

FCC Radio Test Report

FCC ID : TVE-512178E8741
Equipment : Secured Wireless Access Point
Brand Name : FORTINET
Model Name : FortiAP 441Kxxxxxx, FAP-441Kxxxxxx, FORTIAP-441Kxxxxxx
(Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)
Applicant : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA
Manufacturer : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA
Standard : 47 CFR FCC Part 15.247

The product was received on Jul. 11, 2023, and testing was started from Jul. 21, 2023 and completed on Oct. 06, 2023. 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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PHOTOGRAPHS OF EUT V01



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: Barry Hsiao
Report Producer: Ann Hou



1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(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 (125kbps/500kbps/1Mbps/2Mbps) modulation.
- ♦ Bluetooth LE 125k/500k/1Mbps uses the same modulation, and 125kbps was found to be the worst case scenario which was performed full test and recorded in this test report.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	Senao	5718A0730300	PIFA	I-Pex	2.4G	Radio 1
					5G	Radio 2
2	Senao	5718A0731300	PIFA	I-Pex	2.4G	Radio 1
					5G	Radio 2
3	Senao	5718A0732300	PIFA	I-Pex	2.4G	Radio 1
					5G	Radio 2
4	Senao	5718A0733300	PIFA	I-Pex	2.4G	Radio 1
					5G	Radio 2
5	AWAN	7102A0657000	Alford Loop	I-Pex	6E	Radio 3
6	AWAN	7102A0659000	Alford Loop	I-Pex	6E	Radio 3
7	AWAN	7102A0660000	Alford Loop	I-Pex	6E	Radio 3
8	AWAN	7102A0658000	Alford Loop	I-Pex	6E	Radio 3
9	Senao	5718A0734300	PIFA	I-Pex	2.4G/5G/6E	Scan radio
10	Senao	5718A0735300	PIFA	I-Pex	2.4G/5G/6E	Scan radio
11	Senao	5718A0736300	PIFA	I-Pex	BT& Zigbee	-
12	Quectel	7102A0656000	Patch	I-Pex	GPS	-
13	Quectel	Y4SEN00A1EA	Patch	Reverse SMA	GPS	-



Ant.	Port	Gain (dBi)				
		2.4G	5G	6E	BT/Zigbee	GPS
1	1	2.95	5.28	-	-	-
2	2	3.38	2.9	-	-	-
3	3	2.05	6.22	-	-	-
4	4	2.18	4.55	-	-	-
5	1	-	-	4.26	-	-
6	2	-	-	5.89	-	-
7	3	-	-	5.27	-	-
8	4	-	-	4.86	-	-
9	1	1.76	5.11	4.41	-	-
10	2	1.17	2.91	4.43	-	-
11	1	-	-	-	4.5	-
12	1	-	-	-	-	-0.5
13	2	-	-	-	-	1.4

Composite Gain (dBi)										
	2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	5.885G	6.175G	6.475G	6.695G	6.995G
DG [1SS]	6.91	5.35	5.46	6.04	7.23	7.22	9.32	8.48	8.63	8.56
DG [2SS]	3.91	4.2	4.7	4.49	6.22	5.92	6.32	5.48	5.63	5.89
DG [4SS]	3.38	4.2	4.7	4.49	6.22	5.92	5.24	4.19	4.64	5.89

Note 1: The EUT has thirteen antennas.

Note 2: The antenna 13 mentioned above will not be sold with the EUT in the market

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax mode (4TX/4RX)

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

For IEEE 802.11 b/g/n/VHT/ax mode (2RX)

Ant. 9 (port 1) and Ant. 10 (port 2) could receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode (4TX/4RX)

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

For IEEE 802.11 a/n/ac/ax/be mode (2RX)

Ant. 9 (port 1) and Ant. 10 (port 2) could receive simultaneously.

For 6GHz function:

For IEEE 802.11 ax/be mode (4TX/4RX)

Ant. 5 (port 1) , Ant. 6 (port 2) , Ant. 7 (port 3) and Ant. 8 (port 4) could transmit/receive simultaneously.

For IEEE 802.11ax/be mode (2RX)

Ant. 9 (port 1) and Ant. 10 (port 2) could receive simultaneously.

For BT function:

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

Ant. 11 (port 1) could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 11 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint <input type="checkbox"/> Point-to-point
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(125kbps)	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.

1.1.5 Table for Multiple Listing

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

Model Name	Description
FortiAP 441Kxxxxxx, FAP-441Kxxxxxx, FORTIAP-441Kxxxxxx (Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)	All the models are identical, the different model served as marketing strategy.

From the above models, model: FAP-441K 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				
<input checked="" type="checkbox"/>	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	Edward Wang	22.1~23.6°C / 53~58%	19/Sep/2023
RF Conducted	TH07-HY	Xun Hsieh	23.4~23.8°C / 51~56%	24/Jul/2023
<input checked="" type="checkbox"/>	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated(above 1G)	03CH09-HY	Henry Ho	23.5~24.2°C / 53.1~53.2%	21/Jul/2023
<input checked="" type="checkbox"/>	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(below 1G)	03CH25-HY	Henry Ho	23.5~24.1°C / 48.6~53.7%	23/Sep/2023
Radiated(Co-location)	03CH25-HY	Lego Lin	23.1~24.2°C / 53.5~60.2%	04/Oct/2023~06/Oct/2023

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	Putty Release 0.62
Mode	Power Setting
BT-LE(125kbps)	-
2402MHz	100
2440MHz	100
2480MHz	100
BT-LE(2Mbps)	-
2402MHz	98
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	Adapter 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	Adapter 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
Operating Mode	CTX
1	Radio 1_2.4G+Radio 2_5G+Radio 3_6E+Bluetooth
2	Radio 1_2.4G+Radio 2_5G+Radio 3_6E+Zigbee
Refer to Sporton Test Report No.: FA370714 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	



2.3 Accessories

Accessories				
Bracket ceiling mount 1	Brand Name	DRAGONJET CORPORTION	Model Name	CLIP CEILING 9/16 LFP
Bracket ceiling mount 2	Brand Name	DRAGONJET CORPORTION	Model Name	CLIP CEILING 15/16 LFP

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

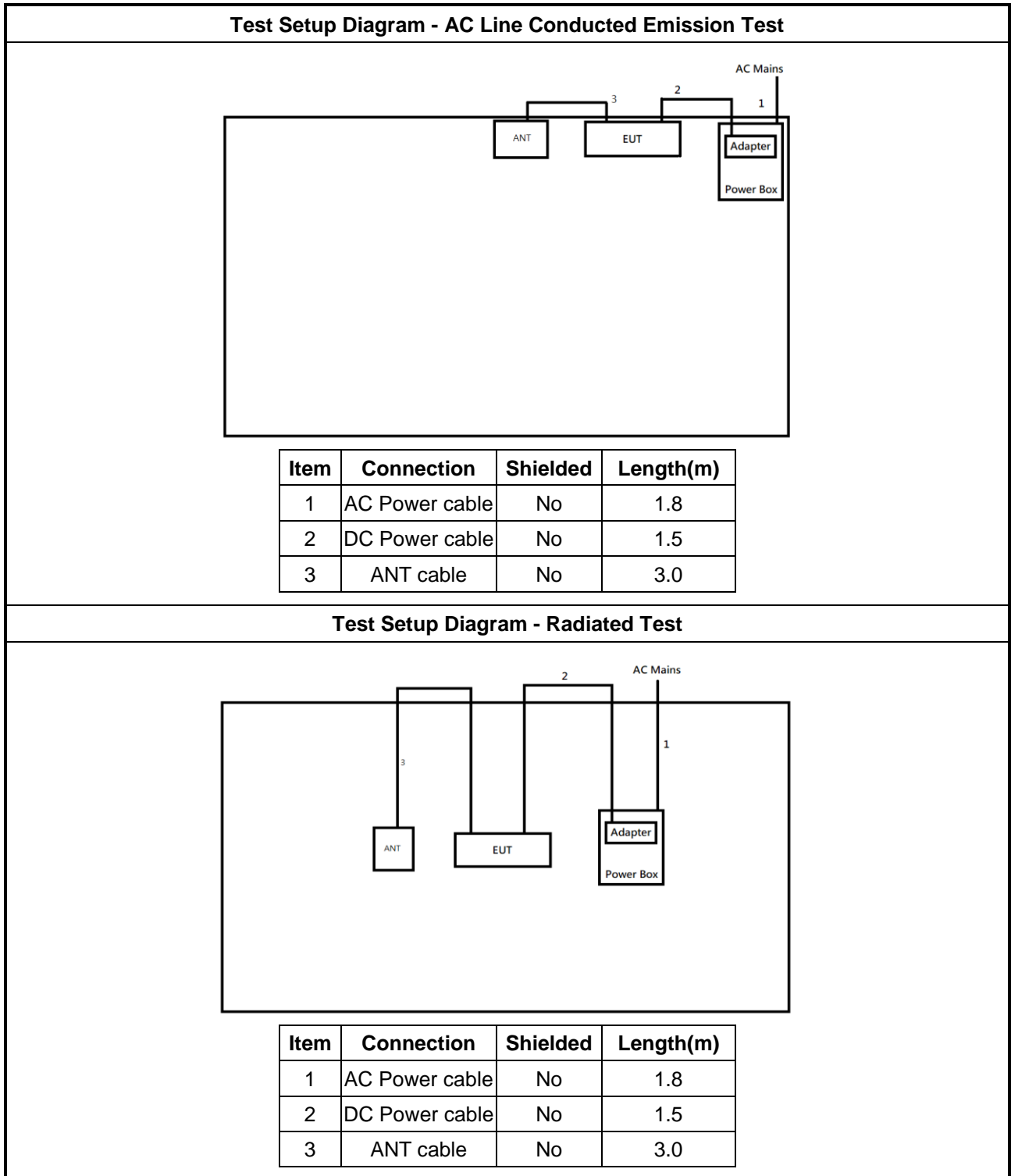
2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer

2.5 Test Setup Diagram



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

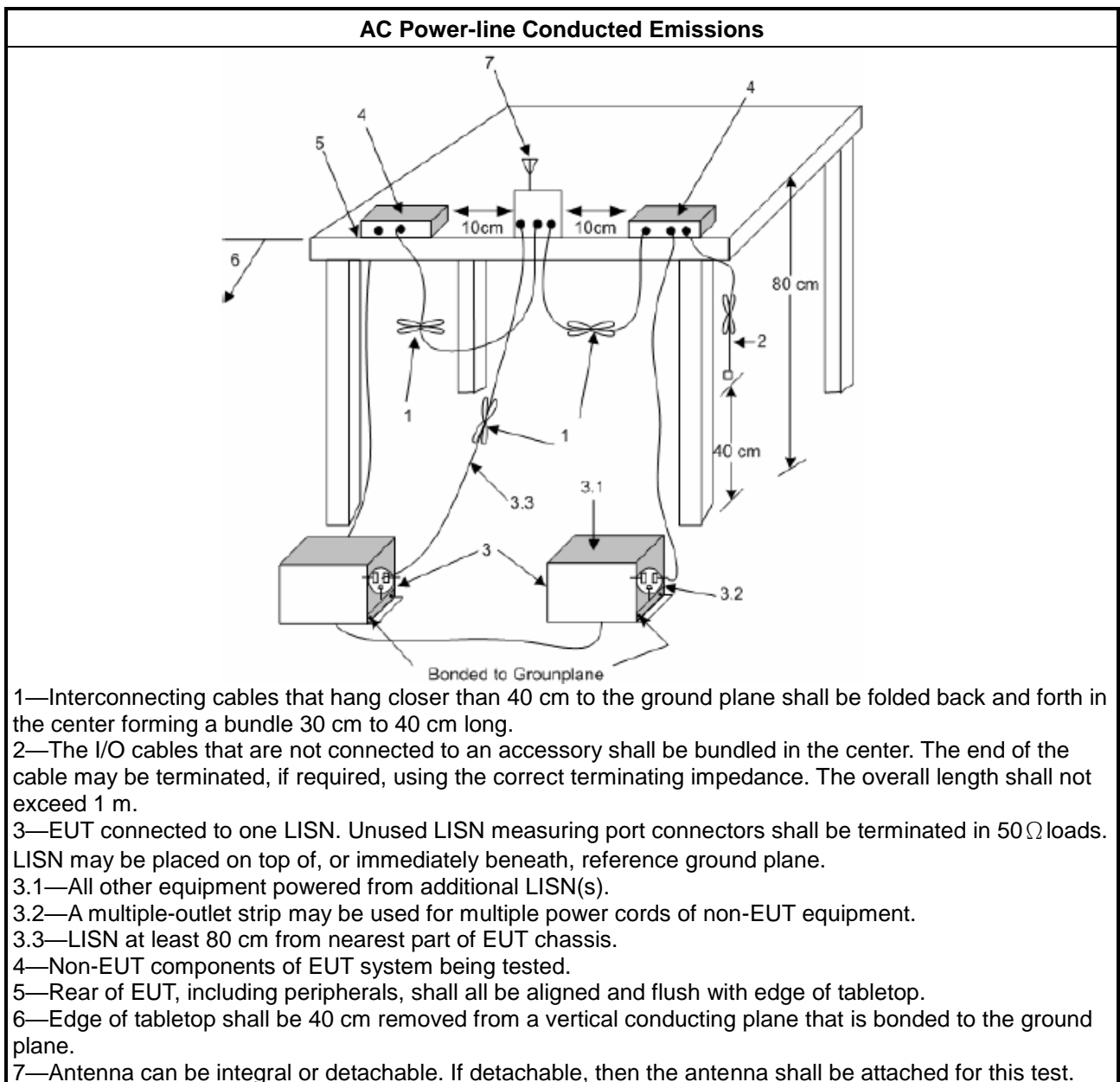
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

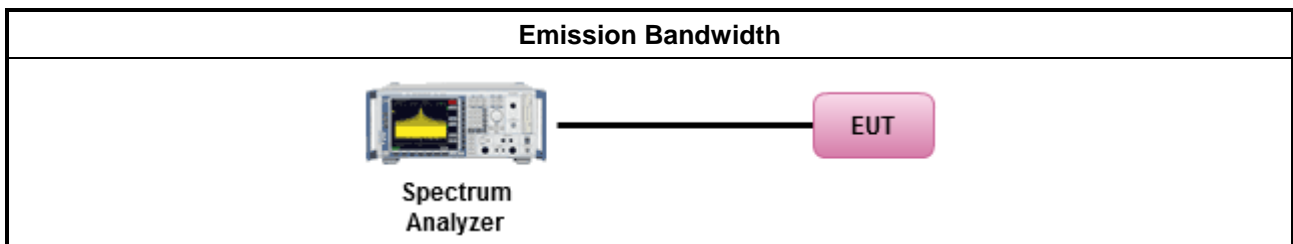
3.2.2 Measuring Instruments

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:
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
<input type="checkbox"/>	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	
	<ul style="list-style-type: none"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS):
	<ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - 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:	
	<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS)
	<ul style="list-style-type: none"> - Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - 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.	

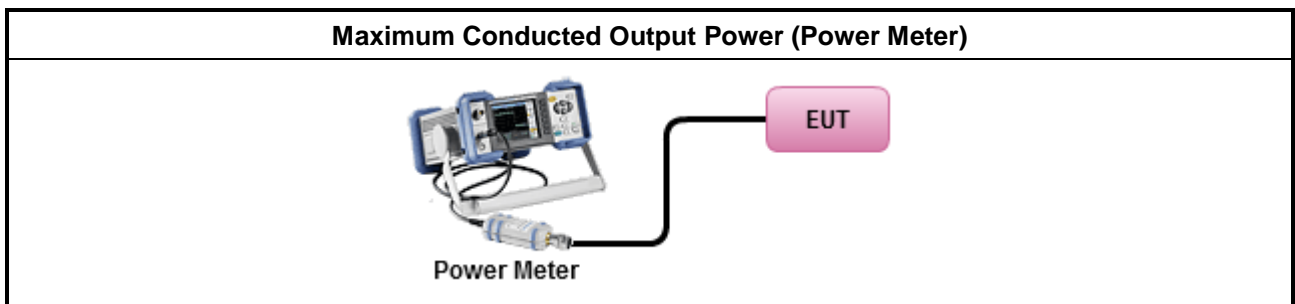
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> ▪ Maximum Average Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ 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. 	
<ul style="list-style-type: none"> ▪ 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
<ul style="list-style-type: none"> Power Spectral Density (PSD) ≤ 8 dBm/3kHz

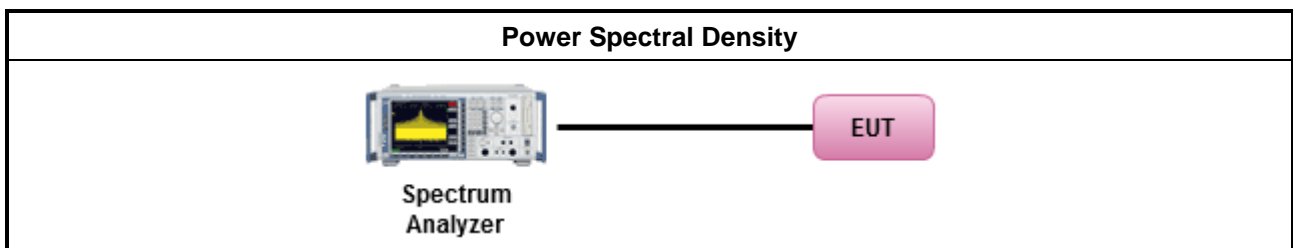
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> 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).
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
	<ul style="list-style-type: none"> For conducted measurement. <ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: <ul style="list-style-type: none"> 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.

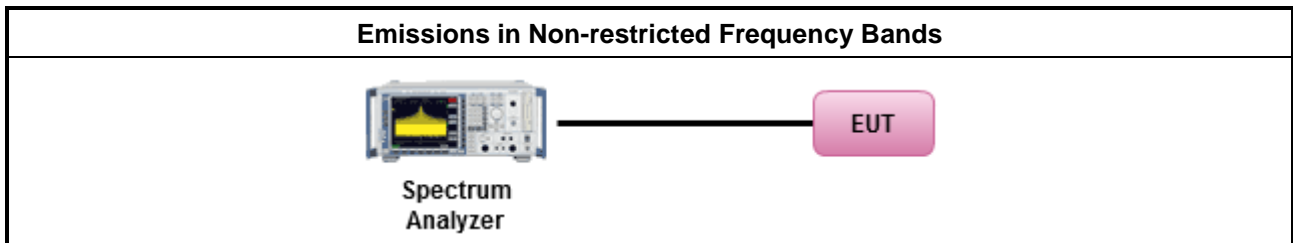
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> 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

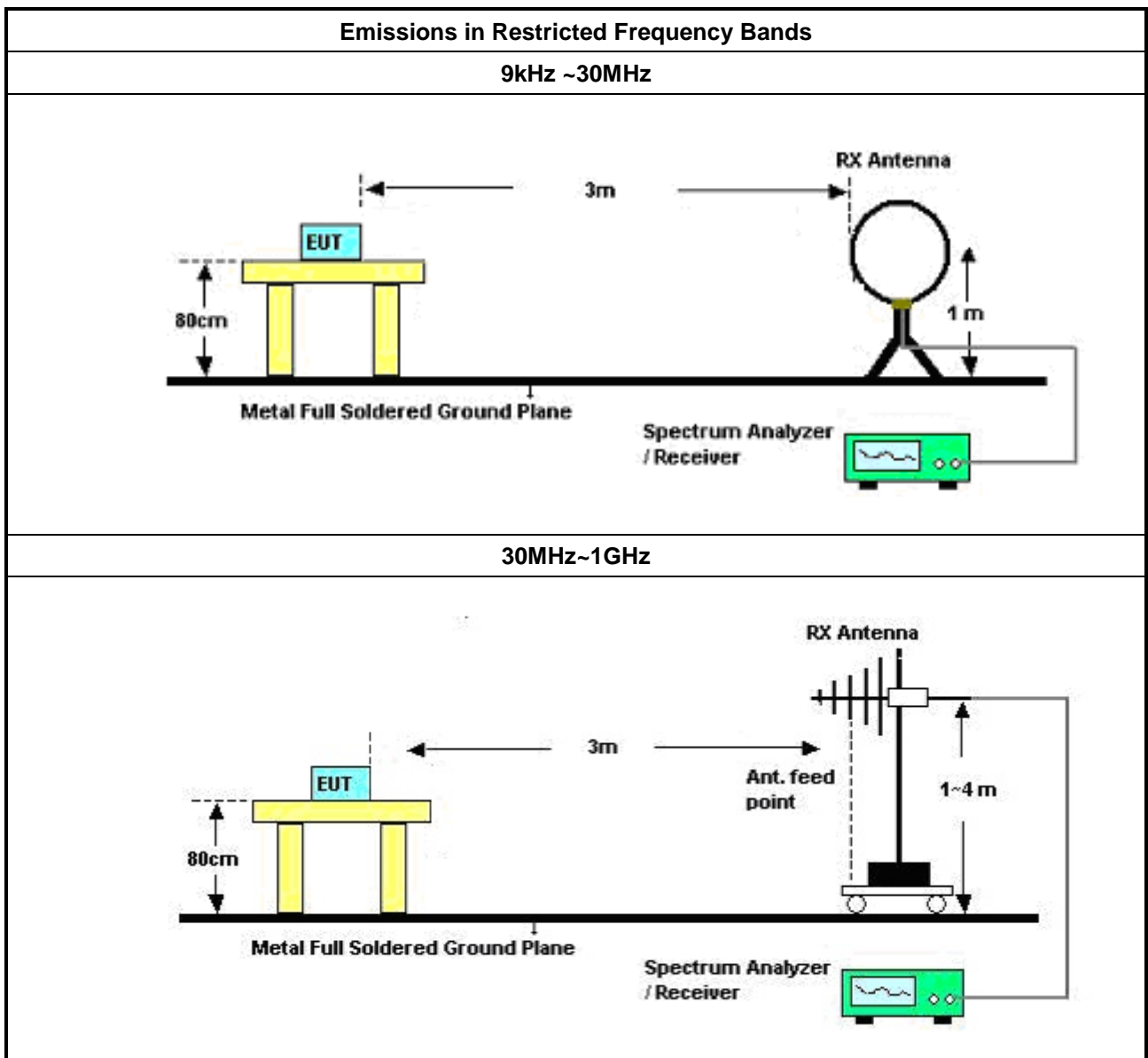
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below:
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
	<ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below:
	<ul style="list-style-type: none"> ▪ 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.
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
	<ul style="list-style-type: none"> ▪ Use the following spectrum analyzer settings:
	<ul style="list-style-type: none"> ▪ Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	<ul style="list-style-type: none"> ▪ Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
	<ul style="list-style-type: none"> ▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
	<ul style="list-style-type: none"> ▪ 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.
	<ul style="list-style-type: none"> ▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

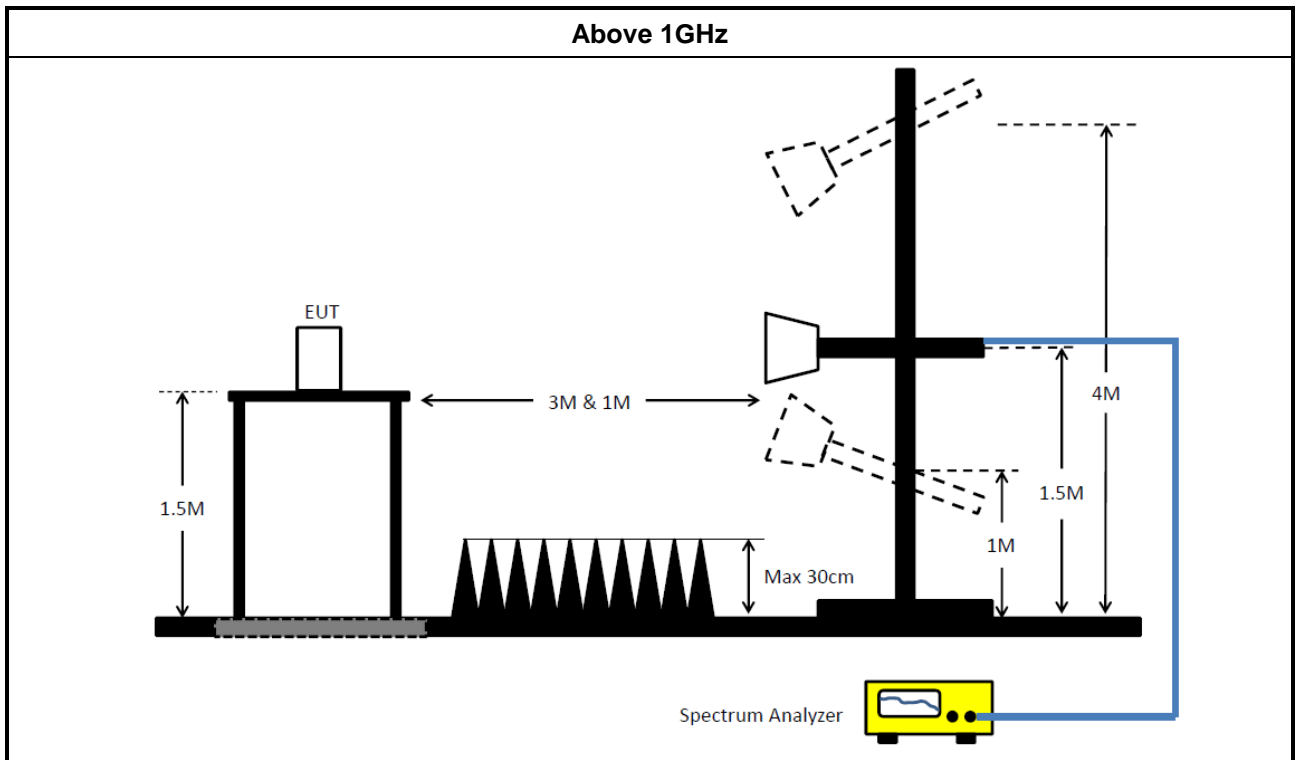
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp 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	R&S	ESR	102051	9kHz ~ 3.6GHz	16/May/2023	15/May/2024
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	07/Sep/2023	06/Sep/2024
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	28/Feb/2023	27/Feb/2024
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	25/Oct/2022	24/Oct/2023
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	101515	9kHz~40GHz	14/Feb/2023	13/Feb/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	14/Dec/2022	13/Dec/2023
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	14/Dec/2022	13/Dec/2023
SENSE-15247_FS	Sporton	V5.11.2	N/A	N/A	N/A	N/A

