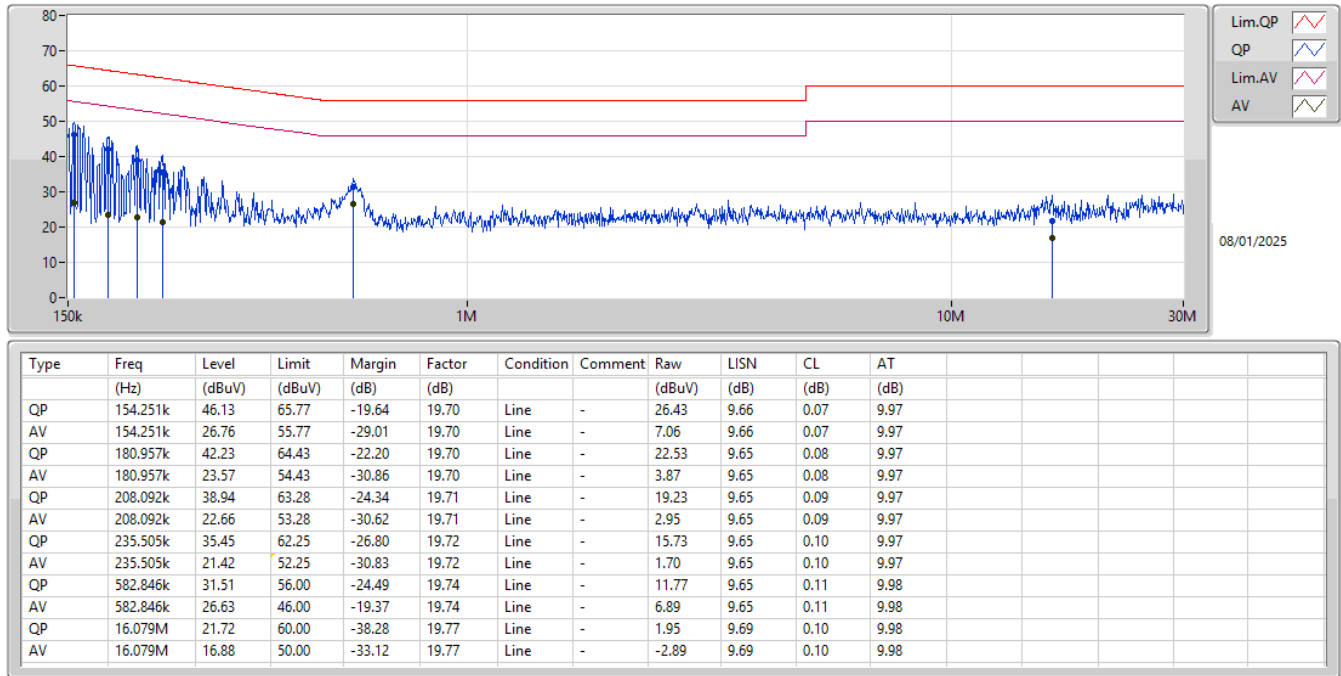
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	582.846k	26.63	46.00	-19.37	Line

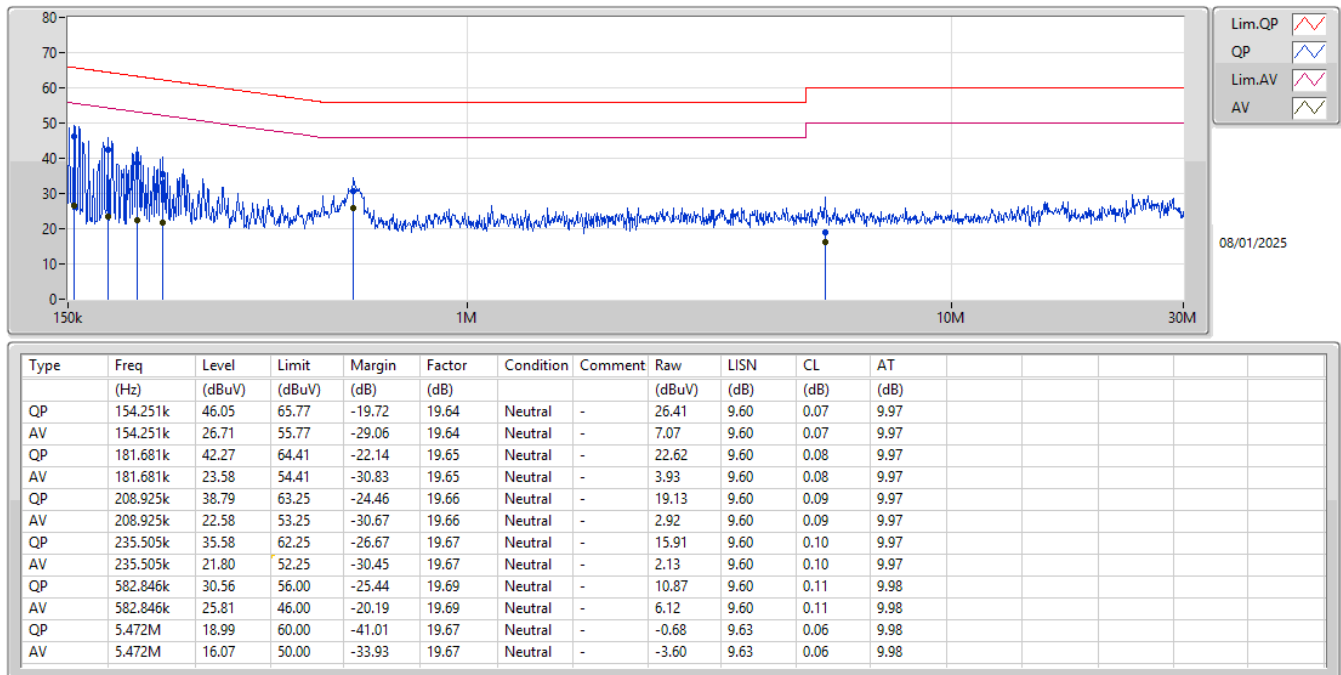
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	154.251k	46.13	65.77	-19.64	Line
Mode 1	Pass	AV	154.251k	26.76	55.77	-29.01	Line
Mode 1	Pass	QP	180.957k	42.23	64.43	-22.20	Line
Mode 1	Pass	AV	180.957k	23.57	54.43	-30.86	Line
Mode 1	Pass	QP	208.092k	38.94	63.28	-24.34	Line
Mode 1	Pass	AV	208.092k	22.66	53.28	-30.62	Line
Mode 1	Pass	QP	235.505k	35.45	62.25	-26.80	Line
Mode 1	Pass	AV	235.505k	21.42	52.25	-30.83	Line
Mode 1	Pass	QP	582.846k	31.51	56.00	-24.49	Line
Mode 1	Pass	AV	582.846k	26.63	46.00	-19.37	Line
Mode 1	Pass	QP	16.079M	21.72	60.00	-38.28	Line
Mode 1	Pass	AV	16.079M	16.88	50.00	-33.12	Line
Mode 1	Pass	QP	154.251k	46.05	65.77	-19.72	Neutral
Mode 1	Pass	AV	154.251k	26.71	55.77	-29.06	Neutral
Mode 1	Pass	QP	181.681k	42.27	64.41	-22.14	Neutral
Mode 1	Pass	AV	181.681k	23.58	54.41	-30.83	Neutral
Mode 1	Pass	QP	208.925k	38.79	63.25	-24.46	Neutral
Mode 1	Pass	AV	208.925k	22.58	53.25	-30.67	Neutral
Mode 1	Pass	QP	235.505k	35.58	62.25	-26.67	Neutral
Mode 1	Pass	AV	235.505k	21.80	52.25	-30.45	Neutral
Mode 1	Pass	QP	582.846k	30.56	56.00	-25.44	Neutral
Mode 1	Pass	AV	582.846k	25.81	46.00	-20.19	Neutral
Mode 1	Pass	QP	5.472M	18.99	60.00	-41.01	Neutral
Mode 1	Pass	AV	5.472M	16.07	50.00	-33.93	Neutral

Conducted Emissions at Powerline_Mode 1



Conducted Emissions at Powerline_Mode 1





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	718.75k	1.037M	1M04F1D	627.5k	1.027M
BT-LE(2Mbps)	1.288M	2.086M	2M09F1D	1.21M	2.076M

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

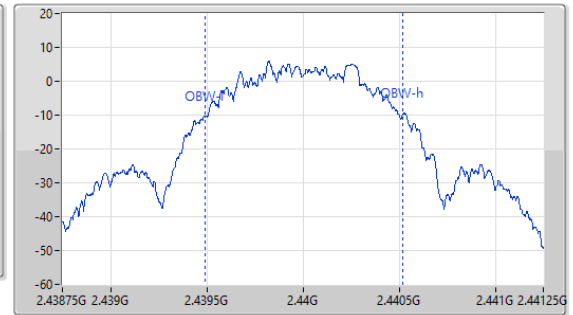
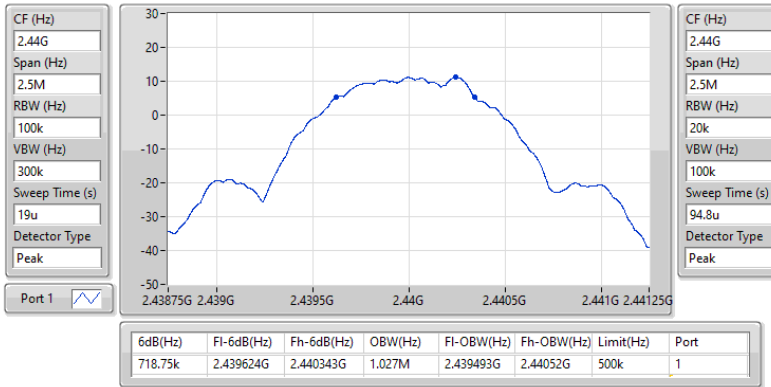
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	716.25k	1.027M
2440MHz	Pass	500k	718.75k	1.027M
2480MHz	Pass	500k	627.5k	1.037M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.288M	2.076M
2440MHz	Pass	500k	1.21M	2.081M
2480MHz	Pass	500k	1.27M	2.086M

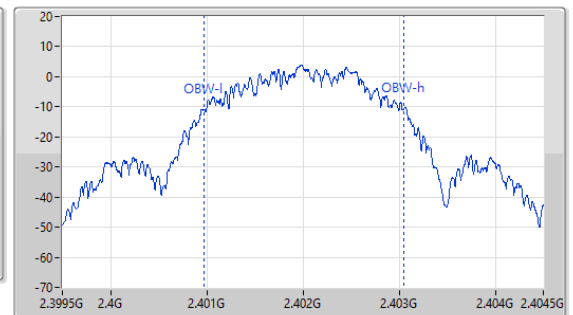
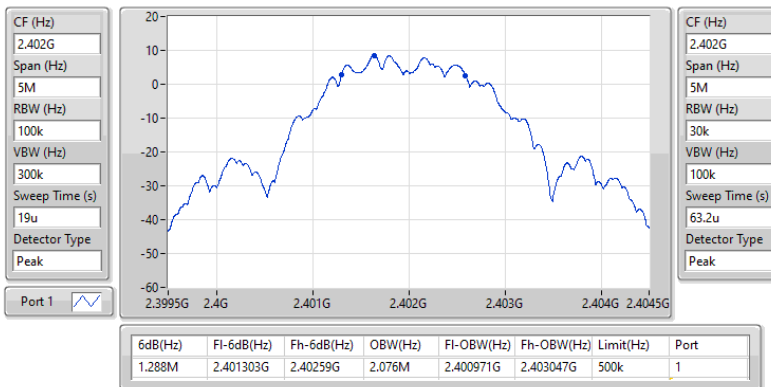
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2440MHz

26/12/2024


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

26/12/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	12.53	0.01791
BT-LE(2Mbps)	12.46	0.01762

**Result**

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.10	12.44	30.00
2440MHz	Pass	4.10	12.49	30.00
2480MHz	Pass	4.10	12.53	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.10	12.18	30.00
2440MHz	Pass	4.10	12.44	30.00
2480MHz	Pass	4.10	12.46	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)	-4.33
BT-LE(2Mbps)	-6.47

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.10	-4.75	8.00
2440MHz	Pass	4.10	-4.70	8.00
2480MHz	Pass	4.10	-4.33	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.10	-6.47	8.00
2440MHz	Pass	4.10	-6.55	8.00
2480MHz	Pass	4.10	-6.64	8.00

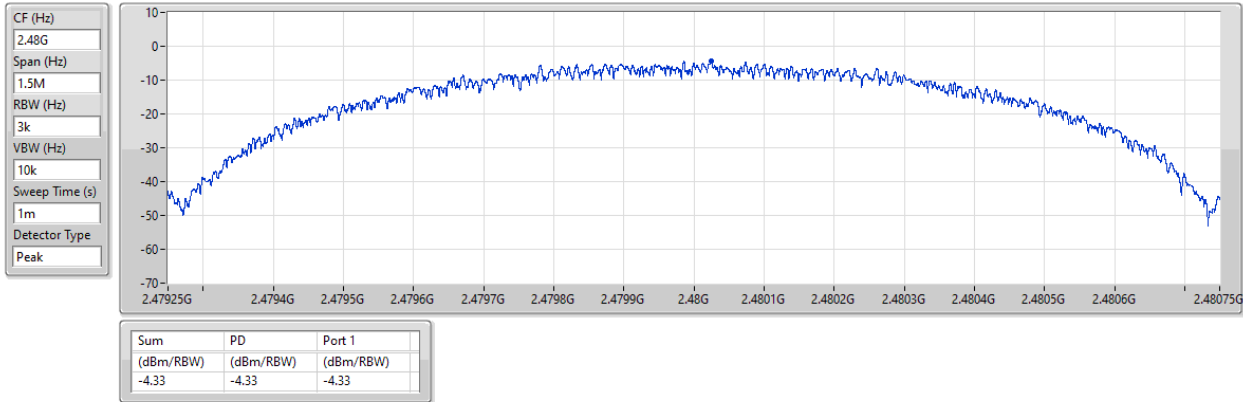
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2480MHz

