

FCC Radio Test Report

FCC ID : AL8-F60L
Equipment : True Wireless In-Ear Headphones
Brand Name : PLANTRONICS
Model Name : F60T
Applicant : Plantronics, Inc.
345 Encinal Street, Santa Cruz, CA 95060 USA
Manufacturer : Plantronics, Inc.
345 Encinal Street, Santa Cruz, CA 95060 USA
Standard : 47 CFR FCC Part 15.247

The product was received on May 30, 2022, and testing was started from Oct. 17, 2022 and completed on Oct. 25, 2022. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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History of this test report

[illegible]

Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
-	15.207	AC Power-line Conducted Emissions	Not Required	Only employ battery power.
3.1	15.247(a)	DTS Bandwidth	PASS	-
3.2	15.247(b)	Maximum Conducted Output Power	PASS	-
3.3	15.247(e)	Power Spectral Density	PASS	-
3.4	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.5	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: Ben Tseng

Report Producer: Ann Hou

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(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	Gain (dBi)
1	Toongin	ANT-Earbuds	FPC Antenna	Touch Pad	-5.56

Note 1: The EUT has one antenna.

For BT function:

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

Ant. 1 could transmit/receive.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From Battery		
EUT Function	☒ Point-to-multipoint	☐ Point-to-point	
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:		...
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:		...
☐	Other:		

1.1.4 Table for Multiple Listing

There are two kinds of MFI chip which specification is the same.

SKU	Model Name	Description
1	MFI343S00176	The specification is the same but IC package design and layout location is different
2	MFI343S00177	

From the above models, SKU2 was selected as representative model for the test and its data was recorded in this report.

1.1.5 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(1Mbps)	0.656	1.83	410u	3k
BT-LE(2Mbps)	0.361	4.42	225.938u	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				
☒ 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
RF Conducted	TH06-HY	Jin	22.6~26.4°C / 51~57%	17/Oct/2022~25/Oct/2022
☒ 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	Daniel	23.7~24.12°C / 55~59%	18/Oct/2022~20/Oct/2022

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
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	BlueTest3: 3.3.5
------------------------------	------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-LE(2Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default

2.2 The Worst Case Measurement Configuration

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	Battery mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT		V	

2.3 Accessories

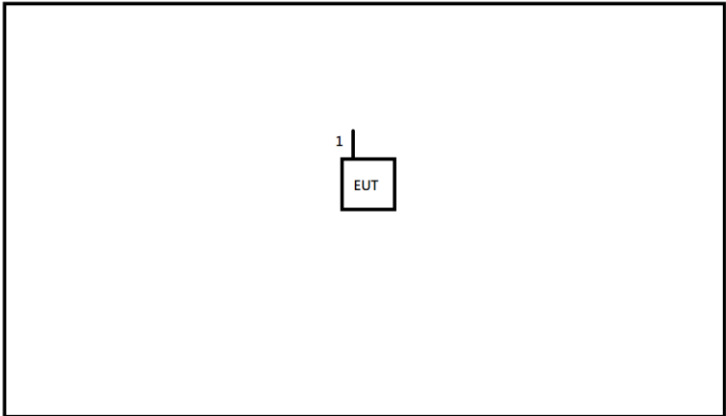
Accessories				
Battery	Brand Name	VDL	Model Name	ZJ1254H
	Power Rating	3.85 Vdc, 70 mAh	Type	Li-ion, Button cell
Wireless Charging case (Optional)	Brand Name	PLANTRONICS	Model Name	CBF60+
USB Cable (Type-C to A) (Optional)	Brand Name	LOT	Model Name	207488-09
	Signal Line	0.3 meter, D-shielded cable, w/o ferrite core		
USB Cable (Type-C to C) (Optional)	Brand Name	LOT	Model Name	207488-10
	Signal Line	0.3 meter, D-shielded cable, w/o ferrite core		
Audio Cable (Type-C to Audio) (Optional)	Brand Name	LOT	Model Name	219266-02
	Signal Line	0.77 meter, non-shielded cable, w/o ferrite core		
Bluetooth Dongle (Type-C) (Optional)	Brand Name	Poly	Model Name	BT700C
	Interface	USB Type-C		
Bluetooth Dongle (Type-A) (Optional)	Brand Name	Poly	Model Name	BT700
	Interface	USB Type-A		

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

2.4 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	HP	HSTNN-I42C	-	-
2	Adapter for NB	HP	HSTNN-CA40	-	-

2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test				
				
Item	Connection	Shielded	Length (m)	
1	Test fixture cable	No	0.05	

3 Transmitter Test Result

3.1 DTS Bandwidth

3.1.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

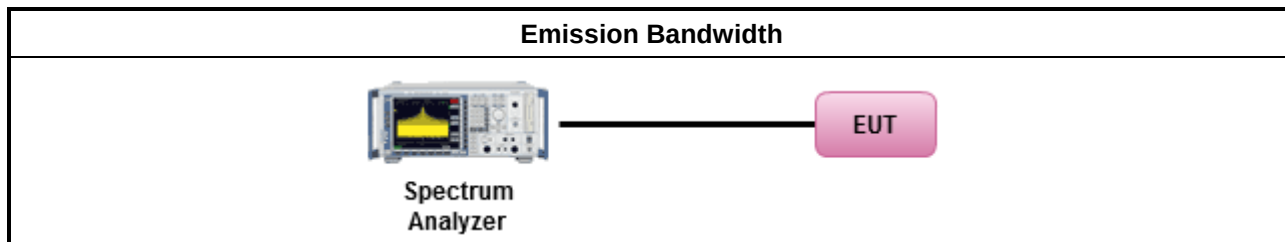
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
e.i.r.p. Power Limit:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

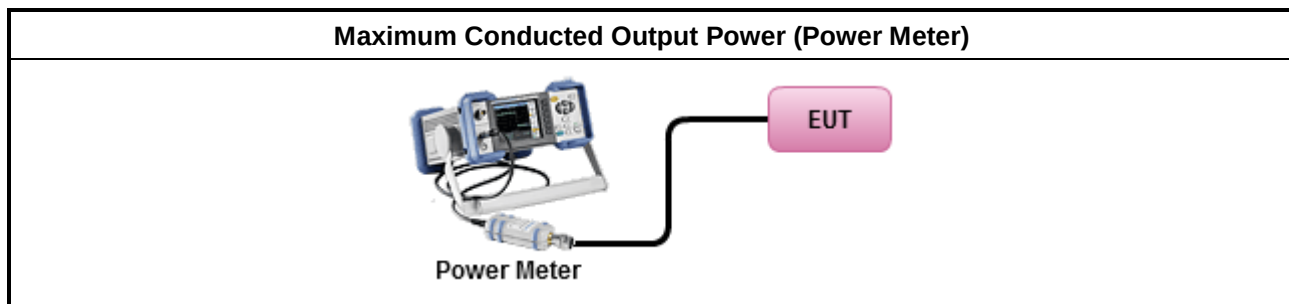
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Power Spectral Density

3.3.1 Power Spectral Density Limit

Power Spectral Density Limit
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

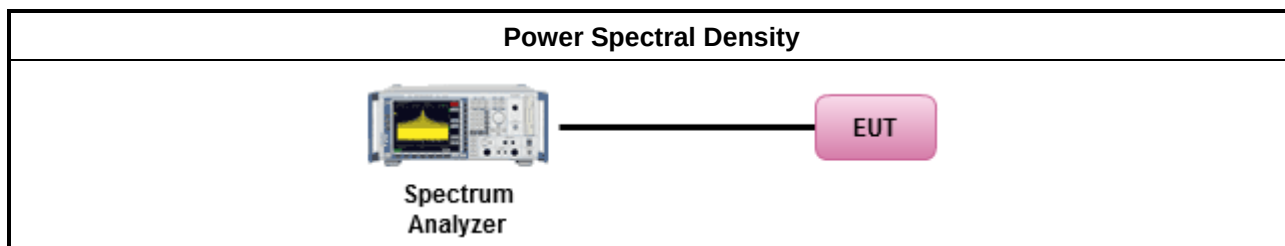
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method
Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒ Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
For conducted measurement.
If The EUT supports multiple transmit chains using options given below:
Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Refer as Appendix C

3.4 Emissions in Non-restricted Frequency Bands

3.4.1 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.	

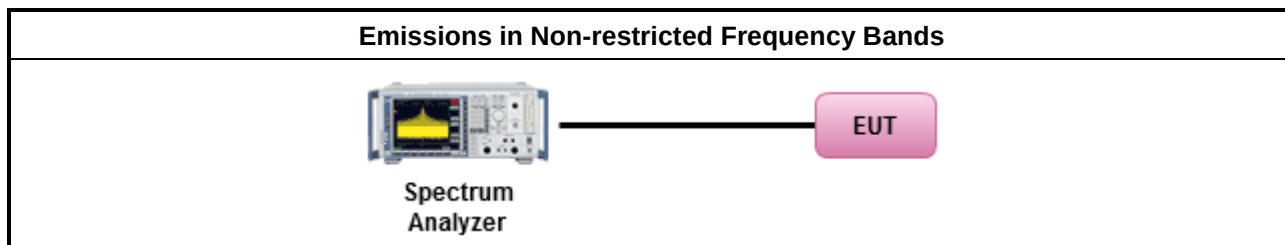
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.4.4 Test Setup



3.4.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix D

3.5 Emissions in Restricted Frequency Bands

3.5.1 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.

3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

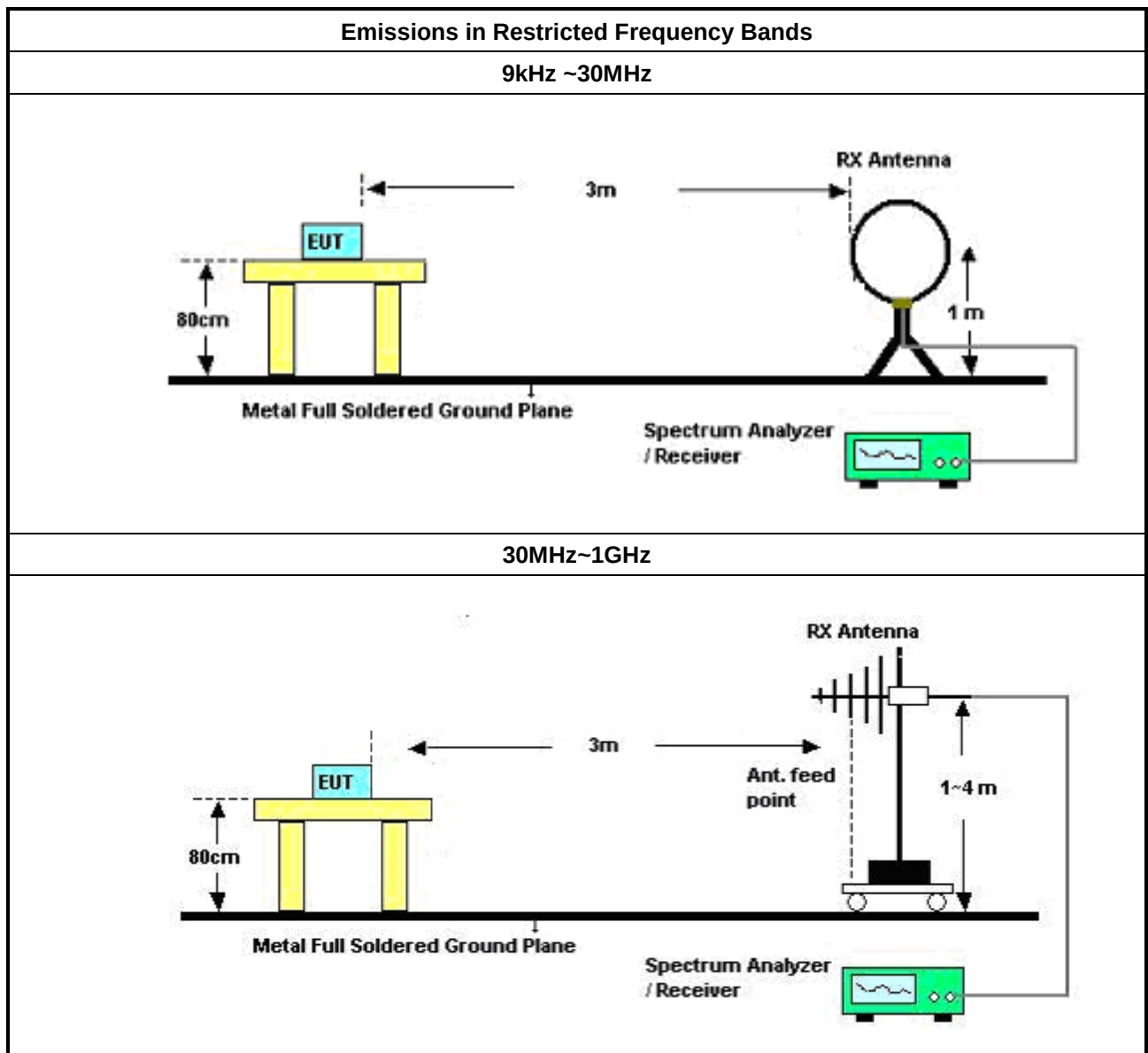
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

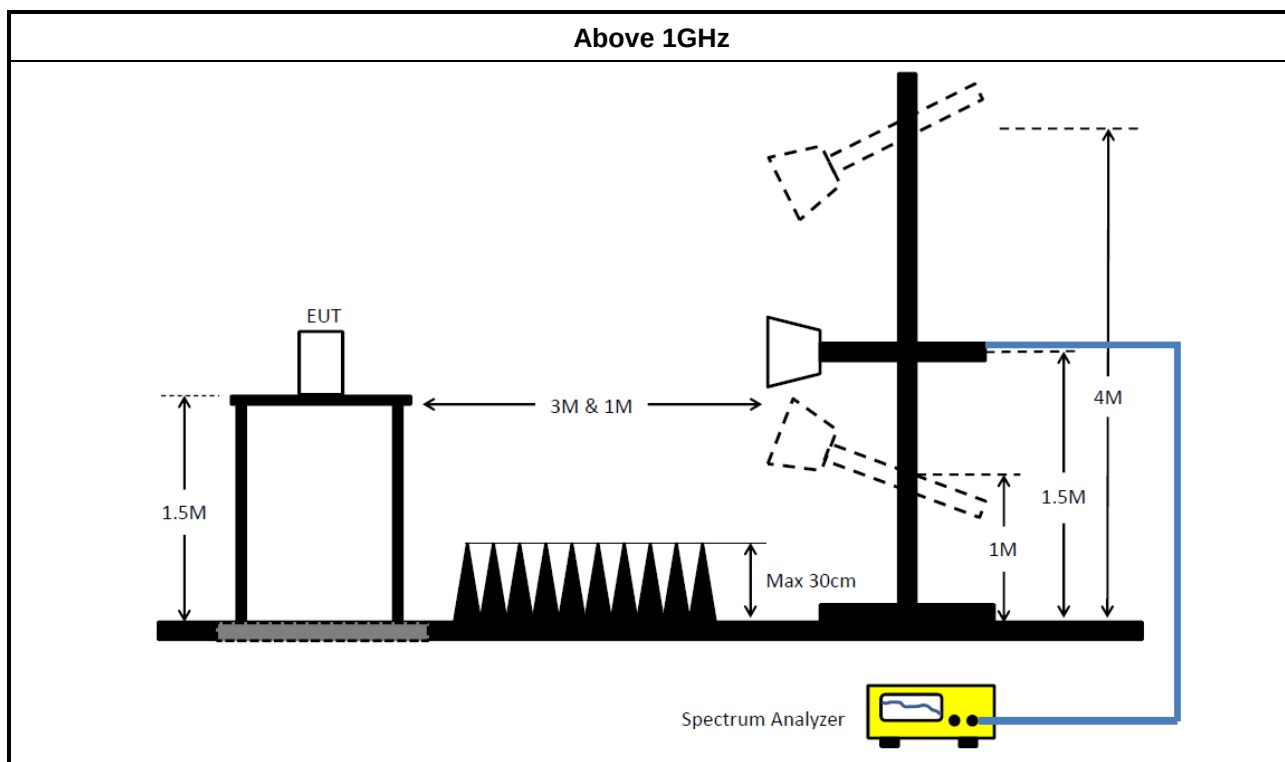
3.5.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.5.5 Test Setup





3.5.6 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.

