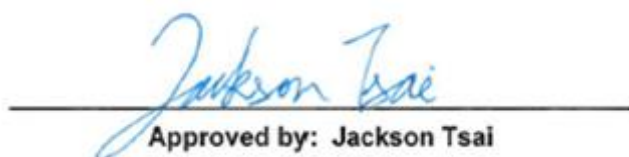


FCC Radio Test Report

FCC ID : 2AENP-MTB03L
Equipment : True Wireless In-Ear Headphones
Brand Name : Montblanc
Model Name : MTB 03
Applicant : Montblanc-Simplo GmbH
Hellgrundweg 100, 22525 Hamburg, Germany
Manufacturer : Montblanc-Simplo GmbH
Hellgrundweg 100, 22525 Hamburg, Germany
Standard : 47 CFR FCC Part 15.247

The product was received on Jul. 20, 2021, and testing was started from Jan. 24, 2022 and completed on Mar. 19, 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.)



Table of Contents

HISTORY OF THIS TEST REPORT	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Information.....	5
1.2 Testing Applied Standards	7
1.3 Testing Location Information	7
1.4 Measurement Uncertainty	7
2 TEST CONFIGURATION OF EUT.....	8
2.1 Test Channel Mode	8
2.2 The Worst Case Measurement Configuration	9
2.3 Accessories	10
2.4 Support Equipment.....	10
2.5 Test Setup Diagram	10
3 TRANSMITTER TEST RESULT	11
3.1 DTS Bandwidth.....	11
3.2 Maximum Conducted Output Power	12
3.3 Power Spectral Density	14
3.4 Emissions in Non-restricted Frequency Bands	15
3.5 Emissions in Restricted Frequency Bands.....	16
4 TEST EQUIPMENT AND CALIBRATION DATA.....	20
APPENDIX A. TEST RESULTS OF DTS BANDWIDTH	
APPENDIX B. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER	
APPENDIX C. TEST RESULTS OF POWER SPECTRAL DENSITY	
APPENDIX D. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS	
APPENDIX E. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS	
APPENDIX F. TEST PHOTOS	
PHOTOGRAPHS OF EUT V01	



History of this test report

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver.4.2
FCC ID: 2AENP-MTB03L

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: Sam Tsai

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	Gain (dBi)
1	OneWave Electronic Co., Ltd.	WAN3216F245L08	Chip Antenna	N/A	-2.3

Note 1: The EUT has one antenna.

For BT function:

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

Only Ant. 1 can be used as transmitting/receiving antenna.

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 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
BT-LE(1Mbps)	0.635	1.97	396.875u	3k
BT-LE(2Mbps)	0.34	4.69	212.5u	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	Johnny Yu	21.2~24.8°C / 52~58%	24/Jan/2022~19/Mar/2022
Radiated	03CH02-HY	Lego Lin	21.5~23.4°C / 54~64%	16/Mar/2022~17/Mar/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.				

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
Conducted Emission (150kHz ~ 30MHz)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 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

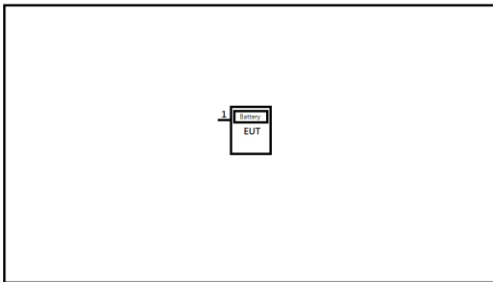
Accessories				
Battery	Brand Name	VARTA	Model Name	CP1254 A4
	Manufacturer	VARTA MICROBATTERY GMBH	SN	-
	Power Rating	3.7 Vdc, 70 mAh	Type	Li-ion, Button cell

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	DELL	E5550	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Test fixture cable	Toongin	254-G5-4	-	Provided by Customer

2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test					
 The diagram shows a large rectangular area representing the test chamber. In the center, there is a small box labeled 'EUT' (Equipment Under Test) with a '1' and a '1000' above it, indicating a connection or measurement point.					
Item	Connection	Shielded	Length(m)	Remark	
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.

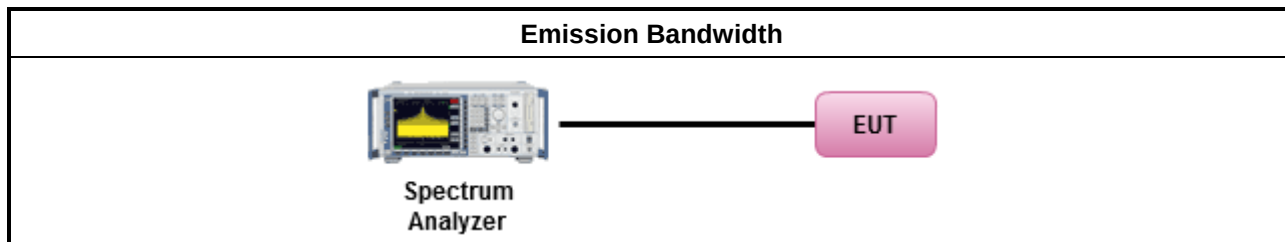
3.1.2 Measuring Instruments

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.	

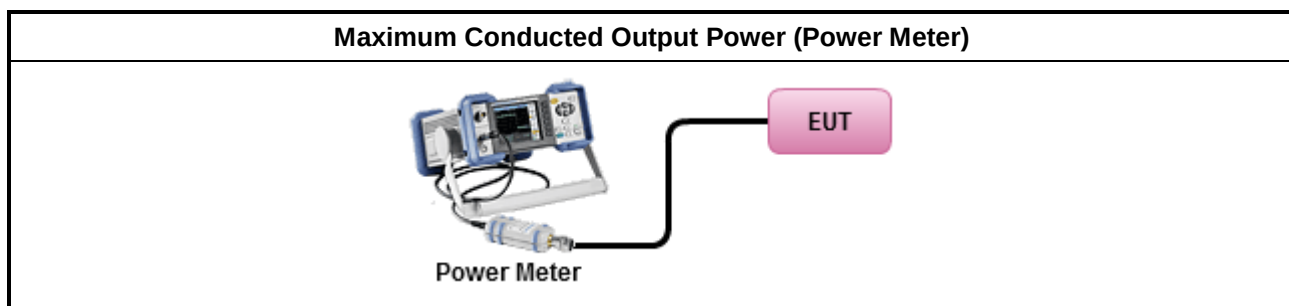
3.2.2 Measuring Instruments

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

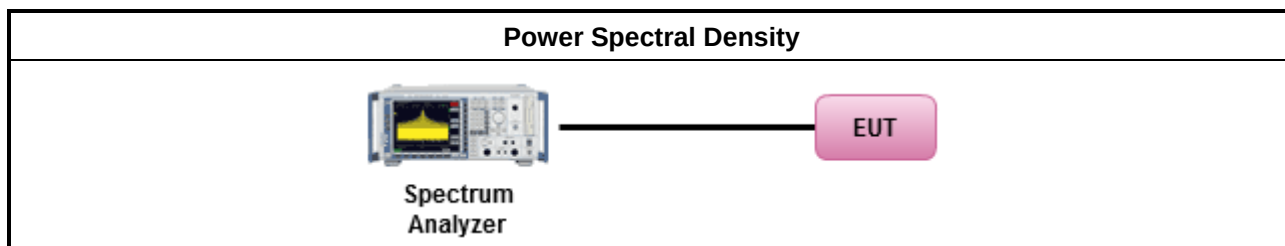
3.3.2 Measuring Instruments

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.	

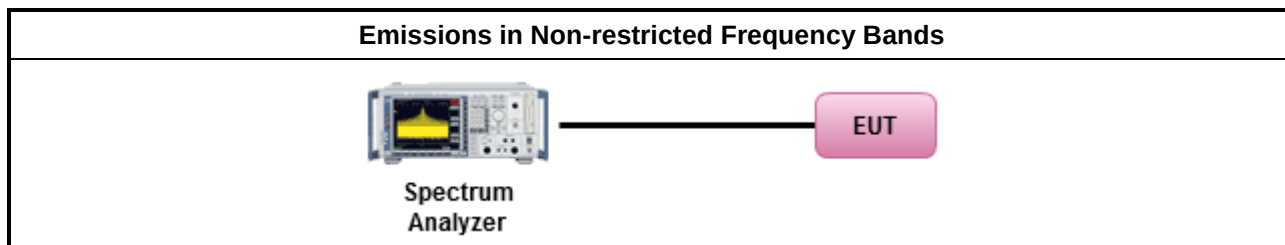
3.4.2 Measuring Instruments

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

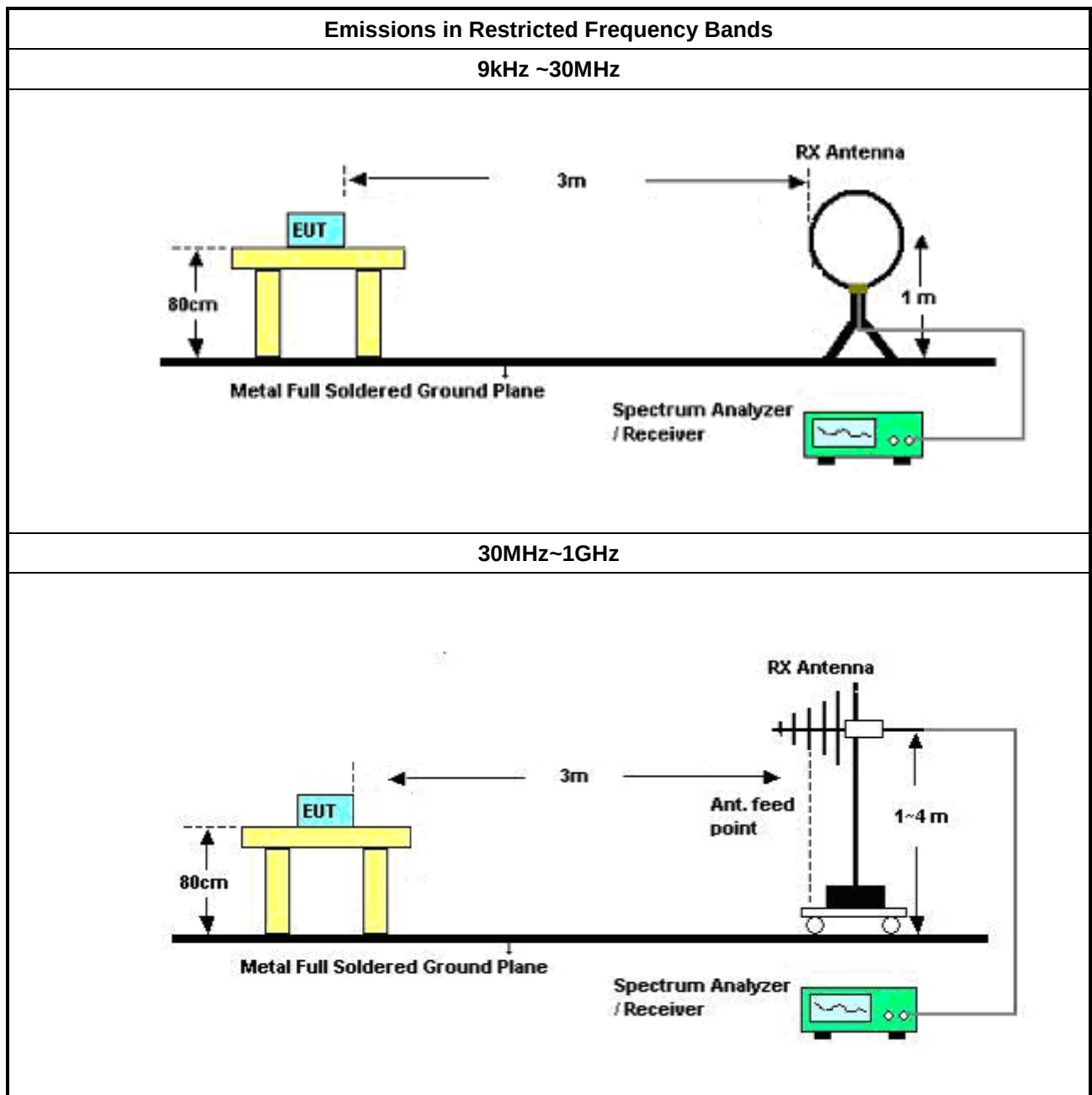
Test Method	
	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted 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.

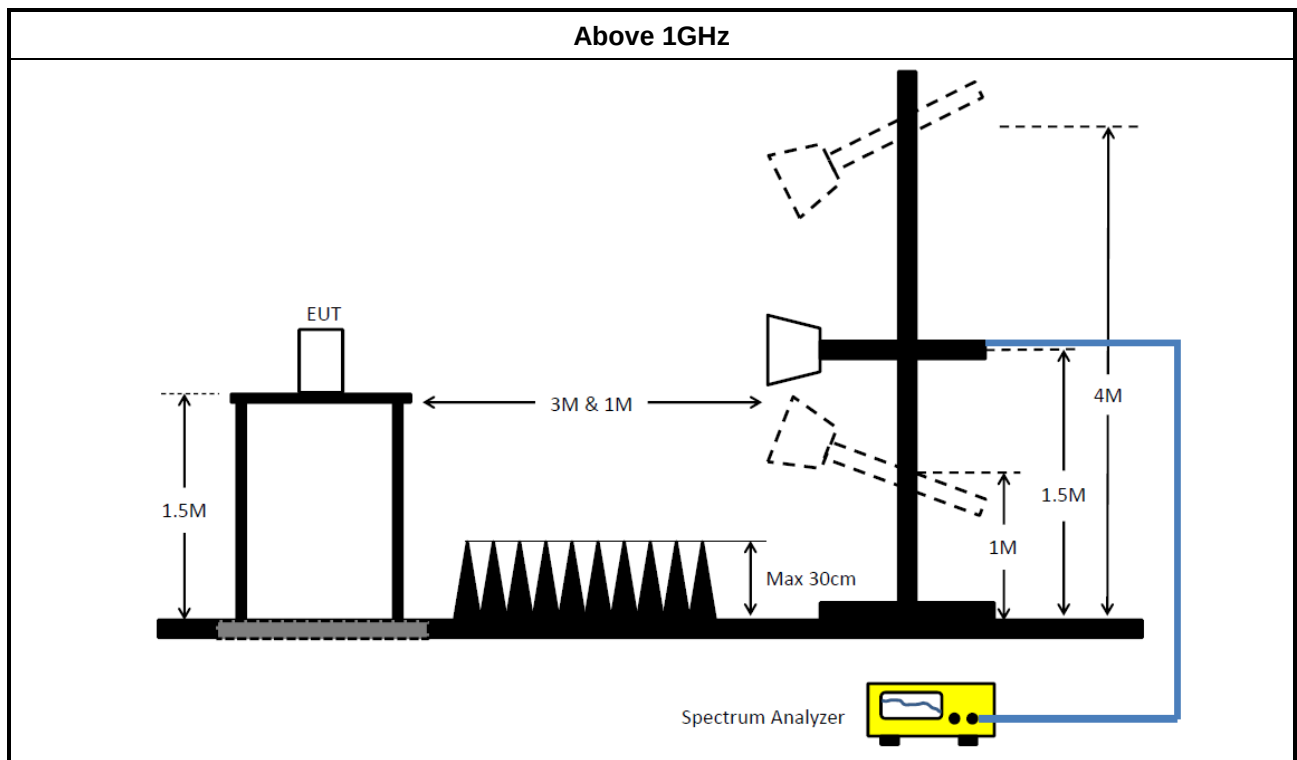
3.5.4 Measurement Results Calculation

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	101029	10Hz~40GHz	20/Oct/2021	19/Oct/2022
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	25/Mar/2021	24/Mar/2022
SENSE-15247_FS	Sporton	V5.10.7.14	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3m	02/Aug/2021	01/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	01/Aug/2021	31/Jul/2022
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	12/Oct/2021	11/Oct/2022
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	29/Jun/2021	28/Jun/2022
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	03/Nov/2021	02/Nov/2022
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	04/Sep/2021	03/Sep/2022
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	04/Jun/2021	03/Jun/2022
RF Cable	MVE	400LL	MVE-1-0802	9kHz~30MHz	05/May/2021	04/May/2022
RF Cable	MVE	400LL	MVE-1-0802	30MHz~1GHz	05/May/2021	04/May/2022
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	06/Apr/2021	05/Apr/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	15GHz~40GHz	12/May/2021	11/May/2022
Loop Antenna	Teseq	HLA 6120	24155	9kHz~30MHz	14/Apr/2021	13/Apr/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022
SENSE-15247_FS	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A
SENSE-15247_EMI	Sporton	V5.10.7.15	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)	717.5k	1.034M	1M03F1D	708.75k	1.033M
BT-LE(2Mbps)	1.258M	2.054M	2M05F1D	1.253M	2.046M

