


FCC Radio Test Report

FCC ID : G95OWA7111
Equipment : Wi-Fi 6E Extender
Brand Name : technicolor, Google Fiber
Model Name : OWA7111TCH3, OWA7111TCH3P, OWA7111GFR, GE6E210T
Applicant : Vantiva USA LLC
4855 Peachtree Industrial
Blvd., Suite 200, Norcross, Georgia 30092
U.S.A.
Manufacturer : Fuhong Precision Component (BacGiang) Co., Ltd.
Dinh Tram Industrial Park
Viet Yen District, BAC GIANG PROVINCE,
Vietnam
Standard : 47 CFR FCC Part 15.247

The product was received on Feb. 09, 2023, and testing was started from Apr. 25, 2023 and completed on May 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

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Table of Contents

HISTORY OF THIS TEST REPORT3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

1.1 Information.....5

1.2 Testing Applied Standards8

1.3 Testing Location Information8

1.4 Measurement Uncertainty8

2 TEST CONFIGURATION OF EUT.....9

2.1 Test Channel Mode9

2.2 The Worst Case Measurement Configuration.....10

2.3 Accessories11

2.4 Support Equipment.....11

2.5 Test Setup Diagram12

3 TRANSMITTER TEST RESULT13

3.1 AC Power-line Conducted Emissions13

3.2 DTS Bandwidth.....15

3.3 Maximum Conducted Output Power16

3.4 Power Spectral Density18

3.5 Emissions in Non-restricted Frequency Bands19

3.6 Emissions in Restricted Frequency Bands.....20

4 TEST EQUIPMENT AND CALIBRATION DATA.....24

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS (PAGE 26-28)

APPENDIX B. TEST RESULTS OF DTS BANDWIDTH (PAGE 29-34)

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER (PAGE 35-36)

APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY (PAGE 37-42)

APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS (PAGE 43-48)

APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS (PAGE 49-65)

APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION (PAGE 66-68)

APPENDIX H. TEST PHOTOS (PAGE 69-72)

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: Ryan Hsiao

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:
<ul style="list-style-type: none"> Bluetooth LE uses a GFSK (1Mbps/2Mbps) modulation. BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Remark
1	NA	NA	PCB	I-Pex	6GHz	Radio 3
2	NA	NA	PCB	I-Pex	6GHz	
3	NA	NA	PCB	I-Pex	6GHz	
4	NA	NA	PCB	I-Pex	6GHz	
5	NA	NA	PCB	I-Pex	2.4GHz + 5GHz	Radio 1
6	NA	NA	PCB	I-Pex	2.4GHz + 5GHz	
7	NA	NA	PCB	I-Pex	Bluetooth	Radio 2

Ant.	Port	Gain (dBi)			
		6GHz			
		U-NII-5	U-NII-6	U-NII-7	U-NII-8
1	1	1.51	1.68	1.23	2.01
2	2	2.4	3.01	3.32	3.22
3	3	2.23	2.76	4.06	3.84
4	4	2.06	1.85	2.35	3.51

Ant.	Port	Gain (dBi)							
		2.4GHz	Bluetooth			5GHz			
			2400 (MHz)	2450 (MHz)	2483(MHz)	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
5	1	1.79	-	-	-	1.21	1.5	2.17	2.68
6	2	1.95	-	-	-	1.39	1.8	2.7	3.87
7	1	-	2.5	3.4	3.98	-	-	-	-



Composite Gain (dBi)					
Stream	2.4G	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
1SS	2.51	2.73	2.15	2.92	3.99
2SS	1.95	1.39	1.8	2.7	3.87

Note 1: The EUT has seven antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v01 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP320924.

For 2.4GHz function:

For IEEE 802.11b mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 5(port 1) and it was recorded in this test report.

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

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

For BT function:

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

Ant. 7 can be used as transmitting/receiving antenna.

For 5GHz function:

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

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

For 6GHz function:

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

Ant. 1 (port 1) ~ Ant. 4 (port 4) could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter
Software Version	5.04L.03
Hardware Version	FGR
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(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-LE(2Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

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

1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	Description
technicolor	OWA7111TCH3, OWA7111TCH3P, OWA7111GFR	All the models are identical, the difference model for difference brand served as marketing strategy.
Google Fiber	GE6E210T	

Note: OWA7111TCH3 was measured during the test.

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	TaiKun Lee	23.4~24.8°C/50~53%	15/May/2023
RF Conducted	TH01-HY	Luby hsu	22.1~23.4°C/50~52%	28/Apr/2023~11/May/2023
Radiated	03CH02-HY	Jack Tang	22.2~23.4°C/59~61%	25/Apr/2023~19/May/2023
Radiated (Co-location)	03CH02-HY	Jack Tang	22.7~23.1°C/60~61%	19/May/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%
Receiver Radiated Unwanted Emissions	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode




Test Software Version	PuTTY Release 0.62
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Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	200
2440MHz	200
2478MHz	200
2480MHz	170
BT-LE(2Mbps)	-
2402MHz	199
2404MHz	200
2440MHz	200
2478MHz	200

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
Test Condition	Radiated measurement
Operating Mode	CTX
1	2.4GHz WLAN + 5GHz WLAN + 6GHz WLAN + Bluetooth
Refer to Sporton Test Report No.: FA320924 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

AC Adapter	Brand Name	ASIAN POWER
	Model Name	ADS-24FUA-12 12024EPCU
	Power Rating	I/P:100-120Vac, 0.7A, O/P: 12Vdc, 2.0A
	DC Power Cable	1.15 meter, non-shielded cable, w/o ferrite core
RJ45 Cable	Signal Line	1.45 meter, non-shielded cable

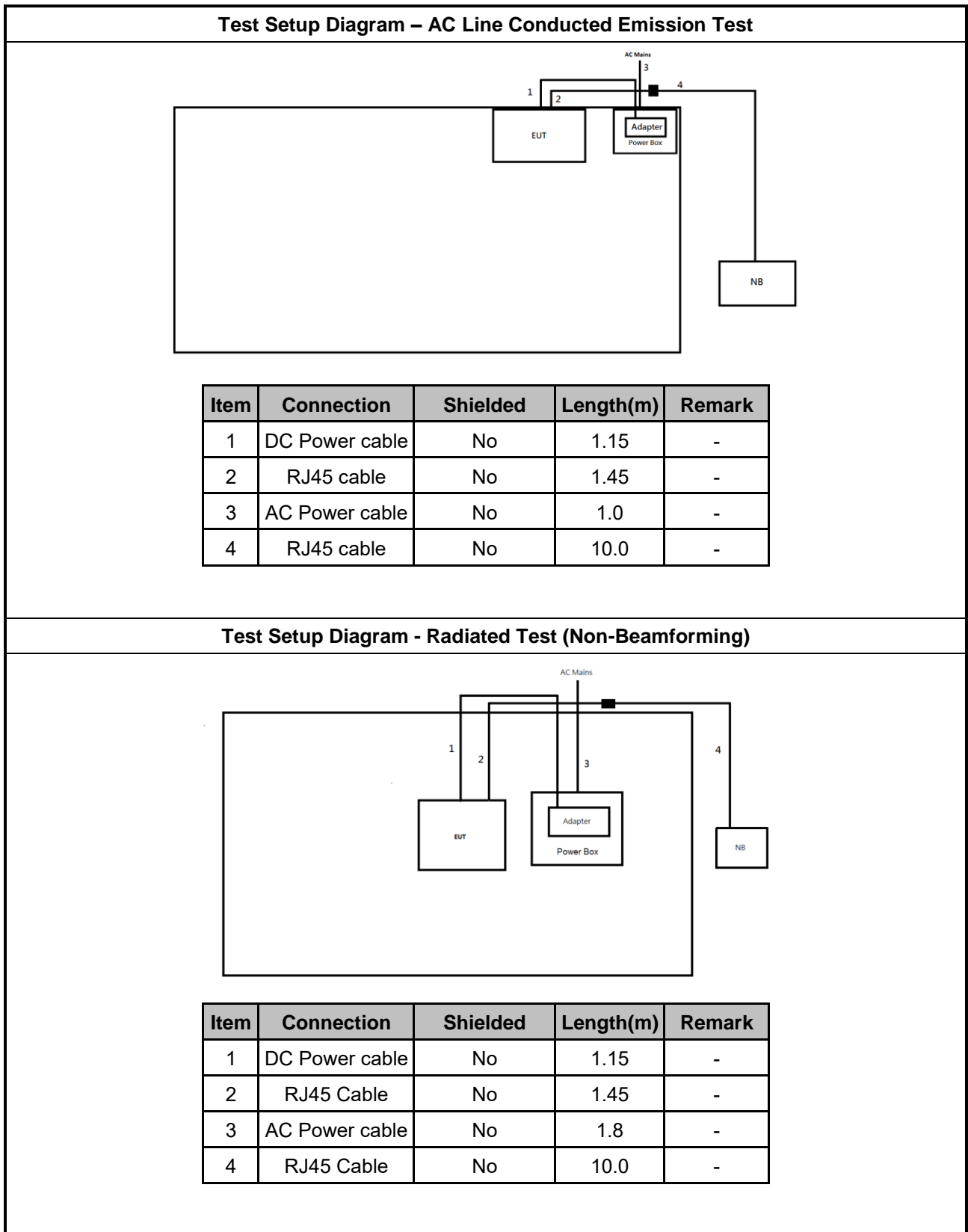
Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	HP	5220M	-	Remote
2	RJ45 Cable	Powersync	CAT-6E-10	-	Remote

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

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

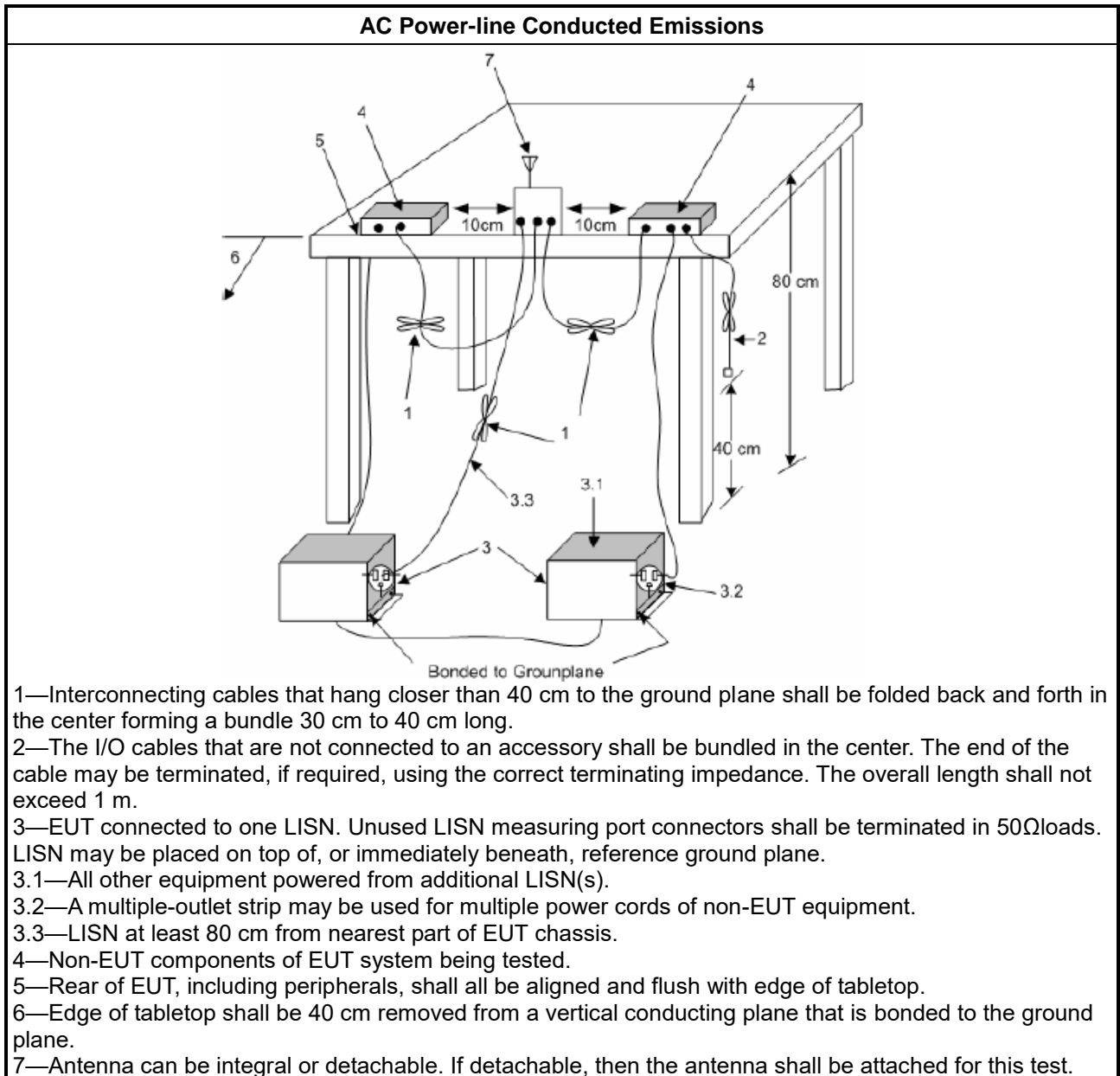
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

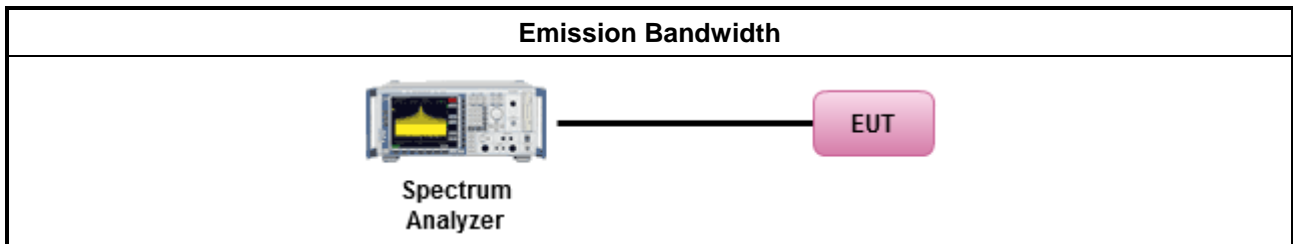
3.2.2 Measuring Instruments

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>P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

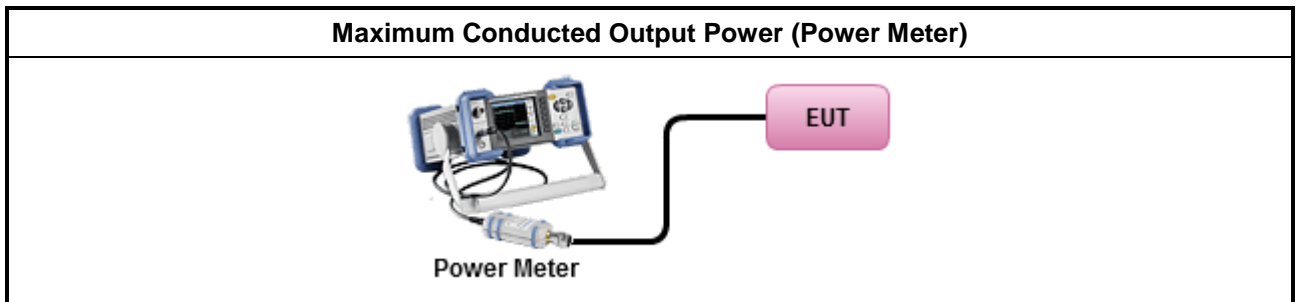
3.3.2 Measuring Instruments

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

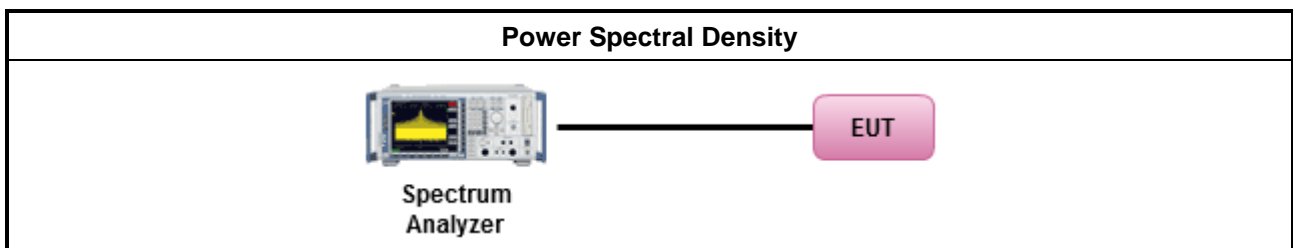
3.4.2 Measuring Instruments

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.

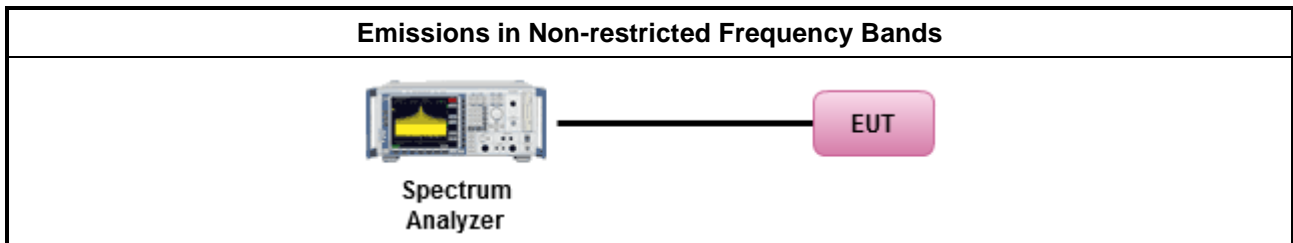
3.5.2 Measuring Instruments

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

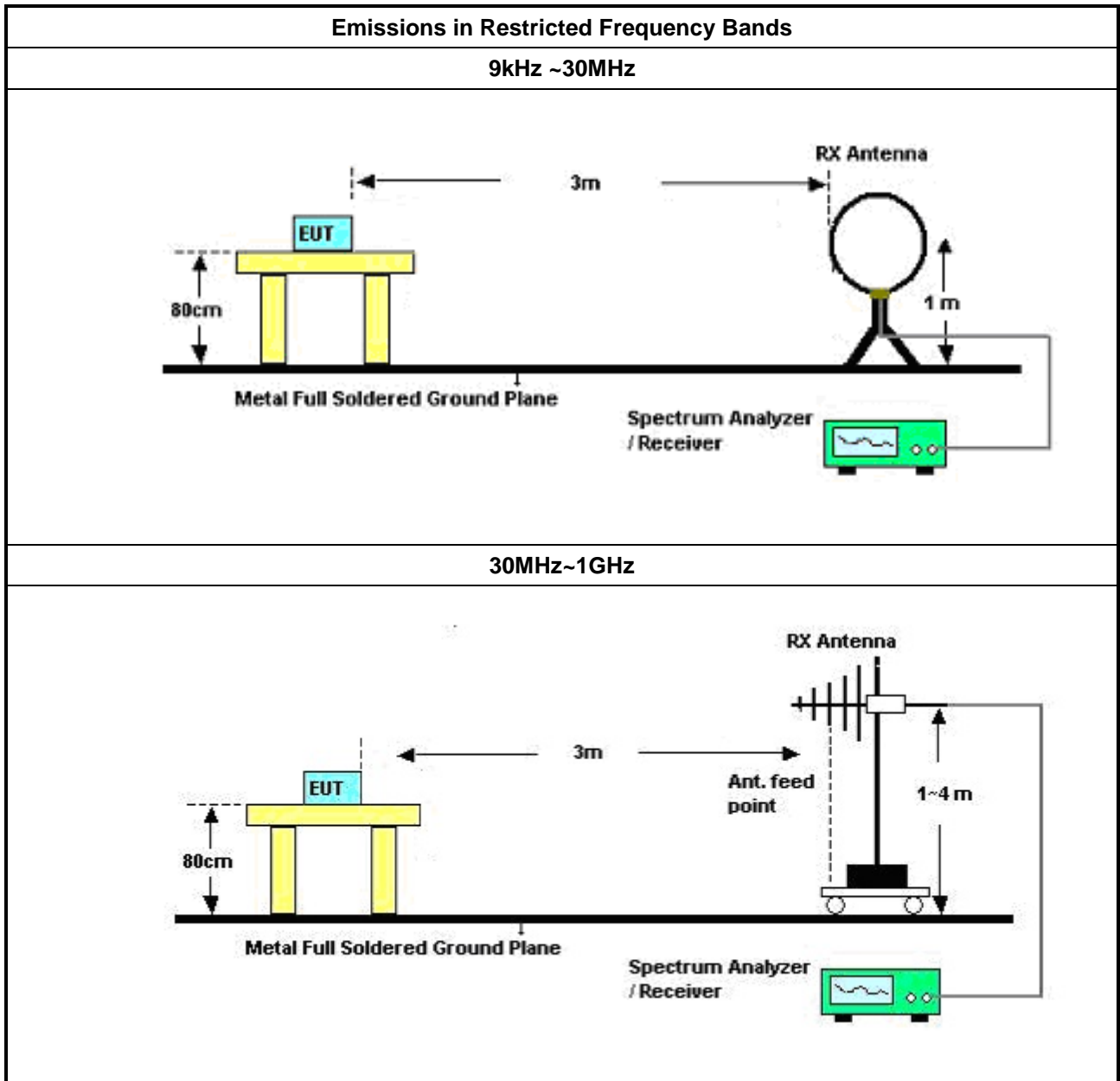
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel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

