

FCC Radio Test Report

FCC ID : H8NMAX2V1K
Equipment : WiFi 6E MDU Router
Model Name : MAX2V1K
Applicant : ASKEY COMPUTER CORPORATION
10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City, Taiwan
Manufacturer : ASKEY COMPUTER CORPORATION
10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Mar. 09, 2023, and testing was started from Mar. 24, 2023 and completed on Apr. 03, 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: Ben Tesng

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



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PHOTOGRAPHS OF EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FR330713AL	01	Initial issue of report	Jul. 12, 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: Ryan 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(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

- ◆ 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
1	adant	STAR4245	PIFA-Like	I-PEX	2.4G
2	adant	STAR4245	PIFA-Like	I-PEX	2.4G
3	adant	STAR4245	PIFA-Like	I-PEX	2.4G
4	adant	STAR4245	PIFA-Like	I-PEX	2.4G
5	adant	STAR4245	PIFA-Like	I-PEX	5G
6	adant	STAR4245	PIFA-Like	I-PEX	5G
7	adant	STAR4245	PIFA-Like	I-PEX	5G
8	adant	STAR4245	PIFA-Like	I-PEX	5G
9	Galtronics	02102475-07795-1	PCB	I-PEX	6G
10	Galtronics	02102475-07795-2	PCB	I-PEX	6G
11	Galtronics	02102475-07795-3	PCB	I-PEX	6G
12	Galtronics	02102475-07795-4	PCB	I-PEX	6G
13	Galtronics	02102073-07795-1	PCB	I-PEX	BT+Thread
14	Galtronics	02102073-07795-2	PCB	I-PEX	Thread



Ant.	Port	Gain (dBi)							
		2.4G	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3	U-NII-4	BT	Thread
1	1	4.7	-	-	-	-	-	-	-
2	2	5.8	-	-	-	-	-	-	-
3	3	5.5	-	-	-	-	-	-	-
4	4	4.8	-	-	-	-	-	-	-
5	1	-	5.5	5.5	5.3	4.9	4.9	-	-
6	2	-	5.8	5.8	5.9	5.5	5.5	-	-
7	3	-	5.8	5.8	5.9	5.7	5.7	-	-
8	4	-	5.6	5.6	5.0	5.4	5.4	-	-
Ant.	Port	-	-	U-NII-5	U-NII-6	U-NII-7	U-NII-8		
9	1	-	-	5.555	5.539	5.259	4.785	-	-
10	2	-	-	4.931	4.494	3.604	4.123	-	-
11	3	-	-	5.382	5.247	4.903	4.711	-	-
12	4	-	-	3.534	3.451	4.063	4.325	-	-
13	1	-	-	-	-	-	-	3.355	3.355
14	2	-	-	-	-	-	-	-	4.950

Note 1: The EUT has fourteen antennas.

For 2.4GHz function:

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

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

For 5GHz function:

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

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

For 6GHz function:

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

Ant. 9 (port 1), Ant. 10 (port 2), Ant. 11 (port 3) and Ant. 12 (port 4) could transmit/receive simultaneously.

For BT function:

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

Ant. 13 (port 1) could transmit/receive simultaneously.

For Thread function:

For IEEE 802.15.4 Thread mode (2TX/2RX)

Ant. 13 (port 1) and Ant. 14 (port 2) could transmit/receive simultaneously.

Note 2: Directional gain information

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

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(1Mbps)	0.69	1.61	431.25u	3k
BT-LE(2Mbps)	0.394	4.05	246.25u	10k

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

1.2 Testing Applied Standards

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

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

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

- ◆ KDB 558074 D01 v05r02
- ◆ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/>	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)		
		TEL: 886-3-327-3456	FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	22.6~23.4°C / 54.7~56.3%	03/Apr/2023
RF Conducted	TH07-HY	Xie Xun	23.7~24.6°C / 53~58%	29/Mar/2023
<input checked="" type="checkbox"/>	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH09-HY	Henry Ho	20.8~22.1°C / 54~ 61%	24/Mar/2023~29/Mar/2023
Radiated (Co-location)	03CH09-HY	Henry Ho	22.2~23.4°C / 50~52%	07/Apr/2023



1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%



2 Test Configuration of EUT




2.1 Test Channel Mode

Test Software Version	Dos 6.1
Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	14
2440MHz	14
2480MHz	10
BT-LE(2Mbps)	-
2402MHz	14
2440MHz	14
2480MHz	0a

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	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	2.4G+5G+6E+BT
2	2.4G+5G+6E+Thread
Refer to Sporton Test Report No.: FA330713 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 Accessories

Accessories				
PoE	Brand Name	DELTA	Model Name	ADH-45AR N
	Power Rating	I/P: 100 - 240Vac, 1.5A, O/P: 56.0Vdc, 0.805A		

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

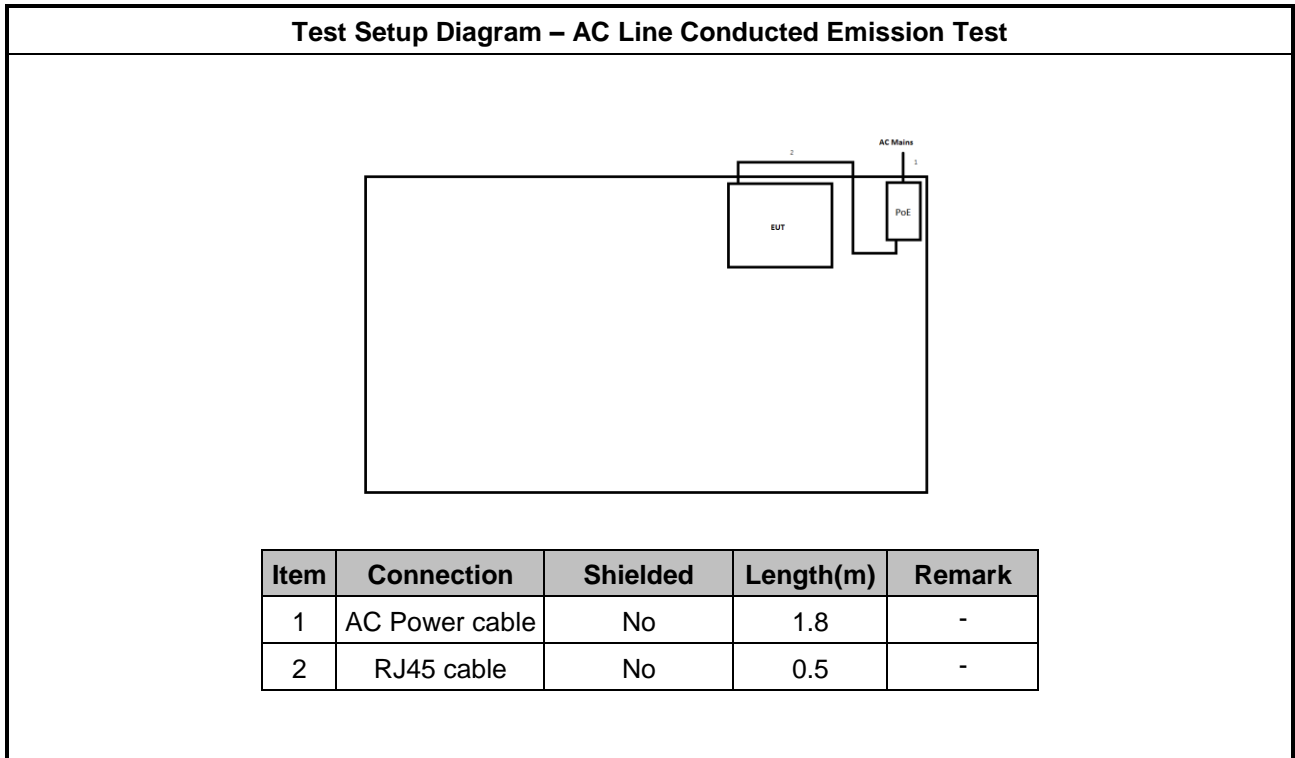
2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 cable	Power sync	CAT-6E-10	-	-
2	AC Power cable	I-SHENG	AC CORD 600mm	-	-
3	RJ45 cable	Power sync	CAT-6E-10	-	-

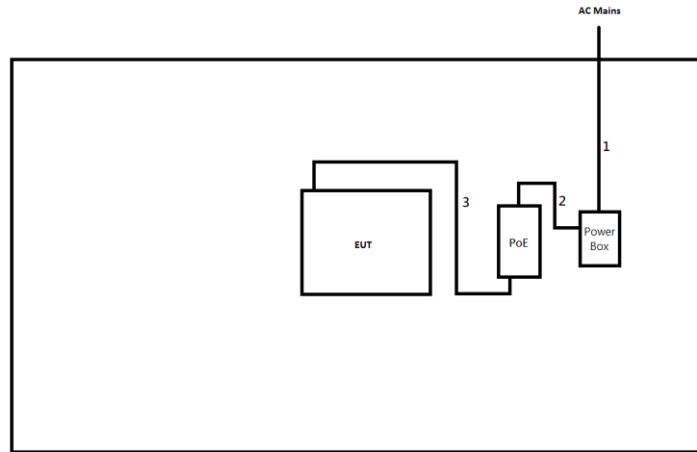
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 cable	Power sync	CAT-6E-10	-	-
2	AC Power cable	I-SHENG	AC CORD 600mm	-	-
3	RJ45 cable	Power sync	CAT-6E-10	-	-

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	AC Power cable	No	1.8	-
3	RJ45 cable	No	1.5	-

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

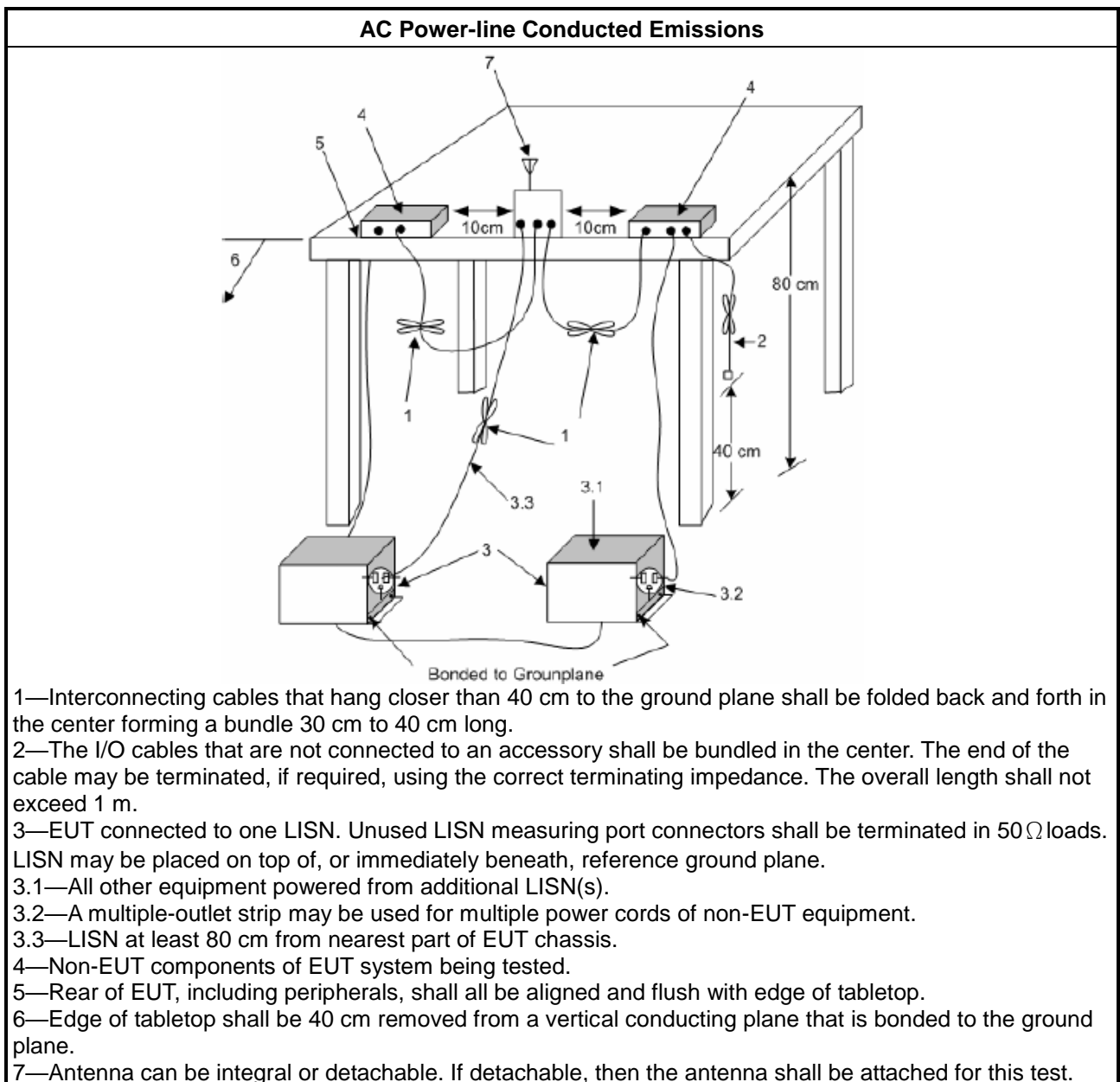
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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:
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz.

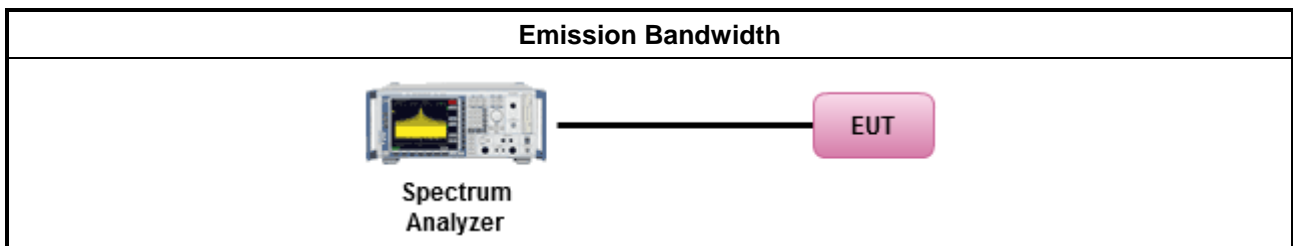
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

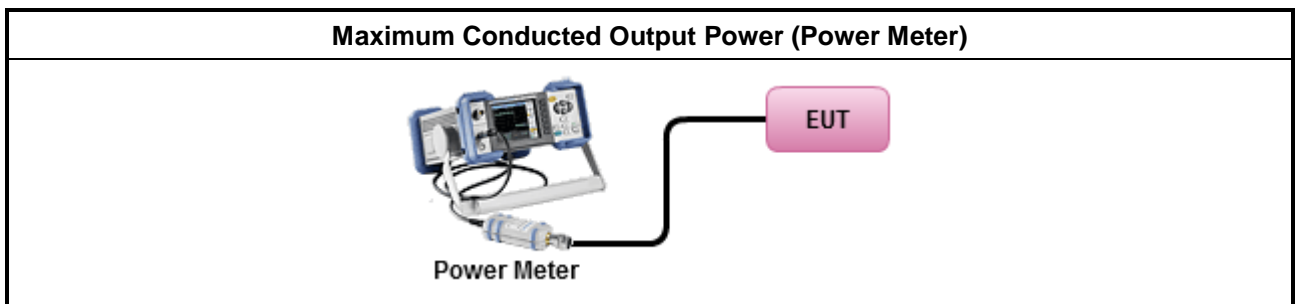
3.3.2 Measuring Instruments

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

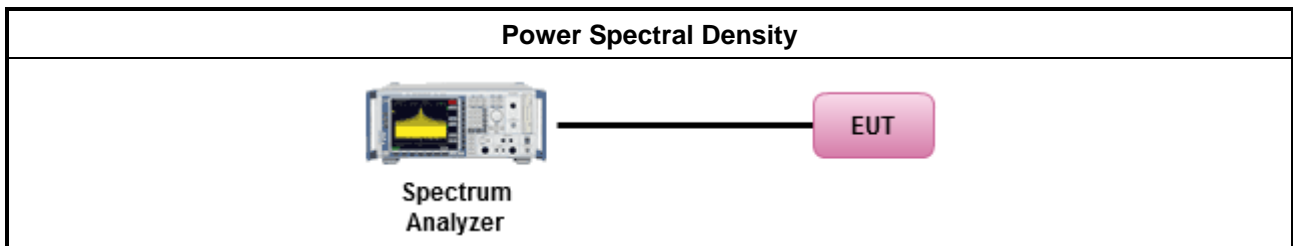
3.4.2 Measuring Instruments

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.

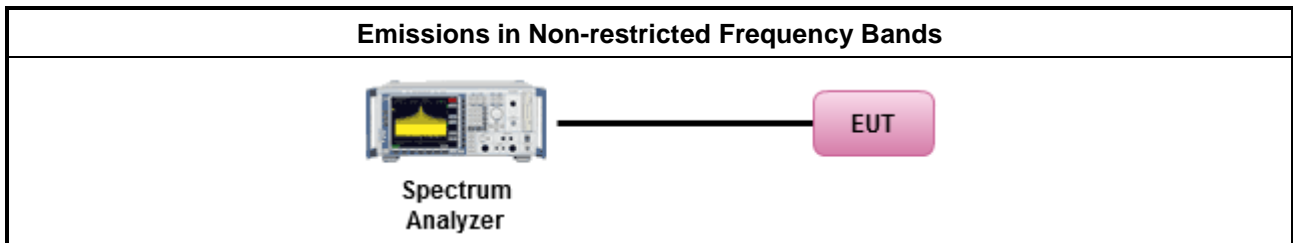
3.5.2 Measuring Instruments

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

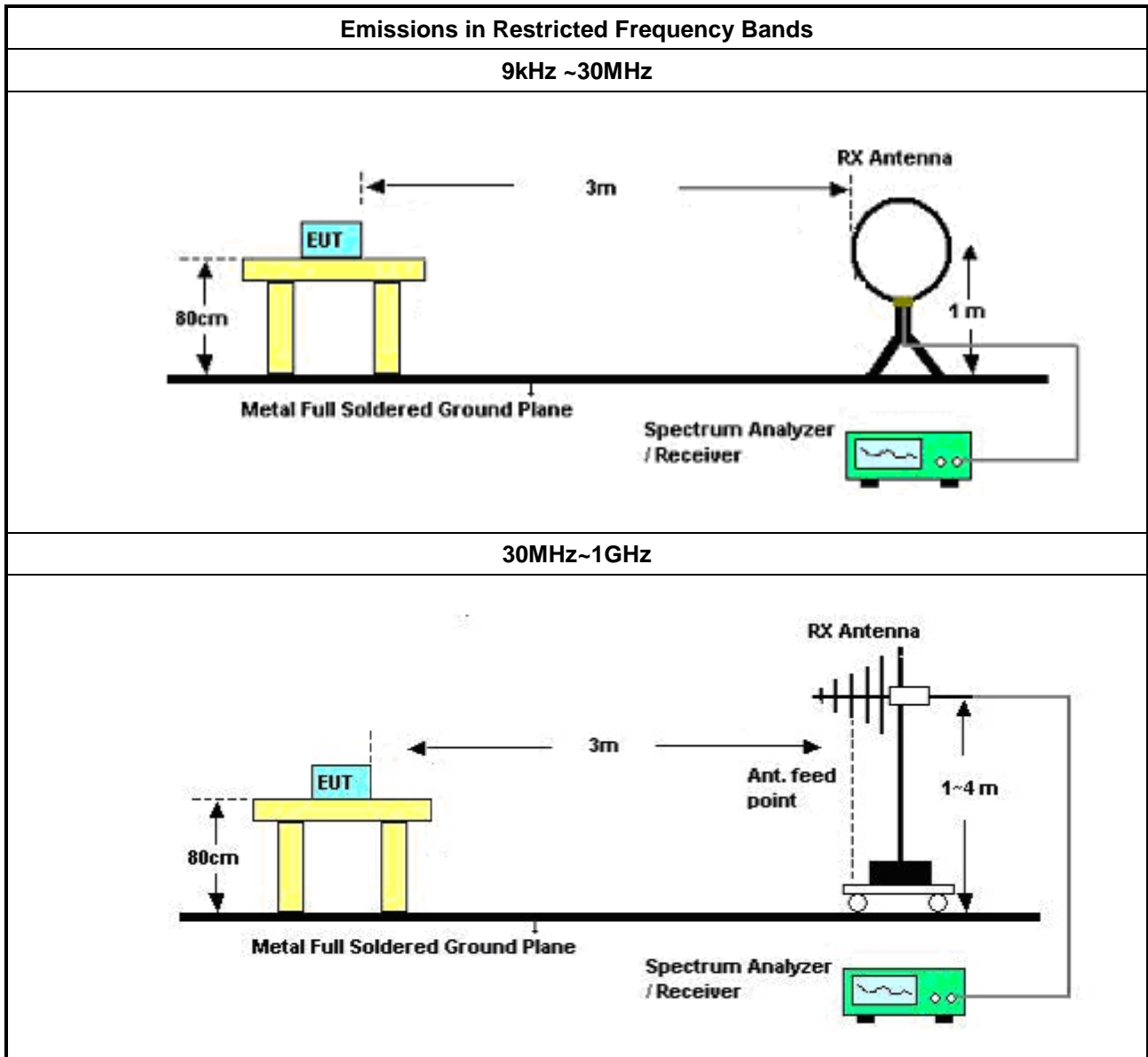
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel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