Instrument for Radiated Test (03CH25-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	30MHz~1GHz 3m	03/Aug/2023	02/Aug/2024
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	02/Nov/2022	01/Nov/2023
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 0400	63537/001	30MHz~1GHz	31/May/2023	30/May/2024
Preamplifier	SGH	PRAMP 903	20230515-1	25MHz~3GHz	25/May/2023	24/May/2024
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	9kHz~1GHz	24/Apr/2023	23/Apr/2024
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	29/Dec/2022	28/Dec/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	23/Mar/2023	22/Mar/2024
SENSE-FS-15.247	Sporton	V5.11.6	NA	NA	NA	NA



Instrument for Radiated Test (03CH09-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Site V.S.W.R	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	14/Mar/2023	13/Mar/2024
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	10/Aug/2023	09/Aug/2024
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz ~ 18GHz	30/Dec/2022	29/Dec/2023
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	21/Jul/2023	20/Jul/2024
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable -02	1GHz~40GHz	21/Mar/2023	20/Mar/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	25/Mar/2023	24/Mar/2024
Amplifier	EM	EM18G40G	060604	18GHz ~ 40GHz	16/Mar/2023	15/Mar/2024
SENSE-FS-15.247	Sporton	V5.11.6	NA	NA	NA	NA

Instrument for Radiated Test (Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	09/Aug/2023	08/Aug/2024
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	02/Nov/2022	01/Nov/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	12/Jul/2023	11/Jul/2024
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz ~18GHz	25/May/2023	24/May/2024
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	24/Apr/2023	23/Apr/2024
Amplifier	EM	EM18G40G	060604	18GHz ~ 40GHz	16/Mar/2023	15/Mar/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	21/Aug/2023	20/Aug/2024
SENSE-EMI	V5.10.11	NA	NA	NA	NA	NA



Summary

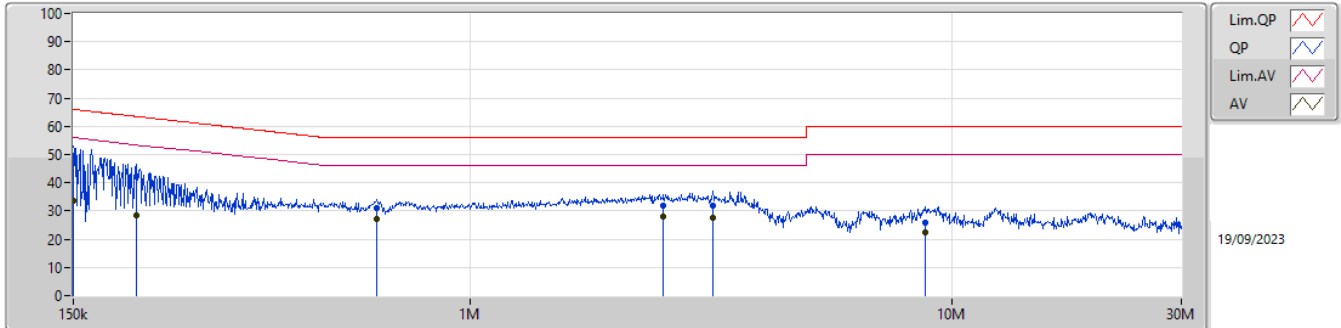
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150k	49.70	66.00	-16.30	Line



Result

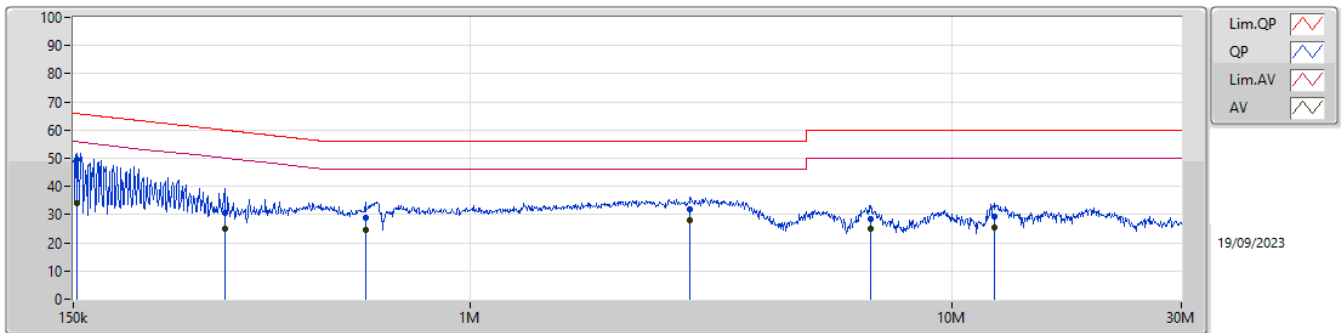
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150k	49.70	66.00	-16.30	Line
Mode 1	Pass	AV	150k	33.65	56.00	-22.35	Line
Mode 1	Pass	QP	202.358k	42.13	63.51	-21.38	Line
Mode 1	Pass	AV	202.358k	28.25	53.51	-25.26	Line
Mode 1	Pass	QP	641.45k	31.12	56.00	-24.88	Line
Mode 1	Pass	AV	641.45k	27.02	46.00	-18.98	Line
Mode 1	Pass	QP	2.522M	31.94	56.00	-24.06	Line
Mode 1	Pass	AV	2.522M	28.09	46.00	-17.91	Line
Mode 1	Pass	QP	3.192M	31.75	56.00	-24.25	Line
Mode 1	Pass	AV	3.192M	27.69	46.00	-18.31	Line
Mode 1	Pass	QP	8.835M	25.99	60.00	-34.01	Line
Mode 1	Pass	AV	8.835M	22.27	50.00	-27.73	Line
Mode 1	Pass	QP	152.414k	49.49	65.87	-16.38	Neutral
Mode 1	Pass	AV	152.414k	34.18	55.87	-21.69	Neutral
Mode 1	Pass	QP	308.954k	30.72	60.00	-29.28	Neutral
Mode 1	Pass	AV	308.954k	24.98	50.00	-25.02	Neutral
Mode 1	Pass	QP	606.584k	28.99	56.00	-27.01	Neutral
Mode 1	Pass	AV	606.584k	24.62	46.00	-21.38	Neutral
Mode 1	Pass	QP	2.866M	31.75	56.00	-24.25	Neutral
Mode 1	Pass	AV	2.866M	28.11	46.00	-17.89	Neutral
Mode 1	Pass	QP	6.789M	28.27	60.00	-31.73	Neutral
Mode 1	Pass	AV	6.789M	24.97	50.00	-25.03	Neutral
Mode 1	Pass	QP	12.306M	29.13	60.00	-30.87	Neutral
Mode 1	Pass	AV	12.306M	25.39	50.00	-24.61	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	150k	49.70	66.00	-16.30	19.53	Line	-	30.17	9.57	0.03	9.93
AV	150k	33.65	56.00	-22.35	19.53	Line	-	14.12	9.57	0.03	9.93
QP	202.358k	42.13	63.51	-21.38	19.52	Line	-	22.61	9.56	0.03	9.93
AV	202.358k	28.25	53.51	-25.26	19.52	Line	-	8.73	9.56	0.03	9.93
QP	641.45k	31.12	56.00	-24.88	19.57	Line	-	11.55	9.57	0.05	9.95
AV	641.45k	27.02	46.00	-18.98	19.57	Line	-	7.45	9.57	0.05	9.95
QP	2.522M	31.94	56.00	-24.06	19.63	Line	-	12.31	9.59	0.10	9.94
AV	2.522M	28.09	46.00	-17.91	19.63	Line	-	8.46	9.59	0.10	9.94
QP	3.192M	31.75	56.00	-24.25	19.63	Line	-	12.12	9.59	0.11	9.93
AV	3.192M	27.69	46.00	-18.31	19.63	Line	-	8.06	9.59	0.11	9.93
QP	8.835M	25.99	60.00	-34.01	19.83	Line	-	6.16	9.70	0.17	9.96
AV	8.835M	22.27	50.00	-27.73	19.83	Line	-	2.44	9.70	0.17	9.96

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	152.414k	49.49	65.87	-16.38	19.58	Neutral	-	29.91	9.62	0.03	9.93
AV	152.414k	34.18	55.87	-21.69	19.58	Neutral	-	14.60	9.62	0.03	9.93
QP	308.954k	30.72	60.00	-29.28	19.61	Neutral	-	11.11	9.62	0.04	9.95
AV	308.954k	24.98	50.00	-25.02	19.61	Neutral	-	5.37	9.62	0.04	9.95
QP	606.584k	28.99	56.00	-27.01	19.61	Neutral	-	9.38	9.62	0.04	9.95
AV	606.584k	24.62	46.00	-21.38	19.61	Neutral	-	5.01	9.62	0.04	9.95
QP	2.866M	31.75	56.00	-24.25	19.69	Neutral	-	12.06	9.65	0.11	9.93
AV	2.866M	28.11	46.00	-17.89	19.69	Neutral	-	8.42	9.65	0.11	9.93
QP	6.789M	28.27	60.00	-31.73	19.86	Neutral	-	8.41	9.75	0.16	9.95
AV	6.789M	24.97	50.00	-25.03	19.86	Neutral	-	5.11	9.75	0.16	9.95
QP	12.306M	29.13	60.00	-30.87	20.03	Neutral	-	9.10	9.85	0.21	9.97
AV	12.306M	25.39	50.00	-24.61	20.03	Neutral	-	5.36	9.85	0.21	9.97



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(125kbps)	747.5k	1.124M	1M12F1D	745k	1.119M
BT-LE(2Mbps)	1.35M	2.116M	2M12F1D	1.345M	2.106M

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(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.35M	2.106M
2440MHz	Pass	500k	1.345M	2.111M
2480MHz	Pass	500k	1.348M	2.116M
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	500k	747.5k	1.123M
2440MHz	Pass	500k	747.5k	1.124M
2480MHz	Pass	500k	745k	1.119M

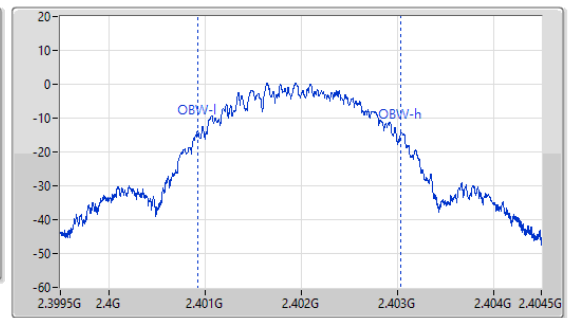
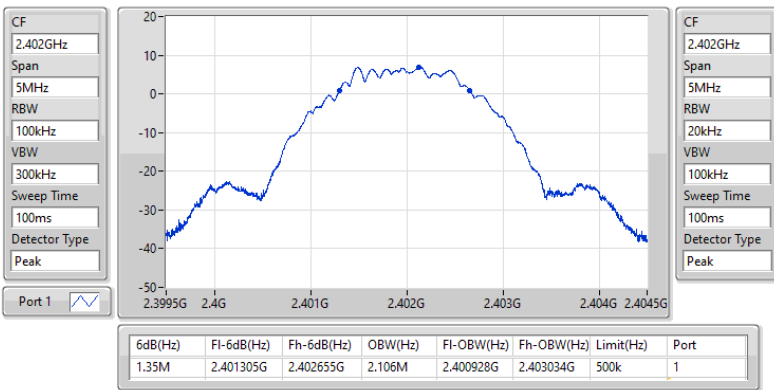
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2402MHz

24/07/2023

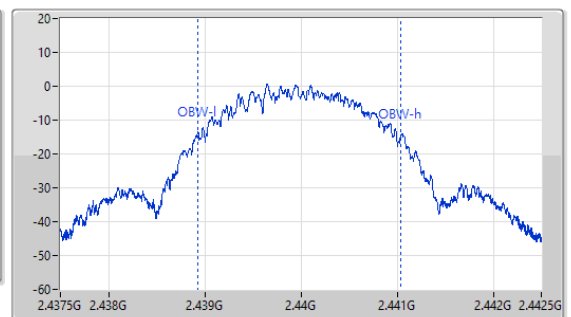
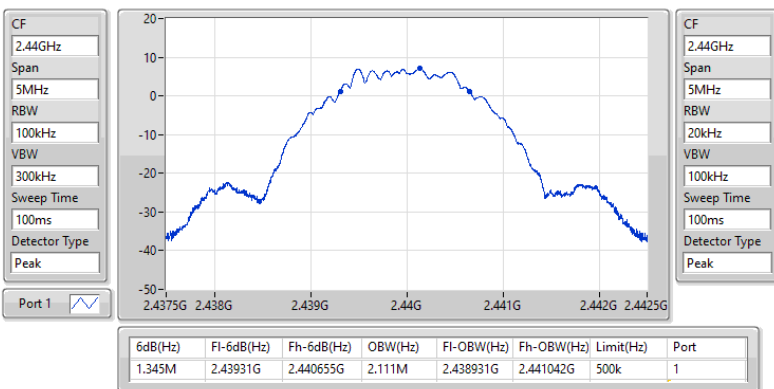


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2440MHz

24/07/2023

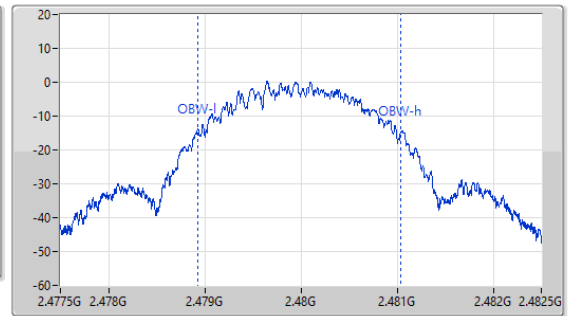
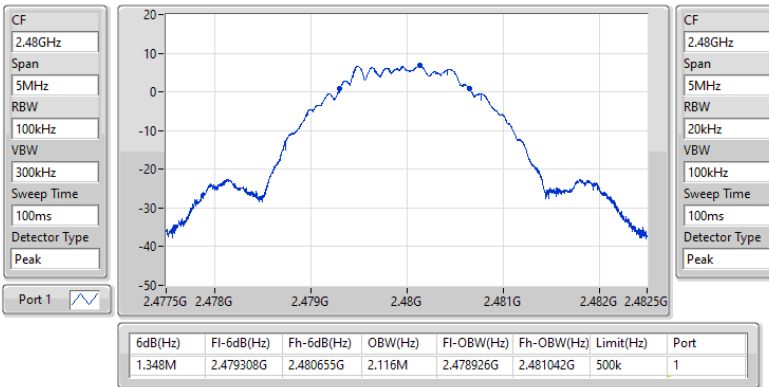


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2480MHz

24/07/2023

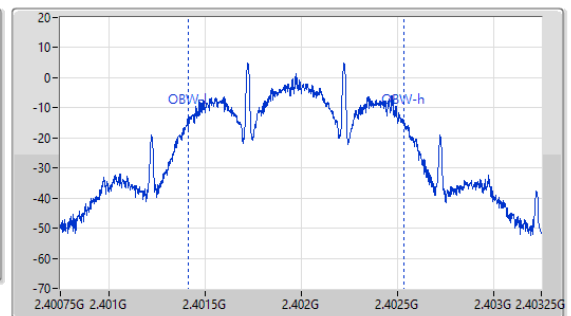
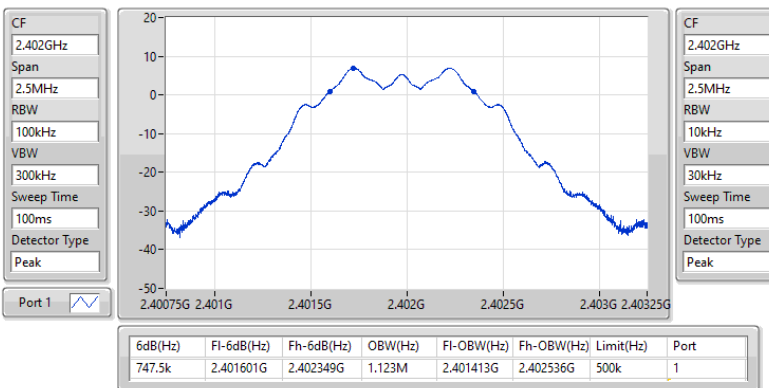


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2402MHz

24/07/2023

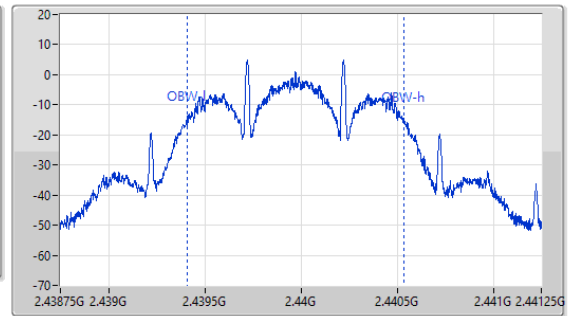
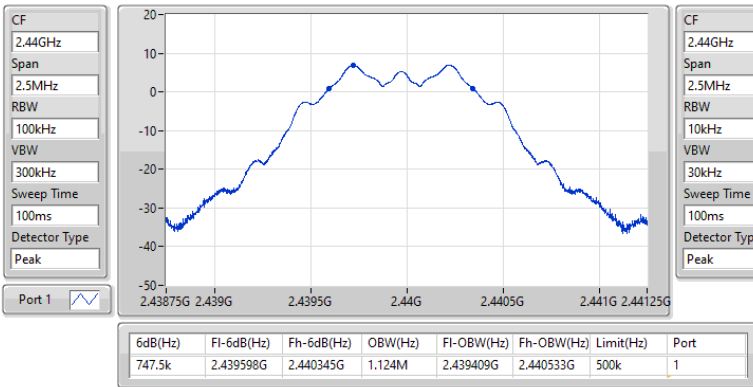


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2440MHz

24/07/2023

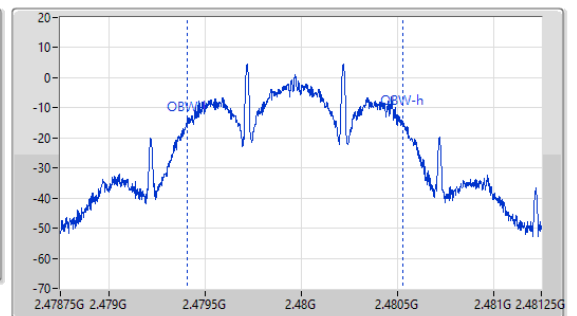
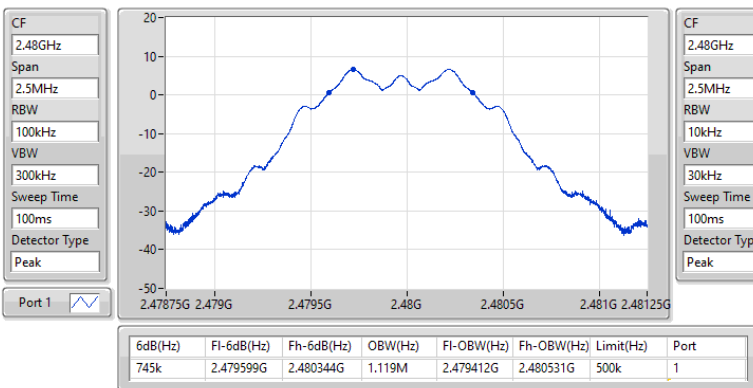


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2480MHz

24/07/2023





Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(125kbps)	10.08	0.01019
BT-LE(2Mbps)	10.12	0.01028



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.50	9.96	30.00
2440MHz	Pass	4.50	10.12	30.00
2480MHz	Pass	4.50	9.95	30.00
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	4.50	10.08	30.00
2440MHz	Pass	4.50	10.04	30.00
2480MHz	Pass	4.50	9.87	30.00

DG = Directional Gain; Port X = Port X output power



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(125kbps)	4.71
BT-LE(2Mbps)	-7.54

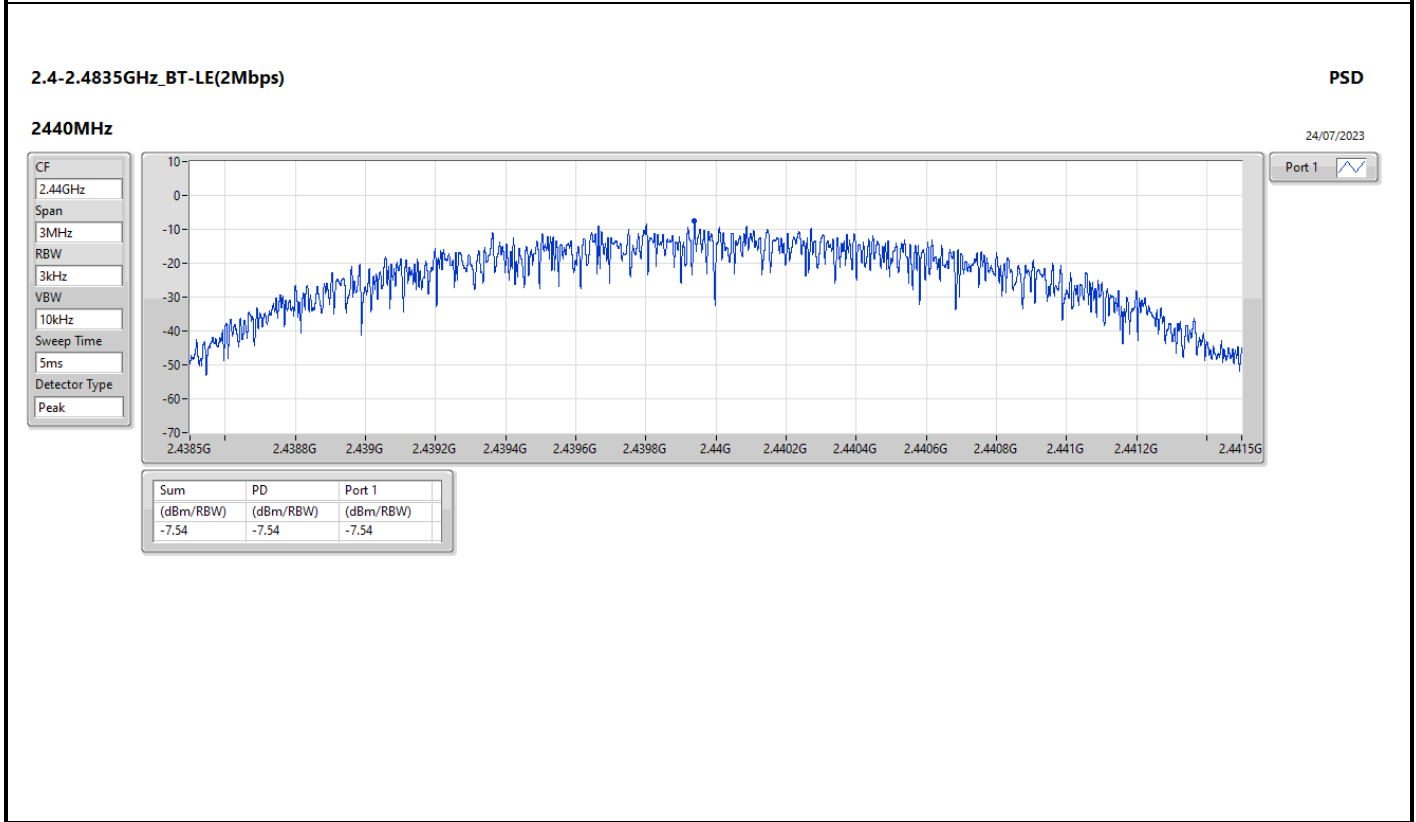
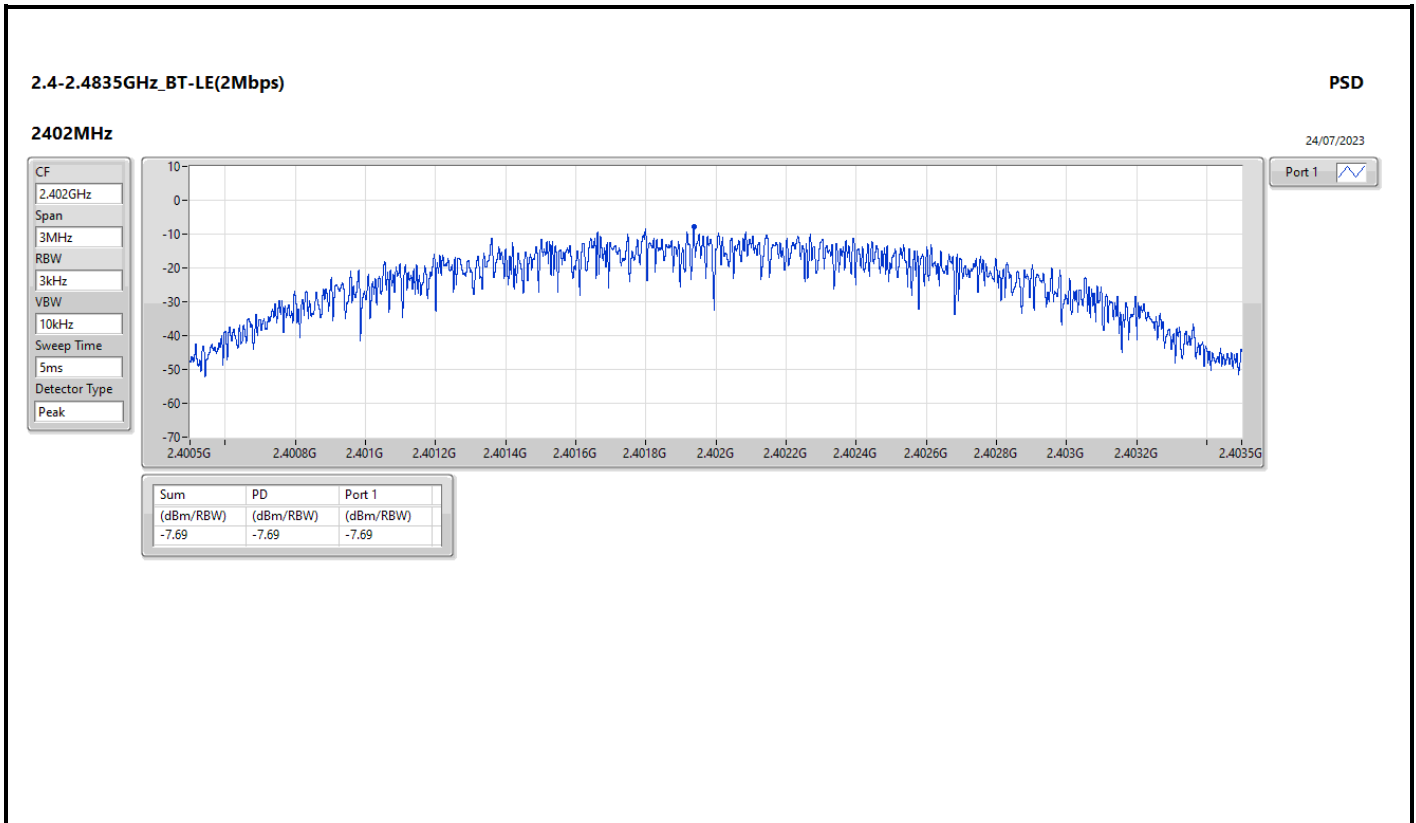
RBW = 3kHz;