26/12/2024

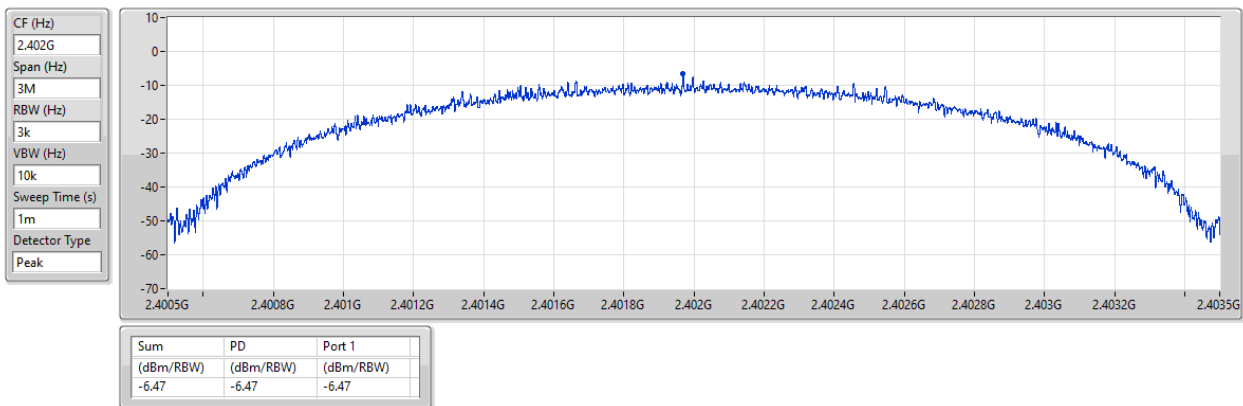


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

26/12/2024





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	2.48033G	11.65	-18.35	760.85M	-56.44	2.39992G	-49.27	2.4G	-49.27	2.50074G	-53.96	17.61552G	-41.68	1
BT-LE(2Mbps)	Pass	2.47949G	10.68	-19.32	2.11915G	-56.15	2.4G	-19.96	2.4G	-19.98	2.50014G	-53.26	16.31073G	-42.13	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	11.65	-18.35	760.85M	-56.44	2.39992G	-49.27	2.4G	-49.27	2.50074G	-53.96	17.61552G	-41.68	1
2440MHz	Pass	2.48033G	11.65	-18.35	1.97345G	-55.41	2.39316G	-53.72	2.4G	-57.14	2.50266G	-53.03	24.54445G	-42.64	1
2480MHz	Pass	2.48033G	11.65	-18.35	2.08508G	-56.12	2.39828G	-54.02	2.4G	-56.28	2.50114G	-53.50	16.94063G	-42.00	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.47949G	10.68	-19.32	2.11915G	-56.15	2.4G	-19.96	2.4G	-19.98	2.50014G	-53.26	16.31073G	-42.13	1
2440MHz	Pass	2.47949G	10.68	-19.32	2.05453G	-54.97	2.398G	-54.56	2.4G	-54.95	2.50206G	-53.54	16.96031G	-42.54	1
2480MHz	Pass	2.47949G	10.68	-19.32	2.14148G	-55.68	2.3966G	-53.49	2.4G	-56.00	2.50318G	-53.57	16.23761G	-42.34	1

2.4-2.4835GHz_BT-LE(1Mbps)

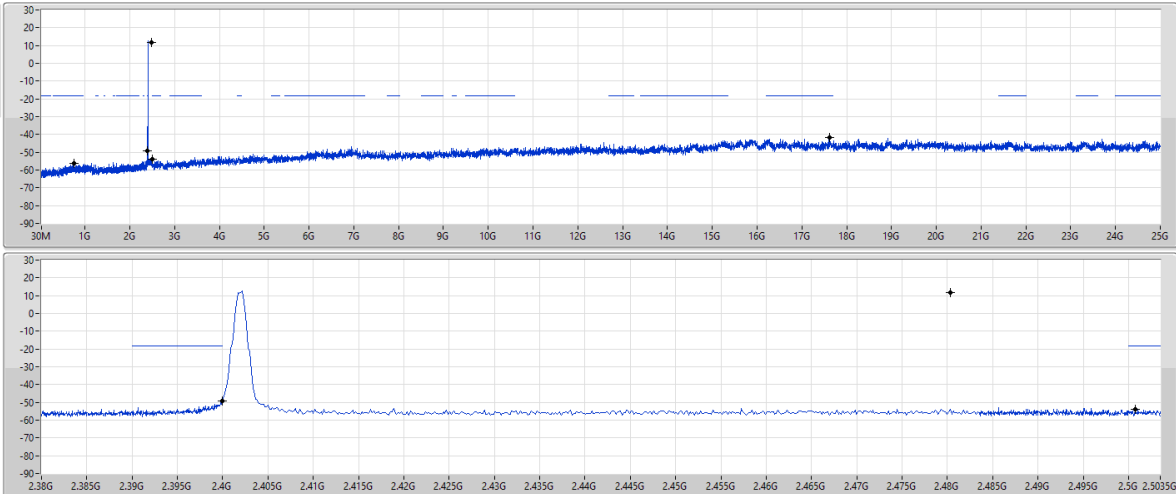
CSEndB-DTS

2402MHz

26/12/2024

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

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48033G	11.65	-18.35	760.85M	-56.44	2.39992G	-49.27	2.4G	-49.27	2.50074G	-53.96	17.61552G	-41.68	1

2.4-2.4835GHz_BT-LE(2Mbps)

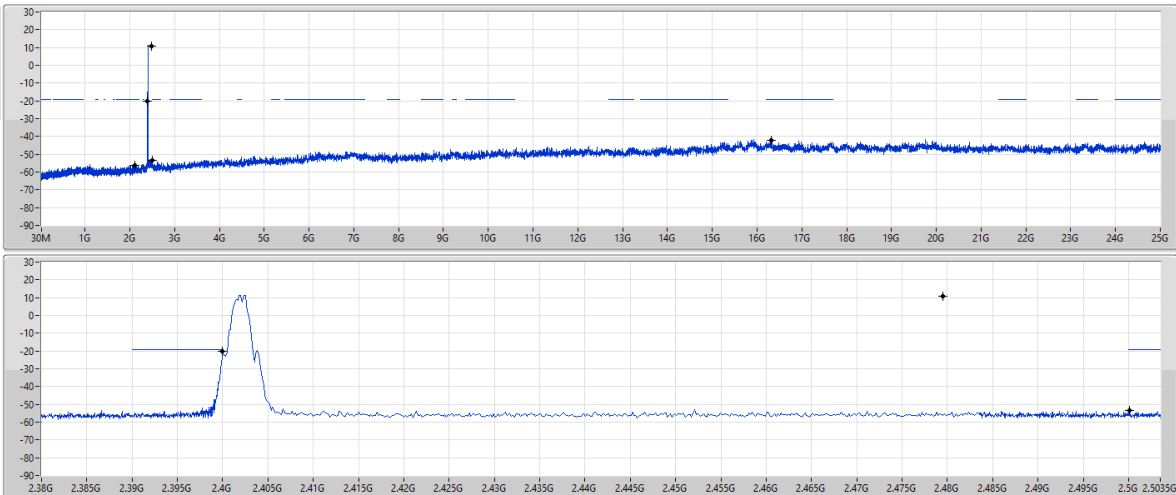
CSEndB-DTS

2402MHz

26/12/2024

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

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47949G	10.68	-19.32	2.11915G	-56.15	2.4G	-19.96	2.4G	-19.98	2.50014G	-53.26	16.31073G	-42.13	1



Summary

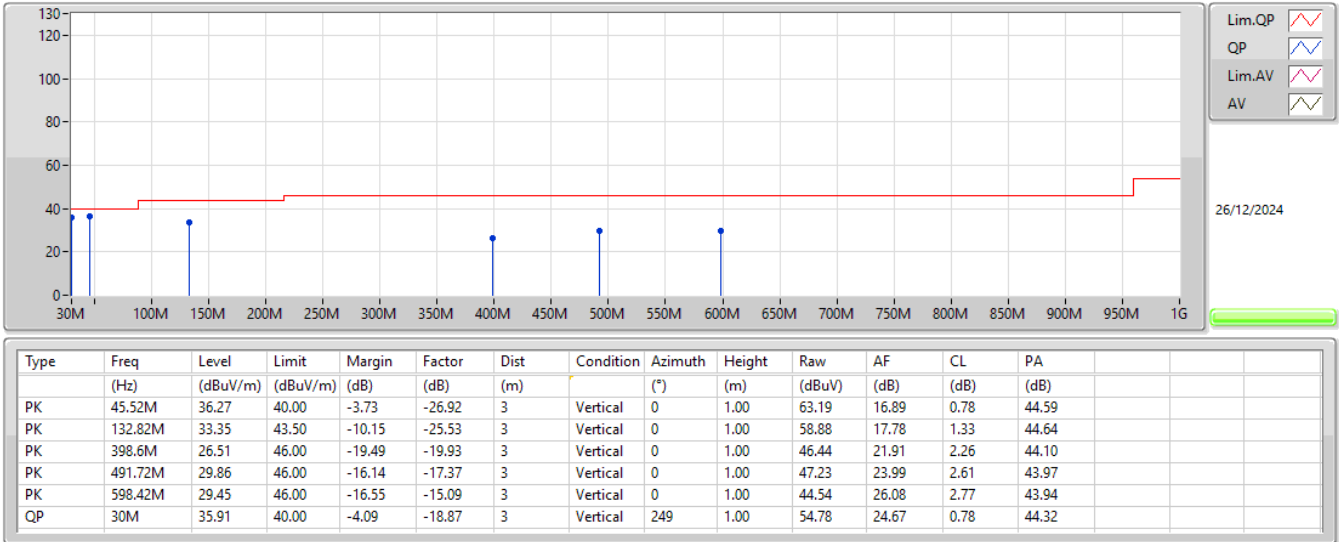
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	45.52M	36.27	40.00	-3.73	3	Vertical	0	1.00

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_Fixture	Pass	PK	45.52M	36.27	40.00	-3.73	3	Vertical	0	1.00
2440MHz_Fixture	Pass	PK	132.82M	33.35	43.50	-10.15	3	Vertical	0	1.00
2440MHz_Fixture	Pass	PK	398.6M	26.51	46.00	-19.49	3	Vertical	0	1.00
2440MHz_Fixture	Pass	PK	491.72M	29.86	46.00	-16.14	3	Vertical	0	1.00
2440MHz_Fixture	Pass	PK	598.42M	29.45	46.00	-16.55	3	Vertical	0	1.00
2440MHz_Fixture	Pass	QP	30M	35.91	40.00	-4.09	3	Vertical	249	1.00
2440MHz_Fixture	Pass	PK	30M	28.78	40.00	-11.22	3	Horizontal	360	1.00
2440MHz_Fixture	Pass	PK	107.6M	32.86	43.50	-10.64	3	Horizontal	360	1.00
2440MHz_Fixture	Pass	PK	276.38M	32.29	46.00	-13.71	3	Horizontal	360	1.00
2440MHz_Fixture	Pass	PK	414.12M	25.78	46.00	-20.22	3	Horizontal	360	1.00
2440MHz_Fixture	Pass	PK	491.72M	28.39	46.00	-17.61	3	Horizontal	360	1.00
2440MHz_Fixture	Pass	PK	631.4M	32.38	46.00	-13.62	3	Horizontal	360	1.00

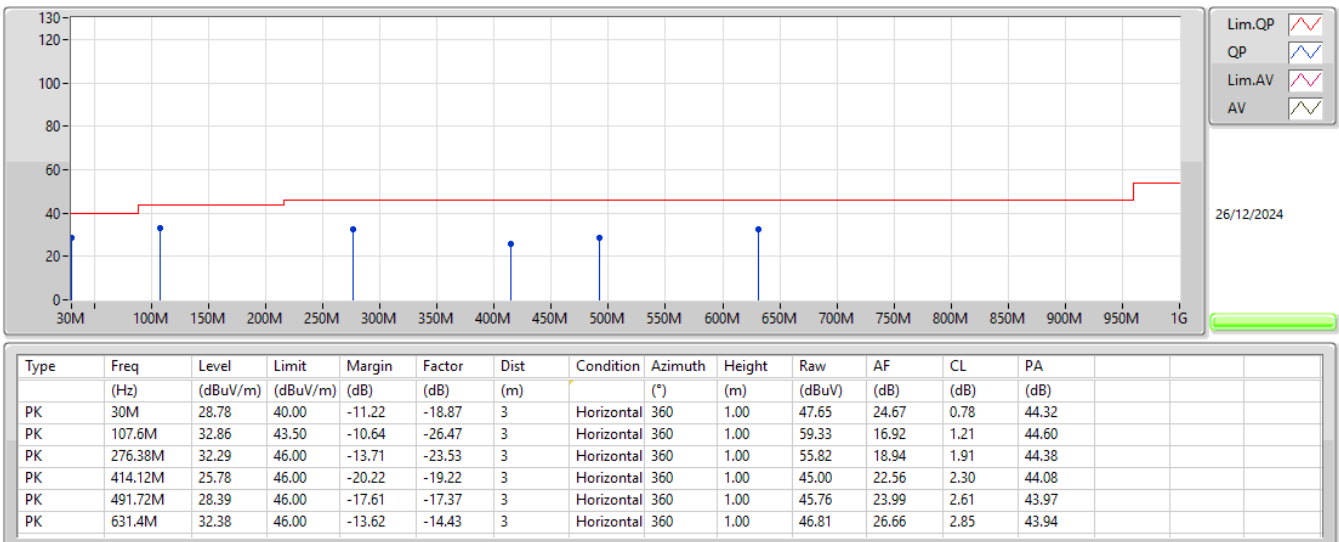
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Fixture



2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Fixture



**Summary**

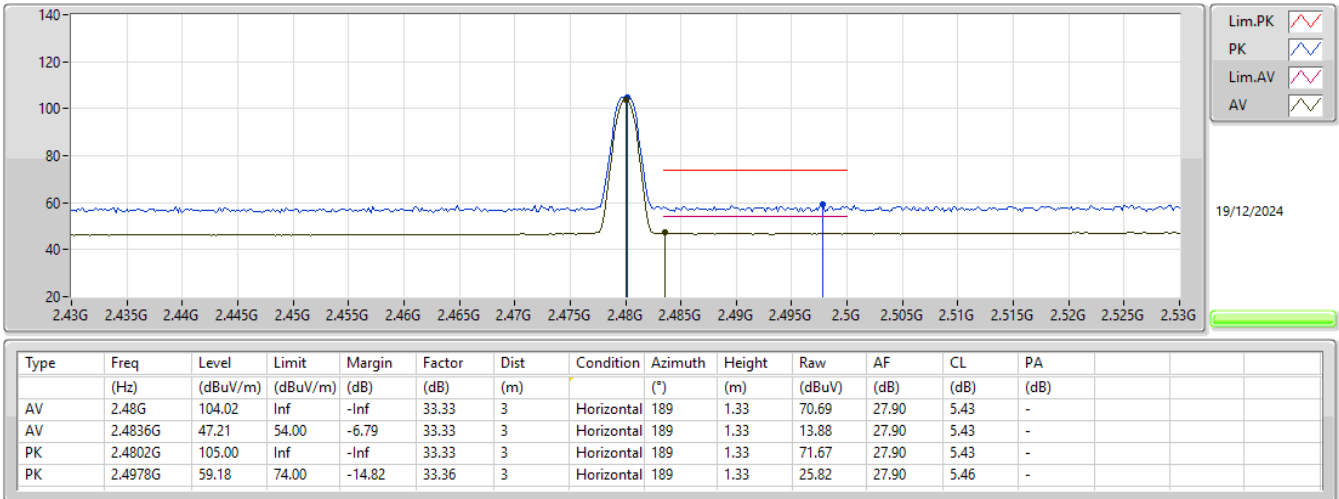
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4836G	47.21	54.00	-6.79	3	Horizontal	189	1.33
BT-LE(2Mbps)	Pass	AV	2.4835G	47.69	54.00	-6.31	3	Horizontal	190	1.07