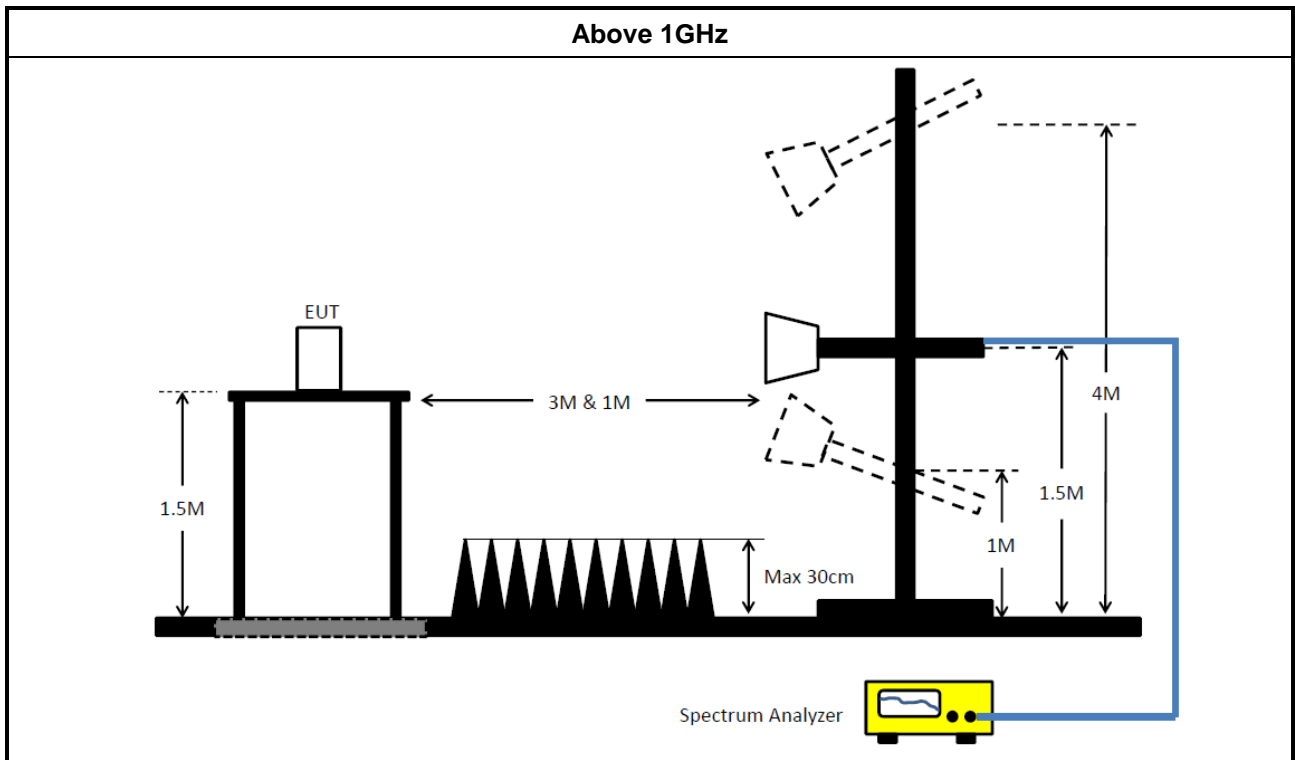
3.6.4 Measurement Results Calculation

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	13/May/2022	12/May/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	101515	10Hz~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	V5.11.1	N/A	N/A	N/A	N/A



Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz~1GHz 3m	15/Mar/2023	14/Mar/2024
Site V.S.W.R	Riken	SAC-3M	03CH09-HY	1GHz~18GHz 3m	14/Mar/2023	13/Mar/2024
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	11/Aug/2022	10/Aug/2023
Amplifier	EMC	EMC9135	980232	9kHz~1GHz	08/Apr/2022	07/Apr/2023
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	22/Jul/2022	21/Jul/2023
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MT J6102-05	35418 & 3	30MHz~1GHz	28/Aug/2022	27/Aug/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	30/Dec/2022	29/Dec/2023
RF Cable-R03m	Jye Bao	RG142	03CH09-cable-01	9kHz~1GHz	21/Feb/2023	20/Feb/2024
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-02	1GHz~40GHz	21/Feb/2023	20/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	14/May/2022	13/May/2023
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060874	18GHz ~ 40GHz	23/Aug/2022	22/Aug/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	23/Mar/2023	22/Mar/2024
EMI Test Receiver	R&S	ESR	102052	9kHz~3.6GHz	30/May/2022	29/May/2023
SENSE_15407_FS	Sporton	Sporton	V5.10.8.9	NA	NA	NA

Instrument for Radiated Test (Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Site V.S.W.R	Riken	SAC-3M	03CH09-HY	1GHz~18GHz 3m	14/Mar/2023	13/Mar/2024
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	11/Aug/2022	10/Aug/2023
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	22/Jul/2022	21/Jul/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	30/Dec/2022	29/Dec/2023
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-02	1GHz~40GHz	21/Feb/2023	20/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	14/May/2022	13/May/2023
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	16/Mar/2023	15/Mar/2024
SENSE-EMI	Sporton	Sporton	V5.11.3	NA	NA	NA



Summary

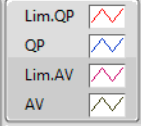
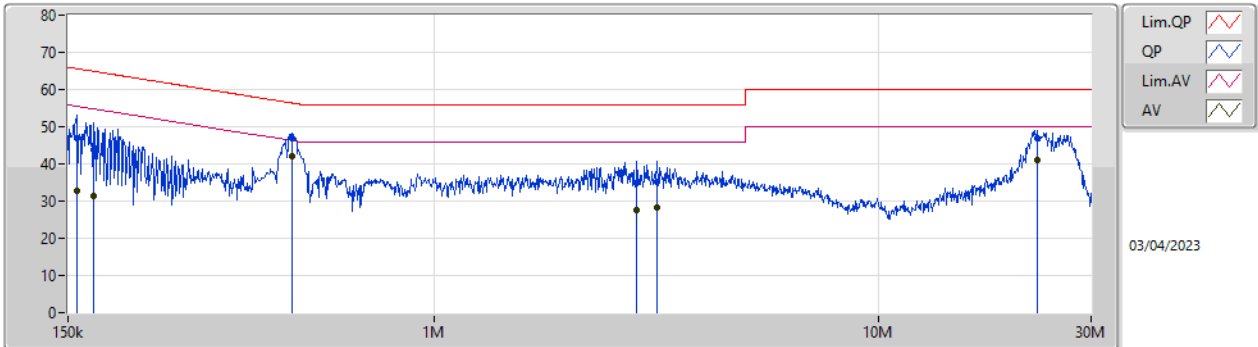
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	479.294k	41.95	46.34	-4.39	Line



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	156.734k	46.75	65.64	-18.89	Line	-
Mode 1	Pass	AV	156.734k	32.67	55.64	-22.97	Line	-
Mode 1	Pass	QP	171.806k	43.96	64.87	-20.91	Line	-
Mode 1	Pass	AV	171.806k	31.29	54.87	-23.58	Line	-
Mode 1	Pass	QP	479.294k	46.99	56.34	-9.35	Line	-
Mode 1	Pass	AV	479.294k	41.95	46.34	-4.39	Line	-
Mode 1	Pass	QP	2.855M	34.81	56.00	-21.19	Line	-
Mode 1	Pass	AV	2.855M	27.55	46.00	-18.45	Line	-
Mode 1	Pass	QP	3.167M	35.01	56.00	-20.99	Line	-
Mode 1	Pass	AV	3.167M	28.21	46.00	-17.79	Line	-
Mode 1	Pass	QP	22.666M	47.02	60.00	-12.98	Line	-
Mode 1	Pass	AV	22.666M	41.04	50.00	-8.96	Line	-
Mode 1	Pass	QP	155.487k	47.60	65.69	-18.09	Neutral	-
Mode 1	Pass	AV	155.487k	32.05	55.69	-23.64	Neutral	-
Mode 1	Pass	QP	333.299k	44.79	59.37	-14.58	Neutral	-
Mode 1	Pass	AV	333.299k	40.87	49.37	-8.50	Neutral	-
Mode 1	Pass	QP	477.384k	26.29	56.38	-30.09	Neutral	-
Mode 1	Pass	AV	477.384k	20.01	46.38	-26.37	Neutral	-
Mode 1	Pass	QP	2.798M	31.89	56.00	-24.11	Neutral	-
Mode 1	Pass	AV	2.798M	26.10	46.00	-19.90	Neutral	-
Mode 1	Pass	QP	3.513M	31.56	56.00	-24.44	Neutral	-
Mode 1	Pass	AV	3.513M	25.21	46.00	-20.79	Neutral	-
Mode 1	Pass	QP	23.778M	46.02	60.00	-13.98	Neutral	-
Mode 1	Pass	AV	23.778M	41.57	50.00	-8.43	Neutral	-

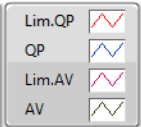
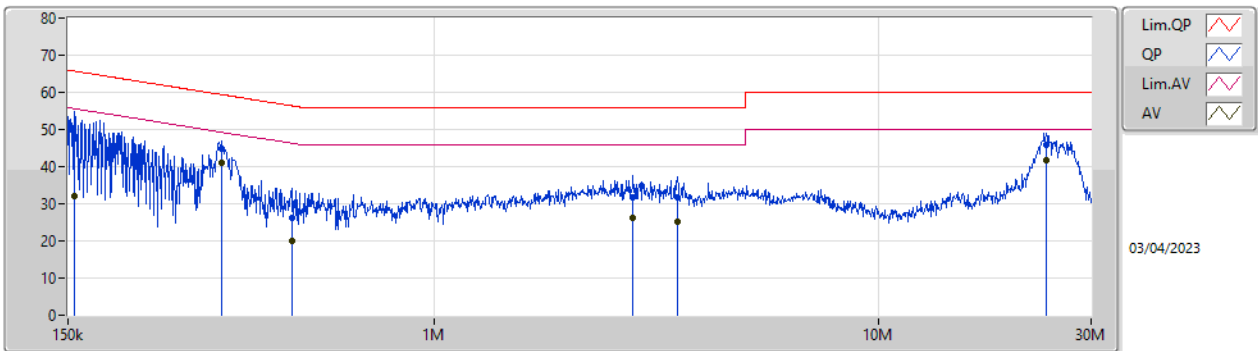
Conducted Emissions at Powerline_Mode 1



03/04/2023

Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	156.734k	46.75	65.64	-18.89	19.61	Line	-	27.14	9.65	0.03	9.93
AV	156.734k	32.67	55.64	-22.97	19.61	Line	-	13.06	9.65	0.03	9.93
QP	171.806k	43.96	64.87	-20.91	19.61	Line	-	24.35	9.65	0.03	9.93
AV	171.806k	31.29	54.87	-23.58	19.61	Line	-	11.68	9.65	0.03	9.93
QP	479.294k	46.99	56.34	-9.35	19.64	Line	-	27.35	9.64	0.04	9.96
AV	479.294k	41.95	46.34	-4.39	19.64	Line	-	22.31	9.64	0.04	9.96
QP	2.855M	34.81	56.00	-21.19	19.73	Line	-	15.08	9.69	0.11	9.93
AV	2.855M	27.55	46.00	-18.45	19.73	Line	-	7.82	9.69	0.11	9.93
QP	3.167M	35.01	56.00	-20.99	19.73	Line	-	15.28	9.69	0.11	9.93
AV	3.167M	28.21	46.00	-17.79	19.73	Line	-	8.48	9.69	0.11	9.93
QP	22.666M	47.02	60.00	-12.98	20.05	Line	-	26.97	9.79	0.29	9.97
AV	22.666M	41.04	50.00	-8.96	20.05	Line	-	20.99	9.79	0.29	9.97

Conducted Emissions at Powerline_Mode 1



03/04/2023

Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	155.487k	47.60	65.69	-18.09	19.59	Neutral	-	28.01	9.63	0.03	9.93
AV	155.487k	32.05	55.69	-23.64	19.59	Neutral	-	12.46	9.63	0.03	9.93
QP	333.299k	44.79	59.37	-14.58	19.62	Neutral	-	25.17	9.63	0.04	9.95
AV	333.299k	40.87	49.37	-8.50	19.62	Neutral	-	21.25	9.63	0.04	9.95
QP	477.384k	26.29	56.38	-30.09	19.63	Neutral	-	6.66	9.63	0.04	9.96
AV	477.384k	20.01	46.38	-26.37	19.63	Neutral	-	0.38	9.63	0.04	9.96
QP	2.798M	31.89	56.00	-24.11	19.71	Neutral	-	12.18	9.67	0.10	9.94
AV	2.798M	26.10	46.00	-19.90	19.71	Neutral	-	6.39	9.67	0.10	9.94
QP	3.513M	31.56	56.00	-24.44	19.73	Neutral	-	11.83	9.68	0.12	9.93
AV	3.513M	25.21	46.00	-20.79	19.73	Neutral	-	5.48	9.68	0.12	9.93
QP	23.778M	46.02	60.00	-13.98	20.28	Neutral	-	25.74	10.01	0.30	9.97
AV	23.778M	41.57	50.00	-8.43	20.28	Neutral	-	21.29	10.01	0.30	9.97



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	635k	1.029M	1M03F1D	633.75k	1.027M
BT-LE(2Mbps)	1.09M	2.061M	2M06F1D	1.085M	2.044M

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	635k	1.028M
2440MHz	Pass	500k	633.75k	1.027M
2480MHz	Pass	500k	635k	1.029M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.09M	2.044M
2440MHz	Pass	500k	1.09M	2.049M
2480MHz	Pass	500k	1.085M	2.061M

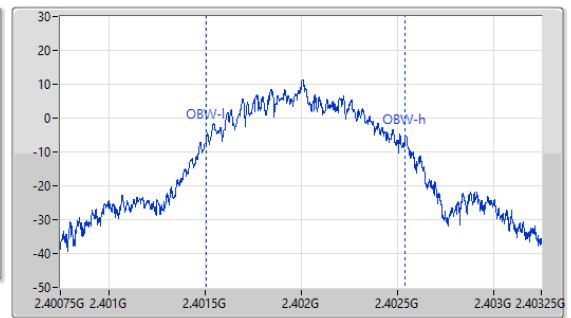
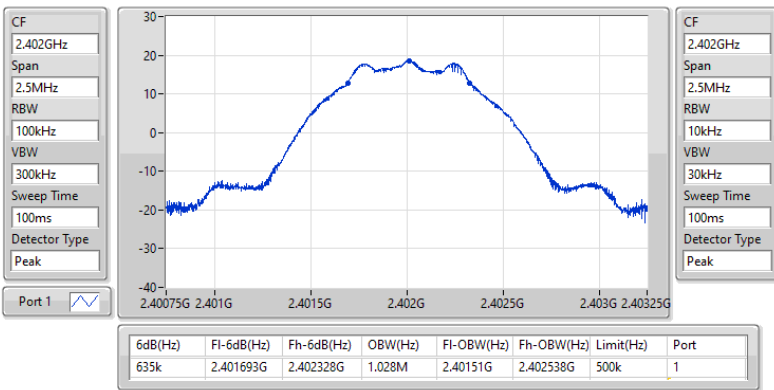
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2402MHz

29/03/2023

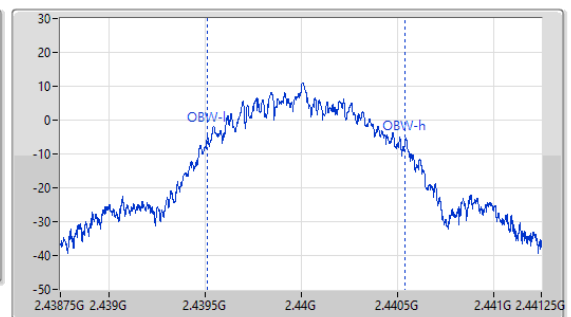
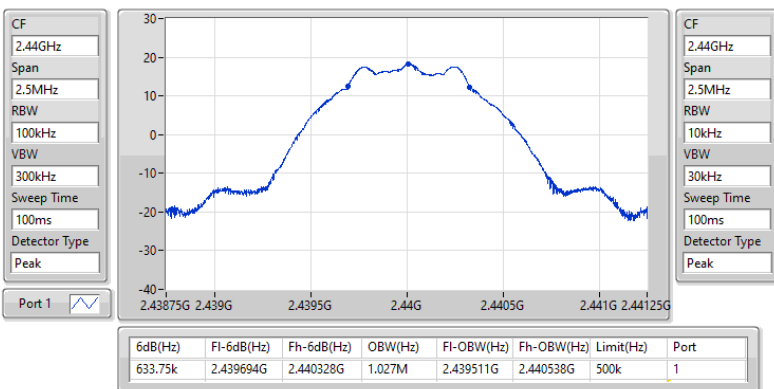


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2440MHz

29/03/2023

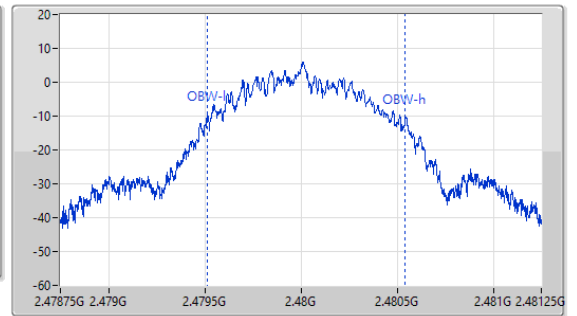
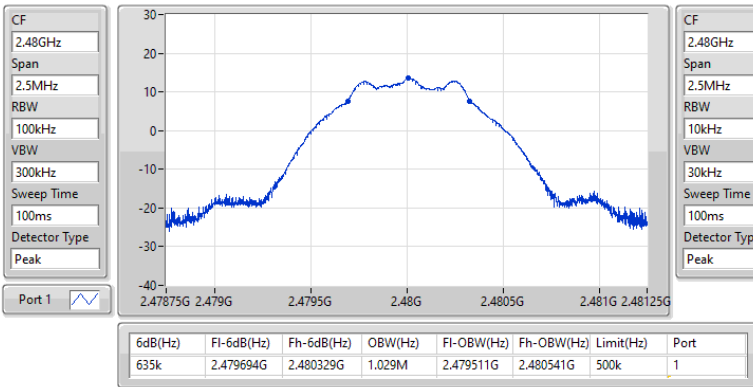


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2480MHz

29/03/2023

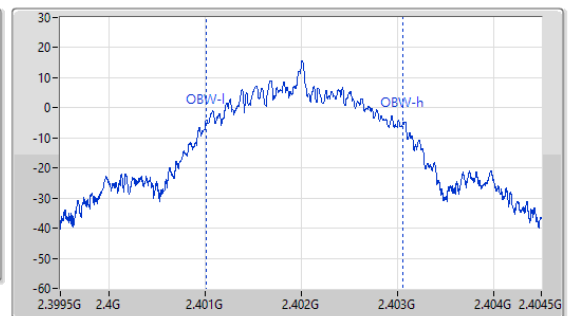
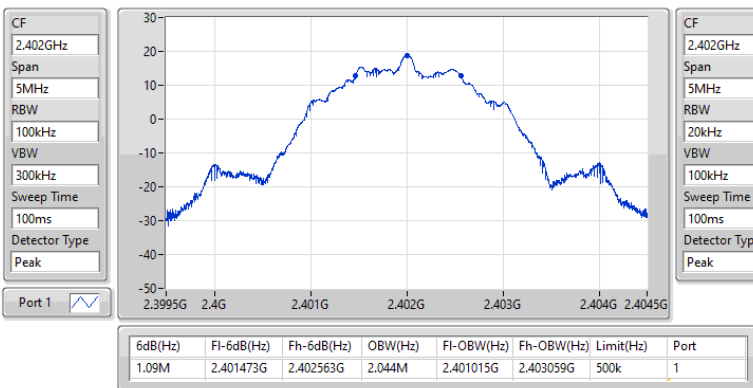