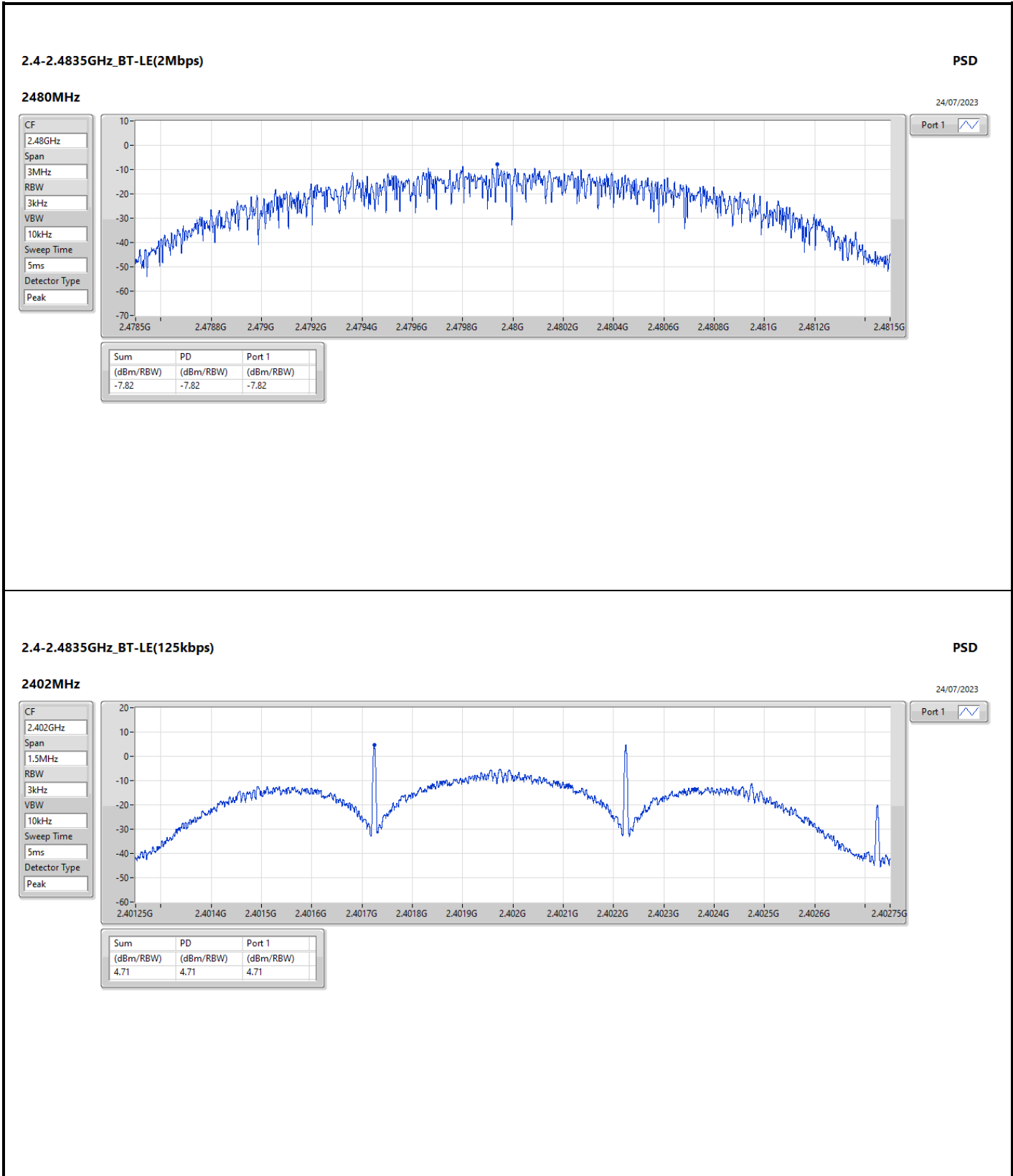


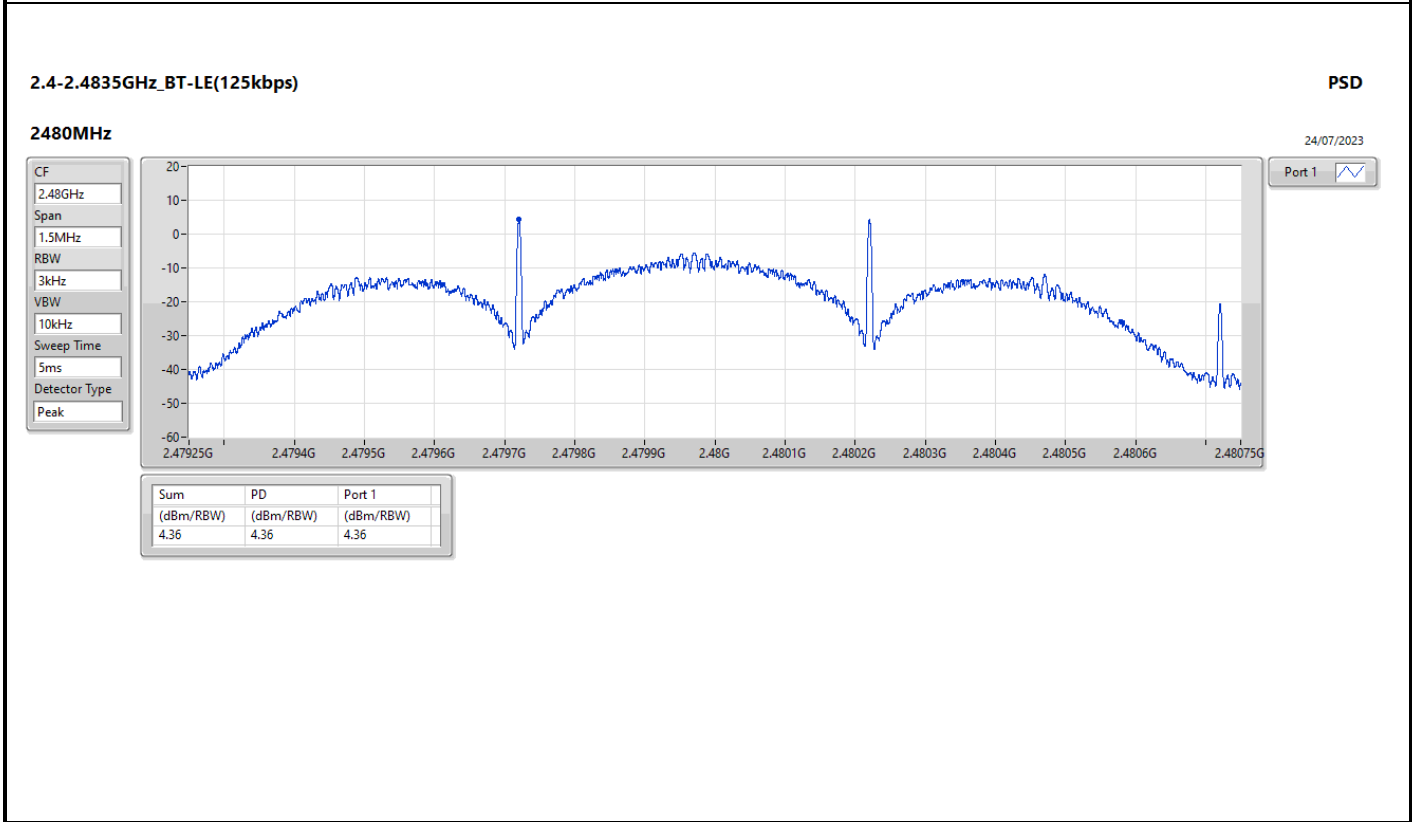
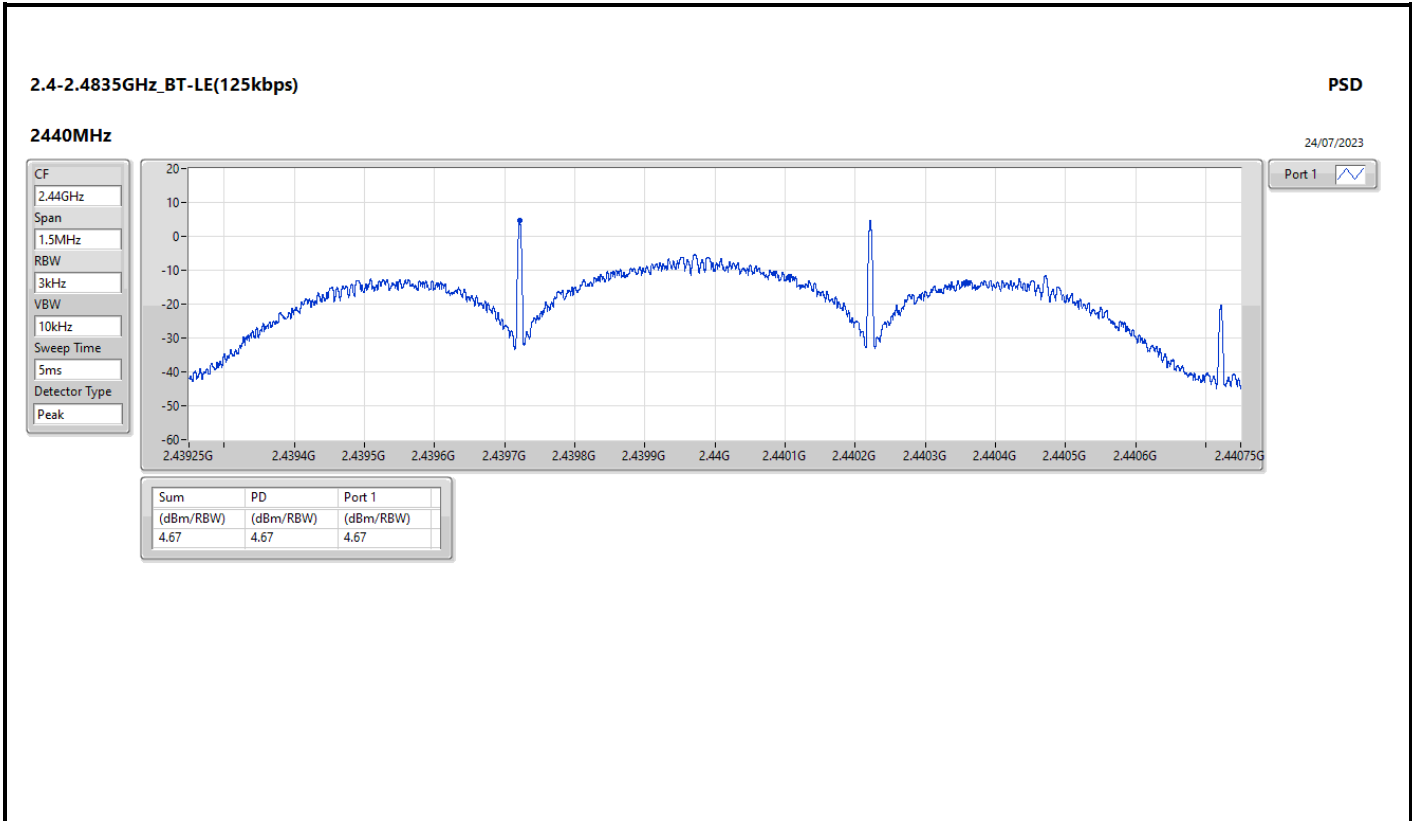
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.50	-7.69	8.00
2440MHz	Pass	4.50	-7.54	8.00
2480MHz	Pass	4.50	-7.82	8.00
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	4.50	4.71	8.00
2440MHz	Pass	4.50	4.67	8.00
2480MHz	Pass	4.50	4.36	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;









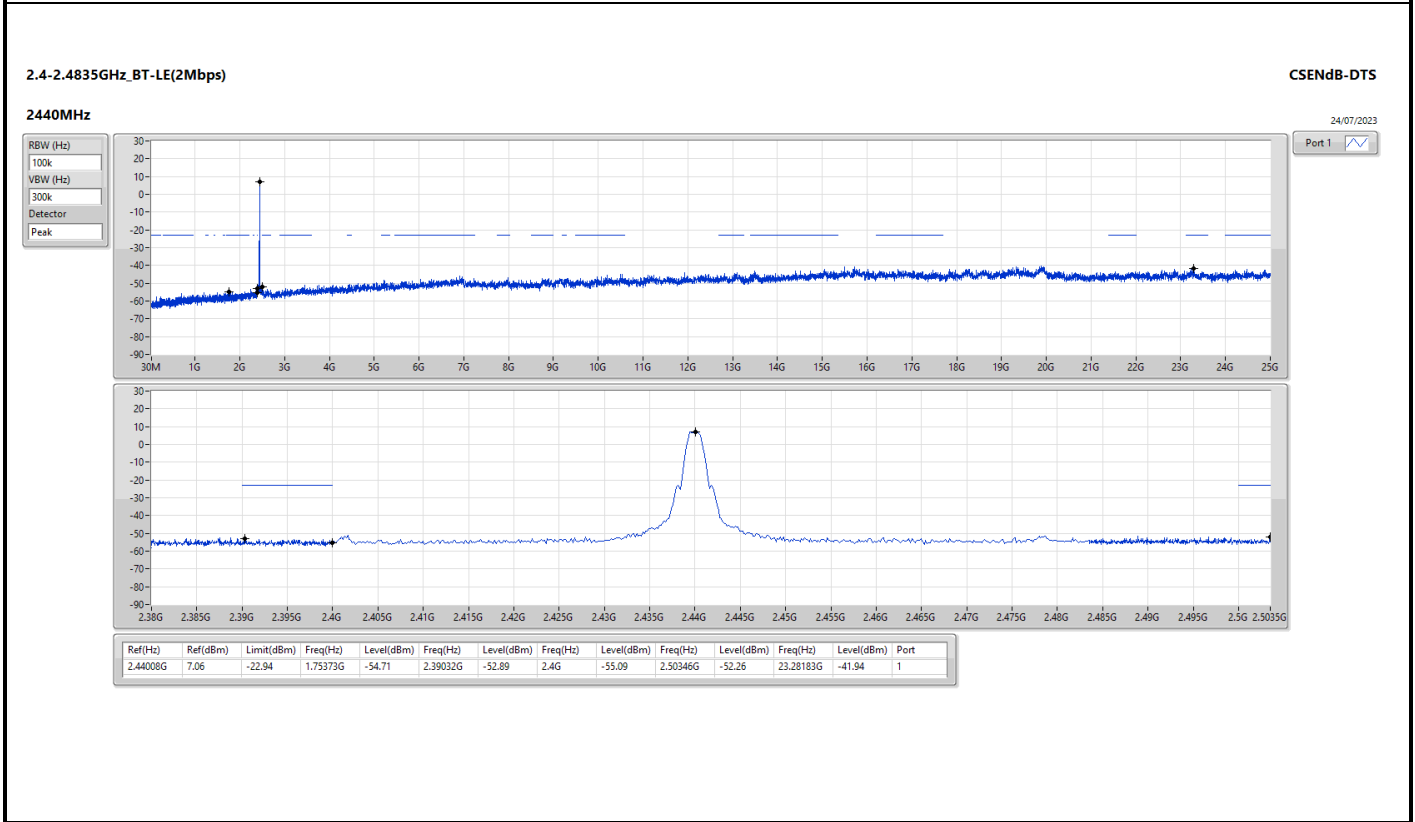
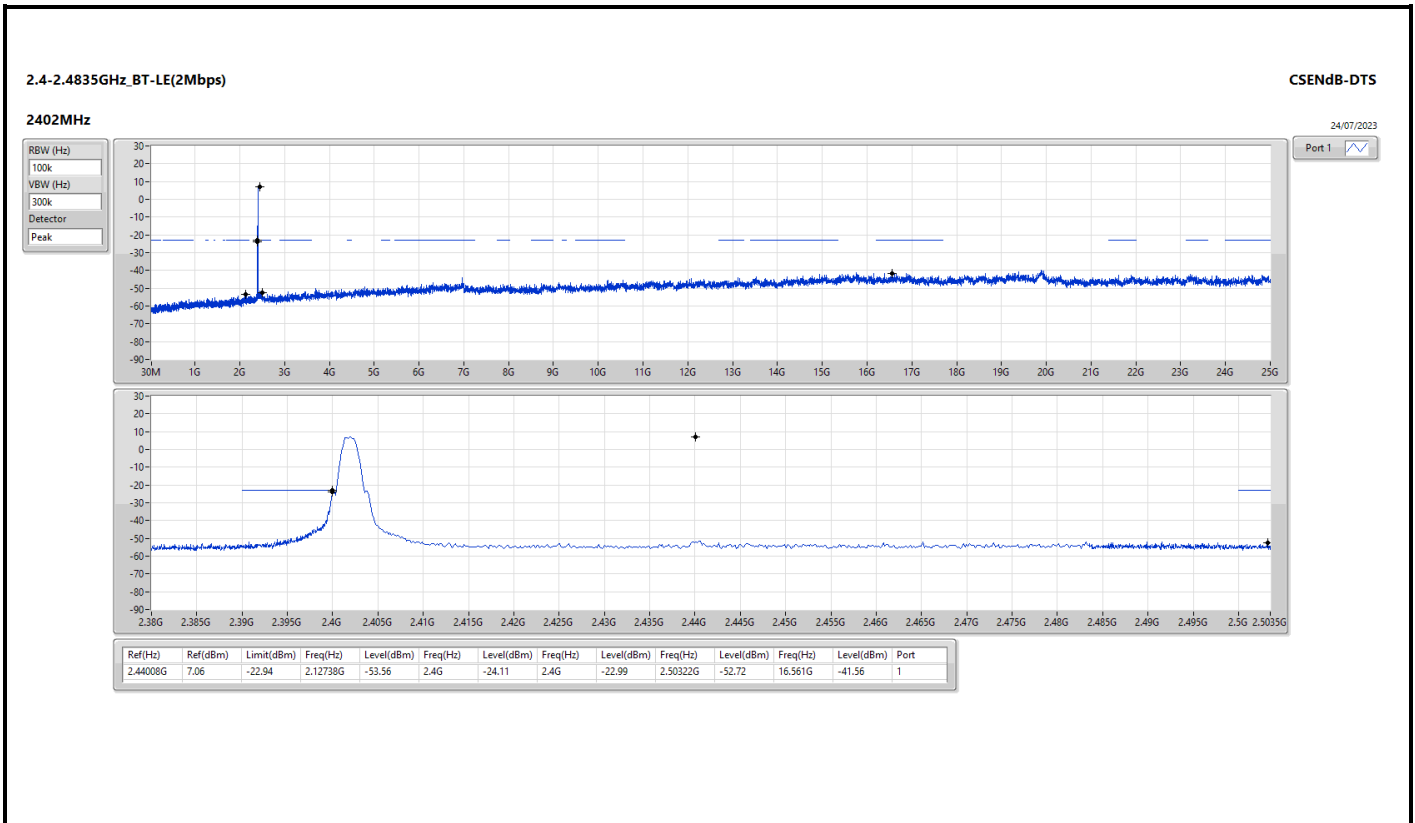
Summary