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.352G	46.10	54.00	-7.90	3	Horizontal	185	2.92
2402MHz	Pass	AV	2.402G	104.12	Inf	-Inf	3	Horizontal	185	2.92
2402MHz	Pass	PK	2.36G	57.49	74.00	-16.51	3	Horizontal	185	2.92
2402MHz	Pass	PK	2.4022G	105.15	Inf	-Inf	3	Horizontal	185	2.92
2402MHz	Pass	AV	4.80446G	32.56	54.00	-21.44	3	Vertical	33	3.00
2402MHz	Pass	PK	4.8045G	44.73	74.00	-29.27	3	Vertical	33	3.00
2402MHz	Pass	AV	4.80631G	32.22	54.00	-21.78	3	Horizontal	184	1.50
2402MHz	Pass	PK	4.80362G	44.64	74.00	-29.36	3	Horizontal	184	1.50
2440MHz	Pass	AV	2.3896G	46.03	54.00	-7.97	3	Horizontal	187	1.50
2440MHz	Pass	AV	2.44G	103.64	Inf	-Inf	3	Horizontal	187	1.50
2440MHz	Pass	AV	2.4876G	47.02	54.00	-6.98	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.3488G	58.37	74.00	-15.63	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.4404G	104.59	Inf	-Inf	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.4968G	58.29	74.00	-15.71	3	Horizontal	187	1.50
2440MHz	Pass	AV	4.88019G	34.89	54.00	-19.11	3	Vertical	42	2.95
2440MHz	Pass	PK	4.8805G	45.75	74.00	-28.25	3	Vertical	42	2.95
2440MHz	Pass	AV	4.88051G	32.99	54.00	-21.01	3	Horizontal	146	1.27
2440MHz	Pass	PK	4.87975G	45.91	74.00	-28.09	3	Horizontal	146	1.27
2480MHz	Pass	AV	2.48G	104.02	Inf	-Inf	3	Horizontal	189	1.33
2480MHz	Pass	AV	2.4836G	47.21	54.00	-6.79	3	Horizontal	189	1.33
2480MHz	Pass	PK	2.4802G	105.00	Inf	-Inf	3	Horizontal	189	1.33
2480MHz	Pass	PK	2.4978G	59.18	74.00	-14.82	3	Horizontal	189	1.33
2480MHz	Pass	AV	4.95927G	32.72	54.00	-21.28	3	Vertical	79	1.20
2480MHz	Pass	PK	4.9589G	44.21	74.00	-29.79	3	Vertical	79	1.20
2480MHz	Pass	AV	4.95921G	32.59	54.00	-21.41	3	Horizontal	102	1.09
2480MHz	Pass	PK	4.95999G	45.66	74.00	-28.34	3	Horizontal	102	1.09
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3562G	46.36	54.00	-7.64	3	Horizontal	186	2.91
2402MHz	Pass	AV	2.402G	101.42	Inf	-Inf	3	Horizontal	186	2.91
2402MHz	Pass	PK	2.389G	58.34	74.00	-15.66	3	Horizontal	186	2.91
2402MHz	Pass	PK	2.4026G	104.13	Inf	-Inf	3	Horizontal	186	2.91
2402MHz	Pass	AV	4.8034G	32.51	54.00	-21.49	3	Vertical	202	2.02
2402MHz	Pass	PK	4.80513G	43.79	74.00	-30.21	3	Vertical	202	2.02
2402MHz	Pass	AV	4.80423G	32.37	54.00	-21.63	3	Horizontal	63	2.97
2402MHz	Pass	PK	4.80375G	45.33	74.00	-28.67	3	Horizontal	63	2.97
2440MHz	Pass	AV	2.362G	46.39	54.00	-7.61	3	Horizontal	187	1.50
2440MHz	Pass	AV	2.44G	101.94	Inf	-Inf	3	Horizontal	187	1.50
2440MHz	Pass	AV	2.4848G	47.13	54.00	-6.87	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.3556G	58.18	74.00	-15.82	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.4404G	104.57	Inf	-Inf	3	Horizontal	187	1.50
2440MHz	Pass	PK	2.486G	59.11	74.00	-14.89	3	Horizontal	187	1.50
2440MHz	Pass	AV	4.87898G	34.18	54.00	-19.82	3	Vertical	42	2.81
2440MHz	Pass	PK	4.88054G	45.39	74.00	-28.61	3	Vertical	42	2.81
2440MHz	Pass	AV	4.87888G	32.88	54.00	-21.12	3	Horizontal	205	1.51
2440MHz	Pass	PK	4.87909G	45.11	74.00	-28.89	3	Horizontal	205	1.51
2480MHz	Pass	AV	2.48G	102.29	Inf	-Inf	3	Horizontal	190	1.07
2480MHz	Pass	AV	2.4835G	47.69	54.00	-6.31	3	Horizontal	190	1.07
2480MHz	Pass	PK	2.4806G	104.98	Inf	-Inf	3	Horizontal	190	1.07
2480MHz	Pass	PK	2.4998G	58.86	74.00	-15.14	3	Horizontal	190	1.07
2480MHz	Pass	AV	4.95955G	32.87	54.00	-21.13	3	Vertical	139	3.00
2480MHz	Pass	PK	4.96089G	45.58	74.00	-28.42	3	Vertical	139	3.00
2480MHz	Pass	AV	4.96017G	33.09	54.00	-20.91	3	Horizontal	231	2.55
2480MHz	Pass	PK	4.95919G	44.94	74.00	-29.06	3	Horizontal	231	2.55

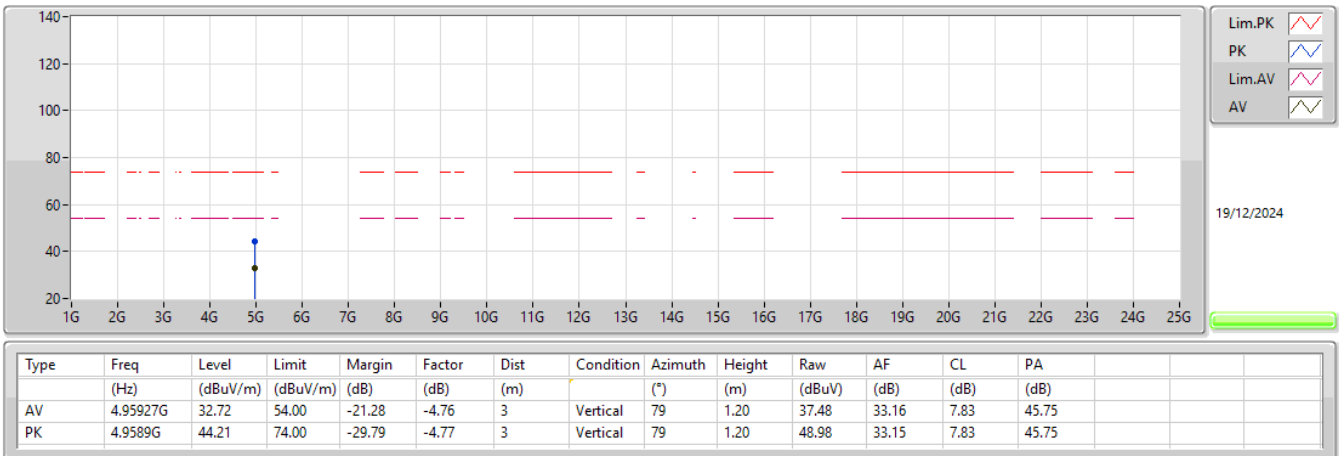
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



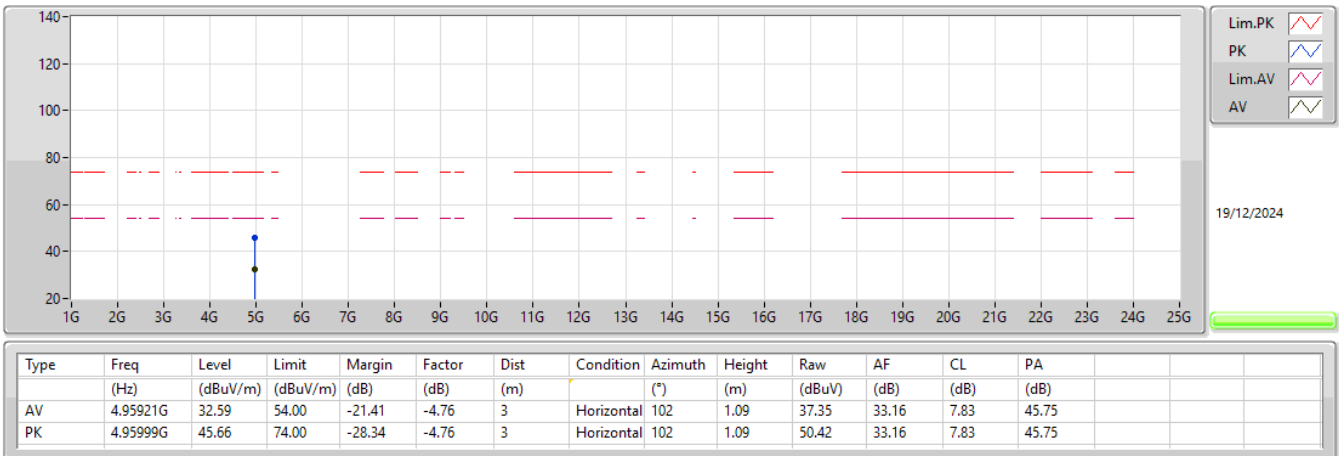
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



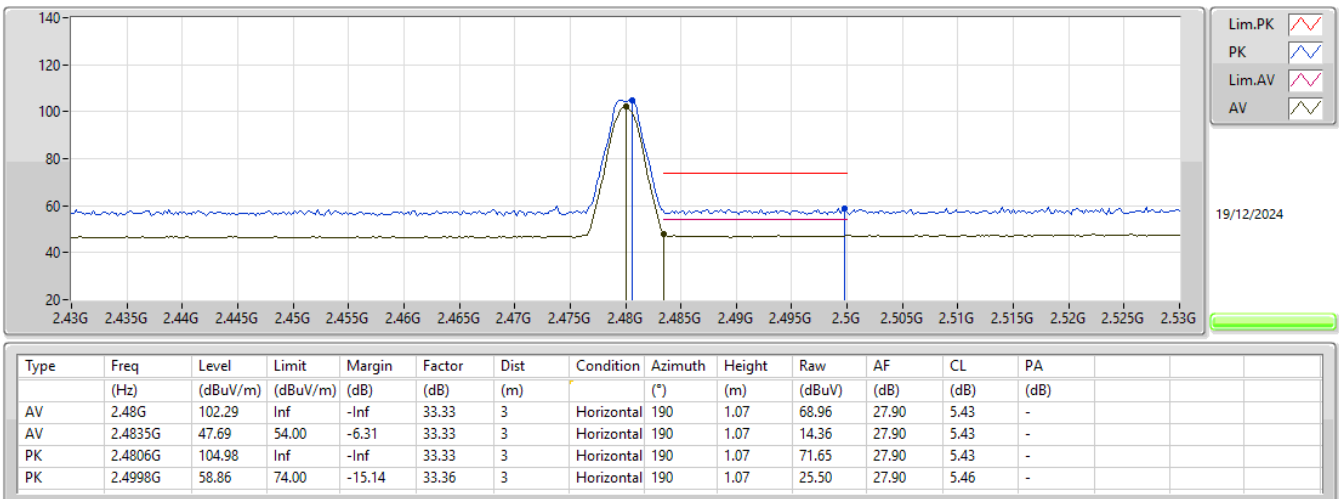
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



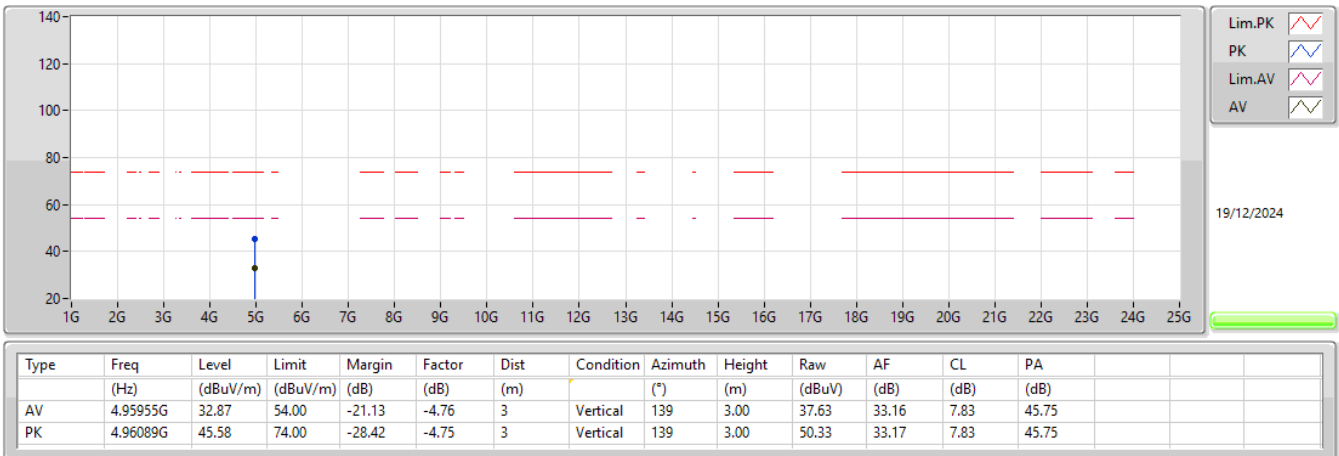
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



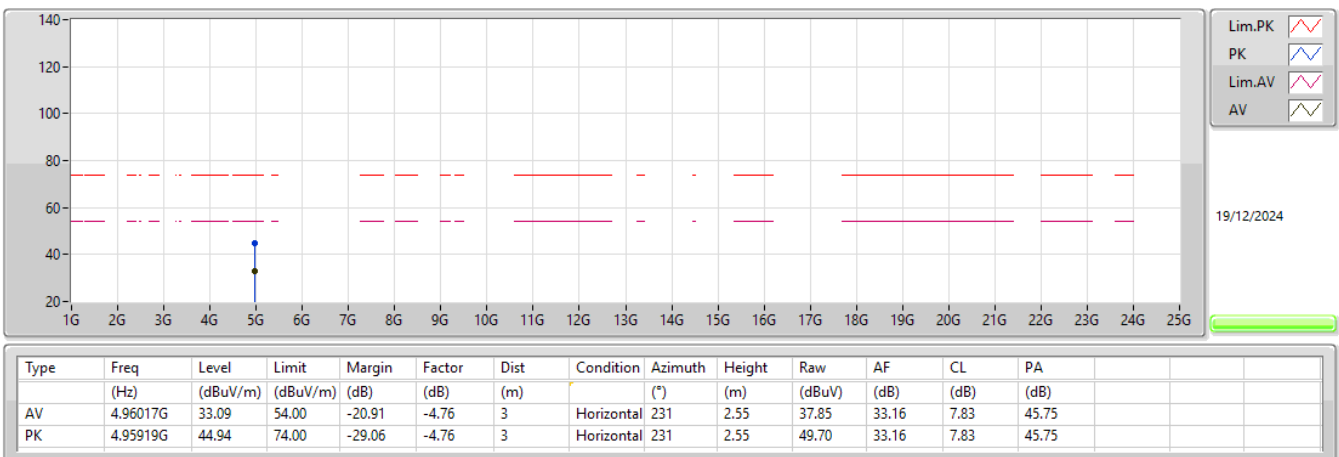
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