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2402MHz

29/03/2023

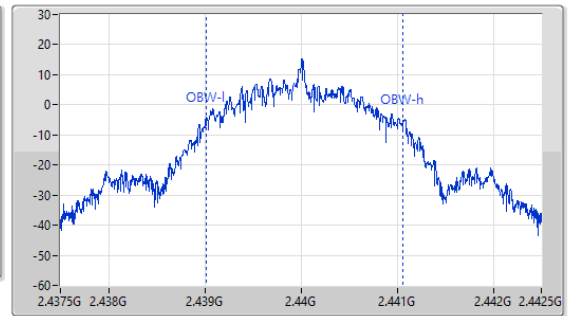
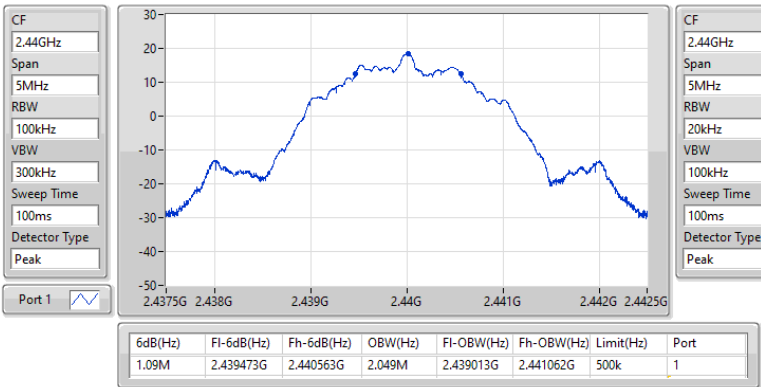


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2440MHz

29/03/2023

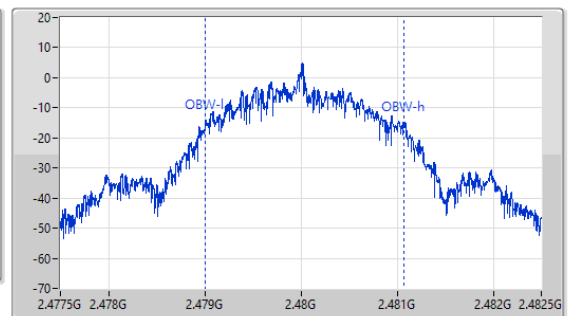
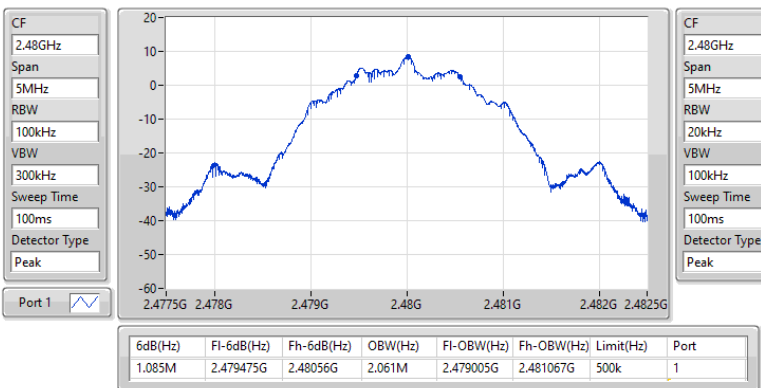


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2480MHz

29/03/2023





Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	18.43	0.06966
BT-LE(2Mbps)	18.26	0.06699



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.355	18.43	30.00
2440MHz	Pass	3.355	18.17	30.00
2480MHz	Pass	3.355	13.41	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.355	18.26	30.00
2440MHz	Pass	3.355	18.01	30.00
2480MHz	Pass	3.355	7.94	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	3.61
BT-LE(2Mbps)	3.46

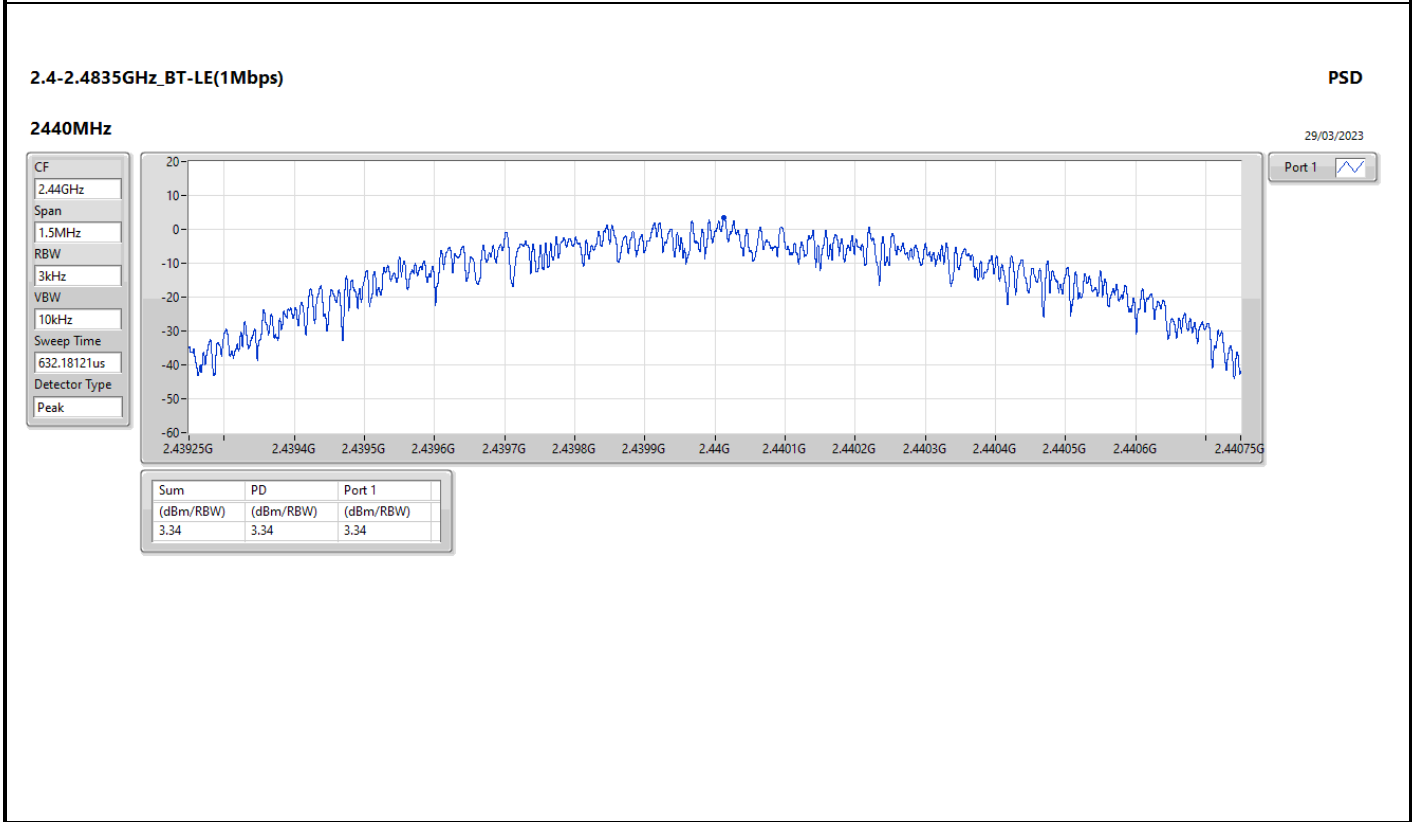
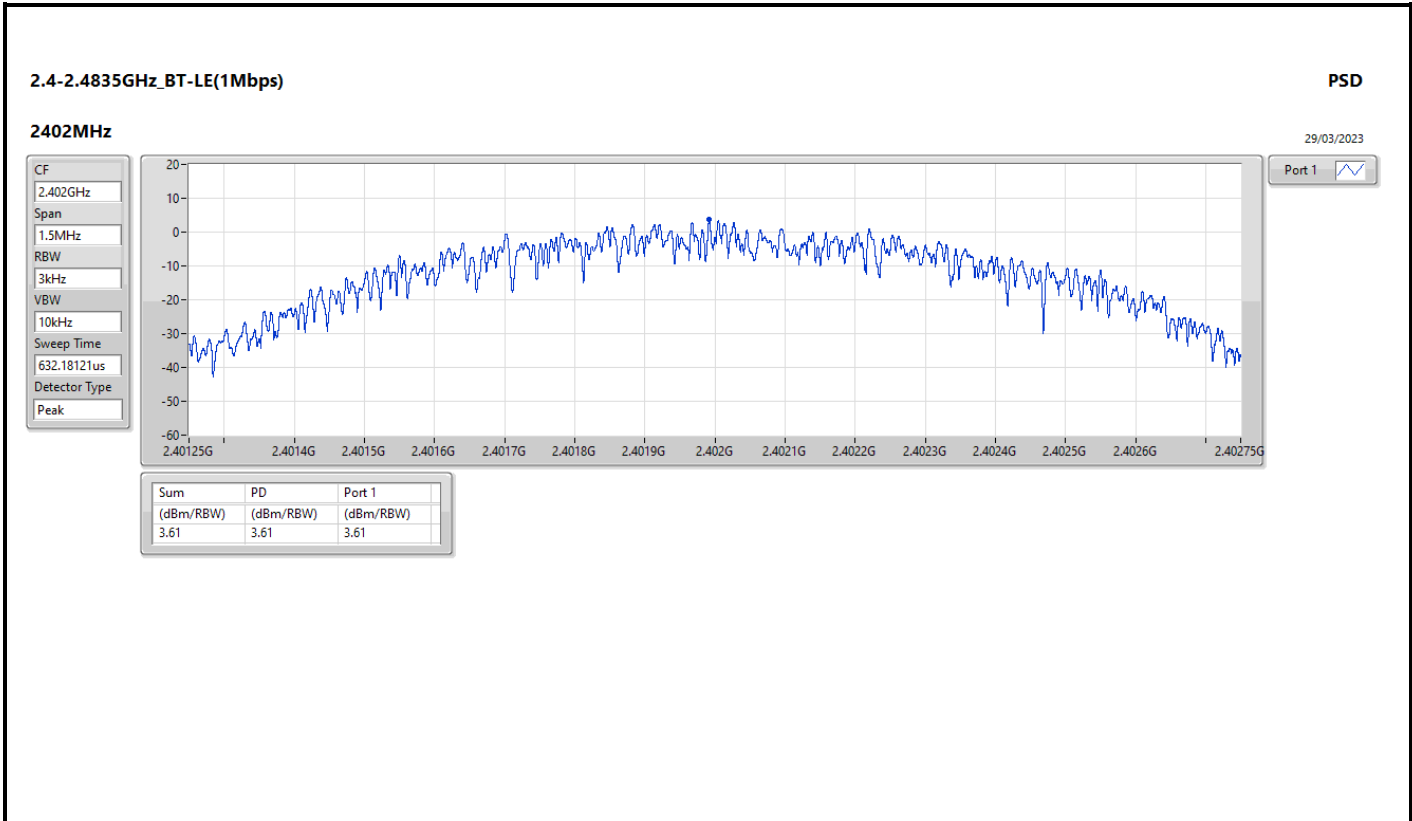
RBW = 3kHz;

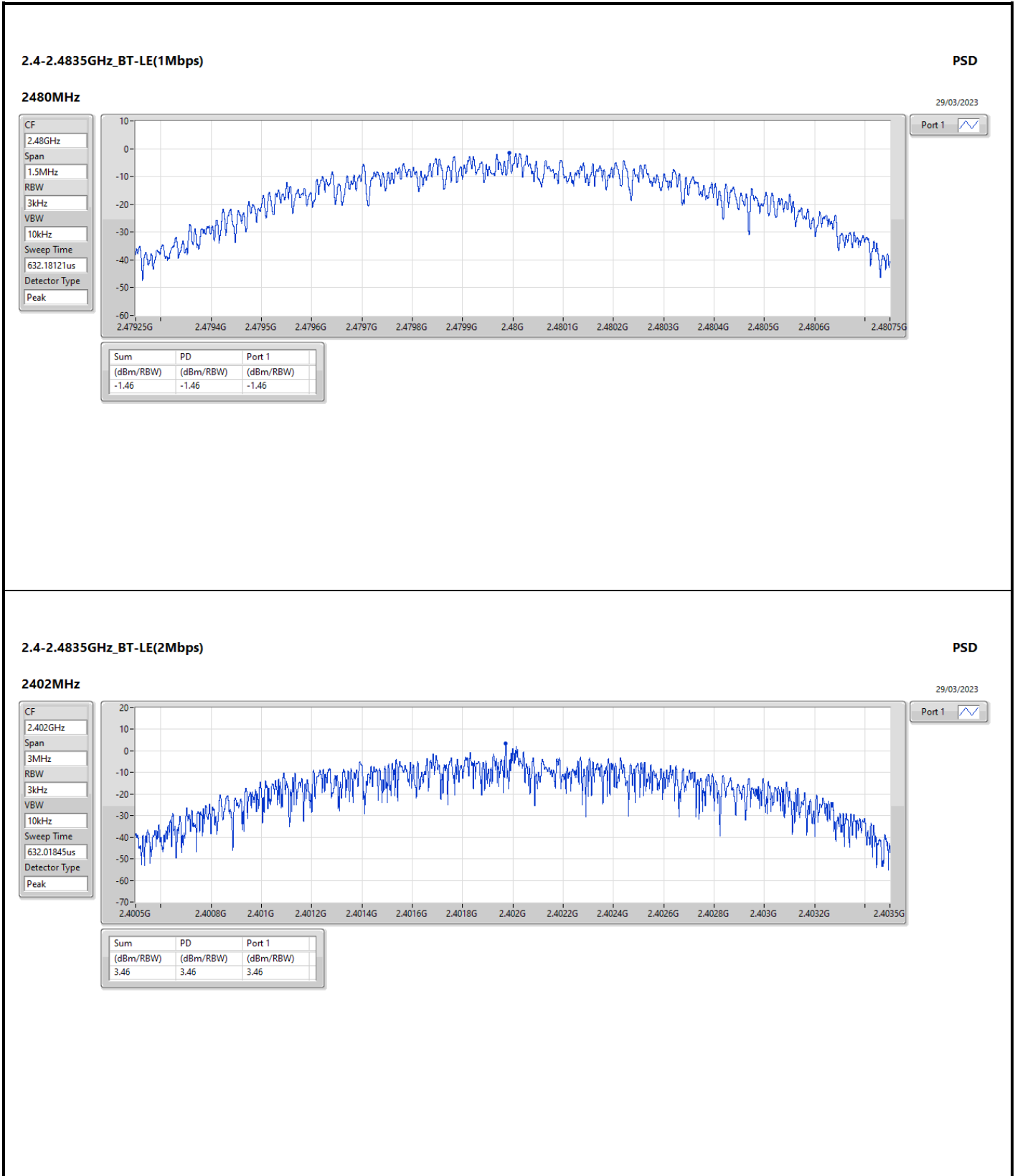


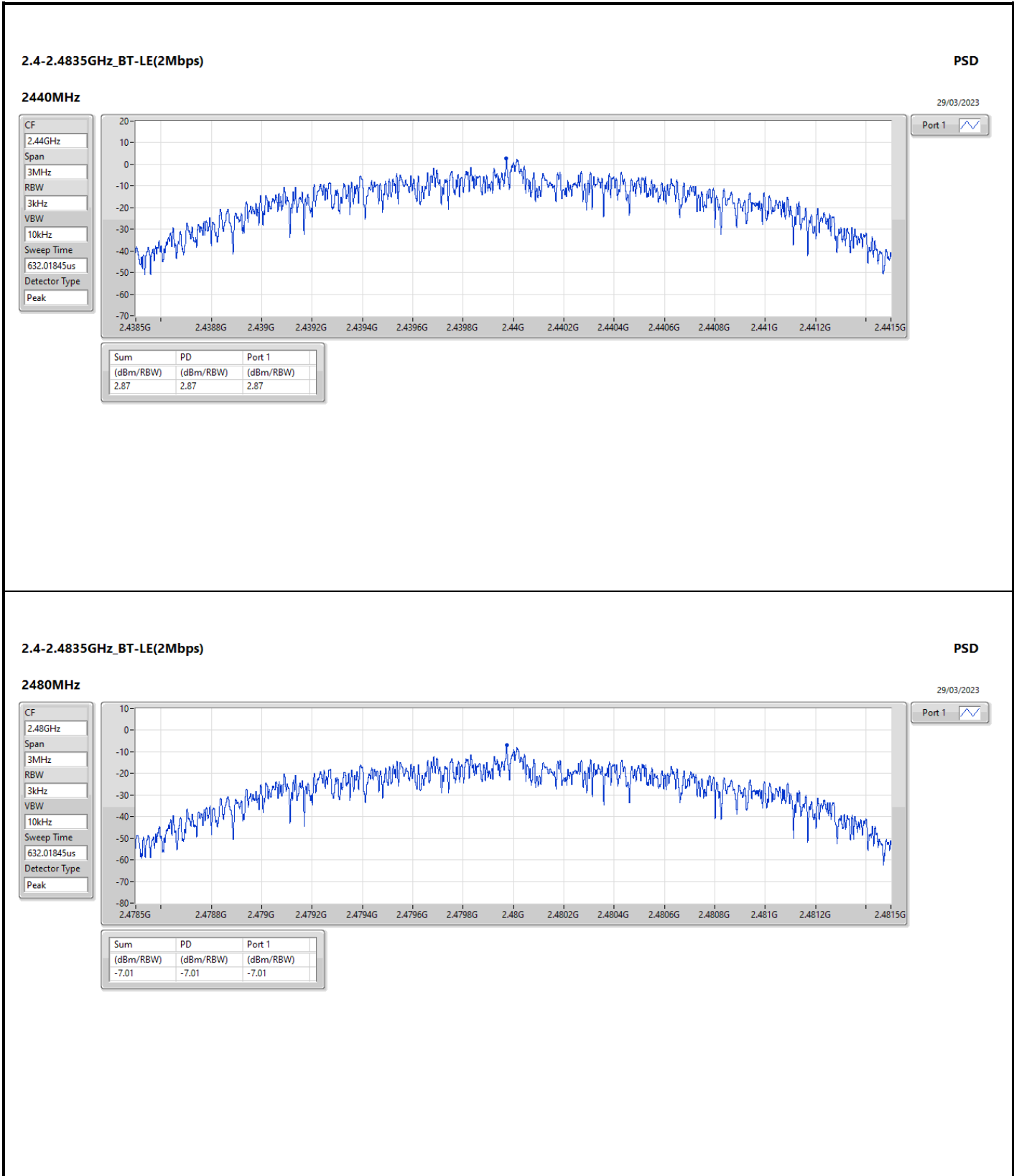
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.355	3.61	8.00
2440MHz	Pass	3.355	3.34	8.00
2480MHz	Pass	3.355	-1.46	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.355	3.46	8.00
2440MHz	Pass	3.355	2.87	8.00
2480MHz	Pass	3.355	-7.01	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;









