

FCC Radio Test Report

FCC ID : TVE-51018E01231

Equipment : Secured Wireless Access Point

Brand Name : FORTINET

Model Name : FortiAP 234Gxxxxxx, FAP-234Gxxxxxx,
FORTIAP-234Gxxxxxx (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 Aug. 07, 2023, and testing was started from Aug. 16, 2023 and completed on Sep. 19, 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.)



Table of Contents

HISTORY OF THIS TEST REPORT3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

1.1 Information.....5

1.2 Testing Applied Standards9

1.3 Testing Location Information9

1.4 Measurement Uncertainty9

2 TEST CONFIGURATION OF EUT.....10

2.1 Test Channel Mode10

2.2 The Worst Case Measurement Configuration.....11

2.3 Accessories13

2.4 Support Equipment.....13

2.5 Test Setup Diagram14

3 TRANSMITTER TEST RESULT16

3.1 AC Power-line Conducted Emissions16

3.2 DTS Bandwidth.....18

3.3 Maximum Conducted Output Power19

3.4 Power Spectral Density21

3.5 Emissions in Non-restricted Frequency Bands22

3.6 Emissions in Restricted Frequency Bands.....23

4 TEST EQUIPMENT AND CALIBRATION DATA.....27

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS

APPENDIX B. TEST RESULTS OF DTS BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER

APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY

APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS

APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS

APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION

APPENDIX H. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FR380143AL	01	Initial issue of report	Nov. 02, 2023



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: Amber Chiu



1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(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.
- ♦ BWch is the nominal channel bandwidth.
- ♦ 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.



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Support
1	1	AWAN	7102A0613000	Cross Dipole	I-Pex	2.4G
2	2	AWAN	7102A0613000	Cross Dipole	I-Pex	2.4G
3	1	AWAN	7102A0651000	Cross Dipole	I-Pex	5G
4	2	AWAN	7102A0651000	Cross Dipole	I-Pex	5G
5	1	AWAN	7102A0651000	Cross Dipole	I-Pex	5G+6G
6	2	AWAN	7102A0651000	Cross Dipole	I-Pex	5G+6G
7	3	AWAN	7102A0650000	Cross Dipole	I-Pex	2.4G
8	4	AWAN	7102A0650000	Cross Dipole	I-Pex	2.4G
9	1	AWAN	7102A0614000	Dipole	I-Pex	BT&Zigbee
10	1	Quectel	7102A0652000	Patch	I-Pex	GPS

Ant.	Port	Gain (dBi)					Remark
		2.4G	5G	6G	BT& Zigbee	GPS	
1	1	6.8	-	-	-	-	Radio 1
2	2	6.8	-	-	-	-	Radio 1
3	1	-	8.4	-	-	-	Radio 2
4	2	-	8.2	-	-	-	Radio 2 (Low Band)
5	1	-	8.4	8.3	-	-	Radio 3
6	2	-	8.4	8.3	-	-	Radio 3 (High Band)
7	3	6.6	-	-	-	-	Radio 3
8	4	6.7	-	-	-	-	Radio 3
9	1	-	-	-	6.2	-	-
10	1	-	-	-	-	2	-



Note 1: The EUT has ten antennas.

For 2.4GHz function:

< Radio 1 >

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

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

< Radio 3 >

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

Ant.7 (port 3), Ant.8 (port 4) could transmit/receive simultaneously.

For 5GHz function:

< Radio 2 >

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

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

< Radio 3 >

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

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

For Bluetooth function:

For Bluetooth mode (1TX/1RX)

Only Ant.9 can be used as transmitting/receiving.

For GPS function:

For GPS mode (1RX)

Only Ant.10 can be used as receiving.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From PoE
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(2Mbps)	1	0	n/a (DC≥=0.98)	n/a (DC≥=0.98)
BT-LE(125kbps)	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 brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
FORTINET	FortiAP 234Gxxxxxx, FAP-234Gxxxxxx, FORTIAP-234Gxxxxxx (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 difference model served as marketing strategy.

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	Ivan Chung	22.1~23.6°C / 53~58%	18/Sep/2023~19/Sep/2023
RF Conducted	TH07-HY	Xie Xun	24.2~25.1°C / 53~56%	17/Aug/2023
Radiated	03CH03-HY	Lego Lin	21.7~23.8°C / 54~59%	16/Aug/2023~17/Aug/2023
<input 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.				

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	DOS
---------------	-----

Mode	Power Setting
BT-LE(2Mbps)	-
2402MHz	100
2440MHz	100
2480MHz	96
BT-LE(125kbps)	-
2402MHz	100
2440MHz	100
2480MHz	100

2.2 The Worst Case Measurement Configuration

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	PoE Mode
Operating Mode > 1GHz	CTX
Orthogonal Planes of EUT	Y 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 3:2.4G+ BT
2	Radio 1:2.4G+ Radio 2:5G+ Radio 3:5G+ BT
3	Radio 1:2.4G+ Radio 2:5G+ Radio 3:2.4G+ Zigbee
4	Radio 1:2.4G+ Radio 2:5G+ Radio 3:5G+ Zigbee
5	Radio 1:2.4G+ (Radio 2:5G Low Band+ Radio 3:5G High Band)+ BT
6	Radio 1:2.4G+ (Radio 2:5G Low Band+ Radio 3:5G High Band)+ Zigbee

Refer to Sporton Test Report No.: FA380143 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.

2.3 Accessories

Accessories				
AC Cord	Brand Name	I-SHENG	Model Name	AC CORD 600mm
	Signal Line	0.5 meter, shielded cable, w/o ferrite core		
PoE Adapter	Brand Name	Senao Inc.	Model Name	EPA5006GPR-SN(4P)
	Power Rating	I/P: 100-240 Vdc, 0.8A, 50-60 Hz O/P: 54 Vdc, 0.6 A		
BRACKET POLE MOUNT	Brand Name	CUN SHENG	Model Name	BRACKET POLE MOUNT LFP
BRACKET WALL MOUNT	Brand Name	XIERTEK	Model Name	BRACKET WALL MOUNT
Pole Mount Bracket	Brand Name	CUN SHENG	Model Name	6301A2873010
Ground Wire	Brand Name	BO YAO	Model Name	WIRE GEN AWG10 180cm
	Signal Line	1.8 meter, shielded cable, w/o ferrite core		

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

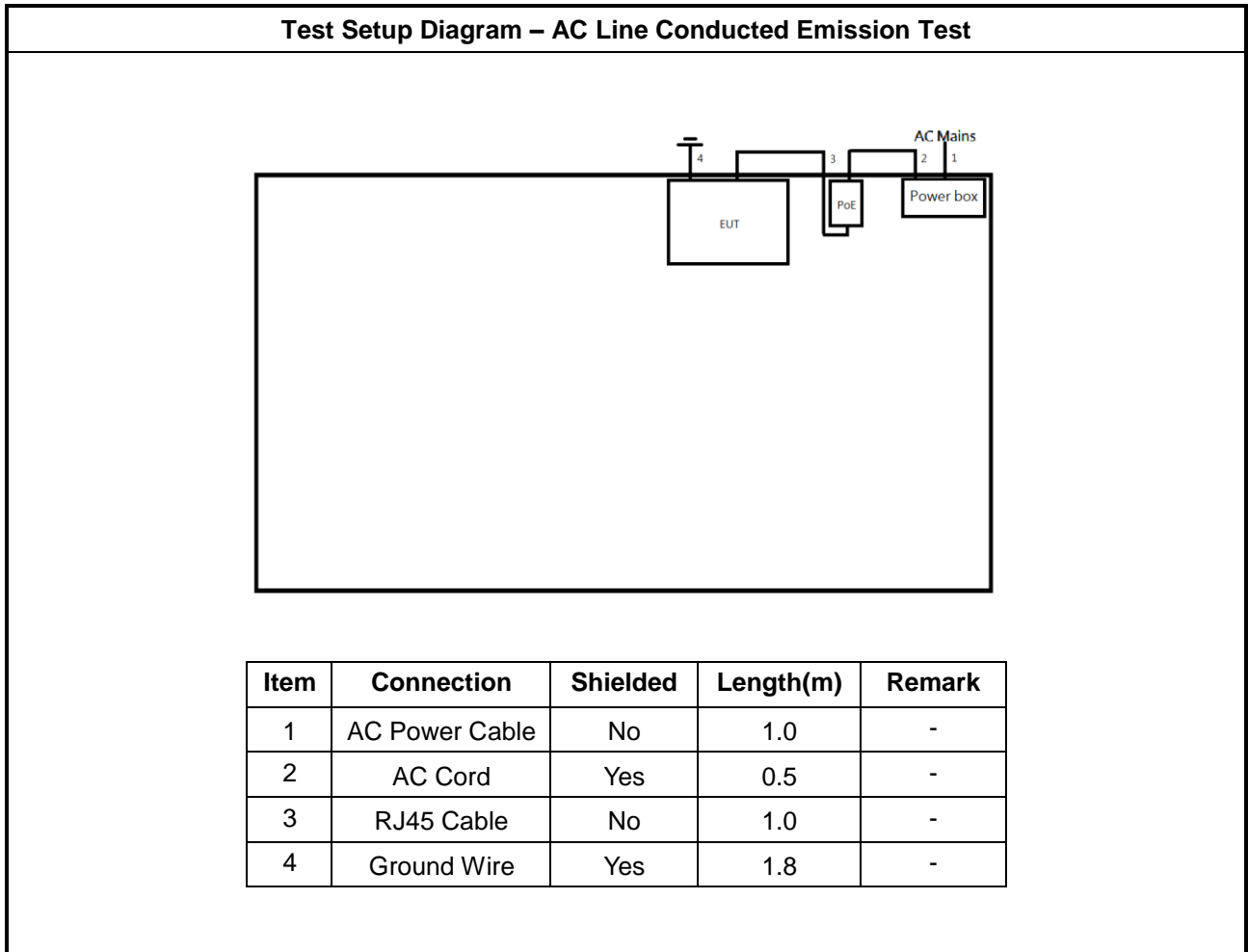
2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 cable	Power Sync	CAT-6E-01	-	-

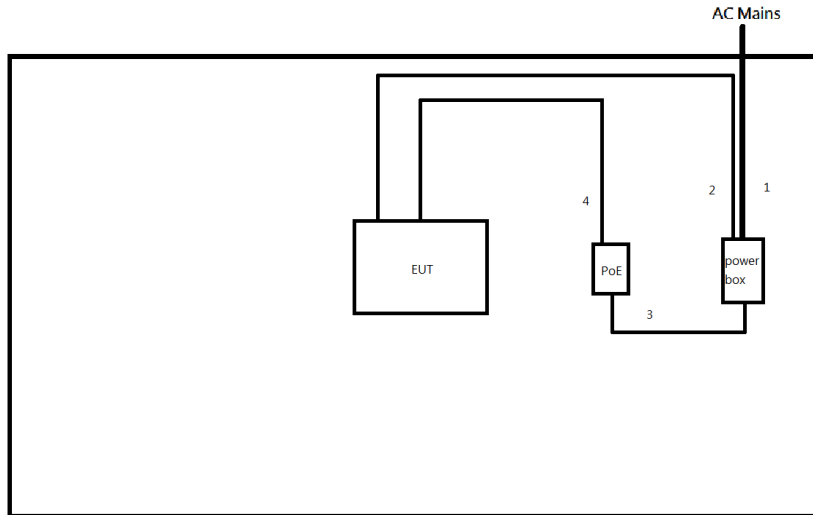
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 cable	Power Sync	CAT-6E-01	-	-

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	Ground Wire	Yes	1.8	-
3	AC Cord	Yes	0.5	-
4	RJ45 Cable	No	1.0	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

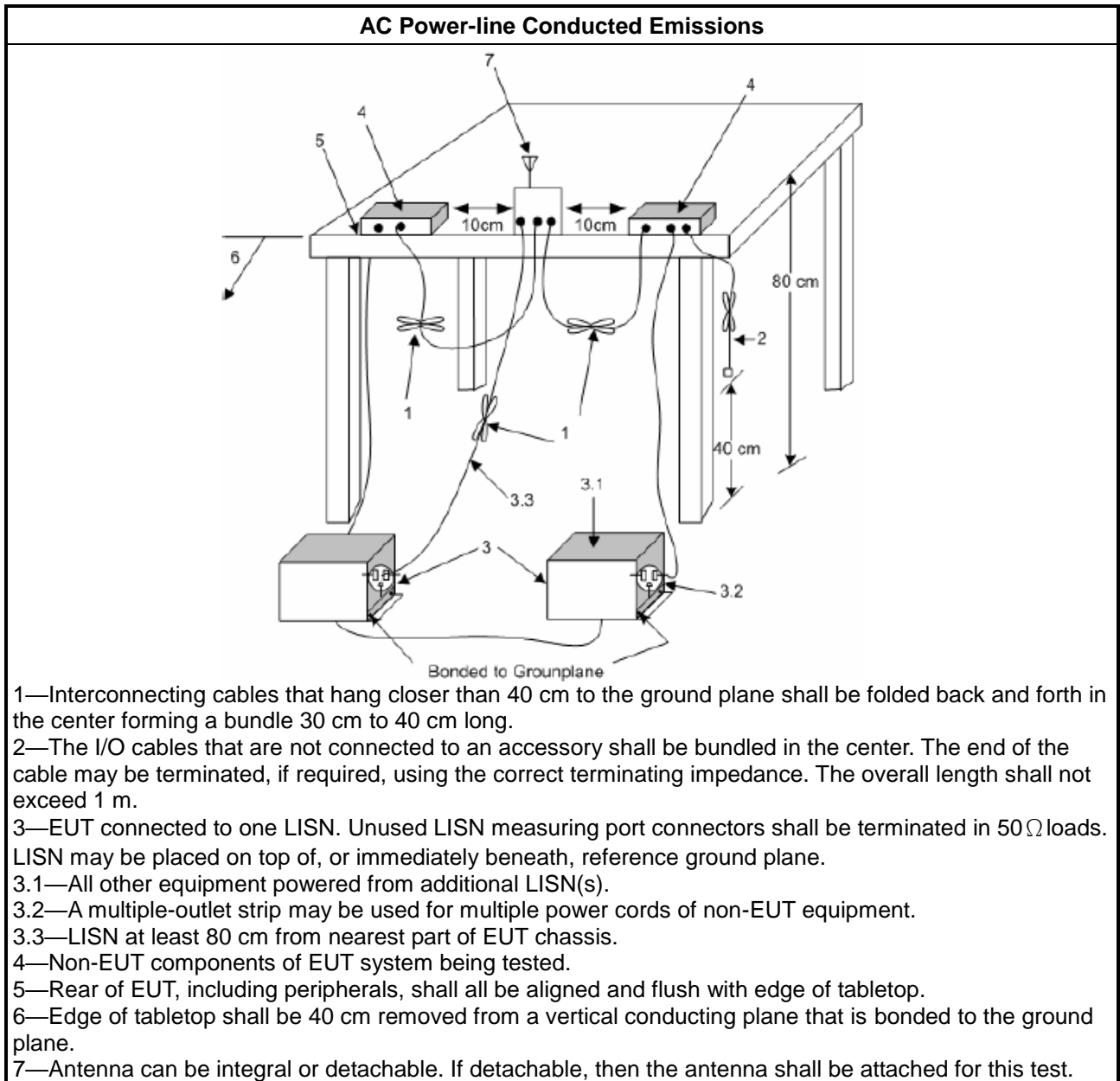
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

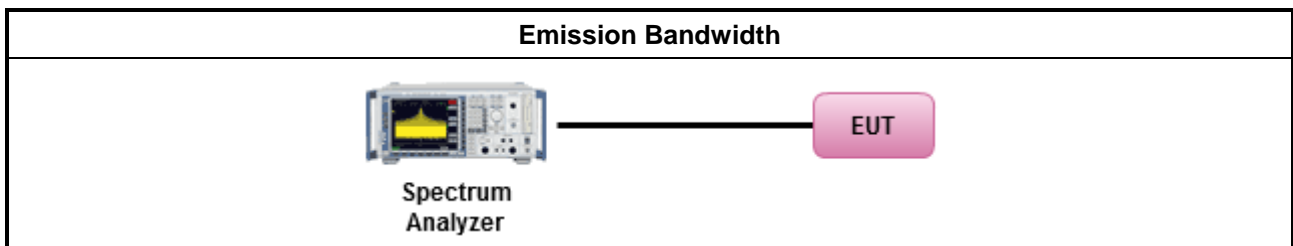
3.2.2 Measuring Instruments

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.	

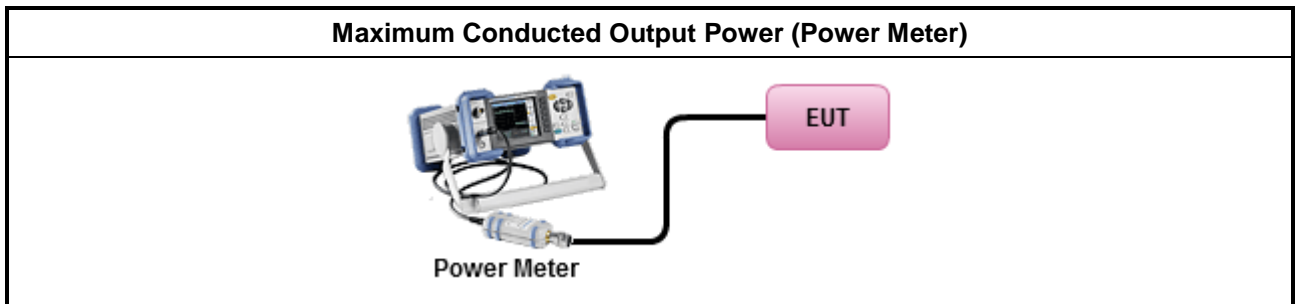
3.3.2 Measuring Instruments

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

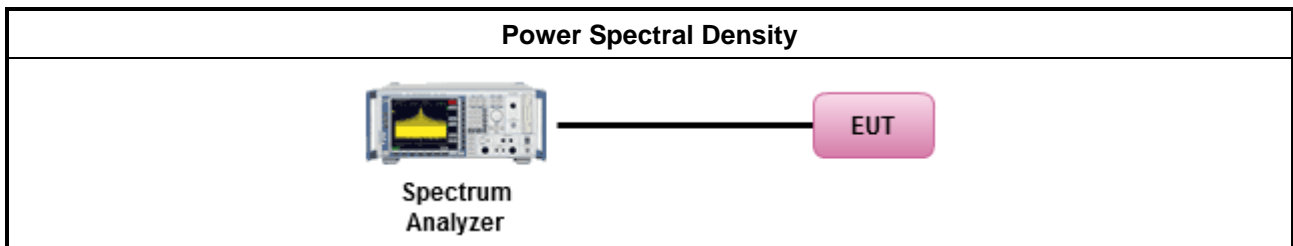
3.4.2 Measuring Instruments

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.

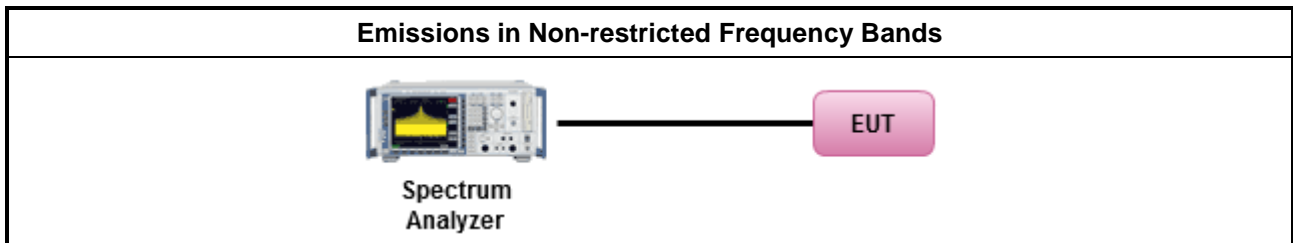
3.5.2 Measuring Instruments

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

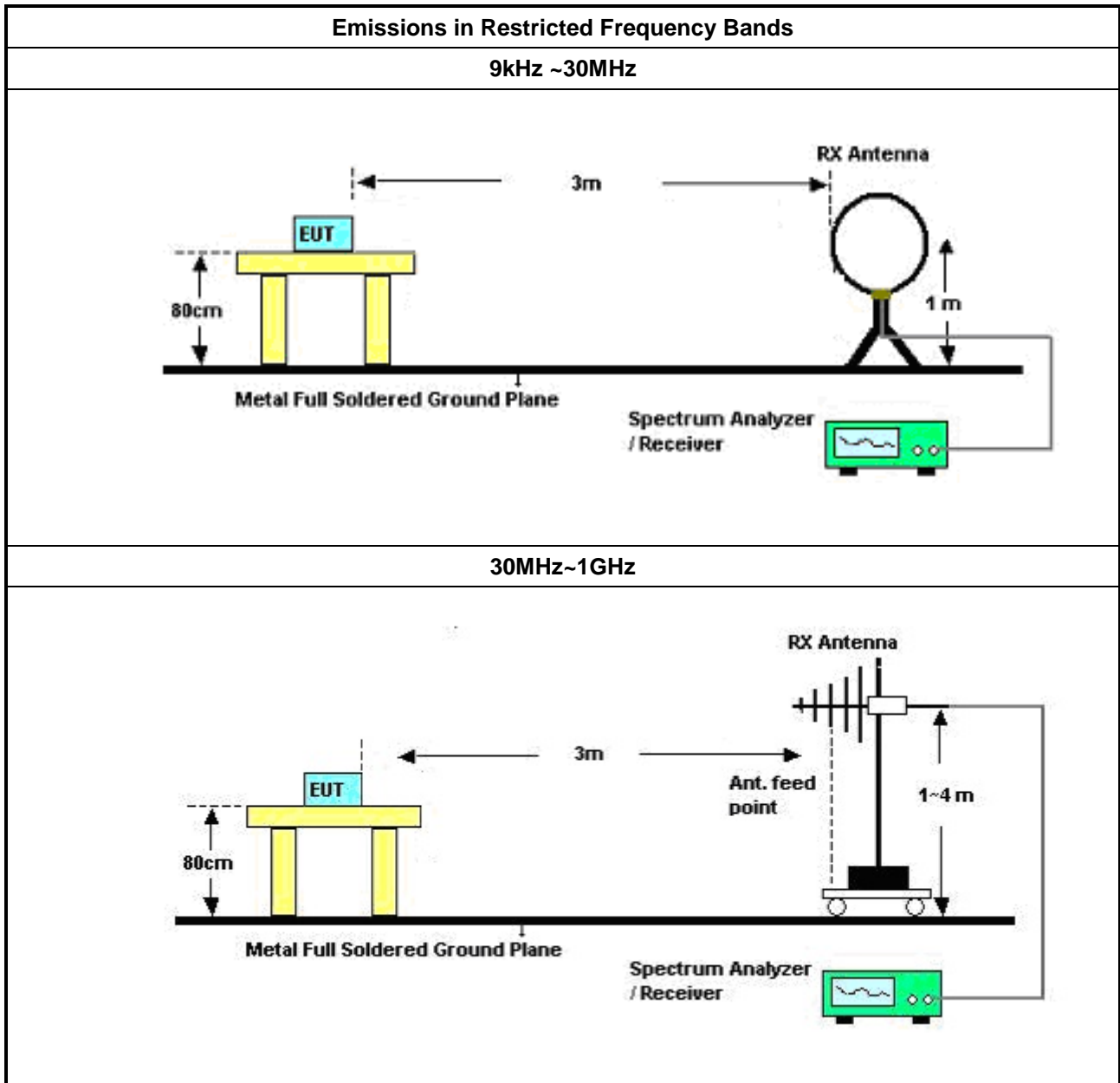
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel 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 ≥ 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.

