

# FCC Radio Test Report

**FCC ID** : 2A4CASOLITAIRET  
**Equipment** : Wireless Headphones  
**Brand Name** : T+A  
**Model Name** : Solitaire T  
**Applicant** : T+A Elektroakustik GmbH & Co.KG  
Planckstr. 9 – 11, 32052 Herford, Germany  
**Manufacturer** : T+A Elektroakustik GmbH & Co.KG  
Planckstr. 11, 32052 Herford, Germany  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Jan. 12, 2022, and testing was started from Jan. 19, 2022 and completed on Mar. 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.)



# 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 .....8

**2 TEST CONFIGURATION OF EUT.....9**

2.1 Test Channel Mode .....9

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

2.3 Accessories .....11

2.4 Support Equipment.....11

2.5 Test Setup Diagram .....12

**3 TRANSMITTER TEST RESULT .....16**

3.1 AC Power-line Conducted Emissions .....16

3.2 DTS Bandwidth.....18

3.3 Maximum Conducted Output Power .....19

3.4 Power Spectral Density .....21

3.5 Emissions in Non-restricted Frequency Bands .....22

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

3.7 Test Equipment and Calibration Data .....27

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

**APPENDIX B. TEST RESULTS OF DTS BANDWIDTH**

**APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER**

**APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY**

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

**APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS**

**APPENDIX G. TEST PHOTOS**

**PHOTOGRAPHS OF EUT V01**





### Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

<b>Declaration of Conformity:</b>
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
<b>Comments and explanations:</b>
None

Reviewed by: Ben Tseng

Report Producer: Anne Kuo

# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

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

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

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

### 1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	T+A	Solitaire_T	Printed Antenna	N/A	0.6

Note 1: The EUT has one antenna.

**For BT function:**

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

Only Ant. 1 (port 1) can be used as transmitting/receiving.

### 1.1.3 EUT Information

Operational Condition	
EUT Power Type	From Power Adapter / From Host System
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint <input type="checkbox"/> Point-to-point
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:



1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(1Mbps)	0.636	1.97	397.5u	3k
BT-LE(2Mbps)	0.34	4.69	212.813u	10k

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

1.1.5 Table for Multiple Listing

The samples in the following table are all refer to the identical product.

Model Name	Sample	Enclosure Color
Solitaire T	1	White
	2	Black

## 1.2 Testing Applied Standards

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

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

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

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

## 1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/>	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)		
		TEL: 886-3-327-3456	FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction (USB Mode)	CO04-HY	Daniel Lin	20.7~21.4°C / 54~58%	21/Jan/2022
AC Conduction (Adapter Mode)	CO04-HY	Jack Tang	21.5~22.3°C / 51~59%	24/Mar/2022~25/Mar/2022
RF Conducted	TH01-HY	Johnny Yu	21.3~26.5°C / 50~60%	19/Jan/2022
Radiated	03CH02-HY	Daniel Lin	20.4~22.1°C / 56~59%	20/Jan/2022~25/Mar/2022
<input type="checkbox"/>	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				



### 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
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	BlueTest 3
-----------------------	------------

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	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
<b>Operating Mode</b>	CTX
1	USB Mode
2	Adapter mode

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

The Worst Case Mode for Following Conformance Tests		
<b>Tests Item</b>	Emissions in Restricted Frequency Bands	
<b>Test Condition</b>	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.	
<b>Operating Mode &lt; 1GHz</b>	CTX	
1	USB Mode	
2	Adapter mode	
<b>Operating Mode &gt; 1GHz</b>	CTX	
<b>Orthogonal Planes of EUT</b>	<b>Y Plane</b>	<b>Z Plane</b>
		
<b>Worst Planes of EUT</b>		V

### 2.3 Accessories

Accessories				
Battery	Brand Name	SHENZHEN KAYO BATTERY CO.,LTD	Model Name	KPL783938
	Power Rating	3.7V, 1200mAh, 4.44Wh	Type	Rechargeable Li-ion Battery Pack
USB Cable	Brand Name	T+A	Model Name	4021XW01947ZAU
	Signal Line	1400mm, D-shielded cable, w/o ferrite core		
Audio Cable-1	Brand Name	T+A	Model Name	4021XW01945ZAG
	Signal Line	1400mm, non-shielded cable, w/o ferrite core		
Audio Cable-2	Brand Name	T+A	Model Name	4021XW01946ZAG
	Signal Line	1400mm, non-shielded cable, w/o ferrite core		
Connector (3.5mm to 6.3mm)	Brand Name	T+A	Model Name	2031JP00034ZB
Connector (3.5mm to two 3.5mm)	Brand Name	T+A	Model Name	2031JP00060ZA

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

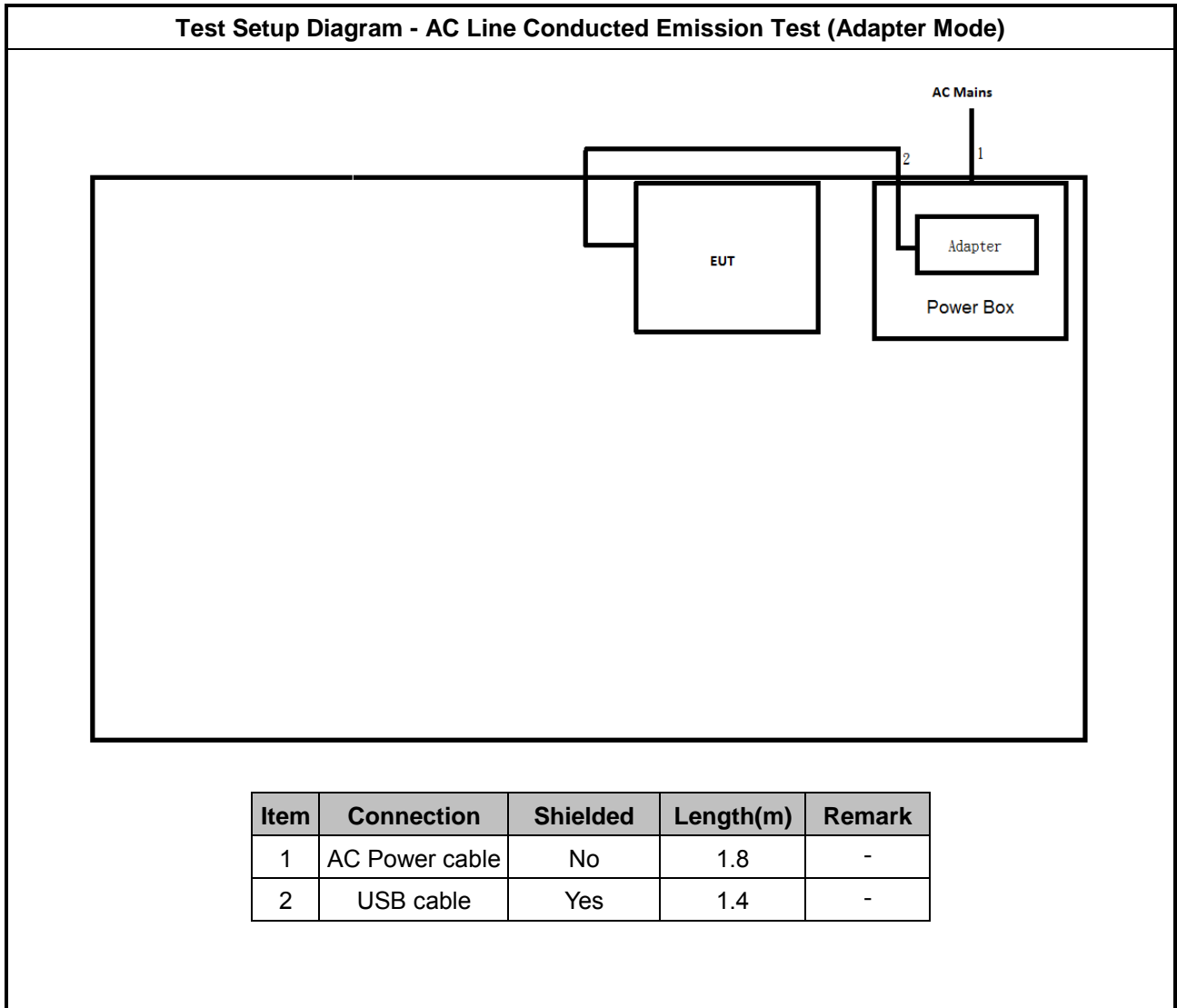
### 2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	AC Power Cable	Power sync	AC Power Cable	-	-
2	Adapter (For NB)	HP	HSTNN-CA40	-	-
3	Notebook	HP	HSTNN-142C	-	-
4	Adapter	VissKO	HKL-57S	-	-

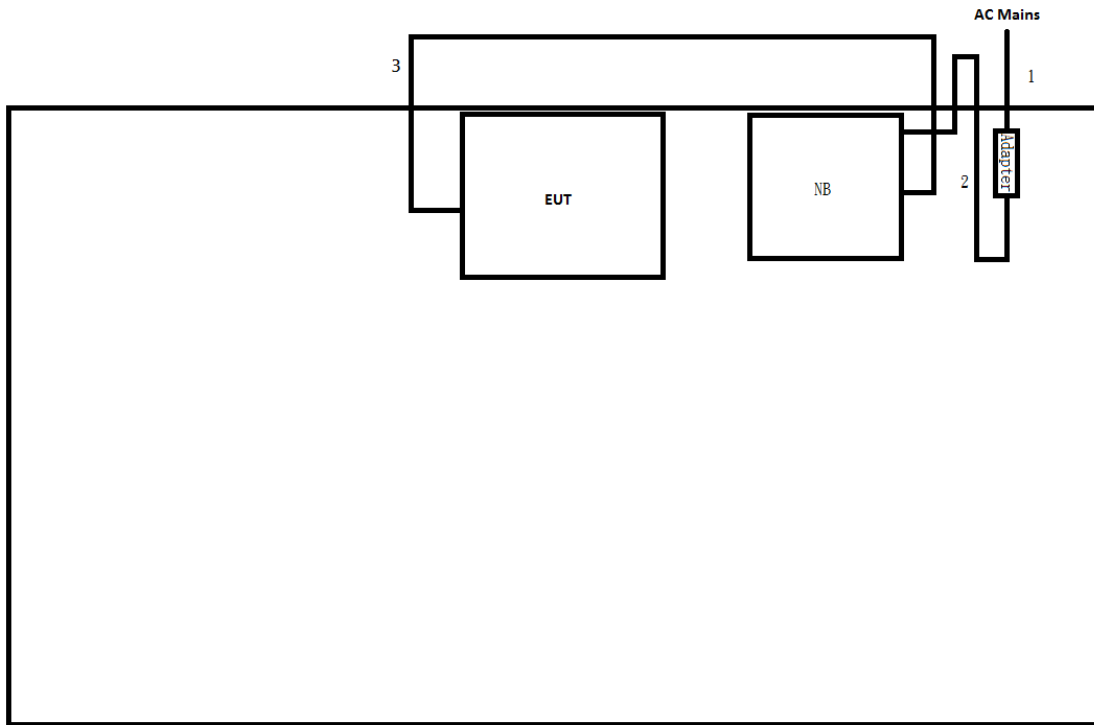
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	HP	HSTNN-I42C	-	-
2	Adapter for NB	HP	HSTNN-CA40	-	-
3	DC Power Supply	DW	GPC-6030D	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	AC Power Cable	Power sync	AC Power Cable	-	-
2	Adapter (For NB)	HP	HSTNN-CA40	-	-
3	Notebook	HP	HSTNN-142C	-	-
4	Adapter	VissKO	HKL-57S	-	-

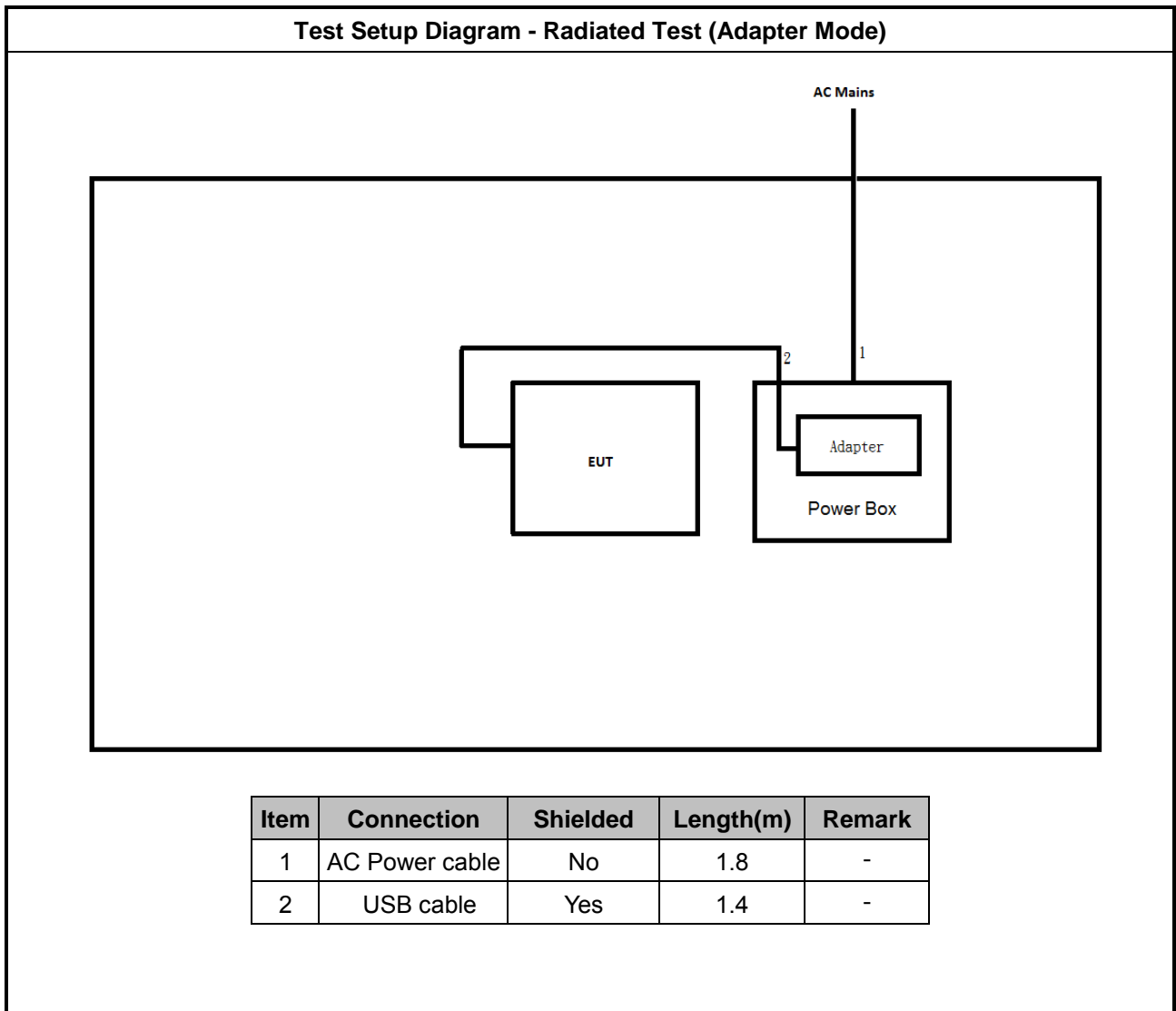
## 2.5 Test Setup Diagram



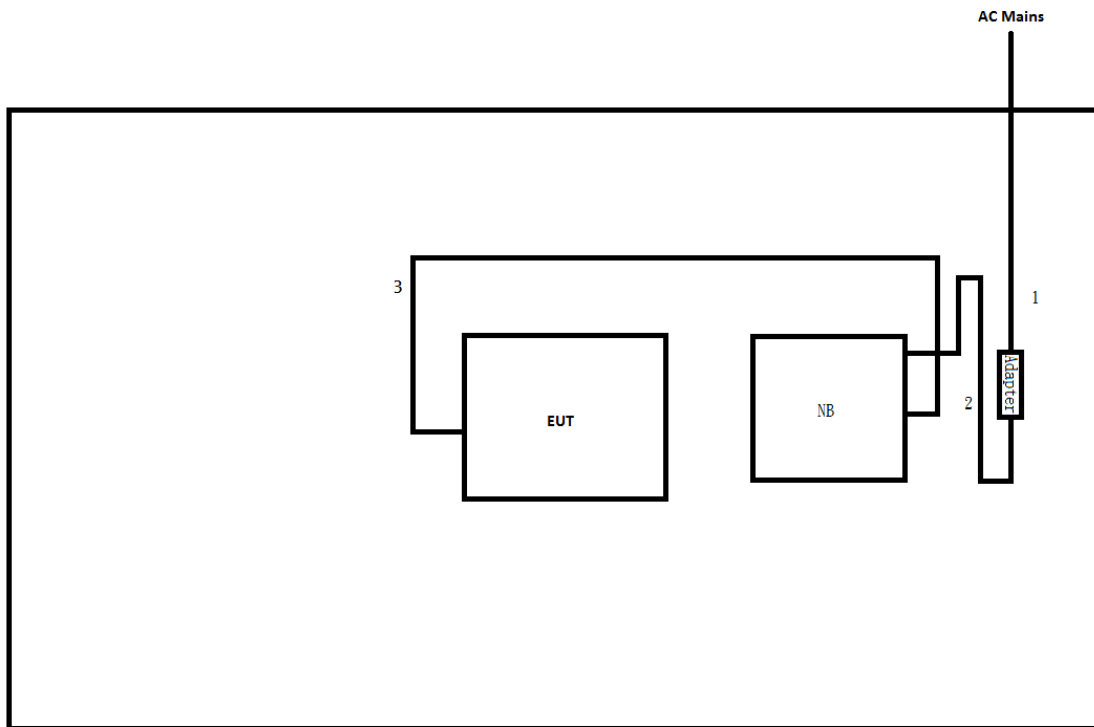
Test Setup Diagram - AC Line Conducted Emission Test (USB Mode)



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.8	-
3	USB cable	Yes	1.4	-



Test Setup Diagram - Radiated Test (USB Mode)



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.8	-
3	USB cable	Yes	1.4	-

### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

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

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

##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

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

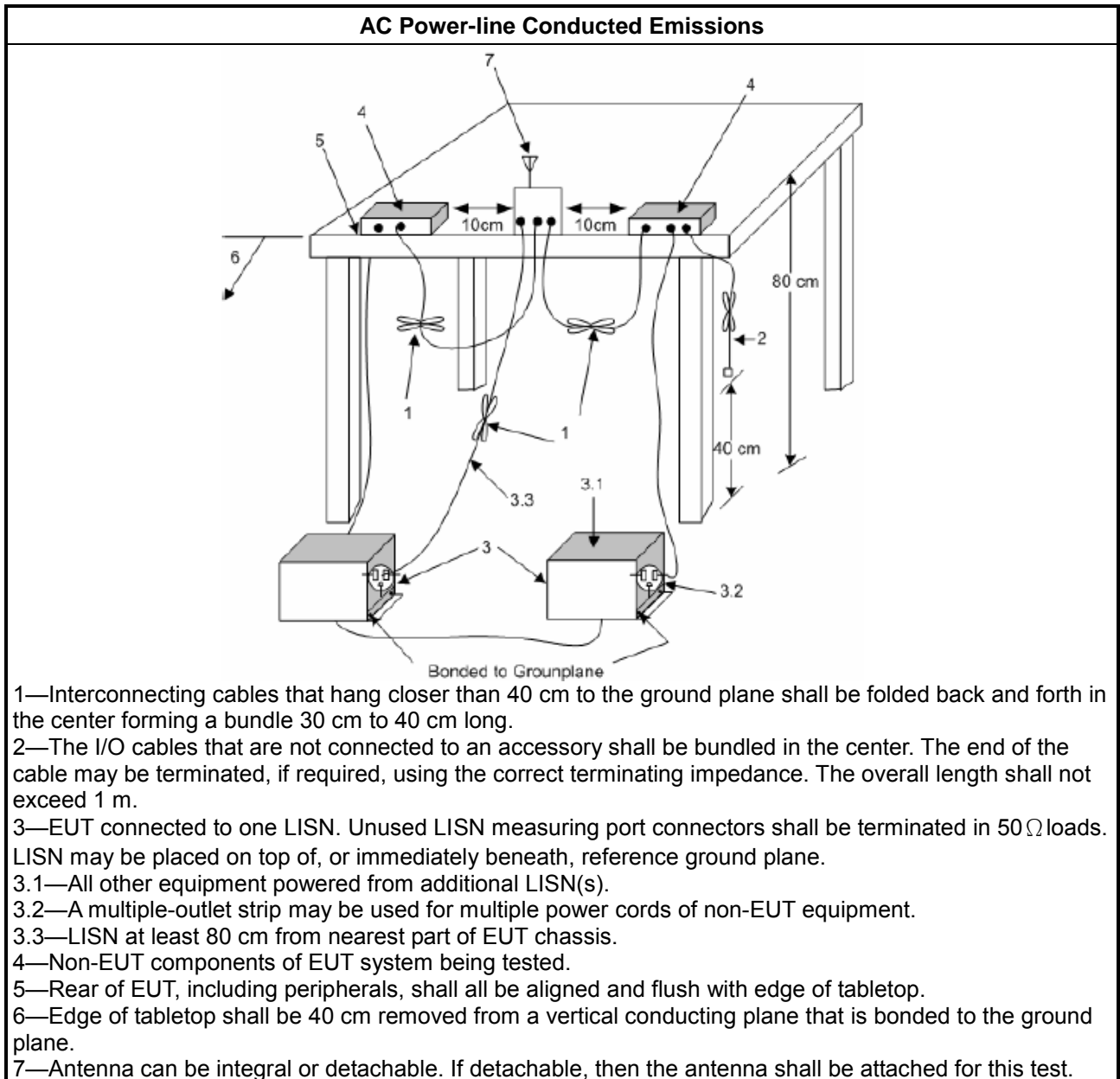
##### 3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).



