

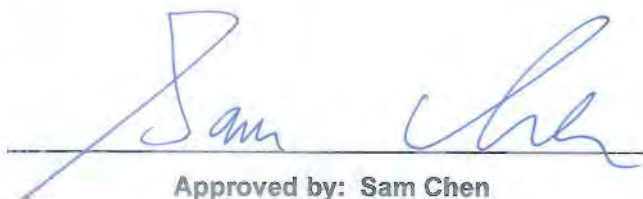


# RADIO TEST REPORT

**FCC ID** : 2AHBN-AP45  
**Equipment** : 802.11ax 6E Wireless Access Point  
**Brand Name** : Juniper  
**Model Name** : AP45, AP45E  
**Applicant** : Juniper Networks, Inc.  
1133 Innovation Way Sunnyvale, California 94089 USA  
**Manufacturer** : Juniper Networks, Inc.  
1133 Innovation Way Sunnyvale, California 94089 USA  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Oct. 08, 2021, and testing was started from Oct. 14, 2021 and completed on Jan. 04, 2022. We, Sporton International Inc. Hsinchu 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. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, 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 Applicable Standards .....11

1.3 Testing Location Information.....11

1.4 Measurement Uncertainty .....11

**2 Test Configuration of EUT .....12**

2.1 Test Channel Mode .....12

2.2 The Worst Case Measurement Configuration.....12

2.3 EUT Operation during Test .....14

2.4 Accessories .....14

2.5 Support Equipment.....15

2.6 Test Setup Diagram .....17

**3 Transmitter Test Result .....20**

3.1 AC Power-line Conducted Emissions .....20

3.2 DTS Bandwidth .....22

3.3 Maximum Conducted Output Power .....23

3.4 Power Spectral Density .....26

3.5 Emissions in Non-restricted Frequency Bands .....28

3.6 Emissions in Restricted Frequency Bands.....29

**4 Test Equipment and Calibration Data .....33**

**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	-

**Declaration of Conformity:**

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

**Comments and Explanations:**

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by: Sam Chen**

**Report Producer: Viola Huang**



# 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]

#### For Radio 4

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1	1TX
2.4-2.4835GHz	BT-LE(500Kb/s)	1	1TX
2.4-2.4835GHz	BT-LE(125Kb/s)	1	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2	1TX

Note:

- ◆ Bluetooth LE uses a GFSK modulation.
- ◆ BWch is the nominal channel bandwidth.



**1.1.2 Antenna Information**

Ant.	Port							Brand Name	Model Name	Ant. Type	Connector	Equip EUT	Gain (dBi)
	WLAN 5GHz (Radio 1)	WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)	WLAN 6GHz (Radio 3)	WLAN 2.4GHz (Radio 4)	WLAN 5GHz (Radio 4)	BT (Radio 5)						
1	1	4	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX	EUT 1	Note 1
2	2	3	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
3	3	2	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
4	4	1	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
5	-	-	1	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
6	-	-	2	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
7	-	-	3	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
8	-	-	4	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
9	-	-	-	1	-	-	-	Juniper	AP45	PIFA	I-PEX		
10	-	-	-	2	-	-	-	Juniper	AP45	PIFA	I-PEX		
11	-	-	-	3	-	-	-	Juniper	AP45	PIFA	I-PEX		
12	-	-	-	4	-	-	-	Juniper	AP45	PIFA	I-PEX		
13	-	-	-	-	1	1	-	Juniper	AP45	PIFA	I-PEX		
14	-	-	-	-	2	2	-	Juniper	AP45	PIFA	I-PEX		
15	-	-	-	-	-	-	1	Juniper	AP45	PIFA	I-PEX		
16	1	4	-	-	-	-	-	Acce ITex	ATS-OO-2456-4 66-10MC-36	OMNI	4-Port connector	EUT 2	
	2	3	-	-	-	-	-						
	3	2	-	-	-	-	-						
	4	1	-	-	-	-	-						
17	1	4	-	-	-	-	-	Acce ITex	ATS-OP-2456-8 1010-10MC-36	Panel	4-Port connector		
	2	3	-	-	-	-	-						
	3	2	-	-	-	-	-						
	4	1	-	-	-	-	-						



Note 1:

Ant.	Antenna Gain (dBi)																		
	WLAN 5GHz (Radio 1)				WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)				WLAN 6GHz (Radio 3)				WLAN 2.4GHz (Radio 4)	WLAN 5GHz (Radio 4)				Bluetooth (Radio 5)
	UNII 1	UNII 2A	UNII 2C	UNII 3		UNII 1	UNII 2A	UNII 5	UNII 6	UNII 7	UNII 8	UNII 1	UNII 2A		UNII 2C	UNII 3			
1	2.89	3.7	3.46	2.39	2.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2.61	2.55	3.04	3.8	0.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	1.94	2.22	2.82	2.54	2.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	3.27	4.06	2.87	2.17	1.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	3.2	3.56	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	2.85	3.77	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	3.37	3.23	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	3.11	3.68	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	5.0	5.4	5.4	5.5	5.3	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	5.0	5.4	5.4	5.5	5.3	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5
16	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	10	10	10	10	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ant.	Directional Gain (dBi)						
	WLAN 5GHz (Radio 1)				WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)	
	UNII 1	UNII 2A	UNII 2C	UNII 3		UNII 1	UNII 2A
1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	6.44	6.41	7.19	6.67	4.23	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	7.7	8.16
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-

Note 2: The EUT has seventeen antennas. The ant.15 is BLE Array (Beam 1~Beam 9 and Omni).

Note 3: The above information was declared by manufacturer.

Note 4: For EUT 1:

Radio 1, 2: Maximum Directional Gain following KDB662911 D03. The antenna report is provided in the operational description for this application.

Radio 3: Maximum Directional Gain following KDB662911 D01.

For EUT 2: Maximum Directional Gain following KDB662911 D01.

**For EUT 1**

**For Radio 2**

**For 2.4GHz:**

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

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 1**

**For 5GHz UNII 1~3:**

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

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 2**

**For 5GHz UNII 1~2:**

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

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 3****For 6E UNII 5~8 (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For scanning Radio 4****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX/2RX):****For 5GHz UNII 1~3:****For IEEE 802.11a/n/ac/ax mode (1TX/2RX):**

For 1TX

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

For 2TX/2RX

The EUT supports the port 1 and port 2 with TX diversity function.

Port 1 generated the worst case than port 2, so it is tested and recorded in the report.

Port 1 and port 2 could receive simultaneously.

**For Radio 5****Bluetooth (1TX/1RX):**

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

**For EUT 2****For Radio 2****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 1****For 5GHz UNII 1~3:****For IEEE 802.11a/n/ac/ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 3: Disable by FW****For scanning Radio 4: Disable by FW****For Radio 5****Bluetooth (1TX/1RX):**

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





**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.631	2	394.375u	3k
BT-LE(2Mbps)	0.333	4.78	208.125u	10k

Note:

- ◆ DC is Duty Cycle.
- ◆ DCF is Duty Cycle Factor.

**1.1.4 EUT Operational Condition**

<b>EUT Power Type</b>	From PoE		
<b>Function</b>	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/>	Point-to-point
<b>Test Software Version</b>	accessMTool(version 3.2.1.5)		
<b>Support Mode</b>	<input checked="" type="checkbox"/>	LE 1M PHY: 1 Mb/s	
	<input checked="" type="checkbox"/>	LE Coded PHY (S=2): 500 Kb/s	
	<input checked="" type="checkbox"/>	LE Coded PHY (S=8): 125 Kb/s	
	<input checked="" type="checkbox"/>	LE 2M PHY: 2 Mb/s	

Note: The above information was declared by manufacturer.



**1.1.5 Table for Radio function**

For EUT 1

Radio	WLAN 2.4GHz	5GHz UNII 1~2	5GHz UNII 1~3	6E (UNII 5~8)	Scanning radio (WLAN 2.4GHz / 5GHz UNII 1~3)	Bluetooth
1	-	-	V	-	-	-
2	V	V	-	-	-	-
3	-	-	-	V	-	-
4	-	-	-	-	V	-
5	-	-	-	-	-	V

For EUT 2

Radio	WLAN 2.4GHz	5GHz UNII 1~3	6E (UNII 5~8)	Scanning radio (WLAN 2.4GHz / 5GHz UNII 1~3)	Bluetooth
1	-	V	-	-	-
2	V	-	-	-	-
3	-	-	Disable by FW	-	-
4	-	-	-	Disable by FW	-
5	-	-	-	-	V

Note: The above information was declared by manufacturer.

**1.1.6 Table for EUT Operation Function**

Mode	Operation Function
1	EUT 1 - R1: 5GHz full band+R2: 2.4GHz+R3: 6E+R4: 2.4GHz+R5: Bluetooth
2	EUT 1 - R1: 5GHz full band+R2: 2.4GHz+R3: 6E+R4: 5GHz+R5: Bluetooth
3	EUT 1 - R1: 5GHz high band+R2: 5GHz low band+R3: 6E+R4: 2.4GHz+R5: Bluetooth
4	EUT 1 - R1: 5GHz high band+R2: 5GHz low band+R3: 6E+R4: 5GHz+R5: Bluetooth
5	EUT 1 - R1: 5GHz full band+R2: 2.4GHz+R5: Bluetooth
6	EUT 1 - R1: 5GHz full band+R2: 2.4GHz+R5: Bluetooth

Note: The above information was declared by manufacturer.

**1.1.7 Table for Multiple Listing**

Model Name	EUT	Antenna	FEM of UNII high band of Radio 1	FEM of UNII low band of Radio 2	Radio 3 (6GHz)	Radio 4 (2.4/5GHz Scanning Radio)
AP45	1	Internal	V	V	V	V
AP45E	2	External	Removed	Removed	Disabled	Disabled

Note 1: FEM means Front End Module

Note 2: The above information was declared by manufacturer.



### 1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.247
- ♦ ANSI C63.10-2013

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

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

### 1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	For EUT 1: Brian Sun	24.3~25.2 / 60~62	Oct. 19, 2021~Nov. 04, 2021
Radiated below 1GHz	03CH01-CB	For EUT 1: Ken Yeh	24.2~26.5 / 54~56	Nov. 09, 2021~Dec. 29, 2021
	03CH05-CB	For EUT 2: Ken Yeh	22.5~23.6 / 56~59	Dec. 29, 2021~Dec. 30, 2021
Radiated above 1GHz	03CH02-CB	For EUT 1: Stim Sung	24.1~25.2 / 55~58	Oct. 14, 2021~Oct. 23, 2021
AC Conduction	CO01-CB	Peter Wu	22~23 / 55~56	Nov. 15, 2021~Jan. 04, 2022

### 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	8
2440MHz	8
2480MHz	8
BT-LE(2Mbps)	-
2402MHz	8
2440MHz	8
2480MHz	8

### 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>	Normal Link
1	EUT 1-R1: 5GHz full band+R2: 2.4GHz+R3: 6E+R4: 2.4GHz+R5: Bluetooth
2	EUT 1-R1: 5GHz full band+R2: 2.4GHz+R3: 6E+R4: 5GHz+R5: Bluetooth
3	EUT 1-R1: 5GHz high band+R2: 5GHz low band+R3: 6E+R4: 2.4GHz +R5: Bluetooth
4	EUT 1-R1: 5GHz high band+R2: 5GHz low band+R3: 6E+R4: 5GHz+R5: Bluetooth
5	EUT 2-R1: 5GHz full band (Ant.17)+R2: 2.4GHz (Ant.17)+R5: Bluetooth (Ant.15)
6	EUT 2-R1: 5GHz full band (Ant.17)+R2: 2.4GHz (Ant.17)+R5: Bluetooth (Ant.15)

For operating mode 2 is the worst case and it was record in this test report.

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
1	EUT 1



<b>The Worst Case Mode for Following Conformance Tests</b>	
<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>	Normal Link
1	EUT 1 in Z axis-R1 5GHz band+R2 2.4GHz+R3 6E+R4 2.4GHz+R5 Bluetooth+PoE
2	EUT 1 in Z axis-R1 5GHz band+R2 2.4GHz+R3 6E+R4 5GHz+R5 Bluetooth+PoE
3	EUT 1 in Z axis-R1 5GHz high band+R2 5GHz low band+ R3 6E+R4 2.4GHz +R5 Bluetooth+ PoE
4	EUT 1 in Z axis-R1 5GHz high band+R2 5GHz low band+R3 6E+R4 5GHz+R5 Bluetooth+PoE
Mode 2 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~6 will follow this same test mode.	
5	EUT 1 in Y axis-R1 5GHz band+R2 2.4GHz+R3 6E+R4 5GHz+R5 Bluetooth+PoE
6	EUT 1 in X axis-R1 5GHz band+R2 2.4GHz+R3 6E+R4 5GHz+R5 Bluetooth +PoE
7	EUT 2 in Z axis-R1 5GHz band (Ant.16) + R2 2.4GHz (Ant.16) + R5 Bluetooth (Ant.15) + PoE
8	EUT 2 in Y axis-R1 5GHz band (Ant.16) + R2 2.4GHz (Ant.16) + R5 Bluetooth (Ant.15) + PoE
9	EUT 2 in X axis-R1 5GHz band (Ant.16) + R2 2.4GHz (Ant.16) + R5 Bluetooth (Ant.15) + PoE
Mode 8 has been evaluated to be the worst case among Mode 7~9, thus measurement for Mode 10 will follow this same test mode.	
10	EUT 2 in Y axis-R1 5GHz band (Ant.17) + R2 2.4GHz (Ant.17) + R5 Bluetooth (Ant.15) + PoE
For operating mode 6 is the worst case and it was record in this test report.	
<b>Operating Mode &gt; 1GHz</b>	CTX
	1. The EUT was performed at X axis, Y axis and Z axis, and the worst case was found at X axis. So the measurement will follow this same test configuration. 2. The EUT (bluetooth) was support bema 1~9 and omin beam function, after evaluating, beam 9 and omni beam mode has been selected to execute the test
1	EUT 1 in X axis_ Bluetooth (Beam 9)
2	EUT 1 in X axis_ Bluetooth (Omni beam)



<b>The Worst Case Mode for Following Conformance Tests</b>	
<b>Tests Item</b>	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
<b>Operating Mode</b>	
1	EUT 1-R1 5GHz band+R2 2.4GHz+R3 6E+R4 2.4GHz+R5 Bluetooth
2	EUT 1-R1 5GHz band+R2 2.4GHz+R3 6E+R4 5GHz+ R5 Bluetooth
3	EUT 1-R1 5GHz high band+R2 5GHz low band+R3 6E+R4 2.4GHz+R5 Bluetooth
4	EUT 1-R1 5GHz high band+R2 5GHz low band+R3 6E+R4 5GHz+R5 Bluetooth
5	EUT 2-R1 5GHz band (Ant. 16) + R2 2.4GHz (Ant. 16) + R5 Bluetooth (Ant. 15)
6	EUT 2-R1 5GHz band (Ant. 17) + R2 2.4GHz (Ant. 17) + R5 Bluetooth (Ant. 15)

Refer to Sporton Test Report No.: FA182421-01 for Co-location RF Exposure Evaluation.

Note: The PoE is for measurement only, would not be marketed.

PoE information as below:

<b>Power</b>	<b>Brand</b>	<b>Model</b>
PoE	PHIHONG	POE60U-1BT-5

### 2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

### 2.4 Accessories

<b>Others</b>
Antenna bracket*1 (Only for ant. 17 use)
Bracket*1



## 2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	PD Load	JUNIPER	RXRB-MIB	N/A
C	PD PC	DELL	T3400	N/A
D	LAN NB	DELL	E6430	N/A
E	2.4G NB	DELL	E6430	N/A
F	5G NB	DELL	E6430	N/A
G	SCAN NB	DELL	E6430	N/A
H	6E device	JUNIPER	RXRB-MIB	N/A
I	Flash disk3.0	Transcend	JetFlash-700	N/A
J	6E NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	Notebook	DELL	E4300	N/A
C	Notebook	DELL	E4300	N/A
D	Notebook	DELL	E4300	N/A
E	Notebook	DELL	E4300	N/A
F	6E device	JUNIPER	AP45	N/A
G	Notebook	DELL	E4300	N/A
H	Notebook	DELL	E4300	N/A
I	PD Load	JUNIPER	AP45	N/A
J	Flash disk3.0	Transcend	JetFlash-700	N/A



**For Radiated (above 1GHz):**

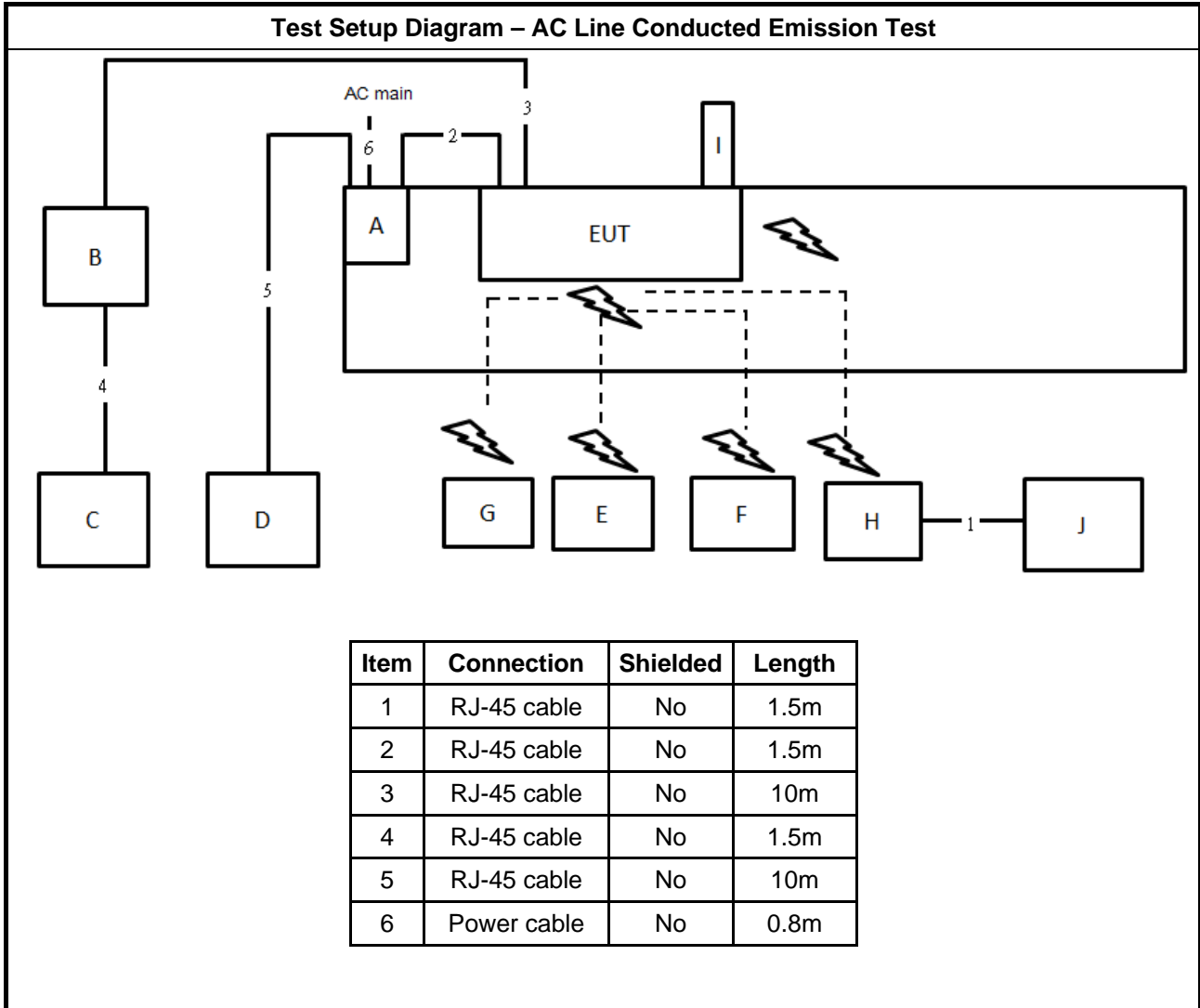
<b>Support Equipment</b>				
<b>No.</b>	<b>Equipment</b>	<b>Brand Name</b>	<b>Model Name</b>	<b>FCC ID</b>
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	Notebook	DELL	E4300	N/A

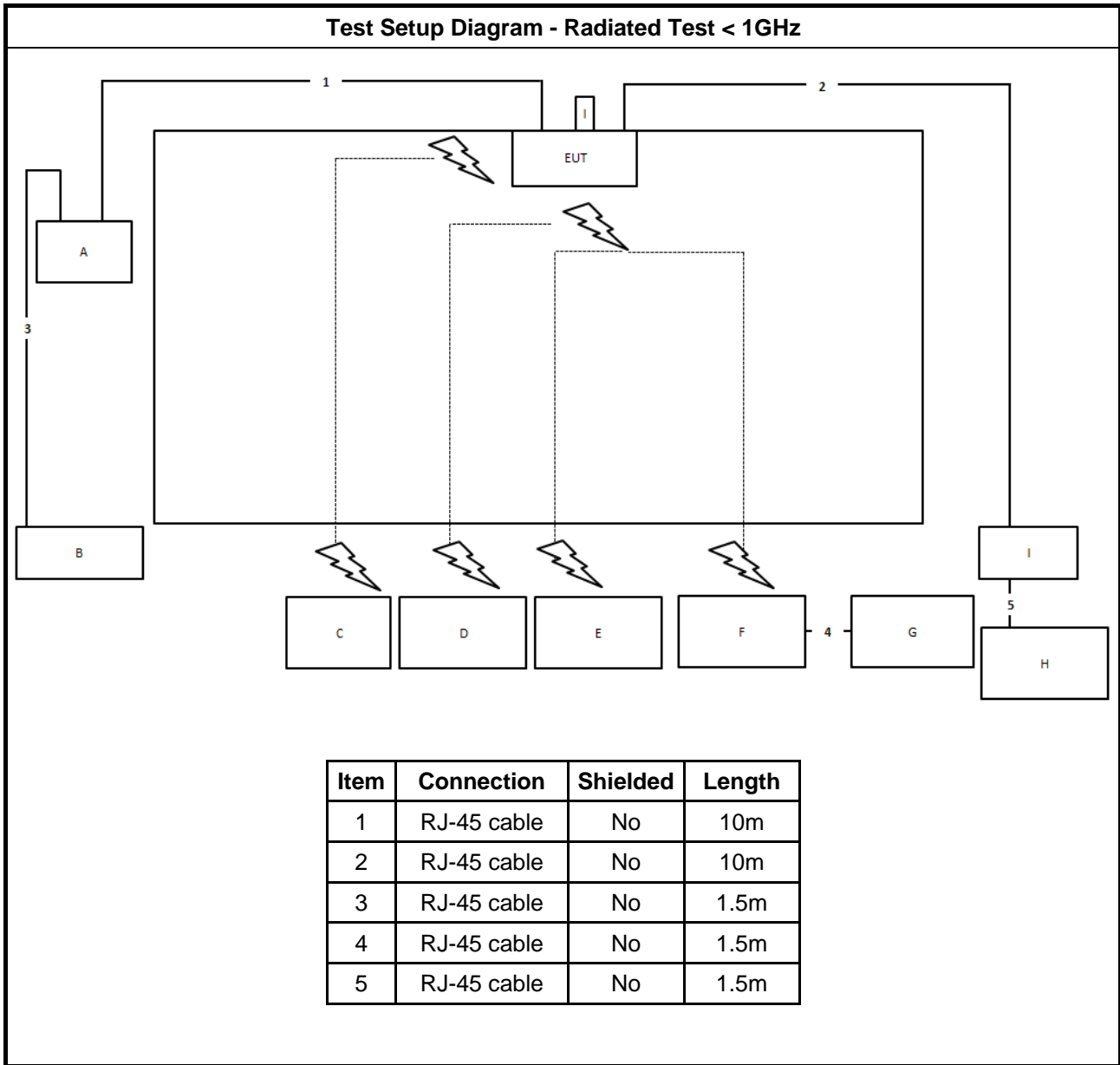
**For RF Conducted:**

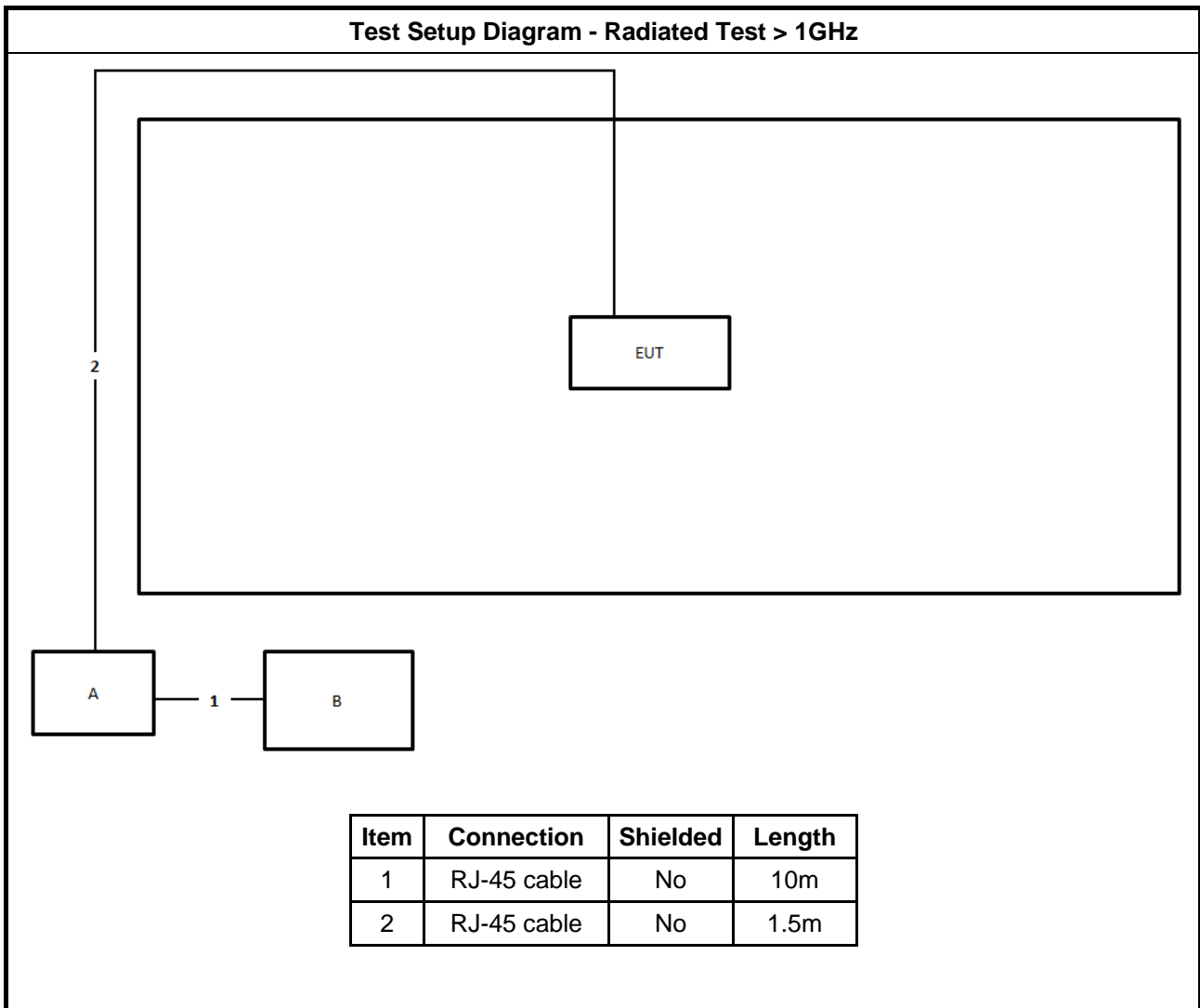
<b>Support Equipment</b>				
<b>No.</b>	<b>Equipment</b>	<b>Brand Name</b>	<b>Model Name</b>	<b>FCC ID</b>
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	Notebook	DELL	E4300	N/A