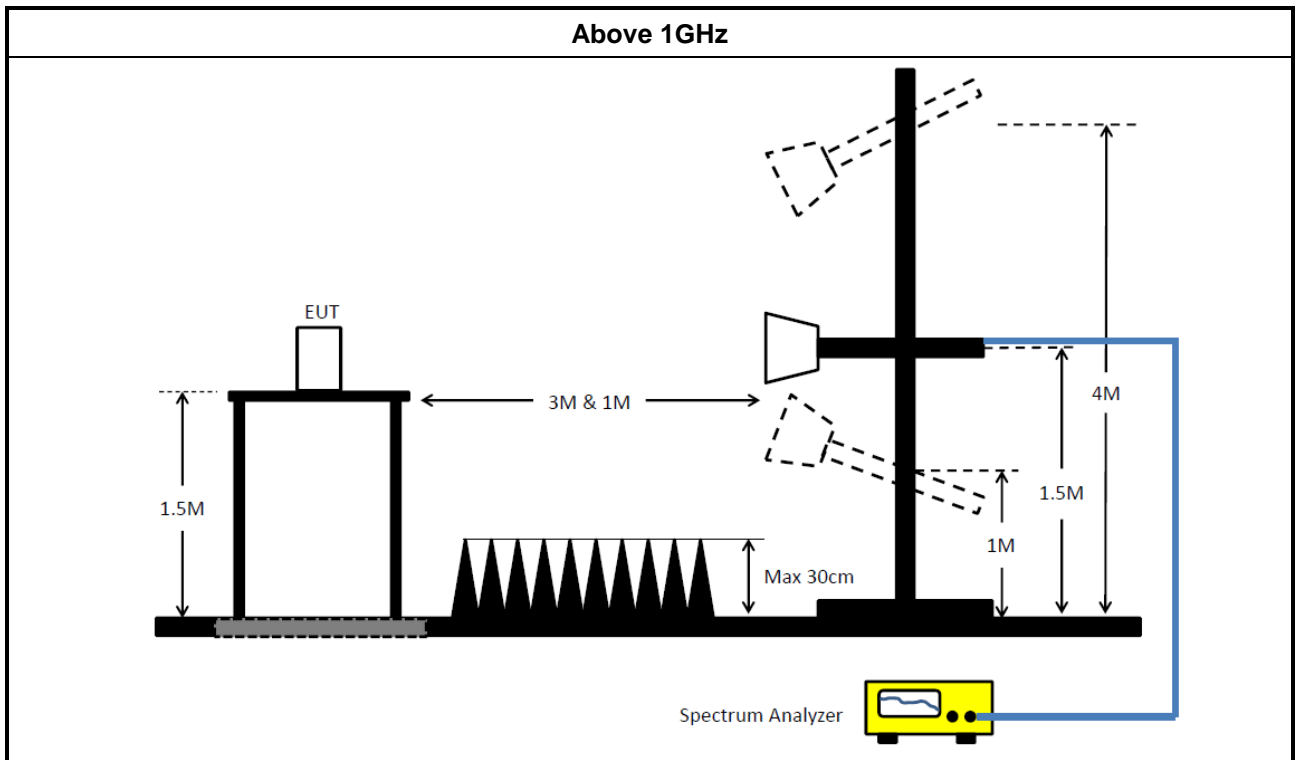
3.6.4 Measurement Results Calculation

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	102318	9kHz ~ 3.6GHz	29/Dec/2022	28/Dec/2023
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	16/Feb/2023	15/Feb/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	V5.10.8.7	-	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	101013	10Hz~40GHz	10/Apr/2023	09/Apr/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	15/Feb/2023	14/Feb/2024
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	15/Feb/2023	14/Feb/2024
SENSE-15247_FS	Sporton	V5.11.5	N/A	N/A	N/A	N/A

Instrument for Radiated Test (Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	30/Jul/2022	29/Jul/2023
Signal Analyzer	R&S	FSP 40	100305	9kHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Preampifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	02/Nov/2022	01/Nov/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	27/Sep/2022	26/Sep/2023
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	03CH02-cable-01	1GHz~40GHz	10/Feb/2023	09/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Prempifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	16/Mar/2023	15/Mar/2024
SENSE-EMI	Sporton	Sporton	V5.11.3	NA	NA	NA



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	03CH02-HY	30MHz~1GHz 3m	31/Jul/2022	30/Jul/2023
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	30/Jul/2022	29/Jul/2023
Signal Analyzer	R&S	FSP 40	100305	9kHz~40GHz	25/Mar/2023	24/Mar/2024
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	28/Jun/2022	27/Jun/2023
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	02/Nov/2022	01/Nov/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	27/Sep/2022	26/Sep/2023
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	28/Aug/2022	27/Aug/2023
RF Cable	MVE	400LL+SN 200207	03CH02-cable-02	9kHz~30MHz	20/Dec/2022	19/Dec/2023
RF Cable	MVE	400LL+SN 200207	03CH02-cable-02	30MHz~1GHz	20/Dec/2022	19/Dec/2023
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	03CH02-cable-01	1GHz~40GHz	10/Feb/2023	09/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	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	102052	9kHz~3.6GHz	30/May/2022	29/May/2023
SENSE-15247_FS	Sporton	Sporton	V5.11.2	NA	NA	NA



Summary

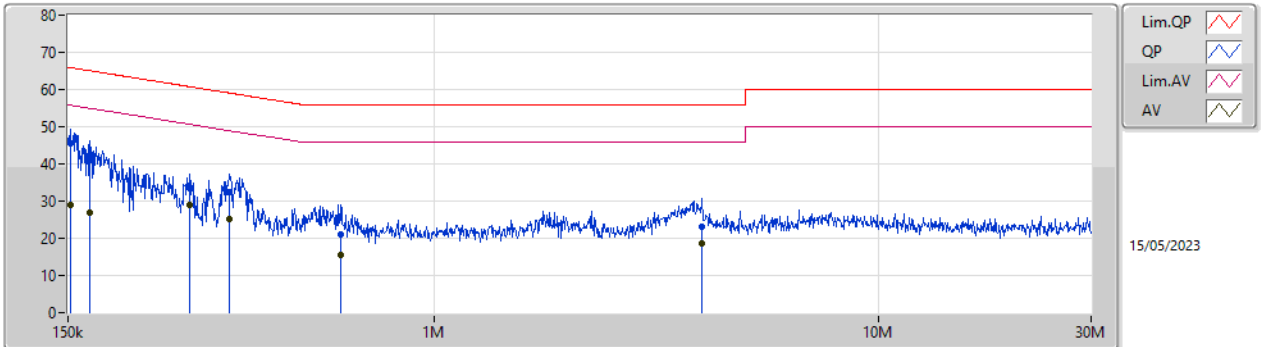
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	156.109k	46.74	65.67	-18.93	Neutral



Result

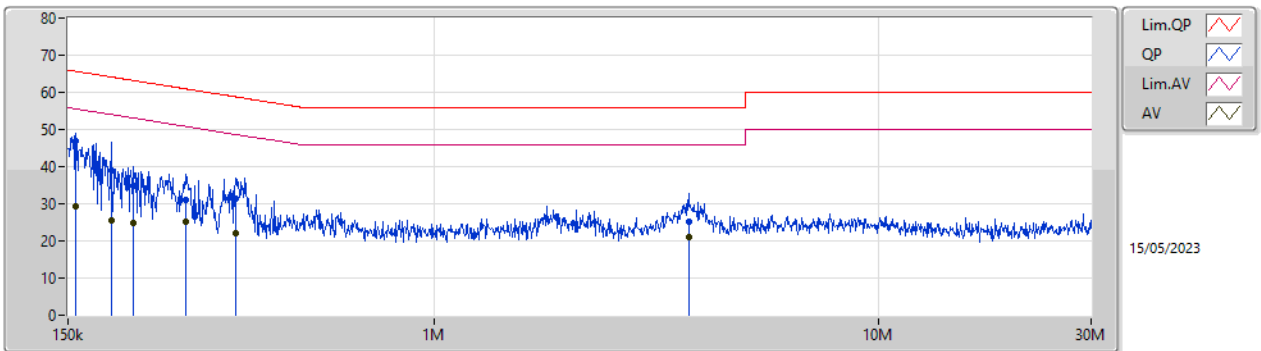
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	151.807k	45.46	65.90	-20.44	Line	-
Mode 1	Pass	AV	151.807k	29.02	55.90	-26.88	Line	-
Mode 1	Pass	QP	167.739k	42.35	65.06	-22.71	Line	-
Mode 1	Pass	AV	167.739k	26.92	55.06	-28.14	Line	-
Mode 1	Pass	QP	281.85k	33.39	60.76	-27.37	Line	-
Mode 1	Pass	AV	281.85k	28.93	50.76	-21.83	Line	-
Mode 1	Pass	QP	345.491k	32.54	59.08	-26.54	Line	-
Mode 1	Pass	AV	345.491k	25.11	49.08	-23.97	Line	-
Mode 1	Pass	QP	613.892k	21.20	56.00	-34.80	Line	-
Mode 1	Pass	AV	613.892k	15.67	46.00	-30.33	Line	-
Mode 1	Pass	QP	4.008M	22.98	56.00	-33.02	Line	-
Mode 1	Pass	AV	4.008M	18.51	46.00	-27.49	Line	-
Mode 1	Pass	QP	156.109k	46.74	65.67	-18.93	Neutral	-
Mode 1	Pass	AV	156.109k	29.41	55.67	-26.26	Neutral	-
Mode 1	Pass	QP	187.577k	39.11	64.15	-25.04	Neutral	-
Mode 1	Pass	AV	187.577k	25.46	54.15	-28.69	Neutral	-
Mode 1	Pass	QP	210.599k	34.85	63.19	-28.34	Neutral	-
Mode 1	Pass	AV	210.599k	24.76	53.19	-28.43	Neutral	-
Mode 1	Pass	QP	275.179k	31.15	60.95	-29.80	Neutral	-
Mode 1	Pass	AV	275.179k	25.07	50.95	-25.88	Neutral	-
Mode 1	Pass	QP	356.703k	31.32	58.81	-27.49	Neutral	-
Mode 1	Pass	AV	356.703k	22.09	48.81	-26.72	Neutral	-
Mode 1	Pass	QP	3.73M	25.27	56.00	-30.73	Neutral	-
Mode 1	Pass	AV	3.73M	20.92	46.00	-25.08	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	151.807k	45.46	65.90	-20.44	19.61	Line	-	25.85	9.65	0.03	9.93
AV	151.807k	29.02	55.90	-26.88	19.61	Line	-	9.41	9.65	0.03	9.93
QP	167.739k	42.35	65.06	-22.71	19.61	Line	-	22.74	9.65	0.03	9.93
AV	167.739k	26.92	55.06	-28.14	19.61	Line	-	7.31	9.65	0.03	9.93
QP	281.85k	33.39	60.76	-27.37	19.62	Line	-	13.77	9.65	0.03	9.94
AV	281.85k	28.93	50.76	-21.83	19.62	Line	-	9.31	9.65	0.03	9.94
QP	345.491k	32.54	59.08	-26.54	19.63	Line	-	12.91	9.64	0.04	9.95
AV	345.491k	25.11	49.08	-23.97	19.63	Line	-	5.48	9.64	0.04	9.95
QP	613.892k	21.20	56.00	-34.80	19.63	Line	-	1.57	9.64	0.04	9.95
AV	613.892k	15.67	46.00	-30.33	19.63	Line	-	-3.96	9.64	0.04	9.95
QP	4.008M	22.98	56.00	-33.02	19.76	Line	-	3.22	9.70	0.13	9.93
AV	4.008M	18.51	46.00	-27.49	19.76	Line	-	-1.25	9.70	0.13	9.93

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	156.109k	46.74	65.67	-18.93	19.59	Neutral	-	27.15	9.63	0.03	9.93
AV	156.109k	29.41	55.67	-26.26	19.59	Neutral	-	9.82	9.63	0.03	9.93
QP	187.577k	39.11	64.15	-25.04	19.58	Neutral	-	19.53	9.62	0.03	9.93
AV	187.577k	25.46	54.15	-28.69	19.58	Neutral	-	5.88	9.62	0.03	9.93
QP	210.599k	34.85	63.19	-28.34	19.58	Neutral	-	15.27	9.62	0.03	9.93
AV	210.599k	24.76	53.19	-28.43	19.58	Neutral	-	5.18	9.62	0.03	9.93
QP	275.179k	31.15	60.95	-29.80	19.59	Neutral	-	11.56	9.62	0.03	9.94
AV	275.179k	25.07	50.95	-25.88	19.59	Neutral	-	5.48	9.62	0.03	9.94
QP	356.703k	31.32	58.81	-27.49	19.63	Neutral	-	11.69	9.63	0.04	9.96
AV	356.703k	22.09	48.81	-26.72	19.63	Neutral	-	2.46	9.63	0.04	9.96
QP	3.73M	25.27	56.00	-30.73	19.74	Neutral	-	5.53	9.68	0.13	9.93
AV	3.73M	20.92	46.00	-25.08	19.74	Neutral	-	1.18	9.68	0.13	9.93



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	691.25k	1.041M	1M04F1D	688.75k	1.039M
BT-LE(2Mbps)	1.345M	2.116M	2M12F1D	1.343M	2.101M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	691.25k	1.039M
2440MHz	Pass	500k	688.75k	1.039M
2478MHz	Pass	500k	688.75k	1.039M
2480MHz	Pass	500k	690k	1.041M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.345M	2.101M
2404MHz	Pass	500k	1.345M	2.101M
2440MHz	Pass	500k	1.345M	2.106M
2478MHz	Pass	500k	1.343M	2.116M

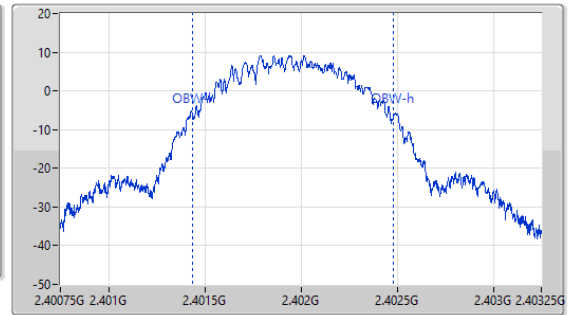
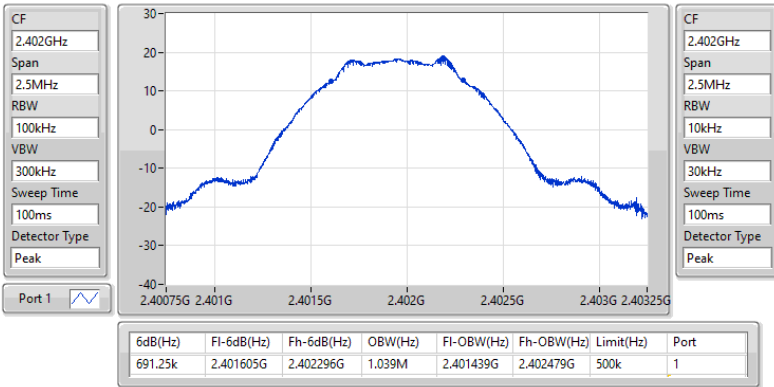
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2402MHz

28/04/2023

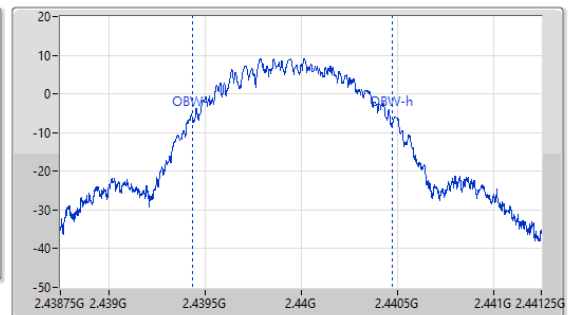
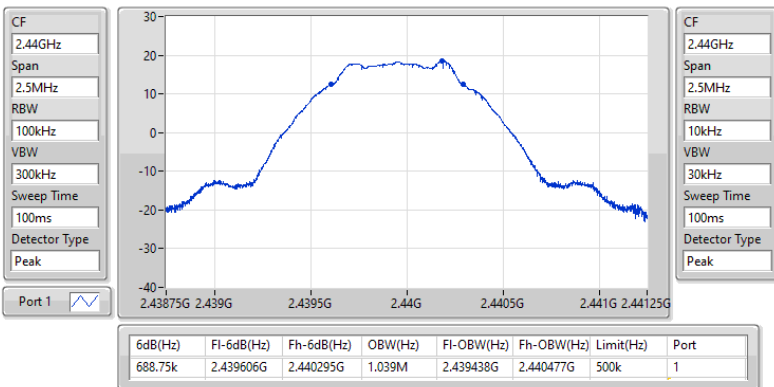


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2440MHz

28/04/2023

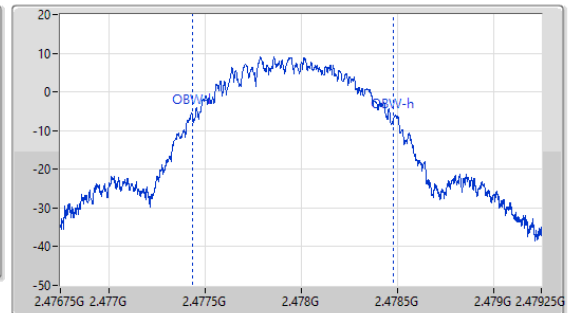
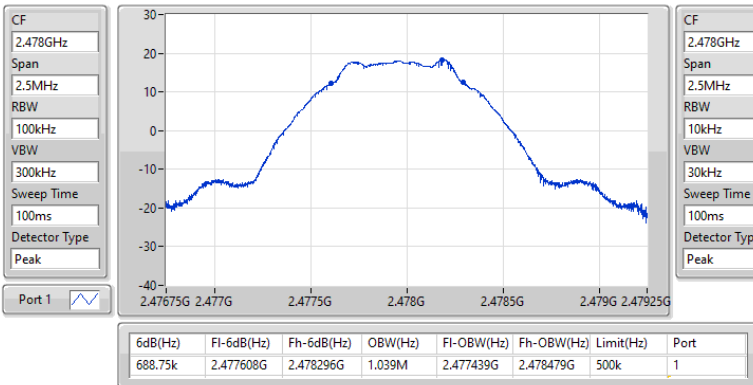


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2478MHz

28/04/2023

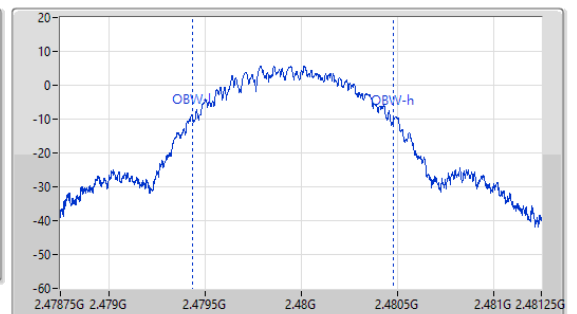
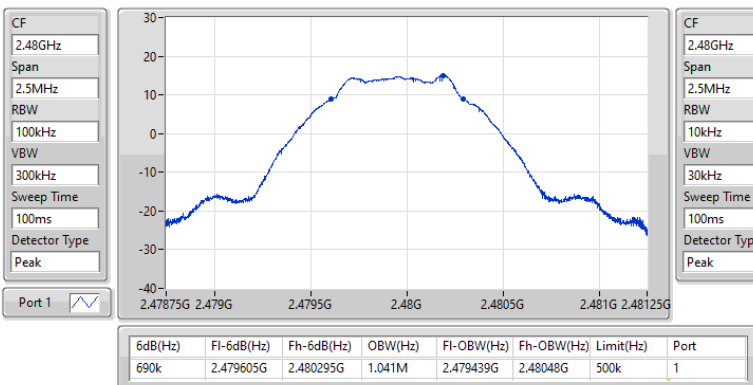


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2480MHz

28/04/2023

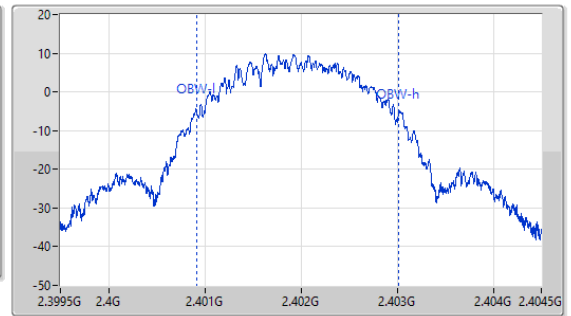
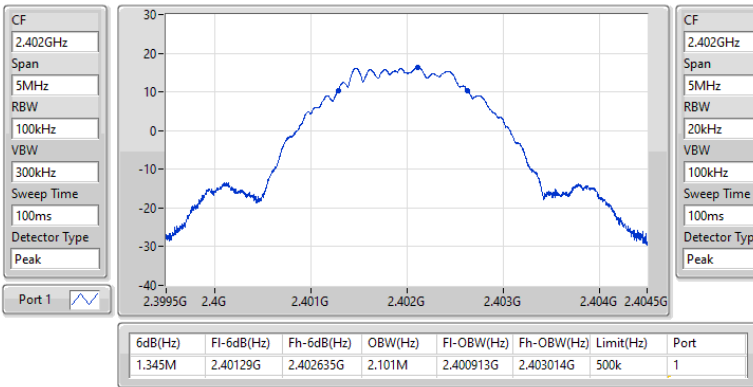


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2402MHz

28/04/2023

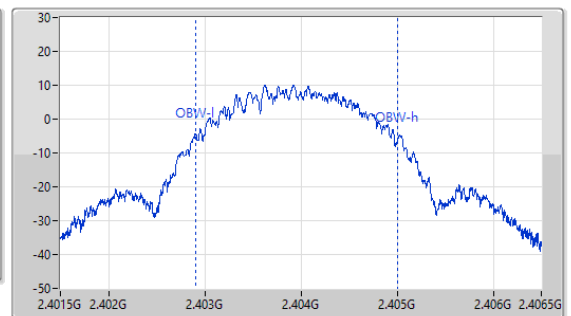
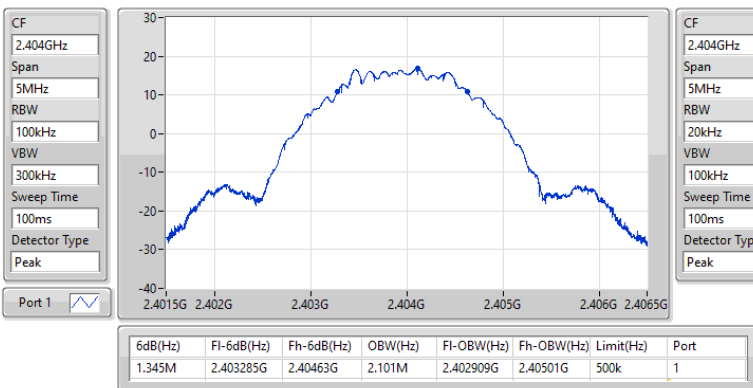