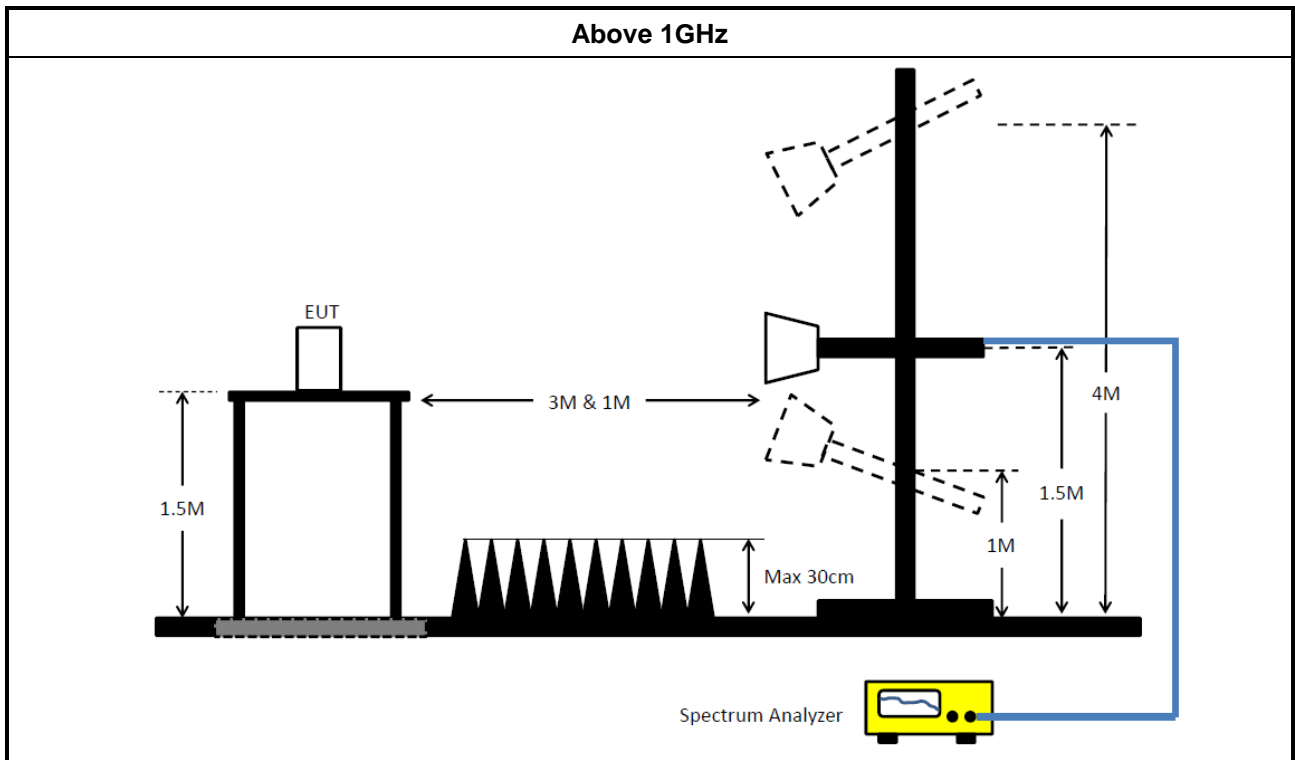
3.6.4 Measurement Results Calculation

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

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	30/Jul/2023	29/Jul/2024
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	28/Jul/2023	27/Jul/2024
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	26/Oct/2022	25/Oct/2023
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	27/Jun/2023	26/Jun/2024
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	2267	1GHz~18GHz	27/Sep/2022	26/Sep/2023
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	16/Oct/2022	15/Oct/2023
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	13/Jun/2023	12/Jun/2024
RF Cable-R03m	Jye Bao	RG142	03CH03-cable-02	30MHz~1GHz	13/Jun/2023	12/Jun/2024
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	03CH03-cable-01	1GHz~40GHz	29/Jun/2023	28/Jun/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Prempplier	Agilent	8449B	3008A02326	1GHz~26.5GHz	26/Jul/2023	25/Jul/2024
Microwave Prempplier	EMC INSTRUMENTS	EM18G40G	60604	18GHz ~ 40GHz	16/Mar/2023	15/Mar/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	23/Mar/2023	22/Mar/2024
EMI Test Receiver	R&S	ESR3	ESR3102052	9kHz~3.6GHz	26/Mar/2023	25/Mar/2024
SENSE-15247_FS	Sporton	V5.11.2	N/A	N/A	N/A	N/A



Summary

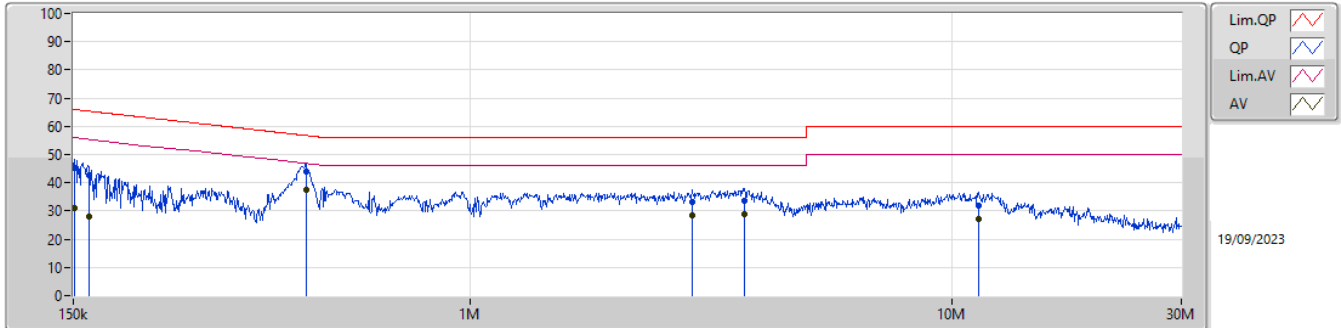
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	449.637k	38.83	46.88	-8.05	Neutral



Result

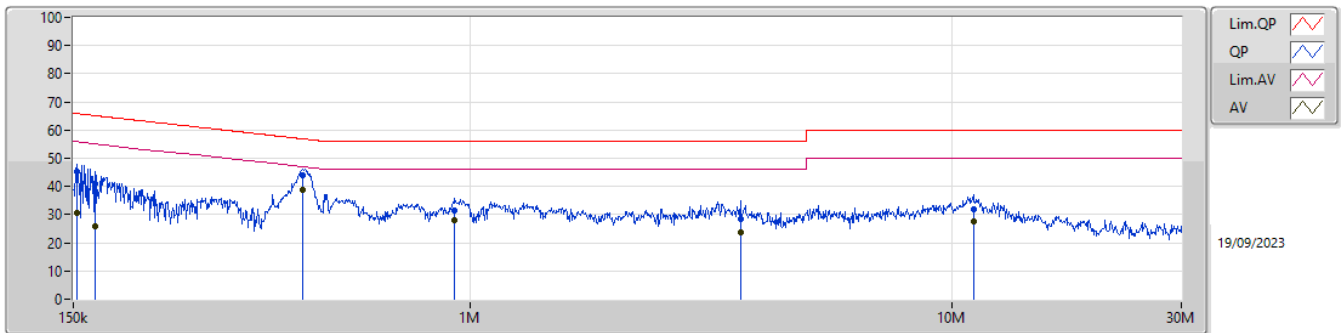
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	45.23	65.96	-20.73	Line
Mode 1	Pass	AV	150.6k	30.96	55.96	-25.00	Line
Mode 1	Pass	QP	161.82k	42.88	65.37	-22.49	Line
Mode 1	Pass	AV	161.82k	28.21	55.37	-27.16	Line
Mode 1	Pass	QP	456.875k	43.90	56.75	-12.85	Line
Mode 1	Pass	AV	456.875k	37.50	46.75	-9.25	Line
Mode 1	Pass	QP	2.889M	32.99	56.00	-23.01	Line
Mode 1	Pass	AV	2.889M	28.49	46.00	-17.51	Line
Mode 1	Pass	QP	3.715M	33.77	56.00	-22.23	Line
Mode 1	Pass	AV	3.715M	28.86	46.00	-17.14	Line
Mode 1	Pass	QP	11.407M	31.74	60.00	-28.26	Line
Mode 1	Pass	AV	11.407M	27.07	50.00	-22.93	Line
Mode 1	Pass	QP	152.414k	45.24	65.87	-20.63	Neutral
Mode 1	Pass	AV	152.414k	30.53	55.87	-25.34	Neutral
Mode 1	Pass	QP	166.406k	41.07	65.14	-24.07	Neutral
Mode 1	Pass	AV	166.406k	25.66	55.14	-29.48	Neutral
Mode 1	Pass	QP	449.637k	44.08	56.88	-12.80	Neutral
Mode 1	Pass	AV	449.637k	38.83	46.88	-8.05	Neutral
Mode 1	Pass	QP	929.818k	31.60	56.00	-24.40	Neutral
Mode 1	Pass	AV	929.818k	27.92	46.00	-18.08	Neutral
Mode 1	Pass	QP	3.642M	28.56	56.00	-27.44	Neutral
Mode 1	Pass	AV	3.642M	23.56	46.00	-22.44	Neutral
Mode 1	Pass	QP	11.093M	32.03	60.00	-27.97	Neutral
Mode 1	Pass	AV	11.093M	27.45	50.00	-22.55	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	150.6k	45.23	65.96	-20.73	19.53	Line	-	25.70	9.57	0.03	9.93
AV	150.6k	30.96	55.96	-25.00	19.53	Line	-	11.43	9.57	0.03	9.93
QP	161.82k	42.88	65.37	-22.49	19.53	Line	-	23.35	9.57	0.03	9.93
AV	161.82k	28.21	55.37	-27.16	19.53	Line	-	8.68	9.57	0.03	9.93
QP	456.875k	43.90	56.75	-12.85	19.57	Line	-	24.33	9.57	0.04	9.96
AV	456.875k	37.50	46.75	-9.25	19.57	Line	-	17.93	9.57	0.04	9.96
QP	2.889M	32.99	56.00	-23.01	19.63	Line	-	13.36	9.59	0.11	9.93
AV	2.889M	28.49	46.00	-17.51	19.63	Line	-	8.86	9.59	0.11	9.93
QP	3.715M	33.77	56.00	-22.23	19.65	Line	-	14.12	9.60	0.12	9.93
AV	3.715M	28.86	46.00	-17.14	19.65	Line	-	9.21	9.60	0.12	9.93
QP	11.407M	31.74	60.00	-28.26	19.87	Line	-	11.87	9.71	0.20	9.96
AV	11.407M	27.07	50.00	-22.93	19.87	Line	-	7.20	9.71	0.20	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	45.24	65.87	-20.63	19.58	Neutral	-	25.66	9.62	0.03	9.93
AV	152.414k	30.53	55.87	-25.34	19.58	Neutral	-	10.95	9.62	0.03	9.93
QP	166.406k	41.07	65.14	-24.07	19.58	Neutral	-	21.49	9.62	0.03	9.93
AV	166.406k	25.66	55.14	-29.48	19.58	Neutral	-	6.08	9.62	0.03	9.93
QP	449.637k	44.08	56.88	-12.80	19.62	Neutral	-	24.46	9.62	0.04	9.96
AV	449.637k	38.83	46.88	-8.05	19.62	Neutral	-	19.21	9.62	0.04	9.96
QP	929.818k	31.60	56.00	-24.40	19.61	Neutral	-	11.99	9.62	0.05	9.94
AV	929.818k	27.92	46.00	-18.08	19.61	Neutral	-	8.31	9.62	0.05	9.94
QP	3.642M	28.56	56.00	-27.44	19.71	Neutral	-	8.85	9.66	0.12	9.93
AV	3.642M	23.56	46.00	-22.44	19.71	Neutral	-	3.85	9.66	0.12	9.93
QP	11.093M	32.03	60.00	-27.97	19.99	Neutral	-	12.04	9.83	0.20	9.96
AV	11.093M	27.45	50.00	-22.55	19.99	Neutral	-	7.46	9.83	0.20	9.96



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)	751.25k	1.124M	1M12F1D	748.75k	1.121M
BT-LE(2Mbps)	1.348M	2.109M	2M11F1D	1.345M	2.096M

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	1.348M	2.096M
2440MHz	Pass	500k	1.345M	2.104M
2480MHz	Pass	500k	1.345M	2.109M
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	500k	751.25k	1.124M
2440MHz	Pass	500k	748.75k	1.123M
2480MHz	Pass	500k	748.75k	1.121M

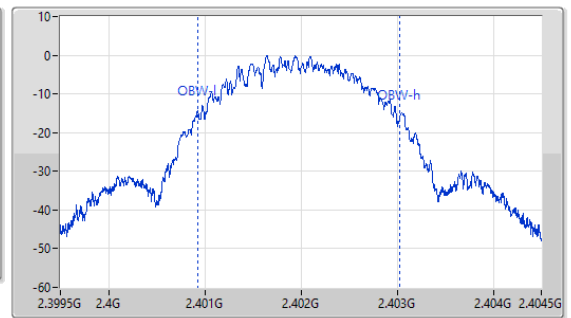
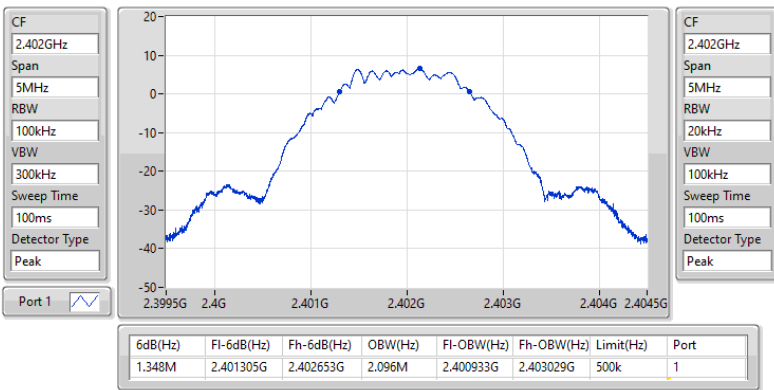
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2402MHz

17/08/2023

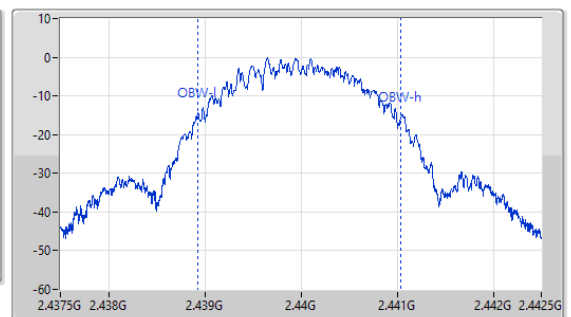
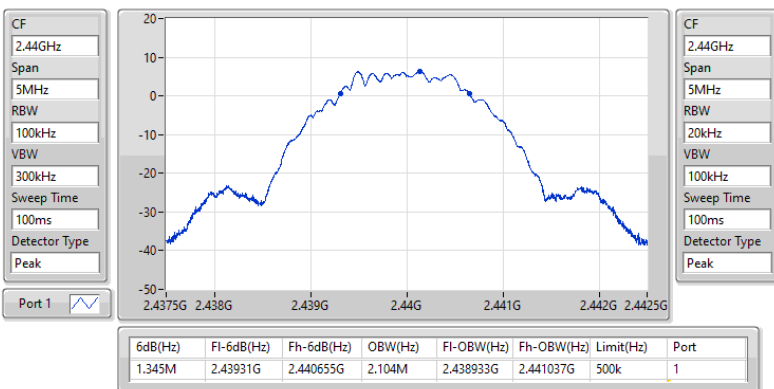


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2440MHz

17/08/2023

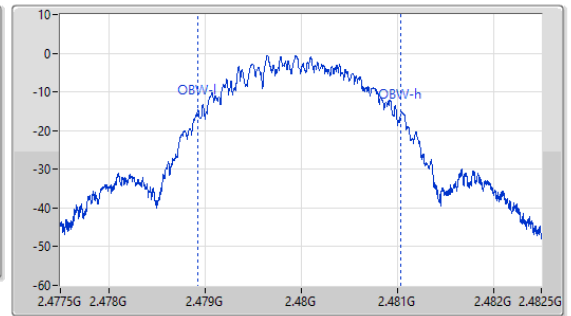
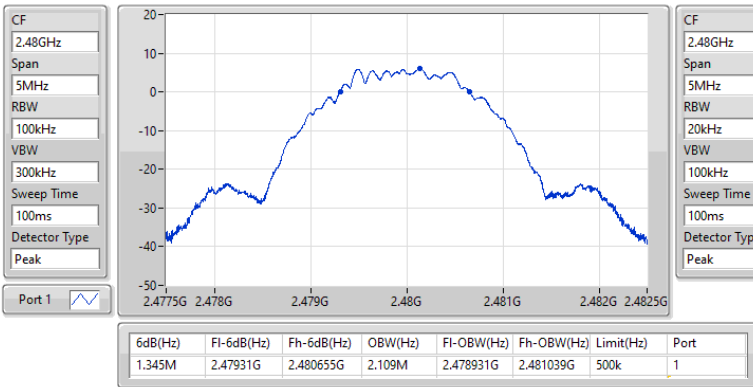


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2480MHz

17/08/2023

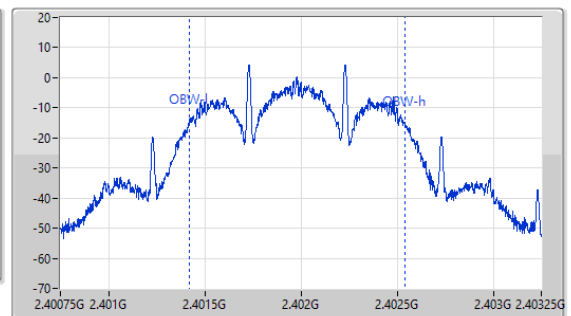
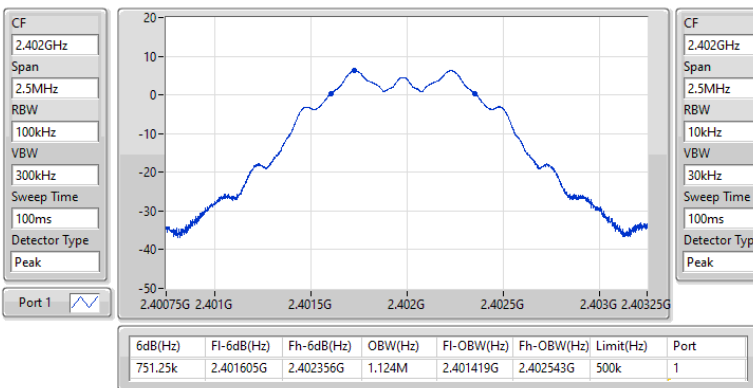


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2402MHz

17/08/2023

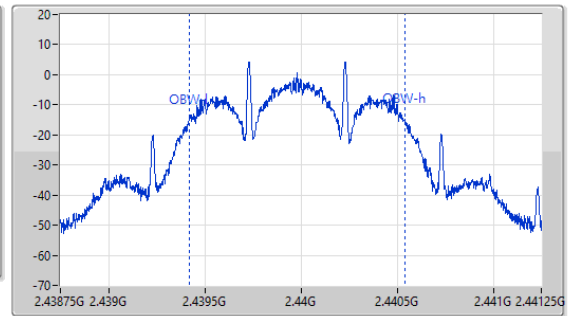
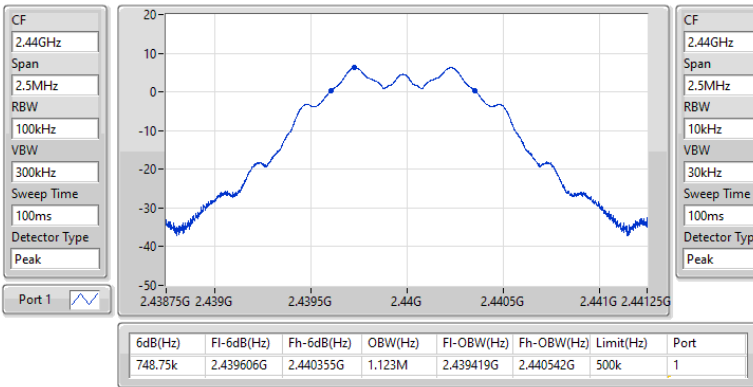


