



RADIO TEST REPORT

FCC ID : TX2-RTL8852CE
Equipment : 11ax RTL8852CE Combo module
Brand Name : REALTEK
Model Name : RTL8852CE
Applicant : Realtek Semiconductor Corp.
No. 2, Innovation Road II, Hsinchu Science Park,
Hsinchu 300, Taiwan
Manufacturer : Realtek Semiconductor Corp.
No. 2, Innovation Road II, Hsinchu Science Park,
Hsinchu 300, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 05, 2021, and testing was started from Nov. 13, 2021 and completed on Jun. 17, 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
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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	10
1.3 Testing Location Information	10
1.4 Measurement Uncertainty	11
2 Test Configuration of EUT.....	12
2.1 Test Channel Mode	12
2.2 The Worst Case Measurement Configuration.....	13
2.3 EUT Operation during Test	15
2.4 Accessories	15
2.5 Support Equipment.....	16
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 Results of Radiated Emission Co-location	
Appendix H. Test Photos	
Photographs of EUT v01	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_6 Ver1.3



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:

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: Sandy Chuang



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 (1Mbps) – v4.x	2402-2480	0-39 [40]
2400-2483.5	LE (1Mbps, 500Kb/s, 125Kb/s) – v5.x	2402, 2426, 2480	0, 12, 39 [3]
2400-2483.5	LE (2Mbps) – v5.x	2404-2478 (Without 2426 MHz)	1-38 [37]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(125Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

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

1.1.2 Antenna Information

Ant.	Port			Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz	WLAN 5GHz / 6GHz	Bluetooth					
1	1/2	1/2	1	ARISTOTLE	RFA-27-JP378-4B-200	Monopole	I-PEX	Note 1
2	1/2	1/2	1	ARISTOTLE	RFA-27-JP326-MHF4300	PIFA	I-PEX	
3	1/2	1/2	1	ARISTOTLE	RFA-27-C38H1-MHF4300	Dipole	I-PEX	
4	-	1/2	-	ARISTOTLE	RFA-57-JP697-4B-300	Monopole	I-PEX	

Note 1

Ant.	Port			Gain (dBi)		
	WLAN 2.4GHz	WLAN 5GHz / 6GHz	Bluetooth	WLAN 2.4GHz	WLAN 5GHz / 6GHz	Bluetooth
1	1/2	1/2	1	3.38	4.86	3.38
2	1/2	1/2	1	3.50	5.00	3.50
3	1/2	1/2	1	3.00	5.00	3.00
4	-	1/2	-	-	-5	-

Note 2: The above information was declared by manufacturer.

Note 3: For Conducted measurement Test: Only the highest gain antenna "Ant. 2" was selected to perform the test and recorded in this report.

<For WLAN 2.4GHz function>

For IEEE 802.11b/g/n/VHT/ax (1TX/2RX):

For Conducted:

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.

Port 1 and Port 2 could receive simultaneously

For Radiated:

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

Port 1 and Port 2 could receive simultaneously

For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

**<For WLAN 5GHz function>****For IEEE 802.11a/n/ac/ax (1TX/2RX):**

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.

Port 1 and Port 2 could receive simultaneously

For IEEE 802.11a/n/ac/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For WLAN 6GHz function>**For IEEE 802.11ax (1TX/2RX):**

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.

Port 1 and Port 2 could receive simultaneously

For IEEE 802.11ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For Bluetooth function> (1TX/1RX):

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

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

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

Ex.

Directional Gain (NSS1) formula :

$$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20}$$

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) / N_{ANT})] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

Where ;

Monopole Antenna

$$2.4G\ G1 = 3.38\ dBi ; G2 = 3.38\ dBi ; DG=6.39\ dBi$$

$$5G\ G1 = 4.86\ dBi ; G2 = 4.86\ dBi ; DG=7.87\ dBi$$

$$6G\ G1 = 4.86\ dBi ; G2 = 4.86\ dBi ; DG=7.87\ dBi$$

PIFA Antenna

$$2.4G\ G1 = 3.5\ dBi ; G2 = 3.5\ dBi ; DG=6.51\ dBi$$

$$5G\ G1 = 5\ dBi ; G2 = 5\ dBi ; DG=8.01\ dBi$$

$$6G\ G1 = 5\ dBi ; G2 = 5\ dBi ; DG=8.01\ dBi$$

Dipole Antenna

$$2.4G\ G1 = 3\ dBi ; G2 = 3\ dBi ; DG=6.01\ dBi$$

$$5G\ G1 = 5\ dBi ; G2 = 5\ dBi ; DG=8.01\ dBi$$

$$6G\ G1 = 5\ dBi ; G2 = 5\ dBi ; DG=8.01\ dBi$$

**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(1Mbps)	0.632	1.99	395u	3k
BT-LE(2Mbps)	0.336	4.74	210u	10k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Function	<input checked="" type="checkbox"/>	Point-to-multipoint	<input type="checkbox"/>	Point-to-point
Test Software Version	RTLBTAPP V5.2.3.13			
Support Mode	<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.



1.2 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
- ♦ 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
(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	TH01-CB	Serway Lee	21~22.3 / 65~69	May 02, 2022~ Jun. 17, 2022
Radiated <Below 1GHz>	10CH01-CB	Peter Wu	23~24 / 57~58	May 18, 2022
Radiated <Above 1GHz: Ant. 1 and Ant. 3>	03CH03-CB	Ken Yeh	23.8-24.9 / 55-58	Nov. 13, 2021~ Dec. 20, 2021
	03CH05-CB		24.5-25.6 °C / 56-59	
Radiated <Above 1GHz: Ant. 2>	03CH02-CB	Ken Yeh	23.7-24.8 / 57-60	Nov. 13, 2021~ Dec. 20, 2021
	03CH03-CB		23.8-24.9 / 55-58	
Radiated <Co-location>	03CH04-CB	Ken Yeh	24.4-25.5 / 55-58	Jun. 09, 2022
AC Conduction	CO01-CB	Ryan Huang	23~24 / 56~57	May 13, 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 Date: Before Jun. 01, 2022

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 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%

Test Date: After May 31, 2022

Test Items	Uncertainty	Remark
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

<High power>

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	0x55
2440MHz	0x55
2480MHz	0x55
BT-LE(2Mbps)	-
2404MHz	0x55
2440MHz	0x55
2478MHz	0x55

<Low power>

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	0x46
2440MHz	0x45
2480MHz	0x47
BT-LE(2Mbps)	-
2404MHz	0x47
2440MHz	0x46
2478MHz	0x48

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link
1	EUT + WLAN 2.4GHz+ Bluetooth + Ant. 2
2	EUT + WLAN 5GHz+ Bluetooth + Ant. 2
3	EUT + WLAN 6GHz+ Bluetooth + Ant. 2
Mode 2 generated the worst test result, so it was recorded in this report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Maximum Conducted Output Power
Test Condition	Conducted measurement at transmit chains
1	High power: EUT with Ant. 2
2	Low power: EUT with Ant. 2

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
1	EUT with Ant. 1
2	EUT with Ant. 2
3	EUT with Ant. 3



The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT in X axis + WLAN 2.4GHz + Bluetooth + Ant. 2
2	EUT in Y axis + WLAN 2.4GHz + Bluetooth + Ant. 2
3	EUT in Z axis + WLAN 2.4GHz + Bluetooth + Ant. 2
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 ~ 5 will follow this same test mode.	
4	EUT in Z axis + WLAN 5GHz + Bluetooth + Ant. 2
5	EUT in Z axis + WLAN 6GHz + Bluetooth + Ant. 2
Mode 3 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 ~ 7 will follow this same test mode.	
6	EUT in Z axis + WLAN 2.4GHz + Bluetooth + Ant. 3
7	EUT in Z axis + WLAN 2.4GHz + Bluetooth + Ant. 1
For operating mode 3 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below:	
1	EUT in Z axis with Ant. 1
2	EUT in Z axis with Ant. 2
3	EUT in Y axis with Ant. 3

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
<p>The EUT was performed at X axis, Y axis and Z axis position. EUT X axis in 5GHz + Bluetooth and EUT Y axis in 6GHz + Bluetooth were been evaluated to be the worst case at Radiated measurement <Above 1GHz>; thus, the measurement will follow this same test configuration</p>	
1	EUT in X with Ant. 1 (Port 1)_WLAN 5GHz + Bluetooth
2	EUT in Y with Ant. 1 (Port 1)_WLAN 6GHz + Bluetooth
3	EUT in X with Ant. 2 (Port 1)_WLAN 5GHz + Bluetooth
4	EUT in Y with Ant. 2 (Port 1)_WLAN 6GHz + Bluetooth
5	EUT in X with Ant. 3 (Port 1)_WLAN 5GHz + Bluetooth
6	EUT in Y with Ant. 3 (Port 1)_WLAN 6GHz + Bluetooth
For operating mode 5 is the worst case and it was record in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Bluetooth + WLAN 5GHz : 2TX
2	Bluetooth + WLAN 6GHz : 2TX
3	WLAN 2.4GHz: 1TX + WLAN 5GHz : 1TX
4	WLAN 2.4GHz: 1TX + WLAN 6GHz : 1TX
5	Bluetooth + WLAN 5GHz : 1TX + WLAN 6GHz : 1TX
Refer to Sporton Test Report No.: FA1N0223 for Co-location RF Exposure Evaluation.	

