

FCC Radio Test Report

FCC ID : TOR-O435
Equipment : Wireless Access Point
Brand Name : ARISTA
Model Name : O-435 / O-435E
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 Oct. 28, 2024, and testing was started from Nov. 15, 2024 and completed on Jan. 22, 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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History of this test report

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver4.3
FCC ID: TOR-O435

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]

O-435

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

O-435E

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

O-435

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	WHAYU	C393-510240-A	PIFA	I-Pex	6G	Radio 2
2	WHAYU	C393-510240-A	PIFA	I-Pex	6G	Radio 2
3	WHAYU	C393-510240-A	PIFA	I-Pex	2.4G+5G+6G	Radio 0
4	WHAYU	C393-510240-A	PIFA	I-Pex	2.4G+5G+6G	Radio 0
5	WHAYU	C393-510240-A	PIFA	I-Pex	2.4G+5G	Radio 1+Radio 2
6	WHAYU	C393-510240-A	PIFA	I-Pex	2.4G+5G	Radio 1+Radio 2
7	WHAYU	C393-510240-A	PIFA	I-Pex	BT	-
8	WHAYU	C393-510240-A	PIFA	I-Pex	GPS	-

Ant.	Port	Gain (dBi)										
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	BT	GPS
1	1	-	-	-	-	-	5.72	5.17	3.67	4.67	-	-
2	2	-	-	-	-	-	5.85	5.09	4.29	3.84	-	-
3	1	3.1	5.33	5.97	4.41	3.32	5	4.13	4.87	3.99	-	-
4	2	3.26	4.32	4.56	5.26	4.37	4.41	5.15	4.7	3.73	-	-
5	1	2.85	3.69	3.89	4.64	4.83	-	-	-	-	-	-
6	2	2.54	3.35	4.34	5.05	3.83	-	-	-	-	-	-
7	1	-	-	-	-	-	-	-	-	-	6.3	-
8	1	-	-	-	-	-	-	-	-	-	-	2.7

Composite Gain (dBi)											
Ant.		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	
1~2	DG [1SS]	-	-	-	-	-	6.2	6.74	5.04	5.54	
	DG [2SS]	-	-	-	-	-	5.85	5.17	4.29	4.67	
3~4	DG [1SS]	5.22	6.59	6.67	6.55	5.22	6.23	6.48	6.18	5.51	
	DG [2SS]	3.26	5.33	5.97	5.26	4.37	5	5.15	4.87	3.99	
5~6	DG [1SS]	4.24	5.3	4.88	5.54	4.84	-	-	-	-	
	DG [2SS]	2.85	3.69	4.34	5.05	4.83	-	-	-	-	

Note 1: The composite gain is derived as KDB 662911 D03 v01 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP4O0402.

O-435E

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	WHAYU	C393-510293-A	Panel	N-type	6G	Radio 2
2	WHAYU	C393-510293-A	Panel	N-type	6G	Radio 2
3	WHAYU	C393-510293-A	Panel	N-type	2.4G+5G+6G	Radio 0
4	WHAYU	C393-510293-A	Panel	N-type	2.4G+5G+6G	Radio 0
5	WHAYU	C393-510293-A	Panel	N-type	2.4G+5G	Radio 1+Radio 2
6	WHAYU	C393-510293-A	Panel	N-type	2.4G+5G	Radio 1+Radio 2
7	WHAYU	C393-510240-A	PIFA	I-Pex	BT	-
8	WHAYU	C393-510240-A	PIFA	I-Pex	GPS	-

Ant.	Port	Gain (dBi)										
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	BT	GPS
1	1	-	-	-	-	-	5.39	3.98	4.51	-	-	-
2	2	-	-	-	-	-	5.98	4.5	5.14	-	-	-
3	1	6.81	5.79	4.86	5.61	5.53	5.95	3.51	4.58	-	-	-
4	2	7.22	4.63	4.62	5.1	4.48	4.99	3.7	4.09	-	-	-
5	1	6.39	4.74	4.75	5.31	4.52	-	-	-	-	-	-
6	2	6.66	4.79	4.45	5.32	5.16	-	-	-	-	-	-
7	1	-	-	-	-	-	-	-	-	-	6.5	-
8	1	-	-	-	-	-	-	-	-	-	-	3.6

Note 2: Directional gain information

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

Note 3: The EUT has eight antennas.

For 2.4GHz function:

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

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

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

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

For 5GHz function:

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

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

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

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

For 6GHz function:

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

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

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

Ant. 1 (port 1) and Ant. 2 (port 2) could 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 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 Table for Multiple Listing

Model Name	Description
O-435	Wi-Fi Internal Antenna
O-435E	Wi-Fi External Antenna

1.1.5 Mode Test Duty Cycle
O-435

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
BT-LE(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-LE(2Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

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

O-435E

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
BT-LE(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-LE(2Mbps)	1	0	n/a (DC>=0.98)	n/a (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	CO04-HY	Andy Wang	20.1~20.5°C / 56~60%	04/Dec/2024~10/Dec/2024
RF Conducted (O435)	TH01-HY	Jin Jing	22.9~23.5°C / 53~56%	15/Nov/2024~06/Jan/2025
RF Conducted (O435E)	TH01-HY	Jin Jing	22.7~23.5°C / 51~55%	15/Nov/2024~16/Nov/2024
Radiated (O-435)	03CH02-HY	Vasari Huang	20.5~20.8°C / 53~59%	05/Dec/2024~06/Dec/2024
Radiated (Co-location)	03CH02-HY	Vasari Huang	20.1~20.6°C / 51~55%	22/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			
Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated (O-435E)	03CH25-HY	Rian Chung	21.5~21.9°C / 50~54%	05/Dec/2024~06/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%
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
-----------------------	------------------------

O-435

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	100
2440MHz	100
2480MHz	100
BT-LE(2Mbps)	-
2402MHz	90
2440MHz	100
2480MHz	80

O-435E

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	100
2440MHz	100
2480MHz	100
BT-LE(2Mbps)	-
2402MHz	85
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	Y Plane
	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	Radio 1 (2.4G) + Radio 2 (5G B1, B4) + Radio 0 (2.4G) + Bluetooth
2	Radio 1 (2.4G) + Radio 2 (5G B1, B4) + Radio 0 (5G B1, B4) + Bluetooth
Refer to Sporton Test Report No.: FA4O0402 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

Accessories				
Pole mount 1	Brand Name	ARISTA	Model Name	M/E KIT ASSY (BRACKET)
Pole mount 2	Brand Name	ARISTA	Model Name	M/E KIT ASSY (Cable ties)

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

2.4 Support Equipment

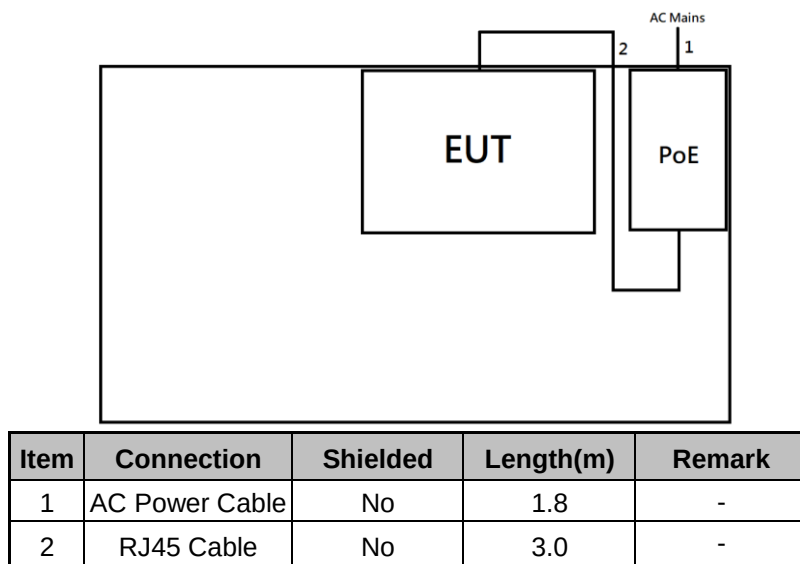
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	External Antenna	WHAYU	C393-510293-A	-	Provided by Customer
2	RJ-45 Cable	Power sync	CAT-6E-03	-	-
3	PoE	PHIHONG	POE20U-560(G)	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

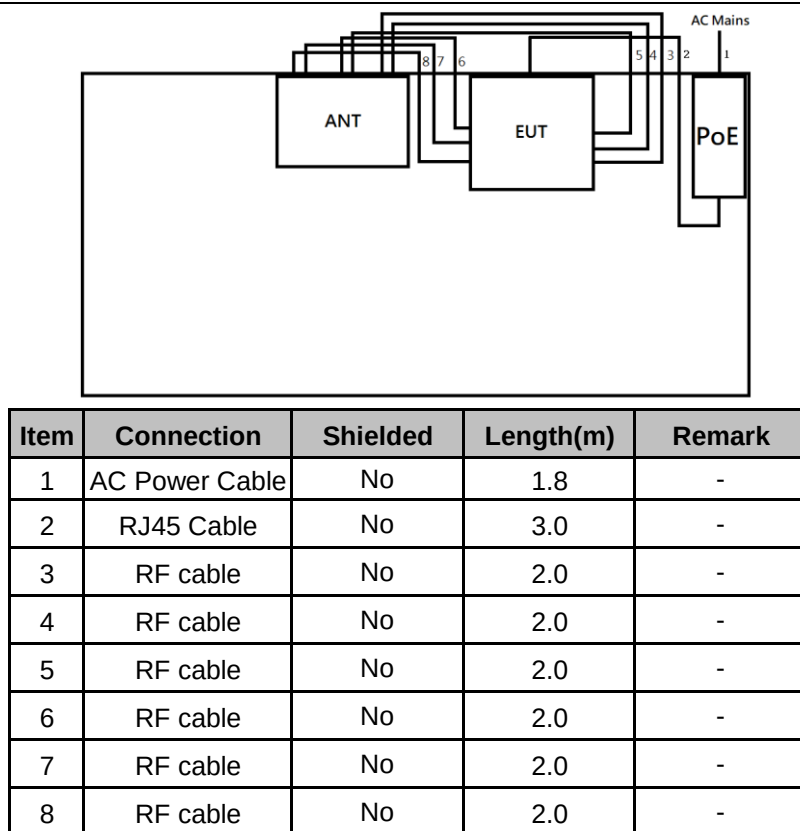
Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-45 Cable	Power sync	CAT-6E-03	-	-
2	External Antenna	WHAYU	C393-510293-A	-	Provided by Customer
3	PoE	PHIHONG	POE20U-560(G)	-	Remote

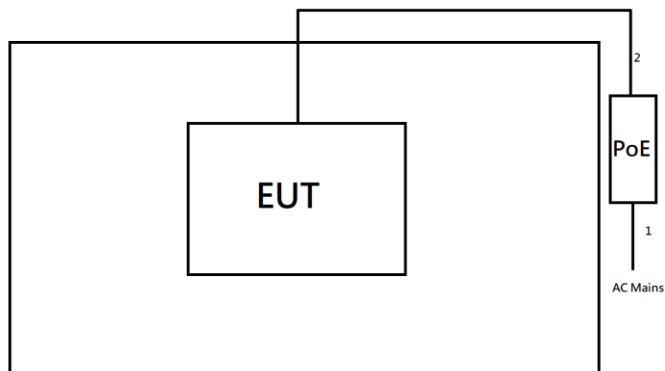
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test (O-435)

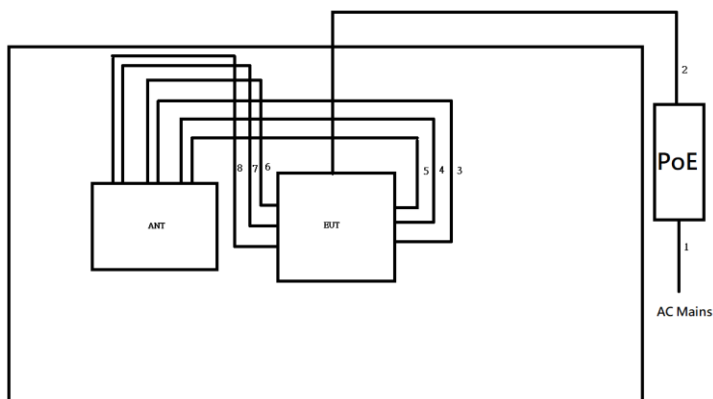


Test Setup Diagram – AC Line Conducted Emission Test (O-435E)



Test Setup Diagram - Radiated Test (O-435)


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

Test Setup Diagram - Radiated Test (O-435E)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	RJ45 Cable	No	3.0	-
3	RF cable	No	2.0	-
4	RF cable	No	2.0	-
5	RF cable	No	2.0	-
6	RF cable	No	2.0	-
7	RF cable	No	2.0	-
8	RF cable	No	2.0	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

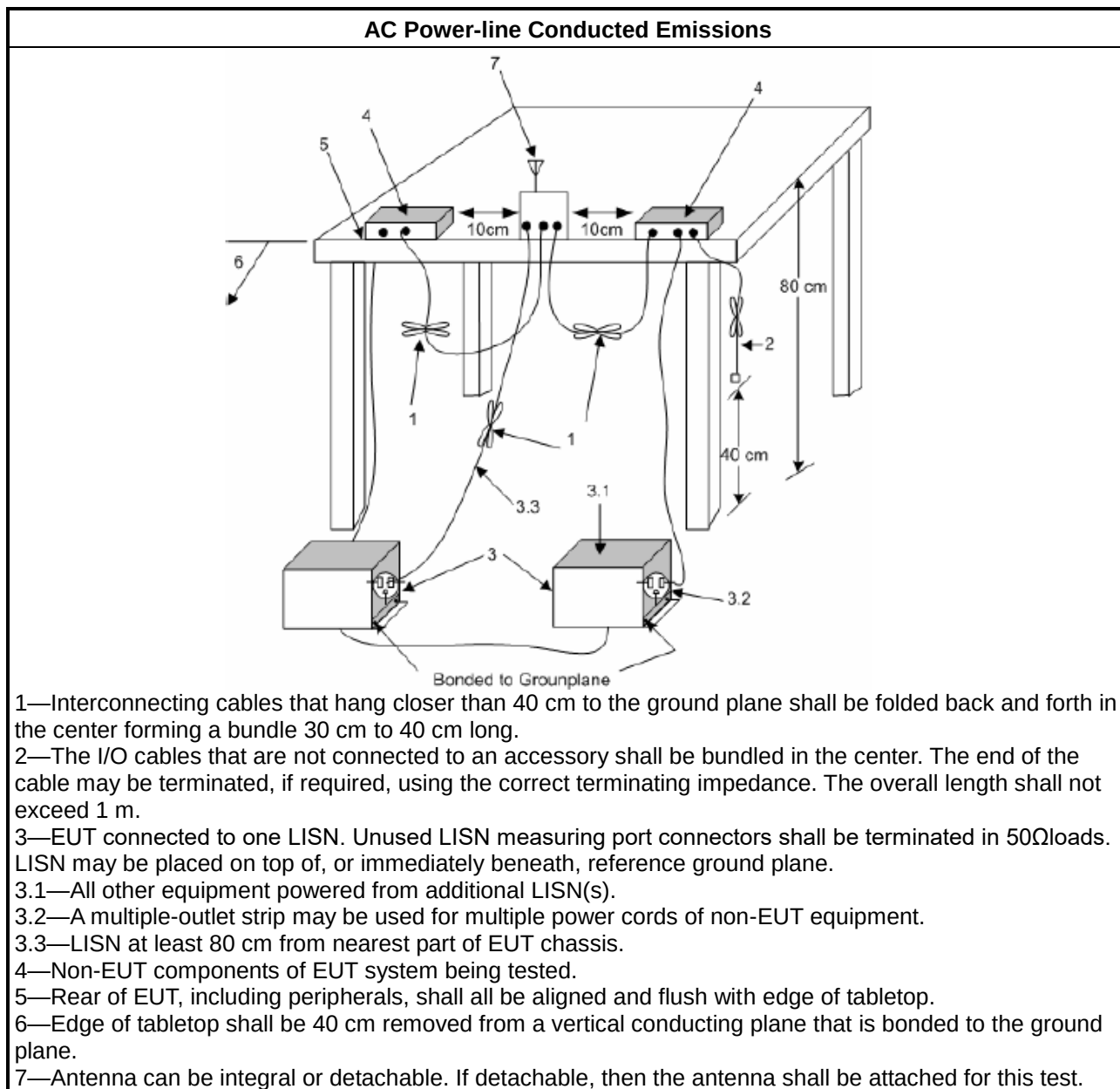
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

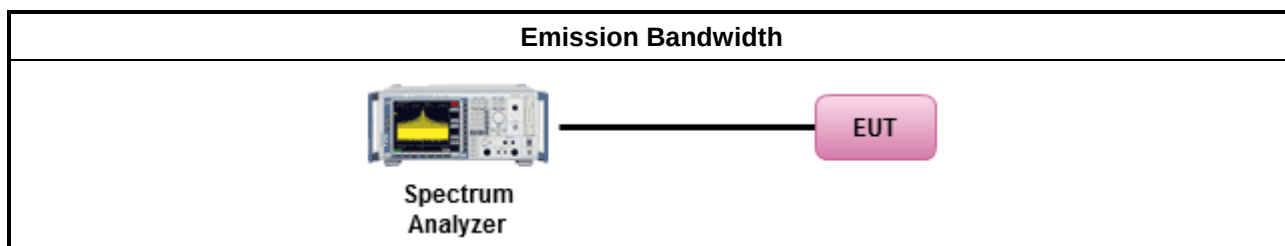
3.2.2 Measuring Instruments

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.	

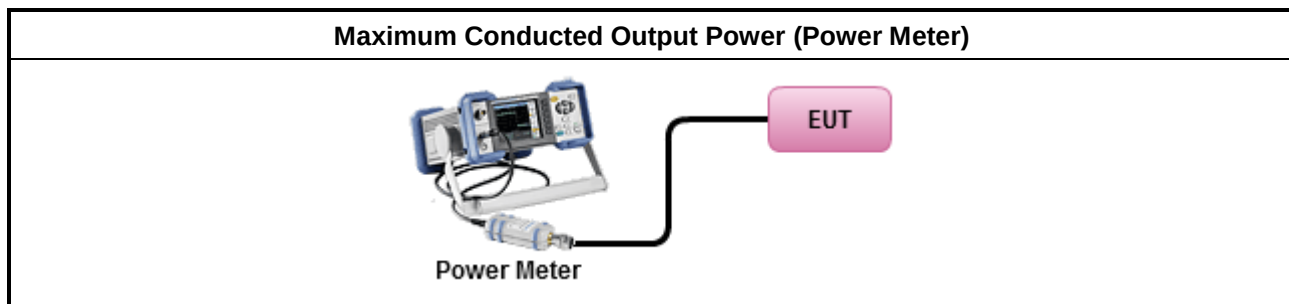
3.3.2 Measuring Instruments

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

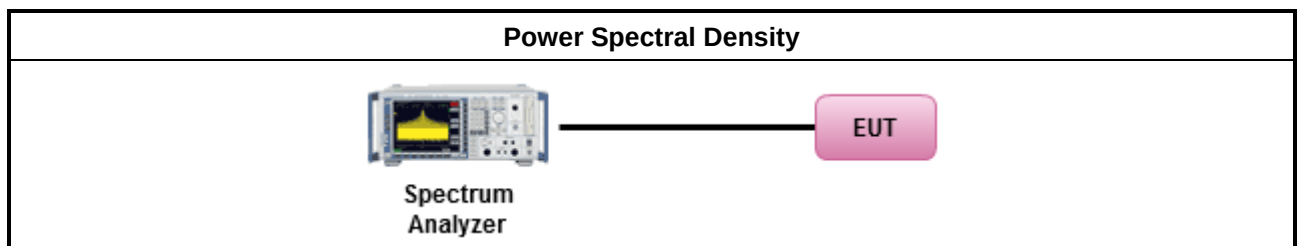
3.4.2 Measuring Instruments

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.	