### 3.1.5 Test Setup



### 3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

### 3.2 DTS Bandwidth

#### 3.2.1 6dB Bandwidth Limit

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

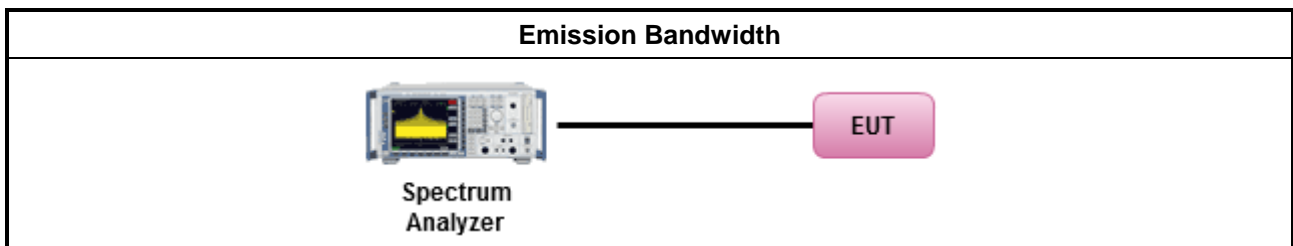
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<ul style="list-style-type: none"> <li>▪ If <math>G_{TX} \leq 6</math> dBi, then <math>P_{Out} \leq 30</math> dBm (1 W)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-point systems (P2P): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Smart antenna system (SAS):</li> </ul>
	<ul style="list-style-type: none"> <li>- Single beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Overlap beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Aggregate power on all beams: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3 + 8</math> dB dBm</li> </ul>
e.i.r.p. Power Limit:	
	<ul style="list-style-type: none"> <li>▪ 2400-2483.5 MHz Band</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): <math>P_{eirp} \leq 36</math> dBm (4 W)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-point systems (P2P): <math>P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Smart antenna system (SAS)</li> </ul>
	<ul style="list-style-type: none"> <li>- Single beam: <math>P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Overlap beam: <math>P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Aggregate power on all beams: <math>P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])</math> dBm</li> </ul>
<p><math>P_{Out}</math> = maximum peak conducted output power or maximum conducted output power in dBm,  <math>G_{TX}</math> = the maximum transmitting antenna directional gain in dBi.</p>	

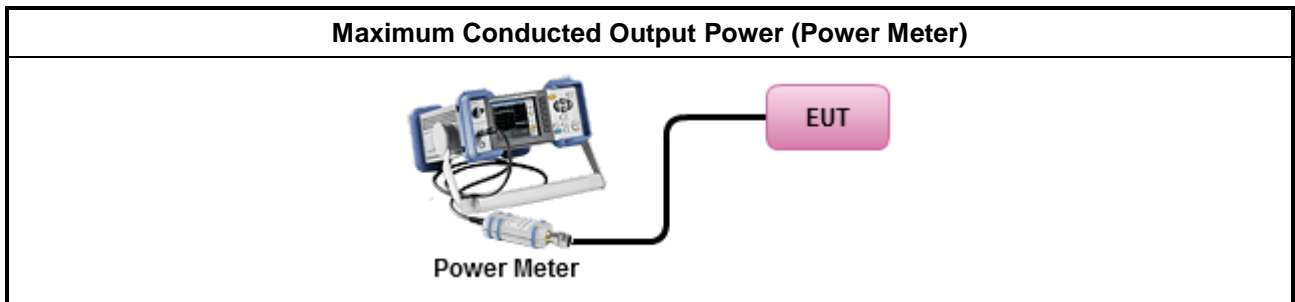
#### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ Maximum Peak Conducted Output Power</li> </ul>	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> <li>▪ Maximum Average Conducted Output Power</li> </ul>	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> <li>▪ For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If multiple transmit chains, EIRP calculation could be following as methods:  <math>P_{total} = P_1 + P_2 + \dots + P_n</math>                      (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = P_{total} + DG</math> </li> </ul>	

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Power Spectral Density

#### 3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> <li>Power Spectral Density (PSD) ≤ 8 dBm/3kHz</li> </ul>

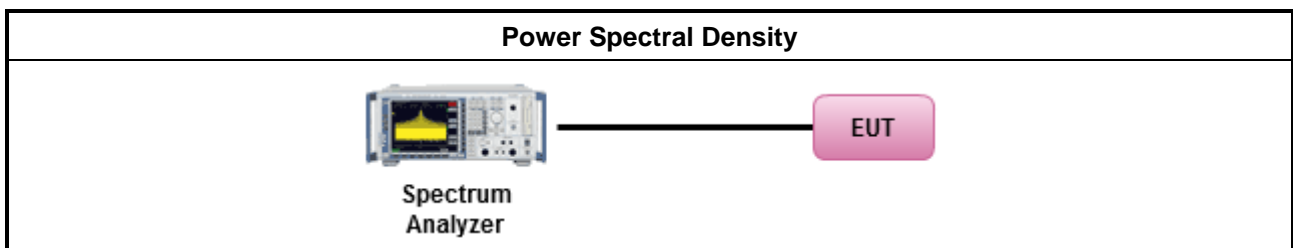
#### 3.4.2 Measuring Instruments

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

#### 3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>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).</li> </ul>	
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
<ul style="list-style-type: none"> <li>For conducted measurement.               <ul style="list-style-type: none"> <li>If The EUT supports multiple transmit chains using options given below:                   <ul style="list-style-type: none"> <li>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.</li> </ul> </li> </ul> </li> </ul>	

#### 3.4.4 Test Setup



#### 3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

### 3.5 Emissions in Non-restricted Frequency Bands

#### 3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.

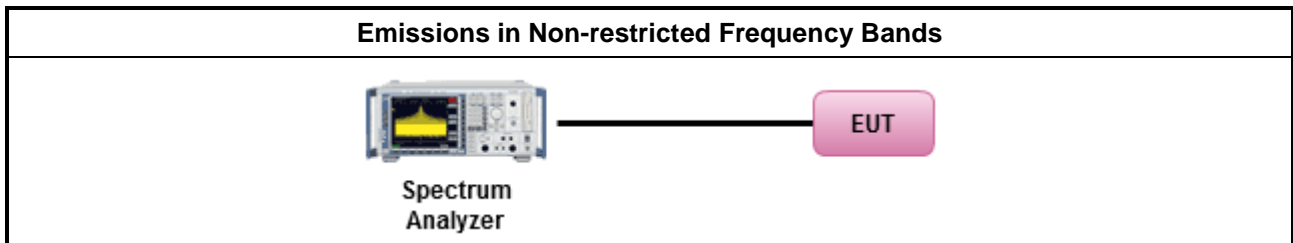
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.</li> </ul>

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

### 3.6 Emissions in Restricted Frequency Bands

#### 3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

#### 3.6.2 Measuring Instruments

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

### 3.6.3 Test Procedures

<b>Test Method</b>	
	<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:               <ul style="list-style-type: none"> <li>▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter band-edge emissions shall be measured using following options below:               <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.</li> <li>▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ Use the following spectrum analyzer settings:               <ul style="list-style-type: none"> <li>▪ Set RBW=100 kHz for f &lt; 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.</li> <li>▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.               <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.</li> </ul> </li> </ul>

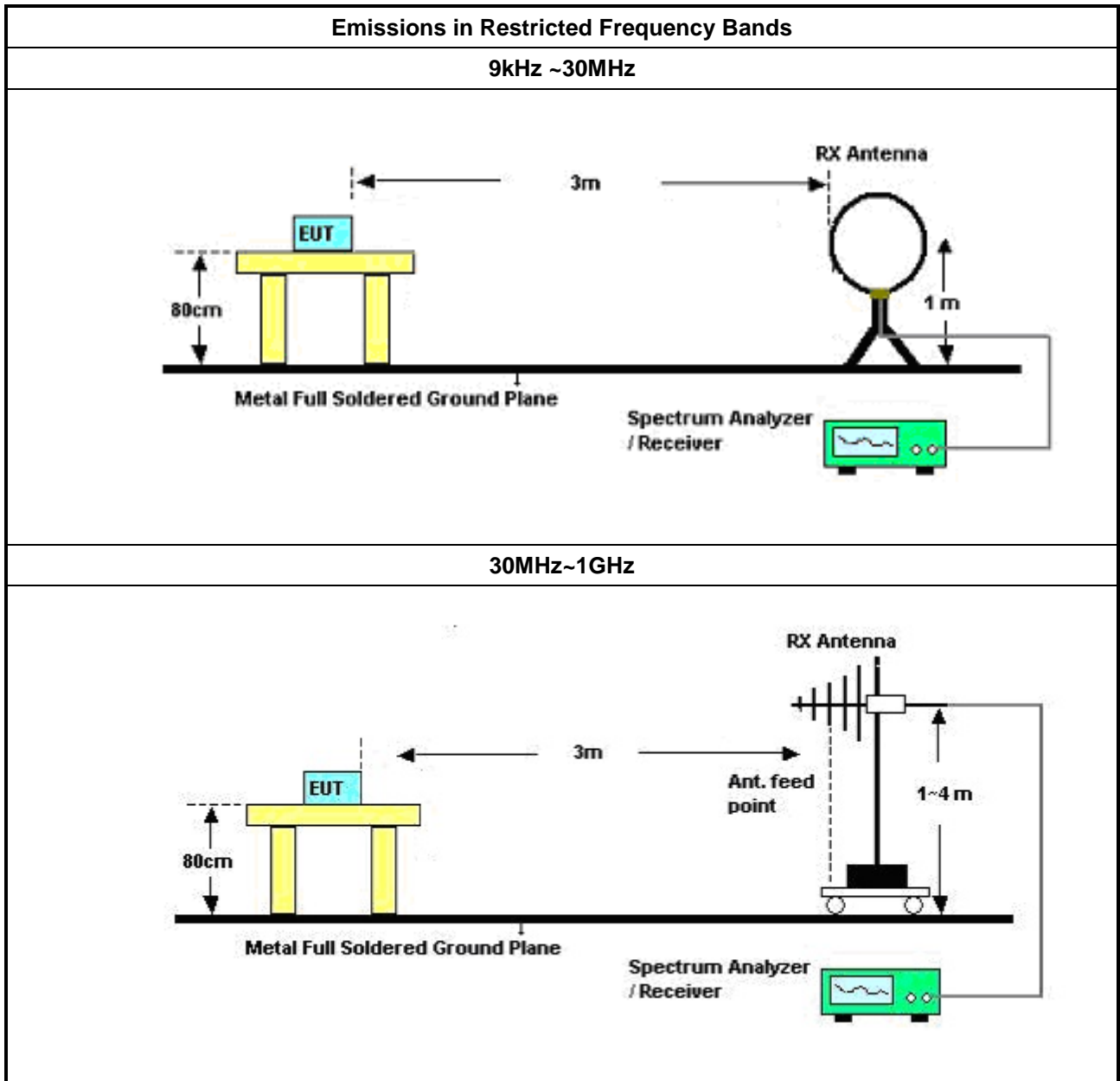
### 3.6.4 Measurement Results Calculation

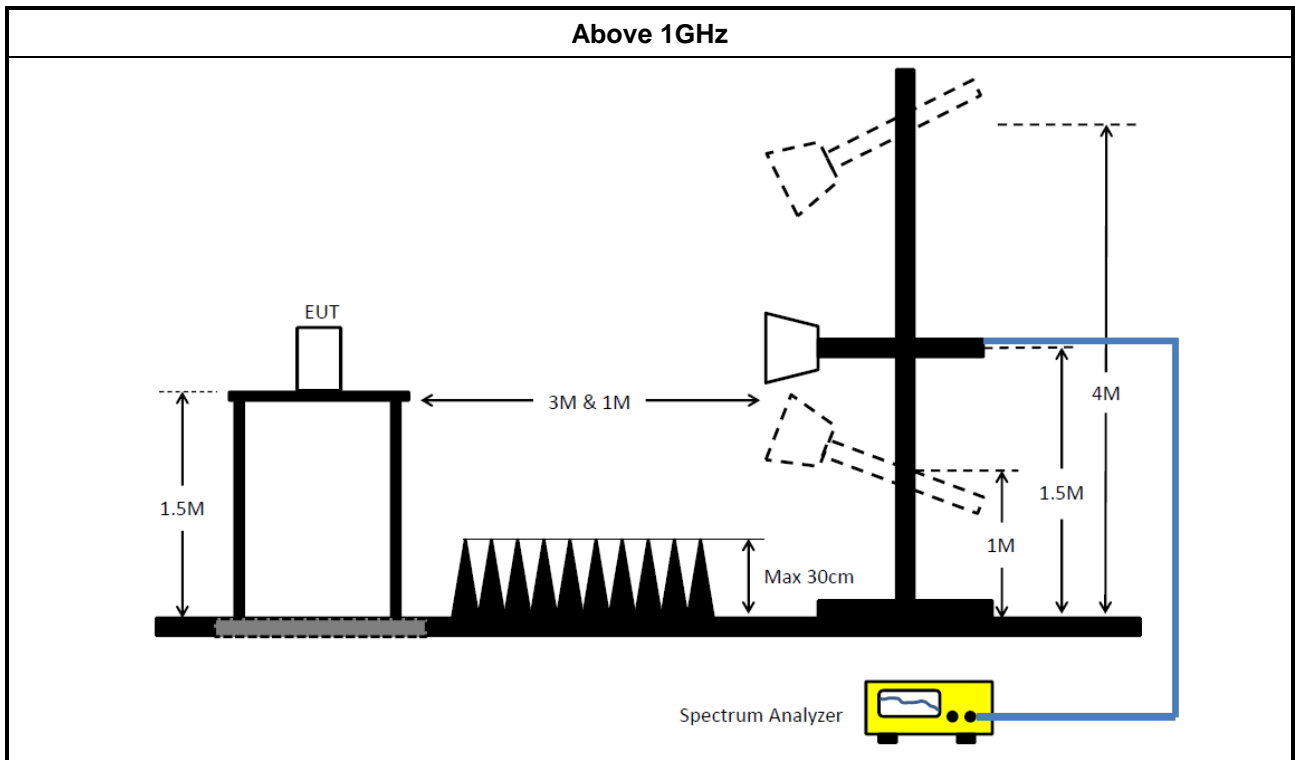
The measured Level is calculated using:

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



### 3.6.5 Test Setup





### 3.6.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

### 3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



### 3.7 Test Equipment and Calibration Data

#### Instrument for AC Conduction (USB Mode)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	21/May/2021	20/May/2022
Two-Line V Network (LISN)	R&S	ENV 216	101274	9kHz ~ 30MHz	12/Jan/2022	11/Jan/2023
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9kHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	26/Oct/2021	25/Oct/2022
Software	Sporton	SENSE-EMI	V5.10.7.14	-	NCR	NCR

NCR: No Calibration Required

#### Instrument for AC Conduction (Adapter Mode)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	21/May/2021	20/May/2022
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	18/Feb/2022	17/Feb/2023
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	01/Mar/2022	28/Feb/2023
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	26/Oct/2021	25/Oct/2022
Software	Sporton	SENSE-EMI	V5.10.7.14	-	NCR	NCR

NCR: No Calibration Required

#### Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Mar/2021	29/Mar/2022
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	23/Feb/2021	22/Feb/2022
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	23/Feb/2021	22/Feb/2022
SENSE-15247_FS	Sporton	V5.10.7.13	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	9kHz~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	BBHA 9170221	15GHz~40GHz	11/Mar/2021	10/Mar/2022
Loop Antenna	TESEQ	HLA 6120	21455	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



**Summary**

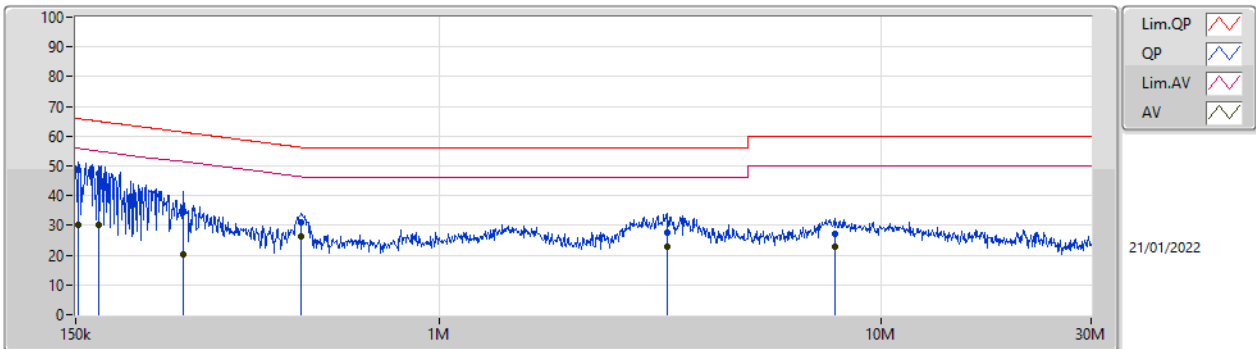
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	48.87	65.69	-16.82	Neutral
Mode 2	Pass	AV	496.827k	23.55	46.06	-22.51	Neutral



Mode config

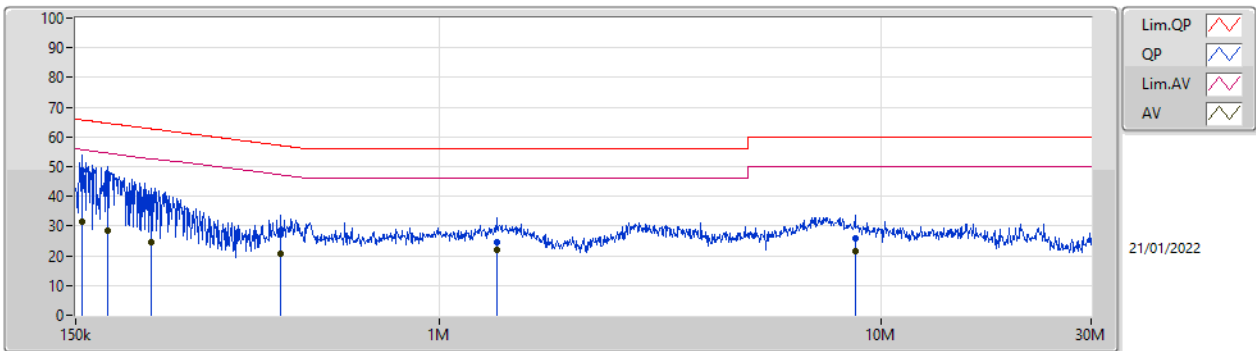
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	152.414k	48.89	65.87	-16.98	Line	-
Mode 1	Pass	AV	152.414k	30.33	55.87	-25.54	Line	-
Mode 1	Pass	QP	169.084k	47.37	65.01	-17.64	Line	-
Mode 1	Pass	AV	169.084k	30.17	55.01	-24.84	Line	-
Mode 1	Pass	QP	262.308k	34.44	61.35	-26.91	Line	-
Mode 1	Pass	AV	262.308k	20.11	51.35	-31.24	Line	-
Mode 1	Pass	QP	487.008k	31.24	56.21	-24.97	Line	-
Mode 1	Pass	AV	487.008k	26.31	46.21	-19.90	Line	-
Mode 1	Pass	QP	3.283M	27.42	56.00	-28.58	Line	-
Mode 1	Pass	AV	3.283M	22.92	46.00	-23.08	Line	-
Mode 1	Pass	QP	7.869M	27.25	60.00	-32.75	Line	-
Mode 1	Pass	AV	7.869M	23.03	50.00	-26.97	Line	-
Mode 1	Pass	QP	155.487k	48.87	65.69	-16.82	Neutral	-
Mode 1	Pass	AV	155.487k	31.36	55.69	-24.33	Neutral	-
Mode 1	Pass	QP	177.381k	45.68	64.60	-18.92	Neutral	-
Mode 1	Pass	AV	177.381k	28.54	54.60	-26.06	Neutral	-
Mode 1	Pass	QP	222.704k	39.48	62.71	-23.23	Neutral	-
Mode 1	Pass	AV	222.704k	24.74	52.71	-27.97	Neutral	-
Mode 1	Pass	QP	437.246k	27.30	57.11	-29.81	Neutral	-
Mode 1	Pass	AV	437.246k	20.59	47.11	-26.52	Neutral	-
Mode 1	Pass	QP	1.348M	24.76	56.00	-31.24	Neutral	-
Mode 1	Pass	AV	1.348M	21.83	46.00	-24.17	Neutral	-
Mode 1	Pass	QP	8.765M	25.78	60.00	-34.22	Neutral	-
Mode 1	Pass	AV	8.765M	21.68	50.00	-28.32	Neutral	-
Mode 2	Pass	QP	170.439k	30.04	64.93	-34.89	Line	-
Mode 2	Pass	AV	170.439k	26.55	54.93	-28.38	Line	-
Mode 2	Pass	QP	276.28k	19.47	60.93	-41.46	Line	-
Mode 2	Pass	AV	276.28k	16.00	50.93	-34.93	Line	-
Mode 2	Pass	QP	492.876k	26.27	56.11	-29.84	Line	-
Mode 2	Pass	AV	492.876k	21.46	46.11	-24.65	Line	-
Mode 2	Pass	QP	789.434k	17.16	56.00	-38.84	Line	-
Mode 2	Pass	AV	789.434k	13.79	46.00	-32.21	Line	-
Mode 2	Pass	QP	8.322M	22.84	60.00	-37.16	Line	-
Mode 2	Pass	AV	8.322M	19.11	50.00	-30.89	Line	-
Mode 2	Pass	QP	24.161M	18.49	60.00	-41.51	Line	-
Mode 2	Pass	AV	24.161M	16.33	50.00	-33.67	Line	-
Mode 2	Pass	QP	166.406k	30.16	65.14	-34.98	Neutral	-
Mode 2	Pass	AV	166.406k	28.13	55.14	-27.01	Neutral	-
Mode 2	Pass	QP	195.216k	27.68	63.80	-36.12	Neutral	-
Mode 2	Pass	AV	195.216k	24.40	53.80	-29.40	Neutral	-
Mode 2	Pass	QP	496.827k	28.36	56.06	-27.70	Neutral	-
Mode 2	Pass	AV	496.827k	23.55	46.06	-22.51	Neutral	-
Mode 2	Pass	QP	897.004k	19.04	56.00	-36.96	Neutral	-
Mode 2	Pass	AV	897.004k	15.20	46.00	-30.80	Neutral	-
Mode 2	Pass	QP	8.355M	23.17	60.00	-36.83	Neutral	-
Mode 2	Pass	AV	8.355M	19.62	50.00	-30.38	Neutral	-
Mode 2	Pass	QP	26.378M	17.53	60.00	-42.47	Neutral	-
Mode 2	Pass	AV	26.378M	15.89	50.00	-34.11	Neutral	-

## Conducted Emissions at Powerline\_Mode 1



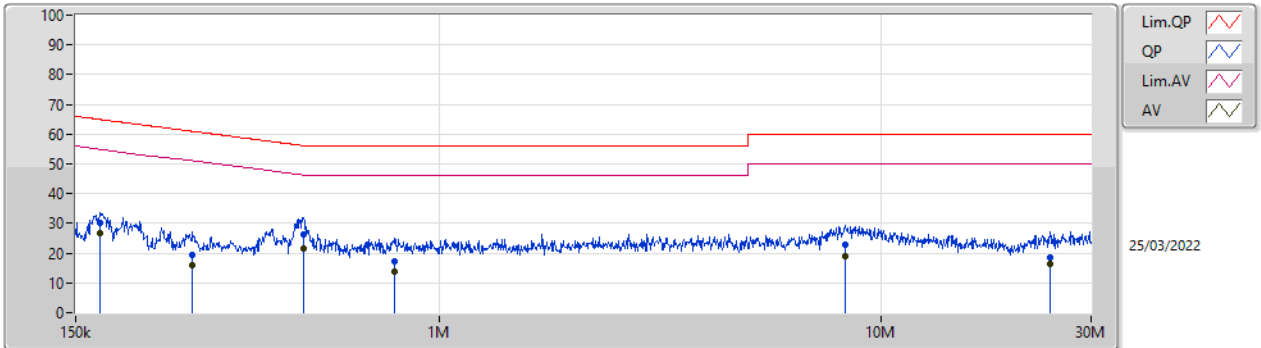
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	152.414k	48.89	65.87	-16.98	19.55	Line	-	29.34	9.60	0.04	9.91
AV	152.414k	30.33	55.87	-25.54	19.55	Line	-	10.78	9.60	0.04	9.91
QP	169.084k	47.37	65.01	-17.64	19.55	Line	-	27.82	9.60	0.04	9.91
AV	169.084k	30.17	55.01	-24.84	19.55	Line	-	10.62	9.60	0.04	9.91
QP	262.308k	34.44	61.35	-26.91	19.57	Line	-	14.87	9.61	0.05	9.91
AV	262.308k	20.11	51.35	-31.24	19.57	Line	-	0.54	9.61	0.05	9.91
QP	487.008k	31.24	56.21	-24.97	19.57	Line	-	11.67	9.60	0.06	9.91
AV	487.008k	26.31	46.21	-19.90	19.57	Line	-	6.74	9.60	0.06	9.91
QP	3.283M	27.42	56.00	-28.58	19.68	Line	-	7.74	9.63	0.13	9.92
AV	3.283M	22.92	46.00	-23.08	19.68	Line	-	3.24	9.63	0.13	9.92
QP	7.869M	27.25	60.00	-32.75	19.75	Line	-	7.50	9.64	0.18	9.93
AV	7.869M	23.03	50.00	-26.97	19.75	Line	-	3.28	9.64	0.18	9.93

## Conducted Emissions at Powerline\_Mode 1



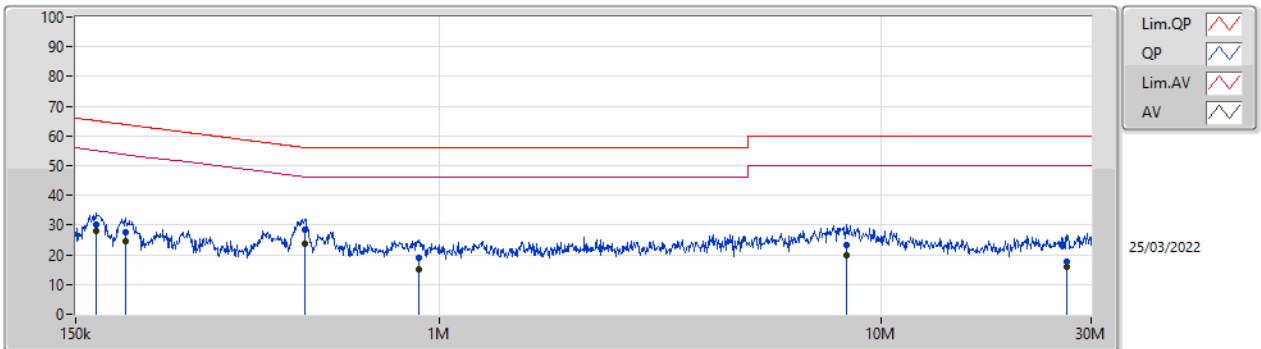
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	155.487k	48.87	65.69	-16.82	19.54	Neutral	-	29.33	9.59	0.04	9.91
AV	155.487k	31.36	55.69	-24.33	19.54	Neutral	-	11.82	9.59	0.04	9.91
QP	177.381k	45.68	64.60	-18.92	19.54	Neutral	-	26.14	9.59	0.04	9.91
AV	177.381k	28.54	54.60	-26.06	19.54	Neutral	-	9.00	9.59	0.04	9.91
QP	222.704k	39.48	62.71	-23.23	19.54	Neutral	-	19.94	9.59	0.04	9.91
AV	222.704k	24.74	52.71	-27.97	19.54	Neutral	-	5.20	9.59	0.04	9.91
QP	437.246k	27.30	57.11	-29.81	19.55	Neutral	-	7.75	9.58	0.06	9.91
AV	437.246k	20.59	47.11	-26.52	19.55	Neutral	-	1.04	9.58	0.06	9.91
QP	1.348M	24.76	56.00	-31.24	19.60	Neutral	-	5.16	9.59	0.09	9.92
AV	1.348M	21.83	46.00	-24.17	19.60	Neutral	-	2.23	9.59	0.09	9.92
QP	8.765M	25.78	60.00	-34.22	19.76	Neutral	-	6.02	9.64	0.19	9.93
AV	8.765M	21.68	50.00	-28.32	19.76	Neutral	-	1.92	9.64	0.19	9.93