3.5.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix E

4 Test Equipment and Calibration Data

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	01/Apr/2022	31/Mar/2023
Signal Generator	Keysight	N5171B	MY53051240	9kHz~6GHz	24/Nov/2021	23/Nov/2022
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	25/Mar/2022	24/Mar/2023
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	25/Mar/2022	24/Mar/2023
SENSE-15247_FS	Sporton	V5.10.7.16	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	25/Mar/2022	24/Mar/2023
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	17/Mar/2022	16/Mar/2023
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	11/Aug/2022	10/Aug/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	27/Dec/2021	26/Dec/2022
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
RF Cable-low	Jye Bao	RG142	CB031+324530/4	9kHz~30MHz	07/Feb/2022	06/Feb/2023
RF Cable-low	Jye Bao	RG142	03CH09-cable-01	30MHz~1GHz	17/Aug/2022	16/Aug/2023
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-02	1GHz~40GHz	17/Aug/2022	16/Aug/2023
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	18/Mar/2022	17/Mar/2023
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	08/Mar/2022	07/Mar/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	18/Mar/2022	17/Mar/2023
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	13/May/2022	12/May/2023
SENSE-15247_FS	Sporton	V5.10.7.14	N/A	N/A	N/A	N/A

Summary

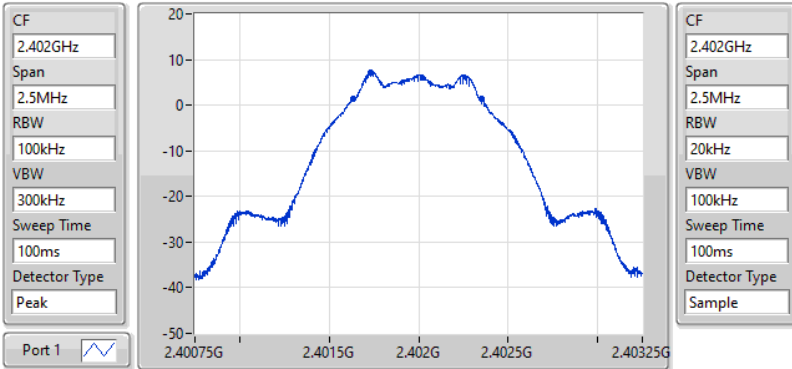
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	720k	1.046M	1M05F1D	715k	1.037M
BT-LE(2Mbps)	1.255M	2.061M	2M06F1D	1.203M	2.049M

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	715k	1.038M
2440MHz	Pass	500k	720k	1.046M
2480MHz	Pass	500k	716.25k	1.037M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.255M	2.059M
2440MHz	Pass	500k	1.253M	2.061M
2480MHz	Pass	500k	1.203M	2.049M

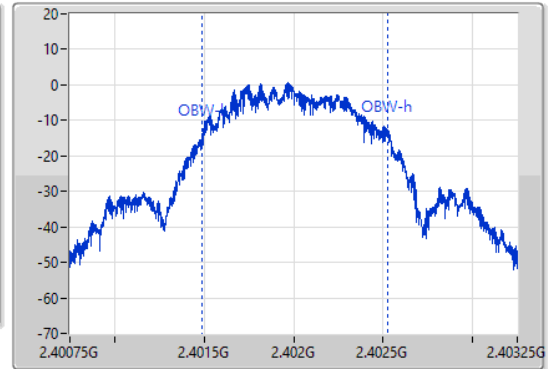
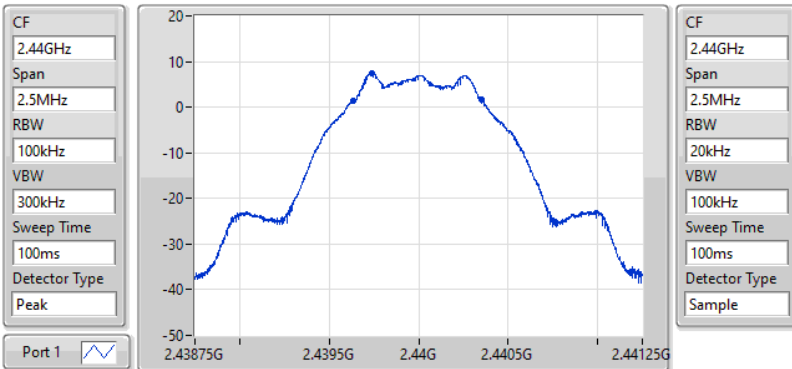
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
715k	2.401636G	2.402351G	1.038M	2.40149G	2.402528G	500k	1

EBW-DTS

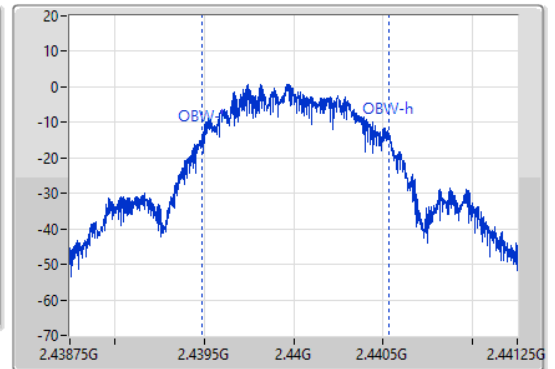
18/10/2022


BT-LE(1Mbps)
2440MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
720k	2.439634G	2.440354G	1.046M	2.439485G	2.440531G	500k	1

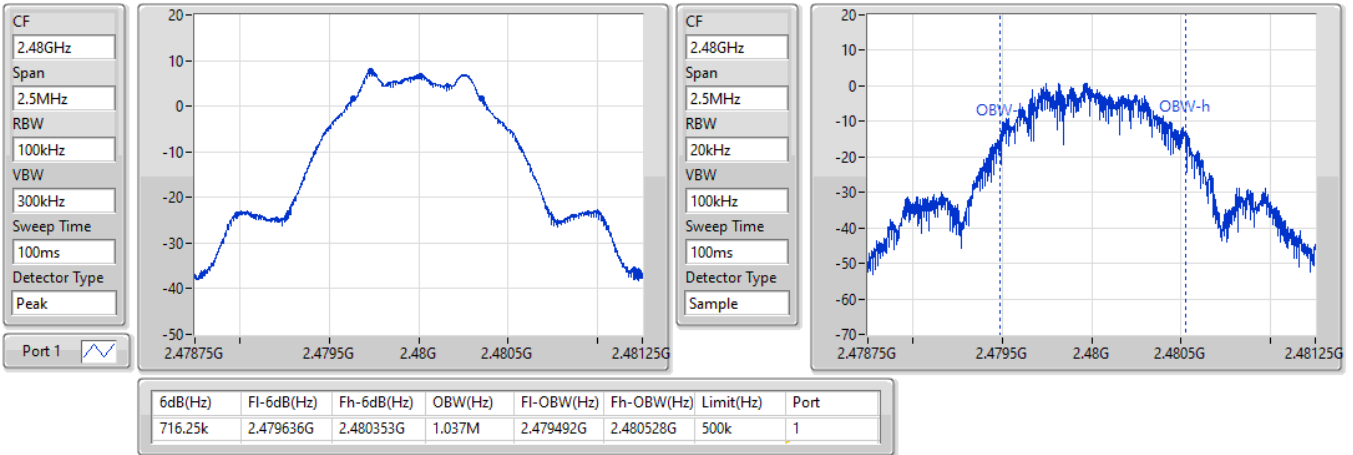
EBW-DTS

18/10/2022

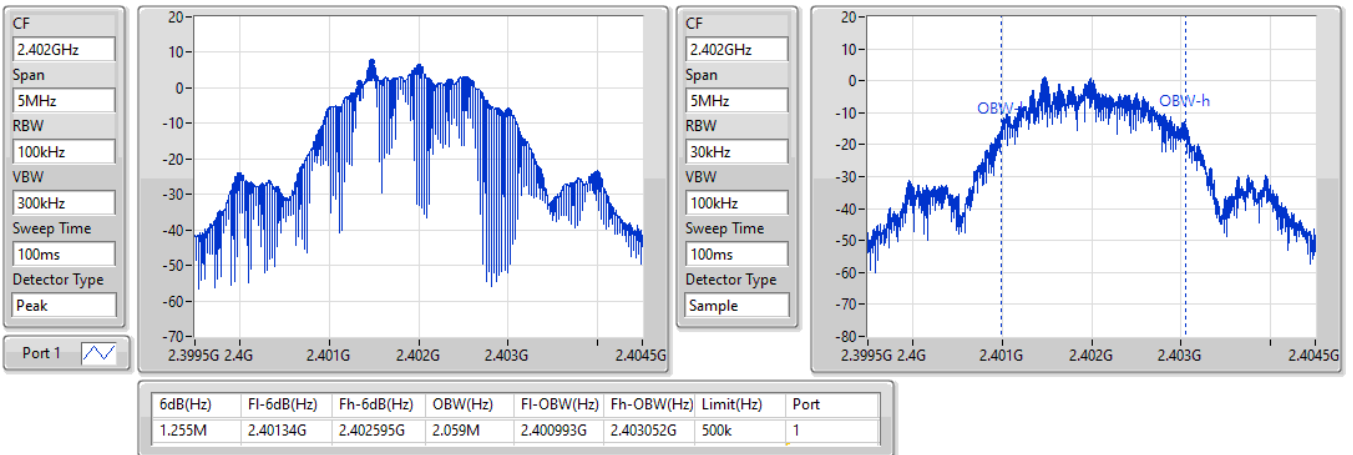


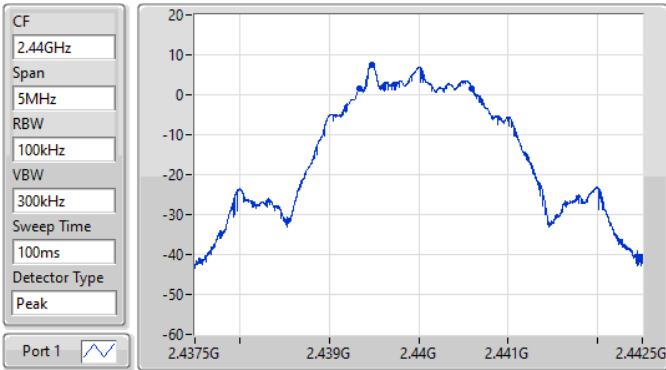
BT-LE(1Mbps)
EBW-DTS
2480MHz

18/10/2022


BT-LE(2Mbps)
EBW-DTS
2402MHz

18/10/2022

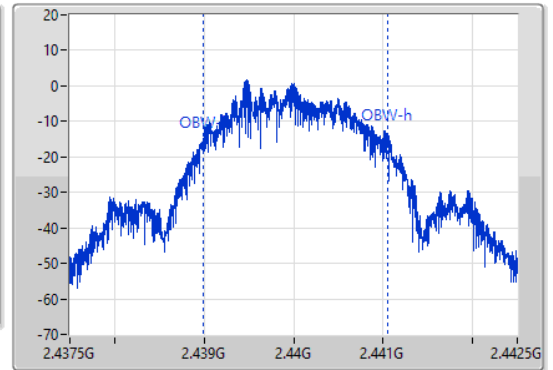
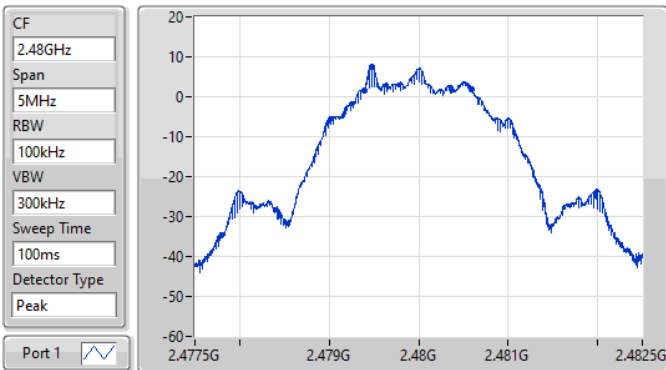


BT-LE(2Mbps)
2440MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.253M	2.439345G	2.440598G	2.061M	2.438991G	2.441052G	500k	1

EBW-DTS

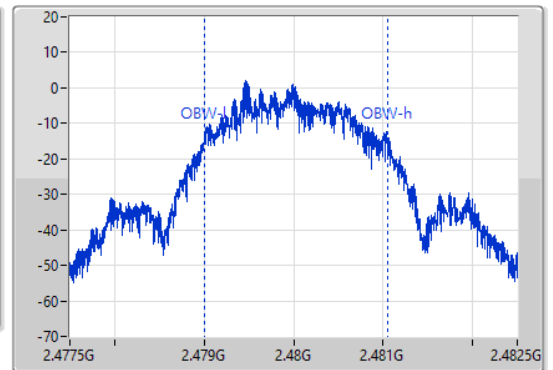
18/10/2022


BT-LE(2Mbps)
2480MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.203M	2.479395G	2.480598G	2.049M	2.478998G	2.481047G	500k	1

EBW-DTS

18/10/2022



**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	7.52	0.00565
BT-LE(2Mbps)	7.46	0.00557

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-5.56	7.26	30.00
2440MHz	Pass	-5.56	7.37	30.00
2480MHz	Pass	-5.56	7.52	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	-5.56	7.24	30.00
2440MHz	Pass	-5.56	7.30	30.00
2480MHz	Pass	-5.56	7.46	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-8.18
BT-LE(2Mbps)	-11.67

RBW = 3kHz;

Result

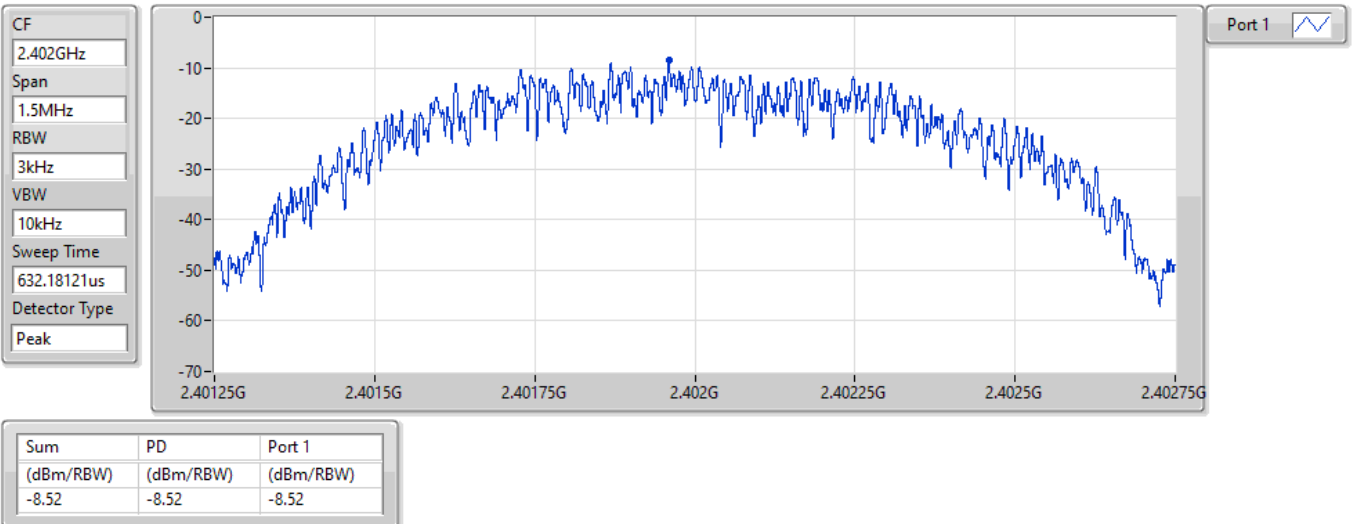
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-5.56	-8.52	8.00
2440MHz	Pass	-5.56	-8.20	8.00
2480MHz	Pass	-5.56	-8.18	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	-5.56	-12.25	8.00
2440MHz	Pass	-5.56	-11.99	8.00
2480MHz	Pass	-5.56	-11.67	8.00

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;

BT-LE(1Mbps)