## 2.6 Test Setup Diagram









### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

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

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

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

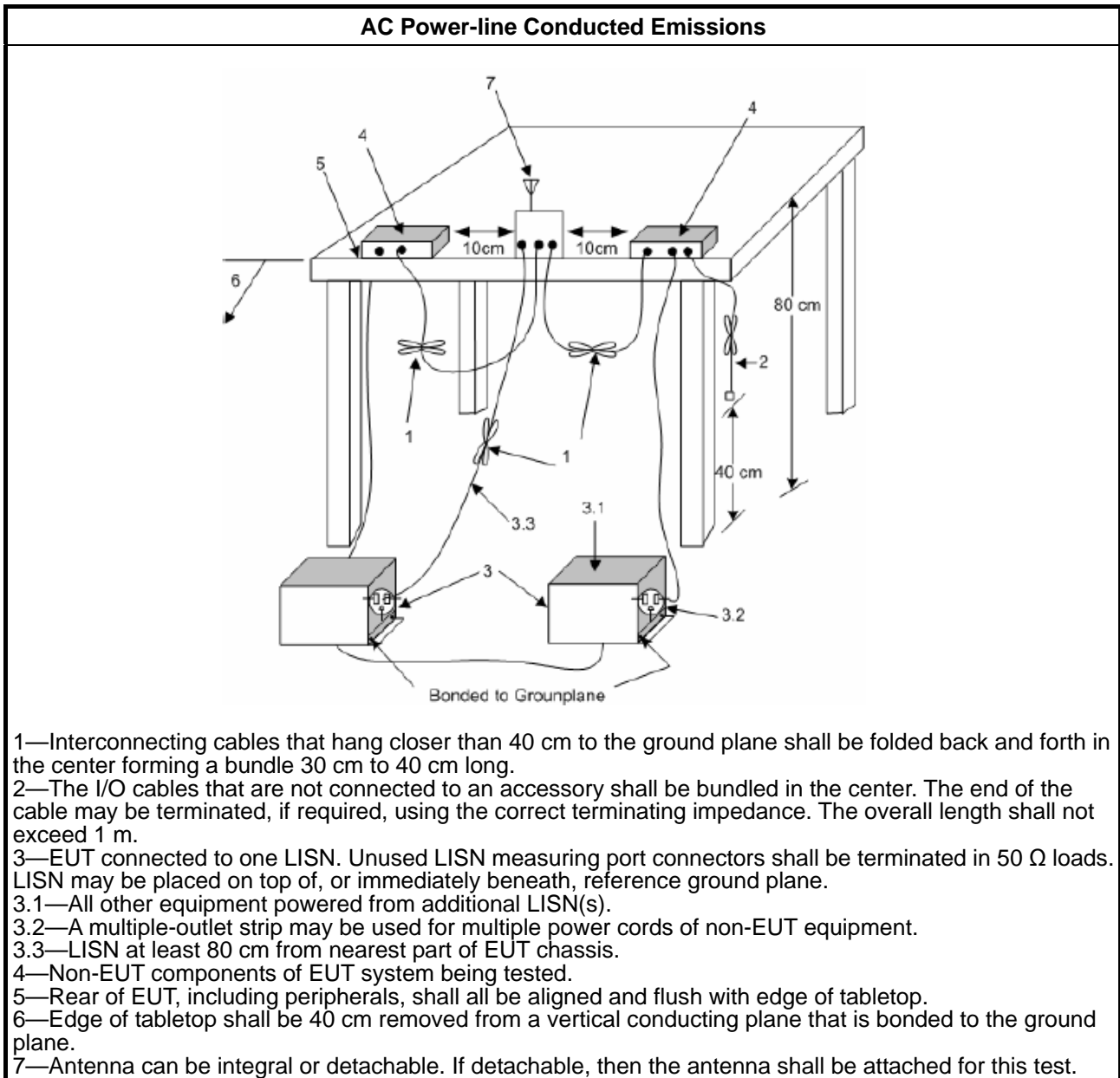
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

### 3.1.4 Test Setup



#### 1.1.1. Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

### 3.1.5 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
<b>Systems using digital modulation techniques:</b>
<ul style="list-style-type: none"> <li>▪ 6 dB bandwidth <math>\geq</math> 500 kHz.</li> </ul>

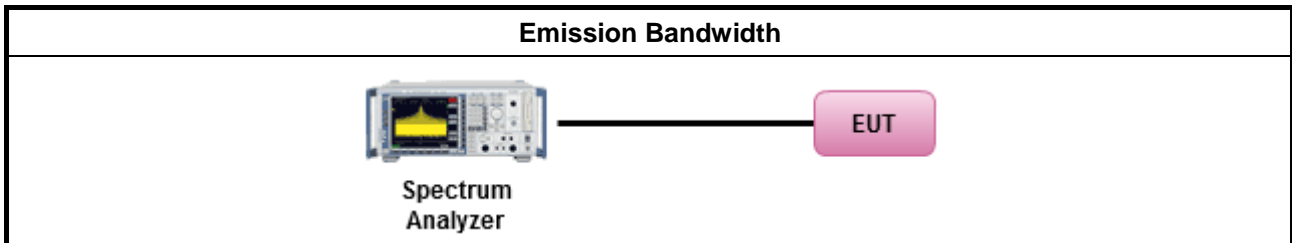
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>▪ For the emission bandwidth shall be measured using one of the options below:</li> </ul>
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 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>
$P_{Out}$ = maximum peak conducted output power or maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi.	

#### 3.3.2 Measuring Instruments

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

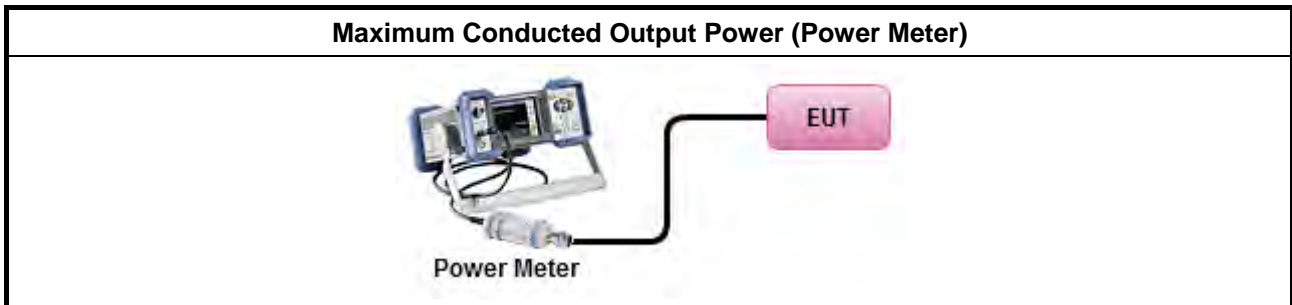


**3.3.3 Test Procedures**

Test Method	
<ul style="list-style-type: none"> <li>▪ Maximum Peak Conducted Output Power</li> </ul>	
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
<ul style="list-style-type: none"> <li>▪ Maximum Conducted Output Power</li> </ul>	
[duty cycle ≥ 98% or external video / power trigger]	
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average 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 FCC 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 display="block">P_{total} = P_1 + P_2 + \dots + P_n</math>                     (calculated in linear unit [mW] and transfer to log unit [dBm])  <math display="block">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>

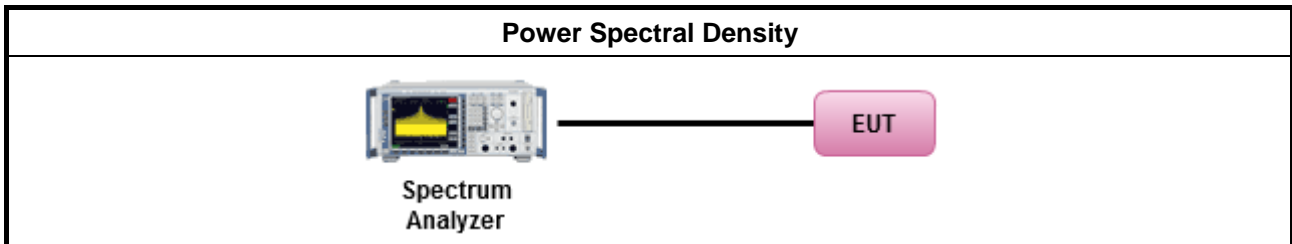
#### 3.4.2 Measuring Instruments

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 FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD. [duty cycle ≥ 98% or external video / power trigger]
<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:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC 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> <li><input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,</li> <li><input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.</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 (dBc)
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 PSD 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 PSD level.

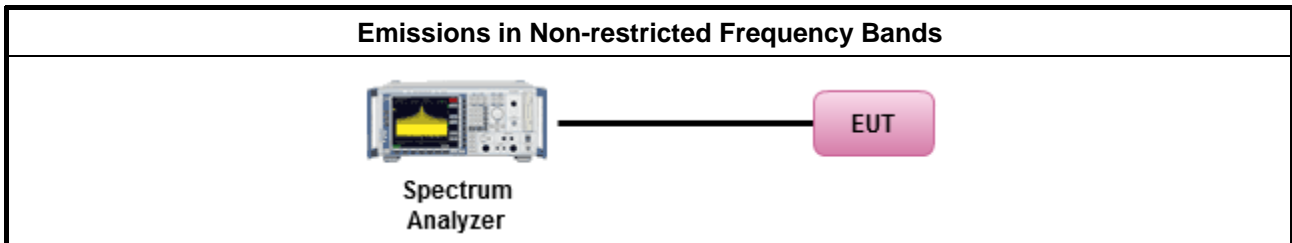
#### 3.5.2 Measuring Instruments

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 FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted 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

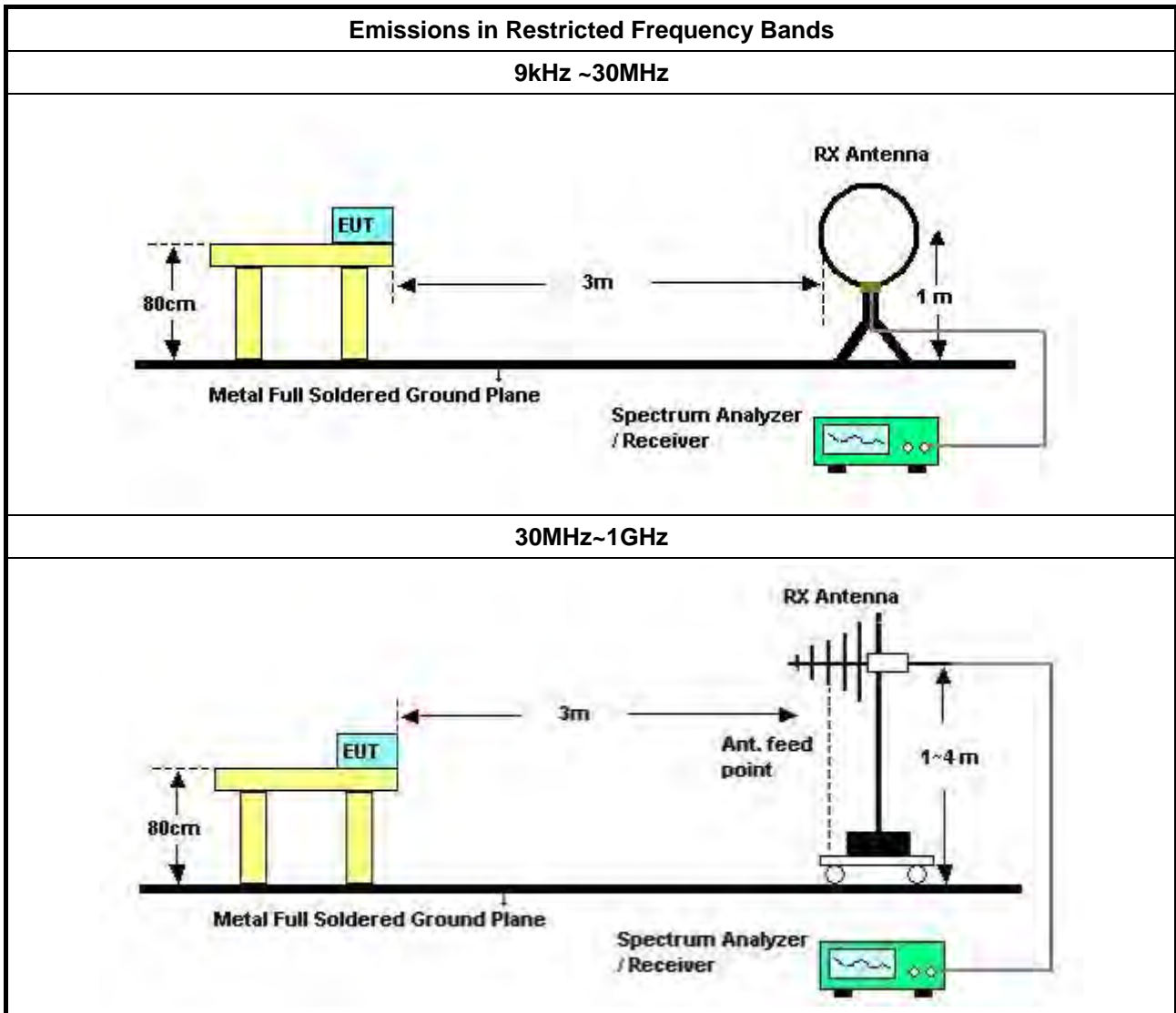
Refer a test equipment and calibration data table in this test report.

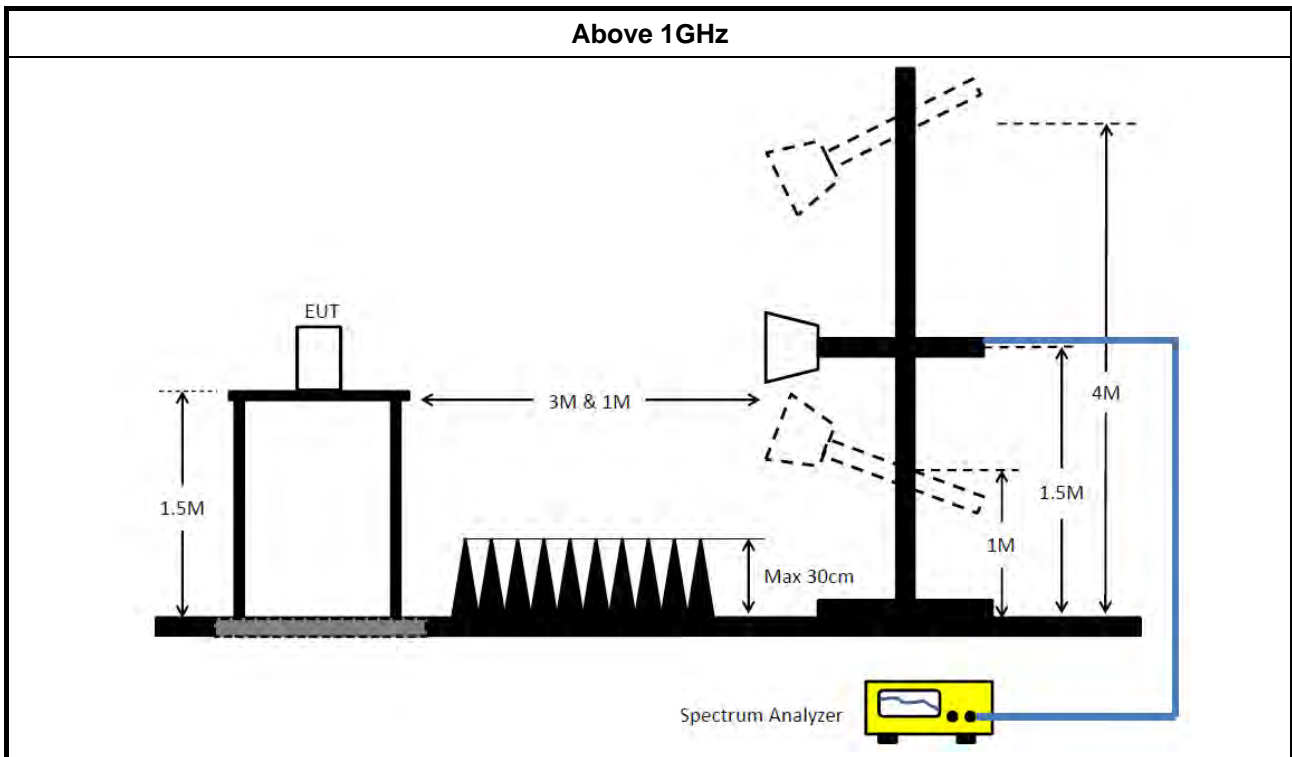


**3.6.3 Test Procedures**

<b>Test Method</b>	
<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle <math>\geq</math> 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:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.</li> </ul>
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq$ 98%).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq$ 1/T).
<input type="checkbox"/>	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> <li>▪ For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074 clause 8.7 &amp; c63.10 clause 11.13.1, 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> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.</li> </ul>

**3.6.4 Test Setup**





**3.6.5 Measurement Results Calculation**

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

**3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)**

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

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

Refer as Appendix F





## 4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz~100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH01-CB	30 MHz ~ 1 GHz	Jan. 26, 2021	Jan. 25, 2022	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Feb. 22, 2021	Feb. 21, 2022	Radiation (03CH01-CB)
Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 03, 2021	May 02, 2022	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz 3m	Mar. 27, 2021	Mar. 26, 2022	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	May 04, 2021	May 03, 2022	Radiation (03CH02-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 31, 2020	Dec. 30, 2021	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.

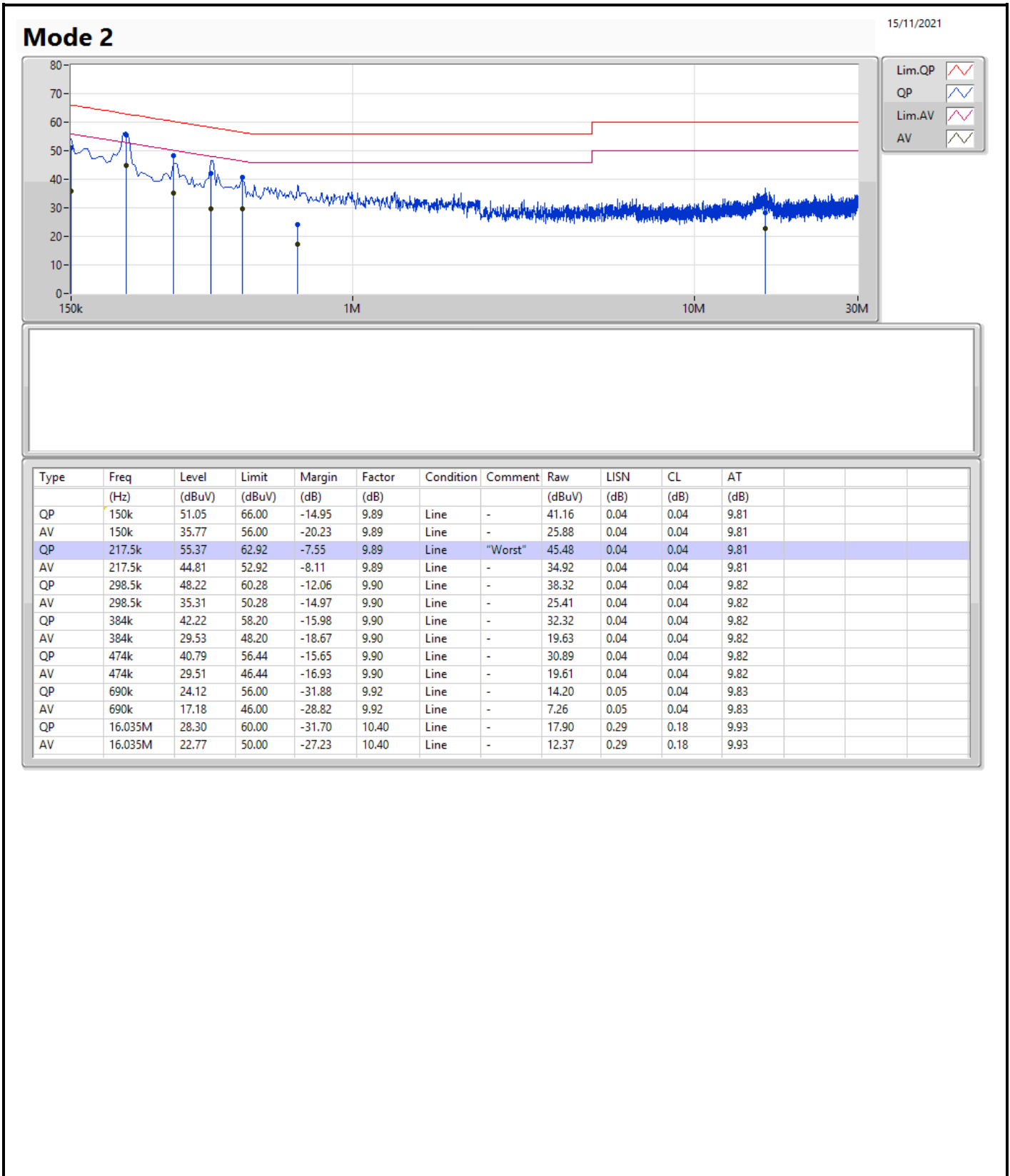


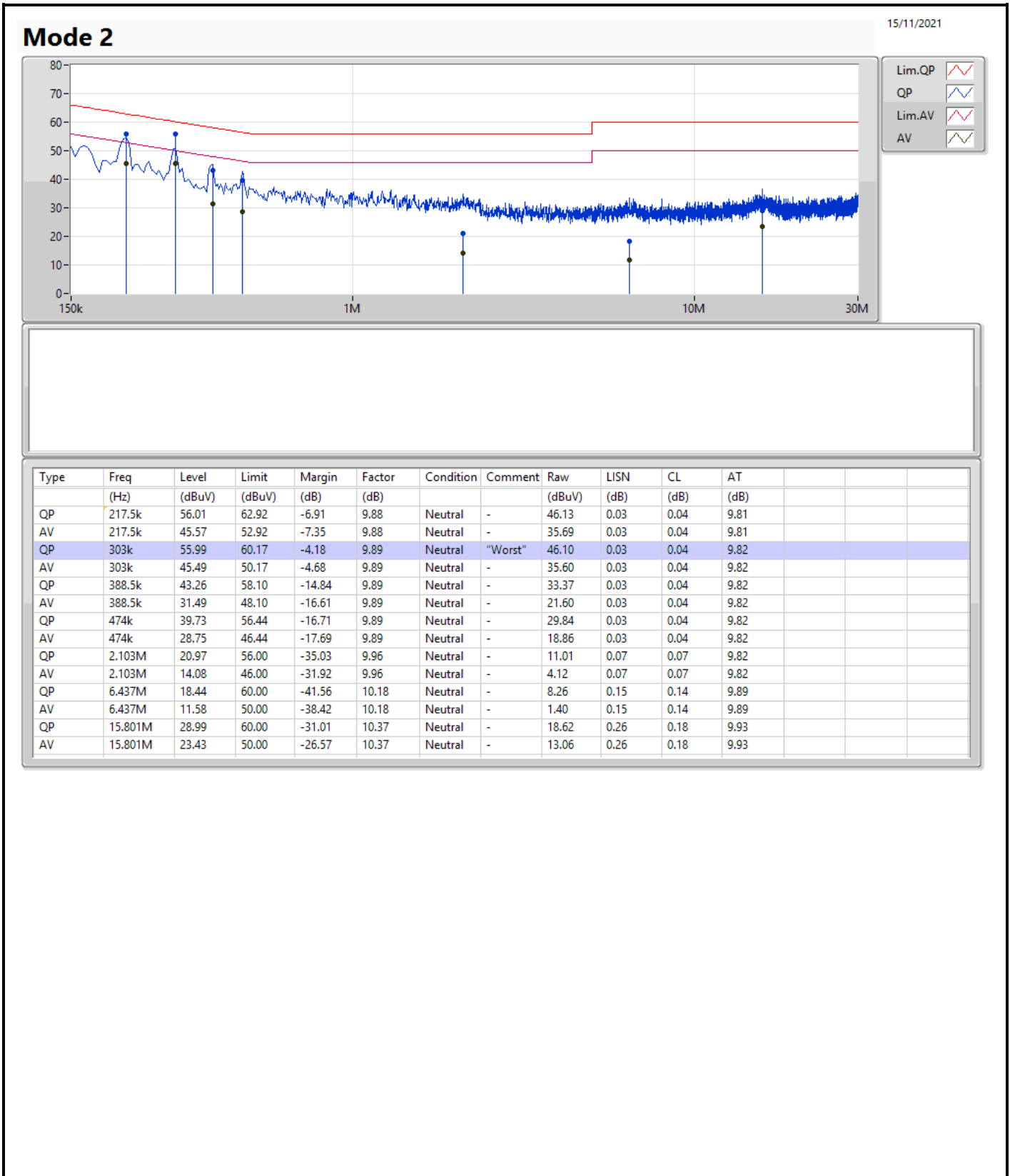
## Conducted Emissions at Powerline

Appendix A

### Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	303k	55.99	60.17	-4.18	Neutral







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)	695k	1.044M	1M04F1D	690k	1.039M
BT-LE(2Mbps)	1.13M	2.039M	2M04F1D	1.125M	2.036M