Conducted Emissions at Powerline\_Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	170.439k	30.04	64.93	-34.89	19.63	Line	-	10.41	9.69	0.03	9.91
AV	170.439k	26.55	54.93	-28.38	19.63	Line	-	6.92	9.69	0.03	9.91
QP	276.28k	19.47	60.93	-41.46	19.63	Line	-	-0.16	9.69	0.03	9.91
AV	276.28k	16.00	50.93	-34.93	19.63	Line	-	-3.63	9.69	0.03	9.91
QP	492.876k	26.27	56.11	-29.84	19.63	Line	-	6.64	9.68	0.04	9.91
AV	492.876k	21.46	46.11	-24.65	19.63	Line	-	1.83	9.68	0.04	9.91
QP	789.434k	17.16	56.00	-38.84	19.65	Line	-	-2.49	9.68	0.05	9.92
AV	789.434k	13.79	46.00	-32.21	19.65	Line	-	-5.86	9.68	0.05	9.92
QP	8.322M	22.84	60.00	-37.16	19.89	Line	-	2.95	9.79	0.17	9.93
AV	8.322M	19.11	50.00	-30.89	19.89	Line	-	-0.78	9.79	0.17	9.93
QP	24.161M	18.49	60.00	-41.51	20.03	Line	-	-1.54	9.80	0.30	9.93
AV	24.161M	16.33	50.00	-33.67	20.03	Line	-	-3.70	9.80	0.30	9.93

Conducted Emissions at Powerline\_Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	166.406k	30.16	65.14	-34.98	19.67	Neutral	-	10.49	9.73	0.03	9.91
AV	166.406k	28.13	55.14	-27.01	19.67	Neutral	-	8.46	9.73	0.03	9.91
QP	195.216k	27.68	63.80	-36.12	19.66	Neutral	-	8.02	9.72	0.03	9.91
AV	195.216k	24.40	53.80	-29.40	19.66	Neutral	-	4.74	9.72	0.03	9.91
QP	496.827k	28.36	56.06	-27.70	19.67	Neutral	-	8.69	9.72	0.04	9.91
AV	496.827k	23.55	46.06	-22.51	19.67	Neutral	-	3.88	9.72	0.04	9.91
QP	897.004k	19.04	56.00	-36.96	19.70	Neutral	-	-0.66	9.73	0.05	9.92
AV	897.004k	15.20	46.00	-30.80	19.70	Neutral	-	-4.50	9.73	0.05	9.92
QP	8.355M	23.17	60.00	-36.83	19.96	Neutral	-	3.21	9.86	0.17	9.93
AV	8.355M	19.62	50.00	-30.38	19.96	Neutral	-	-0.34	9.86	0.17	9.93
QP	26.378M	17.53	60.00	-42.47	20.34	Neutral	-	-2.81	10.09	0.32	9.93
AV	26.378M	15.89	50.00	-34.11	20.34	Neutral	-	-4.45	10.09	0.32	9.93





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	721.25k	1.038M	1M04F1D	715k	1.036M
BT-LE(2Mbps)	1.26M	2.056M	2M06F1D	1.25M	2.049M

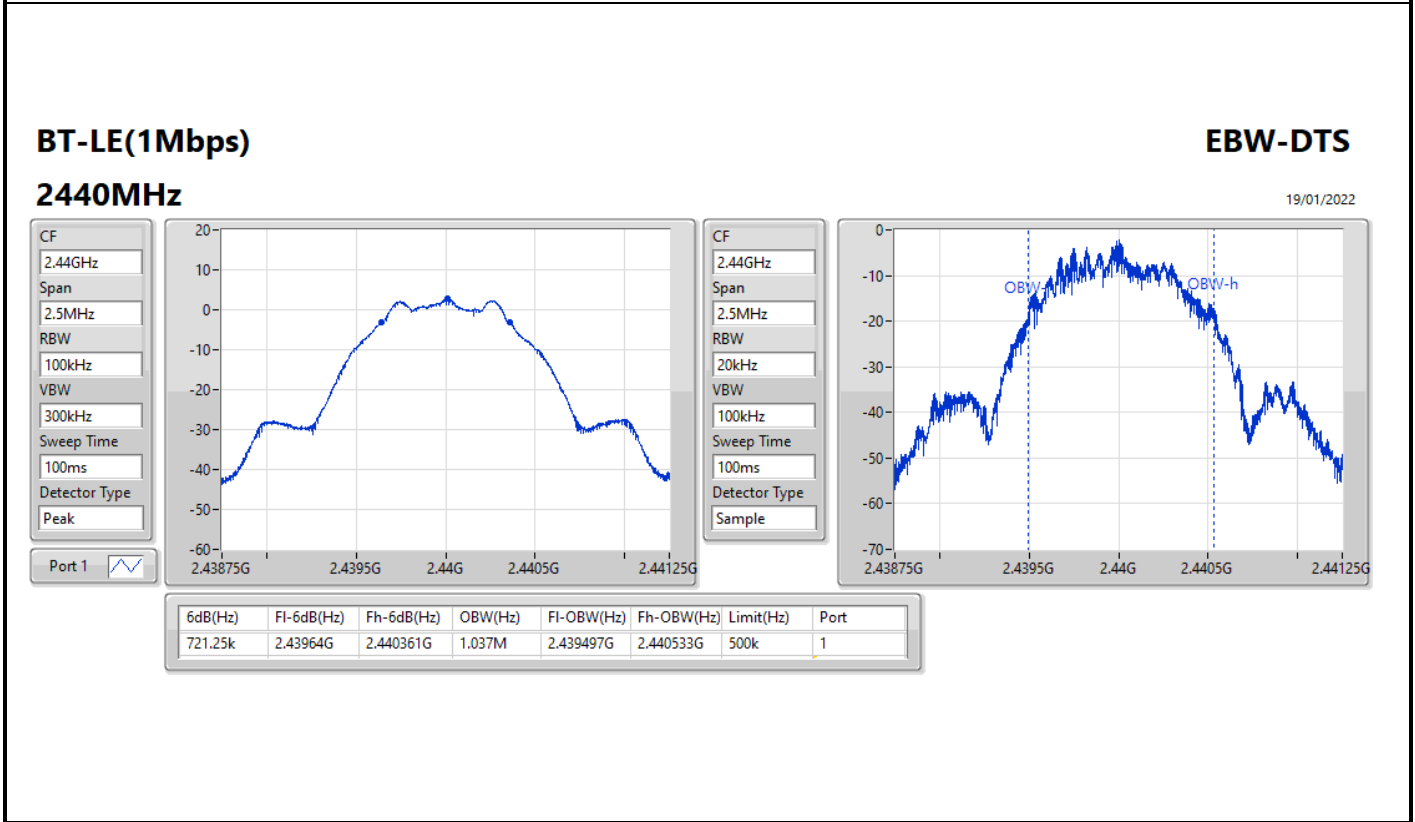
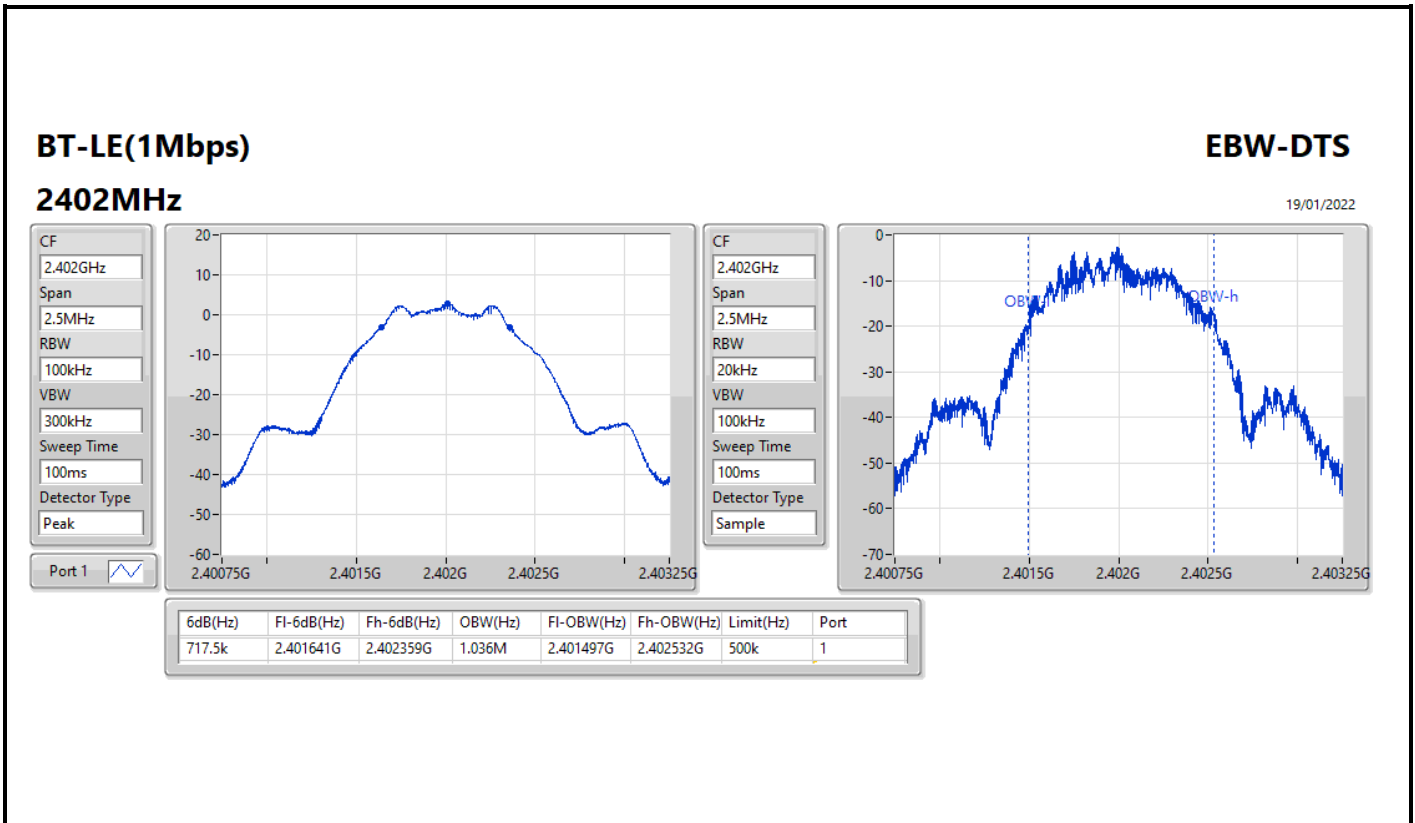
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

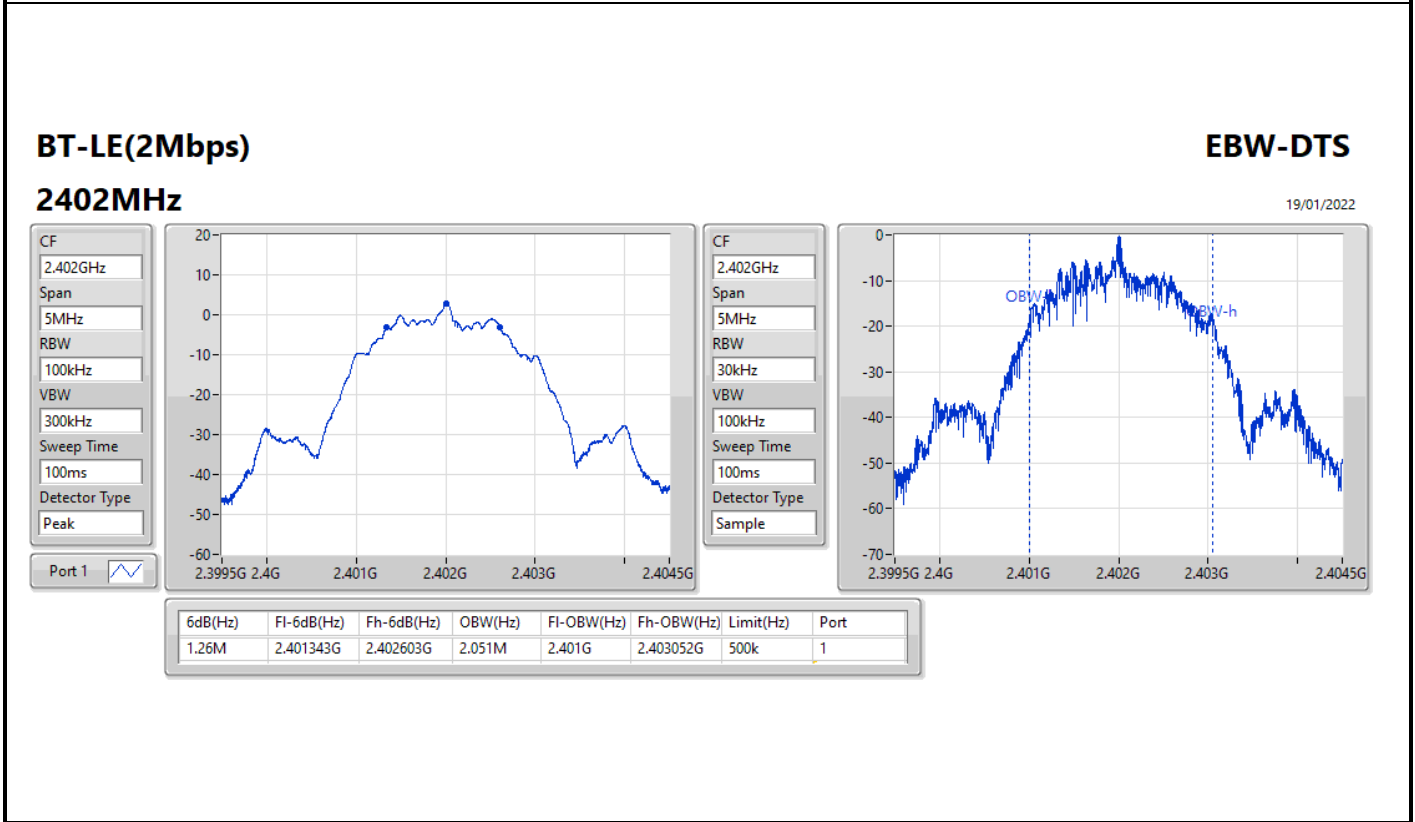
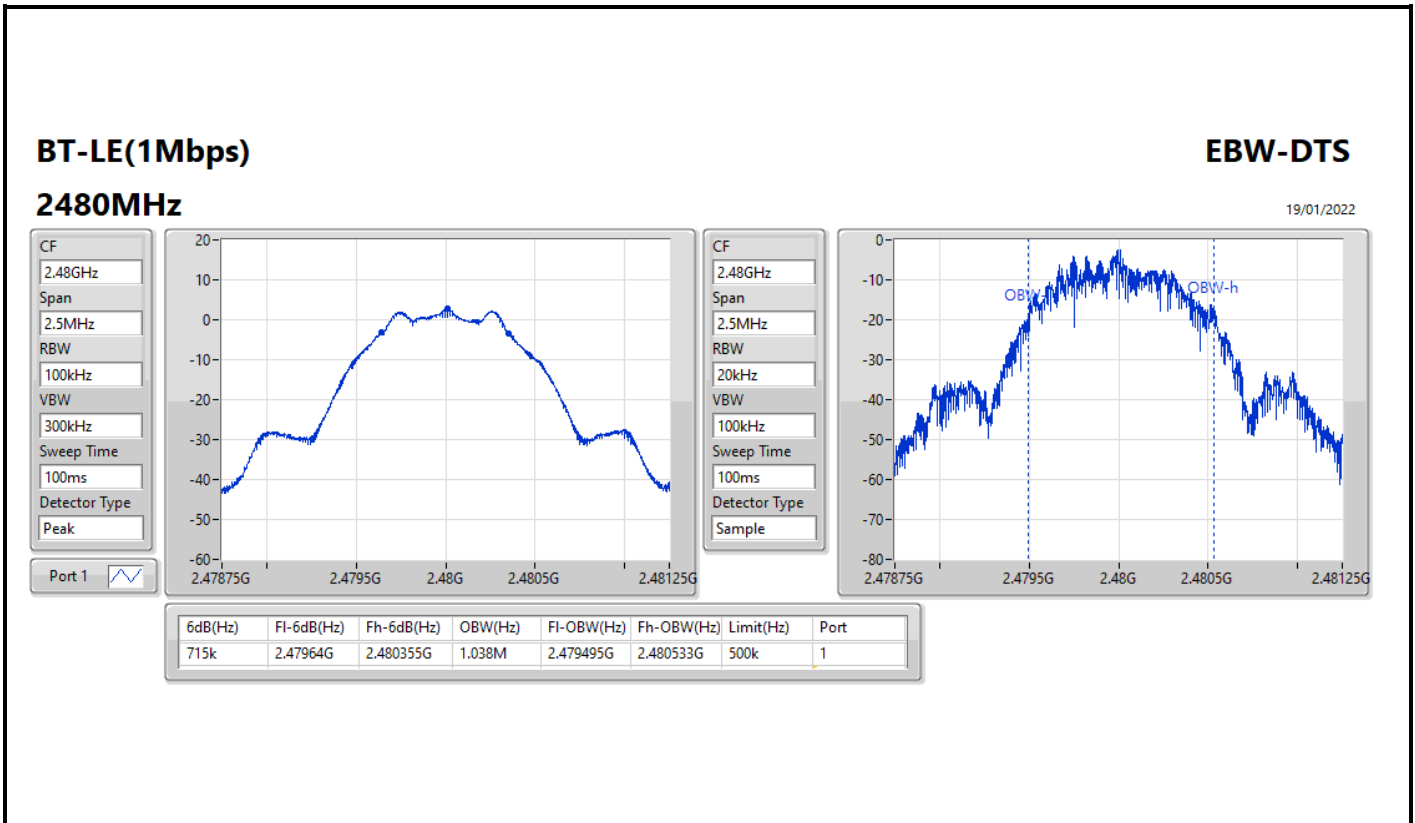


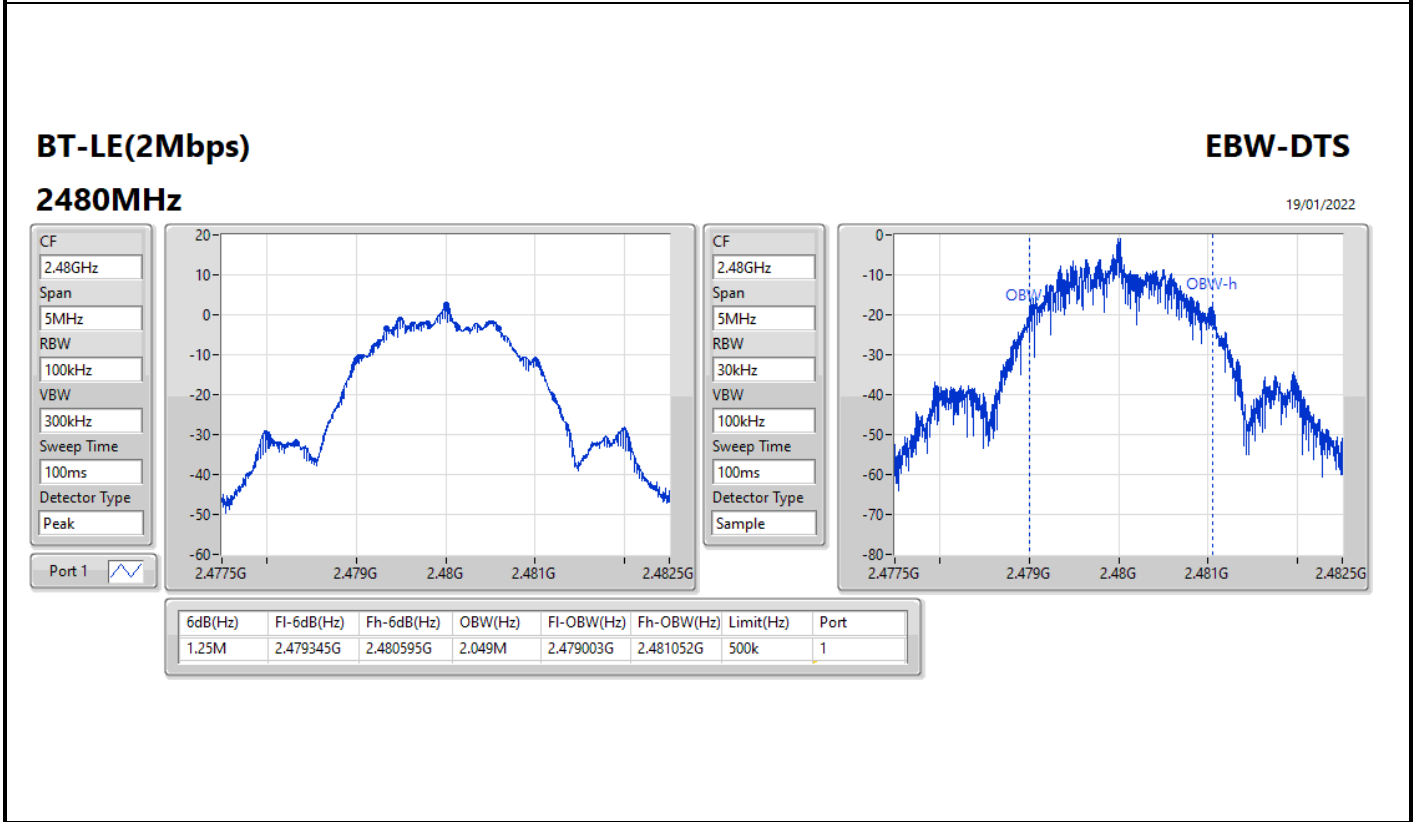
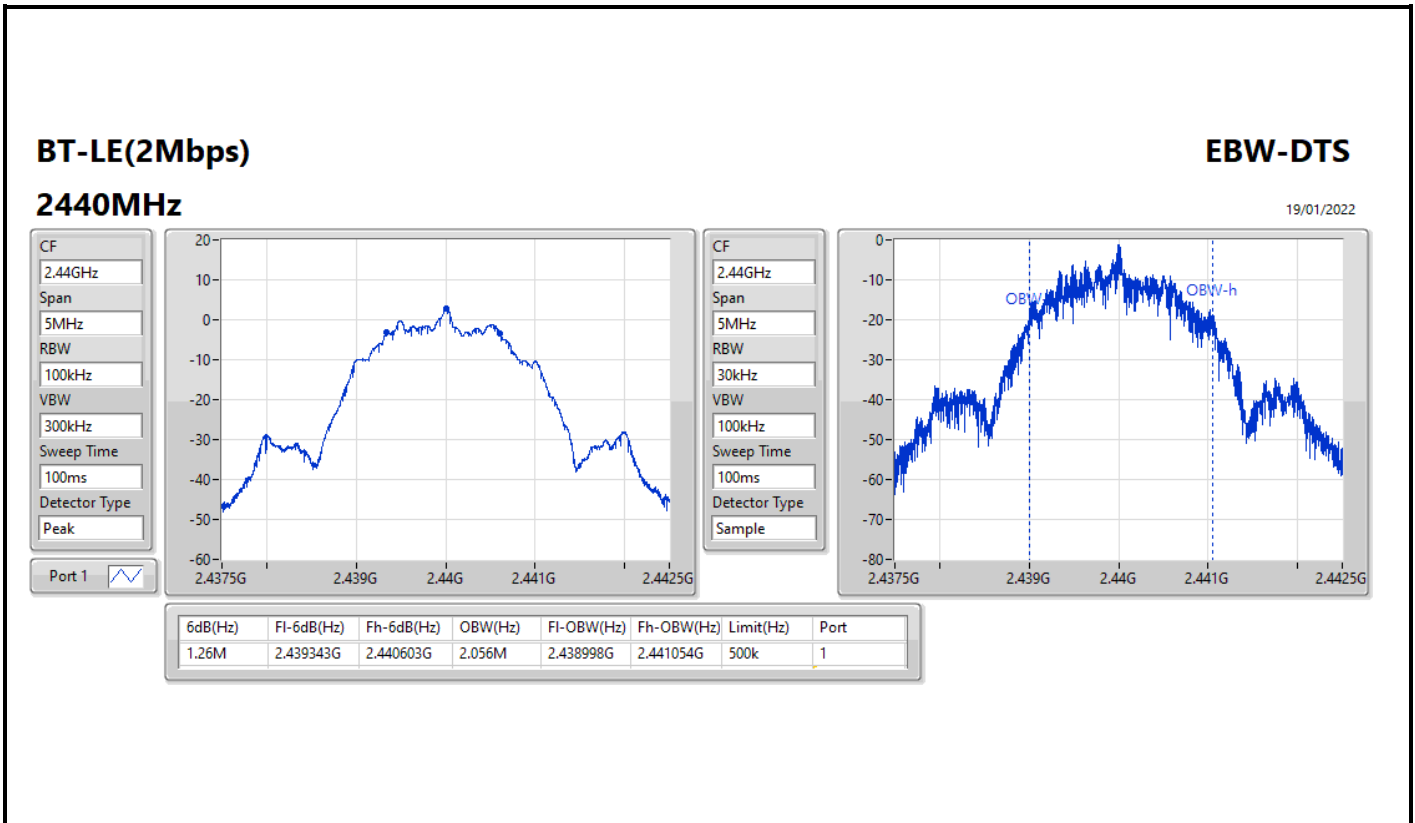
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	717.5k	1.036M
2440MHz	Pass	500k	721.25k	1.037M
2480MHz	Pass	500k	715k	1.038M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.26M	2.051M
2440MHz	Pass	500k	1.26M	2.056M
2480MHz	Pass	500k	1.25M	2.049M