2402MHz

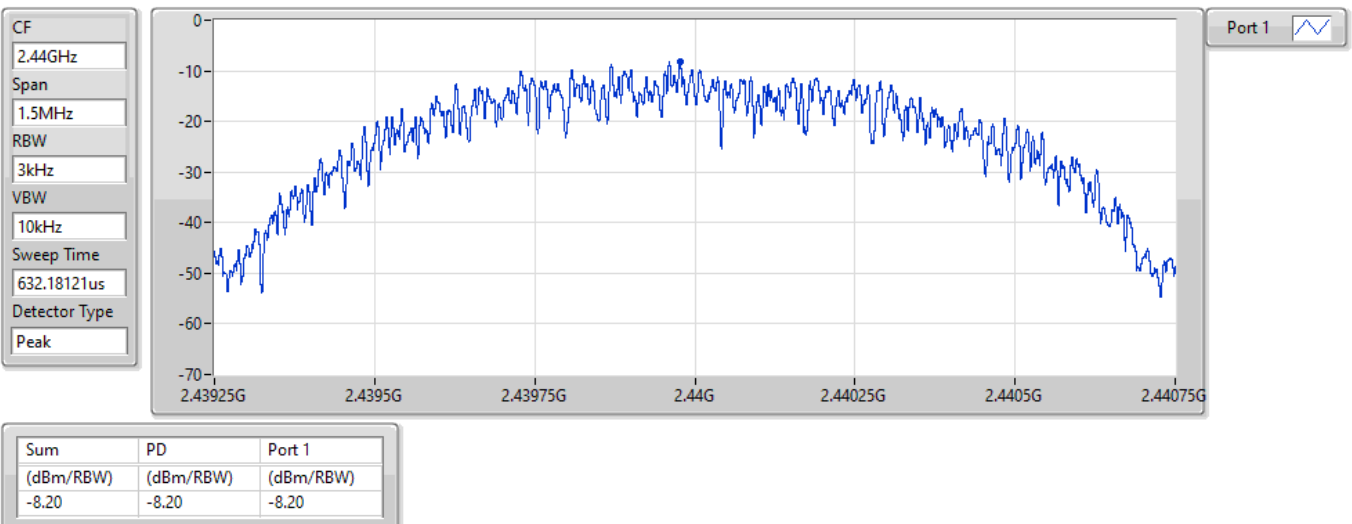
18/10/2022



BT-LE(1Mbps)

2440MHz

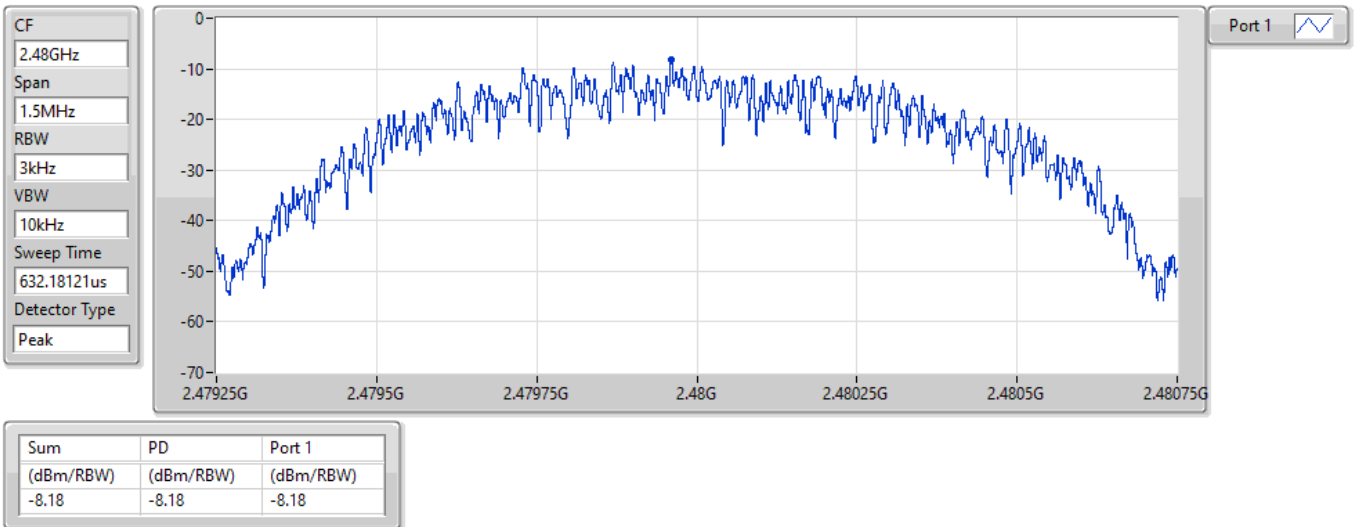
18/10/2022



BT-LE(1Mbps)

2480MHz

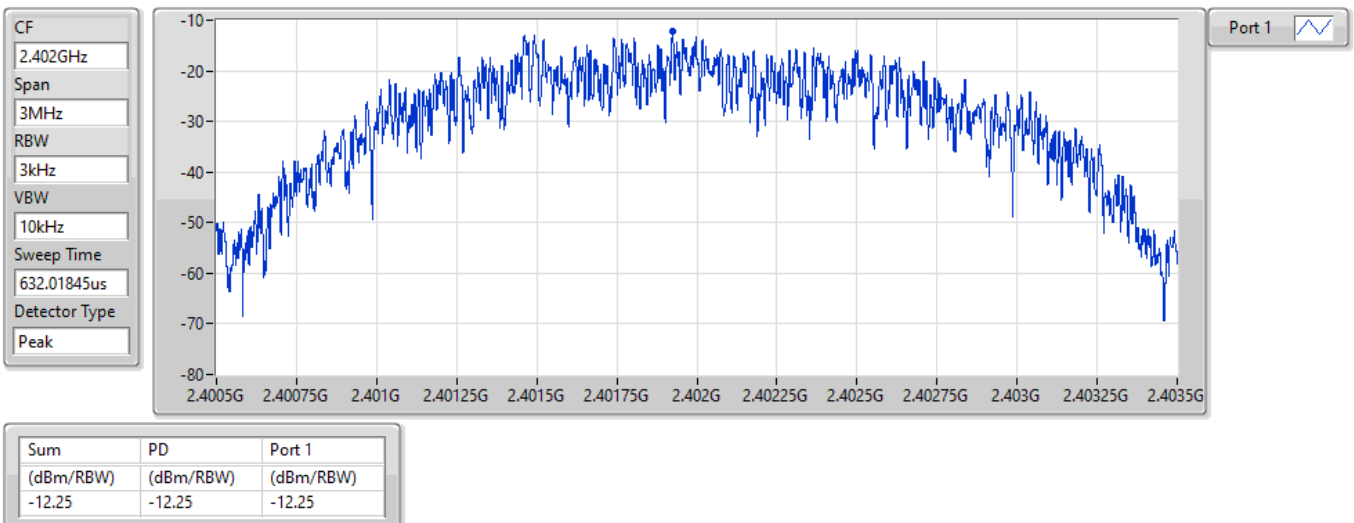
18/10/2022



BT-LE(2Mbps)

2402MHz

18/10/2022

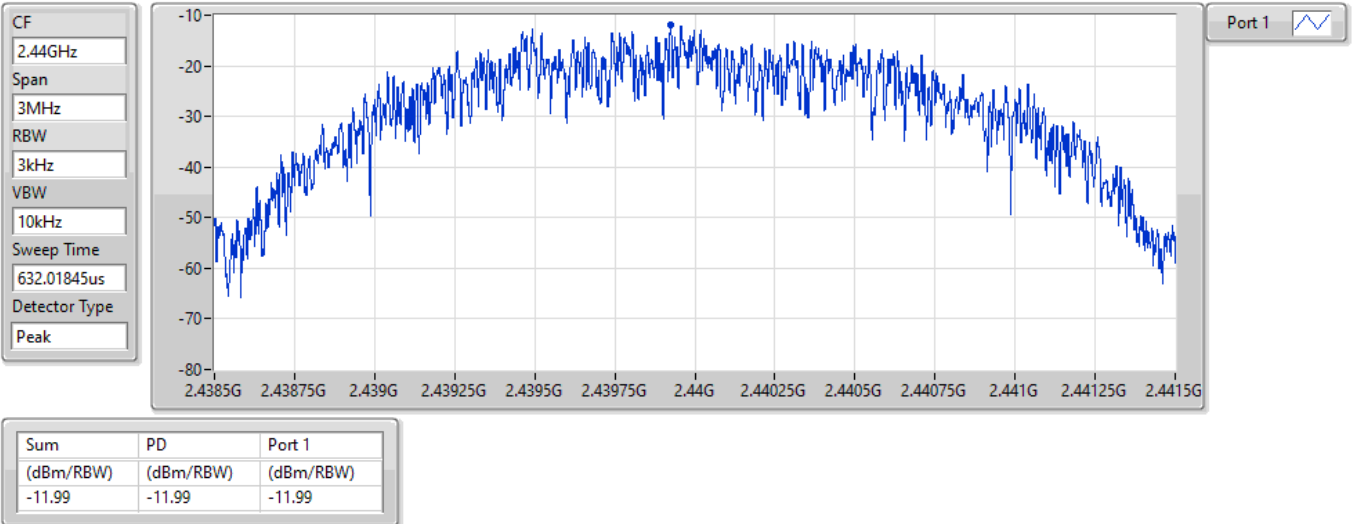


BT-LE(2Mbps)

PSD

2440MHz

18/10/2022

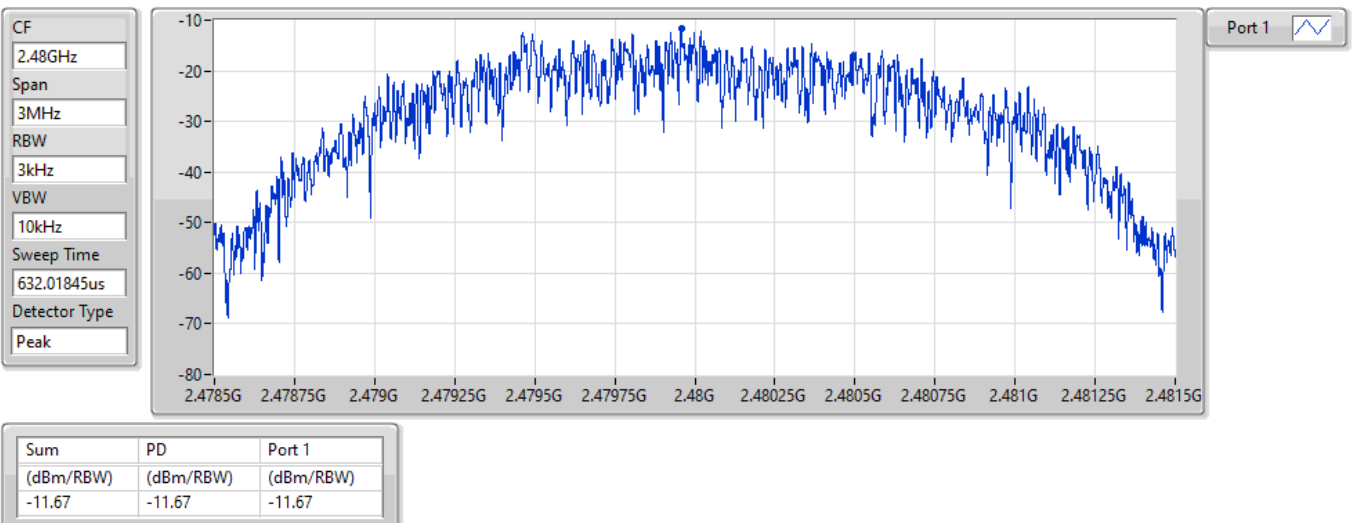


BT-LE(2Mbps)

PSD

2480MHz

18/10/2022



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	2.47983G	7.29	-22.71	2.17555G	-53.61	2.39992G	-46.01	2.4G	-44.60	2.50046G	-51.60	21.51867G	-43.88	1
BT-LE(2Mbps)	Pass	2.47949G	7.21	-22.79	2.3095G	-54.79	2.4G	-24.23	2.4G	-24.57	2.50298G	-52.22	21.58053G	-44.59	1

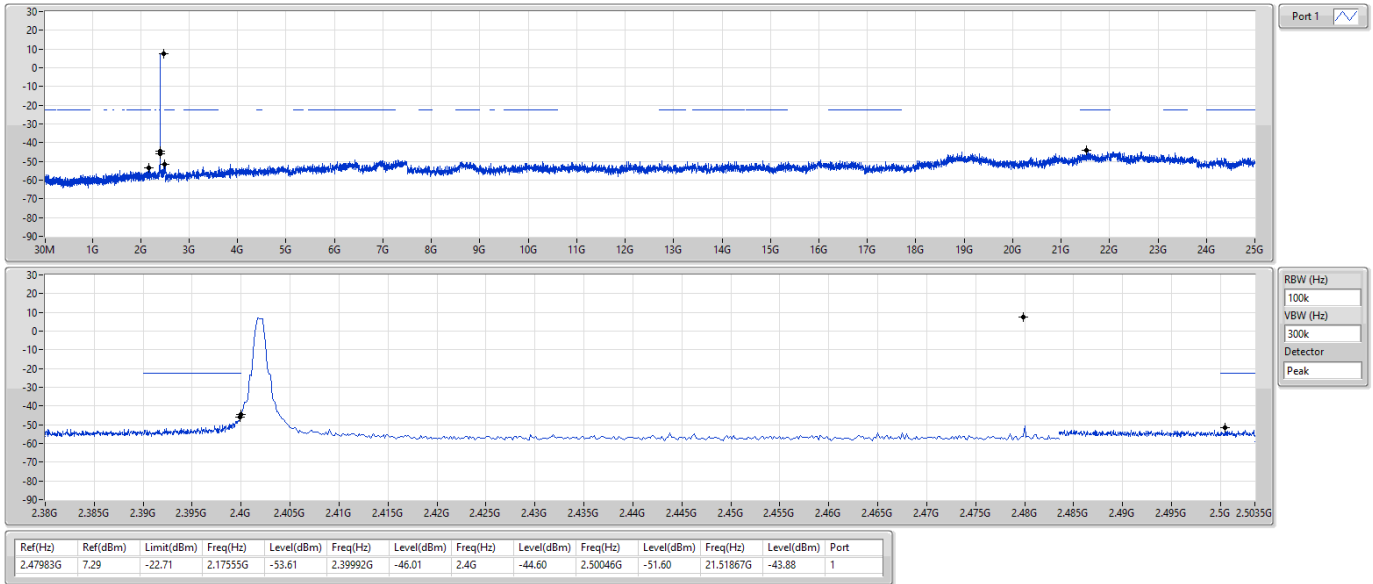
Result

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	2.47983G	7.29	-22.71	2.17555G	-53.61	2.39992G	-46.01	2.4G	-44.60	2.50046G	-51.60	21.51867G	-43.88	1
2440MHz	Pass	2.47983G	7.29	-22.71	2.1356G	-54.71	2.39576G	-51.65	2.4G	-58.04	2.50202G	-52.09	21.73238G	-44.85	1
2480MHz	Pass	2.47983G	7.29	-22.71	2.18613G	-53.91	2.39768G	-53.11	2.4G	-56.39	2.50298G	-52.61	6.93255G	-49.03	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.47949G	7.21	-22.79	2.3095G	-54.79	2.4G	-24.23	2.4G	-24.57	2.50298G	-52.22	21.58053G	-44.59	1
2440MHz	Pass	2.47949G	7.21	-22.79	2.09683G	-54.84	2.3998G	-52.22	2.4G	-56.72	2.50122G	-53.03	21.96578G	-44.93	1
2480MHz	Pass	2.47949G	7.21	-22.79	2.01223G	-55.13	2.39872G	-53.24	2.4G	-57.93	2.50002G	-52.62	21.65927G	-44.58	1

BT-LE(1Mbps)