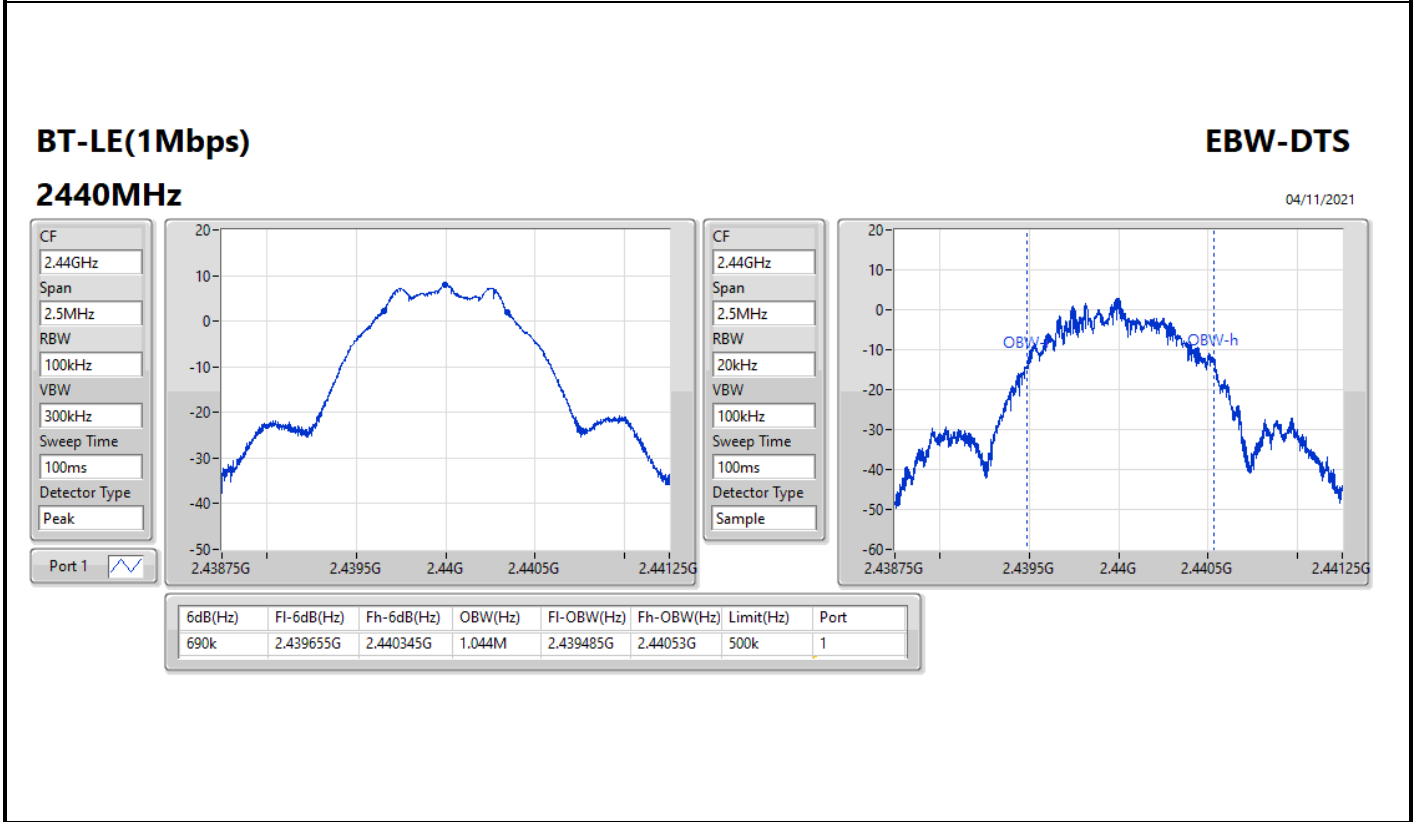
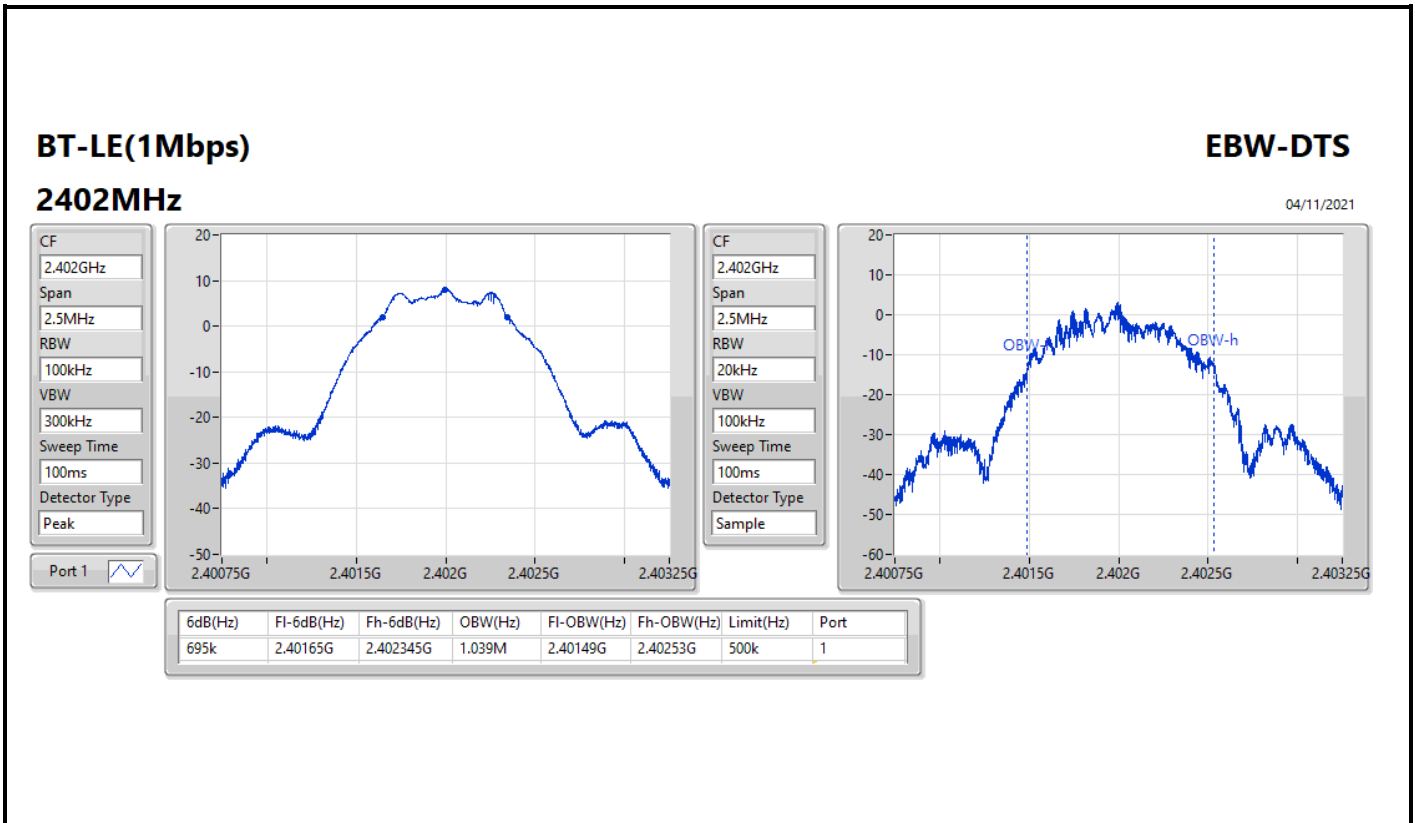
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



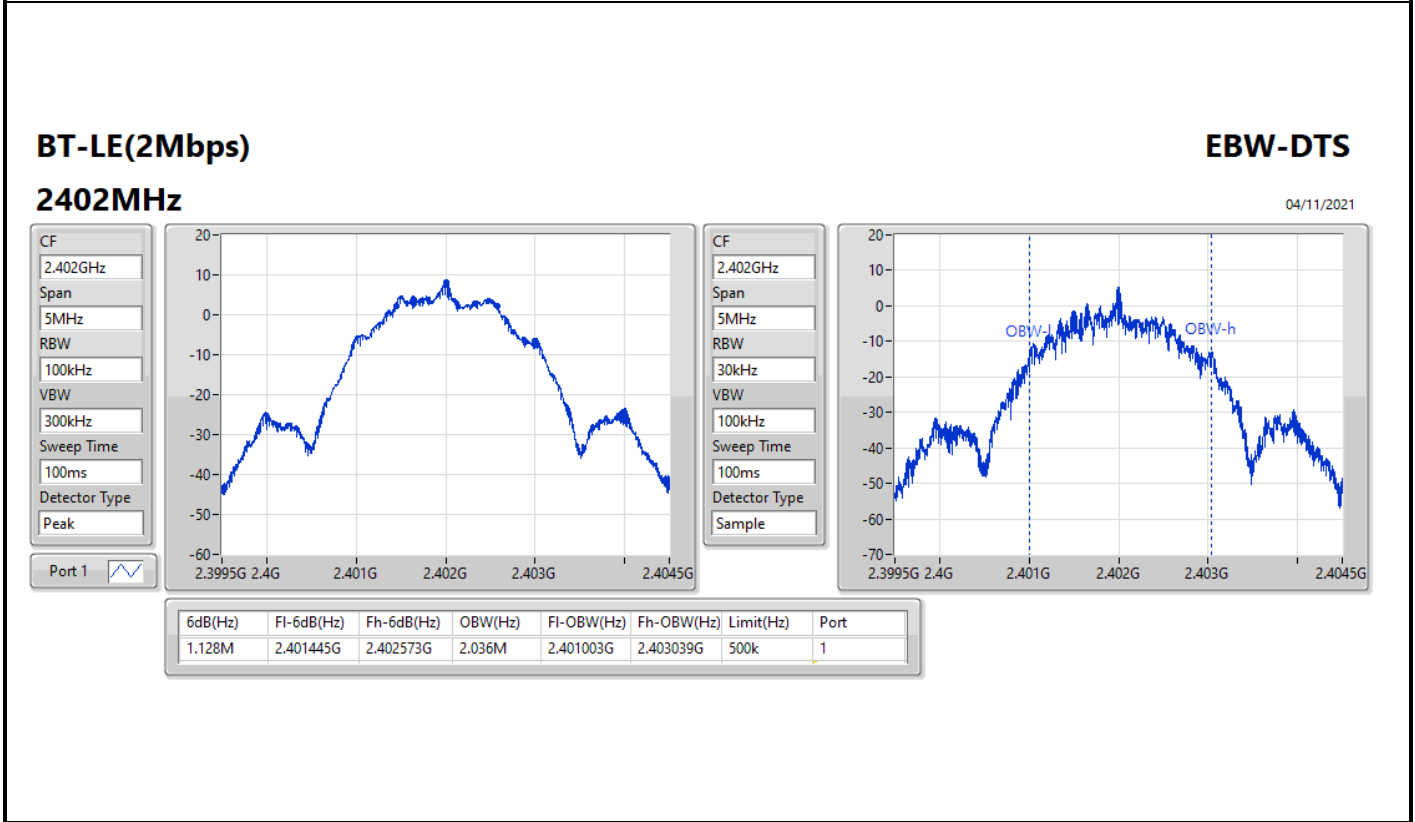
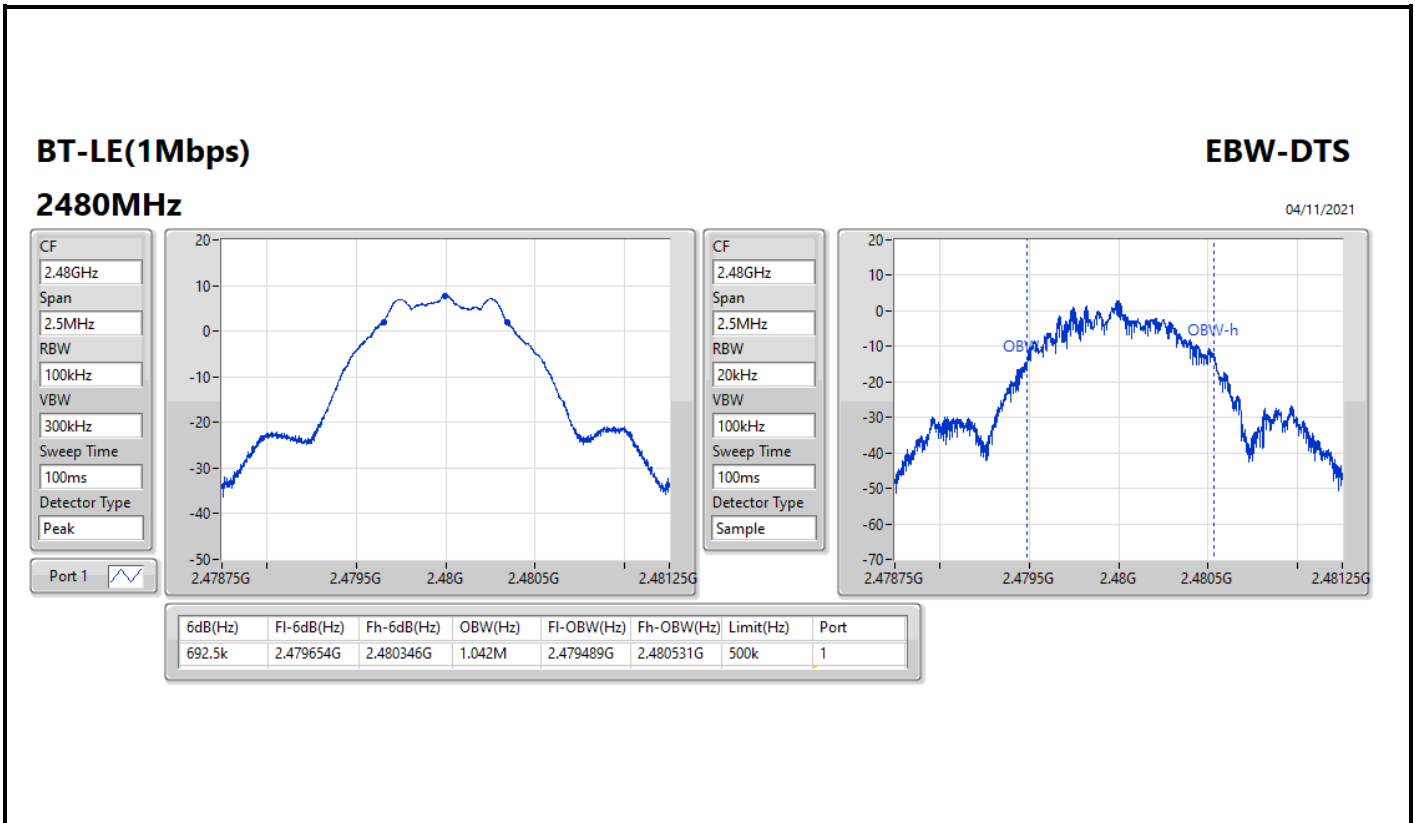
Result

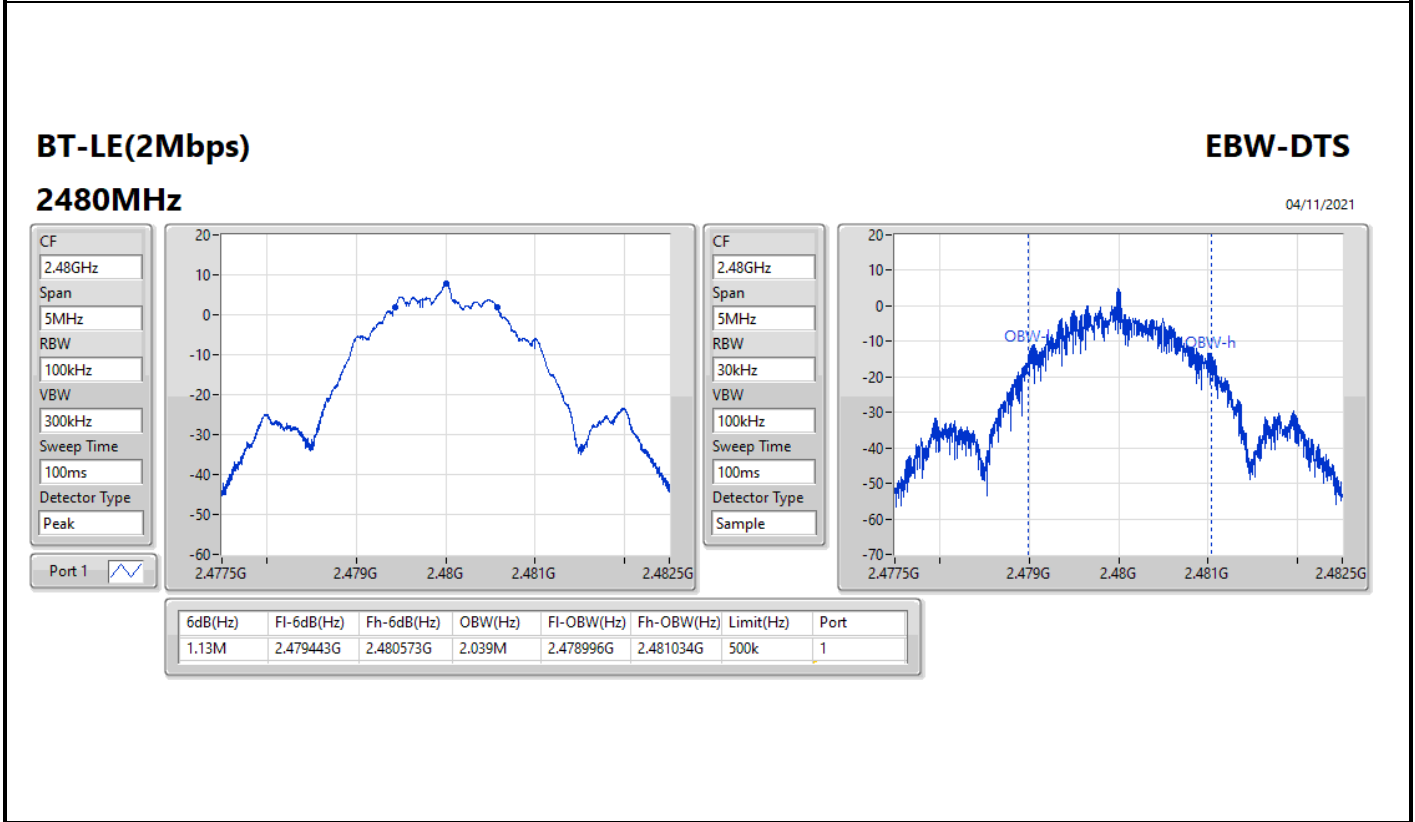
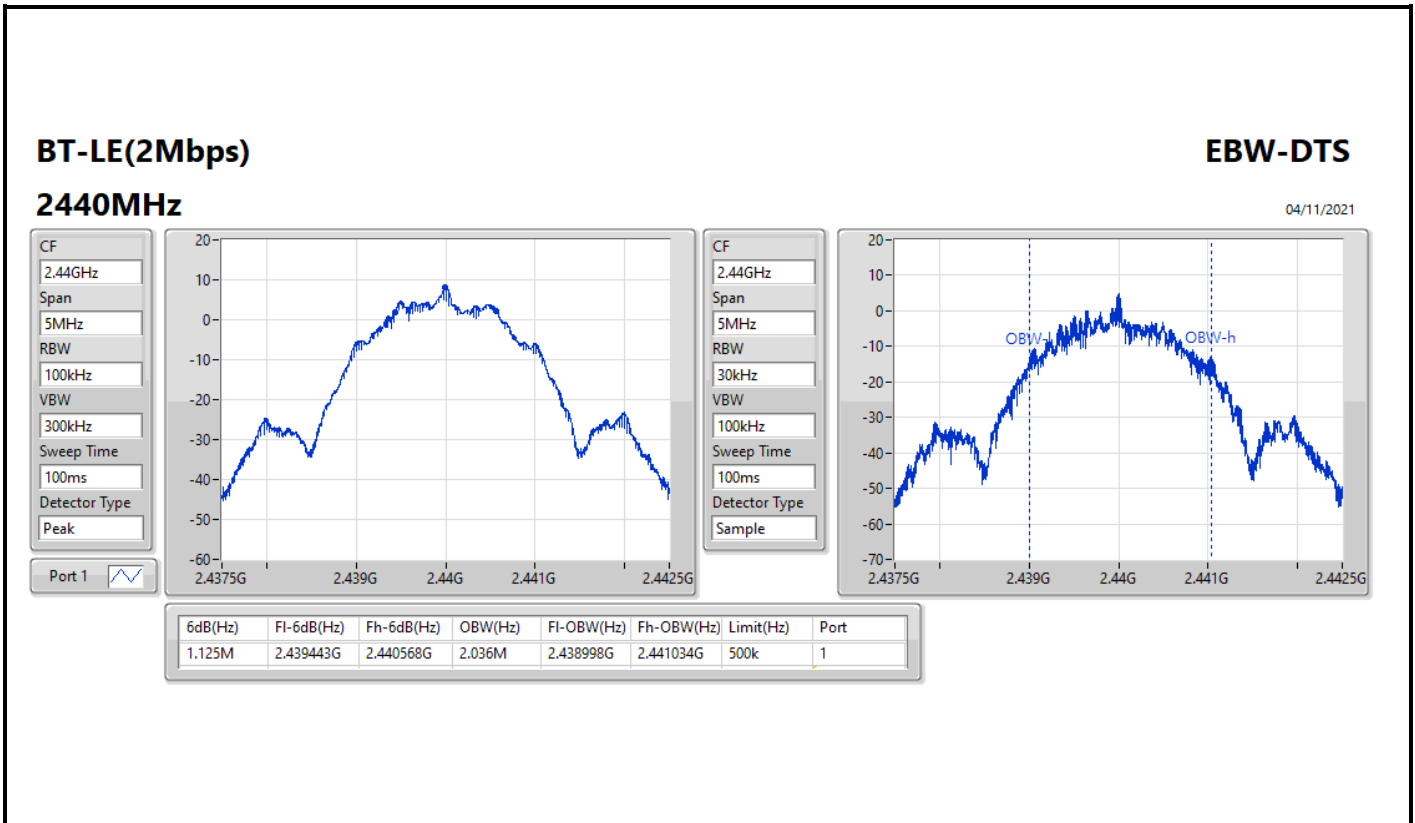
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	695k	1.039M
2440MHz	Pass	500k	690k	1.044M
2480MHz	Pass	500k	692.5k	1.042M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.128M	2.036M
2440MHz	Pass	500k	1.125M	2.036M
2480MHz	Pass	500k	1.13M	2.039M

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)	7.93	0.00621
BT-LE(2Mbps)	7.93	0.00621



**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.50	7.88	30.00
2440MHz	Pass	4.50	7.93	30.00
2480MHz	Pass	4.50	7.83	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.50	7.84	30.00
2440MHz	Pass	4.50	7.93	30.00
2480MHz	Pass	4.50	7.71	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-7.26
BT-LE(2Mbps)	-10.12

RBW = 3kHz;



Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.50	-7.53	8.00
2440MHz	Pass	4.50	-7.26	8.00
2480MHz	Pass	4.50	-7.80	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.50	-10.12	8.00
2440MHz	Pass	4.50	-10.53	8.00
2480MHz	Pass	4.50	-10.26	8.00

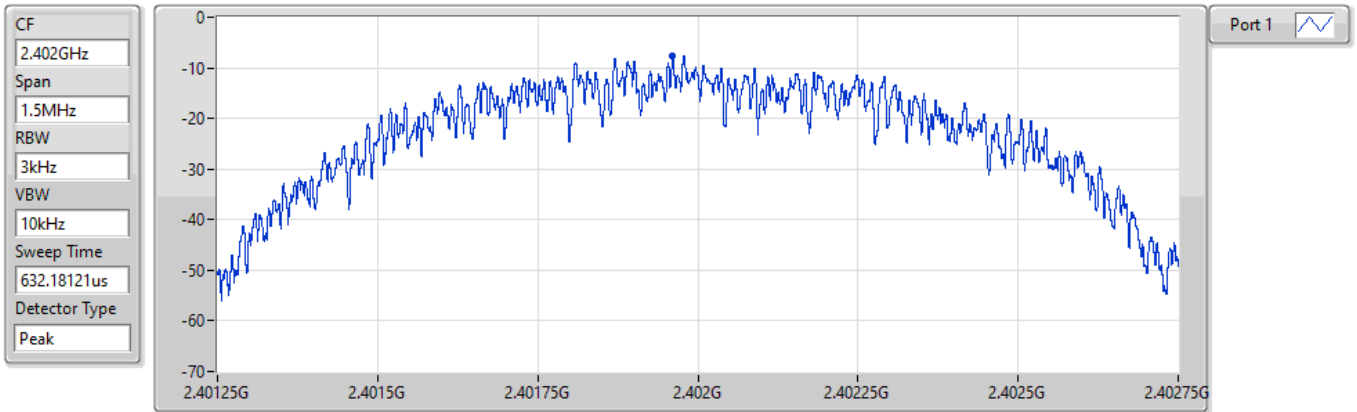
DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

### BT-LE(1Mbps)

### PSD

#### 2402MHz

04/11/2021



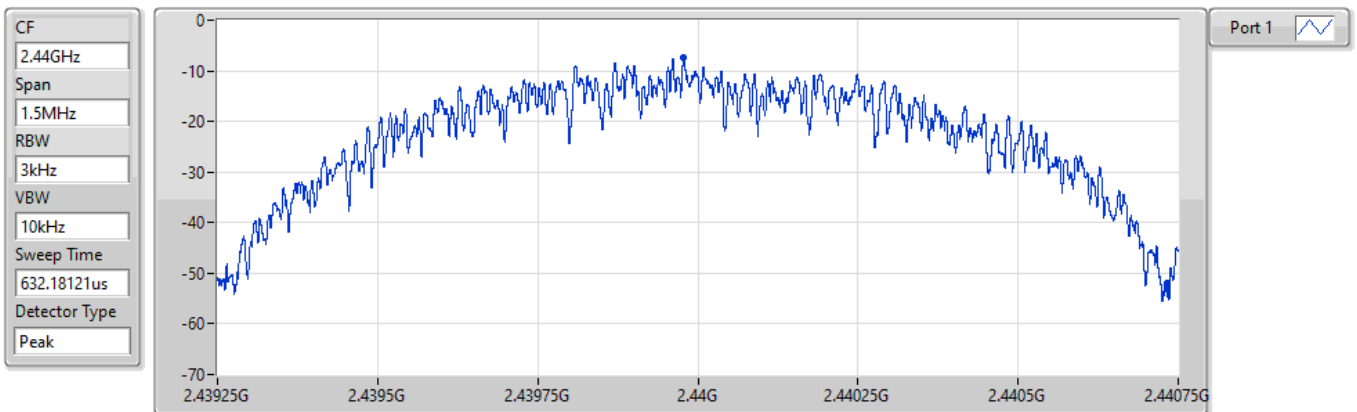
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.53	-7.53	-7.53

### BT-LE(1Mbps)

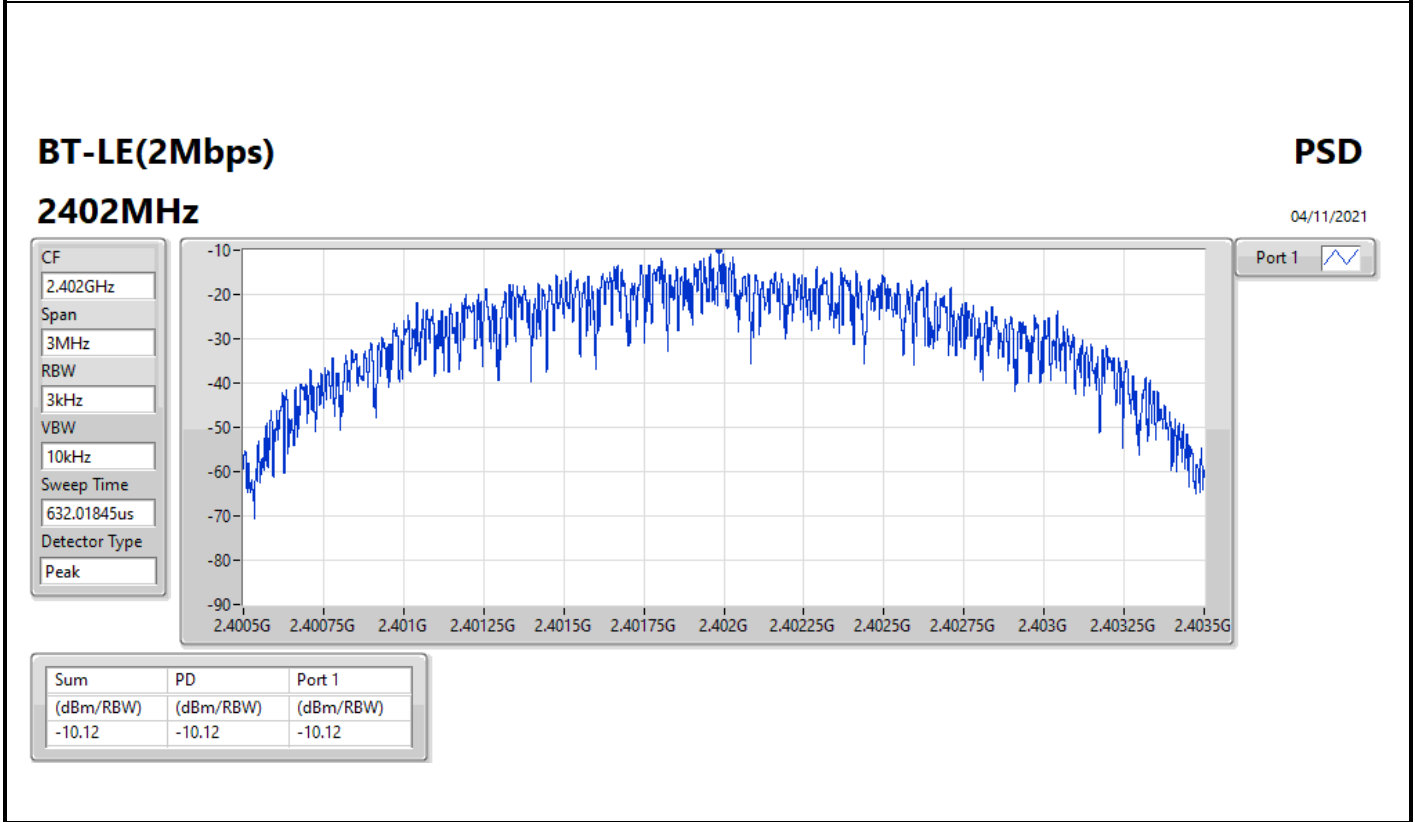
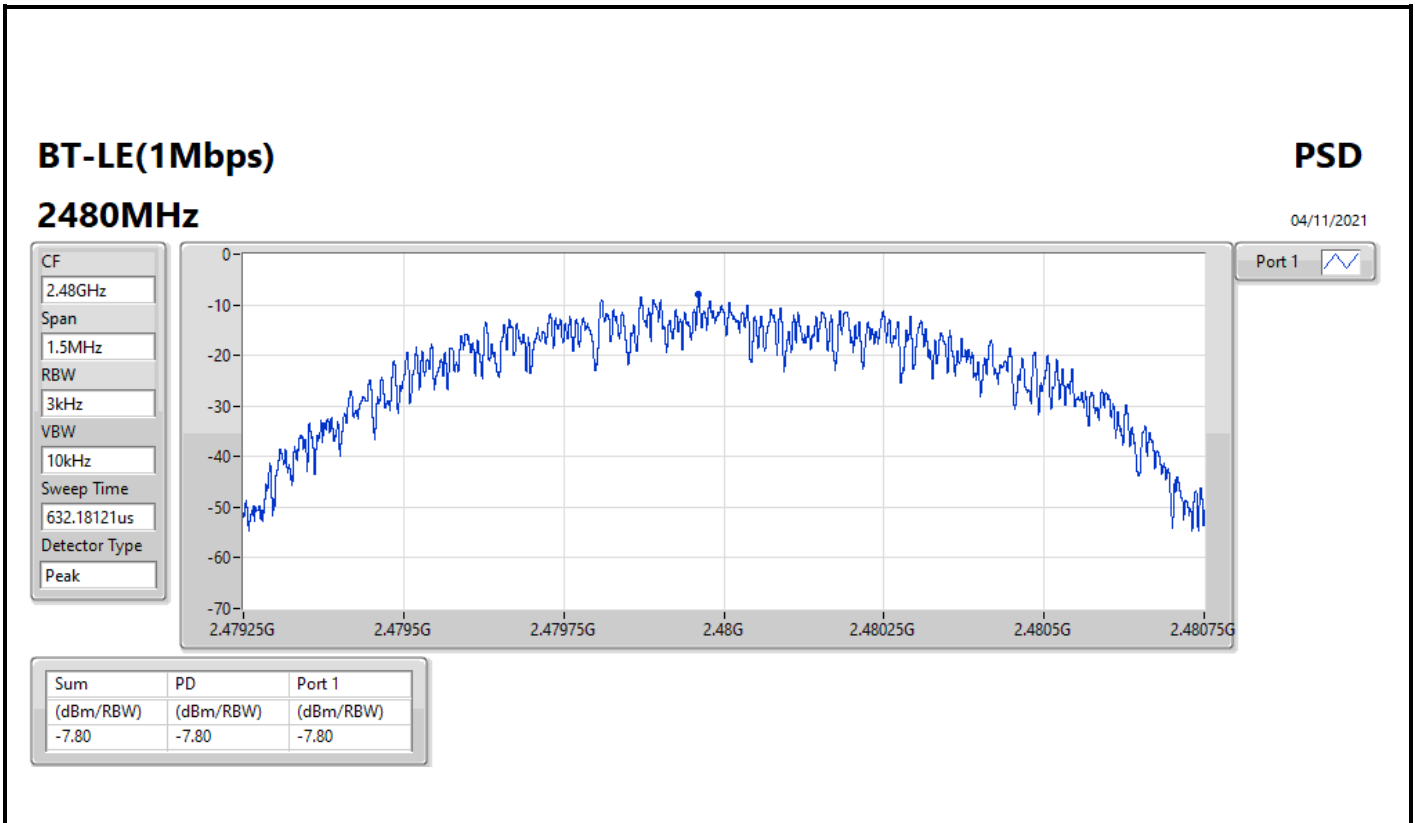
### PSD