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2404MHz

11/05/2023

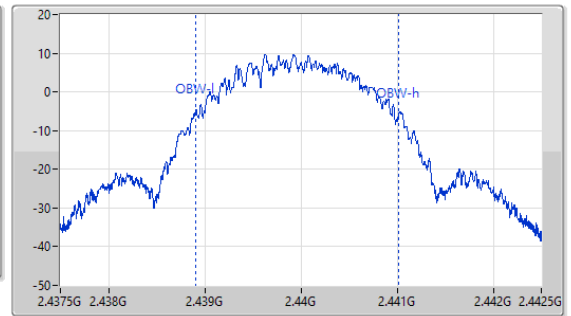
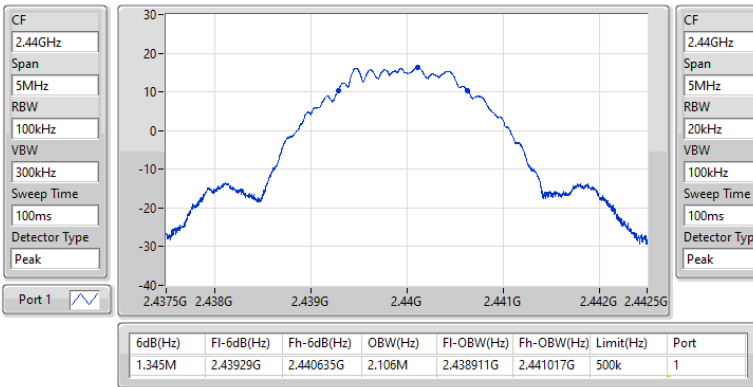


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2440MHz

28/04/2023

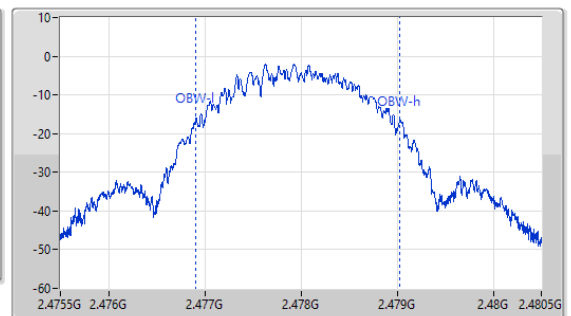
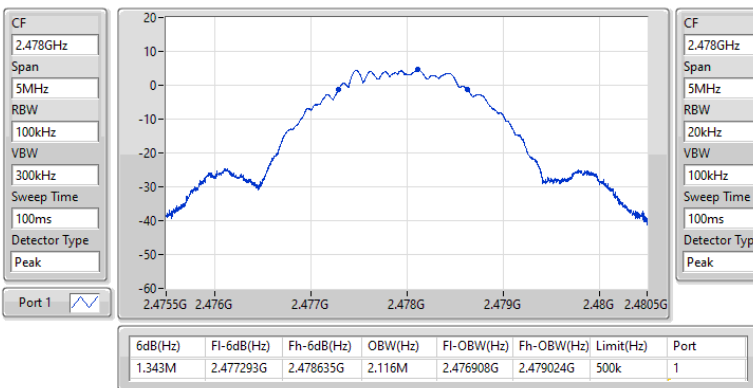


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2478MHz

28/04/2023





Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	19.80	0.09550
BT-LE(2Mbps)	19.87	0.09705



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.50	19.80	30.00
2440MHz	Pass	3.40	19.72	30.00
2478MHz	Pass	3.98	19.57	30.00
2480MHz	Pass	3.98	16.20	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.50	19.79	30.00
2404MHz	Pass	2.50	19.87	30.00
2440MHz	Pass	3.40	19.76	30.00
2478MHz	Pass	3.98	7.99	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	1.10
BT-LE(2Mbps)	1.63

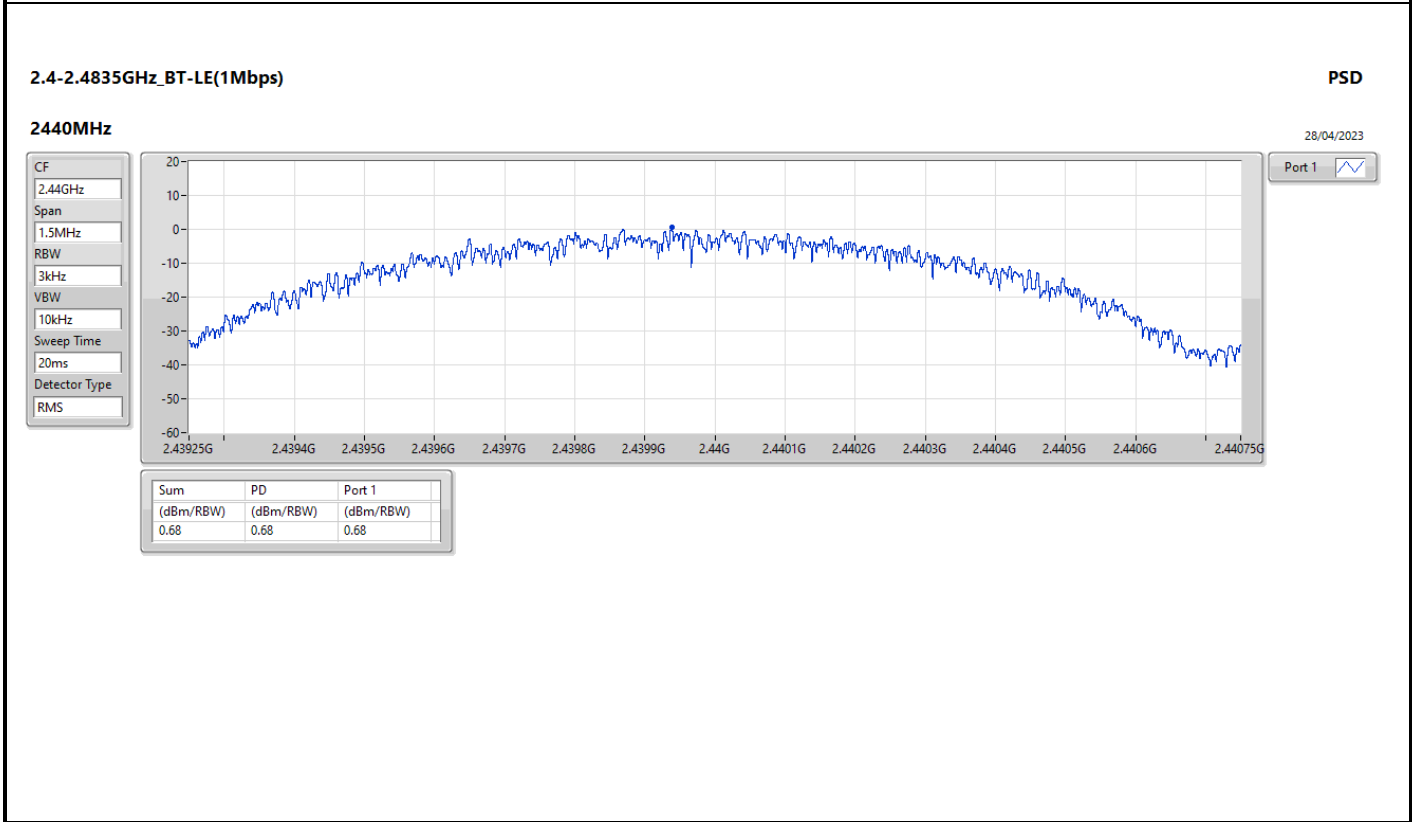
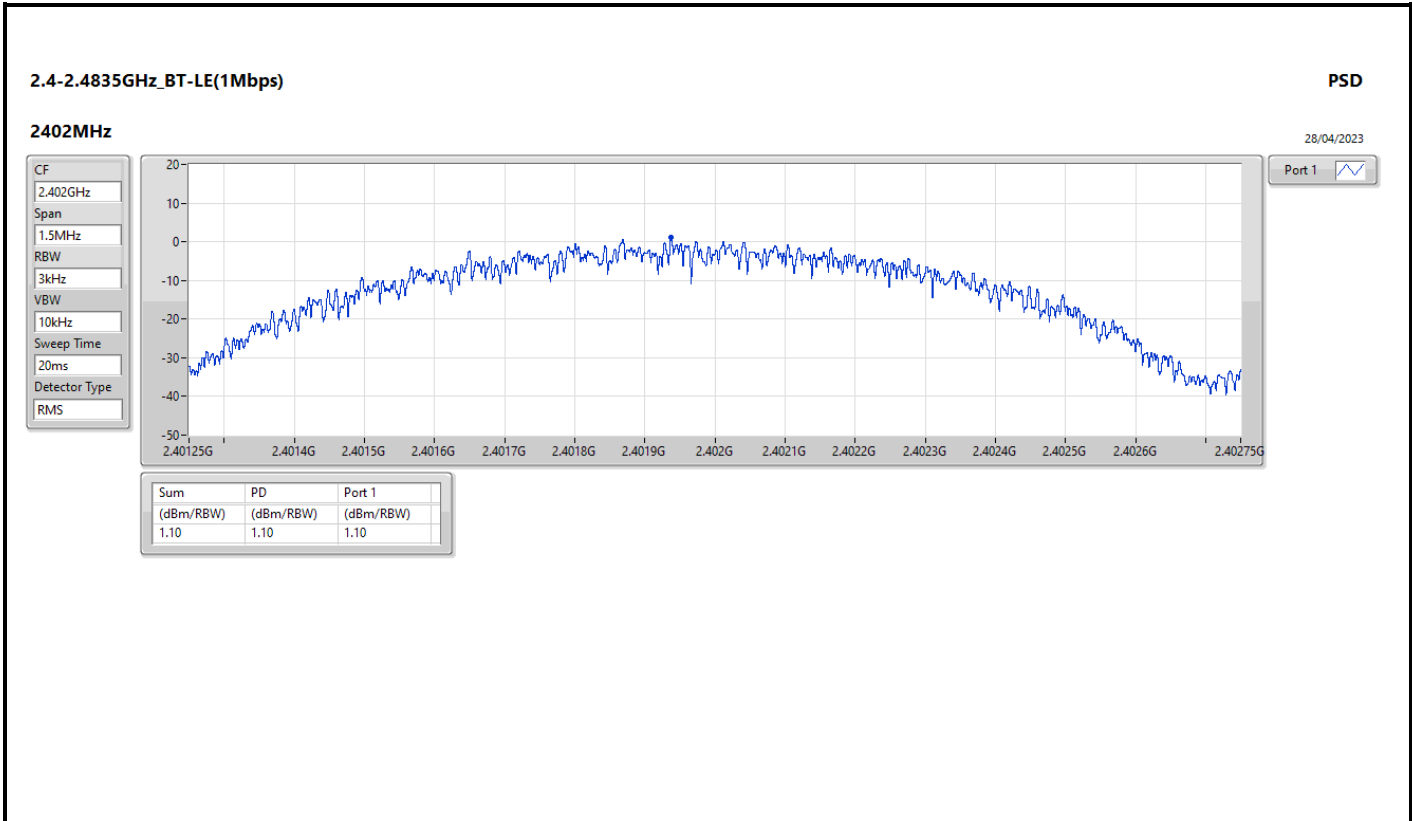
RBW = 3kHz;

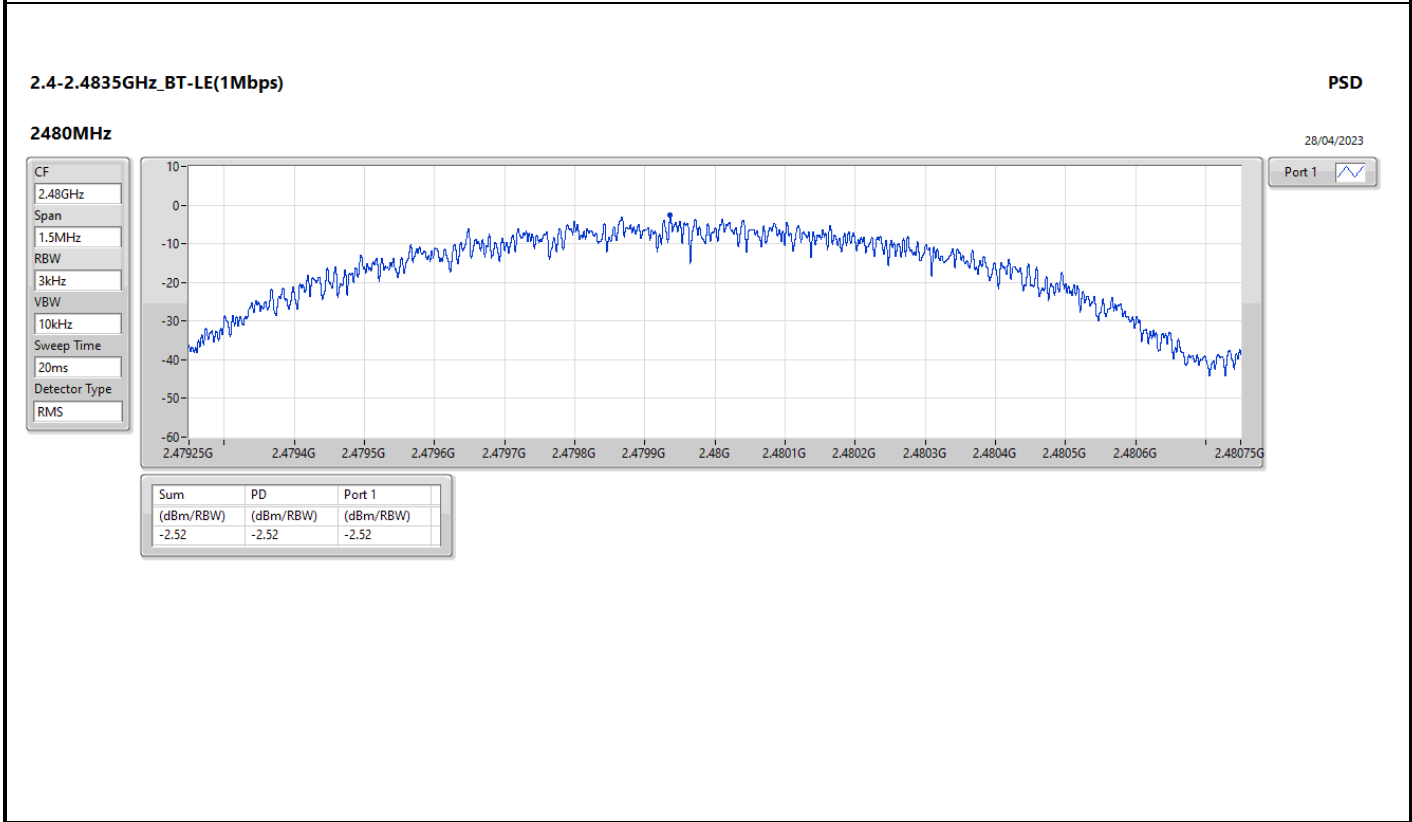
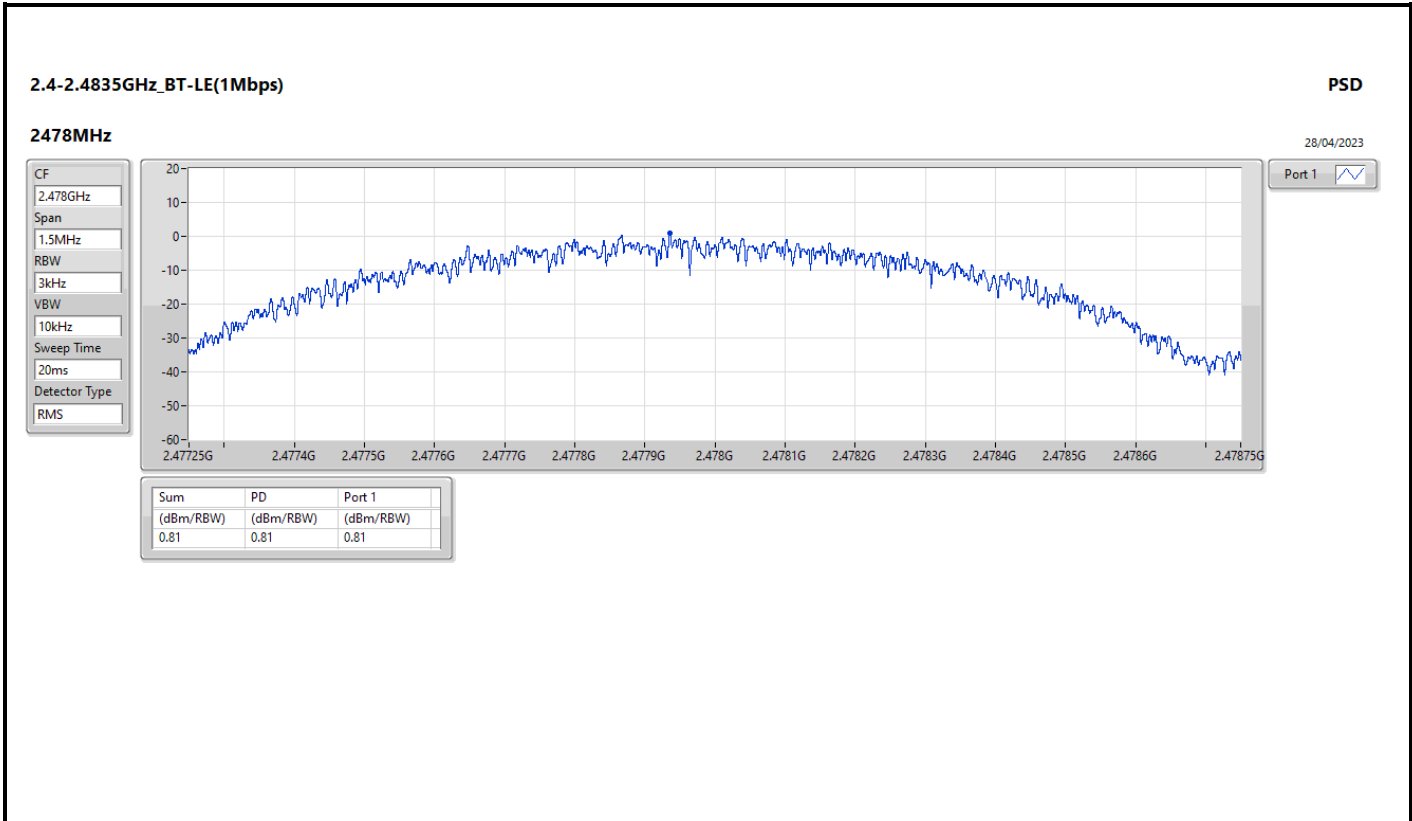