CSEndB-DTS

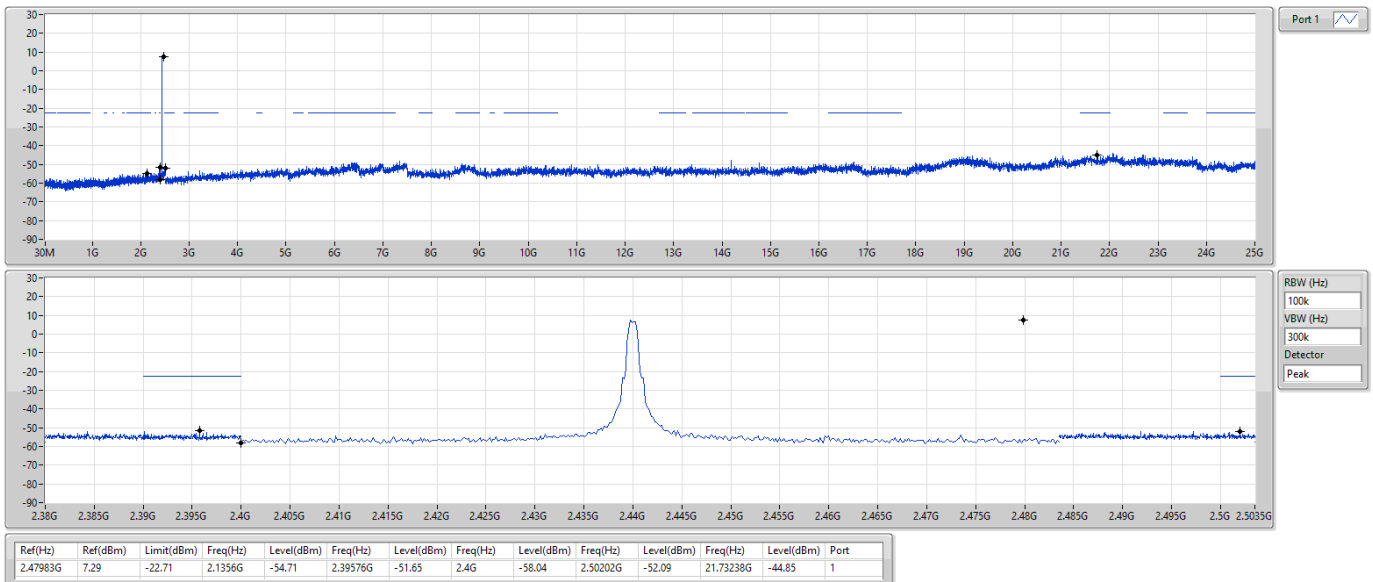
2402MHz



BT-LE(1Mbps)

CSEndB-DTS

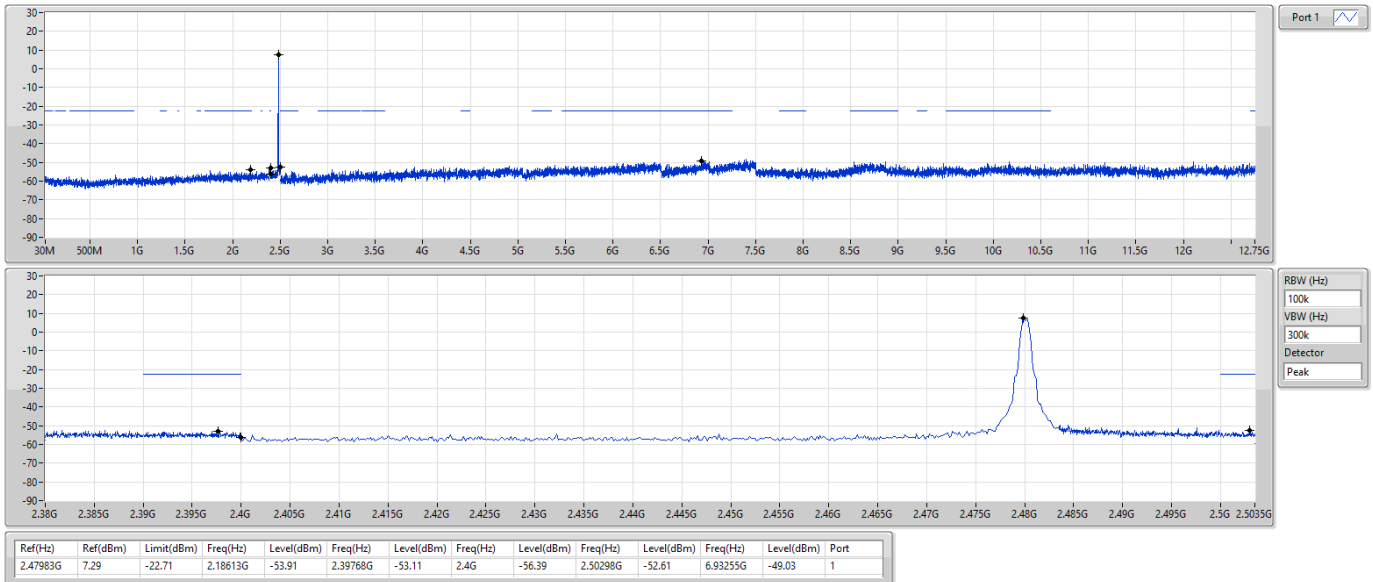
2440MHz



BT-LE(1Mbps)

CSEndB-DTS

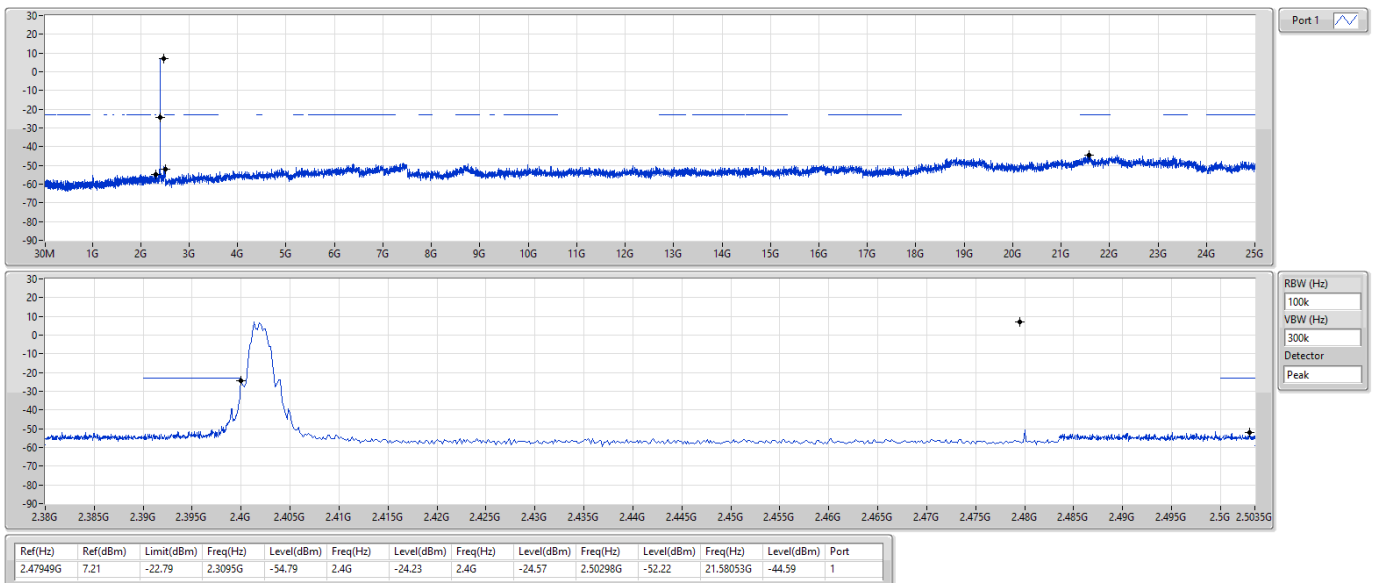
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

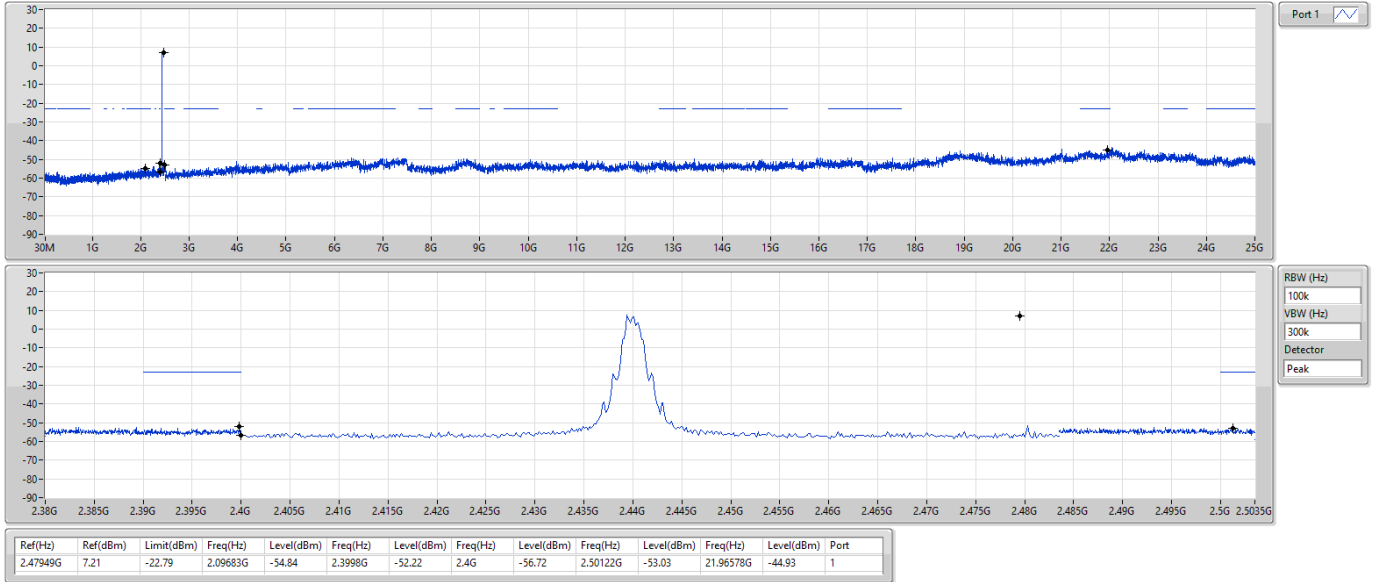
2402MHz



BT-LE(2Mbps)

CSEndB-DTS

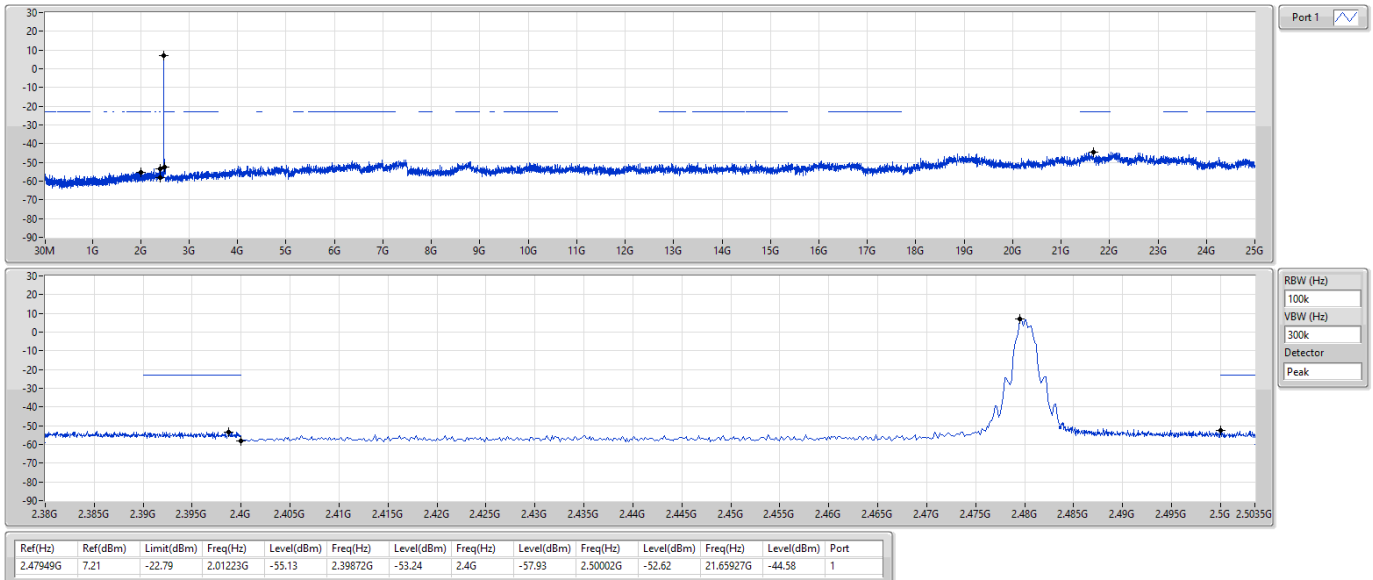
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2480MHz



Summary

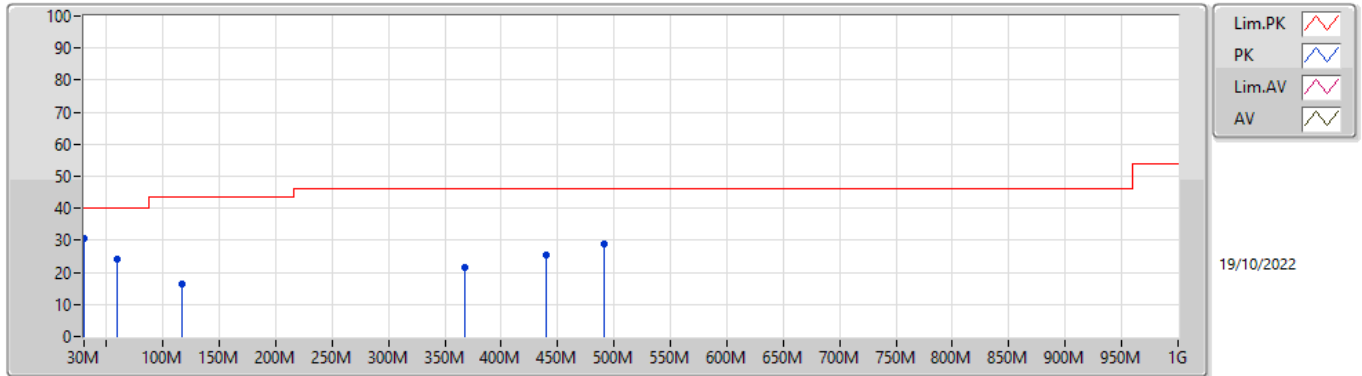
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	30M	30.41	40.00	-9.59	3	Vertical	360	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	PK	30M	30.41	40.00	-9.59	3	Vertical	360	1.00	-
2402MHz	Pass	PK	59.1M	24.12	40.00	-15.88	3	Vertical	360	1.00	-
2402MHz	Pass	PK	117.3M	16.38	43.50	-27.12	3	Vertical	360	1.00	-
2402MHz	Pass	PK	367.56M	21.66	46.00	-24.34	3	Vertical	360	1.00	-
2402MHz	Pass	PK	439.34M	25.60	46.00	-20.40	3	Vertical	360	1.00	-
2402MHz	Pass	PK	491.72M	28.68	46.00	-17.32	3	Vertical	360	1.00	-
2402MHz	Pass	PK	30M	25.88	40.00	-14.12	3	Horizontal	0	1.00	-
2402MHz	Pass	PK	115.36M	14.74	43.50	-28.76	3	Horizontal	0	1.00	-
2402MHz	Pass	PK	262.8M	17.14	46.00	-28.86	3	Horizontal	0	1.00	-
2402MHz	Pass	PK	367.56M	21.60	46.00	-24.40	3	Horizontal	0	1.00	-
2402MHz	Pass	PK	439.34M	25.25	46.00	-20.75	3	Horizontal	0	1.00	-
2402MHz	Pass	PK	493.66M	30.85	46.00	-15.15	3	Horizontal	0	1.00	-

BT-LE(2Mbps)