#### 2440MHz

04/11/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.26	-7.26	-7.26





**BT-LE(2Mbps)**

**PSD**

**2440MHz**

04/11/2021

CF  
2.44GHz

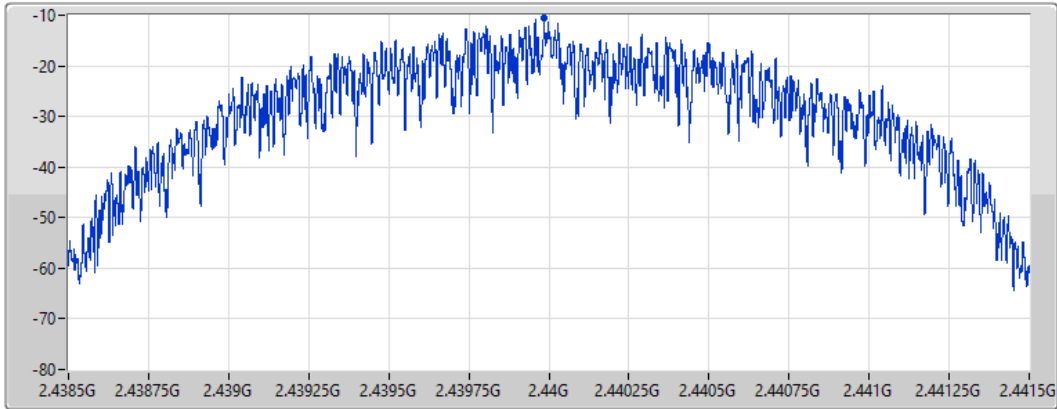
Span  
3MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.01845us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.53	-10.53	-10.53

**BT-LE(2Mbps)**

**PSD**

**2480MHz**

04/11/2021

CF  
2.48GHz

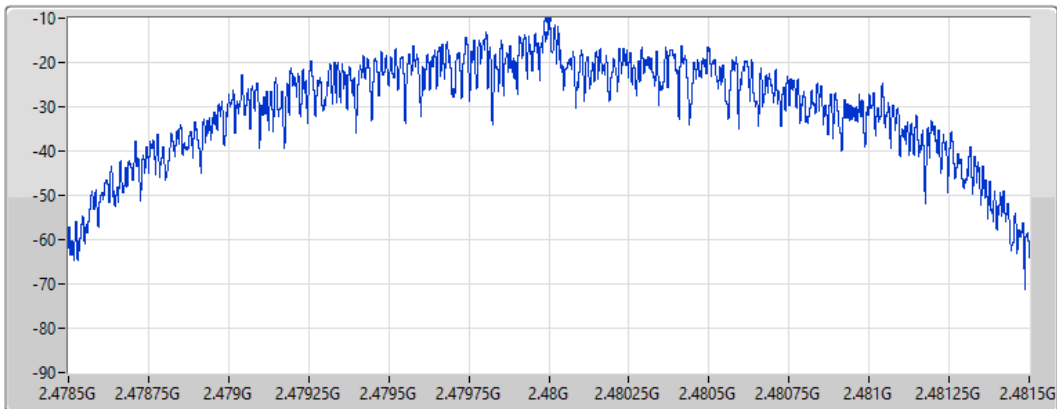
Span  
3MHz


RBW  
3kHz

VBW  
10kHz

Sweep Time  
632.01845us

Detector Type  
Peak



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.26	-10.26	-10.26

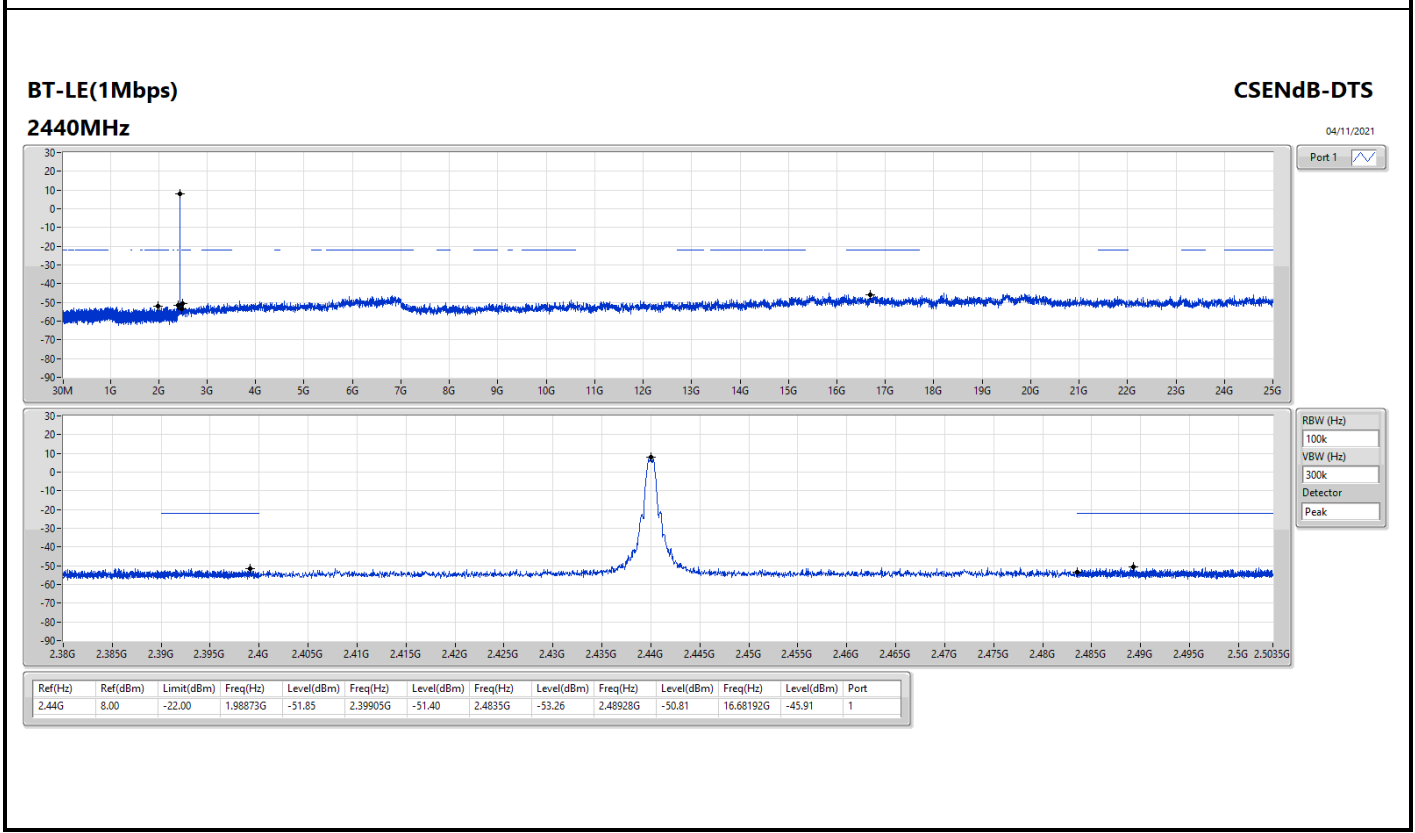
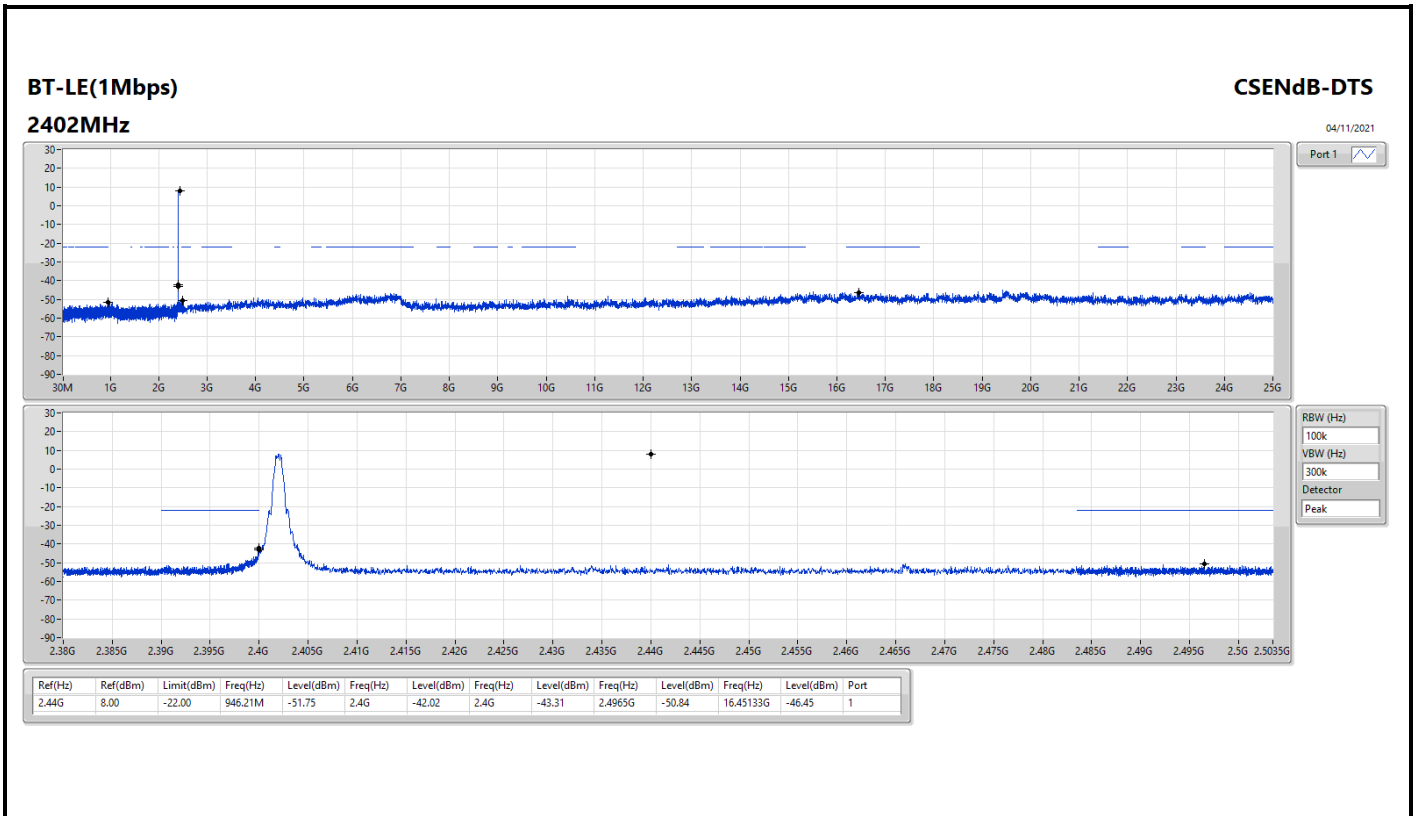


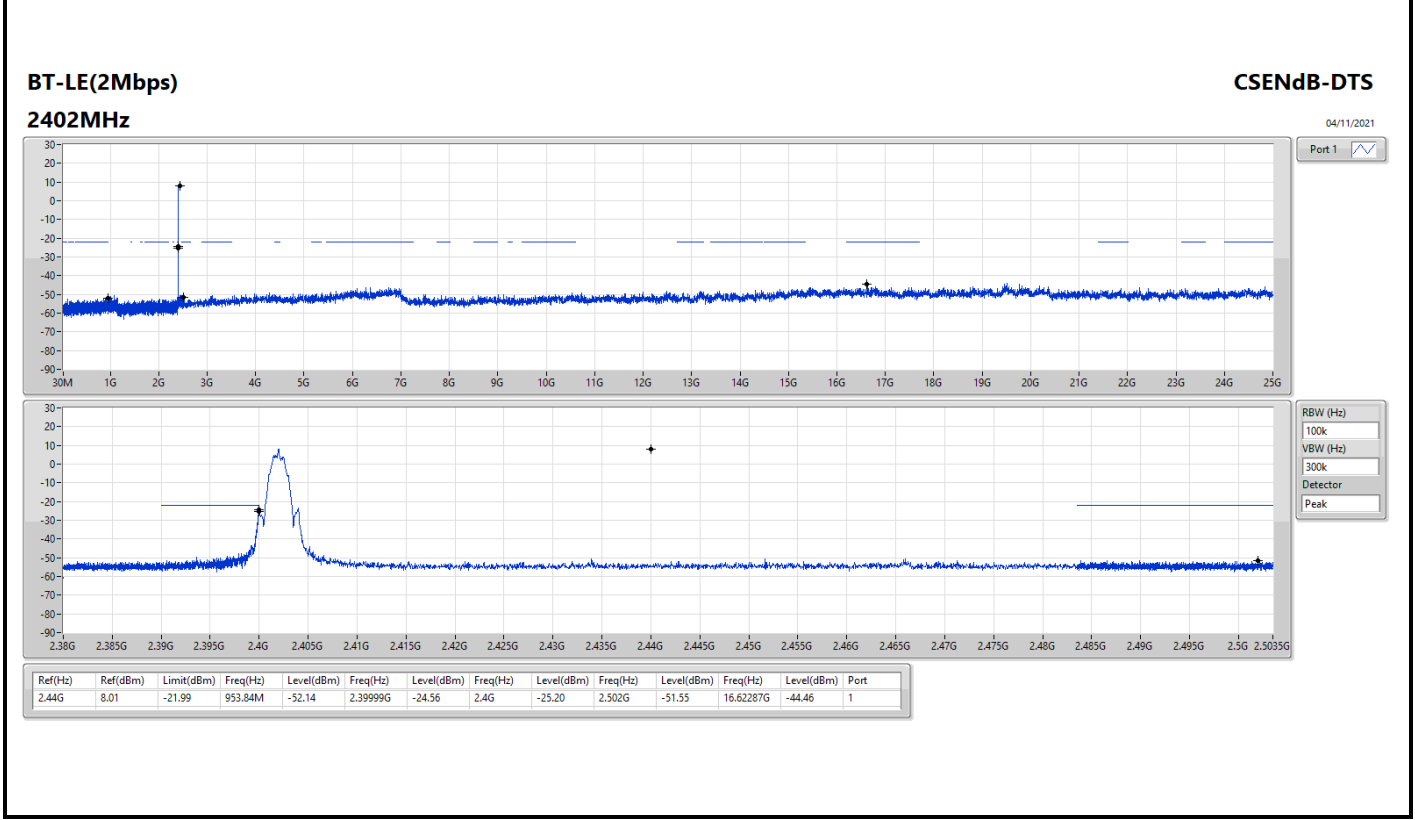
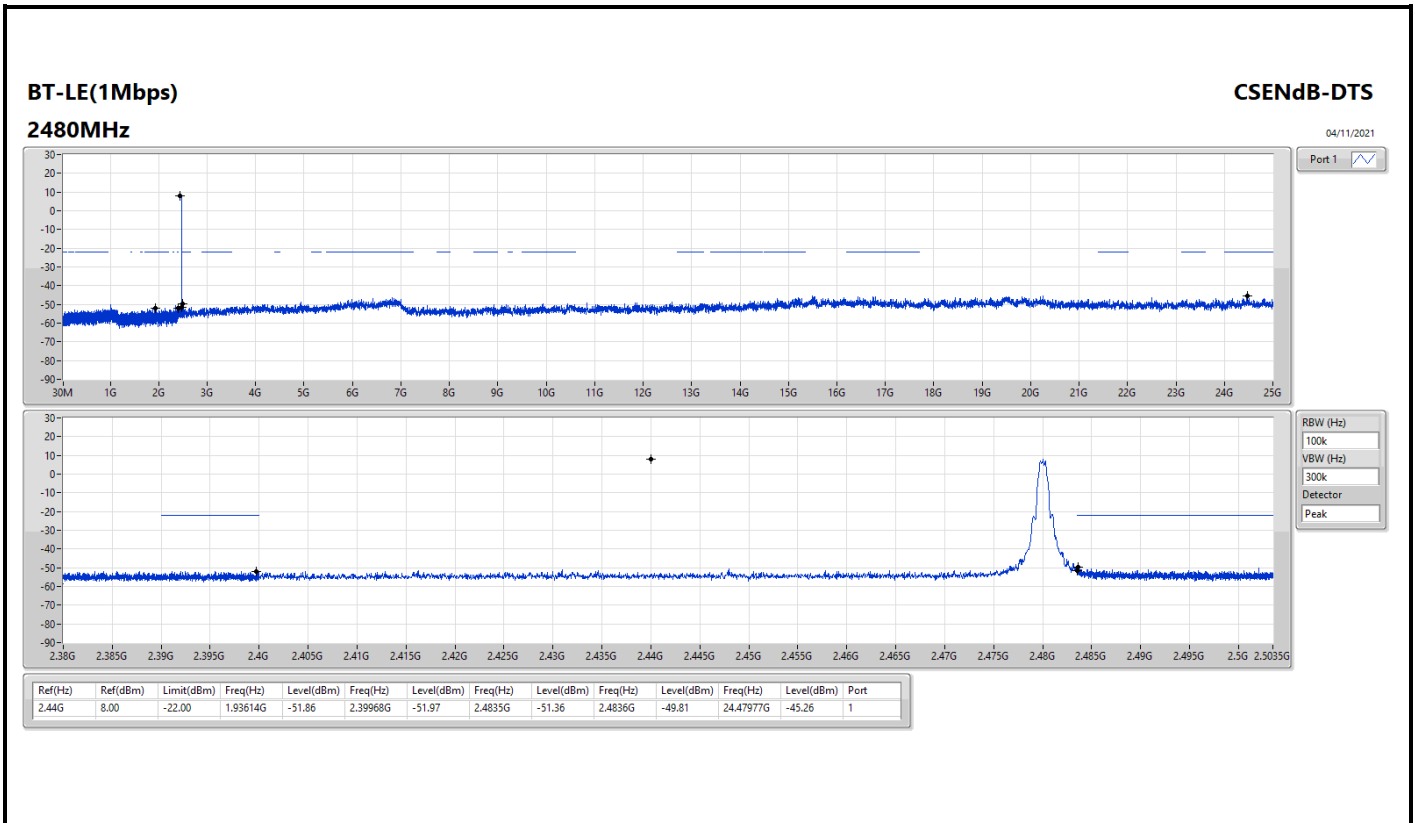
Summary

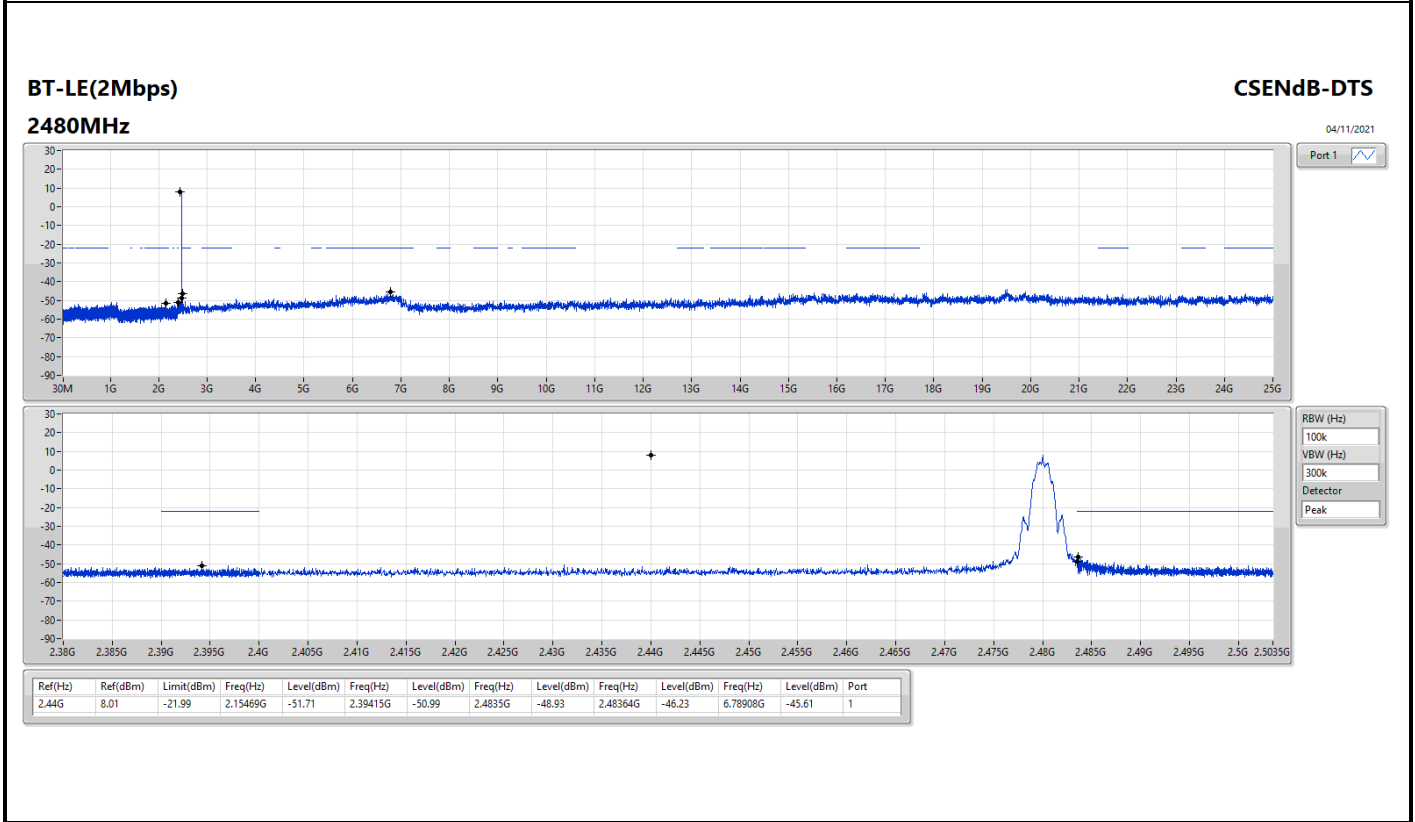
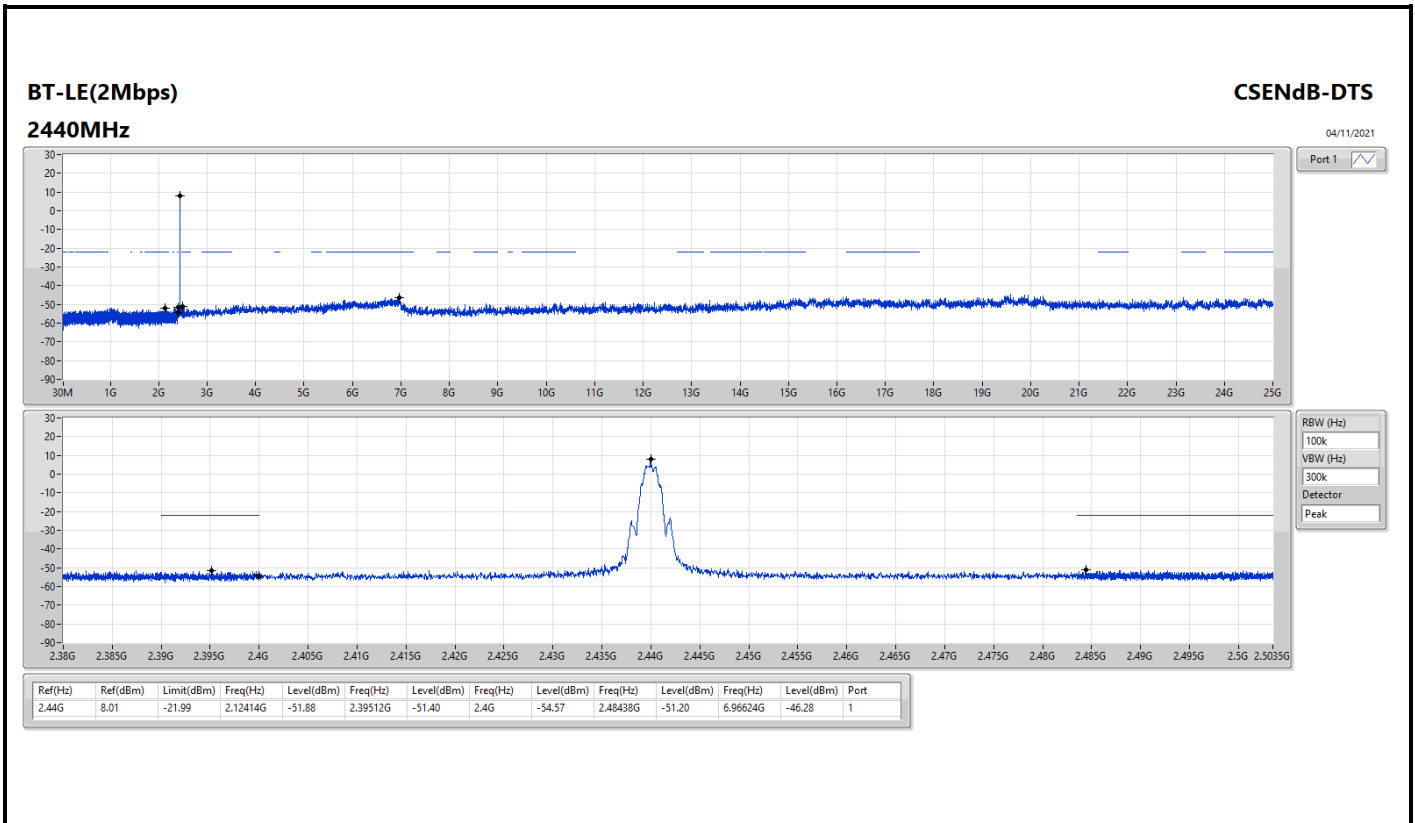
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44G	8.00	-22.00	946.21M	-51.75	2.4G	-42.02	2.4G	-43.31	2.4965G	-50.84	16.45133G	-46.45	1
BT-LE(2Mbps)	Pass	2.44G	8.01	-21.99	953.84M	-52.14	2.39999G	-24.56	2.4G	-25.20	2.502G	-51.55	16.62287G	-44.46	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	2.44G	8.00	-22.00	946.21M	-51.75	2.4G	-42.02	2.4G	-43.31	2.4965G	-50.84	16.45133G	-46.45	1
2440MHz	Pass	2.44G	8.00	-22.00	1.98873G	-51.85	2.39905G	-51.40	2.4835G	-53.26	2.48928G	-50.81	16.68192G	-45.91	1
2480MHz	Pass	2.44G	8.00	-22.00	1.93614G	-51.86	2.39968G	-51.97	2.4835G	-51.36	2.4836G	-49.81	24.47977G	-45.26	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44G	8.01	-21.99	953.84M	-52.14	2.39999G	-24.56	2.4G	-25.20	2.502G	-51.55	16.62287G	-44.46	1
2440MHz	Pass	2.44G	8.01	-21.99	2.12414G	-51.88	2.39512G	-51.40	2.4G	-54.57	2.48438G	-51.20	6.96624G	-46.28	1
2480MHz	Pass	2.44G	8.01	-21.99	2.15469G	-51.71	2.39415G	-50.99	2.4835G	-48.93	2.48364G	-46.23	6.78908G	-45.61	1