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

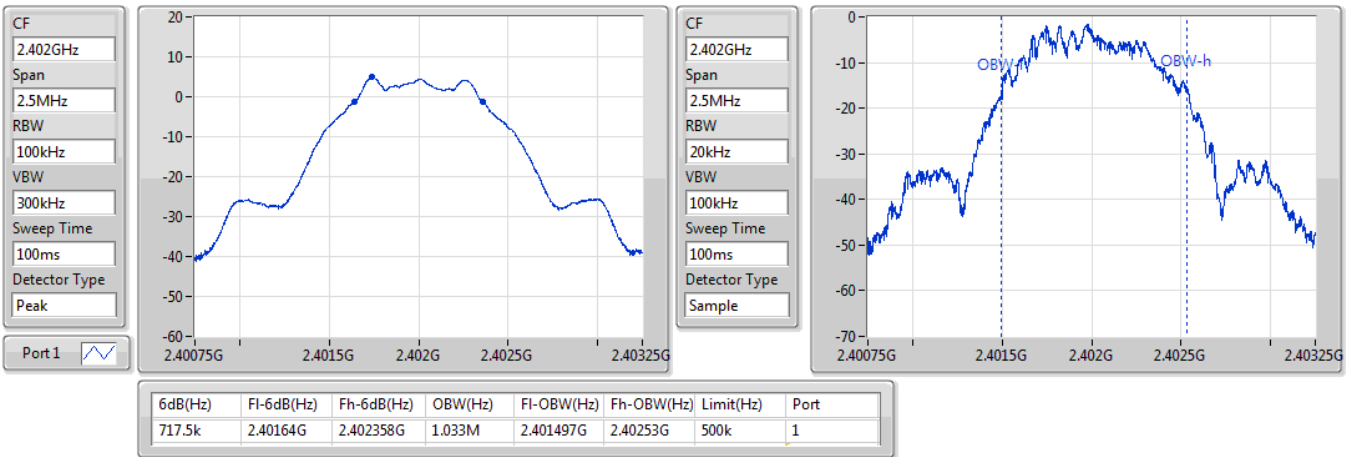
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	717.5k	1.033M
2440MHz	Pass	500k	712.5k	1.034M
2480MHz	Pass	500k	708.75k	1.033M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.253M	2.054M
2440MHz	Pass	500k	1.258M	2.049M
2480MHz	Pass	500k	1.255M	2.046M

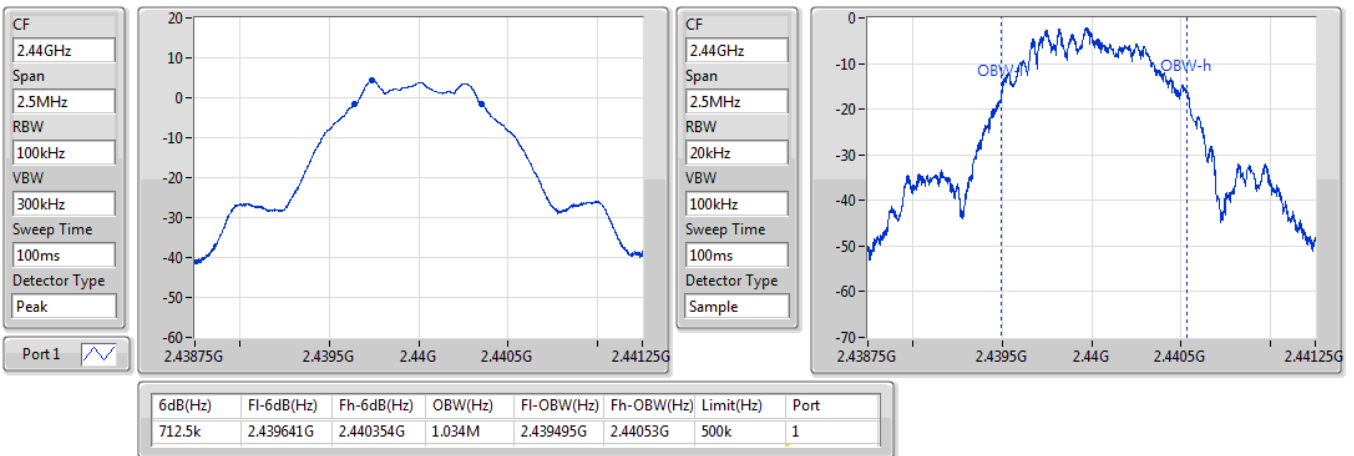
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz
EBW-DTS

19/03/2022

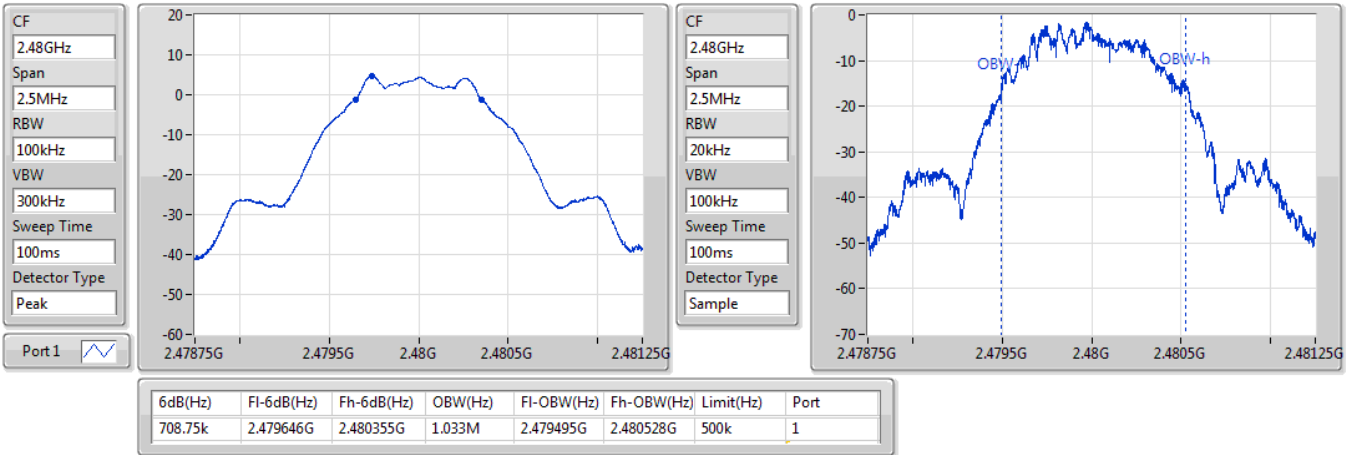

BT-LE(1Mbps)
2440MHz
EBW-DTS

19/03/2022

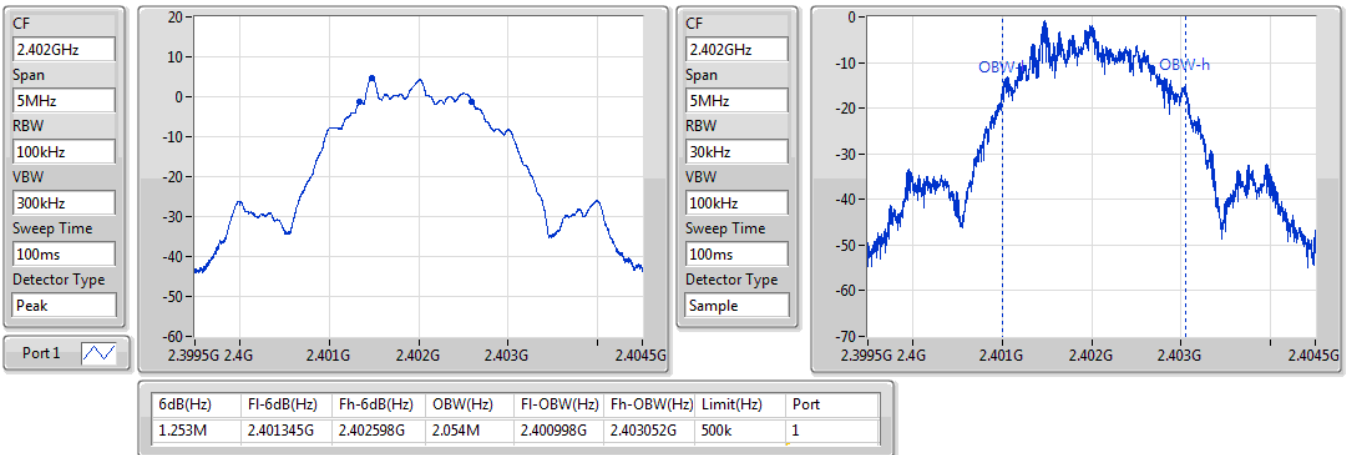


BT-LE(1Mbps)
EBW-DTS
2480MHz

19/03/2022

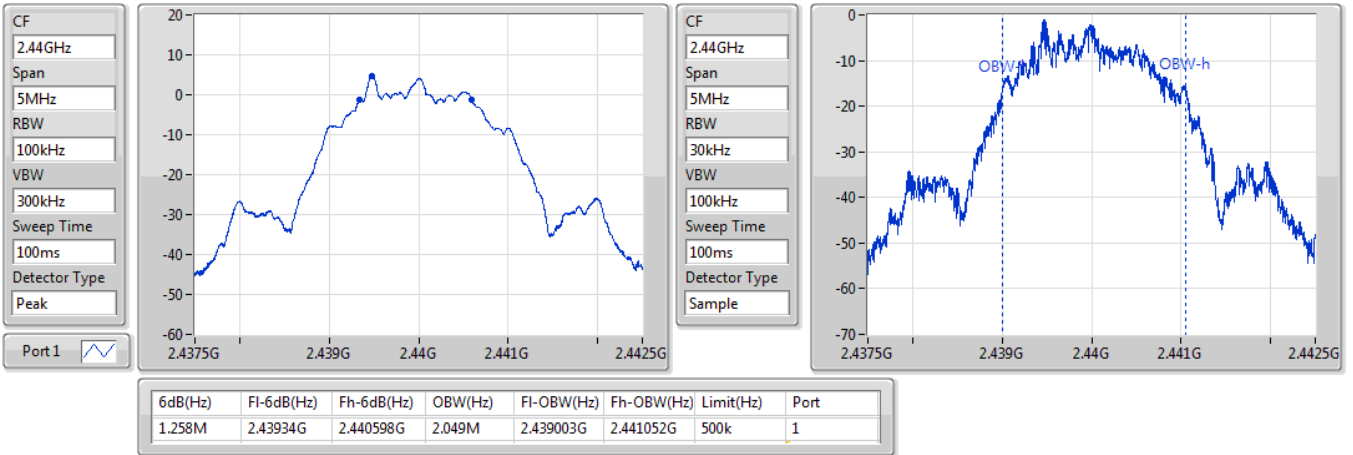

BT-LE(2Mbps)
EBW-DTS
2402MHz

19/03/2022

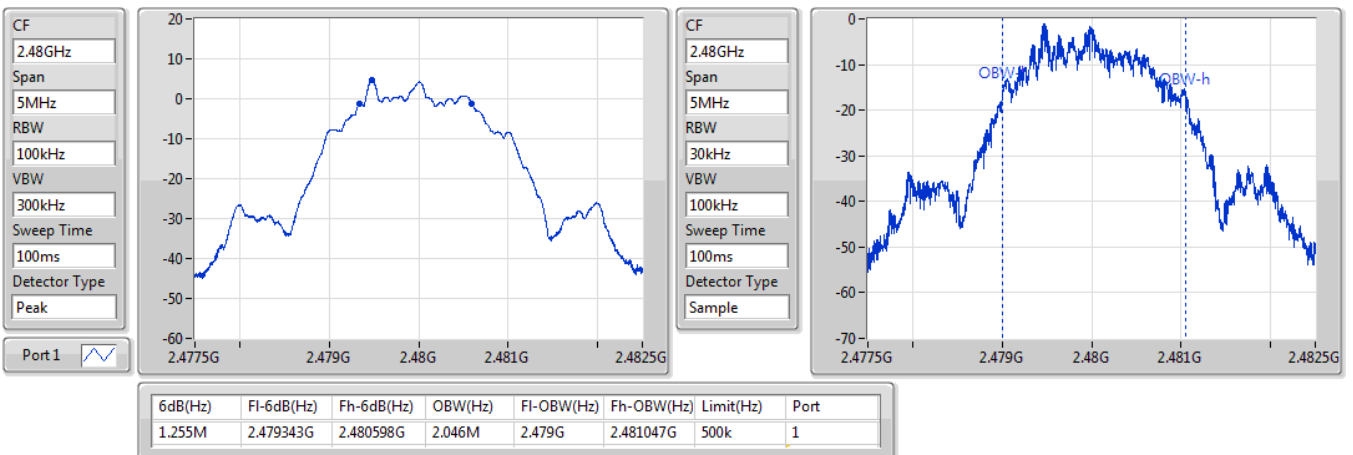


BT-LE(2Mbps)
EBW-DTS
2440MHz

19/03/2022


BT-LE(2Mbps)
EBW-DTS
2480MHz

19/03/2022





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LF(1Mbps)	4.56	0.00286
BT-LF(2Mbps)	4.25	0.00266



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-2.30	4.56	30.00
2440MHz	Pass	-2.30	4.27	30.00
2480MHz	Pass	-2.30	4.45	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	-2.30	4.19	30.00
2440MHz	Pass	-2.30	3.97	30.00
2480MHz	Pass	-2.30	4.25	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-10.93
BT-LE(2Mbps)	-14.19

RBW = 3kHz;



Result

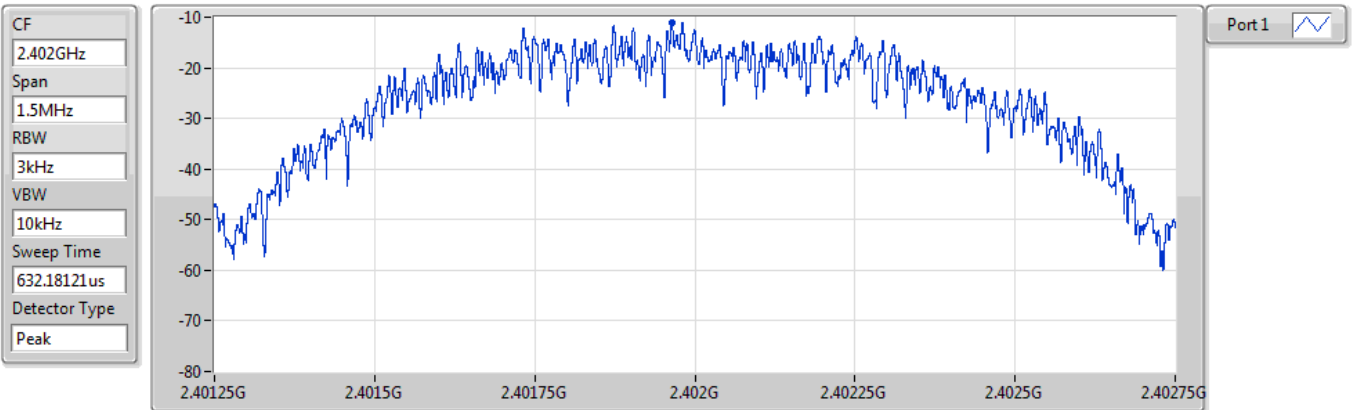
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-2.30	-11.04	8.00
2440MHz	Pass	-2.30	-10.96	8.00
2480MHz	Pass	-2.30	-10.93	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	-2.30	-14.19	8.00
2440MHz	Pass	-2.30	-14.67	8.00
2480MHz	Pass	-2.30	-15.02	8.00