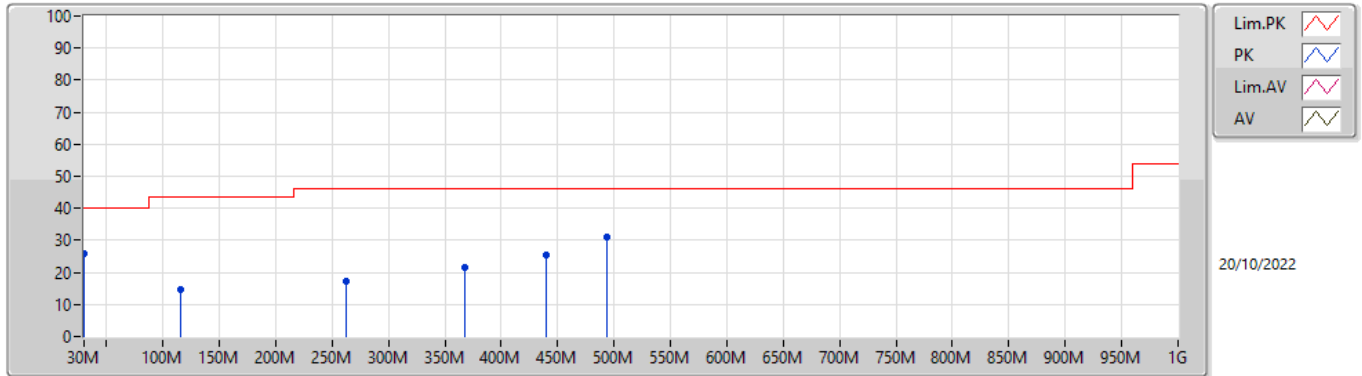
2402MHz_Battery



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	30.41	40.00	-9.59	-12.95	3	Vertical	360	1.00	-	43.36	23.71	0.54	37.20
PK	59.1M	24.12	40.00	-15.88	-25.30	3	Vertical	360	1.00	-	49.42	11.02	0.76	37.08
PK	117.3M	16.38	43.50	-27.12	-18.98	3	Vertical	360	1.00	-	35.36	16.55	1.09	36.62
PK	367.56M	21.66	46.00	-24.34	-14.64	3	Vertical	360	1.00	-	36.30	19.85	2.03	36.52
PK	439.34M	25.60	46.00	-20.40	-12.38	3	Vertical	360	1.00	-	37.98	22.02	2.22	36.62
PK	491.72M	28.68	46.00	-17.32	-11.55	3	Vertical	360	1.00	-	40.23	23.00	2.38	36.93

BT-LE(2Mbps)

2402MHz_Battery



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	30M	25.88	40.00	-14.12	-12.95	3	Horizontal	0	1.00	-	38.83	23.71	0.54	37.20
PK	115.36M	14.74	43.50	-28.76	-19.12	3	Horizontal	0	1.00	-	33.86	16.42	1.08	36.62
PK	262.8M	17.14	46.00	-28.86	-15.63	3	Horizontal	0	1.00	-	32.77	19.16	1.67	36.46
PK	367.56M	21.60	46.00	-24.40	-14.64	3	Horizontal	0	1.00	-	36.24	19.85	2.03	36.52
PK	439.34M	25.25	46.00	-20.75	-12.38	3	Horizontal	0	1.00	-	37.63	22.02	2.22	36.62
PK	493.66M	30.85	46.00	-15.15	-11.52	3	Horizontal	0	1.00	-	42.37	23.03	2.39	36.94



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	4.80386G	51.15	54.00	-2.85	3	Horizontal	168	1.00	-
BT-LE(2Mbps)	Pass	AV	4.80301G	52.26	54.00	-1.74	3	Horizontal	168	1.00	-

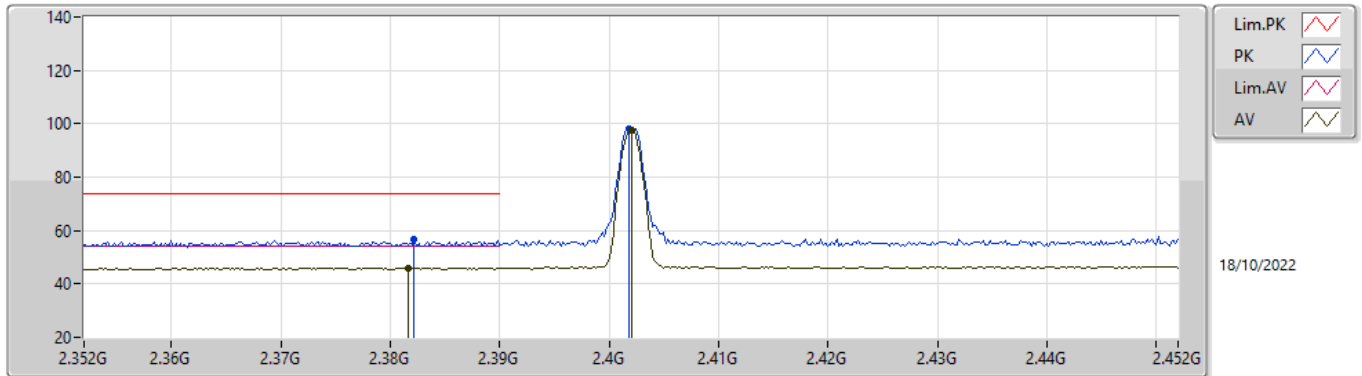
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3816G	46.11	54.00	-7.89	3	Vertical	50	1.83	-
2402MHz	Pass	AV	2.402G	97.39	Inf	-Inf	3	Vertical	50	1.83	-
2402MHz	Pass	PK	2.3822G	56.67	74.00	-17.33	3	Vertical	50	1.83	-
2402MHz	Pass	PK	2.4018G	98.04	Inf	-Inf	3	Vertical	50	1.83	-
2402MHz	Pass	AV	2.3862G	46.13	54.00	-7.87	3	Horizontal	212	1.50	-
2402MHz	Pass	AV	2.402G	95.40	Inf	-Inf	3	Horizontal	212	1.50	-
2402MHz	Pass	PK	2.361G	56.25	74.00	-17.75	3	Horizontal	212	1.50	-
2402MHz	Pass	PK	2.4018G	96.10	Inf	-Inf	3	Horizontal	212	1.50	-
2402MHz	Pass	AV	4.80405G	50.00	54.00	-4.00	3	Vertical	172	1.00	-
2402MHz	Pass	PK	4.80347G	55.66	74.00	-18.34	3	Vertical	172	1.00	-
2402MHz	Pass	AV	4.80386G	51.15	54.00	-2.85	3	Horizontal	168	1.00	-
2402MHz	Pass	PK	4.80351G	56.49	74.00	-17.51	3	Horizontal	168	1.00	-
2440MHz	Pass	AV	2.3496G	46.19	54.00	-7.81	3	Vertical	53	2.22	-
2440MHz	Pass	AV	2.44G	96.99	Inf	-Inf	3	Vertical	53	2.22	-
2440MHz	Pass	AV	2.492G	47.20	54.00	-6.80	3	Vertical	53	2.22	-
2440MHz	Pass	PK	2.3856G	56.61	74.00	-17.39	3	Vertical	53	2.22	-
2440MHz	Pass	PK	2.4404G	97.71	Inf	-Inf	3	Vertical	53	2.22	-
2440MHz	Pass	PK	2.4952G	57.19	74.00	-16.81	3	Vertical	53	2.22	-
2440MHz	Pass	AV	2.3652G	46.06	54.00	-7.94	3	Horizontal	211	1.48	-
2440MHz	Pass	AV	2.44G	94.62	Inf	-Inf	3	Horizontal	211	1.48	-
2440MHz	Pass	AV	2.4916G	46.93	54.00	-7.07	3	Horizontal	211	1.48	-
2440MHz	Pass	PK	2.3812G	56.94	74.00	-17.06	3	Horizontal	211	1.48	-
2440MHz	Pass	PK	2.4404G	95.40	Inf	-Inf	3	Horizontal	211	1.48	-
2440MHz	Pass	PK	2.4996G	56.94	74.00	-17.06	3	Horizontal	211	1.48	-
2440MHz	Pass	AV	4.88005G	49.88	54.00	-4.12	3	Vertical	170	1.01	-
2440MHz	Pass	PK	4.87949G	55.46	74.00	-18.54	3	Vertical	170	1.01	-
2440MHz	Pass	AV	4.87975G	44.83	54.00	-9.17	3	Horizontal	225	1.50	-
2440MHz	Pass	PK	4.88038G	51.47	74.00	-22.53	3	Horizontal	225	1.50	-
2480MHz	Pass	AV	2.48G	95.99	Inf	-Inf	3	Vertical	52	1.80	-
2480MHz	Pass	AV	2.4912G	47.36	54.00	-6.64	3	Vertical	52	1.80	-
2480MHz	Pass	PK	2.4798G	96.73	Inf	-Inf	3	Vertical	52	1.80	-
2480MHz	Pass	PK	2.49G	57.49	74.00	-16.51	3	Vertical	52	1.80	-
2480MHz	Pass	AV	2.48G	92.92	Inf	-Inf	3	Horizontal	210	2.08	-
2480MHz	Pass	AV	2.4846G	47.44	54.00	-6.56	3	Horizontal	210	2.08	-
2480MHz	Pass	PK	2.4798G	93.68	Inf	-Inf	3	Horizontal	210	2.08	-
2480MHz	Pass	PK	2.494G	57.45	74.00	-16.55	3	Horizontal	210	2.08	-
2480MHz	Pass	AV	4.96005G	50.87	54.00	-3.13	3	Vertical	171	1.01	-
2480MHz	Pass	PK	4.9605G	56.15	74.00	-17.85	3	Vertical	171	1.01	-
2480MHz	Pass	AV	4.95986G	48.09	54.00	-5.91	3	Horizontal	205	1.61	-
2480MHz	Pass	PK	4.95956G	54.16	74.00	-19.84	3	Horizontal	205	1.61	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.359G	48.01	54.00	-5.99	3	Vertical	49	1.82	-
2402MHz	Pass	AV	2.402G	96.27	Inf	-Inf	3	Vertical	49	1.82	-
2402MHz	Pass	PK	2.3704G	57.40	74.00	-16.60	3	Vertical	49	1.82	-
2402MHz	Pass	PK	2.4014G	98.30	Inf	-Inf	3	Vertical	49	1.82	-
2402MHz	Pass	AV	2.387G	48.02	54.00	-5.98	3	Horizontal	212	1.50	-
2402MHz	Pass	AV	2.402G	94.00	Inf	-Inf	3	Horizontal	212	1.50	-
2402MHz	Pass	PK	2.3598G	56.16	74.00	-17.84	3	Horizontal	212	1.50	-
2402MHz	Pass	PK	2.4014G	96.12	Inf	-Inf	3	Horizontal	212	1.50	-
2402MHz	Pass	AV	4.80298G	52.20	54.00	-1.80	3	Vertical	166	1.00	-
2402MHz	Pass	PK	4.80291G	56.25	74.00	-17.75	3	Vertical	166	1.00	-
2402MHz	Pass	AV	4.80301G	52.26	54.00	-1.74	3	Horizontal	168	1.00	-
2402MHz	Pass	PK	4.80284G	56.47	74.00	-17.53	3	Horizontal	168	1.00	-
2440MHz	Pass	AV	2.3492G	47.68	54.00	-6.32	3	Vertical	53	2.24	-
2440MHz	Pass	AV	2.44G	95.58	Inf	-Inf	3	Vertical	53	2.24	-
2440MHz	Pass	AV	2.488G	48.48	54.00	-5.52	3	Vertical	53	2.24	-
2440MHz	Pass	PK	2.3652G	56.41	74.00	-17.59	3	Vertical	53	2.24	-
2440MHz	Pass	PK	2.4404G	97.62	Inf	-Inf	3	Vertical	53	2.24	-
2440MHz	Pass	PK	2.4844G	56.92	74.00	-17.08	3	Vertical	53	2.24	-
2440MHz	Pass	AV	2.3432G	48.02	54.00	-5.98	3	Horizontal	211	1.49	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2440MHz	Pass	AV	2.44G	93.19	Inf	-Inf	3	Horizontal	211	1.49	-
2440MHz	Pass	AV	2.4864G	48.68	54.00	-5.32	3	Horizontal	211	1.49	-
2440MHz	Pass	PK	2.37G	56.15	74.00	-17.85	3	Horizontal	211	1.49	-
2440MHz	Pass	PK	2.4404G	95.33	Inf	-Inf	3	Horizontal	211	1.49	-
2440MHz	Pass	PK	2.4932G	57.42	74.00	-16.58	3	Horizontal	211	1.49	-
2440MHz	Pass	AV	4.87899G	47.77	54.00	-6.23	3	Vertical	62	1.24	-
2440MHz	Pass	PK	4.87893G	52.42	74.00	-21.58	3	Vertical	62	1.24	-
2440MHz	Pass	AV	4.87895G	48.84	54.00	-5.16	3	Horizontal	174	1.50	-
2440MHz	Pass	PK	4.8789G	53.18	74.00	-20.82	3	Horizontal	174	1.50	-
2480MHz	Pass	AV	2.48G	94.73	Inf	-Inf	3	Vertical	52	1.80	-
2480MHz	Pass	AV	2.4994G	48.88	54.00	-5.12	3	Vertical	52	1.80	-
2480MHz	Pass	PK	2.4794G	96.80	Inf	-Inf	3	Vertical	52	1.80	-
2480MHz	Pass	PK	2.4972G	58.22	74.00	-15.78	3	Vertical	52	1.80	-
2480MHz	Pass	AV	2.48G	91.82	Inf	-Inf	3	Horizontal	210	2.08	-
2480MHz	Pass	AV	2.4994G	48.65	54.00	-5.35	3	Horizontal	210	2.08	-
2480MHz	Pass	PK	2.4806G	93.89	Inf	-Inf	3	Horizontal	210	2.08	-
2480MHz	Pass	PK	2.4978G	57.61	74.00	-16.39	3	Horizontal	210	2.08	-
2480MHz	Pass	AV	4.95896G	49.11	54.00	-4.89	3	Vertical	62	1.08	-
2480MHz	Pass	PK	4.95897G	54.11	74.00	-19.89	3	Vertical	62	1.08	-
2480MHz	Pass	AV	4.95897G	50.72	54.00	-3.28	3	Horizontal	173	1.14	-
2480MHz	Pass	PK	4.96092G	54.97	74.00	-19.03	3	Horizontal	173	1.14	-

BT-LE(1Mbps)

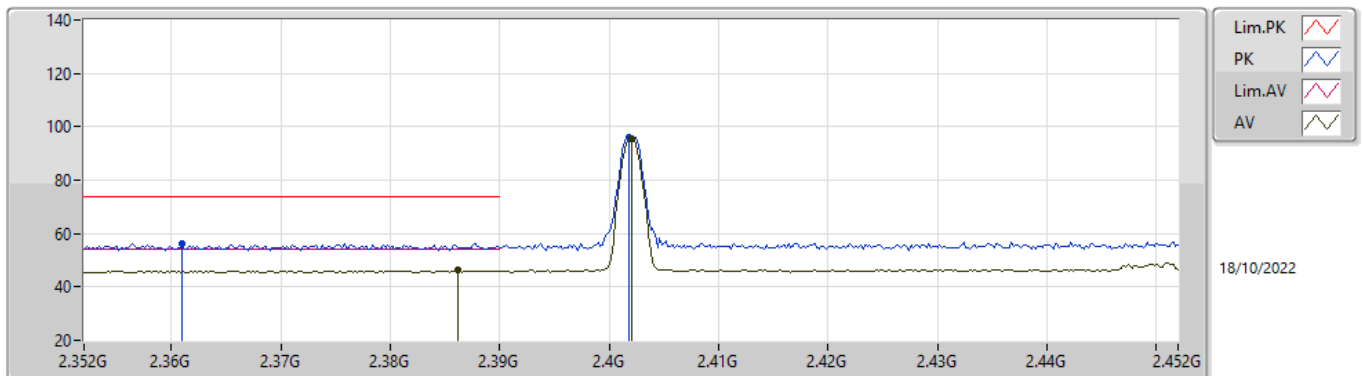
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3816G	46.11	54.00	-7.89	31.54	3	Vertical	50	1.83	-	14.57	27.39	4.15	-
AV	2.402G	97.39	Inf	-Inf	31.67	3	Vertical	50	1.83	-	65.72	27.50	4.17	-
PK	2.3822G	56.67	74.00	-17.33	31.54	3	Vertical	50	1.83	-	25.13	27.39	4.15	-
PK	2.4018G	98.04	Inf	-Inf	31.67	3	Vertical	50	1.83	-	66.37	27.50	4.17	-

BT-LE(1Mbps)