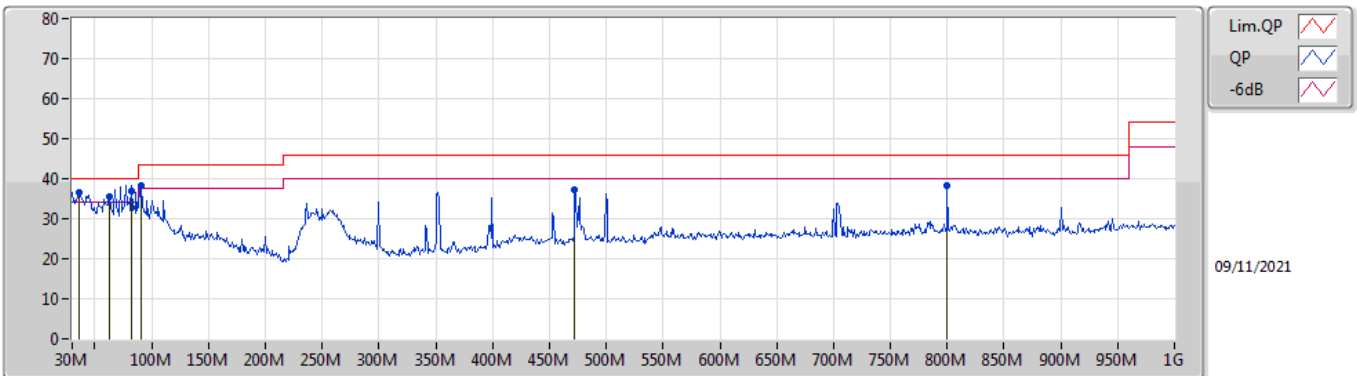




**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 6	Pass	QP	82.38M	36.96	40.00	-3.04	Vertical

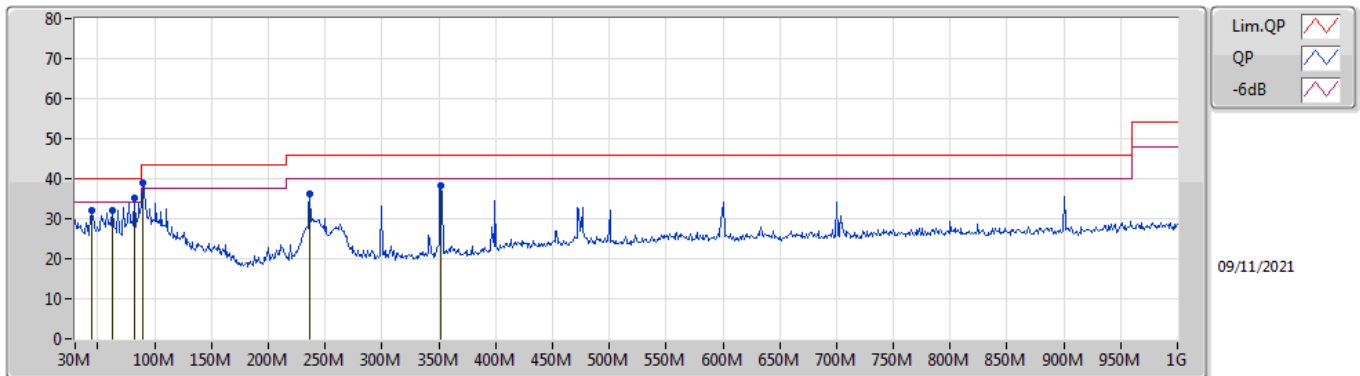
Mode 6



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	35.82M	36.68	40.00	-3.32	-10.84	3	Vertical	190	1.25	-	47.52	20.32	0.52	31.68
PK	62.98M	35.59	40.00	-4.41	-19.84	3	Vertical	218	1.25	-	55.43	11.34	0.70	31.88
QP	82.38M	36.96	40.00	-3.04	-18.74	3	Vertical	248	1.00	"Worst"	55.70	12.42	0.75	31.91
PK	91.11M	38.25	43.50	-5.25	-16.98	3	Vertical	80	1.00	-	55.23	14.13	0.80	31.91
PK	472.32M	37.14	46.00	-8.86	-7.95	3	Vertical	286	1.00	-	45.09	22.46	1.74	32.15
PK	800.18M	38.13	46.00	-7.87	-5.14	3	Vertical	102	1.00	-	43.27	24.90	2.30	32.34



Mode 6



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	44.55M	32.16	40.00	-7.84	-15.31	3	Horizontal	276	1.50	-	47.47	15.88	0.60	31.79
PK	62.98M	31.96	40.00	-8.04	-19.84	3	Horizontal	155	1.50	-	51.80	11.34	0.70	31.88
PK	82.38M	35.32	40.00	-4.68	-18.74	3	Horizontal	149	1.50	-	54.06	12.42	0.75	31.91
PK	89.17M	39.11	43.50	-4.39	-17.42	3	Horizontal	16	2.00	"Worst"	56.53	13.69	0.80	31.91
PK	236.61M	36.19	46.00	-9.81	-14.86	3	Horizontal	134	1.00	-	51.05	15.79	1.27	31.92
PK	352.04M	38.20	46.00	-7.80	-11.02	3	Horizontal	240	1.50	-	49.22	19.46	1.50	31.98



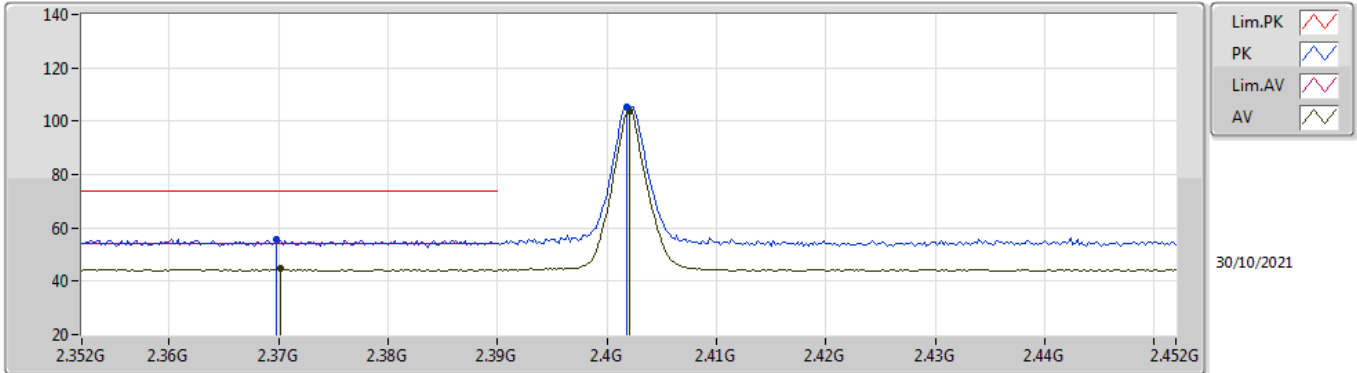
For mode 1 / Beam 9

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	AV	2.4835G	53.20	54.00	-0.80	3	Horizontal	344	2.20	-

**BT-LE(1Mbps)**

**2402MHz\_TX**

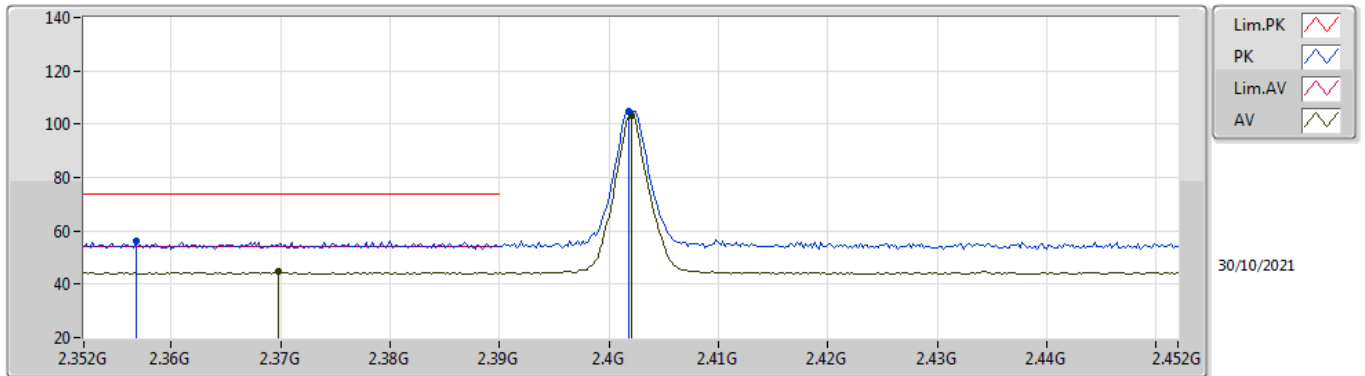


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3698G	55.69	74.00	-18.31	24.57	3	Vertical	19	1.17	-	28.34	2.78	-
AV	2.3702G	44.87	54.00	-9.13	13.74	3	Vertical	19	1.17	-	28.34	2.79	-
PK	2.4018G	105.30	Inf	-Inf	74.10	3	Vertical	19	1.17	-	28.40	2.80	-
AV	2.402G	103.85	Inf	-Inf	72.65	3	Vertical	19	1.17	-	28.40	2.80	-

### BT-LE(1Mbps)

### 2402MHz\_TX

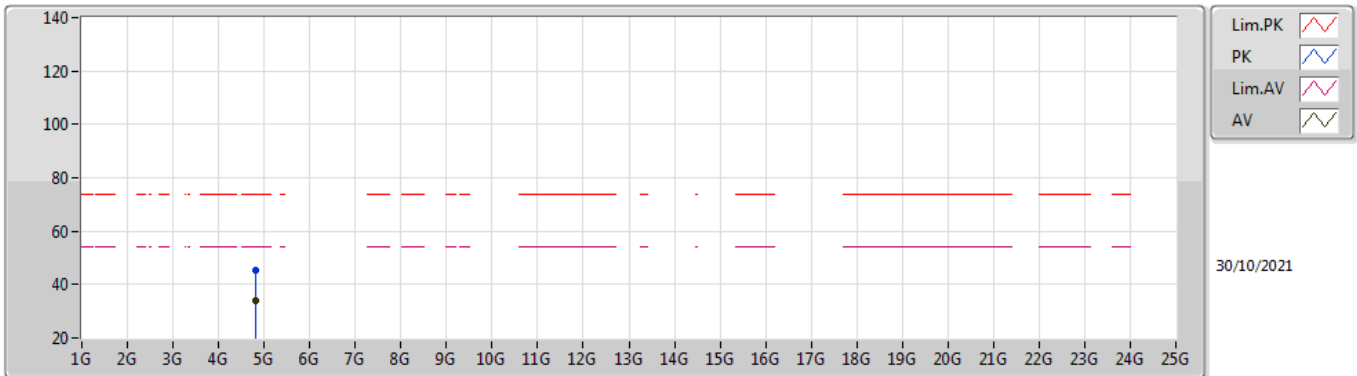


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3568G	56.18	74.00	-17.82	25.09	3	Horizontal	349	2.30	-	28.31	2.78	-
AV	2.3698G	44.72	54.00	-9.28	13.60	3	Horizontal	349	2.30	-	28.34	2.78	-
PK	2.4018G	104.83	Inf	-Inf	73.63	3	Horizontal	349	2.30	-	28.40	2.80	-
AV	2.402G	103.29	Inf	-Inf	72.09	3	Horizontal	349	2.30	-	28.40	2.80	-

### BT-LE(1Mbps)

### 2402MHz\_TX

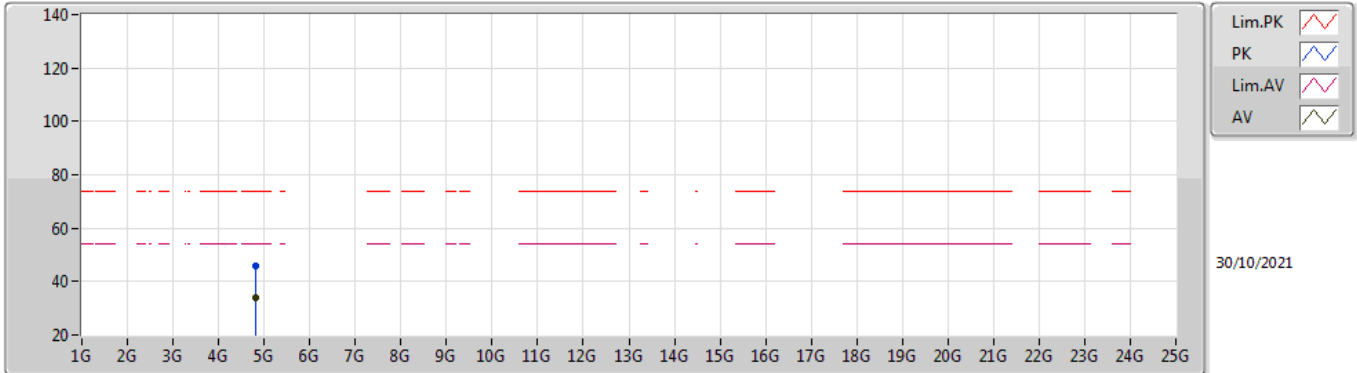


EUT X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80388G	45.24	74.00	-28.76	39.65	3	Vertical	181	2.85	-	32.72	5.10	32.23
AV	4.8036G	33.99	54.00	-20.01	28.41	3	Vertical	181	2.85	-	32.71	5.10	32.23

**BT-LE(1Mbps)**

**2402MHz\_TX**

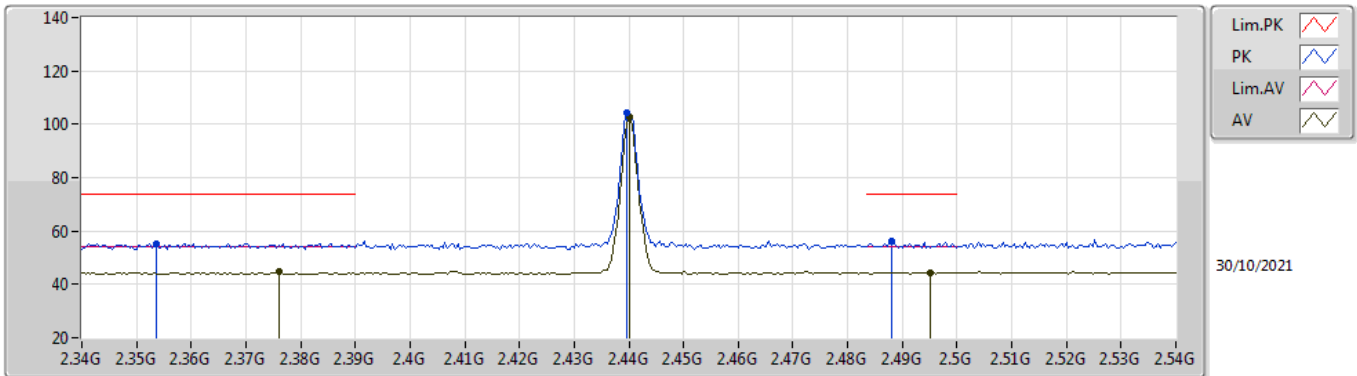


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80448G	45.90	74.00	-28.10	40.31	3	Horizontal	65	1.22	-	32.72	5.10	32.23
AV	4.80444G	33.83	54.00	-20.17	28.24	3	Horizontal	65	1.22	-	32.72	5.10	32.23

### BT-LE(1Mbps)

### 2440MHz\_TX

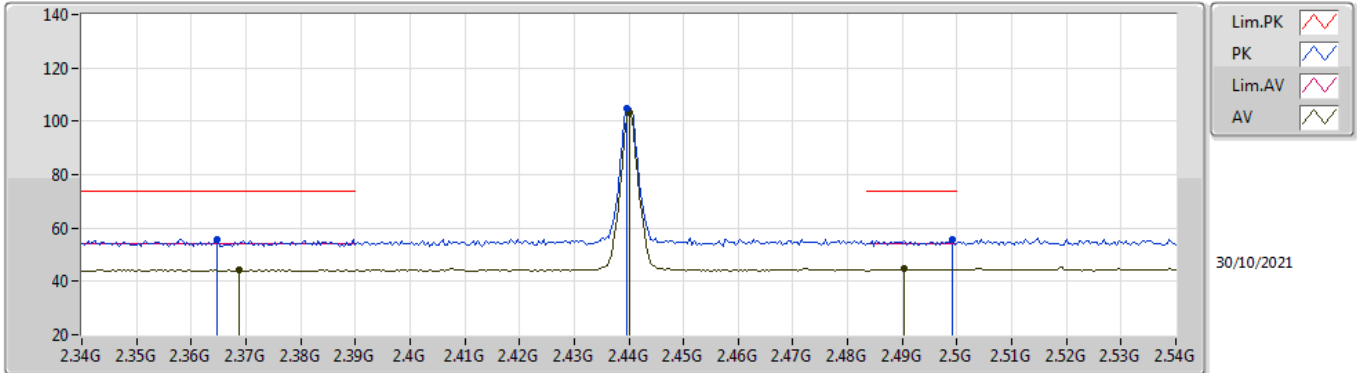


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3536G	55.27	74.00	-18.73	24.18	3	Vertical	25	1.17	-	28.31	2.78	-
AV	2.376G	44.65	54.00	-9.35	13.51	3	Vertical	25	1.17	-	28.35	2.79	-
PK	2.4396G	104.10	Inf	-Inf	72.86	3	Vertical	25	1.17	-	28.40	2.84	-
AV	2.44G	102.57	Inf	-Inf	71.33	3	Vertical	25	1.17	-	28.40	2.84	-
PK	2.488G	56.07	74.00	-17.93	24.63	3	Vertical	25	1.17	-	28.55	2.89	-
AV	2.4952G	44.51	54.00	-9.49	13.03	3	Vertical	25	1.17	-	28.58	2.90	-

**BT-LE(1Mbps)**

**2440MHz\_TX**



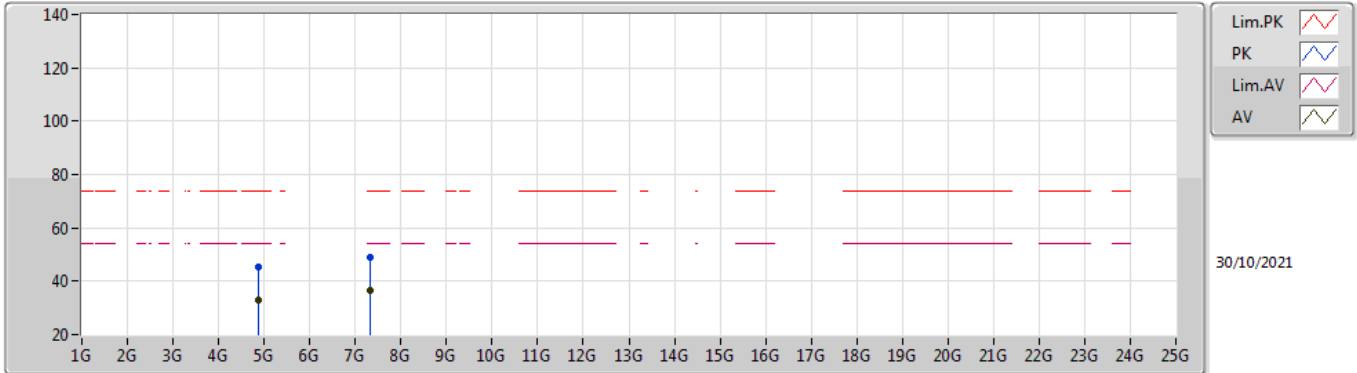
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3648G	55.58	74.00	-18.42	24.47	3	Horizontal	343	2.27	-	28.33	2.78	-
AV	2.3688G	44.32	54.00	-9.68	13.20	3	Horizontal	343	2.27	-	28.34	2.78	-
PK	2.4396G	104.95	Inf	-Inf	73.71	3	Horizontal	343	2.27	-	28.40	2.84	-
AV	2.44G	103.47	Inf	-Inf	72.23	3	Horizontal	343	2.27	-	28.40	2.84	-
PK	2.4992G	55.54	74.00	-18.46	24.04	3	Horizontal	343	2.27	-	28.60	2.90	-
AV	2.4904G	44.62	54.00	-9.38	13.17	3	Horizontal	343	2.27	-	28.56	2.89	-



### BT-LE(1Mbps)

### 2440MHz\_TX

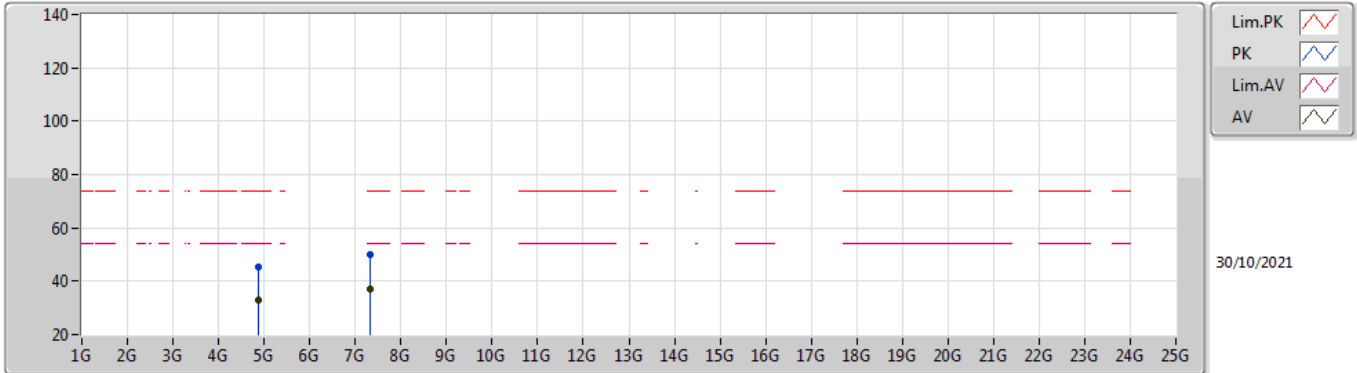


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88162G	45.36	74.00	-28.64	39.50	3	Vertical	229	2.38	-	32.96	5.10	32.20
AV	4.8836G	32.93	54.00	-21.07	27.06	3	Vertical	229	2.38	-	32.97	5.10	32.20
PK	7.31898G	48.82	74.00	-25.18	39.06	3	Vertical	153	2.92	-	36.44	6.16	32.84
AV	7.31602G	36.67	54.00	-17.33	26.91	3	Vertical	153	2.92	-	36.43	6.16	32.83

### BT-LE(1Mbps)

### 2440MHz\_TX

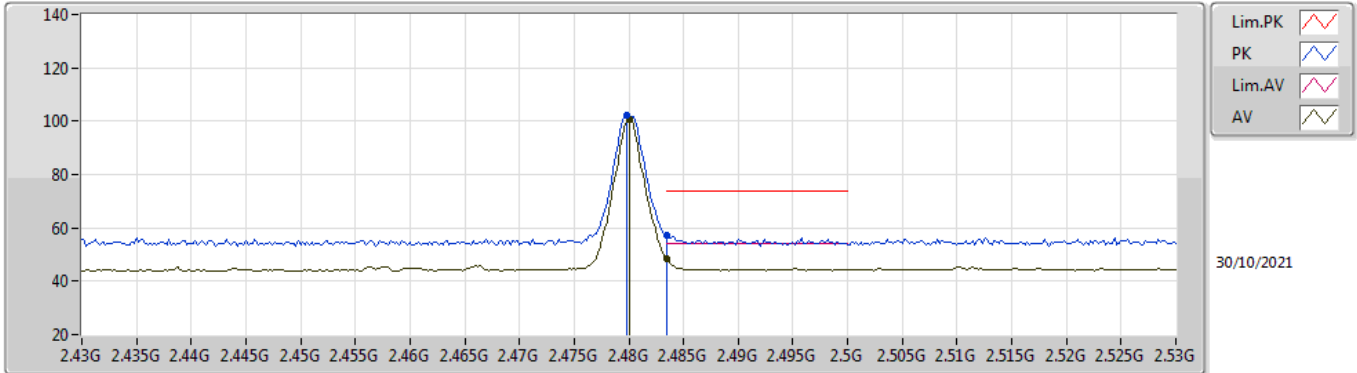


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87644G	45.13	74.00	-28.87	39.28	3	Horizontal	176	2.35	-	32.95	5.10	32.20
AV	4.88262G	32.94	54.00	-21.06	27.07	3	Horizontal	176	2.35	-	32.97	5.10	32.20
PK	7.3191G	50.15	74.00	-23.85	40.39	3	Horizontal	231	2.45	-	36.44	6.16	32.84
AV	7.31604G	36.86	54.00	-17.14	27.10	3	Horizontal	231	2.45	-	36.43	6.16	32.83

### BT-LE(1Mbps)

### 2480MHz\_TX

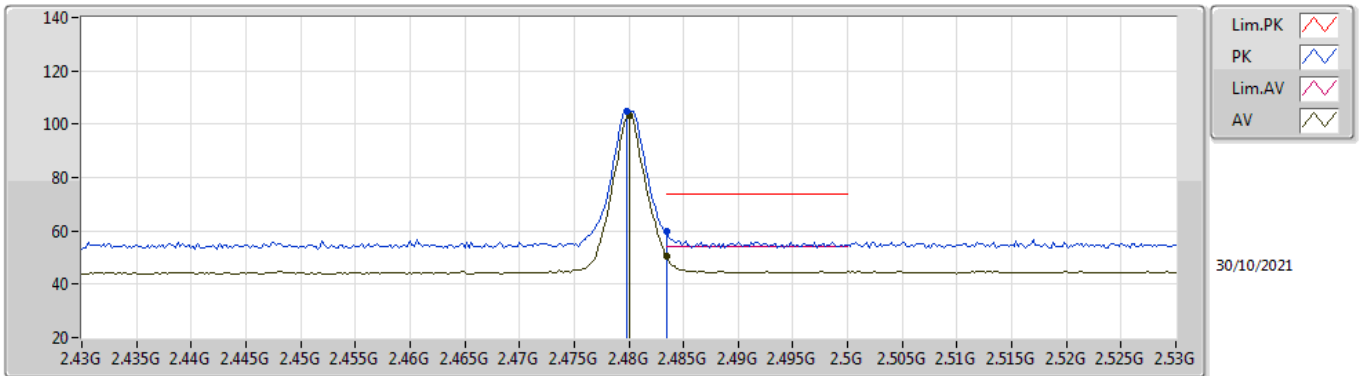


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4798G	101.99	Inf	-Inf	70.59	3	Vertical	348	1.47	-	28.52	2.88	-
AV	2.48G	100.57	Inf	-Inf	69.17	3	Vertical	348	1.47	-	28.52	2.88	-
PK	2.4835G	57.40	74.00	-16.60	25.99	3	Vertical	348	1.47	-	28.53	2.88	-
AV	2.4835G	48.39	54.00	-5.61	16.98	3	Vertical	348	1.47	-	28.53	2.88	-