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

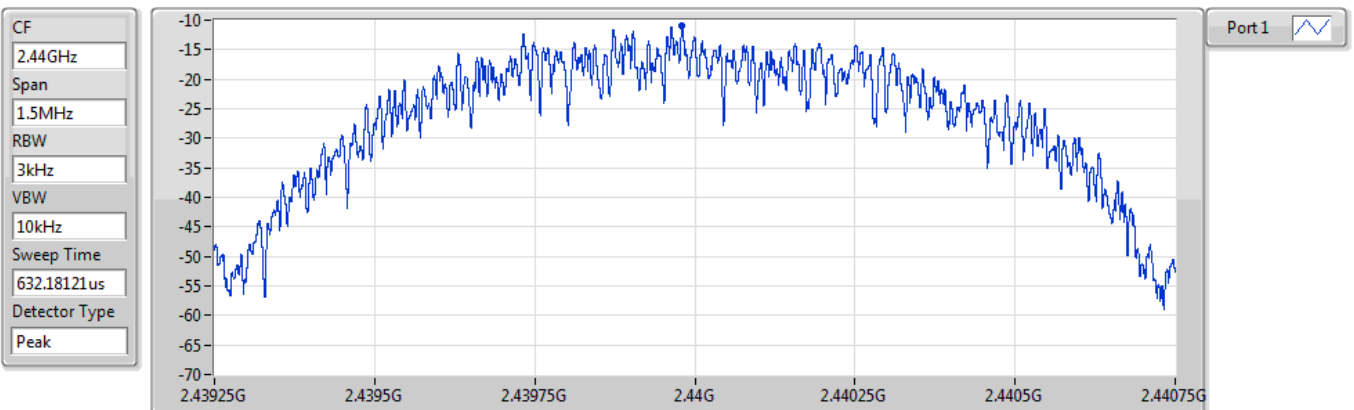
19/03/2022



BT-LE(1Mbps)

2440MHz

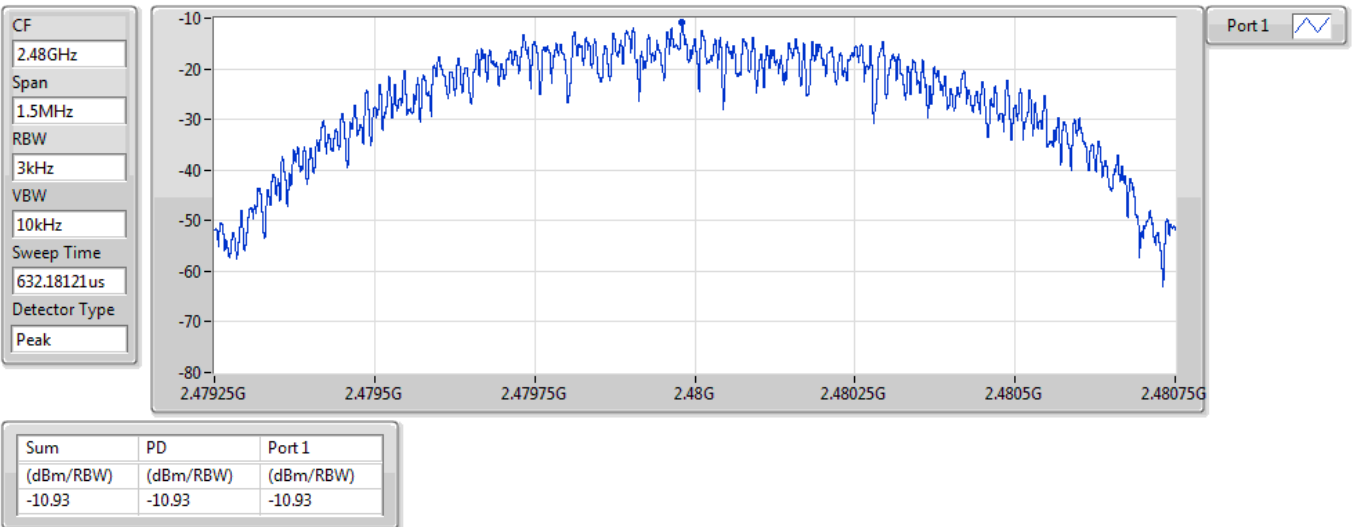
19/03/2022



BT-LE(1Mbps)

2480MHz

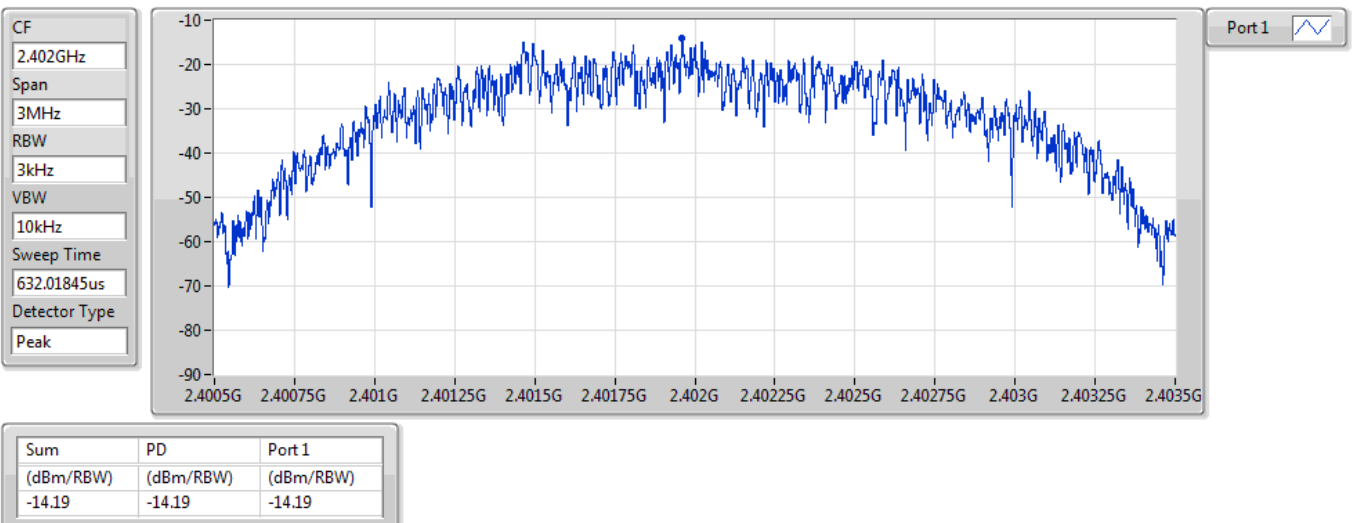
19/03/2022



BT-LE(2Mbps)

2402MHz

19/03/2022

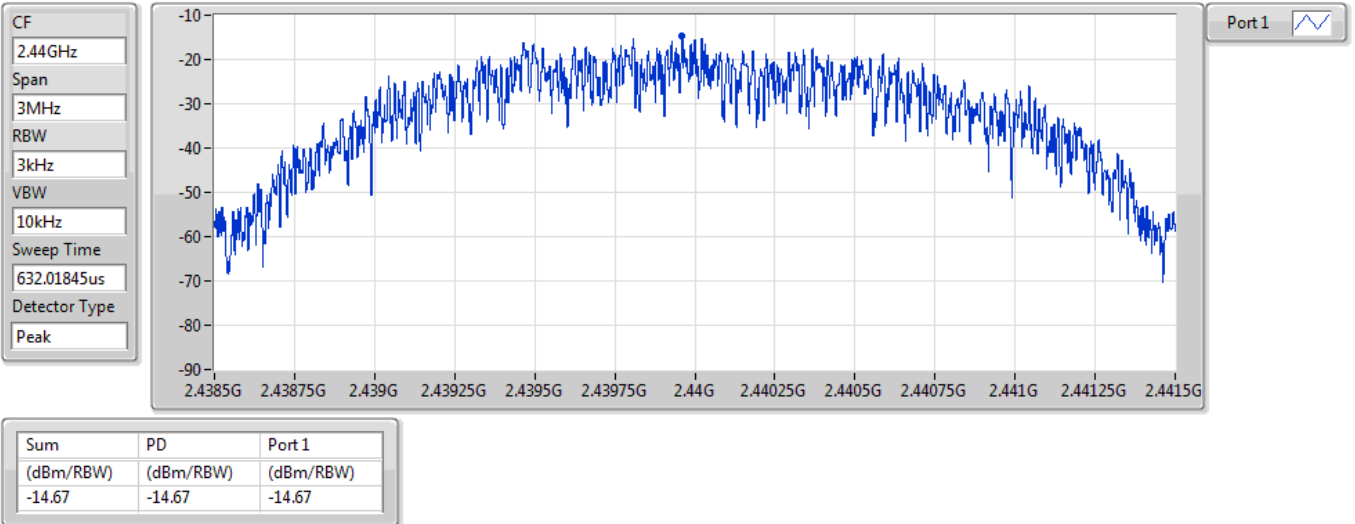


BT-LE(2Mbps)

PSD

2440MHz

19/03/2022

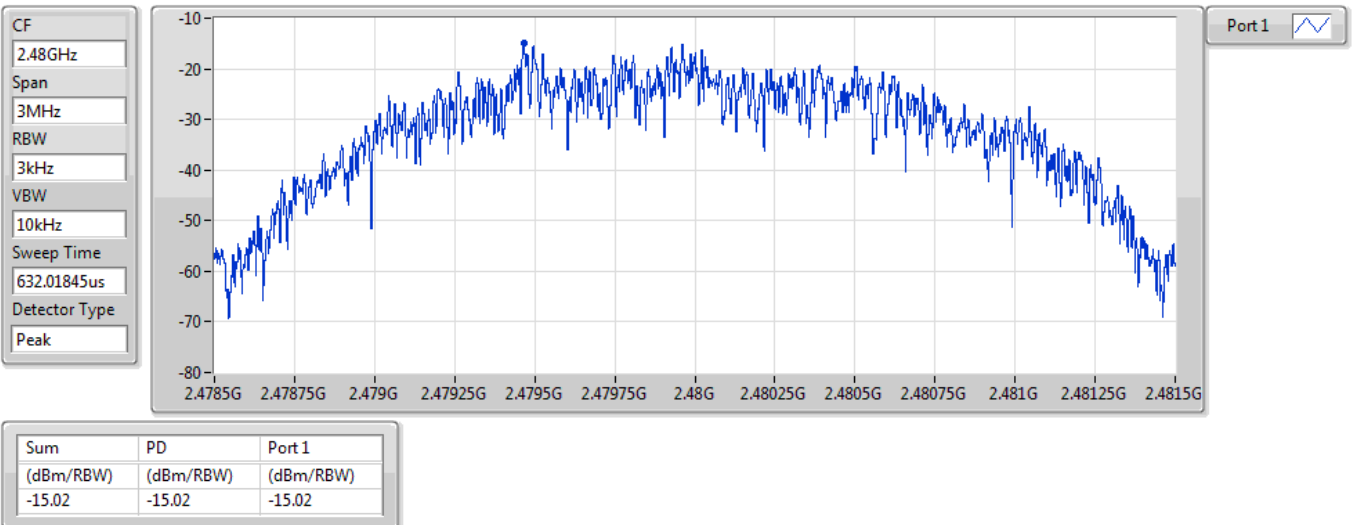


BT-LE(2Mbps)

PSD

2480MHz

19/03/2022





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	2.40171G	4.75	-25.25	2.11504G	-55.35	2.39997G	-47.74	2.4G	-47.65	2.50081G	-53.52	24.87346G	-42.72	1
BT-LE(2Mbps)	Pass	2.47949G	4.65	-25.35	2.12121G	-55.73	2.4G	-26.32	2.4G	-26.36	2.50031G	-53.90	16.92938G	-42.07	1

**Result**

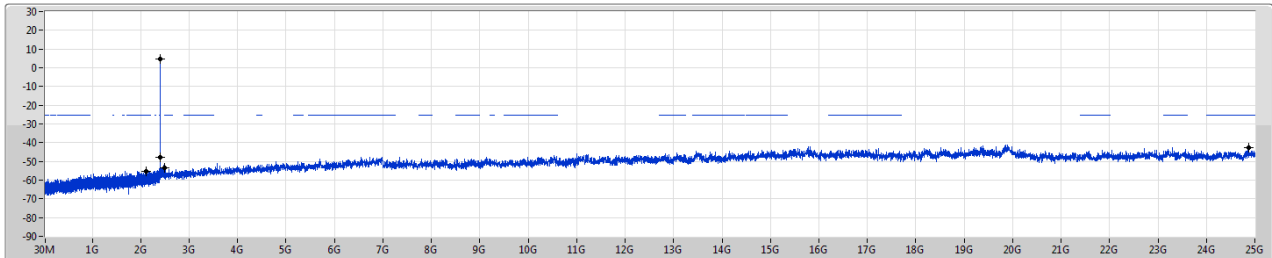
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40171G	4.75	-25.25	2.11504G	-55.35	2.39997G	-47.74	2.4G	-47.65	2.50081G	-53.52	24.87346G	-42.72	1
2440MHz	Pass	2.40171G	4.75	-25.25	1.92293G	-55.25	2.39528G	-54.03	2.4G	-56.61	2.50296G	-53.54	24.87627G	-42.49	1
2480MHz	Pass	2.40171G	4.75	-25.25	2.16028G	-55.00	2.39234G	-54.08	2.4G	-55.54	2.50337G	-53.60	16.93782G	-42.46	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.47949G	4.65	-25.35	2.12121G	-55.73	2.4G	-26.32	2.4G	-26.36	2.50031G	-53.90	16.92938G	-42.07	1
2440MHz	Pass	2.47949G	4.65	-25.35	2.30774G	-54.72	2.39876G	-54.39	2.4G	-56.18	2.50089G	-53.96	24.94938G	-42.37	1
2480MHz	Pass	2.47949G	4.65	-25.35	2.1027G	-54.72	2.39427G	-54.15	2.4G	-57.12	2.50184G	-53.32	24.64287G	-42.87	1

BT-LE(1Mbps)

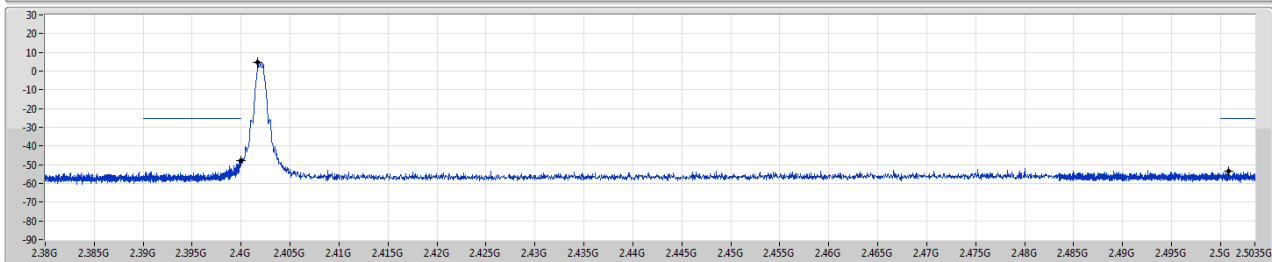
CSEndB-DTS

2402MHz

19/03/2022



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

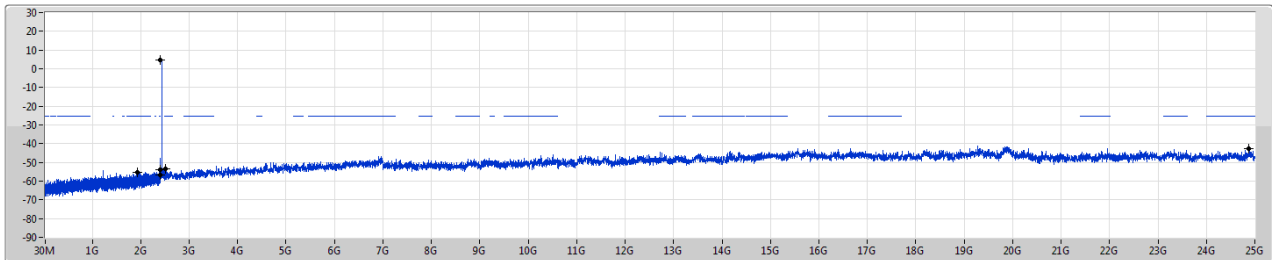
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40171G	4.75	-25.25	2.11504G	-55.35	2.39997G	-47.74	2.4G	-47.65	2.50081G	-53.52	2.47346G	-42.72	1