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2440MHz

17/08/2023

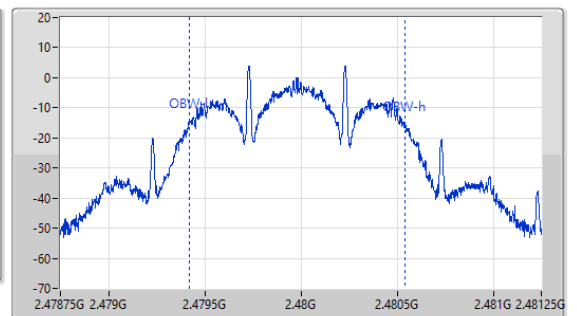
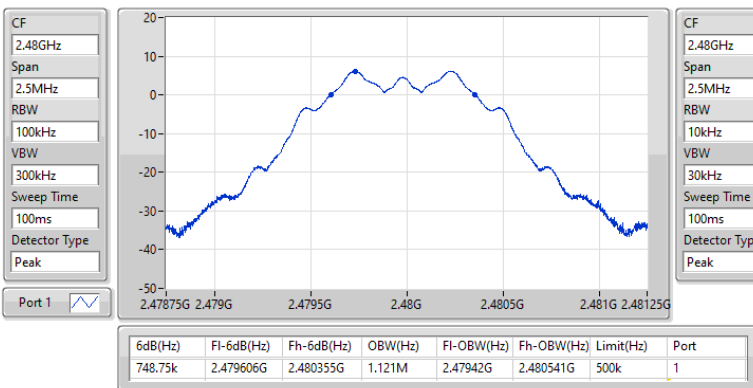


2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

2480MHz

17/08/2023





Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(125kbps)	9.94	0.00986
BT-LE(2Mbps)	9.97	0.00993



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.20	9.97	29.80
2440MHz	Pass	6.20	9.89	29.80
2480MHz	Pass	6.20	9.58	29.80
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	6.20	9.94	29.80
2440MHz	Pass	6.20	9.92	29.80
2480MHz	Pass	6.20	9.93	29.80

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(125kbps)	4.09
BT-LE(2Mbps)	-8.08

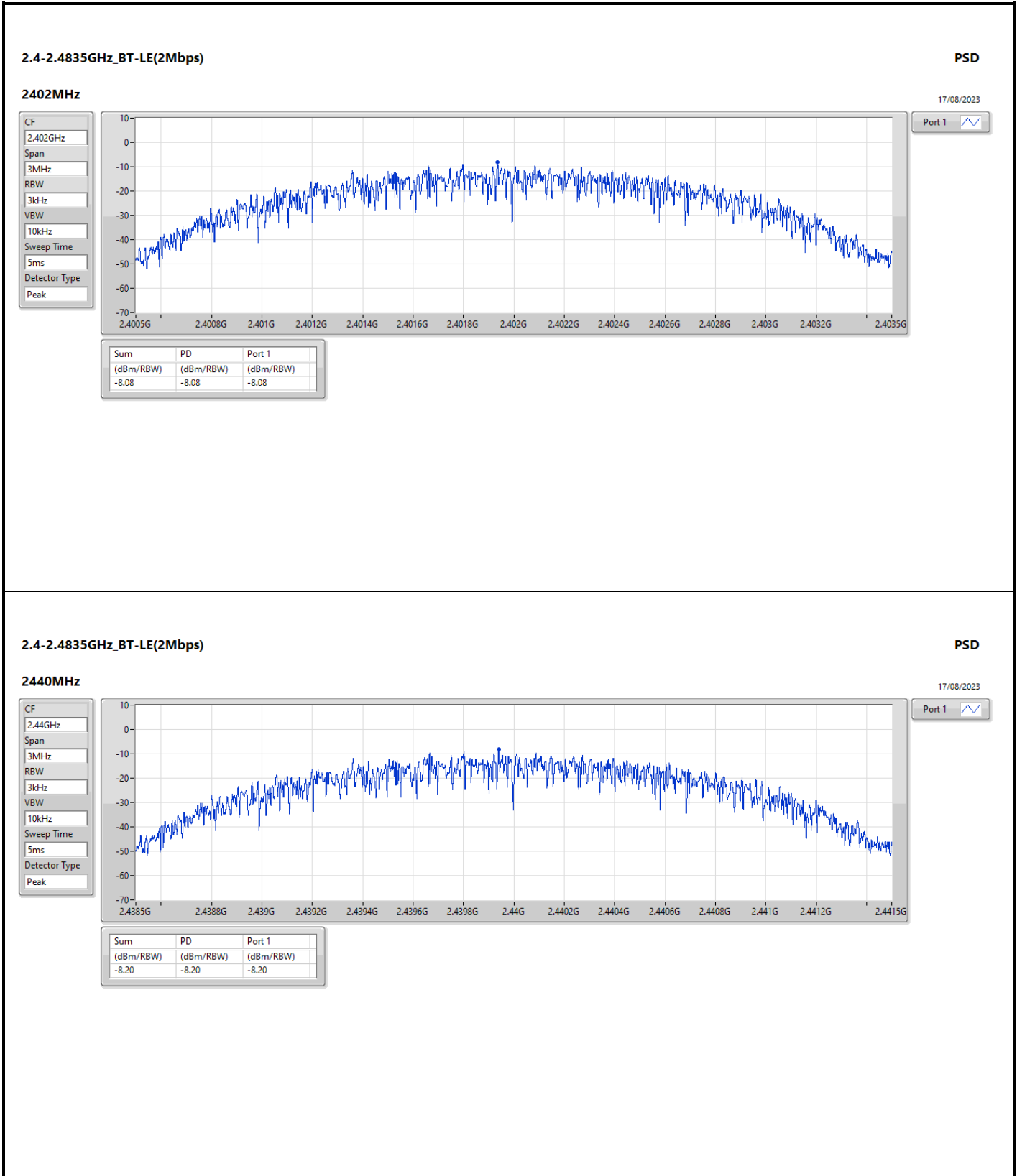
RBW = 3kHz;

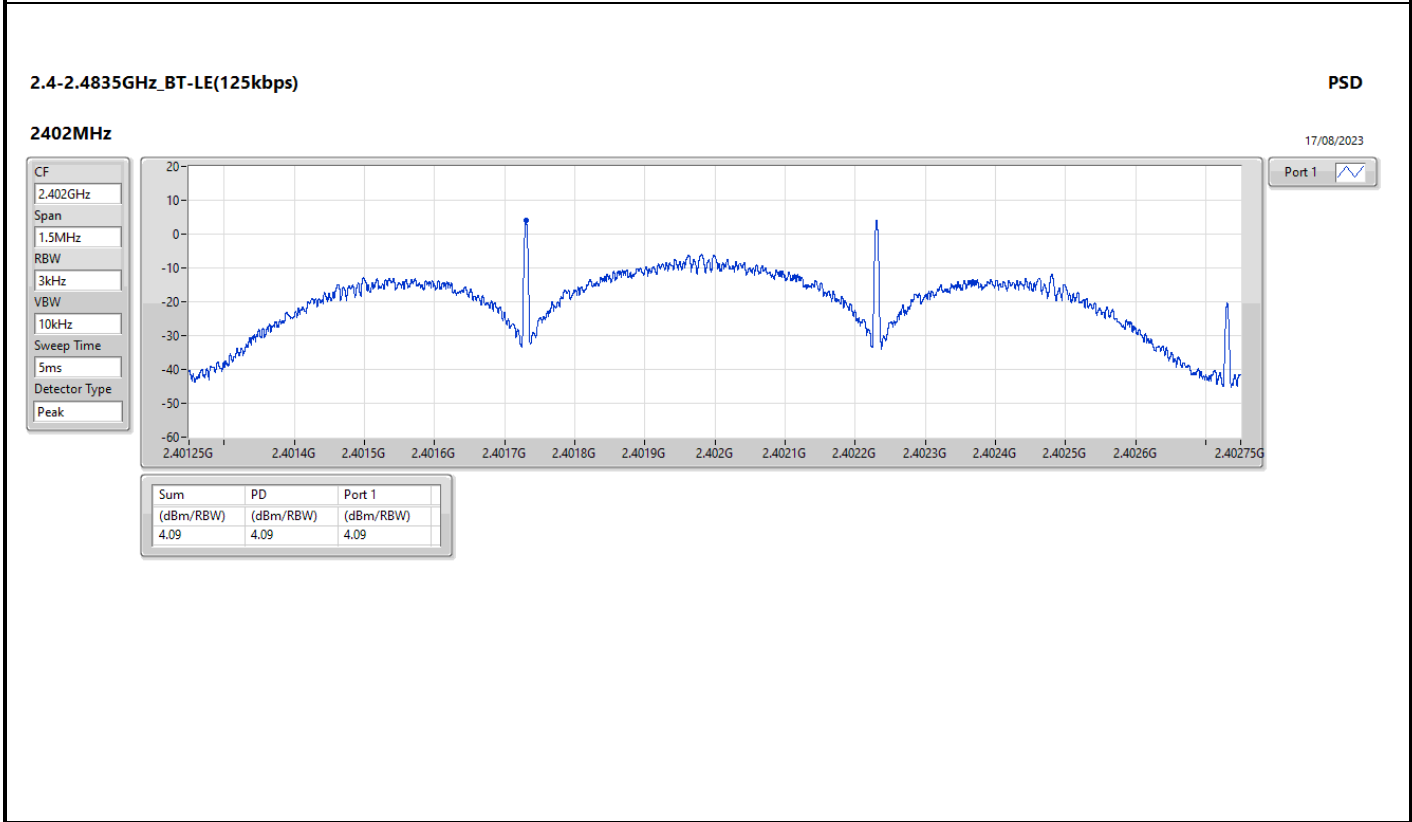
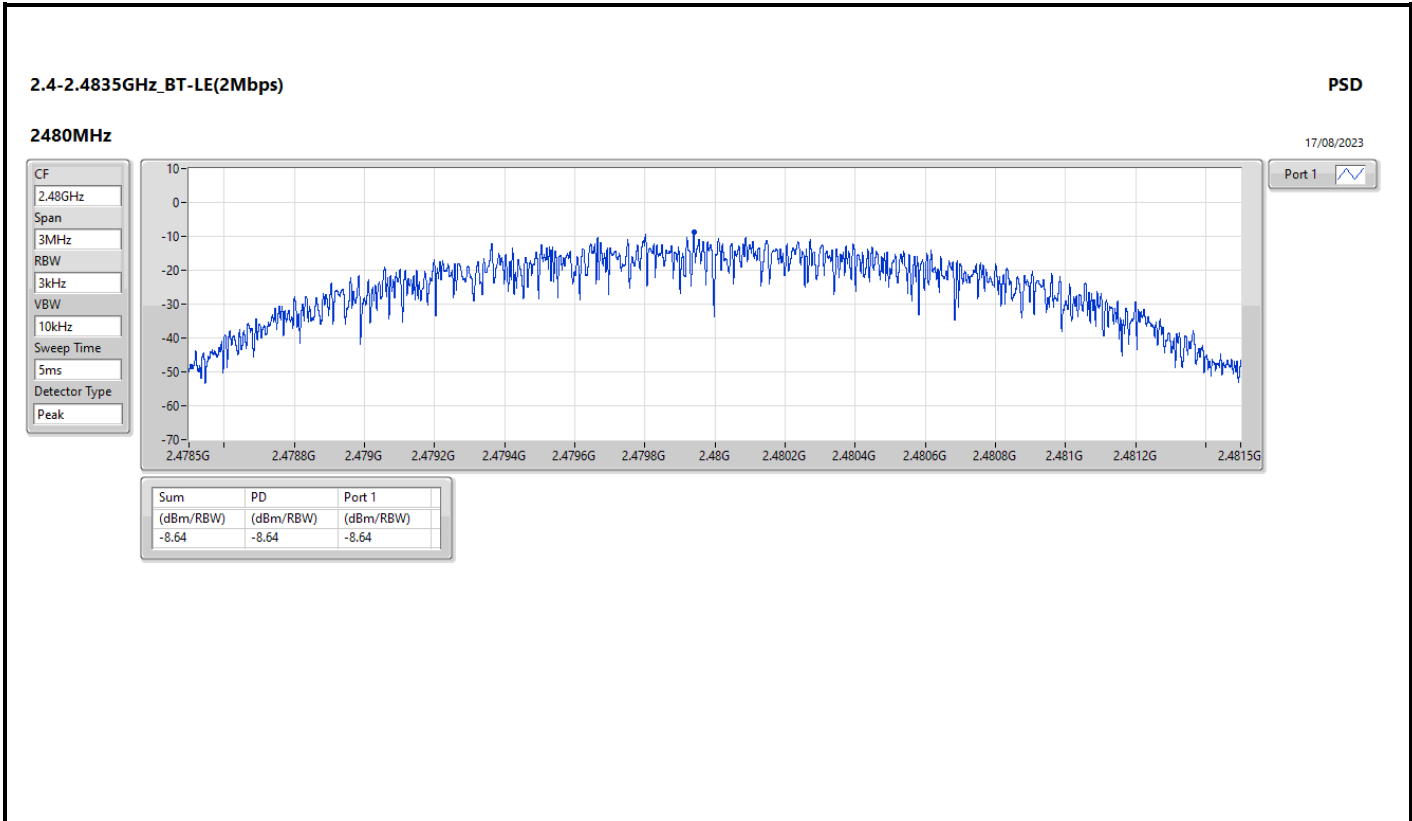


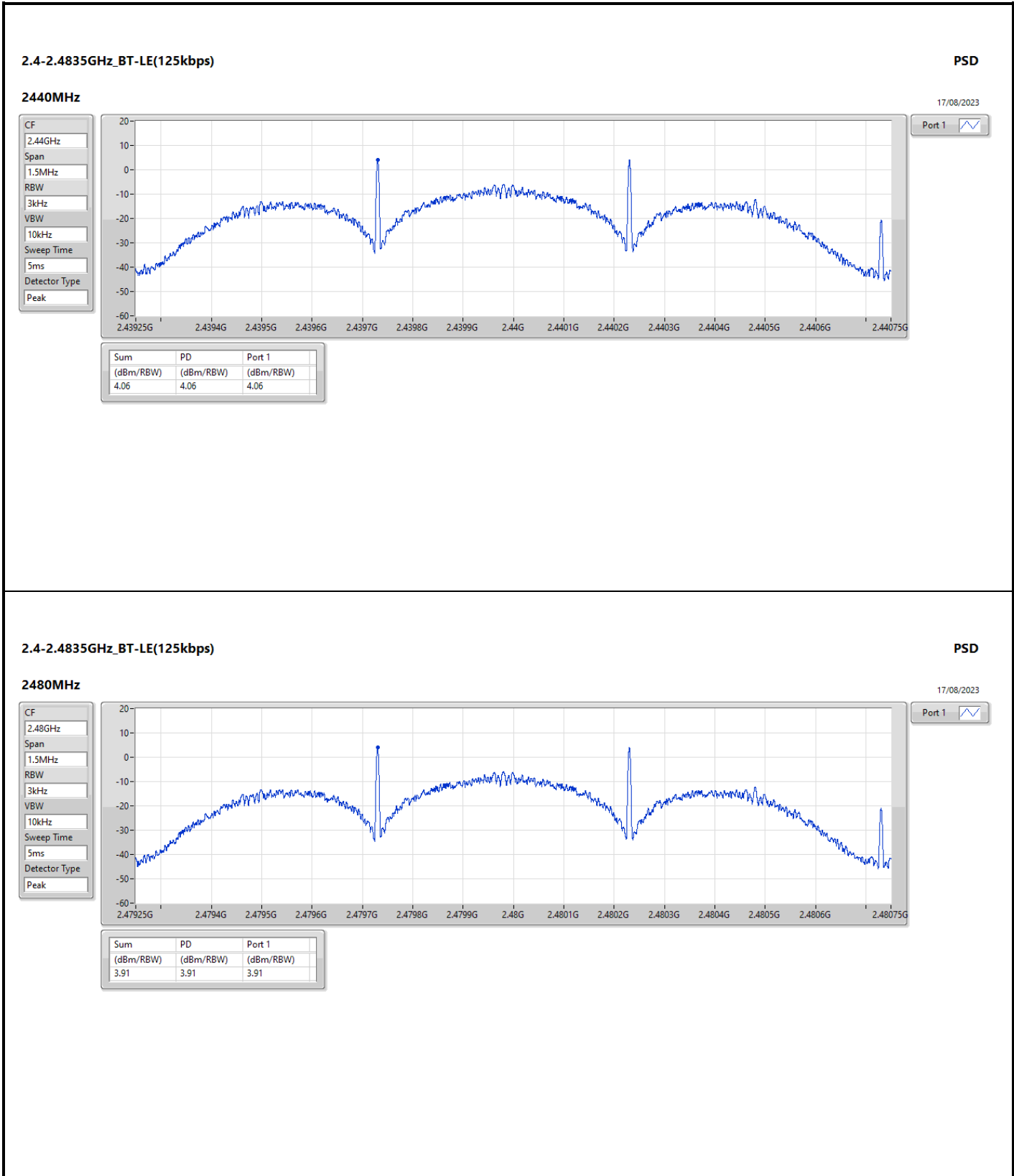
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	6.20	-8.08	7.80
2440MHz	Pass	6.20	-8.20	7.80
2480MHz	Pass	6.20	-8.64	7.80
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	6.20	4.09	7.80
2440MHz	Pass	6.20	4.06	7.80
2480MHz	Pass	6.20	3.91	7.80

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;









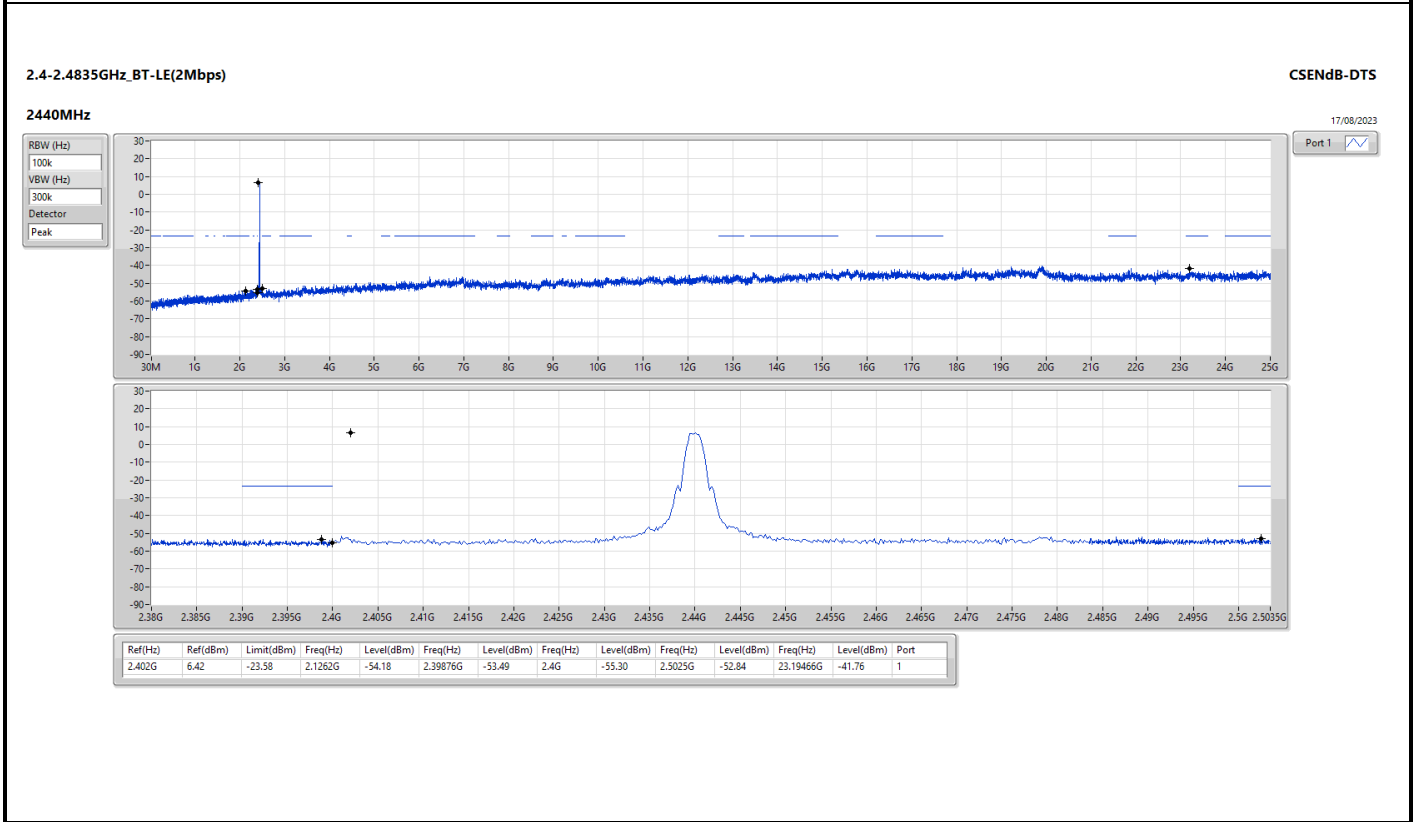
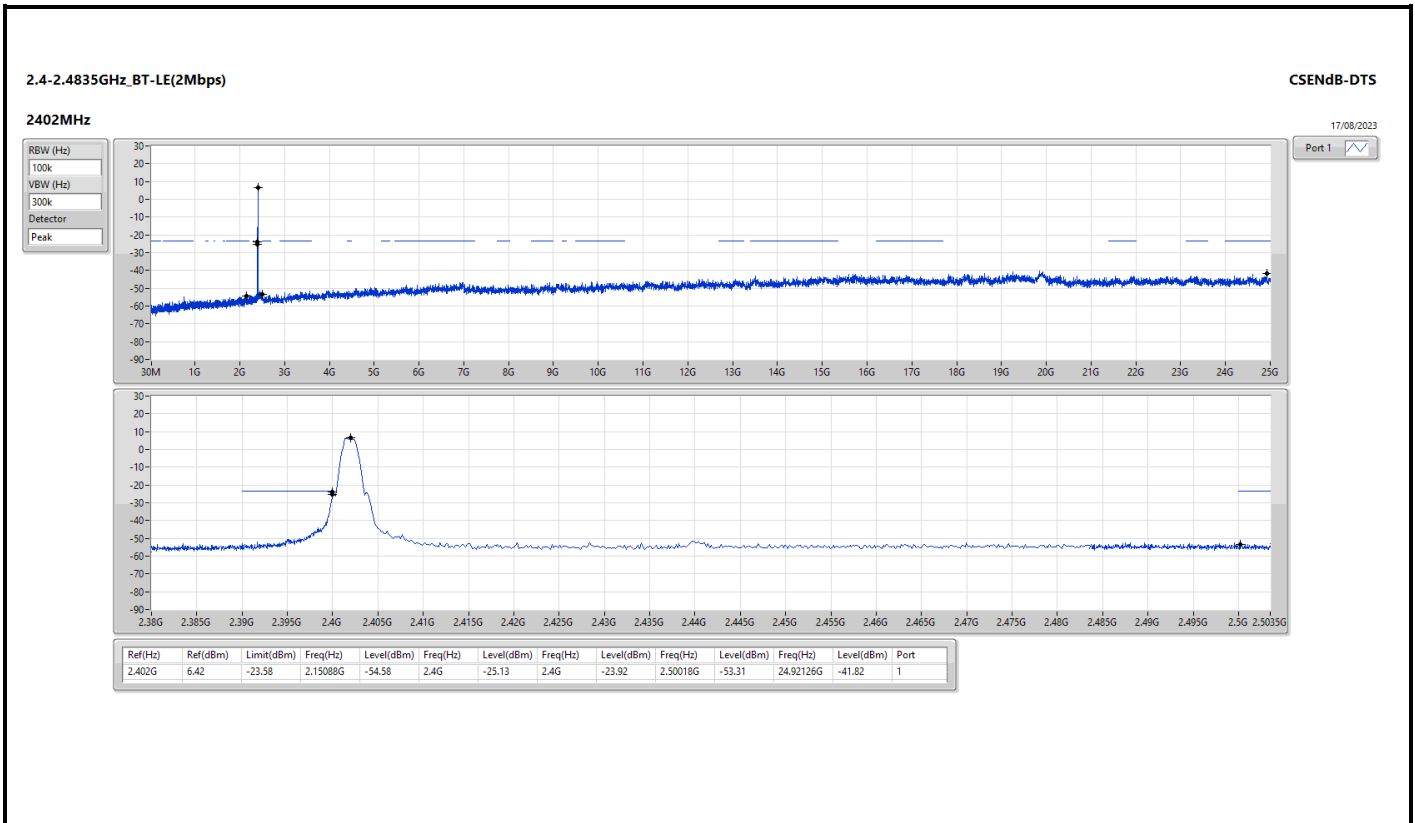
Summary