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

N/A



2.5 Support Equipment

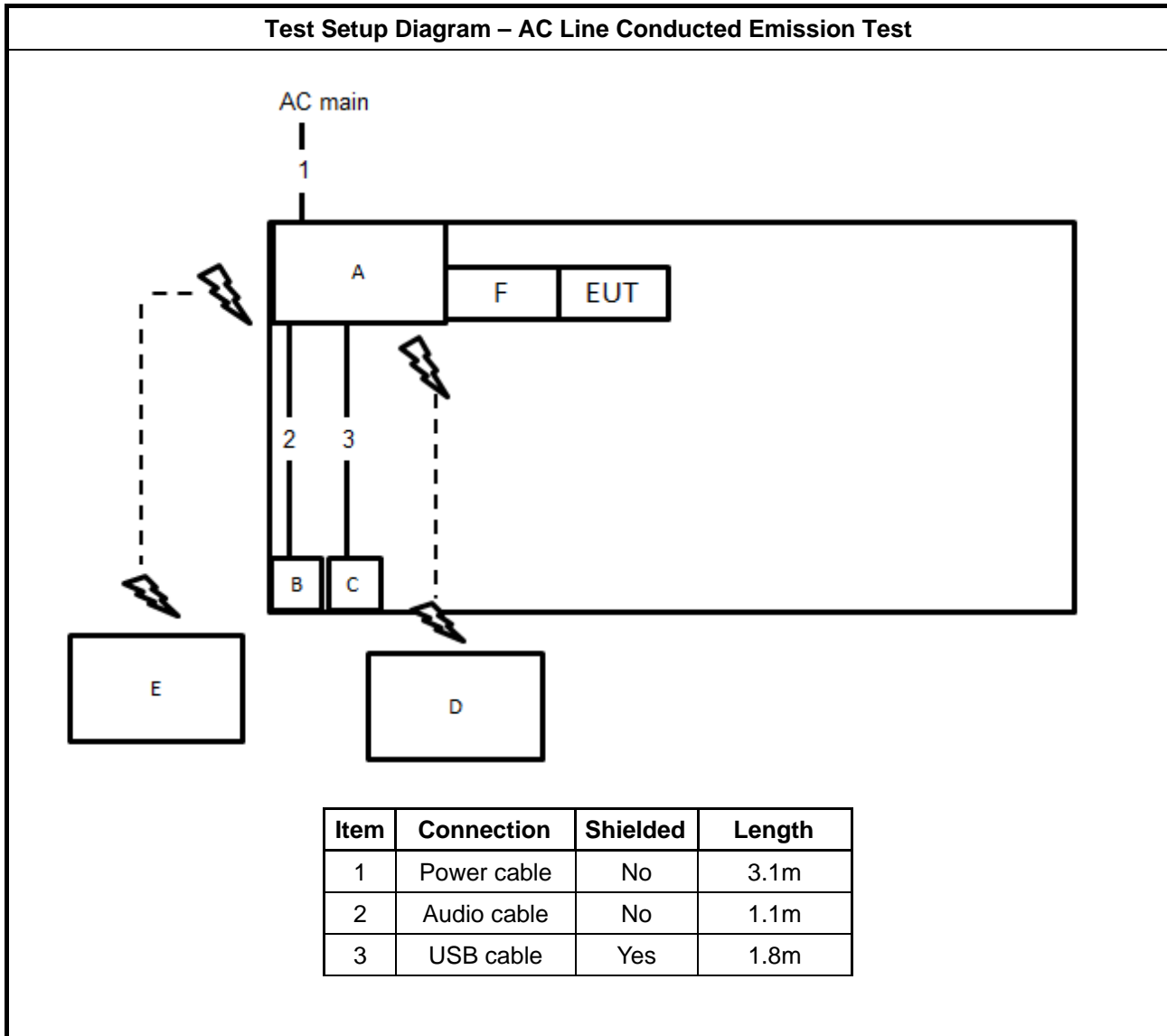
For AC Conduction and Radiated (below 1GHz):

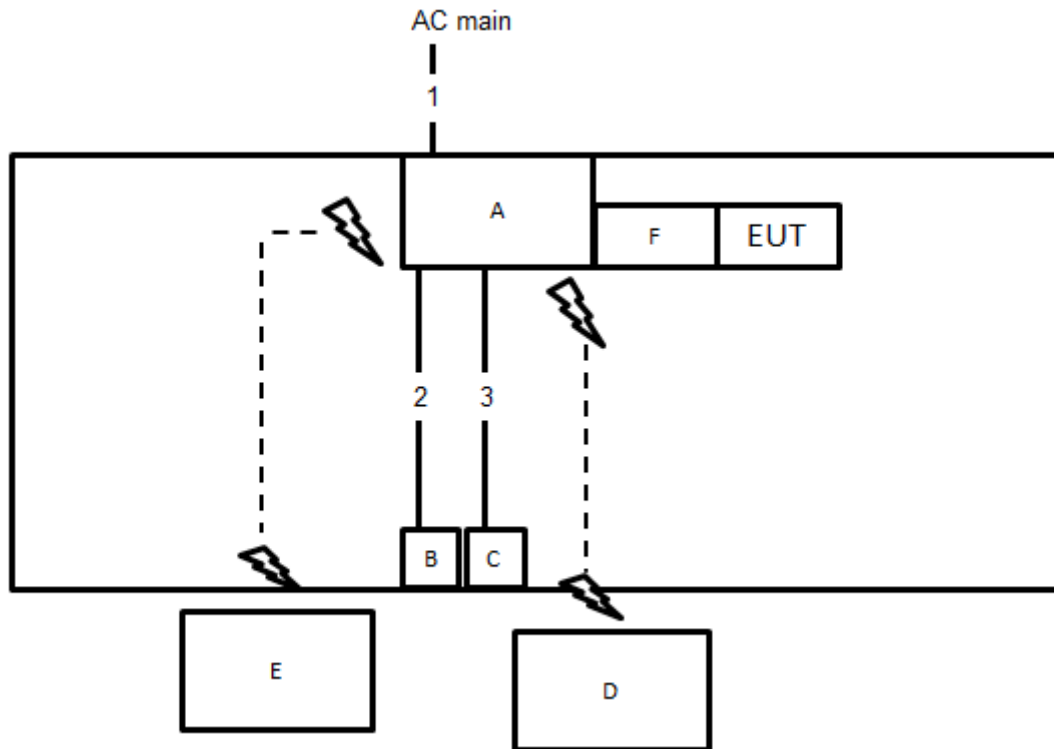
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	PP13S	N/A
B	Earphone	SHYARO CHI	MIC-04	N/A
C	Mouse	Logitech	M-U0026	N/A
D	WIFI AP	ASUS	AX88U	N/A
E	Wireless Connectivity Tester	R&S	CMW270	N/A
F	Test fixture	REALTEK	Ameba adapter	N/A

For Radiated (above 1GHz) and RF Conducted:

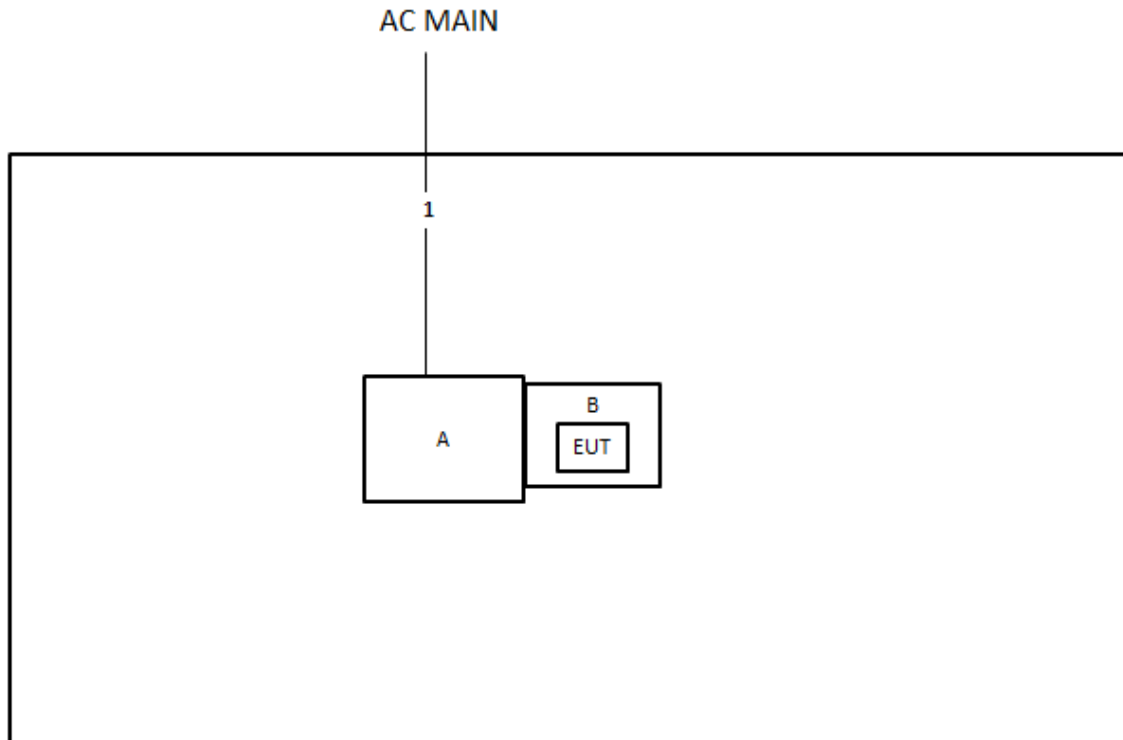
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Test fixture	REALTEK	Ameba adapter	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	3.1m
2	Audio cable	No	1.1m
3	USB cable	Yes	1.8m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	1.5m



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.

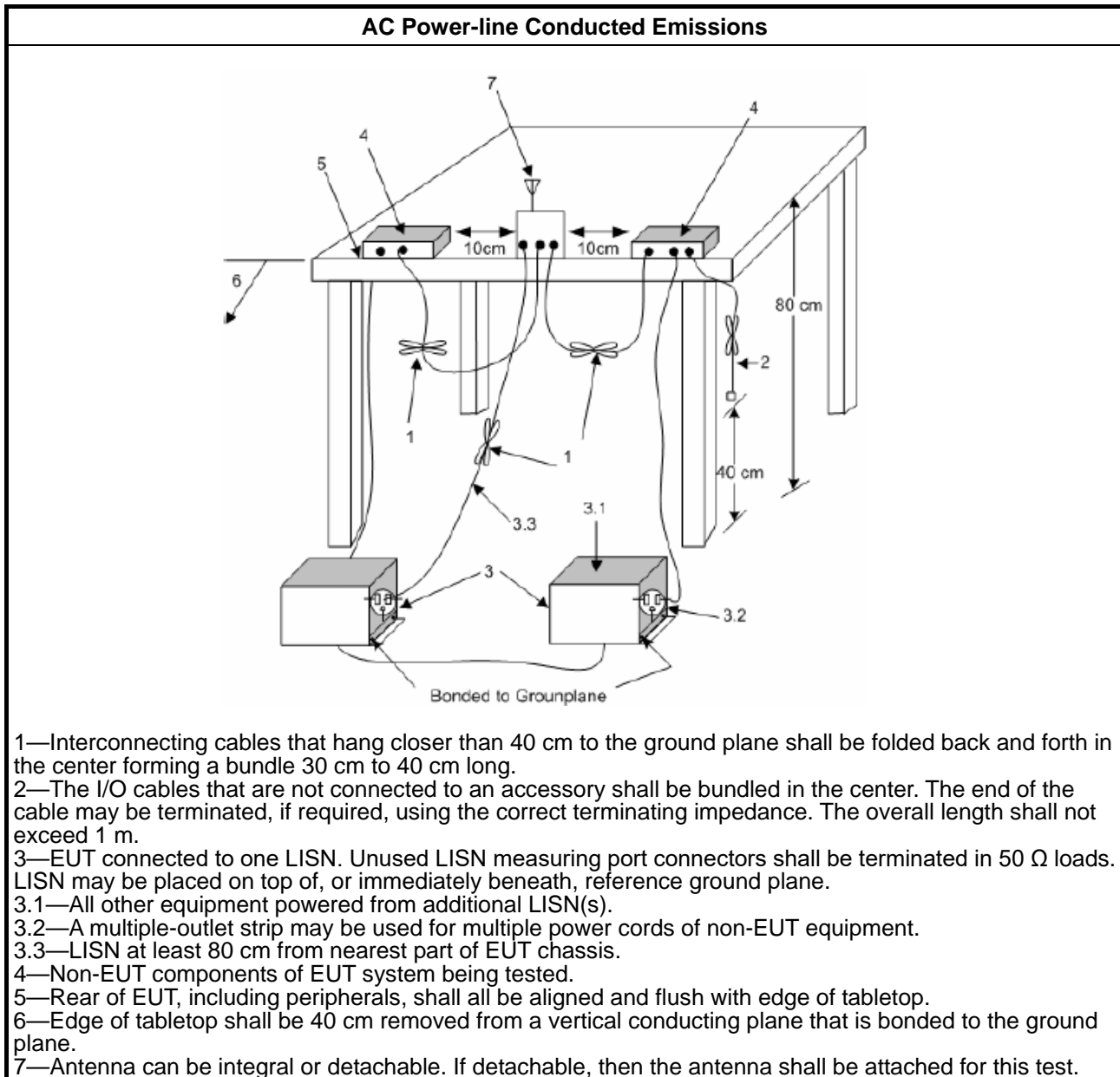
3.1.2 Measuring Instruments

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
Systems using digital modulation techniques:
<ul style="list-style-type: none"> 6 dB bandwidth \geq 500 kHz.