Summary

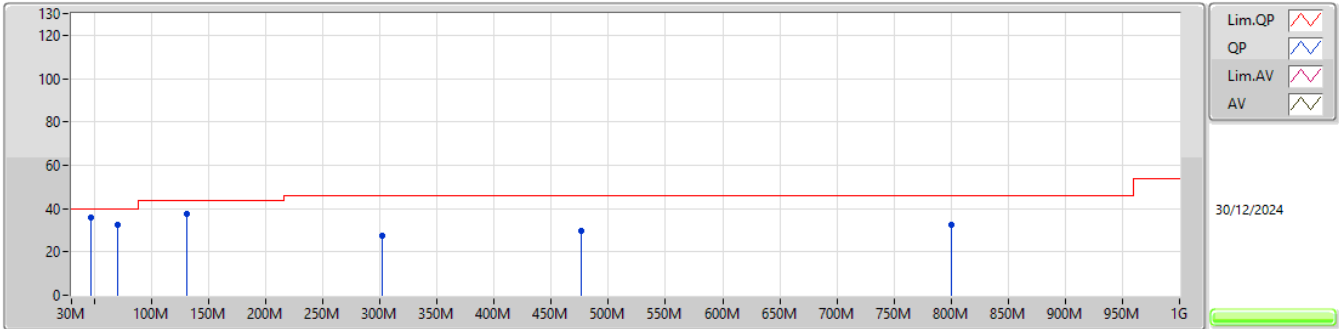
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	47.46M	35.93	40.00	-4.07	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_Fixture	Pass	PK	47.46M	35.93	40.00	-4.07	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	70.74M	32.50	40.00	-7.50	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	130.88M	37.59	43.50	-5.91	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	301.6M	27.47	46.00	-18.53	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	476.2M	29.90	46.00	-16.10	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	800.18M	32.70	46.00	-13.30	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	78.5M	25.60	40.00	-14.40	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	111.48M	33.88	43.50	-9.62	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	216M	32.06	46.00	-13.94	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	419.94M	28.72	46.00	-17.28	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	503.36M	29.38	46.00	-16.62	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	697.36M	28.93	46.00	-17.07	3	Horizontal	0	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

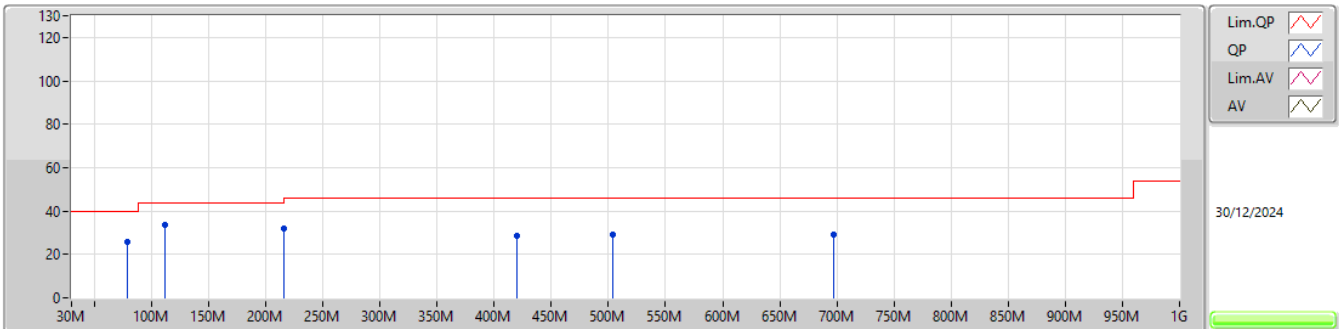
2440MHz_Fixture



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	47.46M	35.93	40.00	-4.07	-27.97	3	Vertical	360	1.00	63.90	15.85	0.79	44.61
PK	70.74M	32.50	40.00	-7.50	-31.29	3	Vertical	360	1.00	63.79	12.44	0.99	44.72
PK	130.88M	37.59	43.50	-5.91	-25.41	3	Vertical	360	1.00	63.00	17.91	1.32	44.64
PK	301.6M	27.47	46.00	-18.53	-22.87	3	Vertical	360	1.00	50.34	19.45	2.01	44.33
PK	476.2M	29.90	46.00	-16.10	-17.73	3	Vertical	360	1.00	47.63	23.73	2.53	43.99
PK	800.18M	32.70	46.00	-13.30	-12.38	3	Vertical	360	1.00	45.08	28.16	3.26	43.80

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Fixture



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	78.5M	25.60	40.00	-14.40	-30.32	3	Horizontal	0	1.00	55.92	13.34	1.04	44.70
PK	111.48M	33.88	43.50	-9.62	-26.22	3	Horizontal	0	1.00	60.10	17.16	1.23	44.61
PK	216M	32.06	46.00	-13.94	-27.41	3	Horizontal	0	1.00	59.47	15.42	1.68	44.51
PK	419.94M	28.72	46.00	-17.28	-18.95	3	Horizontal	0	1.00	47.67	22.80	2.32	44.07
PK	503.36M	29.38	46.00	-16.62	-17.13	3	Horizontal	0	1.00	46.51	24.18	2.65	43.96
PK	697.36M	28.93	46.00	-17.07	-14.18	3	Horizontal	0	1.00	43.11	26.72	3.03	43.93



Summary

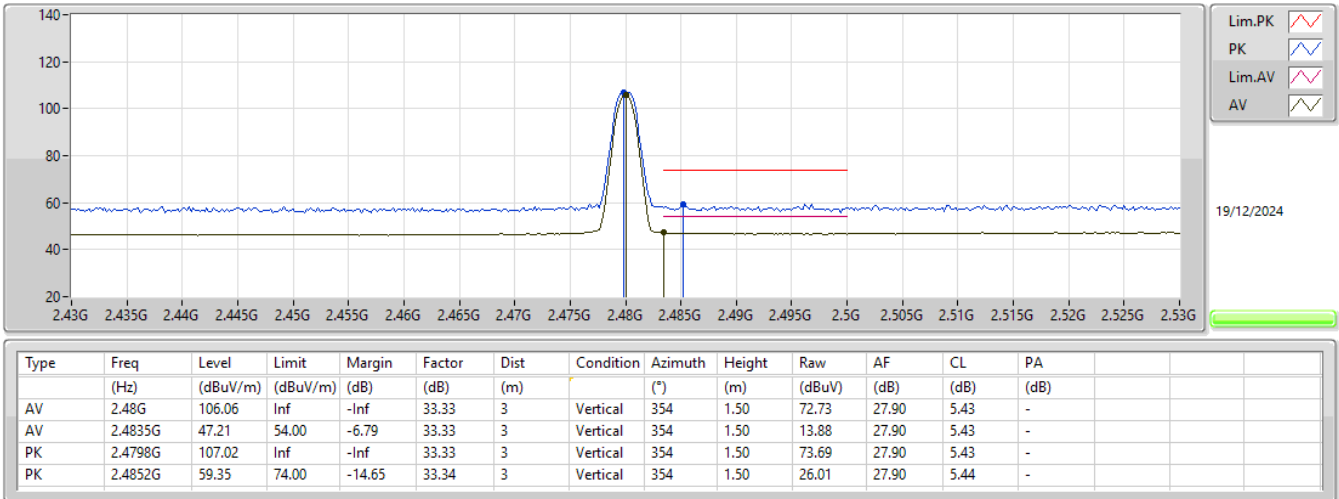
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	47.21	54.00	-6.79	3	Vertical	354	1.50
BT-LE(2Mbps)	Pass	AV	2.4835G	47.93	54.00	-6.07	3	Vertical	355	1.50

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3888G	46.04	54.00	-7.96	3	Vertical	347	2.99
2402MHz	Pass	AV	2.402G	108.68	Inf	-Inf	3	Vertical	347	2.99
2402MHz	Pass	PK	2.3812G	57.72	74.00	-16.28	3	Vertical	347	2.99
2402MHz	Pass	PK	2.4022G	109.67	Inf	-Inf	3	Vertical	347	2.99
2402MHz	Pass	AV	4.80374G	32.34	54.00	-21.66	3	Vertical	11	1.50
2402MHz	Pass	PK	4.80248G	44.77	74.00	-29.23	3	Vertical	11	1.50
2402MHz	Pass	AV	4.80408G	32.20	54.00	-21.80	3	Horizontal	47	1.50
2402MHz	Pass	PK	4.80502G	44.08	74.00	-29.92	3	Horizontal	47	1.50
2440MHz	Pass	AV	2.3832G	46.07	54.00	-7.93	3	Vertical	357	1.50
2440MHz	Pass	AV	2.44G	106.42	Inf	-Inf	3	Vertical	357	1.50
2440MHz	Pass	AV	2.4912G	46.87	54.00	-7.13	3	Vertical	357	1.50
2440MHz	Pass	PK	2.356G	57.93	74.00	-16.07	3	Vertical	357	1.50
2440MHz	Pass	PK	2.4404G	107.36	Inf	-Inf	3	Vertical	357	1.50
2440MHz	Pass	PK	2.4928G	58.72	74.00	-15.28	3	Vertical	357	1.50
2440MHz	Pass	AV	4.87756G	32.12	54.00	-21.88	3	Vertical	10	1.17
2440MHz	Pass	PK	4.88215G	43.42	74.00	-30.58	3	Vertical	10	1.17
2440MHz	Pass	AV	4.87803G	32.03	54.00	-21.97	3	Horizontal	349	2.82
2440MHz	Pass	PK	4.88095G	43.69	74.00	-30.31	3	Horizontal	349	2.82
2480MHz	Pass	AV	2.48G	106.06	Inf	-Inf	3	Vertical	354	1.50
2480MHz	Pass	AV	2.4835G	47.21	54.00	-6.79	3	Vertical	354	1.50
2480MHz	Pass	PK	2.4798G	107.02	Inf	-Inf	3	Vertical	354	1.50
2480MHz	Pass	PK	2.4852G	59.35	74.00	-14.65	3	Vertical	354	1.50
2480MHz	Pass	AV	4.95896G	32.99	54.00	-21.01	3	Vertical	310	1.08
2480MHz	Pass	PK	4.95751G	45.42	74.00	-28.58	3	Vertical	310	1.08
2480MHz	Pass	AV	4.95923G	33.04	54.00	-20.96	3	Horizontal	97	2.54
2480MHz	Pass	PK	4.96073G	44.38	74.00	-29.62	3	Horizontal	97	2.54
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3838G	46.34	54.00	-7.66	3	Vertical	346	1.50
2402MHz	Pass	AV	2.402G	104.61	Inf	-Inf	3	Vertical	346	1.50
2402MHz	Pass	PK	2.3698G	58.29	74.00	-15.71	3	Vertical	346	1.50
2402MHz	Pass	PK	2.4016G	107.34	Inf	-Inf	3	Vertical	346	1.50
2402MHz	Pass	AV	4.80535G	32.13	54.00	-21.87	3	Vertical	349	1.10
2402MHz	Pass	PK	4.8057G	43.71	74.00	-30.29	3	Vertical	349	1.10
2402MHz	Pass	AV	4.80606G	32.32	54.00	-21.68	3	Horizontal	117	1.01
2402MHz	Pass	PK	4.80191G	44.00	74.00	-30.00	3	Horizontal	117	1.01
2440MHz	Pass	AV	2.35G	46.31	54.00	-7.69	3	Vertical	357	1.50
2440MHz	Pass	AV	2.44G	104.14	Inf	-Inf	3	Vertical	357	1.50
2440MHz	Pass	AV	2.484G	47.13	54.00	-6.87	3	Vertical	357	1.50
2440MHz	Pass	PK	2.3588G	57.77	74.00	-16.23	3	Vertical	357	1.50
2440MHz	Pass	PK	2.4396G	106.77	Inf	-Inf	3	Vertical	357	1.50
2440MHz	Pass	PK	2.4968G	58.40	74.00	-15.60	3	Vertical	357	1.50
2440MHz	Pass	AV	4.88158G	32.38	54.00	-21.62	3	Vertical	288	2.54
2440MHz	Pass	PK	4.87895G	43.99	74.00	-30.01	3	Vertical	288	2.54
2440MHz	Pass	AV	4.88153G	32.50	54.00	-21.50	3	Horizontal	209	2.18
2440MHz	Pass	PK	4.87883G	44.03	74.00	-29.97	3	Horizontal	209	2.18
2480MHz	Pass	AV	2.48G	103.72	Inf	-Inf	3	Vertical	355	1.50
2480MHz	Pass	AV	2.4835G	47.93	54.00	-6.07	3	Vertical	355	1.50
2480MHz	Pass	PK	2.4794G	106.43	Inf	-Inf	3	Vertical	355	1.50
2480MHz	Pass	PK	2.495G	59.05	74.00	-14.95	3	Vertical	355	1.50
2480MHz	Pass	AV	4.95947G	33.39	54.00	-20.61	3	Vertical	348	1.00
2480MHz	Pass	PK	4.96114G	45.39	74.00	-28.61	3	Vertical	348	1.00
2480MHz	Pass	AV	4.95959G	33.29	54.00	-20.71	3	Horizontal	67	1.70
2480MHz	Pass	PK	4.95863G	44.28	74.00	-29.72	3	Horizontal	67	1.70

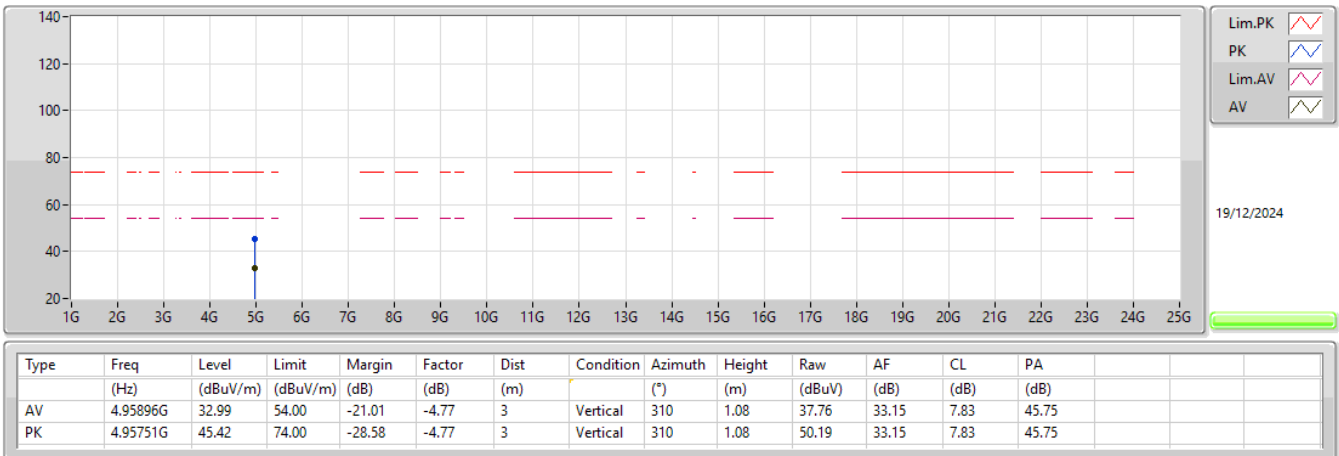
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