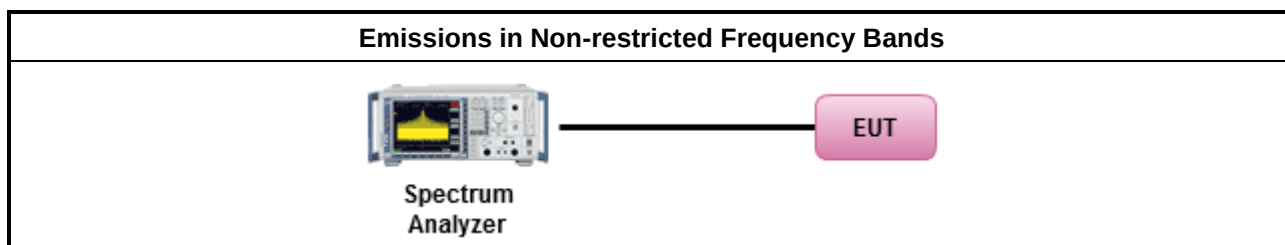
3.5.2 Measuring Instruments

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

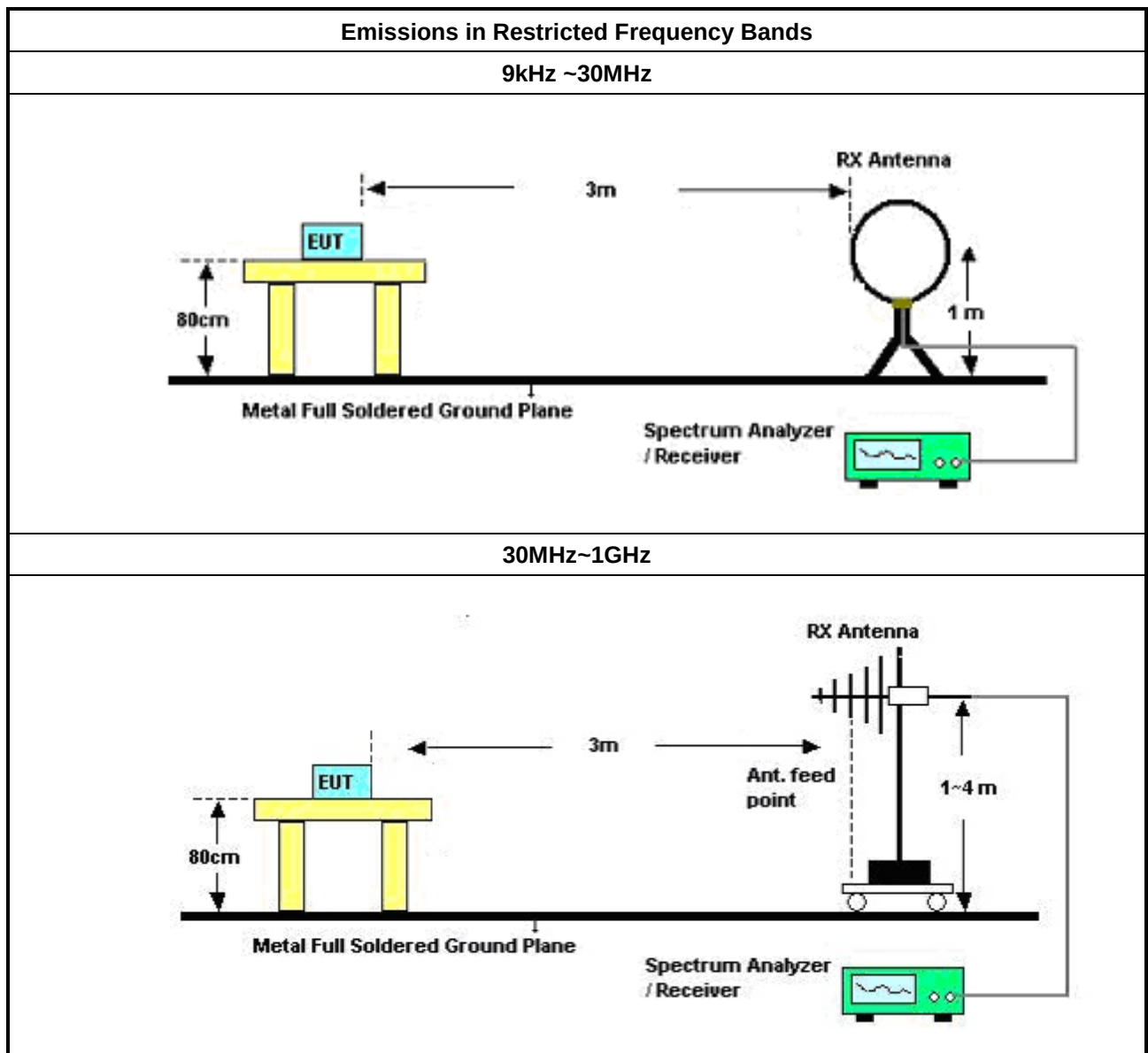
Test Method	
	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted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

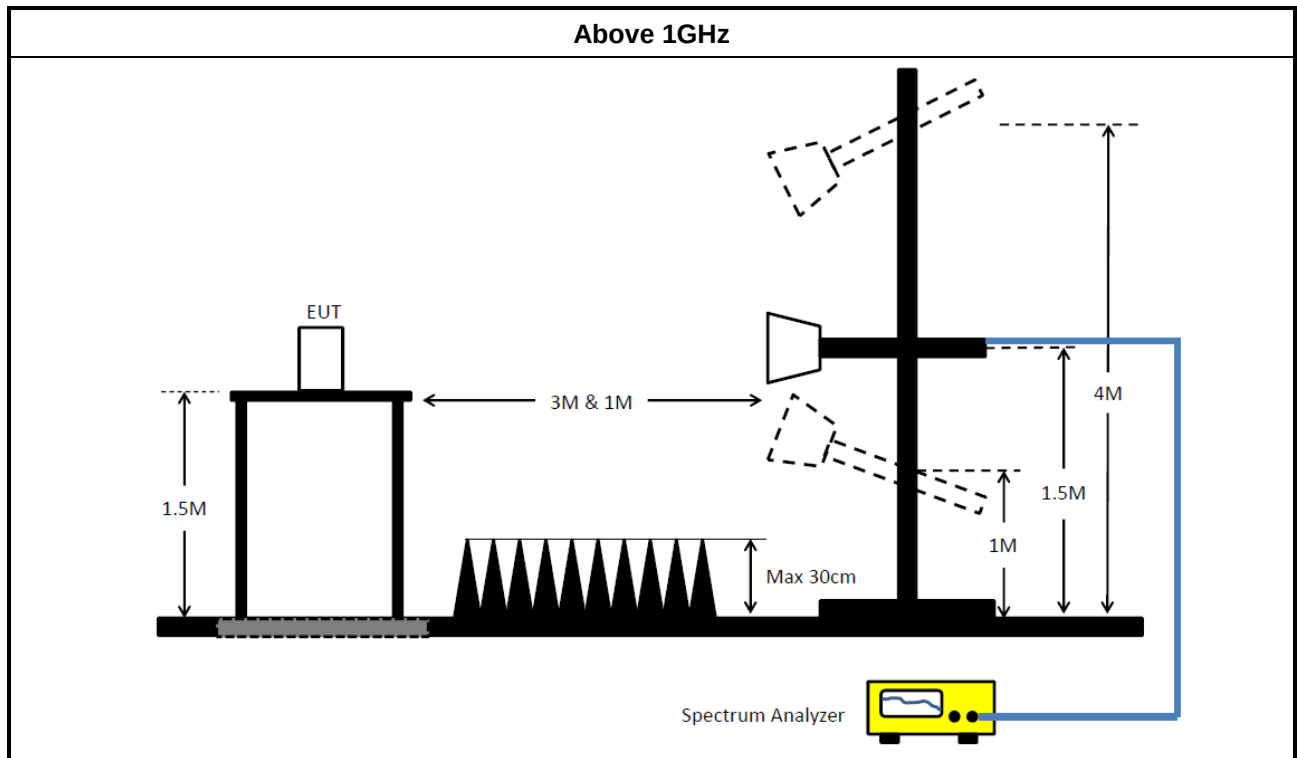
3.6.4 Measurement Results Calculation

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	FSV 40	101013	10Hz~40GHz	09/Apr/2024	08/Apr/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	949003	300MHz~40GHz	17/Feb/2024	16/Feb/2025
Pulse Sensor	Anritsu	MA2411B	917017	300MHz~40GHz	17/Feb/2024	16/Feb/2025
SENSE-15247_FS	Sporton	V5.11.18	N/A	N/A	N/A	N/A

Instrument for Radiated Test (03CH02-HY_Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Site V.S.W.R	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3M	14/Jul/2024	13/Jul/2025
Signal Analyzer	R&S	FSP 40	100593	9kHz~40GHz	11/Mar/2024	10/Mar/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz~18GHz	23/Sep/2024	22/Sep/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX 104	03CH02-cable-01	1GHz~40GHz	15/Feb/2024	14/Feb/2025
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	01/Oct/2024	30/Sep/2025
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~40GHz	19/Apr/2024	18/Apr/2025
SENSE-EMI	Sporton	V5.11.9	N/A	N/A	N/A	N/A

**Instrument for Radiated Test (03CH02-HY_O-435)**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
N.S.A. Measurement	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3M	14/Jul/2024	13/Jul/2025
Site V.S.W.R	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3M	14/Jul/2024	13/Jul/2025
EMI Test Receiver	R&S	ESR	102052	9kHz~3.6GHz	03/May/2024	02/May/2025
Signal Analyzer	R&S	FSP 40	100593	9kHz~40GHz	11/Mar/2024	10/Mar/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723/2	30MHz~1GHz	26/Aug/2024	25/Aug/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz~18GHz	23/Sep/2024	22/Sep/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable	MVE	400LL+SN 200207	03CH02-cable-02	9kHz~30MHz	26/Nov/2024	26/Nov/2025
RF Cable	MVE	400LL+SN 200207	03CH02-cable-02	30MHz~1GHz	26/Nov/2024	26/Nov/2025
RF Cable-R03m	HUBER+ SUHNER	SUCOFLEX 104	03CH02-cable-01	1GHz~40GHz	15/Feb/2024	14/Feb/2025
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	29/Jun/2024	28/Jun/2025
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	01/Oct/2024	30/Sep/2025
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~40GHz	19/Apr/2024	18/Apr/2025
SENSE-15247-FS	Sporton	V5.11.18	NA	NA	19/Apr/2024	18/Apr/2025

Instrument for Radiated Test (03CH25-HY_O-435E)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	30MHz~1GHz 3m	20/Jul/2024	19/Jul/2025
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
ESR7 EMI Test Receiver	ROHDE & SCHWARZ	ESR7	102956	9kHz~3.6GHz	27/Aug/2024	26/Aug/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63537/001	30MHz~1GHz	30/May/2024	29/May/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	11/Jul/2024	10/Jul/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	9kHz~1GHz	24/Apr/2024	23/Apr/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	23/Apr/2024	22/Apr/2025
Preamplifier	SGH	PRAMP 903	20230515-1	25MHz~3GHz	24/May/2024	23/May/2025
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-15247-FS	Sporton	V5.11.20	NA	NA	NA	NA



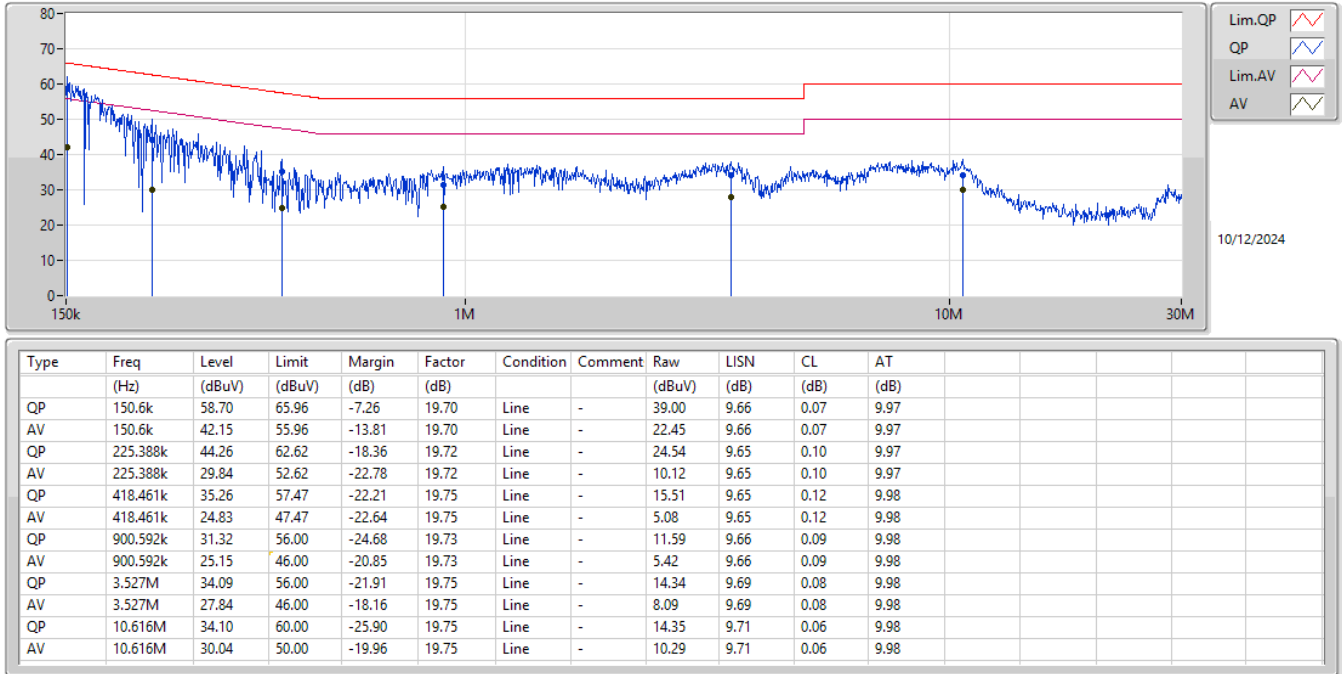
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	58.70	65.96	-7.26	Line

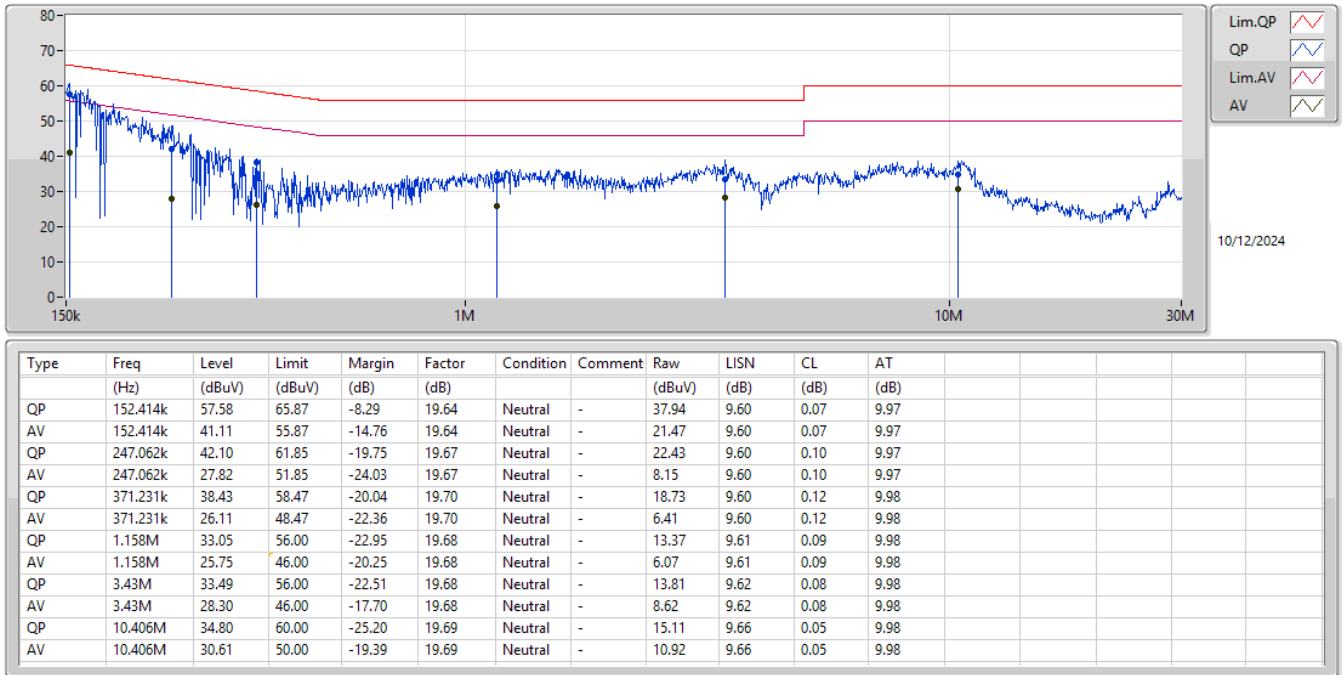
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	58.70	65.96	-7.26	Line
Mode 1	Pass	AV	150.6k	42.15	55.96	-13.81	Line
Mode 1	Pass	QP	225.388k	44.26	62.62	-18.36	Line
Mode 1	Pass	AV	225.388k	29.84	52.62	-22.78	Line
Mode 1	Pass	QP	418.461k	35.26	57.47	-22.21	Line
Mode 1	Pass	AV	418.461k	24.83	47.47	-22.64	Line
Mode 1	Pass	QP	900.592k	31.32	56.00	-24.68	Line
Mode 1	Pass	AV	900.592k	25.15	46.00	-20.85	Line
Mode 1	Pass	QP	3.527M	34.09	56.00	-21.91	Line
Mode 1	Pass	AV	3.527M	27.84	46.00	-18.16	Line
Mode 1	Pass	QP	10.616M	34.10	60.00	-25.90	Line
Mode 1	Pass	AV	10.616M	30.04	50.00	-19.96	Line
Mode 1	Pass	QP	152.414k	57.58	65.87	-8.29	Neutral
Mode 1	Pass	AV	152.414k	41.11	55.87	-14.76	Neutral
Mode 1	Pass	QP	247.062k	42.10	61.85	-19.75	Neutral
Mode 1	Pass	AV	247.062k	27.82	51.85	-24.03	Neutral
Mode 1	Pass	QP	371.231k	38.43	58.47	-20.04	Neutral
Mode 1	Pass	AV	371.231k	26.11	48.47	-22.36	Neutral
Mode 1	Pass	QP	1.158M	33.05	56.00	-22.95	Neutral
Mode 1	Pass	AV	1.158M	25.75	46.00	-20.25	Neutral
Mode 1	Pass	QP	3.43M	33.49	56.00	-22.51	Neutral
Mode 1	Pass	AV	3.43M	28.30	46.00	-17.70	Neutral
Mode 1	Pass	QP	10.406M	34.80	60.00	-25.20	Neutral
Mode 1	Pass	AV	10.406M	30.61	50.00	-19.39	Neutral