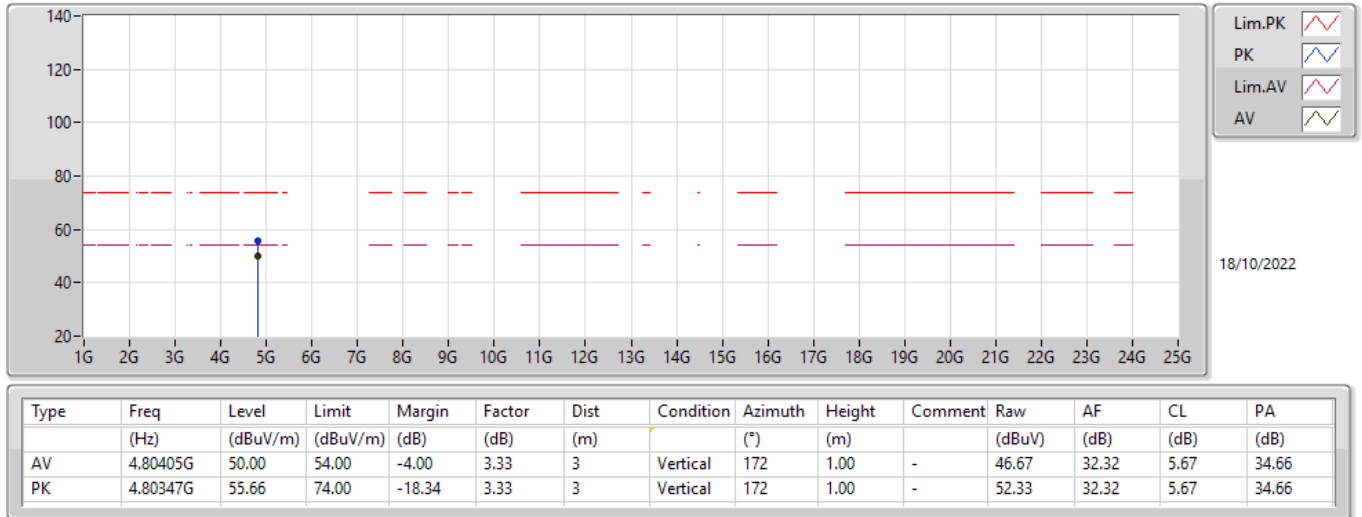
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3862G	46.13	54.00	-7.87	31.58	3	Horizontal	212	1.50	-	14.55	27.42	4.16	-
AV	2.402G	95.40	Inf	-Inf	31.67	3	Horizontal	212	1.50	-	63.73	27.50	4.17	-
PK	2.361G	56.25	74.00	-17.75	31.40	3	Horizontal	212	1.50	-	24.85	27.27	4.13	-
PK	2.4018G	96.10	Inf	-Inf	31.67	3	Horizontal	212	1.50	-	64.43	27.50	4.17	-

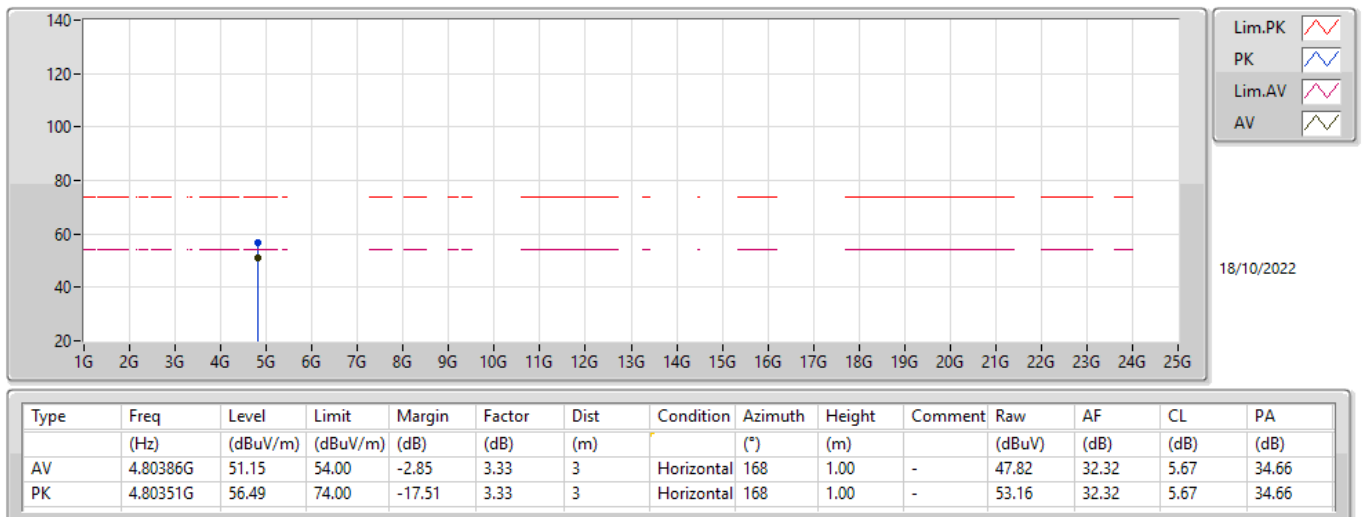
BT-LE(1Mbps)

2402MHz_TX



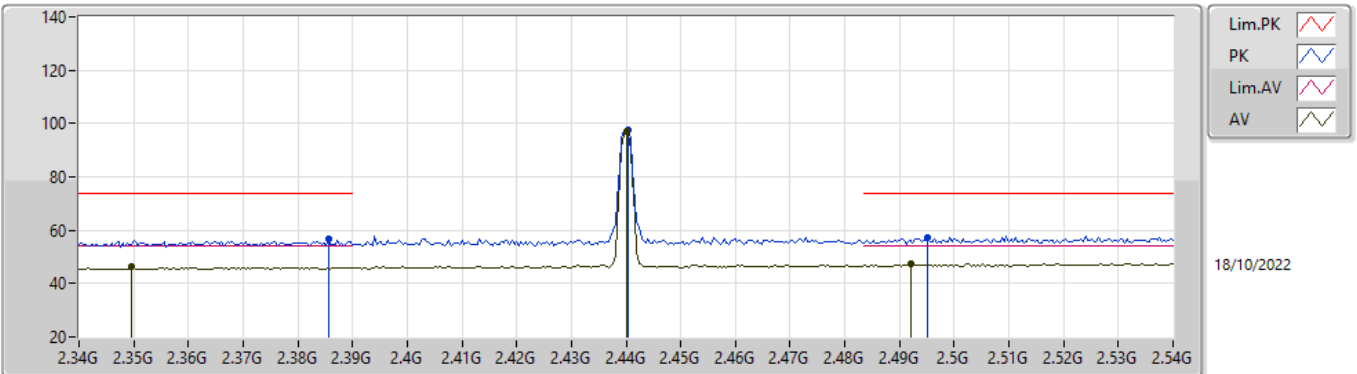
BT-LE(1Mbps)

2402MHz_TX



BT-LE(1Mbps)

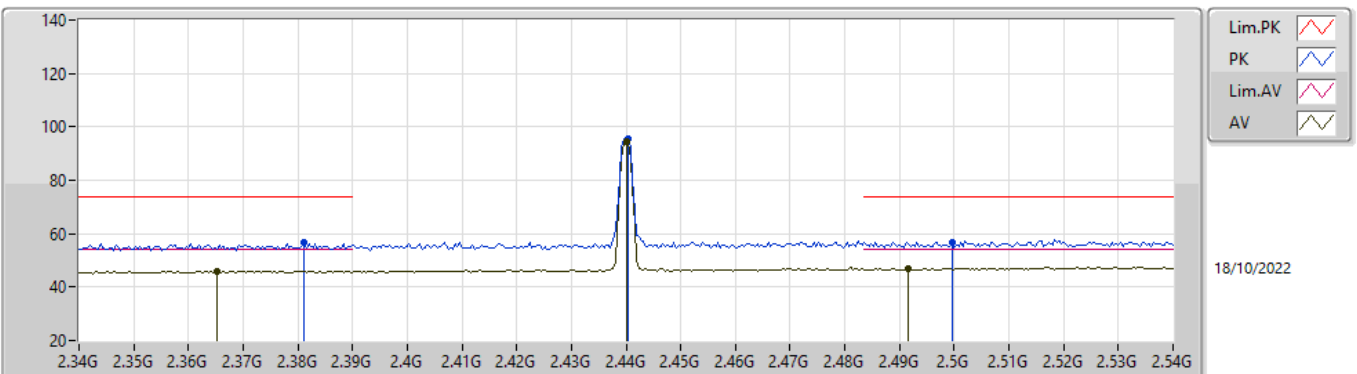
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3496G	46.19	54.00	-7.81	31.32	3	Vertical	53	2.22	-	14.87	27.20	4.12	-
AV	2.44G	96.99	Inf	-Inf	31.77	3	Vertical	53	2.22	-	65.22	27.58	4.19	-
AV	2.492G	47.20	54.00	-6.80	32.08	3	Vertical	53	2.22	-	15.12	27.85	4.23	-
PK	2.3856G	56.61	74.00	-17.39	31.57	3	Vertical	53	2.22	-	25.04	27.41	4.16	-
PK	2.4404G	97.71	Inf	-Inf	31.77	3	Vertical	53	2.22	-	65.94	27.58	4.19	-
PK	2.4952G	57.19	74.00	-16.81	32.10	3	Vertical	53	2.22	-	25.09	27.87	4.23	-

BT-LE(1Mbps)

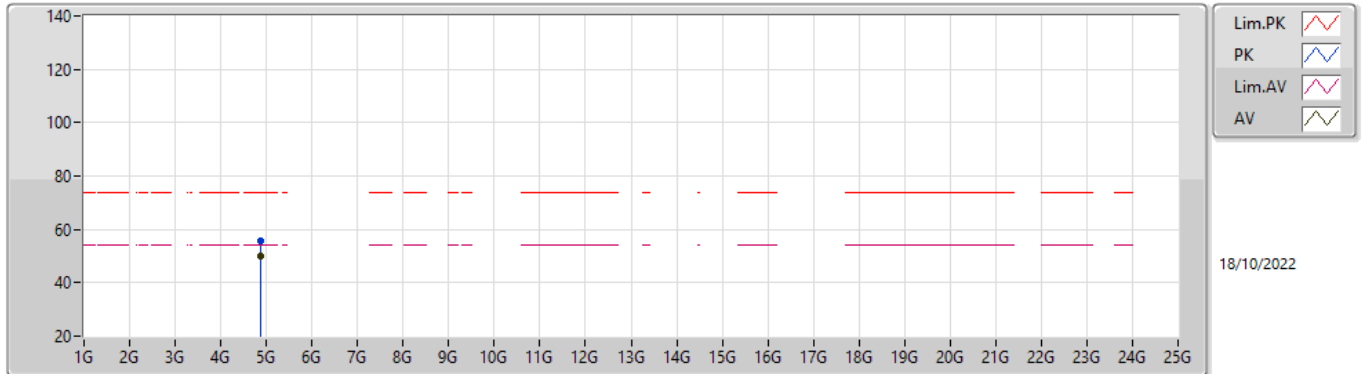
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3652G	46.06	54.00	-7.94	31.43	3	Horizontal	211	1.48	-	14.63	27.29	4.14	-
AV	2.44G	94.62	Inf	-Inf	31.77	3	Horizontal	211	1.48	-	62.85	27.58	4.19	-
AV	2.4916G	46.93	54.00	-7.07	32.07	3	Horizontal	211	1.48	-	14.86	27.85	4.22	-
PK	2.3812G	56.94	74.00	-17.06	31.54	3	Horizontal	211	1.48	-	25.40	27.39	4.15	-
PK	2.4404G	95.40	Inf	-Inf	31.77	3	Horizontal	211	1.48	-	63.63	27.58	4.19	-
PK	2.4996G	56.94	74.00	-17.06	32.13	3	Horizontal	211	1.48	-	24.81	27.90	4.23	-

BT-LE(1Mbps)

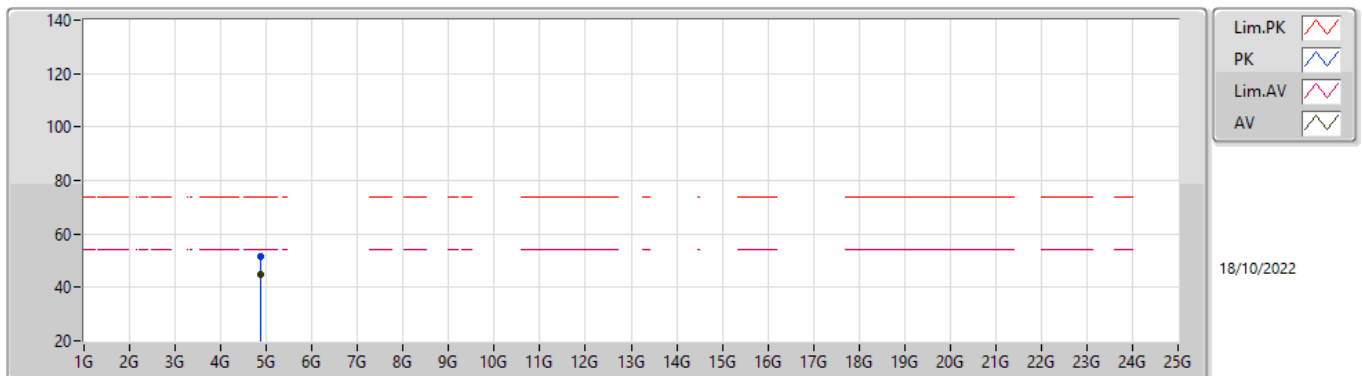
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88005G	49.88	54.00	-4.12	3.79	3	Vertical	170	1.01	-	46.09	32.72	5.72	34.65
PK	4.87949G	55.46	74.00	-18.54	3.79	3	Vertical	170	1.01	-	51.67	32.72	5.72	34.65

BT-LE(1Mbps)

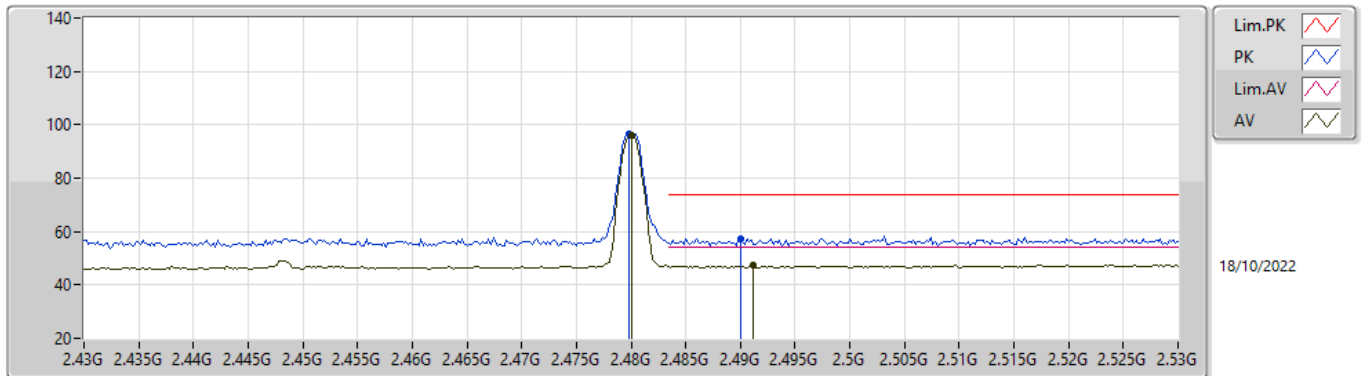
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87975G	44.83	54.00	-9.17	3.79	3	Horizontal	225	1.50	-	41.04	32.72	5.72	34.65
PK	4.88038G	51.47	74.00	-22.53	3.79	3	Horizontal	225	1.50	-	47.68	32.72	5.72	34.65

BT-LE(1Mbps)