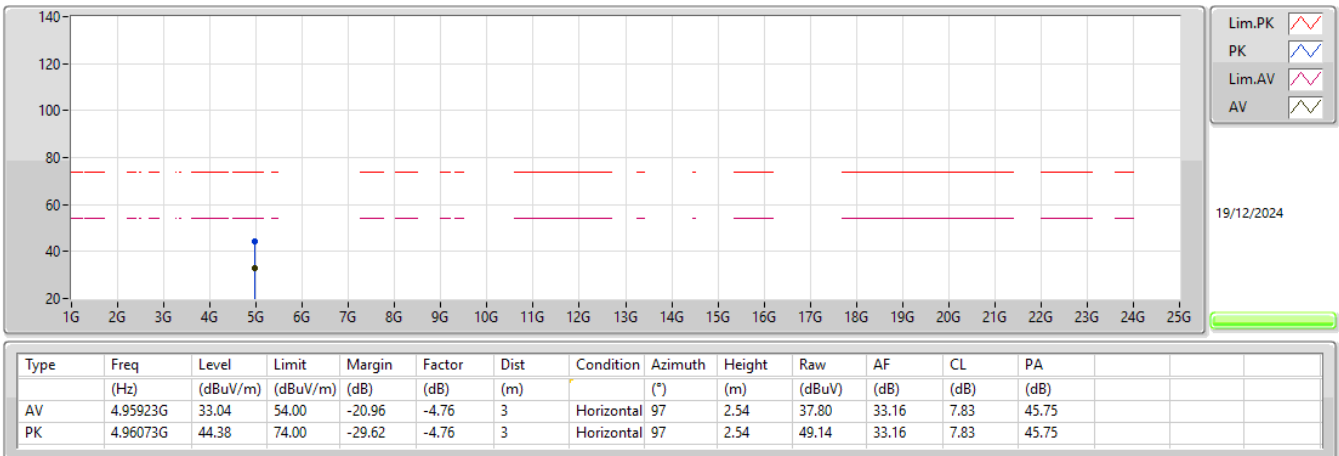
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



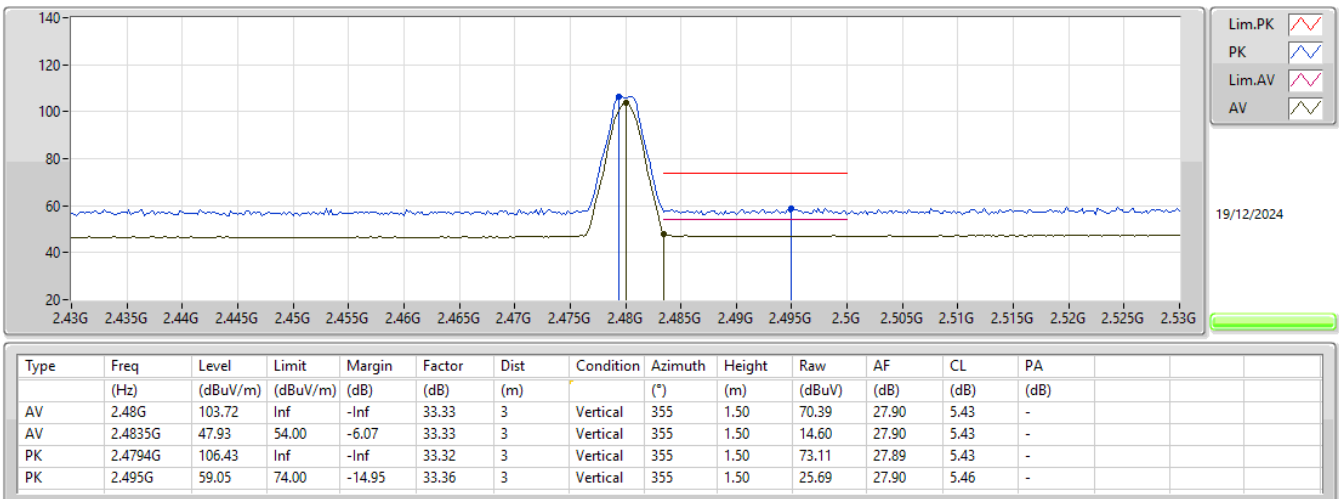
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



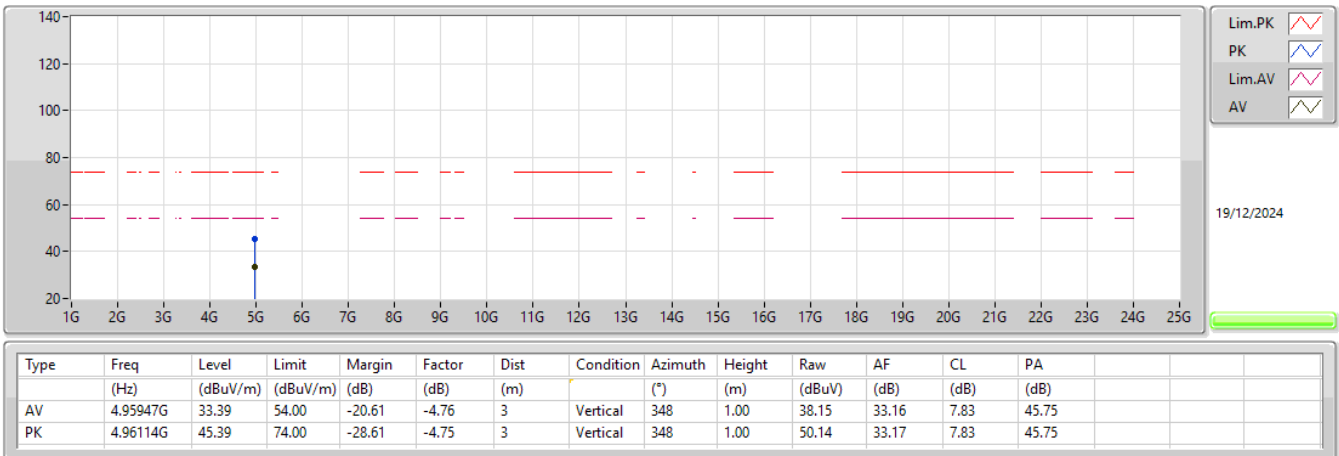
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



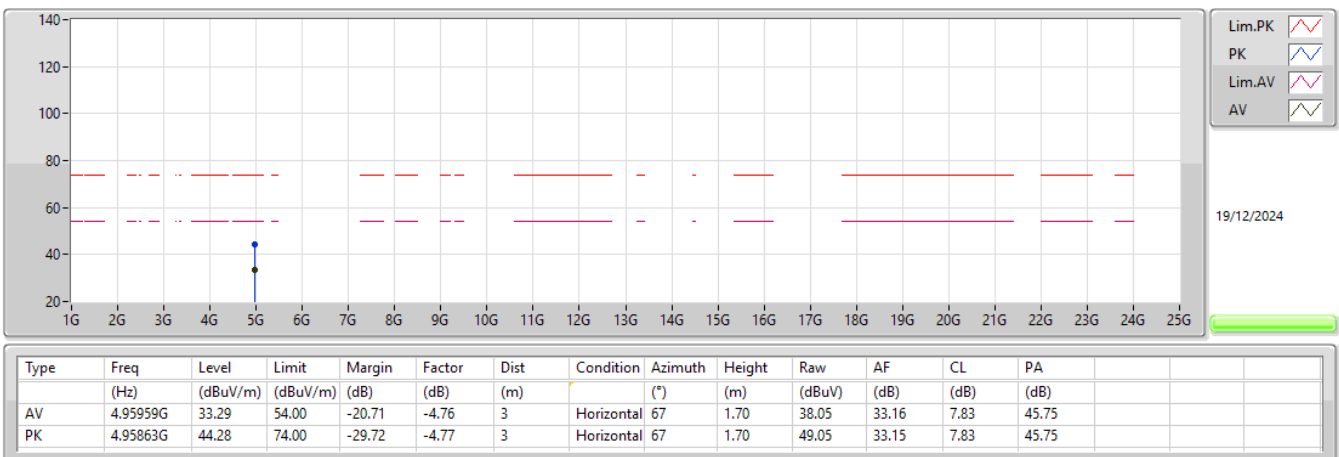
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





Summary

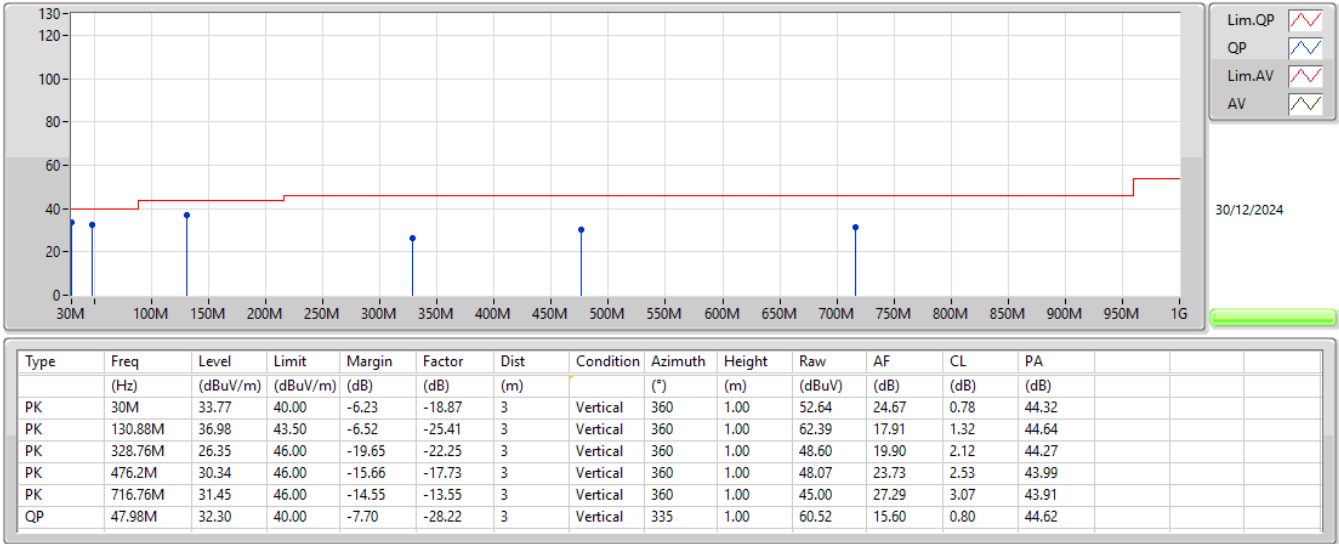
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	30M	33.77	40.00	-6.23	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_Fixture	Pass	PK	30M	33.77	40.00	-6.23	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	130.88M	36.98	43.50	-6.52	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	328.76M	26.35	46.00	-19.65	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	476.2M	30.34	46.00	-15.66	3	Vertical	360	1.00
2440MHz_Fixture	Pass	PK	716.76M	31.45	46.00	-14.55	3	Vertical	360	1.00
2440MHz_Fixture	Pass	QP	47.98M	32.30	40.00	-7.70	3	Vertical	335	1.00
2440MHz_Fixture	Pass	PK	47.46M	24.50	40.00	-15.50	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	111.48M	34.76	43.50	-8.74	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	130.88M	34.80	43.50	-8.70	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	216M	31.89	46.00	-14.11	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	503.36M	31.93	46.00	-14.07	3	Horizontal	0	1.00
2440MHz_Fixture	Pass	PK	722.58M	36.25	46.00	-9.75	3	Horizontal	0	1.00

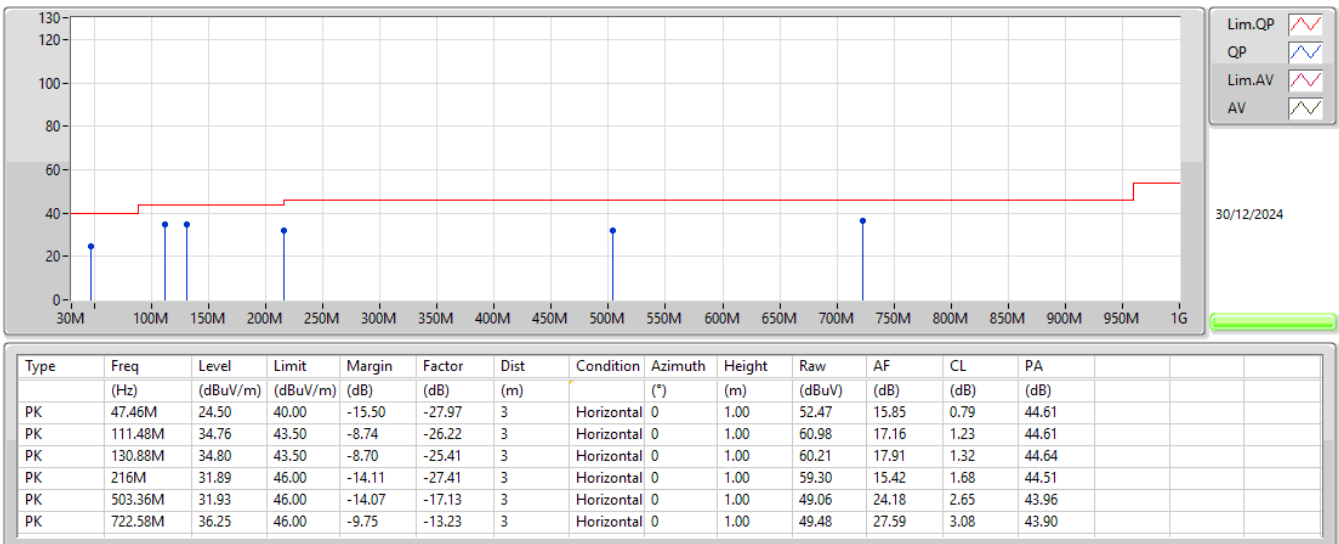
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Fixture



2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Fixture



**Summary**

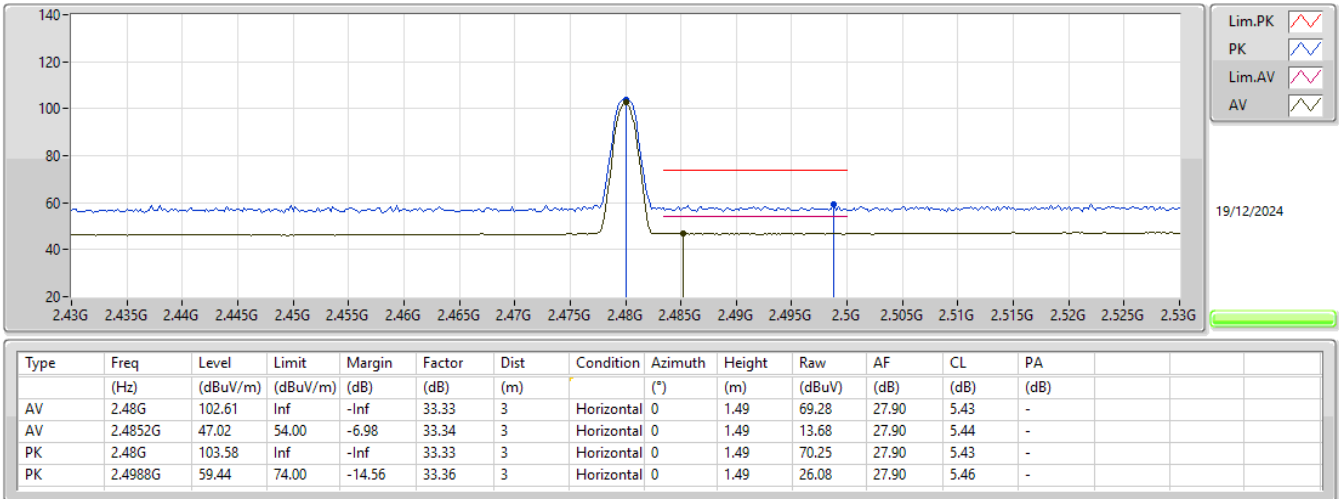
Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4852G	47.02	54.00	-6.98	3	Horizontal	0	1.49
BT-LE(2Mbps)	Pass	AV	2.4835G	47.33	54.00	-6.67	3	Horizontal	2	1.49