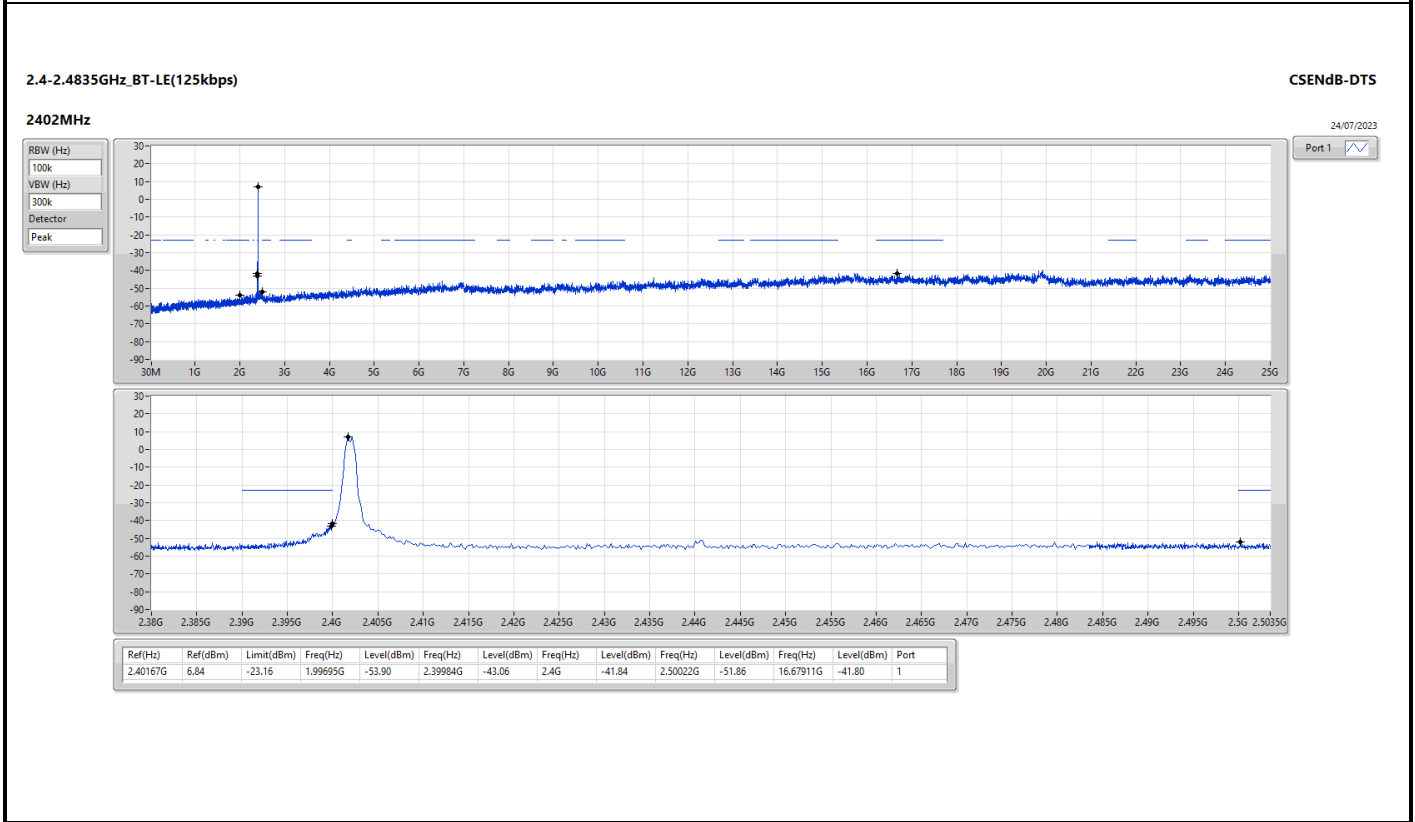
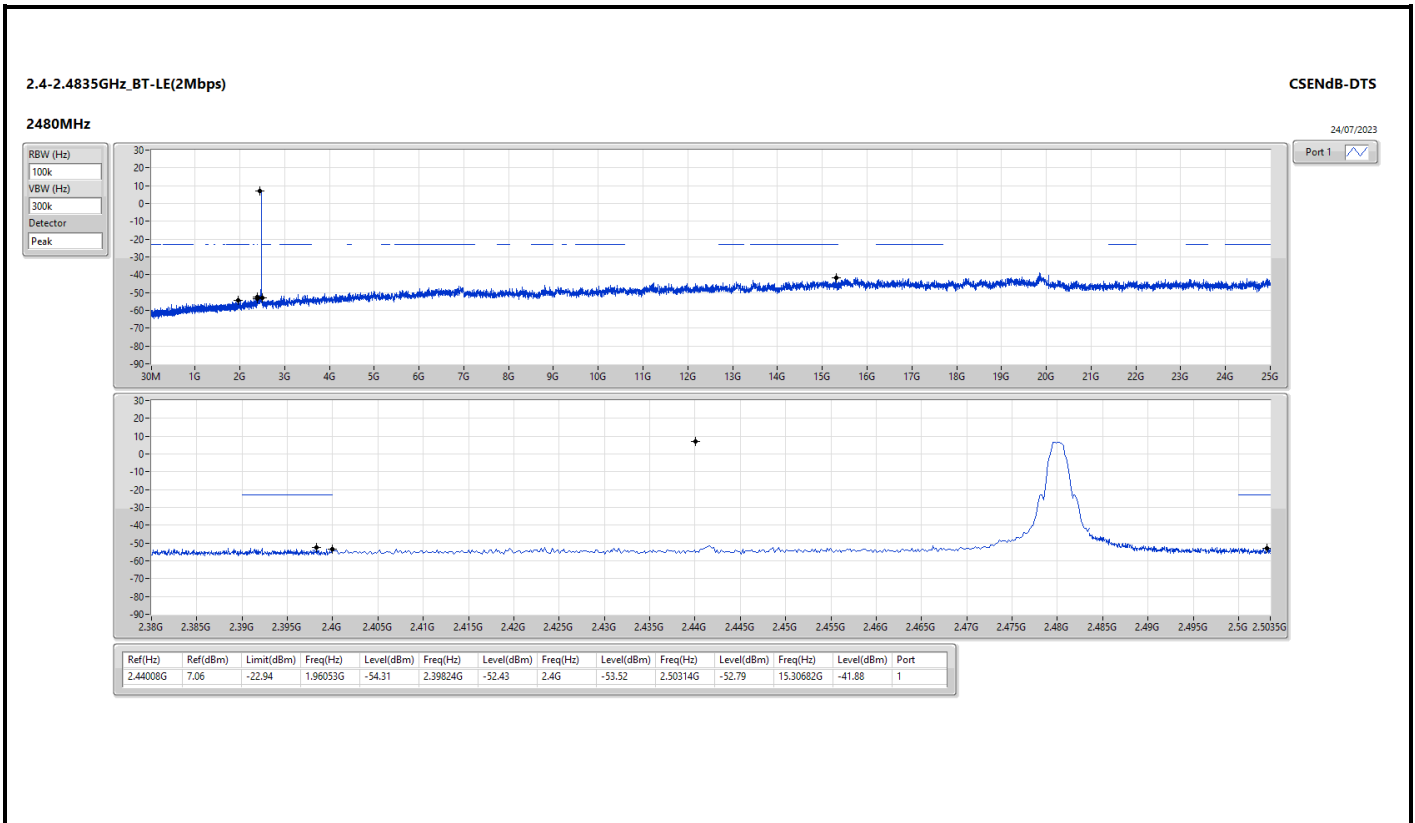
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(125kbps)	Pass	2.40167G	6.84	-23.16	1.99695G	-53.90	2.39984G	-43.06	2.4G	-41.84	2.50022G	-51.86	16.67911G	-41.80	1
BT-LE(2Mbps)	Pass	2.44008G	7.06	-22.94	2.12738G	-53.56	2.4G	-24.11	2.4G	-22.99	2.50322G	-52.72	16.561G	-41.56	1

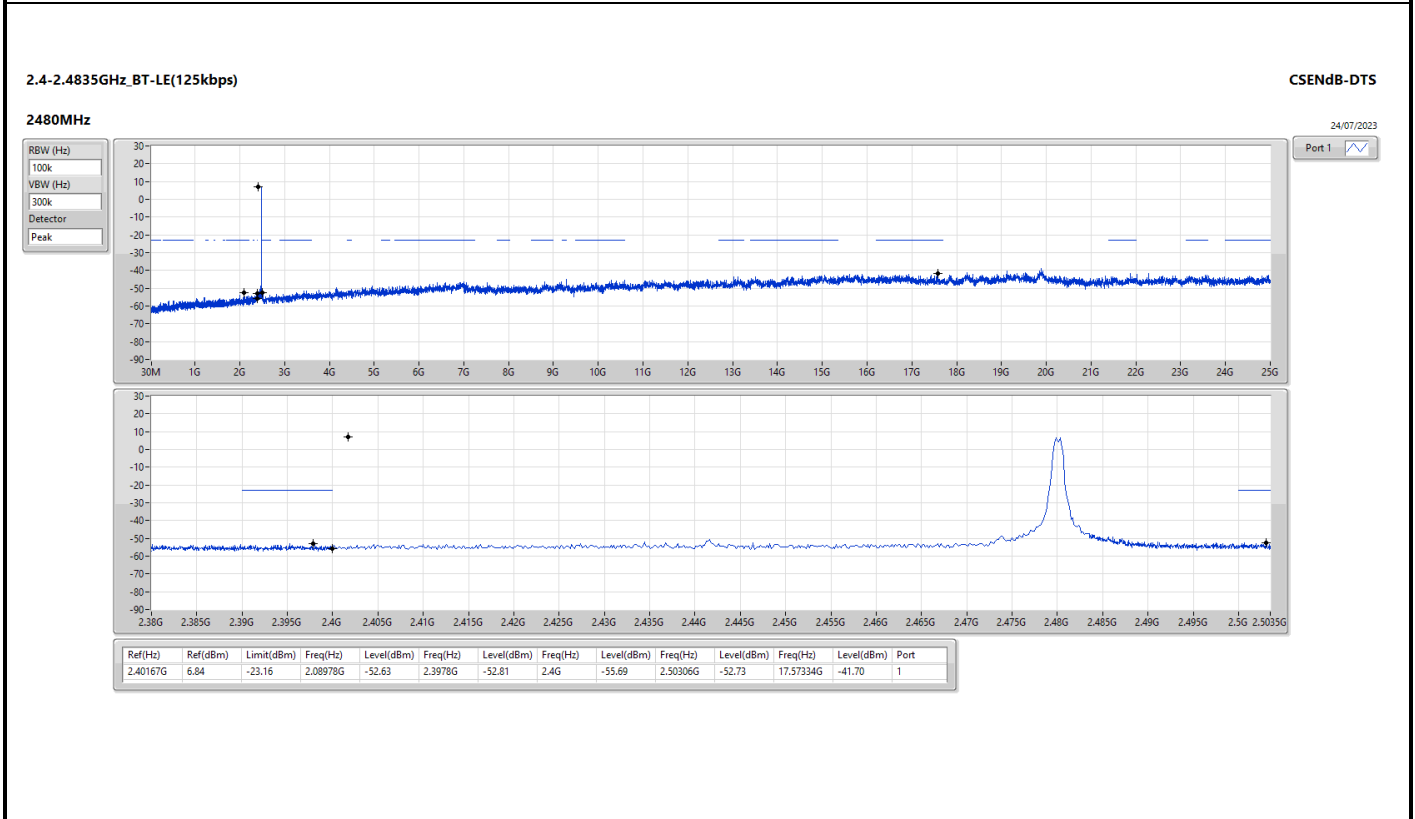
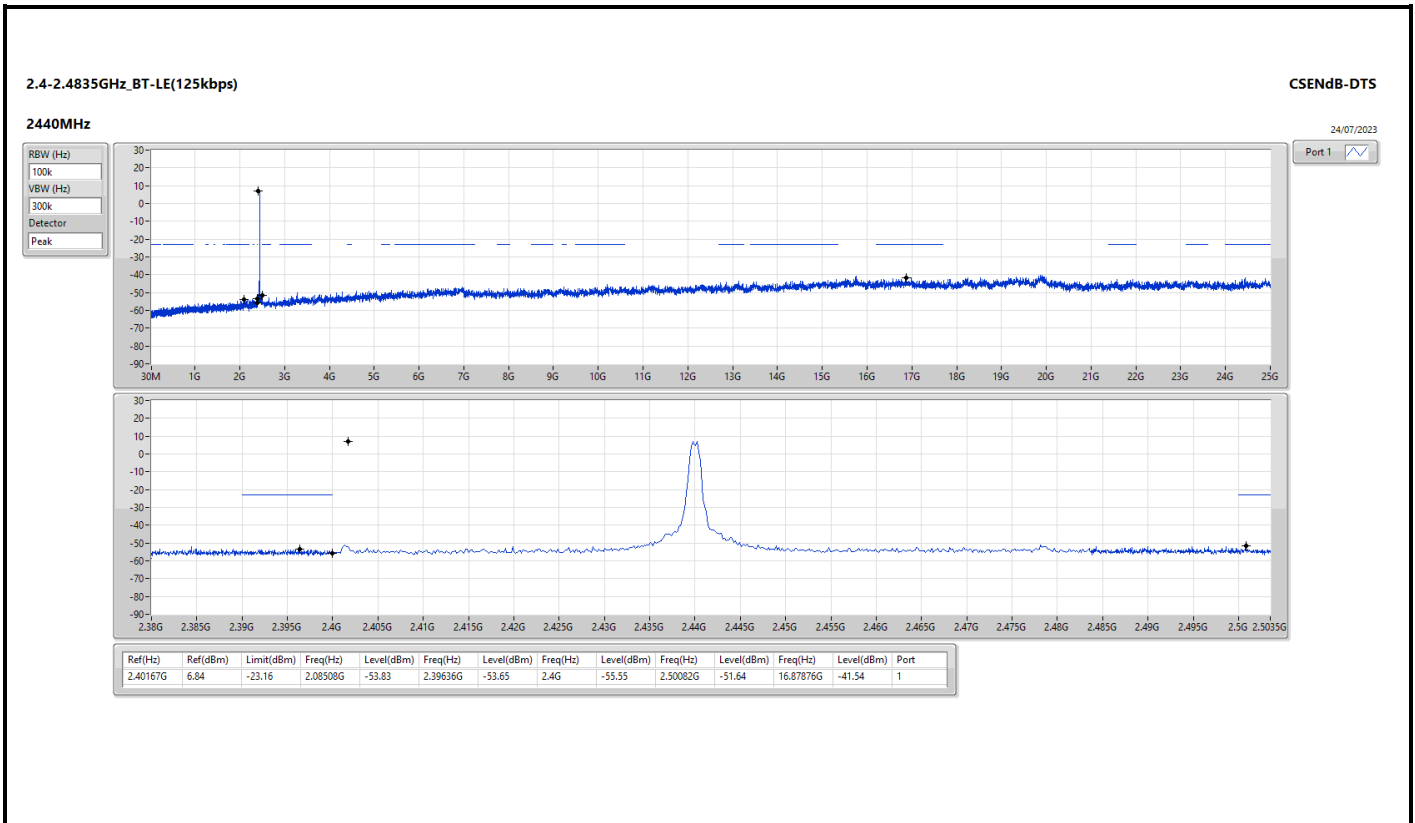


Result

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(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44008G	7.06	-22.94	2.12738G	-53.56	2.4G	-24.11	2.4G	-22.99	2.50322G	-52.72	16.561G	-41.56	1
2440MHz	Pass	2.44008G	7.06	-22.94	1.75373G	-54.71	2.39032G	-52.89	2.4G	-55.09	2.50346G	-52.26	23.28183G	-41.94	1
2480MHz	Pass	2.44008G	7.06	-22.94	1.96053G	-54.31	2.39824G	-52.43	2.4G	-53.52	2.50314G	-52.79	15.30682G	-41.88	1
BT-LE(125kbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40167G	6.84	-23.16	1.99695G	-53.90	2.39984G	-43.06	2.4G	-41.84	2.50022G	-51.86	16.67911G	-41.80	1
2440MHz	Pass	2.40167G	6.84	-23.16	2.08508G	-53.83	2.39636G	-53.65	2.4G	-55.55	2.50082G	-51.64	16.87876G	-41.54	1
2480MHz	Pass	2.40167G	6.84	-23.16	2.08978G	-52.63	2.3978G	-52.81	2.4G	-55.69	2.50306G	-52.73	17.57334G	-41.70	1









Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	35.82M	34.47	40.00	-5.53	3	Vertical	0	1.00

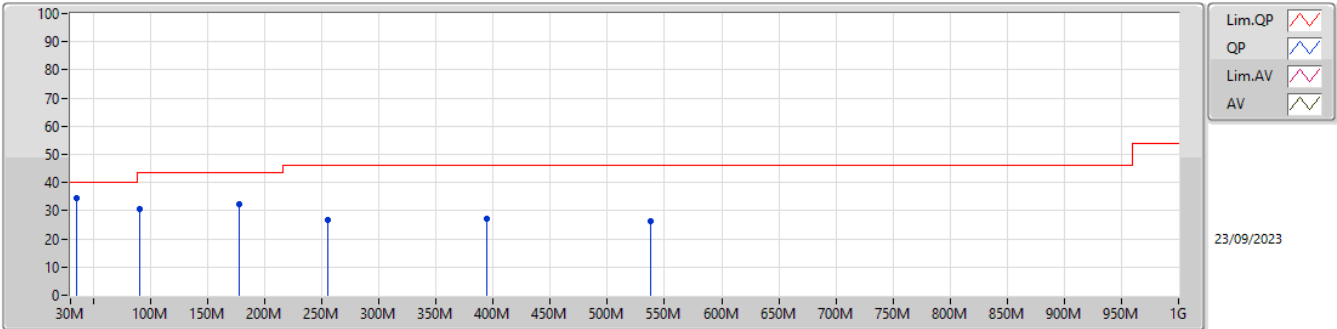


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	PK	35.82M	34.47	40.00	-5.53	3	Vertical	0	1.00
2402MHz	Pass	PK	90.14M	30.72	43.50	-12.78	3	Vertical	0	1.00
2402MHz	Pass	PK	177.44M	32.13	43.50	-11.37	3	Vertical	0	1.00
2402MHz	Pass	PK	255.04M	26.85	46.00	-19.15	3	Vertical	0	1.00
2402MHz	Pass	PK	394.72M	27.03	46.00	-18.97	3	Vertical	0	1.00
2402MHz	Pass	PK	538.28M	26.17	46.00	-19.83	3	Vertical	0	1.00
2402MHz	Pass	PK	117.3M	28.70	43.50	-14.80	3	Horizontal	360	1.00
2402MHz	Pass	PK	177.44M	32.61	43.50	-10.89	3	Horizontal	360	1.00
2402MHz	Pass	PK	214.3M	27.70	43.50	-15.80	3	Horizontal	360	1.00
2402MHz	Pass	PK	260.86M	25.63	46.00	-20.37	3	Horizontal	360	1.00
2402MHz	Pass	PK	549.92M	25.68	46.00	-20.32	3	Horizontal	360	1.00
2402MHz	Pass	PK	953.44M	29.41	46.00	-16.59	3	Horizontal	360	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

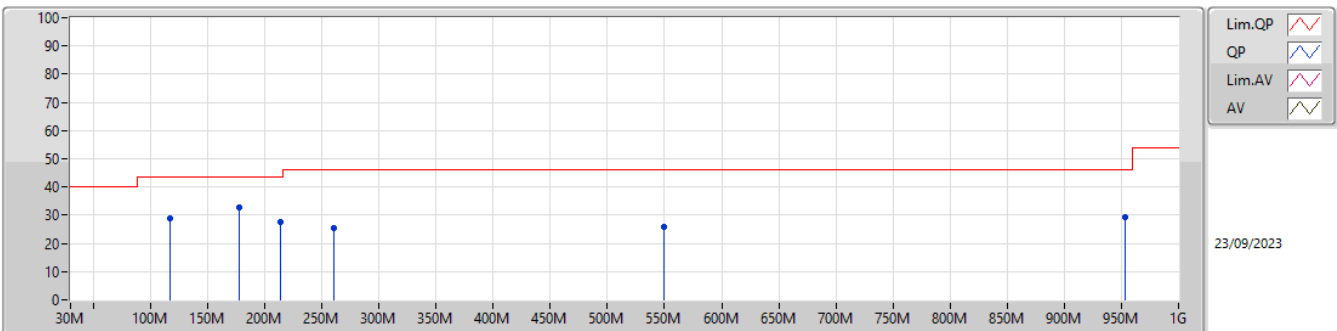
2402MHz_Adapter



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	35.82M	34.47	40.00	-5.53	-21.48	3	Vertical	0	1.00	55.95	22.36	0.44	44.28
PK	90.14M	30.72	43.50	-12.78	-28.71	3	Vertical	0	1.00	59.43	15.10	0.61	44.42
PK	177.44M	32.13	43.50	-11.37	-28.12	3	Vertical	0	1.00	60.25	15.26	0.91	44.29
PK	255.04M	26.85	46.00	-19.15	-23.57	3	Vertical	0	1.00	50.42	19.51	1.09	44.17
PK	394.72M	27.03	46.00	-18.97	-20.62	3	Vertical	0	1.00	47.65	21.99	1.33	43.94
PK	538.28M	26.17	46.00	-19.83	-17.68	3	Vertical	0	1.00	43.85	24.50	1.58	43.76

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_Adapter



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	117.3M	28.70	43.50	-14.80	-25.98	3	Horizontal	360	1.00	54.68	17.67	0.73	44.38
PK	177.44M	32.61	43.50	-10.89	-28.12	3	Horizontal	360	1.00	60.73	15.26	0.91	44.29
PK	214.3M	27.70	43.50	-15.80	-28.18	3	Horizontal	360	1.00	55.88	15.07	0.99	44.24
PK	260.86M	25.63	46.00	-20.37	-22.56	3	Horizontal	360	1.00	48.19	20.50	1.10	44.16
PK	549.92M	25.68	46.00	-20.32	-16.47	3	Horizontal	360	1.00	42.15	25.69	1.59	43.75
PK	953.44M	29.41	46.00	-16.59	-9.68	3	Horizontal	360	1.00	39.09	31.57	2.13	43.38



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(125kbps)	Pass	AV	2.4835G	49.11	54.00	-4.89	3	Horizontal	61	1.08
BT-LE(2Mbps)	Pass	AV	2.3636G	45.35	54.00	-8.65	3	Horizontal	61	3.00



Result

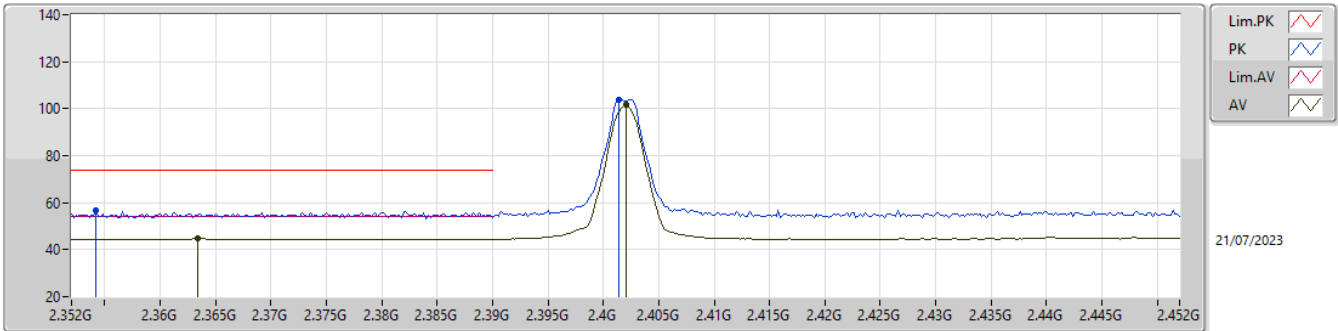
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3634G	44.79	54.00	-9.21	3	Vertical	346	1.27
2402MHz	Pass	AV	2.402G	101.48	Inf	-Inf	3	Vertical	346	1.27
2402MHz	Pass	PK	2.3542G	56.64	74.00	-17.36	3	Vertical	346	1.27
2402MHz	Pass	PK	2.4014G	103.98	Inf	-Inf	3	Vertical	346	1.27
2402MHz	Pass	AV	2.3636G	45.35	54.00	-8.65	3	Horizontal	61	3.00
2402MHz	Pass	AV	2.402G	105.90	Inf	-Inf	3	Horizontal	61	3.00
2402MHz	Pass	PK	2.3546G	57.33	74.00	-16.67	3	Horizontal	61	3.00
2402MHz	Pass	PK	2.4014G	108.44	Inf	-Inf	3	Horizontal	61	3.00
2402MHz	Pass	AV	4.80868G	33.14	54.00	-20.86	3	Vertical	214	2.18
2402MHz	Pass	PK	4.81076G	44.65	74.00	-29.35	3	Vertical	214	2.18
2402MHz	Pass	AV	4.80628G	33.19	54.00	-20.81	3	Horizontal	327	1.16
2402MHz	Pass	PK	4.79408G	44.20	74.00	-29.80	3	Horizontal	327	1.16
2440MHz	Pass	AV	2.3792G	44.37	54.00	-9.63	3	Vertical	343	1.10
2440MHz	Pass	AV	2.44G	101.57	Inf	-Inf	3	Vertical	343	1.10
2440MHz	Pass	AV	2.4928G	45.27	54.00	-8.73	3	Vertical	343	1.10
2440MHz	Pass	PK	2.3532G	56.60	74.00	-17.40	3	Vertical	343	1.10
2440MHz	Pass	PK	2.4396G	104.00	Inf	-Inf	3	Vertical	343	1.10
2440MHz	Pass	PK	2.4996G	57.19	74.00	-16.81	3	Vertical	343	1.10
2440MHz	Pass	AV	2.382G	44.41	54.00	-9.59	3	Horizontal	62	2.89
2440MHz	Pass	AV	2.44G	104.47	Inf	-Inf	3	Horizontal	62	2.89
2440MHz	Pass	AV	2.4952G	45.32	54.00	-8.68	3	Horizontal	62	2.89
2440MHz	Pass	PK	2.35G	56.42	74.00	-17.58	3	Horizontal	62	2.89
2440MHz	Pass	PK	2.4404G	107.01	Inf	-Inf	3	Horizontal	62	2.89
2440MHz	Pass	PK	2.4964G	56.84	74.00	-17.16	3	Horizontal	62	2.89
2440MHz	Pass	AV	4.87784G	32.29	54.00	-21.71	3	Vertical	78	1.09
2440MHz	Pass	PK	4.87788G	44.09	74.00	-29.91	3	Vertical	78	1.09
2440MHz	Pass	AV	4.87861G	32.31	54.00	-21.69	3	Horizontal	336	2.56
2440MHz	Pass	PK	4.87765G	44.12	74.00	-29.88	3	Horizontal	336	2.56
2480MHz	Pass	AV	2.3636G	44.71	54.00	-9.29	3	Vertical	355	3.00
2480MHz	Pass	AV	2.402G	100.34	Inf	-Inf	3	Vertical	355	3.00
2480MHz	Pass	PK	2.377G	56.88	74.00	-17.12	3	Vertical	355	3.00
2480MHz	Pass	PK	2.4018G	101.69	Inf	-Inf	3	Vertical	355	3.00
2480MHz	Pass	AV	2.3636G	45.03	54.00	-8.97	3	Horizontal	59	3.00
2480MHz	Pass	AV	2.402G	104.93	Inf	-Inf	3	Horizontal	59	3.00
2480MHz	Pass	PK	2.3726G	56.61	74.00	-17.39	3	Horizontal	59	3.00
2480MHz	Pass	PK	2.4016G	106.28	Inf	-Inf	3	Horizontal	59	3.00
2480MHz	Pass	AV	4.80528G	33.24	54.00	-20.76	3	Vertical	194	1.18
2480MHz	Pass	PK	4.80632G	45.08	74.00	-28.92	3	Vertical	194	1.18
2480MHz	Pass	AV	4.80588G	33.26	54.00	-20.74	3	Horizontal	170	2.71
2480MHz	Pass	PK	4.80972G	44.97	74.00	-29.03	3	Horizontal	170	2.71
BT-LE(125kbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3636G	44.71	54.00	-9.29	3	Vertical	355	3.00
2402MHz	Pass	AV	2.402G	100.34	Inf	-Inf	3	Vertical	355	3.00
2402MHz	Pass	PK	2.377G	56.88	74.00	-17.12	3	Vertical	355	3.00
2402MHz	Pass	PK	2.4018G	101.69	Inf	-Inf	3	Vertical	355	3.00
2402MHz	Pass	AV	2.3636G	45.03	54.00	-8.97	3	Horizontal	59	3.00
2402MHz	Pass	AV	2.402G	104.93	Inf	-Inf	3	Horizontal	59	3.00
2402MHz	Pass	PK	2.3726G	56.61	74.00	-17.39	3	Horizontal	59	3.00
2402MHz	Pass	PK	2.4016G	106.28	Inf	-Inf	3	Horizontal	59	3.00
2402MHz	Pass	AV	4.80528G	33.24	54.00	-20.76	3	Vertical	194	1.18
2402MHz	Pass	PK	4.80632G	45.08	74.00	-28.92	3	Vertical	194	1.18
2402MHz	Pass	AV	4.80588G	33.26	54.00	-20.74	3	Horizontal	170	2.71
2402MHz	Pass	PK	4.80972G	44.97	74.00	-29.03	3	Horizontal	170	2.71
2440MHz	Pass	AV	2.382G	44.40	54.00	-9.60	3	Vertical	344	1.09
2440MHz	Pass	AV	2.44G	101.74	Inf	-Inf	3	Vertical	344	1.09
2440MHz	Pass	AV	2.4916G	45.31	54.00	-8.69	3	Vertical	344	1.09
2440MHz	Pass	PK	2.3872G	55.98	74.00	-18.02	3	Vertical	344	1.09
2440MHz	Pass	PK	2.4396G	102.97	Inf	-Inf	3	Vertical	344	1.09
2440MHz	Pass	PK	2.4856G	56.65	74.00	-17.35	3	Vertical	344	1.09
2440MHz	Pass	AV	2.3732G	44.43	54.00	-9.57	3	Horizontal	61	2.90