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









**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	3.34	0.00216
BT-LE(2Mbps)	3.10	0.00204



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	0.60	3.34	30.00
2440MHz	Pass	0.60	3.23	30.00
2480MHz	Pass	0.60	3.14	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	0.60	3.10	30.00
2440MHz	Pass	0.60	3.01	30.00
2480MHz	Pass	0.60	2.91	30.00

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



**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-12.43
BT-LE(2Mbps)	-15.17

RBW = 3kHz;

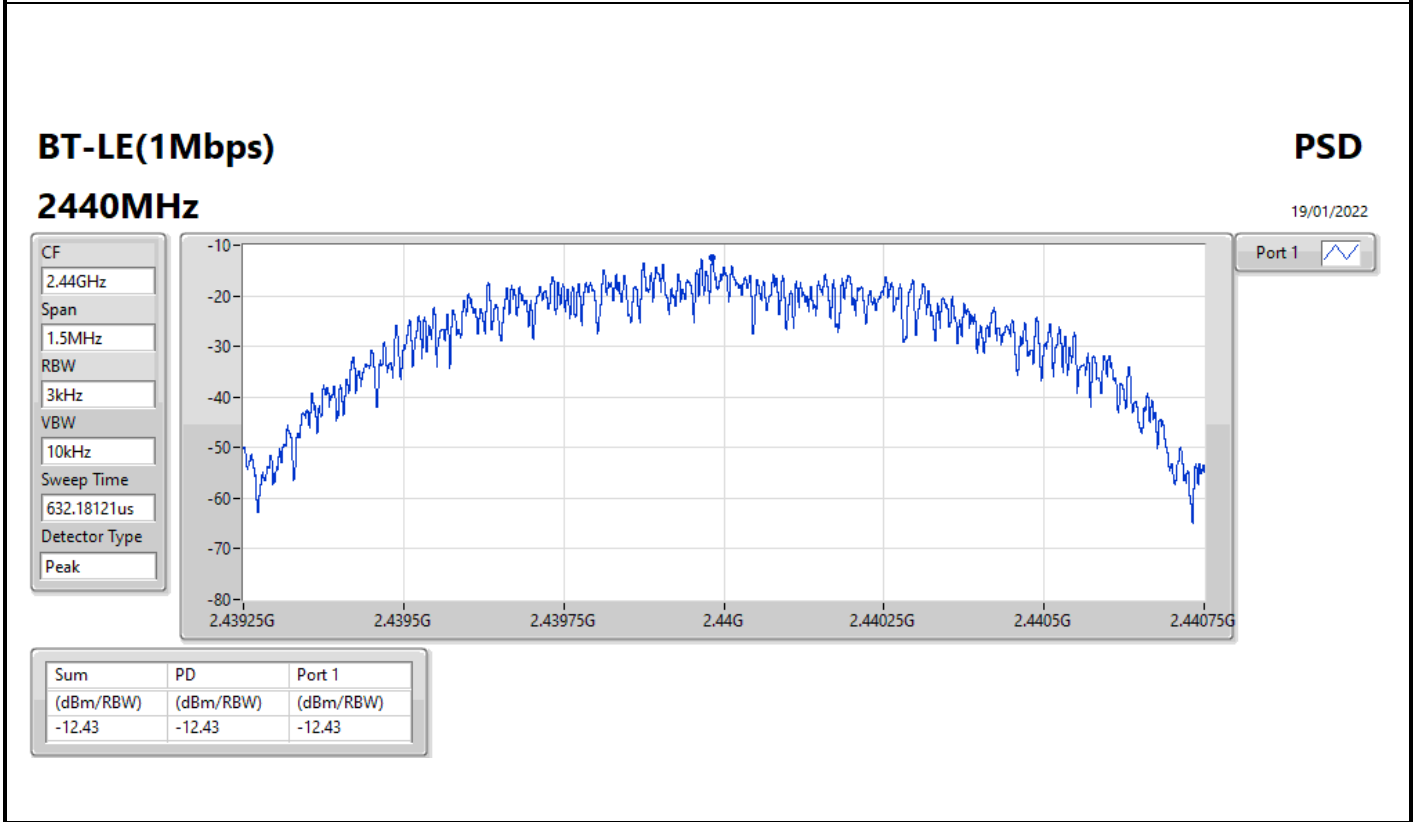
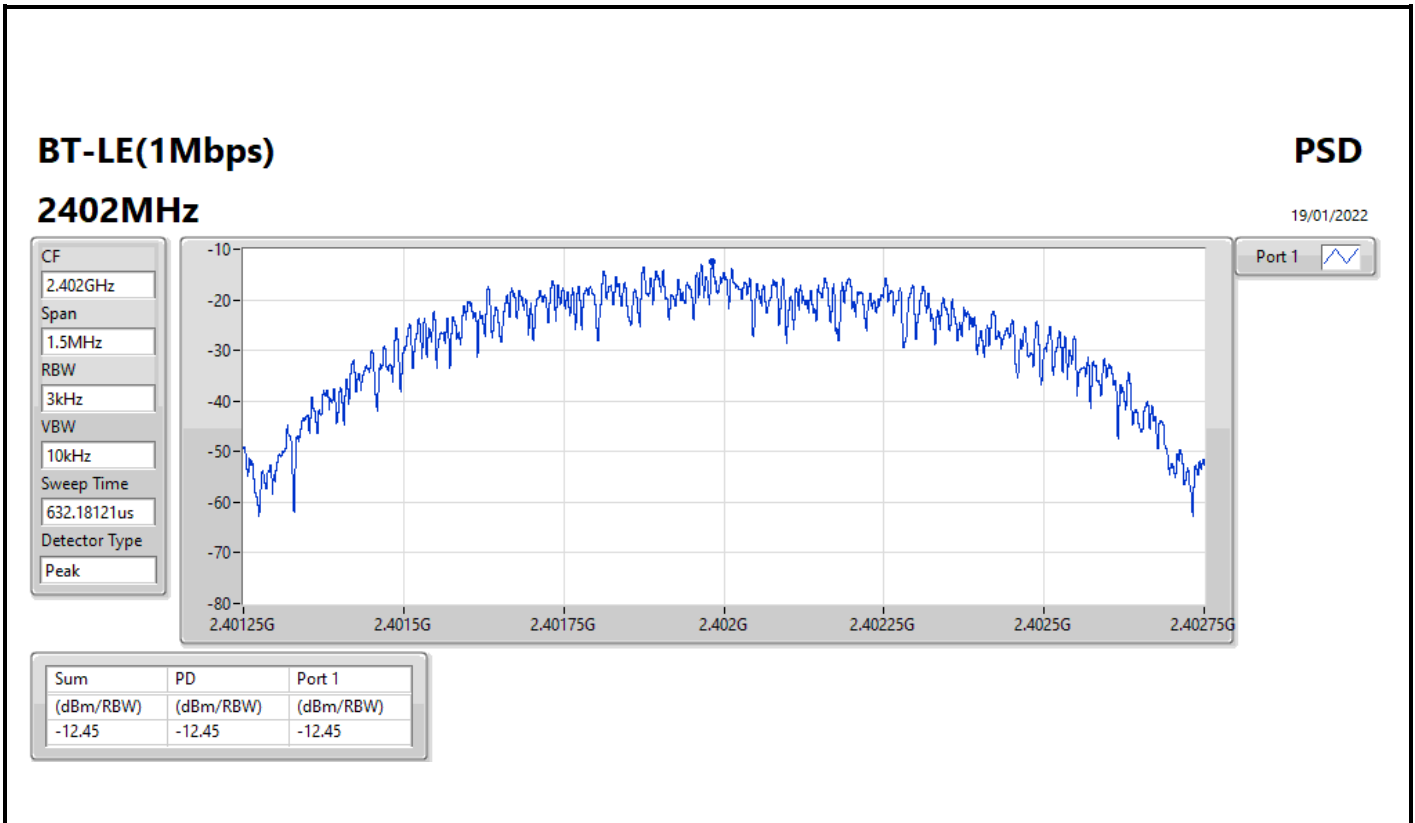




Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	0.60	-12.45	8.00
2440MHz	Pass	0.60	-12.43	8.00
2480MHz	Pass	0.60	-12.59	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	0.60	-15.19	8.00
2440MHz	Pass	0.60	-15.19	8.00
2480MHz	Pass	0.60	-15.17	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)

### PSD

2480MHz

19/01/2022

CF  
2.48GHz

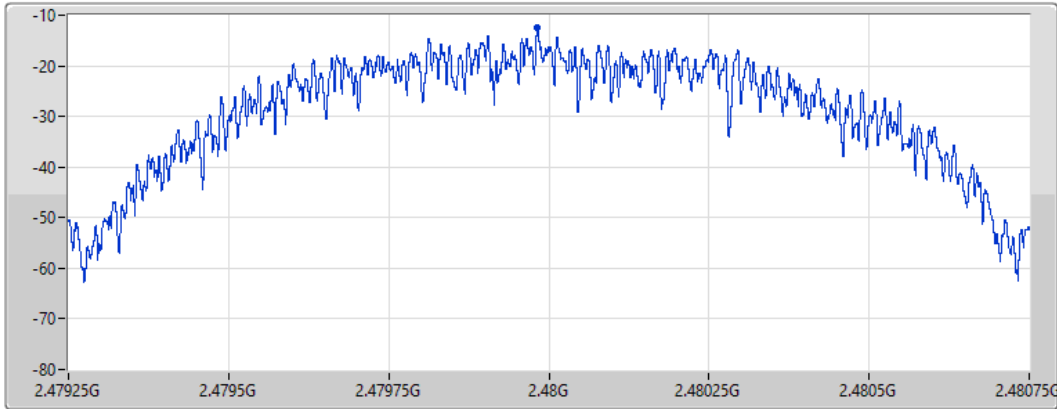
Span  
1.5MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.18121us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.59	-12.59	-12.59

### BT-LE(2Mbps)

### PSD

2402MHz

19/01/2022

CF  
2.402GHz

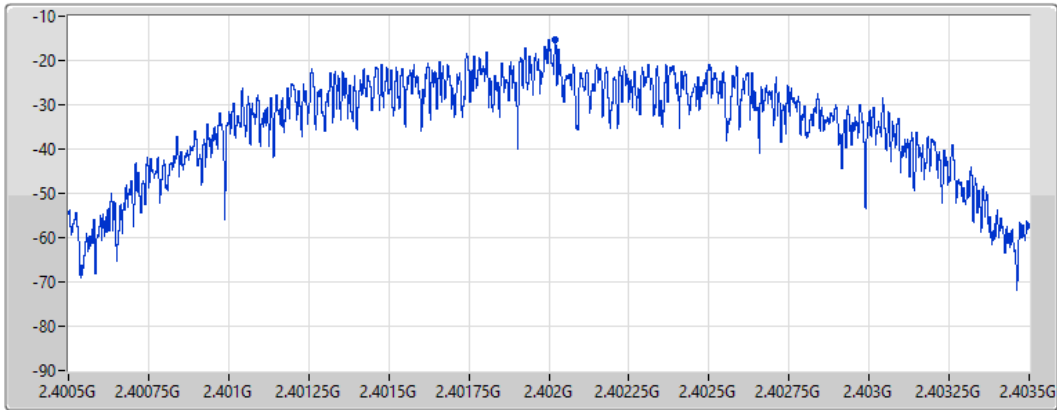
Span  
3MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.01845us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.19	-15.19	-15.19

**BT-LE(2Mbps)**

**PSD**

**2440MHz**

19/01/2022

CF  
2.44GHz

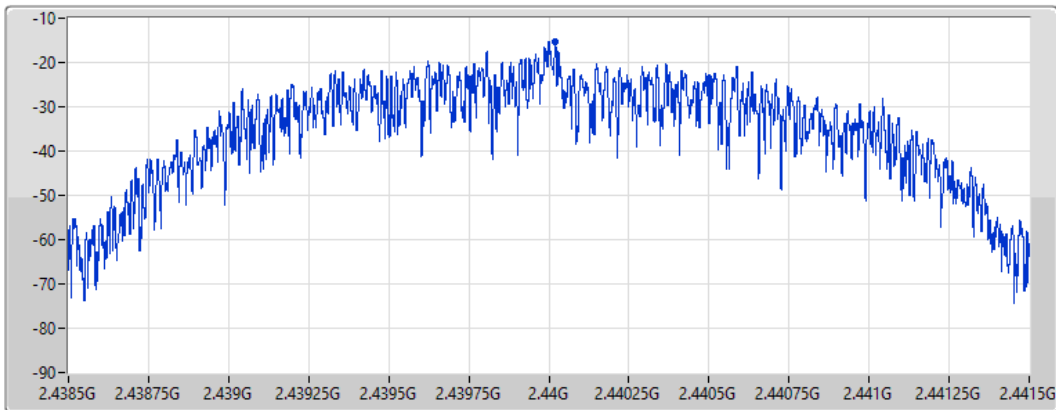
Span  
3MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.01845us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.19	-15.19	-15.19

**BT-LE(2Mbps)**

**PSD**

**2480MHz**

19/01/2022

CF  
2.48GHz

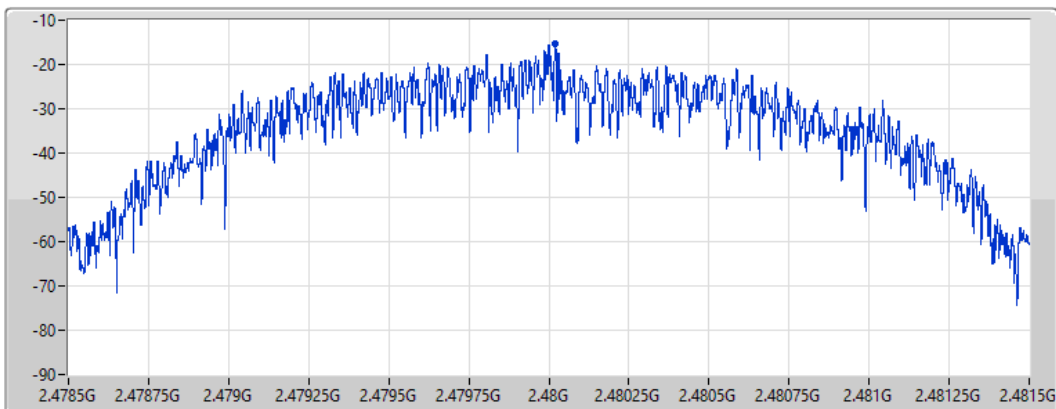
Span  
3MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.01845us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.17	-15.17	-15.17



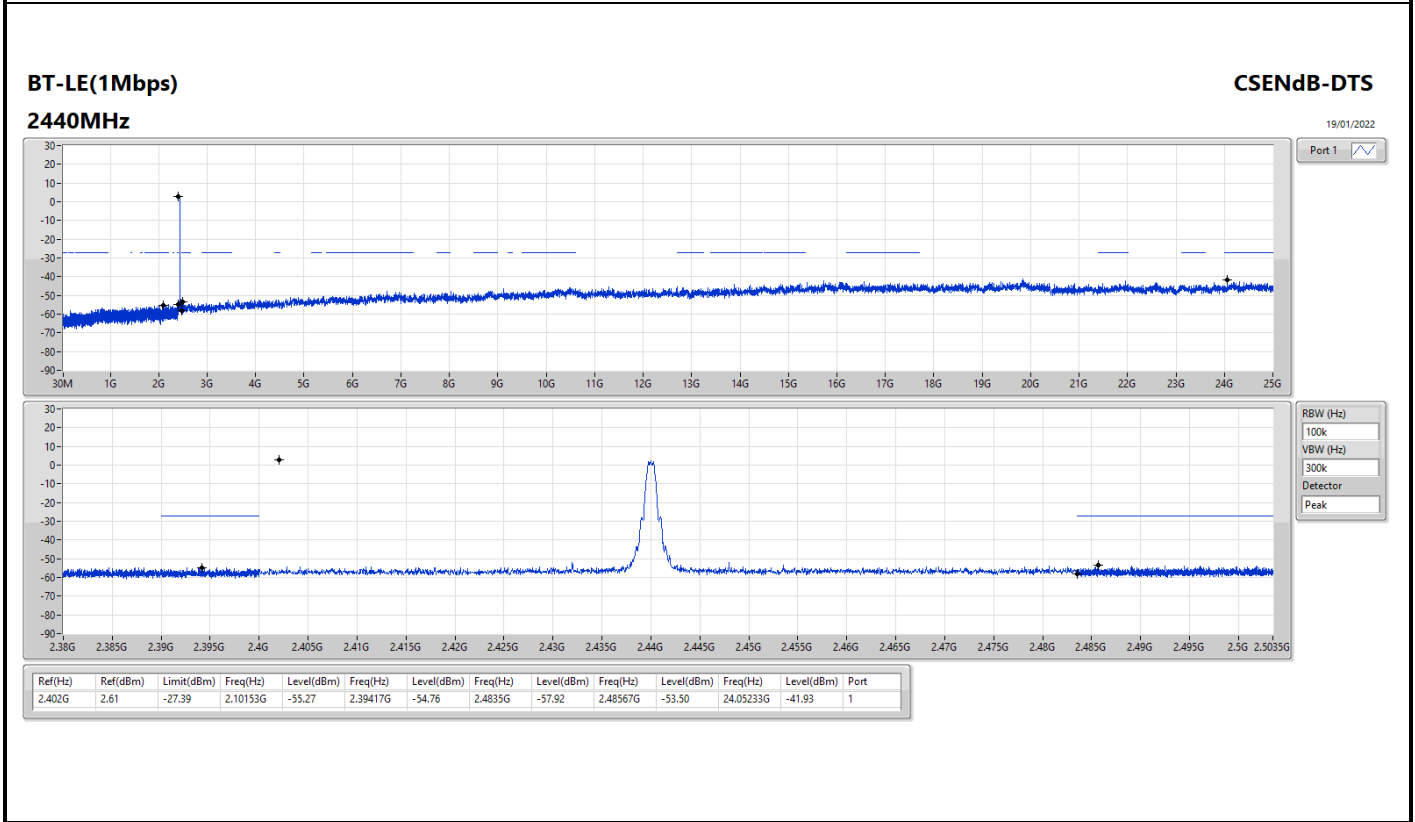
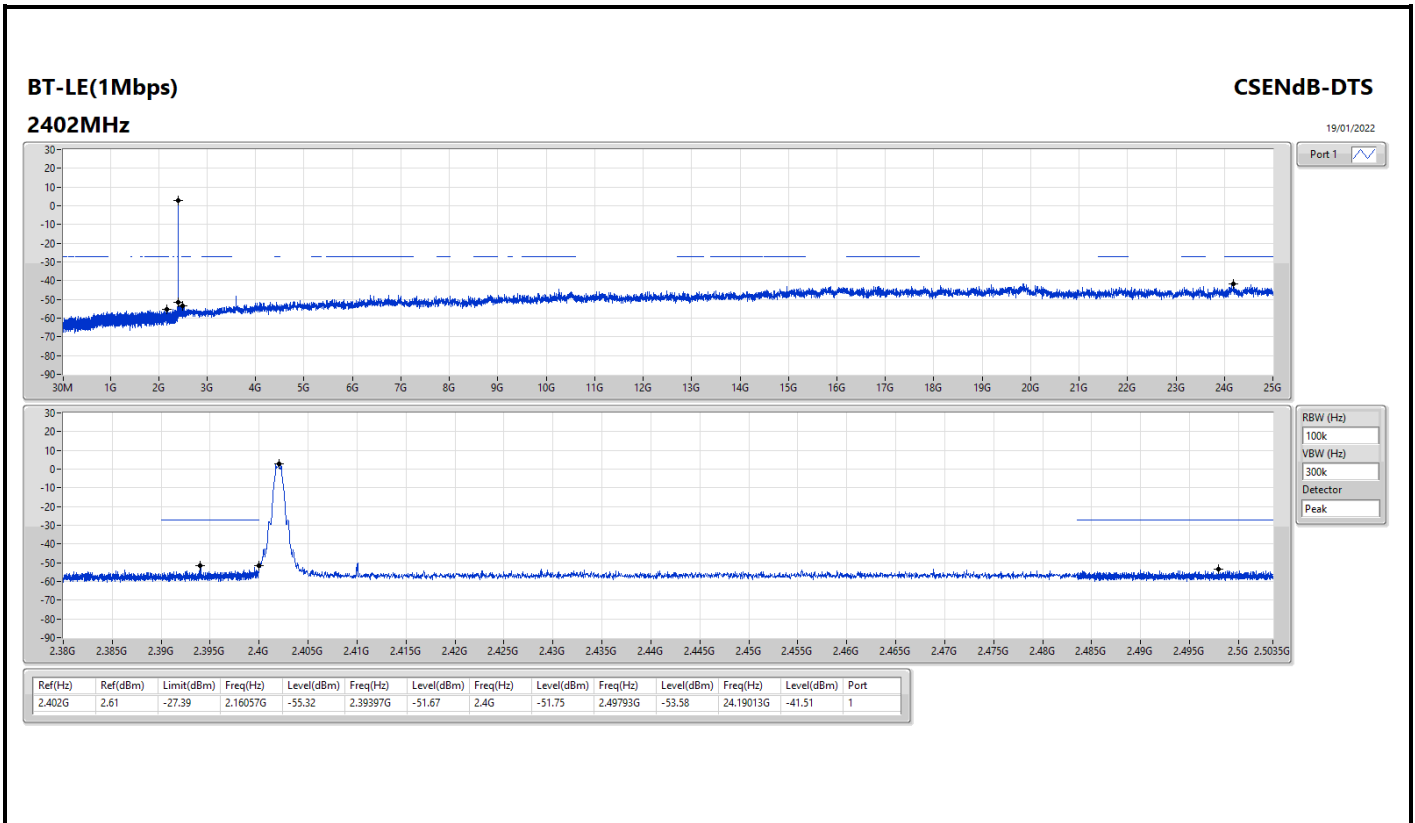
Summary