Result

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3898G	46.06	54.00	-7.94	3	Horizontal	10	1.50
2402MHz	Pass	AV	2.402G	104.60	Inf	-Inf	3	Horizontal	10	1.50
2402MHz	Pass	PK	2.3662G	57.72	74.00	-16.28	3	Horizontal	10	1.50
2402MHz	Pass	PK	2.4018G	105.59	Inf	-Inf	3	Horizontal	10	1.50
2402MHz	Pass	AV	4.80155G	32.49	54.00	-21.51	3	Vertical	238	1.34
2402MHz	Pass	PK	4.8047G	45.09	74.00	-28.91	3	Vertical	238	1.34
2402MHz	Pass	AV	4.80405G	32.59	54.00	-21.41	3	Horizontal	341	2.80
2402MHz	Pass	PK	4.80483G	44.32	74.00	-29.68	3	Horizontal	341	2.80
2440MHz	Pass	AV	2.3488G	46.10	54.00	-7.90	3	Horizontal	7	1.01
2440MHz	Pass	AV	2.44G	103.51	Inf	-Inf	3	Horizontal	7	1.01
2440MHz	Pass	AV	2.4952G	46.86	54.00	-7.14	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.384G	58.43	74.00	-15.57	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.4396G	104.52	Inf	-Inf	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.4988G	58.63	74.00	-15.37	3	Horizontal	7	1.01
2440MHz	Pass	AV	4.87959G	32.26	54.00	-21.74	3	Vertical	35	1.50
2440MHz	Pass	PK	4.87879G	44.56	74.00	-29.44	3	Vertical	35	1.50
2440MHz	Pass	AV	4.88139G	32.35	54.00	-21.65	3	Horizontal	25	2.33
2440MHz	Pass	PK	4.87809G	44.48	74.00	-29.52	3	Horizontal	25	2.33
2480MHz	Pass	AV	2.48G	102.61	Inf	-Inf	3	Horizontal	0	1.49
2480MHz	Pass	AV	2.4852G	47.02	54.00	-6.98	3	Horizontal	0	1.49
2480MHz	Pass	PK	2.48G	103.58	Inf	-Inf	3	Horizontal	0	1.49
2480MHz	Pass	PK	2.4988G	59.44	74.00	-14.56	3	Horizontal	0	1.49
2480MHz	Pass	AV	4.96048G	32.66	54.00	-21.34	3	Vertical	12	1.22
2480MHz	Pass	PK	4.96212G	44.72	74.00	-29.28	3	Vertical	12	1.22
2480MHz	Pass	AV	4.96024G	32.74	54.00	-21.26	3	Horizontal	334	1.00
2480MHz	Pass	PK	4.95973G	45.21	74.00	-28.79	3	Horizontal	334	1.00
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3594G	46.30	54.00	-7.70	3	Horizontal	10	1.50
2402MHz	Pass	AV	2.4022G	101.65	Inf	-Inf	3	Horizontal	10	1.50
2402MHz	Pass	PK	2.3602G	58.01	74.00	-15.99	3	Horizontal	10	1.50
2402MHz	Pass	PK	2.4014G	104.51	Inf	-Inf	3	Horizontal	10	1.50
2402MHz	Pass	AV	4.80186G	32.45	54.00	-21.55	3	Vertical	205	1.50
2402MHz	Pass	PK	4.80574G	44.48	74.00	-29.52	3	Vertical	205	1.50
2402MHz	Pass	AV	4.80384G	32.52	54.00	-21.48	3	Horizontal	122	1.50
2402MHz	Pass	PK	4.80472G	44.31	74.00	-29.69	3	Horizontal	122	1.50
2440MHz	Pass	AV	2.3888G	46.33	54.00	-7.67	3	Horizontal	7	1.01
2440MHz	Pass	AV	2.44G	101.68	Inf	-Inf	3	Horizontal	7	1.01
2440MHz	Pass	AV	2.4888G	47.30	54.00	-6.70	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.376G	57.80	74.00	-16.20	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.4396G	104.38	Inf	-Inf	3	Horizontal	7	1.01
2440MHz	Pass	PK	2.4844G	58.33	74.00	-15.67	3	Horizontal	7	1.01
2440MHz	Pass	AV	4.87761G	32.63	54.00	-21.37	3	Vertical	267	2.41
2440MHz	Pass	PK	4.88148G	44.38	74.00	-29.62	3	Vertical	267	2.41
2440MHz	Pass	AV	4.87779G	32.57	54.00	-21.43	3	Horizontal	133	1.50
2440MHz	Pass	PK	4.88025G	44.42	74.00	-29.58	3	Horizontal	133	1.50
2480MHz	Pass	AV	2.48G	101.35	Inf	-Inf	3	Horizontal	2	1.49
2480MHz	Pass	AV	2.4835G	47.33	54.00	-6.67	3	Horizontal	2	1.49
2480MHz	Pass	PK	2.4796G	103.97	Inf	-Inf	3	Horizontal	2	1.49
2480MHz	Pass	PK	2.4898G	59.09	74.00	-14.91	3	Horizontal	2	1.49
2480MHz	Pass	AV	4.95755G	33.01	54.00	-20.99	3	Vertical	331	1.50
2480MHz	Pass	PK	4.96013G	45.13	74.00	-28.87	3	Vertical	331	1.50
2480MHz	Pass	AV	4.95812G	32.94	54.00	-21.06	3	Horizontal	209	1.50
2480MHz	Pass	PK	4.95917G	45.28	74.00	-28.72	3	Horizontal	209	1.50

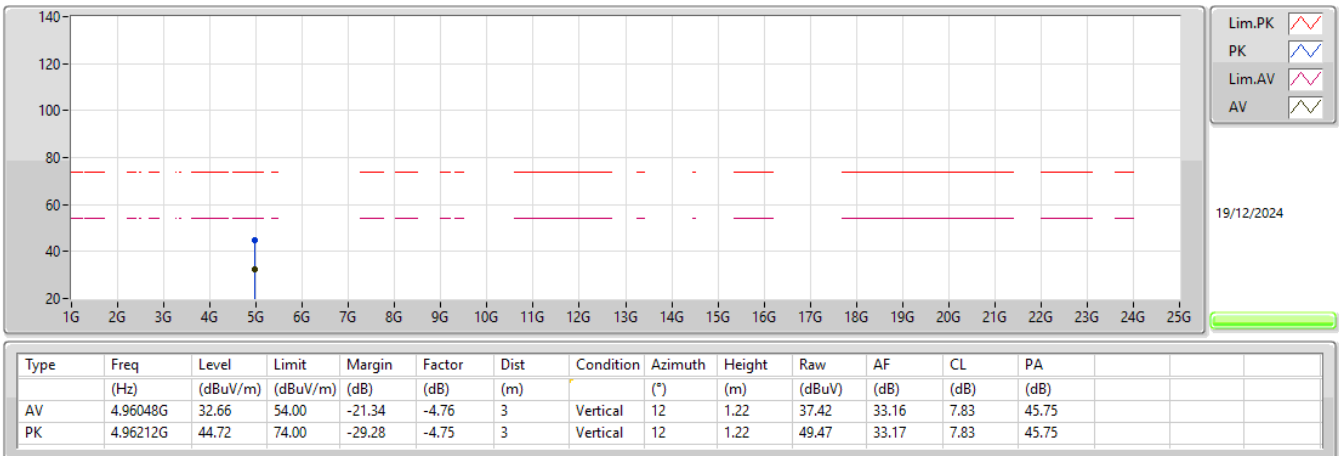
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



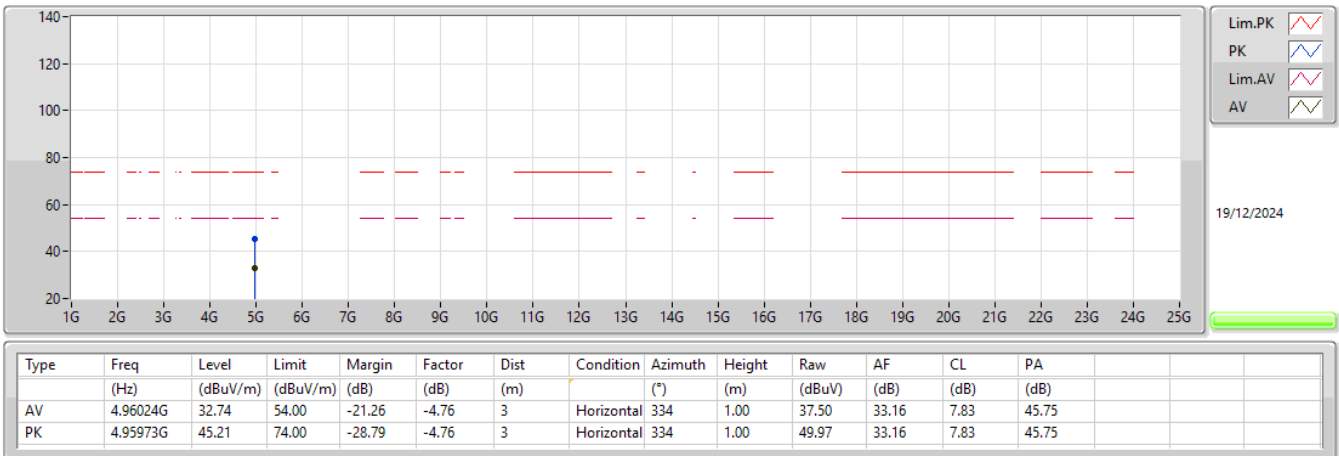
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



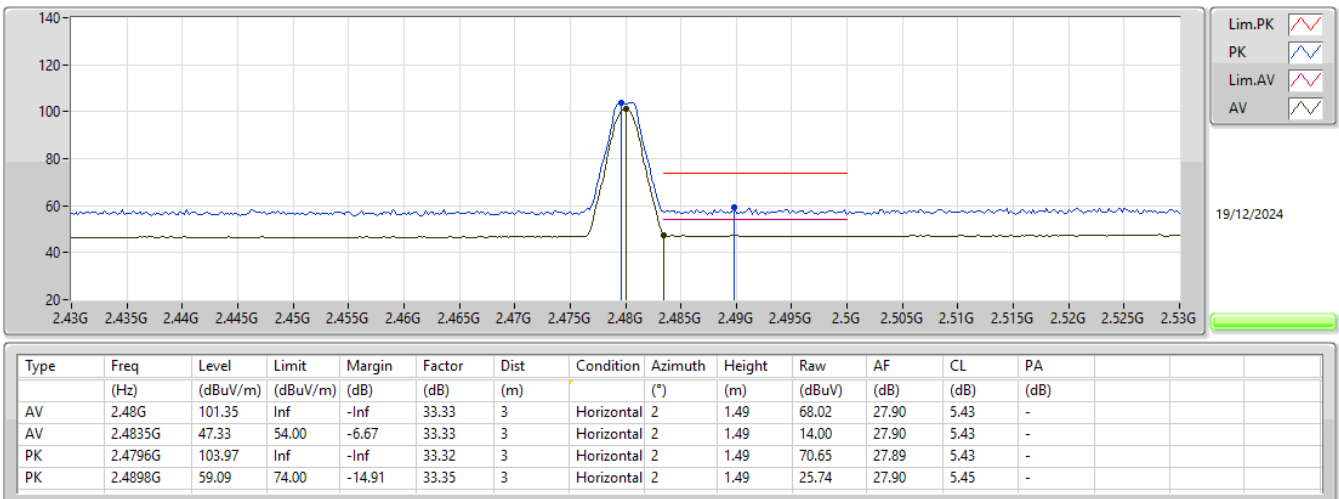
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



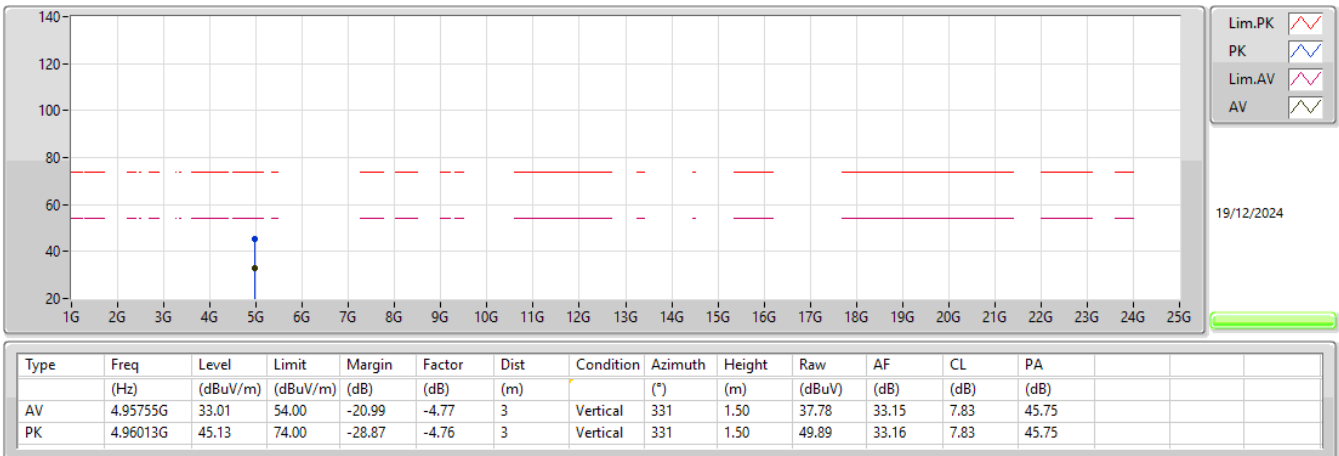
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