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2440MHz	Pass	AV	2.44G	104.57	Inf	-Inf	3	Horizontal	61	2.90
2440MHz	Pass	AV	2.5G	45.26	54.00	-8.74	3	Horizontal	61	2.90
2440MHz	Pass	PK	2.3856G	56.71	74.00	-17.29	3	Horizontal	61	2.90
2440MHz	Pass	PK	2.4404G	105.90	Inf	-Inf	3	Horizontal	61	2.90
2440MHz	Pass	PK	2.4884G	56.36	74.00	-17.64	3	Horizontal	61	2.90
2440MHz	Pass	AV	4.87012G	32.55	54.00	-21.45	3	Vertical	355	1.70
2440MHz	Pass	PK	4.876G	43.54	74.00	-30.46	3	Vertical	355	1.70
2440MHz	Pass	AV	4.8702G	32.54	54.00	-21.46	3	Horizontal	51	2.62
2440MHz	Pass	PK	4.88528G	43.69	74.00	-30.31	3	Horizontal	51	2.62
2480MHz	Pass	AV	2.48G	101.72	Inf	-Inf	3	Vertical	352	1.09
2480MHz	Pass	AV	2.4835G	47.67	54.00	-6.33	3	Vertical	352	1.09
2480MHz	Pass	PK	2.4802G	102.98	Inf	-Inf	3	Vertical	352	1.09
2480MHz	Pass	PK	2.4835G	58.66	74.00	-15.34	3	Vertical	352	1.09
2480MHz	Pass	AV	2.48G	104.66	Inf	-Inf	3	Horizontal	61	1.08
2480MHz	Pass	AV	2.4835G	49.11	54.00	-4.89	3	Horizontal	61	1.08
2480MHz	Pass	PK	2.4802G	106.01	Inf	-Inf	3	Horizontal	61	1.08
2480MHz	Pass	PK	2.4835G	60.12	74.00	-13.88	3	Horizontal	61	1.08
2480MHz	Pass	AV	4.96187G	32.82	54.00	-21.18	3	Vertical	68	1.75
2480MHz	Pass	PK	4.95996G	44.59	74.00	-29.41	3	Vertical	68	1.75
2480MHz	Pass	AV	4.95761G	32.87	54.00	-21.13	3	Horizontal	191	2.53
2480MHz	Pass	PK	4.95985G	44.31	74.00	-29.69	3	Horizontal	191	2.53

2.4-2.4835GHz_BT-LE(2Mbps)

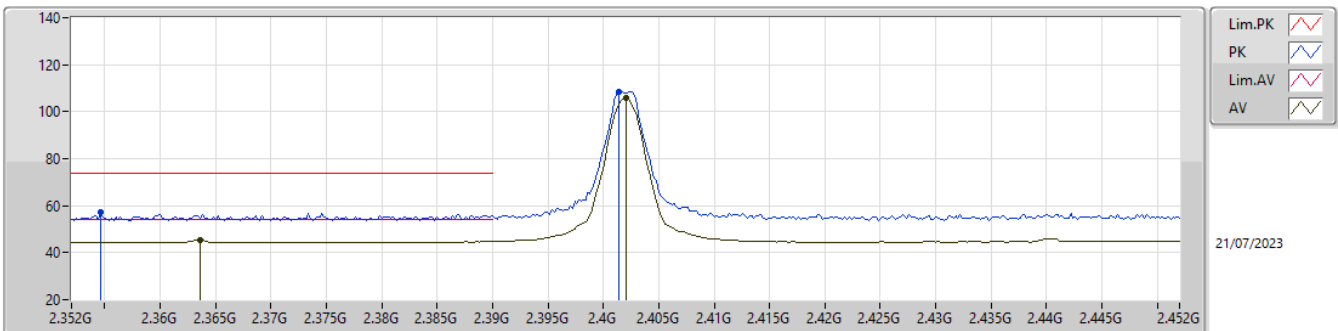
2402MHz_TX



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)
AV	2.3634G	44.79	54.00	-9.21	31.06	3	Vertical	346	1.27	13.73	27.33	3.73	-
AV	2.402G	101.48	Inf	-Inf	31.17	3	Vertical	346	1.27	70.31	27.40	3.77	-
PK	2.3542G	56.64	74.00	-17.36	31.03	3	Vertical	346	1.27	25.61	27.31	3.72	-
PK	2.4014G	103.98	Inf	-Inf	31.17	3	Vertical	346	1.27	72.81	27.40	3.77	-

2.4-2.4835GHz_BT-LE(2Mbps)

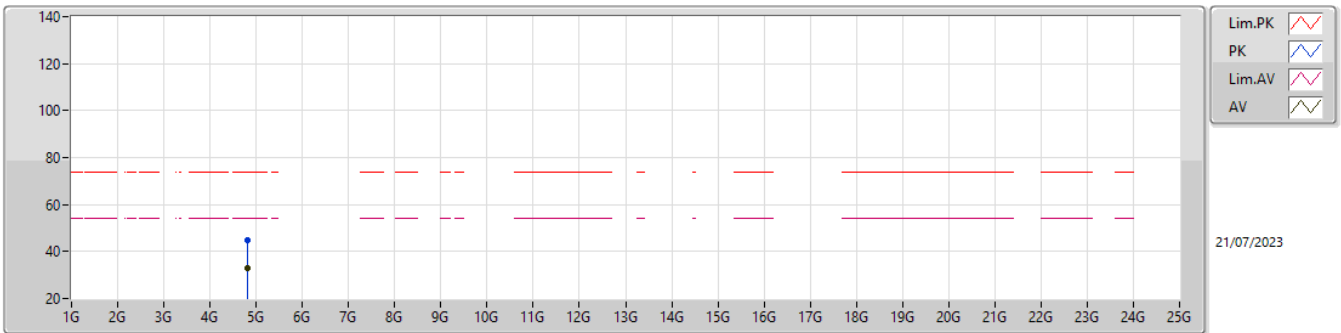
2402MHz_TX



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)
AV	2.3636G	45.35	54.00	-8.65	31.06	3	Horizontal	61	3.00	14.29	27.33	3.73	-
AV	2.402G	105.90	Inf	-Inf	31.17	3	Horizontal	61	3.00	74.73	27.40	3.77	-
PK	2.3546G	57.33	74.00	-16.67	31.03	3	Horizontal	61	3.00	26.30	27.31	3.72	-
PK	2.4014G	108.44	Inf	-Inf	31.17	3	Horizontal	61	3.00	77.27	27.40	3.77	-

2.4-2.4835GHz_BT-LE(2Mbps)

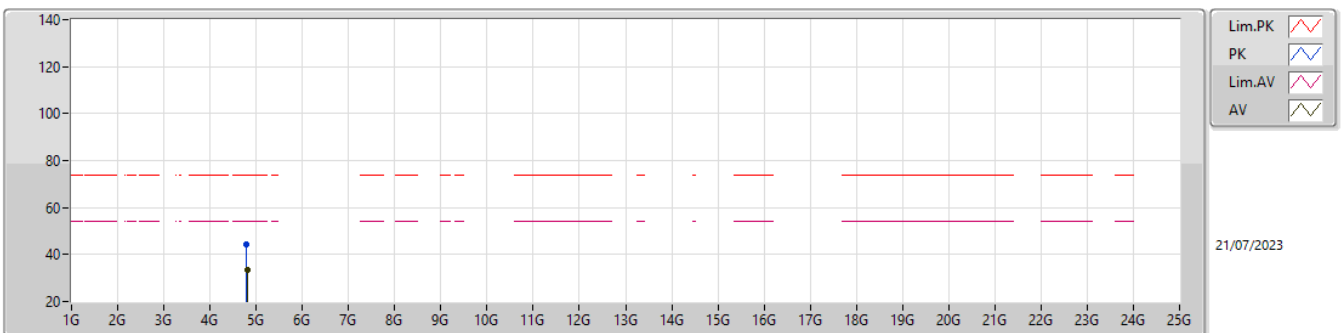
2402MHz_TX



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)
AV	4.80868G	33.14	54.00	-20.86	2.45	3	Vertical	214	2.18	30.69	32.35	5.33	35.23
PK	4.81076G	44.65	74.00	-29.35	2.46	3	Vertical	214	2.18	42.19	32.36	5.33	35.23

2.4-2.4835GHz_BT-LE(2Mbps)

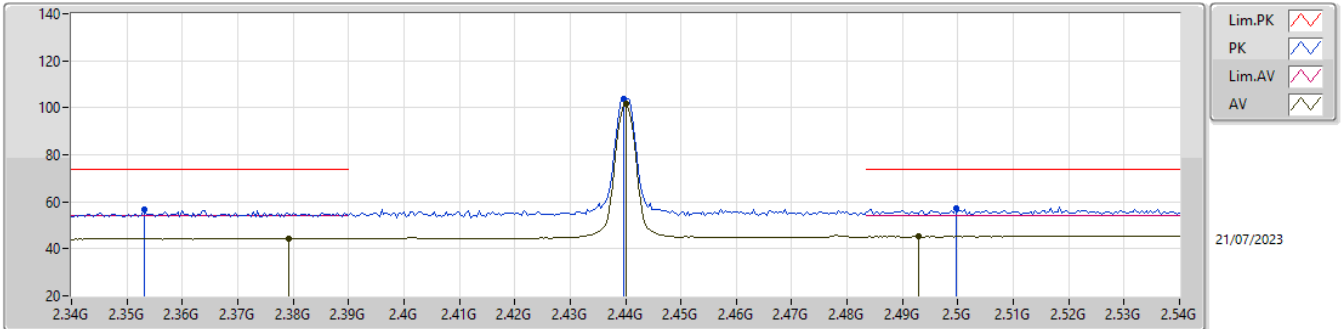
2402MHz_TX



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)
AV	4.80628G	33.19	54.00	-20.81	2.43	3	Horizontal	327	1.16	30.76	32.34	5.32	35.23
PK	4.79408G	44.20	74.00	-29.80	2.34	3	Horizontal	327	1.16	41.86	32.26	5.31	35.23

2.4-2.4835GHz_BT-LE(2Mbps)

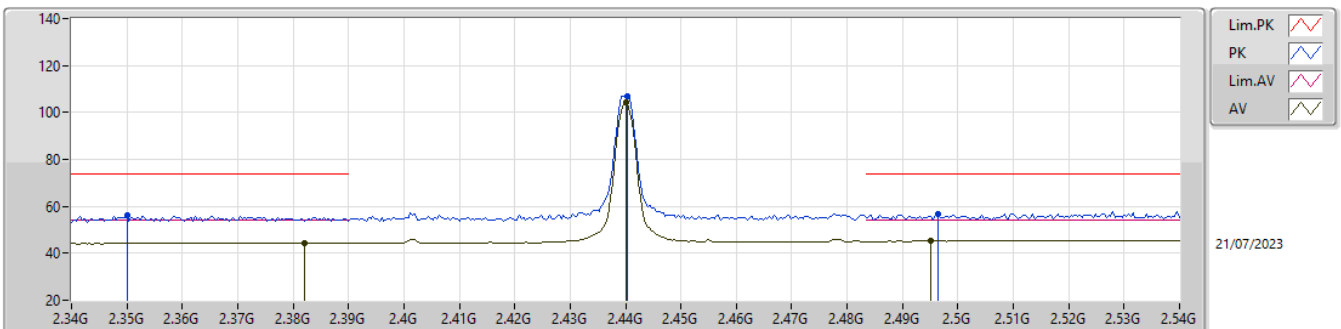
2440MHz_TX



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)
AV	2.3792G	44.37	54.00	-9.63	31.11	3	Vertical	343	1.10	13.26	27.36	3.75	-
AV	2.44G	101.57	Inf	-Inf	31.28	3	Vertical	343	1.10	70.29	27.48	3.80	-
AV	2.4928G	45.27	54.00	-8.73	31.61	3	Vertical	343	1.10	13.66	27.76	3.85	-
PK	2.3532G	56.60	74.00	-17.40	31.03	3	Vertical	343	1.10	25.57	27.31	3.72	-
PK	2.4396G	104.00	Inf	-Inf	31.28	3	Vertical	343	1.10	72.72	27.48	3.80	-
PK	2.4996G	57.19	74.00	-16.81	31.65	3	Vertical	343	1.10	25.54	27.80	3.85	-

2.4-2.4835GHz_BT-LE(2Mbps)

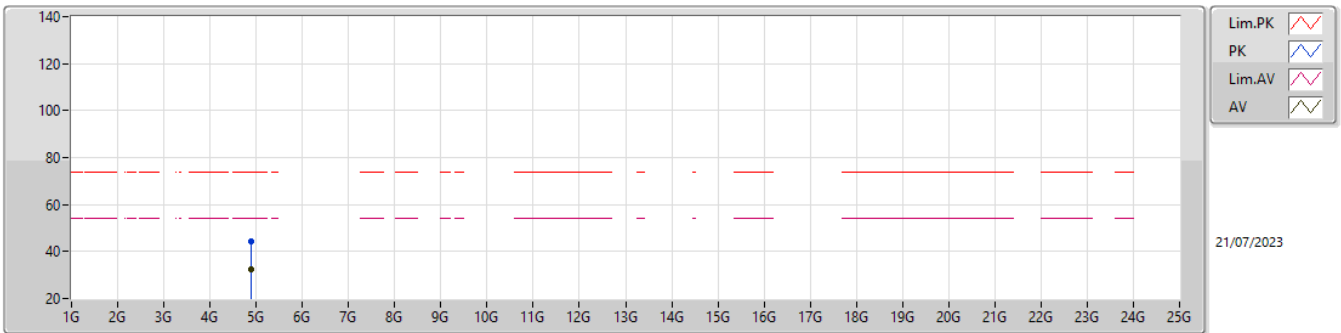
2440MHz_TX



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)
AV	2.382G	44.41	54.00	-9.59	31.11	3	Horizontal	62	2.89	13.30	27.36	3.75	-
AV	2.44G	104.47	Inf	-Inf	31.28	3	Horizontal	62	2.89	73.19	27.48	3.80	-
AV	2.4952G	45.32	54.00	-8.68	31.62	3	Horizontal	62	2.89	13.70	27.77	3.85	-
PK	2.35G	56.42	74.00	-17.58	31.02	3	Horizontal	62	2.89	25.40	27.30	3.72	-
PK	2.4404G	107.01	Inf	-Inf	31.28	3	Horizontal	62	2.89	75.73	27.48	3.80	-
PK	2.4964G	56.84	74.00	-17.16	31.63	3	Horizontal	62	2.89	25.21	27.78	3.85	-

2.4-2.4835GHz_BT-LE(2Mbps)

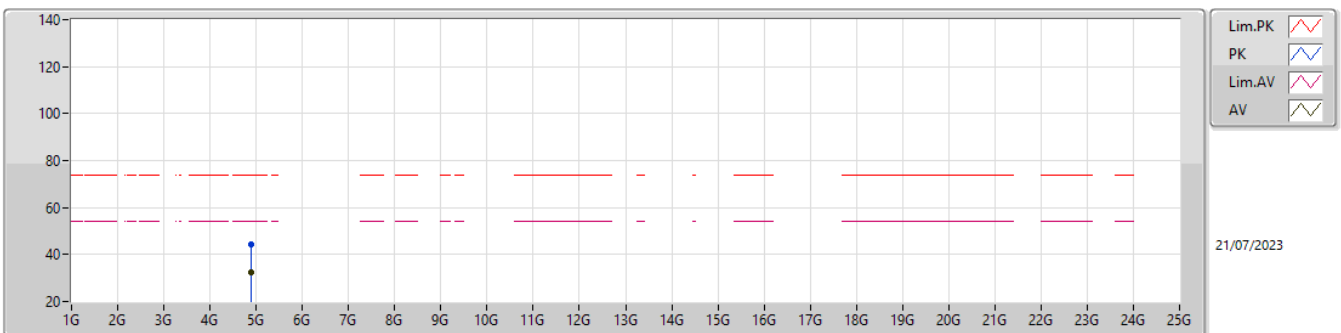
2440MHz_TX



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)
AV	4.87784G	32.29	54.00	-21.71	2.77	3	Vertical	78	1.09	29.52	32.60	5.38	35.21
PK	4.87788G	44.09	74.00	-29.91	2.77	3	Vertical	78	1.09	41.32	32.60	5.38	35.21

2.4-2.4835GHz_BT-LE(2Mbps)

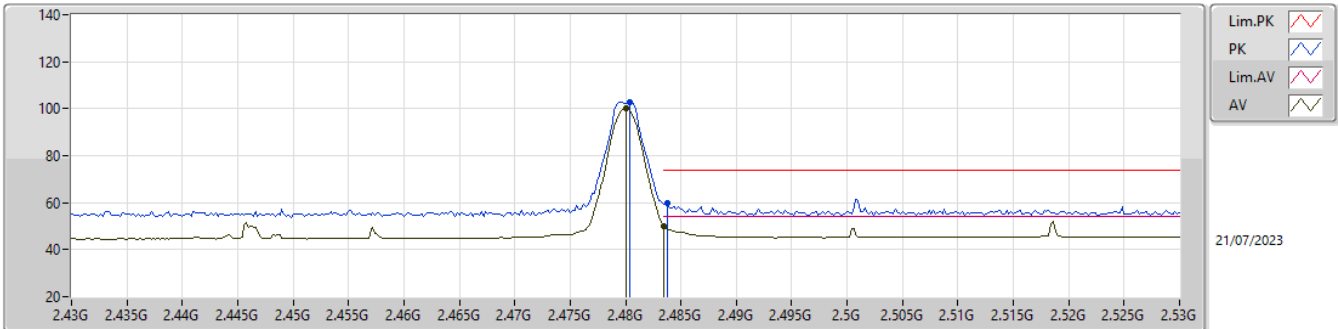
2440MHz_TX



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)
AV	4.87861G	32.31	54.00	-21.69	2.77	3	Horizontal	336	2.56	29.54	32.60	5.38	35.21
PK	4.87765G	44.12	74.00	-29.88	2.77	3	Horizontal	336	2.56	41.35	32.60	5.38	35.21

2.4-2.4835GHz_BT-LE(2Mbps)

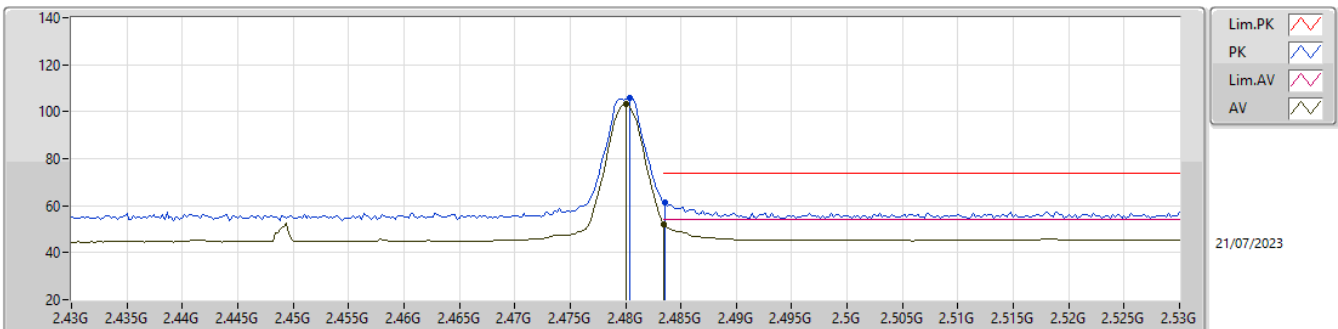
2480MHz_TX



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)
AV	2.48G	100.26	Inf	-Inf	31.52	3	Vertical	350	1.09	68.74	27.68	3.84	-
AV	2.4835G	49.90	54.00	-4.10	31.54	3	Vertical	350	1.09	18.36	27.70	3.84	-
PK	2.4804G	102.85	Inf	-Inf	31.52	3	Vertical	350	1.09	71.33	27.68	3.84	-
PK	2.4838G	59.97	74.00	-14.03	31.54	3	Vertical	350	1.09	28.43	27.70	3.84	-

2.4-2.4835GHz_BT-LE(2Mbps)

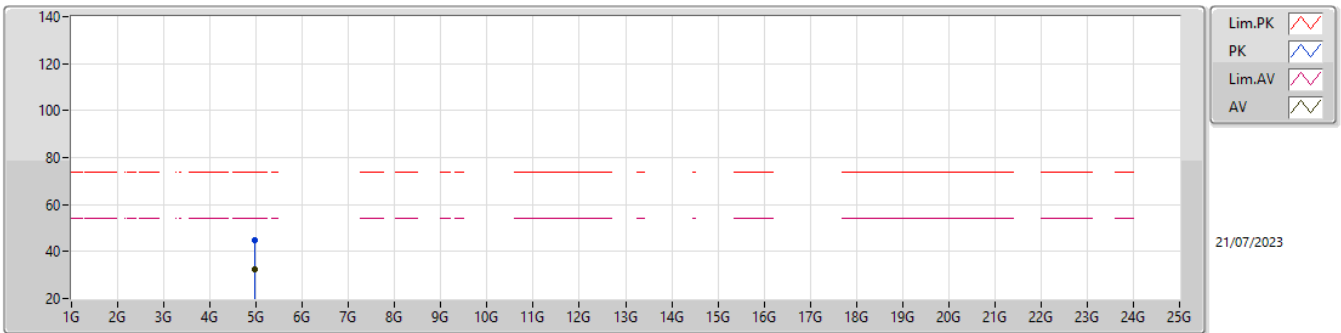
2480MHz_TX



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)
AV	2.48G	103.14	Inf	-Inf	31.52	3	Horizontal	60	1.08	71.62	27.68	3.84	-
AV	2.4835G	52.15	54.00	-1.85	31.54	3	Horizontal	60	1.08	20.61	27.70	3.84	-
PK	2.4804G	105.71	Inf	-Inf	31.52	3	Horizontal	60	1.08	74.19	27.68	3.84	-
PK	2.4836G	61.35	74.00	-12.65	31.54	3	Horizontal	60	1.08	29.81	27.70	3.84	-

2.4-2.4835GHz_BT-LE(2Mbps)

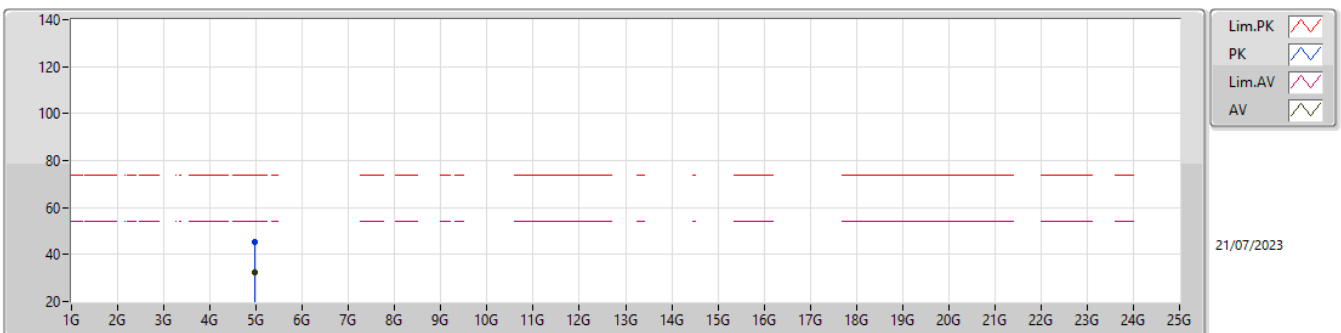
2480MHz_TX



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)
AV	4.9575G	32.59	54.00	-21.41	3.08	3	Vertical	242	2.02	29.51	32.83	5.44	35.19
PK	4.96119G	44.91	74.00	-29.09	3.09	3	Vertical	242	2.02	41.82	32.84	5.44	35.19

2.4-2.4835GHz_BT-LE(2Mbps)