BT-LE(1Mbps)

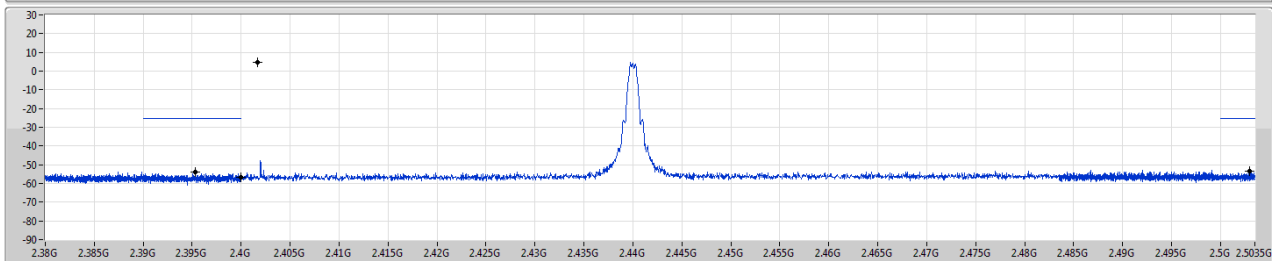
CSEndB-DTS

2440MHz

19/03/2022



Port1



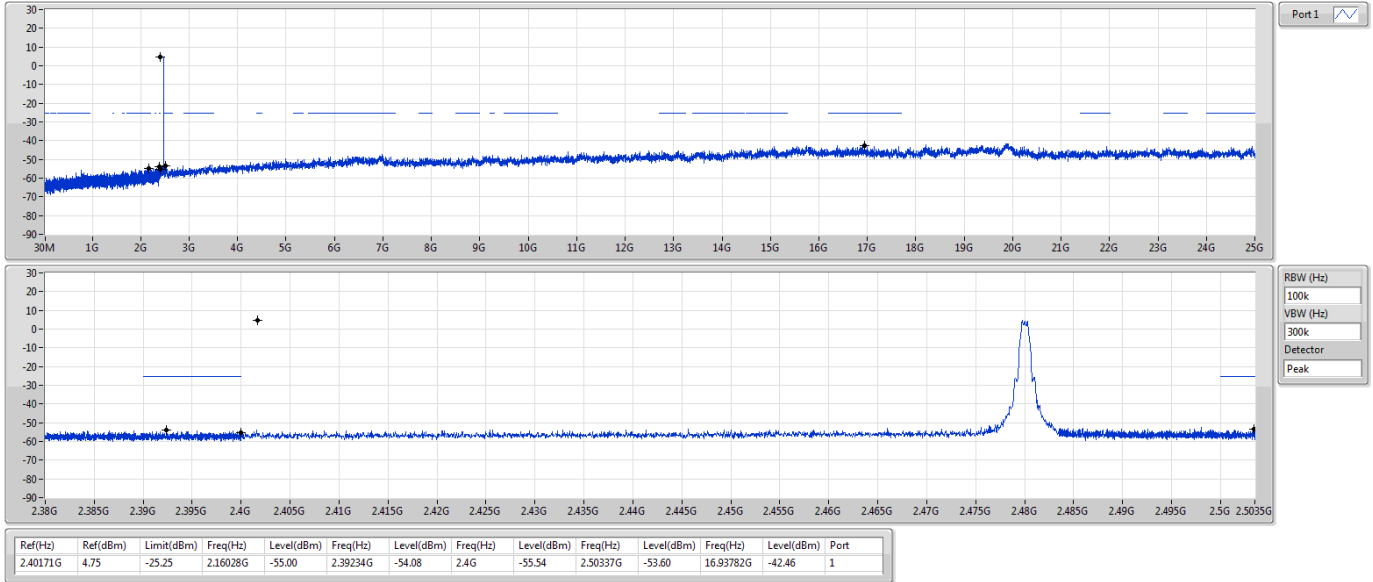
RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

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
2.40171G	4.75	-25.25	1.92293G	-55.25	2.39528G	-54.03	2.4G	-56.61	2.50296G	-53.54	2.47627G	-42.49	1

BT-LE(1Mbps)

CSEndB-DTS

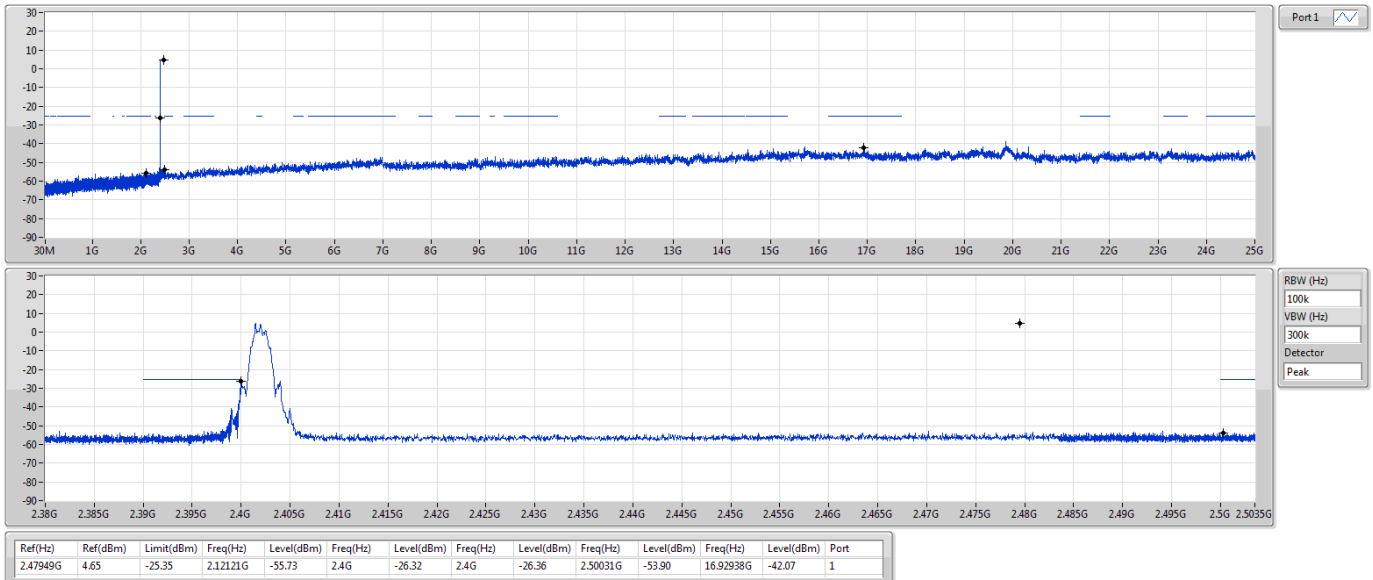
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

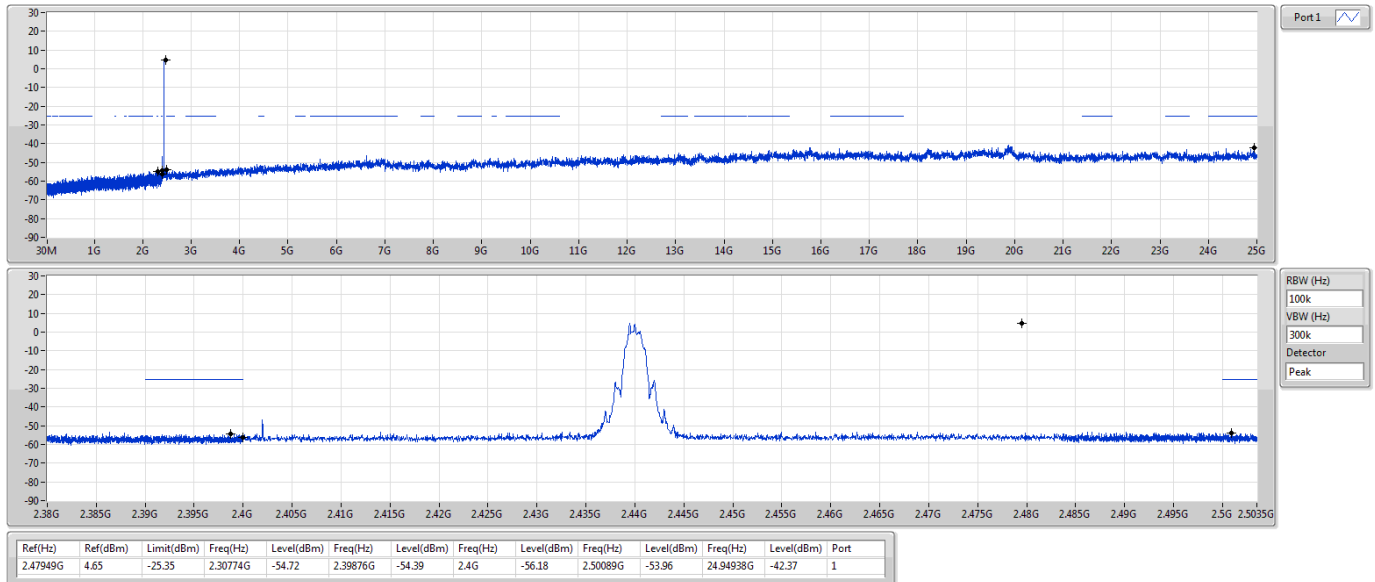
2402MHz



BT-LE(2Mbps)

CSEndB-DTS

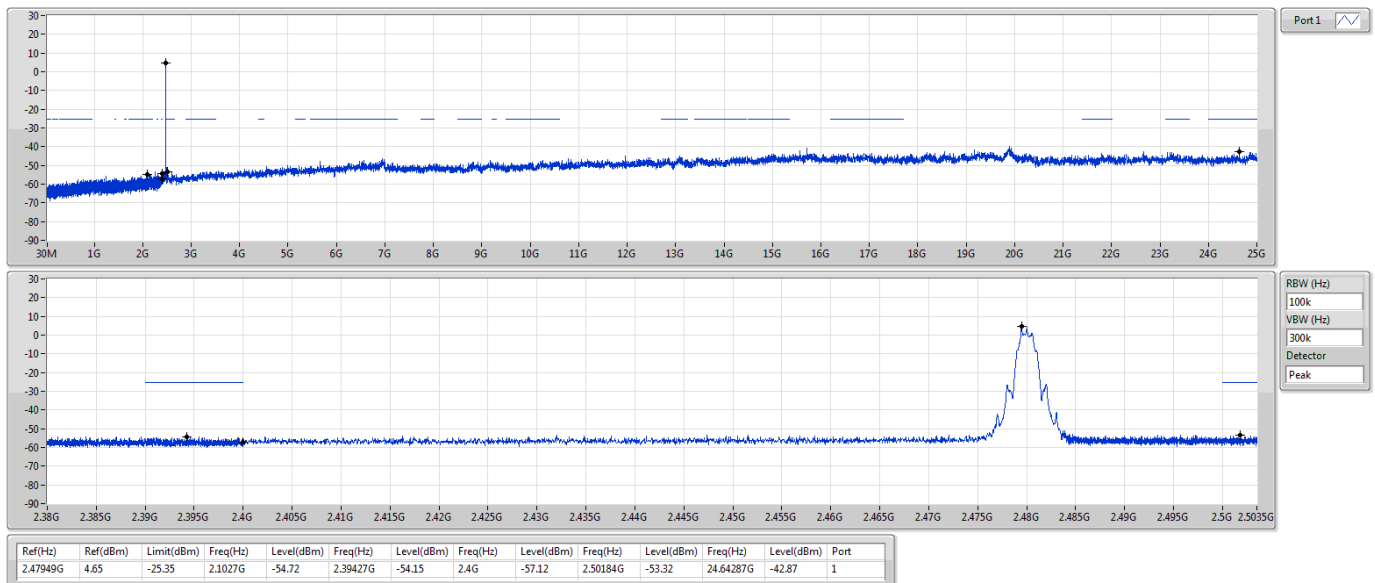
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2480MHz





Summary

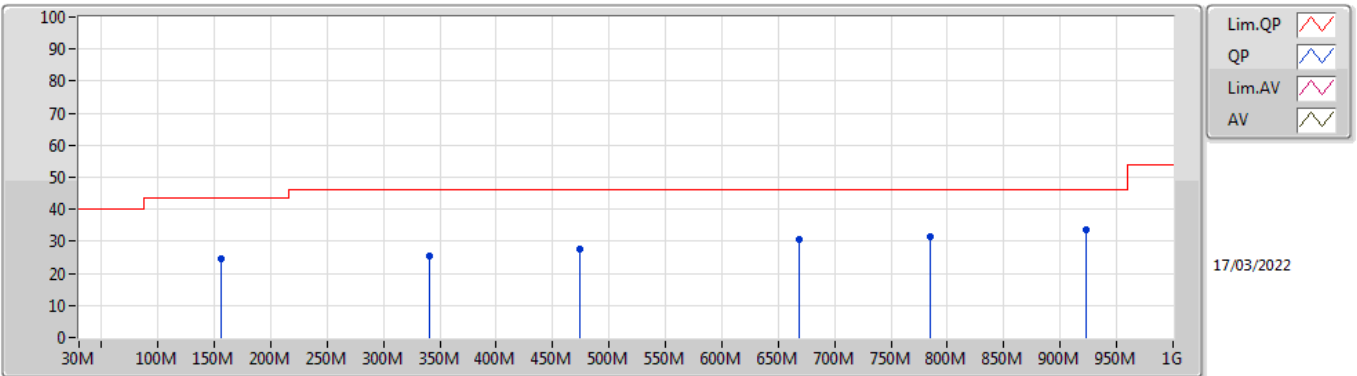
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	922.4M	33.68	46.00	-12.32	3	Vertical	360	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	156.1M	24.63	43.50	-18.87	3	Vertical	360	1.00	-
2440MHz	Pass	PK	340.4M	25.50	46.00	-20.50	3	Vertical	360	1.00	-
2440MHz	Pass	PK	474.26M	27.50	46.00	-18.50	3	Vertical	360	1.00	-
2440MHz	Pass	PK	668.26M	30.58	46.00	-15.42	3	Vertical	360	1.00	-
2440MHz	Pass	PK	784.66M	31.68	46.00	-14.32	3	Vertical	360	1.00	-
2440MHz	Pass	PK	922.4M	33.68	46.00	-12.32	3	Vertical	360	1.00	-
2440MHz	Pass	PK	117.3M	21.78	43.50	-21.72	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	305.48M	24.09	46.00	-21.91	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	425.76M	27.11	46.00	-18.89	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	580.96M	29.80	46.00	-16.20	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	734.22M	31.15	46.00	-14.85	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	914.64M	33.00	46.00	-13.00	3	Horizontal	0	1.00	-

BT-LE(2Mbps)

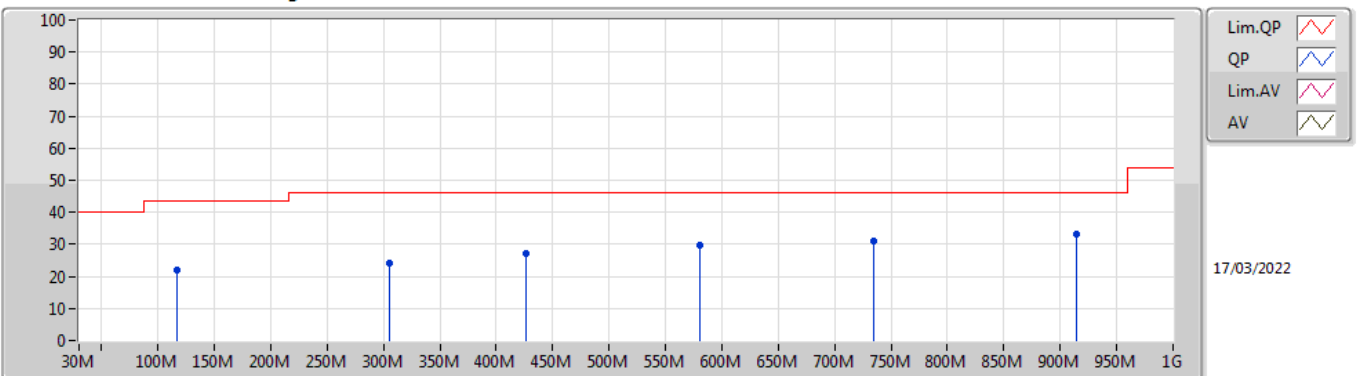
2440MHz_Battery



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	156.1M	24.63	43.50	-18.87	-10.48	3	Vertical	360	1.00	-	35.11	15.32	1.74	27.54
PK	340.4M	25.50	46.00	-20.50	-5.61	3	Vertical	360	1.00	-	31.11	19.16	2.51	27.28
PK	474.26M	27.50	46.00	-18.50	-2.63	3	Vertical	360	1.00	-	30.13	22.59	2.99	28.21
PK	668.26M	30.58	46.00	-15.42	-0.53	3	Vertical	360	1.00	-	31.11	24.18	3.50	28.21
PK	784.66M	31.68	46.00	-14.32	0.92	3	Vertical	360	1.00	-	30.76	25.04	3.82	27.94
PK	922.4M	33.68	46.00	-12.32	2.56	3	Vertical	360	1.00	-	31.12	25.82	4.14	27.40