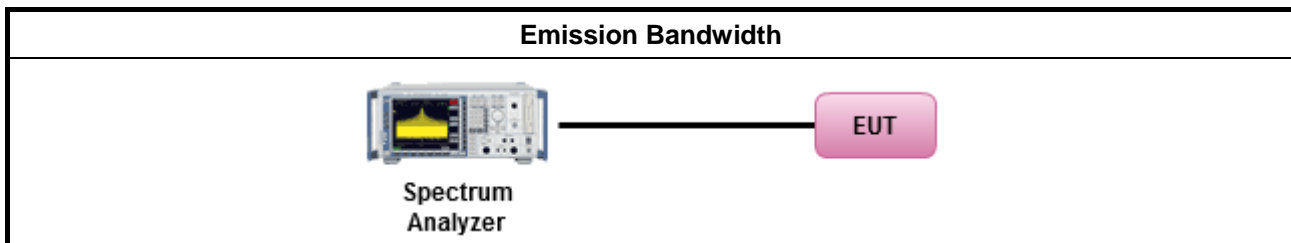
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/> Refer as 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	
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	▪ Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

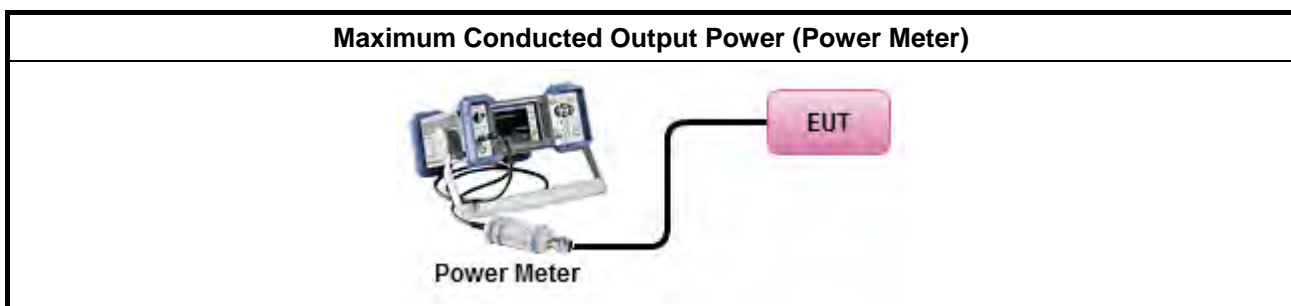
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as 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"> Maximum Conducted Output Power 	
[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"> For conducted measurement. 	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup





3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

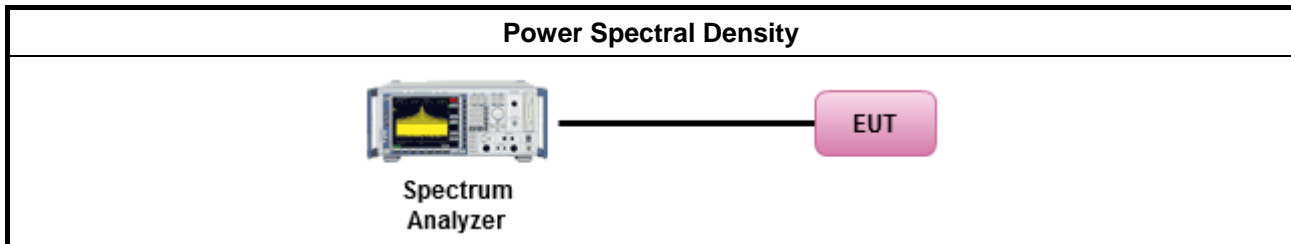
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD. [duty cycle $\geq 98\%$ or external video / power trigger]
▪ For conducted measurement.	
▪ If The EUT supports multiple transmit chains using options given below:	
<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.
<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,
<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.

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
<p>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.</p> <p>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.</p>	

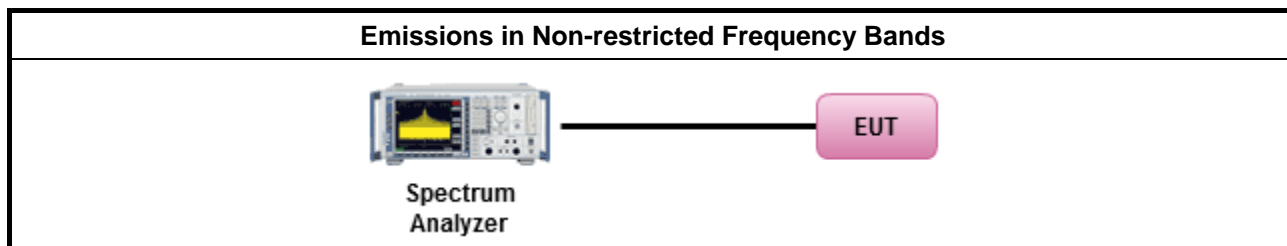
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

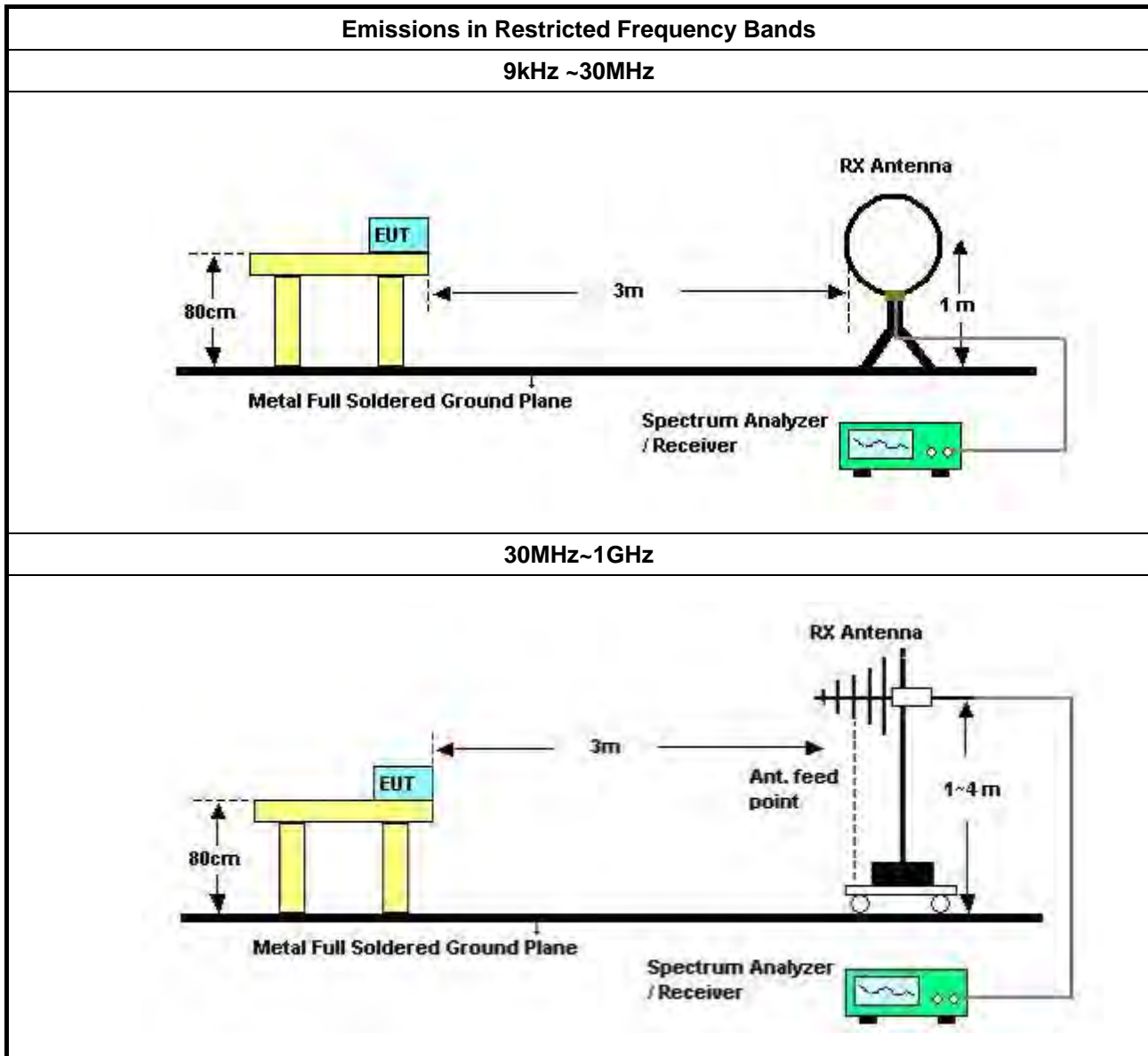
Refer a test equipment and calibration data table in this test report.