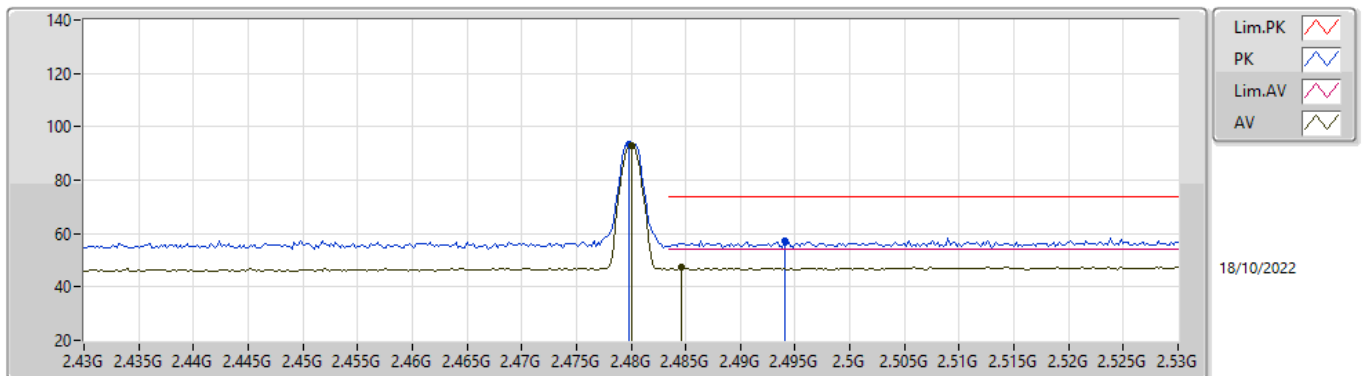
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	95.99	Inf	-Inf	32.00	3	Vertical	52	1.80	-	63.99	27.78	4.22	-
AV	2.4912G	47.36	54.00	-6.64	32.07	3	Vertical	52	1.80	-	15.29	27.85	4.22	-
PK	2.4798G	96.73	Inf	-Inf	32.00	3	Vertical	52	1.80	-	64.73	27.78	4.22	-
PK	2.49G	57.49	74.00	-16.51	32.06	3	Vertical	52	1.80	-	25.43	27.84	4.22	-

BT-LE(1Mbps)

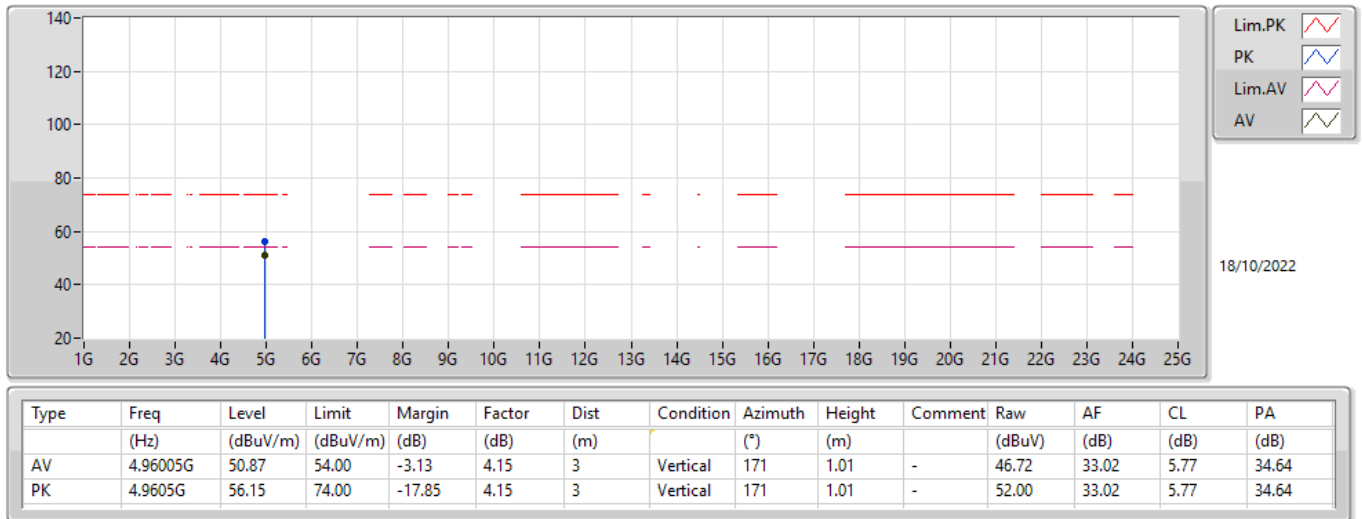
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	92.92	Inf	-Inf	32.00	3	Horizontal	210	2.08	-	60.92	27.78	4.22	-
AV	2.4846G	47.44	54.00	-6.56	32.03	3	Horizontal	210	2.08	-	15.41	27.81	4.22	-
PK	2.4798G	93.68	Inf	-Inf	32.00	3	Horizontal	210	2.08	-	61.68	27.78	4.22	-
PK	2.494G	57.45	74.00	-16.55	32.09	3	Horizontal	210	2.08	-	25.36	27.86	4.23	-

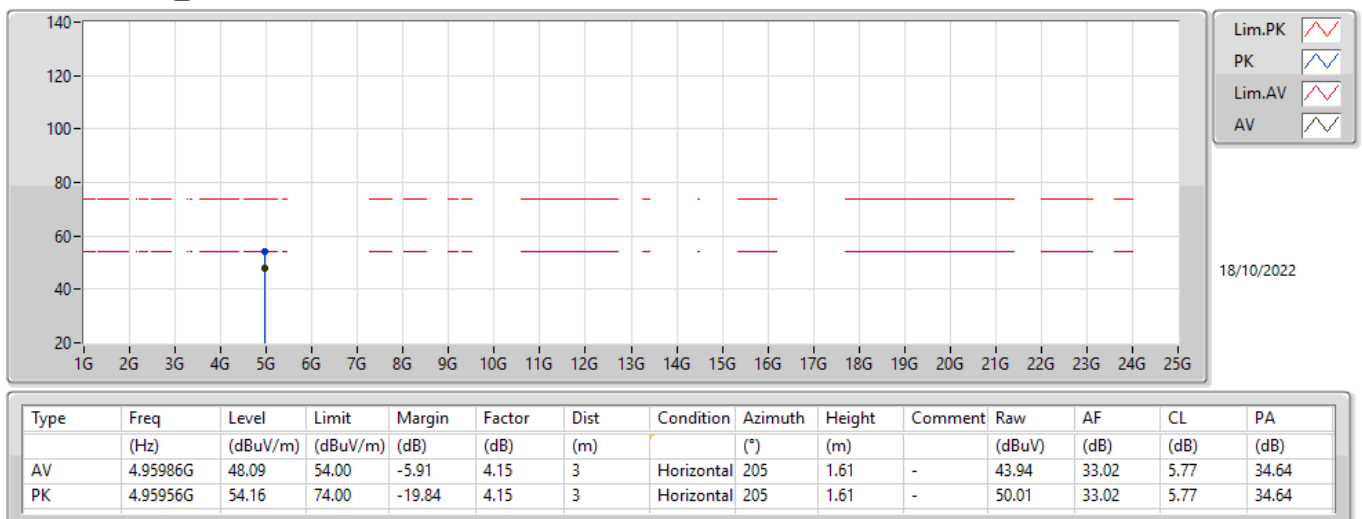
BT-LE(1Mbps)

2480MHz_TX



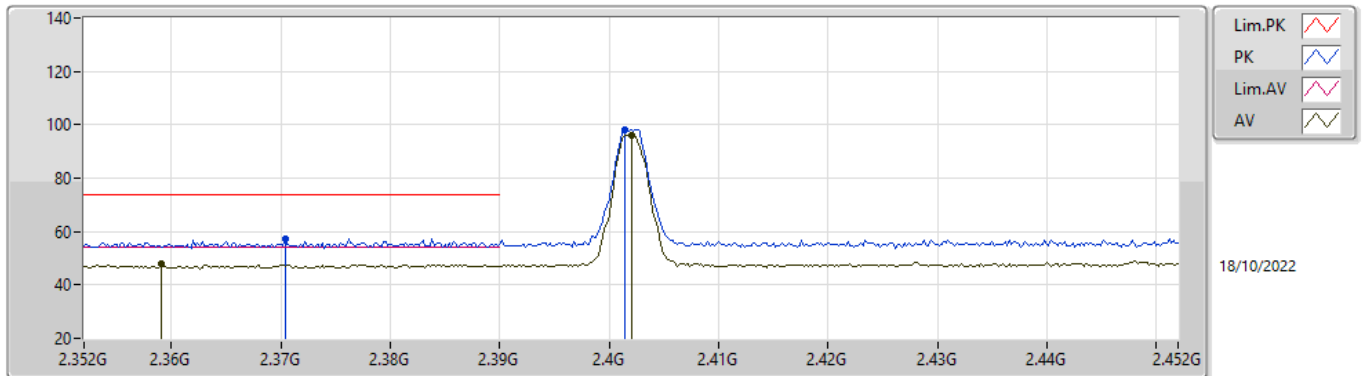
BT-LE(1Mbps)

2480MHz_TX



BT-LE(2Mbps)

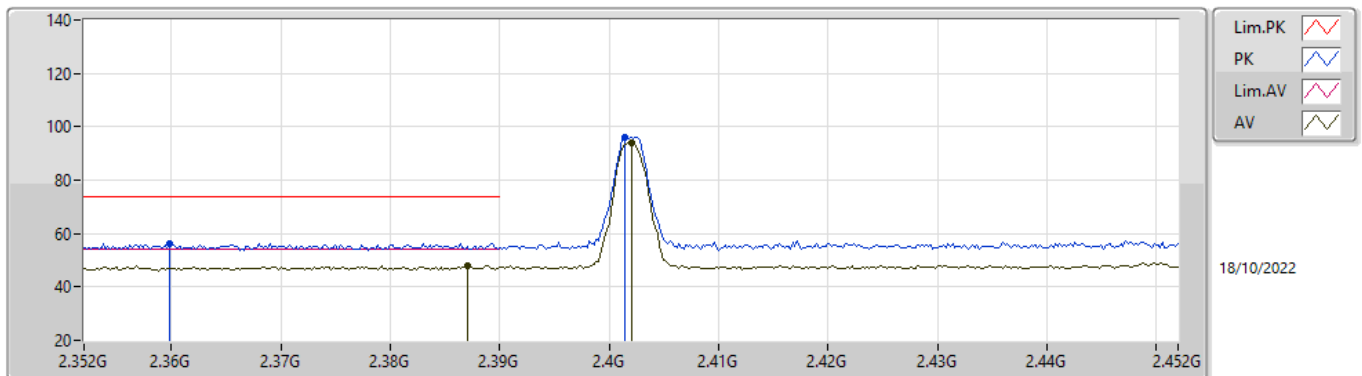
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.359G	48.01	54.00	-5.99	31.38	3	Vertical	49	1.82	-	16.63	27.25	4.13	-
AV	2.402G	96.27	Inf	-Inf	31.67	3	Vertical	49	1.82	-	64.60	27.50	4.17	-
PK	2.3704G	57.40	74.00	-16.60	31.46	3	Vertical	49	1.82	-	25.94	27.32	4.14	-
PK	2.4014G	98.30	Inf	-Inf	31.67	3	Vertical	49	1.82	-	66.63	27.50	4.17	-

BT-LE(2Mbps)

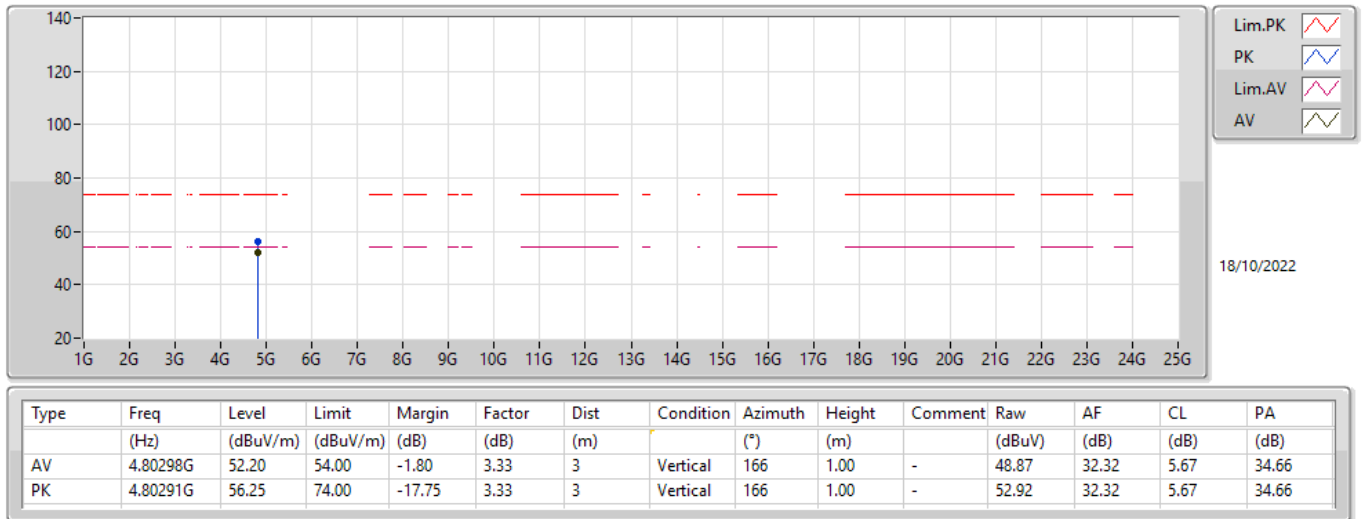
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.387G	48.02	54.00	-5.98	31.58	3	Horizontal	212	1.50	-	16.44	27.42	4.16	-
AV	2.402G	94.00	Inf	-Inf	31.67	3	Horizontal	212	1.50	-	62.33	27.50	4.17	-
PK	2.3598G	56.16	74.00	-17.84	31.39	3	Horizontal	212	1.50	-	24.77	27.26	4.13	-
PK	2.4014G	96.12	Inf	-Inf	31.67	3	Horizontal	212	1.50	-	64.45	27.50	4.17	-

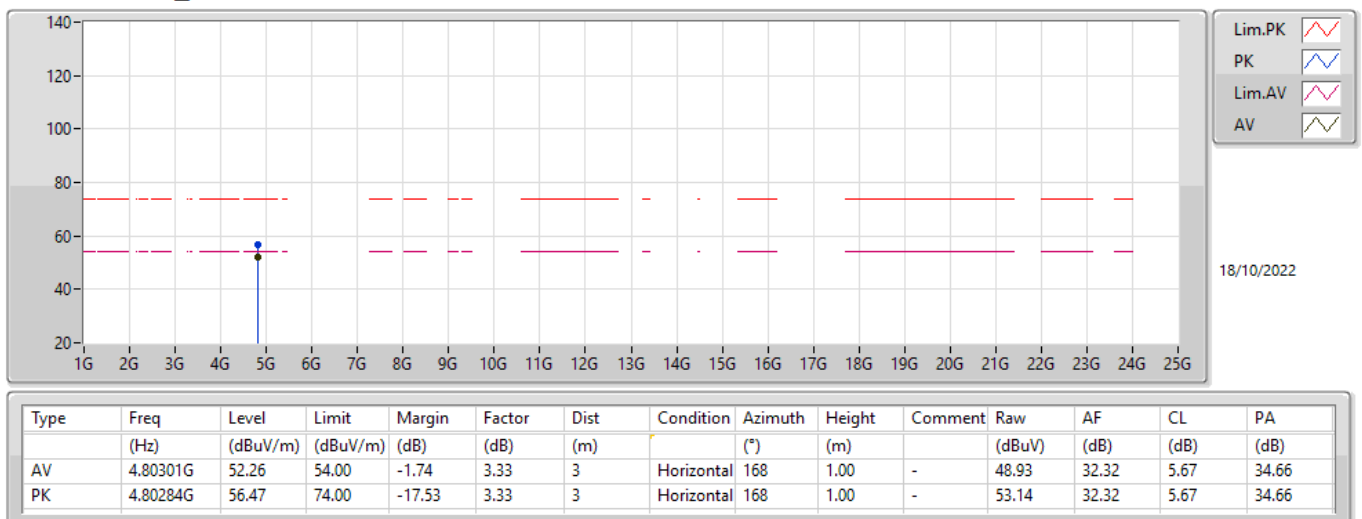
BT-LE(2Mbps)