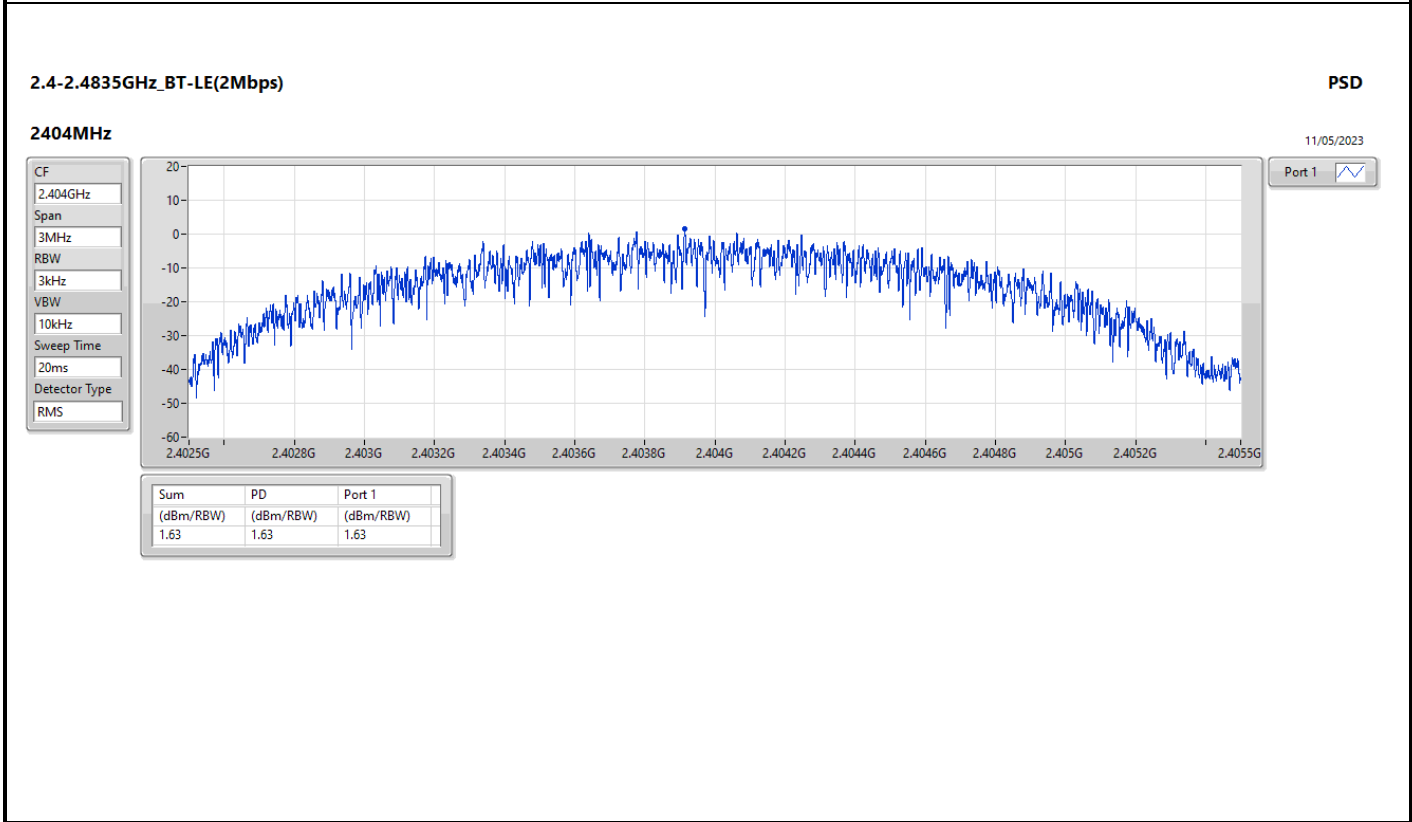
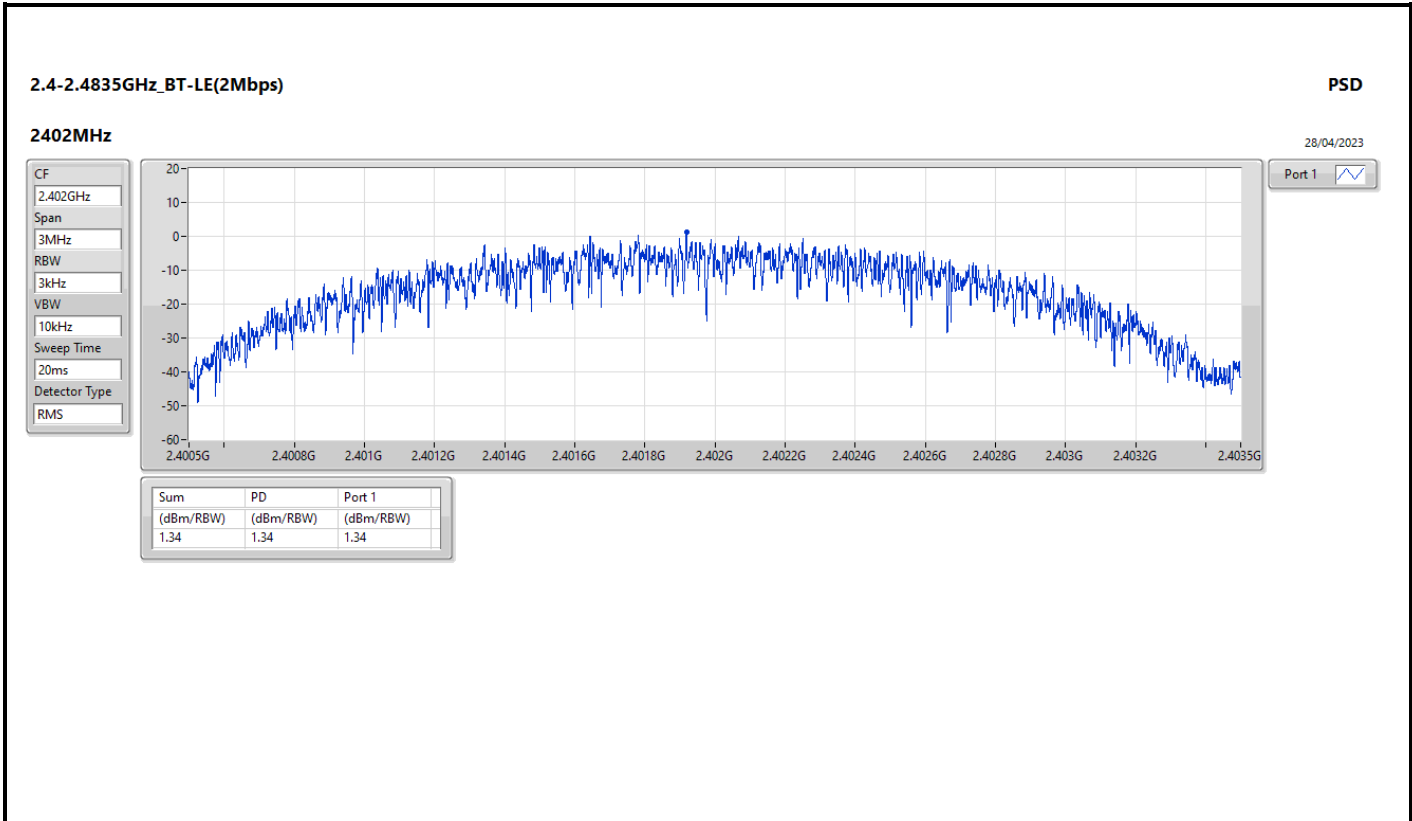
Result

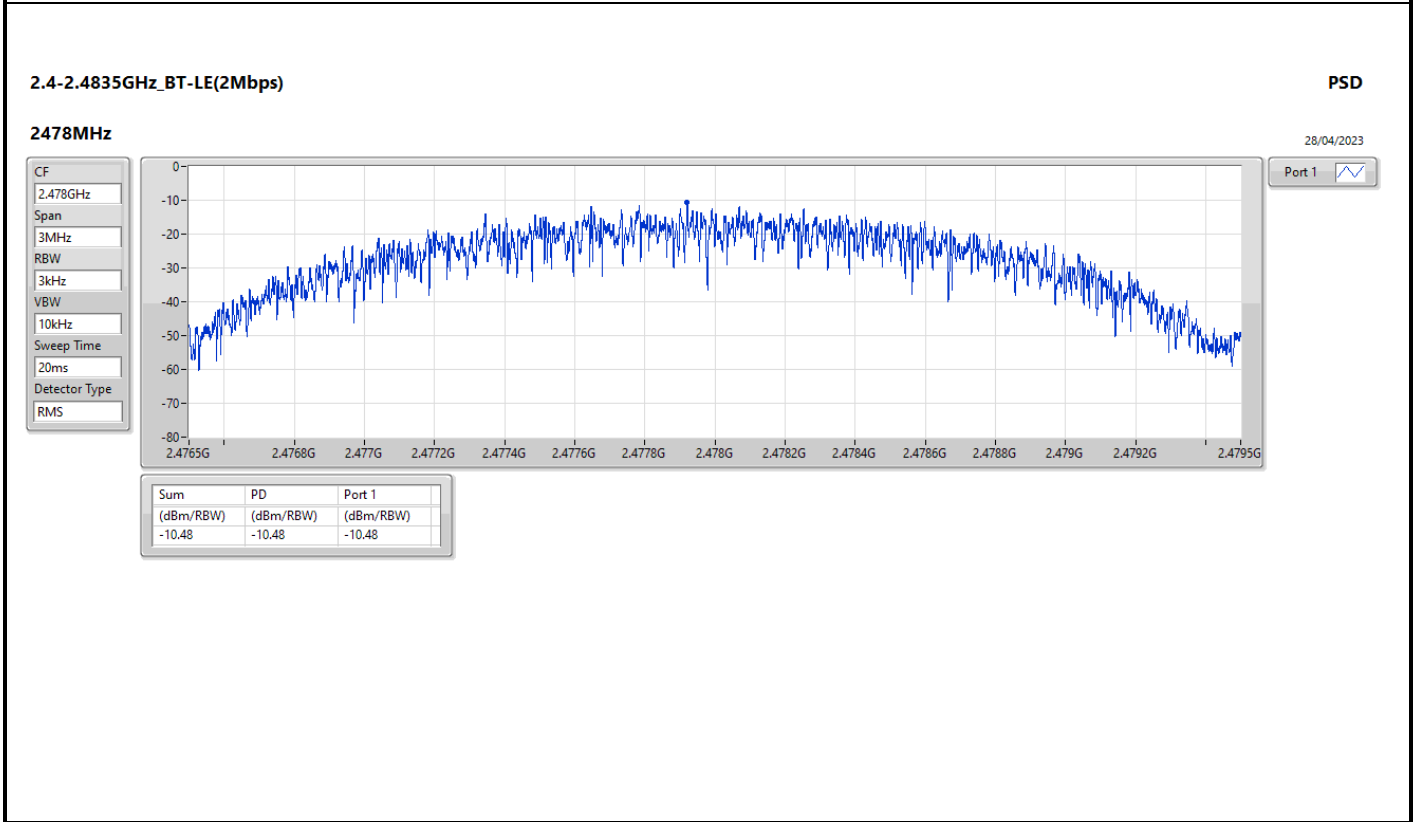
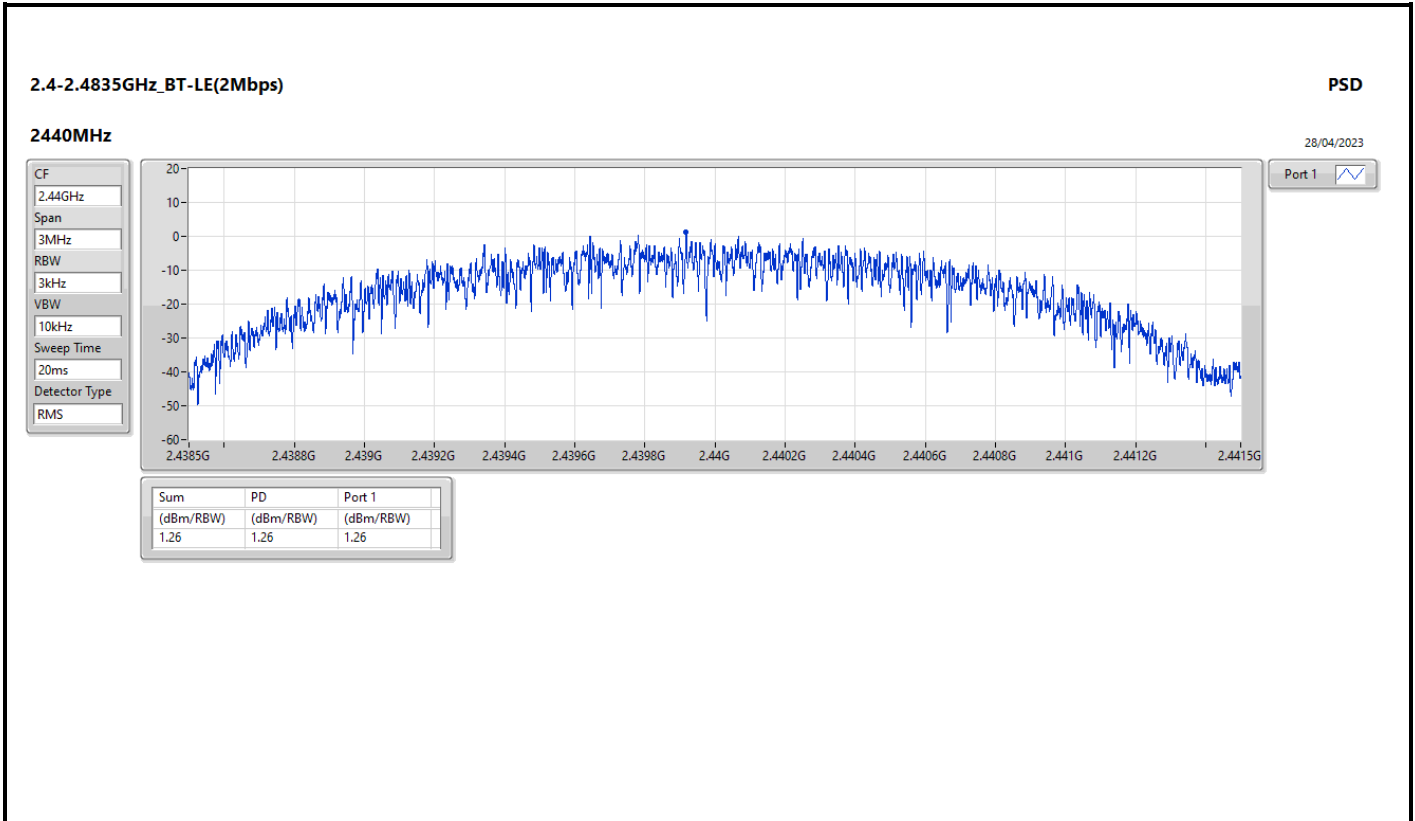
Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.50	1.10	8.00
2440MHz	Pass	3.40	0.68	8.00
2478MHz	Pass	3.98	0.81	8.00
2480MHz	Pass	3.98	-2.52	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.50	1.34	8.00
2404MHz	Pass	2.50	1.63	8.00
2440MHz	Pass	3.40	1.26	8.00
2478MHz	Pass	3.98	-10.48	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;









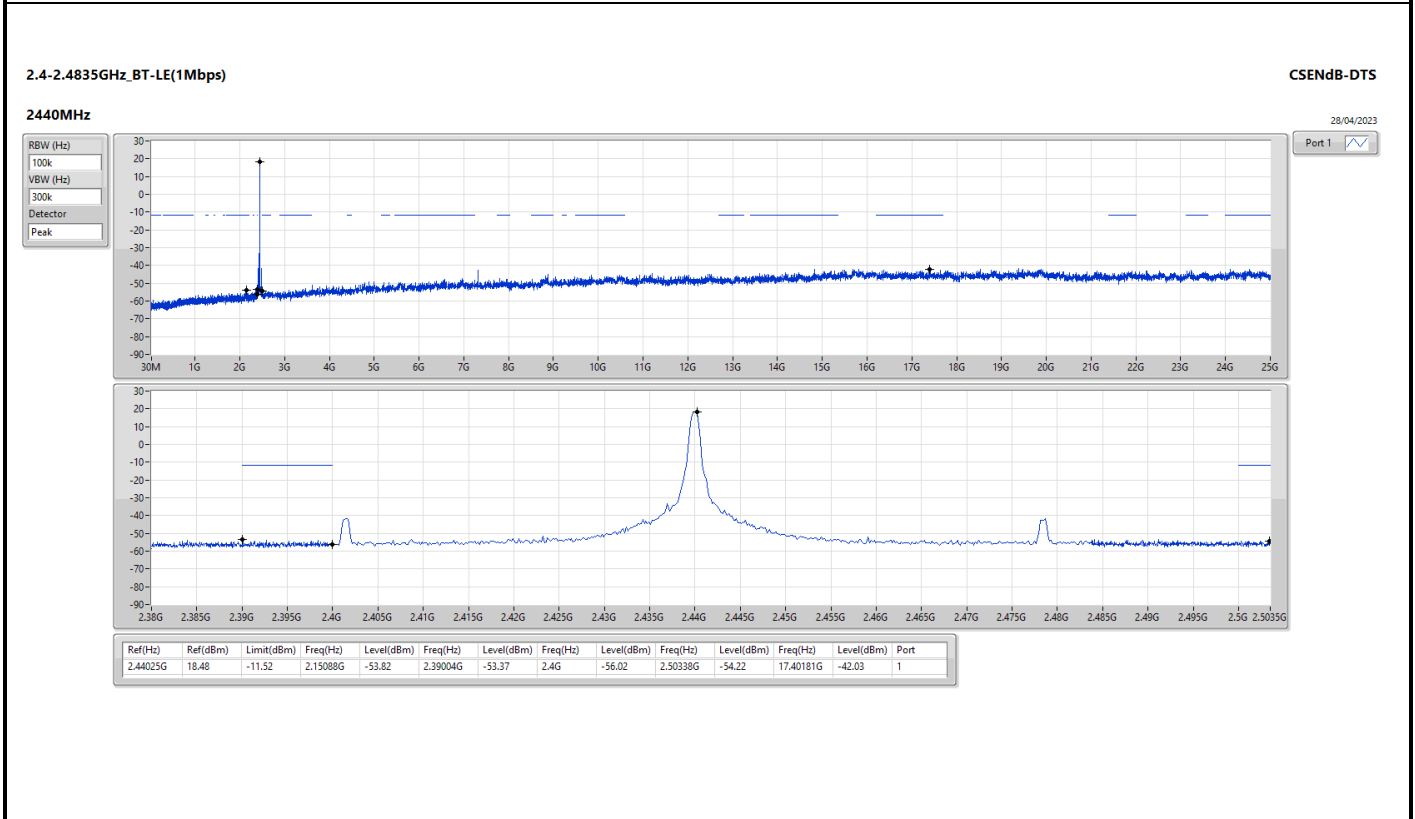
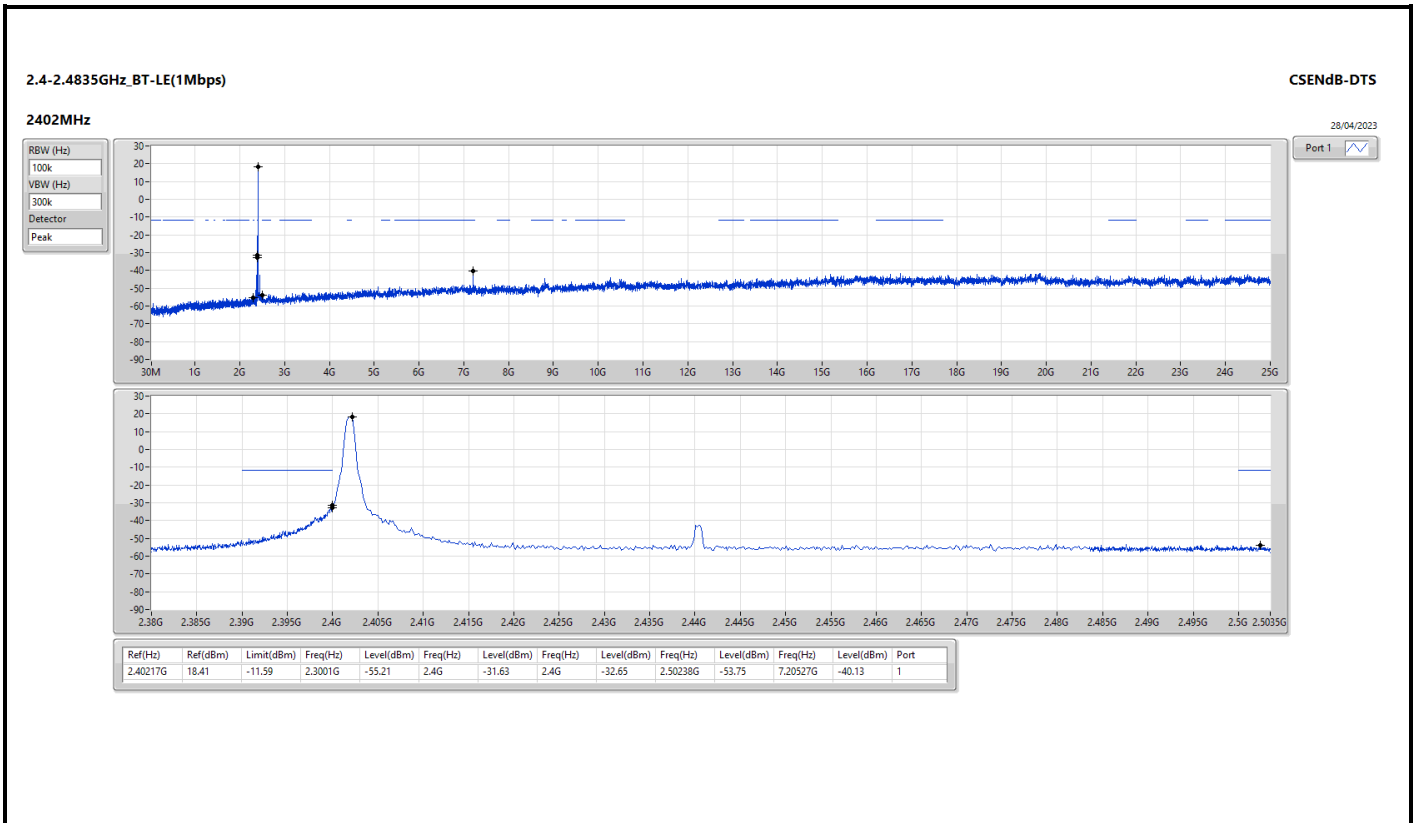