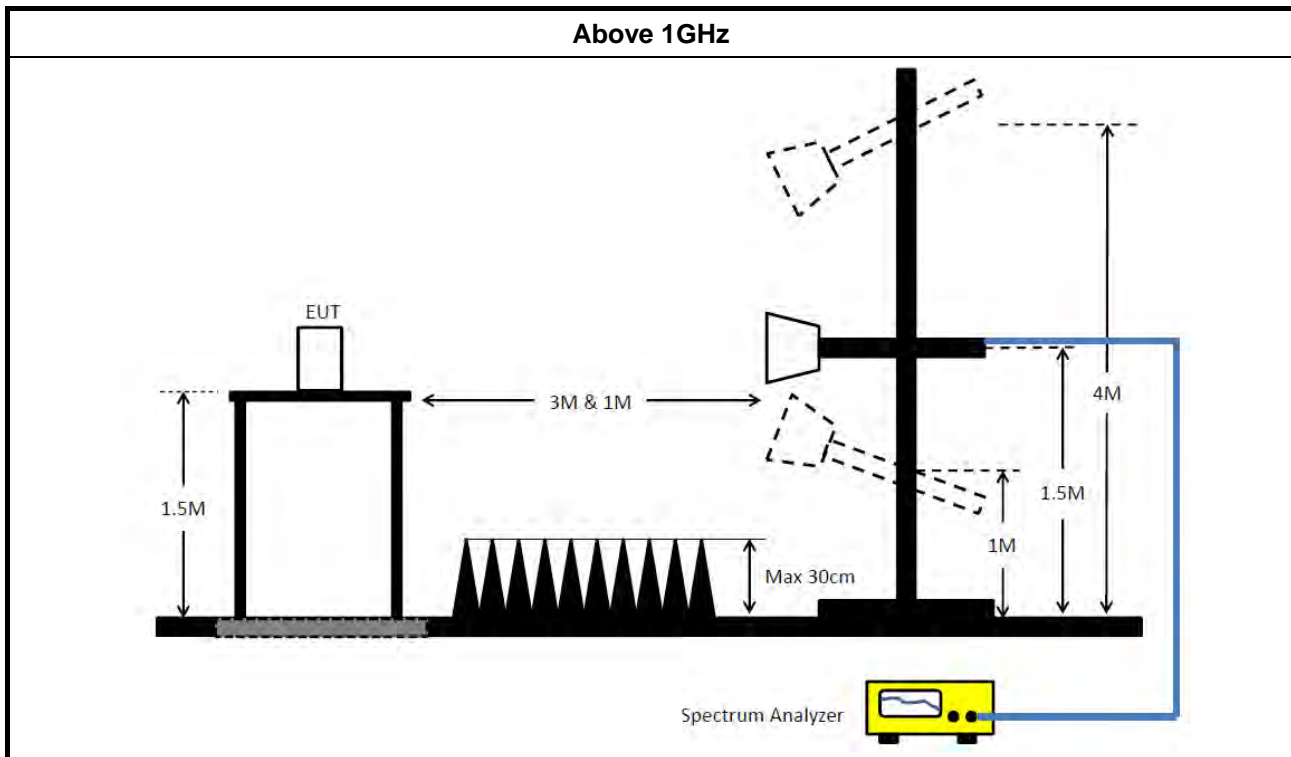


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. 	
<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. 	
<ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
<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"> For the transmitter band-edge emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as FCC KDB 558074 clause 8.7 & 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.
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> 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).
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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.

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	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	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	31244	9kHz - 30 MHz	Mar. 18, 2022	Mar. 17, 2023	Radiation (10CH01-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 27, 2022	Jan. 26, 2023	Radiation (10CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
High Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jul. 01, 2021	Jun. 30, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde&Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde&Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 22, 2022	Apr. 21, 2023	Radiation (10CH01-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-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	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-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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-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)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 06, 2021	May 05, 2022	Radiation (03CH03-CB)
Horn Antenna	ETS · Lindgren	3115	6821	750MHz~18GHz	Jan. 26, 2021	Jan. 25, 2022	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 04, 2021	Jun. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH03-CB)
Test Software	Audix	E3	6.2009-10-8b	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 08, 2021	Aug. 07, 2022	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS · Lindgren	3115	00143147	750MHz~18GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
High Cable	Woken	RG402	40G#4	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 07, 2021	Nov. 06, 2022	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Oct. 14, 2021	Oct. 13, 2022	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2022	May 26, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)

**RADIO TEST REPORT****Report No. : FR1N0223AD**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)

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

NCR means Non-Calibration required.



Conducted Emissions at Powerline

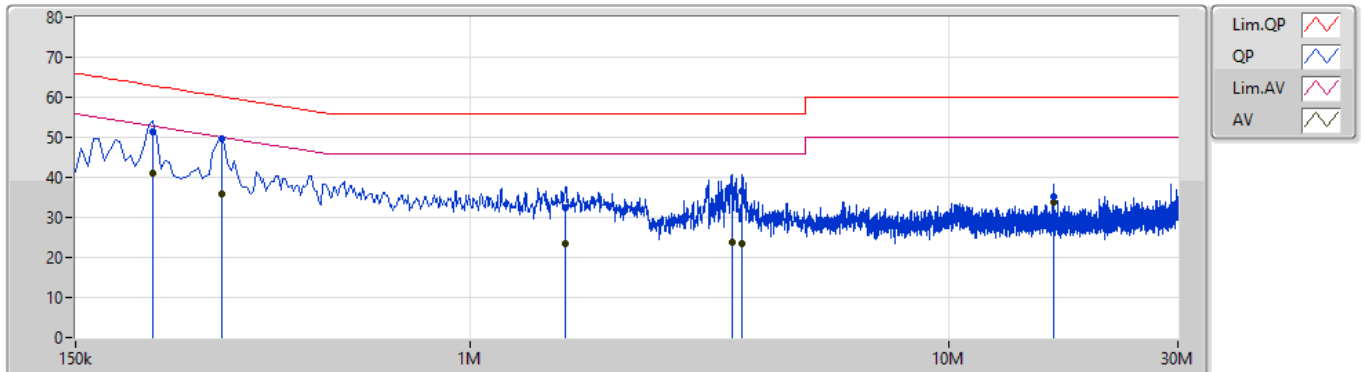
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	303k	49.73	60.17	-10.44	Line

Mode 2

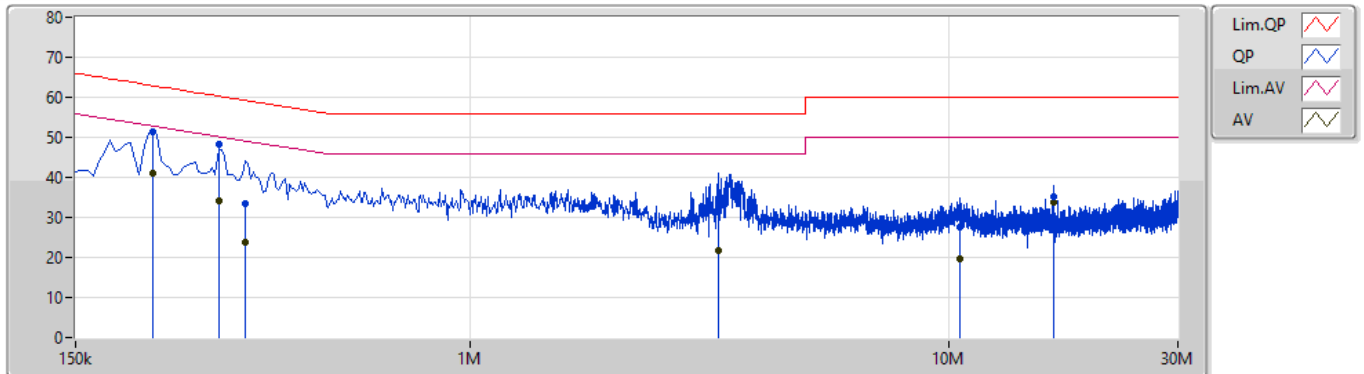
13/05/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	217.5k	51.25	62.92	-11.67	9.97	Line	-	41.28	0.06	0.02	9.89			
AV	217.5k	41.20	52.92	-11.72	9.97	Line	-	31.23	0.06	0.02	9.89			
QP	303k	49.73	60.17	-10.44	9.97	Line	"Worst"	39.76	0.06	0.02	9.89			
AV	303k	35.87	50.17	-14.30	9.97	Line	-	25.90	0.06	0.02	9.89			
QP	1.581M	32.27	56.00	-23.73	10.01	Line	-	22.26	0.08	0.04	9.89			
AV	1.581M	23.37	46.00	-22.63	10.01	Line	-	13.36	0.08	0.04	9.89			
QP	3.512M	36.85	56.00	-19.15	10.07	Line	-	26.78	0.11	0.07	9.89			
AV	3.512M	23.68	46.00	-22.32	10.07	Line	-	13.61	0.11	0.07	9.89			
QP	3.701M	36.56	56.00	-19.44	10.08	Line	-	26.48	0.12	0.07	9.89			
AV	3.701M	23.28	46.00	-22.72	10.08	Line	-	13.20	0.12	0.07	9.89			
QP	16.467M	35.01	60.00	-24.99	10.34	Line	-	24.67	0.28	0.11	9.95			
AV	16.467M	33.72	50.00	-16.28	10.34	Line	-	23.38	0.28	0.11	9.95			

Mode 2

13/05/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	217.5k	51.31	62.92	-11.61	9.98	Neutral	"Worst"	41.33	0.07	0.02	9.89			
AV	217.5k	40.99	52.92	-11.93	9.98	Neutral	-	31.01	0.07	0.02	9.89			
QP	298.5k	48.18	60.28	-12.10	9.98	Neutral	-	38.20	0.07	0.02	9.89			
AV	298.5k	34.28	50.28	-16.00	9.98	Neutral	-	24.30	0.07	0.02	9.89			
QP	339k	33.53	59.23	-25.70	9.98	Neutral	-	23.55	0.07	0.02	9.89			
AV	339k	23.75	49.23	-25.48	9.98	Neutral	-	13.77	0.07	0.02	9.89			
QP	3.291M	34.54	56.00	-21.46	10.07	Neutral	-	24.47	0.12	0.06	9.89			
AV	3.291M	21.71	46.00	-24.29	10.07	Neutral	-	11.64	0.12	0.06	9.89			
QP	10.518M	27.42	60.00	-32.58	10.22	Neutral	-	17.20	0.24	0.07	9.91			
AV	10.518M	19.73	50.00	-30.27	10.22	Neutral	-	9.51	0.24	0.07	9.91			
QP	16.467M	35.03	60.00	-24.97	10.34	Neutral	-	24.69	0.28	0.11	9.95			
AV	16.467M	33.76	50.00	-16.24	10.34	Neutral	-	23.42	0.28	0.11	9.95			

**Summary**

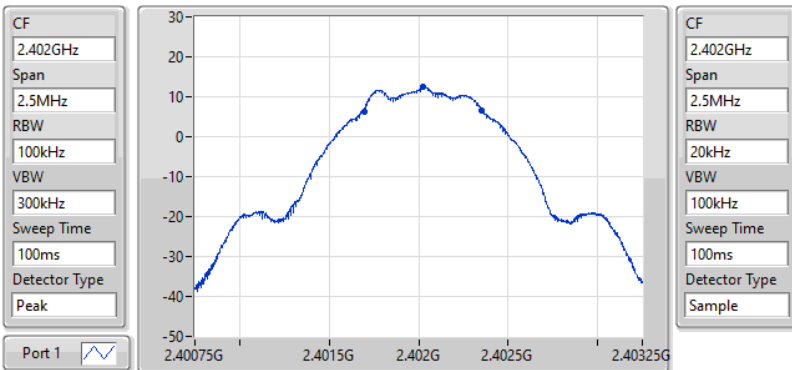
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	668.75k	1.041M	1M04F1D	660k	1.016M
BT-LE(2Mbps)	1.115M	2.061M	2M06F1D	1.1M	2.046M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	660k	1.041M
2440MHz	Pass	500k	662.5k	1.016M
2480MHz	Pass	500k	668.75k	1.031M
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.103M	2.061M
2440MHz	Pass	500k	1.115M	2.046M
2478MHz	Pass	500k	1.1M	2.051M