Conducted Emissions at Powerline_Mode 1



Conducted Emissions at Powerline_Mode 1





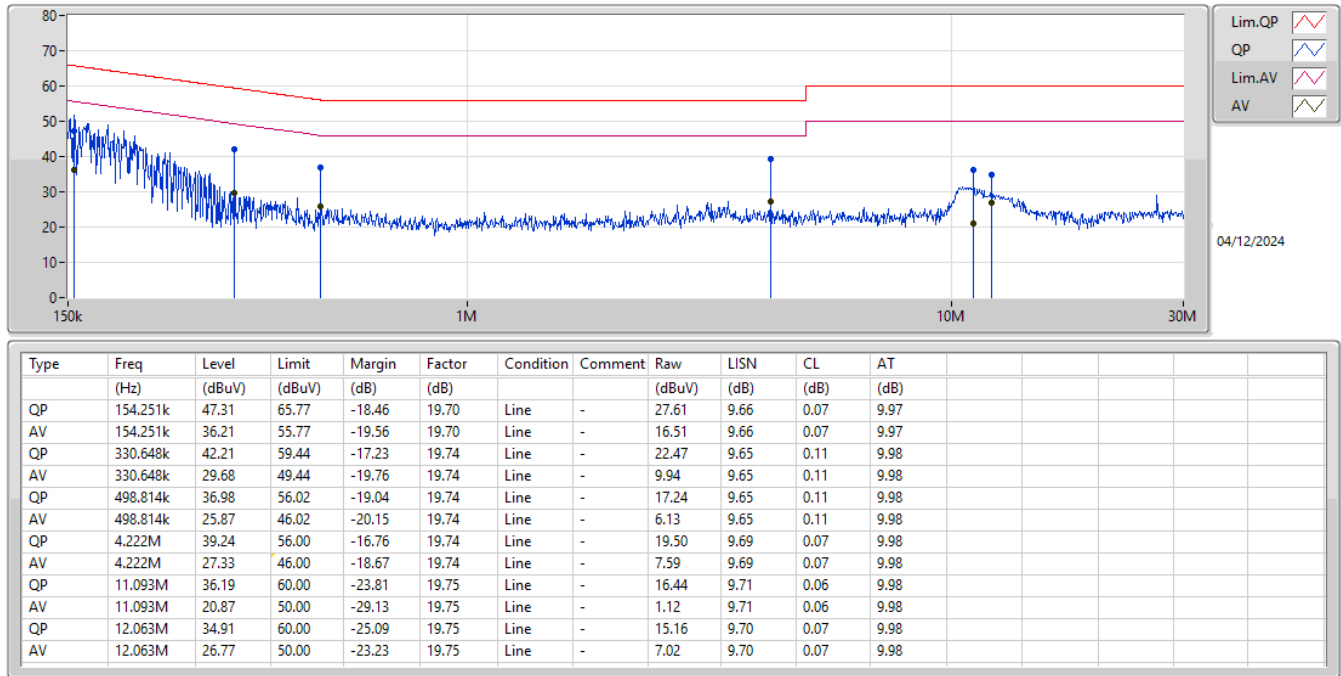
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	49.82	65.96	-16.14	Neutral

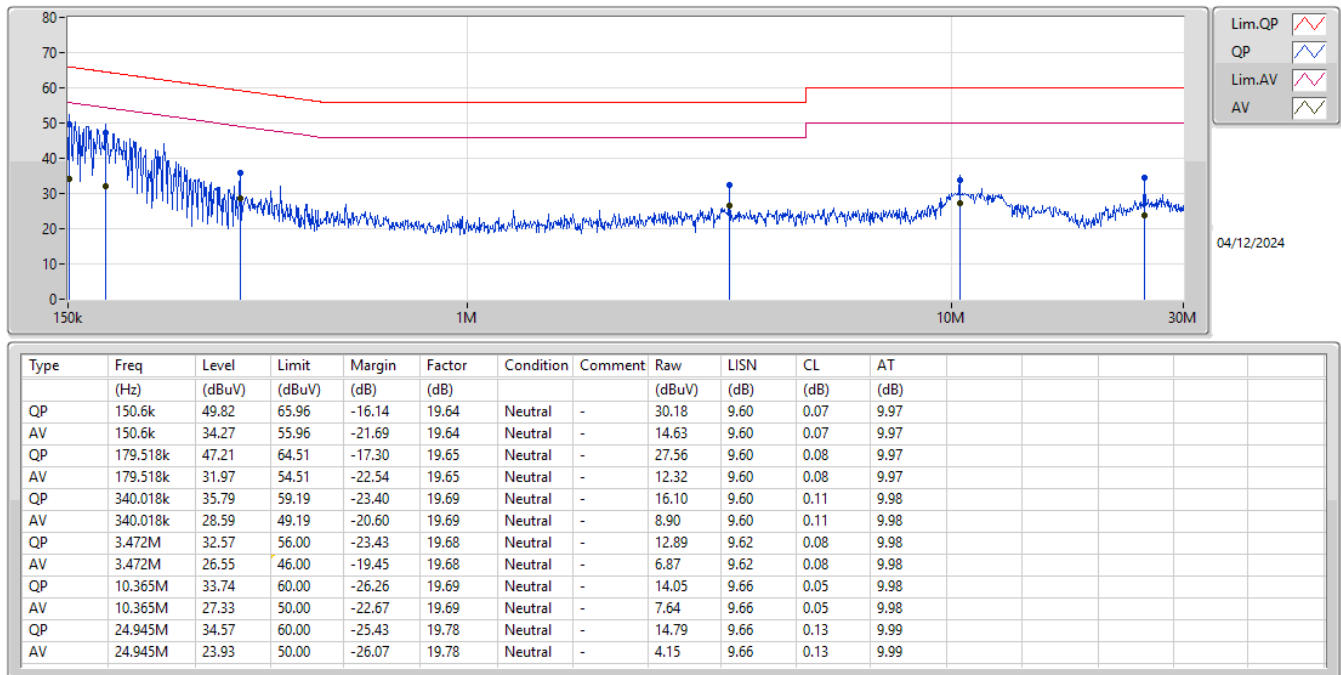
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	154.251k	47.31	65.77	-18.46	Line	-
Mode 1	Pass	AV	154.251k	36.21	55.77	-19.56	Line	-
Mode 1	Pass	QP	330.648k	42.21	59.44	-17.23	Line	-
Mode 1	Pass	AV	330.648k	29.68	49.44	-19.76	Line	-
Mode 1	Pass	QP	498.814k	36.98	56.02	-19.04	Line	-
Mode 1	Pass	AV	498.814k	25.87	46.02	-20.15	Line	-
Mode 1	Pass	QP	4.222M	39.24	56.00	-16.76	Line	-
Mode 1	Pass	AV	4.222M	27.33	46.00	-18.67	Line	-
Mode 1	Pass	QP	11.093M	36.19	60.00	-23.81	Line	-
Mode 1	Pass	AV	11.093M	20.87	50.00	-29.13	Line	-
Mode 1	Pass	QP	12.063M	34.91	60.00	-25.09	Line	-
Mode 1	Pass	AV	12.063M	26.77	50.00	-23.23	Line	-
Mode 1	Pass	QP	150.6k	49.82	65.96	-16.14	Neutral	-
Mode 1	Pass	AV	150.6k	34.27	55.96	-21.69	Neutral	-
Mode 1	Pass	QP	179.518k	47.21	64.51	-17.30	Neutral	-
Mode 1	Pass	AV	179.518k	31.97	54.51	-22.54	Neutral	-
Mode 1	Pass	QP	340.018k	35.79	59.19	-23.40	Neutral	-
Mode 1	Pass	AV	340.018k	28.59	49.19	-20.60	Neutral	-
Mode 1	Pass	QP	3.472M	32.57	56.00	-23.43	Neutral	-
Mode 1	Pass	AV	3.472M	26.55	46.00	-19.45	Neutral	-
Mode 1	Pass	QP	10.365M	33.74	60.00	-26.26	Neutral	-
Mode 1	Pass	AV	10.365M	27.33	50.00	-22.67	Neutral	-
Mode 1	Pass	QP	24.945M	34.57	60.00	-25.43	Neutral	-
Mode 1	Pass	AV	24.945M	23.93	50.00	-26.07	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)	768.75k	1.046M	1M05F1D	692.5k	1.037M
BT-LE(2Mbps)	1.34M	2.116M	2M12F1D	1.295M	2.109M

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	692.5k	1.037M
2440MHz	Pass	500k	768.75k	1.038M
2480MHz	Pass	500k	723.75k	1.046M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.295M	2.111M
2440MHz	Pass	500k	1.34M	2.109M
2480MHz	Pass	500k	1.328M	2.116M

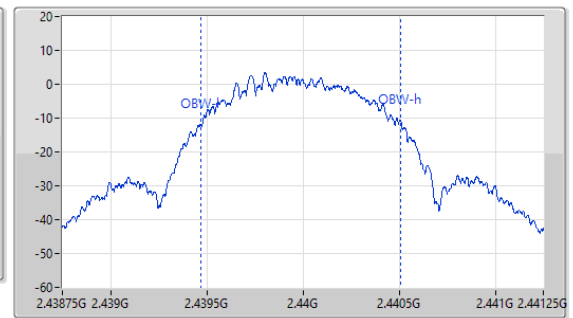
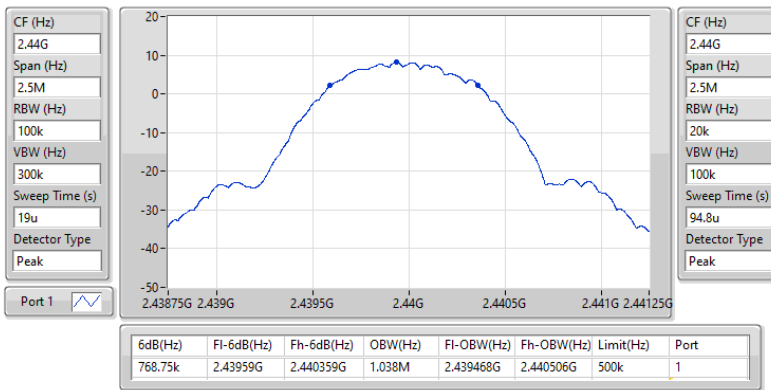
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2440MHz

15/11/2024

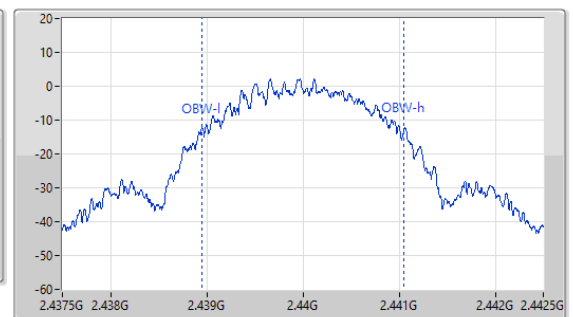
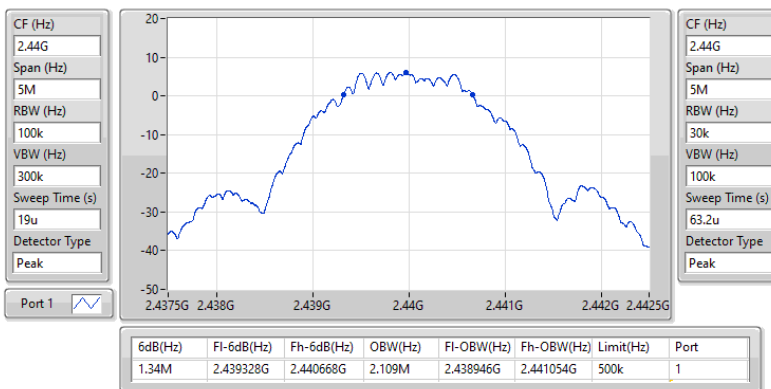


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2440MHz

15/11/2024





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)	748.75k	1.044M	1M04F1D	727.5k	1.036M
BT-LE(2Mbps)	1.29M	2.109M	2M11F1D	1.265M	2.084M

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

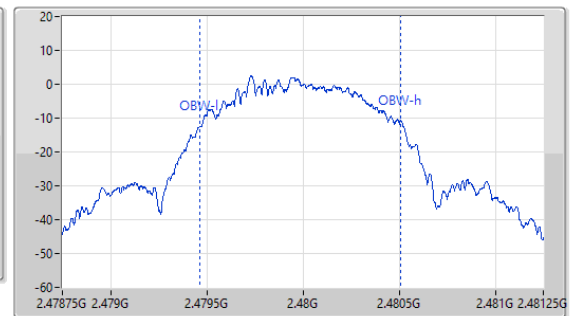
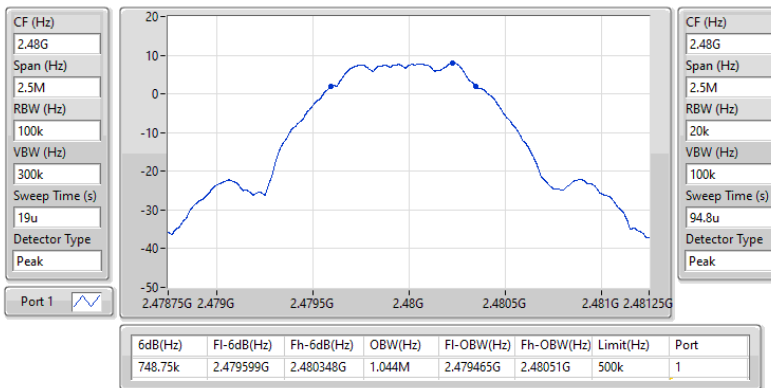
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	731.25k	1.036M
2440MHz	Pass	500k	727.5k	1.039M
2480MHz	Pass	500k	748.75k	1.044M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.265M	2.101M
2440MHz	Pass	500k	1.273M	2.084M
2480MHz	Pass	500k	1.29M	2.109M

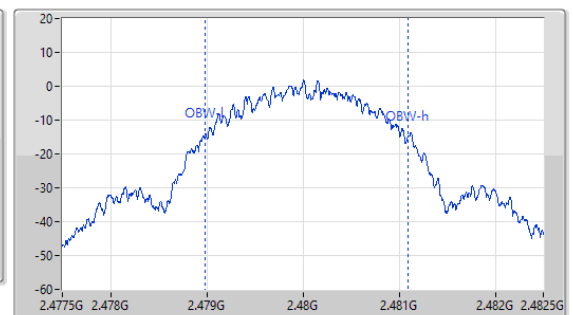
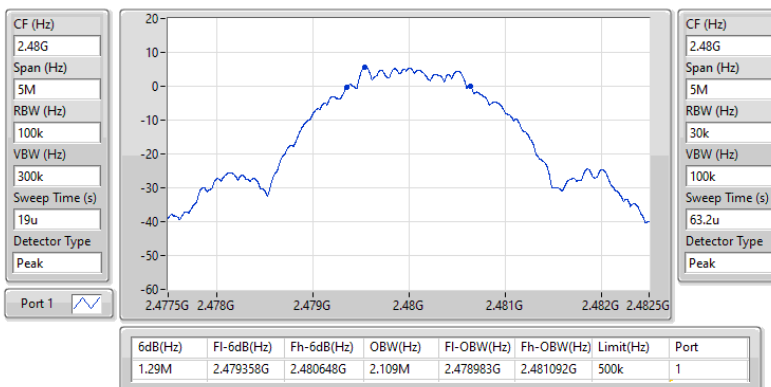
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

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

16/11/2024


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

16/11/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	9.99	0.00998
BT-LE(2Mbps)	9.77	0.00948



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.30	9.99	29.70
2440MHz	Pass	6.30	9.85	29.70
2480MHz	Pass	6.30	9.88	29.70
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.30	9.44	29.70
2440MHz	Pass	6.30	9.77	29.70
2480MHz	Pass	6.30	8.27	29.70

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	10.00	0.01000
BT-LE(2Mbps)	9.83	0.00962

**Result**

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.50	10.00	29.50
2440MHz	Pass	6.50	9.76	29.50
2480MHz	Pass	6.50	9.77	29.50
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.50	9.05	29.50
2440MHz	Pass	6.50	9.80	29.50
2480MHz	Pass	6.50	9.83	29.50

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-7.80
BT-LE(2Mbps)	-7.74

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.30	-7.80	7.70
2440MHz	Pass	6.30	-7.92	7.70
2480MHz	Pass	6.30	-7.91	7.70
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.30	-8.02	7.70
2440MHz	Pass	6.30	-7.74	7.70
2480MHz	Pass	6.30	-9.44	7.70

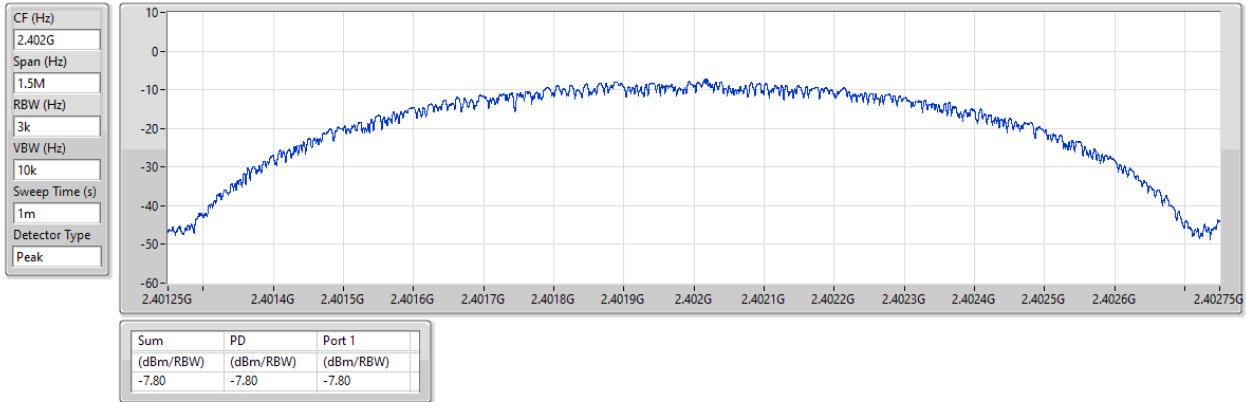
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2402MHz