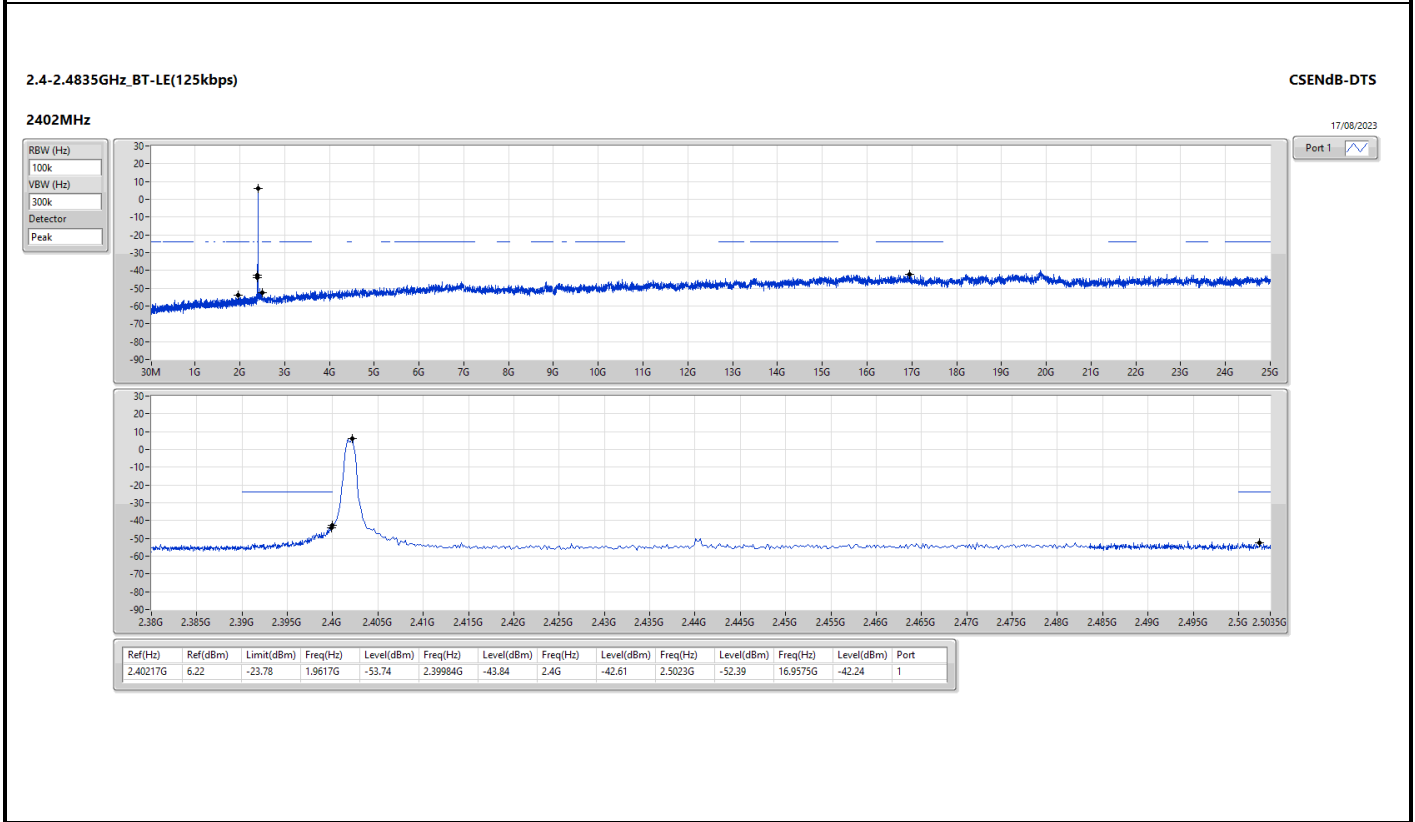
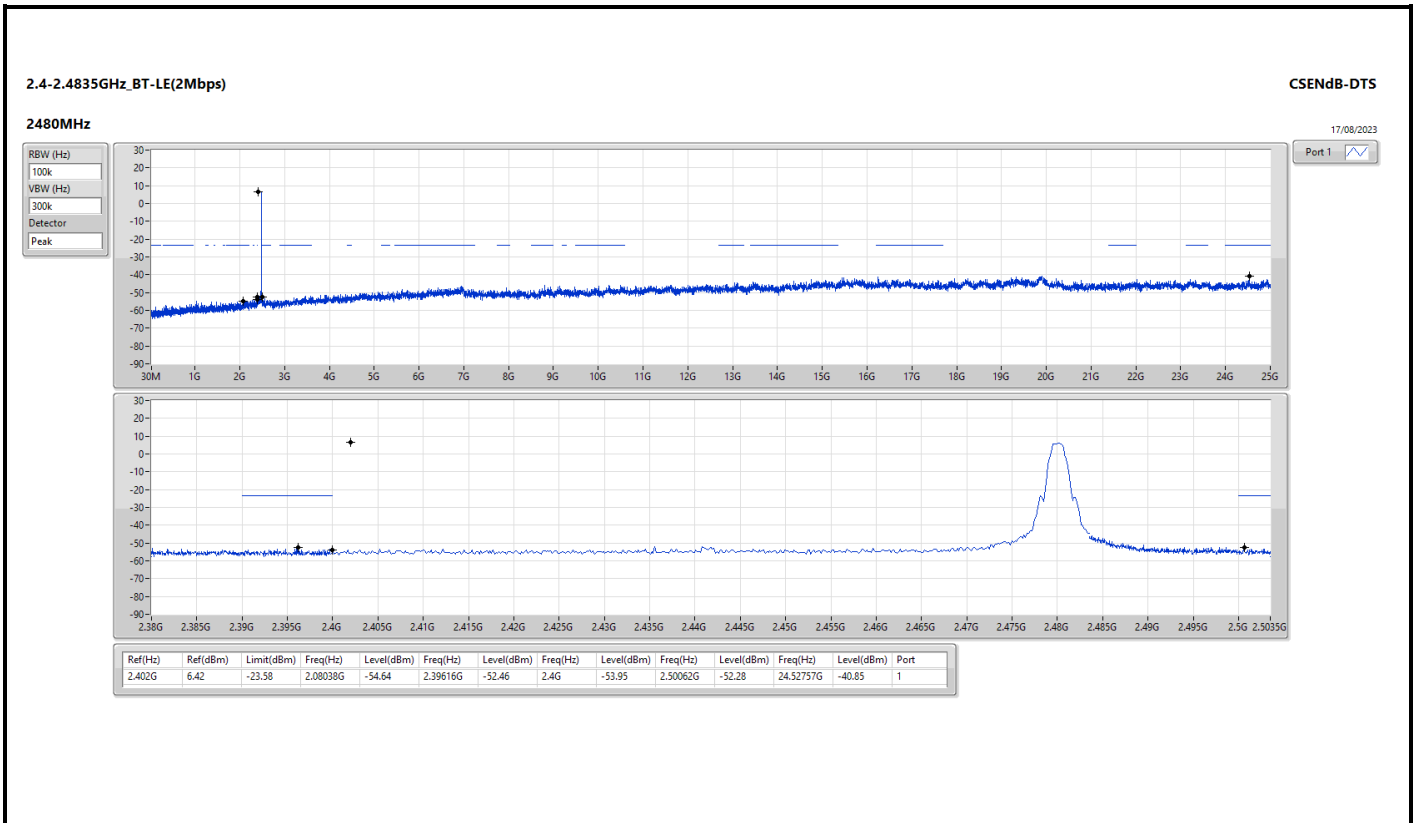
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(125kbps)	Pass	2.40217G	6.22	-23.78	1.9617G	-53.74	2.39984G	-43.84	2.4G	-42.61	2.5023G	-52.39	16.9575G	-42.24	1
BT-LE(2Mbps)	Pass	2.402G	6.42	-23.58	2.15088G	-54.58	2.4G	-25.13	2.4G	-23.92	2.50018G	-53.31	24.92126G	-41.82	1

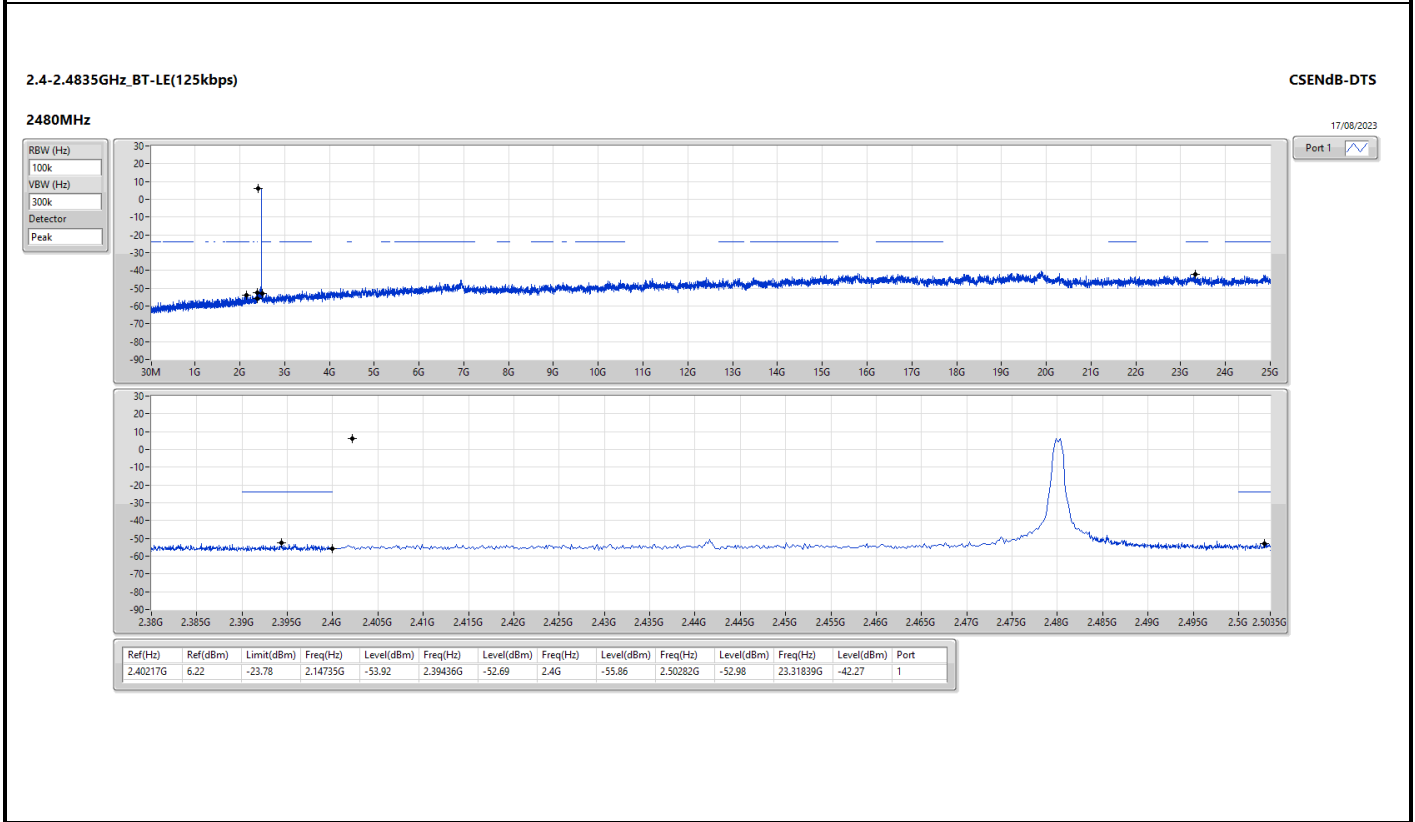
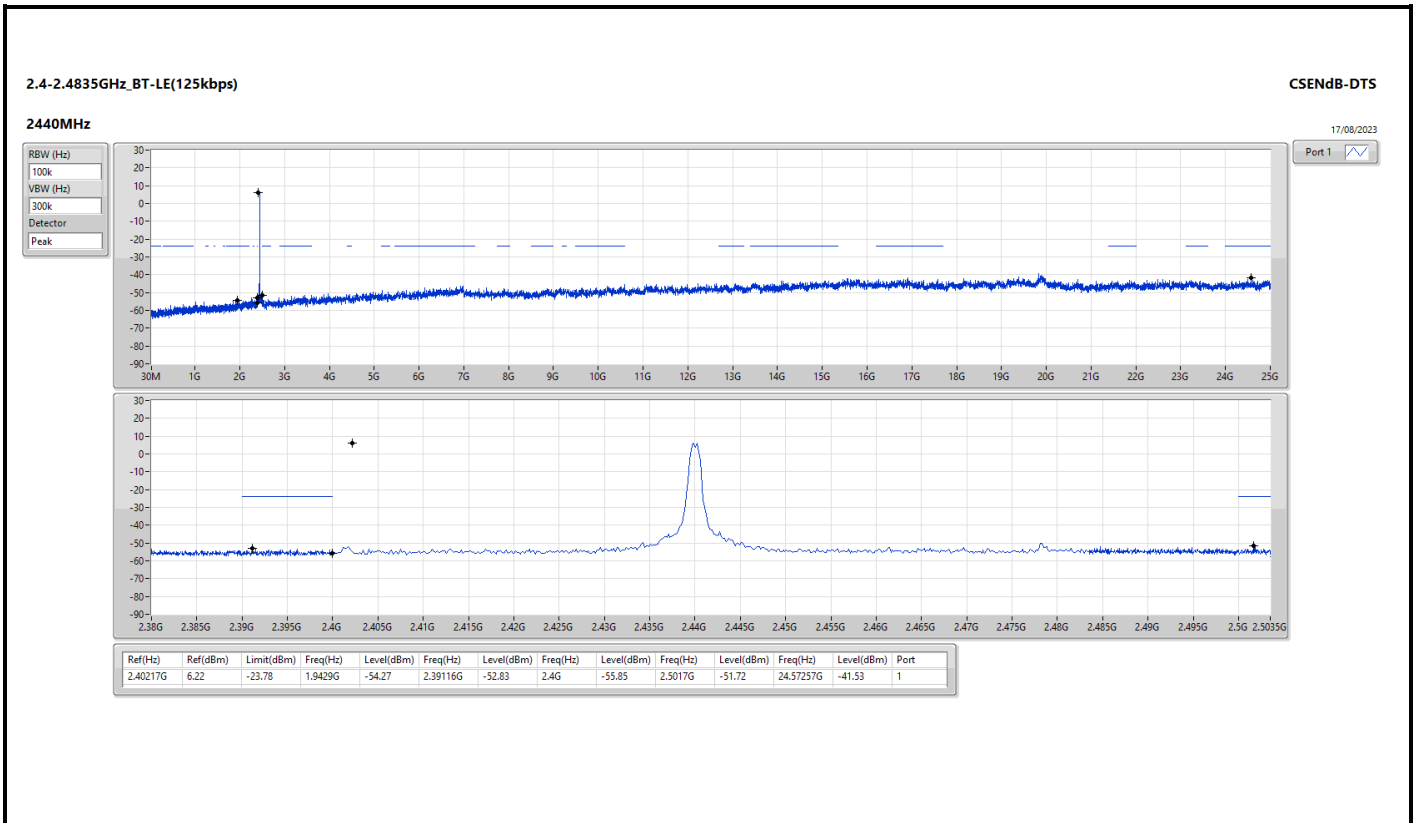


Result

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	2.402G	6.42	-23.58	2.15088G	-54.58	2.4G	-25.13	2.4G	-23.92	2.50018G	-53.31	24.92126G	-41.82	1
2440MHz	Pass	2.402G	6.42	-23.58	2.1262G	-54.18	2.39876G	-53.49	2.4G	-55.30	2.5025G	-52.84	23.19466G	-41.76	1
2480MHz	Pass	2.402G	6.42	-23.58	2.08038G	-54.64	2.39616G	-52.46	2.4G	-53.95	2.50062G	-52.28	24.52757G	-40.85	1
BT-LE(125kbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	6.22	-23.78	1.9617G	-53.74	2.39984G	-43.84	2.4G	-42.61	2.5023G	-52.39	16.9575G	-42.24	1
2440MHz	Pass	2.40217G	6.22	-23.78	1.9429G	-54.27	2.39116G	-52.83	2.4G	-55.85	2.5017G	-51.72	24.57257G	-41.53	1
2480MHz	Pass	2.40217G	6.22	-23.78	2.14735G	-53.92	2.39436G	-52.69	2.4G	-55.86	2.50282G	-52.98	23.31839G	-42.27	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	716.76M	32.01	46.00	-13.99	3	Vertical	360	1.00

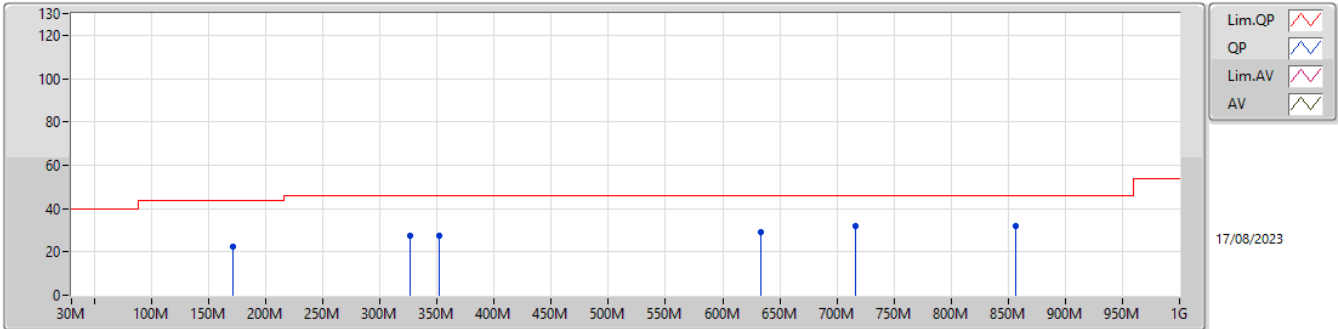


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	171.62M	22.41	43.50	-21.09	3	Vertical	360	1.00
2440MHz	Pass	PK	326.82M	27.60	46.00	-18.40	3	Vertical	360	1.00
2440MHz	Pass	PK	352.04M	27.34	46.00	-18.66	3	Vertical	360	1.00
2440MHz	Pass	PK	633.34M	29.27	46.00	-16.73	3	Vertical	360	1.00
2440MHz	Pass	PK	716.76M	32.01	46.00	-13.99	3	Vertical	360	1.00
2440MHz	Pass	PK	856.44M	31.76	46.00	-14.24	3	Vertical	360	1.00
2440MHz	Pass	PK	142.52M	21.06	43.50	-22.44	3	Horizontal	0	1.00
2440MHz	Pass	PK	206.54M	24.42	43.50	-19.08	3	Horizontal	0	1.00
2440MHz	Pass	PK	264.74M	29.41	46.00	-16.59	3	Horizontal	0	1.00
2440MHz	Pass	PK	305.48M	31.51	46.00	-14.49	3	Horizontal	0	1.00
2440MHz	Pass	PK	532.46M	28.29	46.00	-17.71	3	Horizontal	0	1.00
2440MHz	Pass	PK	885.54M	31.67	46.00	-14.33	3	Horizontal	0	1.00

2.4-2.4835GHz_BT-LE(2Mbps)