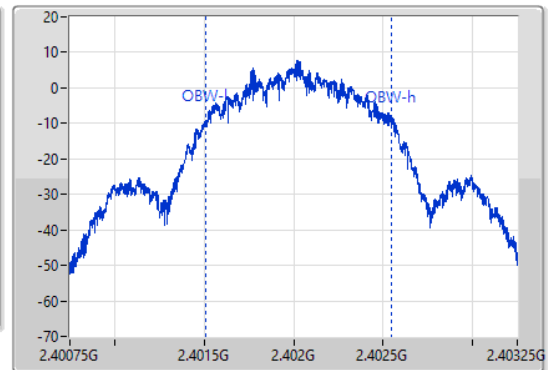
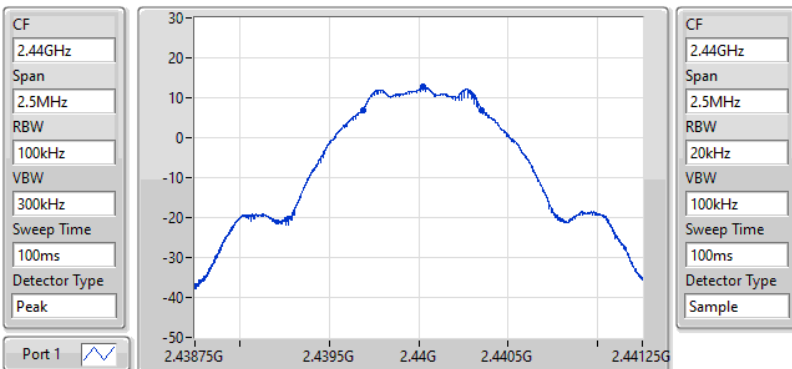
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
660k	2.401694G	2.402354G	1.041M	2.401506G	2.402547G	500k	1

EBW-DTS

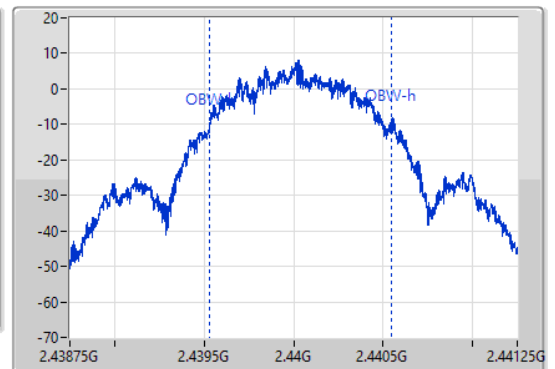
01/12/2021

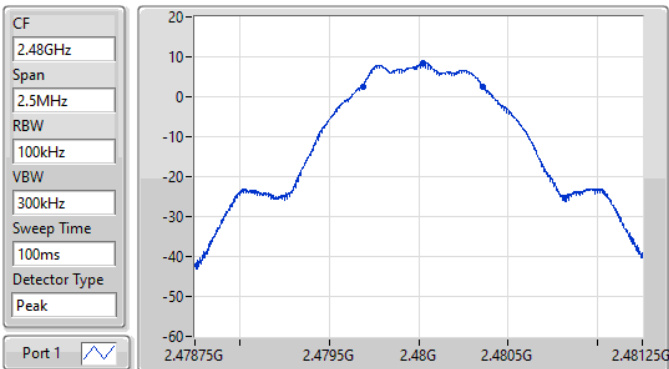

BT-LE(1Mbps)
2440MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
662.5k	2.439689G	2.440351G	1.016M	2.439533G	2.440548G	500k	1

EBW-DTS

01/12/2021

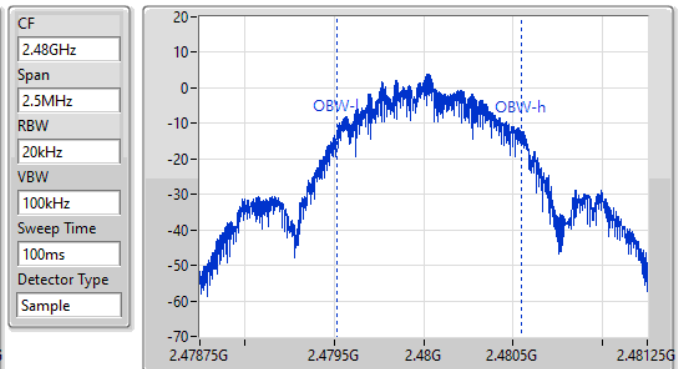
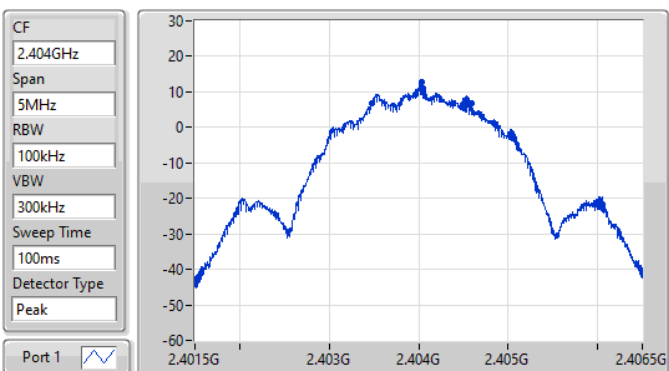


BT-LE(1Mbps)
2480MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
668.75k	2.479689G	2.480358G	1.031M	2.479518G	2.480548G	500k	1

EBW-DTS

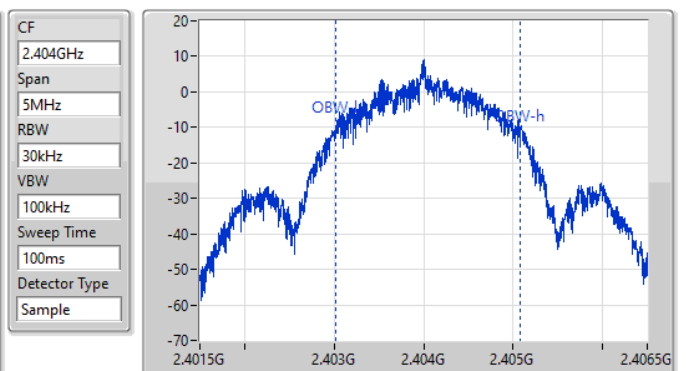
01/12/2021


BT-LE(2Mbps)
2404MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.103M	2.403483G	2.404585G	2.061M	2.403013G	2.405074G	500k	1