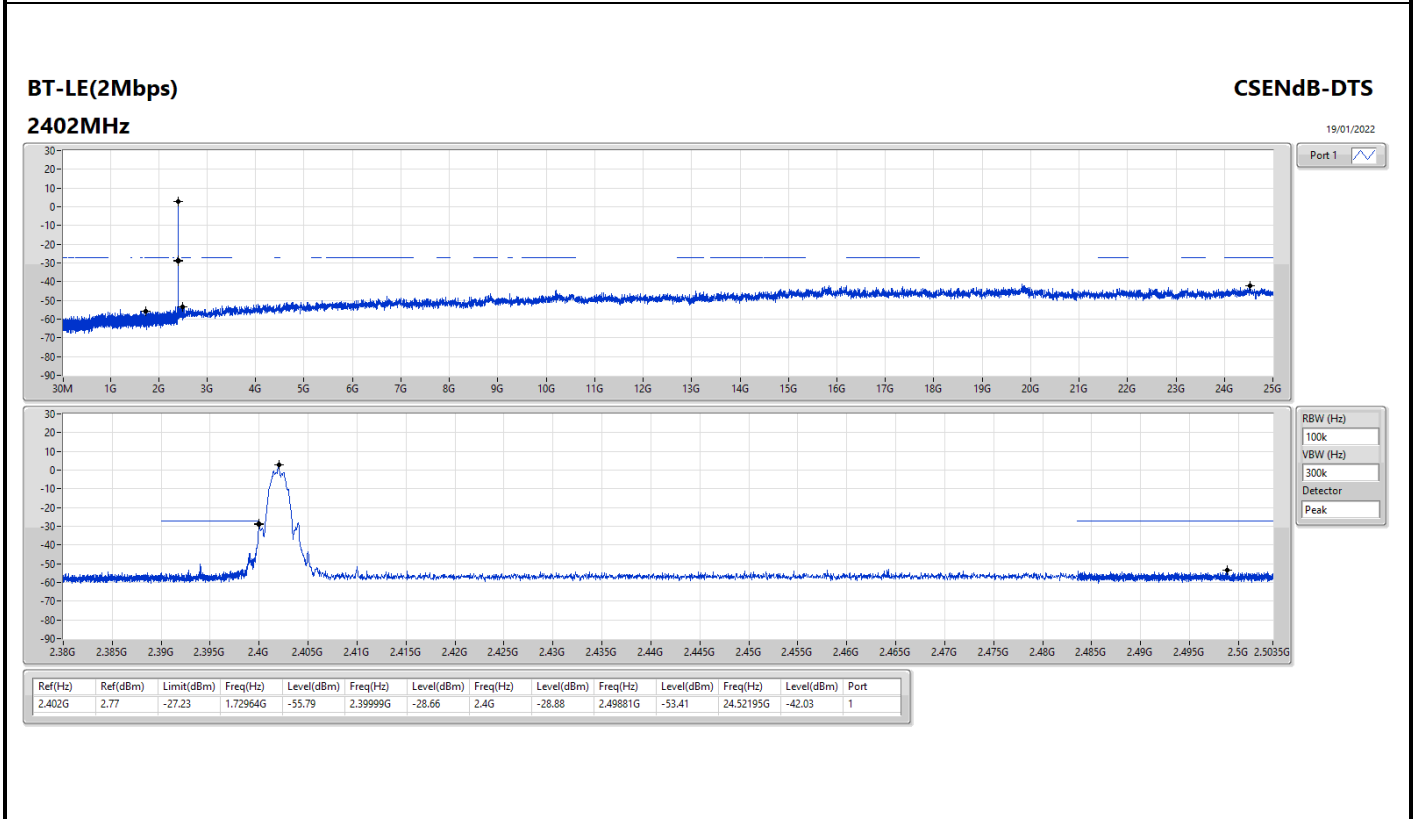
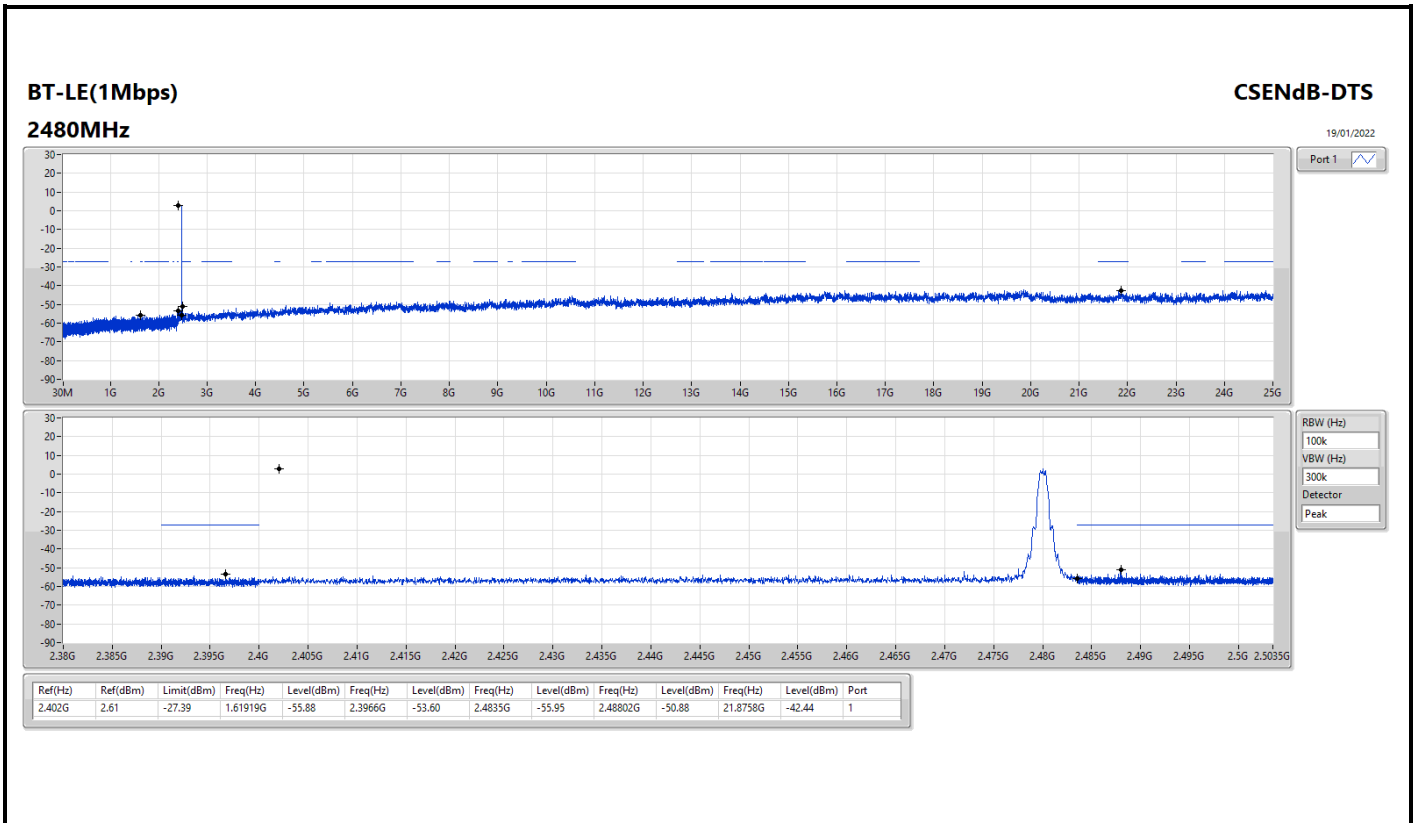
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.402G	2.61	-27.39	1.61919G	-55.88	2.3966G	-53.60	2.4835G	-55.95	2.48802G	-50.88	21.8758G	-42.44	1
BT-LE(2Mbps)	Pass	2.402G	2.77	-27.23	1.72964G	-55.79	2.39999G	-28.66	2.4G	-28.88	2.49881G	-53.41	24.52195G	-42.03	1



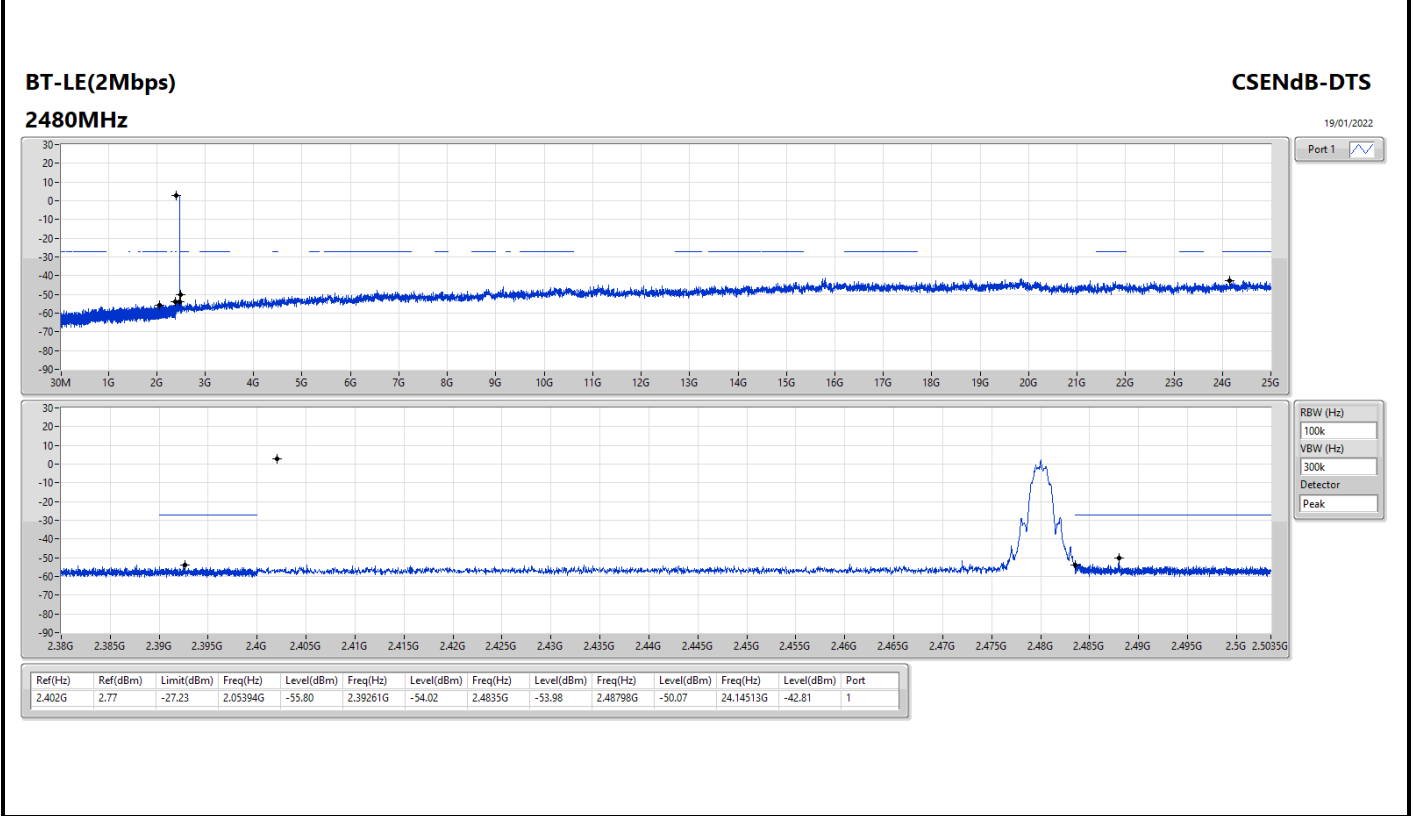
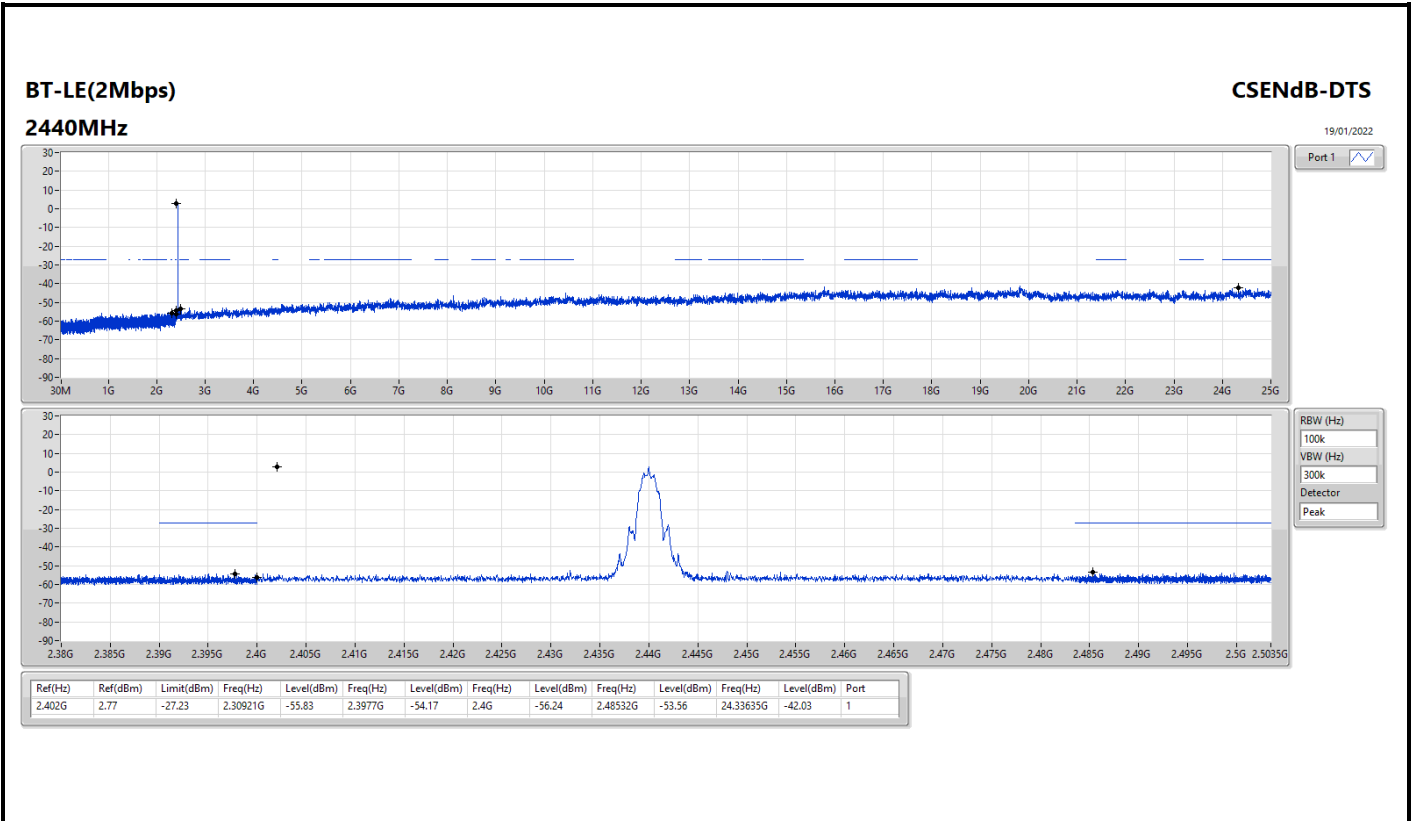
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	2.61	-27.39	2.16057G	-55.32	2.39397G	-51.67	2.4G	-51.75	2.49793G	-53.58	24.19013G	-41.51	1
2440MHz	Pass	2.402G	2.61	-27.39	2.10153G	-55.27	2.39417G	-54.76	2.4835G	-57.92	2.48567G	-53.50	24.05233G	-41.93	1
2480MHz	Pass	2.402G	2.61	-27.39	1.61919G	-55.88	2.3966G	-53.60	2.4835G	-55.95	2.48802G	-50.88	21.8758G	-42.44	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	2.77	-27.23	1.72964G	-55.79	2.39999G	-28.66	2.4G	-28.88	2.49881G	-53.41	24.52195G	-42.03	1
2440MHz	Pass	2.402G	2.77	-27.23	2.30921G	-55.83	2.3977G	-54.17	2.4G	-56.24	2.48532G	-53.56	24.33635G	-42.03	1
2480MHz	Pass	2.402G	2.77	-27.23	2.05394G	-55.80	2.39261G	-54.02	2.4835G	-53.98	2.48798G	-50.07	24.14513G	-42.81	1











Summary

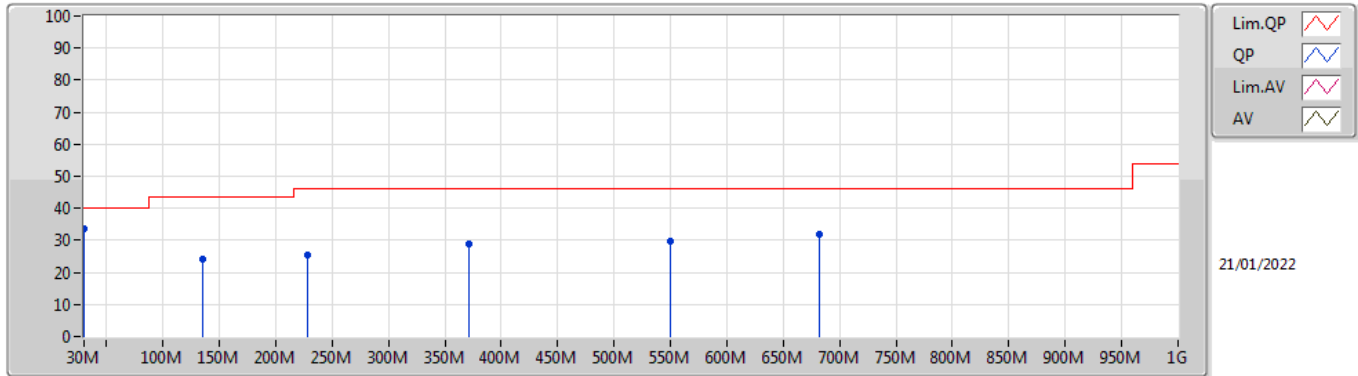
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	30M	33.48	40.00	-6.52	3	Vertical	0	1.00	-



Result

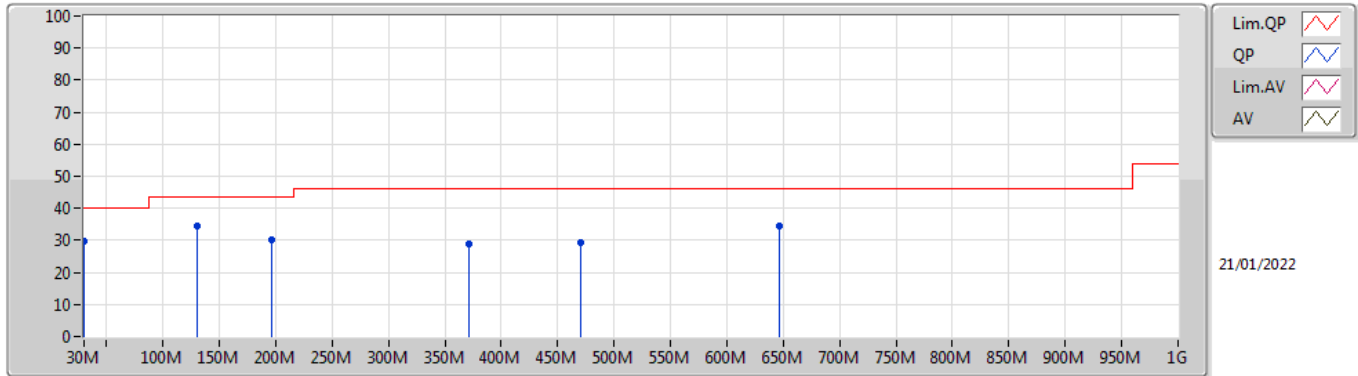
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	33.48	40.00	-6.52	3	Vertical	0	1.00	-
2440MHz	Pass	PK	134.76M	24.09	43.50	-19.41	3	Vertical	0	1.00	-
2440MHz	Pass	PK	227.88M	25.42	46.00	-20.58	3	Vertical	0	1.00	-
2440MHz	Pass	PK	371.44M	28.77	46.00	-17.23	3	Vertical	0	1.00	-
2440MHz	Pass	PK	549.92M	29.62	46.00	-16.38	3	Vertical	0	1.00	-
2440MHz	Pass	PK	681.84M	31.77	46.00	-14.23	3	Vertical	0	1.00	-
2440MHz	Pass	PK	30M	29.87	40.00	-10.13	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	130.88M	34.66	43.50	-8.84	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	196.84M	30.05	43.50	-13.45	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	371.44M	28.77	46.00	-17.23	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	470.38M	29.49	46.00	-16.51	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	646.92M	34.27	46.00	-11.73	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	146.4M	22.23	43.50	-21.27	3	Vertical	0	1.00	-
2440MHz	Pass	PK	258.92M	19.91	46.00	-26.09	3	Vertical	0	1.00	-
2440MHz	Pass	PK	408.3M	24.97	46.00	-21.03	3	Vertical	0	1.00	-
2440MHz	Pass	PK	553.8M	26.54	46.00	-19.46	3	Vertical	0	1.00	-
2440MHz	Pass	PK	683.78M	27.59	46.00	-18.41	3	Vertical	0	1.00	-
2440MHz	Pass	PK	844.8M	29.37	46.00	-16.63	3	Vertical	0	1.00	-
2440MHz	Pass	PK	105.66M	23.89	43.50	-19.61	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	146.4M	22.13	43.50	-21.37	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	340.4M	21.25	46.00	-24.75	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	400.54M	24.31	46.00	-21.69	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	695.42M	30.39	46.00	-15.61	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	945.68M	29.34	46.00	-16.66	3	Horizontal	360	1.00	-

**BT-LE(2Mbps)**  
**2440MHz\_USB**



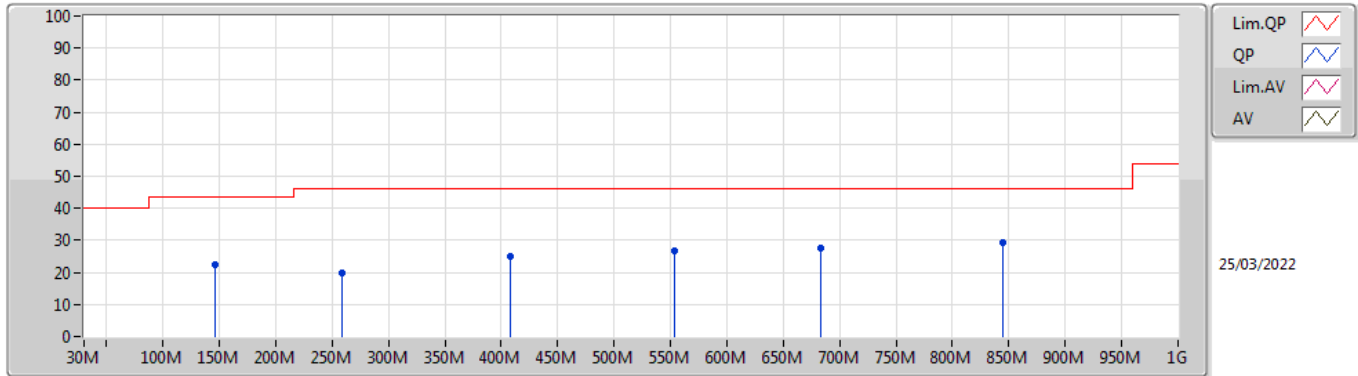
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	33.48	40.00	-6.52	-2.87	3	Vertical	0	1.00	-	36.35	23.26	0.86	26.99
PK	134.76M	24.09	43.50	-19.41	-9.24	3	Vertical	0	1.00	-	33.33	16.80	1.61	27.65
PK	227.88M	25.42	46.00	-20.58	-9.99	3	Vertical	0	1.00	-	35.41	15.09	2.07	27.15
PK	371.44M	28.77	46.00	-17.23	-4.88	3	Vertical	0	1.00	-	33.65	20.01	2.63	27.52
PK	549.92M	29.62	46.00	-16.38	-1.24	3	Vertical	0	1.00	-	30.86	23.89	3.19	28.32
PK	681.84M	31.77	46.00	-14.23	-0.50	3	Vertical	0	1.00	-	32.27	24.18	3.55	28.23

**BT-LE(2Mbps)**  
**2440MHz\_USB**



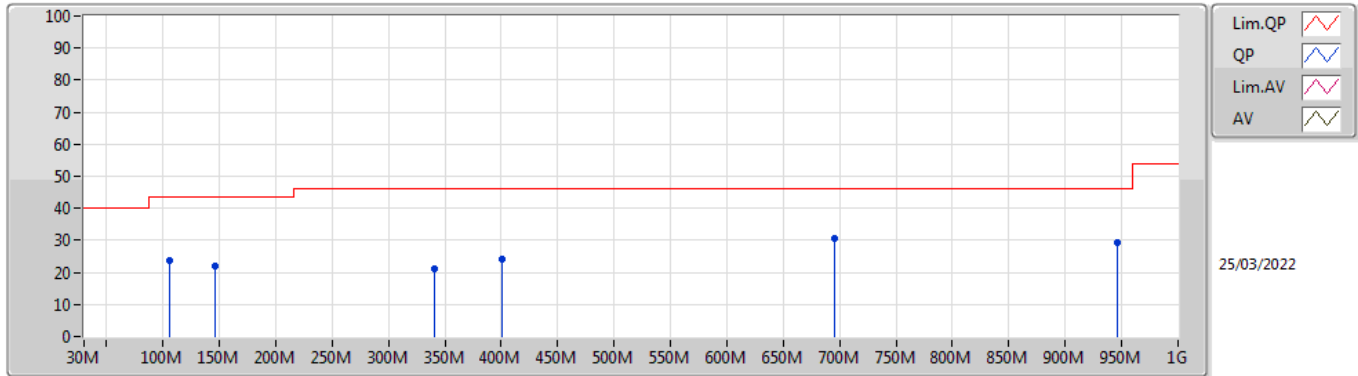
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	29.87	40.00	-10.13	-2.87	3	Horizontal	360	1.00	-	32.74	23.26	0.86	26.99
PK	130.88M	34.66	43.50	-8.84	-9.00	3	Horizontal	360	1.00	-	43.66	17.10	1.59	27.69
PK	196.84M	30.05	43.50	-13.45	-10.94	3	Horizontal	360	1.00	-	40.99	14.46	1.94	27.34
PK	371.44M	28.77	46.00	-17.23	-4.88	3	Horizontal	360	1.00	-	33.65	20.01	2.63	27.52
PK	470.38M	29.49	46.00	-16.51	-2.71	3	Horizontal	360	1.00	-	32.20	22.50	2.97	28.18
PK	646.92M	34.27	46.00	-11.73	-0.54	3	Horizontal	360	1.00	-	34.81	24.22	3.45	28.21