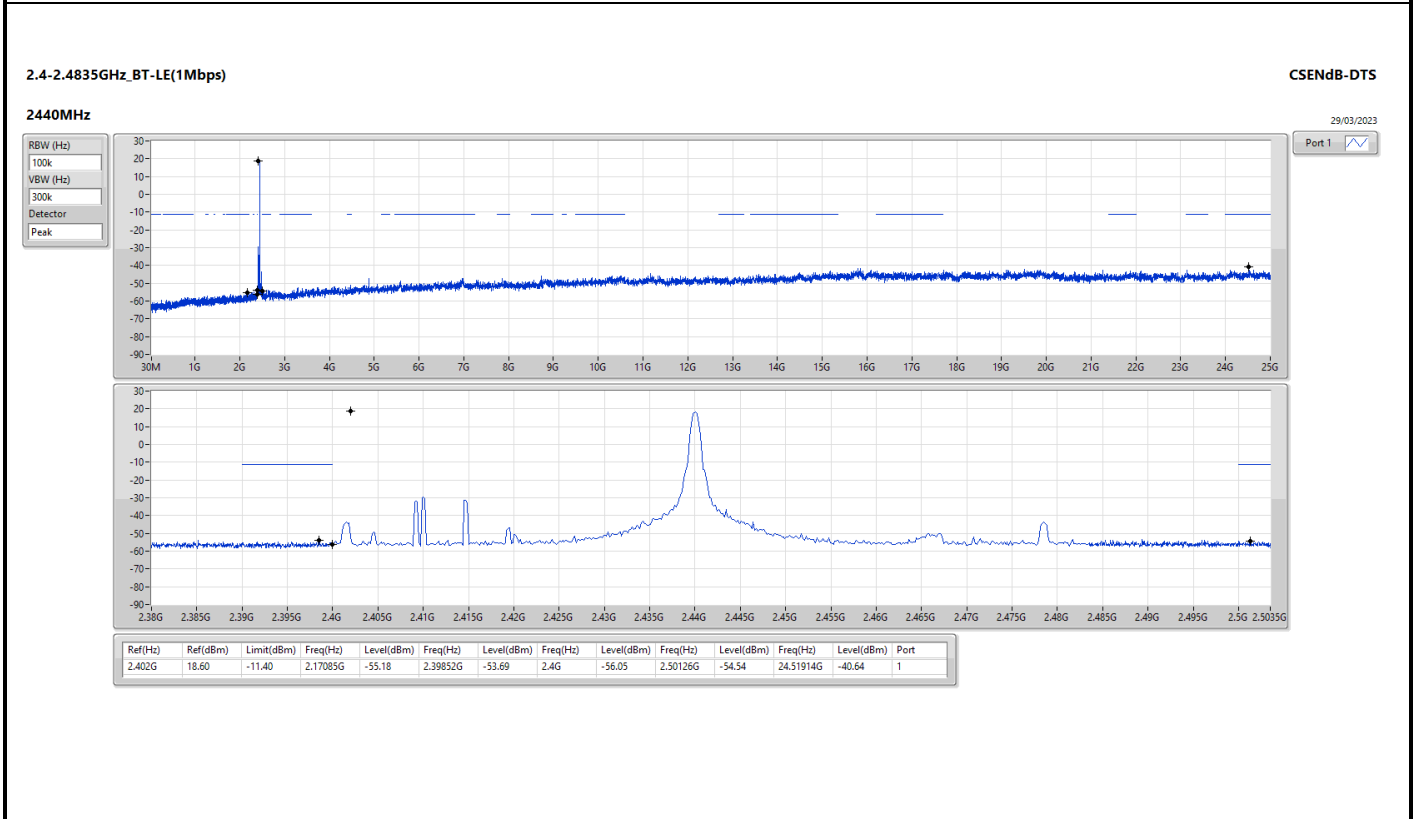
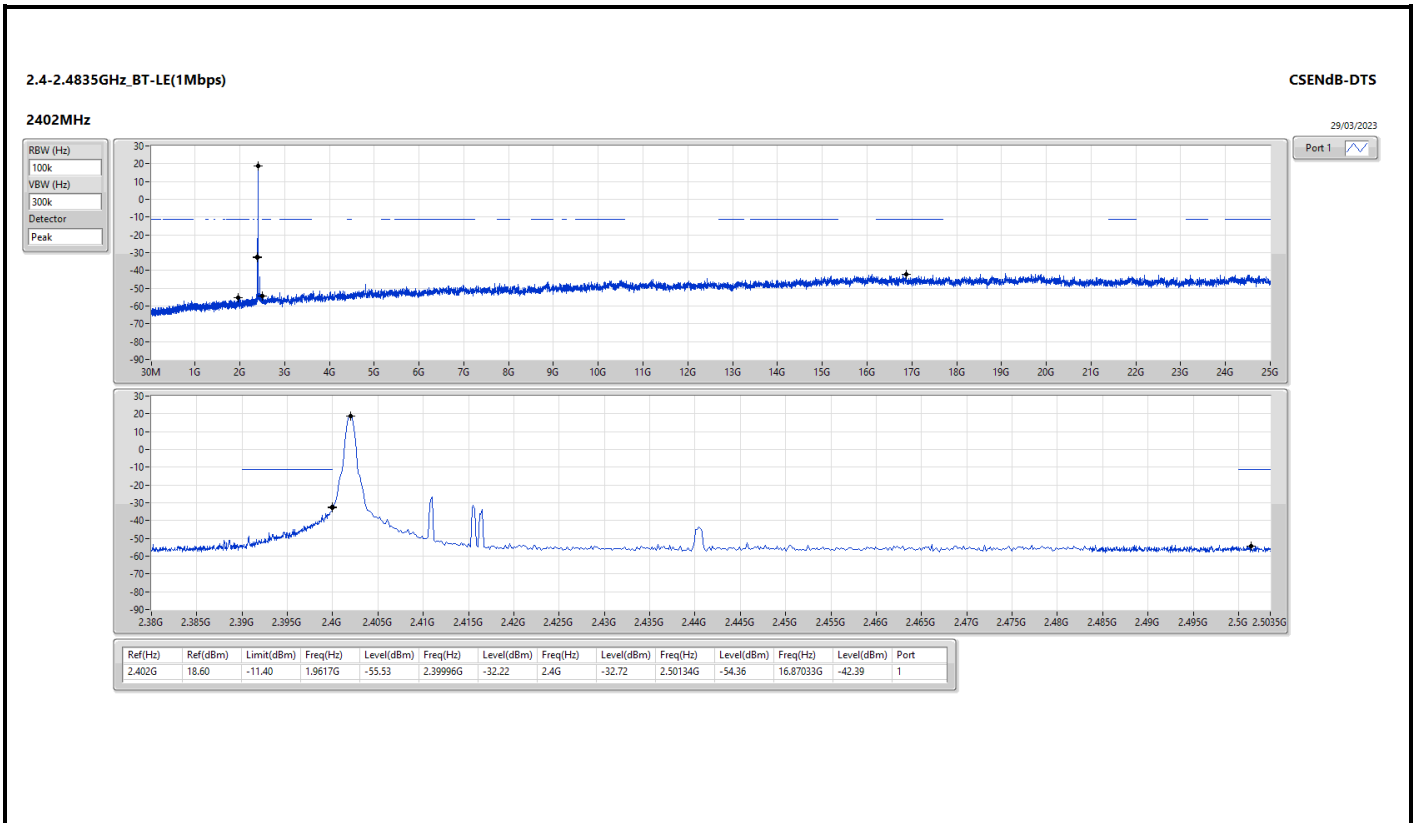
Summary

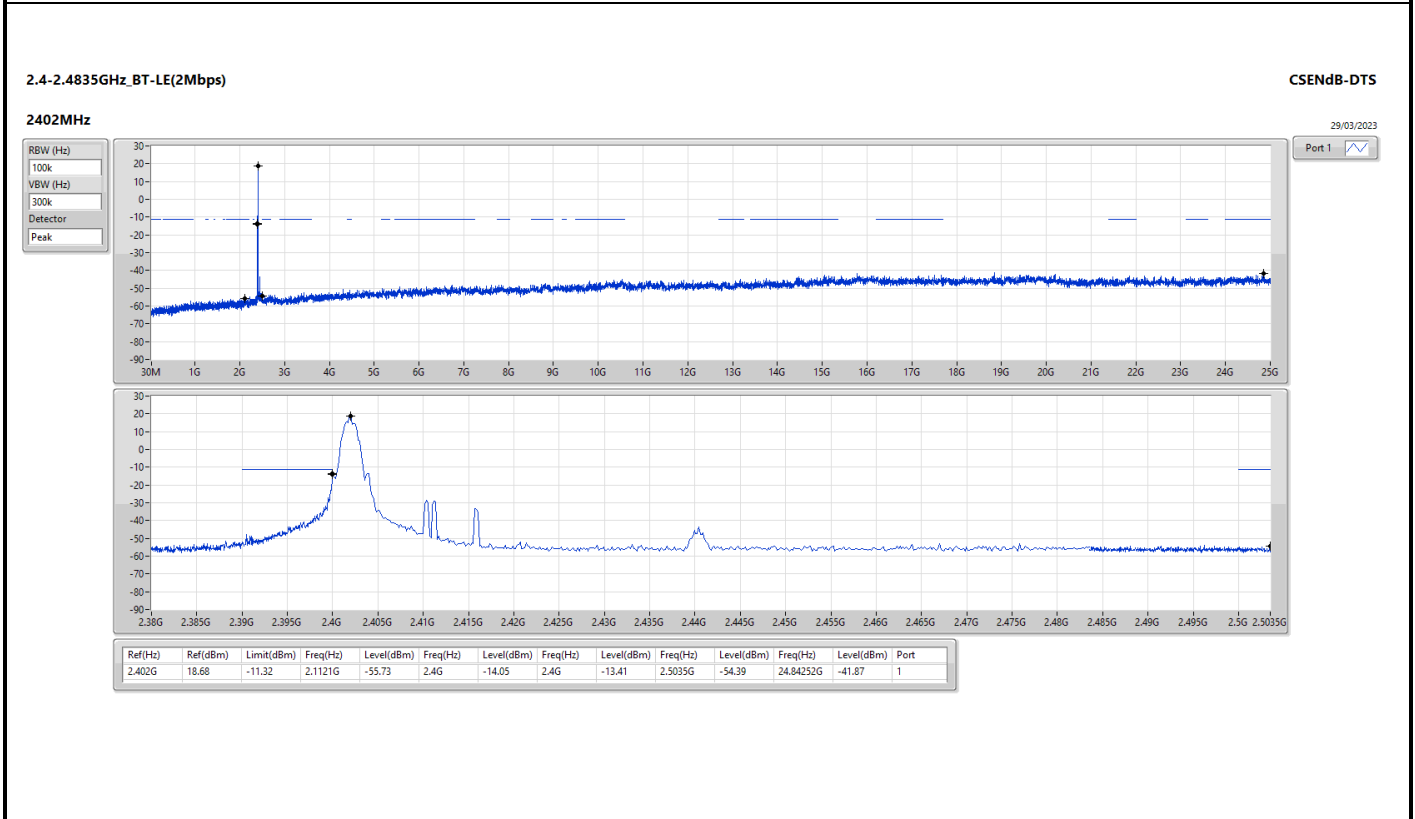
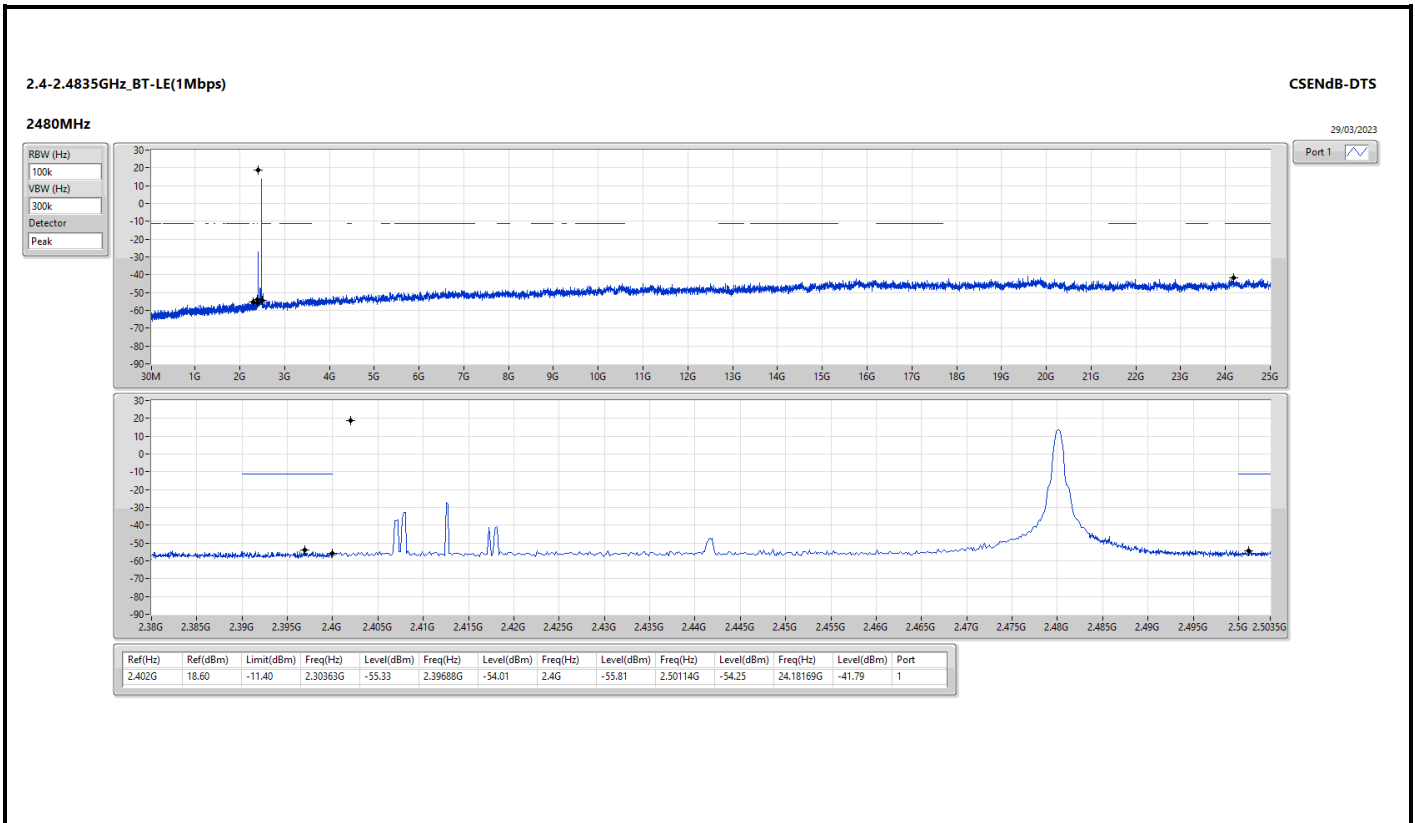
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.402G	18.60	-11.40	1.9617G	-55.53	2.39996G	-32.22	2.4G	-32.72	2.50134G	-54.36	16.87033G	-42.39	1
BT-LE(2Mbps)	Pass	2.402G	18.68	-11.32	2.1121G	-55.73	2.4G	-14.05	2.4G	-13.41	2.5035G	-54.39	24.84252G	-41.87	1

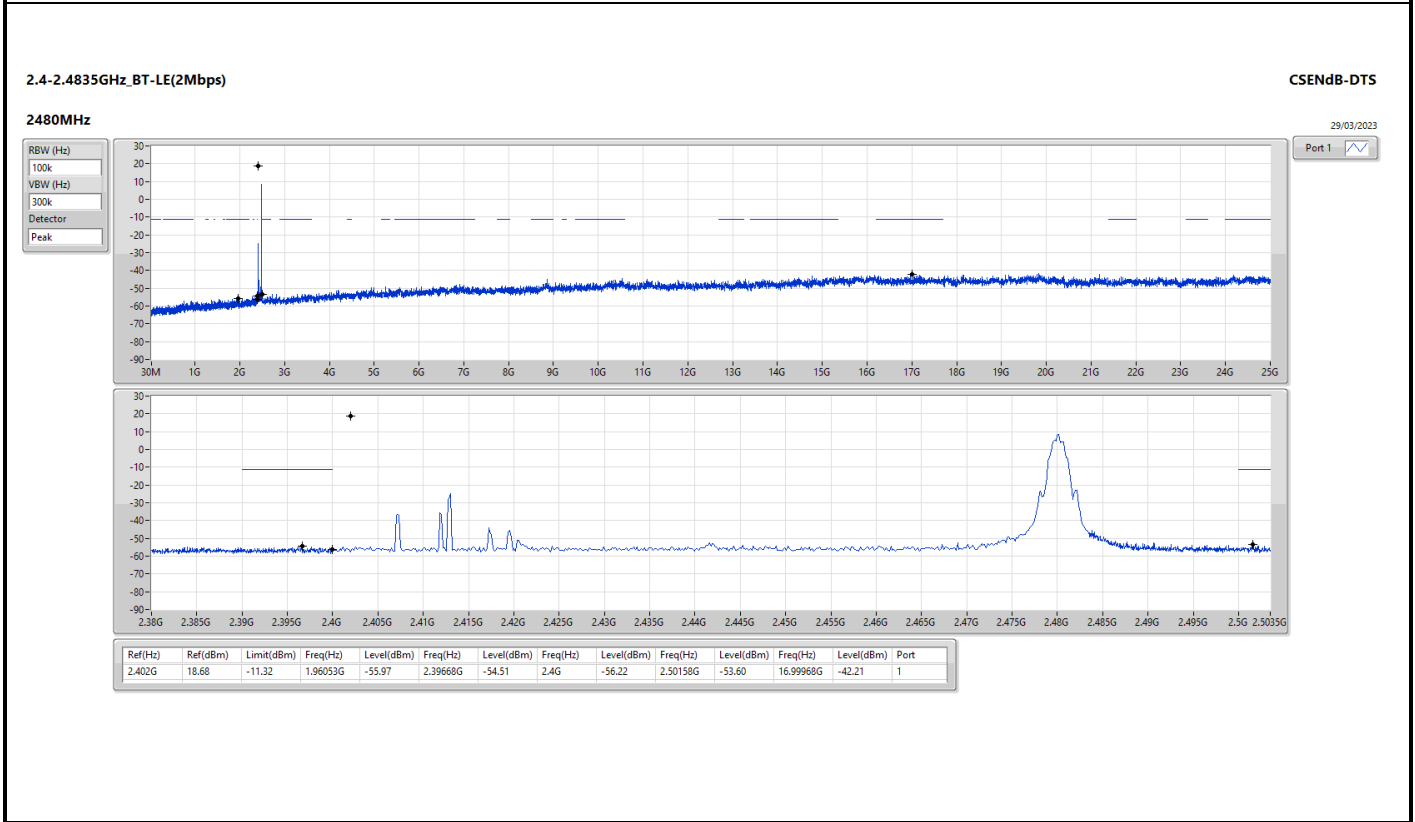
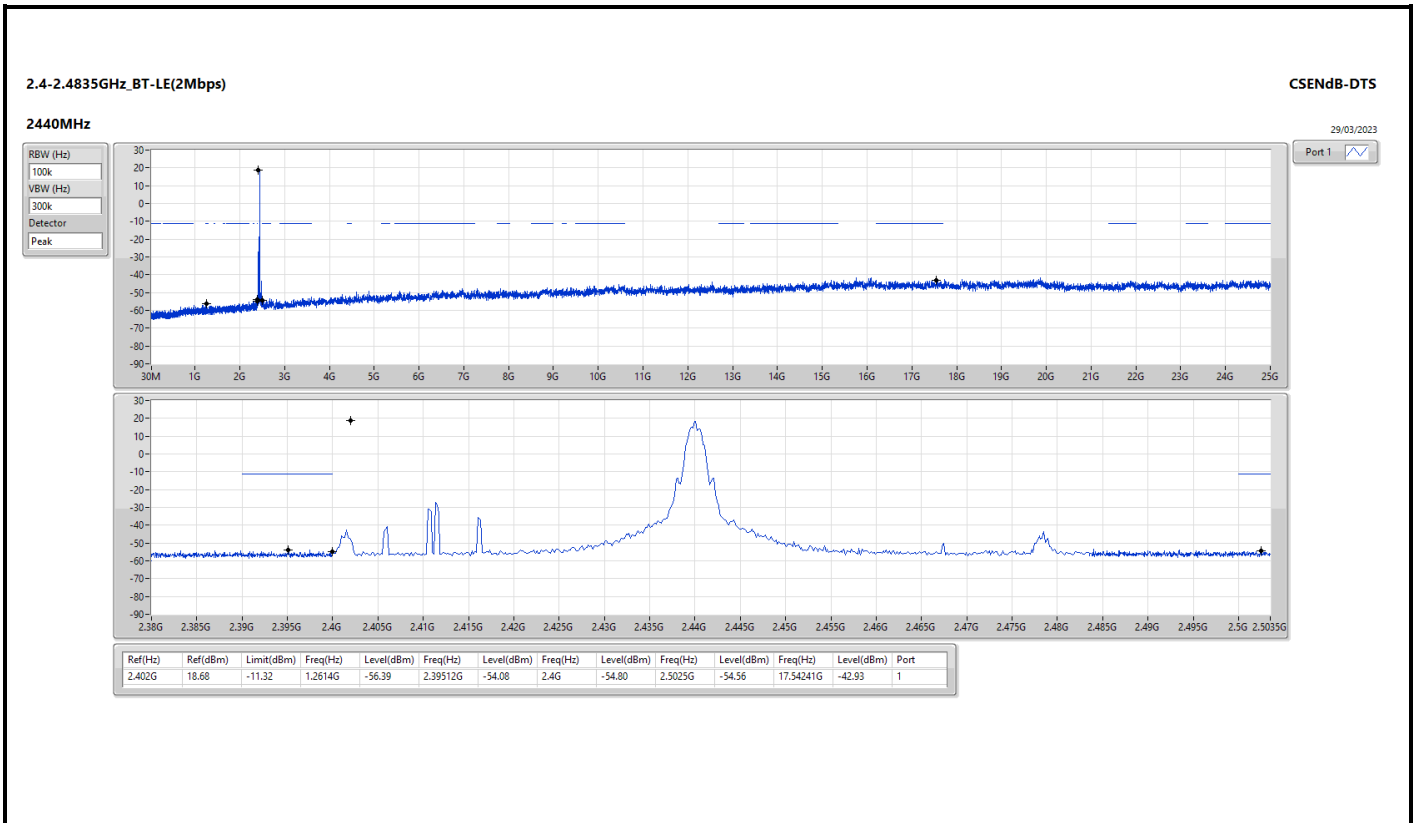