### BT-LE(1Mbps)

### 2480MHz\_TX

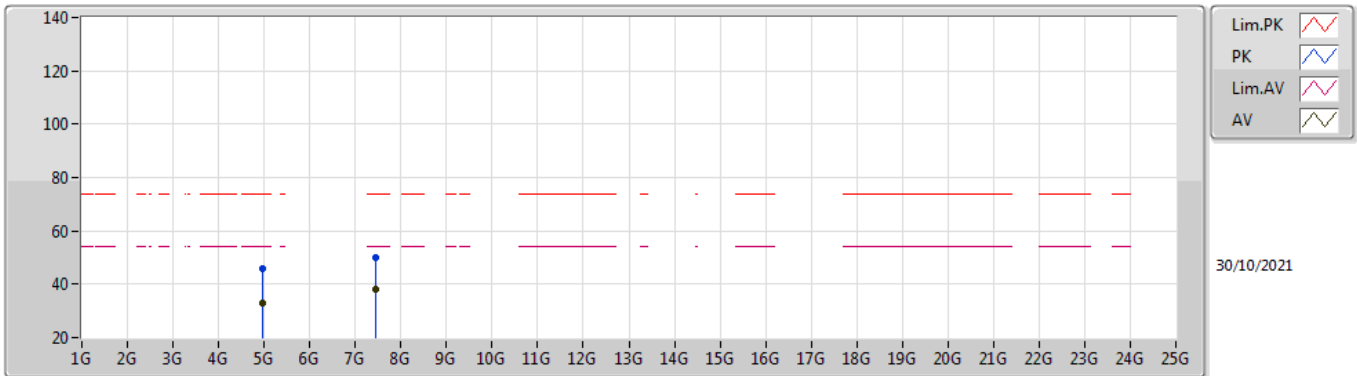


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4798G	104.92	Inf	-Inf	73.52	3	Horizontal	348	2.19	-	28.52	2.88	-
AV	2.48G	103.43	Inf	-Inf	72.03	3	Horizontal	348	2.19	-	28.52	2.88	-
PK	2.4835G	60.08	74.00	-13.92	28.67	3	Horizontal	348	2.19	-	28.53	2.88	-
AV	2.4835G	50.45	54.00	-3.55	19.04	3	Horizontal	348	2.19	-	28.53	2.88	-

### BT-LE(1Mbps)

### 2480MHz\_TX

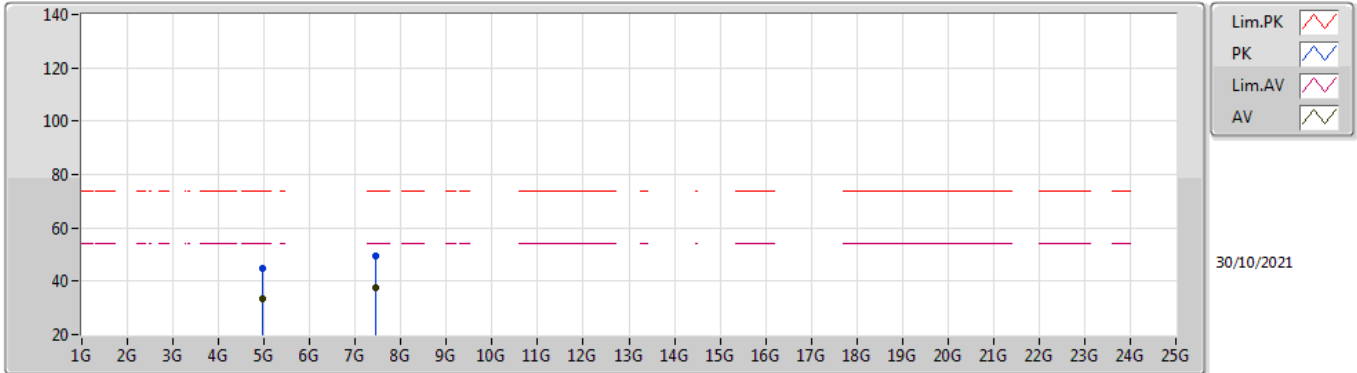


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96438G	45.82	74.00	-28.18	39.62	3	Vertical	29	2.25	-	33.27	5.10	32.17
AV	4.96092G	33.10	54.00	-20.90	26.89	3	Vertical	29	2.25	-	33.28	5.10	32.17
PK	7.43718G	49.99	74.00	-24.01	40.30	3	Vertical	322	1.09	-	36.53	6.20	33.04
AV	7.43546G	37.89	54.00	-16.11	28.20	3	Vertical	322	1.09	-	36.53	6.20	33.04

### BT-LE(1Mbps)

### 2480MHz\_TX

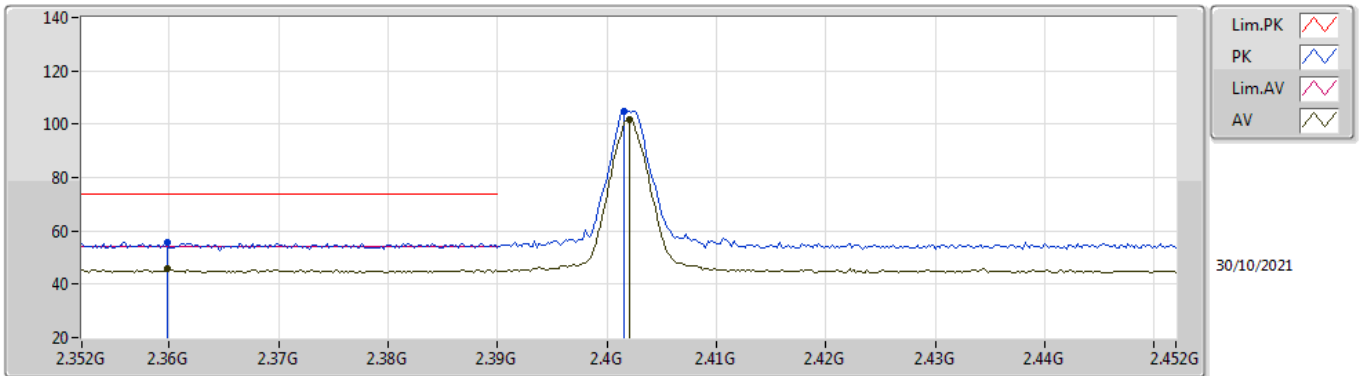


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96254G	45.08	74.00	-28.92	38.88	3	Horizontal	186	1.49	-	33.27	5.10	32.17
AV	4.95978G	33.24	54.00	-20.76	27.03	3	Horizontal	186	1.49	-	33.28	5.10	32.17
PK	7.43856G	49.60	74.00	-24.40	39.92	3	Horizontal	285	2.39	-	36.52	6.20	33.04
AV	7.43574G	37.62	54.00	-16.38	27.93	3	Horizontal	285	2.39	-	36.53	6.20	33.04

**BT-LE(2Mbps)**

**2402MHz\_TX**

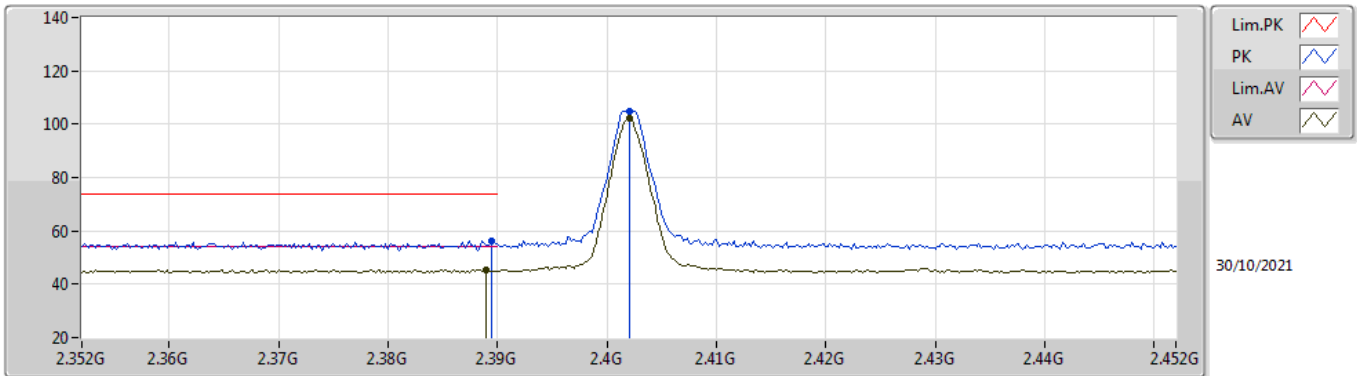


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3598G	55.66	74.00	-18.34	24.56	3	Vertical	27	1.00	-	28.32	2.78	-
AV	2.3598G	45.61	54.00	-8.39	14.51	3	Vertical	27	1.00	-	28.32	2.78	-
PK	2.4016G	104.70	Inf	-Inf	73.50	3	Vertical	27	1.00	-	28.40	2.80	-
AV	2.402G	101.98	Inf	-Inf	70.78	3	Vertical	27	1.00	-	28.40	2.80	-

### BT-LE(2Mbps)

### 2402MHz\_TX



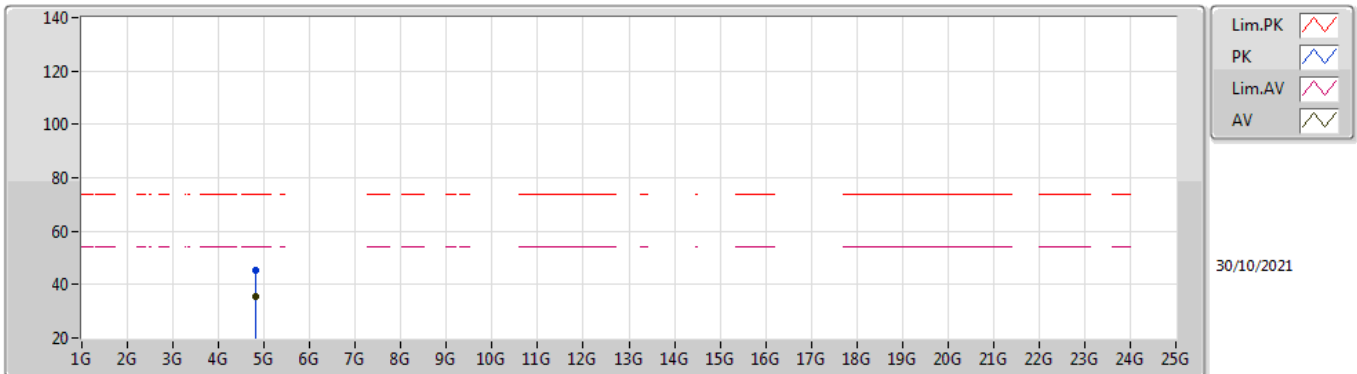
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3894G	56.10	74.00	-17.90	24.93	3	Horizontal	344	2.29	-	28.38	2.79	-
AV	2.389G	45.50	54.00	-8.50	14.33	3	Horizontal	344	2.29	-	28.38	2.79	-
PK	2.402G	104.75	Inf	-Inf	73.55	3	Horizontal	344	2.29	-	28.40	2.80	-
AV	2.402G	101.99	Inf	-Inf	70.79	3	Horizontal	344	2.29	-	28.40	2.80	-



### BT-LE(2Mbps)

### 2402MHz\_TX

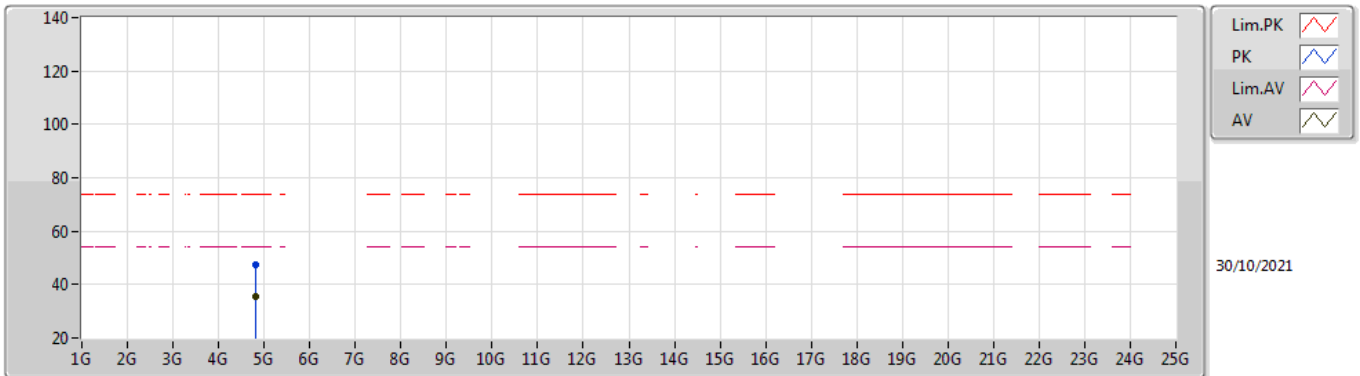


EUT X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80358G	45.56	74.00	-28.44	39.98	3	Vertical	347	2.60	-	32.71	5.10	32.23
AV	4.80368G	35.46	54.00	-18.54	29.88	3	Vertical	347	2.60	-	32.71	5.10	32.23

### BT-LE(2Mbps)

### 2402MHz\_TX

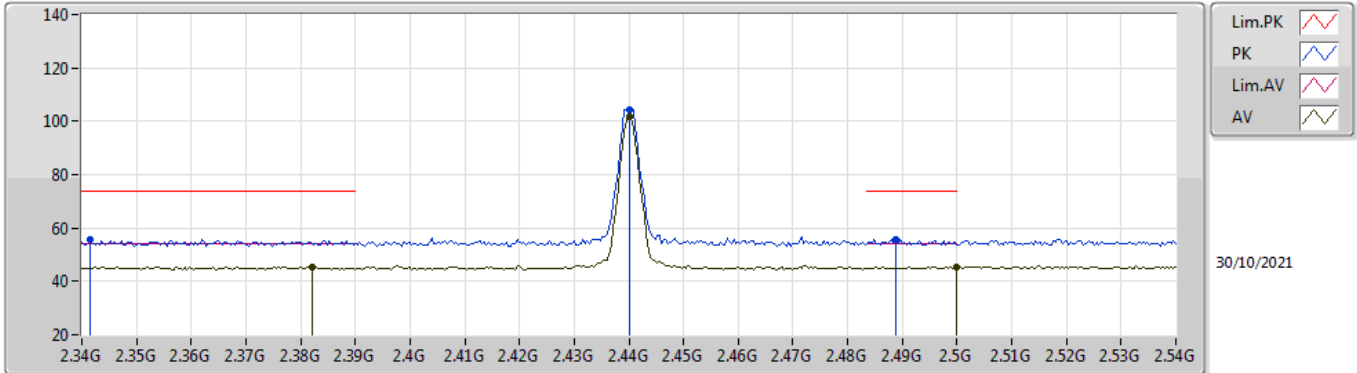


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80368G	47.16	74.00	-26.84	41.58	3	Horizontal	97	1.54	-	32.71	5.10	32.23
AV	4.80446G	35.68	54.00	-18.32	30.09	3	Horizontal	97	1.54	-	32.72	5.10	32.23

**BT-LE(2Mbps)**

**2440MHz\_TX**

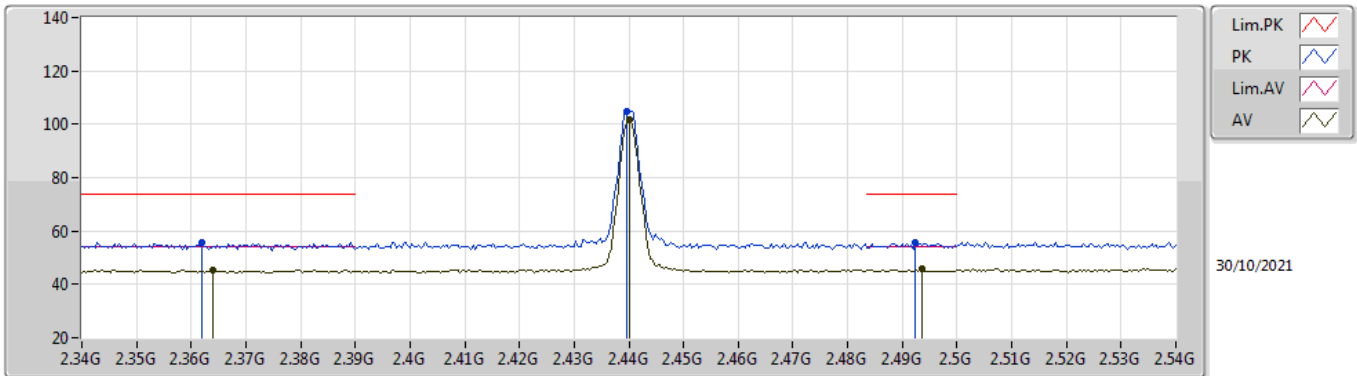


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3416G	55.92	74.00	-18.08	24.88	3	Vertical	358	1.00	-	28.27	2.77	-
AV	2.382G	45.52	54.00	-8.48	14.37	3	Vertical	358	1.00	-	28.36	2.79	-
PK	2.44G	104.55	Inf	-Inf	73.31	3	Vertical	358	1.00	-	28.40	2.84	-
AV	2.44G	101.79	Inf	-Inf	70.55	3	Vertical	358	1.00	-	28.40	2.84	-
PK	2.4888G	55.69	74.00	-18.31	24.24	3	Vertical	358	1.00	-	28.56	2.89	-
AV	2.5G	45.57	54.00	-8.43	14.07	3	Vertical	358	1.00	-	28.60	2.90	-

**BT-LE(2Mbps)**

**2440MHz\_TX**

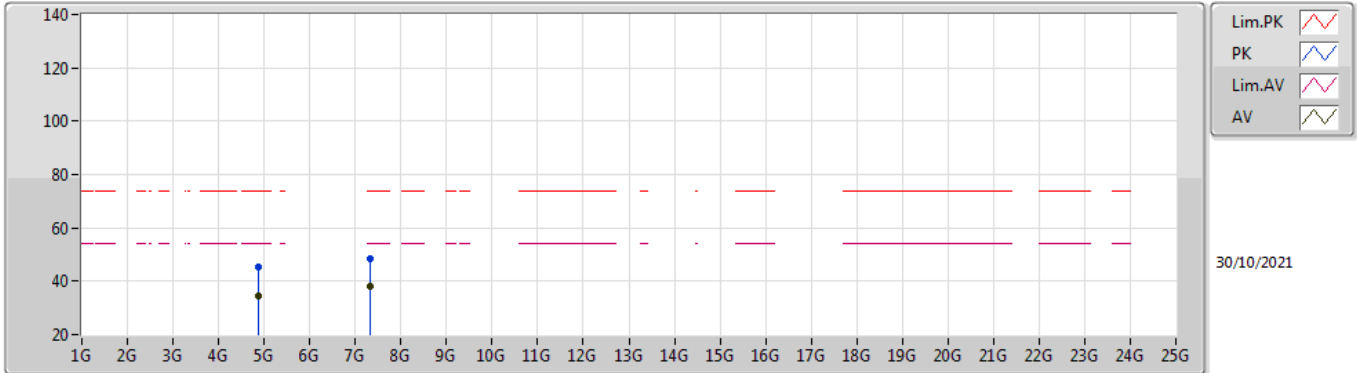


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.362G	55.64	74.00	-18.36	24.54	3	Horizontal	354	2.27	-	28.32	2.78	-
AV	2.364G	45.60	54.00	-8.40	14.49	3	Horizontal	354	2.27	-	28.33	2.78	-
PK	2.4396G	104.96	Inf	-Inf	73.72	3	Horizontal	354	2.27	-	28.40	2.84	-
AV	2.44G	101.93	Inf	-Inf	70.69	3	Horizontal	354	2.27	-	28.40	2.84	-
PK	2.4924G	55.68	74.00	-18.32	24.22	3	Horizontal	354	2.27	-	28.57	2.89	-
AV	2.4936G	45.66	54.00	-8.34	14.20	3	Horizontal	354	2.27	-	28.57	2.89	-

### BT-LE(2Mbps)

### 2440MHz\_TX

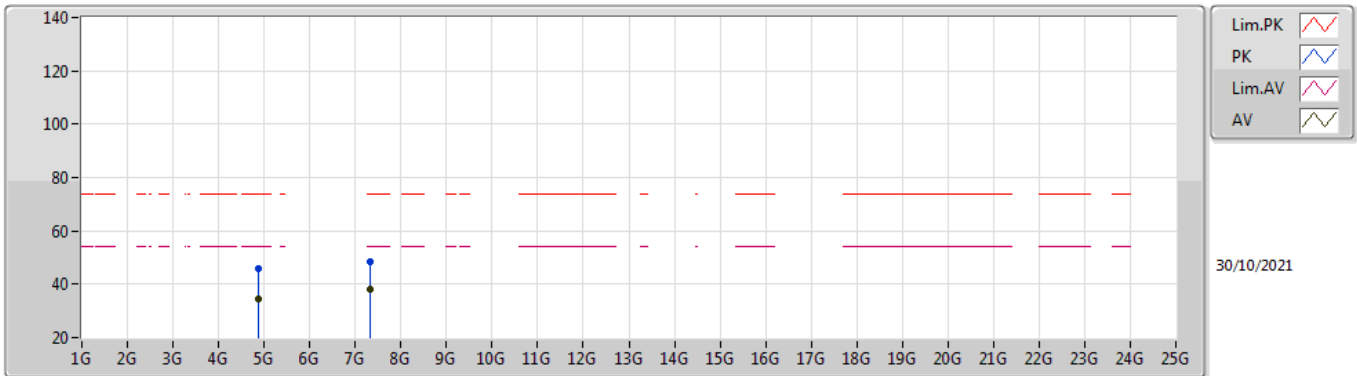


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8769G	45.11	74.00	-28.89	39.26	3	Vertical	27	2.45	-	32.95	5.10	32.20
AV	4.883G	34.33	54.00	-19.67	28.46	3	Vertical	27	2.45	-	32.97	5.10	32.20
PK	7.31796G	48.56	74.00	-25.44	38.79	3	Vertical	320	1.20	-	36.44	6.16	32.83
AV	7.32276G	38.23	54.00	-15.77	28.46	3	Vertical	320	1.20	-	36.45	6.16	32.84

### BT-LE(2Mbps)

### 2440MHz\_TX

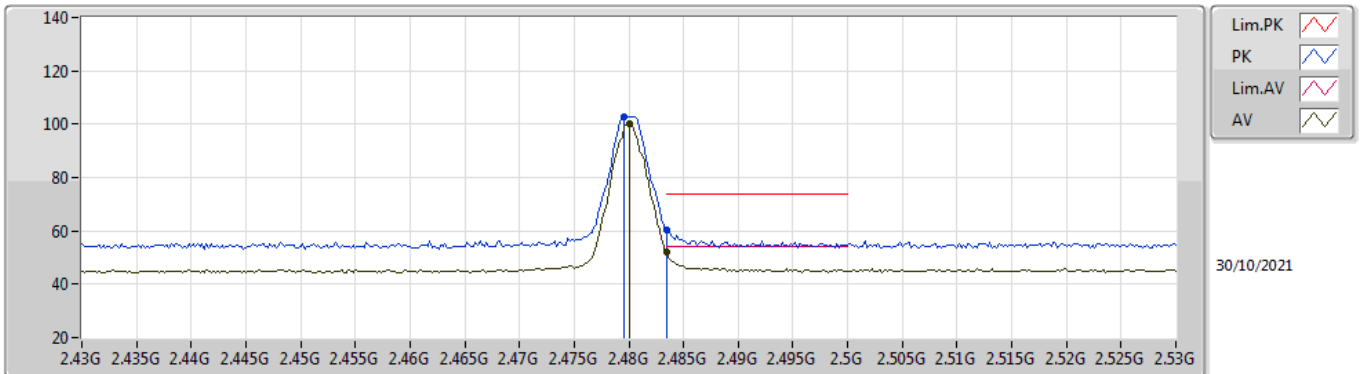


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8762G	45.67	74.00	-28.33	39.82	3	Horizontal	353	2.52	-	32.95	5.10	32.20
AV	4.87676G	34.26	54.00	-19.74	28.41	3	Horizontal	353	2.52	-	32.95	5.10	32.20
PK	7.3226G	48.37	74.00	-25.63	38.60	3	Horizontal	184	1.25	-	36.45	6.16	32.84
AV	7.32172G	38.34	54.00	-15.66	28.58	3	Horizontal	184	1.25	-	36.44	6.16	32.84

### BT-LE(2Mbps)

### 2480MHz\_TX

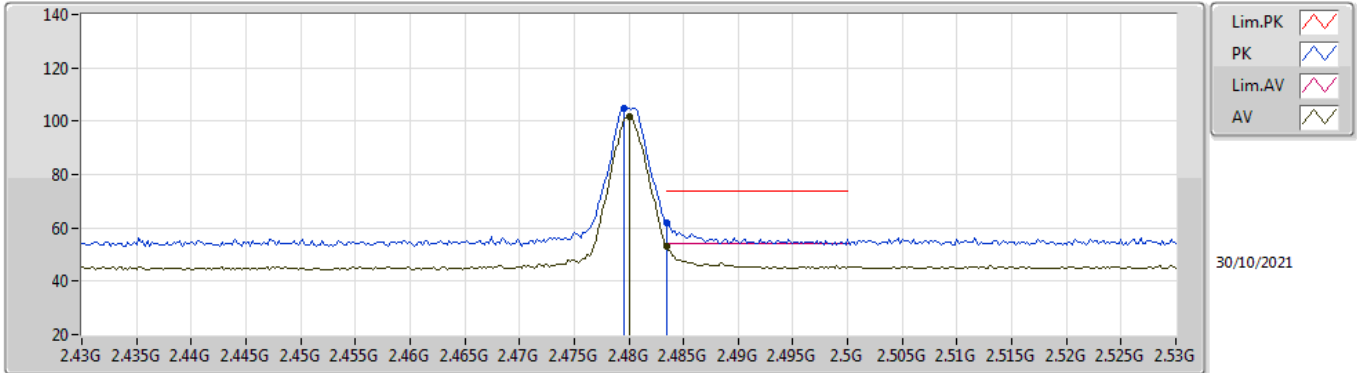


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4796G	102.97	Inf	-Inf	71.57	3	Vertical	352	1.05	-	28.52	2.88	-
AV	2.48G	100.26	Inf	-Inf	68.86	3	Vertical	352	1.05	-	28.52	2.88	-
PK	2.4835G	60.27	74.00	-13.73	28.86	3	Vertical	352	1.05	-	28.53	2.88	-
AV	2.4835G	51.98	54.00	-2.02	20.57	3	Vertical	352	1.05	-	28.53	2.88	-

### BT-LE(2Mbps)

### 2480MHz\_TX



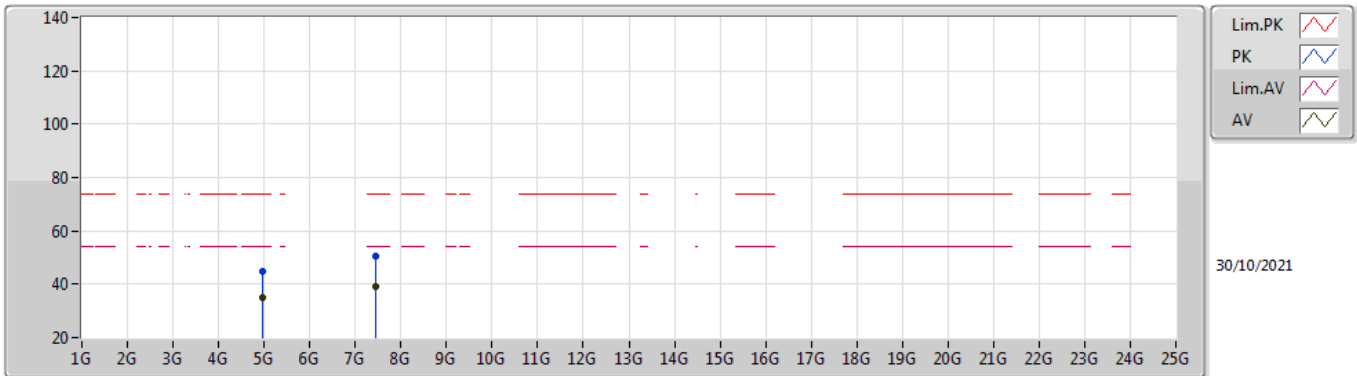
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4796G	104.73	Inf	-Inf	73.33	3	Horizontal	344	2.20	-	28.52	2.88	-
AV	2.48G	101.91	Inf	-Inf	70.51	3	Horizontal	344	2.20	-	28.52	2.88	-
PK	2.4835G	61.78	74.00	-12.22	30.37	3	Horizontal	344	2.20	-	28.53	2.88	-
AV	2.4835G	53.20	54.00	-0.80	21.79	3	Horizontal	344	2.20	-	28.53	2.88	-