**BT-LE(2Mbps)**  
**2440MHz\_Adapter**



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	146.4M	22.23	43.50	-21.27	-10.06	3	Vertical	0	1.00	-	32.29	15.83	1.68	27.57
PK	258.92M	19.91	46.00	-26.09	-6.20	3	Vertical	0	1.00	-	26.11	18.64	2.19	27.03
PK	408.3M	24.97	46.00	-21.03	-3.61	3	Vertical	0	1.00	-	28.58	21.45	2.77	27.83
PK	553.8M	26.54	46.00	-19.46	-1.14	3	Vertical	0	1.00	-	27.68	23.99	3.20	28.33
PK	683.78M	27.59	46.00	-18.41	-0.49	3	Vertical	0	1.00	-	28.08	24.19	3.55	28.23
PK	844.8M	29.37	46.00	-16.63	1.81	3	Vertical	0	1.00	-	27.56	25.57	3.98	27.74

**BT-LE(2Mbps)**  
**2440MHz\_Adapter**



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	105.66M	23.89	43.50	-19.61	-9.56	3	Horizontal	360	1.00	-	33.45	16.77	1.45	27.78
PK	146.4M	22.13	43.50	-21.37	-10.06	3	Horizontal	360	1.00	-	32.19	15.83	1.68	27.57
PK	340.4M	21.25	46.00	-24.75	-5.61	3	Horizontal	360	1.00	-	26.86	19.16	2.51	27.28
PK	400.54M	24.31	46.00	-21.69	-3.99	3	Horizontal	360	1.00	-	28.30	21.05	2.74	27.78
PK	695.42M	30.39	46.00	-15.61	-0.48	3	Horizontal	360	1.00	-	30.87	24.17	3.59	28.24
PK	945.68M	29.34	46.00	-16.66	2.92	3	Horizontal	360	1.00	-	26.42	26.05	4.17	27.30



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	7.31942G	50.83	54.00	-3.17	3	Horizontal	273	1.00	-
BT-LE(2Mbps)	Pass	AV	7.31874G	51.09	54.00	-2.91	3	Horizontal	274	1.00	-





Result

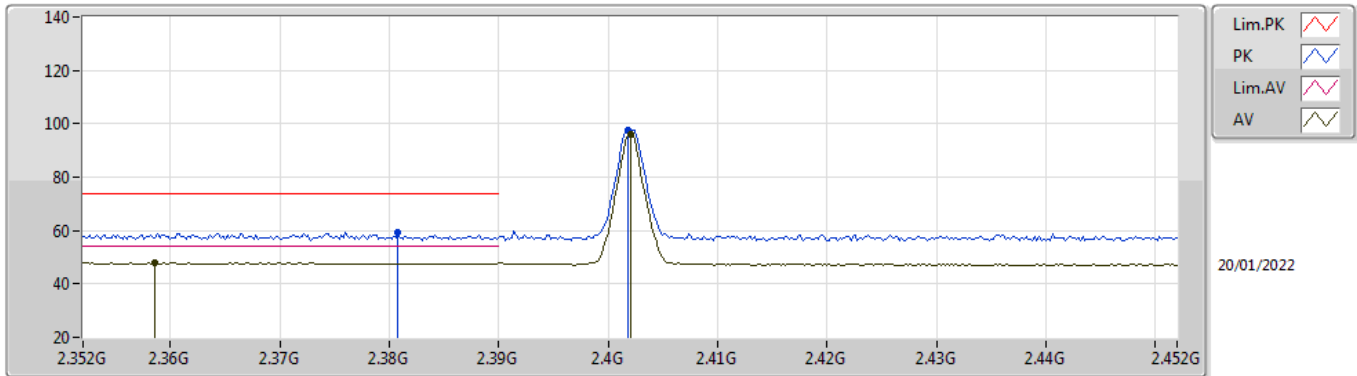
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3586G	47.92	54.00	-6.08	3	Vertical	250	1.11	-
2402MHz	Pass	AV	2.402G	96.05	Inf	-Inf	3	Vertical	250	1.11	-
2402MHz	Pass	PK	2.3808G	59.24	74.00	-14.76	3	Vertical	250	1.11	-
2402MHz	Pass	PK	2.4018G	97.51	Inf	-Inf	3	Vertical	250	1.11	-
2402MHz	Pass	AV	2.3634G	48.00	54.00	-6.00	3	Horizontal	247	1.18	-
2402MHz	Pass	AV	2.402G	95.91	Inf	-Inf	3	Horizontal	247	1.18	-
2402MHz	Pass	PK	2.3808G	59.17	74.00	-14.83	3	Horizontal	247	1.18	-
2402MHz	Pass	PK	2.4018G	97.36	Inf	-Inf	3	Horizontal	247	1.18	-
2402MHz	Pass	AV	3.60293G	45.24	54.00	-8.76	3	Vertical	83	2.21	-
2402MHz	Pass	AV	4.80368G	37.07	54.00	-16.93	3	Vertical	257	2.56	-
2402MHz	Pass	PK	3.60258G	49.91	74.00	-24.09	3	Vertical	83	2.21	-
2402MHz	Pass	PK	4.8035G	46.36	74.00	-27.64	3	Vertical	257	2.56	-
2402MHz	Pass	AV	3.60303G	49.21	54.00	-4.79	3	Horizontal	43	1.50	-
2402MHz	Pass	AV	4.80359G	35.49	54.00	-18.51	3	Horizontal	55	1.00	-
2402MHz	Pass	PK	3.60264G	53.21	74.00	-20.79	3	Horizontal	43	1.50	-
2402MHz	Pass	PK	4.80451G	45.74	74.00	-28.26	3	Horizontal	55	1.00	-
2440MHz	Pass	AV	2.3424G	48.00	54.00	-6.00	3	Vertical	237	1.14	-
2440MHz	Pass	AV	2.44G	97.02	Inf	-Inf	3	Vertical	237	1.14	-
2440MHz	Pass	AV	2.4912G	47.52	54.00	-6.48	3	Vertical	237	1.14	-
2440MHz	Pass	PK	2.344G	60.05	74.00	-13.95	3	Vertical	237	1.14	-
2440MHz	Pass	PK	2.4396G	98.49	Inf	-Inf	3	Vertical	237	1.14	-
2440MHz	Pass	PK	2.4864G	57.90	74.00	-16.10	3	Vertical	237	1.14	-
2440MHz	Pass	AV	2.364G	48.14	54.00	-5.86	3	Horizontal	244	1.00	-
2440MHz	Pass	AV	2.44G	96.91	Inf	-Inf	3	Horizontal	244	1.00	-
2440MHz	Pass	AV	2.4952G	47.42	54.00	-6.58	3	Horizontal	244	1.00	-
2440MHz	Pass	PK	2.3504G	59.50	74.00	-14.50	3	Horizontal	244	1.00	-
2440MHz	Pass	PK	2.4396G	98.41	Inf	-Inf	3	Horizontal	244	1.00	-
2440MHz	Pass	PK	2.4944G	58.12	74.00	-15.88	3	Horizontal	244	1.00	-
2440MHz	Pass	AV	3.65997G	43.89	54.00	-10.11	3	Vertical	76	1.18	-
2440MHz	Pass	AV	4.87971G	36.75	54.00	-17.25	3	Vertical	258	2.93	-
2440MHz	Pass	AV	7.3194G	46.52	54.00	-7.48	3	Vertical	215	1.50	-
2440MHz	Pass	PK	3.66036G	48.64	74.00	-25.36	3	Vertical	76	1.18	-
2440MHz	Pass	PK	4.87946G	46.86	74.00	-27.14	3	Vertical	258	2.93	-
2440MHz	Pass	PK	7.32077G	55.68	74.00	-18.32	3	Vertical	215	1.50	-
2440MHz	Pass	AV	3.66002G	46.09	54.00	-7.91	3	Horizontal	46	1.27	-
2440MHz	Pass	AV	4.87973G	36.57	54.00	-17.43	3	Horizontal	192	2.68	-
2440MHz	Pass	AV	7.31942G	50.83	54.00	-3.17	3	Horizontal	273	1.00	-
2440MHz	Pass	PK	3.65958G	50.32	74.00	-23.68	3	Horizontal	46	1.27	-
2440MHz	Pass	PK	4.88046G	46.61	74.00	-27.39	3	Horizontal	192	2.68	-
2440MHz	Pass	PK	7.32G	58.89	74.00	-15.11	3	Horizontal	273	1.00	-
2480MHz	Pass	AV	2.48G	97.20	Inf	-Inf	3	Vertical	241	1.00	-
2480MHz	Pass	AV	2.4835G	48.16	54.00	-5.84	3	Vertical	241	1.00	-
2480MHz	Pass	PK	2.4798G	98.72	Inf	-Inf	3	Vertical	241	1.00	-
2480MHz	Pass	PK	2.4835G	58.63	74.00	-15.37	3	Vertical	241	1.00	-
2480MHz	Pass	AV	2.48G	96.29	Inf	-Inf	3	Horizontal	234	1.59	-
2480MHz	Pass	AV	2.4835G	48.04	54.00	-5.96	3	Horizontal	234	1.59	-
2480MHz	Pass	PK	2.4798G	97.75	Inf	-Inf	3	Horizontal	234	1.59	-
2480MHz	Pass	PK	2.4896G	58.23	74.00	-15.77	3	Horizontal	234	1.59	-
2480MHz	Pass	AV	3.72G	39.63	54.00	-14.37	3	Vertical	77	1.37	-
2480MHz	Pass	AV	4.95964G	35.77	54.00	-18.23	3	Vertical	271	3.00	-
2480MHz	Pass	AV	7.43935G	48.33	54.00	-5.67	3	Vertical	226	1.16	-
2480MHz	Pass	PK	3.72028G	45.51	74.00	-28.49	3	Vertical	77	1.37	-
2480MHz	Pass	PK	4.95955G	45.47	74.00	-28.53	3	Vertical	271	3.00	-
2480MHz	Pass	PK	7.43921G	56.85	74.00	-17.15	3	Vertical	226	1.16	-
2480MHz	Pass	AV	3.72004G	42.03	54.00	-11.97	3	Horizontal	48	1.00	-
2480MHz	Pass	AV	4.95967G	35.40	54.00	-18.60	3	Horizontal	56	1.05	-
2480MHz	Pass	AV	7.43942G	49.01	54.00	-4.99	3	Horizontal	274	1.02	-
2480MHz	Pass	PK	3.71958G	47.48	74.00	-26.52	3	Horizontal	48	1.00	-
2480MHz	Pass	PK	4.95953G	45.79	74.00	-28.21	3	Horizontal	56	1.05	-
2480MHz	Pass	PK	7.44002G	57.79	74.00	-16.21	3	Horizontal	274	1.02	-



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	AV	2.3884G	49.00	54.00	-5.00	3	Vertical	250	1.08	-
2402MHz	Pass	AV	2.402G	93.94	Inf	-Inf	3	Vertical	250	1.08	-
2402MHz	Pass	PK	2.3708G	59.35	74.00	-14.65	3	Vertical	250	1.08	-
2402MHz	Pass	PK	2.4014G	96.97	Inf	-Inf	3	Vertical	250	1.08	-
2402MHz	Pass	AV	2.371G	49.39	54.00	-4.61	3	Horizontal	233	1.50	-
2402MHz	Pass	AV	2.402G	96.74	Inf	-Inf	3	Horizontal	233	1.50	-
2402MHz	Pass	PK	2.3732G	59.34	74.00	-14.66	3	Horizontal	233	1.50	-
2402MHz	Pass	PK	2.4014G	99.75	Inf	-Inf	3	Horizontal	233	1.50	-
2402MHz	Pass	AV	3.60299G	43.73	54.00	-10.27	3	Vertical	81	1.12	-
2402MHz	Pass	AV	4.80395G	37.44	54.00	-16.56	3	Vertical	254	2.56	-
2402MHz	Pass	PK	3.603G	49.63	74.00	-24.37	3	Vertical	81	1.12	-
2402MHz	Pass	PK	4.80287G	46.17	74.00	-27.83	3	Vertical	254	2.56	-
2402MHz	Pass	AV	3.60253G	47.06	54.00	-6.94	3	Horizontal	42	1.13	-
2402MHz	Pass	AV	4.80395G	36.48	54.00	-17.52	3	Horizontal	53	1.00	-
2402MHz	Pass	PK	3.60224G	53.31	74.00	-20.69	3	Horizontal	42	1.13	-
2402MHz	Pass	PK	4.80522G	44.64	74.00	-29.36	3	Horizontal	53	1.00	-
2440MHz	Pass	AV	2.3504G	48.85	54.00	-5.15	3	Vertical	242	1.14	-
2440MHz	Pass	AV	2.44G	94.45	Inf	-Inf	3	Vertical	242	1.14	-
2440MHz	Pass	AV	2.4888G	48.36	54.00	-5.64	3	Vertical	242	1.14	-
2440MHz	Pass	PK	2.34G	59.65	74.00	-14.35	3	Vertical	242	1.14	-
2440MHz	Pass	PK	2.4396G	97.51	Inf	-Inf	3	Vertical	242	1.14	-
2440MHz	Pass	PK	2.4944G	58.86	74.00	-15.14	3	Vertical	242	1.14	-
2440MHz	Pass	AV	2.3412G	49.04	54.00	-4.96	3	Horizontal	242	1.00	-
2440MHz	Pass	AV	2.44G	96.51	Inf	-Inf	3	Horizontal	242	1.00	-
2440MHz	Pass	AV	2.4848G	48.49	54.00	-5.51	3	Horizontal	242	1.00	-
2440MHz	Pass	PK	2.3724G	59.13	74.00	-14.87	3	Horizontal	242	1.00	-
2440MHz	Pass	PK	2.44G	99.93	Inf	-Inf	3	Horizontal	242	1.00	-
2440MHz	Pass	PK	2.4844G	58.62	74.00	-15.38	3	Horizontal	242	1.00	-
2440MHz	Pass	AV	3.65998G	41.52	54.00	-12.48	3	Vertical	81	1.14	-
2440MHz	Pass	AV	4.87991G	34.19	54.00	-19.81	3	Vertical	87	3.00	-
2440MHz	Pass	AV	7.31862G	49.35	54.00	-4.65	3	Vertical	227	1.04	-
2440MHz	Pass	PK	3.65919G	47.72	74.00	-26.28	3	Vertical	81	1.14	-
2440MHz	Pass	PK	4.87906G	43.87	74.00	-30.13	3	Vertical	87	3.00	-
2440MHz	Pass	PK	7.31833G	56.87	74.00	-17.13	3	Vertical	227	1.04	-
2440MHz	Pass	AV	3.65995G	44.17	54.00	-9.83	3	Horizontal	43	1.04	-
2440MHz	Pass	AV	4.88G	37.66	54.00	-16.34	3	Horizontal	180	2.86	-
2440MHz	Pass	AV	7.31874G	51.09	54.00	-2.91	3	Horizontal	274	1.00	-
2440MHz	Pass	PK	3.66006G	50.09	74.00	-23.91	3	Horizontal	43	1.04	-
2440MHz	Pass	PK	4.8799G	46.23	74.00	-27.77	3	Horizontal	180	2.86	-
2440MHz	Pass	PK	7.31843G	58.48	74.00	-15.52	3	Horizontal	274	1.00	-
2480MHz	Pass	AV	2.48G	91.26	Inf	-Inf	3	Vertical	247	1.10	-
2480MHz	Pass	AV	2.4835G	49.06	54.00	-4.94	3	Vertical	247	1.10	-
2480MHz	Pass	PK	2.4794G	94.42	Inf	-Inf	3	Vertical	247	1.10	-
2480MHz	Pass	PK	2.4954G	58.46	74.00	-15.54	3	Vertical	247	1.10	-
2480MHz	Pass	AV	2.4802G	93.29	Inf	-Inf	3	Horizontal	235	1.15	-
2480MHz	Pass	AV	2.4835G	49.65	54.00	-4.35	3	Horizontal	235	1.15	-
2480MHz	Pass	PK	2.4794G	96.45	Inf	-Inf	3	Horizontal	235	1.15	-
2480MHz	Pass	PK	2.4944G	58.99	74.00	-15.01	3	Horizontal	235	1.15	-
2480MHz	Pass	AV	3.71988G	37.64	54.00	-16.36	3	Vertical	82	1.22	-
2480MHz	Pass	AV	4.95995G	34.48	54.00	-19.52	3	Vertical	81	1.50	-
2480MHz	Pass	AV	7.43868G	48.40	54.00	-5.60	3	Vertical	225	1.00	-
2480MHz	Pass	PK	3.71998G	45.07	74.00	-28.93	3	Vertical	82	1.22	-
2480MHz	Pass	PK	4.95892G	44.01	74.00	-29.99	3	Vertical	81	1.50	-
2480MHz	Pass	PK	7.44168G	56.15	74.00	-17.85	3	Vertical	225	1.00	-
2480MHz	Pass	AV	3.72002G	40.43	54.00	-13.57	3	Horizontal	44	1.00	-
2480MHz	Pass	AV	4.95889G	35.43	54.00	-18.57	3	Horizontal	50	2.01	-
2480MHz	Pass	AV	7.43867G	49.17	54.00	-4.83	3	Horizontal	276	1.00	-
2480MHz	Pass	PK	3.71909G	47.34	74.00	-26.66	3	Horizontal	44	1.00	-
2480MHz	Pass	PK	4.95919G	44.55	74.00	-29.45	3	Horizontal	50	2.01	-
2480MHz	Pass	PK	7.43844G	57.14	74.00	-16.86	3	Horizontal	276	1.00	-

**BT-LE(1Mbps)**

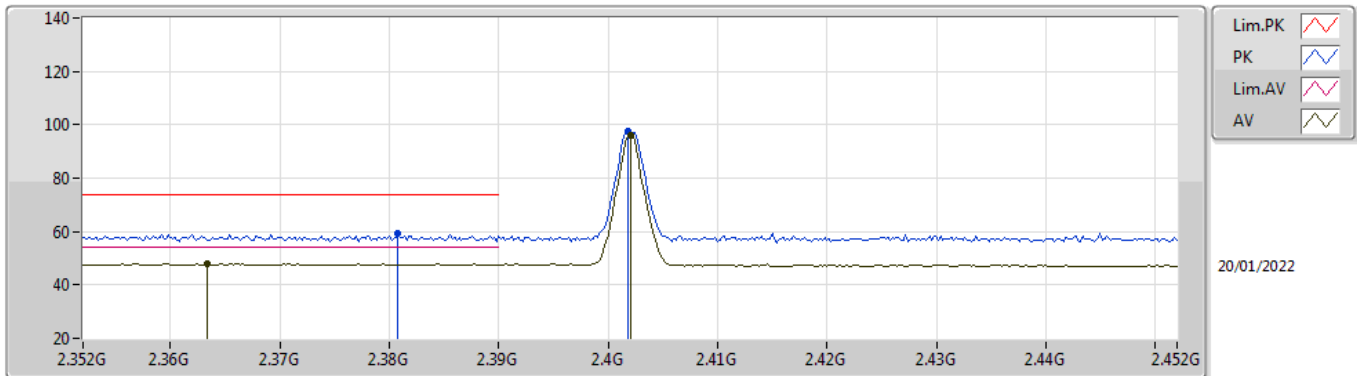
**2402MHz\_TX**



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	2.3586G	47.92	54.00	-6.08	35.02	3	Vertical	250	1.11	-	12.90	27.78	7.24	-
AV	2.402G	96.05	Inf	-Inf	34.95	3	Vertical	250	1.11	-	61.10	27.69	7.26	-
PK	2.3808G	59.24	74.00	-14.76	34.99	3	Vertical	250	1.11	-	24.25	27.74	7.25	-
PK	2.4018G	97.51	Inf	-Inf	34.95	3	Vertical	250	1.11	-	62.56	27.69	7.26	-

**BT-LE(1Mbps)**

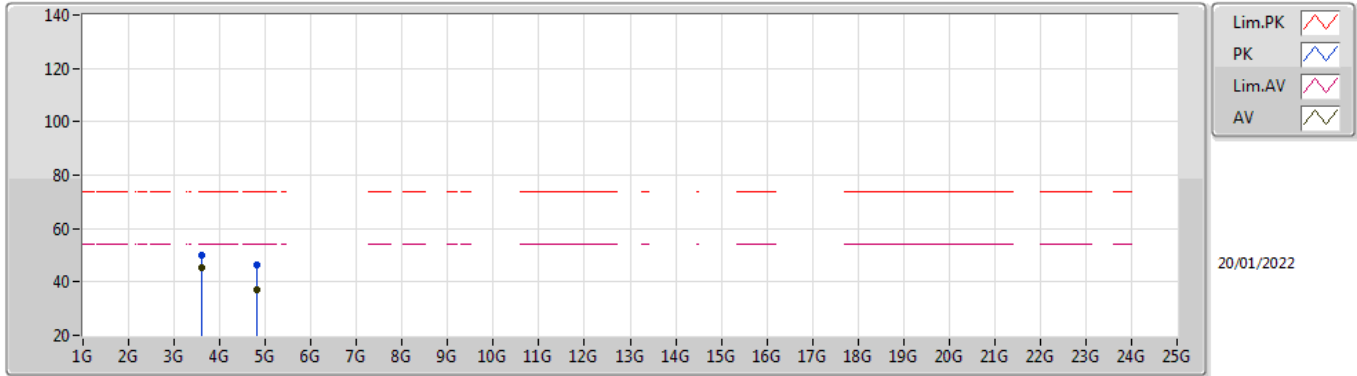
**2402MHz\_TX**



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	2.3634G	48.00	54.00	-6.00	35.01	3	Horizontal	247	1.18	-	12.99	27.77	7.24	-
AV	2.402G	95.91	Inf	-Inf	34.95	3	Horizontal	247	1.18	-	60.96	27.69	7.26	-
PK	2.3808G	59.17	74.00	-14.83	34.99	3	Horizontal	247	1.18	-	24.18	27.74	7.25	-
PK	2.4018G	97.36	Inf	-Inf	34.95	3	Horizontal	247	1.18	-	62.41	27.69	7.26	-

**BT-LE(1Mbps)**

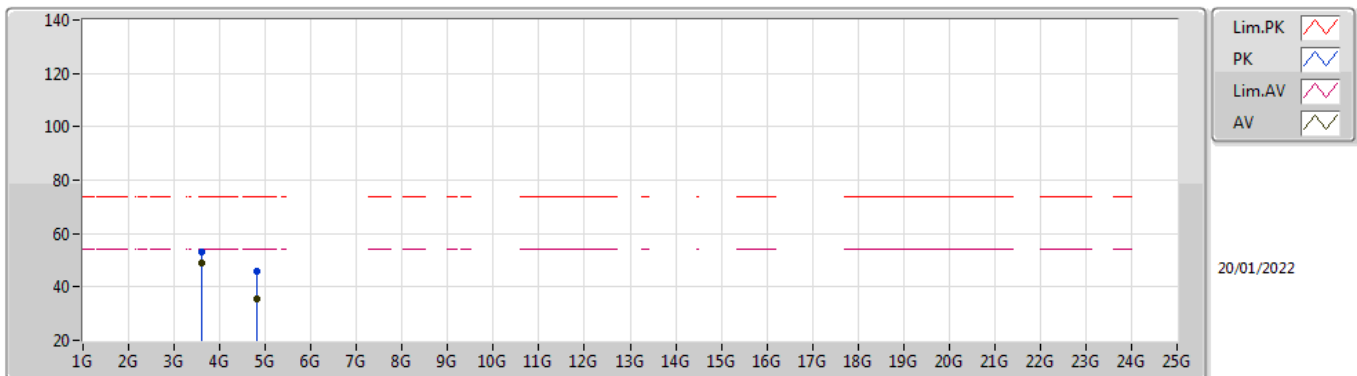
**2402MHz\_TX**



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	3.60293G	45.24	54.00	-8.76	2.20	3	Vertical	83	2.21	-	43.04	29.11	7.45	34.36
AV	4.80368G	37.07	54.00	-16.93	5.82	3	Vertical	257	2.56	-	31.25	31.11	8.90	34.19
PK	3.60258G	49.91	74.00	-24.09	2.20	3	Vertical	83	2.21	-	47.71	29.11	7.45	34.36
PK	4.8035G	46.36	74.00	-27.64	5.82	3	Vertical	257	2.56	-	40.54	31.11	8.90	34.19