15/11/2024

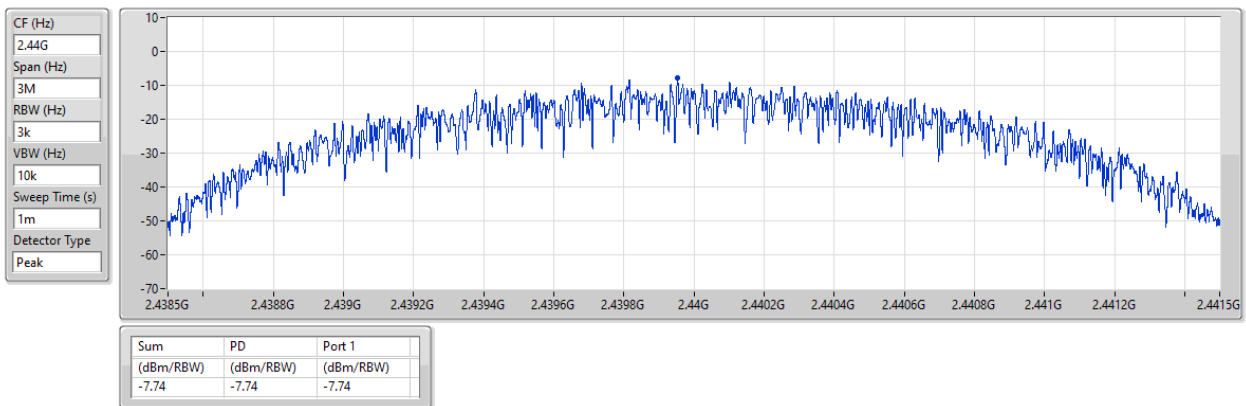


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2440MHz

15/11/2024





Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-8.15
BT-LE(2Mbps)	-8.15

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.50	-8.15	7.50
2440MHz	Pass	6.50	-8.42	7.50
2480MHz	Pass	6.50	-8.43	7.50
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.50	-9.45	7.50
2440MHz	Pass	6.50	-8.15	7.50
2480MHz	Pass	6.50	-8.22	7.50

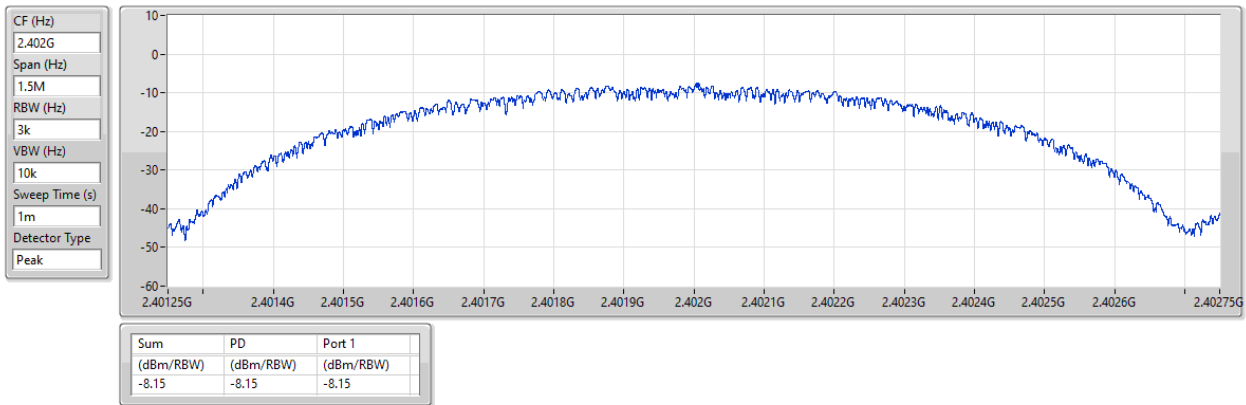
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2402MHz

16/11/2024

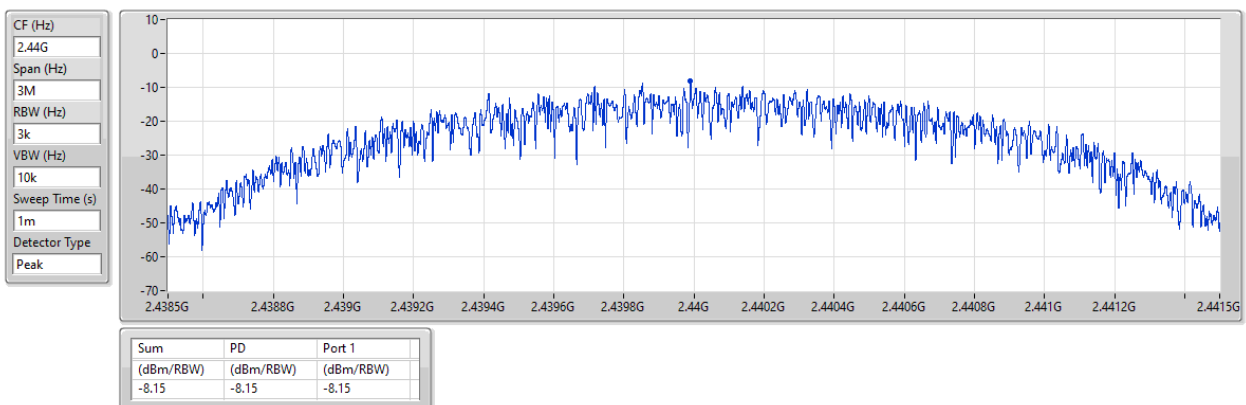


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2440MHz

16/11/2024





Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40217G	9.07	-20.93	1.63388G	-55.19	2.39996G	-42.74	2.4G	-43.62	2.50158G	-54.02	24.52476G	-41.92	1
BT-LE(2Mbps)	Pass	2.44008G	6.63	-23.37	2.3001G	-55.69	2.4G	-24.94	2.4G	-23.66	2.50186G	-53.83	15.18871G	-41.34	1

Result

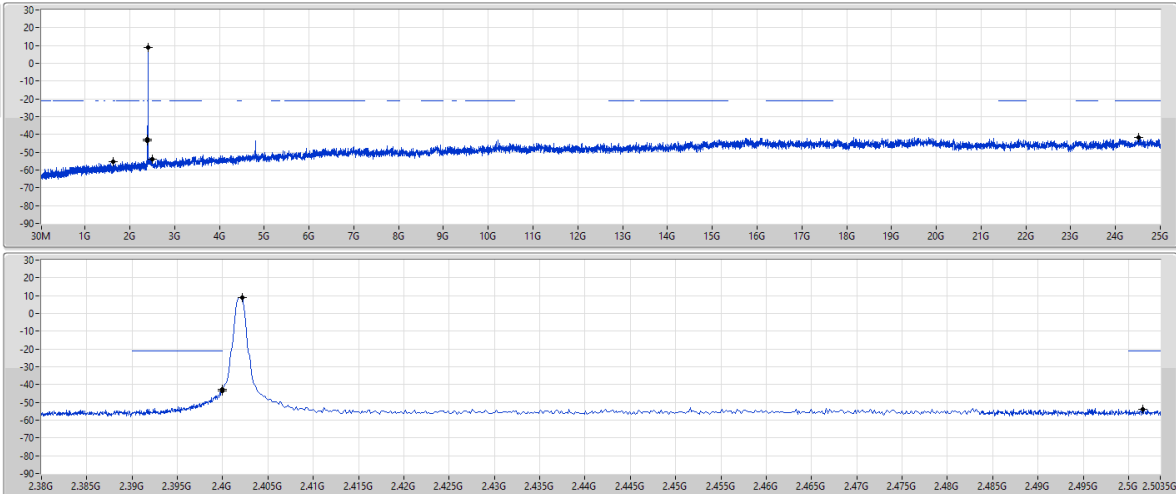
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	9.07	-20.93	1.63388G	-55.19	2.39996G	-42.74	2.4G	-43.62	2.50158G	-54.02	24.52476G	-41.92	1
2440MHz	Pass	2.40217G	9.07	-20.93	1.79955G	-54.70	2.39324G	-54.15	2.4G	-55.74	2.50226G	-53.85	24.57819G	-41.78	1
2480MHz	Pass	2.40217G	9.07	-20.93	2.18025G	-55.75	2.39272G	-53.79	2.4G	-55.82	2.50198G	-53.75	24.28855G	-41.77	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44008G	6.63	-23.37	2.3001G	-55.69	2.4G	-24.94	2.4G	-23.66	2.50186G	-53.83	15.18871G	-41.34	1
2440MHz	Pass	2.44008G	6.63	-23.37	2.16028G	-55.38	2.3994G	-54.25	2.4G	-55.30	2.50166G	-53.74	15.17465G	-41.73	1
2480MHz	Pass	2.44008G	6.63	-23.37	1.957G	-55.08	2.3902G	-53.87	2.4G	-55.45	2.5013G	-53.80	16.94625G	-42.05	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2402MHz

15/11/2024

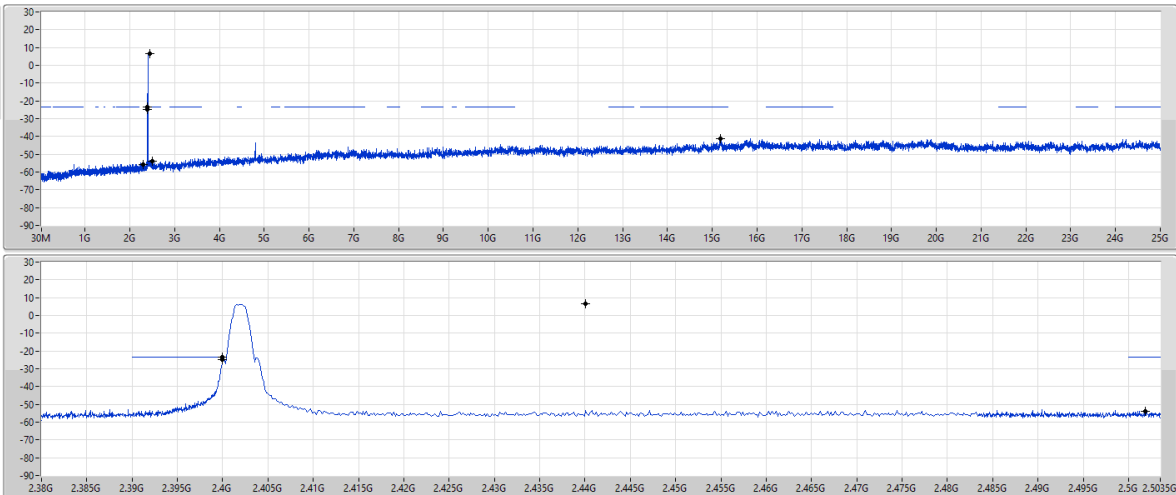
RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2402MHz

06/01/2025

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



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40217G	8.77	-21.23	1.96758G	-53.82	2.39996G	-43.64	2.4G	-43.14	2.50058G	-53.04	24.11701G	-40.70	1
BT-LE(2Mbps)	Pass	2.48033G	6.21	-23.79	2.30363G	-53.66	2.4G	-27.56	2.4G	-26.24	2.5011G	-53.82	14.80065G	-41.94	1

Result

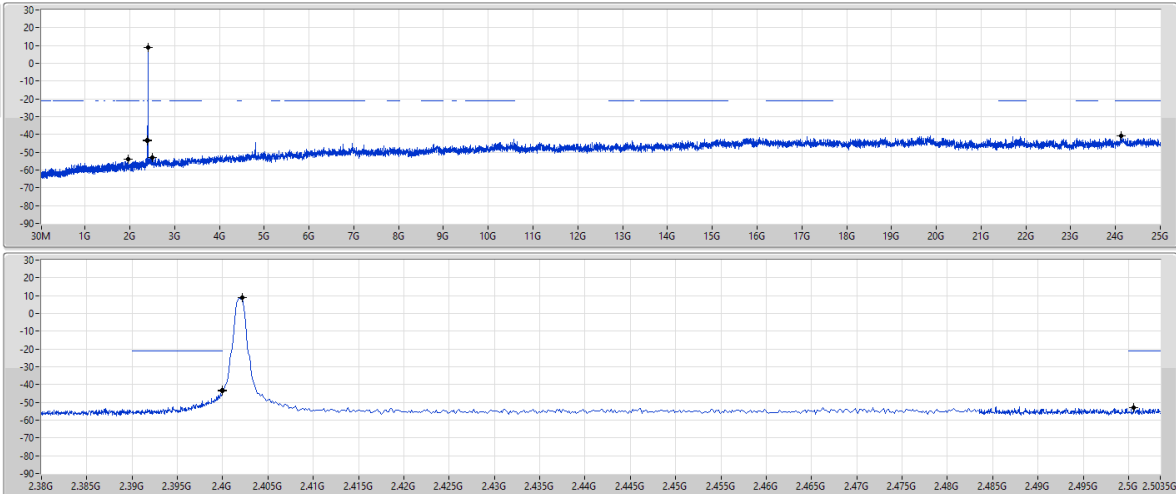
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	8.77	-21.23	1.96758G	-53.82	2.39996G	-43.64	2.4G	-43.14	2.50058G	-53.04	24.11701G	-40.70	1
2440MHz	Pass	2.40217G	8.77	-21.23	2.3001G	-54.76	2.392G	-53.19	2.4G	-55.93	2.50098G	-53.56	24.1367G	-40.53	1
2480MHz	Pass	2.40217G	8.77	-21.23	2.16968G	-54.11	2.39344G	-53.11	2.4G	-54.60	2.50202G	-53.60	24.74973G	-40.82	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48033G	6.21	-23.79	2.30363G	-53.66	2.4G	-27.56	2.4G	-26.24	2.5011G	-53.82	14.80065G	-41.94	1
2440MHz	Pass	2.48033G	6.21	-23.79	2.00518G	-55.49	2.39368G	-53.77	2.4G	-55.04	2.5005G	-52.87	16.68473G	-42.17	1
2480MHz	Pass	2.48033G	6.21	-23.79	1.95465G	-54.44	2.39964G	-54.45	2.4G	-55.48	2.5033G	-52.29	15.29276G	-41.79	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSNdB-DTS

2402MHz

16/11/2024

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

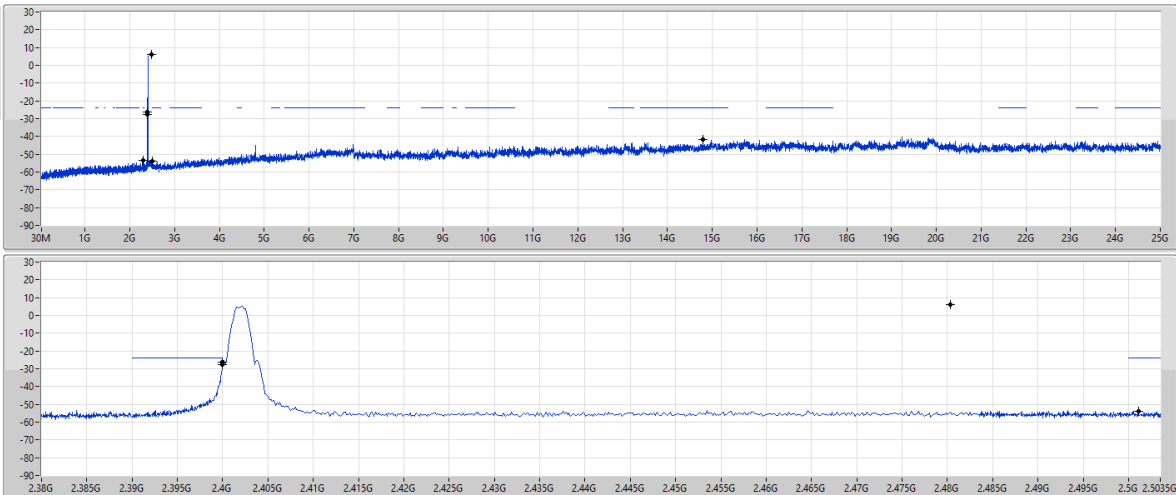
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	8.77	-21.23	1.96758G	-53.82	2.39996G	-43.64	2.4G	-43.14	2.50058G	-53.04	2.411701G	-40.70	1

2.4-2.4835GHz_BT-LE(2Mbps)

CSNdB-DTS

2402MHz

16/11/2024

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

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48033G	6.21	-23.79	2.30363G	-53.66	2.4G	-27.56	2.4G	-26.24	2.5011G	-53.82	14.80065G	-41.94	1



Summary

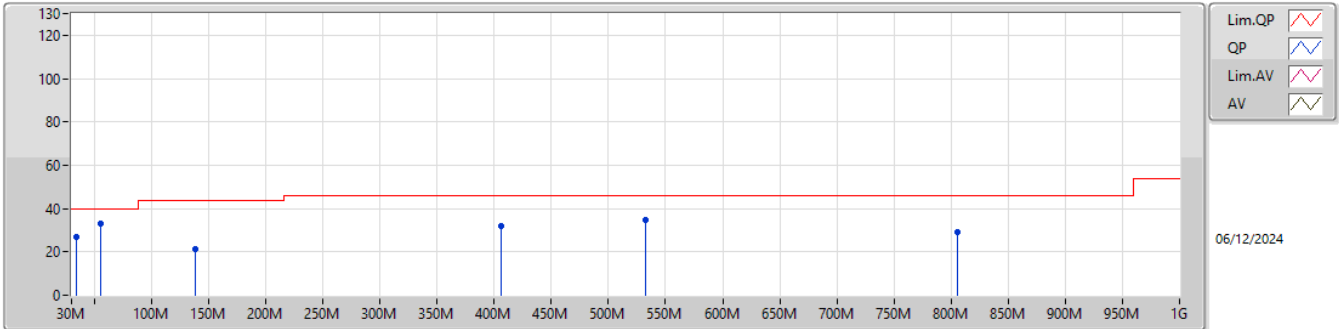
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	55.22M	33.21	40.00	-6.79	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	33.88M	26.80	40.00	-13.20	3	Vertical	360	1.00
2440MHz	Pass	PK	55.22M	33.21	40.00	-6.79	3	Vertical	360	1.00
2440MHz	Pass	PK	138.64M	21.34	43.50	-22.16	3	Vertical	360	1.00
2440MHz	Pass	PK	406.36M	31.85	46.00	-14.15	3	Vertical	360	1.00
2440MHz	Pass	PK	532.46M	34.48	46.00	-11.52	3	Vertical	360	1.00
2440MHz	Pass	PK	806M	29.39	46.00	-16.61	3	Vertical	360	1.00
2440MHz	Pass	PK	30M	24.32	40.00	-15.68	3	Horizontal	0	1.00
2440MHz	Pass	PK	55.22M	20.78	40.00	-19.22	3	Horizontal	0	1.00
2440MHz	Pass	PK	406.36M	34.90	46.00	-11.10	3	Horizontal	0	1.00
2440MHz	Pass	PK	418M	30.53	46.00	-15.47	3	Horizontal	0	1.00
2440MHz	Pass	PK	745.86M	29.69	46.00	-16.31	3	Horizontal	0	1.00
2440MHz	Pass	PK	806M	31.99	46.00	-14.01	3	Horizontal	0	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