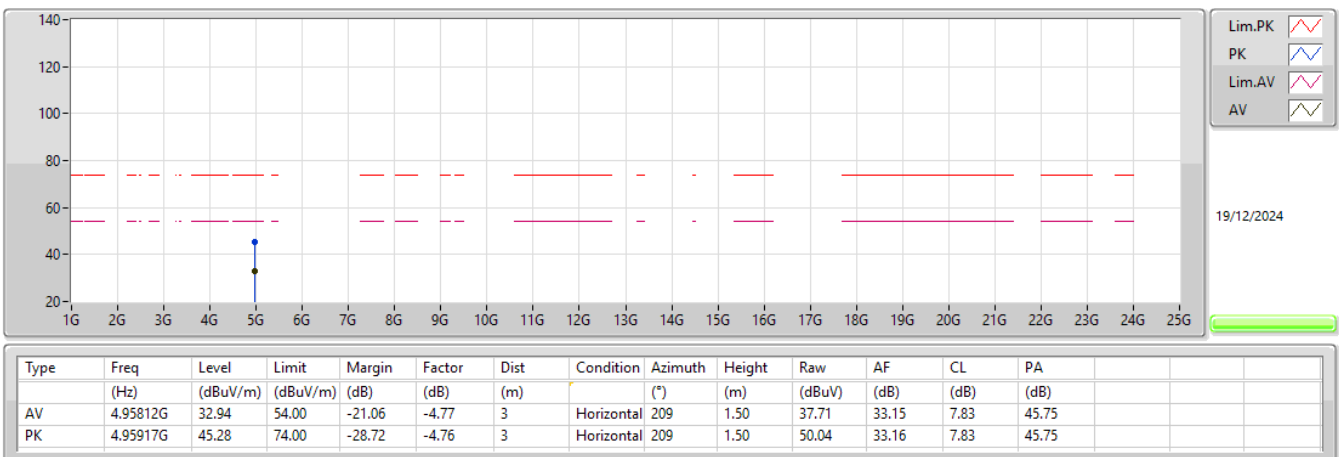
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





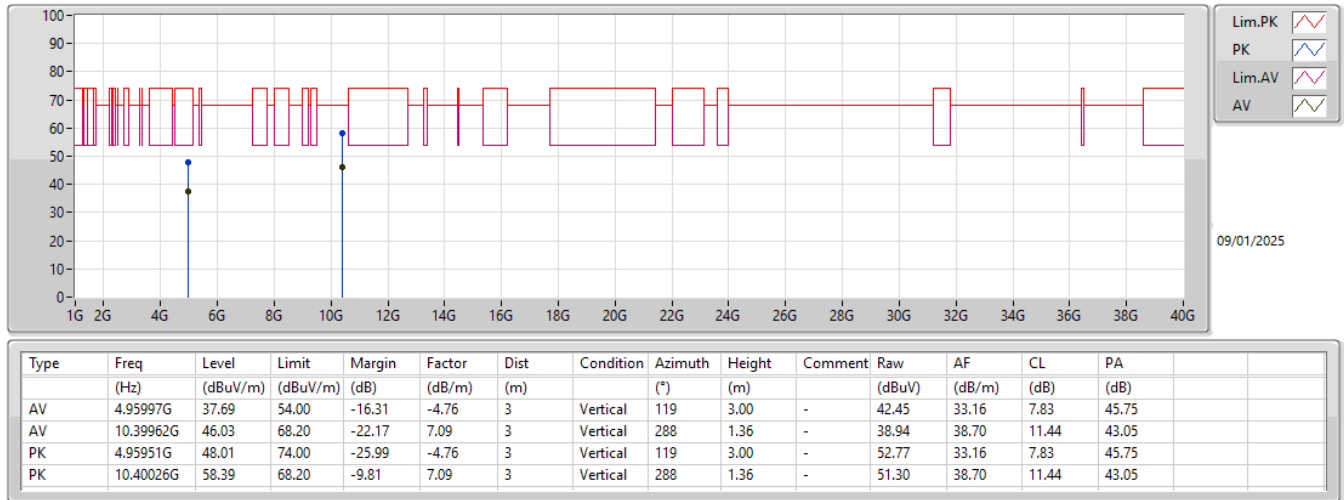
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	10.40366G	64.16	68.20	-4.04	Horizontal
Mode 2	Pass	PK	10.40016G	63.13	68.20	-5.07	Horizontal

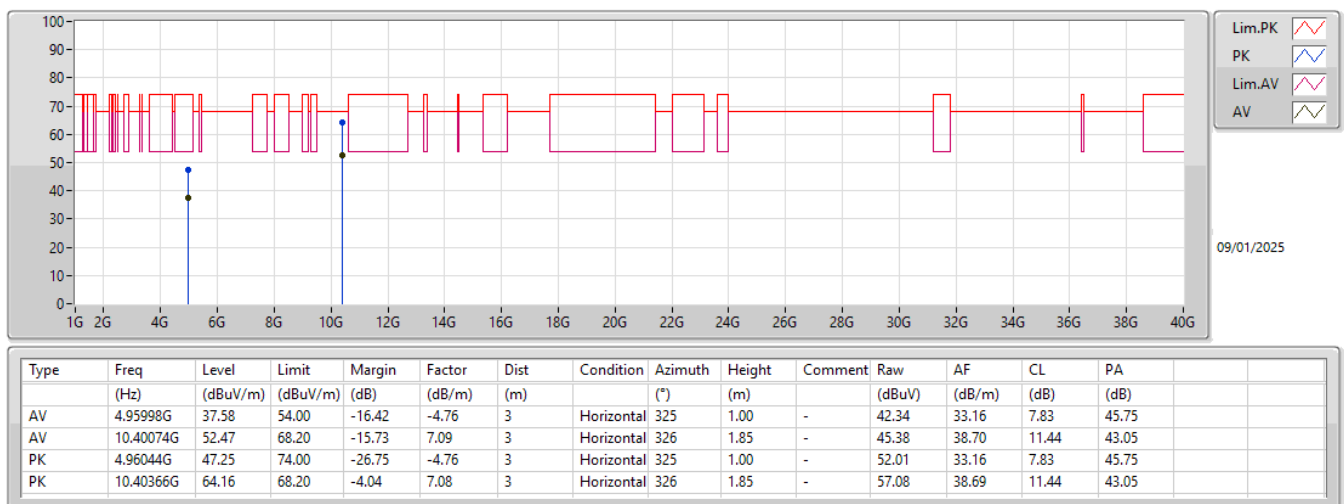
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.95997G	37.69	54.00	-16.31	3	Vertical	119	3.00	-
Mode 1	Pass	AV	10.39962G	46.03	68.20	-22.17	3	Vertical	288	1.36	-
Mode 1	Pass	PK	4.95951G	48.01	74.00	-25.99	3	Vertical	119	3.00	-
Mode 1	Pass	PK	10.40026G	58.39	68.20	-9.81	3	Vertical	288	1.36	-
Mode 1	Pass	AV	4.95998G	37.58	54.00	-16.42	3	Horizontal	325	1.00	-
Mode 1	Pass	AV	10.40074G	52.47	68.20	-15.73	3	Horizontal	326	1.85	-
Mode 1	Pass	PK	4.96044G	47.25	74.00	-26.75	3	Horizontal	325	1.00	-
Mode 1	Pass	PK	10.40366G	64.16	68.20	-4.04	3	Horizontal	326	1.85	-
Mode 2	Pass	AV	4.8809G	34.71	54.00	-19.29	3	Vertical	331	2.54	-
Mode 2	Pass	AV	10.39862G	46.32	68.20	-21.88	3	Vertical	155	1.58	-
Mode 2	Pass	PK	4.8808G	45.77	74.00	-28.23	3	Vertical	331	2.54	-
Mode 2	Pass	PK	10.40044G	58.53	68.20	-9.67	3	Vertical	155	1.58	-
Mode 2	Pass	AV	4.88084G	34.95	54.00	-19.05	3	Horizontal	276	1.11	-
Mode 2	Pass	AV	10.4004G	51.46	68.20	-16.74	3	Horizontal	311	1.01	-
Mode 2	Pass	PK	4.88104G	46.78	74.00	-27.22	3	Horizontal	276	1.11	-
Mode 2	Pass	PK	10.40016G	63.13	68.20	-5.07	3	Horizontal	311	1.01	-

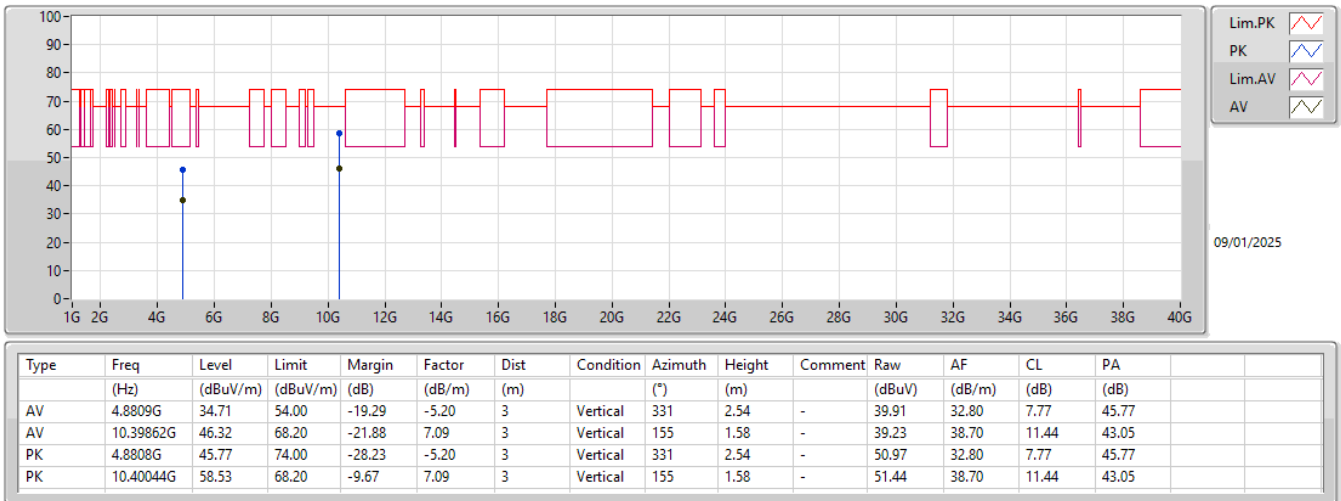
Radiated Emissions above 1GHz_Mode 1



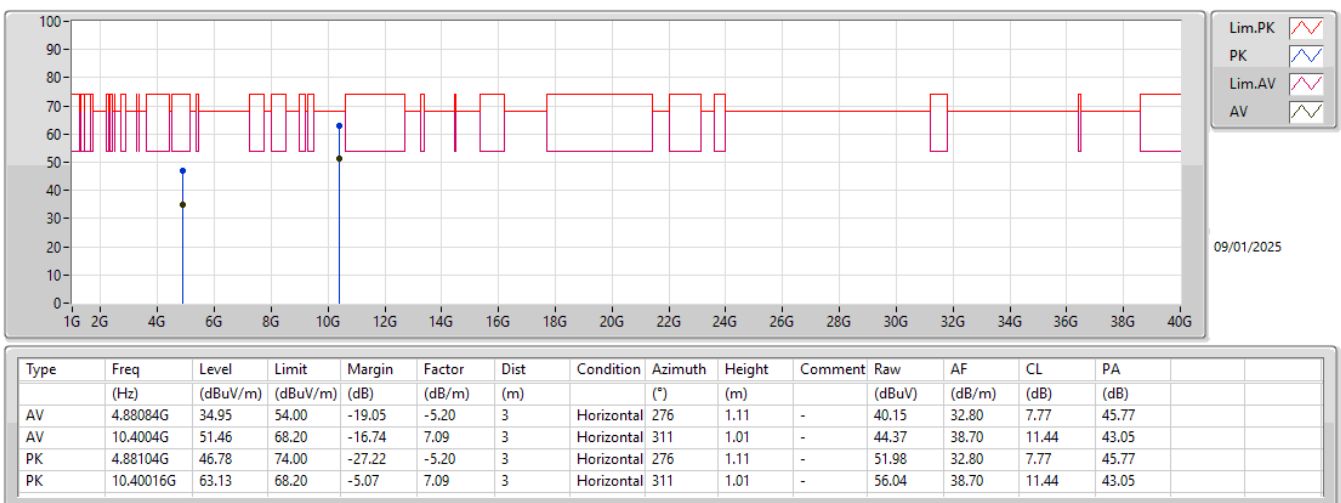
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 2



Radiated Emissions above 1GHz_Mode 2





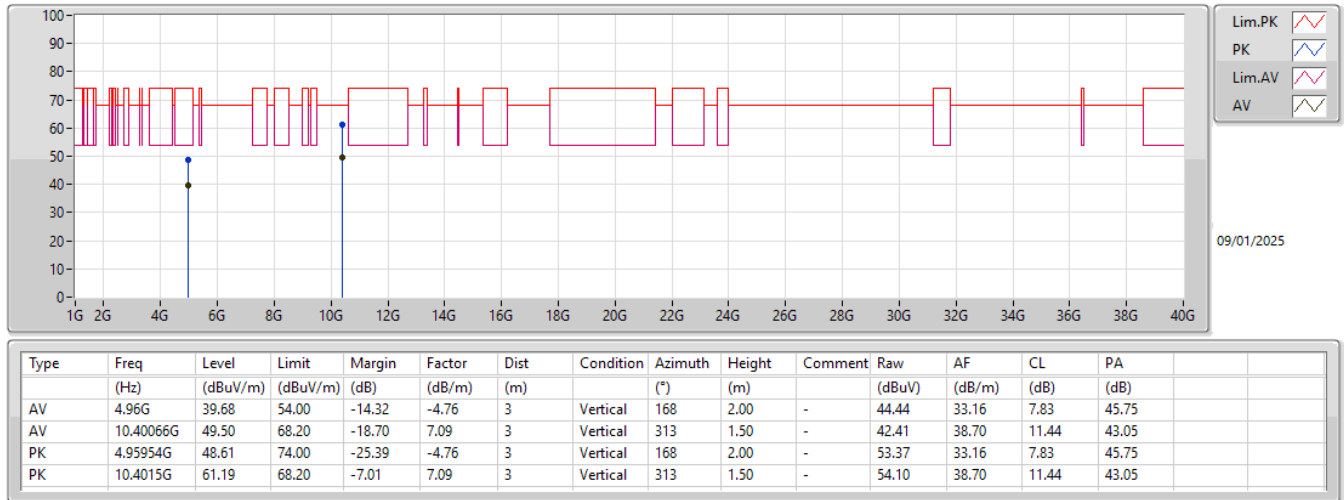
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	10.4015G	61.19	68.20	-7.01	Vertical
Mode 2	Pass	PK	10.3989G	62.65	68.20	-5.55	Vertical