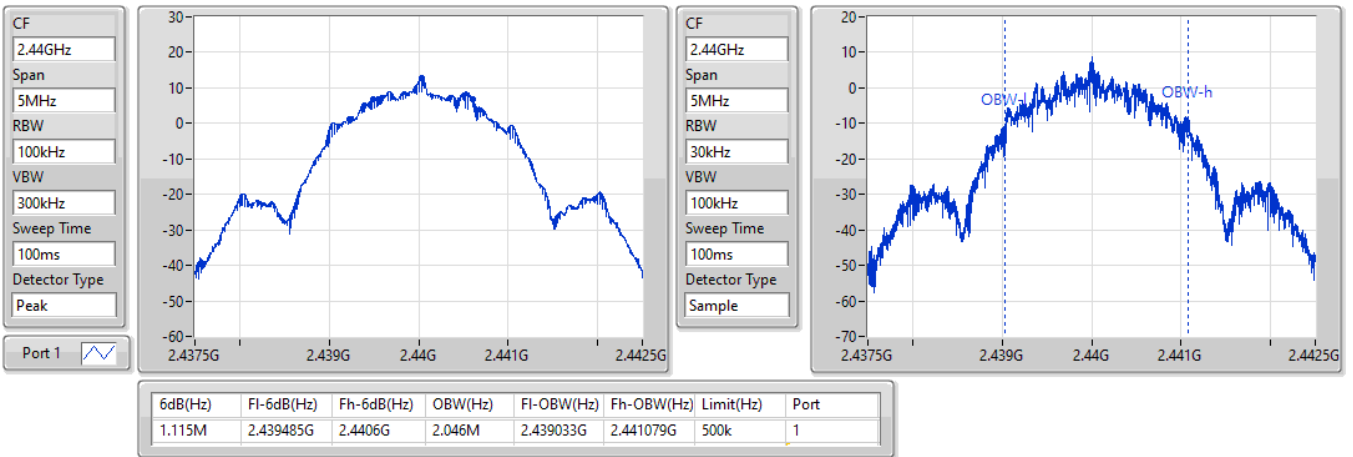
EBW-DTS

01/12/2021

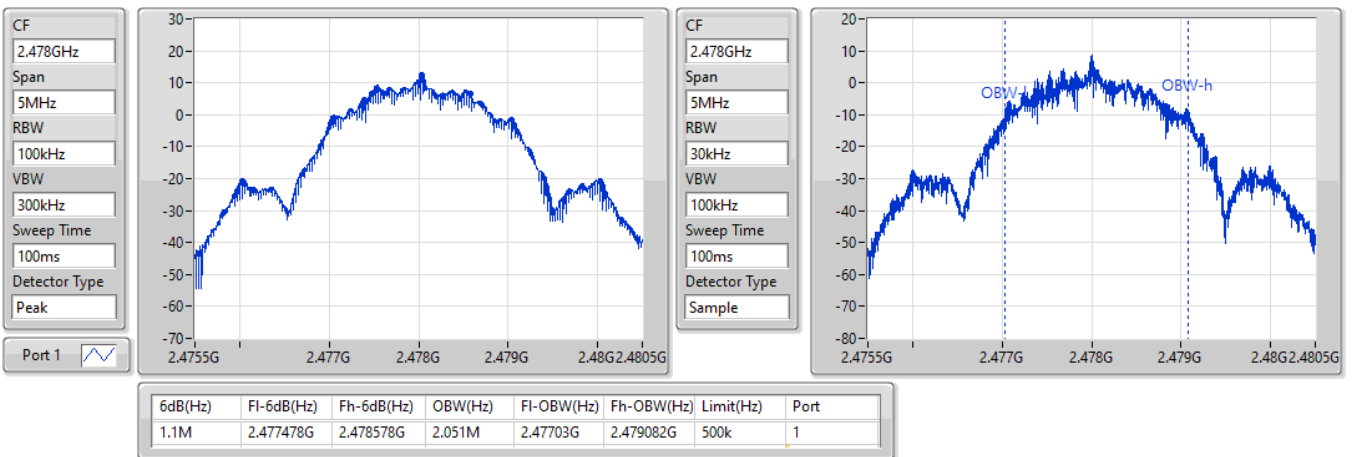


BT-LE(2Mbps)
EBW-DTS
2440MHz

01/12/2021


BT-LE(2Mbps)
EBW-DTS
2478MHz

01/12/2021



**Summary**

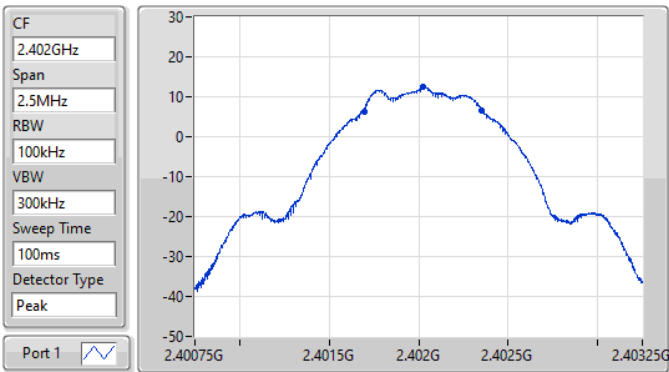
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	668.75k	1.041M	1M04F1D	660k	1.016M
BT-LE(2Mbps)	1.115M	2.061M	2M06F1D	1.1M	2.046M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	660k	1.041M
2440MHz	Pass	500k	662.5k	1.016M
2480MHz	Pass	500k	668.75k	1.031M
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.103M	2.061M
2440MHz	Pass	500k	1.115M	2.046M
2478MHz	Pass	500k	1.1M	2.051M

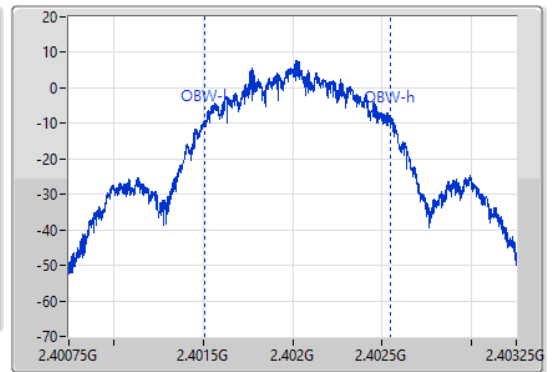
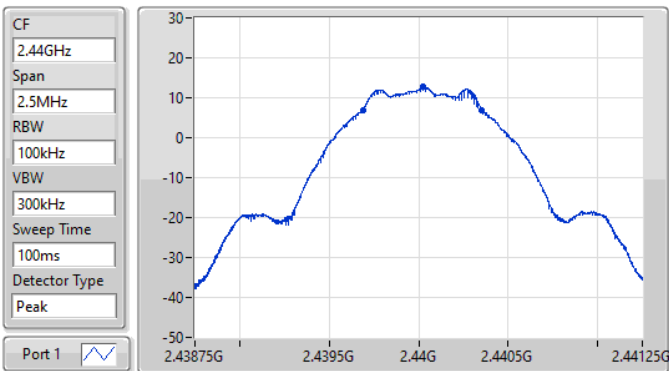
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
660k	2.401694G	2.402354G	1.041M	2.401506G	2.402547G	500k	1

EBW-DTS

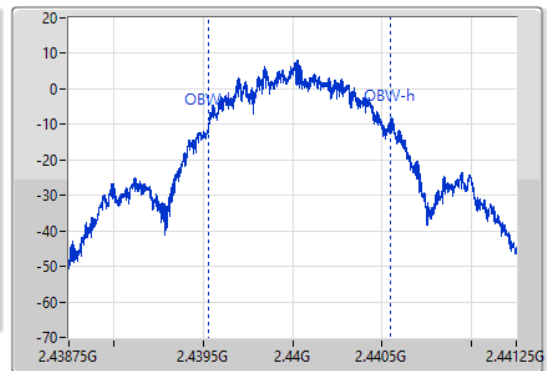
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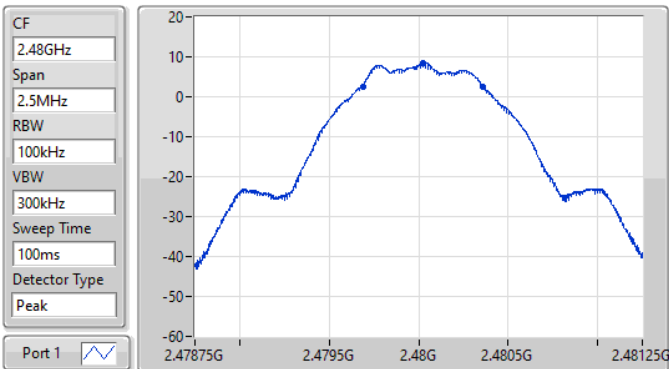

BT-LE(1Mbps)
2440MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
662.5k	2.439689G	2.440351G	1.016M	2.439533G	2.440548G	500k	1

EBW-DTS

01/12/2021

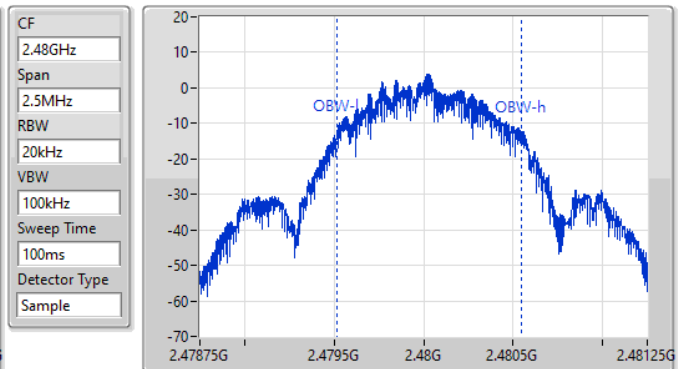
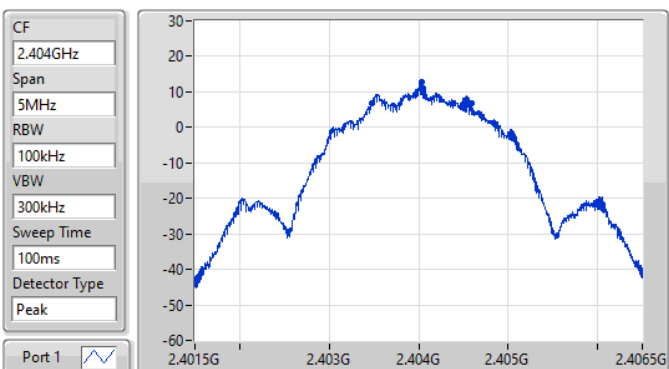


BT-LE(1Mbps)
2480MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
668.75k	2.479689G	2.480358G	1.031M	2.479518G	2.480548G	500k	1

EBW-DTS

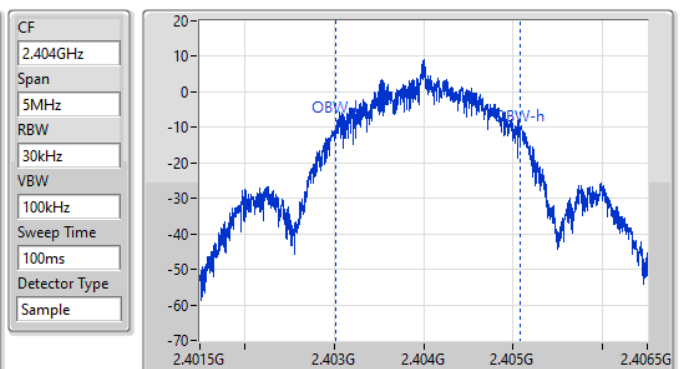
01/12/2021


BT-LE(2Mbps)
2404MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.103M	2.403483G	2.404585G	2.061M	2.403013G	2.405074G	500k	1