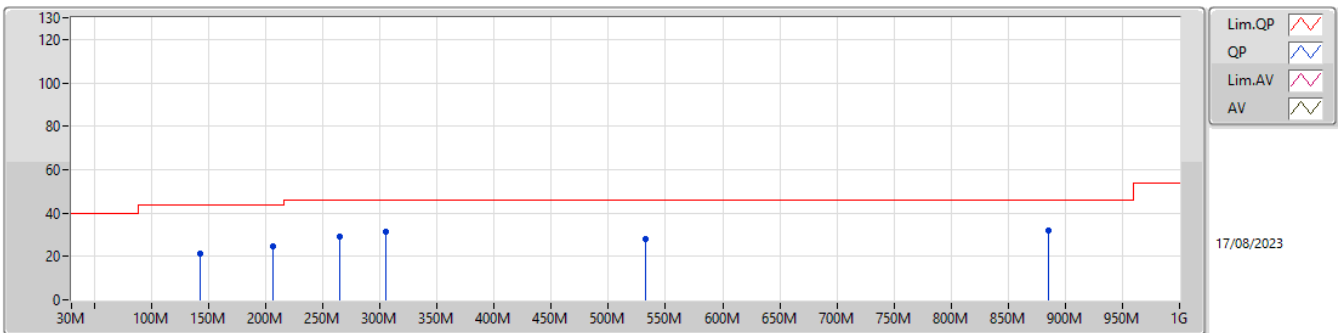
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	171.62M	22.41	43.50	-21.09	-10.68	3	Vertical	360	1.00	33.09	14.76	2.17	27.61
PK	326.82M	27.60	46.00	-18.40	-5.62	3	Vertical	360	1.00	33.22	18.78	3.05	27.45
PK	352.04M	27.34	46.00	-18.66	-4.87	3	Vertical	360	1.00	32.21	19.55	3.18	27.60
PK	633.34M	29.27	46.00	-16.73	0.10	3	Vertical	360	1.00	29.17	24.24	4.42	28.56
PK	716.76M	32.01	46.00	-13.99	0.89	3	Vertical	360	1.00	31.12	24.61	4.65	28.37
PK	856.44M	31.76	46.00	-14.24	2.93	3	Vertical	360	1.00	28.83	25.77	5.15	27.99

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	142.52M	21.06	43.50	-22.44	-9.55	3	Horizontal	0	1.00	30.61	16.24	1.97	27.76
PK	206.54M	24.42	43.50	-19.08	-10.71	3	Horizontal	0	1.00	35.13	14.34	2.40	27.45
PK	264.74M	29.41	46.00	-16.59	-6.40	3	Horizontal	0	1.00	35.81	18.13	2.71	27.24
PK	305.48M	31.51	46.00	-14.49	-5.88	3	Horizontal	0	1.00	37.39	18.49	2.94	27.31
PK	532.46M	28.29	46.00	-17.71	-1.06	3	Horizontal	0	1.00	29.35	23.60	3.94	28.60
PK	885.54M	31.67	46.00	-14.33	3.07	3	Horizontal	0	1.00	28.60	25.76	5.22	27.91



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	51.13	54.00	-2.87	3	Horizontal	360	1.04
BT-LE(2Mbps)	Pass	AV	2.4835G	53.85	54.00	-0.15	3	Horizontal	7	1.09



Result

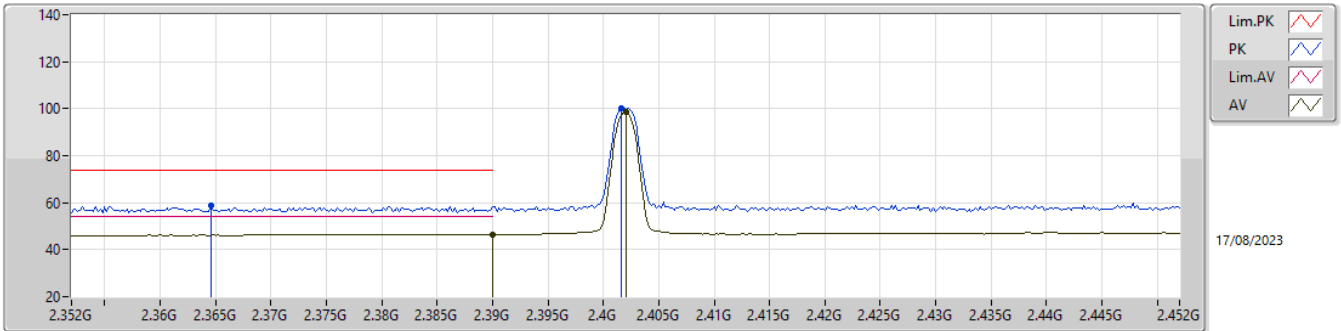
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(125kbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.39G	46.58	54.00	-7.42	3	Vertical	48	2.10
2402MHz	Pass	AV	2.402G	98.62	Inf	-Inf	3	Vertical	48	2.10
2402MHz	Pass	PK	2.3646G	58.96	74.00	-15.04	3	Vertical	48	2.10
2402MHz	Pass	PK	2.4016G	100.01	Inf	-Inf	3	Vertical	48	2.10
2402MHz	Pass	AV	2.3634G	48.67	54.00	-5.33	3	Horizontal	350	2.90
2402MHz	Pass	AV	2.402G	108.00	Inf	-Inf	3	Horizontal	350	2.90
2402MHz	Pass	PK	2.3634G	59.01	74.00	-14.99	3	Horizontal	350	2.90
2402MHz	Pass	PK	2.4018G	109.35	Inf	-Inf	3	Horizontal	350	2.90
2402MHz	Pass	AV	4.80418G	32.67	54.00	-21.33	3	Vertical	46	1.00
2402MHz	Pass	PK	4.80422G	45.92	74.00	-28.08	3	Vertical	46	1.00
2402MHz	Pass	AV	4.80423G	32.99	54.00	-21.01	3	Horizontal	347	1.95
2402MHz	Pass	PK	4.80433G	45.96	74.00	-28.04	3	Horizontal	347	1.95
2440MHz	Pass	AV	2.3892G	46.57	54.00	-7.43	3	Vertical	47	1.95
2440MHz	Pass	AV	2.44G	100.35	Inf	-Inf	3	Vertical	47	1.95
2440MHz	Pass	AV	2.4992G	47.58	54.00	-6.42	3	Vertical	47	1.95
2440MHz	Pass	PK	2.354G	58.52	74.00	-15.48	3	Vertical	47	1.95
2440MHz	Pass	PK	2.4404G	101.71	Inf	-Inf	3	Vertical	47	1.95
2440MHz	Pass	PK	2.498G	59.71	74.00	-14.29	3	Vertical	47	1.95
2440MHz	Pass	AV	2.3896G	46.57	54.00	-7.43	3	Horizontal	0	1.00
2440MHz	Pass	AV	2.44G	108.09	Inf	-Inf	3	Horizontal	0	1.00
2440MHz	Pass	AV	2.4992G	47.58	54.00	-6.42	3	Horizontal	0	1.00
2440MHz	Pass	PK	2.3564G	58.85	74.00	-15.15	3	Horizontal	0	1.00
2440MHz	Pass	PK	2.4404G	109.45	Inf	-Inf	3	Horizontal	0	1.00
2440MHz	Pass	PK	2.4976G	58.89	74.00	-15.11	3	Horizontal	0	1.00
2440MHz	Pass	AV	4.87987G	33.29	54.00	-20.71	3	Vertical	326	1.50
2440MHz	Pass	PK	4.88018G	46.00	74.00	-28.00	3	Vertical	326	1.50
2440MHz	Pass	AV	4.87985G	33.29	54.00	-20.71	3	Horizontal	119	1.50
2440MHz	Pass	PK	4.87929G	45.94	74.00	-28.06	3	Horizontal	119	1.50
2480MHz	Pass	AV	2.48G	100.07	Inf	-Inf	3	Vertical	51	2.06
2480MHz	Pass	AV	2.4835G	48.27	54.00	-5.73	3	Vertical	51	2.06
2480MHz	Pass	PK	2.4796G	101.46	Inf	-Inf	3	Vertical	51	2.06
2480MHz	Pass	PK	2.4908G	60.53	74.00	-13.47	3	Vertical	51	2.06
2480MHz	Pass	AV	2.48G	107.48	Inf	-Inf	3	Horizontal	360	1.04
2480MHz	Pass	AV	2.4835G	51.13	54.00	-2.87	3	Horizontal	360	1.04
2480MHz	Pass	PK	2.4796G	108.84	Inf	-Inf	3	Horizontal	360	1.04
2480MHz	Pass	PK	2.4835G	62.64	74.00	-11.36	3	Horizontal	360	1.04
2480MHz	Pass	AV	4.95954G	33.72	54.00	-20.28	3	Vertical	43	1.50
2480MHz	Pass	PK	4.96G	46.63	74.00	-27.37	3	Vertical	43	1.50
2480MHz	Pass	AV	4.95949G	34.12	54.00	-19.88	3	Horizontal	354	1.18
2480MHz	Pass	PK	4.96002G	46.76	74.00	-27.24	3	Horizontal	354	1.18
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3798G	46.66	54.00	-7.34	3	Vertical	54	1.92
2402MHz	Pass	AV	2.402G	98.47	Inf	-Inf	3	Vertical	54	1.92
2402MHz	Pass	PK	2.39G	59.40	74.00	-14.60	3	Vertical	54	1.92
2402MHz	Pass	PK	2.4014G	101.03	Inf	-Inf	3	Vertical	54	1.92
2402MHz	Pass	AV	2.3632G	48.00	54.00	-6.00	3	Horizontal	0	1.01
2402MHz	Pass	AV	2.402G	107.18	Inf	-Inf	3	Horizontal	0	1.01
2402MHz	Pass	PK	2.369G	59.03	74.00	-14.97	3	Horizontal	0	1.01
2402MHz	Pass	PK	2.4014G	109.72	Inf	-Inf	3	Horizontal	0	1.01
2402MHz	Pass	AV	4.8134G	33.00	54.00	-21.00	3	Vertical	16	2.77
2402MHz	Pass	PK	4.80272G	45.27	74.00	-28.73	3	Vertical	16	2.77
2402MHz	Pass	AV	4.80472G	33.25	54.00	-20.75	3	Horizontal	345	1.24
2402MHz	Pass	PK	4.79616G	45.97	74.00	-28.03	3	Horizontal	345	1.24
2440MHz	Pass	AV	2.3872G	46.71	54.00	-7.29	3	Vertical	45	2.03
2440MHz	Pass	AV	2.44G	99.10	Inf	-Inf	3	Vertical	45	2.03
2440MHz	Pass	AV	2.4928G	47.74	54.00	-6.26	3	Vertical	45	2.03
2440MHz	Pass	PK	2.3848G	59.14	74.00	-14.86	3	Vertical	45	2.03
2440MHz	Pass	PK	2.4404G	101.78	Inf	-Inf	3	Vertical	45	2.03
2440MHz	Pass	PK	2.4868G	59.32	74.00	-14.68	3	Vertical	45	2.03
2440MHz	Pass	AV	2.39G	46.76	54.00	-7.24	3	Horizontal	7	1.08



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2440MHz	Pass	AV	2.44G	107.49	Inf	-Inf	3	Horizontal	7	1.08
2440MHz	Pass	AV	2.4948G	47.74	54.00	-6.26	3	Horizontal	7	1.08
2440MHz	Pass	PK	2.3608G	58.53	74.00	-15.47	3	Horizontal	7	1.08
2440MHz	Pass	PK	2.4404G	110.03	Inf	-Inf	3	Horizontal	7	1.08
2440MHz	Pass	PK	2.5G	59.35	74.00	-14.65	3	Horizontal	7	1.08
2440MHz	Pass	AV	4.88452G	33.63	54.00	-20.37	3	Vertical	228	1.38
2440MHz	Pass	PK	4.88086G	46.26	74.00	-27.74	3	Vertical	228	1.38
2440MHz	Pass	AV	4.88099G	33.48	54.00	-20.52	3	Horizontal	32	2.61
2440MHz	Pass	PK	4.8791G	45.78	74.00	-28.22	3	Horizontal	32	2.61
2480MHz	Pass	AV	2.48G	95.32	Inf	-Inf	3	Vertical	6	1.50
2480MHz	Pass	AV	2.4835G	48.45	54.00	-5.55	3	Vertical	6	1.50
2480MHz	Pass	PK	2.4796G	97.86	Inf	-Inf	3	Vertical	6	1.50
2480MHz	Pass	PK	2.484G	60.09	74.00	-13.91	3	Vertical	6	1.50
2480MHz	Pass	AV	2.48G	106.33	Inf	-Inf	3	Horizontal	7	1.09
2480MHz	Pass	AV	2.4835G	53.85	54.00	-0.15	3	Horizontal	7	1.09
2480MHz	Pass	PK	2.4796G	108.93	Inf	-Inf	3	Horizontal	7	1.09
2480MHz	Pass	PK	2.4835G	64.64	74.00	-9.36	3	Horizontal	7	1.09
2480MHz	Pass	AV	4.96088G	33.73	54.00	-20.27	3	Vertical	34	1.50
2480MHz	Pass	PK	4.96014G	47.33	74.00	-26.67	3	Vertical	34	1.50
2480MHz	Pass	AV	4.96082G	34.37	54.00	-19.63	3	Horizontal	57	2.31
2480MHz	Pass	PK	4.95913G	46.99	74.00	-27.01	3	Horizontal	57	2.31

2.4-2.4835GHz_BT-LE(125kbps)

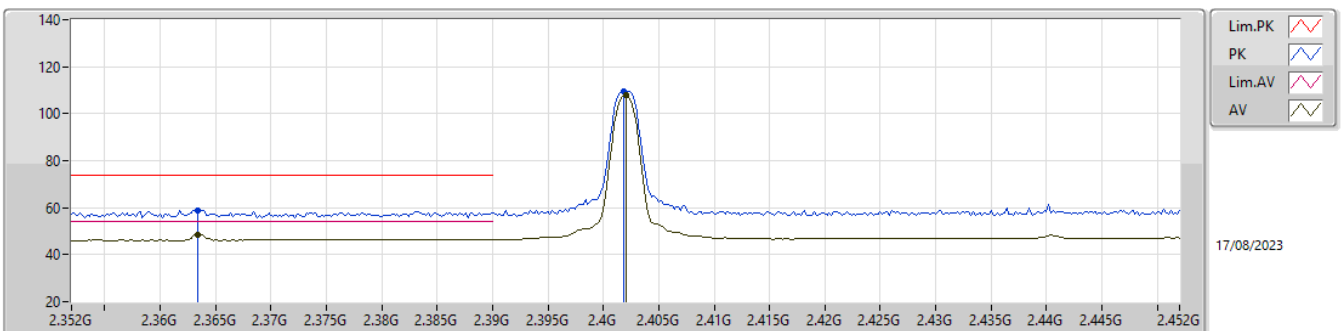
2402MHz_TX



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	2.39G	46.58	54.00	-7.42	32.19	3	Vertical	48	2.10	14.39	27.54	4.65	-
AV	2.402G	98.62	Inf	-Inf	32.26	3	Vertical	48	2.10	66.36	27.60	4.66	-
PK	2.3646G	58.96	74.00	-15.04	32.01	3	Vertical	48	2.10	26.95	27.39	4.62	-
PK	2.4016G	100.01	Inf	-Inf	32.26	3	Vertical	48	2.10	67.75	27.60	4.66	-

2.4-2.4835GHz_BT-LE(125kbps)

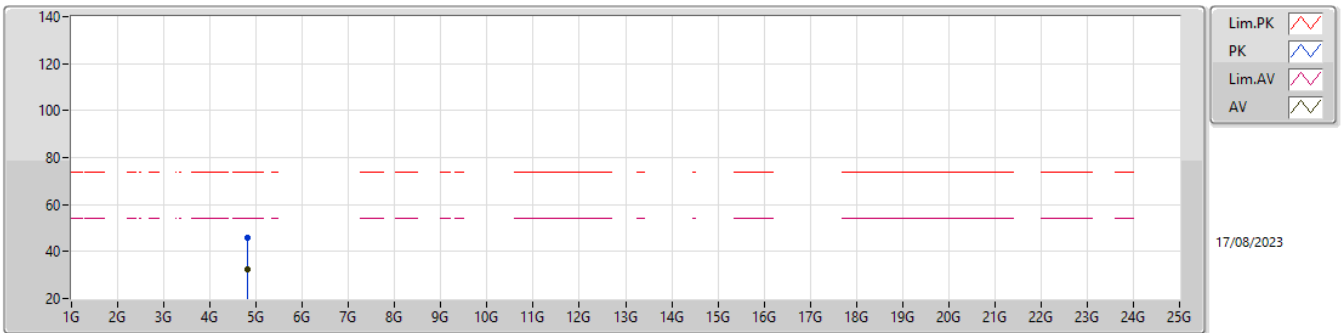
2402MHz_TX



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	2.3634G	48.67	54.00	-5.33	32.00	3	Horizontal	350	2.90	16.67	27.38	4.62	-
AV	2.402G	108.00	Inf	-Inf	32.26	3	Horizontal	350	2.90	75.74	27.60	4.66	-
PK	2.3634G	59.01	74.00	-14.99	32.00	3	Horizontal	350	2.90	27.01	27.38	4.62	-
PK	2.4018G	109.35	Inf	-Inf	32.26	3	Horizontal	350	2.90	77.09	27.60	4.66	-

2.4-2.4835GHz_BT-LE(125kbps)

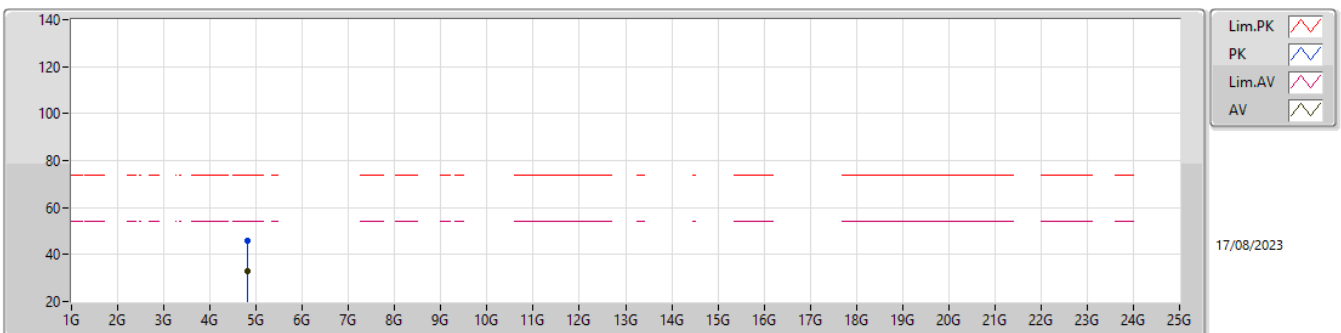
2402MHz_TX



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	4.80418G	32.67	54.00	-21.33	5.11	3	Vertical	46	1.00	27.56	32.33	6.79	34.01
PK	4.80422G	45.92	74.00	-28.08	5.11	3	Vertical	46	1.00	40.81	32.33	6.79	34.01

2.4-2.4835GHz_BT-LE(125kbps)

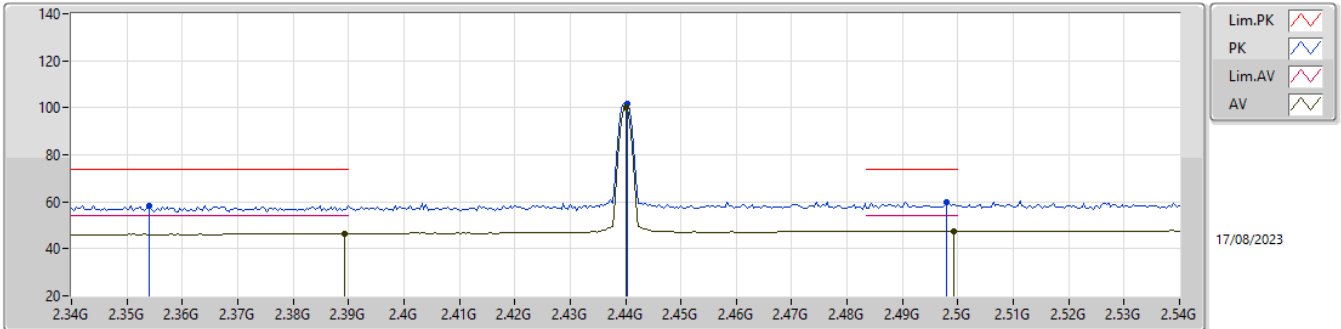
2402MHz_TX



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	4.80423G	32.99	54.00	-21.01	5.11	3	Horizontal	347	1.95	27.88	32.33	6.79	34.01
PK	4.80433G	45.96	74.00	-28.04	5.11	3	Horizontal	347	1.95	40.85	32.33	6.79	34.01

2.4-2.4835GHz_BT-LE(125kbps)

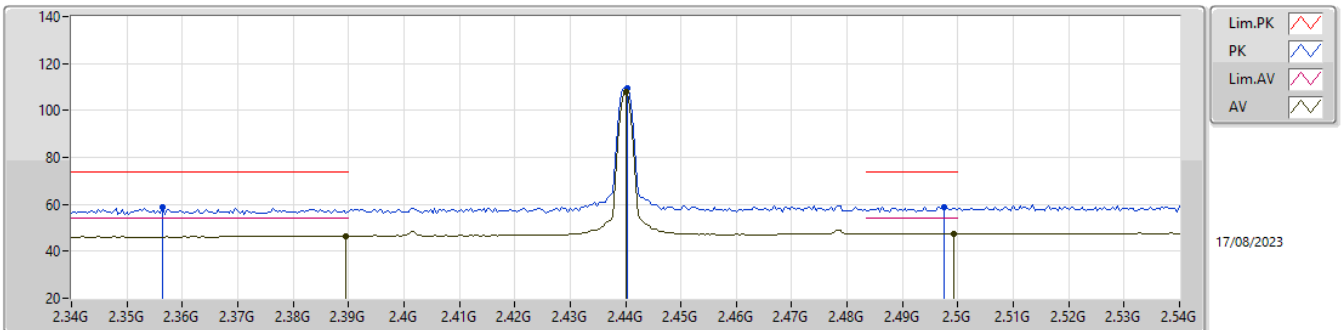
2440MHz_TX



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	2.3892G	46.57	54.00	-7.43	32.19	3	Vertical	47	1.95	14.38	27.54	4.65	-
AV	2.44G	100.35	Inf	-Inf	32.41	3	Vertical	47	1.95	67.94	27.68	4.73	-
AV	2.4992G	47.58	54.00	-6.42	32.83	3	Vertical	47	1.95	14.75	28.00	4.83	-
PK	2.354G	58.52	74.00	-15.48	31.92	3	Vertical	47	1.95	26.60	27.32	4.60	-
PK	2.4404G	101.71	Inf	-Inf	32.41	3	Vertical	47	1.95	69.30	27.68	4.73	-
PK	2.498G	59.71	74.00	-14.29	32.82	3	Vertical	47	1.95	26.89	27.99	4.83	-

2.4-2.4835GHz_BT-LE(125kbps)