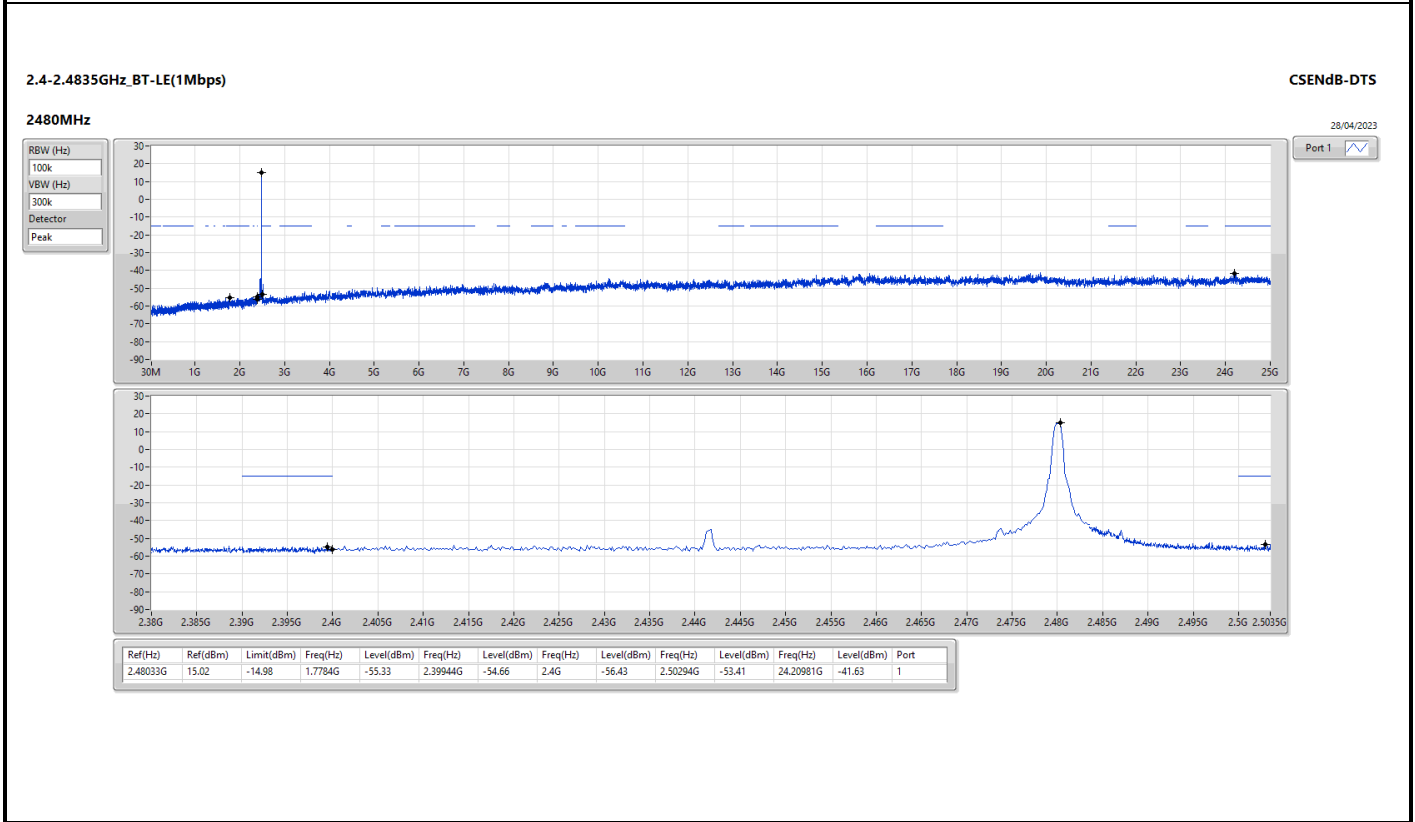
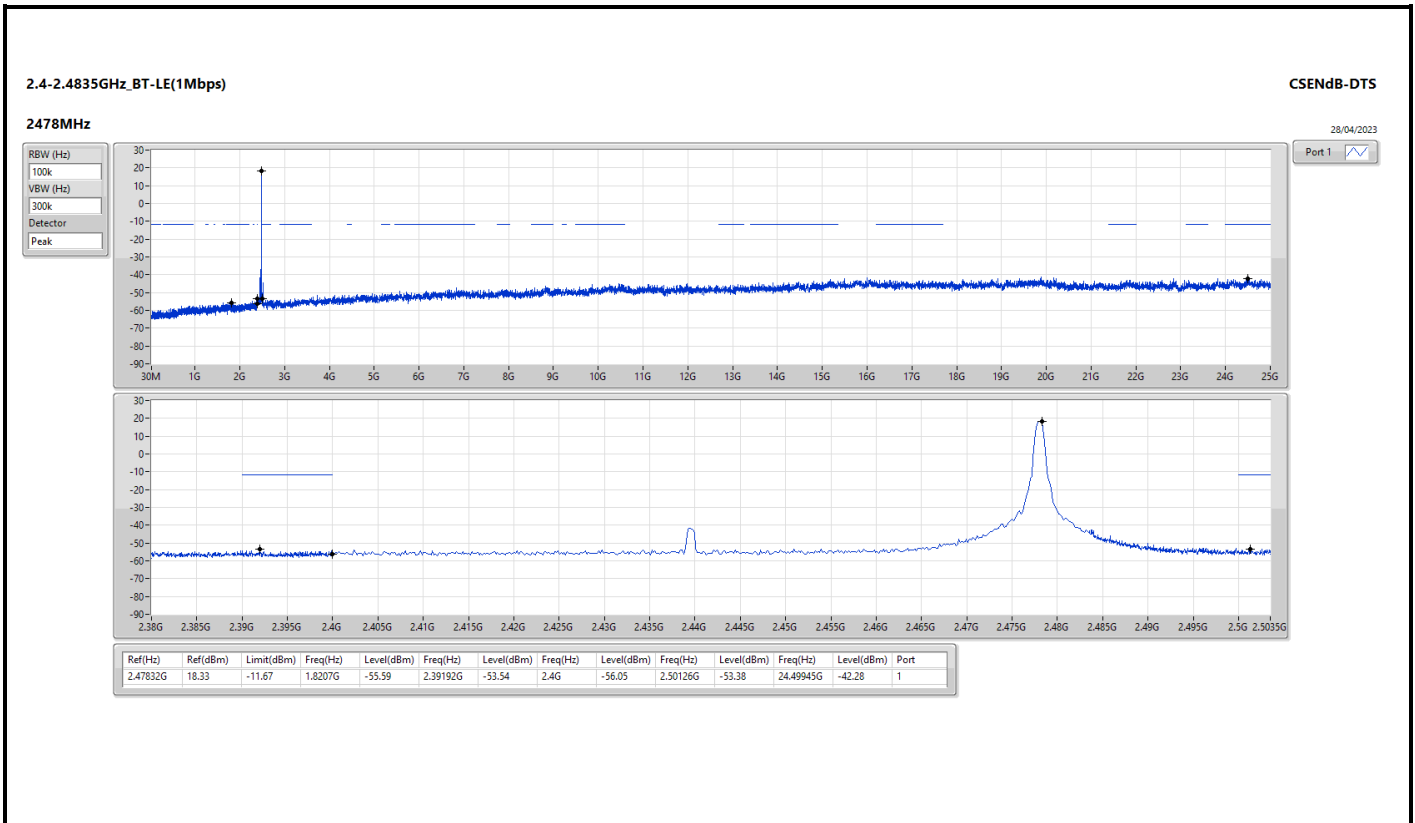
Summary

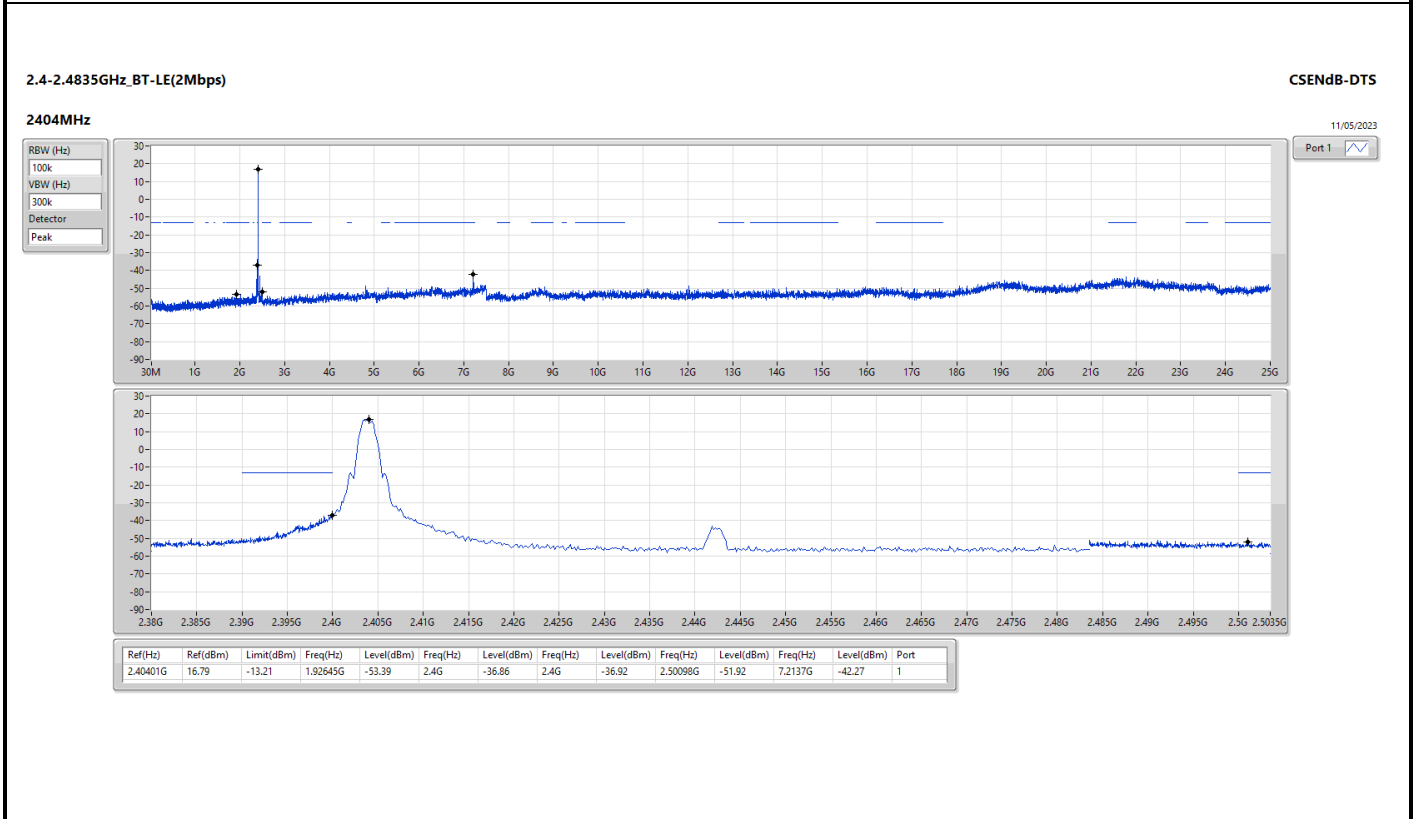
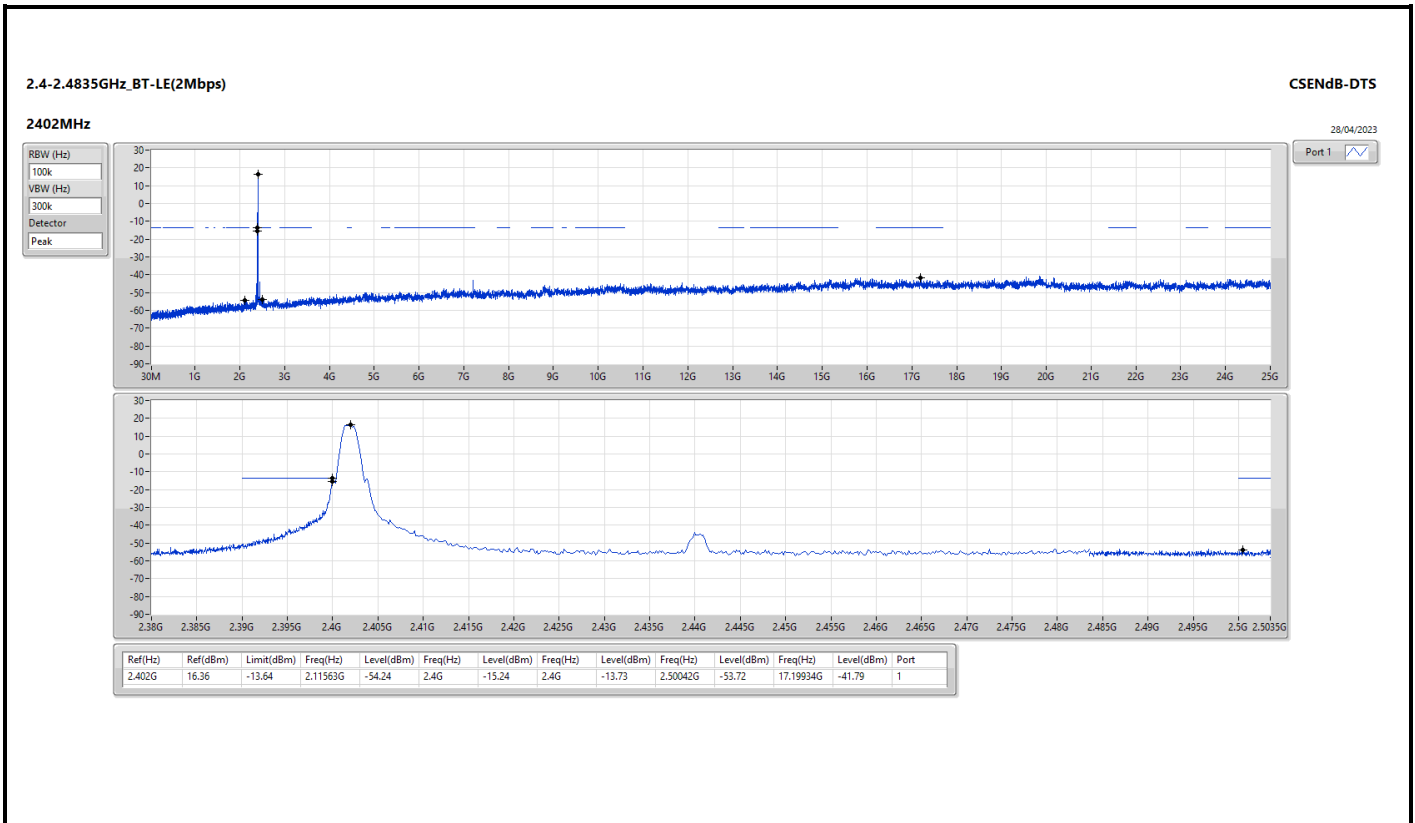
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40217G	18.41	-11.59	2.3001G	-55.21	2.4G	-31.63	2.4G	-32.65	2.50238G	-53.75	7.20527G	-40.13	1
BT-LE(2Mbps)	Pass	2.402G	16.36	-13.64	2.11563G	-54.24	2.4G	-15.24	2.4G	-13.73	2.50042G	-53.72	17.19934G	-41.79	1

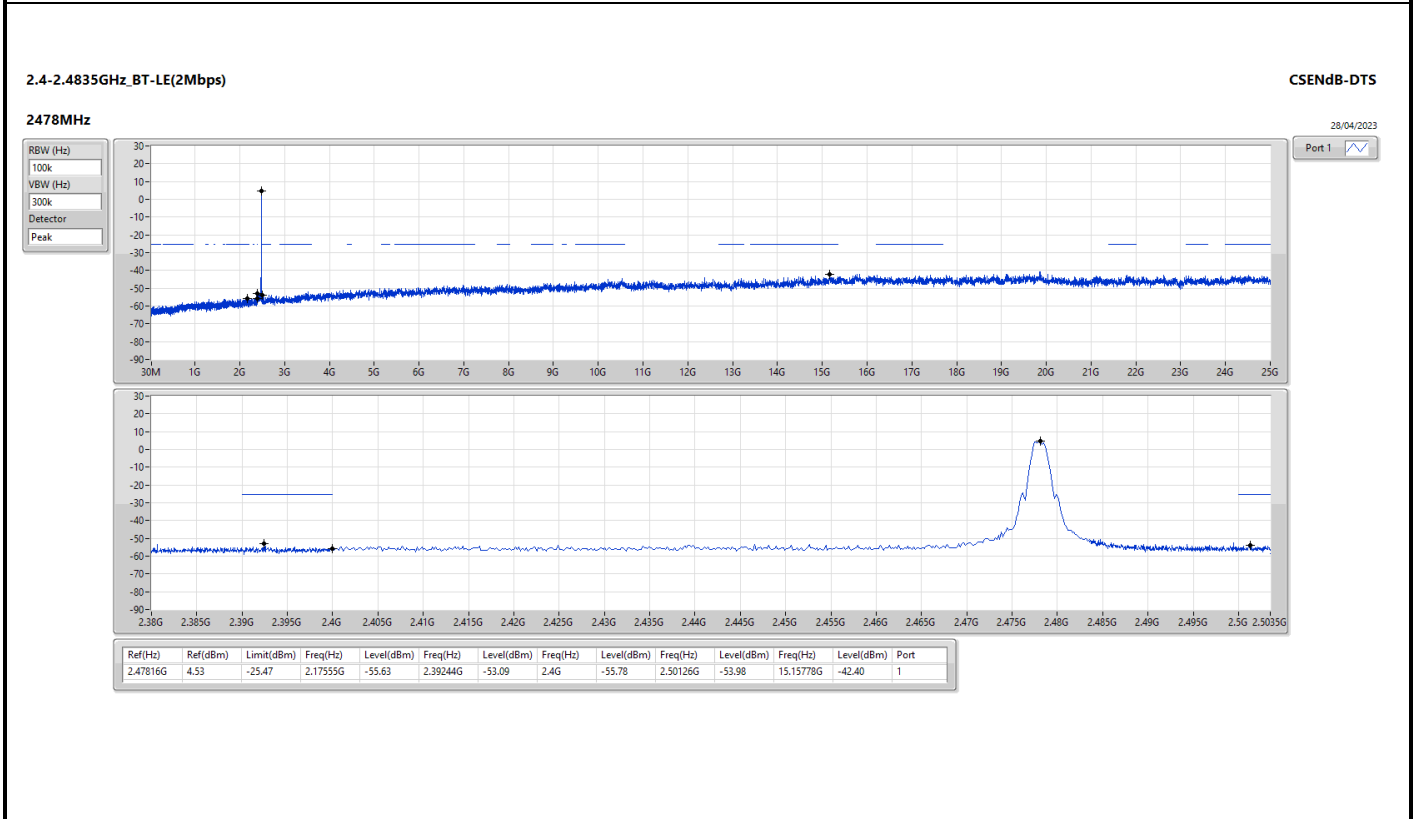
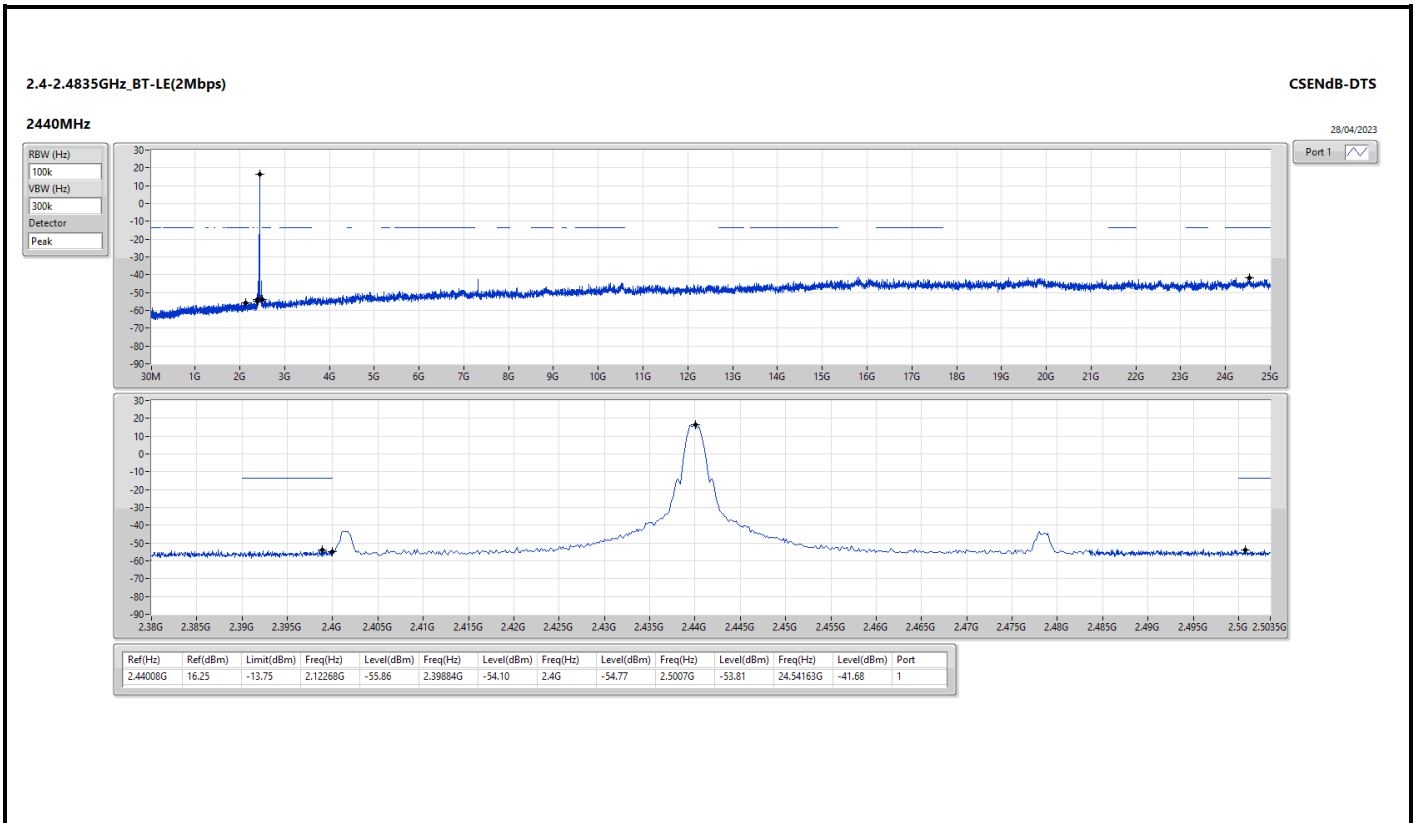
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	18.41	-11.59	2.3001G	-55.21	2.4G	-31.63	2.4G	-32.65	2.50238G	-53.75	7.20527G	-40.13	1
2440MHz	Pass	2.44025G	18.48	-11.52	2.15088G	-53.82	2.39004G	-53.37	2.4G	-56.02	2.50338G	-54.22	17.40181G	-42.03	1
2478MHz	Pass	2.47832G	18.33	-11.67	1.8207G	-55.59	2.39192G	-53.54	2.4G	-56.05	2.50126G	-53.38	24.49945G	-42.28	1
2480MHz	Pass	2.48033G	15.02	-14.98	1.7784G	-55.33	2.39944G	-54.66	2.4G	-56.43	2.50294G	-53.41	24.20981G	-41.63	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	16.36	-13.64	2.11563G	-54.24	2.4G	-15.24	2.4G	-13.73	2.50042G	-53.72	17.19934G	-41.79	1
2404MHz	Pass	2.40401G	16.79	-13.21	1.92645G	-53.39	2.4G	-36.86	2.4G	-36.92	2.50098G	-51.92	7.2137G	-42.27	1
2440MHz	Pass	2.44008G	16.25	-13.75	2.12268G	-55.86	2.39884G	-54.10	2.4G	-54.77	2.5007G	-53.81	24.54163G	-41.68	1
2478MHz	Pass	2.47816G	4.53	-25.47	2.17555G	-55.63	2.39244G	-53.09	2.4G	-55.78	2.50126G	-53.98	15.15778G	-42.40	1











Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	518.88M	39.27	46.00	-6.73	3	Horizontal	360	1.00	-

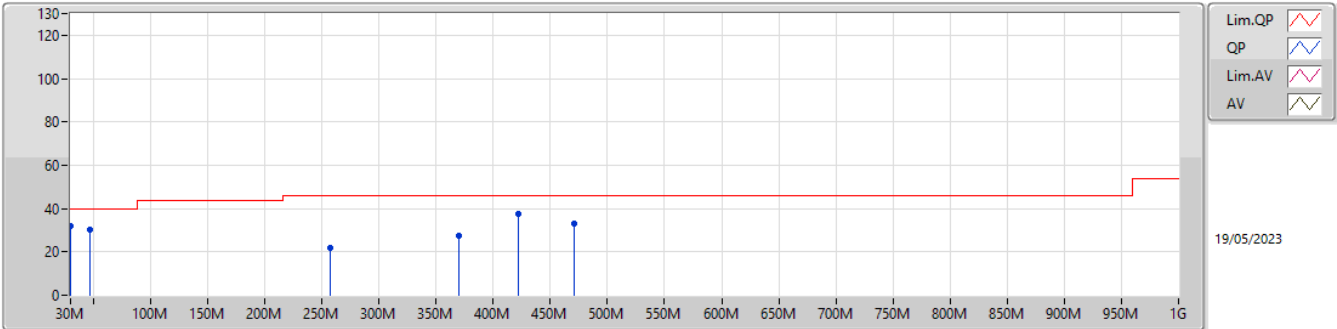


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	31.87	40.00	-8.13	3	Vertical	0	1.00	-
2440MHz	Pass	PK	47.46M	30.49	40.00	-9.51	3	Vertical	0	1.00	-
2440MHz	Pass	PK	256.98M	21.73	46.00	-24.27	3	Vertical	0	1.00	-
2440MHz	Pass	PK	369.5M	27.36	46.00	-18.64	3	Vertical	0	1.00	-
2440MHz	Pass	PK	421.88M	37.82	46.00	-8.18	3	Vertical	0	1.00	-
2440MHz	Pass	PK	470.38M	33.32	46.00	-12.68	3	Vertical	0	1.00	-
2440MHz	Pass	PK	39.7M	30.05	40.00	-9.95	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	47.46M	29.17	40.00	-10.83	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	264.74M	24.52	46.00	-21.48	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	369.5M	28.11	46.00	-17.89	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	421.88M	37.30	46.00	-8.70	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	518.88M	39.27	46.00	-6.73	3	Horizontal	360	1.00	-

2.4-2.4835GHz_BT-LE(2Mbps)

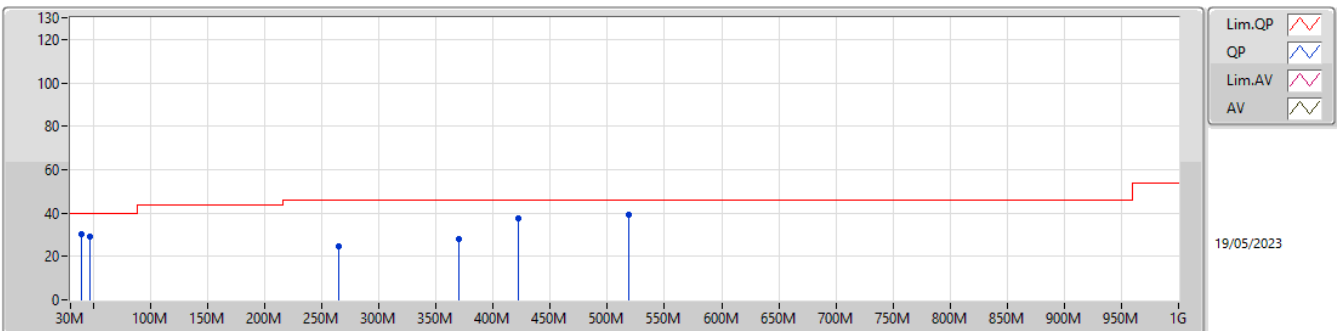
2440MHz_Adapter



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	30M	31.87	40.00	-8.13	-2.61	3	Vertical	0	1.00	34.48	23.14	1.21	26.96
PK	47.46M	30.49	40.00	-9.51	-11.46	3	Vertical	0	1.00	41.95	14.39	1.44	27.29
PK	256.98M	21.73	46.00	-24.27	-5.69	3	Vertical	0	1.00	27.42	18.40	3.07	27.16
PK	369.5M	27.36	46.00	-18.64	-3.87	3	Vertical	0	1.00	31.23	20.01	3.75	27.63
PK	421.88M	37.82	46.00	-8.18	-2.18	3	Vertical	0	1.00	40.00	21.78	4.07	28.03
PK	470.38M	33.32	46.00	-12.68	-1.44	3	Vertical	0	1.00	34.76	22.53	4.33	28.30

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_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	39.7M	30.05	40.00	-9.95	-7.37	3	Horizontal	360	1.00	37.42	18.01	1.41	26.79
PK	47.46M	29.17	40.00	-10.83	-11.46	3	Horizontal	360	1.00	40.63	14.39	1.44	27.29
PK	264.74M	24.52	46.00	-21.48	-5.41	3	Horizontal	360	1.00	29.93	18.65	3.11	27.17
PK	369.5M	28.11	46.00	-17.89	-3.87	3	Horizontal	360	1.00	31.98	20.01	3.75	27.63
PK	421.88M	37.30	46.00	-8.70	-2.18	3	Horizontal	360	1.00	39.48	21.78	4.07	28.03
PK	518.88M	39.27	46.00	-6.73	-1.32	3	Horizontal	360	1.00	40.59	22.68	4.45	28.45



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	53.75	54.00	-0.25	3	Horizontal	213	2.60	-
BT-LE(2Mbps)	Pass	AV	2.3654G	52.70	54.00	-1.30	3	Horizontal	185	2.26	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3634G	52.96	54.00	-1.04	3	Vertical	110	2.09	-
2402MHz	Pass	AV	2.402G	114.29	Inf	-Inf	3	Vertical	110	2.09	-
2402MHz	Pass	PK	2.3636G	60.32	74.00	-13.68	3	Vertical	110	2.09	-
2402MHz	Pass	PK	2.4022G	115.27	Inf	-Inf	3	Vertical	110	2.09	-
2402MHz	Pass	AV	2.3634G	53.07	54.00	-0.93	3	Horizontal	188	1.99	-
2402MHz	Pass	AV	2.402G	115.96	Inf	-Inf	3	Horizontal	188	1.99	-
2402MHz	Pass	PK	2.3638G	61.79	74.00	-12.21	3	Horizontal	188	1.99	-
2402MHz	Pass	PK	2.4016G	116.98	Inf	-Inf	3	Horizontal	188	1.99	-
2402MHz	Pass	AV	4.8039G	29.47	54.00	-24.53	3	Vertical	147	2.66	-
2402MHz	Pass	PK	4.8038G	43.11	74.00	-30.89	3	Vertical	147	2.66	-
2402MHz	Pass	AV	4.80392G	30.78	54.00	-23.22	3	Horizontal	197	2.44	-
2402MHz	Pass	PK	4.8045G	43.30	74.00	-30.70	3	Horizontal	197	2.44	-
2440MHz	Pass	AV	2.3832G	43.96	54.00	-10.04	3	Vertical	129	1.45	-
2440MHz	Pass	AV	2.44G	113.92	Inf	-Inf	3	Vertical	129	1.45	-
2440MHz	Pass	AV	2.4992G	44.54	54.00	-9.46	3	Vertical	129	1.45	-
2440MHz	Pass	PK	2.378G	57.38	74.00	-16.62	3	Vertical	129	1.45	-
2440MHz	Pass	PK	2.4396G	114.95	Inf	-Inf	3	Vertical	129	1.45	-
2440MHz	Pass	PK	2.4856G	58.07	74.00	-15.93	3	Vertical	129	1.45	-
2440MHz	Pass	AV	2.3892G	44.03	54.00	-9.97	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	2.44G	116.26	Inf	-Inf	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	2.4936G	44.53	54.00	-9.47	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.3564G	57.47	74.00	-16.53	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.4396G	117.25	Inf	-Inf	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.4984G	58.11	74.00	-15.89	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	4.87978G	32.99	54.00	-21.01	3	Vertical	176	2.90	-
2440MHz	Pass	AV	7.32032G	41.12	54.00	-12.88	3	Vertical	231	1.46	-
2440MHz	Pass	PK	4.88036G	44.89	74.00	-29.11	3	Vertical	176	2.90	-
2440MHz	Pass	PK	7.319G	53.11	74.00	-20.89	3	Vertical	231	1.46	-
2440MHz	Pass	AV	4.87986G	34.63	54.00	-19.37	3	Horizontal	210	2.02	-
2440MHz	Pass	AV	7.3193G	40.88	54.00	-13.12	3	Horizontal	274	2.85	-
2440MHz	Pass	PK	4.88036G	45.81	74.00	-28.19	3	Horizontal	210	2.02	-
2440MHz	Pass	PK	7.319G	53.16	74.00	-20.84	3	Horizontal	274	2.85	-
2478MHz	Pass	AV	2.478G	114.82	Inf	-Inf	3	Vertical	107	2.10	-
2478MHz	Pass	AV	2.4835G	49.88	54.00	-4.12	3	Vertical	107	2.10	-
2478MHz	Pass	PK	2.4776G	115.80	Inf	-Inf	3	Vertical	107	2.10	-
2478MHz	Pass	PK	2.4838G	62.39	74.00	-11.61	3	Vertical	107	2.10	-
2478MHz	Pass	AV	2.478G	116.79	Inf	-Inf	3	Horizontal	212	2.60	-
2478MHz	Pass	AV	2.4835G	52.08	54.00	-1.92	3	Horizontal	212	2.60	-
2478MHz	Pass	PK	2.4782G	117.80	Inf	-Inf	3	Horizontal	212	2.60	-
2478MHz	Pass	PK	2.4835G	65.78	74.00	-8.22	3	Horizontal	212	2.60	-
2478MHz	Pass	AV	4.95588G	38.26	54.00	-15.74	3	Vertical	171	2.56	-
2478MHz	Pass	AV	7.4343G	40.30	54.00	-13.70	3	Vertical	230	1.49	-
2478MHz	Pass	PK	4.95536G	47.60	74.00	-26.40	3	Vertical	171	2.56	-
2478MHz	Pass	PK	7.43444G	52.48	74.00	-21.52	3	Vertical	230	1.49	-
2478MHz	Pass	AV	4.95586G	40.18	54.00	-13.82	3	Horizontal	216	1.77	-
2478MHz	Pass	AV	7.43332G	38.01	54.00	-15.99	3	Horizontal	357	1.69	-
2478MHz	Pass	PK	4.95544G	48.44	74.00	-25.56	3	Horizontal	216	1.77	-
2478MHz	Pass	PK	7.43464G	50.08	74.00	-23.92	3	Horizontal	357	1.69	-
2480MHz	Pass	AV	2.48G	111.70	Inf	-Inf	3	Vertical	108	1.86	-
2480MHz	Pass	AV	2.4835G	51.93	54.00	-2.07	3	Vertical	108	1.86	-
2480MHz	Pass	PK	2.4796G	112.67	Inf	-Inf	3	Vertical	108	1.86	-
2480MHz	Pass	PK	2.4836G	65.26	74.00	-8.74	3	Vertical	108	1.86	-
2480MHz	Pass	AV	2.48G	113.93	Inf	-Inf	3	Horizontal	213	2.60	-
2480MHz	Pass	AV	2.4835G	53.75	54.00	-0.25	3	Horizontal	213	2.60	-
2480MHz	Pass	PK	2.4796G	114.92	Inf	-Inf	3	Horizontal	213	2.60	-
2480MHz	Pass	PK	2.4838G	66.62	74.00	-7.38	3	Horizontal	213	2.60	-
2480MHz	Pass	AV	4.95988G	39.17	54.00	-14.83	3	Vertical	172	2.55	-
2480MHz	Pass	AV	7.44038G	37.72	54.00	-16.28	3	Vertical	231	1.50	-
2480MHz	Pass	PK	4.96024G	48.52	74.00	-25.48	3	Vertical	172	2.55	-
2480MHz	Pass	PK	7.43898G	50.07	74.00	-23.93	3	Vertical	231	1.50	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2480MHz	Pass	AV	4.9599G	40.70	54.00	-13.30	3	Horizontal	222	1.76	-
2480MHz	Pass	AV	7.44038G	35.97	54.00	-18.03	3	Horizontal	355	1.70	-
2480MHz	Pass	PK	4.95944G	49.32	74.00	-24.68	3	Horizontal	222	1.76	-
2480MHz	Pass	PK	7.44038G	49.37	74.00	-24.63	3	Horizontal	355	1.70	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3634G	51.31	54.00	-2.69	3	Vertical	110	2.10	-
2402MHz	Pass	AV	2.402G	112.33	Inf	-Inf	3	Vertical	110	2.10	-
2402MHz	Pass	PK	2.3636G	61.49	74.00	-12.51	3	Vertical	110	2.10	-
2402MHz	Pass	PK	2.4014G	115.17	Inf	-Inf	3	Vertical	110	2.10	-
2402MHz	Pass	AV	2.3634G	51.88	54.00	-2.12	3	Horizontal	208	3.00	-
2402MHz	Pass	AV	2.402G	115.01	Inf	-Inf	3	Horizontal	208	3.00	-
2402MHz	Pass	PK	2.3632G	61.02	74.00	-12.98	3	Horizontal	208	3.00	-
2402MHz	Pass	PK	2.4014G	117.87	Inf	-Inf	3	Horizontal	208	3.00	-
2402MHz	Pass	AV	4.80296G	28.46	54.00	-25.54	3	Vertical	161	2.95	-
2402MHz	Pass	PK	4.80326G	41.65	74.00	-32.35	3	Vertical	161	2.95	-
2402MHz	Pass	AV	4.80302G	29.24	54.00	-24.76	3	Horizontal	201	2.40	-
2402MHz	Pass	PK	4.80474G	43.15	74.00	-30.85	3	Horizontal	201	2.40	-
2404MHz	Pass	AV	2.3654G	51.04	54.00	-2.96	3	Vertical	111	2.07	-
2404MHz	Pass	AV	2.404G	113.13	Inf	-Inf	3	Vertical	111	2.07	-
2404MHz	Pass	PK	2.3656G	60.29	74.00	-13.71	3	Vertical	111	2.07	-
2404MHz	Pass	PK	2.4044G	115.97	Inf	-Inf	3	Vertical	111	2.07	-
2404MHz	Pass	AV	2.3654G	52.70	54.00	-1.30	3	Horizontal	185	2.26	-
2404MHz	Pass	AV	2.404G	113.94	Inf	-Inf	3	Horizontal	185	2.26	-
2404MHz	Pass	PK	2.365G	60.97	74.00	-13.03	3	Horizontal	185	2.26	-
2404MHz	Pass	PK	2.4034G	116.75	Inf	-Inf	3	Horizontal	185	2.26	-
2404MHz	Pass	AV	4.80886G	41.18	54.00	-12.82	3	Vertical	179	2.69	-
2404MHz	Pass	PK	4.80703G	51.86	74.00	-22.14	3	Vertical	179	2.69	-
2404MHz	Pass	AV	4.80835G	40.98	54.00	-13.02	3	Horizontal	215	2.76	-
2404MHz	Pass	PK	4.80899G	51.39	74.00	-22.61	3	Horizontal	215	2.76	-
2440MHz	Pass	AV	2.3888G	43.95	54.00	-10.05	3	Vertical	128	1.44	-
2440MHz	Pass	AV	2.44G	112.02	Inf	-Inf	3	Vertical	128	1.44	-
2440MHz	Pass	AV	2.4964G	44.54	54.00	-9.46	3	Vertical	128	1.44	-
2440MHz	Pass	PK	2.3812G	57.69	74.00	-16.31	3	Vertical	128	1.44	-
2440MHz	Pass	PK	2.4396G	114.96	Inf	-Inf	3	Vertical	128	1.44	-
2440MHz	Pass	PK	2.494G	59.73	74.00	-14.27	3	Vertical	128	1.44	-
2440MHz	Pass	AV	2.3896G	44.04	54.00	-9.96	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	2.44G	114.42	Inf	-Inf	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	2.4916G	44.58	54.00	-9.42	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.37G	57.77	74.00	-16.23	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.4396G	117.29	Inf	-Inf	3	Horizontal	184	2.43	-
2440MHz	Pass	PK	2.4936G	58.98	74.00	-15.02	3	Horizontal	184	2.43	-
2440MHz	Pass	AV	4.88076G	31.10	54.00	-22.90	3	Vertical	171	2.62	-
2440MHz	Pass	AV	7.32094G	41.03	54.00	-12.97	3	Vertical	232	1.46	-
2440MHz	Pass	PK	4.88078G	45.07	74.00	-28.93	3	Vertical	171	2.62	-
2440MHz	Pass	PK	7.32132G	53.12	74.00	-20.88	3	Vertical	232	1.46	-
2440MHz	Pass	AV	4.88084G	32.08	54.00	-21.92	3	Horizontal	212	1.99	-
2440MHz	Pass	AV	7.32096G	40.38	54.00	-13.62	3	Horizontal	274	2.86	-
2440MHz	Pass	PK	4.87882G	44.90	74.00	-29.10	3	Horizontal	212	1.99	-
2440MHz	Pass	PK	7.31838G	52.57	74.00	-21.43	3	Horizontal	274	2.86	-
2478MHz	Pass	AV	2.478G	101.47	Inf	-Inf	3	Vertical	104	1.46	-
2478MHz	Pass	AV	2.4835G	45.82	54.00	-8.18	3	Vertical	104	1.46	-
2478MHz	Pass	PK	2.4774G	104.30	Inf	-Inf	3	Vertical	104	1.46	-
2478MHz	Pass	PK	2.4842G	58.69	74.00	-15.31	3	Vertical	104	1.46	-
2478MHz	Pass	AV	2.478G	103.11	Inf	-Inf	3	Horizontal	197	2.14	-
2478MHz	Pass	AV	2.4835G	46.18	54.00	-7.82	3	Horizontal	197	2.14	-
2478MHz	Pass	PK	2.4774G	105.95	Inf	-Inf	3	Horizontal	197	2.14	-
2478MHz	Pass	PK	2.4848G	59.68	74.00	-14.32	3	Horizontal	197	2.14	-
2478MHz	Pass	AV	4.95676G	33.49	54.00	-20.51	3	Vertical	173	2.55	-
2478MHz	Pass	AV	7.435G	35.37	54.00	-18.63	3	Vertical	228	1.50	-
2478MHz	Pass	PK	4.95696G	46.17	74.00	-27.83	3	Vertical	173	2.55	-
2478MHz	Pass	PK	7.43524G	48.87	74.00	-25.13	3	Vertical	228	1.50	-
2478MHz	Pass	AV	4.95684G	34.21	54.00	-19.79	3	Horizontal	217	1.84	-



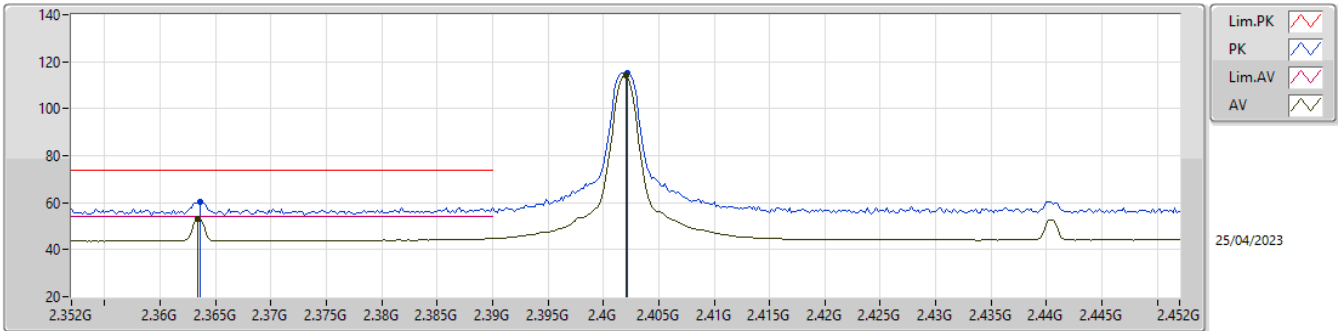
RSE TX above 1GHz

Appendix F.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2478MHz	Pass	AV	7.43508G	34.88	54.00	-19.12	3	Horizontal	271	2.85	-
2478MHz	Pass	PK	4.95692G	46.50	74.00	-27.50	3	Horizontal	217	1.84	-
2478MHz	Pass	PK	7.43516G	48.52	74.00	-25.48	3	Horizontal	271	2.85	-

2.4-2.4835GHz_BT-LE(1Mbps)

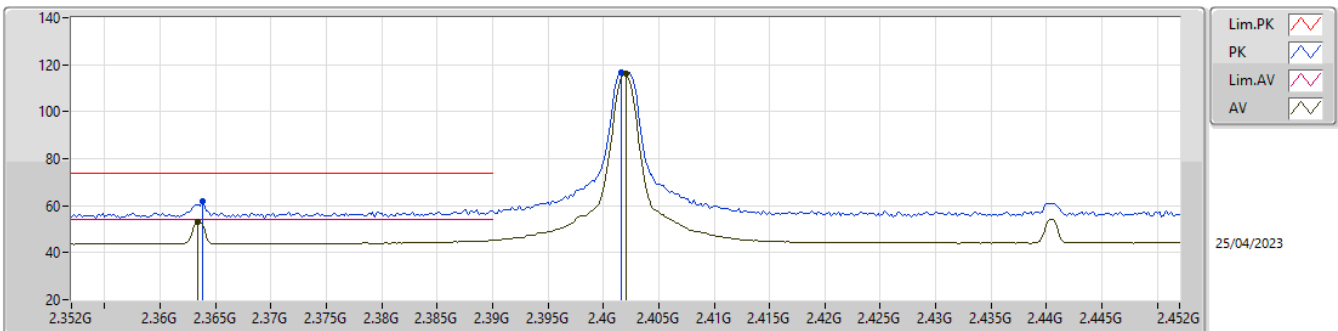
2402MHz_TX



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	52.96	54.00	-1.04	31.54	3	Vertical	110	2.09	21.42	27.31	4.23	-
AV	2.402G	114.29	Inf	-Inf	31.86	3	Vertical	110	2.09	82.43	27.60	4.26	-
PK	2.3636G	60.32	74.00	-13.68	31.54	3	Vertical	110	2.09	28.78	27.31	4.23	-
PK	2.4022G	115.27	Inf	-Inf	31.86	3	Vertical	110	2.09	83.41	27.60	4.26	-