Result

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	2.402G	18.60	-11.40	1.9617G	-55.53	2.39996G	-32.22	2.4G	-32.72	2.50134G	-54.36	16.87033G	-42.39	1
2440MHz	Pass	2.402G	18.60	-11.40	2.17085G	-55.18	2.39852G	-53.69	2.4G	-56.05	2.50126G	-54.54	24.51914G	-40.64	1
2480MHz	Pass	2.402G	18.60	-11.40	2.30363G	-55.33	2.39688G	-54.01	2.4G	-55.81	2.50114G	-54.25	24.18169G	-41.79	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	18.68	-11.32	2.1121G	-55.73	2.4G	-14.05	2.4G	-13.41	2.5035G	-54.39	24.84252G	-41.87	1
2440MHz	Pass	2.402G	18.68	-11.32	1.2614G	-56.39	2.39512G	-54.08	2.4G	-54.80	2.5025G	-54.56	17.54241G	-42.93	1
2480MHz	Pass	2.402G	18.68	-11.32	1.96053G	-55.97	2.39668G	-54.51	2.4G	-56.22	2.50158G	-53.60	16.99968G	-42.21	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	QP	404.42M	42.77	46.00	-3.23	3	Horizontal	163	1.30

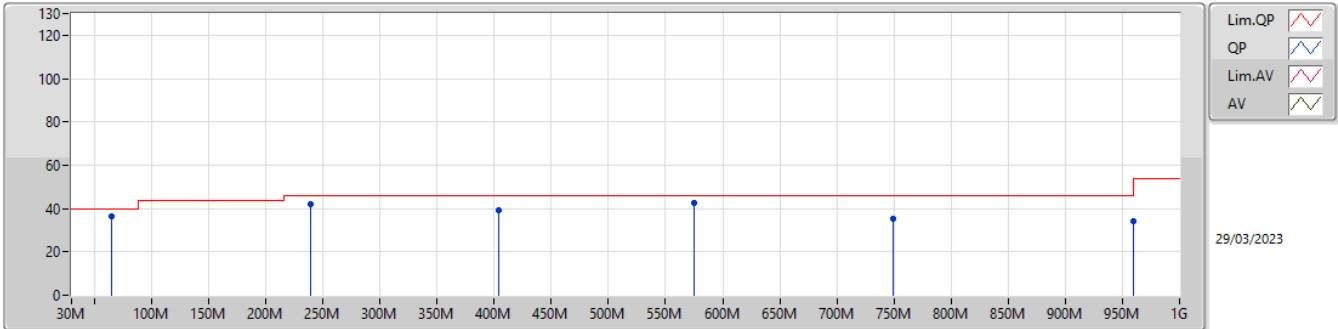


Result

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	64.92M	36.35	40.00	-3.65	3	Vertical	360	1.00
2440MHz	Pass	PK	239.52M	41.97	46.00	-4.03	3	Vertical	360	1.00
2440MHz	Pass	PK	404.42M	39.37	46.00	-6.63	3	Vertical	360	1.00
2440MHz	Pass	PK	575.14M	42.34	46.00	-3.66	3	Vertical	360	1.00
2440MHz	Pass	PK	749.74M	35.19	46.00	-10.81	3	Vertical	360	1.00
2440MHz	Pass	PK	959.26M	34.01	46.00	-11.99	3	Vertical	360	1.00
2440MHz	Pass	PK	74.62M	30.92	40.00	-9.08	3	Horizontal	0	1.00
2440MHz	Pass	PK	235.64M	40.32	46.00	-5.68	3	Horizontal	0	1.00
2440MHz	Pass	PK	575.14M	40.03	46.00	-5.97	3	Horizontal	0	1.00
2440MHz	Pass	PK	749.74M	39.52	46.00	-6.48	3	Horizontal	0	1.00
2440MHz	Pass	QP	334.58M	41.81	46.00	-4.19	3	Horizontal	266	1.20
2440MHz	Pass	QP	404.42M	42.77	46.00	-3.23	3	Horizontal	163	1.30

2.4-2.4835GHz_BT-LE(2Mbps)

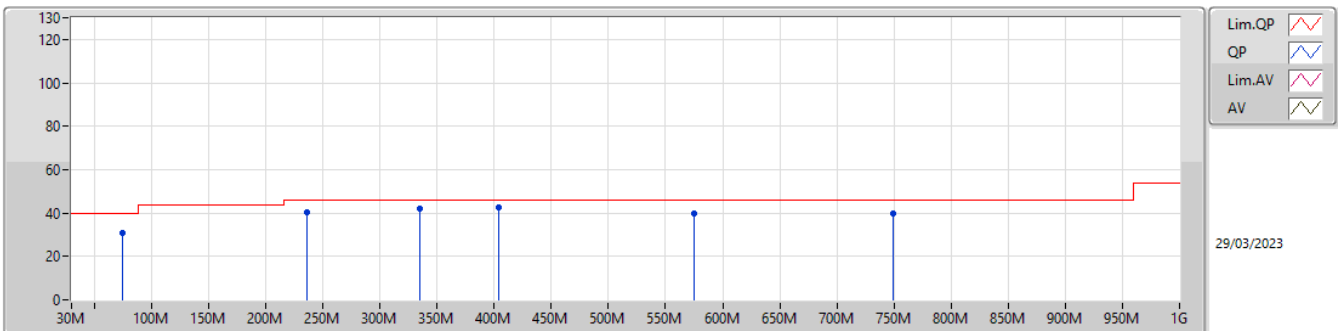
2440MHz_TX



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	64.92M	36.35	40.00	-3.65	-24.32	3	Vertical	360	1.00	60.67	11.18	1.53	37.03
PK	239.52M	41.97	46.00	-4.03	-18.39	3	Vertical	360	1.00	60.36	16.35	1.70	36.44
PK	404.42M	39.37	46.00	-6.63	-13.55	3	Vertical	360	1.00	52.92	21.12	1.85	36.52
PK	575.14M	42.34	46.00	-3.66	-10.13	3	Vertical	360	1.00	52.47	24.96	2.02	37.11
PK	749.74M	35.19	46.00	-10.81	-7.97	3	Vertical	360	1.00	43.16	27.28	2.18	37.43
PK	959.26M	34.01	46.00	-11.99	-4.86	3	Vertical	360	1.00	38.87	30.07	2.38	37.31

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	74.62M	30.92	40.00	-9.08	-23.43	3	Horizontal	0	1.00	54.35	11.95	1.54	36.92
PK	235.64M	40.32	46.00	-5.68	-18.82	3	Horizontal	0	1.00	59.14	15.91	1.69	36.42
PK	575.14M	40.03	46.00	-5.97	-10.13	3	Horizontal	0	1.00	50.16	24.96	2.02	37.11
PK	749.74M	39.52	46.00	-6.48	-7.97	3	Horizontal	0	1.00	47.49	27.28	2.18	37.43
QP	334.58M	41.81	46.00	-4.19	-15.66	3	Horizontal	266	1.20	57.47	19.04	1.79	36.49
QP	404.42M	42.77	46.00	-3.23	-13.55	3	Horizontal	163	1.30	56.32	21.12	1.85	36.52



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	53.33	54.00	-0.67	3	Horizontal	196	1.50
BT-LE(2Mbps)	Pass	AV	2.4835G	53.25	54.00	-0.75	3	Horizontal	185	1.50



Result

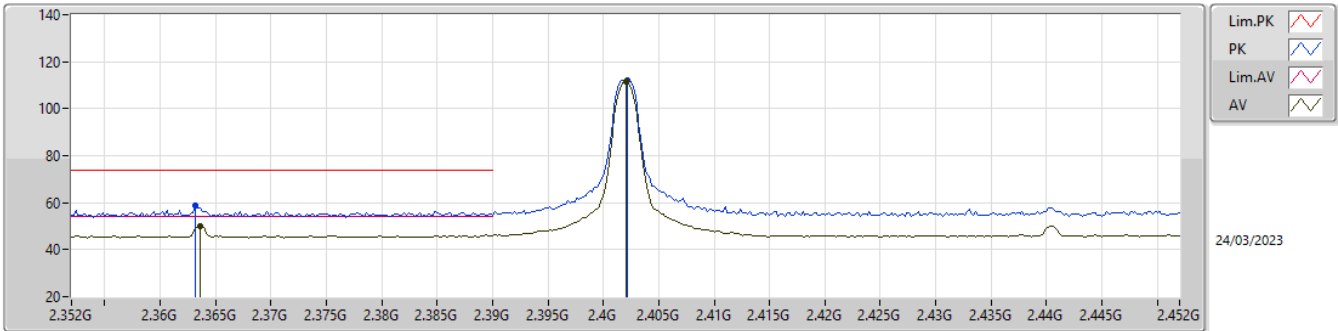
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3636G	49.88	54.00	-4.12	3	Vertical	206	1.95
2402MHz	Pass	AV	2.402G	111.71	Inf	-Inf	3	Vertical	206	1.95
2402MHz	Pass	PK	2.3632G	58.62	74.00	-15.38	3	Vertical	206	1.95
2402MHz	Pass	PK	2.4022G	112.30	Inf	-Inf	3	Vertical	206	1.95
2402MHz	Pass	AV	2.3636G	52.28	54.00	-1.72	3	Horizontal	196	1.62
2402MHz	Pass	AV	2.402G	115.88	Inf	-Inf	3	Horizontal	196	1.62
2402MHz	Pass	PK	2.3634G	58.49	74.00	-15.51	3	Horizontal	196	1.62
2402MHz	Pass	PK	2.4018G	116.57	Inf	-Inf	3	Horizontal	196	1.62
2402MHz	Pass	AV	4.8036G	39.73	54.00	-14.27	3	Vertical	34	1.72
2402MHz	Pass	PK	4.80456G	49.70	74.00	-24.30	3	Vertical	34	1.72
2402MHz	Pass	AV	4.80393G	44.02	54.00	-9.98	3	Horizontal	162	1.73
2402MHz	Pass	PK	4.80432G	51.22	74.00	-22.78	3	Horizontal	162	1.73
2440MHz	Pass	AV	2.3816G	45.97	54.00	-8.03	3	Vertical	206	1.94
2440MHz	Pass	AV	2.44G	110.55	Inf	-Inf	3	Vertical	206	1.94
2440MHz	Pass	AV	2.4912G	46.85	54.00	-7.15	3	Vertical	206	1.94
2440MHz	Pass	PK	2.376G	56.65	74.00	-17.35	3	Vertical	206	1.94
2440MHz	Pass	PK	2.4404G	111.35	Inf	-Inf	3	Vertical	206	1.94
2440MHz	Pass	PK	2.4988G	57.35	74.00	-16.65	3	Vertical	206	1.94
2440MHz	Pass	AV	2.3484G	45.85	54.00	-8.15	3	Horizontal	183	1.46
2440MHz	Pass	AV	2.44G	115.08	Inf	-Inf	3	Horizontal	183	1.46
2440MHz	Pass	AV	2.4984G	46.53	54.00	-7.47	3	Horizontal	183	1.46
2440MHz	Pass	PK	2.3812G	57.01	74.00	-16.99	3	Horizontal	183	1.46
2440MHz	Pass	PK	2.4404G	115.72	Inf	-Inf	3	Horizontal	183	1.46
2440MHz	Pass	PK	2.4884G	57.12	74.00	-16.88	3	Horizontal	183	1.46
2440MHz	Pass	AV	4.87956G	38.75	54.00	-15.25	3	Vertical	48	2.86
2440MHz	Pass	AV	7.31933G	43.29	54.00	-10.71	3	Vertical	5	1.50
2440MHz	Pass	PK	4.87968G	48.11	74.00	-25.89	3	Vertical	48	2.86
2440MHz	Pass	PK	7.31935G	52.32	74.00	-21.68	3	Vertical	5	1.50
2440MHz	Pass	AV	4.87993G	43.90	54.00	-10.10	3	Horizontal	176	1.75
2440MHz	Pass	AV	7.31938G	45.80	54.00	-8.20	3	Horizontal	156	1.16
2440MHz	Pass	PK	4.87963G	50.95	74.00	-23.05	3	Horizontal	176	1.75
2440MHz	Pass	PK	7.31944G	54.23	74.00	-19.77	3	Horizontal	156	1.16
2480MHz	Pass	AV	2.48G	104.61	Inf	-Inf	3	Vertical	209	1.59
2480MHz	Pass	AV	2.4835G	50.00	54.00	-4.00	3	Vertical	209	1.59
2480MHz	Pass	PK	2.48G	105.19	Inf	-Inf	3	Vertical	209	1.59
2480MHz	Pass	PK	2.4835G	59.93	74.00	-14.07	3	Vertical	209	1.59
2480MHz	Pass	AV	2.48G	109.17	Inf	-Inf	3	Horizontal	196	1.50
2480MHz	Pass	AV	2.4835G	53.33	54.00	-0.67	3	Horizontal	196	1.50
2480MHz	Pass	PK	2.4798G	109.78	Inf	-Inf	3	Horizontal	196	1.50
2480MHz	Pass	PK	2.4838G	62.54	74.00	-11.46	3	Horizontal	196	1.50
2480MHz	Pass	AV	4.96005G	36.48	54.00	-17.52	3	Vertical	8	1.50
2480MHz	Pass	AV	7.44052G	39.97	54.00	-14.03	3	Vertical	50	1.84
2480MHz	Pass	PK	4.9593G	46.66	74.00	-27.34	3	Vertical	8	1.50
2480MHz	Pass	PK	7.43956G	50.74	74.00	-23.26	3	Vertical	50	1.84
2480MHz	Pass	AV	4.95986G	37.33	54.00	-16.67	3	Horizontal	148	1.47
2480MHz	Pass	AV	7.43937G	41.87	54.00	-12.13	3	Horizontal	100	1.68
2480MHz	Pass	PK	4.95957G	47.46	74.00	-26.54	3	Horizontal	148	1.47
2480MHz	Pass	PK	7.44071G	51.83	74.00	-22.17	3	Horizontal	100	1.68
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3634G	50.82	54.00	-3.18	3	Vertical	205	2.32
2402MHz	Pass	AV	2.402G	110.85	Inf	-Inf	3	Vertical	205	2.32
2402MHz	Pass	PK	2.3632G	58.14	74.00	-15.86	3	Vertical	205	2.32
2402MHz	Pass	PK	2.4016G	112.15	Inf	-Inf	3	Vertical	205	2.32
2402MHz	Pass	AV	2.3636G	51.87	54.00	-2.13	3	Horizontal	200	1.48
2402MHz	Pass	AV	2.402G	114.51	Inf	-Inf	3	Horizontal	200	1.48
2402MHz	Pass	PK	2.3634G	58.28	74.00	-15.72	3	Horizontal	200	1.48
2402MHz	Pass	PK	2.4026G	115.71	Inf	-Inf	3	Horizontal	200	1.48
2402MHz	Pass	AV	4.80405G	40.79	54.00	-13.21	3	Vertical	33	1.49
2402MHz	Pass	PK	4.8039G	48.29	74.00	-25.71	3	Vertical	33	1.49
2402MHz	Pass	AV	4.80403G	45.29	54.00	-8.71	3	Horizontal	190	1.66



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2402MHz	Pass	PK	4.80293G	51.27	74.00	-22.73	3	Horizontal	190	1.66
2440MHz	Pass	AV	2.348G	47.68	54.00	-6.32	3	Vertical	207	2.20
2440MHz	Pass	AV	2.44G	110.36	Inf	-Inf	3	Vertical	207	2.20
2440MHz	Pass	AV	2.4984G	48.21	54.00	-5.79	3	Vertical	207	2.20
2440MHz	Pass	PK	2.3504G	56.91	74.00	-17.09	3	Vertical	207	2.20
2440MHz	Pass	PK	2.4404G	111.65	Inf	-Inf	3	Vertical	207	2.20
2440MHz	Pass	PK	2.4904G	57.16	74.00	-16.84	3	Vertical	207	2.20
2440MHz	Pass	AV	2.3632G	47.81	54.00	-6.19	3	Horizontal	184	1.46
2440MHz	Pass	AV	2.44G	114.30	Inf	-Inf	3	Horizontal	184	1.46
2440MHz	Pass	AV	2.486G	48.50	54.00	-5.50	3	Horizontal	184	1.46
2440MHz	Pass	PK	2.3756G	56.39	74.00	-17.61	3	Horizontal	184	1.46
2440MHz	Pass	PK	2.4404G	115.52	Inf	-Inf	3	Horizontal	184	1.46
2440MHz	Pass	PK	2.4892G	57.04	74.00	-16.96	3	Horizontal	184	1.46
2440MHz	Pass	AV	4.88003G	39.78	54.00	-14.22	3	Vertical	47	2.87
2440MHz	Pass	AV	7.31995G	43.86	54.00	-10.14	3	Vertical	144	1.50
2440MHz	Pass	PK	4.88067G	47.25	74.00	-26.75	3	Vertical	47	2.87
2440MHz	Pass	PK	7.31872G	51.80	74.00	-22.20	3	Vertical	144	1.50
2440MHz	Pass	AV	4.88G	44.78	54.00	-9.22	3	Horizontal	199	1.80
2440MHz	Pass	AV	7.32009G	46.47	54.00	-7.53	3	Horizontal	153	1.68
2440MHz	Pass	PK	4.87907G	50.56	74.00	-23.44	3	Horizontal	199	1.80
2440MHz	Pass	PK	7.31863G	53.38	74.00	-20.62	3	Horizontal	153	1.68
2480MHz	Pass	AV	2.48G	98.58	Inf	-Inf	3	Vertical	209	1.60
2480MHz	Pass	AV	2.4835G	50.31	54.00	-3.69	3	Vertical	209	1.60
2480MHz	Pass	PK	2.4804G	100.10	Inf	-Inf	3	Vertical	209	1.60
2480MHz	Pass	PK	2.4835G	58.78	74.00	-15.22	3	Vertical	209	1.60
2480MHz	Pass	AV	2.48G	103.04	Inf	-Inf	3	Horizontal	185	1.50
2480MHz	Pass	AV	2.4835G	53.25	54.00	-0.75	3	Horizontal	185	1.50
2480MHz	Pass	PK	2.4796G	104.48	Inf	-Inf	3	Horizontal	185	1.50
2480MHz	Pass	PK	2.4835G	62.65	74.00	-11.35	3	Horizontal	185	1.50
2480MHz	Pass	AV	4.9614G	36.94	54.00	-17.06	3	Vertical	359	1.50
2480MHz	Pass	AV	7.44163G	40.65	54.00	-13.35	3	Vertical	62	1.00
2480MHz	Pass	PK	4.96143G	46.59	74.00	-27.41	3	Vertical	359	1.50
2480MHz	Pass	PK	7.43751G	50.86	74.00	-23.14	3	Vertical	62	1.00
2480MHz	Pass	AV	4.96138G	36.94	54.00	-17.06	3	Horizontal	249	1.50
2480MHz	Pass	AV	7.43852G	40.87	54.00	-13.13	3	Horizontal	281	1.32
2480MHz	Pass	PK	4.96105G	46.26	74.00	-27.74	3	Horizontal	249	1.50
2480MHz	Pass	PK	7.4385G	50.36	74.00	-23.64	3	Horizontal	281	1.32

2.4-2.4835GHz_BT-LE(1Mbps)