**BT-LE(2Mbps)**

**2480MHz\_TX**

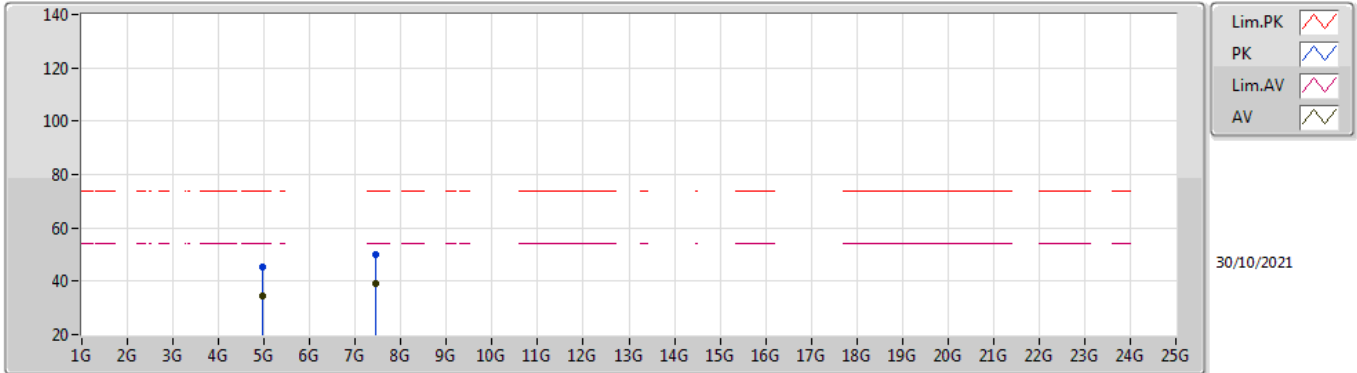


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96452G	45.06	74.00	-28.94	38.86	3	Vertical	209	1.22	-	33.27	5.10	32.17
AV	4.9638G	35.02	54.00	-18.98	28.82	3	Vertical	209	1.22	-	33.27	5.10	32.17
PK	7.43808G	50.68	74.00	-23.32	41.00	3	Vertical	5	1.85	-	36.52	6.20	33.04
AV	7.4426G	39.17	54.00	-14.83	29.51	3	Vertical	5	1.85	-	36.51	6.20	33.05

**BT-LE(2Mbps)**

**2480MHz\_TX**



EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95636G	45.60	74.00	-28.40	39.39	3	Horizontal	307	2.58	-	33.29	5.10	32.18
AV	4.9579G	34.45	54.00	-19.55	28.25	3	Horizontal	307	2.58	-	33.28	5.10	32.18
PK	7.4439G	49.82	74.00	-24.18	40.16	3	Horizontal	347	2.04	-	36.51	6.20	33.05
AV	7.43762G	39.26	54.00	-14.74	29.58	3	Horizontal	347	2.04	-	36.52	6.20	33.04



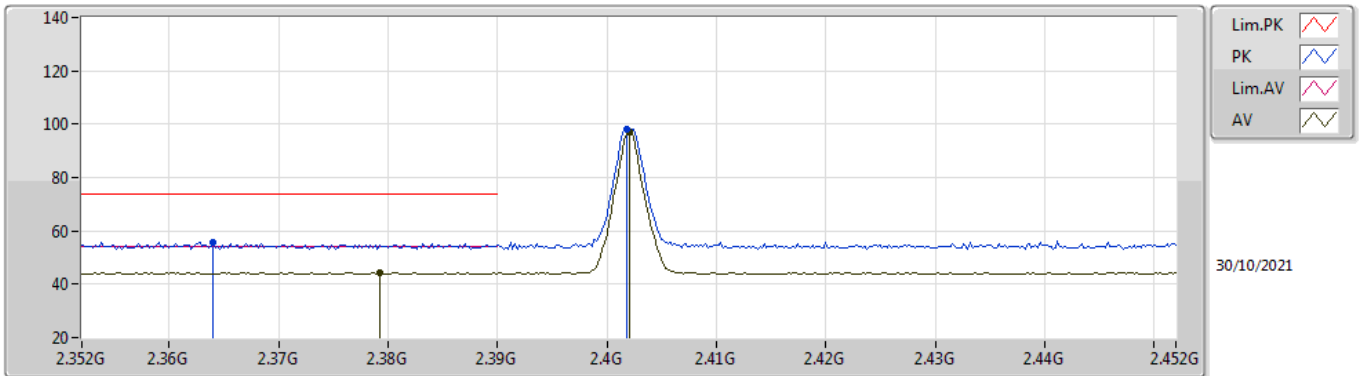
For mode 2 / Omni beam

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	AV	2.4835G	52.07	54.00	-1.93	3	Horizontal	45	1.24	-

### BT-LE(1Mbps)

### 2402MHz\_TX

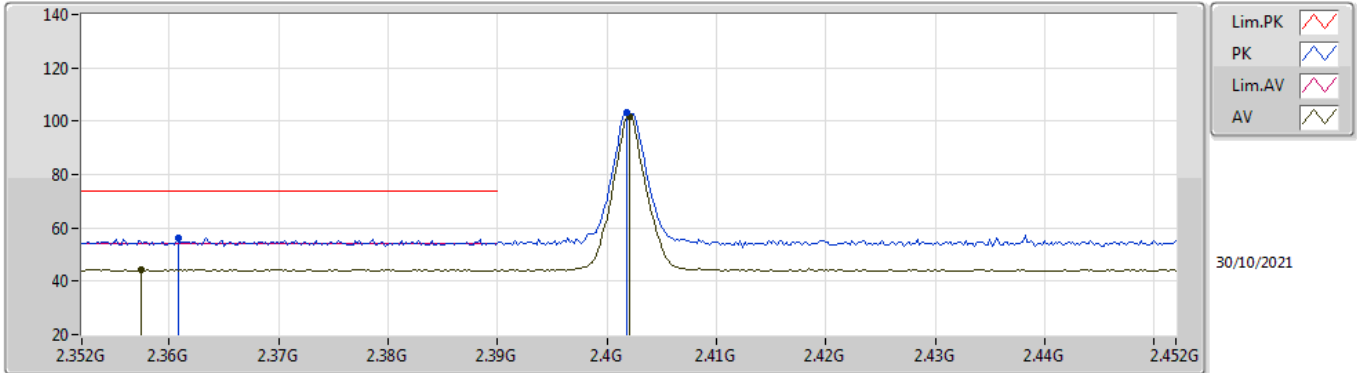


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.364G	55.57	74.00	-18.43	24.46	3	Vertical	20	2.79	-	28.33	2.78	-
AV	2.3792G	44.39	54.00	-9.61	13.24	3	Vertical	20	2.79	-	28.36	2.79	-
PK	2.4018G	98.31	Inf	-Inf	67.11	3	Vertical	20	2.79	-	28.40	2.80	-
AV	2.402G	96.87	Inf	-Inf	65.67	3	Vertical	20	2.79	-	28.40	2.80	-

### BT-LE(1Mbps)

### 2402MHz\_TX

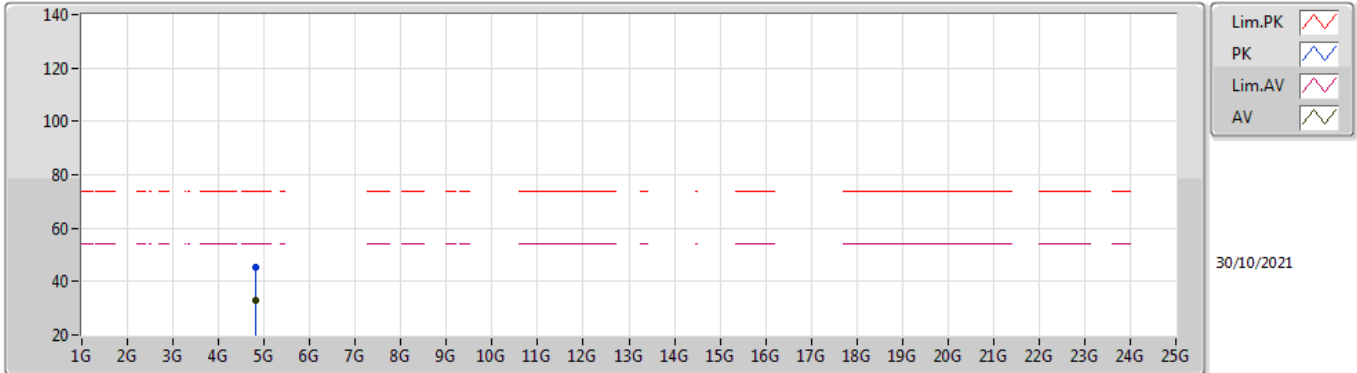


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3608G	56.27	74.00	-17.73	25.17	3	Horizontal	309	1.88	-	28.32	2.78	-
AV	2.3574G	44.43	54.00	-9.57	13.34	3	Horizontal	309	1.88	-	28.31	2.78	-
PK	2.4018G	103.10	Inf	-Inf	71.90	3	Horizontal	309	1.88	-	28.40	2.80	-
AV	2.402G	101.62	Inf	-Inf	70.42	3	Horizontal	309	1.88	-	28.40	2.80	-

### BT-LE(1Mbps)

### 2402MHz\_TX

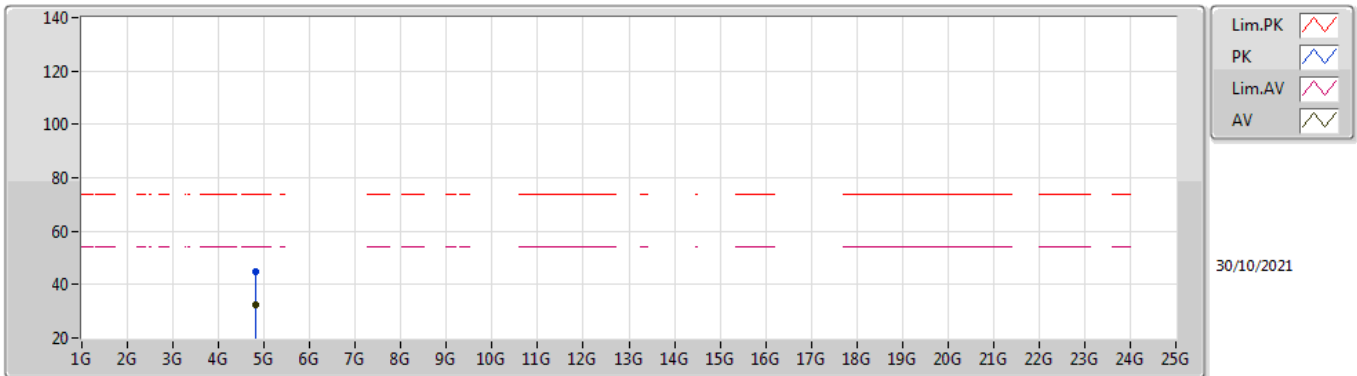


EUT X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80524G	45.26	74.00	-28.74	39.67	3	Vertical	45	2.81	-	32.72	5.10	32.23
AV	4.8052G	32.73	54.00	-21.27	27.14	3	Vertical	45	2.81	-	32.72	5.10	32.23

### BT-LE(1Mbps)

### 2402MHz\_TX

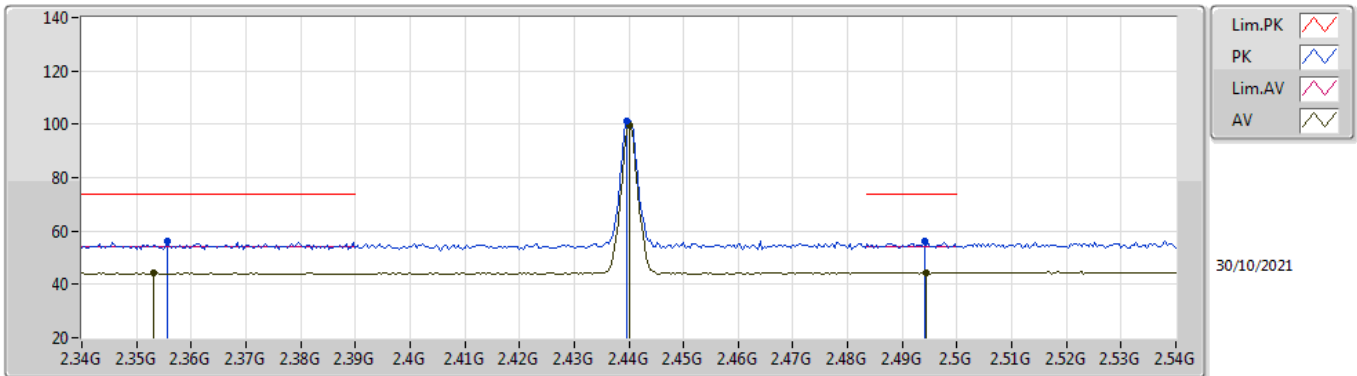


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80324G	44.92	74.00	-29.08	39.34	3	Horizontal	149	2.10	-	32.71	5.10	32.23
AV	4.80542G	32.63	54.00	-21.37	27.04	3	Horizontal	149	2.10	-	32.72	5.10	32.23

**BT-LE(1Mbps)**

**2440MHz\_TX**



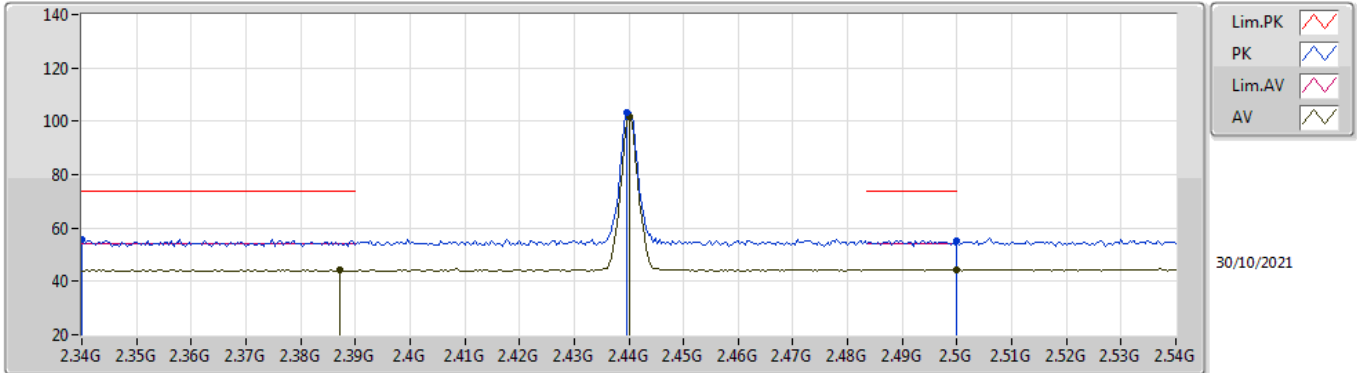
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3556G	56.17	74.00	-17.83	25.08	3	Vertical	32	3.00	-	28.31	2.78	-
AV	2.3532G	44.30	54.00	-9.70	13.21	3	Vertical	32	3.00	-	28.31	2.78	-
PK	2.4396G	101.15	Inf	-Inf	69.91	3	Vertical	32	3.00	-	28.40	2.84	-
AV	2.44G	99.67	Inf	-Inf	68.43	3	Vertical	32	3.00	-	28.40	2.84	-
PK	2.494G	56.44	74.00	-17.56	24.97	3	Vertical	32	3.00	-	28.58	2.89	-
AV	2.4944G	44.40	54.00	-9.60	12.93	3	Vertical	32	3.00	-	28.58	2.89	-



### BT-LE(1Mbps)

### 2440MHz\_TX

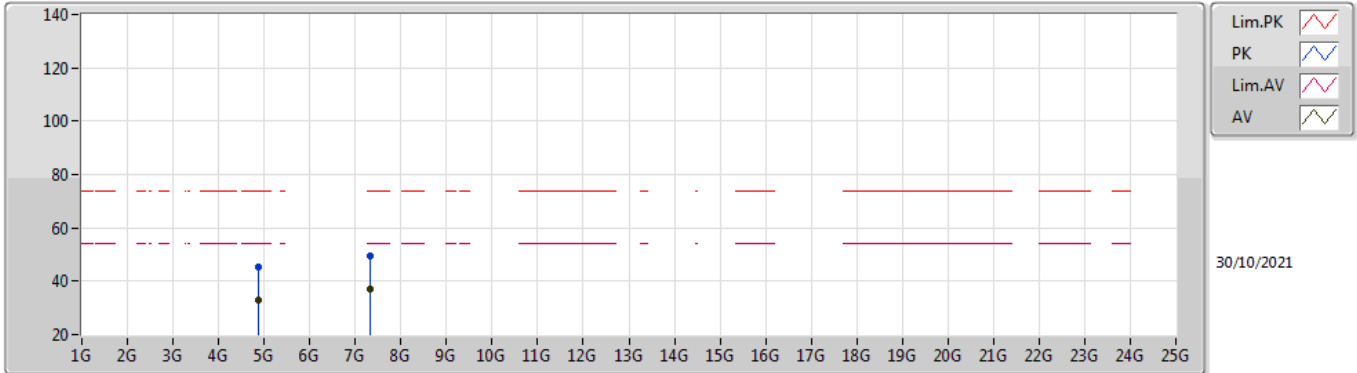


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.34G	55.77	74.00	-18.23	24.74	3	Horizontal	52	2.21	-	28.26	2.77	-
AV	2.3872G	44.45	54.00	-9.55	13.29	3	Horizontal	52	2.21	-	28.37	2.79	-
PK	2.4396G	103.14	Inf	-Inf	71.90	3	Horizontal	52	2.21	-	28.40	2.84	-
AV	2.44G	101.69	Inf	-Inf	70.45	3	Horizontal	52	2.21	-	28.40	2.84	-
PK	2.5G	55.22	74.00	-18.78	23.72	3	Horizontal	52	2.21	-	28.60	2.90	-
AV	2.5G	44.51	54.00	-9.49	13.01	3	Horizontal	52	2.21	-	28.60	2.90	-

### BT-LE(1Mbps)

### 2440MHz\_TX

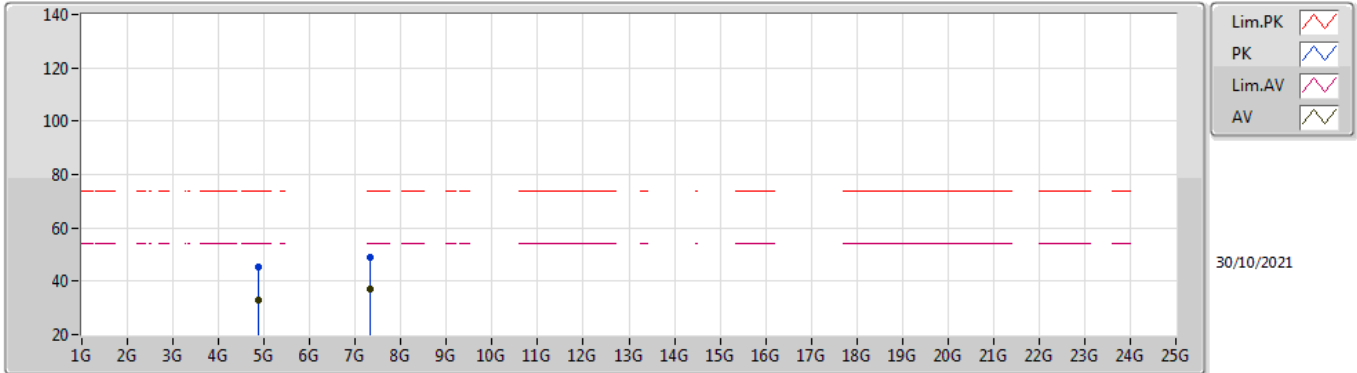


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87552G	45.24	74.00	-28.76	39.39	3	Vertical	228	1.99	-	32.95	5.10	32.20
AV	4.88284G	32.92	54.00	-21.08	27.05	3	Vertical	228	1.99	-	32.97	5.10	32.20
PK	7.31848G	49.57	74.00	-24.43	39.80	3	Vertical	228	2.61	-	36.44	6.16	32.83
AV	7.3211G	37.05	54.00	-16.95	27.29	3	Vertical	228	2.61	-	36.44	6.16	32.84

### BT-LE(1Mbps)

### 2440MHz\_TX

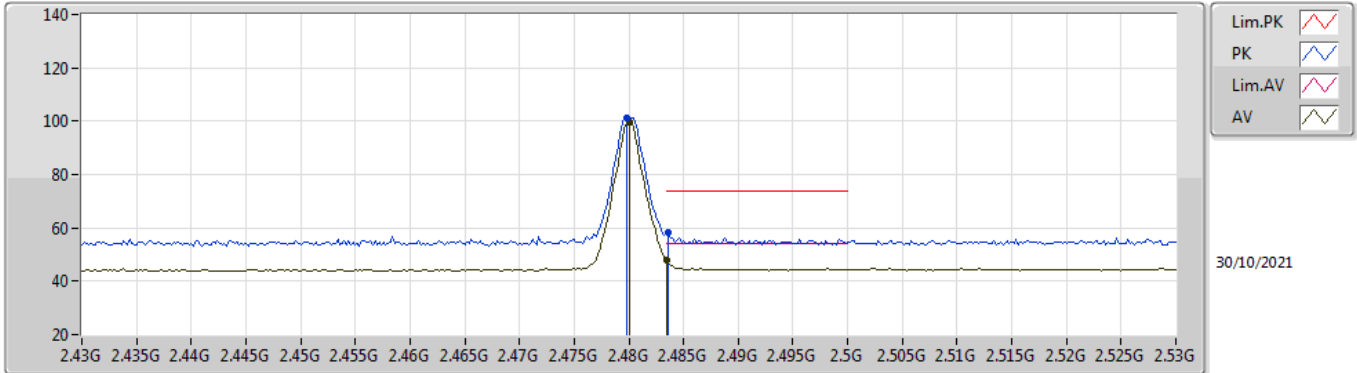


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88406G	45.30	74.00	-28.70	39.43	3	Horizontal	289	2.77	-	32.97	5.10	32.20
AV	4.8816G	32.81	54.00	-21.19	26.95	3	Horizontal	289	2.77	-	32.96	5.10	32.20
PK	7.31854G	49.16	74.00	-24.84	39.39	3	Horizontal	11	2.10	-	36.44	6.16	32.83
AV	7.32176G	36.82	54.00	-17.18	27.06	3	Horizontal	11	2.10	-	36.44	6.16	32.84

### BT-LE(1Mbps)

### 2480MHz\_TX

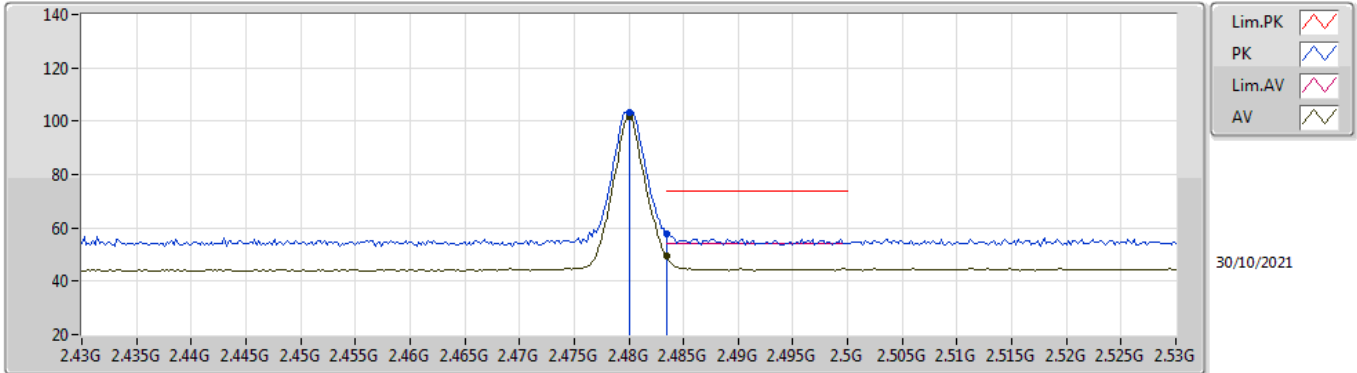


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4798G	101.30	Inf	-Inf	69.90	3	Vertical	26	2.48	-	28.52	2.88	-
AV	2.48G	99.73	Inf	-Inf	68.33	3	Vertical	26	2.48	-	28.52	2.88	-
PK	2.4836G	58.27	74.00	-15.73	26.86	3	Vertical	26	2.48	-	28.53	2.88	-
AV	2.4835G	47.86	54.00	-6.14	16.45	3	Vertical	26	2.48	-	28.53	2.88	-

### BT-LE(1Mbps)

### 2480MHz\_TX

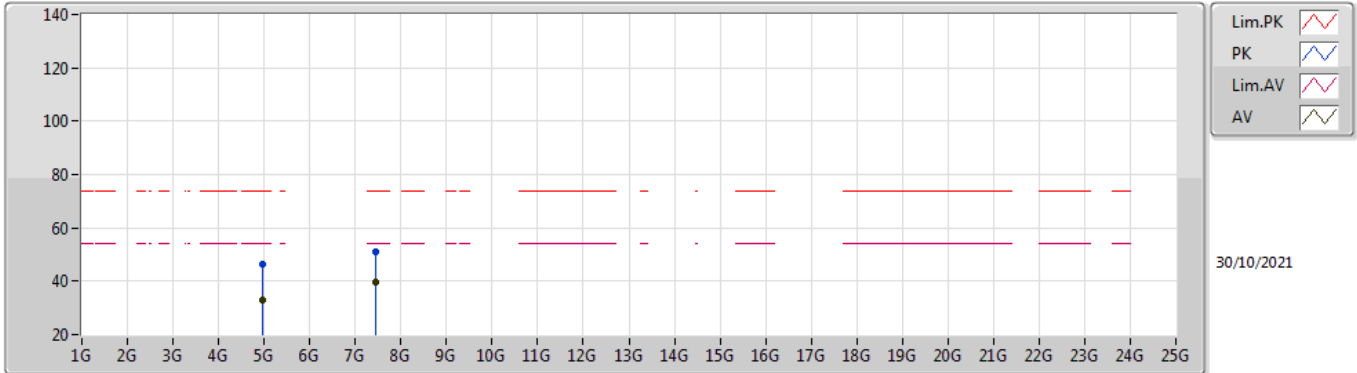


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.48G	103.19	Inf	-Inf	71.79	3	Horizontal	45	2.39	-	28.52	2.88	-
AV	2.48G	101.72	Inf	-Inf	70.32	3	Horizontal	45	2.39	-	28.52	2.88	-
PK	2.4835G	57.64	74.00	-16.36	26.23	3	Horizontal	45	2.39	-	28.53	2.88	-
AV	2.4835G	49.32	54.00	-4.68	17.91	3	Horizontal	45	2.39	-	28.53	2.88	-

**BT-LE(1Mbps)**

**2480MHz\_TX**

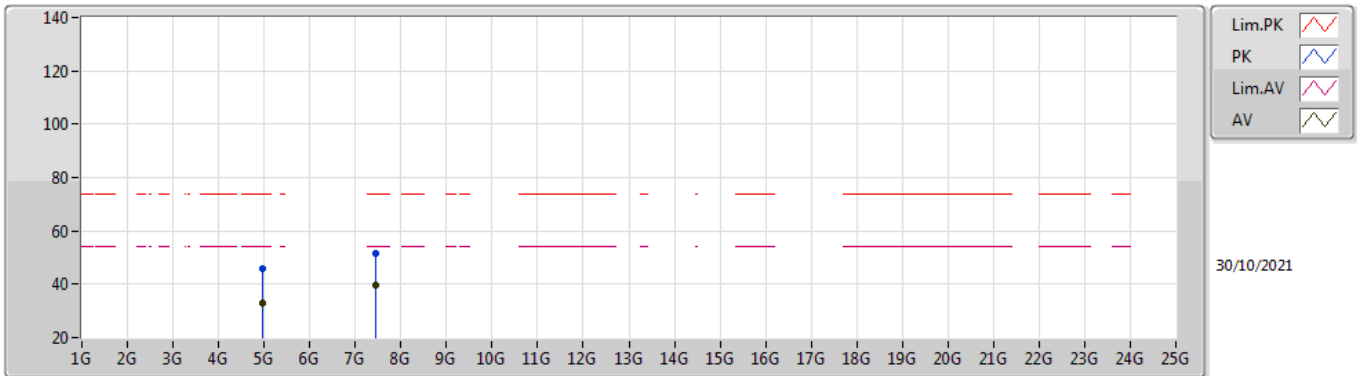


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96196G	46.15	74.00	-27.85	39.94	3	Vertical	187	2.36	-	33.28	5.10	32.17
AV	4.95832G	32.98	54.00	-21.02	26.78	3	Vertical	187	2.36	-	33.28	5.10	32.18
PK	7.4411G	51.23	74.00	-22.77	41.56	3	Vertical	29	1.74	-	36.52	6.20	33.05
AV	7.43874G	39.47	54.00	-14.53	29.79	3	Vertical	29	1.74	-	36.52	6.20	33.04