**BT-LE(1Mbps)**

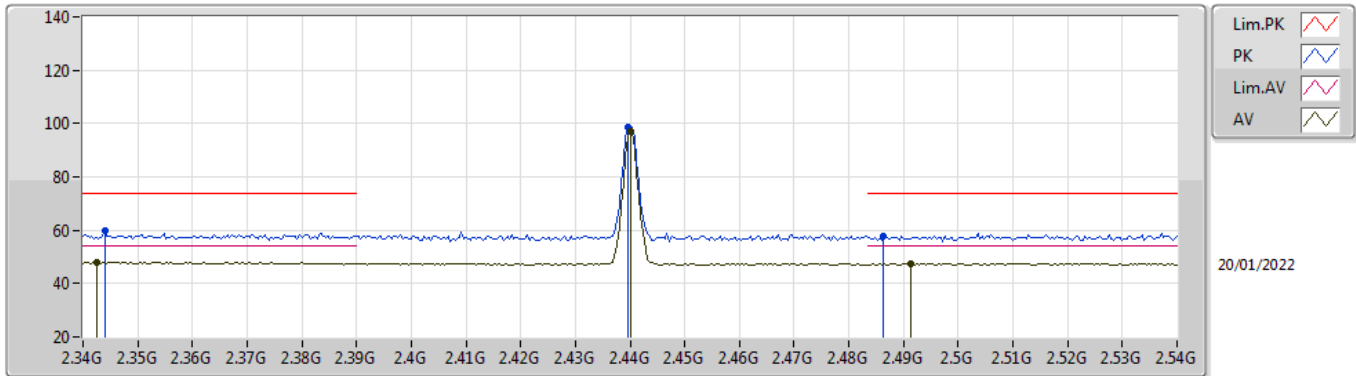
**2402MHz\_TX**



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	3.60303G	49.21	54.00	-4.79	2.20	3	Horizontal	43	1.50	-	47.01	29.11	7.45	34.36
AV	4.80359G	35.49	54.00	-18.51	5.82	3	Horizontal	55	1.00	-	29.67	31.11	8.90	34.19
PK	3.60264G	53.21	74.00	-20.79	2.20	3	Horizontal	43	1.50	-	51.01	29.11	7.45	34.36
PK	4.80451G	45.74	74.00	-28.26	5.82	3	Horizontal	55	1.00	-	39.92	31.11	8.90	34.19

### BT-LE(1Mbps)

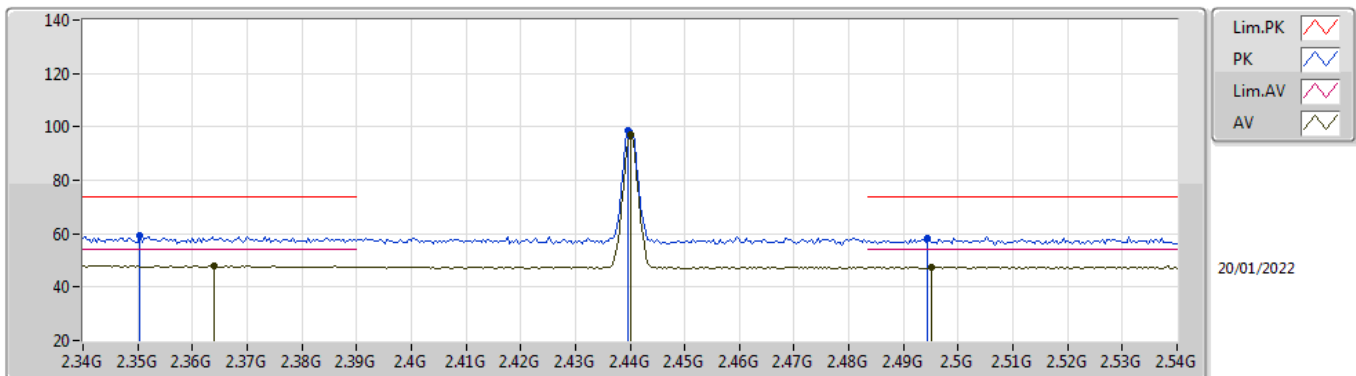
### 2440MHz\_TX



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	2.3424G	48.00	54.00	-6.00	35.05	3	Vertical	237	1.14	-	12.95	27.82	7.23	-
AV	2.44G	97.02	Inf	-Inf	34.75	3	Vertical	237	1.14	-	62.27	27.46	7.29	-
AV	2.4912G	47.52	54.00	-6.48	34.73	3	Vertical	237	1.14	-	12.79	27.40	7.33	-
PK	2.344G	60.05	74.00	-13.95	35.04	3	Vertical	237	1.14	-	25.01	27.81	7.23	-
PK	2.4396G	98.49	Inf	-Inf	34.75	3	Vertical	237	1.14	-	63.74	27.46	7.29	-
PK	2.4864G	57.90	74.00	-16.10	34.73	3	Vertical	237	1.14	-	23.17	27.40	7.33	-

### BT-LE(1Mbps)

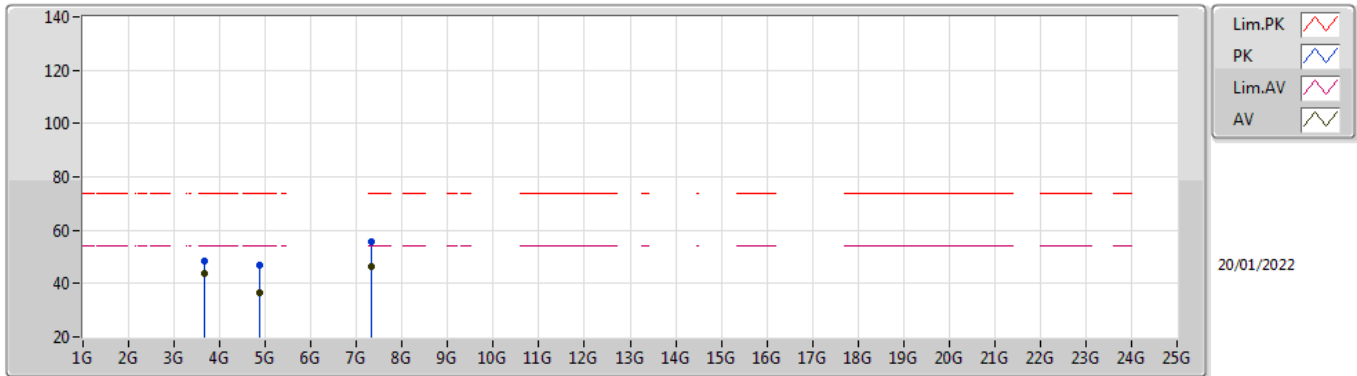
### 2440MHz\_TX



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	2.364G	48.14	54.00	-5.86	35.01	3	Horizontal	244	1.00	-	13.13	27.77	7.24	-
AV	2.44G	96.91	Inf	-Inf	34.75	3	Horizontal	244	1.00	-	62.16	27.46	7.29	-
AV	2.4952G	47.42	54.00	-6.58	34.74	3	Horizontal	244	1.00	-	12.68	27.40	7.34	-
PK	2.3504G	59.50	74.00	-14.50	35.04	3	Horizontal	244	1.00	-	24.46	27.80	7.24	-
PK	2.4396G	98.41	Inf	-Inf	34.75	3	Horizontal	244	1.00	-	63.66	27.46	7.29	-
PK	2.4944G	58.12	74.00	-15.88	34.74	3	Horizontal	244	1.00	-	23.38	27.40	7.34	-

### BT-LE(1Mbps)

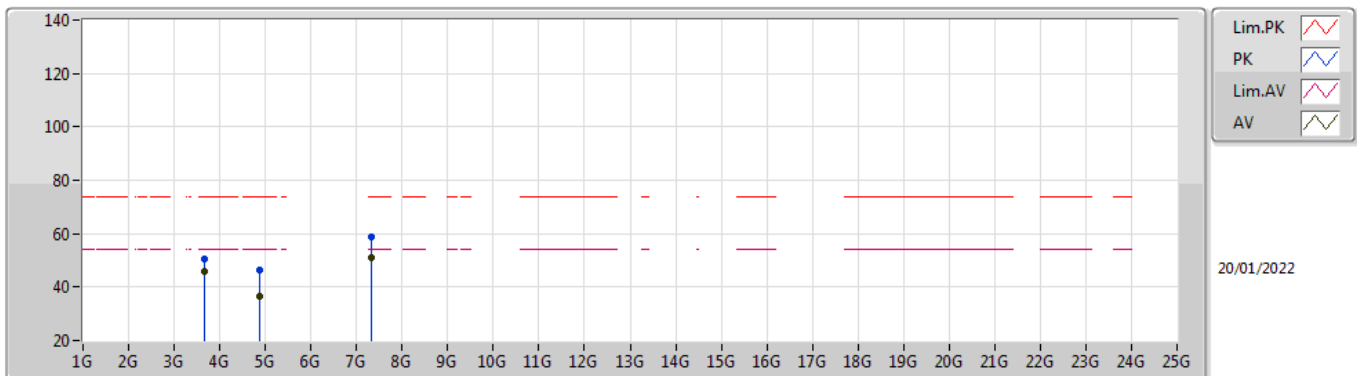
### 2440MHz\_TX



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	3.65997G	43.89	54.00	-10.11	2.44	3	Vertical	76	1.18	-	41.45	29.18	7.63	34.37
AV	4.87971G	36.75	54.00	-17.25	6.00	3	Vertical	258	2.93	-	30.75	31.20	8.96	34.16
AV	7.3194G	46.52	54.00	-7.48	12.49	3	Vertical	215	1.50	-	34.03	36.36	10.63	34.50
PK	3.66036G	48.64	74.00	-25.36	2.45	3	Vertical	76	1.18	-	46.19	29.18	7.64	34.37
PK	4.87946G	46.86	74.00	-27.14	6.00	3	Vertical	258	2.93	-	40.86	31.20	8.96	34.16
PK	7.32077G	55.68	74.00	-18.32	12.49	3	Vertical	215	1.50	-	43.19	36.36	10.63	34.50

### BT-LE(1Mbps)

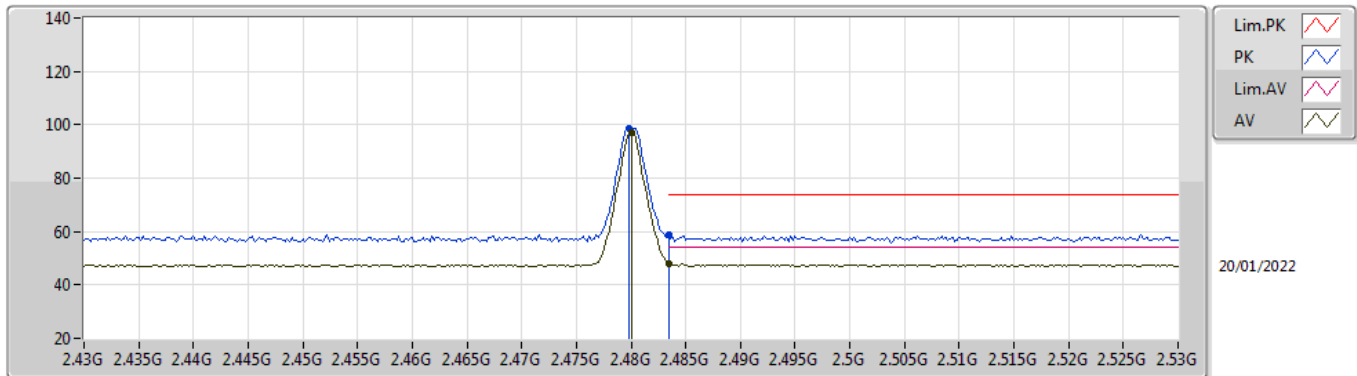
### 2440MHz\_TX



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	3.66002G	46.09	54.00	-7.91	2.45	3	Horizontal	46	1.27	-	43.64	29.18	7.64	34.37
AV	4.87973G	36.57	54.00	-17.43	6.00	3	Horizontal	192	2.68	-	30.57	31.20	8.96	34.16
AV	7.31942G	50.83	54.00	-3.17	12.49	3	Horizontal	273	1.00	-	38.34	36.36	10.63	34.50
PK	3.65958G	50.32	74.00	-23.68	2.44	3	Horizontal	46	1.27	-	47.88	29.18	7.63	34.37
PK	4.88046G	46.61	74.00	-27.39	6.00	3	Horizontal	192	2.68	-	40.61	31.20	8.96	34.16
PK	7.32G	58.89	74.00	-15.11	12.49	3	Horizontal	273	1.00	-	46.40	36.36	10.63	34.50

### BT-LE(1Mbps)

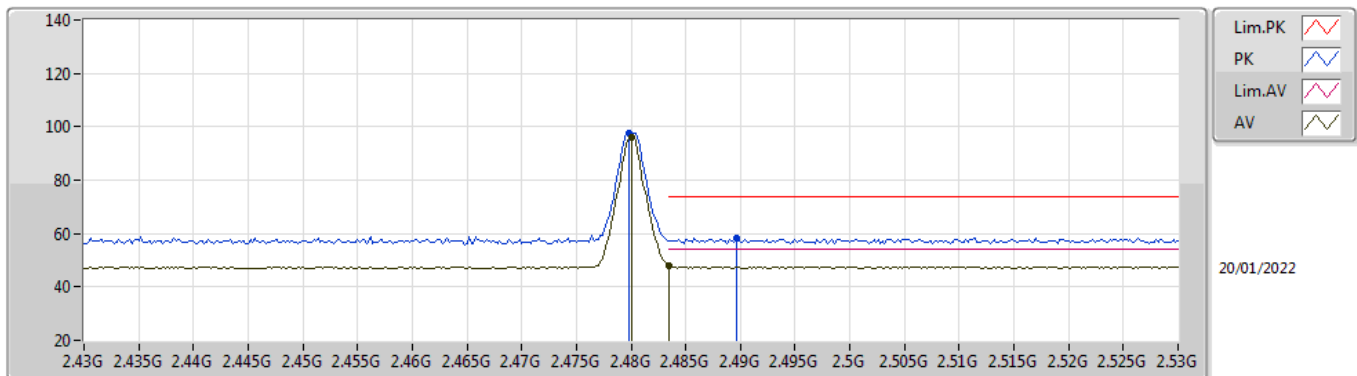
### 2480MHz\_TX



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	97.20	Inf	-Inf	34.72	3	Vertical	241	1.00	-	62.48	27.40	7.32	-
AV	2.4835G	48.16	54.00	-5.84	34.73	3	Vertical	241	1.00	-	13.43	27.40	7.33	-
PK	2.4798G	98.72	Inf	-Inf	34.72	3	Vertical	241	1.00	-	64.00	27.40	7.32	-
PK	2.4835G	58.63	74.00	-15.37	34.73	3	Vertical	241	1.00	-	23.90	27.40	7.33	-

### BT-LE(1Mbps)

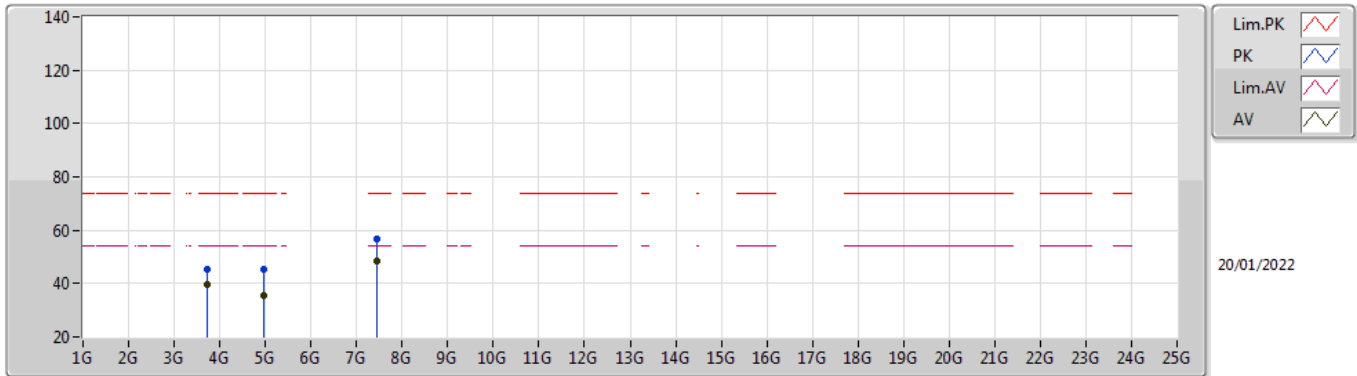
### 2480MHz\_TX



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	96.29	Inf	-Inf	34.72	3	Horizontal	234	1.59	-	61.57	27.40	7.32	-
AV	2.4835G	48.04	54.00	-5.96	34.73	3	Horizontal	234	1.59	-	13.31	27.40	7.33	-
PK	2.4798G	97.75	Inf	-Inf	34.72	3	Horizontal	234	1.59	-	63.03	27.40	7.32	-
PK	2.4896G	58.23	74.00	-15.77	34.73	3	Horizontal	234	1.59	-	23.50	27.40	7.33	-

**BT-LE(1Mbps)**

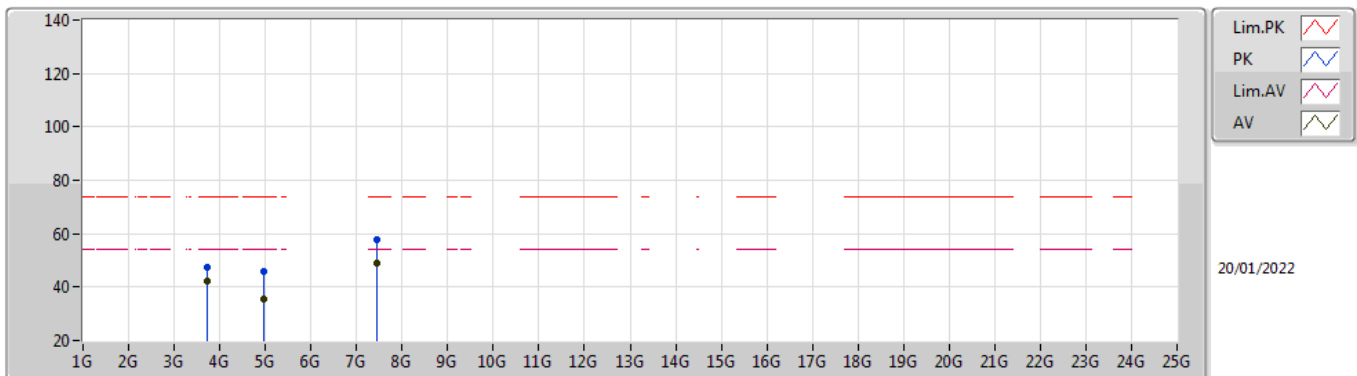
**2480MHz\_TX**



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	3.72G	39.63	54.00	-14.37	2.59	3	Vertical	77	1.37	-	37.04	29.14	7.83	34.38
AV	4.95964G	35.77	54.00	-18.23	6.32	3	Vertical	271	3.00	-	29.45	31.42	9.02	34.12
AV	7.43935G	48.33	54.00	-5.67	12.51	3	Vertical	226	1.16	-	35.82	36.28	10.72	34.49
PK	3.72028G	45.51	74.00	-28.49	2.59	3	Vertical	77	1.37	-	42.92	29.14	7.83	34.38
PK	4.95955G	45.47	74.00	-28.53	6.32	3	Vertical	271	3.00	-	39.15	31.42	9.02	34.12
PK	7.43921G	56.85	74.00	-17.15	12.51	3	Vertical	226	1.16	-	44.34	36.28	10.72	34.49

**BT-LE(1Mbps)**

**2480MHz\_TX**

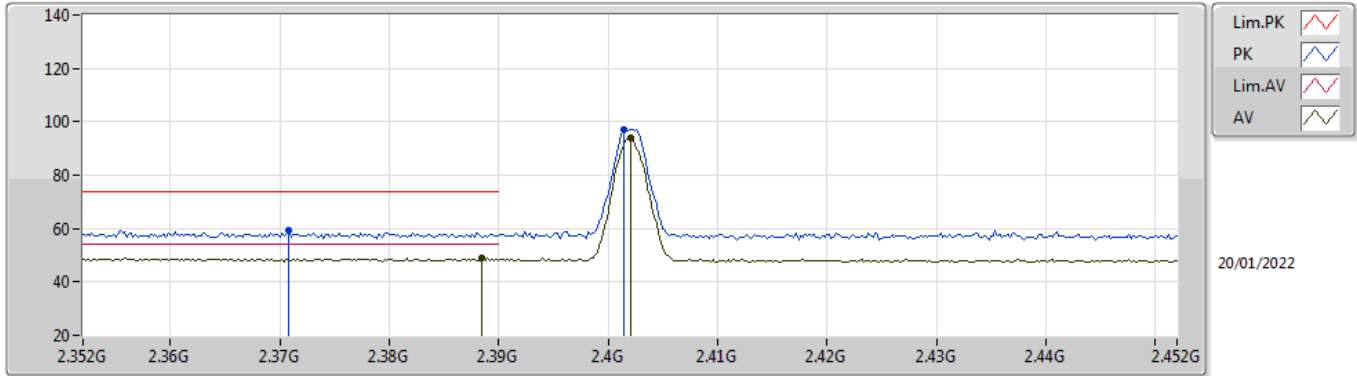


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	3.72004G	42.03	54.00	-11.97	2.59	3	Horizontal	48	1.00	-	39.44	29.14	7.83	34.38
AV	4.95967G	35.40	54.00	-18.60	6.32	3	Horizontal	56	1.05	-	29.08	31.42	9.02	34.12
AV	7.43942G	49.01	54.00	-4.99	12.51	3	Horizontal	274	1.02	-	36.50	36.28	10.72	34.49
PK	3.71958G	47.48	74.00	-26.52	2.59	3	Horizontal	48	1.00	-	44.89	29.14	7.83	34.38
PK	4.95953G	45.79	74.00	-28.21	6.32	3	Horizontal	56	1.05	-	39.47	31.42	9.02	34.12
PK	7.44002G	57.79	74.00	-16.21	12.51	3	Horizontal	274	1.02	-	45.28	36.28	10.72	34.49



### BT-LE(2Mbps)

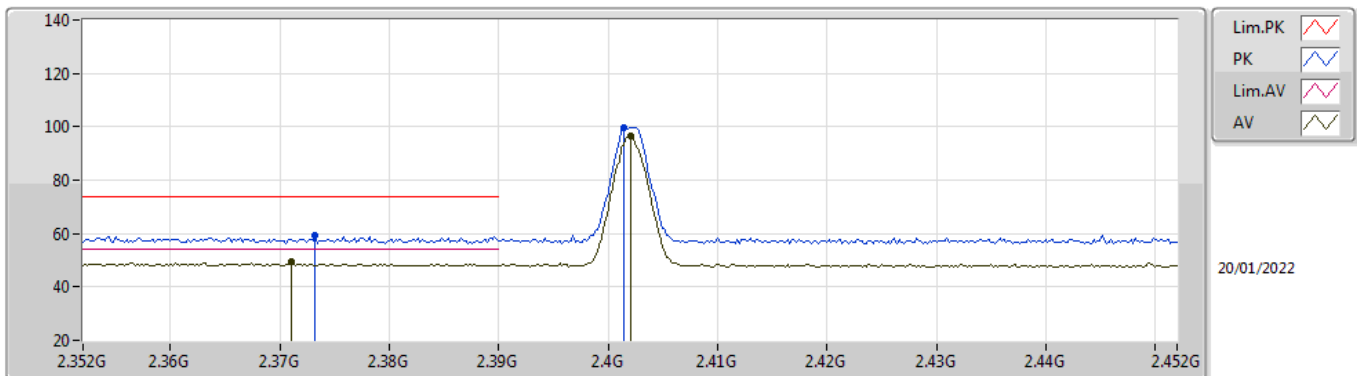
### 2402MHz\_TX



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	2.3884G	49.00	54.00	-5.00	34.97	3	Vertical	250	1.08	-	14.03	27.72	7.25	-
AV	2.402G	93.94	Inf	-Inf	34.95	3	Vertical	250	1.08	-	58.99	27.69	7.26	-
PK	2.3708G	59.35	74.00	-14.65	35.01	3	Vertical	250	1.08	-	24.34	27.76	7.25	-
PK	2.4014G	96.97	Inf	-Inf	34.95	3	Vertical	250	1.08	-	62.02	27.69	7.26	-