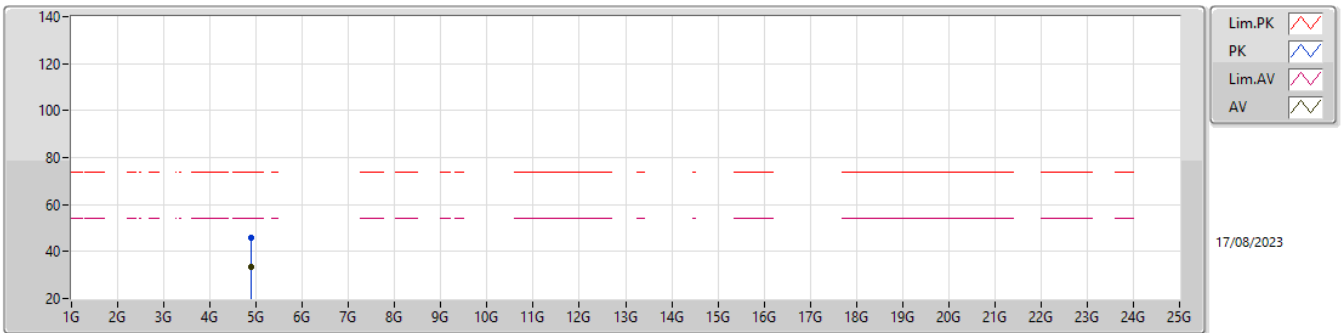
2440MHz_TX



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	2.3896G	46.57	54.00	-7.43	32.19	3	Horizontal	0	1.00	14.38	27.54	4.65	-
AV	2.44G	108.09	Inf	-Inf	32.41	3	Horizontal	0	1.00	75.68	27.68	4.73	-
AV	2.4992G	47.58	54.00	-6.42	32.83	3	Horizontal	0	1.00	14.75	28.00	4.83	-
PK	2.3564G	58.85	74.00	-15.15	31.95	3	Horizontal	0	1.00	26.90	27.34	4.61	-
PK	2.4404G	109.45	Inf	-Inf	32.41	3	Horizontal	0	1.00	77.04	27.68	4.73	-
PK	2.4976G	58.89	74.00	-15.11	32.82	3	Horizontal	0	1.00	26.07	27.99	4.83	-

2.4-2.4835GHz_BT-LE(125kbps)

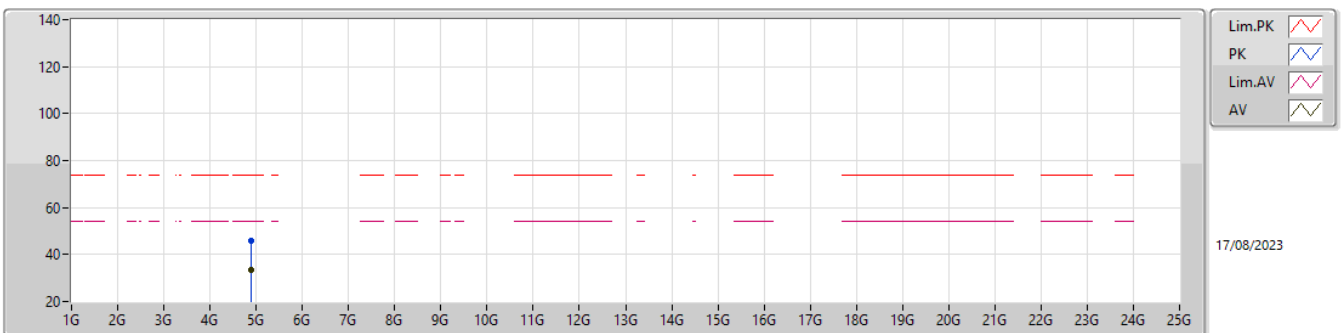
2440MHz_TX



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	4.87987G	33.29	54.00	-20.71	5.54	3	Vertical	326	1.50	27.75	32.72	6.82	34.00
PK	4.88018G	46.00	74.00	-28.00	5.54	3	Vertical	326	1.50	40.46	32.72	6.82	34.00

2.4-2.4835GHz_BT-LE(125kbps)

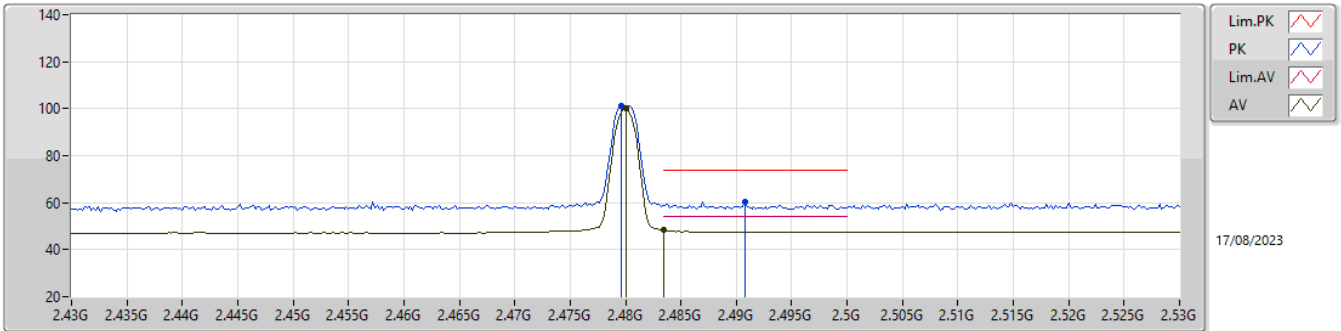
2440MHz_TX



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	4.87985G	33.29	54.00	-20.71	5.54	3	Horizontal	119	1.50	27.75	32.72	6.82	34.00
PK	4.87929G	45.94	74.00	-28.06	5.54	3	Horizontal	119	1.50	40.40	32.72	6.82	34.00

2.4-2.4835GHz_BT-LE(125kbps)

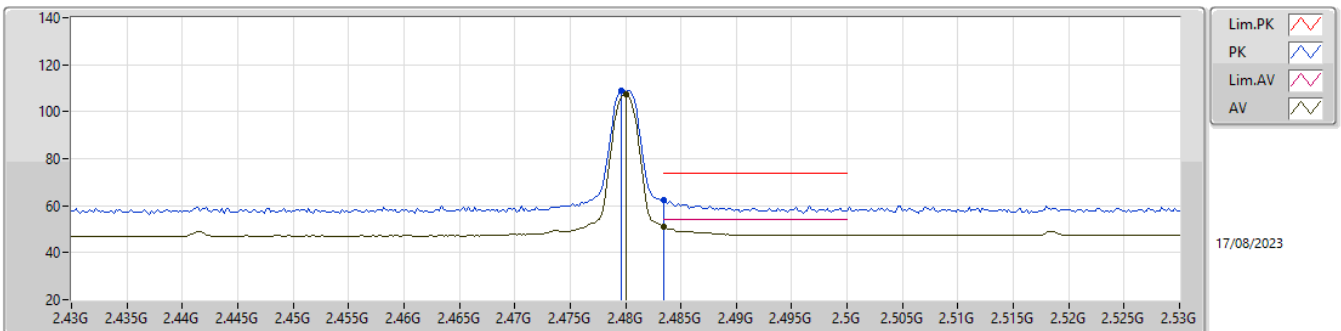
2480MHz_TX



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	100.07	Inf	-Inf	32.68	3	Vertical	51	2.06	67.39	27.88	4.80	-
AV	2.4835G	48.27	54.00	-5.73	32.70	3	Vertical	51	2.06	15.57	27.90	4.80	-
PK	2.4796G	101.46	Inf	-Inf	32.68	3	Vertical	51	2.06	68.78	27.88	4.80	-
PK	2.4908G	60.53	74.00	-13.47	32.75	3	Vertical	51	2.06	27.78	27.94	4.81	-

2.4-2.4835GHz_BT-LE(125kbps)

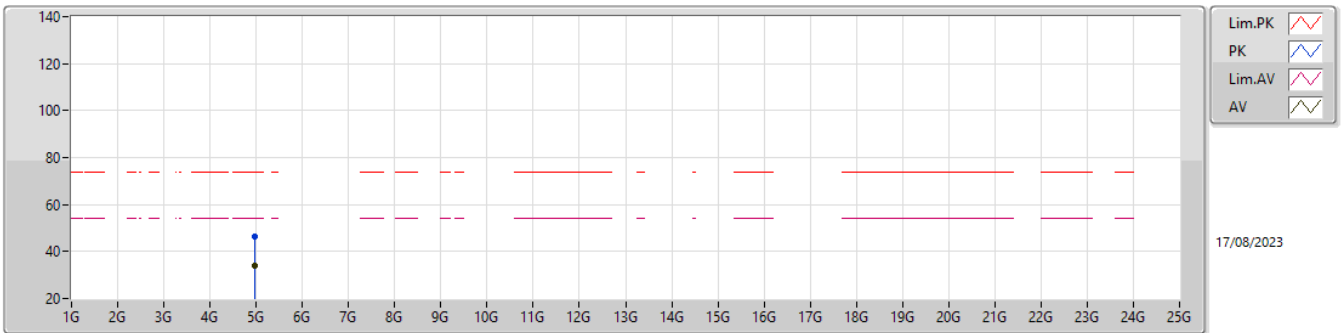
2480MHz_TX



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	107.48	Inf	-Inf	32.68	3	Horizontal	360	1.04	74.80	27.88	4.80	-
AV	2.4835G	51.13	54.00	-2.87	32.70	3	Horizontal	360	1.04	18.43	27.90	4.80	-
PK	2.4796G	108.84	Inf	-Inf	32.68	3	Horizontal	360	1.04	76.16	27.88	4.80	-
PK	2.4835G	62.64	74.00	-11.36	32.70	3	Horizontal	360	1.04	29.94	27.90	4.80	-

2.4-2.4835GHz_BT-LE(125kbps)

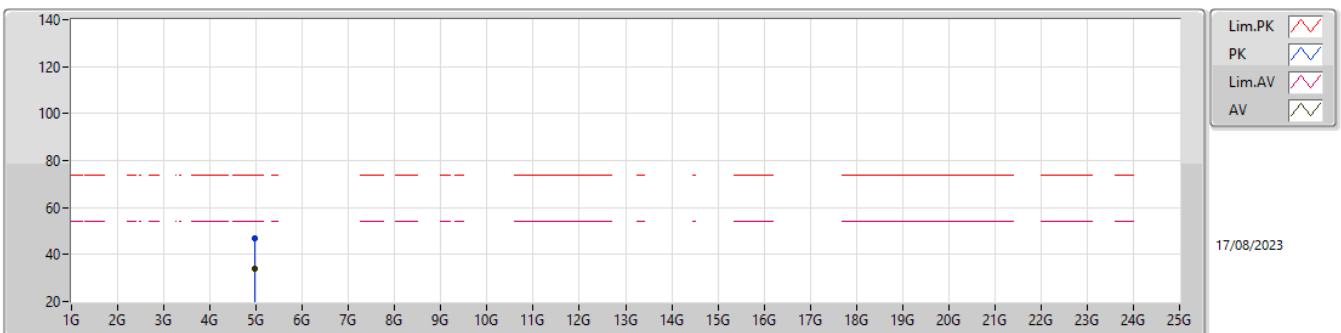
2480MHz_TX



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	4.95954G	33.72	54.00	-20.28	5.98	3	Vertical	43	1.50	27.74	33.12	6.85	33.99
PK	4.96G	46.63	74.00	-27.37	5.98	3	Vertical	43	1.50	40.65	33.12	6.85	33.99

2.4-2.4835GHz_BT-LE(125kbps)

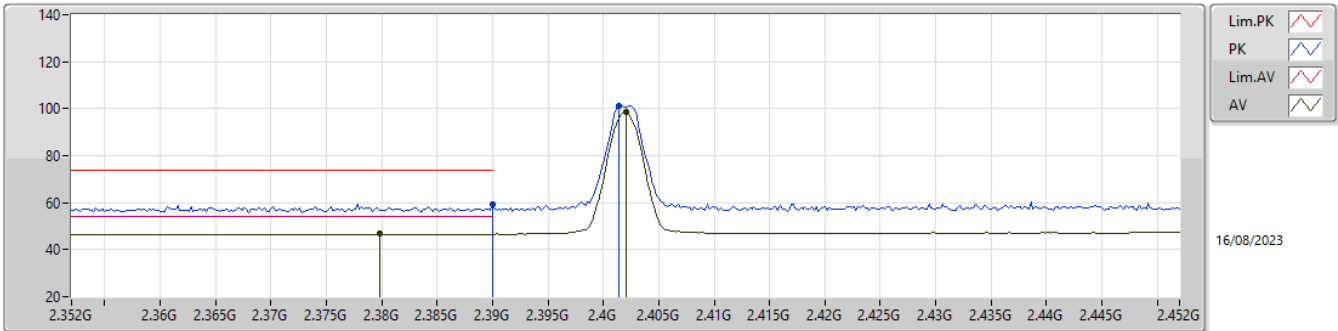
2480MHz_TX



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	4.95949G	34.12	54.00	-19.88	5.98	3	Horizontal	354	1.18	28.14	33.12	6.85	33.99
PK	4.96002G	46.76	74.00	-27.24	5.98	3	Horizontal	354	1.18	40.78	33.12	6.85	33.99

2.4-2.4835GHz_BT-LE(2Mbps)

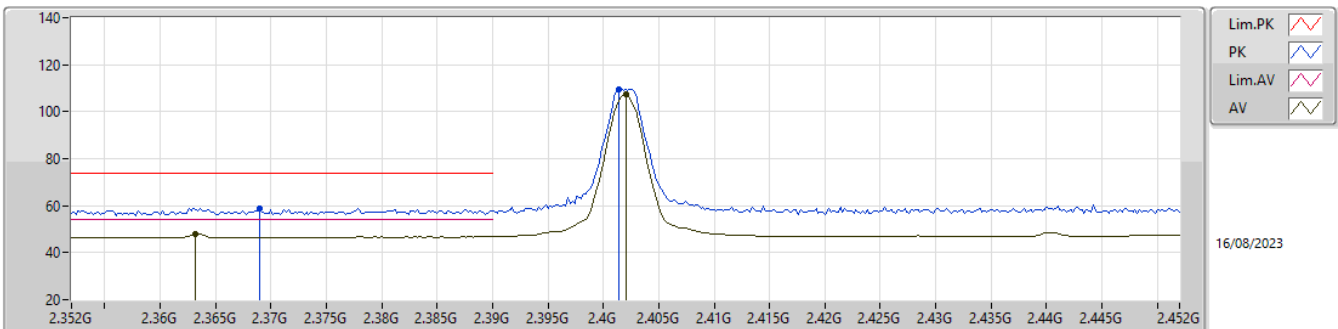
2402MHz_TX



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	2.3798G	46.66	54.00	-7.34	32.12	3	Vertical	54	1.92	14.54	27.48	4.64	-
AV	2.402G	98.47	Inf	-Inf	32.26	3	Vertical	54	1.92	66.21	27.60	4.66	-
PK	2.39G	59.40	74.00	-14.60	32.19	3	Vertical	54	1.92	27.21	27.54	4.65	-
PK	2.4014G	101.03	Inf	-Inf	32.26	3	Vertical	54	1.92	68.77	27.60	4.66	-

2.4-2.4835GHz_BT-LE(2Mbps)

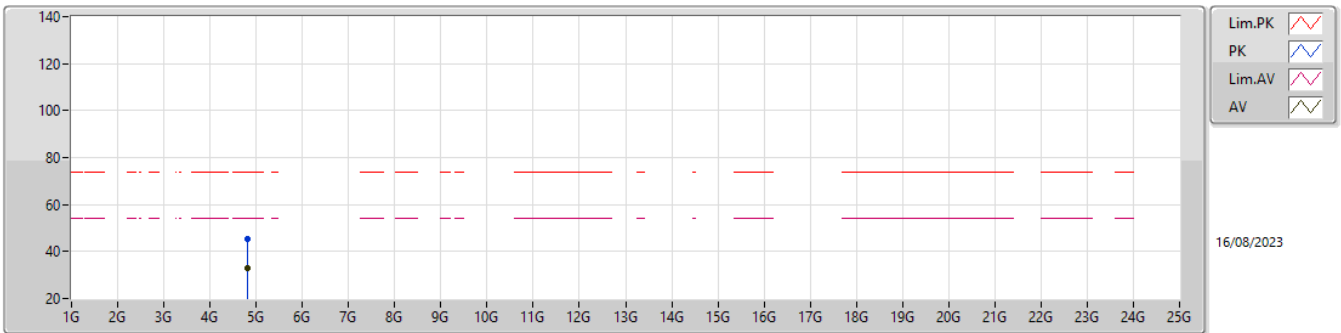
2402MHz_TX



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	2.3632G	48.00	54.00	-6.00	32.00	3	Horizontal	0	1.01	16.00	27.38	4.62	-
AV	2.402G	107.18	Inf	-Inf	32.26	3	Horizontal	0	1.01	74.92	27.60	4.66	-
PK	2.369G	59.03	74.00	-14.97	32.03	3	Horizontal	0	1.01	27.00	27.41	4.62	-
PK	2.4014G	109.72	Inf	-Inf	32.26	3	Horizontal	0	1.01	77.46	27.60	4.66	-

2.4-2.4835GHz_BT-LE(2Mbps)

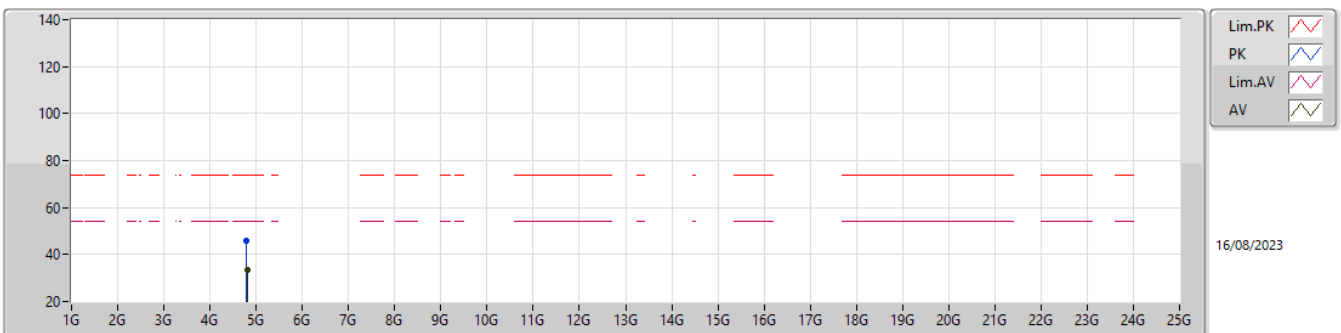
2402MHz_TX



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	4.8134G	33.00	54.00	-21.00	5.17	3	Vertical	16	2.77	27.83	32.38	6.80	34.01
PK	4.80272G	45.27	74.00	-28.73	5.10	3	Vertical	16	2.77	40.17	32.32	6.79	34.01

2.4-2.4835GHz_BT-LE(2Mbps)

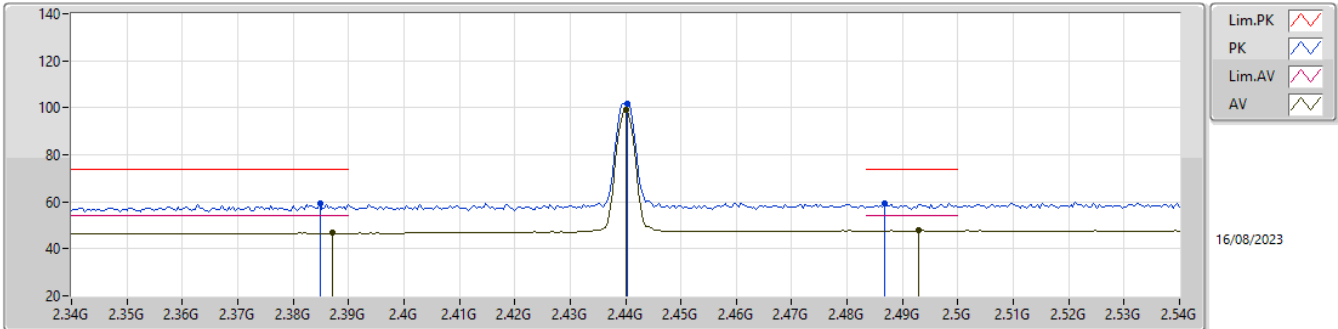
2402MHz_TX



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	4.80472G	33.25	54.00	-20.75	5.11	3	Horizontal	345	1.24	28.14	32.33	6.79	34.01
PK	4.79616G	45.97	74.00	-28.03	5.07	3	Horizontal	345	1.24	40.90	32.29	6.79	34.01

2.4-2.4835GHz_BT-LE(2Mbps)

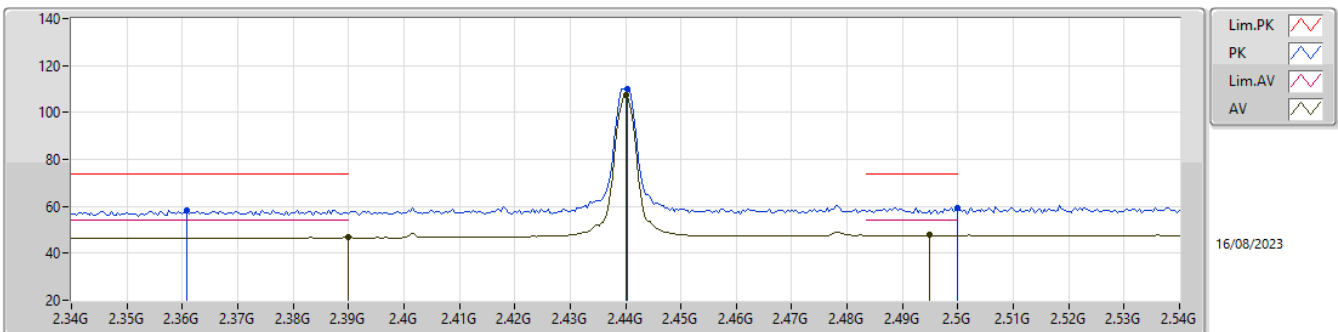
2440MHz_TX



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	2.3872G	46.71	54.00	-7.29	32.16	3	Vertical	45	2.03	14.55	27.52	4.64	-
AV	2.44G	99.10	Inf	-Inf	32.41	3	Vertical	45	2.03	66.69	27.68	4.73	-
AV	2.4928G	47.74	54.00	-6.26	32.78	3	Vertical	45	2.03	14.96	27.96	4.82	-
PK	2.3848G	59.14	74.00	-14.86	32.15	3	Vertical	45	2.03	26.99	27.51	4.64	-
PK	2.4404G	101.78	Inf	-Inf	32.41	3	Vertical	45	2.03	69.37	27.68	4.73	-
PK	2.4868G	59.32	74.00	-14.68	32.73	3	Vertical	45	2.03	26.59	27.92	4.81	-