BT-LE(2Mbps)

2440MHz_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	117.3M	21.78	43.50	-21.72	-8.86	3	Horizontal	0	1.00	-	30.64	17.42	1.52	27.80
PK	305.48M	24.09	46.00	-21.91	-6.17	3	Horizontal	0	1.00	-	30.26	18.54	2.38	27.09
PK	425.76M	27.11	46.00	-18.89	-3.31	3	Horizontal	0	1.00	-	30.42	21.80	2.82	27.93
PK	580.96M	29.80	46.00	-16.20	-1.18	3	Horizontal	0	1.00	-	30.98	23.91	3.30	28.39
PK	734.22M	31.15	46.00	-14.85	0.30	3	Horizontal	0	1.00	-	30.85	24.75	3.67	28.12
PK	914.64M	33.00	46.00	-13.00	2.42	3	Horizontal	0	1.00	-	30.58	25.73	4.13	27.44



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.34G	48.18	54.00	-5.82	3	Vertical	148	1.04	-
BT-LE(2Mbps)	Pass	AV	2.4835G	50.64	54.00	-3.36	3	Horizontal	118	1.34	-

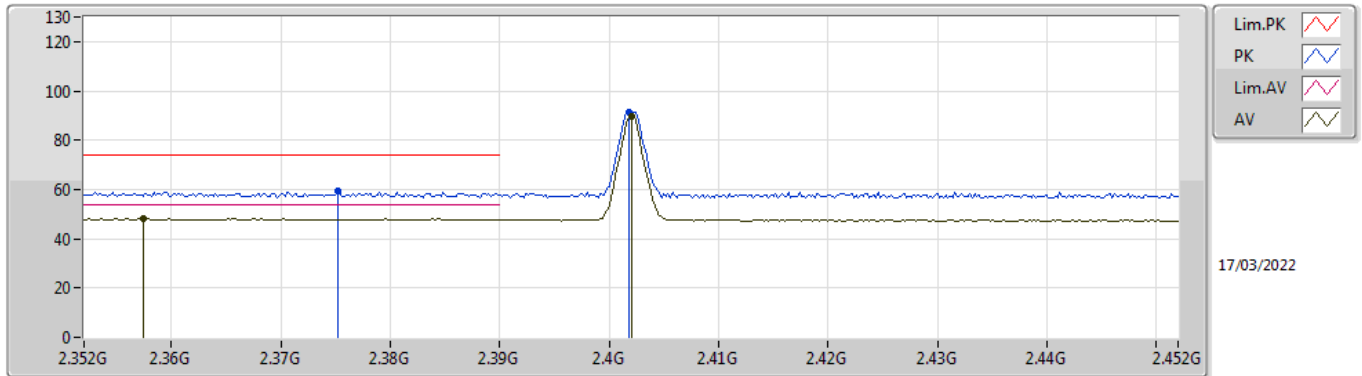
Result

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	2.3574G	48.05	54.00	-5.95	3	Vertical	308	2.80	-
2402MHz	Pass	AV	2.402G	89.78	Inf	-Inf	3	Vertical	308	2.80	-
2402MHz	Pass	PK	2.3752G	59.48	74.00	-14.52	3	Vertical	308	2.80	-
2402MHz	Pass	PK	2.4018G	91.29	Inf	-Inf	3	Vertical	308	2.80	-
2402MHz	Pass	AV	2.3792G	48.13	54.00	-5.87	3	Horizontal	113	1.00	-
2402MHz	Pass	AV	2.402G	95.07	Inf	-Inf	3	Horizontal	113	1.00	-
2402MHz	Pass	PK	2.3544G	60.27	74.00	-13.73	3	Horizontal	113	1.00	-
2402MHz	Pass	PK	2.4018G	96.54	Inf	-Inf	3	Horizontal	113	1.00	-
2402MHz	Pass	AV	4.80388G	34.29	54.00	-19.71	3	Vertical	104	1.05	-
2402MHz	Pass	PK	4.8033G	45.14	74.00	-28.86	3	Vertical	104	1.05	-
2402MHz	Pass	AV	4.80346G	33.43	54.00	-20.57	3	Horizontal	132	1.50	-
2402MHz	Pass	PK	4.80355G	43.46	74.00	-30.54	3	Horizontal	132	1.50	-
2440MHz	Pass	AV	2.34G	48.18	54.00	-5.82	3	Vertical	148	1.04	-
2440MHz	Pass	AV	2.44G	91.28	Inf	-Inf	3	Vertical	148	1.04	-
2440MHz	Pass	AV	2.4924G	47.65	54.00	-6.35	3	Vertical	148	1.04	-
2440MHz	Pass	PK	2.3444G	59.31	74.00	-14.69	3	Vertical	148	1.04	-
2440MHz	Pass	PK	2.4396G	92.89	Inf	-Inf	3	Vertical	148	1.04	-
2440MHz	Pass	PK	2.4976G	59.00	74.00	-15.00	3	Vertical	148	1.04	-
2440MHz	Pass	AV	2.3556G	48.11	54.00	-5.89	3	Horizontal	117	1.18	-
2440MHz	Pass	AV	2.44G	97.08	Inf	-Inf	3	Horizontal	117	1.18	-
2440MHz	Pass	AV	2.488G	47.72	54.00	-6.28	3	Horizontal	117	1.18	-
2440MHz	Pass	PK	2.38G	59.25	74.00	-14.75	3	Horizontal	117	1.18	-
2440MHz	Pass	PK	2.4404G	98.52	Inf	-Inf	3	Horizontal	117	1.18	-
2440MHz	Pass	PK	2.4884G	58.55	74.00	-15.45	3	Horizontal	117	1.18	-
2440MHz	Pass	AV	4.87833G	31.02	54.00	-22.98	3	Vertical	153	1.50	-
2440MHz	Pass	PK	4.88149G	43.73	74.00	-30.27	3	Vertical	153	1.50	-
2440MHz	Pass	AV	4.88043G	30.94	54.00	-23.06	3	Horizontal	131	1.19	-
2440MHz	Pass	PK	4.8805G	43.36	74.00	-30.64	3	Horizontal	131	1.19	-
2480MHz	Pass	AV	2.48G	89.37	Inf	-Inf	3	Vertical	281	2.97	-
2480MHz	Pass	AV	2.484G	47.67	54.00	-6.33	3	Vertical	281	2.97	-
2480MHz	Pass	PK	2.4802G	90.83	Inf	-Inf	3	Vertical	281	2.97	-
2480MHz	Pass	PK	2.4952G	59.04	74.00	-14.96	3	Vertical	281	2.97	-
2480MHz	Pass	AV	2.48G	95.89	Inf	-Inf	3	Horizontal	116	1.32	-
2480MHz	Pass	AV	2.4835G	48.15	54.00	-5.85	3	Horizontal	116	1.32	-
2480MHz	Pass	PK	2.4798G	97.28	Inf	-Inf	3	Horizontal	116	1.32	-
2480MHz	Pass	PK	2.4966G	58.70	74.00	-15.30	3	Horizontal	116	1.32	-
2480MHz	Pass	AV	4.95967G	32.06	54.00	-21.94	3	Vertical	153	1.12	-
2480MHz	Pass	PK	4.95853G	43.27	74.00	-30.73	3	Vertical	153	1.12	-
2480MHz	Pass	AV	4.96012G	32.92	54.00	-21.08	3	Horizontal	140	1.19	-
2480MHz	Pass	PK	4.95997G	43.58	74.00	-30.42	3	Horizontal	140	1.19	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.352G	49.13	54.00	-4.87	3	Vertical	306	2.80	-
2402MHz	Pass	AV	2.402G	89.57	Inf	-Inf	3	Vertical	306	2.80	-
2402MHz	Pass	PK	2.3824G	59.58	74.00	-14.42	3	Vertical	306	2.80	-
2402MHz	Pass	PK	2.4014G	92.68	Inf	-Inf	3	Vertical	306	2.80	-
2402MHz	Pass	AV	2.3702G	49.17	54.00	-4.83	3	Horizontal	115	1.40	-
2402MHz	Pass	AV	2.402G	95.18	Inf	-Inf	3	Horizontal	115	1.40	-
2402MHz	Pass	PK	2.3602G	59.64	74.00	-14.36	3	Horizontal	115	1.40	-
2402MHz	Pass	PK	2.4014G	98.17	Inf	-Inf	3	Horizontal	115	1.40	-
2402MHz	Pass	AV	4.80382G	32.96	54.00	-21.04	3	Vertical	278	1.83	-
2402MHz	Pass	PK	4.80424G	43.79	74.00	-30.21	3	Vertical	278	1.83	-
2402MHz	Pass	AV	4.80798G	35.45	54.00	-18.55	3	Horizontal	94	2.04	-
2402MHz	Pass	PK	4.80096G	43.31	74.00	-30.69	3	Horizontal	94	2.04	-
2440MHz	Pass	AV	2.3672G	49.19	54.00	-4.81	3	Vertical	146	1.05	-
2440MHz	Pass	AV	2.44G	90.63	Inf	-Inf	3	Vertical	146	1.05	-
2440MHz	Pass	AV	2.4968G	48.51	54.00	-5.49	3	Vertical	146	1.05	-
2440MHz	Pass	PK	2.3684G	59.53	74.00	-14.47	3	Vertical	146	1.05	-
2440MHz	Pass	PK	2.44G	93.71	Inf	-Inf	3	Vertical	146	1.05	-
2440MHz	Pass	PK	2.4948G	58.83	74.00	-15.17	3	Vertical	146	1.05	-
2440MHz	Pass	AV	2.378G	49.36	54.00	-4.64	3	Horizontal	119	1.15	-

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	96.48	Inf	-Inf	3	Horizontal	119	1.15	-
2440MHz	Pass	AV	2.4876G	48.65	54.00	-5.35	3	Horizontal	119	1.15	-
2440MHz	Pass	PK	2.3556G	59.25	74.00	-14.75	3	Horizontal	119	1.15	-
2440MHz	Pass	PK	2.4404G	99.56	Inf	-Inf	3	Horizontal	119	1.15	-
2440MHz	Pass	PK	2.4924G	58.54	74.00	-15.46	3	Horizontal	119	1.15	-
2440MHz	Pass	AV	4.88422G	32.77	54.00	-21.23	3	Vertical	59	1.27	-
2440MHz	Pass	PK	4.8809G	43.16	74.00	-30.84	3	Vertical	59	1.27	-
2440MHz	Pass	AV	4.88394G	35.44	54.00	-18.56	3	Horizontal	186	2.18	-
2440MHz	Pass	PK	4.88156G	43.88	74.00	-30.12	3	Horizontal	186	2.18	-
2480MHz	Pass	AV	2.48G	87.04	Inf	-Inf	3	Vertical	250	2.95	-
2480MHz	Pass	AV	2.4835G	48.61	54.00	-5.39	3	Vertical	250	2.95	-
2480MHz	Pass	PK	2.4806G	90.17	Inf	-Inf	3	Vertical	250	2.95	-
2480MHz	Pass	PK	2.4958G	58.57	74.00	-15.43	3	Vertical	250	2.95	-
2480MHz	Pass	AV	2.48G	95.17	Inf	-Inf	3	Horizontal	118	1.34	-
2480MHz	Pass	AV	2.4835G	50.64	54.00	-3.36	3	Horizontal	118	1.34	-
2480MHz	Pass	PK	2.4796G	98.20	Inf	-Inf	3	Horizontal	118	1.34	-
2480MHz	Pass	PK	2.4835G	59.57	74.00	-14.43	3	Horizontal	118	1.34	-
2480MHz	Pass	AV	4.95796G	36.04	54.00	-17.96	3	Vertical	244	1.38	-
2480MHz	Pass	PK	4.95684G	44.12	74.00	-29.88	3	Vertical	244	1.38	-
2480MHz	Pass	AV	4.95616G	32.62	54.00	-21.38	3	Horizontal	128	1.41	-
2480MHz	Pass	PK	4.95814G	44.01	74.00	-29.99	3	Horizontal	128	1.41	-

BT-LE(1Mbps)

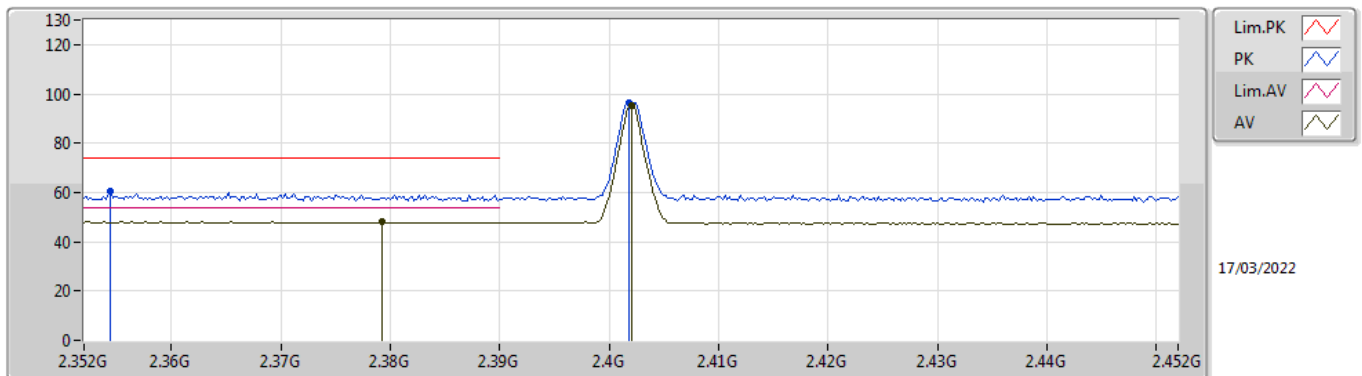
2402MHz_TX



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	2.3574G	48.05	54.00	-5.95	35.03	3	Vertical	308	2.80	-	13.02	27.79	7.24	-
AV	2.402G	89.78	Inf	-Inf	34.95	3	Vertical	308	2.80	-	54.83	27.69	7.26	-
PK	2.3752G	59.48	74.00	-14.52	35.00	3	Vertical	308	2.80	-	24.48	27.75	7.25	-
PK	2.4018G	91.29	Inf	-Inf	34.95	3	Vertical	308	2.80	-	56.34	27.69	7.26	-

BT-LE(1Mbps)