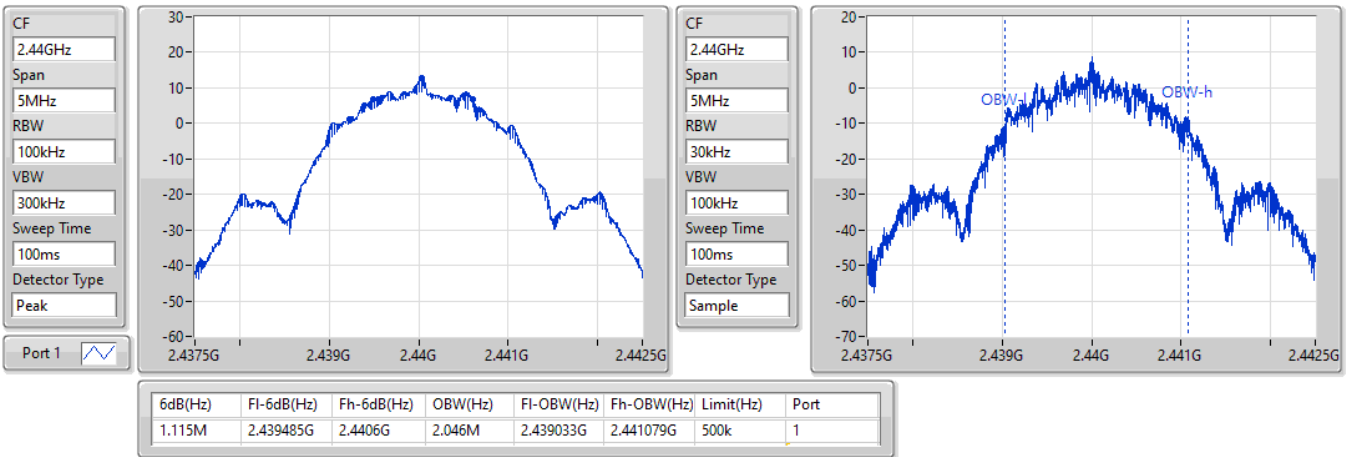
EBW-DTS

01/12/2021

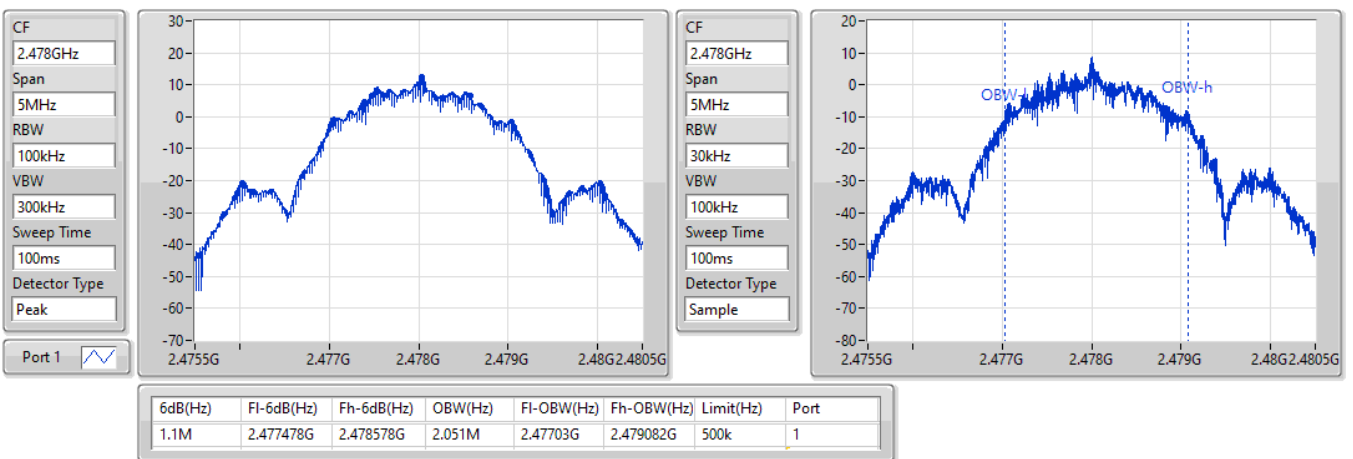


BT-LE(2Mbps)
EBW-DTS
2440MHz

01/12/2021


BT-LE(2Mbps)
EBW-DTS
2478MHz

01/12/2021



**Summary**

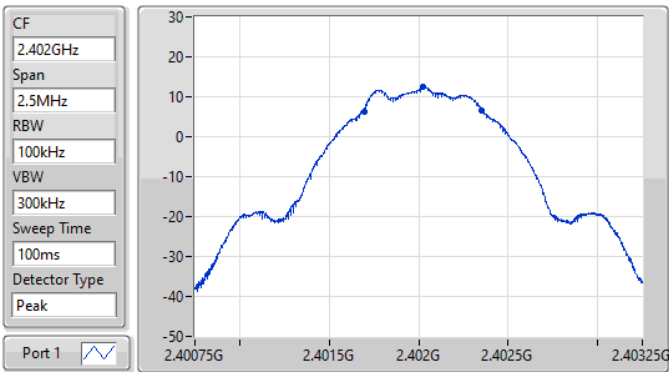
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	668.75k	1.041M	1M04F1D	660k	1.016M
BT-LE(2Mbps)	1.115M	2.061M	2M06F1D	1.1M	2.046M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	660k	1.041M
2440MHz	Pass	500k	662.5k	1.016M
2480MHz	Pass	500k	668.75k	1.031M
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.103M	2.061M
2440MHz	Pass	500k	1.115M	2.046M
2478MHz	Pass	500k	1.1M	2.051M

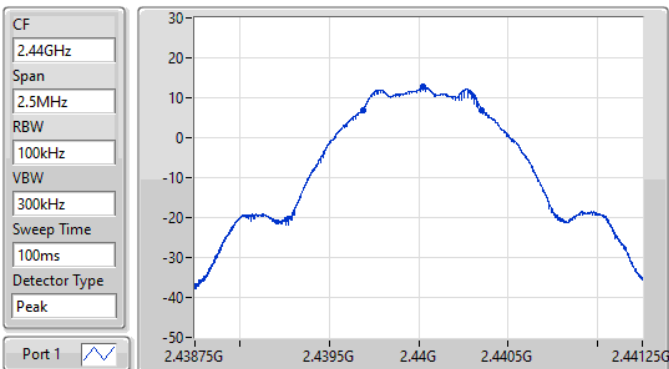
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz


6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
660k	2.401694G	2.402354G	1.041M	2.401506G	2.402547G	500k	1

EBW-DTS

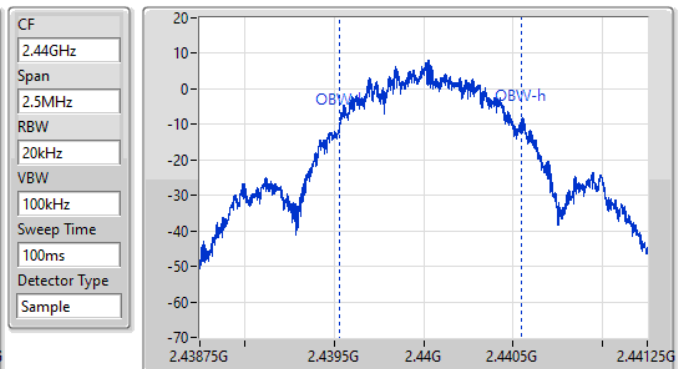
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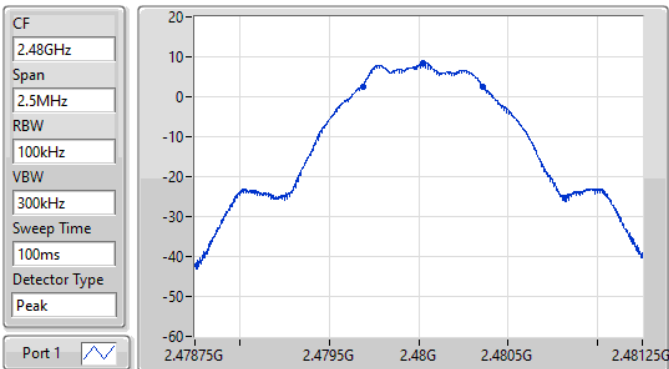

BT-LE(1Mbps)
2440MHz


6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
662.5k	2.439689G	2.440351G	1.016M	2.439533G	2.440548G	500k	1

EBW-DTS

01/12/2021

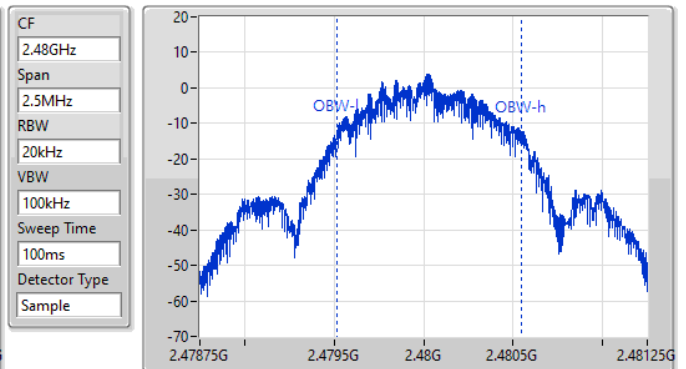
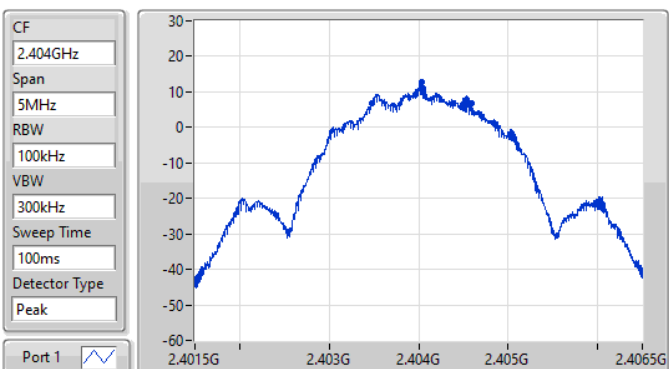


BT-LE(1Mbps)
2480MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
668.75k	2.479689G	2.480358G	1.031M	2.479518G	2.480548G	500k	1

EBW-DTS

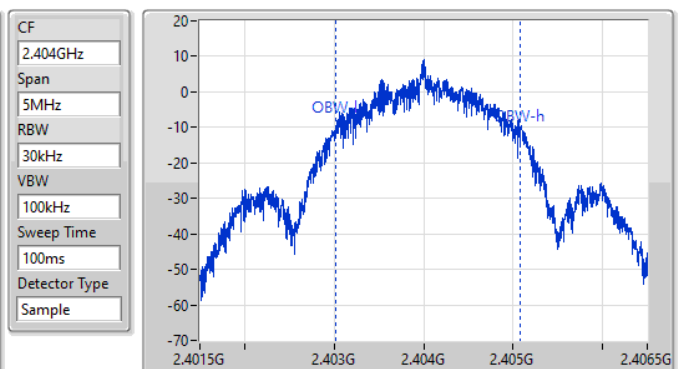
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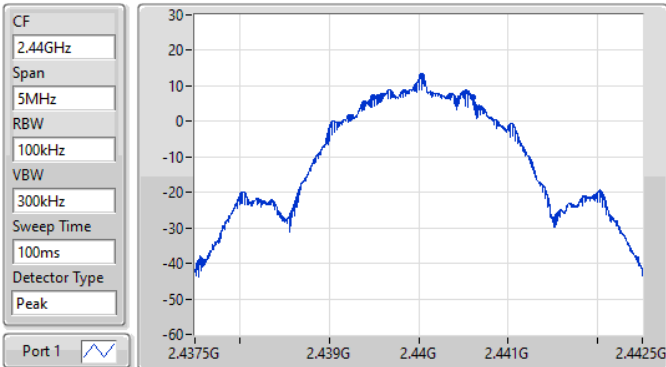

BT-LE(2Mbps)
2404MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.103M	2.403483G	2.404585G	2.061M	2.403013G	2.405074G	500k	1

EBW-DTS

01/12/2021

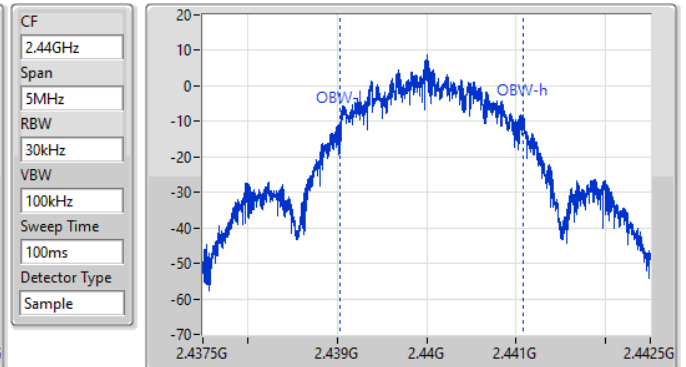
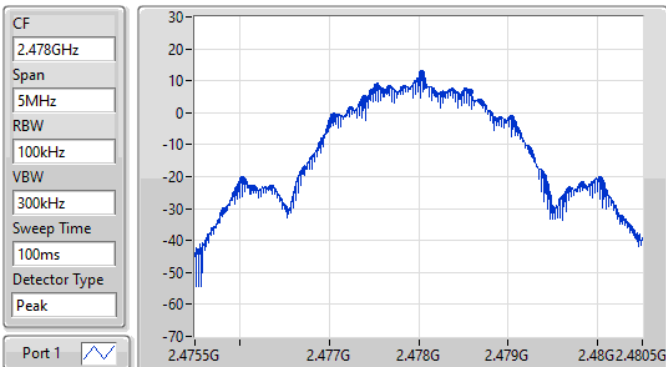