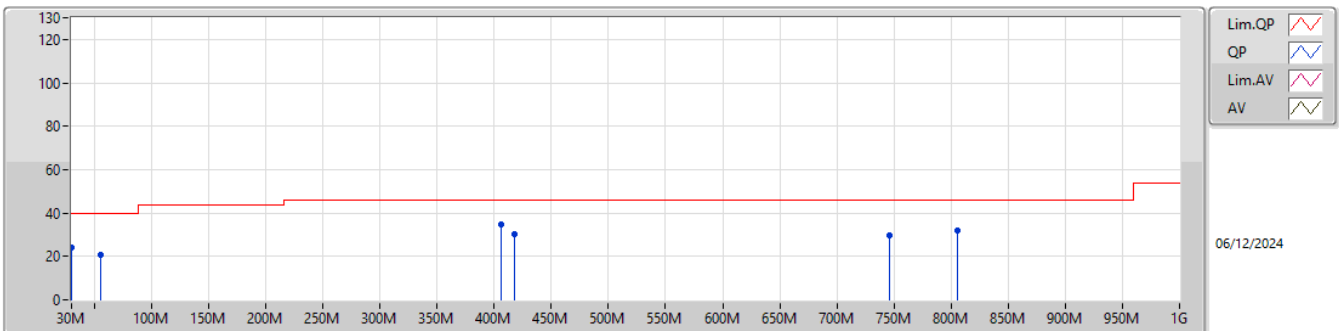
2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	26.80	40.00	-13.20	-4.76	3	Vertical	360	1.00	31.56	21.15	1.15	27.06
PK	55.22M	33.21	40.00	-6.79	-13.34	3	Vertical	360	1.00	46.55	11.50	1.47	26.31
PK	138.64M	21.34	43.50	-22.16	-9.20	3	Vertical	360	1.00	30.54	15.99	2.36	27.55
PK	406.36M	31.85	46.00	-14.15	-2.87	3	Vertical	360	1.00	34.72	20.78	4.16	27.81
PK	532.46M	34.48	46.00	-11.52	-1.06	3	Vertical	360	1.00	35.54	22.46	4.79	28.31
PK	806M	29.39	46.00	-16.61	2.55	3	Vertical	360	1.00	26.84	24.35	6.09	27.89

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	24.32	40.00	-15.68	-3.12	3	Horizontal	0	1.00	27.44	23.18	1.09	27.39
PK	55.22M	20.78	40.00	-19.22	-13.34	3	Horizontal	0	1.00	34.12	11.50	1.47	26.31
PK	406.36M	34.90	46.00	-11.10	-2.87	3	Horizontal	0	1.00	37.77	20.78	4.16	27.81
PK	418M	30.53	46.00	-15.47	-2.36	3	Horizontal	0	1.00	32.89	21.29	4.22	27.87
PK	745.86M	29.69	46.00	-16.31	1.96	3	Horizontal	0	1.00	27.73	24.22	5.80	28.06
PK	806M	31.99	46.00	-14.01	2.55	3	Horizontal	0	1.00	29.44	24.35	6.09	27.89



Summary

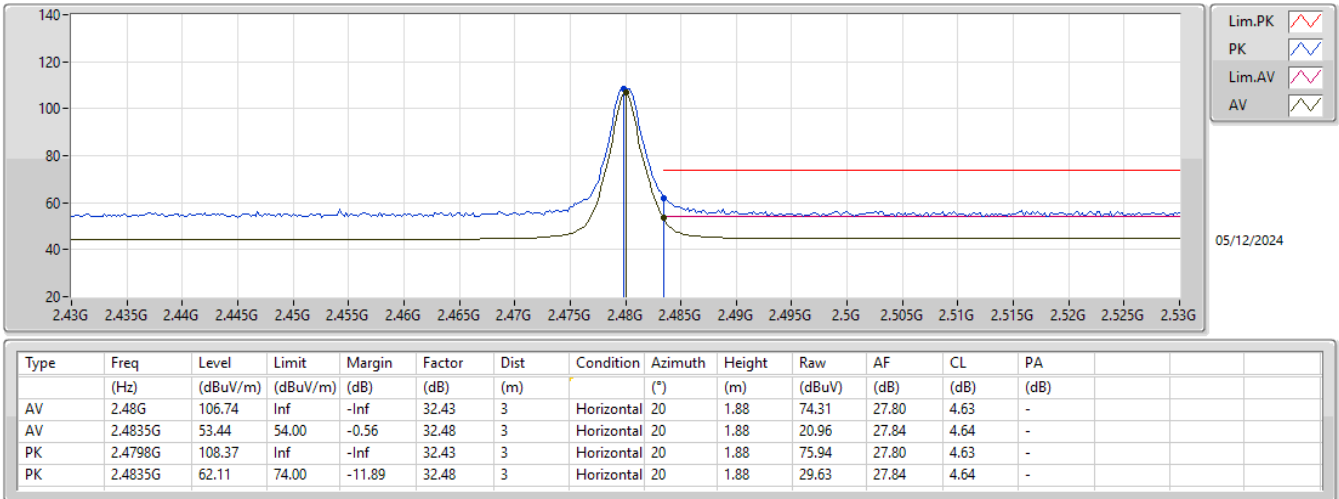
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	53.44	54.00	-0.56	3	Horizontal	20	1.88
BT-LE(2Mbps)	Pass	AV	2.4835G	53.84	54.00	-0.16	3	Horizontal	18	1.88

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	44.41	54.00	-9.59	3	Horizontal	12	1.22
2402MHz	Pass	AV	2.402G	110.63	Inf	-Inf	3	Horizontal	12	1.22
2402MHz	Pass	PK	2.3654G	56.48	74.00	-17.52	3	Horizontal	12	1.22
2402MHz	Pass	PK	2.4018G	112.31	Inf	-Inf	3	Horizontal	12	1.22
2402MHz	Pass	AV	4.80396G	45.89	54.00	-8.11	3	Vertical	312	1.12
2402MHz	Pass	PK	4.80364G	52.05	74.00	-21.95	3	Vertical	312	1.12
2402MHz	Pass	AV	4.80396G	42.57	54.00	-11.43	3	Horizontal	44	2.95
2402MHz	Pass	PK	4.80352G	49.18	74.00	-24.82	3	Horizontal	44	2.95
2440MHz	Pass	AV	2.3504G	43.98	54.00	-10.02	3	Horizontal	12	1.56
2440MHz	Pass	AV	2.44G	110.23	Inf	-Inf	3	Horizontal	12	1.56
2440MHz	Pass	AV	2.4988G	44.67	54.00	-9.33	3	Horizontal	12	1.56
2440MHz	Pass	PK	2.3896G	56.11	74.00	-17.89	3	Horizontal	12	1.56
2440MHz	Pass	PK	2.4396G	111.89	Inf	-Inf	3	Horizontal	12	1.56
2440MHz	Pass	PK	2.49G	57.13	74.00	-16.87	3	Horizontal	12	1.56
2440MHz	Pass	AV	4.87996G	41.54	54.00	-12.46	3	Vertical	305	1.01
2440MHz	Pass	PK	4.87936G	48.59	74.00	-25.41	3	Vertical	305	1.01
2440MHz	Pass	AV	4.87996G	37.22	54.00	-16.78	3	Horizontal	360	2.85
2440MHz	Pass	PK	4.88048G	45.51	74.00	-28.49	3	Horizontal	360	2.85
2480MHz	Pass	AV	2.48G	106.74	Inf	-Inf	3	Horizontal	20	1.88
2480MHz	Pass	AV	2.4835G	53.44	54.00	-0.56	3	Horizontal	20	1.88
2480MHz	Pass	PK	2.4798G	108.37	Inf	-Inf	3	Horizontal	20	1.88
2480MHz	Pass	PK	2.4835G	62.11	74.00	-11.89	3	Horizontal	20	1.88
2480MHz	Pass	AV	4.95996G	38.14	54.00	-15.86	3	Vertical	306	1.11
2480MHz	Pass	PK	4.9604G	46.22	74.00	-27.78	3	Vertical	306	1.11
2480MHz	Pass	AV	4.95996G	34.80	54.00	-19.20	3	Horizontal	36	2.95
2480MHz	Pass	PK	4.95976G	44.01	74.00	-29.99	3	Horizontal	36	2.95
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.39G	44.67	54.00	-9.33	3	Horizontal	11	1.21
2402MHz	Pass	AV	2.402G	111.28	Inf	-Inf	3	Horizontal	11	1.21
2402MHz	Pass	PK	2.3834G	56.13	74.00	-17.87	3	Horizontal	11	1.21
2402MHz	Pass	PK	2.4018G	112.51	Inf	-Inf	3	Horizontal	11	1.21
2402MHz	Pass	AV	4.80396G	47.64	54.00	-6.36	3	Vertical	318	1.14
2402MHz	Pass	PK	4.80436G	51.93	74.00	-22.07	3	Vertical	318	1.14
2402MHz	Pass	AV	4.80396G	44.18	54.00	-9.82	3	Horizontal	46	2.96
2402MHz	Pass	PK	4.8044G	49.33	74.00	-24.67	3	Horizontal	46	2.96
2440MHz	Pass	AV	2.35G	43.99	54.00	-10.01	3	Horizontal	10	1.54
2440MHz	Pass	AV	2.44G	110.82	Inf	-Inf	3	Horizontal	10	1.54
2440MHz	Pass	AV	2.4984G	44.67	54.00	-9.33	3	Horizontal	10	1.54
2440MHz	Pass	PK	2.3472G	56.27	74.00	-17.73	3	Horizontal	10	1.54
2440MHz	Pass	PK	2.4396G	112.01	Inf	-Inf	3	Horizontal	10	1.54
2440MHz	Pass	PK	2.4888G	56.72	74.00	-17.28	3	Horizontal	10	1.54
2440MHz	Pass	AV	4.87996G	43.01	54.00	-10.99	3	Vertical	306	1.02
2440MHz	Pass	PK	4.87992G	48.58	74.00	-25.42	3	Vertical	306	1.02
2440MHz	Pass	AV	4.87996G	38.20	54.00	-15.80	3	Horizontal	358	3.00
2440MHz	Pass	PK	4.88036G	45.48	74.00	-28.52	3	Horizontal	358	3.00
2480MHz	Pass	AV	2.48G	106.14	Inf	-Inf	3	Horizontal	18	1.88
2480MHz	Pass	AV	2.4835G	53.84	54.00	-0.16	3	Horizontal	18	1.88
2480MHz	Pass	PK	2.4798G	107.28	Inf	-Inf	3	Horizontal	18	1.88
2480MHz	Pass	PK	2.4835G	63.32	74.00	-10.68	3	Horizontal	18	1.88
2480MHz	Pass	AV	4.95996G	38.61	54.00	-15.39	3	Vertical	312	1.40
2480MHz	Pass	PK	4.96044G	45.30	74.00	-28.70	3	Vertical	312	1.40
2480MHz	Pass	AV	4.95996G	36.00	54.00	-18.00	3	Horizontal	35	2.90
2480MHz	Pass	PK	4.9594G	44.03	74.00	-29.97	3	Horizontal	35	2.90

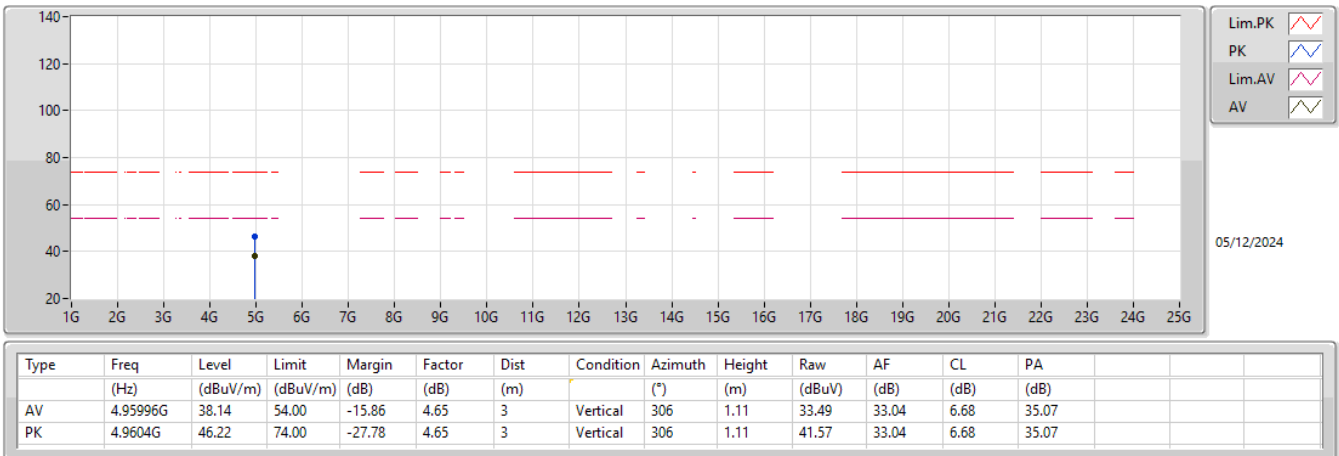
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



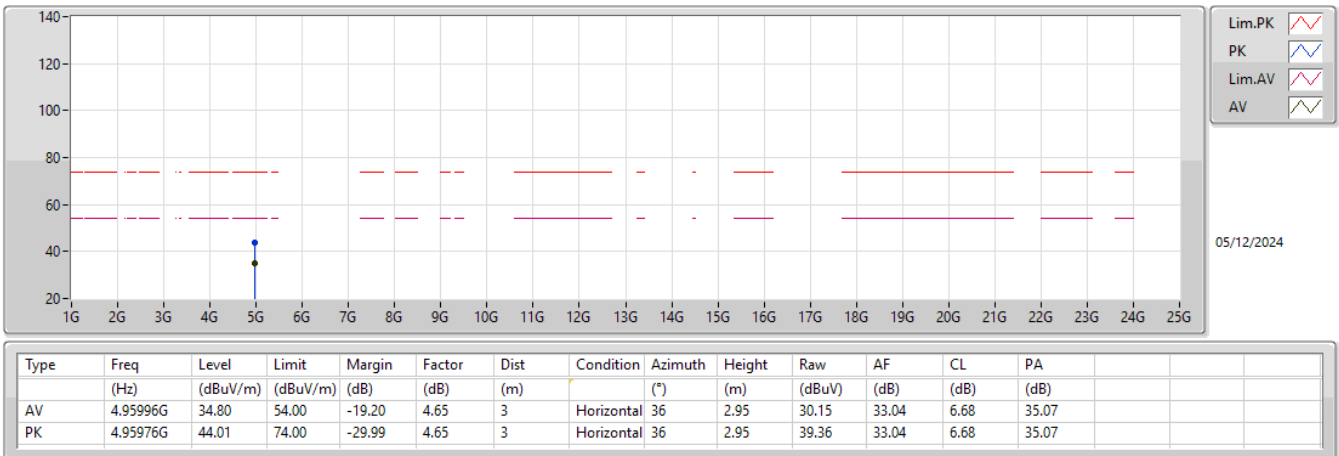
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



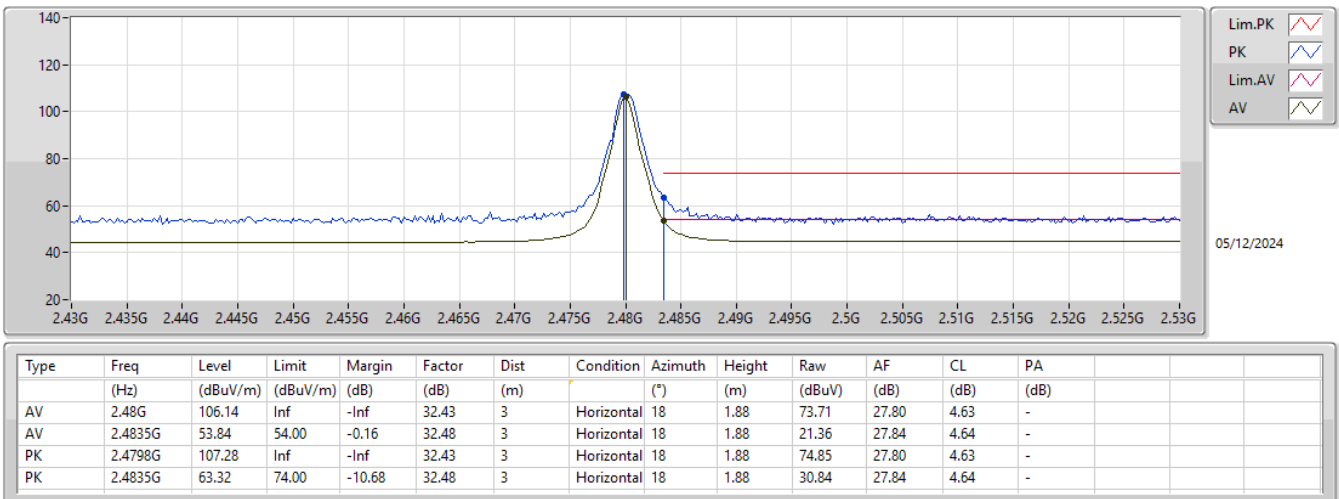
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



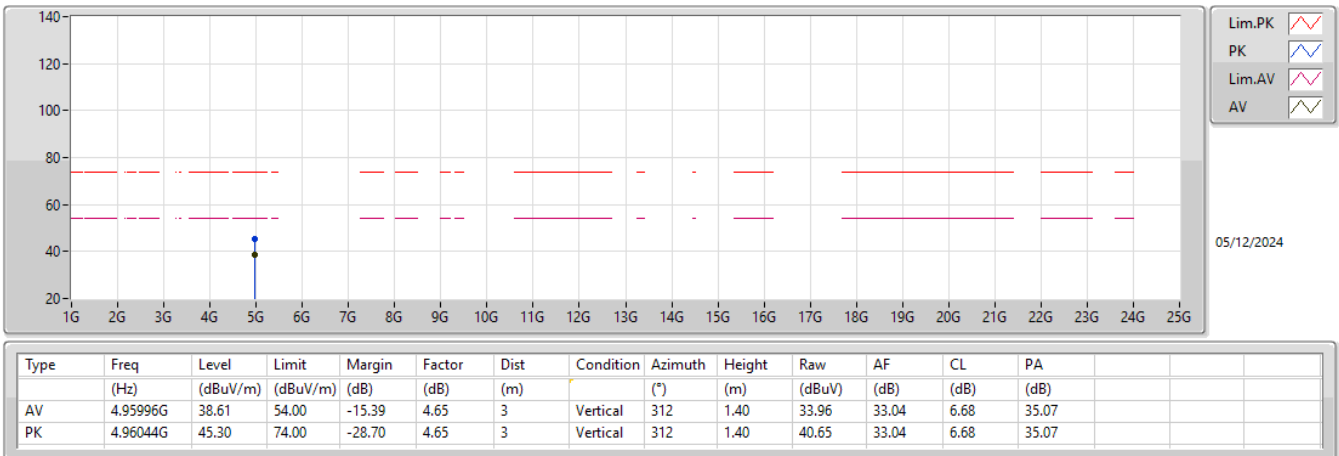
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