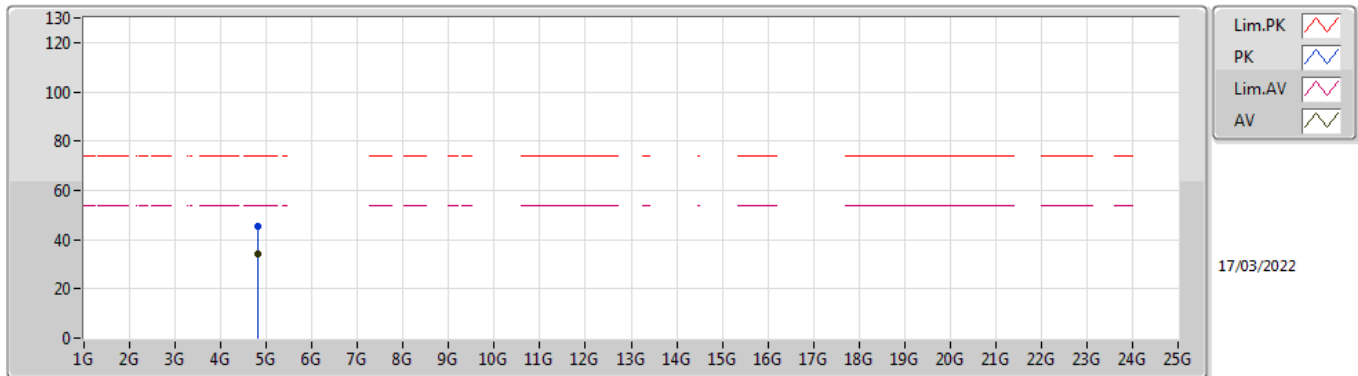
2402MHz_TX



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	2.3792G	48.13	54.00	-5.87	34.99	3	Horizontal	113	1.00	-	13.14	27.74	7.25	-
AV	2.402G	95.07	Inf	-Inf	34.95	3	Horizontal	113	1.00	-	60.12	27.69	7.26	-
PK	2.3544G	60.27	74.00	-13.73	35.03	3	Horizontal	113	1.00	-	25.24	27.79	7.24	-
PK	2.4018G	96.54	Inf	-Inf	34.95	3	Horizontal	113	1.00	-	61.59	27.69	7.26	-

BT-LE(1Mbps)

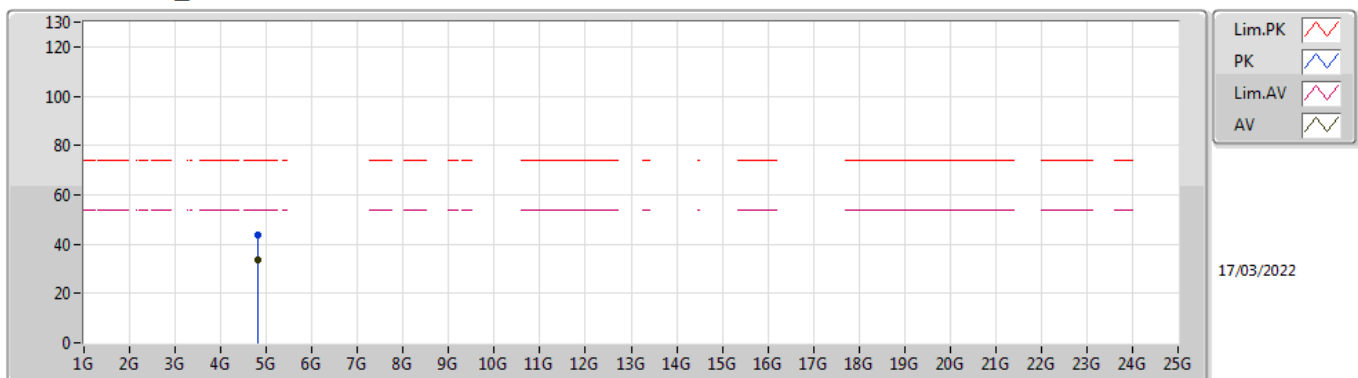
2402MHz_TX



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	4.80388G	34.29	54.00	-19.71	5.82	3	Vertical	104	1.05	-	28.47	31.11	8.90	34.19
PK	4.8033G	45.14	74.00	-28.86	5.82	3	Vertical	104	1.05	-	39.32	31.11	8.90	34.19

BT-LE(1Mbps)

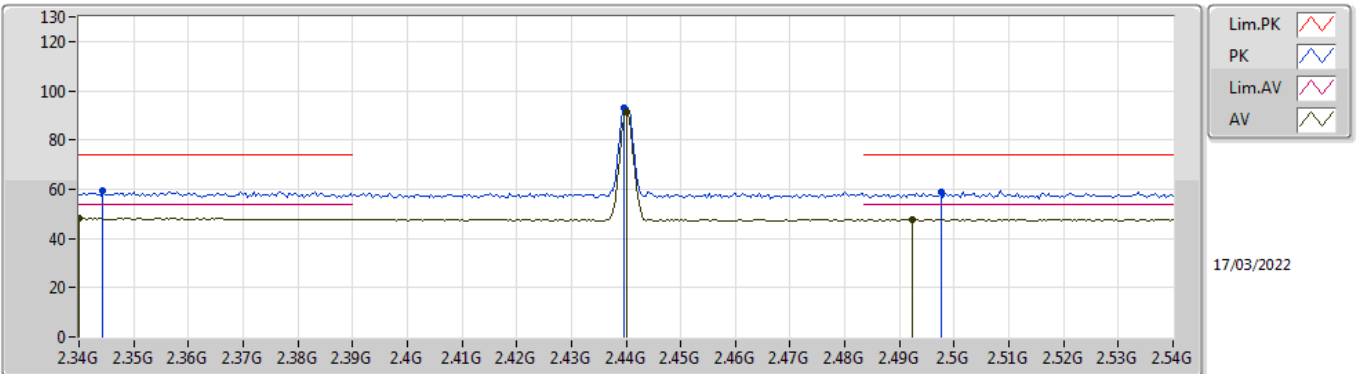
2402MHz_TX



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	4.80346G	33.43	54.00	-20.57	5.82	3	Horizontal	132	1.50	-	27.61	31.11	8.90	34.19
PK	4.80355G	43.46	74.00	-30.54	5.82	3	Horizontal	132	1.50	-	37.64	31.11	8.90	34.19

BT-LE(1Mbps)

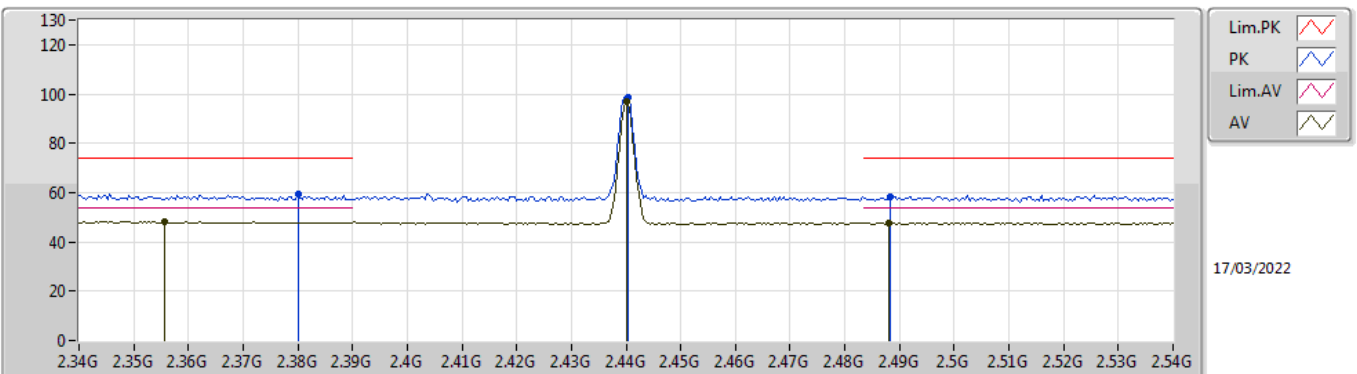
2440MHz_TX



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	2.34G	48.18	54.00	-5.82	35.05	3	Vertical	148	1.04	-	13.13	27.82	7.23	-
AV	2.44G	91.28	Inf	-Inf	34.75	3	Vertical	148	1.04	-	56.53	27.46	7.29	-
AV	2.4924G	47.65	54.00	-6.35	34.73	3	Vertical	148	1.04	-	12.92	27.40	7.33	-
PK	2.3444G	59.31	74.00	-14.69	35.04	3	Vertical	148	1.04	-	24.27	27.81	7.23	-
PK	2.4396G	92.89	Inf	-Inf	34.75	3	Vertical	148	1.04	-	58.14	27.46	7.29	-
PK	2.4976G	59.00	74.00	-15.00	34.74	3	Vertical	148	1.04	-	24.26	27.40	7.34	-

BT-LE(1Mbps)

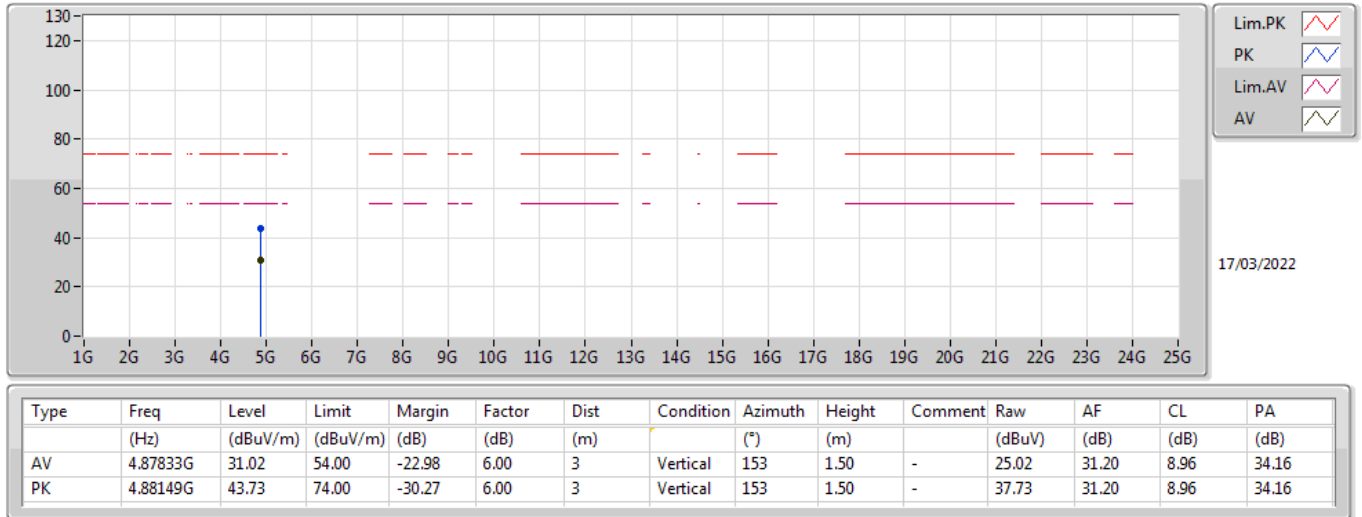
2440MHz_TX



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	2.3556G	48.11	54.00	-5.89	35.03	3	Horizontal	117	1.18	-	13.08	27.79	7.24	-
AV	2.44G	97.08	Inf	-Inf	34.75	3	Horizontal	117	1.18	-	62.33	27.46	7.29	-
AV	2.488G	47.72	54.00	-6.28	34.73	3	Horizontal	117	1.18	-	12.99	27.40	7.33	-
PK	2.38G	59.25	74.00	-14.75	34.99	3	Horizontal	117	1.18	-	24.26	27.74	7.25	-
PK	2.4404G	98.52	Inf	-Inf	34.75	3	Horizontal	117	1.18	-	63.77	27.46	7.29	-
PK	2.4884G	58.55	74.00	-15.45	34.73	3	Horizontal	117	1.18	-	23.82	27.40	7.33	-

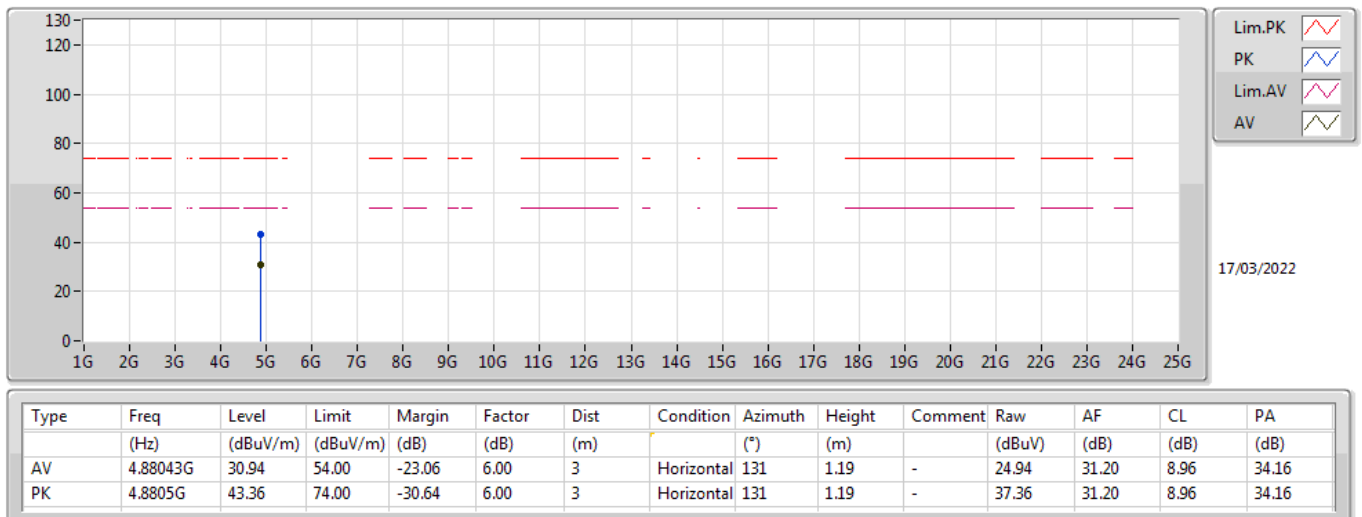
BT-LE(1Mbps)

2440MHz_TX



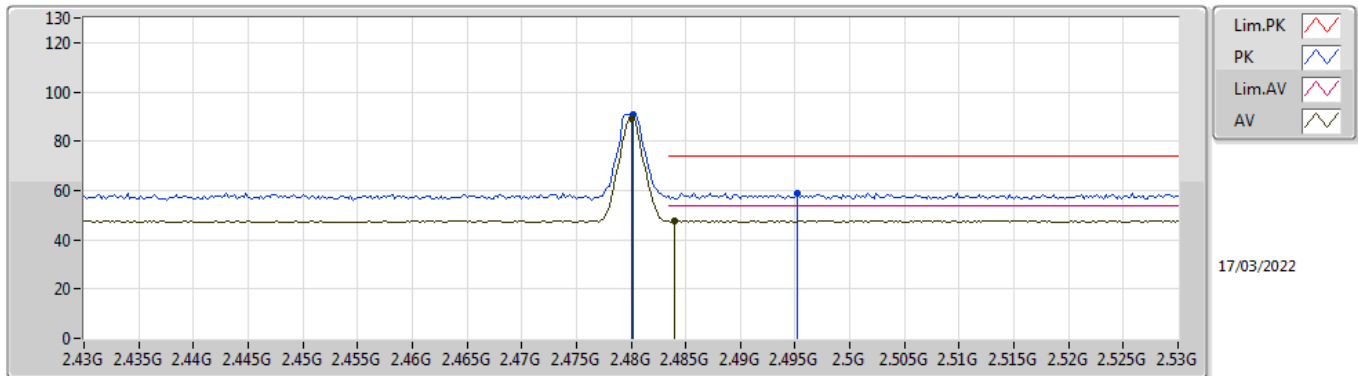
BT-LE(1Mbps)

2440MHz_TX



BT-LE(1Mbps)