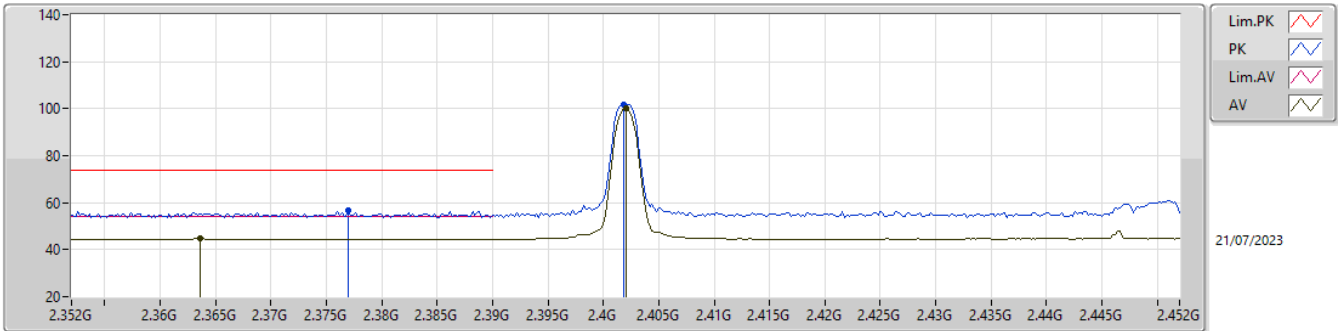
2480MHz_TX



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)
AV	4.95905G	32.60	54.00	-21.40	3.09	3	Horizontal	344	1.15	29.51	32.84	5.44	35.19
PK	4.96048G	45.49	74.00	-28.51	3.09	3	Horizontal	344	1.15	42.40	32.84	5.44	35.19

2.4-2.4835GHz_BT-LE(125kbps)

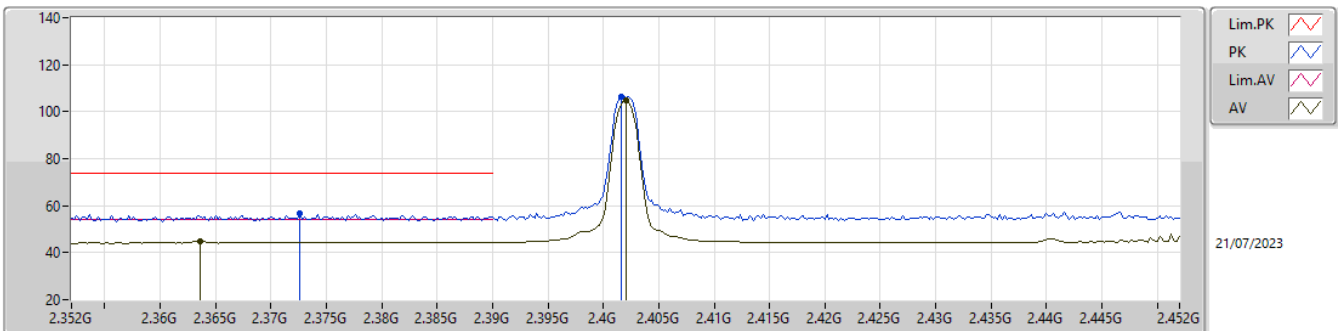
2402MHz_TX



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)
AV	2.3636G	44.71	54.00	-9.29	31.06	3	Vertical	355	3.00	13.65	27.33	3.73	-
AV	2.402G	100.34	Inf	-Inf	31.17	3	Vertical	355	3.00	69.17	27.40	3.77	-
PK	2.377G	56.88	74.00	-17.12	31.10	3	Vertical	355	3.00	25.78	27.35	3.75	-
PK	2.4018G	101.69	Inf	-Inf	31.17	3	Vertical	355	3.00	70.52	27.40	3.77	-

2.4-2.4835GHz_BT-LE(125kbps)

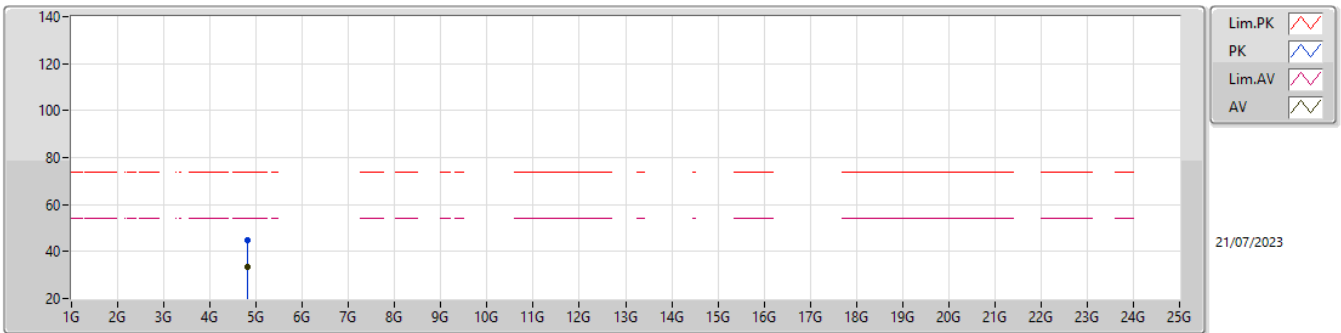
2402MHz_TX



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)
AV	2.3636G	45.03	54.00	-8.97	31.06	3	Horizontal	59	3.00	13.97	27.33	3.73	-
AV	2.402G	104.93	Inf	-Inf	31.17	3	Horizontal	59	3.00	73.76	27.40	3.77	-
PK	2.3726G	56.61	74.00	-17.39	31.09	3	Horizontal	59	3.00	25.52	27.35	3.74	-
PK	2.4016G	106.28	Inf	-Inf	31.17	3	Horizontal	59	3.00	75.11	27.40	3.77	-

2.4-2.4835GHz_BT-LE(125kbps)

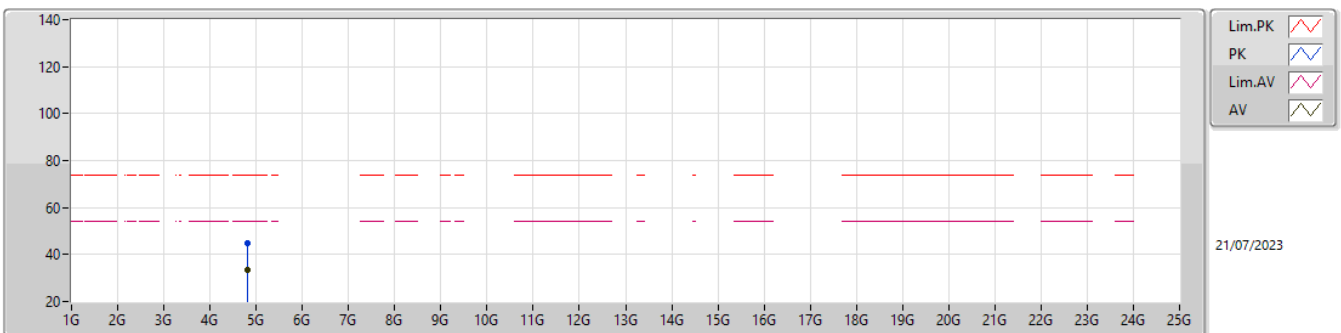
2402MHz_TX



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)
AV	4.80528G	33.24	54.00	-20.76	2.42	3	Vertical	194	1.18	30.82	32.33	5.32	35.23
PK	4.80632G	45.08	74.00	-28.92	2.43	3	Vertical	194	1.18	42.65	32.34	5.32	35.23

2.4-2.4835GHz_BT-LE(125kbps)

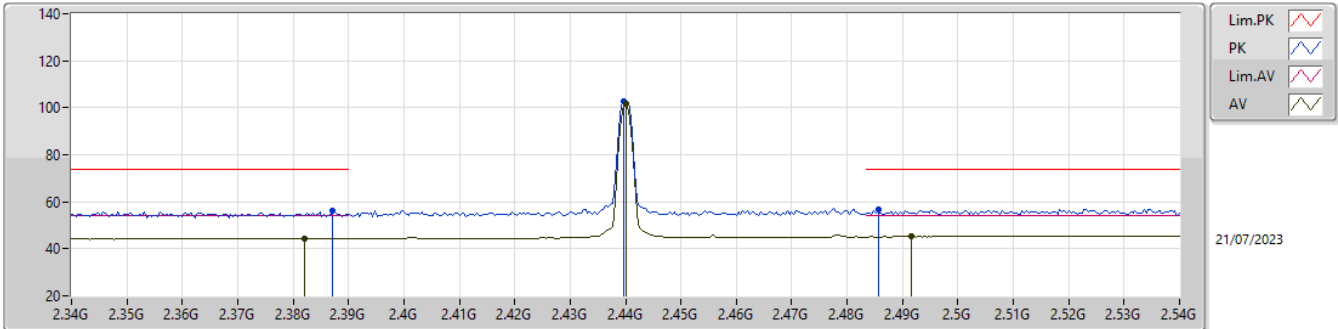
2402MHz_TX



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)
AV	4.80588G	33.26	54.00	-20.74	2.43	3	Horizontal	170	2.71	30.83	32.34	5.32	35.23
PK	4.80972G	44.97	74.00	-29.03	2.46	3	Horizontal	170	2.71	42.51	32.36	5.33	35.23

2.4-2.4835GHz_BT-LE(125kbps)

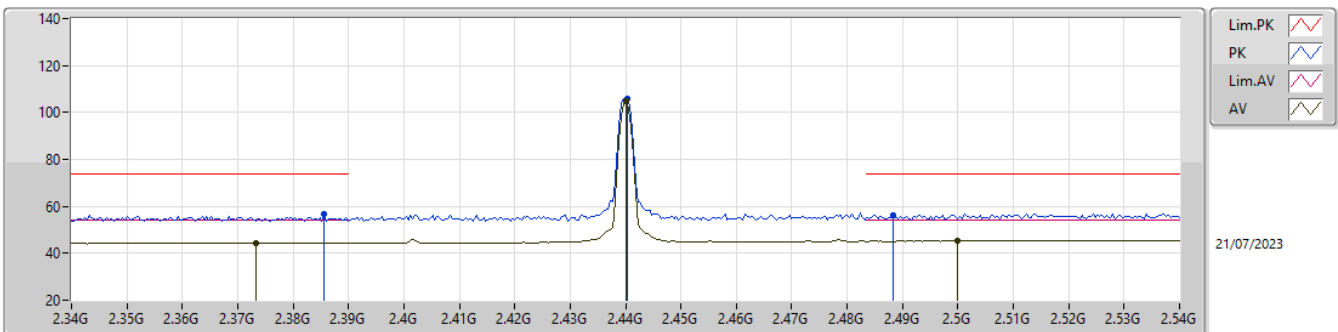
2440MHz_TX



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)
AV	2.382G	44.40	54.00	-9.60	31.11	3	Vertical	344	1.09	13.29	27.36	3.75	-
AV	2.44G	101.74	Inf	-Inf	31.28	3	Vertical	344	1.09	70.46	27.48	3.80	-
AV	2.4916G	45.31	54.00	-8.69	31.60	3	Vertical	344	1.09	13.71	27.75	3.85	-
PK	2.3872G	55.98	74.00	-18.02	31.13	3	Vertical	344	1.09	24.85	27.37	3.76	-
PK	2.4396G	102.97	Inf	-Inf	31.28	3	Vertical	344	1.09	71.69	27.48	3.80	-
PK	2.4856G	56.65	74.00	-17.35	31.55	3	Vertical	344	1.09	25.10	27.71	3.84	-

2.4-2.4835GHz_BT-LE(125kbps)

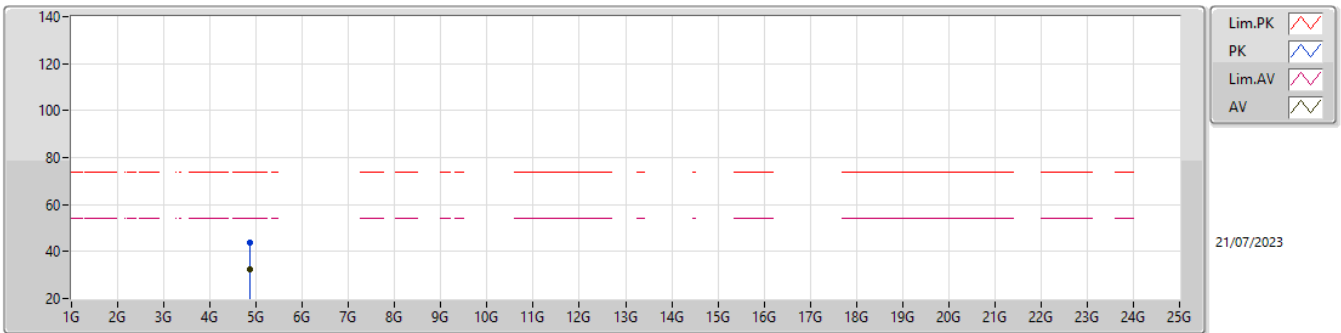
2440MHz_TX



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)
AV	2.3732G	44.43	54.00	-9.57	31.09	3	Horizontal	61	2.90	13.34	27.35	3.74	-
AV	2.44G	104.57	Inf	-Inf	31.28	3	Horizontal	61	2.90	73.29	27.48	3.80	-
AV	2.5G	45.26	54.00	-8.74	31.65	3	Horizontal	61	2.90	13.61	27.80	3.85	-
PK	2.3856G	56.71	74.00	-17.29	31.12	3	Horizontal	61	2.90	25.59	27.37	3.75	-
PK	2.4404G	105.90	Inf	-Inf	31.28	3	Horizontal	61	2.90	74.62	27.48	3.80	-
PK	2.4884G	56.36	74.00	-17.64	31.58	3	Horizontal	61	2.90	24.78	27.73	3.85	-

2.4-2.4835GHz_BT-LE(125kbps)

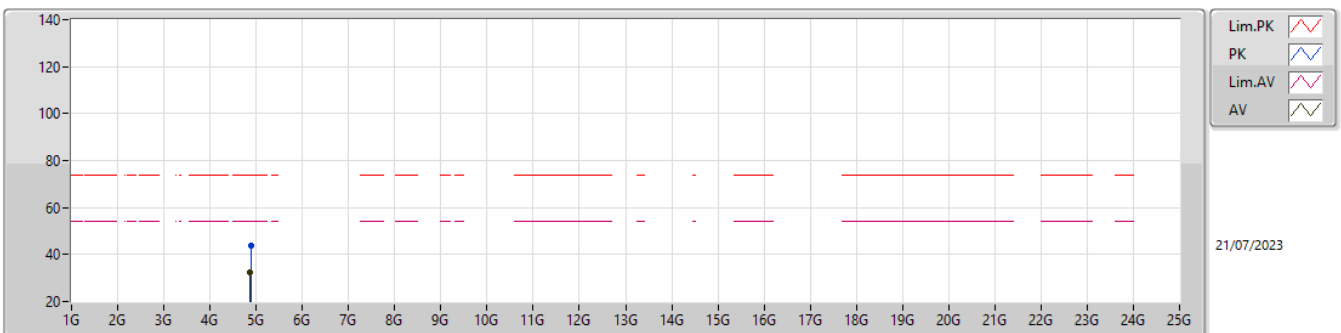
2440MHz_TX



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)
AV	4.87012G	32.55	54.00	-21.45	2.76	3	Vertical	355	1.70	29.79	32.60	5.37	35.21
PK	4.8766G	43.54	74.00	-30.46	2.77	3	Vertical	355	1.70	40.77	32.60	5.38	35.21

2.4-2.4835GHz_BT-LE(125kbps)

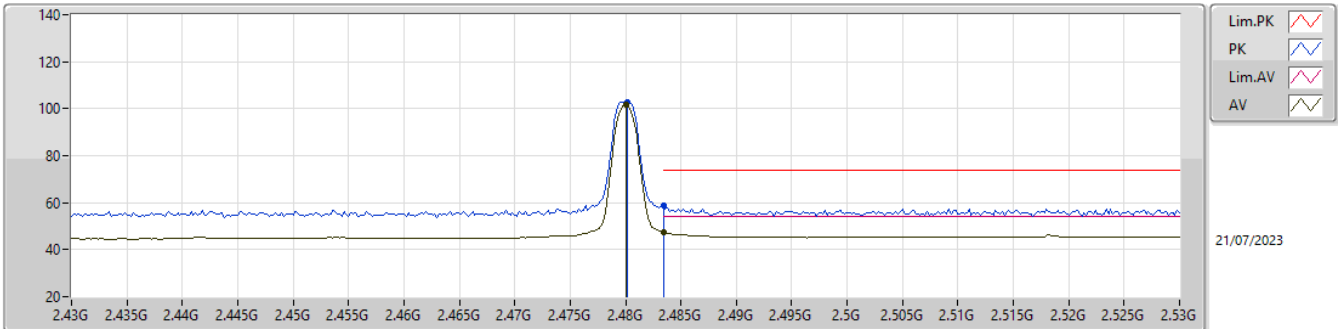
2440MHz_TX



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)
AV	4.8702G	32.54	54.00	-21.46	2.76	3	Horizontal	51	2.62	29.78	32.60	5.37	35.21
PK	4.88528G	43.69	74.00	-30.31	2.77	3	Horizontal	51	2.62	40.92	32.60	5.38	35.21

2.4-2.4835GHz_BT-LE(125kbps)

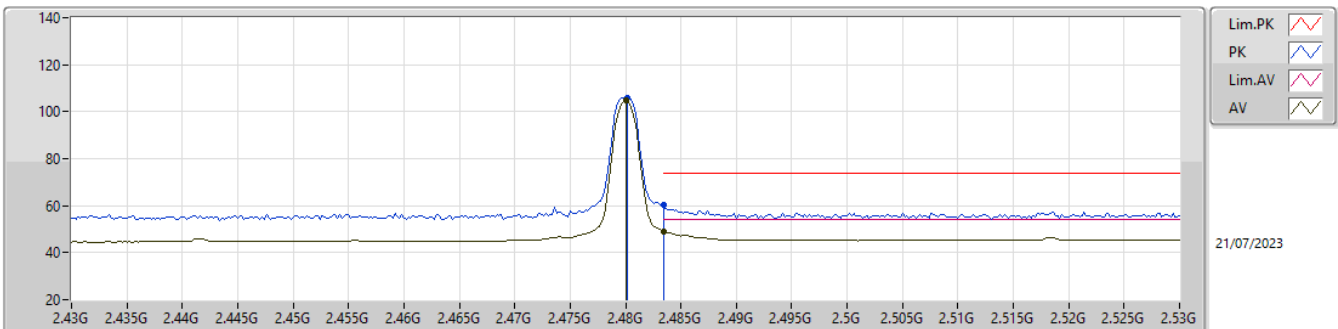
2480MHz_TX



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)
AV	2.48G	101.72	Inf	-Inf	31.52	3	Vertical	352	1.09	70.20	27.68	3.84	-
AV	2.4835G	47.67	54.00	-6.33	31.54	3	Vertical	352	1.09	16.13	27.70	3.84	-
PK	2.4802G	102.98	Inf	-Inf	31.52	3	Vertical	352	1.09	71.46	27.68	3.84	-
PK	2.4835G	58.66	74.00	-15.34	31.54	3	Vertical	352	1.09	27.12	27.70	3.84	-

2.4-2.4835GHz_BT-LE(125kbps)

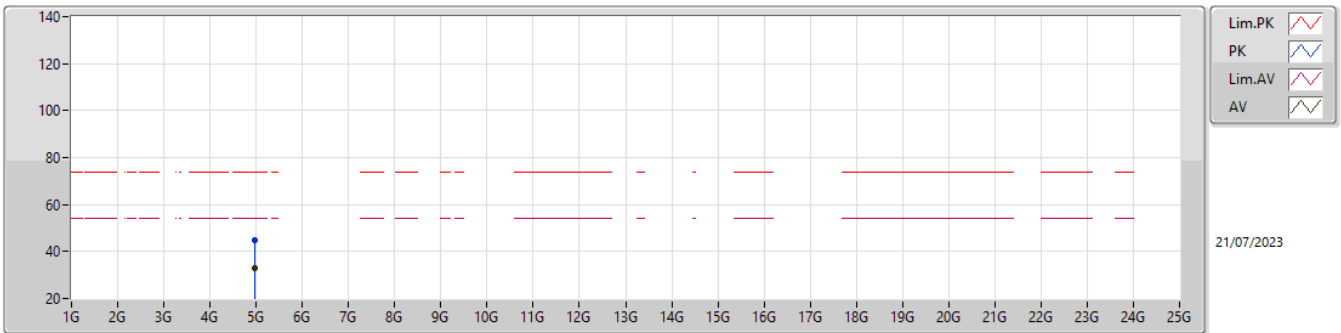
2480MHz_TX







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)
AV	2.48G	104.66	Inf	-Inf	31.52	3	Horizontal	61	1.08	73.14	27.68	3.84	-
AV	2.4835G	49.11	54.00	-4.89	31.54	3	Horizontal	61	1.08	17.57	27.70	3.84	-
PK	2.4802G	106.01	Inf	-Inf	31.52	3	Horizontal	61	1.08	74.49	27.68	3.84	-
PK	2.4835G	60.12	74.00	-13.88	31.54	3	Horizontal	61	1.08	28.58	27.70	3.84	-

2.4-2.4835GHz_BT-LE(125kbps)

2480MHz_TX



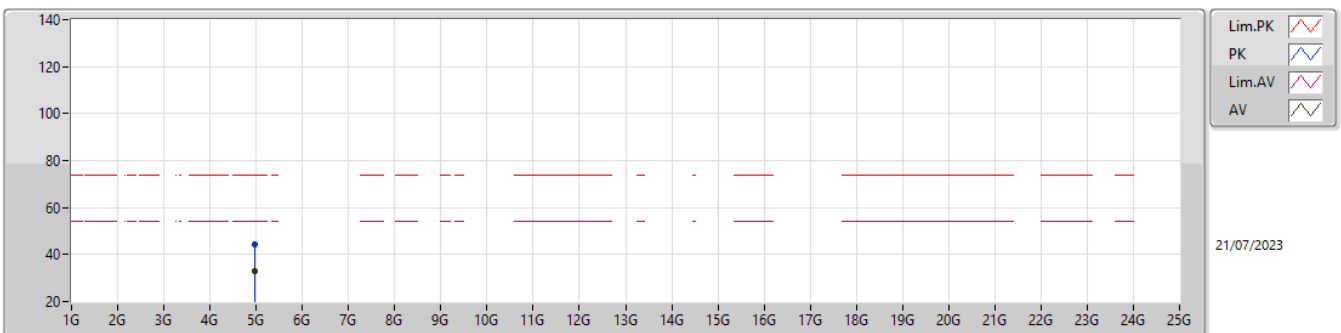
Lim.PK 
 PK 
 Lim.AV 
 AV 





21/07/2023

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96187G	32.82	54.00	-21.18	3.10	3	Vertical	68	1.75	29.72	32.85	5.44	35.19
PK	4.95996G	44.59	74.00	-29.41	3.09	3	Vertical	68	1.75	41.50	32.84	5.44	35.19

2.4-2.4835GHz_BT-LE(125kbps)

2480MHz_TX



Lim.PK 
 PK 
 Lim.AV 
 AV 

21/07/2023

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95761G	32.87	54.00	-21.13	3.08	3	Horizontal	191	2.53	29.79	32.83	5.44	35.19
PK	4.95985G	44.31	74.00	-29.69	3.09	3	Horizontal	191	2.53	41.22	32.84	5.44	35.19



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	7.31775G	62.50	74.00	-11.50	Vertical
Mode 2	Pass	AV	11.49215G	40.99	54.00	-13.01	Horizontal
Mode 3	Pass	AV	7.2905G	42.17	54.00	-11.83	Horizontal
Mode 4	Pass	AV	11.49282G	41.85	54.00	-12.15	Horizontal
Mode 5	Pass	AV	11.4933G	42.02	54.00	-11.98	Horizontal
Mode 6	Pass	AV	7.2617G	44.30	54.00	-9.70	Horizontal