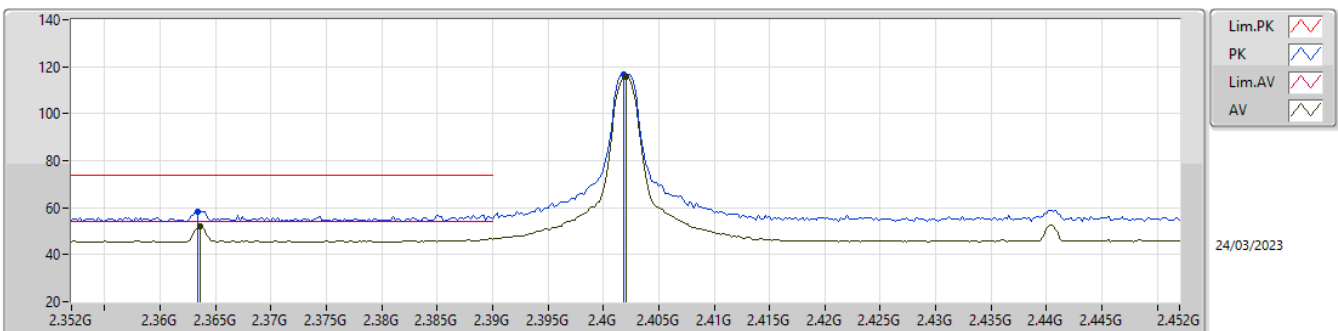
2402MHz_TX



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	2.3636G	49.88	54.00	-4.12	31.06	3	Vertical	206	1.95	18.82	27.33	3.73	-
AV	2.402G	111.71	Inf	-Inf	31.17	3	Vertical	206	1.95	80.54	27.40	3.77	-
PK	2.3632G	58.62	74.00	-15.38	31.06	3	Vertical	206	1.95	27.56	27.33	3.73	-
PK	2.4022G	112.30	Inf	-Inf	31.17	3	Vertical	206	1.95	81.13	27.40	3.77	-

2.4-2.4835GHz_BT-LE(1Mbps)

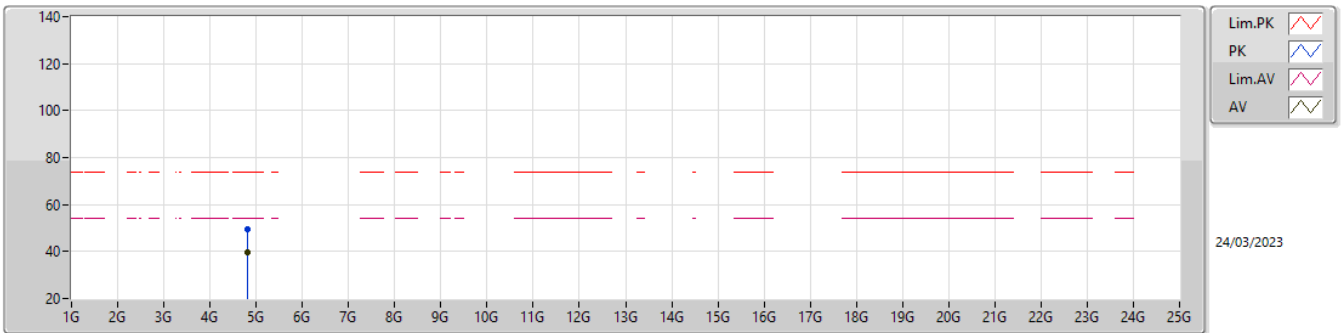
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Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3636G	52.28	54.00	-1.72	31.06	3	Horizontal	196	1.62	21.22	27.33	3.73	-
AV	2.402G	115.88	Inf	-Inf	31.17	3	Horizontal	196	1.62	84.71	27.40	3.77	-
PK	2.3634G	58.49	74.00	-15.51	31.06	3	Horizontal	196	1.62	27.43	27.33	3.73	-
PK	2.4018G	116.57	Inf	-Inf	31.17	3	Horizontal	196	1.62	85.40	27.40	3.77	-

2.4-2.4835GHz_BT-LE(1Mbps)

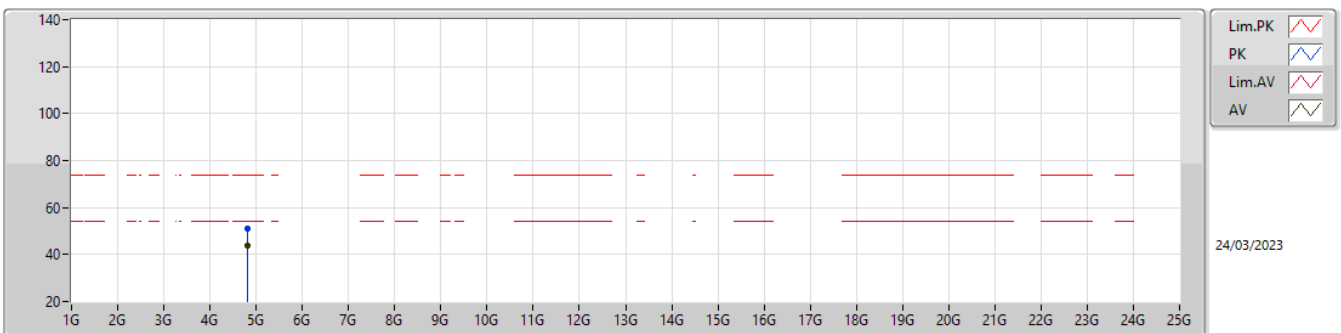
2402MHz_TX



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	4.8036G	39.73	54.00	-14.27	2.98	3	Vertical	34	1.72	36.75	32.32	5.32	34.66
PK	4.80456G	49.70	74.00	-24.30	2.99	3	Vertical	34	1.72	46.71	32.33	5.32	34.66

2.4-2.4835GHz_BT-LE(1Mbps)

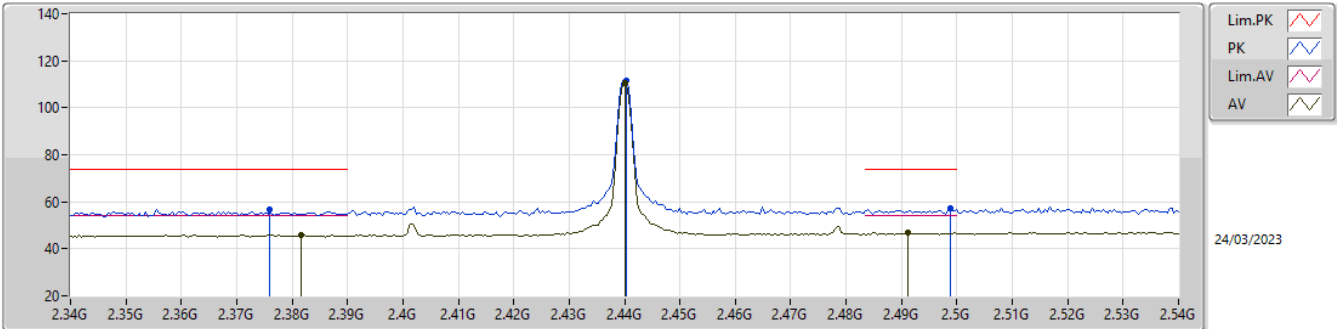
2402MHz_TX



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	4.80393G	44.02	54.00	-9.98	2.98	3	Horizontal	162	1.73	41.04	32.32	5.32	34.66
PK	4.80432G	51.22	74.00	-22.78	2.99	3	Horizontal	162	1.73	48.23	32.33	5.32	34.66

2.4-2.4835GHz_BT-LE(1Mbps)

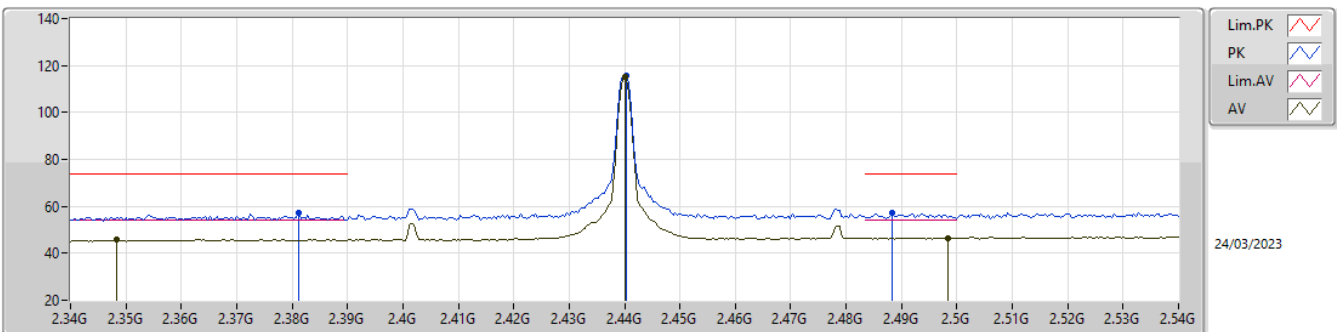
2440MHz_TX



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	2.3816G	45.97	54.00	-8.03	31.11	3	Vertical	206	1.94	14.86	27.36	3.75	-
AV	2.44G	110.55	Inf	-Inf	31.28	3	Vertical	206	1.94	79.27	27.48	3.80	-
AV	2.4912G	46.85	54.00	-7.15	31.60	3	Vertical	206	1.94	15.25	27.75	3.85	-
PK	2.376G	56.65	74.00	-17.35	31.09	3	Vertical	206	1.94	25.56	27.35	3.74	-
PK	2.4404G	111.35	Inf	-Inf	31.28	3	Vertical	206	1.94	80.07	27.48	3.80	-
PK	2.4988G	57.35	74.00	-16.65	31.64	3	Vertical	206	1.94	25.71	27.79	3.85	-

2.4-2.4835GHz_BT-LE(1Mbps)

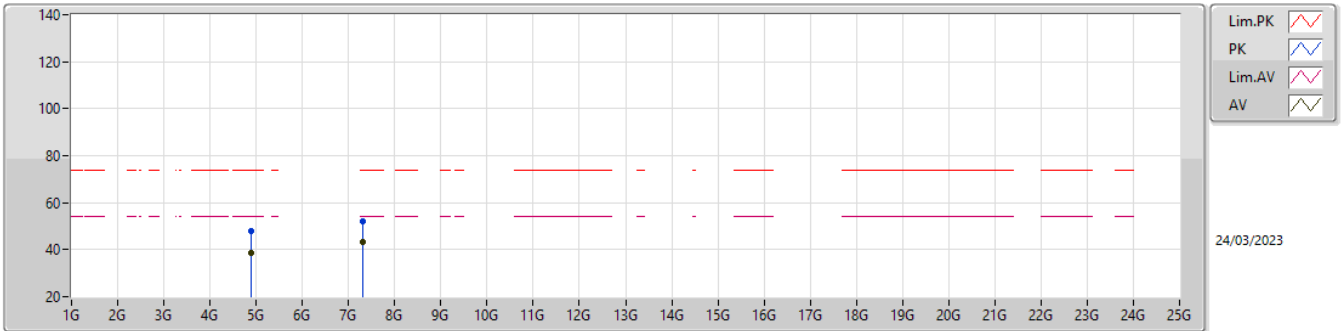
2440MHz_TX



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	2.3484G	45.85	54.00	-8.15	31.01	3	Horizontal	183	1.46	14.84	27.29	3.72	-
AV	2.44G	115.08	Inf	-Inf	31.28	3	Horizontal	183	1.46	83.80	27.48	3.80	-
AV	2.4984G	46.53	54.00	-7.47	31.64	3	Horizontal	183	1.46	14.89	27.79	3.85	-
PK	2.3812G	57.01	74.00	-16.99	31.11	3	Horizontal	183	1.46	25.90	27.36	3.75	-
PK	2.4404G	115.72	Inf	-Inf	31.28	3	Horizontal	183	1.46	84.44	27.48	3.80	-
PK	2.4884G	57.12	74.00	-16.88	31.58	3	Horizontal	183	1.46	25.54	27.73	3.85	-

2.4-2.4835GHz_BT-LE(1Mbps)

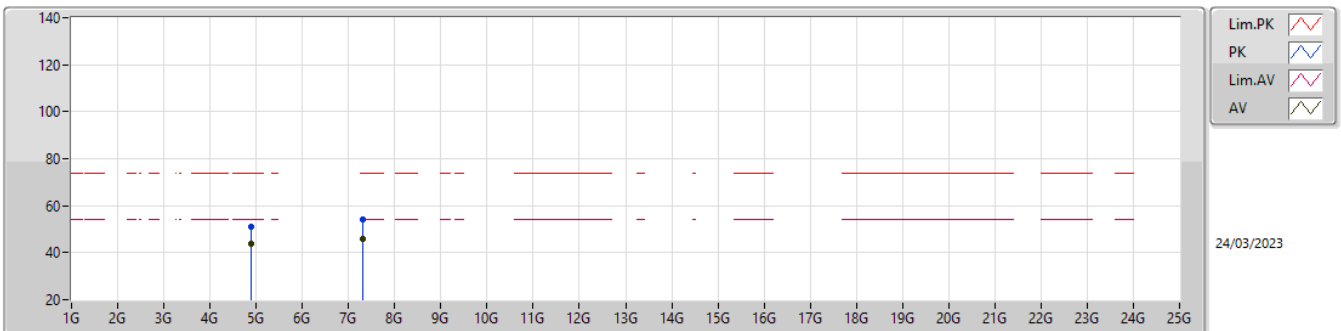
2440MHz_TX



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	4.87956G	38.75	54.00	-15.25	3.33	3	Vertical	48	2.86	35.42	32.60	5.38	34.65
AV	7.31933G	43.29	54.00	-10.71	8.52	3	Vertical	5	1.50	34.77	36.66	6.64	34.78
PK	4.87968G	48.11	74.00	-25.89	3.33	3	Vertical	48	2.86	44.78	32.60	5.38	34.65
PK	7.31935G	52.32	74.00	-21.68	8.52	3	Vertical	5	1.50	43.80	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(1Mbps)

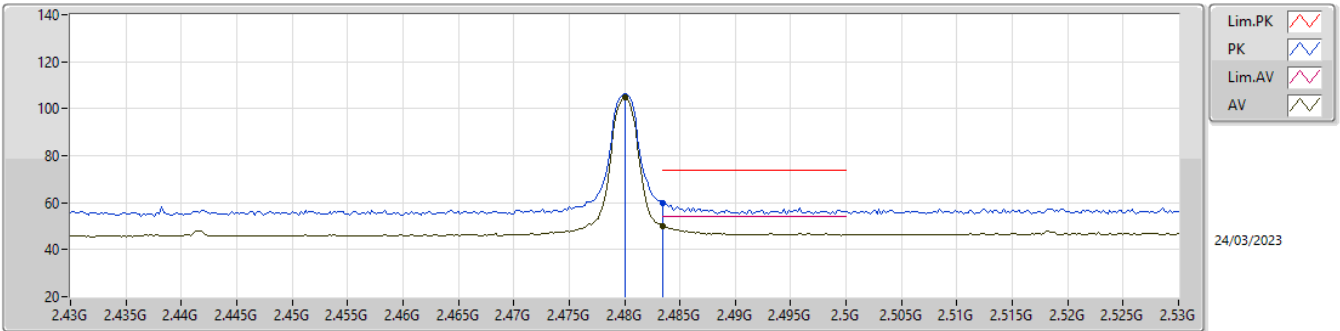
2440MHz_TX



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	4.87993G	43.90	54.00	-10.10	3.33	3	Horizontal	176	1.75	40.57	32.60	5.38	34.65
AV	7.31938G	45.80	54.00	-8.20	8.52	3	Horizontal	156	1.16	37.28	36.66	6.64	34.78
PK	4.87963G	50.95	74.00	-23.05	3.33	3	Horizontal	176	1.75	47.62	32.60	5.38	34.65
PK	7.31944G	54.23	74.00	-19.77	8.52	3	Horizontal	156	1.16	45.71	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(1Mbps)

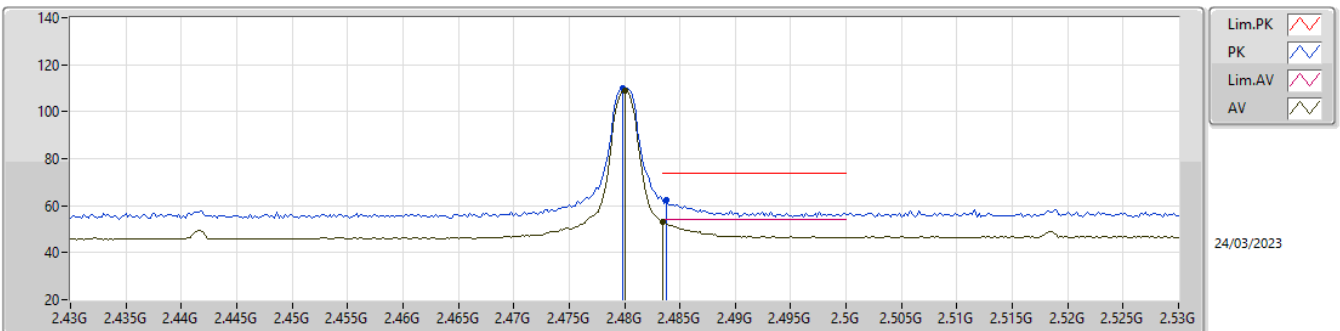
2480MHz_TX



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	104.61	Inf	-Inf	31.52	3	Vertical	209	1.59	73.09	27.68	3.84	-
AV	2.4835G	50.00	54.00	-4.00	31.54	3	Vertical	209	1.59	18.46	27.70	3.84	-
PK	2.48G	105.19	Inf	-Inf	31.52	3	Vertical	209	1.59	73.67	27.68	3.84	-
PK	2.4835G	59.93	74.00	-14.07	31.54	3	Vertical	209	1.59	28.39	27.70	3.84	-

2.4-2.4835GHz_BT-LE(1Mbps)

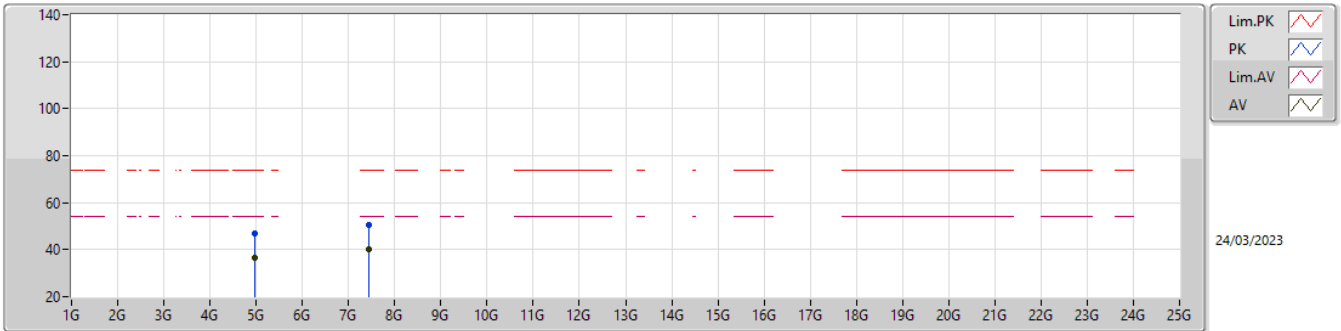
2480MHz_TX



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	109.17	Inf	-Inf	31.52	3	Horizontal	196	1.50	77.65	27.68	3.84	-
AV	2.4835G	53.33	54.00	-0.67	31.54	3	Horizontal	196	1.50	21.79	27.70	3.84	-
PK	2.4798G	109.78	Inf	-Inf	31.52	3	Horizontal	196	1.50	78.26	27.68	3.84	-
PK	2.4838G	62.54	74.00	-11.46	31.54	3	Horizontal	196	1.50	31.00	27.70	3.84	-

2.4-2.4835GHz_BT-LE(1Mbps)