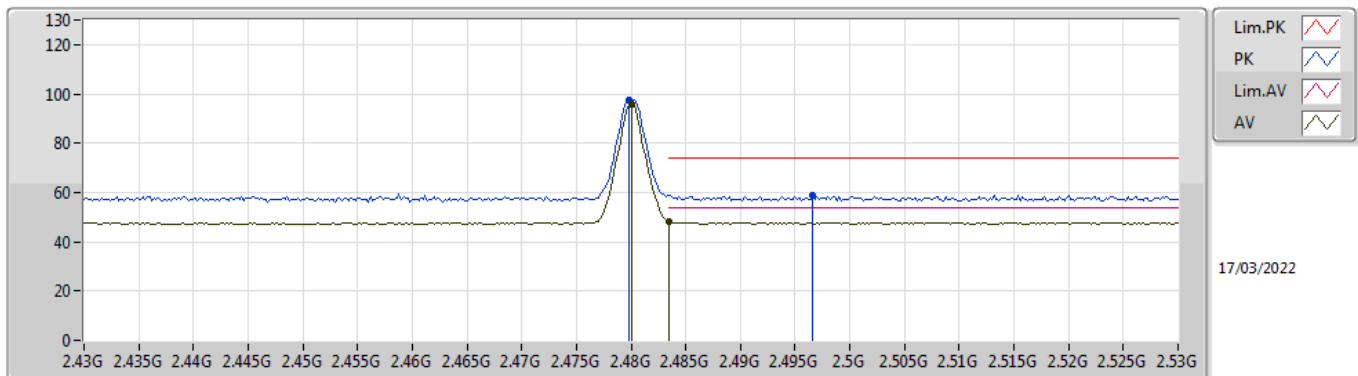
2480MHz_TX



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	89.37	Inf	-Inf	34.72	3	Vertical	281	2.97	-	54.65	27.40	7.32	-
AV	2.484G	47.67	54.00	-6.33	34.73	3	Vertical	281	2.97	-	12.94	27.40	7.33	-
PK	2.4802G	90.83	Inf	-Inf	34.72	3	Vertical	281	2.97	-	56.11	27.40	7.32	-
PK	2.4952G	59.04	74.00	-14.96	34.74	3	Vertical	281	2.97	-	24.30	27.40	7.34	-

BT-LE(1Mbps)

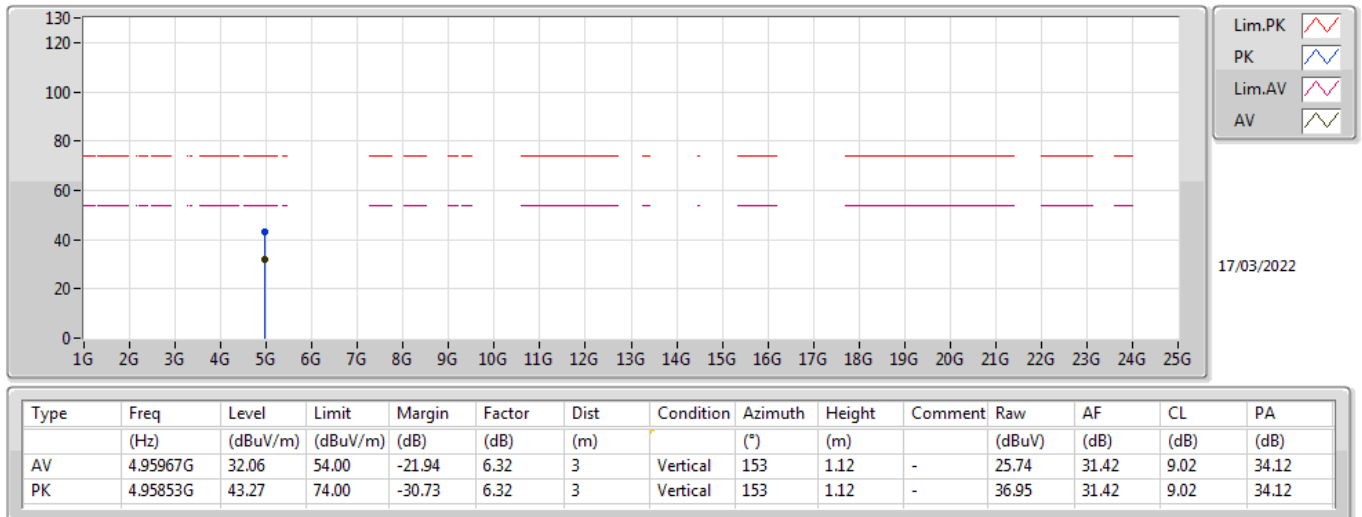
2480MHz_TX



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	95.89	Inf	-Inf	34.72	3	Horizontal	116	1.32	-	61.17	27.40	7.32	-
AV	2.4835G	48.15	54.00	-5.85	34.73	3	Horizontal	116	1.32	-	13.42	27.40	7.33	-
PK	2.4798G	97.28	Inf	-Inf	34.72	3	Horizontal	116	1.32	-	62.56	27.40	7.32	-
PK	2.4966G	58.70	74.00	-15.30	34.74	3	Horizontal	116	1.32	-	23.96	27.40	7.34	-

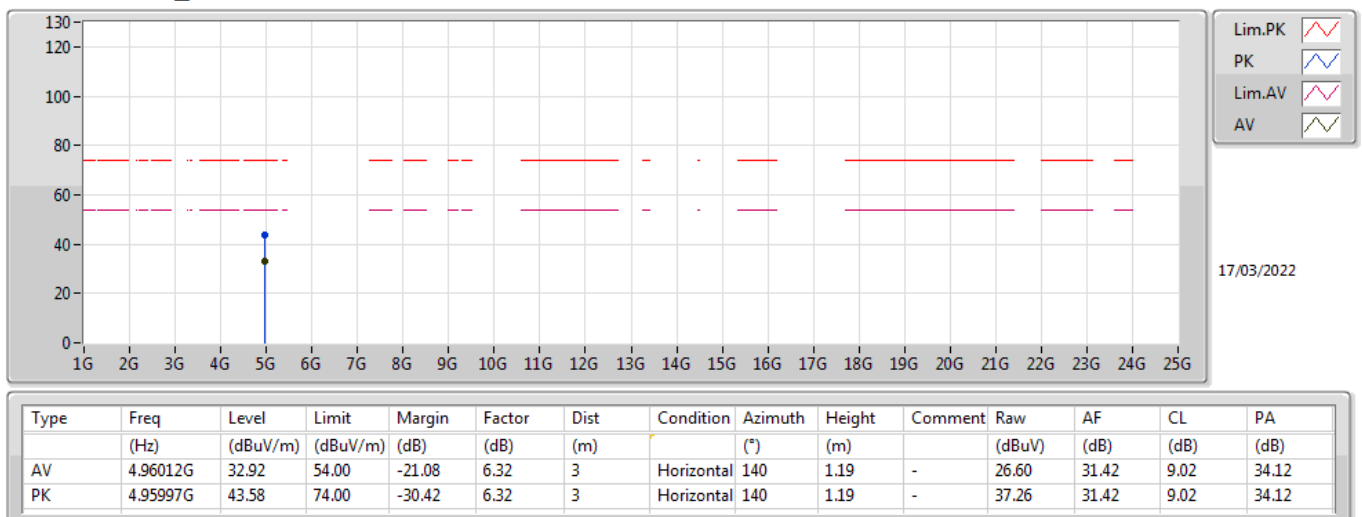
BT-LE(1Mbps)

2480MHz_TX



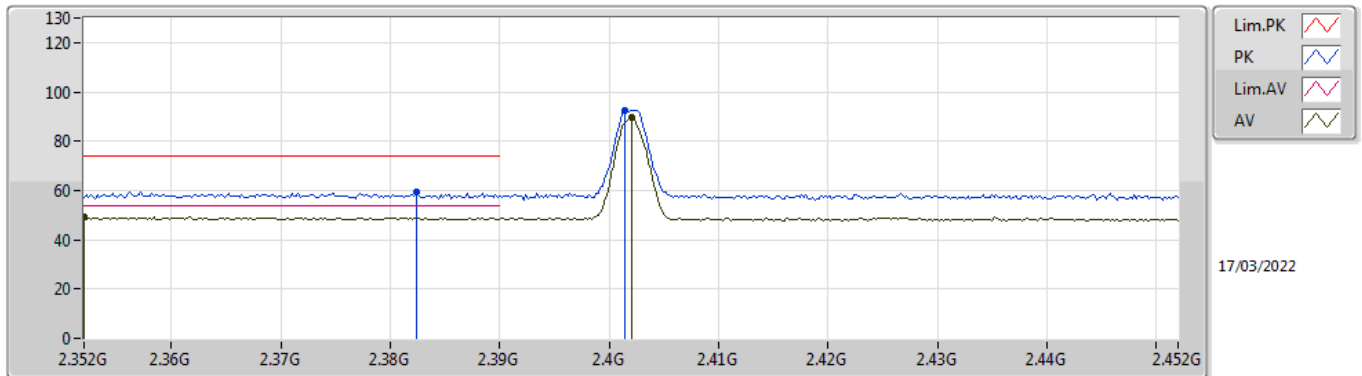
BT-LE(1Mbps)

2480MHz_TX



BT-LE(2Mbps)

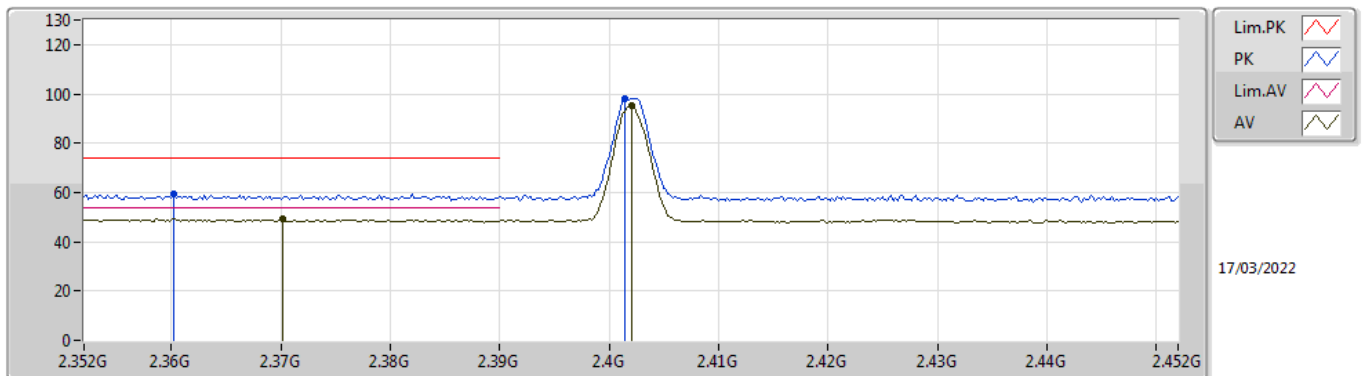
2402MHz_TX



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	2.352G	49.13	54.00	-4.87	35.04	3	Vertical	306	2.80	-	14.09	27.80	7.24	-
AV	2.402G	89.57	Inf	-Inf	34.95	3	Vertical	306	2.80	-	54.62	27.69	7.26	-
PK	2.3824G	59.58	74.00	-14.42	34.99	3	Vertical	306	2.80	-	24.59	27.74	7.25	-
PK	2.4014G	92.68	Inf	-Inf	34.95	3	Vertical	306	2.80	-	57.73	27.69	7.26	-

BT-LE(2Mbps)

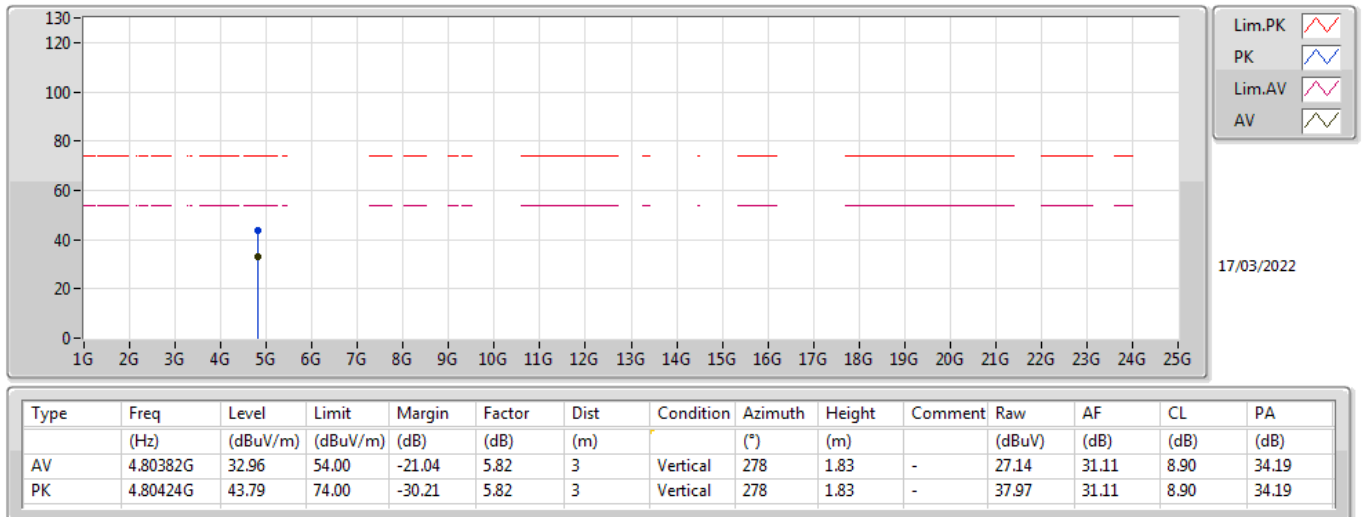
2402MHz_TX



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	2.3702G	49.17	54.00	-4.83	35.01	3	Horizontal	115	1.40	-	14.16	27.76	7.25	-
AV	2.402G	95.18	Inf	-Inf	34.95	3	Horizontal	115	1.40	-	60.23	27.69	7.26	-
PK	2.3602G	59.64	74.00	-14.36	35.02	3	Horizontal	115	1.40	-	24.62	27.78	7.24	-
PK	2.4014G	98.17	Inf	-Inf	34.95	3	Horizontal	115	1.40	-	63.22	27.69	7.26	-

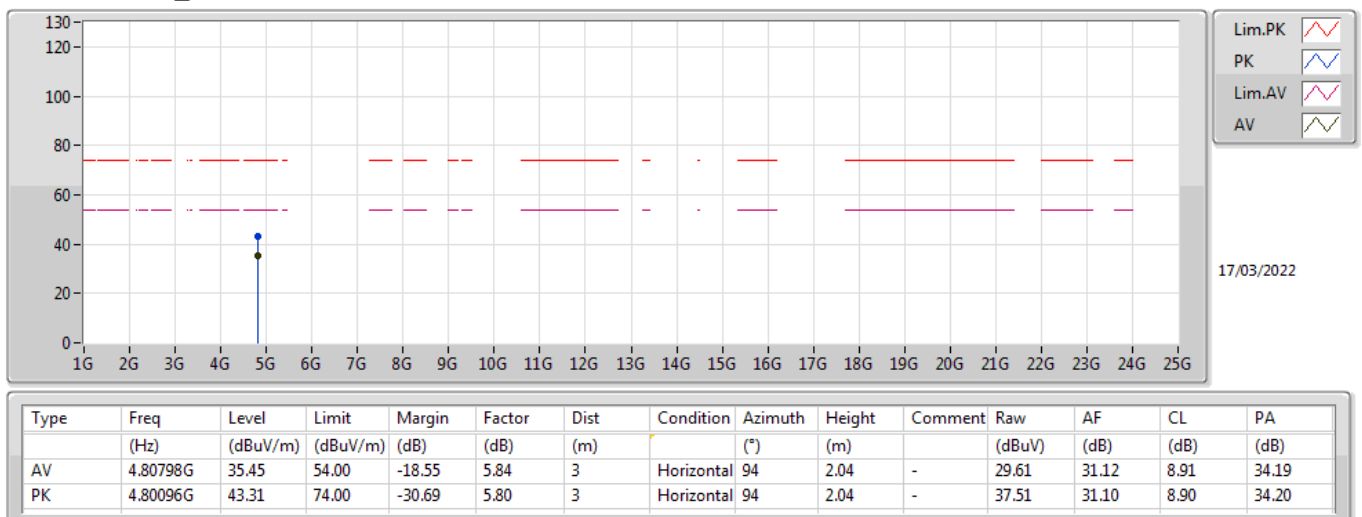
BT-LE(2Mbps)