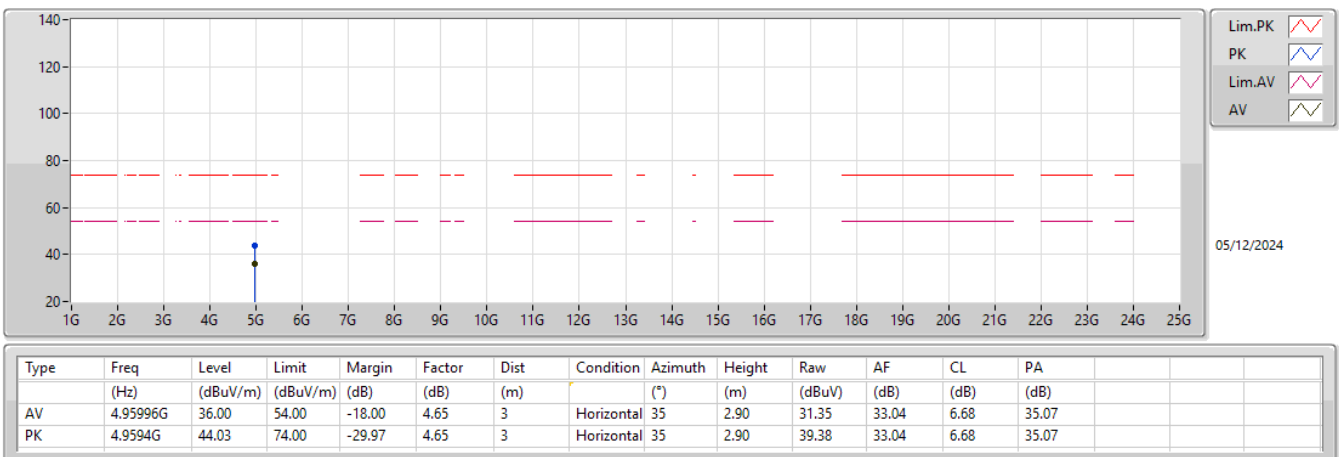
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





Summary

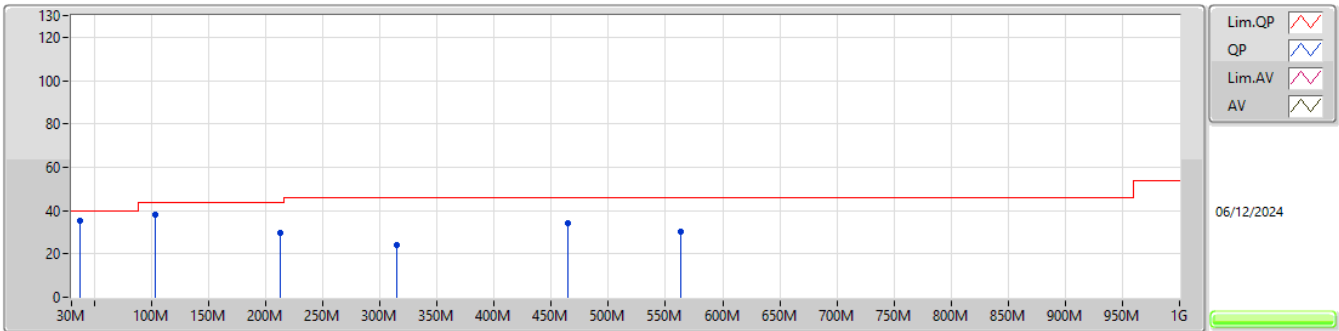
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	37.76M	35.33	40.00	-4.67	3	Vertical	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	37.76M	35.33	40.00	-4.67	3	Vertical	0	1.00
2440MHz	Pass	PK	103.72M	38.15	43.50	-5.35	3	Vertical	0	1.00
2440MHz	Pass	PK	212.36M	29.88	43.50	-13.62	3	Vertical	0	1.00
2440MHz	Pass	PK	315.18M	24.32	46.00	-21.68	3	Vertical	0	1.00
2440MHz	Pass	PK	464.56M	33.95	46.00	-12.05	3	Vertical	0	1.00
2440MHz	Pass	PK	563.5M	30.01	46.00	-15.99	3	Vertical	0	1.00
2440MHz	Pass	PK	57.16M	26.12	40.00	-13.88	3	Horizontal	360	1.00
2440MHz	Pass	PK	103.72M	27.66	43.50	-15.84	3	Horizontal	360	1.00
2440MHz	Pass	PK	175.5M	30.24	43.50	-13.26	3	Horizontal	360	1.00
2440MHz	Pass	PK	286.08M	26.11	46.00	-19.89	3	Horizontal	360	1.00
2440MHz	Pass	PK	418M	38.29	46.00	-7.71	3	Horizontal	360	1.00
2440MHz	Pass	PK	559.62M	30.60	46.00	-15.40	3	Horizontal	360	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

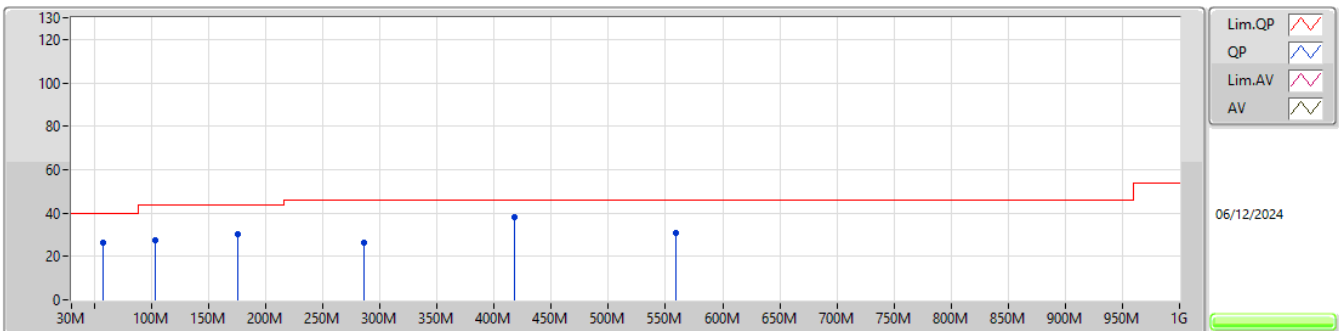
2440MHz_TX



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	37.76M	35.33	40.00	-4.67	-23.11	3	Vertical	0	1.00	58.44	20.86	0.44	44.41
PK	103.72M	38.15	43.50	-5.35	-27.20	3	Vertical	0	1.00	65.35	16.51	0.82	44.53
PK	212.36M	29.88	43.50	-13.62	-28.07	3	Vertical	0	1.00	57.95	15.25	1.13	44.45
PK	315.18M	24.32	46.00	-21.68	-23.60	3	Vertical	0	1.00	47.92	19.39	1.23	44.22
PK	464.56M	33.95	46.00	-12.05	-18.96	3	Vertical	0	1.00	52.91	23.42	1.55	43.93
PK	563.5M	30.01	46.00	-15.99	-15.67	3	Vertical	0	1.00	45.68	26.53	1.67	43.87

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



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	57.16M	26.12	40.00	-13.88	-31.99	3	Horizontal	360	1.00	58.11	12.11	0.53	44.63
PK	103.72M	27.66	43.50	-15.84	-27.20	3	Horizontal	360	1.00	54.86	16.51	0.82	44.53
PK	175.5M	30.24	43.50	-13.26	-28.01	3	Horizontal	360	1.00	58.25	15.50	1.02	44.53
PK	286.08M	26.11	46.00	-19.89	-24.03	3	Horizontal	360	1.00	50.14	19.07	1.19	44.29
PK	418M	38.29	46.00	-7.71	-19.79	3	Horizontal	360	1.00	58.08	22.73	1.47	43.99
PK	559.62M	30.60	46.00	-15.40	-15.53	3	Horizontal	360	1.00	46.13	26.67	1.67	43.87



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	47.67	54.00	-6.33	3	Horizontal	5	1.00
BT-LE(2Mbps)	Pass	AV	2.4835G	50.78	54.00	-3.22	3	Horizontal	5	1.01

Result

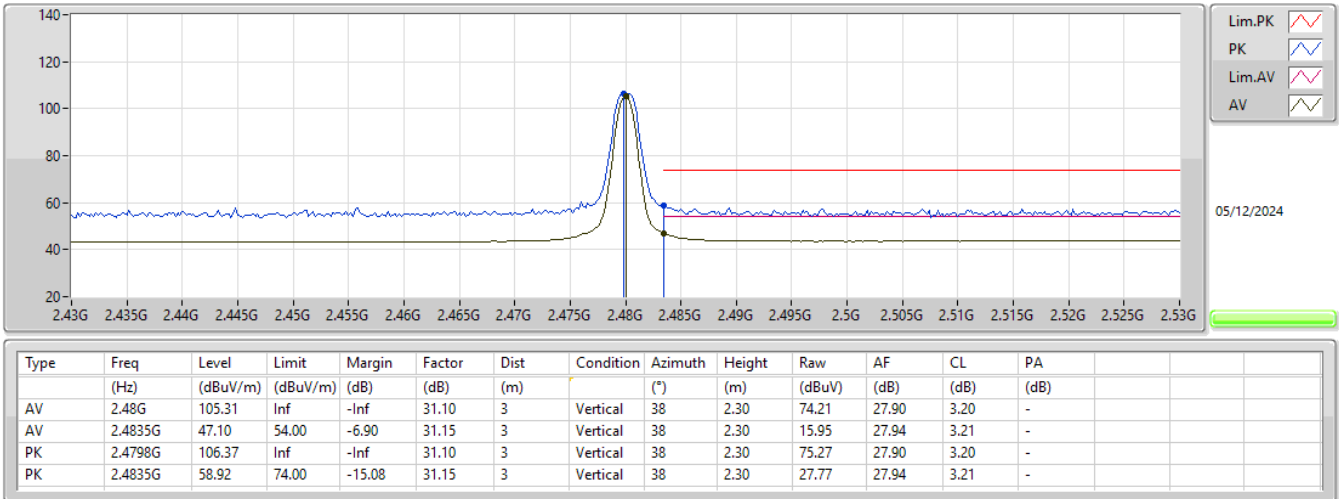
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.39G	43.05	54.00	-10.95	3	Vertical	40	2.01
2402MHz	Pass	AV	2.402G	108.32	Inf	-Inf	3	Vertical	40	2.01
2402MHz	Pass	PK	2.3812G	56.76	74.00	-17.24	3	Vertical	40	2.01
2402MHz	Pass	PK	2.4022G	109.40	Inf	-Inf	3	Vertical	40	2.01
2402MHz	Pass	AV	2.39G	43.03	54.00	-10.97	3	Horizontal	358	1.37
2402MHz	Pass	AV	2.402G	108.24	Inf	-Inf	3	Horizontal	358	1.37
2402MHz	Pass	PK	2.385G	56.38	74.00	-17.62	3	Horizontal	358	1.37
2402MHz	Pass	PK	2.4022G	109.31	Inf	-Inf	3	Horizontal	358	1.37
2402MHz	Pass	AV	4.804G	46.47	54.00	-7.53	3	Vertical	64	1.00
2402MHz	Pass	PK	4.80459G	52.25	74.00	-21.75	3	Vertical	64	1.00
2402MHz	Pass	AV	4.80398G	40.66	54.00	-13.34	3	Horizontal	52	1.66
2402MHz	Pass	PK	4.80353G	47.90	74.00	-26.10	3	Horizontal	52	1.66
2402MHz	Pass	AV	2.3896G	42.93	54.00	-11.07	3	Vertical	43	1.65
2440MHz	Pass	AV	2.44G	107.07	Inf	-Inf	3	Vertical	43	1.65
2440MHz	Pass	AV	2.4896G	43.70	54.00	-10.30	3	Vertical	43	1.65
2440MHz	Pass	PK	2.3696G	56.69	74.00	-17.31	3	Vertical	43	1.65
2440MHz	Pass	PK	2.4396G	108.15	Inf	-Inf	3	Vertical	43	1.65
2440MHz	Pass	PK	2.4936G	56.94	74.00	-17.06	3	Vertical	43	1.65
2440MHz	Pass	AV	2.3692G	42.95	54.00	-11.05	3	Horizontal	6	1.00
2440MHz	Pass	AV	2.44G	108.05	Inf	-Inf	3	Horizontal	6	1.00
2440MHz	Pass	AV	2.4848G	43.69	54.00	-10.31	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.3896G	56.30	74.00	-17.70	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.4396G	109.13	Inf	-Inf	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.4964G	56.50	74.00	-17.50	3	Horizontal	6	1.00
2440MHz	Pass	AV	4.87997G	39.57	54.00	-14.43	3	Vertical	61	1.02
2440MHz	Pass	PK	4.88038G	47.84	74.00	-26.16	3	Vertical	61	1.02
2440MHz	Pass	AV	4.87999G	34.95	54.00	-19.05	3	Horizontal	31	2.87
2440MHz	Pass	PK	4.87962G	45.35	74.00	-28.65	3	Horizontal	31	2.87
2480MHz	Pass	AV	2.48G	105.31	Inf	-Inf	3	Vertical	38	2.30
2480MHz	Pass	AV	2.4835G	47.10	54.00	-6.90	3	Vertical	38	2.30
2480MHz	Pass	PK	2.4798G	106.37	Inf	-Inf	3	Vertical	38	2.30
2480MHz	Pass	PK	2.4835G	58.92	74.00	-15.08	3	Vertical	38	2.30
2480MHz	Pass	AV	2.48G	106.47	Inf	-Inf	3	Horizontal	5	1.00
2480MHz	Pass	AV	2.4835G	47.67	54.00	-6.33	3	Horizontal	5	1.00
2480MHz	Pass	PK	2.4798G	107.55	Inf	-Inf	3	Horizontal	5	1.00
2480MHz	Pass	PK	2.4835G	59.47	74.00	-14.53	3	Horizontal	5	1.00
2480MHz	Pass	AV	4.96002G	40.29	54.00	-13.71	3	Vertical	61	1.00
2480MHz	Pass	PK	4.96058G	48.07	74.00	-25.93	3	Vertical	61	1.00
2480MHz	Pass	AV	4.96004G	35.48	54.00	-18.52	3	Horizontal	42	1.73
2480MHz	Pass	PK	4.96059G	45.57	74.00	-28.43	3	Horizontal	42	1.73
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3896G	43.10	54.00	-10.90	3	Vertical	40	1.99
2402MHz	Pass	AV	2.402G	105.67	Inf	-Inf	3	Vertical	40	1.99
2402MHz	Pass	PK	2.3812G	56.60	74.00	-17.40	3	Vertical	40	1.99
2402MHz	Pass	PK	2.4024G	108.53	Inf	-Inf	3	Vertical	40	1.99
2402MHz	Pass	AV	2.39G	43.19	54.00	-10.81	3	Horizontal	3	1.34
2402MHz	Pass	AV	2.402G	105.45	Inf	-Inf	3	Horizontal	3	1.34
2402MHz	Pass	PK	2.3738G	56.97	74.00	-17.03	3	Horizontal	3	1.34
2402MHz	Pass	PK	2.4024G	108.20	Inf	-Inf	3	Horizontal	3	1.34
2402MHz	Pass	AV	4.80358G	41.60	54.00	-12.40	3	Vertical	63	1.13
2402MHz	Pass	PK	4.80301G	51.97	74.00	-22.03	3	Vertical	63	1.13
2402MHz	Pass	AV	4.80354G	37.03	54.00	-16.97	3	Horizontal	51	1.54
2402MHz	Pass	PK	4.80299G	47.82	74.00	-26.18	3	Horizontal	51	1.54
2440MHz	Pass	AV	2.3768G	42.88	54.00	-11.12	3	Vertical	35	1.64
2440MHz	Pass	AV	2.44G	103.42	Inf	-Inf	3	Vertical	35	1.64
2440MHz	Pass	AV	2.4908G	43.70	54.00	-10.30	3	Vertical	35	1.64
2440MHz	Pass	PK	2.362G	56.28	74.00	-17.72	3	Vertical	35	1.64
2440MHz	Pass	PK	2.4396G	106.14	Inf	-Inf	3	Vertical	35	1.64
2440MHz	Pass	PK	2.4908G	56.61	74.00	-17.39	3	Vertical	35	1.64
2440MHz	Pass	AV	2.36G	42.88	54.00	-11.12	3	Horizontal	6	1.01



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2440MHz	Pass	AV	2.44G	104.81	Inf	-Inf	3	Horizontal	6	1.01
2440MHz	Pass	AV	2.4856G	43.68	54.00	-10.32	3	Horizontal	6	1.01
2440MHz	Pass	PK	2.3536G	56.92	74.00	-17.08	3	Horizontal	6	1.01
2440MHz	Pass	PK	2.4404G	107.57	Inf	-Inf	3	Horizontal	6	1.01
2440MHz	Pass	PK	2.4972G	56.35	74.00	-17.65	3	Horizontal	6	1.01
2440MHz	Pass	AV	4.87911G	35.61	54.00	-18.39	3	Vertical	62	1.01
2440MHz	Pass	PK	4.87895G	46.76	74.00	-27.24	3	Vertical	62	1.01
2440MHz	Pass	AV	4.87909G	32.36	54.00	-21.64	3	Horizontal	31	2.87
2440MHz	Pass	PK	4.87913G	44.67	74.00	-29.33	3	Horizontal	31	2.87
2480MHz	Pass	AV	2.48G	102.52	Inf	-Inf	3	Vertical	39	2.34
2480MHz	Pass	AV	2.4835G	49.98	54.00	-4.02	3	Vertical	39	2.34
2480MHz	Pass	PK	2.4796G	105.39	Inf	-Inf	3	Vertical	39	2.34
2480MHz	Pass	PK	2.4835G	60.95	74.00	-13.05	3	Vertical	39	2.34
2480MHz	Pass	AV	2.48G	103.80	Inf	-Inf	3	Horizontal	5	1.01
2480MHz	Pass	AV	2.4835G	50.78	54.00	-3.22	3	Horizontal	5	1.01
2480MHz	Pass	PK	2.4796G	106.58	Inf	-Inf	3	Horizontal	5	1.01
2480MHz	Pass	PK	2.4835G	62.86	74.00	-11.14	3	Horizontal	5	1.01
2480MHz	Pass	AV	4.96088G	36.84	54.00	-17.16	3	Vertical	61	1.00
2480MHz	Pass	PK	4.96077G	47.98	74.00	-26.02	3	Vertical	61	1.00
2480MHz	Pass	AV	4.96085G	32.75	54.00	-21.25	3	Horizontal	40	1.65
2480MHz	Pass	PK	4.96088G	45.27	74.00	-28.73	3	Horizontal	40	1.65