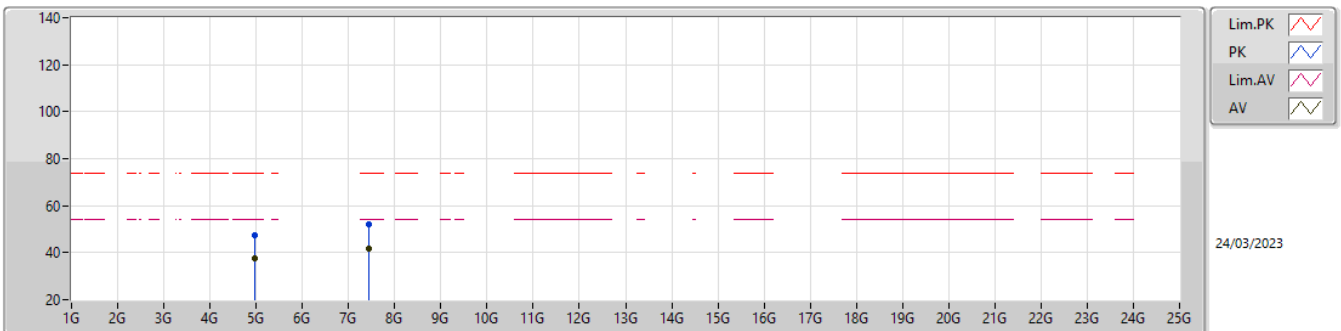
2480MHz_TX



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	4.96005G	36.48	54.00	-17.52	3.64	3	Vertical	8	1.50	32.84	32.84	5.44	34.64
AV	7.44052G	39.97	54.00	-14.03	8.23	3	Vertical	50	1.84	31.74	36.32	6.70	34.79
PK	4.9593G	46.66	74.00	-27.34	3.64	3	Vertical	8	1.50	43.02	32.84	5.44	34.64
PK	7.43956G	50.74	74.00	-23.26	8.23	3	Vertical	50	1.84	42.51	36.32	6.70	34.79

2.4-2.4835GHz_BT-LE(1Mbps)

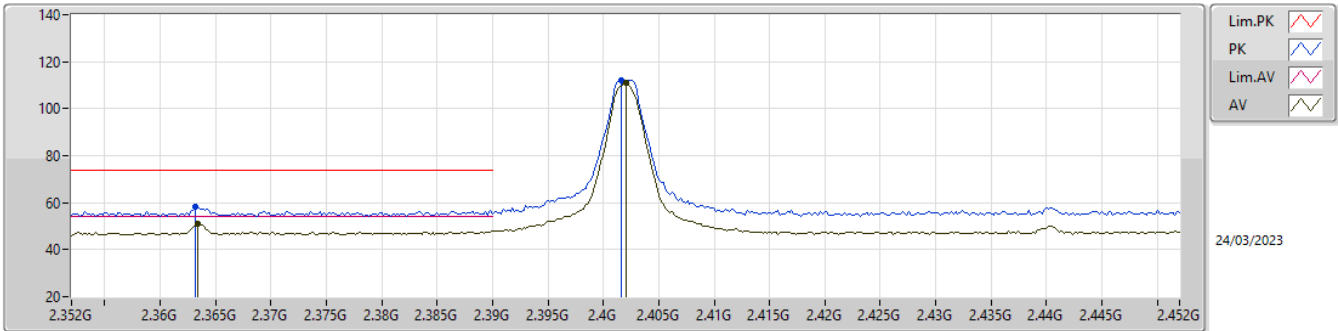
2480MHz_TX



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	4.95986G	37.33	54.00	-16.67	3.64	3	Horizontal	148	1.47	33.69	32.84	5.44	34.64
AV	7.43937G	41.87	54.00	-12.13	8.23	3	Horizontal	100	1.68	33.64	36.32	6.70	34.79
PK	4.95957G	47.46	74.00	-26.54	3.64	3	Horizontal	148	1.47	43.82	32.84	5.44	34.64
PK	7.44071G	51.83	74.00	-22.17	8.23	3	Horizontal	100	1.68	43.60	36.32	6.70	34.79

2.4-2.4835GHz_BT-LE(2Mbps)

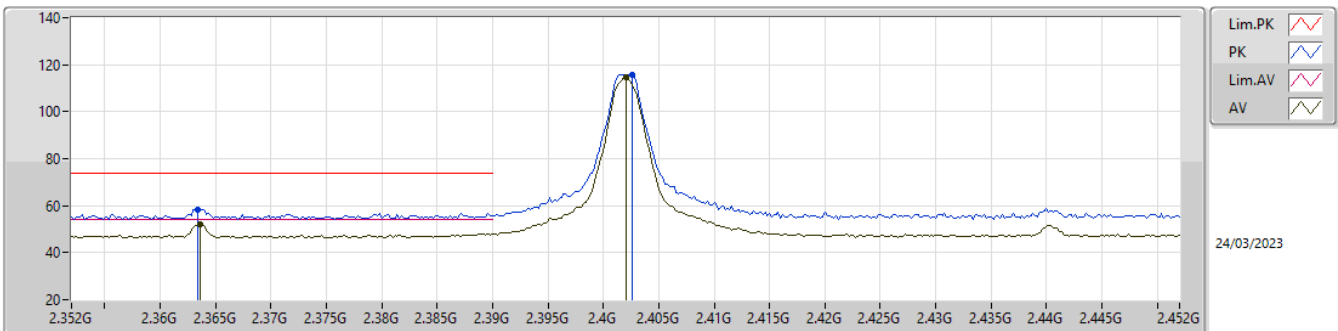
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3634G	50.82	54.00	-3.18	31.06	3	Vertical	205	2.32	19.76	27.33	3.73	-
AV	2.402G	110.85	Inf	-Inf	31.17	3	Vertical	205	2.32	79.68	27.40	3.77	-
PK	2.3632G	58.14	74.00	-15.86	31.06	3	Vertical	205	2.32	27.08	27.33	3.73	-
PK	2.4016G	112.15	Inf	-Inf	31.17	3	Vertical	205	2.32	80.98	27.40	3.77	-

2.4-2.4835GHz_BT-LE(2Mbps)

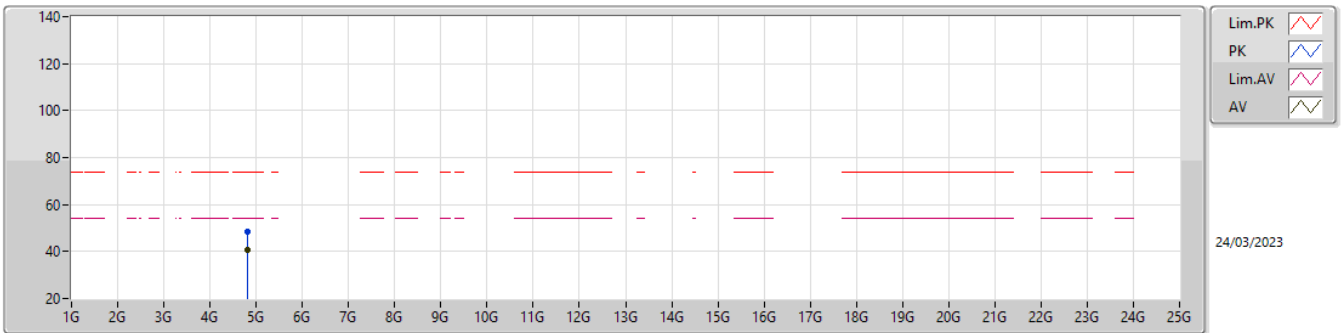
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3636G	51.87	54.00	-2.13	31.06	3	Horizontal	200	1.48	20.81	27.33	3.73	-
AV	2.402G	114.51	Inf	-Inf	31.17	3	Horizontal	200	1.48	83.34	27.40	3.77	-
PK	2.3634G	58.28	74.00	-15.72	31.06	3	Horizontal	200	1.48	27.22	27.33	3.73	-
PK	2.4026G	115.71	Inf	-Inf	31.18	3	Horizontal	200	1.48	84.53	27.41	3.77	-

2.4-2.4835GHz_BT-LE(2Mbps)

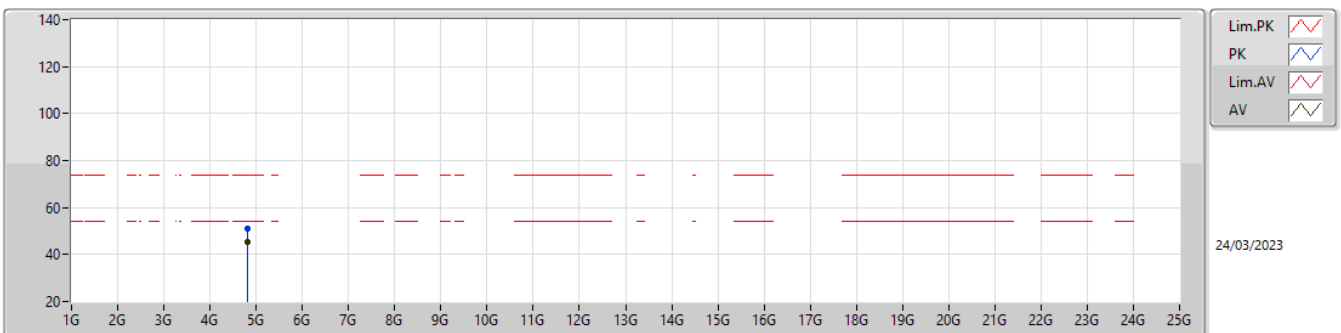
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80405G	40.79	54.00	-13.21	2.98	3	Vertical	33	1.49	37.81	32.32	5.32	34.66
PK	4.8039G	48.29	74.00	-25.71	2.98	3	Vertical	33	1.49	45.31	32.32	5.32	34.66

2.4-2.4835GHz_BT-LE(2Mbps)

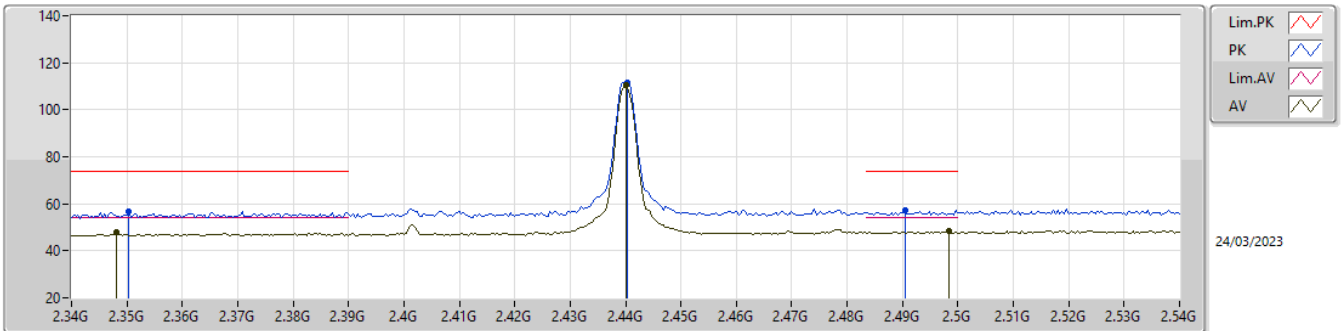
2402MHz_TX



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	4.80403G	45.29	54.00	-8.71	2.98	3	Horizontal	190	1.66	42.31	32.32	5.32	34.66
PK	4.80293G	51.27	74.00	-22.73	2.98	3	Horizontal	190	1.66	48.29	32.32	5.32	34.66

2.4-2.4835GHz_BT-LE(2Mbps)

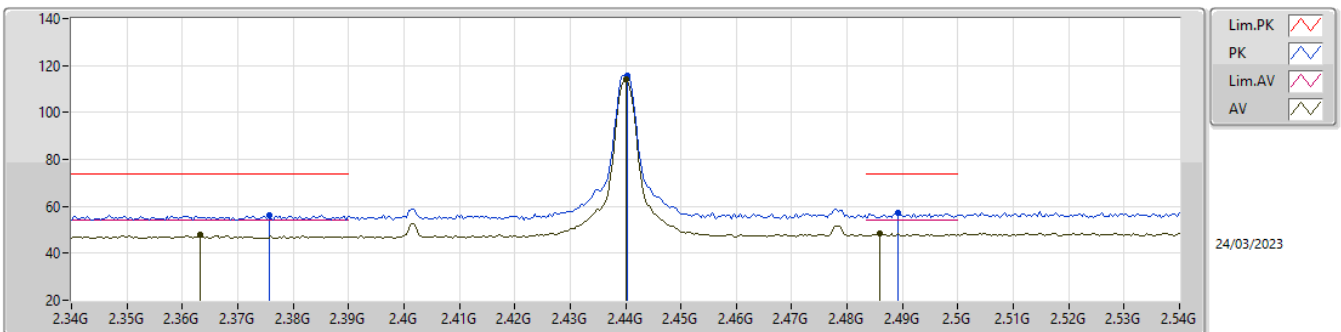
2440MHz_TX



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	2.348G	47.68	54.00	-6.32	31.01	3	Vertical	207	2.20	16.67	27.29	3.72	-
AV	2.44G	110.36	Inf	-Inf	31.28	3	Vertical	207	2.20	79.08	27.48	3.80	-
AV	2.4984G	48.21	54.00	-5.79	31.64	3	Vertical	207	2.20	16.57	27.79	3.85	-
PK	2.3504G	56.91	74.00	-17.09	31.02	3	Vertical	207	2.20	25.89	27.30	3.72	-
PK	2.4404G	111.65	Inf	-Inf	31.28	3	Vertical	207	2.20	80.37	27.48	3.80	-
PK	2.4904G	57.16	74.00	-16.84	31.59	3	Vertical	207	2.20	25.57	27.74	3.85	-

2.4-2.4835GHz_BT-LE(2Mbps)

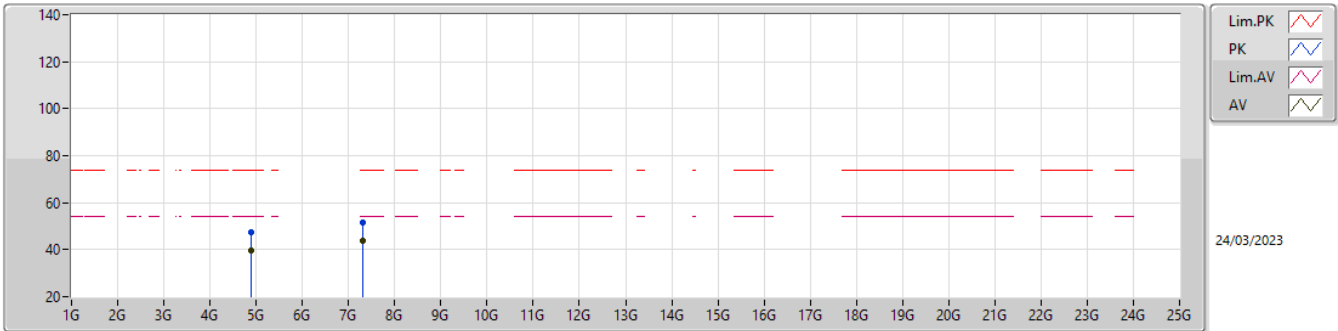
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3632G	47.81	54.00	-6.19	31.06	3	Horizontal	184	1.46	16.75	27.33	3.73	-
AV	2.44G	114.30	Inf	-Inf	31.28	3	Horizontal	184	1.46	83.02	27.48	3.80	-
AV	2.486G	48.50	54.00	-5.50	31.56	3	Horizontal	184	1.46	16.94	27.72	3.84	-
PK	2.3756G	56.39	74.00	-17.61	31.09	3	Horizontal	184	1.46	25.30	27.35	3.74	-
PK	2.4404G	115.52	Inf	-Inf	31.28	3	Horizontal	184	1.46	84.24	27.48	3.80	-
PK	2.4892G	57.04	74.00	-16.96	31.59	3	Horizontal	184	1.46	25.45	27.74	3.85	-

2.4-2.4835GHz_BT-LE(2Mbps)

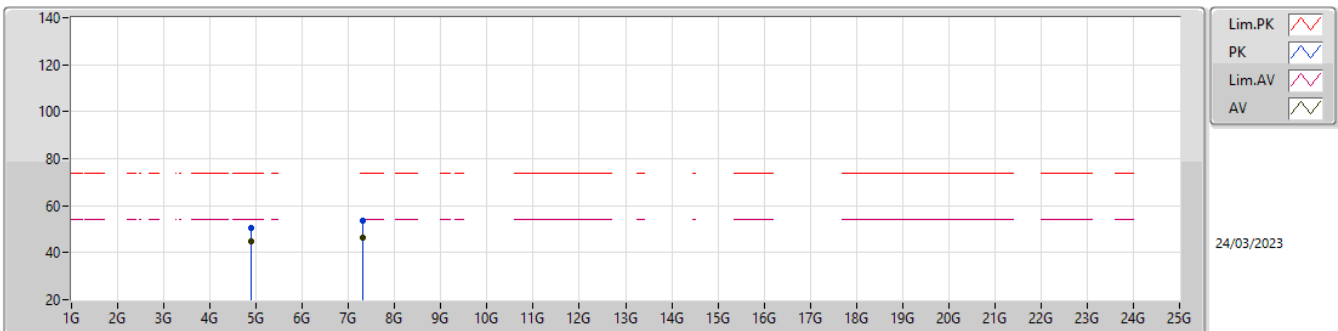
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88003G	39.78	54.00	-14.22	3.33	3	Vertical	47	2.87	36.45	32.60	5.38	34.65
AV	7.31995G	43.86	54.00	-10.14	8.52	3	Vertical	144	1.50	35.34	36.66	6.64	34.78
PK	4.88067G	47.25	74.00	-26.75	3.33	3	Vertical	47	2.87	43.92	32.60	5.38	34.65
PK	7.31872G	51.80	74.00	-22.20	8.52	3	Vertical	144	1.50	43.28	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(2Mbps)

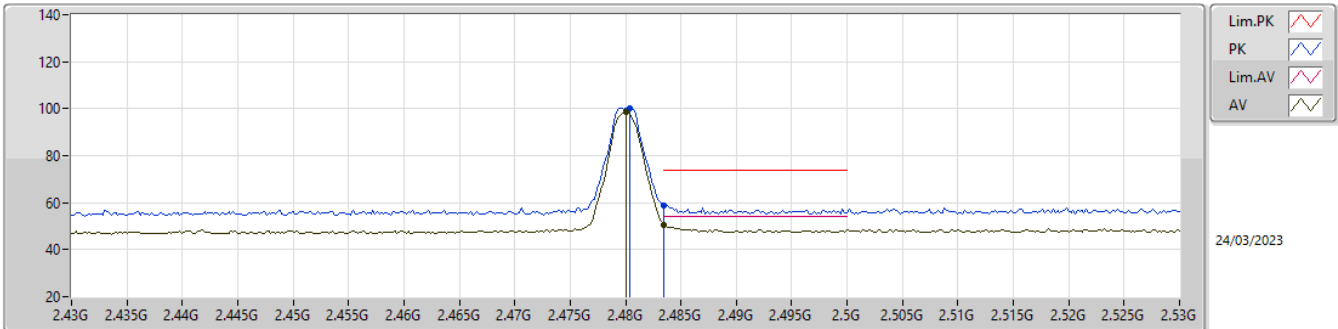
2440MHz_TX



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	4.88G	44.78	54.00	-9.22	3.33	3	Horizontal	199	1.80	41.45	32.60	5.38	34.65
AV	7.32009G	46.47	54.00	-7.53	8.52	3	Horizontal	153	1.68	37.95	36.66	6.64	34.78
PK	4.87907G	50.56	74.00	-23.44	3.33	3	Horizontal	199	1.80	47.23	32.60	5.38	34.65
PK	7.31863G	53.38	74.00	-20.62	8.52	3	Horizontal	153	1.68	44.86	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(2Mbps)

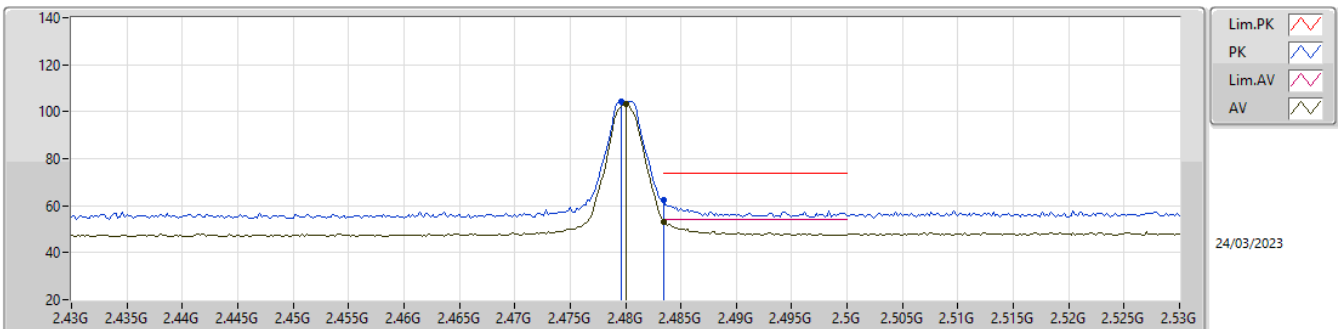
2480MHz_TX



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	98.58	Inf	-Inf	31.52	3	Vertical	209	1.60	67.06	27.68	3.84	-
AV	2.4835G	50.31	54.00	-3.69	31.54	3	Vertical	209	1.60	18.77	27.70	3.84	-
PK	2.4804G	100.10	Inf	-Inf	31.52	3	Vertical	209	1.60	68.58	27.68	3.84	-
PK	2.4835G	58.78	74.00	-15.22	31.54	3	Vertical	209	1.60	27.24	27.70	3.84	-