2402MHz_TX



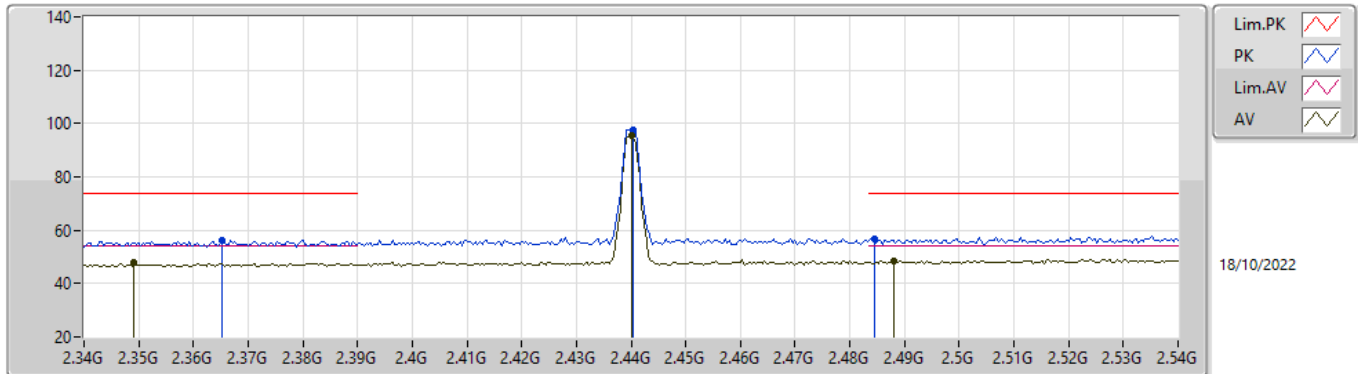
BT-LE(2Mbps)

2402MHz_TX



BT-LE(2Mbps)

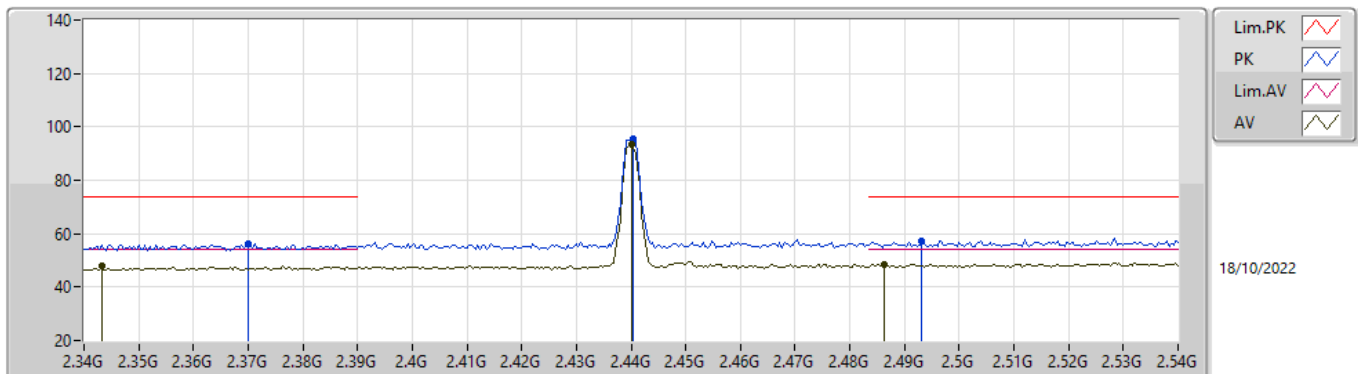
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3492G	47.68	54.00	-6.32	31.32	3	Vertical	53	2.24	-	16.36	27.20	4.12	-
AV	2.44G	95.58	Inf	-Inf	31.77	3	Vertical	53	2.24	-	63.81	27.58	4.19	-
AV	2.488G	48.48	54.00	-5.52	32.05	3	Vertical	53	2.24	-	16.43	27.83	4.22	-
PK	2.3652G	56.41	74.00	-17.59	31.43	3	Vertical	53	2.24	-	24.98	27.29	4.14	-
PK	2.4404G	97.62	Inf	-Inf	31.77	3	Vertical	53	2.24	-	65.85	27.58	4.19	-
PK	2.4844G	56.92	74.00	-17.08	32.03	3	Vertical	53	2.24	-	24.89	27.81	4.22	-

BT-LE(2Mbps)

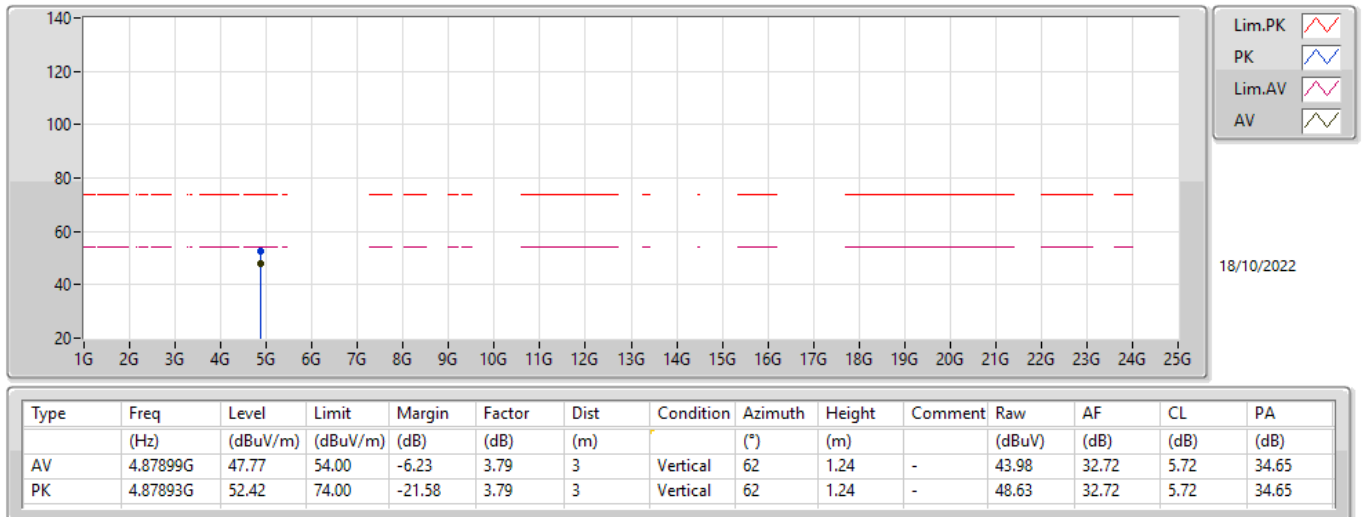
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3432G	48.02	54.00	-5.98	31.29	3	Horizontal	211	1.49	-	16.73	27.17	4.12	-
AV	2.44G	93.19	Inf	-Inf	31.77	3	Horizontal	211	1.49	-	61.42	27.58	4.19	-
AV	2.4864G	48.68	54.00	-5.32	32.04	3	Horizontal	211	1.49	-	16.64	27.82	4.22	-
PK	2.37G	56.15	74.00	-17.85	31.46	3	Horizontal	211	1.49	-	24.69	27.32	4.14	-
PK	2.4404G	95.33	Inf	-Inf	31.77	3	Horizontal	211	1.49	-	63.56	27.58	4.19	-
PK	2.4932G	57.42	74.00	-16.58	32.09	3	Horizontal	211	1.49	-	25.33	27.86	4.23	-

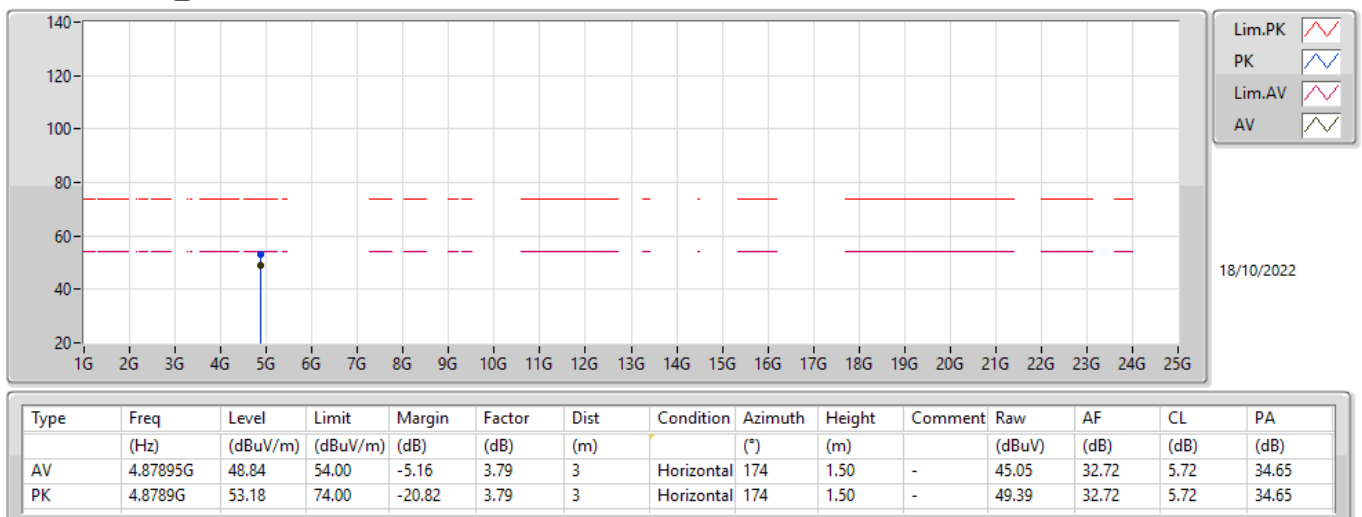
BT-LE(2Mbps)

2440MHz_TX



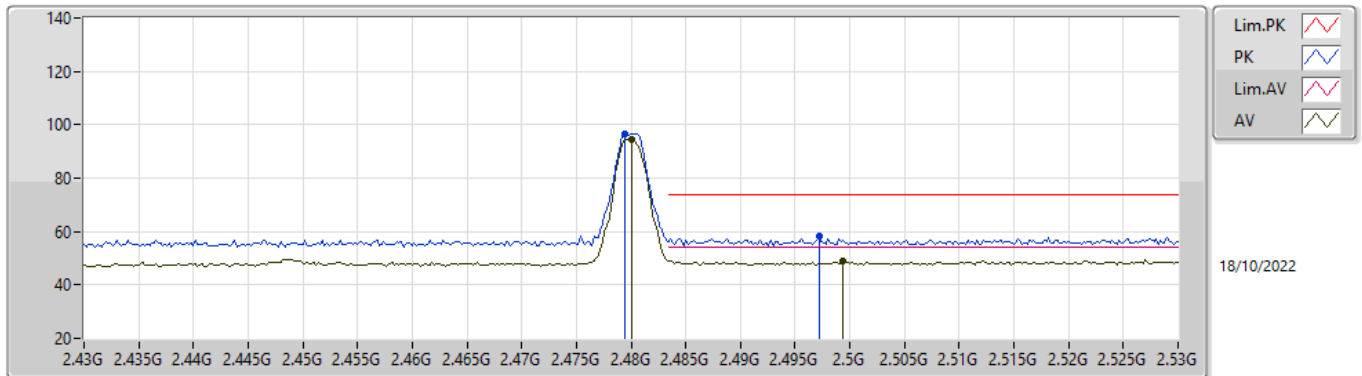
BT-LE(2Mbps)

2440MHz_TX



BT-LE(2Mbps)

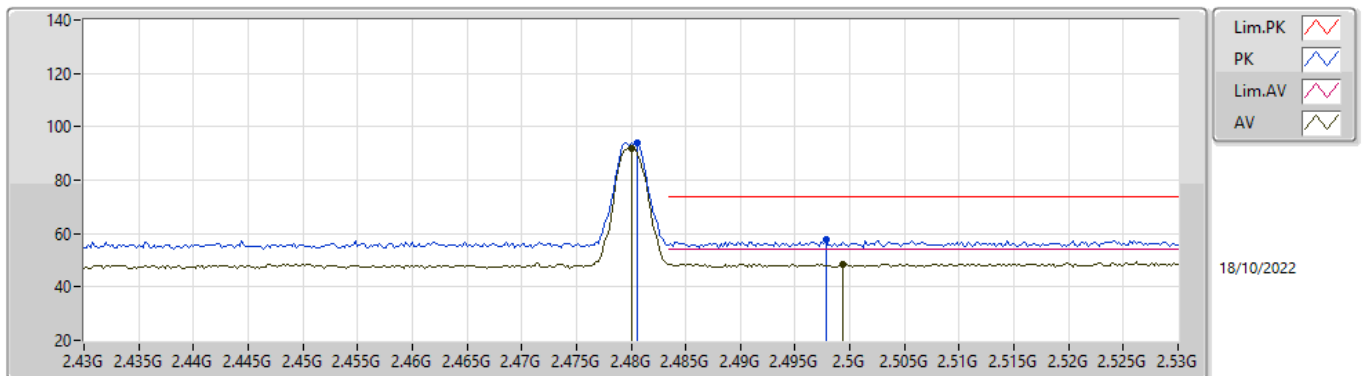
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	94.73	Inf	-Inf	32.00	3	Vertical	52	1.80	-	62.73	27.78	4.22	-
AV	2.4994G	48.88	54.00	-5.12	32.13	3	Vertical	52	1.80	-	16.75	27.90	4.23	-
PK	2.4794G	96.80	Inf	-Inf	32.00	3	Vertical	52	1.80	-	64.80	27.78	4.22	-
PK	2.4972G	58.22	74.00	-15.78	32.11	3	Vertical	52	1.80	-	26.11	27.88	4.23	-

BT-LE(2Mbps)

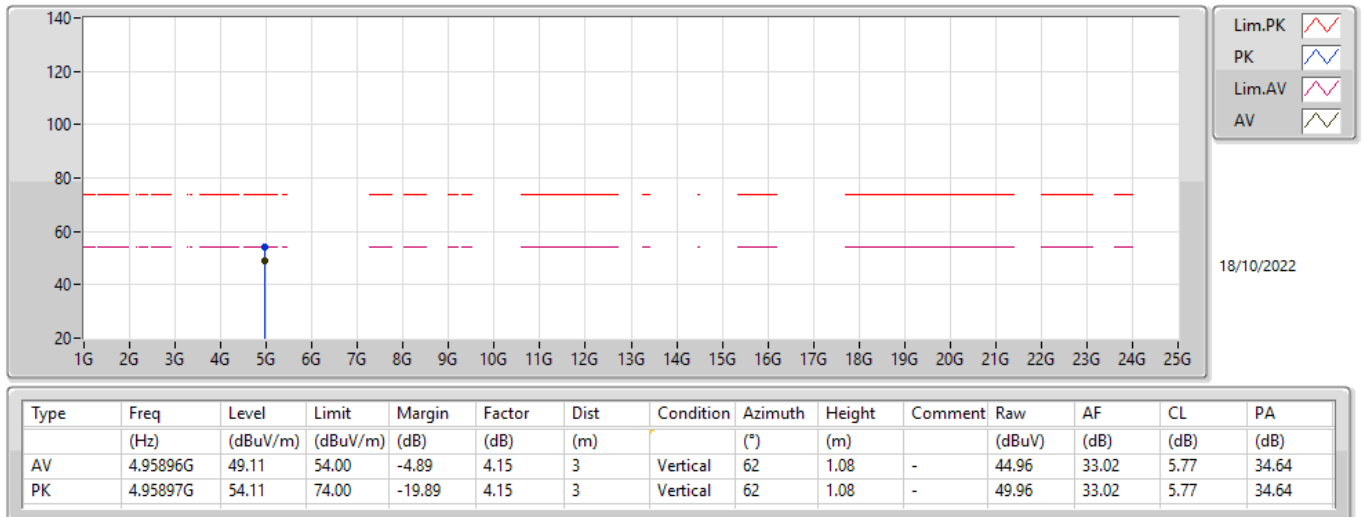
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	91.82	Inf	-Inf	32.00	3	Horizontal	210	2.08	-	59.82	27.78	4.22	-
AV	2.4994G	48.65	54.00	-5.35	32.13	3	Horizontal	210	2.08	-	16.52	27.90	4.23	-
PK	2.4806G	93.89	Inf	-Inf	32.00	3	Horizontal	210	2.08	-	61.89	27.78	4.22	-
PK	2.4978G	57.61	74.00	-16.39	32.12	3	Horizontal	210	2.08	-	25.49	27.89	4.23	-

BT-LE(2Mbps)

2480MHz_TX



BT-LE(2Mbps)

2480MHz_TX