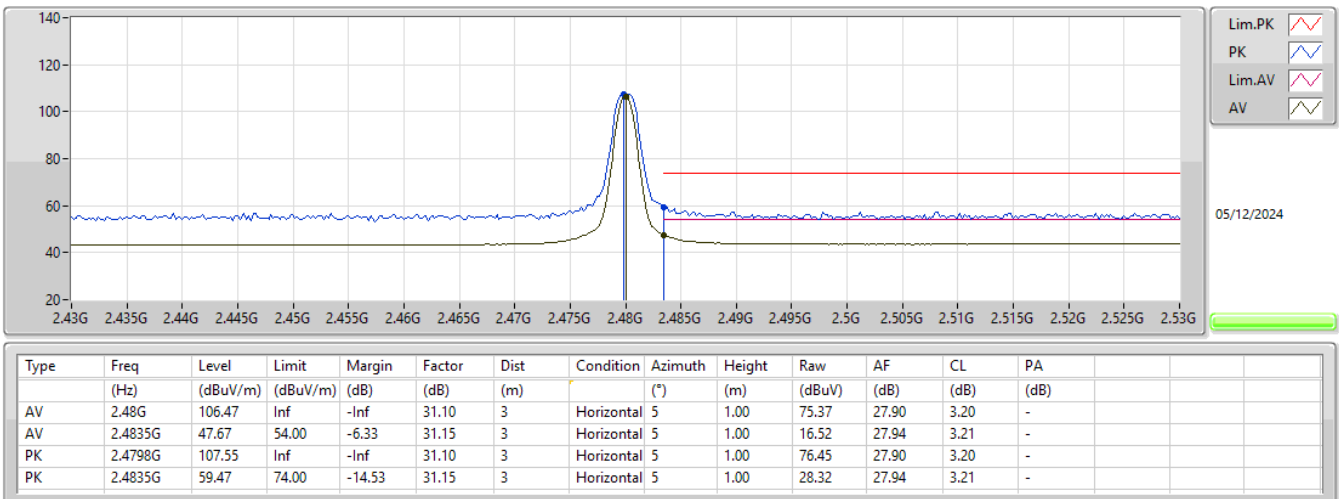
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



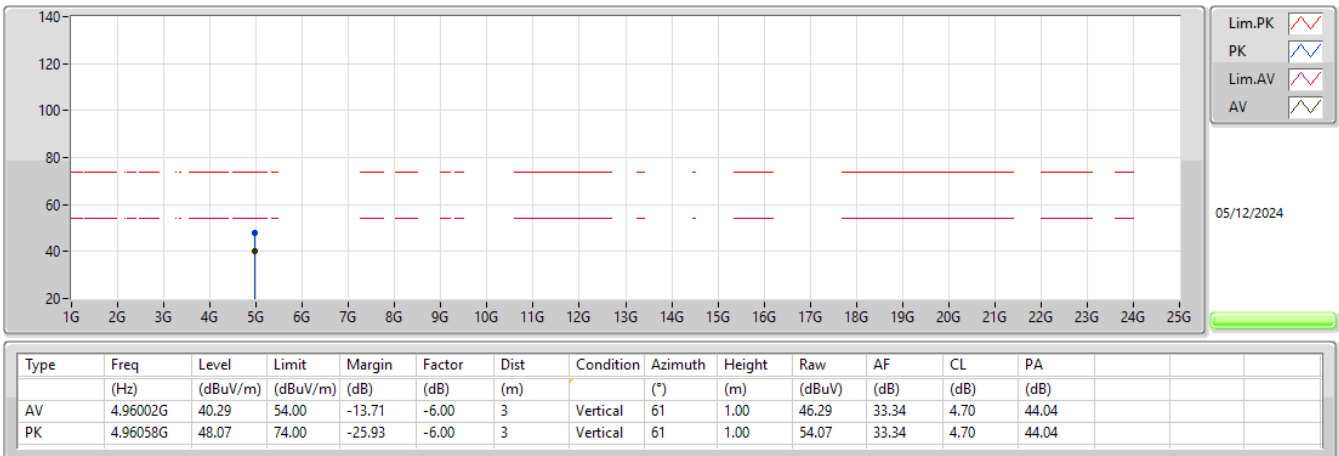
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



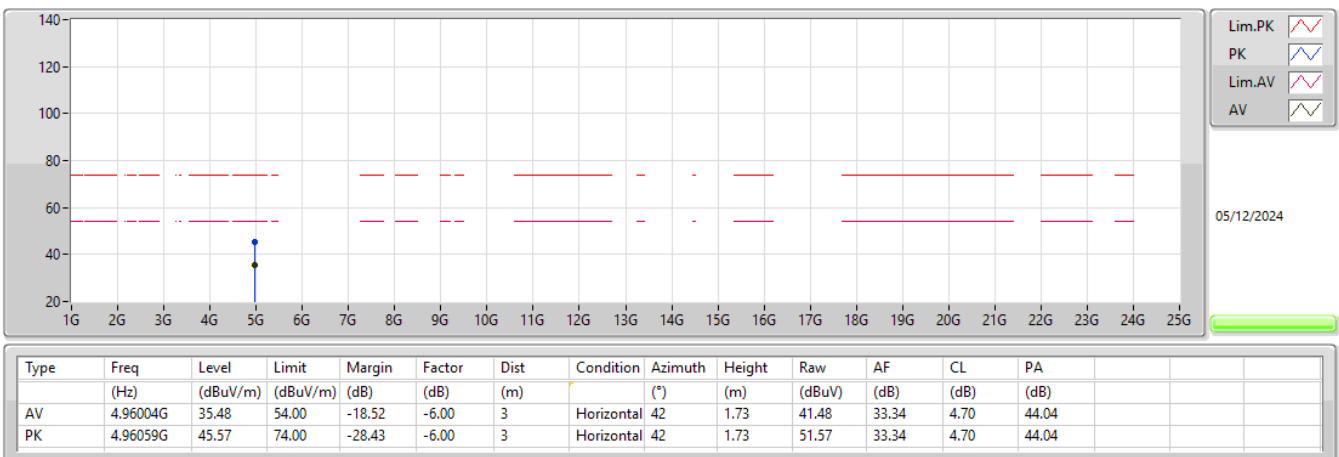
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



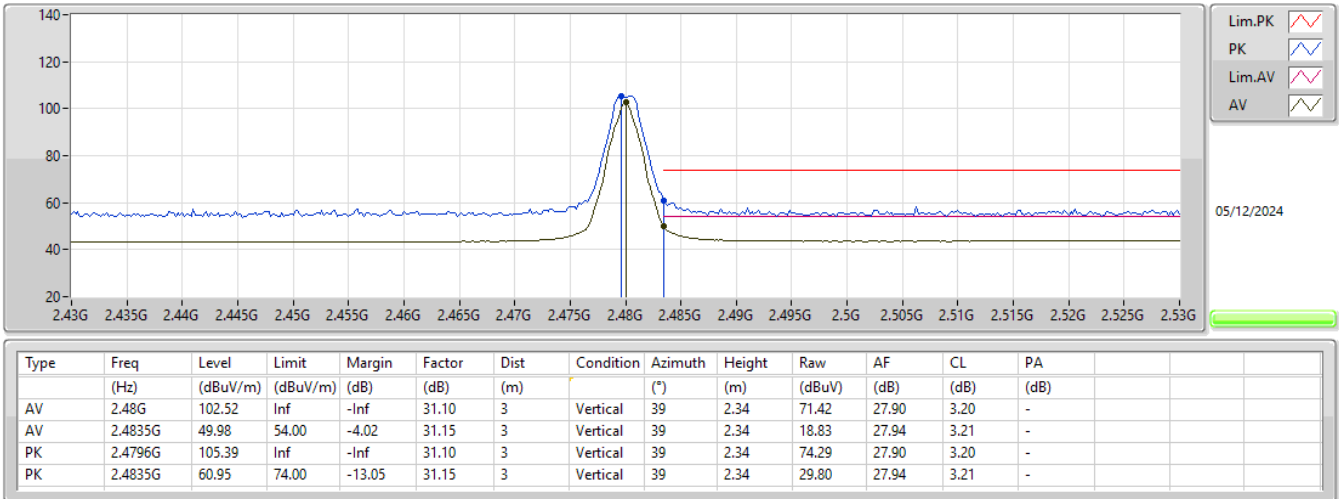
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



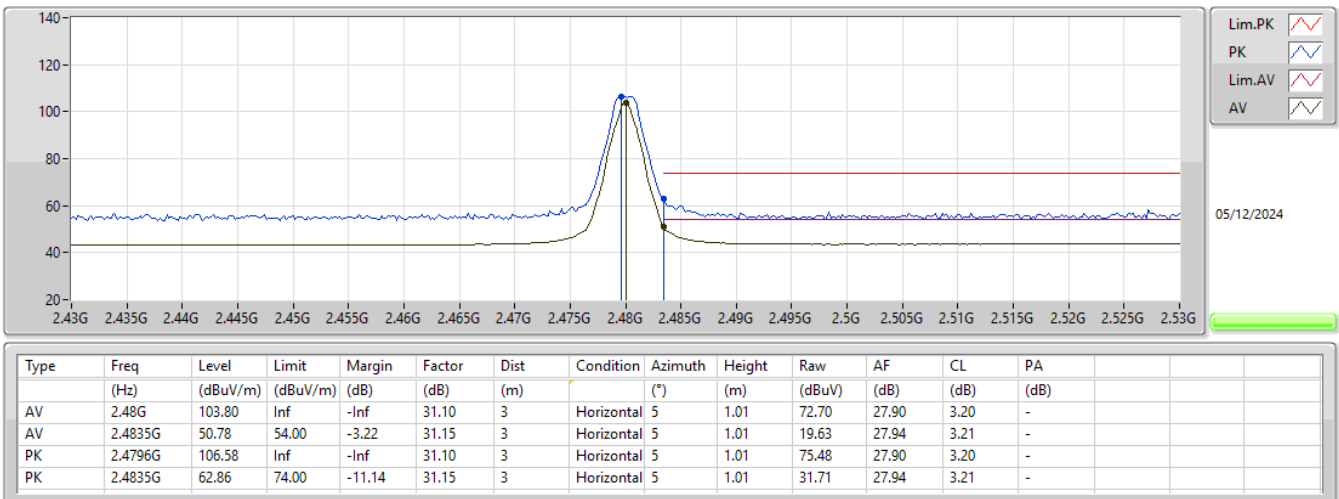
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



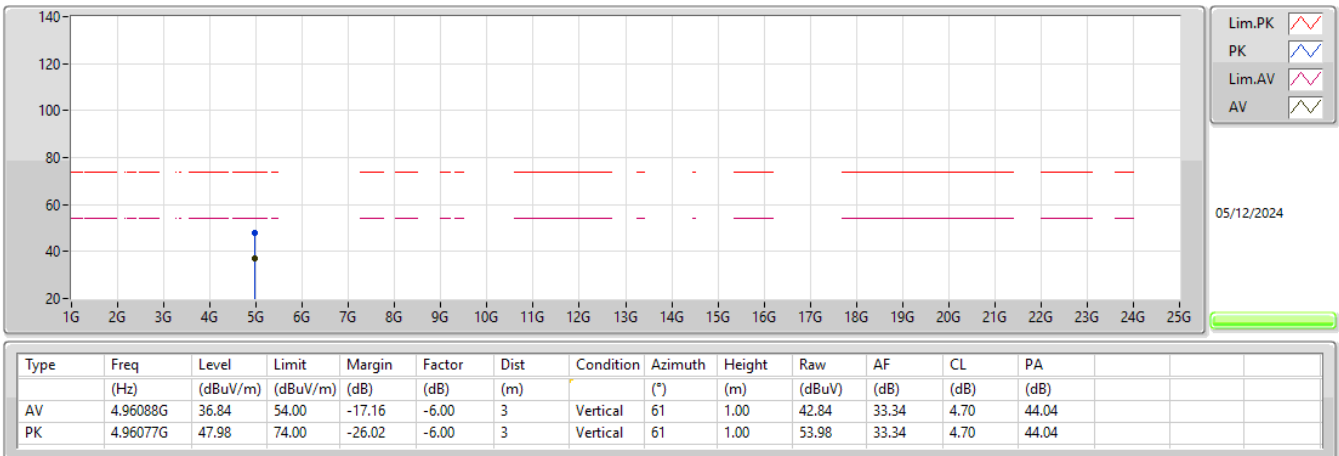
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



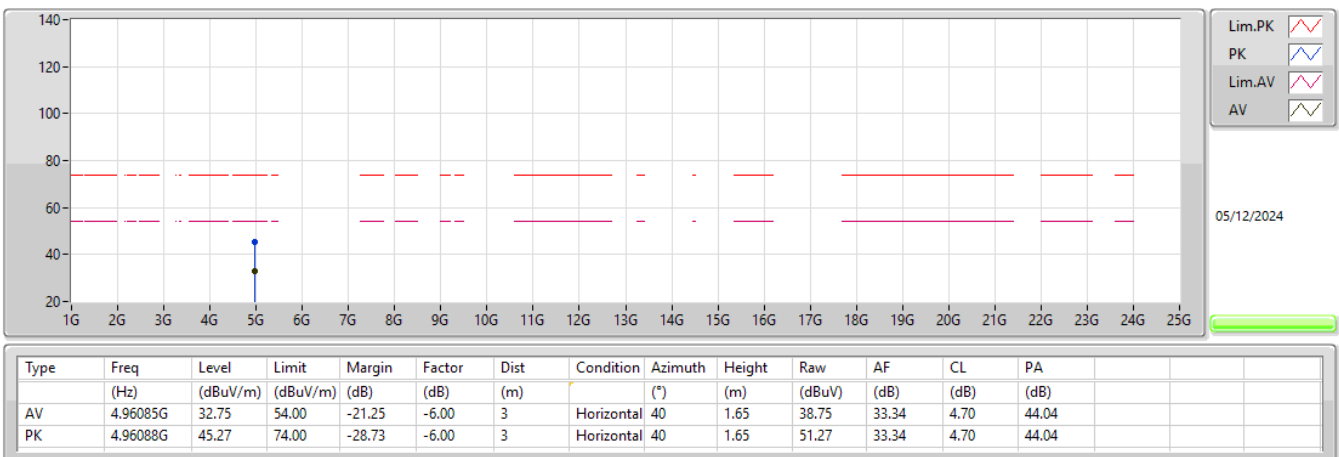
2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX





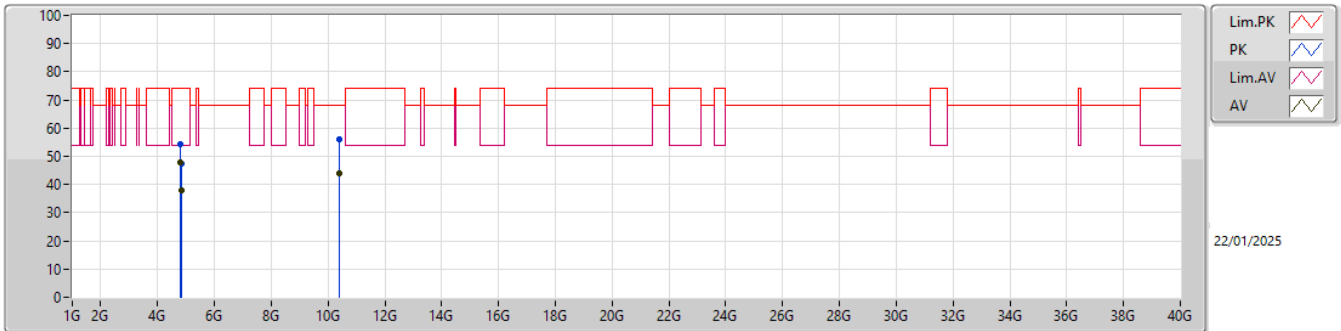
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.80404G	47.99	54.00	-6.01	Vertical
Mode 2	Pass	AV	4.80394G	47.72	54.00	-6.28	Vertical

Result

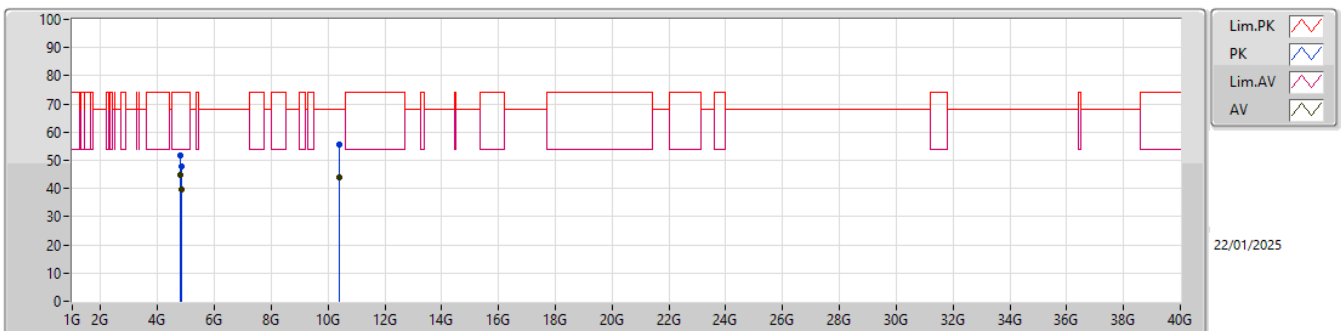
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.80404G	47.99	54.00	-6.01	3	Vertical	314	1.01
Mode 1	Pass	AV	4.82403G	37.85	54.00	-16.15	3	Vertical	0	2.50
Mode 1	Pass	AV	10.40033G	43.77	68.20	-24.43	3	Vertical	190	1.50
Mode 1	Pass	PK	4.80434G	54.19	74.00	-19.81	3	Vertical	314	1.01
Mode 1	Pass	PK	4.82403G	47.32	74.00	-26.68	3	Vertical	0	2.50
Mode 1	Pass	PK	10.40069G	56.23	68.20	-11.97	3	Vertical	190	1.50
Mode 1	Pass	AV	4.80397G	44.95	54.00	-9.05	3	Horizontal	32	1.00
Mode 1	Pass	AV	4.82394G	39.56	54.00	-14.44	3	Horizontal	302	1.05
Mode 1	Pass	AV	10.40035G	43.81	68.20	-24.39	3	Horizontal	360	2.62
Mode 1	Pass	PK	4.80464G	51.92	74.00	-22.08	3	Horizontal	32	1.00
Mode 1	Pass	PK	4.82402G	47.91	74.00	-26.09	3	Horizontal	302	1.05
Mode 1	Pass	PK	10.39989G	55.50	68.20	-12.70	3	Horizontal	360	2.62
Mode 2	Pass	AV	4.80394G	47.72	54.00	-6.28	3	Vertical	313	1.00
Mode 2	Pass	AV	4.82393G	37.70	54.00	-16.30	3	Vertical	0	2.51
Mode 2	Pass	AV	10.40049G	43.90	54.00	-10.10	3	Vertical	76	2.61
Mode 2	Pass	AV	10.46044G	44.15	54.00	-9.85	3	Vertical	355	1.50
Mode 2	Pass	PK	4.80456G	53.98	74.00	-20.02	3	Vertical	313	1.00
Mode 2	Pass	PK	4.82375G	47.82	74.00	-26.18	3	Vertical	0	2.51
Mode 2	Pass	PK	10.40023G	56.18	74.00	-17.82	3	Vertical	76	2.61
Mode 2	Pass	PK	10.46062G	56.94	74.00	-17.06	3	Vertical	355	1.50
Mode 2	Pass	AV	4.80404G	44.68	54.00	-9.32	3	Horizontal	34	1.00
Mode 2	Pass	AV	4.82406G	37.58	54.00	-16.42	3	Horizontal	0	1.20
Mode 2	Pass	AV	10.40026G	43.88	54.00	-10.12	3	Horizontal	325	2.44
Mode 2	Pass	AV	10.45981G	44.14	54.00	-9.86	3	Horizontal	247	1.69
Mode 2	Pass	PK	4.80348G	52.26	74.00	-21.74	3	Horizontal	34	1.00
Mode 2	Pass	PK	4.82418G	48.51	74.00	-25.49	3	Horizontal	0	1.20
Mode 2	Pass	PK	10.39904G	56.33	74.00	-17.67	3	Horizontal	325	2.44
Mode 2	Pass	PK	10.4595G	56.42	74.00	-17.58	3	Horizontal	247	1.69