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.87352G	40.96	54.00	-13.04	3	Vertical	300	1.88
Mode 1	Pass	AV	7.3168G	41.23	54.00	-12.77	3	Vertical	40	2.18
Mode 1	Pass	AV	11.4897G	40.31	54.00	-13.69	3	Vertical	356	1.50
Mode 1	Pass	AV	12.84735G	38.49	68.20	-29.71	3	Vertical	79	1.55
Mode 1	Pass	AV	17.2222G	37.90	68.20	-30.30	3	Vertical	116	1.90
Mode 1	Pass	PK	4.87872G	55.78	74.00	-18.22	3	Vertical	300	1.88
Mode 1	Pass	PK	7.31775G	62.50	74.00	-11.50	3	Vertical	40	2.18
Mode 1	Pass	PK	11.4888G	54.05	74.00	-19.95	3	Vertical	356	1.50
Mode 1	Pass	PK	12.847G	52.60	88.20	-35.60	3	Vertical	79	1.55
Mode 1	Pass	PK	17.2157G	52.49	88.20	-35.71	3	Vertical	116	1.90
Mode 1	Pass	AV	4.87904G	41.85	54.00	-12.15	3	Horizontal	312	1.96
Mode 1	Pass	AV	7.31739G	41.66	54.00	-12.34	3	Horizontal	287	1.79
Mode 1	Pass	AV	11.49275G	41.20	54.00	-12.80	3	Horizontal	317	1.56
Mode 1	Pass	AV	12.8502G	38.48	68.20	-29.72	3	Horizontal	279	1.60
Mode 1	Pass	AV	17.2308G	37.85	68.20	-30.35	3	Horizontal	310	1.70
Mode 1	Pass	PK	4.87844G	56.96	74.00	-17.04	3	Horizontal	312	1.96
Mode 1	Pass	PK	7.31779G	61.73	74.00	-12.27	3	Horizontal	287	1.79
Mode 1	Pass	PK	11.4927G	54.63	74.00	-19.37	3	Horizontal	317	1.56
Mode 1	Pass	PK	12.82535G	52.24	88.20	-35.96	3	Horizontal	279	1.60
Mode 1	Pass	PK	17.22765G	52.68	88.20	-35.52	3	Horizontal	310	1.70
Mode 2	Pass	AV	4.8721G	39.46	54.00	-14.54	3	Vertical	50	1.54
Mode 2	Pass	AV	7.31215G	35.38	54.00	-18.62	3	Vertical	10	1.50
Mode 2	Pass	AV	11.49025G	39.28	54.00	-14.72	3	Vertical	355	1.55
Mode 2	Pass	AV	11.55295G	37.44	54.00	-16.56	3	Vertical	347	1.62
Mode 2	Pass	AV	12.852G	38.40	68.20	-29.80	3	Vertical	38	1.49
Mode 2	Pass	AV	17.25505G	37.80	68.20	-30.40	3	Vertical	330	2.33
Mode 2	Pass	AV	17.33495G	37.91	68.20	-30.29	3	Vertical	127	1.73
Mode 2	Pass	PK	4.87365G	55.11	74.00	-18.89	3	Vertical	50	1.54
Mode 2	Pass	PK	7.31085G	51.68	74.00	-22.32	3	Vertical	10	1.50
Mode 2	Pass	PK	11.4903G	52.31	74.00	-21.69	3	Vertical	355	1.55
Mode 2	Pass	PK	11.56455G	51.84	74.00	-22.16	3	Vertical	347	1.62
Mode 2	Pass	PK	12.8484G	51.95	88.20	-36.25	3	Vertical	38	1.49
Mode 2	Pass	PK	17.2339G	51.69	88.20	-36.51	3	Vertical	330	2.33
Mode 2	Pass	PK	17.3782G	51.51	88.20	-36.69	3	Vertical	127	1.73
Mode 2	Pass	AV	4.88065G	38.54	54.00	-15.46	3	Horizontal	210	1.66
Mode 2	Pass	AV	7.31185G	35.34	54.00	-18.66	3	Horizontal	323	1.46
Mode 2	Pass	AV	11.49215G	40.99	54.00	-13.01	3	Horizontal	319	1.38
Mode 2	Pass	AV	11.5668G	37.51	54.00	-16.49	3	Horizontal	258	1.45
Mode 2	Pass	AV	12.8622G	38.48	68.20	-29.72	3	Horizontal	90	1.96
Mode 2	Pass	AV	17.2191G	37.82	68.20	-30.38	3	Horizontal	214	2.06
Mode 2	Pass	AV	17.36615G	38.01	68.20	-30.19	3	Horizontal	190	2.35
Mode 2	Pass	PK	4.87985G	55.26	74.00	-18.74	3	Horizontal	210	1.66
Mode 2	Pass	PK	7.3164G	50.51	74.00	-23.49	3	Horizontal	323	1.46
Mode 2	Pass	PK	11.49305G	54.80	74.00	-19.20	3	Horizontal	319	1.38
Mode 2	Pass	PK	11.5816G	51.90	74.00	-22.10	3	Horizontal	258	1.45
Mode 2	Pass	PK	12.86215G	52.88	88.20	-35.32	3	Horizontal	90	1.96
Mode 2	Pass	PK	17.2278G	51.04	88.20	-37.16	3	Horizontal	214	2.06
Mode 2	Pass	PK	17.35605G	51.23	88.20	-36.97	3	Horizontal	190	2.35
Mode 3	Pass	AV	4.8719G	38.76	54.00	-15.24	3	Vertical	54	2.21
Mode 3	Pass	AV	7.28625G	41.30	54.00	-12.70	3	Vertical	105	1.87

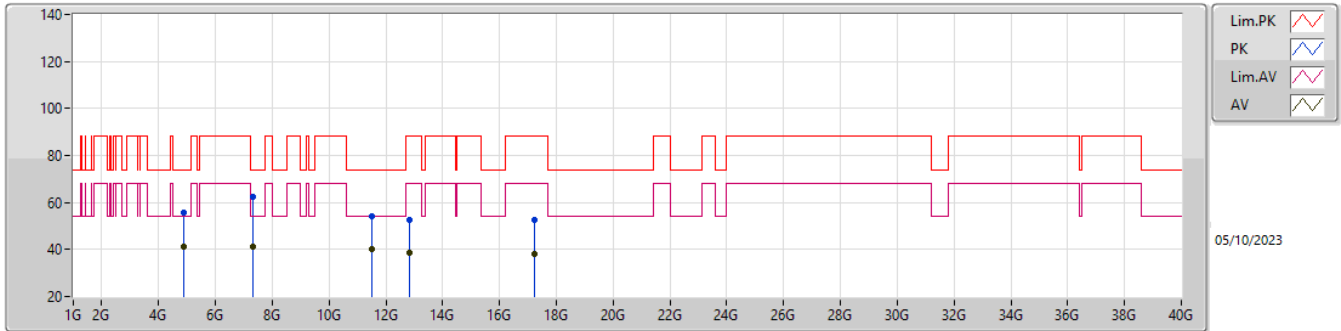


Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 3	Pass	AV	11.4911G	38.24	54.00	-15.76	3	Vertical	78	2.93
Mode 3	Pass	AV	12.84476G	38.59	68.20	-29.61	3	Vertical	280	2.30
Mode 3	Pass	AV	13.00708G	38.35	68.20	-29.85	3	Vertical	8	1.92
Mode 3	Pass	AV	17.22982G	37.95	68.20	-30.25	3	Vertical	352	1.36
Mode 3	Pass	PK	4.8714G	53.59	74.00	-20.41	3	Vertical	54	2.21
Mode 3	Pass	PK	7.28615G	56.62	74.00	-17.38	3	Vertical	105	1.87
Mode 3	Pass	PK	11.48012G	51.68	74.00	-22.32	3	Vertical	78	2.93
Mode 3	Pass	PK	12.84398G	52.17	88.20	-36.03	3	Vertical	280	2.30
Mode 3	Pass	PK	13.00846G	52.09	88.20	-36.11	3	Vertical	8	1.92
Mode 3	Pass	PK	17.22676G	51.77	88.20	-36.43	3	Vertical	352	1.36
Mode 3	Pass	AV	4.8849G	38.68	54.00	-15.32	3	Horizontal	102	1.37
Mode 3	Pass	AV	7.2905G	42.17	54.00	-11.83	3	Horizontal	95	1.77
Mode 3	Pass	AV	11.4935G	41.48	54.00	-12.52	3	Horizontal	318	1.49
Mode 3	Pass	AV	12.8438G	38.59	68.20	-29.61	3	Horizontal	335	2.67
Mode 3	Pass	AV	13.01068G	38.38	68.20	-29.82	3	Horizontal	140	1.01
Mode 3	Pass	AV	17.2333G	37.80	68.20	-30.40	3	Horizontal	222	2.84
Mode 3	Pass	PK	4.88475G	54.97	74.00	-19.03	3	Horizontal	102	1.37
Mode 3	Pass	PK	7.29115G	56.98	74.00	-17.02	3	Horizontal	95	1.77
Mode 3	Pass	PK	11.49256G	55.57	74.00	-18.43	3	Horizontal	318	1.49
Mode 3	Pass	PK	12.85988G	51.90	88.20	-36.30	3	Horizontal	335	2.67
Mode 3	Pass	PK	13.0169G	51.73	88.20	-36.47	3	Horizontal	140	1.01
Mode 3	Pass	PK	17.23728G	51.15	88.20	-37.05	3	Horizontal	222	2.84
Mode 4	Pass	AV	4.87744G	28.82	54.00	-25.18	3	Vertical	351	1.73
Mode 4	Pass	AV	7.30016G	35.52	54.00	-18.48	3	Vertical	70	2.58
Mode 4	Pass	AV	11.4906G	38.93	54.00	-15.07	3	Vertical	341	1.72
Mode 4	Pass	AV	12.84988G	38.92	68.20	-29.28	3	Vertical	229	1.15
Mode 4	Pass	AV	17.23075G	38.08	68.20	-30.12	3	Vertical	187	2.39
Mode 4	Pass	PK	4.87464G	42.62	74.00	-31.38	3	Vertical	351	1.73
Mode 4	Pass	PK	7.29828G	50.02	74.00	-23.98	3	Vertical	70	2.58
Mode 4	Pass	PK	11.4915G	52.17	74.00	-21.83	3	Vertical	341	1.72
Mode 4	Pass	PK	12.85026G	52.27	88.20	-35.93	3	Vertical	229	1.15
Mode 4	Pass	PK	17.23109G	52.14	88.20	-36.06	3	Vertical	187	2.39
Mode 4	Pass	AV	4.86456G	29.19	54.00	-24.81	3	Horizontal	352	1.34
Mode 4	Pass	AV	7.31308G	33.76	54.00	-20.24	3	Horizontal	349	1.33
Mode 4	Pass	AV	11.49282G	41.85	54.00	-12.15	3	Horizontal	319	1.50
Mode 4	Pass	AV	12.8504G	38.95	68.20	-29.25	3	Horizontal	144	2.75
Mode 4	Pass	AV	17.23334G	38.12	68.20	-30.08	3	Horizontal	296	1.19
Mode 4	Pass	PK	4.86556G	42.50	74.00	-31.50	3	Horizontal	352	1.34
Mode 4	Pass	PK	7.2964G	47.95	74.00	-26.05	3	Horizontal	349	1.33
Mode 4	Pass	PK	11.49168G	55.50	74.00	-18.50	3	Horizontal	319	1.50
Mode 4	Pass	PK	12.84591G	52.37	88.20	-35.83	3	Horizontal	144	2.75
Mode 4	Pass	PK	17.23286G	51.73	88.20	-36.47	3	Horizontal	296	1.19
Mode 5	Pass	AV	4.87215G	39.73	54.00	-14.27	3	Vertical	302	1.68
Mode 5	Pass	AV	7.3089G	34.62	54.00	-19.38	3	Vertical	35	1.69
Mode 5	Pass	AV	11.49195G	39.94	54.00	-14.06	3	Vertical	353	2.82
Mode 5	Pass	AV	11.56683G	37.89	54.00	-16.11	3	Vertical	43	1.16
Mode 5	Pass	AV	12.84889G	38.94	68.20	-29.26	3	Vertical	264	2.63
Mode 5	Pass	AV	17.23091G	38.11	68.20	-30.09	3	Vertical	246	1.04
Mode 5	Pass	AV	17.35831G	38.27	68.20	-29.93	3	Vertical	243	2.01
Mode 5	Pass	PK	4.87155G	55.32	74.00	-18.68	3	Vertical	302	1.68



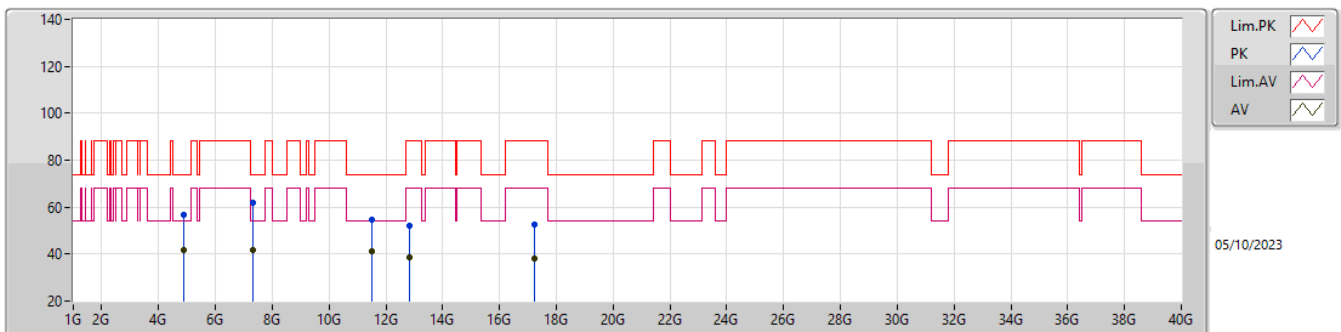
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 5	Pass	PK	7.3108G	49.20	74.00	-24.80	3	Vertical	35	1.69
Mode 5	Pass	PK	11.49235G	53.74	74.00	-20.26	3	Vertical	353	2.82
Mode 5	Pass	PK	11.57219G	51.50	74.00	-22.50	3	Vertical	43	1.16
Mode 5	Pass	PK	12.85132G	53.01	88.20	-35.19	3	Vertical	264	2.63
Mode 5	Pass	PK	17.23232G	52.27	88.20	-35.93	3	Vertical	246	1.04
Mode 5	Pass	PK	17.35132G	51.58	88.20	-36.62	3	Vertical	243	2.01
Mode 5	Pass	AV	4.88485G	38.35	54.00	-15.65	3	Horizontal	351	1.36
Mode 5	Pass	AV	7.3078G	34.37	54.00	-19.63	3	Horizontal	320	1.45
Mode 5	Pass	AV	11.4933G	42.02	54.00	-11.98	3	Horizontal	318	1.47
Mode 5	Pass	AV	11.56546G	37.83	54.00	-16.17	3	Horizontal	293	1.50
Mode 5	Pass	AV	12.84773G	38.96	68.20	-29.24	3	Horizontal	111	1.86
Mode 5	Pass	AV	17.23301G	38.11	68.20	-30.09	3	Horizontal	358	2.08
Mode 5	Pass	AV	17.35942G	38.21	68.20	-29.99	3	Horizontal	168	1.78
Mode 5	Pass	PK	4.88545G	54.42	74.00	-19.58	3	Horizontal	351	1.36
Mode 5	Pass	PK	7.3066G	48.34	74.00	-25.66	3	Horizontal	320	1.45
Mode 5	Pass	PK	11.49285G	56.27	74.00	-17.73	3	Horizontal	318	1.47
Mode 5	Pass	PK	11.57103G	53.95	74.00	-20.05	3	Horizontal	293	1.50
Mode 5	Pass	PK	12.84769G	52.59	88.20	-35.61	3	Horizontal	111	1.86
Mode 5	Pass	PK	17.23907G	52.21	88.20	-35.99	3	Horizontal	358	2.08
Mode 5	Pass	PK	17.35383G	52.26	88.20	-35.94	3	Horizontal	168	1.78
Mode 6	Pass	AV	4.87215G	39.40	54.00	-14.60	3	Vertical	305	1.60
Mode 6	Pass	AV	7.2639G	42.34	54.00	-11.66	3	Vertical	40	1.70
Mode 6	Pass	AV	11.4897G	39.02	54.00	-14.98	3	Vertical	357	1.50
Mode 6	Pass	AV	12.85618G	38.58	68.20	-29.62	3	Vertical	269	2.24
Mode 6	Pass	AV	13.0096G	38.40	68.20	-29.80	3	Vertical	178	1.80
Mode 6	Pass	AV	17.2324G	37.76	68.20	-30.44	3	Vertical	160	1.45
Mode 6	Pass	PK	4.874G	54.73	74.00	-19.27	3	Vertical	305	1.60
Mode 6	Pass	PK	7.2992G	56.50	74.00	-17.50	3	Vertical	40	1.70
Mode 6	Pass	PK	11.48988G	53.31	74.00	-20.69	3	Vertical	357	1.50
Mode 6	Pass	PK	12.84412G	53.48	88.20	-34.72	3	Vertical	269	2.24
Mode 6	Pass	PK	13.00796G	51.97	88.20	-36.23	3	Vertical	178	1.80
Mode 6	Pass	PK	17.23426G	51.30	88.20	-36.90	3	Vertical	160	1.45
Mode 6	Pass	AV	4.87695G	38.68	54.00	-15.32	3	Horizontal	46	1.03
Mode 6	Pass	AV	7.2617G	44.30	54.00	-9.70	3	Horizontal	296	2.32
Mode 6	Pass	AV	11.49263G	41.42	54.00	-12.58	3	Horizontal	317	1.39
Mode 6	Pass	AV	12.84682G	38.67	68.20	-29.53	3	Horizontal	206	1.87
Mode 6	Pass	AV	13.00932G	38.43	68.20	-29.77	3	Horizontal	43	1.50
Mode 6	Pass	AV	17.23892G	37.75	68.20	-30.45	3	Horizontal	15	1.25
Mode 6	Pass	PK	4.87665G	53.06	74.00	-20.94	3	Horizontal	46	1.03
Mode 6	Pass	PK	7.276G	59.08	74.00	-14.92	3	Horizontal	296	2.32
Mode 6	Pass	PK	11.49298G	55.10	74.00	-18.90	3	Horizontal	317	1.39
Mode 6	Pass	PK	12.84592G	51.94	88.20	-36.26	3	Horizontal	206	1.87
Mode 6	Pass	PK	13.00828G	51.92	88.20	-36.28	3	Horizontal	43	1.50
Mode 6	Pass	PK	17.23592G	51.46	88.20	-36.74	3	Horizontal	15	1.25

Radiated Emissions above 1GHz_Mode 1



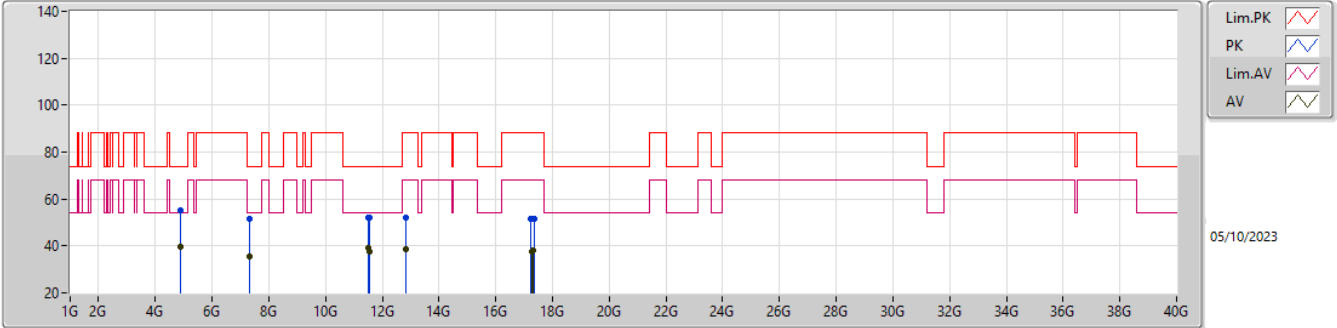
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87352G	40.96	54.00	-13.04	-6.12	3	Vertical	300	1.88	47.08	32.89	5.02	44.03
AV	7.3168G	41.23	54.00	-12.77	-0.54	3	Vertical	40	2.18	41.77	37.13	6.23	43.90
AV	11.4897G	40.31	54.00	-13.69	5.58	3	Vertical	356	1.50	34.73	39.10	8.41	41.93
AV	12.84735G	38.49	68.20	-29.71	6.71	3	Vertical	79	1.55	31.78	39.98	8.84	42.11
AV	17.2222G	37.90	68.20	-30.30	5.22	3	Vertical	116	1.90	32.68	37.54	10.82	43.14
PK	4.87872G	55.78	74.00	-18.22	-6.10	3	Vertical	300	1.88	61.88	32.91	5.02	44.03
PK	7.31775G	62.50	74.00	-11.50	-0.54	3	Vertical	40	2.18	63.04	37.13	6.23	43.90
PK	11.4888G	54.05	74.00	-19.95	5.58	3	Vertical	356	1.50	48.47	39.10	8.41	41.93
PK	12.847G	52.60	88.20	-35.60	6.71	3	Vertical	79	1.55	45.89	39.98	8.84	42.11
PK	17.2157G	52.49	88.20	-35.71	5.22	3	Vertical	116	1.90	47.27	37.53	10.83	43.14

Radiated Emissions above 1GHz_Mode 1



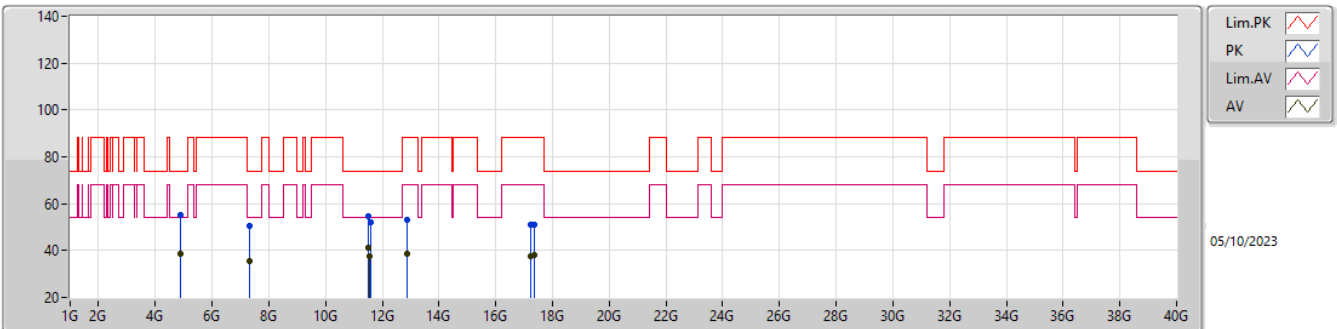
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87904G	41.85	54.00	-12.15	-6.09	3	Horizontal	312	1.96	47.94	32.92	5.02	44.03
AV	7.31739G	41.66	54.00	-12.34	-0.54	3	Horizontal	287	1.79	42.20	37.13	6.23	43.90
AV	11.49275G	41.20	54.00	-12.80	5.60	3	Horizontal	317	1.56	35.60	39.10	8.42	41.92
AV	12.8502G	38.48	68.20	-29.72	6.73	3	Horizontal	279	1.60	31.75	40.00	8.84	42.11
AV	17.2308G	37.85	68.20	-30.35	5.25	3	Horizontal	310	1.70	32.60	37.56	10.82	43.13
PK	4.87844G	56.96	74.00	-17.04	-6.10	3	Horizontal	312	1.96	63.06	32.91	5.02	44.03
PK	7.31779G	61.73	74.00	-12.27	-0.54	3	Horizontal	287	1.79	62.27	37.13	6.23	43.90
PK	11.4927G	54.63	74.00	-19.37	5.60	3	Horizontal	317	1.56	49.03	39.10	8.42	41.92
PK	12.82535G	52.24	88.20	-35.96	6.58	3	Horizontal	279	1.60	45.66	39.85	8.83	42.10
PK	17.22765G	52.68	88.20	-35.52	5.24	3	Horizontal	310	1.70	47.44	37.56	10.82	43.14

Radiated Emissions above 1GHz_Mode 2



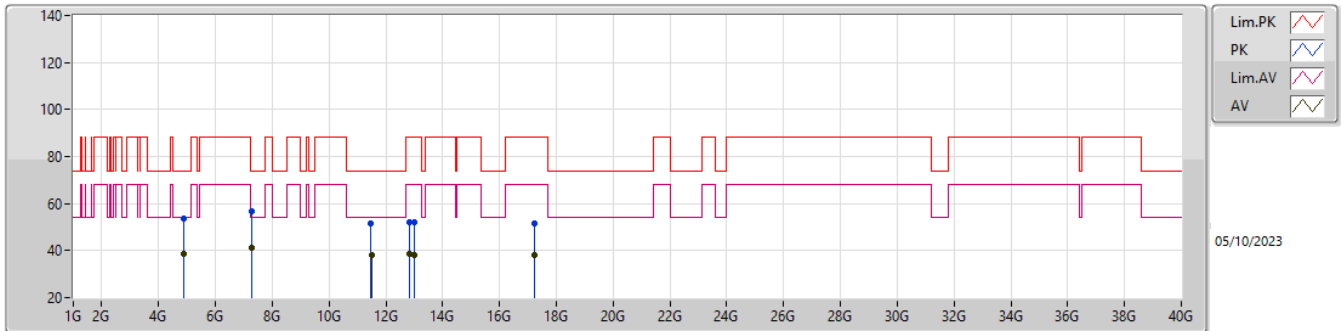
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.8721G	39.46	54.00	-14.54	-6.12	3	Vertical	50	1.54	45.58	32.89	5.02	44.03
AV	7.31215G	35.38	54.00	-18.62	-0.53	3	Vertical	10	1.50	35.91	37.15	6.22	43.90
AV	11.49025G	39.28	54.00	-14.72	5.58	3	Vertical	355	1.55	33.70	39.10	8.41	41.93
AV	11.55295G	37.44	54.00	-16.56	5.57	3	Vertical	347	1.62	31.87	39.08	8.43	41.94
AV	12.852G	38.40	68.20	-29.80	6.73	3	Vertical	38	1.49	31.67	40.00	8.84	42.11
AV	17.25505G	37.80	68.20	-30.40	5.29	3	Vertical	330	2.33	32.51	37.61	10.81	43.13
AV	17.33495G	37.91	68.20	-30.29	5.37	3	Vertical	127	1.73	32.54	37.70	10.78	43.11
PK	4.87365G	55.11	74.00	-18.89	-6.12	3	Vertical	50	1.54	61.23	32.89	5.02	44.03
PK	7.31085G	51.68	74.00	-22.32	-0.52	3	Vertical	10	1.50	52.20	37.16	6.22	43.90
PK	11.4903G	52.31	74.00	-21.69	5.58	3	Vertical	355	1.55	46.73	39.10	8.41	41.93
PK	11.56455G	51.84	74.00	-22.16	5.50	3	Vertical	347	1.62	46.34	39.01	8.44	41.95
PK	12.8484G	51.95	88.20	-36.25	6.72	3	Vertical	38	1.49	45.23	39.99	8.84	42.11
PK	17.2339G	51.69	88.20	-36.51	5.26	3	Vertical	330	2.33	46.43	37.57	10.82	43.13
PK	17.3782G	51.51	88.20	-36.69	5.42	3	Vertical	127	1.73	46.09	37.76	10.76	43.10