### BT-LE(1Mbps)

### 2480MHz\_TX

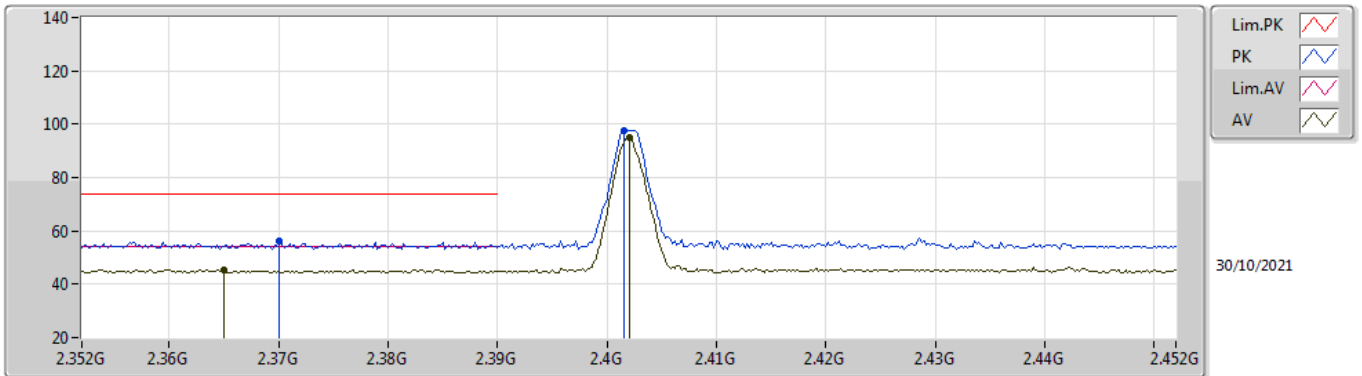


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95886G	45.63	74.00	-28.37	39.42	3	Horizontal	236	2.09	-	33.28	5.10	32.17
AV	4.9636G	33.02	54.00	-20.98	26.82	3	Horizontal	236	2.09	-	33.27	5.10	32.17
PK	7.43854G	51.49	74.00	-22.51	41.81	3	Horizontal	1	2.65	-	36.52	6.20	33.04
AV	7.43886G	39.64	54.00	-14.36	29.96	3	Horizontal	1	2.65	-	36.52	6.20	33.04

**BT-LE(2Mbps)**

**2402MHz\_TX**



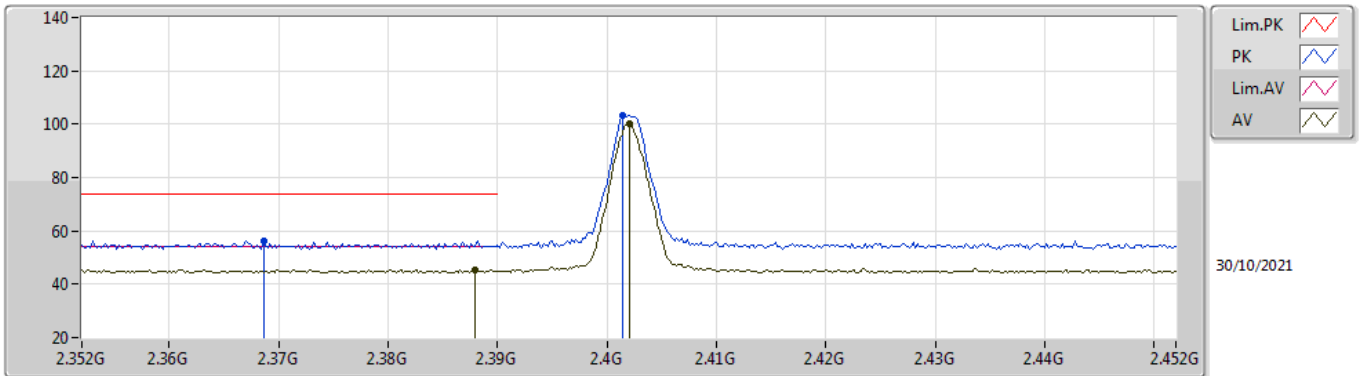
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.37G	56.15	74.00	-17.85	25.03	3	Vertical	34	2.81	-	28.34	2.78	-
AV	2.365G	45.46	54.00	-8.54	14.35	3	Vertical	34	2.81	-	28.33	2.78	-
PK	2.4016G	97.76	Inf	-Inf	66.56	3	Vertical	34	2.81	-	28.40	2.80	-
AV	2.402G	94.96	Inf	-Inf	63.76	3	Vertical	34	2.81	-	28.40	2.80	-



### BT-LE(2Mbps)

### 2402MHz\_TX

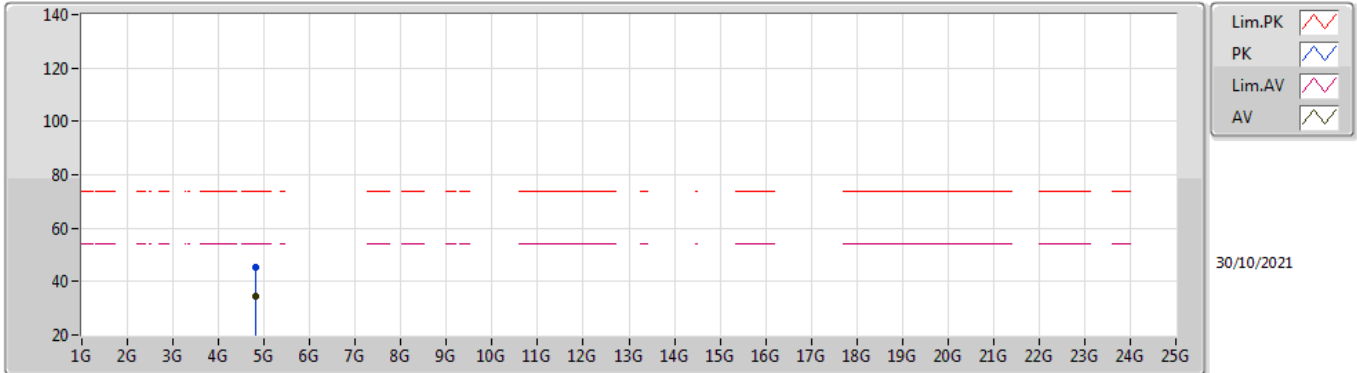


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3686G	56.39	74.00	-17.61	25.27	3	Horizontal	308	1.88	-	28.34	2.78	-
AV	2.388G	45.50	54.00	-8.50	14.33	3	Horizontal	308	1.88	-	28.38	2.79	-
PK	2.4014G	103.15	Inf	-Inf	71.95	3	Horizontal	308	1.88	-	28.40	2.80	-
AV	2.402G	100.37	Inf	-Inf	69.17	3	Horizontal	308	1.88	-	28.40	2.80	-

**BT-LE(2Mbps)**

**2402MHz\_TX**

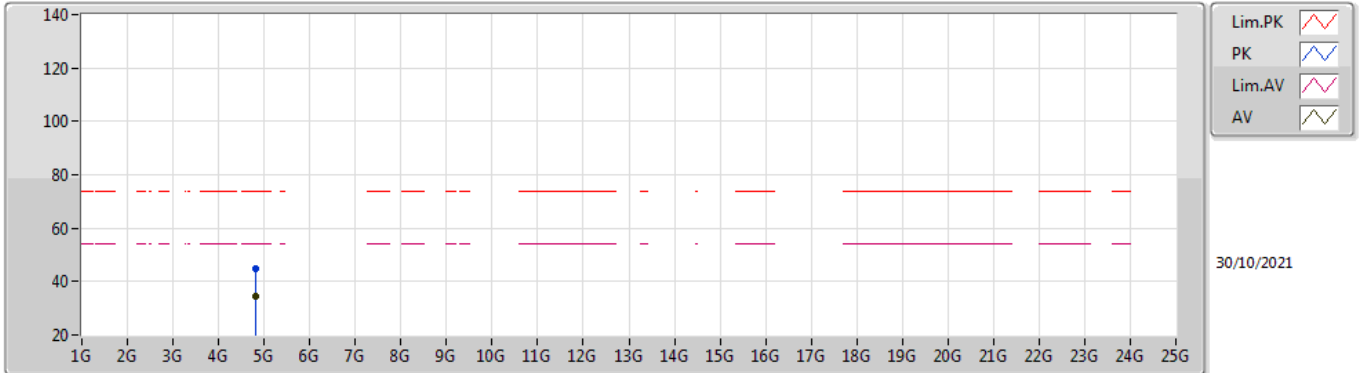


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80552G	45.41	74.00	-28.59	39.82	3	Vertical	18	1.66	-	32.72	5.10	32.23
AV	4.80576G	34.32	54.00	-19.68	28.73	3	Vertical	18	1.66	-	32.72	5.10	32.23

### BT-LE(2Mbps)

### 2402MHz\_TX

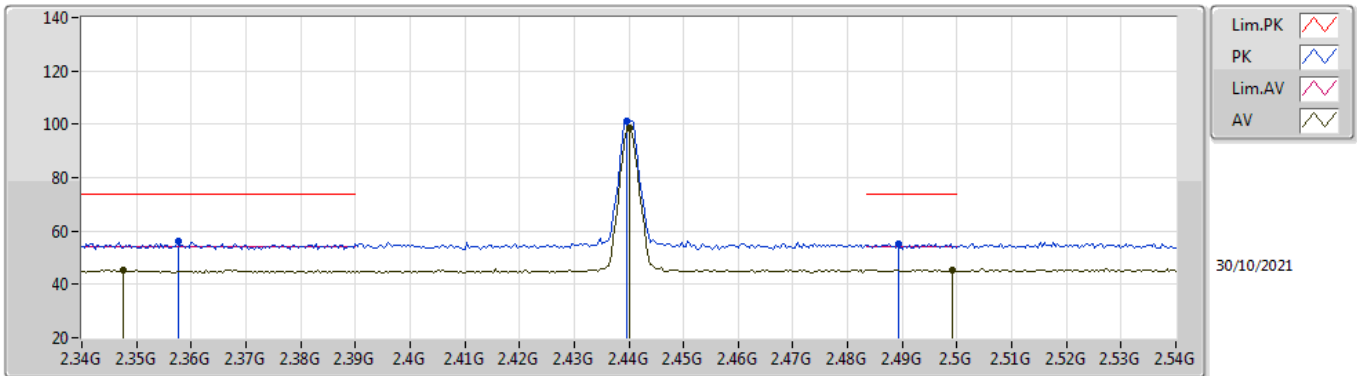


EUT X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80518G	44.74	74.00	-29.26	39.15	3	Horizontal	230	1.80	-	32.72	5.10	32.23
AV	4.8084G	34.50	54.00	-19.50	28.90	3	Horizontal	230	1.80	-	32.73	5.10	32.23

### BT-LE(2Mbps)

### 2440MHz\_TX

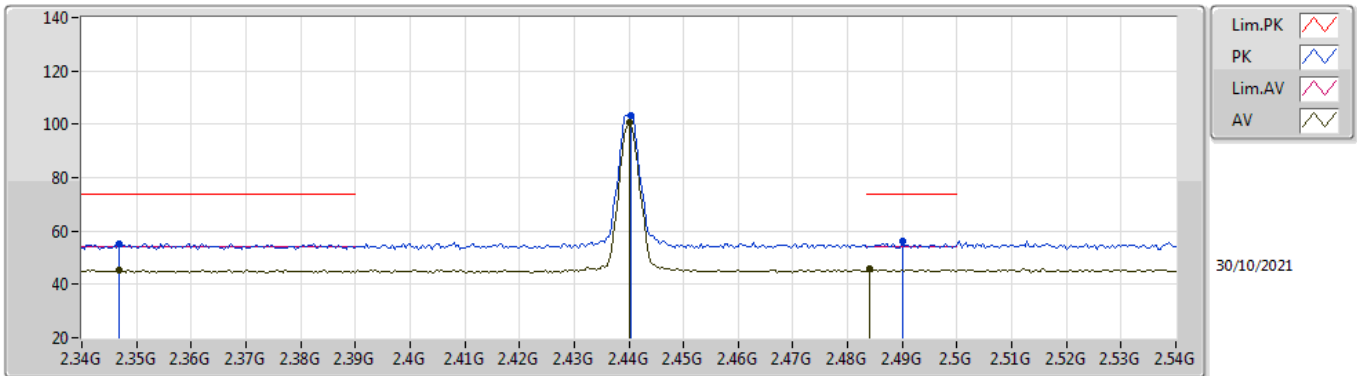


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3576G	56.09	74.00	-17.91	24.99	3	Vertical	25	3.00	-	28.32	2.78	-
AV	2.3476G	45.25	54.00	-8.75	14.19	3	Vertical	25	3.00	-	28.29	2.77	-
PK	2.4396G	101.17	Inf	-Inf	69.93	3	Vertical	25	3.00	-	28.40	2.84	-
AV	2.44G	98.41	Inf	-Inf	67.17	3	Vertical	25	3.00	-	28.40	2.84	-
PK	2.4892G	55.23	74.00	-18.77	23.78	3	Vertical	25	3.00	-	28.56	2.89	-
AV	2.4992G	45.57	54.00	-8.43	14.07	3	Vertical	25	3.00	-	28.60	2.90	-

### BT-LE(2Mbps)

### 2440MHz\_TX

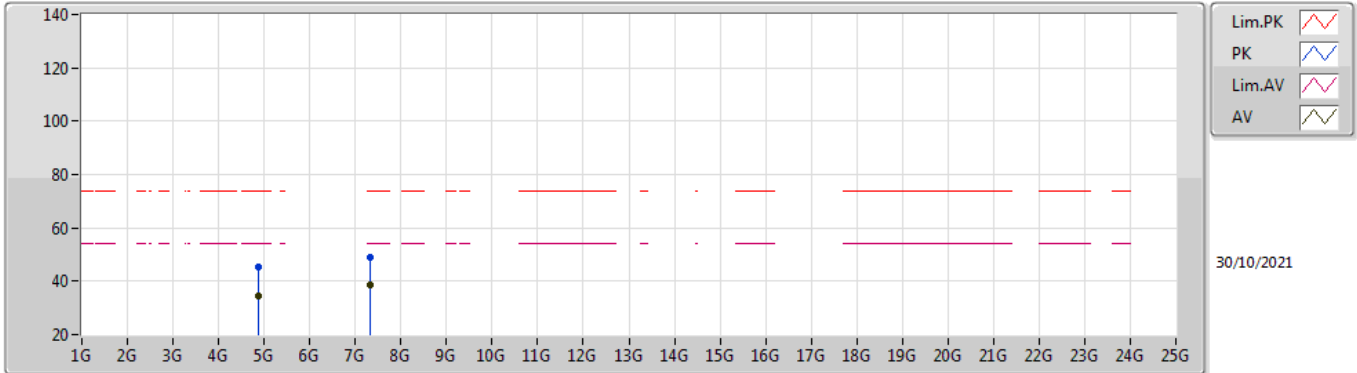


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3468G	55.25	74.00	-18.75	24.19	3	Horizontal	51	2.45	-	28.29	2.77	-
AV	2.3468G	45.24	54.00	-8.76	14.18	3	Horizontal	51	2.45	-	28.29	2.77	-
PK	2.4404G	103.30	Inf	-Inf	72.06	3	Horizontal	51	2.45	-	28.40	2.84	-
AV	2.44G	100.47	Inf	-Inf	69.23	3	Horizontal	51	2.45	-	28.40	2.84	-
PK	2.49G	56.24	74.00	-17.76	24.79	3	Horizontal	51	2.45	-	28.56	2.89	-
AV	2.484G	45.68	54.00	-8.32	14.26	3	Horizontal	51	2.45	-	28.54	2.88	-

**BT-LE(2Mbps)**

**2440MHz\_TX**

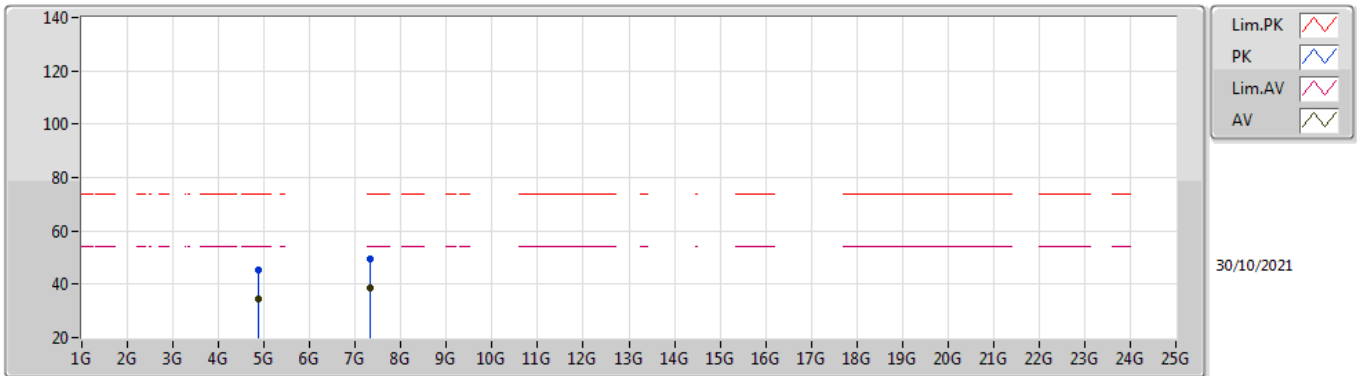


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87648G	45.58	74.00	-28.42	39.73	3	Vertical	75	2.73	-	32.95	5.10	32.20
AV	4.88334G	34.42	54.00	-19.58	28.55	3	Vertical	75	2.73	-	32.97	5.10	32.20
PK	7.31712G	49.12	74.00	-24.88	39.36	3	Vertical	137	1.44	-	36.43	6.16	32.83
AV	7.3187G	38.37	54.00	-15.63	28.60	3	Vertical	137	1.44	-	36.44	6.16	32.83

### BT-LE(2Mbps)

### 2440MHz\_TX

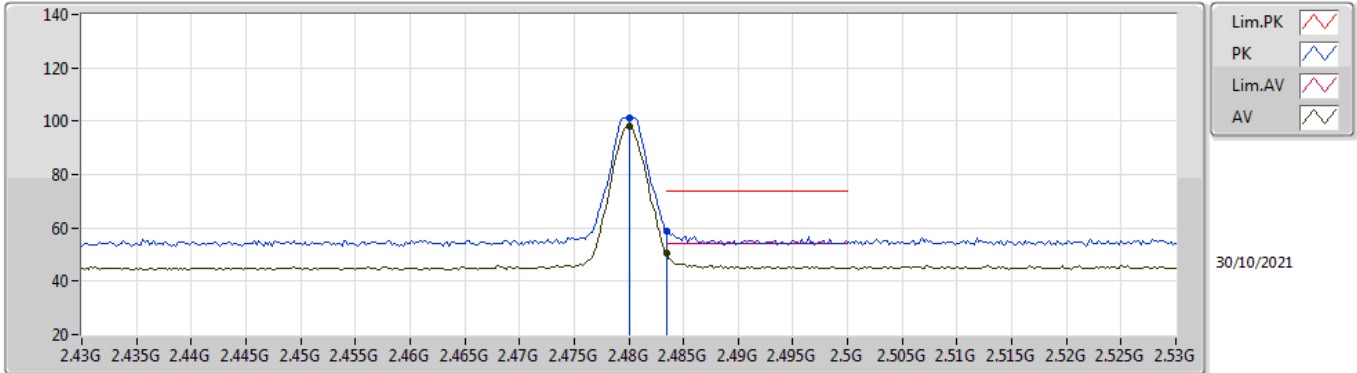


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87882G	45.36	74.00	-28.64	39.50	3	Horizontal	170	1.53	-	32.96	5.10	32.20
AV	4.8839G	34.56	54.00	-19.44	28.69	3	Horizontal	170	1.53	-	32.97	5.10	32.20
PK	7.32302G	49.51	74.00	-24.49	39.74	3	Horizontal	0	2.86	-	36.45	6.16	32.84
AV	7.31812G	38.54	54.00	-15.46	28.77	3	Horizontal	0	2.86	-	36.44	6.16	32.83

**BT-LE(2Mbps)**

**2480MHz\_TX**



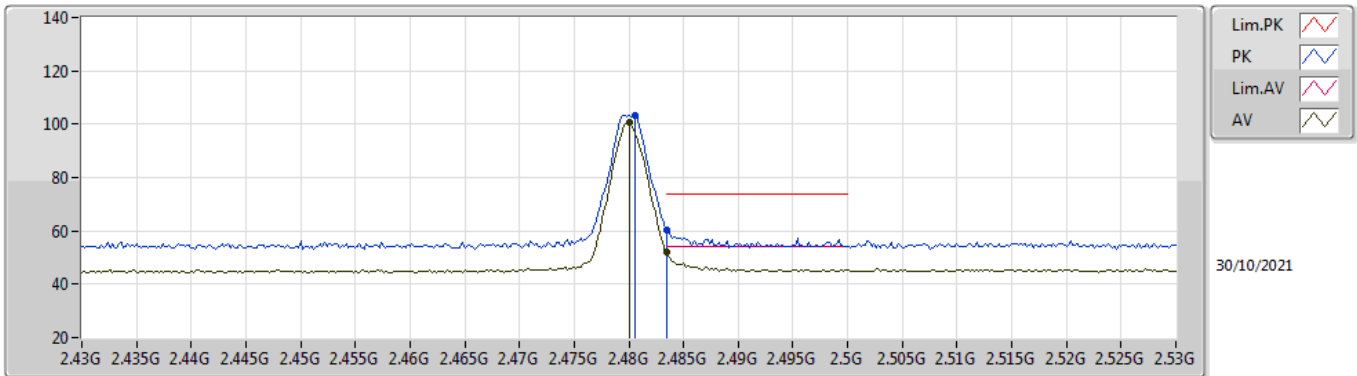
EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.48G	101.08	Inf	-Inf	69.68	3	Vertical	26	2.45	-	28.52	2.88	-
AV	2.48G	98.32	Inf	-Inf	66.92	3	Vertical	26	2.45	-	28.52	2.88	-
PK	2.4835G	58.88	74.00	-15.12	27.47	3	Vertical	26	2.45	-	28.53	2.88	-
AV	2.4835G	50.32	54.00	-3.68	18.91	3	Vertical	26	2.45	-	28.53	2.88	-



### BT-LE(2Mbps)

### 2480MHz\_TX

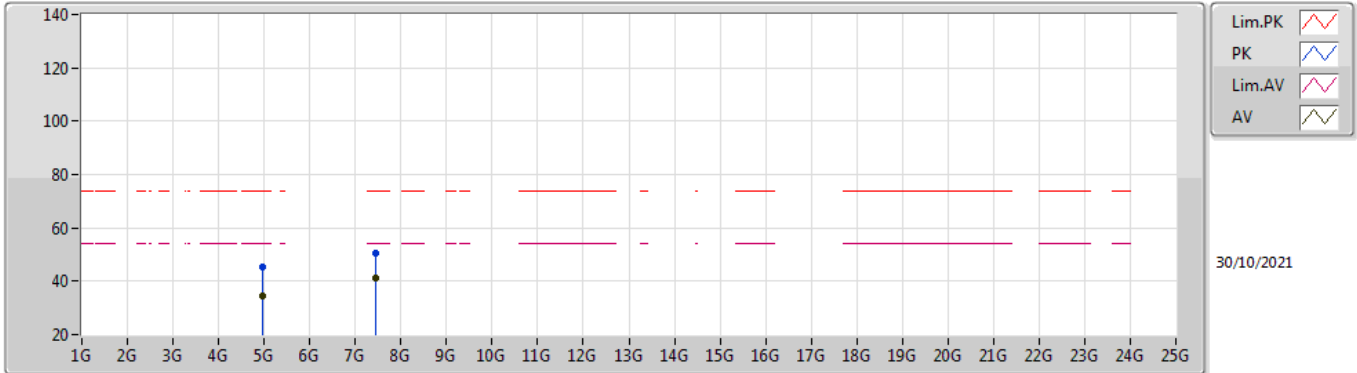


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4806G	103.25	Inf	-Inf	71.85	3	Horizontal	45	1.24	-	28.52	2.88	-
AV	2.48G	100.49	Inf	-Inf	69.09	3	Horizontal	45	1.24	-	28.52	2.88	-
PK	2.4835G	60.21	74.00	-13.79	28.80	3	Horizontal	45	1.24	-	28.53	2.88	-
AV	2.4835G	52.07	54.00	-1.93	20.66	3	Horizontal	45	1.24	-	28.53	2.88	-

**BT-LE(2Mbps)**

**2480MHz\_TX**

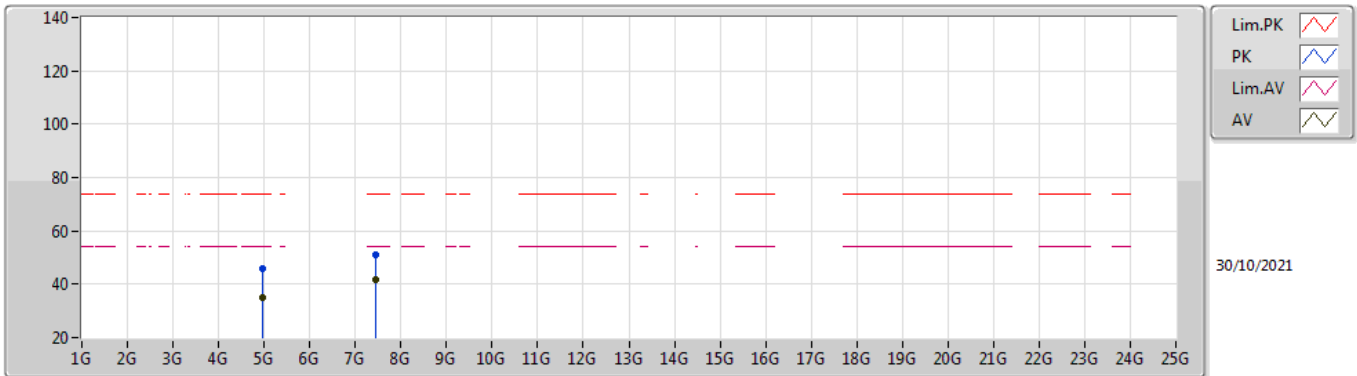


EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95704G	45.52	74.00	-28.48	39.31	3	Vertical	358	1.41	-	33.29	5.10	32.18
AV	4.95774G	34.58	54.00	-19.42	28.38	3	Vertical	358	1.41	-	33.28	5.10	32.18
PK	7.43502G	50.41	74.00	-23.59	40.72	3	Vertical	323	1.08	-	36.53	6.20	33.04
AV	7.43842G	41.45	54.00	-12.55	31.77	3	Vertical	323	1.08	-	36.52	6.20	33.04

### BT-LE(2Mbps)

### 2480MHz\_TX



EUT\_X\_1TX  
Setting 8  
02-C-S-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96278G	45.83	74.00	-28.17	39.63	3	Horizontal	208	1.34	-	33.27	5.10	32.17
AV	4.96366G	34.83	54.00	-19.17	28.63	3	Horizontal	208	1.34	-	33.27	5.10	32.17
PK	7.43994G	51.02	74.00	-22.98	41.35	3	Horizontal	157	1.95	-	36.52	6.20	33.05
AV	7.43852G	41.67	54.00	-12.33	31.99	3	Horizontal	157	1.95	-	36.52	6.20	33.04