2.4-2.4835GHz_BT-LE(2Mbps)

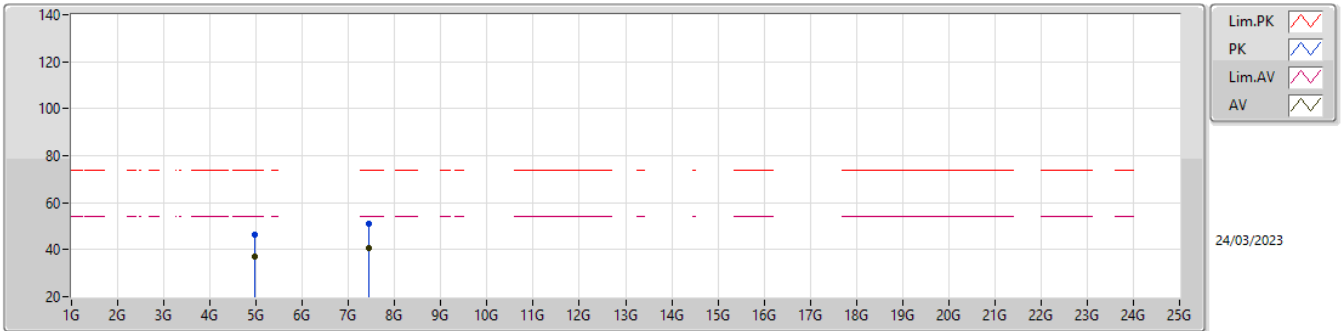
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	103.04	Inf	-Inf	31.52	3	Horizontal	185	1.50	71.52	27.68	3.84	-
AV	2.4835G	53.25	54.00	-0.75	31.54	3	Horizontal	185	1.50	21.71	27.70	3.84	-
PK	2.4796G	104.48	Inf	-Inf	31.52	3	Horizontal	185	1.50	72.96	27.68	3.84	-
PK	2.4835G	62.65	74.00	-11.35	31.54	3	Horizontal	185	1.50	31.11	27.70	3.84	-

2.4-2.4835GHz_BT-LE(2Mbps)

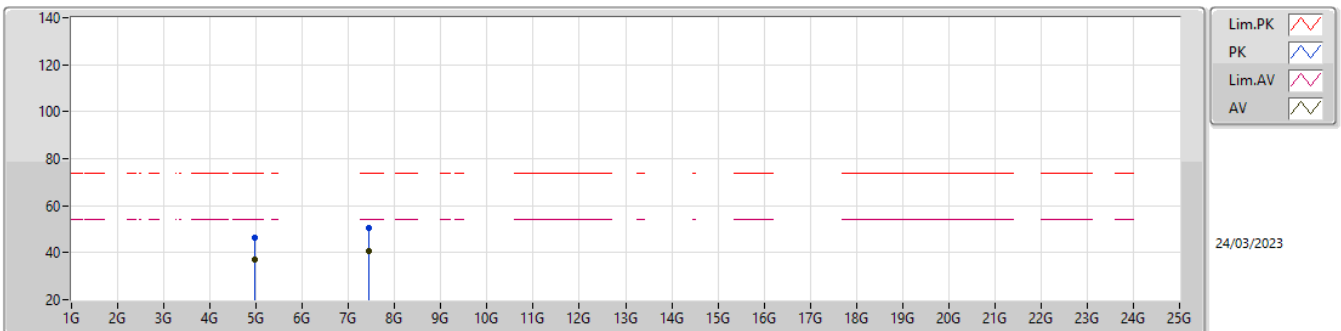
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.9614G	36.94	54.00	-17.06	3.65	3	Vertical	359	1.50	33.29	32.85	5.44	34.64
AV	7.44163G	40.65	54.00	-13.35	8.23	3	Vertical	62	1.00	32.42	36.32	6.70	34.79
PK	4.96143G	46.59	74.00	-27.41	3.65	3	Vertical	359	1.50	42.94	32.85	5.44	34.64
PK	7.43751G	50.86	74.00	-23.14	8.23	3	Vertical	62	1.00	42.63	36.32	6.70	34.79

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	4.96138G	36.94	54.00	-17.06	3.65	3	Horizontal	249	1.50	33.29	32.85	5.44	34.64
AV	7.43852G	40.87	54.00	-13.13	8.23	3	Horizontal	281	1.32	32.64	36.32	6.70	34.79
PK	4.96105G	46.26	74.00	-27.74	3.64	3	Horizontal	249	1.50	42.62	32.84	5.44	34.64
PK	7.4385G	50.36	74.00	-23.64	8.23	3	Horizontal	281	1.32	42.13	36.32	6.70	34.79



Summary

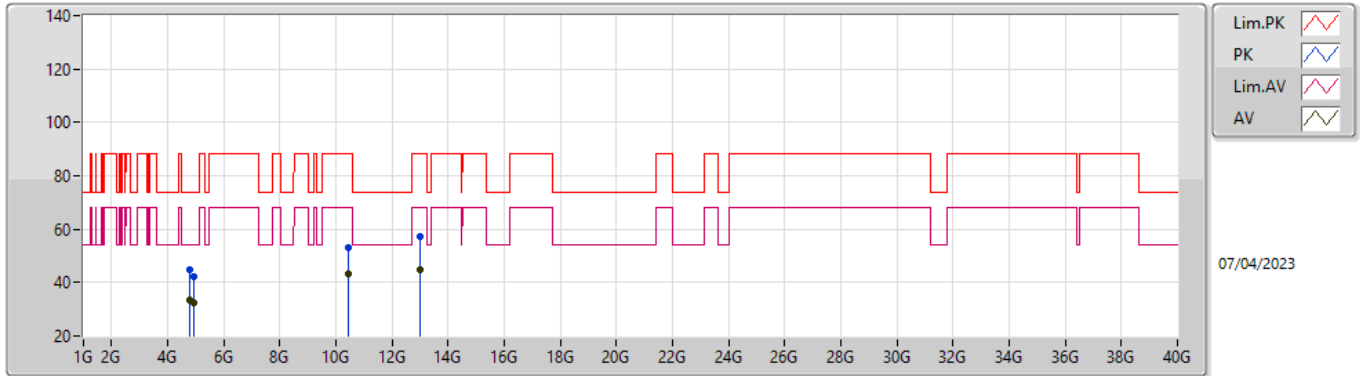
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.80478G	33.89	54.00	-20.11	Horizontal
Mode 2	Pass	AV	4.92455G	46.57	54.00	-7.43	Vertical







Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.79872G	33.69	54.00	-20.31	2.95	3	Vertical	178	1.50	-
Mode 1	Pass	AV	4.92452G	32.60	54.00	-21.40	3.46	3	Vertical	222	1.11	-
Mode 1	Pass	AV	10.46696G	43.45	68.20	-24.75	11.72	3	Vertical	29	2.25	-
Mode 1	Pass	AV	13.01018G	44.99	68.20	-23.21	14.85	3	Vertical	68	1.56	-
Mode 1	Pass	PK	4.81114G	44.86	74.00	-29.14	3.04	3	Vertical	178	1.50	-
Mode 1	Pass	PK	4.92394G	42.30	74.00	-31.70	3.46	3	Vertical	222	1.11	-
Mode 1	Pass	PK	10.46608G	53.27	88.20	-34.93	11.72	3	Vertical	29	2.25	-
Mode 1	Pass	PK	13.01016G	57.16	88.20	-31.04	14.85	3	Vertical	68	1.56	-
Mode 1	Pass	AV	4.80478G	33.89	54.00	-20.11	2.99	3	Horizontal	1	1.43	-
Mode 1	Pass	AV	4.92455G	32.78	54.00	-21.22	3.46	3	Horizontal	229	1.25	-
Mode 1	Pass	AV	10.46665G	43.67	68.20	-24.53	11.72	3	Horizontal	250	1.25	-
Mode 1	Pass	AV	13.01057G	42.57	68.20	-25.63	14.85	3	Horizontal	267	1.04	-
Mode 1	Pass	PK	4.80568G	45.10	74.00	-28.90	2.99	3	Horizontal	1	1.43	-
Mode 1	Pass	PK	4.924036G	42.53	74.00	-31.47	3.46	3	Horizontal	229	1.25	-
Mode 1	Pass	PK	10.46628G	52.45	88.20	-35.75	11.72	3	Horizontal	250	1.25	-
Mode 1	Pass	PK	13.01069G	54.76	88.20	-33.44	14.85	3	Horizontal	267	1.04	-
Mode 2	Pass	AV	4.81072G	34.12	54.00	-19.88	3.03	3	Vertical	112	2.20	-
Mode 2	Pass	AV	4.92455G	46.57	54.00	-7.43	3.46	3	Vertical	300	1.00	-
Mode 2	Pass	AV	10.46072G	58.72	68.20	-9.48	11.70	3	Vertical	120	1.32	-
Mode 2	Pass	AV	13.01065G	46.28	68.20	-21.92	14.85	3	Vertical	260	2.12	-
Mode 2	Pass	PK	4.80978G	43.75	74.00	-30.25	3.03	3	Vertical	112	2.20	-
Mode 2	Pass	PK	4.92463G	62.35	74.00	-11.65	3.46	3	Vertical	300	1.00	-
Mode 2	Pass	PK	10.46042G	58.92	88.20	-29.28	11.70	3	Vertical	120	1.32	-
Mode 2	Pass	PK	13.01038G	54.38	88.20	-33.82	14.85	3	Vertical	260	2.12	-
Mode 2	Pass	AV	4.81076G	32.24	54.00	-21.76	3.03	3	Horizontal	142	3.00	-
Mode 2	Pass	AV	4.92456G	45.32	54.00	-8.68	3.46	3	Horizontal	132	1.20	-
Mode 2	Pass	AV	10.45729G	56.82	68.20	-11.38	11.69	3	Horizontal	92	1.30	-
Mode 2	Pass	AV	13.01046G	48.25	68.20	-19.95	14.85	3	Horizontal	220	2.00	-
Mode 2	Pass	PK	4.81112G	43.24	74.00	-30.76	3.04	3	Horizontal	142	3.00	-
Mode 2	Pass	PK	4.92451G	62.72	74.00	-11.28	3.46	3	Horizontal	132	1.20	-
Mode 2	Pass	PK	10.46125G	58.57	88.20	-29.63	11.70	3	Horizontal	92	1.30	-
Mode 2	Pass	PK	13.01075G	55.69	88.20	-32.51	14.85	3	Horizontal	220	2.00	-

Radiated Emissions above 1GHz_Mode 1

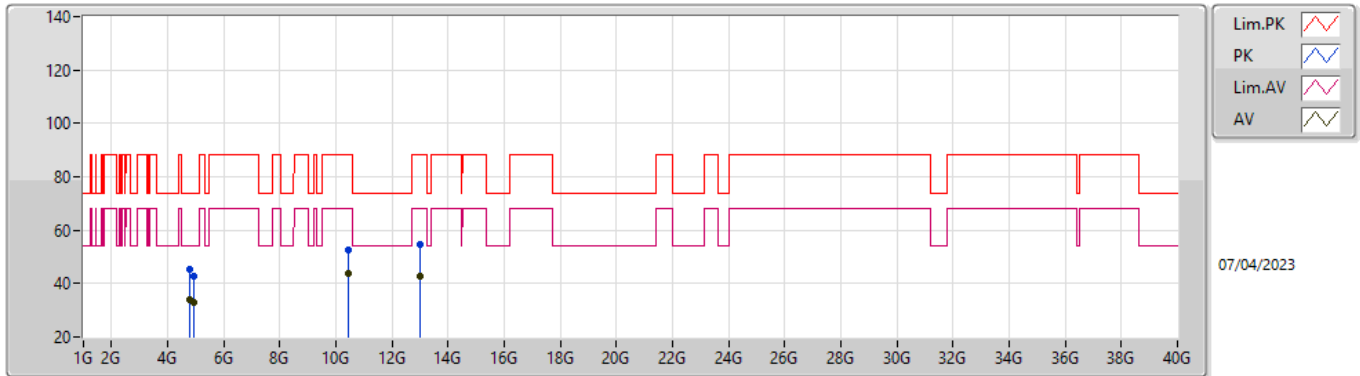






Lim.PK 
 PK 
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07/04/2023

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	4.79872G	33.69	54.00	-20.31	2.95	3	Vertical	178	1.50	30.74	32.29	5.32	34.66
AV	4.92452G	32.60	54.00	-21.40	3.46	3	Vertical	222	1.11	29.14	32.70	5.41	34.65
AV	10.46696G	43.45	68.20	-24.75	11.72	3	Vertical	29	2.25	31.73	38.47	8.00	34.75
AV	13.01018G	44.99	68.20	-23.21	14.85	3	Vertical	68	1.56	30.14	39.60	8.74	33.49
PK	4.81114G	44.86	74.00	-29.14	3.04	3	Vertical	178	1.50	41.82	32.37	5.33	34.66
PK	4.92394G	42.30	74.00	-31.70	3.46	3	Vertical	222	1.11	38.84	32.70	5.41	34.65
PK	10.46608G	53.27	88.20	-34.93	11.72	3	Vertical	29	2.25	41.55	38.47	8.00	34.75
PK	13.01016G	57.16	88.20	-31.04	14.85	3	Vertical	68	1.56	42.31	39.60	8.74	33.49

Radiated Emissions above 1GHz_Mode 1

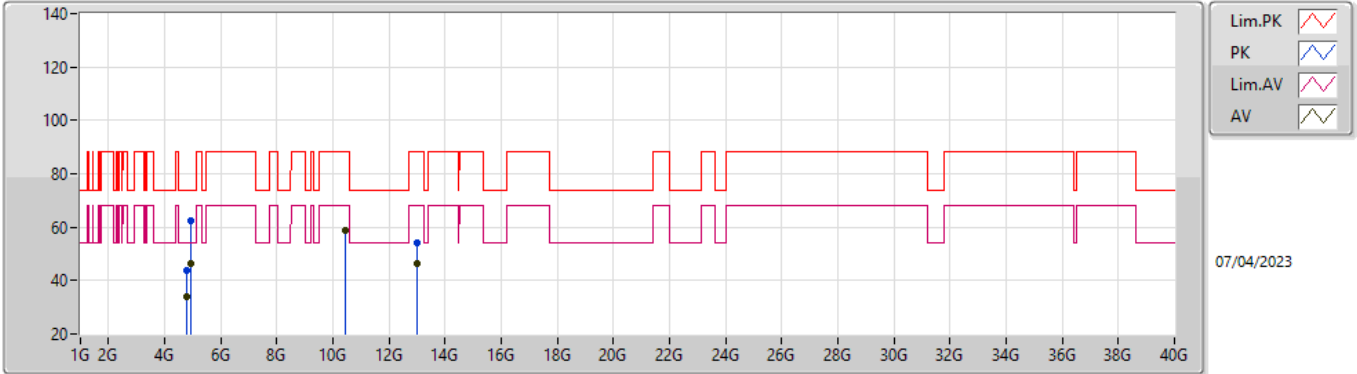


Lim.PK 
 PK 
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 AV 

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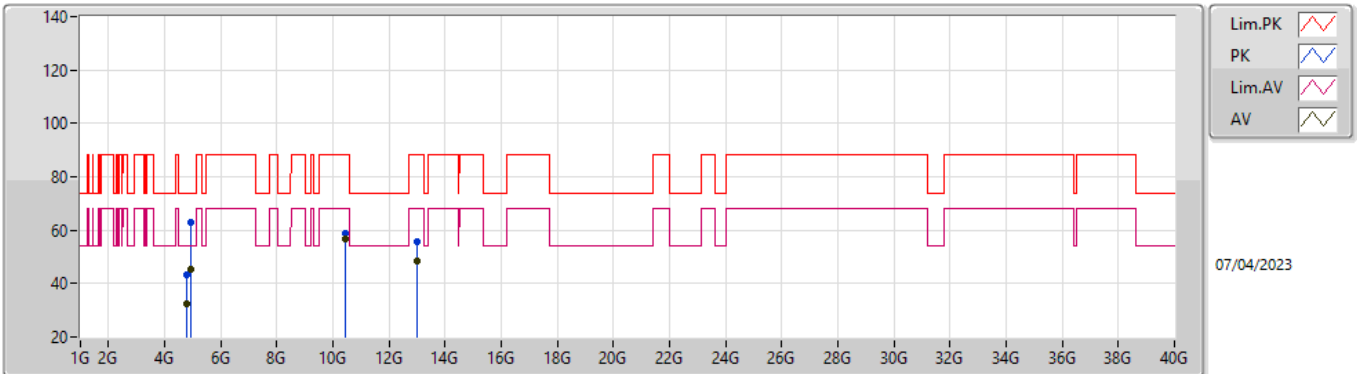
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.80478G	33.89	54.00	-20.11	2.99	3	Horizontal	1	1.43	30.90	32.33	5.32	34.66
AV	4.92455G	32.78	54.00	-21.22	3.46	3	Horizontal	229	1.25	29.32	32.70	5.41	34.65
AV	10.46665G	43.67	68.20	-24.53	11.72	3	Horizontal	250	1.25	31.95	38.47	8.00	34.75
AV	13.01057G	42.57	68.20	-25.63	14.85	3	Horizontal	267	1.04	27.72	39.60	8.74	33.49
PK	4.80568G	45.10	74.00	-28.90	2.99	3	Horizontal	1	1.43	42.11	32.33	5.32	34.66
PK	4.924036G	42.53	74.00	-31.47	3.46	3	Horizontal	229	1.25	39.07	32.70	5.41	34.65
PK	10.46628G	52.45	88.20	-35.75	11.72	3	Horizontal	250	1.25	40.73	38.47	8.00	34.75
PK	13.01069G	54.76	88.20	-33.44	14.85	3	Horizontal	267	1.04	39.91	39.60	8.74	33.49

Radiated Emissions above 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.81072G	34.12	54.00	-19.88	3.03	3	Vertical	112	2.20	31.09	32.36	5.33	34.66
AV	4.92455G	46.57	54.00	-7.43	3.46	3	Vertical	300	1.00	43.11	32.70	5.41	34.65
AV	10.46072G	58.72	68.20	-9.48	11.70	3	Vertical	120	1.32	47.02	38.46	8.00	34.76
AV	13.01065G	46.28	68.20	-21.92	14.85	3	Vertical	260	2.12	31.43	39.60	8.74	33.49
PK	4.80978G	43.75	74.00	-30.25	3.03	3	Vertical	112	2.20	40.72	32.36	5.33	34.66
PK	4.92463G	62.35	74.00	-11.65	3.46	3	Vertical	300	1.00	58.89	32.70	5.41	34.65
PK	10.46042G	58.92	88.20	-29.28	11.70	3	Vertical	120	1.32	47.22	38.46	8.00	34.76
PK	13.01038G	54.38	88.20	-33.82	14.85	3	Vertical	260	2.12	39.53	39.60	8.74	33.49

Radiated Emissions above 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	4.81076G	32.24	54.00	-21.76	3.03	3	Horizontal	142	3.00	29.21	32.36	5.33	34.66
AV	4.92456G	45.32	54.00	-8.68	3.46	3	Horizontal	132	1.20	41.86	32.70	5.41	34.65
AV	10.45729G	56.82	68.20	-11.38	11.69	3	Horizontal	92	1.30	45.13	38.46	7.99	34.76
AV	13.01046G	48.25	68.20	-19.95	14.85	3	Horizontal	220	2.00	33.40	39.60	8.74	33.49
PK	4.81112G	43.24	74.00	-30.76	3.04	3	Horizontal	142	3.00	40.20	32.37	5.33	34.66
PK	4.92451G	62.72	74.00	-11.28	3.46	3	Horizontal	132	1.20	59.26	32.70	5.41	34.65
PK	10.46125G	58.57	88.20	-29.63	11.70	3	Horizontal	92	1.30	46.87	38.46	8.00	34.76
PK	13.01075G	55.69	88.20	-32.51	14.85	3	Horizontal	220	2.00	40.84	39.60	8.74	33.49