Radiated Emissions above 1GHz_Mode 2



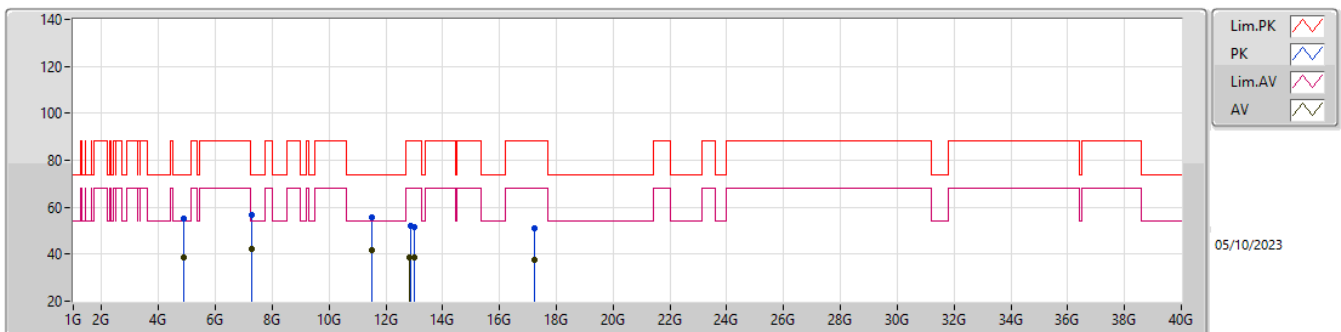
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.88065G	38.54	54.00	-15.46	-6.09	3	Horizontal	210	1.66	44.63	32.92	5.02	44.03
AV	7.31185G	35.34	54.00	-18.66	-0.53	3	Horizontal	323	1.46	35.87	37.15	6.22	43.90
AV	11.49215G	40.99	54.00	-13.01	5.60	3	Horizontal	319	1.38	35.39	39.10	8.42	41.92
AV	11.5668G	37.51	54.00	-16.49	5.49	3	Horizontal	258	1.45	32.02	39.00	8.44	41.95
AV	12.8622G	38.48	68.20	-29.72	6.71	3	Horizontal	90	1.96	31.77	39.98	8.85	42.12
AV	17.2191G	37.82	68.20	-30.38	5.22	3	Horizontal	214	2.06	32.60	37.54	10.82	43.14
AV	17.36615G	38.01	68.20	-30.19	5.39	3	Horizontal	190	2.35	32.62	37.73	10.76	43.10
PK	4.87985G	55.26	74.00	-18.74	-6.09	3	Horizontal	210	1.66	61.35	32.92	5.02	44.03
PK	7.3164G	50.51	74.00	-23.49	-0.54	3	Horizontal	323	1.46	51.05	37.13	6.23	43.90
PK	11.49305G	54.80	74.00	-19.20	5.60	3	Horizontal	319	1.38	49.20	39.10	8.42	41.92
PK	11.5816G	51.90	74.00	-22.10	5.40	3	Horizontal	258	1.45	46.50	38.91	8.44	41.95
PK	12.86215G	52.88	88.20	-35.32	6.71	3	Horizontal	90	1.96	46.17	39.98	8.85	42.12
PK	17.2278G	51.04	88.20	-37.16	5.24	3	Horizontal	214	2.06	45.80	37.56	10.82	43.14
PK	17.35605G	51.23	88.20	-36.97	5.38	3	Horizontal	190	2.35	45.85	37.71	10.77	43.10

Radiated Emissions above 1GHz_Mode 3



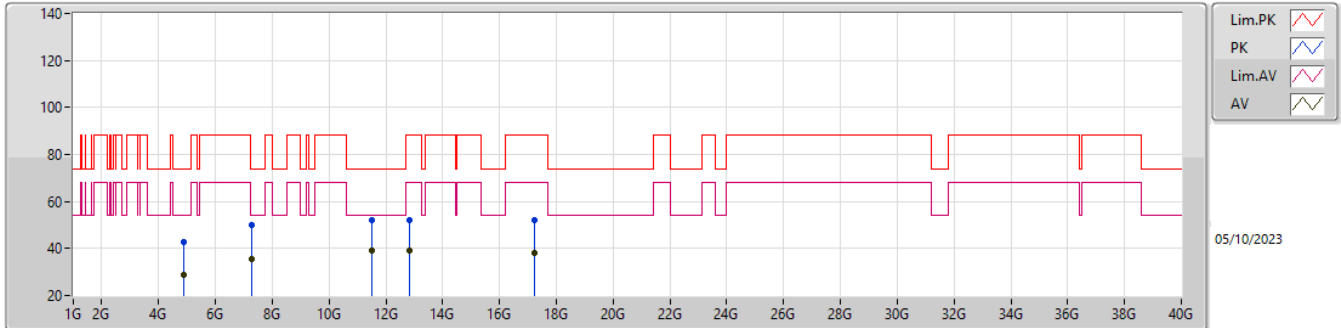
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.8719G	38.76	54.00	-15.24	-6.12	3	Vertical	54	2.21	44.88	32.89	5.02	44.03
AV	7.28625G	41.30	54.00	-12.70	-0.48	3	Vertical	105	1.87	41.78	37.23	6.21	43.92
AV	11.4911G	38.24	54.00	-15.76	5.59	3	Vertical	78	2.93	32.65	39.10	8.41	41.92
AV	12.84476G	38.59	68.20	-29.61	6.70	3	Vertical	280	2.30	31.89	39.97	8.84	42.11
AV	13.00708G	38.35	68.20	-29.85	6.48	3	Vertical	8	1.92	31.87	39.77	8.89	42.18
AV	17.22982G	37.95	68.20	-30.25	5.25	3	Vertical	352	1.36	32.70	37.56	10.82	43.13
PK	4.8714G	53.59	74.00	-20.41	-6.12	3	Vertical	54	2.21	59.71	32.89	5.02	44.03
PK	7.28615G	56.62	74.00	-17.38	-0.48	3	Vertical	105	1.87	57.10	37.23	6.21	43.92
PK	11.48012G	51.68	74.00	-22.32	5.58	3	Vertical	78	2.93	46.10	39.10	8.41	41.93
PK	12.84398G	52.17	88.20	-36.03	6.69	3	Vertical	280	2.30	45.48	39.96	8.84	42.11
PK	13.00846G	52.09	88.20	-36.11	6.48	3	Vertical	8	1.92	45.61	39.77	8.89	42.18
PK	17.22676G	51.77	88.20	-36.43	5.23	3	Vertical	352	1.36	46.54	37.55	10.82	43.14

Radiated Emissions above 1GHz_Mode 3



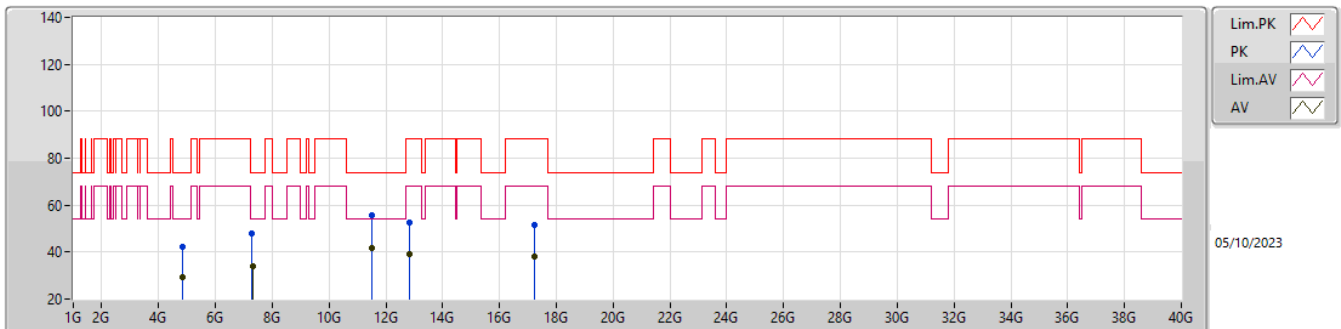
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.8849G	38.68	54.00	-15.32	-6.06	3	Horizontal	102	1.37	44.74	32.94	5.03	44.03
AV	7.2905G	42.17	54.00	-11.83	-0.48	3	Horizontal	95	1.77	42.65	37.22	6.21	43.91
AV	11.4935G	41.48	54.00	-12.52	5.60	3	Horizontal	318	1.49	35.88	39.10	8.42	41.92
AV	12.8438G	38.59	68.20	-29.61	6.69	3	Horizontal	335	2.67	31.90	39.96	8.84	42.11
AV	13.01068G	38.38	68.20	-29.82	6.47	3	Horizontal	140	1.01	31.91	39.76	8.89	42.18
AV	17.2333G	37.80	68.20	-30.40	5.26	3	Horizontal	222	2.84	32.54	37.57	10.82	43.13
PK	4.88475G	54.97	74.00	-19.03	-6.06	3	Horizontal	102	1.37	61.03	32.94	5.03	44.03
PK	7.29115G	56.98	74.00	-17.02	-0.48	3	Horizontal	95	1.77	57.46	37.22	6.21	43.91
PK	11.49256G	55.57	74.00	-18.43	5.60	3	Horizontal	318	1.49	49.97	39.10	8.42	41.92
PK	12.85988G	51.90	88.20	-36.30	6.71	3	Horizontal	335	2.67	45.19	39.98	8.85	42.12
PK	13.0169G	51.73	88.20	-36.47	6.45	3	Horizontal	140	1.01	45.28	39.73	8.90	42.18
PK	17.23728G	51.15	88.20	-37.05	5.26	3	Horizontal	222	2.84	45.89	37.57	10.82	43.13

Radiated Emissions above 1GHz_Mode 4



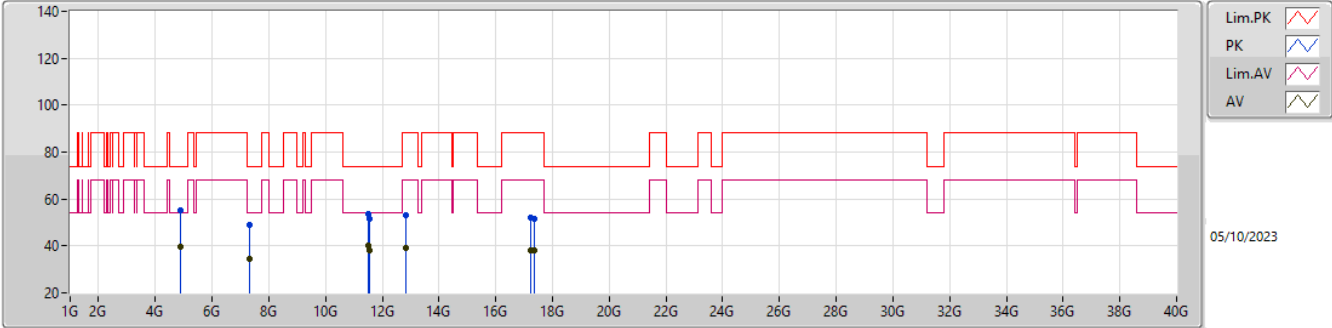
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87744G	28.82	54.00	-25.18	-6.10	3	Vertical	351	1.73	34.92	32.91	5.02	44.03
AV	7.30016G	35.52	54.00	-18.48	-0.49	3	Vertical	70	2.58	36.01	37.20	6.22	43.91
AV	11.4906G	38.93	54.00	-15.07	5.59	3	Vertical	341	1.72	33.34	39.10	8.41	41.92
AV	12.84988G	38.92	68.20	-29.28	6.73	3	Vertical	229	1.15	32.19	40.00	8.84	42.11
AV	17.23075G	38.08	68.20	-30.12	5.25	3	Vertical	187	2.39	32.83	37.56	10.82	43.13
PK	4.87464G	42.62	74.00	-31.38	-6.11	3	Vertical	351	1.73	48.73	32.90	5.02	44.03
PK	7.29828G	50.02	74.00	-23.98	-0.50	3	Vertical	70	2.58	50.52	37.20	6.21	43.91
PK	11.4915G	52.17	74.00	-21.83	5.59	3	Vertical	341	1.72	46.58	39.10	8.41	41.92
PK	12.85026G	52.27	88.20	-35.93	6.73	3	Vertical	229	1.15	45.54	40.00	8.84	42.11
PK	17.23109G	52.14	88.20	-36.06	5.25	3	Vertical	187	2.39	46.89	37.56	10.82	43.13

Radiated Emissions above 1GHz_Mode 4



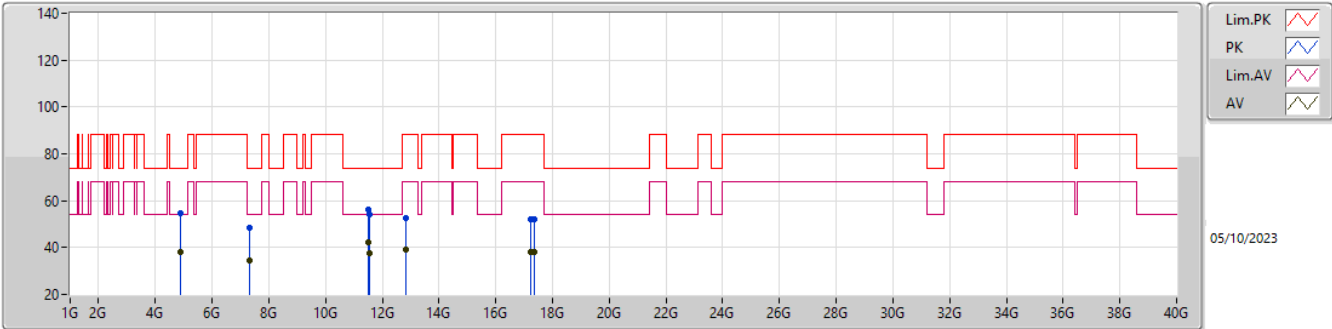
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.86456G	29.19	54.00	-24.81	-6.16	3	Horizontal	352	1.34	35.35	32.86	5.01	44.03
AV	7.31308G	33.76	54.00	-20.24	-0.53	3	Horizontal	349	1.33	34.29	37.15	6.22	43.90
AV	11.49282G	41.85	54.00	-12.15	5.60	3	Horizontal	319	1.50	36.25	39.10	8.42	41.92
AV	12.8504G	38.95	68.20	-29.25	6.73	3	Horizontal	144	2.75	32.22	40.00	8.84	42.11
AV	17.23334G	38.12	68.20	-30.08	5.26	3	Horizontal	296	1.19	32.86	37.57	10.82	43.13
PK	4.86556G	42.50	74.00	-31.50	-6.16	3	Horizontal	352	1.34	48.66	32.86	5.01	44.03
PK	7.2964G	47.95	74.00	-26.05	-0.49	3	Horizontal	349	1.33	48.44	37.21	6.21	43.91
PK	11.49168G	55.50	74.00	-18.50	5.59	3	Horizontal	319	1.50	49.91	39.10	8.41	41.92
PK	12.84591G	52.37	88.20	-35.83	6.71	3	Horizontal	144	2.75	45.66	39.98	8.84	42.11
PK	17.23286G	51.73	88.20	-36.47	5.26	3	Horizontal	296	1.19	46.47	37.57	10.82	43.13

Radiated Emissions above 1GHz_Mode 5



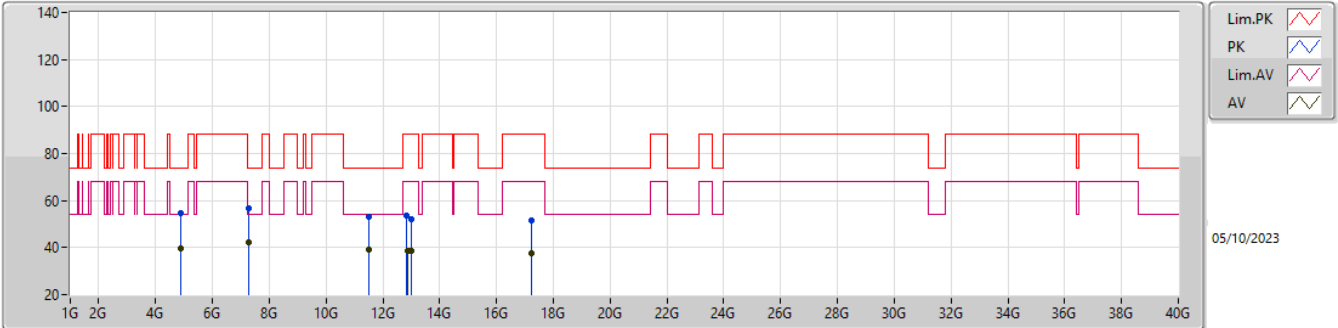
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87215G	39.73	54.00	-14.27	-6.12	3	Vertical	302	1.68	45.85	32.89	5.02	44.03
AV	7.3089G	34.62	54.00	-19.38	-0.52	3	Vertical	35	1.69	35.14	37.16	6.22	43.90
AV	11.49195G	39.94	54.00	-14.06	5.60	3	Vertical	353	2.82	34.34	39.10	8.42	41.92
AV	11.56683G	37.89	54.00	-16.11	5.49	3	Vertical	43	1.16	32.40	39.00	8.44	41.95
AV	12.84889G	38.94	68.20	-29.26	6.72	3	Vertical	264	2.63	32.22	39.99	8.84	42.11
AV	17.23091G	38.11	68.20	-30.09	5.25	3	Vertical	246	1.04	32.86	37.56	10.82	43.13
AV	17.35831G	38.27	68.20	-29.93	5.39	3	Vertical	243	2.01	32.88	37.72	10.77	43.10
PK	4.87155G	55.32	74.00	-18.68	-6.12	3	Vertical	302	1.68	61.44	32.89	5.02	44.03
PK	7.3108G	49.20	74.00	-24.80	-0.52	3	Vertical	35	1.69	49.72	37.16	6.22	43.90
PK	11.49235G	53.74	74.00	-20.26	5.60	3	Vertical	353	2.82	48.14	39.10	8.42	41.92
PK	11.57219G	51.50	74.00	-22.50	5.46	3	Vertical	43	1.16	46.04	38.97	8.44	41.95
PK	12.85132G	53.01	88.20	-35.19	6.73	3	Vertical	264	2.63	46.28	40.00	8.84	42.11
PK	17.23232G	52.27	88.20	-35.93	5.25	3	Vertical	246	1.04	47.02	37.56	10.82	43.13
PK	17.35132G	51.58	88.20	-36.62	5.36	3	Vertical	243	2.01	46.22	37.70	10.77	43.11

Radiated Emissions above 1GHz_Mode 5



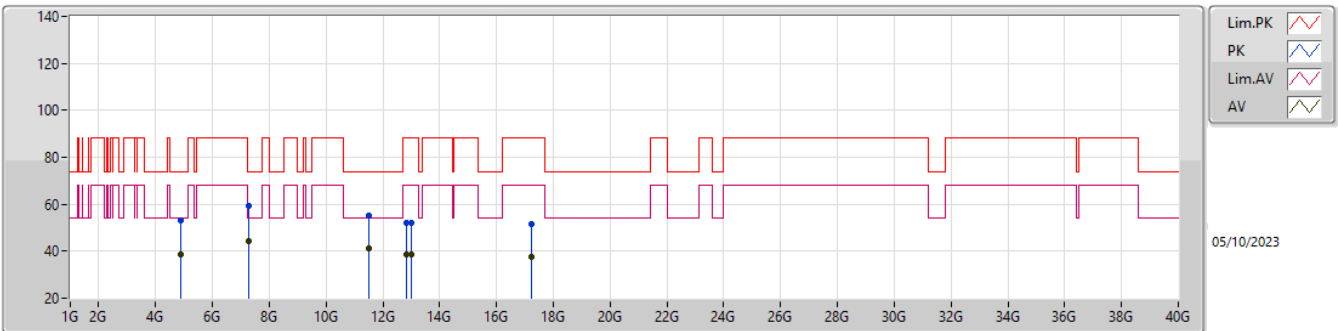
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.88485G	38.35	54.00	-15.65	-6.06	3	Horizontal	351	1.36	44.41	32.94	5.03	44.03
AV	7.3078G	34.37	54.00	-19.63	-0.51	3	Horizontal	320	1.45	34.88	37.17	6.22	43.90
AV	11.4933G	42.02	54.00	-11.98	5.60	3	Horizontal	318	1.47	36.42	39.10	8.42	41.92
AV	11.56546G	37.83	54.00	-16.17	5.50	3	Horizontal	293	1.50	32.33	39.01	8.44	41.95
AV	12.84773G	38.96	68.20	-29.24	6.72	3	Horizontal	111	1.86	32.24	39.99	8.84	42.11
AV	17.23301G	38.11	68.20	-30.09	5.26	3	Horizontal	358	2.08	32.85	37.57	10.82	43.13
AV	17.35942G	38.21	68.20	-29.99	5.39	3	Horizontal	168	1.78	32.82	37.72	10.77	43.10
PK	4.88545G	54.42	74.00	-19.58	-6.06	3	Horizontal	351	1.36	60.48	32.94	5.03	44.03
PK	7.3066G	48.34	74.00	-25.66	-0.51	3	Horizontal	320	1.45	48.85	37.17	6.22	43.90
PK	11.49285G	56.27	74.00	-17.73	5.60	3	Horizontal	318	1.47	50.67	39.10	8.42	41.92
PK	11.57103G	53.95	74.00	-20.05	5.46	3	Horizontal	293	1.50	48.49	38.97	8.44	41.95
PK	12.84769G	52.59	88.20	-35.61	6.72	3	Horizontal	111	1.86	45.87	39.99	8.84	42.11
PK	17.23907G	52.21	88.20	-35.99	5.27	3	Horizontal	358	2.08	46.94	37.58	10.82	43.13
PK	17.35383G	52.26	88.20	-35.94	5.37	3	Horizontal	168	1.78	46.89	37.71	10.77	43.11

Radiated Emissions above 1GHz_Mode 6



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87215G	39.40	54.00	-14.60	-6.12	3	Vertical	305	1.60	45.52	32.89	5.02	44.03
AV	7.2639G	42.34	54.00	-11.66	-0.47	3	Vertical	40	1.70	42.81	37.27	6.19	43.93
AV	11.4897G	39.02	54.00	-14.98	5.58	3	Vertical	357	1.50	33.44	39.10	8.41	41.93
AV	12.85618G	38.58	68.20	-29.62	6.71	3	Vertical	269	2.24	31.87	39.99	8.84	42.12
AV	13.0096G	38.40	68.20	-29.80	6.47	3	Vertical	178	1.80	31.93	39.76	8.89	42.18
AV	17.2324G	37.76	68.20	-30.44	5.25	3	Vertical	160	1.45	32.51	37.56	10.82	43.13
PK	4.874G	54.73	74.00	-19.27	-6.11	3	Vertical	305	1.60	60.84	32.90	5.02	44.03
PK	7.2992G	56.50	74.00	-17.50	-0.50	3	Vertical	40	1.70	57.00	37.20	6.21	43.91
PK	11.48988G	53.31	74.00	-20.69	5.58	3	Vertical	357	1.50	47.73	39.10	8.41	41.93
PK	12.84412G	53.48	88.20	-34.72	6.69	3	Vertical	269	2.24	46.79	39.96	8.84	42.11
PK	13.00796G	51.97	88.20	-36.23	6.48	3	Vertical	178	1.80	45.49	39.77	8.89	42.18
PK	17.23426G	51.30	88.20	-36.90	5.26	3	Vertical	160	1.45	46.04	37.57	10.82	43.13

Radiated Emissions above 1GHz_Mode 6



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87695G	38.68	54.00	-15.32	-6.10	3	Horizontal	46	1.03	44.78	32.91	5.02	44.03
AV	7.2617G	44.30	54.00	-9.70	-0.46	3	Horizontal	296	2.32	44.76	37.28	6.19	43.93
AV	11.49263G	41.42	54.00	-12.58	5.60	3	Horizontal	317	1.39	35.82	39.10	8.42	41.92
AV	12.84682G	38.67	68.20	-29.53	6.71	3	Horizontal	206	1.87	31.96	39.98	8.84	42.11
AV	13.00932G	38.43	68.20	-29.77	6.47	3	Horizontal	43	1.50	31.96	39.76	8.89	42.18
AV	17.23892G	37.75	68.20	-30.45	5.27	3	Horizontal	15	1.25	32.48	37.58	10.82	43.13
PK	4.87665G	53.06	74.00	-20.94	-6.10	3	Horizontal	46	1.03	59.16	32.91	5.02	44.03
PK	7.276G	59.08	74.00	-14.92	-0.47	3	Horizontal	296	2.32	59.55	37.25	6.20	43.92
PK	11.49298G	55.10	74.00	-18.90	5.60	3	Horizontal	317	1.39	49.50	39.10	8.42	41.92
PK	12.84592G	51.94	88.20	-36.26	6.71	3	Horizontal	206	1.87	45.23	39.98	8.84	42.11
PK	13.00828G	51.92	88.20	-36.28	6.48	3	Horizontal	43	1.50	45.44	39.77	8.89	42.18
PK	17.23592G	51.46	88.20	-36.74	5.26	3	Horizontal	15	1.25	46.20	37.57	10.82	43.13