2.4-2.4835GHz_BT-LE(2Mbps)

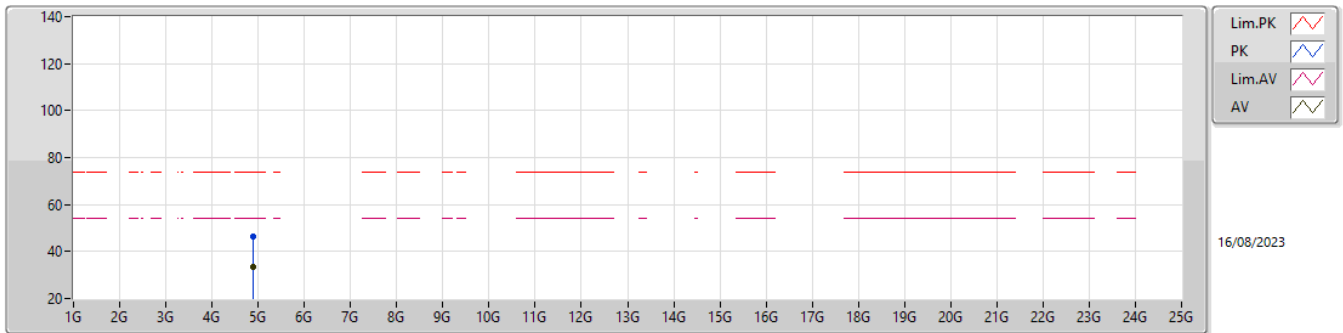
2440MHz_TX



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	2.39G	46.76	54.00	-7.24	32.19	3	Horizontal	7	1.08	14.57	27.54	4.65	-
AV	2.44G	107.49	Inf	-Inf	32.41	3	Horizontal	7	1.08	75.08	27.68	4.73	-
AV	2.4948G	47.74	54.00	-6.26	32.79	3	Horizontal	7	1.08	14.95	27.97	4.82	-
PK	2.3608G	58.53	74.00	-15.47	31.97	3	Horizontal	7	1.08	26.56	27.36	4.61	-
PK	2.4404G	110.03	Inf	-Inf	32.41	3	Horizontal	7	1.08	77.62	27.68	4.73	-
PK	2.5G	59.35	74.00	-14.65	32.83	3	Horizontal	7	1.08	26.52	28.00	4.83	-

2.4-2.4835GHz_BT-LE(2Mbps)

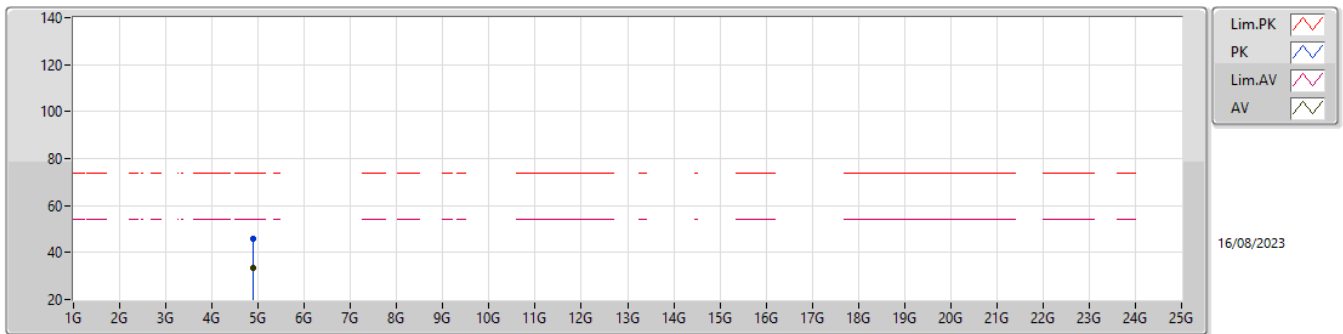
2440MHz_TX



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	4.88452G	33.63	54.00	-20.37	5.56	3	Vertical	228	1.38	28.07	32.74	6.82	34.00
PK	4.88086G	46.26	74.00	-27.74	5.54	3	Vertical	228	1.38	40.72	32.72	6.82	34.00

2.4-2.4835GHz_BT-LE(2Mbps)

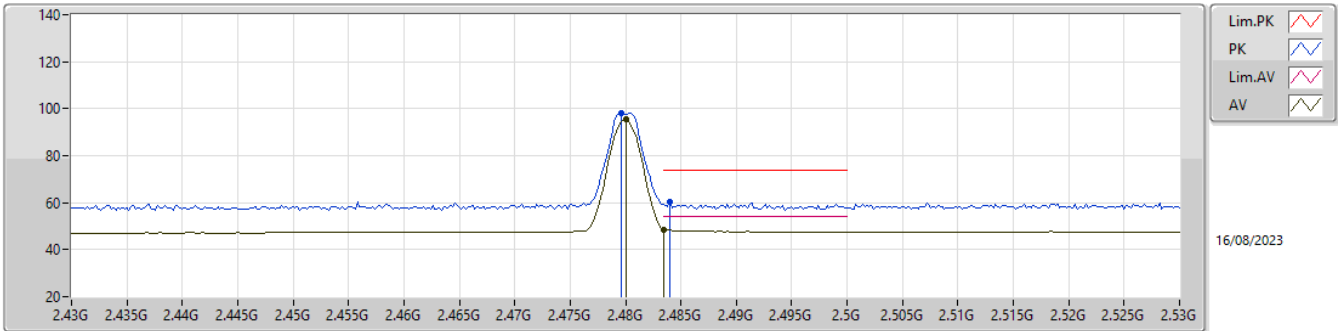
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88099G	33.48	54.00	-20.52	5.54	3	Horizontal	32	2.61	27.94	32.72	6.82	34.00
PK	4.8791G	45.78	74.00	-28.22	5.54	3	Horizontal	32	2.61	40.24	32.72	6.82	34.00

2.4-2.4835GHz_BT-LE(2Mbps)

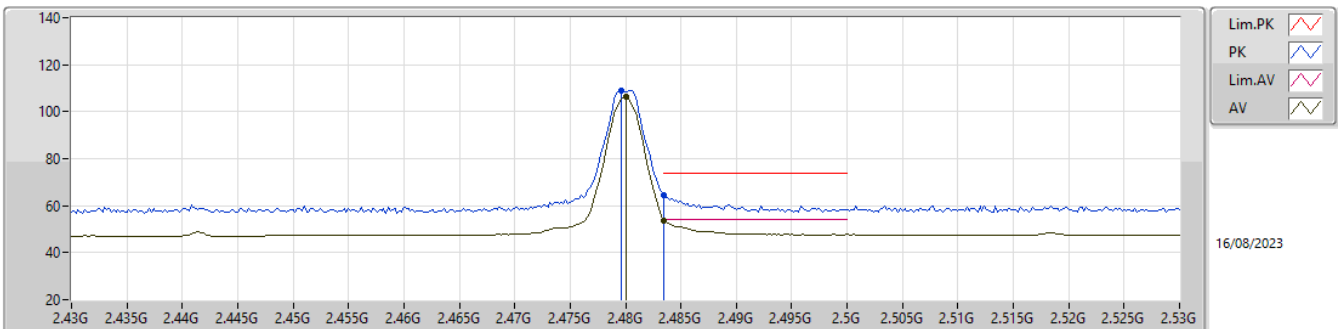
2480MHz_TX



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	95.32	Inf	-Inf	32.68	3	Vertical	6	1.50	62.64	27.88	4.80	-
AV	2.4835G	48.45	54.00	-5.55	32.70	3	Vertical	6	1.50	15.75	27.90	4.80	-
PK	2.4796G	97.86	Inf	-Inf	32.68	3	Vertical	6	1.50	65.18	27.88	4.80	-
PK	2.484G	60.09	74.00	-13.91	32.70	3	Vertical	6	1.50	27.39	27.90	4.80	-

2.4-2.4835GHz_BT-LE(2Mbps)

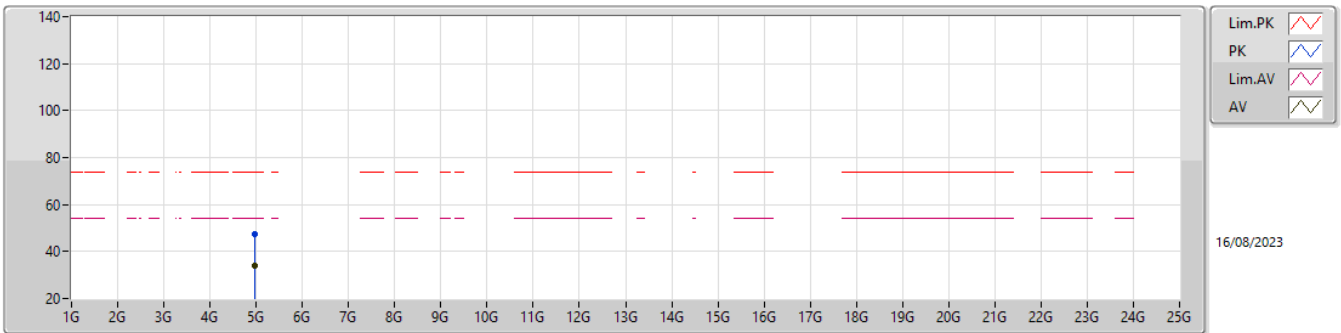
2480MHz_TX



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	106.33	Inf	-Inf	32.68	3	Horizontal	7	1.09	73.65	27.88	4.80	-
AV	2.4835G	53.85	54.00	-0.15	32.70	3	Horizontal	7	1.09	21.15	27.90	4.80	-
PK	2.4796G	108.93	Inf	-Inf	32.68	3	Horizontal	7	1.09	76.25	27.88	4.80	-
PK	2.4835G	64.64	74.00	-9.36	32.70	3	Horizontal	7	1.09	31.94	27.90	4.80	-

2.4-2.4835GHz_BT-LE(2Mbps)

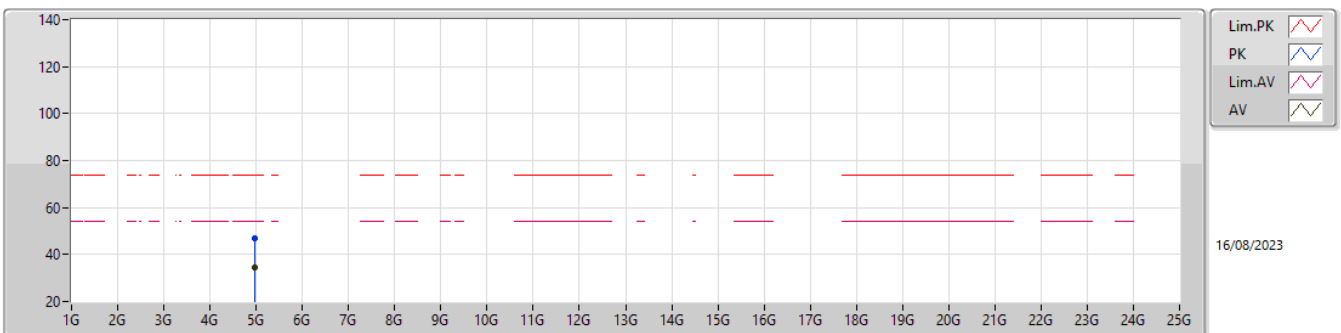
2480MHz_TX



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	4.96088G	33.73	54.00	-20.27	5.98	3	Vertical	34	1.50	27.75	33.12	6.85	33.99
PK	4.96014G	47.33	74.00	-26.67	5.98	3	Vertical	34	1.50	41.35	33.12	6.85	33.99

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	4.96082G	34.37	54.00	-19.63	5.98	3	Horizontal	57	2.31	28.39	33.12	6.85	33.99
PK	4.95913G	46.99	74.00	-27.01	5.98	3	Horizontal	57	2.31	41.01	33.12	6.85	33.99



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	10.39919G	63.80	68.20	-4.40	Vertical
Mode 2	Pass	PK	13.60193G	61.07	68.20	-7.13	Horizontal
Mode 3	Pass	PK	10.39659G	65.10	68.20	-3.10	Horizontal
Mode 4	Pass	AV	12.02275G	43.15	54.00	-10.85	Horizontal
Mode 5	Pass	PK	13.321G	60.53	74.00	-13.47	Horizontal
Mode 6	Pass	AV	8.43579G	41.18	54.00	-12.82	Horizontal



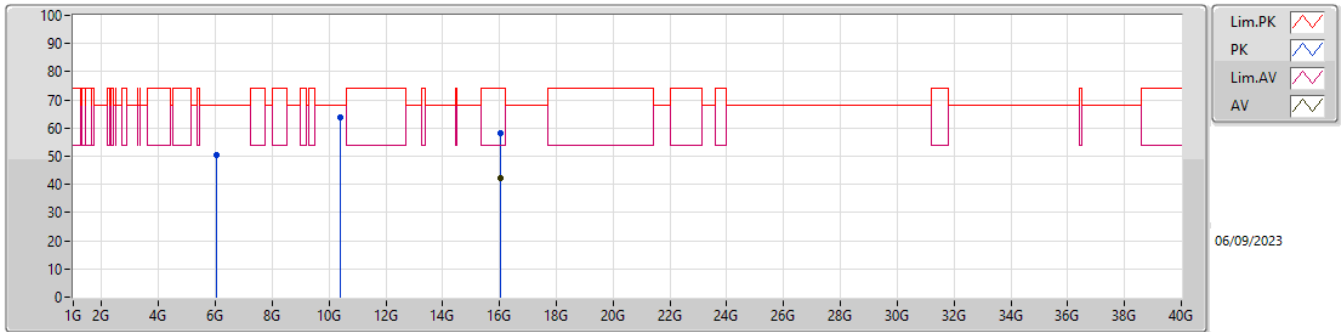
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	6.0502G	33.59	68.20	-34.61	3	Vertical	234	1.50
Mode 1	Pass	AV	10.39919G	42.25	68.20	-25.95	3	Vertical	54	1.84
Mode 1	Pass	AV	16.04521G	42.41	54.00	-11.59	3	Vertical	47	1.56
Mode 1	Pass	PK	6.0502G	50.30	68.20	-17.90	3	Vertical	234	1.50
Mode 1	Pass	PK	10.39919G	63.80	68.20	-4.40	3	Vertical	54	1.84
Mode 1	Pass	PK	16.04521G	58.23	74.00	-15.77	3	Vertical	47	1.56
Mode 1	Pass	AV	4.87492G	40.13	54.00	-13.87	3	Horizontal	2	1.50
Mode 1	Pass	AV	10.39128G	42.97	68.20	-25.23	3	Horizontal	308	1.50
Mode 1	Pass	AV	13.48595G	45.95	68.20	-22.25	3	Horizontal	29	2.16
Mode 1	Pass	PK	4.87492G	53.76	74.00	-20.24	3	Horizontal	2	1.50
Mode 1	Pass	PK	10.39128G	52.44	68.20	-15.76	3	Horizontal	308	1.50
Mode 1	Pass	PK	13.48595G	61.42	68.20	-6.78	3	Horizontal	29	2.16
Mode 2	Pass	AV	4.32006G	30.47	54.00	-23.53	3	Vertical	54	1.44
Mode 2	Pass	AV	10.39718G	49.92	68.20	-18.28	3	Vertical	51	1.14
Mode 2	Pass	AV	15.77993G	42.59	54.00	-11.41	3	Vertical	14	2.18
Mode 2	Pass	PK	4.32006G	46.12	74.00	-27.88	3	Vertical	54	1.44
Mode 2	Pass	PK	10.39718G	59.92	68.20	-8.28	3	Vertical	51	1.14
Mode 2	Pass	PK	15.77993G	57.66	74.00	-16.34	3	Vertical	14	2.18
Mode 2	Pass	AV	4.3592G	30.40	54.00	-23.60	3	Horizontal	341	1.67
Mode 2	Pass	AV	13.60193G	58.60	68.20	-9.60	3	Horizontal	64	1.68
Mode 2	Pass	AV	16.81324G	43.39	68.20	-24.81	3	Horizontal	21	1.51
Mode 2	Pass	PK	4.3592G	46.60	74.00	-27.40	3	Horizontal	341	1.67
Mode 2	Pass	PK	13.60193G	61.07	68.20	-7.13	3	Horizontal	64	1.68
Mode 2	Pass	PK	16.81324G	59.92	68.20	-8.28	3	Horizontal	21	1.51
Mode 3	Pass	AV	3.41346G	28.67	68.20	-39.53	3	Vertical	276	1.83
Mode 3	Pass	AV	7.45493G	36.97	54.00	-17.03	3	Vertical	254	1.68
Mode 3	Pass	AV	14.92756G	44.36	68.20	-23.84	3	Vertical	358	1.62
Mode 3	Pass	PK	3.41346G	44.23	68.20	-23.97	3	Vertical	276	1.83
Mode 3	Pass	PK	7.45493G	53.18	74.00	-20.82	3	Vertical	254	1.68
Mode 3	Pass	PK	14.92756G	59.50	68.20	-8.70	3	Vertical	358	1.62
Mode 3	Pass	AV	2.97678G	28.44	68.20	-39.76	3	Horizontal	248	1.54
Mode 3	Pass	AV	5.96245G	34.00	68.20	-34.20	3	Horizontal	198	1.37
Mode 3	Pass	AV	10.39659G	41.56	68.20	-26.64	3	Horizontal	311	2.14
Mode 3	Pass	PK	2.97678G	43.67	68.20	-24.53	3	Horizontal	248	1.54
Mode 3	Pass	PK	5.96245G	49.60	68.20	-18.60	3	Horizontal	198	1.37
Mode 3	Pass	PK	10.39659G	65.10	68.20	-3.10	3	Horizontal	311	2.14
Mode 4	Pass	AV	5.66069G	32.90	68.20	-35.30	3	Vertical	116	1.17
Mode 4	Pass	AV	8.07867G	37.59	54.00	-16.41	3	Vertical	320	2.13
Mode 4	Pass	AV	15.8784G	42.37	54.00	-11.63	3	Vertical	68	2.41
Mode 4	Pass	PK	5.66069G	49.30	68.20	-18.90	3	Vertical	116	1.17
Mode 4	Pass	PK	8.07867G	53.38	74.00	-20.62	3	Vertical	320	2.13
Mode 4	Pass	PK	15.8784G	58.27	74.00	-15.73	3	Vertical	68	2.41
Mode 4	Pass	AV	4.87393G	31.12	54.00	-22.88	3	Horizontal	16	1.84
Mode 4	Pass	AV	6.4189G	34.63	68.20	-33.57	3	Horizontal	351	2.18
Mode 4	Pass	AV	12.02275G	43.15	54.00	-10.85	3	Horizontal	26	2.32
Mode 4	Pass	PK	4.87393G	58.82	74.00	-15.18	3	Horizontal	16	1.84
Mode 4	Pass	PK	6.4189G	50.46	68.20	-17.74	3	Horizontal	351	2.18
Mode 4	Pass	PK	12.02275G	57.83	74.00	-16.17	3	Horizontal	26	2.32
Mode 5	Pass	AV	3.1703G	30.43	68.20	-37.77	3	Vertical	106	1.82
Mode 5	Pass	AV	5.76388G	36.69	68.20	-31.51	3	Vertical	63	2.14



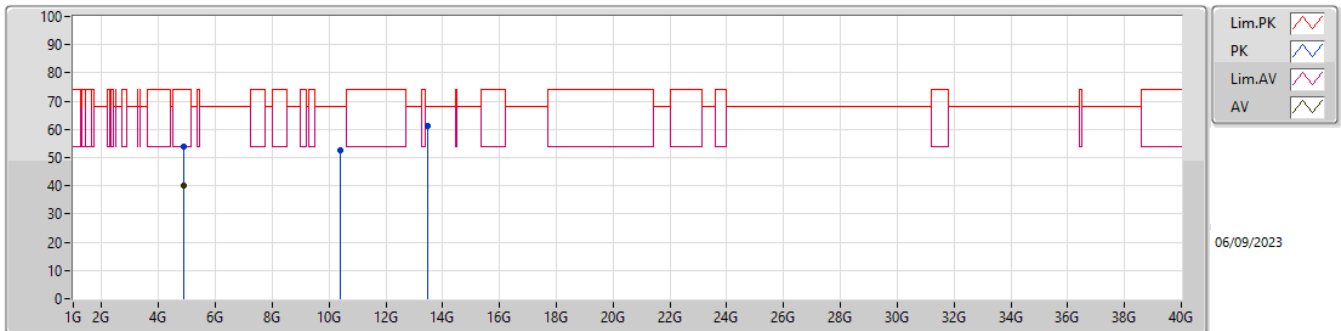
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 5	Pass	PK	3.1703G	46.42	68.20	-21.78	3	Vertical	106	1.82
Mode 5	Pass	PK	5.76388G	52.70	68.20	-15.50	3	Vertical	63	2.14
Mode 5	Pass	PK	11.45G	59.02	74.00	-14.98	3	Vertical	0	1.00
Mode 5	Pass	AV	3.38179G	31.00	68.20	-37.20	3	Horizontal	347	1.50
Mode 5	Pass	AV	6.08679G	36.38	68.20	-31.82	3	Horizontal	4	2.00
Mode 5	Pass	PK	3.38179G	47.22	68.20	-20.98	3	Horizontal	347	1.50
Mode 5	Pass	PK	6.08679G	52.06	68.20	-16.14	3	Horizontal	4	2.00
Mode 5	Pass	PK	13.321G	60.53	74.00	-13.47	3	Horizontal	360	1.00
Mode 6	Pass	AV	3.4337G	30.59	68.20	-37.61	3	Vertical	194	1.63
Mode 6	Pass	AV	6.19199G	36.89	68.20	-31.31	3	Vertical	59	2.79
Mode 6	Pass	AV	8.07156G	41.02	54.00	-12.98	3	Vertical	56	2.31
Mode 6	Pass	PK	3.4337G	46.23	68.20	-21.97	3	Vertical	194	1.63
Mode 6	Pass	PK	6.19199G	52.17	68.20	-16.03	3	Vertical	59	2.79
Mode 6	Pass	PK	8.07156G	56.44	74.00	-17.56	3	Vertical	56	2.31
Mode 6	Pass	AV	3.92062G	32.45	54.00	-21.55	3	Horizontal	118	1.52
Mode 6	Pass	AV	5.92792G	37.00	68.20	-31.20	3	Horizontal	53	1.67
Mode 6	Pass	AV	8.43579G	41.18	54.00	-12.82	3	Horizontal	316	1.46
Mode 6	Pass	PK	3.92062G	47.71	74.00	-26.29	3	Horizontal	118	1.52
Mode 6	Pass	PK	5.92792G	52.68	68.20	-15.52	3	Horizontal	53	1.67
Mode 6	Pass	PK	8.43579G	56.89	74.00	-17.11	3	Horizontal	316	1.46