### BT-LE(2Mbps)

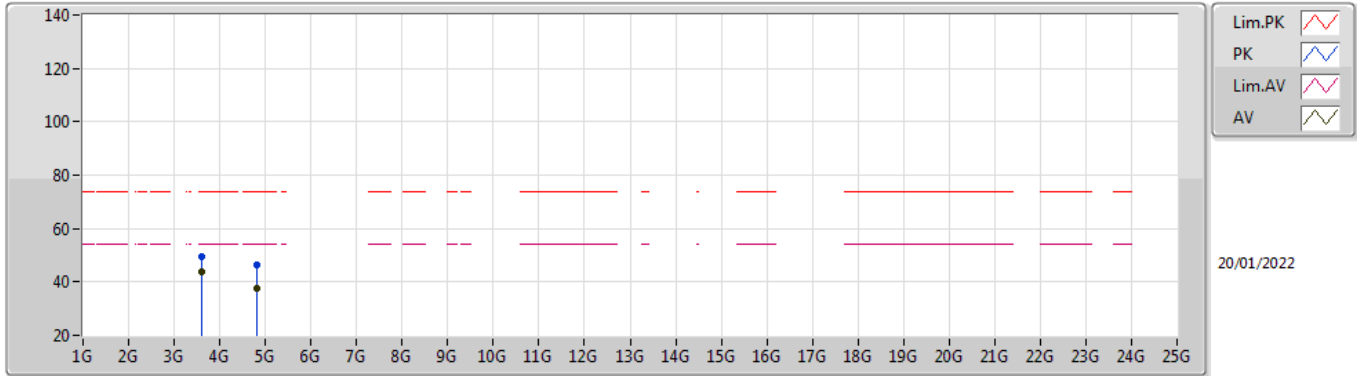
### 2402MHz\_TX



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	2.371G	49.39	54.00	-4.61	35.01	3	Horizontal	233	1.50	-	14.38	27.76	7.25	-
AV	2.402G	96.74	Inf	-Inf	34.95	3	Horizontal	233	1.50	-	61.79	27.69	7.26	-
PK	2.3732G	59.34	74.00	-14.66	35.00	3	Horizontal	233	1.50	-	24.34	27.75	7.25	-
PK	2.4014G	99.75	Inf	-Inf	34.95	3	Horizontal	233	1.50	-	64.80	27.69	7.26	-

**BT-LE(2Mbps)**

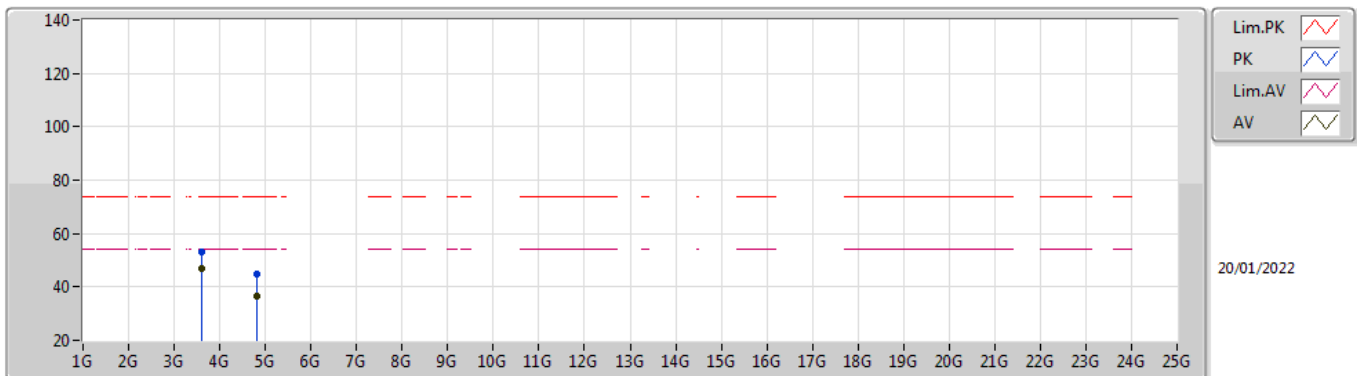
**2402MHz\_TX**



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	3.60299G	43.73	54.00	-10.27	2.20	3	Vertical	81	1.12	-	41.53	29.11	7.45	34.36
AV	4.80395G	37.44	54.00	-16.56	5.82	3	Vertical	254	2.56	-	31.62	31.11	8.90	34.19
PK	3.603G	49.63	74.00	-24.37	2.20	3	Vertical	81	1.12	-	47.43	29.11	7.45	34.36
PK	4.80287G	46.17	74.00	-27.83	5.82	3	Vertical	254	2.56	-	40.35	31.11	8.90	34.19

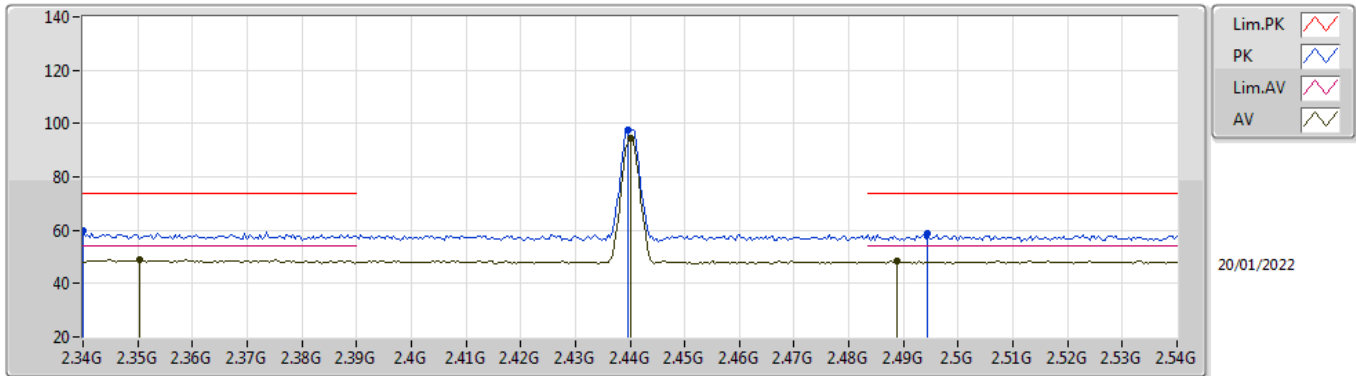
**BT-LE(2Mbps)**

**2402MHz\_TX**



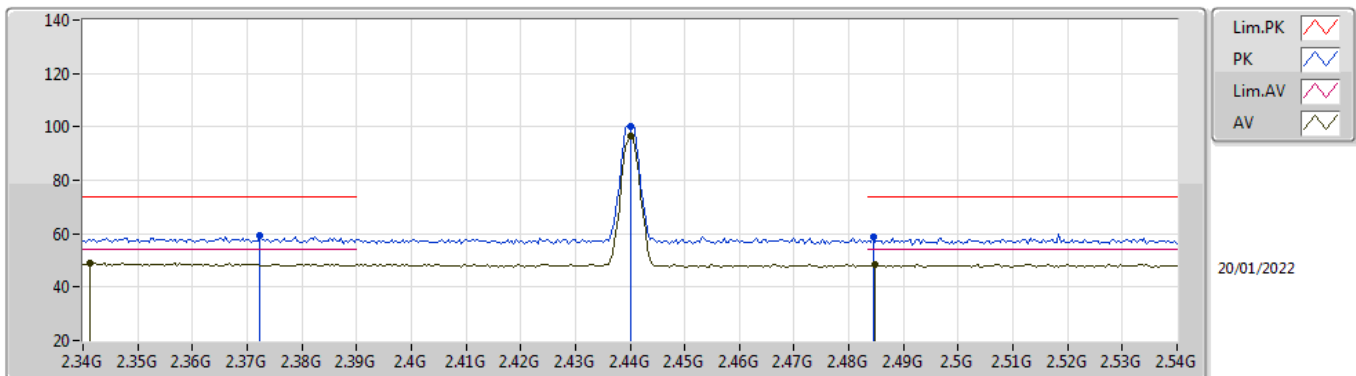
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	3.60253G	47.06	54.00	-6.94	2.20	3	Horizontal	42	1.13	-	44.86	29.11	7.45	34.36
AV	4.80395G	36.48	54.00	-17.52	5.82	3	Horizontal	53	1.00	-	30.66	31.11	8.90	34.19
PK	3.60224G	53.31	74.00	-20.69	2.19	3	Horizontal	42	1.13	-	51.12	29.10	7.45	34.36
PK	4.80522G	44.64	74.00	-29.36	5.82	3	Horizontal	53	1.00	-	38.82	31.11	8.90	34.19

**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	2.3504G	48.85	54.00	-5.15	35.04	3	Vertical	242	1.14	-	13.81	27.80	7.24	-
AV	2.44G	94.45	Inf	-Inf	34.75	3	Vertical	242	1.14	-	59.70	27.46	7.29	-
AV	2.4888G	48.36	54.00	-5.64	34.73	3	Vertical	242	1.14	-	13.63	27.40	7.33	-
PK	2.34G	59.65	74.00	-14.35	35.05	3	Vertical	242	1.14	-	24.60	27.82	7.23	-
PK	2.4396G	97.51	Inf	-Inf	34.75	3	Vertical	242	1.14	-	62.76	27.46	7.29	-
PK	2.4944G	58.86	74.00	-15.14	34.74	3	Vertical	242	1.14	-	24.12	27.40	7.34	-

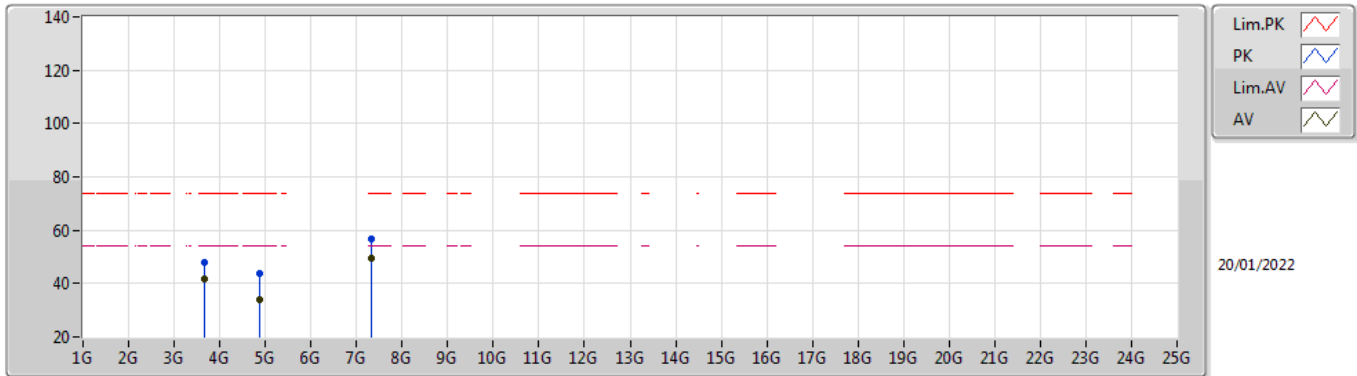
**BT-LE(2Mbps)**  
**2440MHz\_TX**



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	2.3412G	49.04	54.00	-4.96	35.05	3	Horizontal	242	1.00	-	13.99	27.82	7.23	-
AV	2.44G	96.51	Inf	-Inf	34.75	3	Horizontal	242	1.00	-	61.76	27.46	7.29	-
AV	2.4848G	48.49	54.00	-5.51	34.73	3	Horizontal	242	1.00	-	13.76	27.40	7.33	-
PK	2.3724G	59.13	74.00	-14.87	35.01	3	Horizontal	242	1.00	-	24.12	27.76	7.25	-
PK	2.44G	99.93	Inf	-Inf	34.75	3	Horizontal	242	1.00	-	65.18	27.46	7.29	-
PK	2.4844G	58.62	74.00	-15.38	34.73	3	Horizontal	242	1.00	-	23.89	27.40	7.33	-

**BT-LE(2Mbps)**

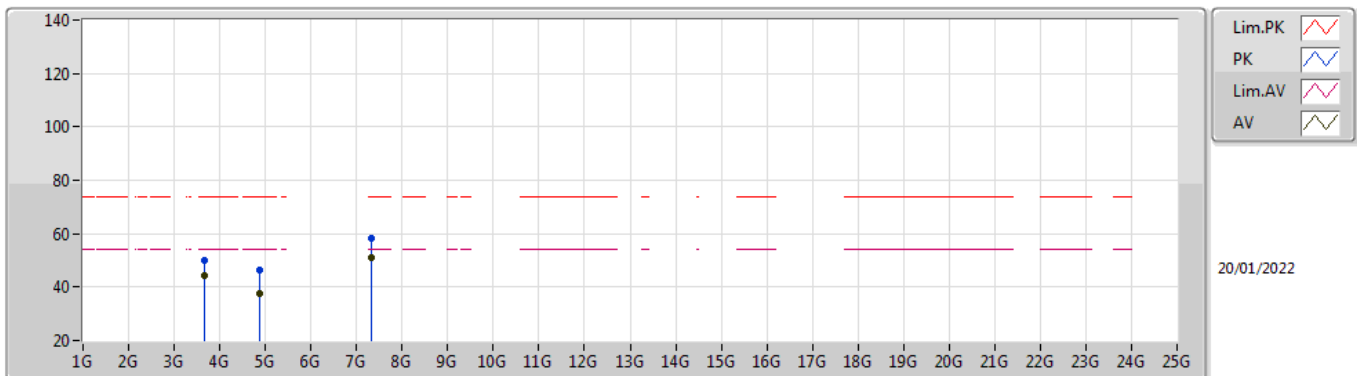
**2440MHz\_TX**



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	3.65998G	41.52	54.00	-12.48	2.44	3	Vertical	81	1.14	-	39.08	29.18	7.63	34.37
AV	4.87991G	34.19	54.00	-19.81	6.00	3	Vertical	87	3.00	-	28.19	31.20	8.96	34.16
AV	7.31862G	49.35	54.00	-4.65	12.49	3	Vertical	227	1.04	-	36.86	36.36	10.63	34.50
PK	3.65919G	47.72	74.00	-26.28	2.44	3	Vertical	81	1.14	-	45.28	29.18	7.63	34.37
PK	4.87906G	43.87	74.00	-30.13	6.00	3	Vertical	87	3.00	-	37.87	31.20	8.96	34.16
PK	7.31833G	56.87	74.00	-17.13	12.49	3	Vertical	227	1.04	-	44.38	36.36	10.63	34.50

**BT-LE(2Mbps)**

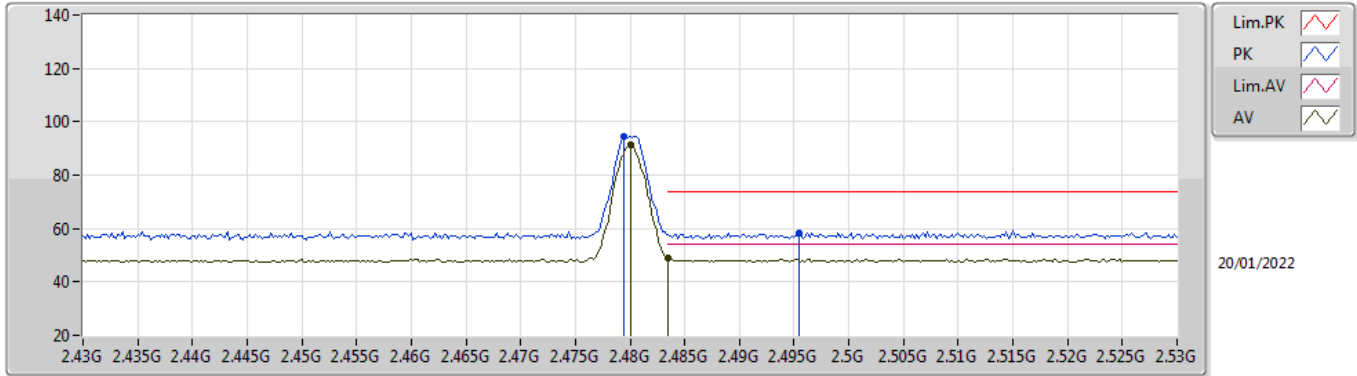
**2440MHz\_TX**



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	3.65995G	44.17	54.00	-9.83	2.44	3	Horizontal	43	1.04	-	41.73	29.18	7.63	34.37
AV	4.88G	37.66	54.00	-16.34	6.00	3	Horizontal	180	2.86	-	31.66	31.20	8.96	34.16
AV	7.31874G	51.09	54.00	-2.91	12.49	3	Horizontal	274	1.00	-	38.60	36.36	10.63	34.50
PK	3.66006G	50.09	74.00	-23.91	2.45	3	Horizontal	43	1.04	-	47.64	29.18	7.64	34.37
PK	4.8799G	46.23	74.00	-27.77	6.00	3	Horizontal	180	2.86	-	40.23	31.20	8.96	34.16
PK	7.31843G	58.48	74.00	-15.52	12.49	3	Horizontal	274	1.00	-	45.99	36.36	10.63	34.50

**BT-LE(2Mbps)**

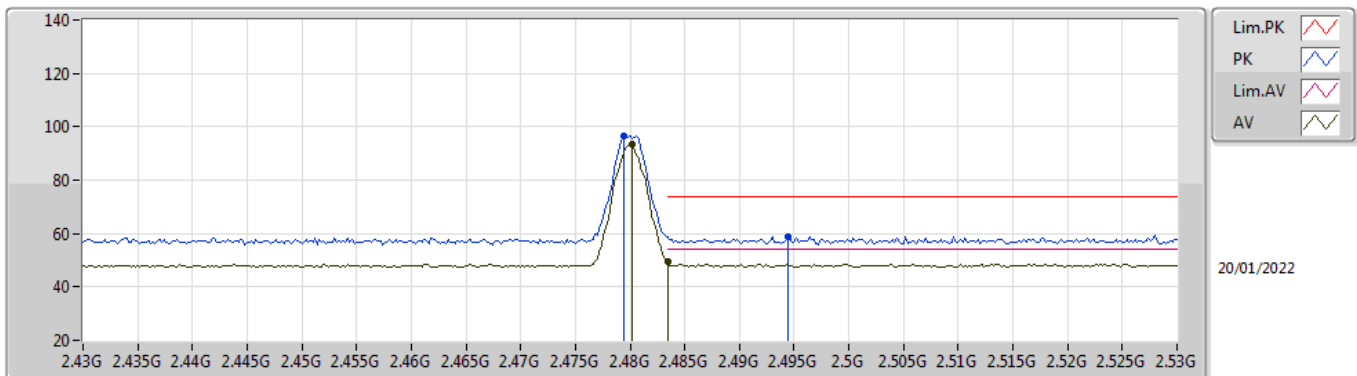
**2480MHz\_TX**



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	91.26	Inf	-Inf	34.72	3	Vertical	247	1.10	-	56.54	27.40	7.32	-
AV	2.4835G	49.06	54.00	-4.94	34.73	3	Vertical	247	1.10	-	14.33	27.40	7.33	-
PK	2.4794G	94.42	Inf	-Inf	34.72	3	Vertical	247	1.10	-	59.70	27.40	7.32	-
PK	2.4954G	58.46	74.00	-15.54	34.74	3	Vertical	247	1.10	-	23.72	27.40	7.34	-

**BT-LE(2Mbps)**

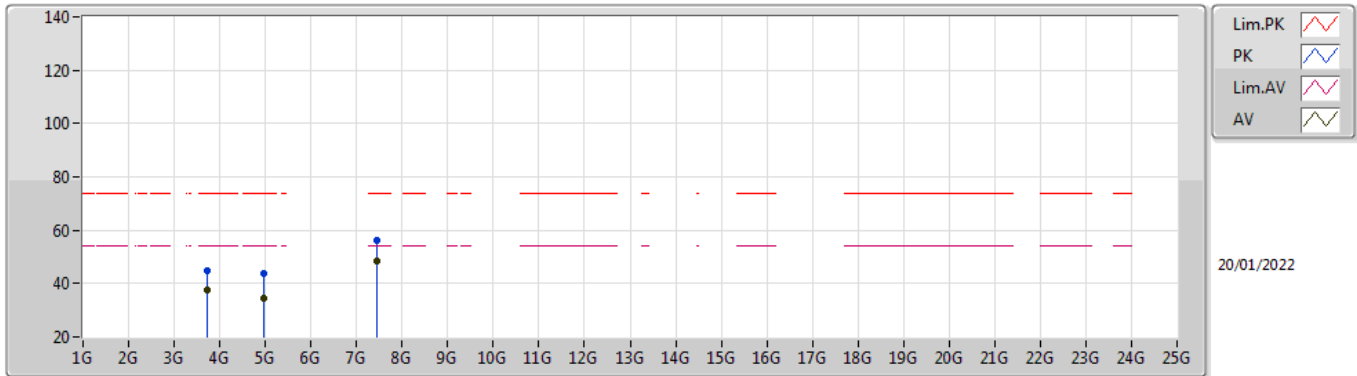
**2480MHz\_TX**



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	2.4802G	93.29	Inf	-Inf	34.72	3	Horizontal	235	1.15	-	58.57	27.40	7.32	-
AV	2.4835G	49.65	54.00	-4.35	34.73	3	Horizontal	235	1.15	-	14.92	27.40	7.33	-
PK	2.4794G	96.45	Inf	-Inf	34.72	3	Horizontal	235	1.15	-	61.73	27.40	7.32	-
PK	2.4944G	58.99	74.00	-15.01	34.74	3	Horizontal	235	1.15	-	24.25	27.40	7.34	-

**BT-LE(2Mbps)**

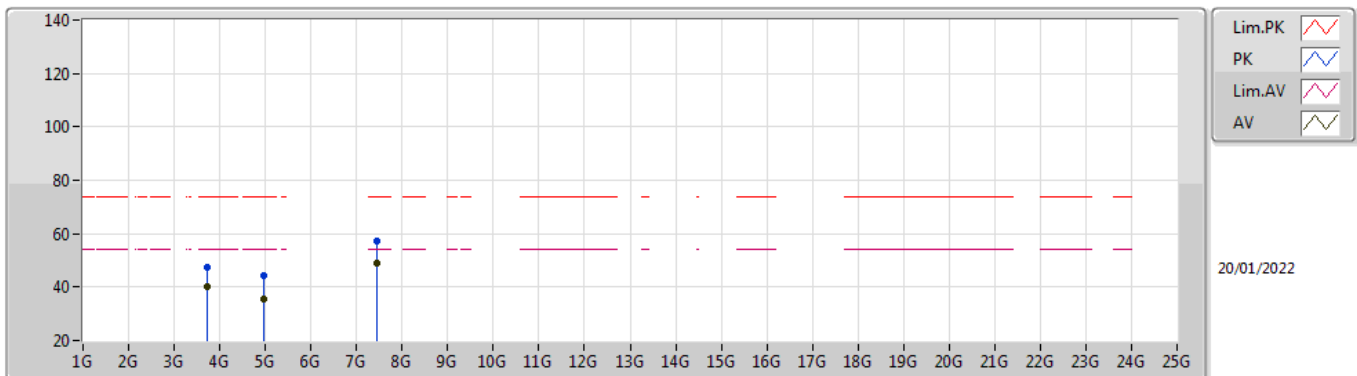
**2480MHz\_TX**



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	3.71988G	37.64	54.00	-16.36	2.59	3	Vertical	82	1.22	-	35.05	29.14	7.83	34.38
AV	4.95995G	34.48	54.00	-19.52	6.32	3	Vertical	81	1.50	-	28.16	31.42	9.02	34.12
AV	7.43868G	48.40	54.00	-5.60	12.51	3	Vertical	225	1.00	-	35.89	36.28	10.72	34.49
PK	3.71998G	45.07	74.00	-28.93	2.59	3	Vertical	82	1.22	-	42.48	29.14	7.83	34.38
PK	4.95892G	44.01	74.00	-29.99	6.32	3	Vertical	81	1.50	-	37.69	31.42	9.02	34.12
PK	7.44168G	56.15	74.00	-17.85	12.51	3	Vertical	225	1.00	-	43.64	36.28	10.72	34.49

**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	3.72002G	40.43	54.00	-13.57	2.59	3	Horizontal	44	1.00	-	37.84	29.14	7.83	34.38
AV	4.95889G	35.43	54.00	-18.57	6.32	3	Horizontal	50	2.01	-	29.11	31.42	9.02	34.12
AV	7.43867G	49.17	54.00	-4.83	12.51	3	Horizontal	276	1.00	-	36.66	36.28	10.72	34.49
PK	3.71909G	47.34	74.00	-26.66	2.59	3	Horizontal	44	1.00	-	44.75	29.14	7.83	34.38
PK	4.95919G	44.55	74.00	-29.45	6.32	3	Horizontal	50	2.01	-	38.23	31.42	9.02	34.12
PK	7.43844G	57.14	74.00	-16.86	12.51	3	Horizontal	276	1.00	-	44.63	36.28	10.72	34.49