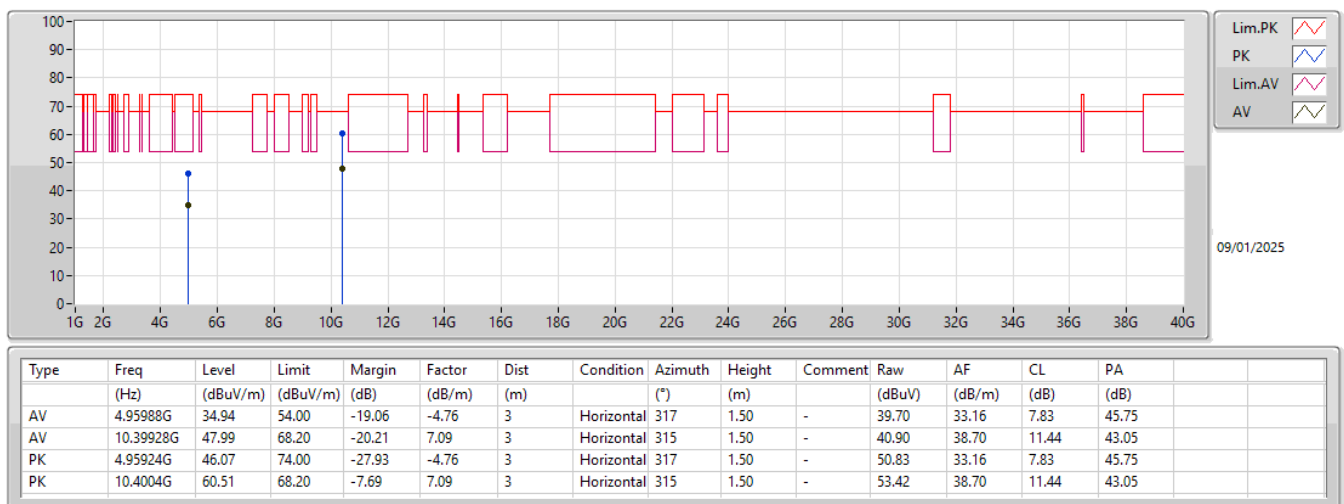
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.96G	39.68	54.00	-14.32	3	Vertical	168	2.00	-
Mode 1	Pass	AV	10.40066G	49.50	68.20	-18.70	3	Vertical	313	1.50	-
Mode 1	Pass	PK	4.95954G	48.61	74.00	-25.39	3	Vertical	168	2.00	-
Mode 1	Pass	PK	10.4015G	61.19	68.20	-7.01	3	Vertical	313	1.50	-
Mode 1	Pass	AV	4.95988G	34.94	54.00	-19.06	3	Horizontal	317	1.50	-
Mode 1	Pass	AV	10.39928G	47.99	68.20	-20.21	3	Horizontal	315	1.50	-
Mode 1	Pass	PK	4.95924G	46.07	74.00	-27.93	3	Horizontal	317	1.50	-
Mode 1	Pass	PK	10.4004G	60.51	68.20	-7.69	3	Horizontal	315	1.50	-
Mode 2	Pass	AV	4.87896G	36.76	54.00	-17.24	3	Vertical	142	1.50	-
Mode 2	Pass	AV	10.40038G	50.95	68.20	-17.25	3	Vertical	317	1.32	-
Mode 2	Pass	PK	4.8796G	46.94	74.00	-27.06	3	Vertical	142	1.50	-
Mode 2	Pass	PK	10.3989G	62.65	68.20	-5.55	3	Vertical	317	1.32	-
Mode 2	Pass	AV	4.87888G	35.21	54.00	-18.79	3	Horizontal	289	1.00	-
Mode 2	Pass	AV	10.40092G	48.14	68.20	-20.06	3	Horizontal	311	1.52	-
Mode 2	Pass	PK	4.87902G	46.29	74.00	-27.71	3	Horizontal	289	1.00	-
Mode 2	Pass	PK	10.40256G	60.04	68.20	-8.16	3	Horizontal	311	1.52	-

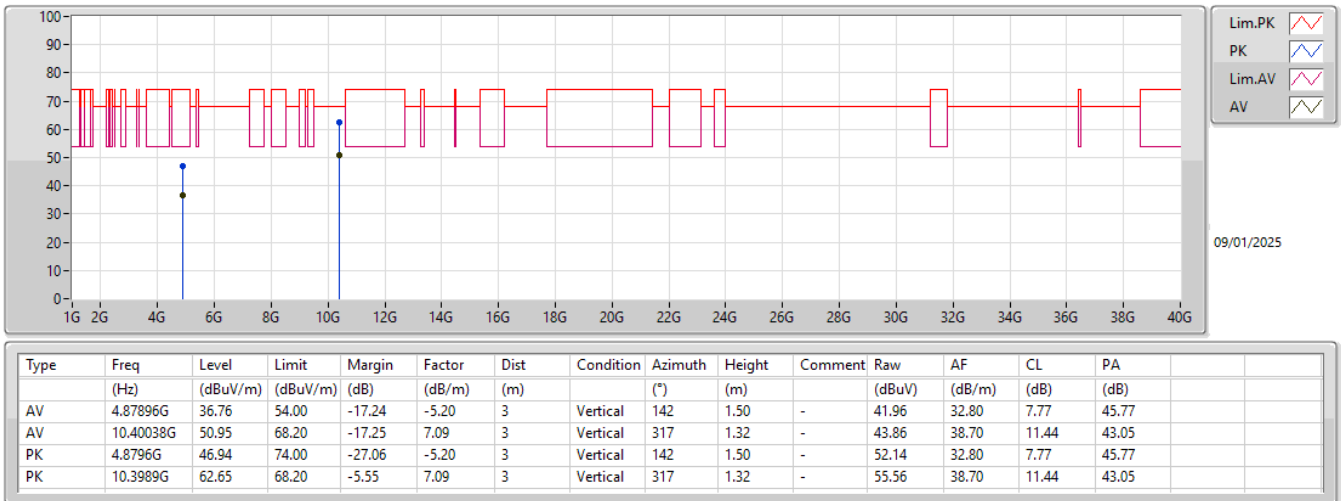
Radiated Emissions above 1GHz_Mode 1



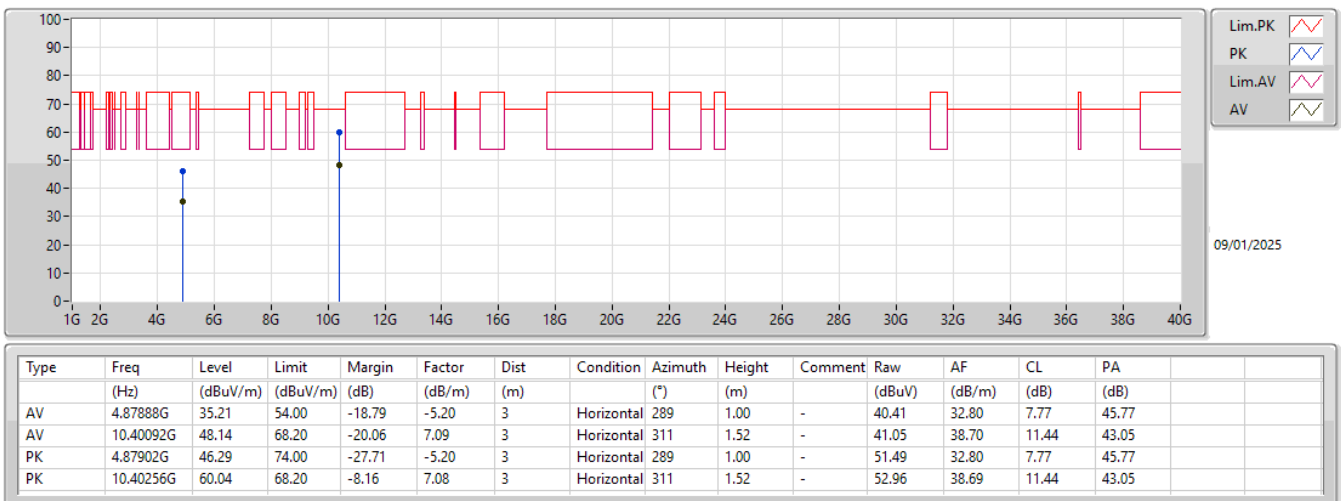
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 2



Radiated Emissions above 1GHz_Mode 2





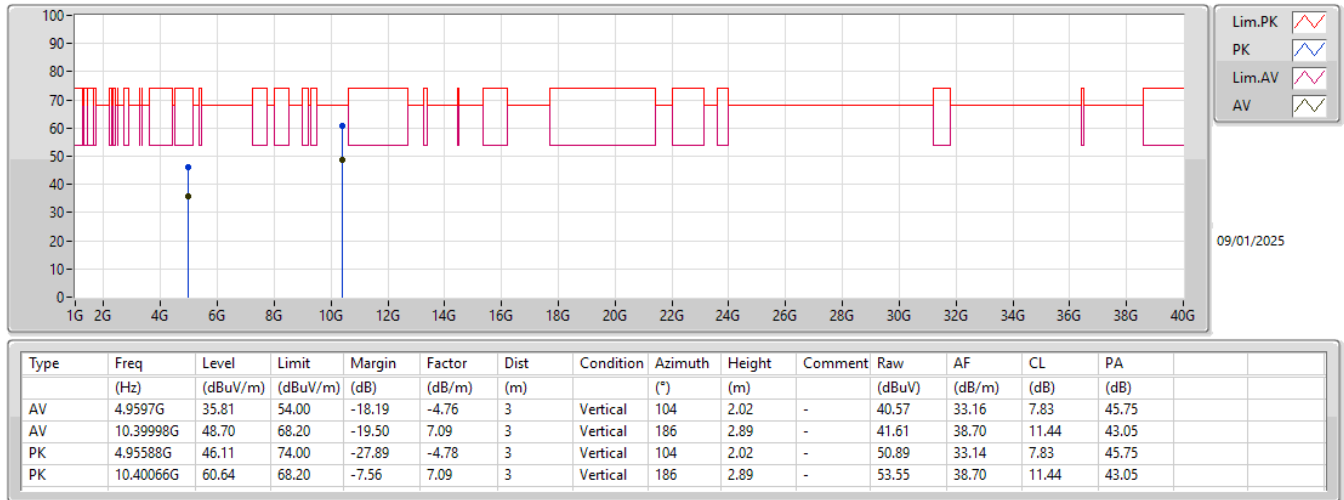
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	10.40522G	64.42	68.20	-3.78	Horizontal
Mode 2	Pass	PK	10.39676G	63.22	68.20	-4.98	Horizontal

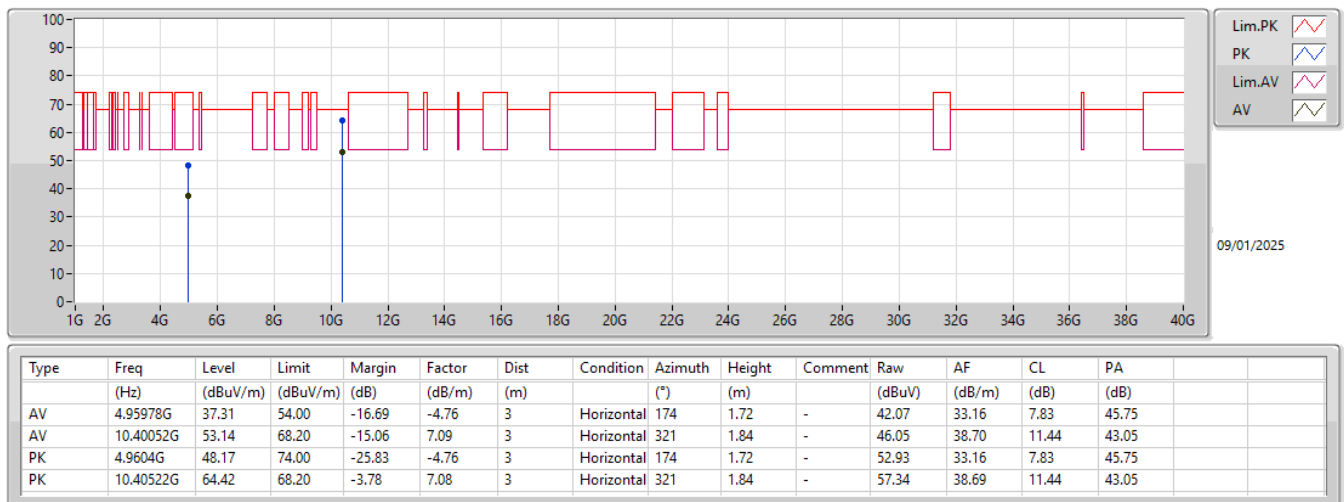
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.9597G	35.81	54.00	-18.19	3	Vertical	104	2.02	-
Mode 1	Pass	AV	10.39998G	48.70	68.20	-19.50	3	Vertical	186	2.89	-
Mode 1	Pass	PK	4.95588G	46.11	74.00	-27.89	3	Vertical	104	2.02	-
Mode 1	Pass	PK	10.40066G	60.64	68.20	-7.56	3	Vertical	186	2.89	-
Mode 1	Pass	AV	4.95978G	37.31	54.00	-16.69	3	Horizontal	174	1.72	-
Mode 1	Pass	AV	10.40052G	53.14	68.20	-15.06	3	Horizontal	321	1.84	-
Mode 1	Pass	PK	4.9604G	48.17	74.00	-25.83	3	Horizontal	174	1.72	-
Mode 1	Pass	PK	10.40522G	64.42	68.20	-3.78	3	Horizontal	321	1.84	-
Mode 2	Pass	AV	4.87906G	34.94	54.00	-19.06	3	Vertical	71	1.14	-
Mode 2	Pass	AV	10.3994G	50.27	68.20	-17.93	3	Vertical	191	1.46	-
Mode 2	Pass	PK	4.87902G	47.21	74.00	-26.79	3	Vertical	71	1.14	-
Mode 2	Pass	PK	10.3961G	62.39	68.20	-5.81	3	Vertical	191	1.46	-
Mode 2	Pass	AV	4.87912G	34.74	54.00	-19.26	3	Horizontal	17	1.50	-
Mode 2	Pass	AV	10.39956G	51.61	68.20	-16.59	3	Horizontal	324	1.50	-
Mode 2	Pass	PK	4.88132G	45.56	74.00	-28.44	3	Horizontal	17	1.50	-
Mode 2	Pass	PK	10.39676G	63.22	68.20	-4.98	3	Horizontal	324	1.50	-

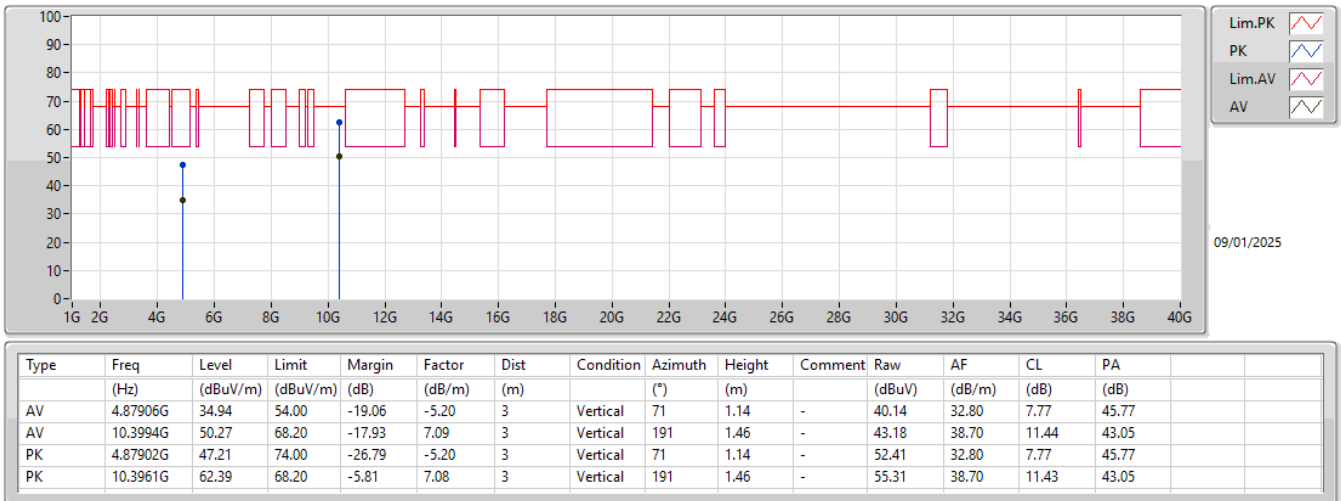
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 2



Radiated Emissions above 1GHz_Mode 2