Mode 1



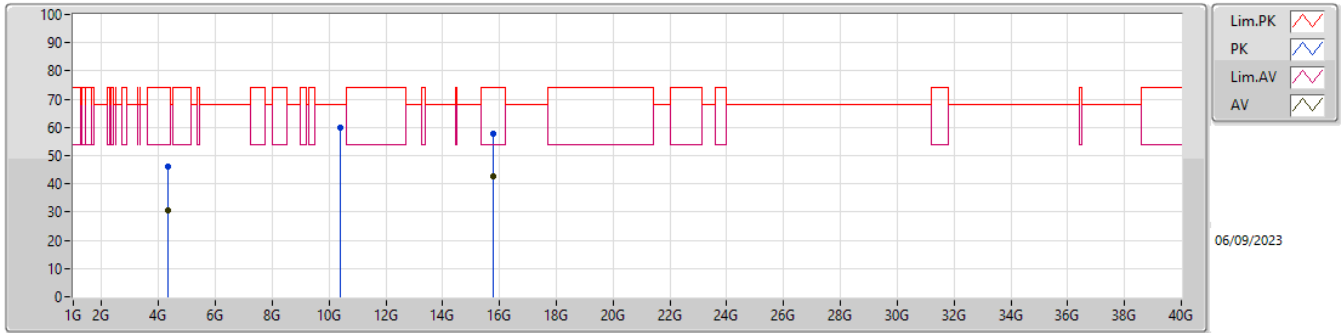
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	16.04521G	42.41	54.00	-11.59	15.82	3	Vertical	47	1.56	26.59	38.00	12.46	34.64
PK	6.0502G	50.30	68.20	-17.90	6.97	3	Vertical	234	1.50	43.33	34.10	7.10	34.23
PK	10.39919G	63.80	68.20	-4.40	15.34	3	Vertical	54	1.84	48.46	38.90	11.03	34.59
PK	16.04521G	58.23	74.00	-15.77	15.82	3	Vertical	47	1.56	42.41	38.00	12.46	34.64

Mode 1



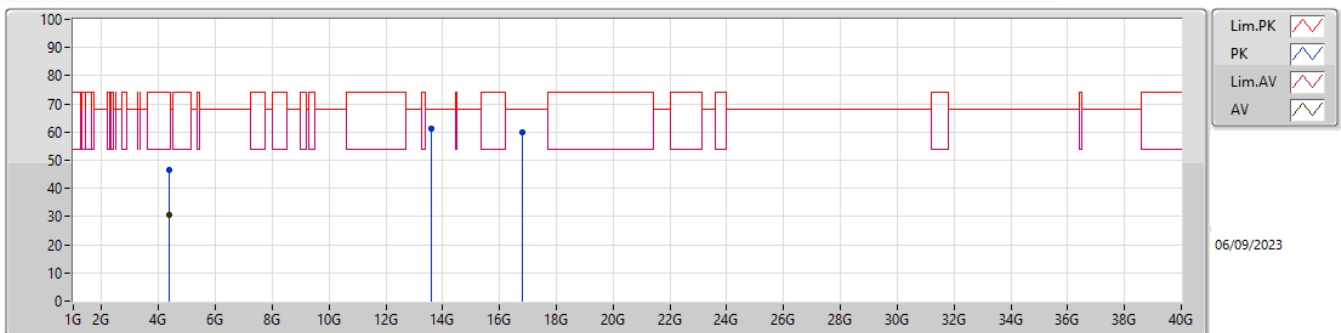
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87492G	40.13	54.00	-13.87	4.64	3	Horizontal	2	1.50	35.49	32.60	6.21	34.17
PK	4.87492G	53.76	74.00	-20.24	4.64	3	Horizontal	2	1.50	49.12	32.60	6.21	34.17
PK	10.39128G	52.44	68.20	-15.76	15.32	3	Horizontal	308	1.50	37.12	38.90	11.02	34.60
PK	13.48595G	61.42	68.20	-6.78	18.99	3	Horizontal	29	2.16	42.43	40.04	11.31	32.36

Mode 2



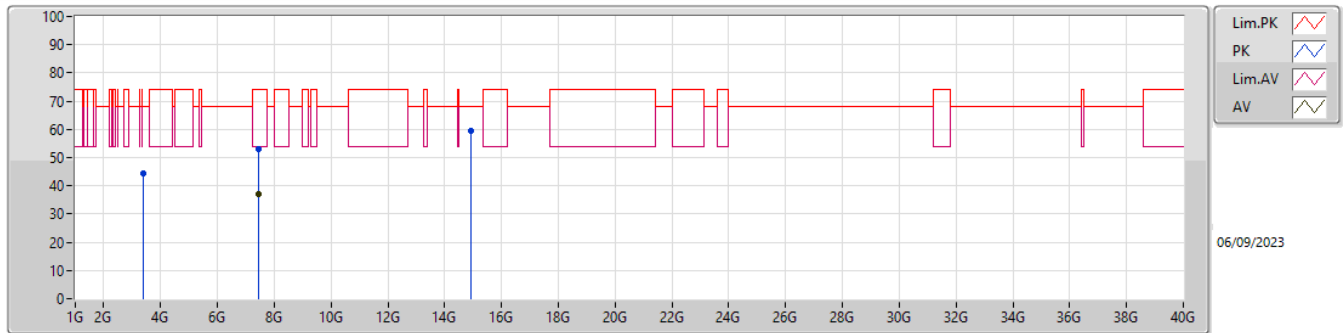
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.32006G	30.47	54.00	-23.53	2.87	3	Vertical	54	1.44	27.60	31.44	5.74	34.31
AV	15.77993G	42.59	54.00	-11.41	16.19	3	Vertical	14	2.18	26.40	38.40	12.30	34.51
PK	4.32006G	46.12	74.00	-27.88	2.87	3	Vertical	54	1.44	43.25	31.44	5.74	34.31
PK	10.39718G	59.92	68.20	-8.28	15.33	3	Vertical	51	1.14	44.59	38.90	11.03	34.60
PK	15.77993G	57.66	74.00	-16.34	16.19	3	Vertical	14	2.18	41.47	38.40	12.30	34.51

Mode 2



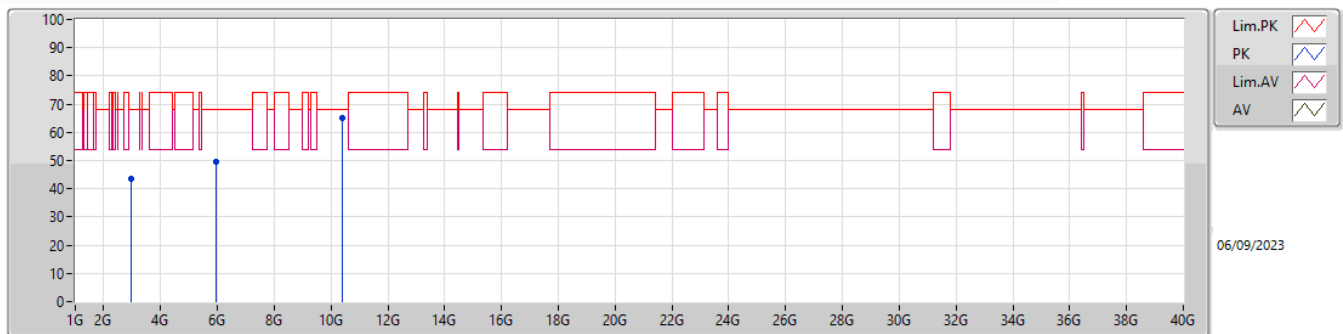
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.3592G	30.40	54.00	-23.60	2.99	3	Horizontal	341	1.67	27.41	31.56	5.74	34.31
PK	4.3592G	46.60	74.00	-27.40	2.99	3	Horizontal	341	1.67	43.61	31.56	5.74	34.31
PK	13.60193G	61.07	68.20	-7.13	18.82	3	Horizontal	64	1.68	42.25	39.90	11.28	32.36
PK	16.81324G	59.92	68.20	-8.28	17.50	3	Horizontal	21	1.51	42.42	38.27	12.81	33.58

Mode 3



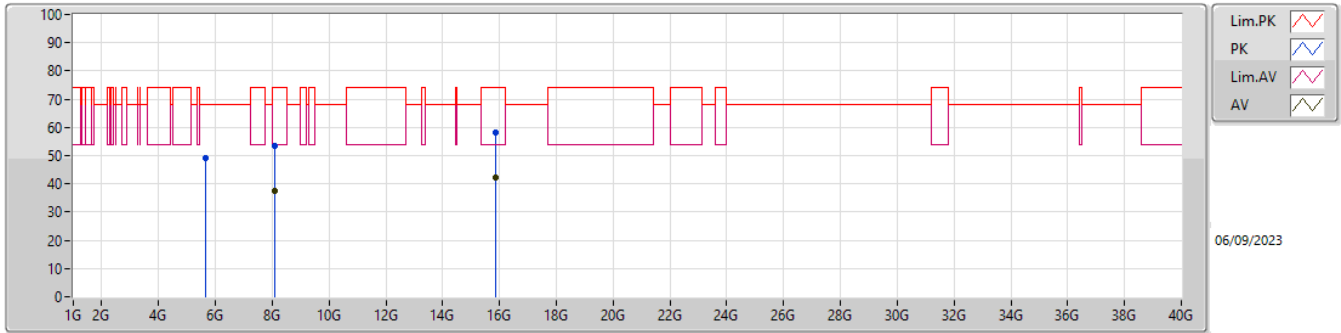
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	7.45493G	36.97	54.00	-17.03	9.77	3	Vertical	254	1.68	27.20	36.38	7.90	34.51
PK	3.41346G	44.23	68.20	-23.97	0.42	3	Vertical	276	1.83	43.81	29.57	5.11	34.26
PK	7.45493G	53.18	74.00	-20.82	9.77	3	Vertical	254	1.68	43.41	36.38	7.90	34.51
PK	14.92756G	59.50	68.20	-8.70	17.89	3	Vertical	358	1.62	41.61	39.70	11.78	33.59

Mode 3



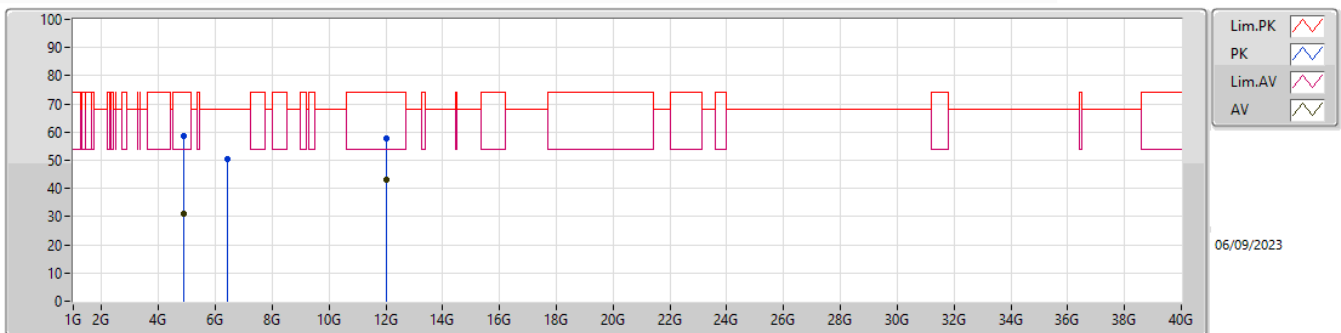
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	2.97678G	43.67	68.20	-24.53	-0.09	3	Horizontal	248	1.54	43.76	29.47	4.73	34.29
PK	5.96245G	49.60	68.20	-18.60	7.00	3	Horizontal	198	1.37	42.60	34.18	7.04	34.22
PK	10.39659G	65.10	68.20	-3.10	15.33	3	Horizontal	311	2.14	49.77	38.90	11.03	34.60

Mode 4



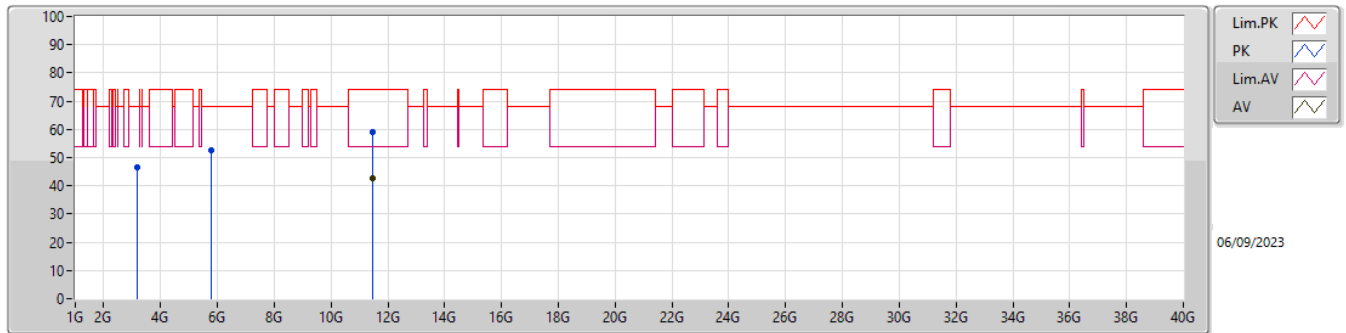
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	8.07867G	37.59	54.00	-16.41	10.93	3	Vertical	320	2.13	26.66	37.10	8.52	34.69
AV	15.8784G	42.37	54.00	-11.63	16.01	3	Vertical	68	2.41	26.36	38.24	12.36	34.59
PK	5.66069G	49.30	68.20	-18.90	5.75	3	Vertical	116	1.17	43.55	33.13	6.81	34.19
PK	8.07867G	53.38	74.00	-20.62	10.93	3	Vertical	320	2.13	42.45	37.10	8.52	34.69
PK	15.8784G	58.27	74.00	-15.73	16.01	3	Vertical	68	2.41	42.26	38.24	12.36	34.59

Mode 4



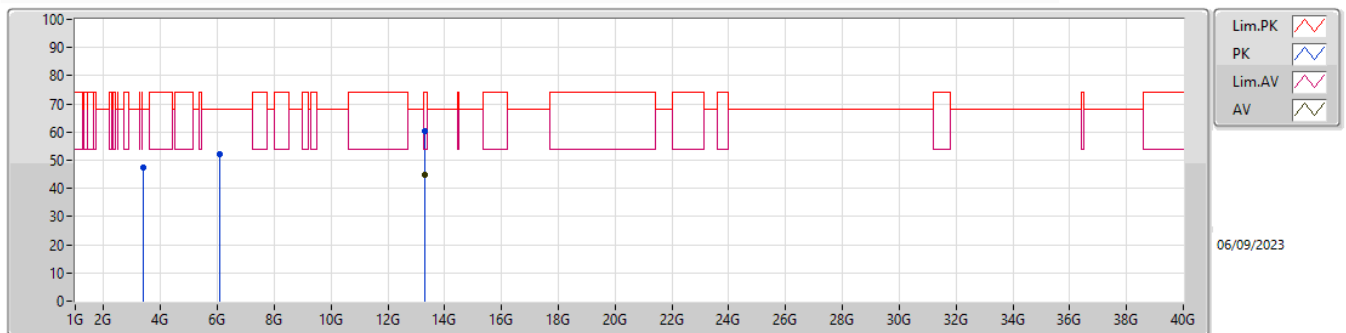
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.87393G	31.12	54.00	-22.88	4.64	3	Horizontal	16	1.84	26.48	32.60	6.21	34.17
AV	12.02275G	43.15	54.00	-10.85	16.38	3	Horizontal	26	2.32	26.77	39.12	11.62	34.36
PK	4.87393G	58.82	74.00	-15.18	4.64	3	Horizontal	16	1.84	54.18	32.60	6.21	34.17
PK	6.4189G	50.46	68.20	-17.74	7.73	3	Horizontal	351	2.18	42.73	34.80	7.24	34.31
PK	12.02275G	57.83	74.00	-16.17	16.38	3	Horizontal	26	2.32	41.45	39.12	11.62	34.36

Mode 5



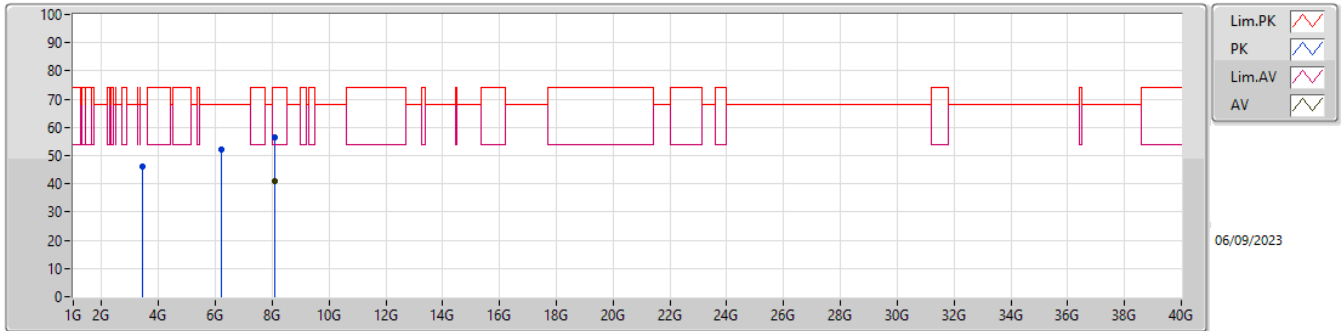
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	11.45G	42.86	54.00	-11.14	16.50	3	Vertical	0	1.00	26.36	39.15	11.42	34.07
PK	3.1703G	46.42	68.20	-21.78	0.43	3	Vertical	106	1.82	45.99	29.80	4.91	34.28
PK	5.76388G	52.70	68.20	-15.50	6.56	3	Vertical	63	2.14	46.14	33.88	6.88	34.20
PK	11.45G	59.02	74.00	-14.98	16.50	3	Vertical	0	1.00	42.52	39.15	11.42	34.07

Mode 5



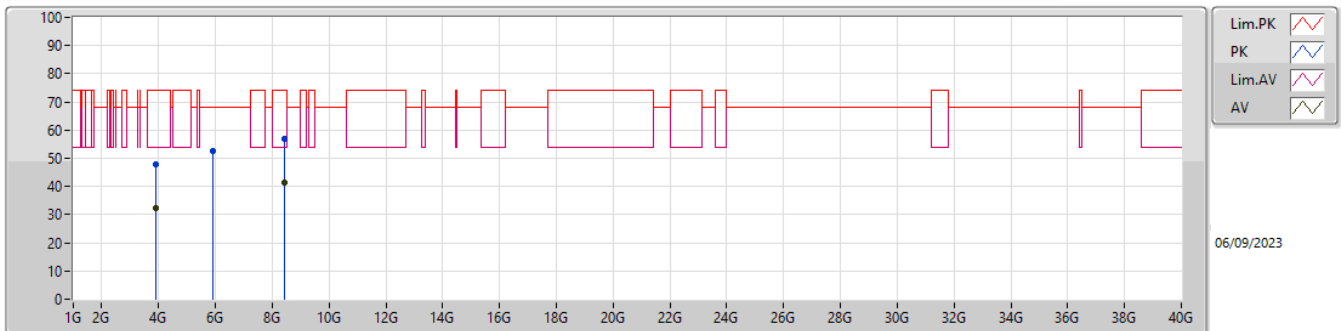
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	13.321G	44.97	54.00	-9.03	18.72	3	Horizontal	0	0.00	26.25	39.98	11.34	32.60
PK	3.38179G	47.22	68.20	-20.98	0.39	3	Horizontal	347	1.50	46.83	29.56	5.09	34.26
PK	6.08679G	52.06	68.20	-16.14	6.90	3	Horizontal	4	2.00	45.16	34.03	7.11	34.24
PK	13.321G	60.53	74.00	-13.47	18.72	3	Horizontal	360	1.00	41.81	39.98	11.34	32.60

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	8.07156G	41.02	54.00	-12.98	10.94	3	Vertical	56	2.31	30.08	37.10	8.53	34.69
PK	3.4337G	46.23	68.20	-21.97	0.40	3	Vertical	194	1.63	45.83	29.53	5.13	34.26
PK	6.19199G	52.17	68.20	-16.03	7.19	3	Vertical	59	2.79	44.98	34.28	7.17	34.26
PK	8.07156G	56.44	74.00	-17.56	10.94	3	Vertical	56	2.31	45.50	37.10	8.53	34.69

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	3.92062G	32.45	54.00	-21.55	2.20	3	Horizontal	118	1.52	30.25	30.94	5.57	34.31
AV	8.43579G	41.18	54.00	-12.82	11.71	3	Horizontal	316	1.46	29.47	37.54	8.84	34.67
PK	3.92062G	47.71	74.00	-26.29	2.20	3	Horizontal	118	1.52	45.51	30.94	5.57	34.31
PK	5.92792G	52.68	68.20	-15.52	7.04	3	Horizontal	53	1.67	45.64	34.24	7.01	34.21
PK	8.43579G	56.89	74.00	-17.11	11.71	3	Horizontal	316	1.46	45.18	37.54	8.84	34.67