Radiated Emissions above 1GHz_Mode 1



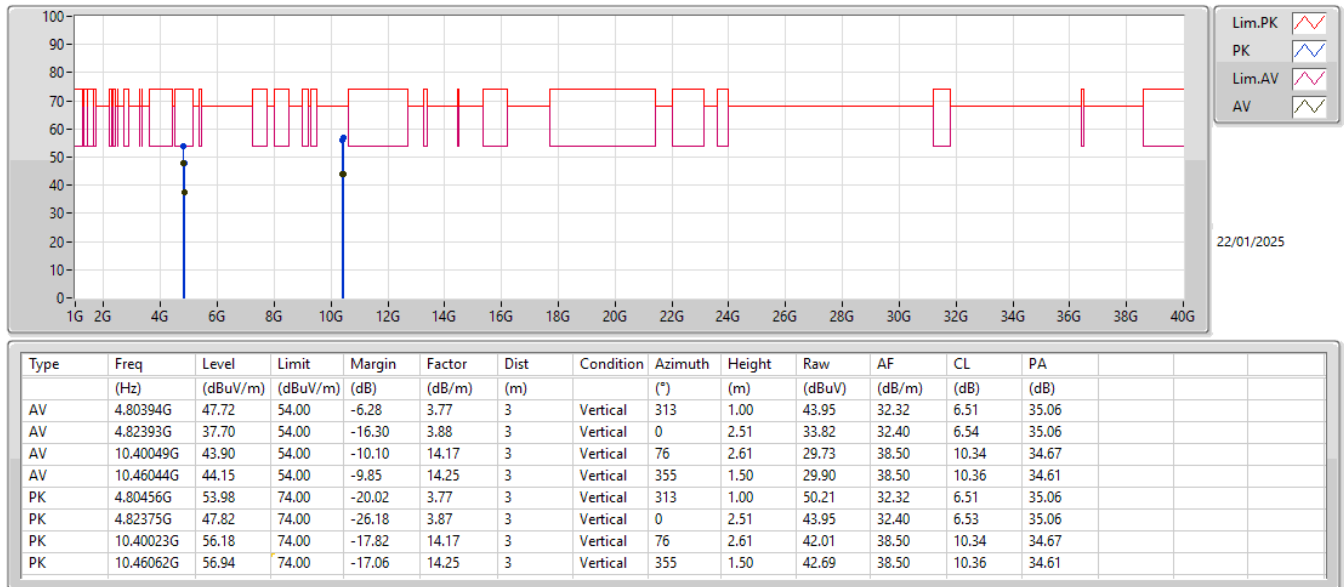
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80404G	47.99	54.00	-6.01	3.77	3	Vertical	314	1.01	44.22	32.32	6.51	35.06
AV	4.82403G	37.85	54.00	-16.15	3.88	3	Vertical	0	2.50	33.97	32.40	6.54	35.06
AV	10.40033G	43.77	68.20	-24.43	14.17	3	Vertical	190	1.50	29.60	38.50	10.34	34.67
PK	4.80434G	54.19	74.00	-19.81	3.77	3	Vertical	314	1.01	50.42	32.32	6.51	35.06
PK	4.82403G	47.32	74.00	-26.68	3.88	3	Vertical	0	2.50	43.44	32.40	6.54	35.06
PK	10.40069G	56.23	68.20	-11.97	14.17	3	Vertical	190	1.50	42.06	38.50	10.34	34.67

Radiated Emissions above 1GHz_Mode 1

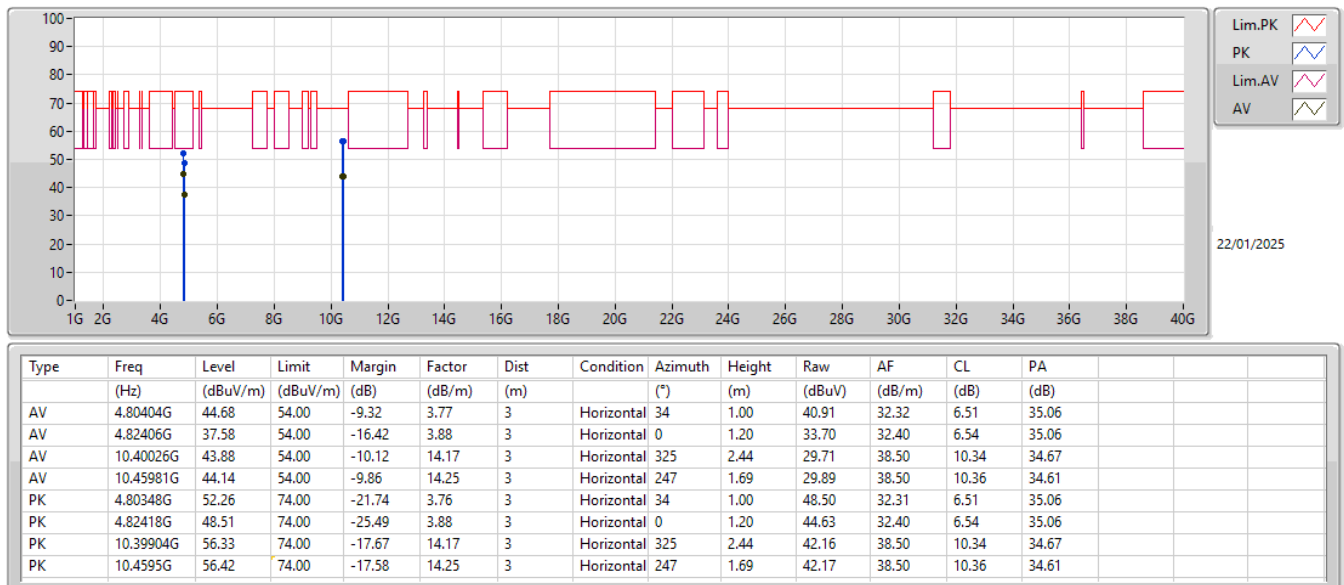


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80397G	44.95	54.00	-9.05	3.77	3	Horizontal	32	1.00	41.18	32.32	6.51	35.06
AV	4.82394G	39.56	54.00	-14.44	3.88	3	Horizontal	302	1.05	35.68	32.40	6.54	35.06
AV	10.40035G	43.81	68.20	-24.39	14.17	3	Horizontal	360	2.62	29.64	38.50	10.34	34.67
PK	4.80464G	51.92	74.00	-22.08	3.77	3	Horizontal	32	1.00	48.15	32.32	6.51	35.06
PK	4.82402G	47.91	74.00	-26.09	3.88	3	Horizontal	302	1.05	44.03	32.40	6.54	35.06
PK	10.39989G	55.50	68.20	-12.70	14.17	3	Horizontal	360	2.62	41.33	38.50	10.34	34.67

Radiated Emissions above 1GHz_Mode 2



Radiated Emissions above 1GHz_Mode 2





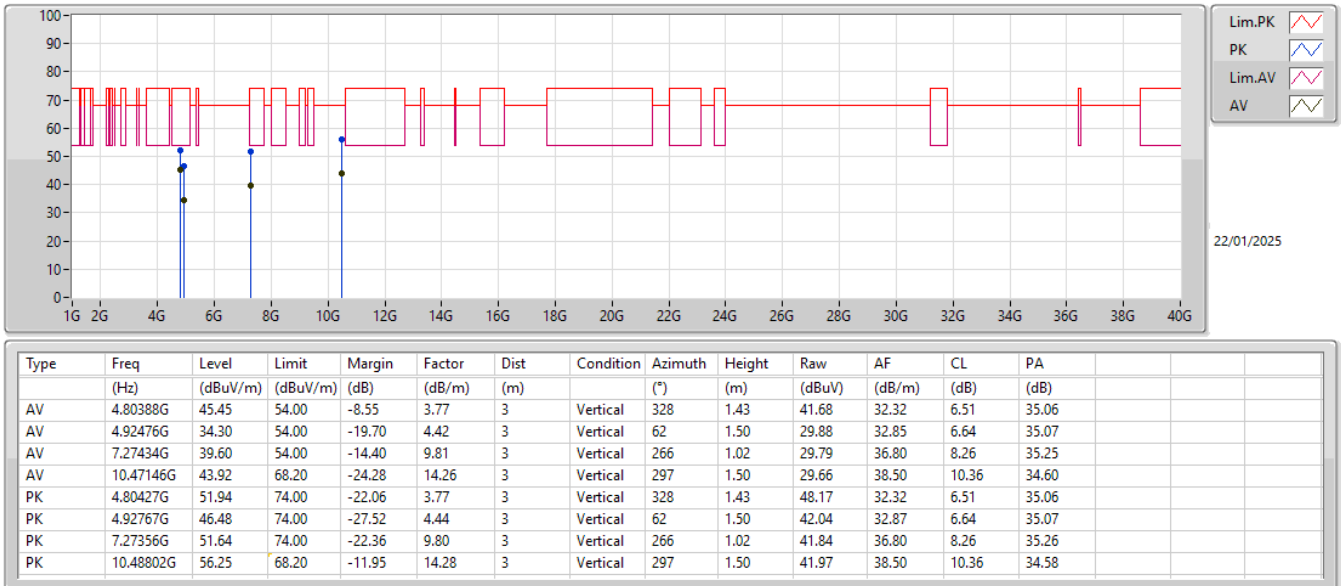
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.80388G	45.45	54.00	-8.55	Vertical
Mode 2	Pass	AV	15.58563G	47.19	54.00	-6.81	Vertical

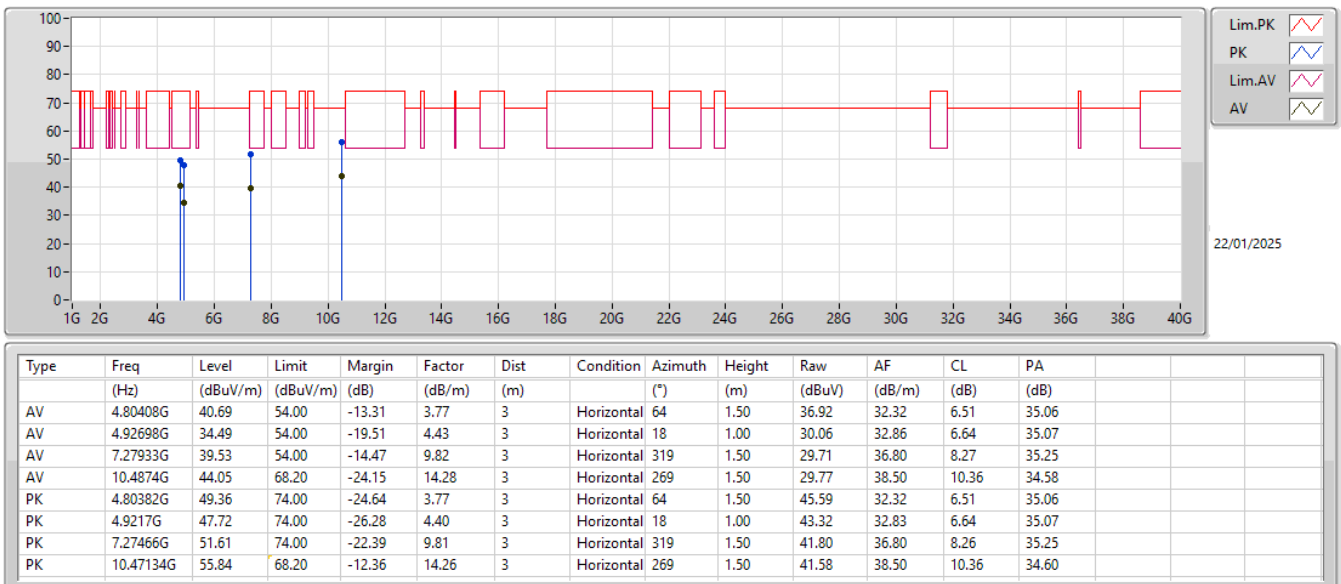
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.80388G	45.45	54.00	-8.55	3	Vertical	328	1.43
Mode 1	Pass	AV	4.92476G	34.30	54.00	-19.70	3	Vertical	62	1.50
Mode 1	Pass	AV	7.27434G	39.60	54.00	-14.40	3	Vertical	266	1.02
Mode 1	Pass	AV	10.47146G	43.92	68.20	-24.28	3	Vertical	297	1.50
Mode 1	Pass	PK	4.80427G	51.94	74.00	-22.06	3	Vertical	328	1.43
Mode 1	Pass	PK	4.92767G	46.48	74.00	-27.52	3	Vertical	62	1.50
Mode 1	Pass	PK	7.27356G	51.64	74.00	-22.36	3	Vertical	266	1.02
Mode 1	Pass	PK	10.48802G	56.25	68.20	-11.95	3	Vertical	297	1.50
Mode 1	Pass	AV	4.80408G	40.69	54.00	-13.31	3	Horizontal	64	1.50
Mode 1	Pass	AV	4.92698G	34.49	54.00	-19.51	3	Horizontal	18	1.00
Mode 1	Pass	AV	7.27933G	39.53	54.00	-14.47	3	Horizontal	319	1.50
Mode 1	Pass	AV	10.4874G	44.05	68.20	-24.15	3	Horizontal	269	1.50
Mode 1	Pass	PK	4.80382G	49.36	74.00	-24.64	3	Horizontal	64	1.50
Mode 1	Pass	PK	4.9217G	47.72	74.00	-26.28	3	Horizontal	18	1.00
Mode 1	Pass	PK	7.27466G	51.61	74.00	-22.39	3	Horizontal	319	1.50
Mode 1	Pass	PK	10.47134G	55.84	68.20	-12.36	3	Horizontal	269	1.50
Mode 2	Pass	AV	4.80407G	46.06	54.00	-7.94	3	Vertical	72	1.09
Mode 2	Pass	AV	7.28034G	39.62	54.00	-14.38	3	Vertical	16	1.05
Mode 2	Pass	AV	10.48549G	44.14	68.20	-24.06	3	Vertical	262	2.98
Mode 2	Pass	AV	15.58563G	47.19	54.00	-6.81	3	Vertical	31	3.00
Mode 2	Pass	PK	4.8043G	52.73	74.00	-21.27	3	Vertical	72	1.09
Mode 2	Pass	PK	7.27188G	51.59	74.00	-22.41	3	Vertical	16	1.05
Mode 2	Pass	PK	10.4848G	56.72	68.20	-11.48	3	Vertical	262	2.98
Mode 2	Pass	PK	15.58683G	58.94	74.00	-15.06	3	Vertical	31	3.00
Mode 2	Pass	AV	4.80413G	40.42	54.00	-13.58	3	Horizontal	65	1.59
Mode 2	Pass	AV	7.27848G	39.44	54.00	-14.56	3	Horizontal	334	2.99
Mode 2	Pass	AV	10.46953G	44.12	68.20	-24.08	3	Horizontal	261	1.50
Mode 2	Pass	AV	15.60279G	47.16	54.00	-6.84	3	Horizontal	7	2.62
Mode 2	Pass	PK	4.80437G	49.40	74.00	-24.60	3	Horizontal	65	1.59
Mode 2	Pass	PK	7.26822G	51.61	74.00	-22.39	3	Horizontal	334	2.99
Mode 2	Pass	PK	10.4704G	57.46	68.20	-10.74	3	Horizontal	261	1.50
Mode 2	Pass	PK	15.58506G	59.40	74.00	-14.60	3	Horizontal	7	2.62

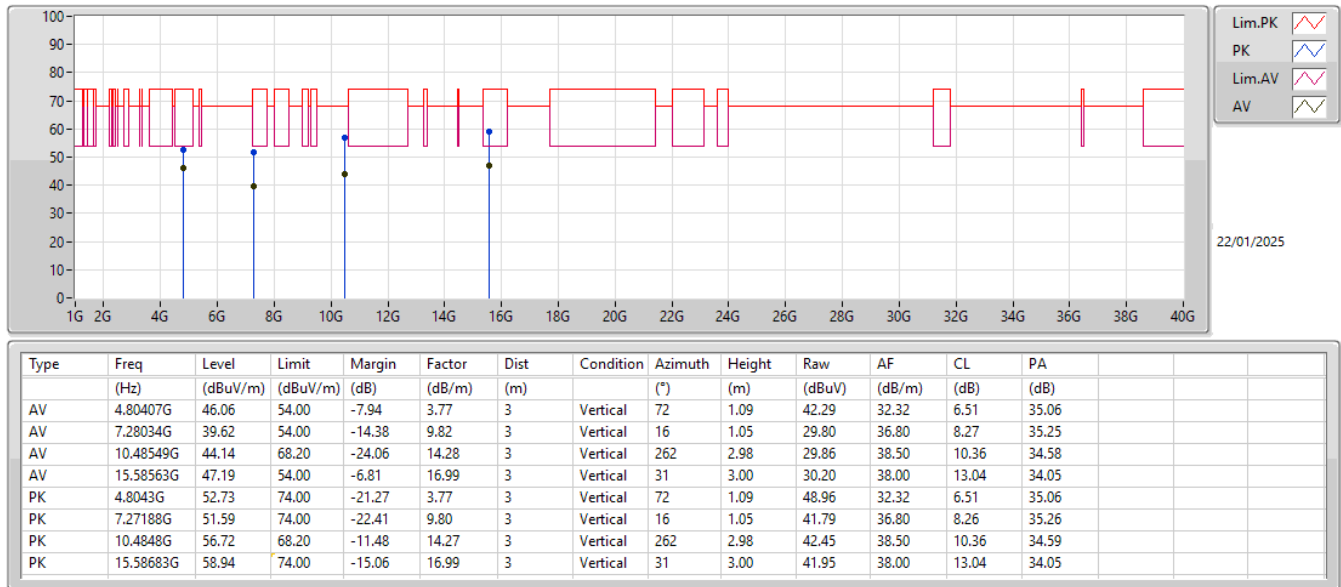
Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 2



Radiated Emissions above 1GHz_Mode 2