2.4-2.4835GHz_BT-LE(1Mbps)

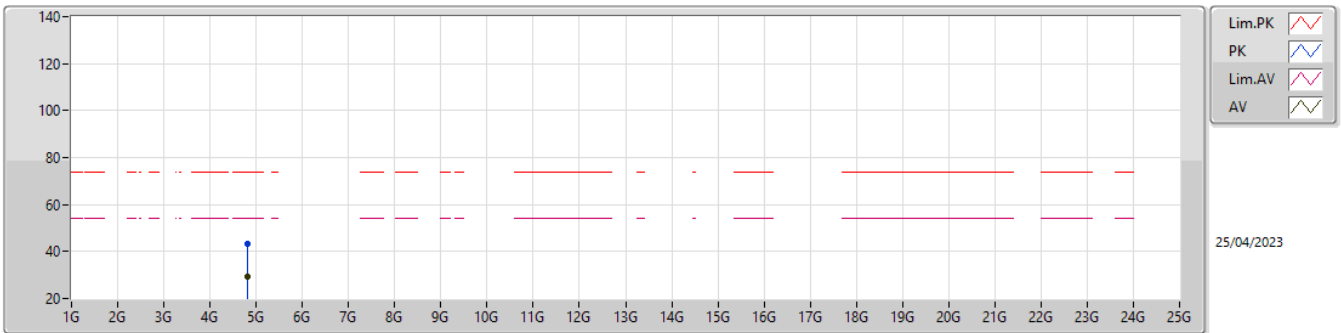
2402MHz_TX



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	53.07	54.00	-0.93	31.54	3	Horizontal	188	1.99	21.53	27.31	4.23	-
AV	2.402G	115.96	Inf	-Inf	31.86	3	Horizontal	188	1.99	84.10	27.60	4.26	-
PK	2.3638G	61.79	74.00	-12.21	31.54	3	Horizontal	188	1.99	30.25	27.31	4.23	-
PK	2.4016G	116.98	Inf	-Inf	31.86	3	Horizontal	188	1.99	85.12	27.60	4.26	-

2.4-2.4835GHz_BT-LE(1Mbps)

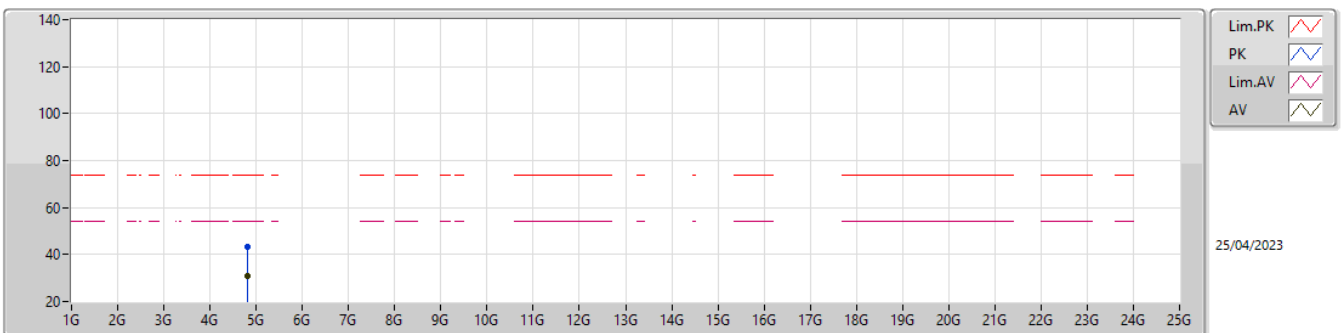
2402MHz_TX



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	4.8039G	29.47	54.00	-24.53	4.19	3	Vertical	147	2.66	25.28	32.22	6.16	34.19
PK	4.8038G	43.11	74.00	-30.89	4.19	3	Vertical	147	2.66	38.92	32.22	6.16	34.19

2.4-2.4835GHz_BT-LE(1Mbps)

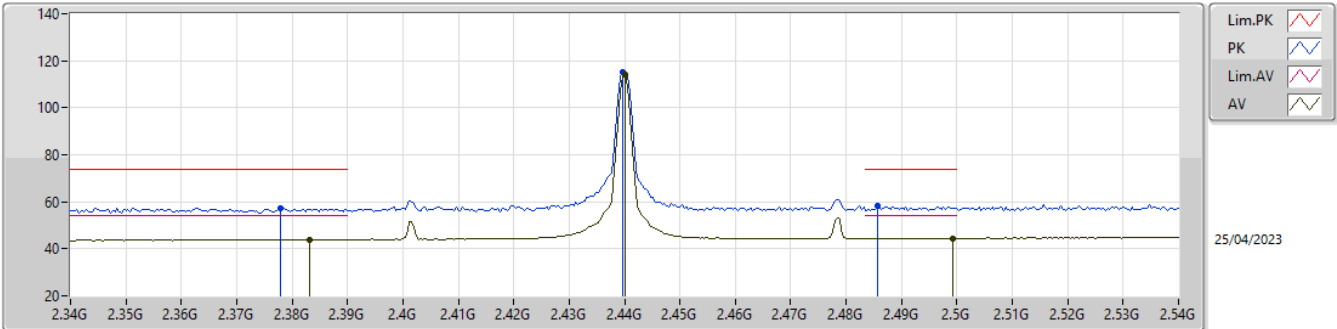
2402MHz_TX



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	4.80392G	30.78	54.00	-23.22	4.19	3	Horizontal	197	2.44	26.59	32.22	6.16	34.19
PK	4.8045G	43.30	74.00	-30.70	4.20	3	Horizontal	197	2.44	39.10	32.23	6.16	34.19

2.4-2.4835GHz_BT-LE(1Mbps)

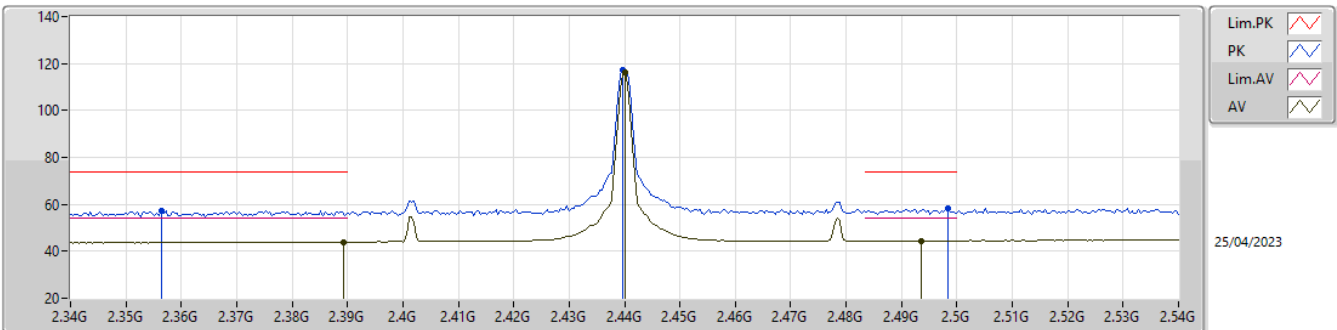
2440MHz_TX



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	2.3832G	43.96	54.00	-10.04	31.72	3	Vertical	129	1.45	12.24	27.47	4.25	-
AV	2.44G	113.92	Inf	-Inf	31.96	3	Vertical	129	1.45	81.96	27.68	4.28	-
AV	2.4992G	44.54	54.00	-9.46	32.22	3	Vertical	129	1.45	12.32	27.90	4.32	-
PK	2.378G	57.38	74.00	-16.62	31.66	3	Vertical	129	1.45	25.72	27.42	4.24	-
PK	2.4396G	114.95	Inf	-Inf	31.96	3	Vertical	129	1.45	82.99	27.68	4.28	-
PK	2.4856G	58.07	74.00	-15.93	32.15	3	Vertical	129	1.45	25.92	27.84	4.31	-

2.4-2.4835GHz_BT-LE(1Mbps)

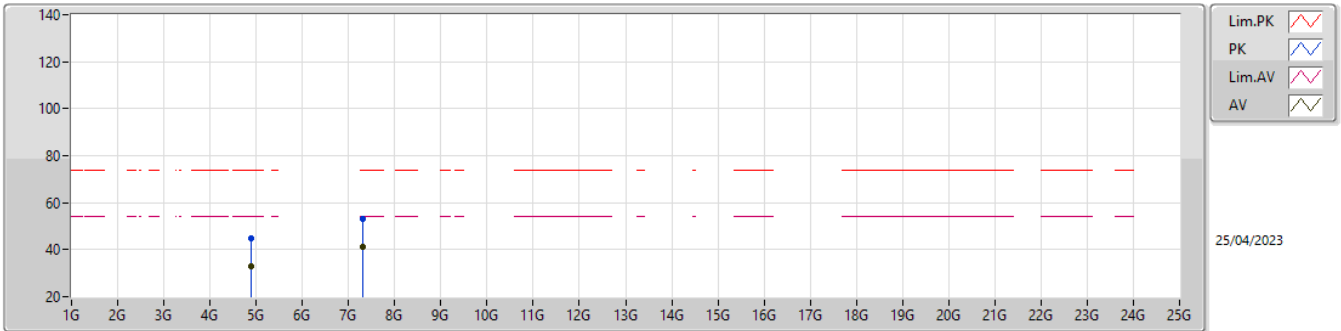
2440MHz_TX



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	44.03	54.00	-9.97	31.76	3	Horizontal	184	2.43	12.27	27.51	4.25	-
AV	2.44G	116.26	Inf	-Inf	31.96	3	Horizontal	184	2.43	84.30	27.68	4.28	-
AV	2.4936G	44.53	54.00	-9.47	32.19	3	Horizontal	184	2.43	12.34	27.87	4.32	-
PK	2.3564G	57.47	74.00	-16.53	31.47	3	Horizontal	184	2.43	26.00	27.25	4.22	-
PK	2.4396G	117.25	Inf	-Inf	31.96	3	Horizontal	184	2.43	85.29	27.68	4.28	-
PK	2.4984G	58.11	74.00	-15.89	32.21	3	Horizontal	184	2.43	25.90	27.89	4.32	-

2.4-2.4835GHz_BT-LE(1Mbps)

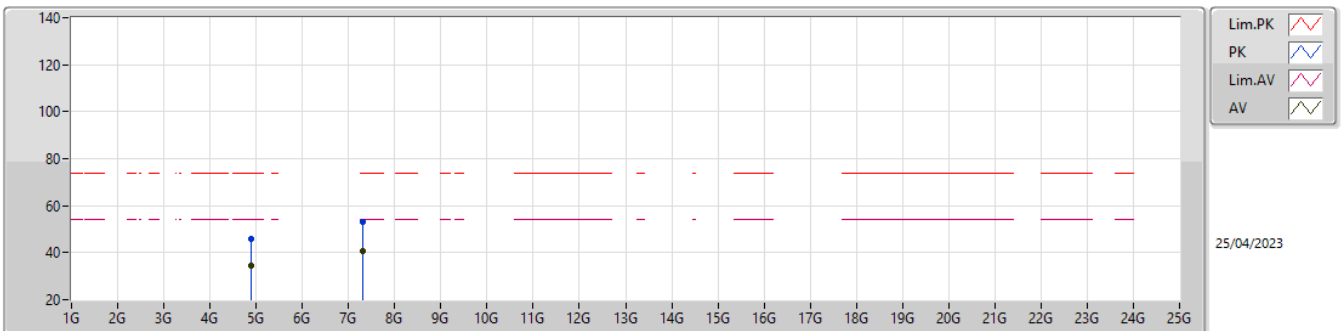
2440MHz_TX



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	4.87978G	32.99	54.00	-21.01	4.68	3	Vertical	176	2.90	28.31	32.62	6.22	34.16
AV	7.32032G	41.12	54.00	-12.88	10.02	3	Vertical	231	1.46	31.10	36.72	7.80	34.50
PK	4.88036G	44.89	74.00	-29.11	4.68	3	Vertical	176	2.90	40.21	32.62	6.22	34.16
PK	7.319G	53.11	74.00	-20.89	10.02	3	Vertical	231	1.46	43.09	36.72	7.80	34.50

2.4-2.4835GHz_BT-LE(1Mbps)

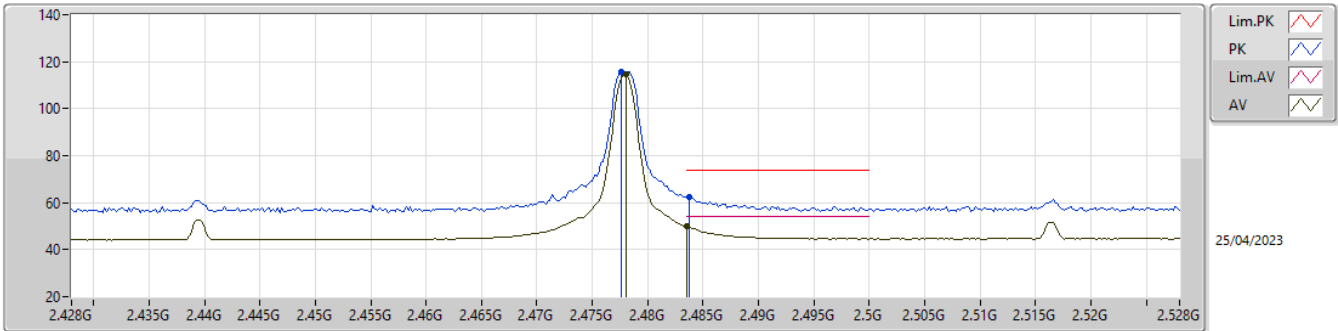
2440MHz_TX



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	4.87986G	34.63	54.00	-19.37	4.68	3	Horizontal	210	2.02	29.95	32.62	6.22	34.16
AV	7.3193G	40.88	54.00	-13.12	10.02	3	Horizontal	274	2.85	30.86	36.72	7.80	34.50
PK	4.88036G	45.81	74.00	-28.19	4.68	3	Horizontal	210	2.02	41.13	32.62	6.22	34.16
PK	7.319G	53.16	74.00	-20.84	10.02	3	Horizontal	274	2.85	43.14	36.72	7.80	34.50

2.4-2.4835GHz_BT-LE(1Mbps)

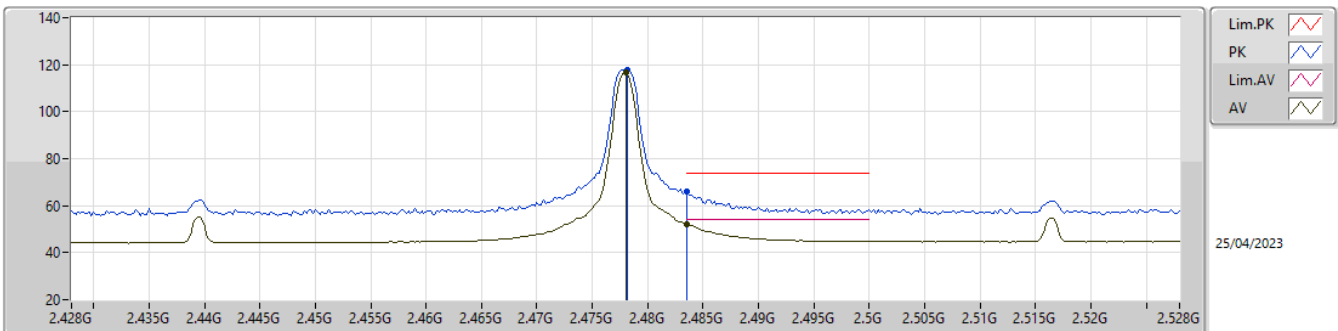
2478MHz_TX



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	2.478G	114.82	Inf	-Inf	32.12	3	Vertical	107	2.10	82.70	27.81	4.31	-
AV	2.4835G	49.88	54.00	-4.12	32.14	3	Vertical	107	2.10	17.74	27.83	4.31	-
PK	2.4776G	115.80	Inf	-Inf	32.12	3	Vertical	107	2.10	83.68	27.81	4.31	-
PK	2.4838G	62.39	74.00	-11.61	32.15	3	Vertical	107	2.10	30.24	27.84	4.31	-

2.4-2.4835GHz_BT-LE(1Mbps)

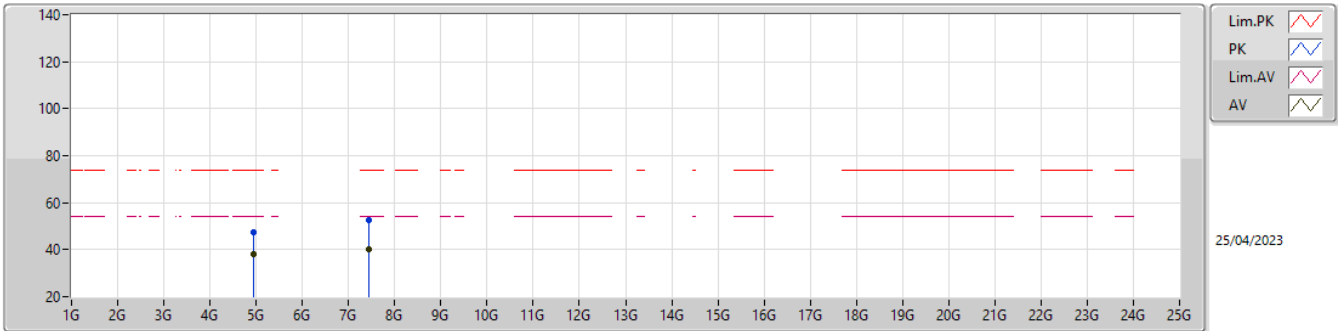
2478MHz_TX



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	2.478G	116.79	Inf	-Inf	32.12	3	Horizontal	212	2.60	84.67	27.81	4.31	-
AV	2.4835G	52.08	54.00	-1.92	32.14	3	Horizontal	212	2.60	19.94	27.83	4.31	-
PK	2.4782G	117.80	Inf	-Inf	32.12	3	Horizontal	212	2.60	85.68	27.81	4.31	-
PK	2.4835G	65.78	74.00	-8.22	32.14	3	Horizontal	212	2.60	33.64	27.83	4.31	-

2.4-2.4835GHz_BT-LE(1Mbps)

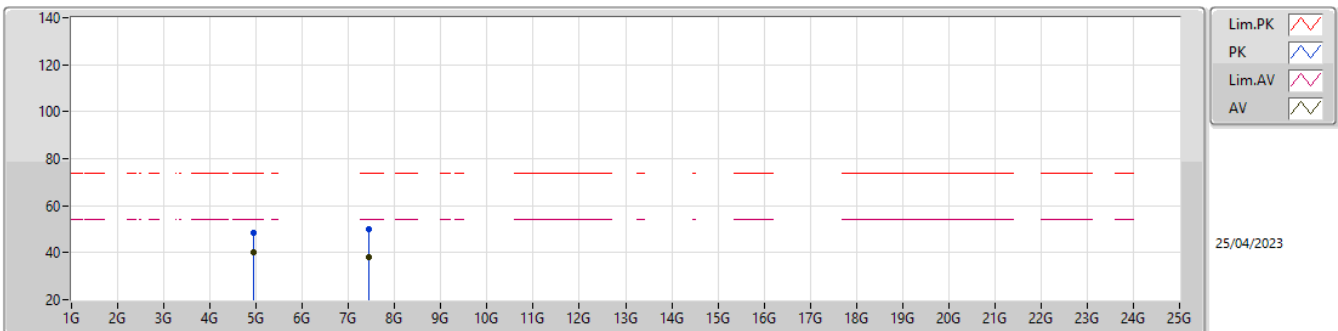
2478MHz_TX



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	4.95588G	38.26	54.00	-15.74	5.15	3	Vertical	171	2.56	33.11	33.02	6.27	34.14
AV	7.43433G	40.30	54.00	-13.70	9.77	3	Vertical	230	1.49	30.53	36.40	7.88	34.51
PK	4.95536G	47.60	74.00	-26.40	5.15	3	Vertical	171	2.56	42.45	33.02	6.27	34.14
PK	7.43444G	52.48	74.00	-21.52	9.77	3	Vertical	230	1.49	42.71	36.40	7.88	34.51

2.4-2.4835GHz_BT-LE(1Mbps)

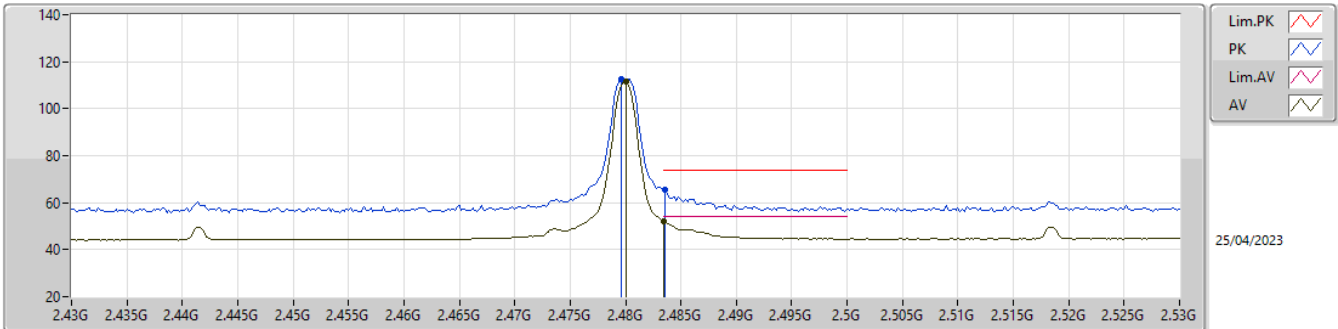
2478MHz_TX



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	4.95586G	40.18	54.00	-13.82	5.15	3	Horizontal	216	1.77	35.03	33.02	6.27	34.14
AV	7.43332G	38.01	54.00	-15.99	9.77	3	Horizontal	357	1.69	28.24	36.40	7.88	34.51
PK	4.95544G	48.44	74.00	-25.56	5.15	3	Horizontal	216	1.77	43.29	33.02	6.27	34.14
PK	7.43464G	50.08	74.00	-23.92	9.77	3	Horizontal	357	1.69	40.31	36.40	7.88	34.51