2402MHz_TX



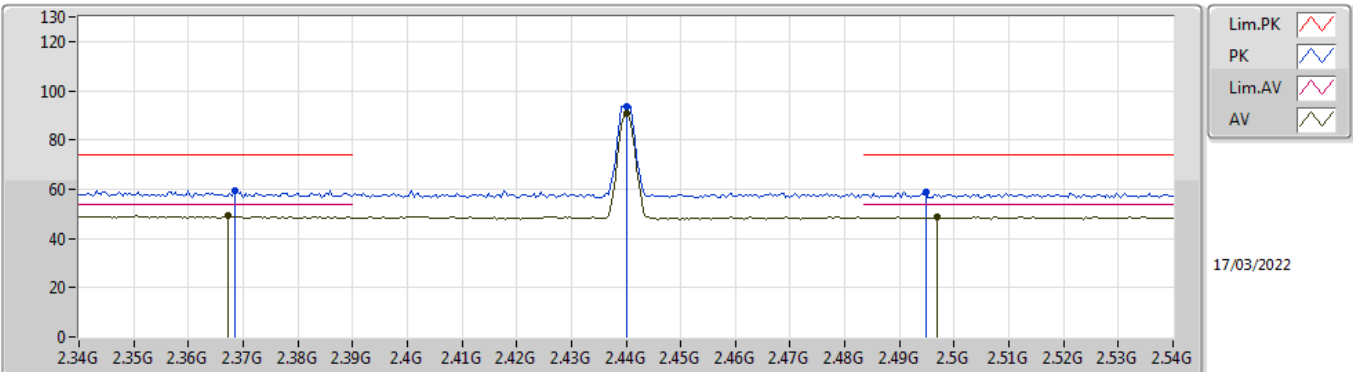
BT-LE(2Mbps)

2402MHz_TX



BT-LE(2Mbps)

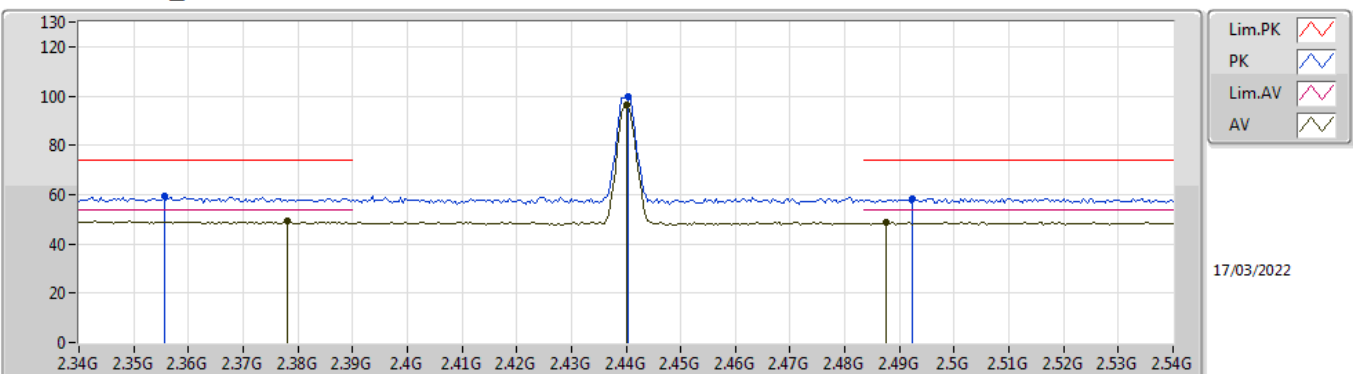
2440MHz_TX



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	2.3672G	49.19	54.00	-4.81	35.02	3	Vertical	146	1.05	-	14.17	27.77	7.25	-
AV	2.44G	90.63	Inf	-Inf	34.75	3	Vertical	146	1.05	-	55.88	27.46	7.29	-
AV	2.4968G	48.51	54.00	-5.49	34.74	3	Vertical	146	1.05	-	13.77	27.40	7.34	-
PK	2.3684G	59.53	74.00	-14.47	35.01	3	Vertical	146	1.05	-	24.52	27.76	7.25	-
PK	2.44G	93.71	Inf	-Inf	34.75	3	Vertical	146	1.05	-	58.96	27.46	7.29	-
PK	2.4948G	58.83	74.00	-15.17	34.74	3	Vertical	146	1.05	-	24.09	27.40	7.34	-

BT-LE(2Mbps)

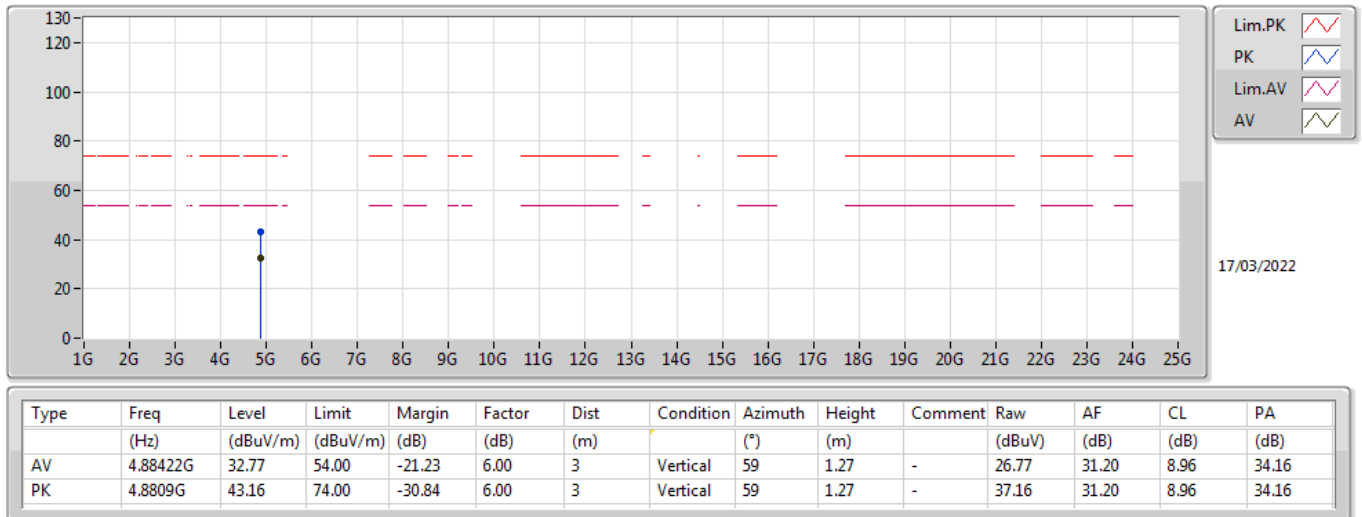
2440MHz_TX



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	2.378G	49.36	54.00	-4.64	34.99	3	Horizontal	119	1.15	-	14.37	27.74	7.25	-
AV	2.44G	96.48	Inf	-Inf	34.75	3	Horizontal	119	1.15	-	61.73	27.46	7.29	-
AV	2.4876G	48.65	54.00	-5.35	34.73	3	Horizontal	119	1.15	-	13.92	27.40	7.33	-
PK	2.3556G	59.25	74.00	-14.75	35.03	3	Horizontal	119	1.15	-	24.22	27.79	7.24	-
PK	2.4404G	99.56	Inf	-Inf	34.75	3	Horizontal	119	1.15	-	64.81	27.46	7.29	-
PK	2.4924G	58.54	74.00	-15.46	34.73	3	Horizontal	119	1.15	-	23.81	27.40	7.33	-

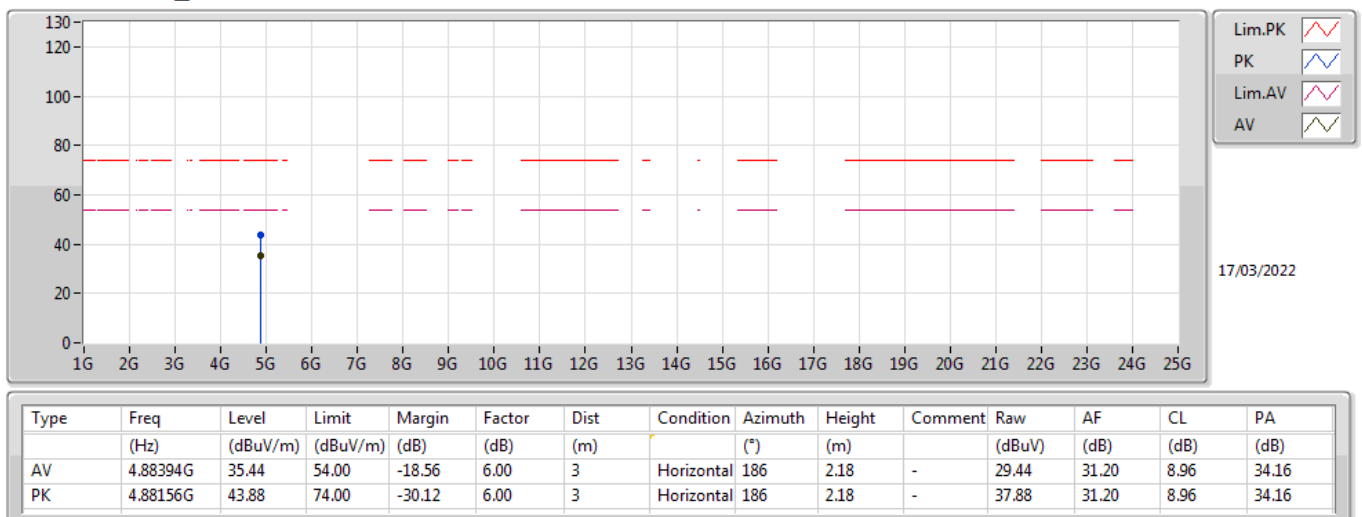
BT-LE(2Mbps)

2440MHz_TX



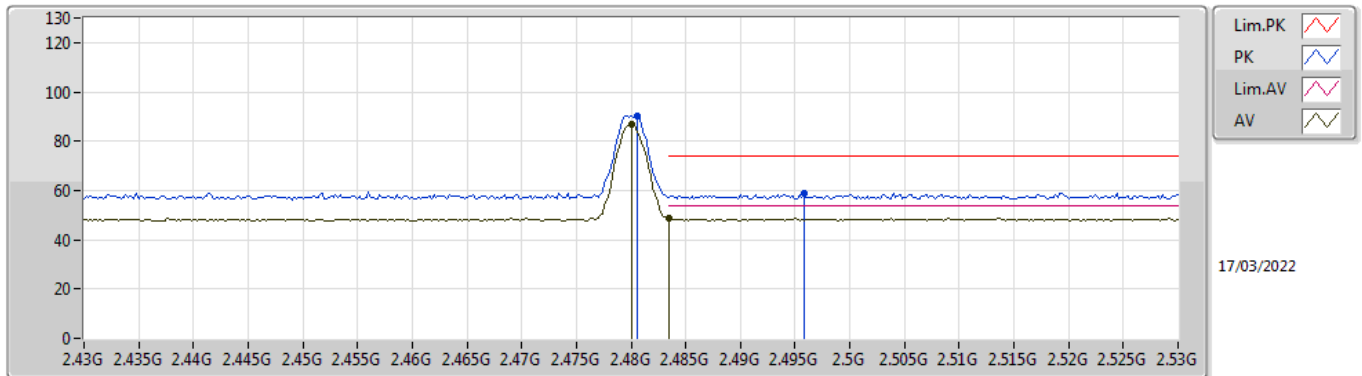
BT-LE(2Mbps)

2440MHz_TX



BT-LE(2Mbps)

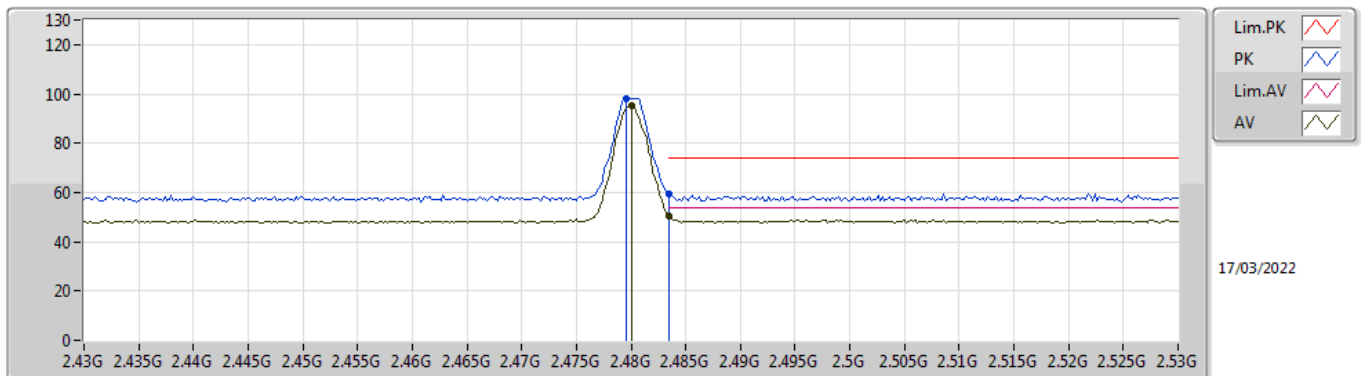
2480MHz_TX



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	2.48G	87.04	Inf	-Inf	34.72	3	Vertical	250	2.95	-	52.32	27.40	7.32	-
AV	2.4835G	48.61	54.00	-5.39	34.73	3	Vertical	250	2.95	-	13.88	27.40	7.33	-
PK	2.4806G	90.17	Inf	-Inf	34.72	3	Vertical	250	2.95	-	55.45	27.40	7.32	-
PK	2.4958G	58.57	74.00	-15.43	34.74	3	Vertical	250	2.95	-	23.83	27.40	7.34	-

BT-LE(2Mbps)

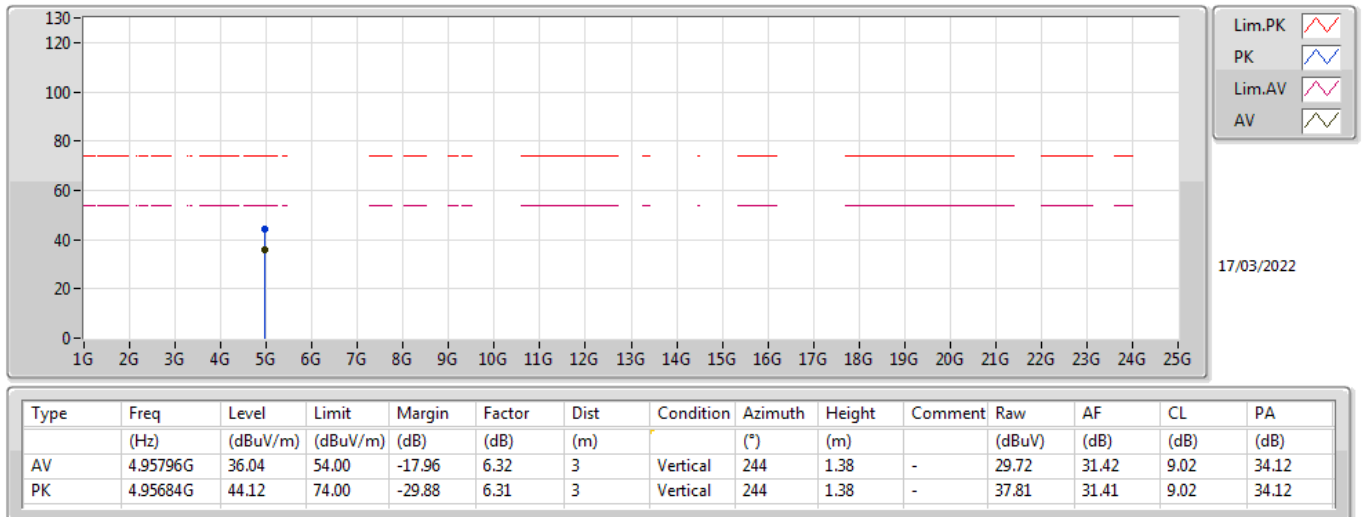
2480MHz_TX



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	2.48G	95.17	Inf	-Inf	34.72	3	Horizontal	118	1.34	-	60.45	27.40	7.32	-
AV	2.4835G	50.64	54.00	-3.36	34.73	3	Horizontal	118	1.34	-	15.91	27.40	7.33	-
PK	2.4796G	98.20	Inf	-Inf	34.72	3	Horizontal	118	1.34	-	63.48	27.40	7.32	-
PK	2.4835G	59.57	74.00	-14.43	34.73	3	Horizontal	118	1.34	-	24.84	27.40	7.33	-

BT-LE(2Mbps)

2480MHz_TX



BT-LE(2Mbps)

2480MHz_TX