2.4-2.4835GHz_BT-LE(1Mbps)

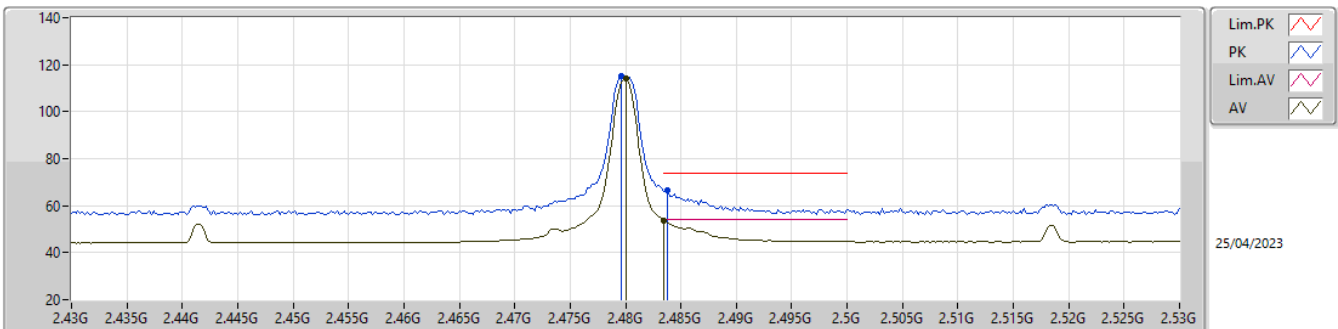
2480MHz_TX



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	111.70	Inf	-Inf	32.13	3	Vertical	108	1.86	79.57	27.82	4.31	-
AV	2.4835G	51.93	54.00	-2.07	32.14	3	Vertical	108	1.86	19.79	27.83	4.31	-
PK	2.4796G	112.67	Inf	-Inf	32.13	3	Vertical	108	1.86	80.54	27.82	4.31	-
PK	2.4836G	65.26	74.00	-8.74	32.14	3	Vertical	108	1.86	33.12	27.83	4.31	-

2.4-2.4835GHz_BT-LE(1Mbps)

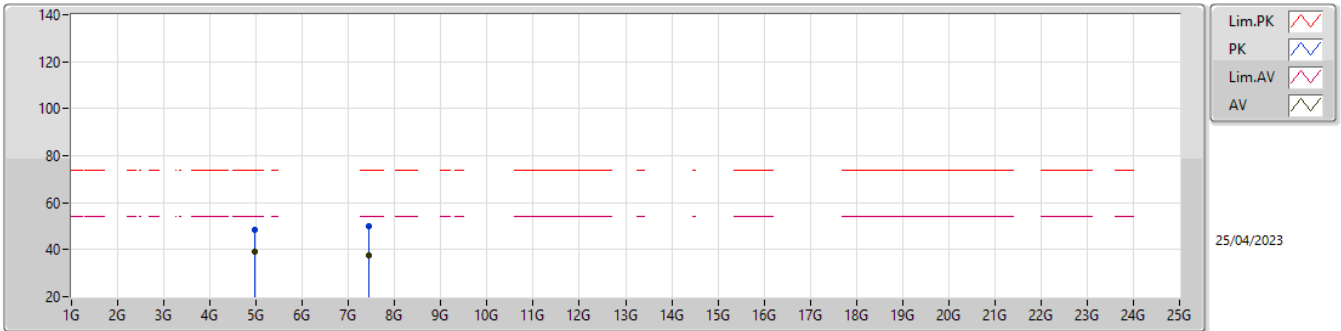
2480MHz_TX



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	113.93	Inf	-Inf	32.13	3	Horizontal	213	2.60	81.80	27.82	4.31	-
AV	2.4835G	53.75	54.00	-0.25	32.14	3	Horizontal	213	2.60	21.61	27.83	4.31	-
PK	2.4796G	114.92	Inf	-Inf	32.13	3	Horizontal	213	2.60	82.79	27.82	4.31	-
PK	2.4838G	66.62	74.00	-7.38	32.15	3	Horizontal	213	2.60	34.47	27.84	4.31	-

2.4-2.4835GHz_BT-LE(1Mbps)

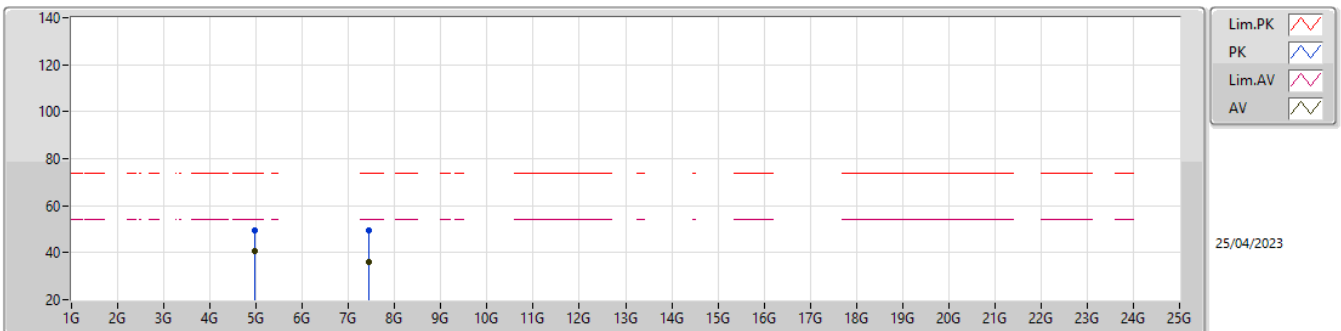
2480MHz_TX



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	4.95988G	39.17	54.00	-14.83	5.18	3	Vertical	172	2.55	33.99	33.04	6.27	34.13
AV	7.44038G	37.72	54.00	-16.28	9.78	3	Vertical	231	1.50	27.94	36.40	7.89	34.51
PK	4.96024G	48.52	74.00	-25.48	5.18	3	Vertical	172	2.55	43.34	33.04	6.27	34.13
PK	7.43898G	50.07	74.00	-23.93	9.78	3	Vertical	231	1.50	40.29	36.40	7.89	34.51

2.4-2.4835GHz_BT-LE(1Mbps)

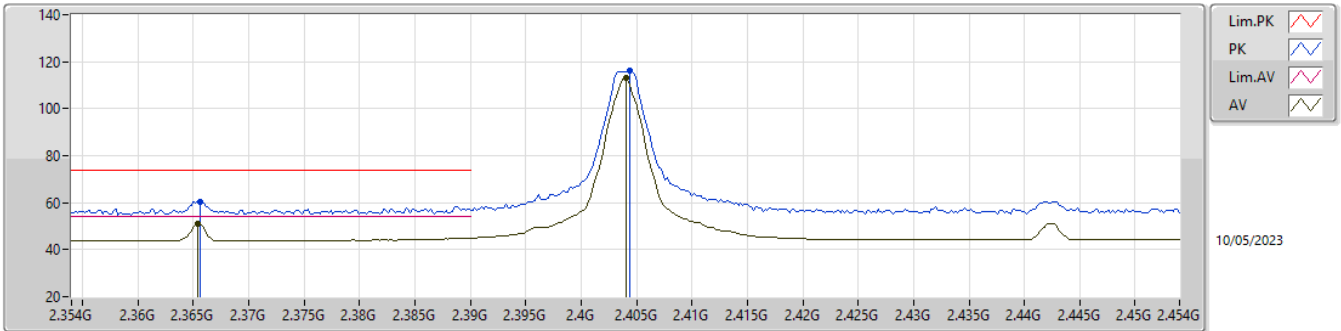
2480MHz_TX



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	4.9599G	40.70	54.00	-13.30	5.18	3	Horizontal	222	1.76	35.52	33.04	6.27	34.13
AV	7.44038G	35.97	54.00	-18.03	9.78	3	Horizontal	355	1.70	26.19	36.40	7.89	34.51
PK	4.95944G	49.32	74.00	-24.68	5.18	3	Horizontal	222	1.76	44.14	33.04	6.27	34.13
PK	7.44038G	49.37	74.00	-24.63	9.78	3	Horizontal	355	1.70	39.59	36.40	7.89	34.51

2.4-2.4835GHz_BT-LE(2Mbps)

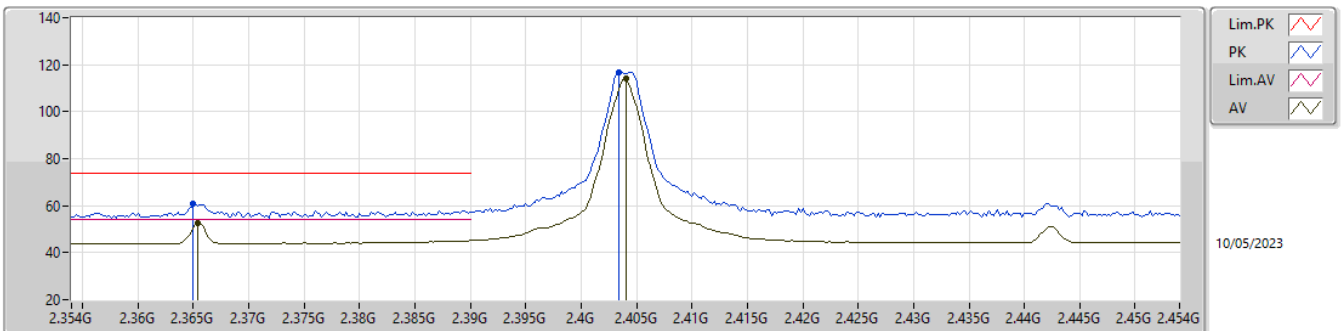
2404MHz_TX



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	2.3654G	51.04	54.00	-2.96	31.55	3	Vertical	111	2.07	19.49	27.32	4.23	-
AV	2.404G	113.13	Inf	-Inf	31.87	3	Vertical	111	2.07	81.26	27.61	4.26	-
PK	2.3656G	60.29	74.00	-13.71	31.55	3	Vertical	111	2.07	28.74	27.32	4.23	-
PK	2.4044G	115.97	Inf	-Inf	31.87	3	Vertical	111	2.07	84.10	27.61	4.26	-

2.4-2.4835GHz_BT-LE(2Mbps)

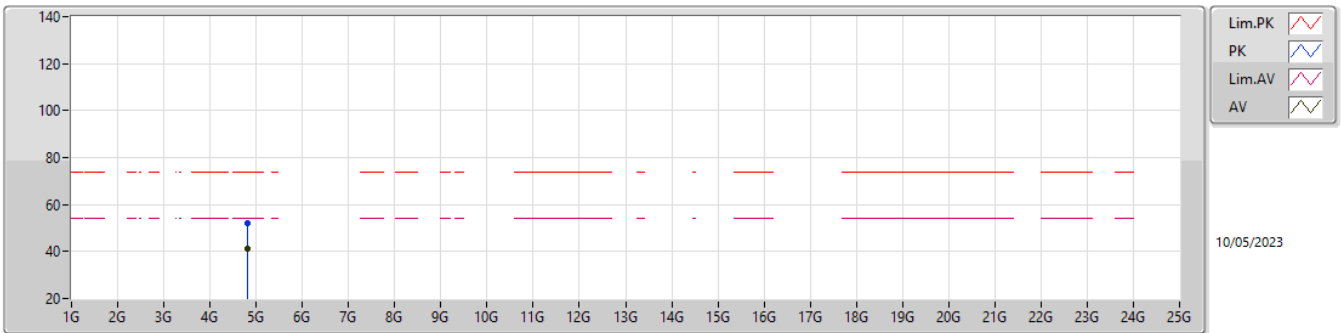
2404MHz_TX



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	2.3654G	52.70	54.00	-1.30	31.55	3	Horizontal	185	2.26	21.15	27.32	4.23	-
AV	2.404G	113.94	Inf	-Inf	31.87	3	Horizontal	185	2.26	82.07	27.61	4.26	-
PK	2.365G	60.97	74.00	-13.03	31.55	3	Horizontal	185	2.26	29.42	27.32	4.23	-
PK	2.4034G	116.75	Inf	-Inf	31.87	3	Horizontal	185	2.26	84.88	27.61	4.26	-

2.4-2.4835GHz_BT-LE(2Mbps)

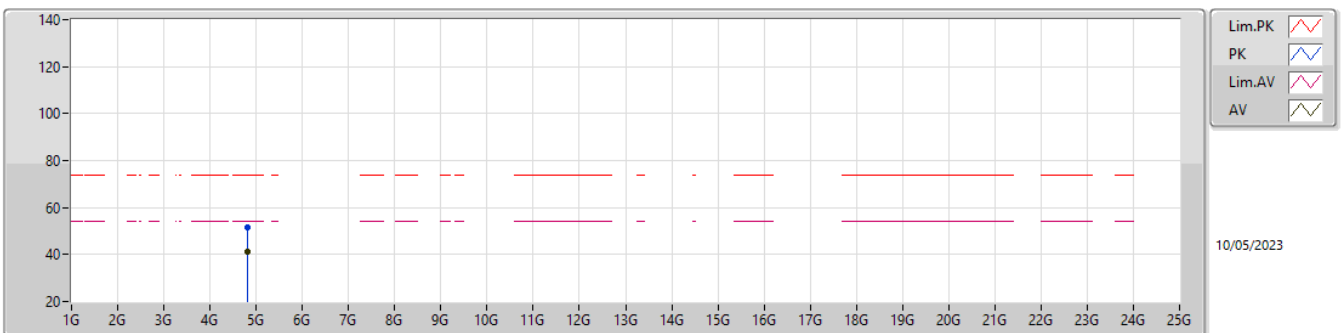
2404MHz_TX



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	4.80886G	41.18	54.00	-12.82	4.23	3	Vertical	179	2.69	36.95	32.25	6.17	34.19
PK	4.80703G	51.86	74.00	-22.14	4.21	3	Vertical	179	2.69	47.65	32.24	6.16	34.19

2.4-2.4835GHz_BT-LE(2Mbps)

2404MHz_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	4.80835G	40.98	54.00	-13.02	4.23	3	Horizontal	215	2.76	36.75	32.25	6.17	34.19
PK	4.80899G	51.39	74.00	-22.61	4.23	3	Horizontal	215	2.76	47.16	32.25	6.17	34.19



Summary

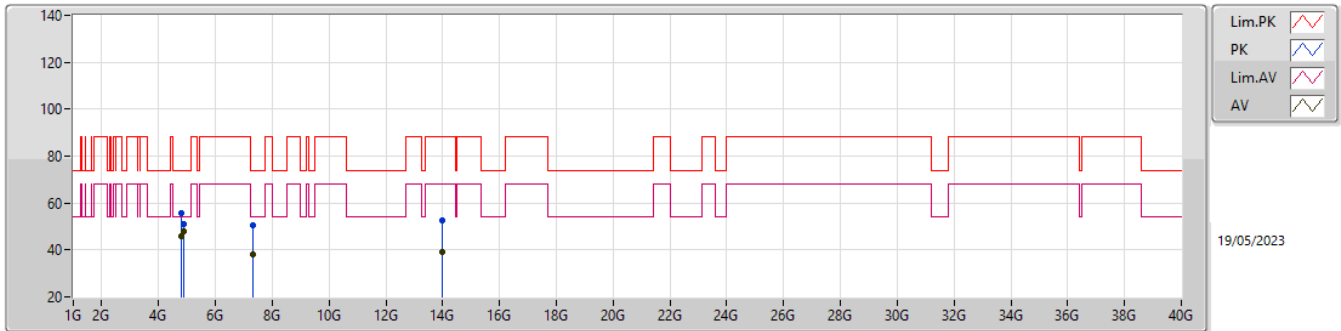
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.87399G	53.11	54.00	-0.89	Horizontal



Result

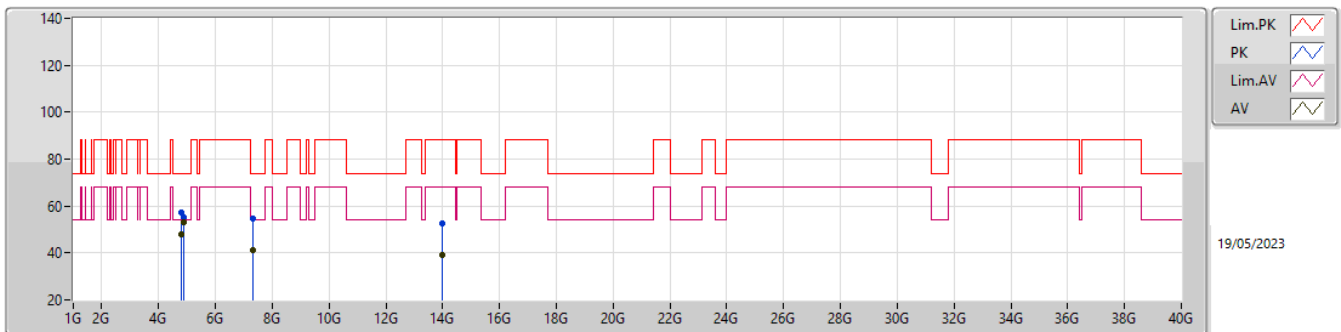
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	4.80748G	46.12	54.00	-7.88	4.22	3	Vertical	156	2.57
Mode 1	Pass	AV	4.87395G	47.70	54.00	-6.30	4.64	3	Vertical	147	2.92
Mode 1	Pass	AV	7.30948G	38.36	54.00	-15.64	10.06	3	Vertical	174	1.66
Mode 1	Pass	AV	13.97604G	39.01	68.20	-29.19	18.57	3	Vertical	167	1.38
Mode 1	Pass	PK	4.80885G	55.87	74.00	-18.13	4.23	3	Vertical	156	2.57
Mode 1	Pass	PK	4.87398G	51.28	74.00	-22.72	4.64	3	Vertical	147	2.92
Mode 1	Pass	PK	7.3136G	50.70	74.00	-23.30	10.05	3	Vertical	174	1.66
Mode 1	Pass	PK	13.96482G	52.33	88.20	-35.87	18.58	3	Vertical	167	1.38
Mode 1	Pass	AV	4.80751G	47.79	54.00	-6.21	4.23	3	Horizontal	209	1.86
Mode 1	Pass	AV	4.87399G	53.11	54.00	-0.89	4.64	3	Horizontal	124	1.25
Mode 1	Pass	AV	7.3035G	41.17	54.00	-12.83	10.08	3	Horizontal	95	1.72
Mode 1	Pass	AV	13.96825G	39.12	68.20	-29.08	18.58	3	Horizontal	158	1.50
Mode 1	Pass	PK	4.80688G	57.46	74.00	-16.54	4.21	3	Horizontal	209	1.86
Mode 1	Pass	PK	4.87402G	55.22	74.00	-18.78	4.64	3	Horizontal	124	1.25
Mode 1	Pass	PK	7.30986G	54.79	74.00	-19.21	10.06	3	Horizontal	95	1.72
Mode 1	Pass	PK	13.9659G	52.61	88.20	-35.59	18.58	3	Horizontal	158	1.50

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)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80748G	46.12	54.00	-7.88	4.22	3	Vertical	156	2.57	-	41.90	32.24	6.17	34.19
AV	4.87395G	47.70	54.00	-6.30	4.64	3	Vertical	147	2.92	-	43.06	32.60	6.21	34.17
AV	7.30948G	38.36	54.00	-15.64	10.06	3	Vertical	174	1.66	-	28.30	36.76	7.80	34.50
AV	13.97604G	39.01	68.20	-29.19	18.57	3	Vertical	167	1.38	-	20.44	39.80	11.21	32.44
PK	4.80885G	55.87	74.00	-18.13	4.23	3	Vertical	156	2.57	-	51.64	32.25	6.17	34.19
PK	4.87398G	51.28	74.00	-22.72	4.64	3	Vertical	147	2.92	-	46.64	32.60	6.21	34.17
PK	7.3136G	50.70	74.00	-23.30	10.05	3	Vertical	174	1.66	-	40.65	36.75	7.80	34.50
PK	13.96482G	52.33	88.20	-35.87	18.58	3	Vertical	167	1.38	-	33.75	39.80	11.21	32.43

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)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80751G	47.79	54.00	-6.21	4.23	3	Horizontal	209	1.86	-	43.56	32.25	6.17	34.19
AV	4.87399G	53.11	54.00	-0.89	4.64	3	Horizontal	124	1.25	-	48.47	32.60	6.21	34.17
AV	7.3035G	41.17	54.00	-12.83	10.08	3	Horizontal	95	1.72	-	31.09	36.79	7.79	34.50
AV	13.96825G	39.12	68.20	-29.08	18.58	3	Horizontal	158	1.50	-	20.54	39.80	11.21	32.43
PK	4.80688G	57.46	74.00	-16.54	4.21	3	Horizontal	209	1.86	-	53.25	32.24	6.16	34.19
PK	4.87402G	55.22	74.00	-18.78	4.64	3	Horizontal	124	1.25	-	50.58	32.60	6.21	34.17
PK	7.30986G	54.79	74.00	-19.21	10.06	3	Horizontal	95	1.72	-	44.73	36.76	7.80	34.50
PK	13.9659G	52.61	88.20	-35.59	18.58	3	Horizontal	158	1.50	-	34.03	39.80	11.21	32.43