BT-LE(2Mbps)
2440MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.115M	2.439485G	2.4406G	2.046M	2.439033G	2.441079G	500k	1

EBW-DTS

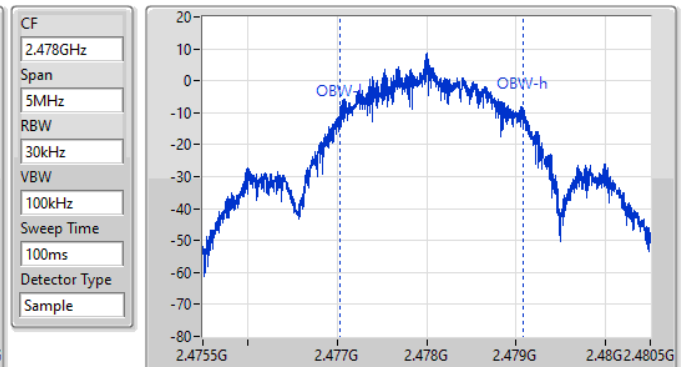
01/12/2021


BT-LE(2Mbps)
2478MHz


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.1M	2.477478G	2.478578G	2.051M	2.47703G	2.479082G	500k	1

EBW-DTS

01/12/2021





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	12.48	0.01770
BT-LE(2Mbps)	12.46	0.01762



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.50	12.47	30.00
2440MHz	Pass	3.50	12.48	30.00
2480MHz	Pass	3.50	12.11	30.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	3.50	12.32	30.00
2440MHz	Pass	3.50	12.46	30.00
2478MHz	Pass	3.50	12.41	30.00

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



Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	6.44	0.00441
BT-LE(2Mbps)	6.48	0.00445



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.50	6.20	30.00
2440MHz	Pass	3.50	6.44	30.00
2480MHz	Pass	3.50	6.37	30.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	3.50	6.29	30.00
2440MHz	Pass	3.50	6.46	30.00
2478MHz	Pass	3.50	6.48	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-2.03
BT-LE(2Mbps)	-4.12

RBW = 3kHz;

Result

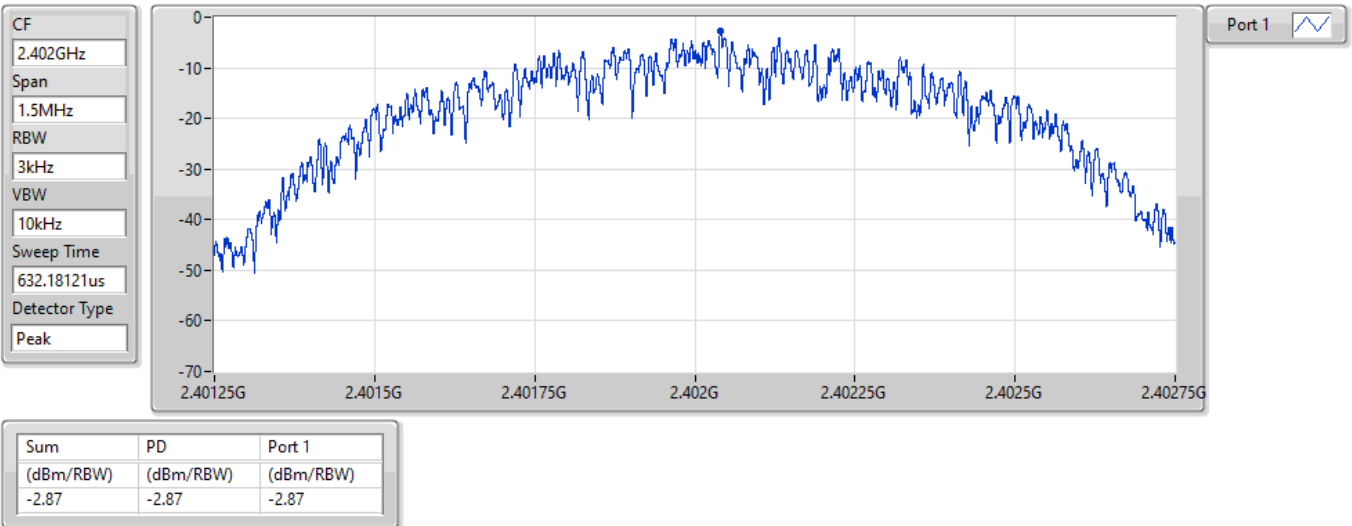
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.38	-2.87	8.00
2440MHz	Pass	3.38	-2.03	8.00
2480MHz	Pass	3.38	-3.27	8.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	3.38	-6.29	8.00
2440MHz	Pass	3.38	-4.52	8.00
2478MHz	Pass	3.38	-4.12	8.00

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

BT-LE(1Mbps)

2402MHz

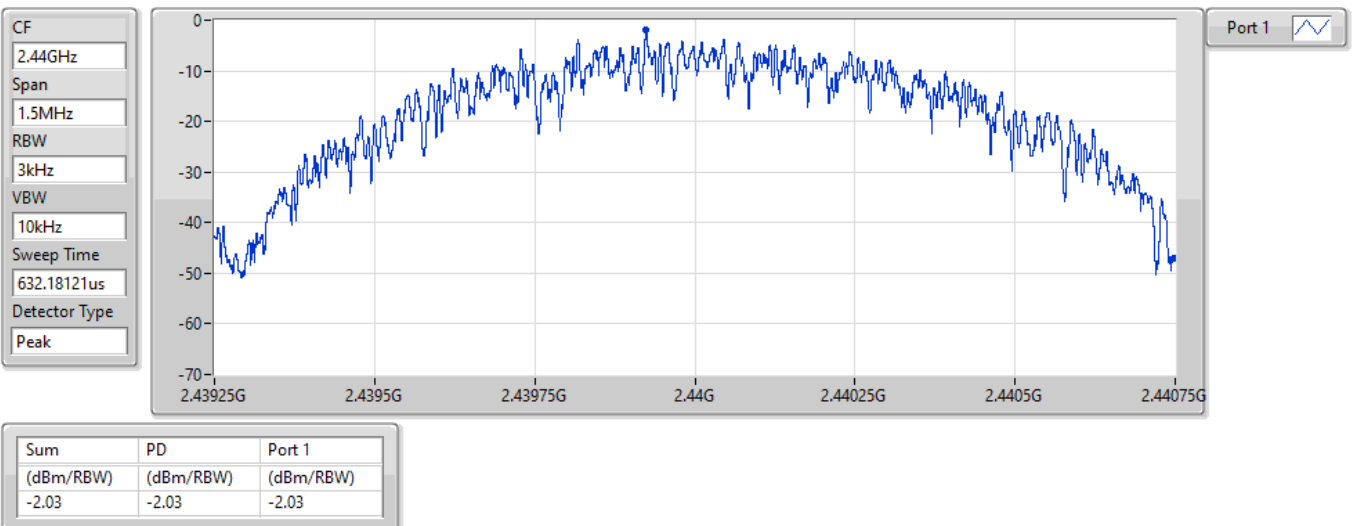
01/12/2021



BT-LE(1Mbps)

2440MHz

01/12/2021

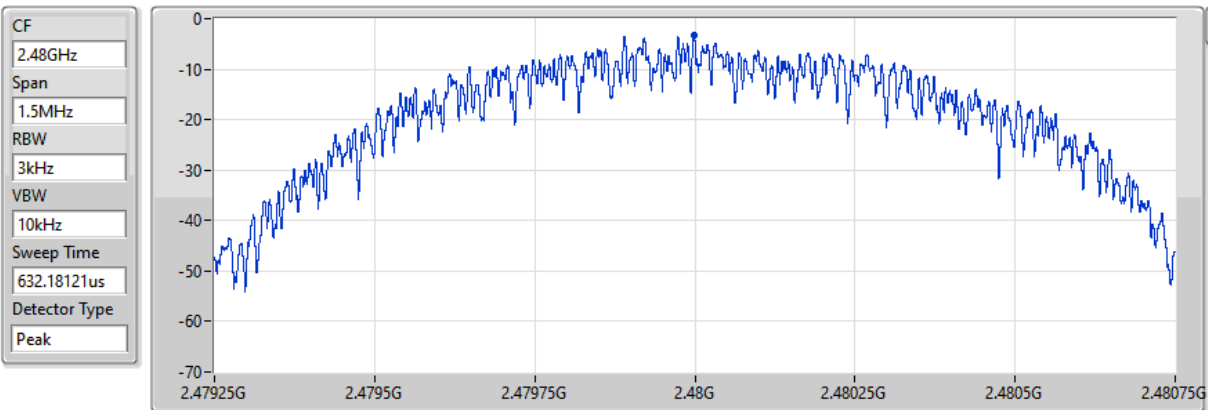


BT-LE(1Mbps)

PSD

2480MHz

21/12/2021



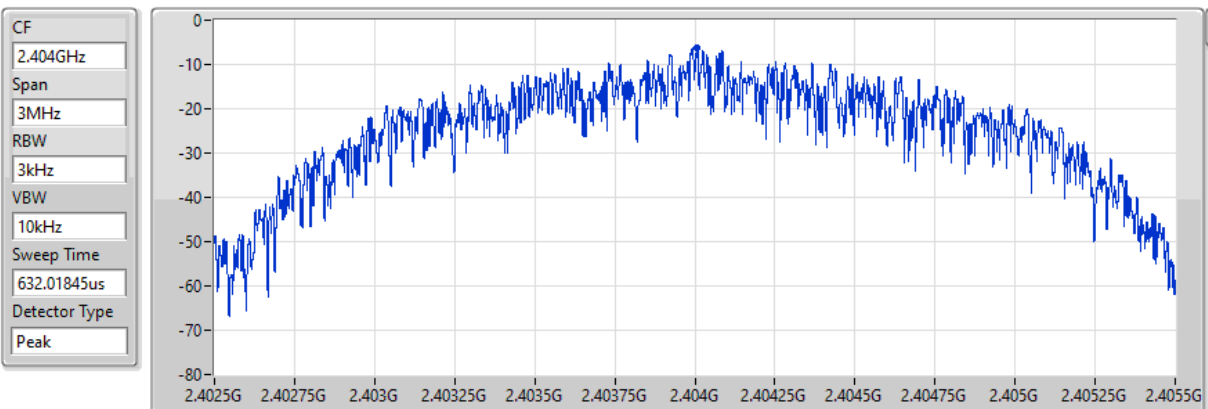
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.27	-3.27	-3.27

BT-LE(2Mbps)

PSD

2404MHz

01/12/2021



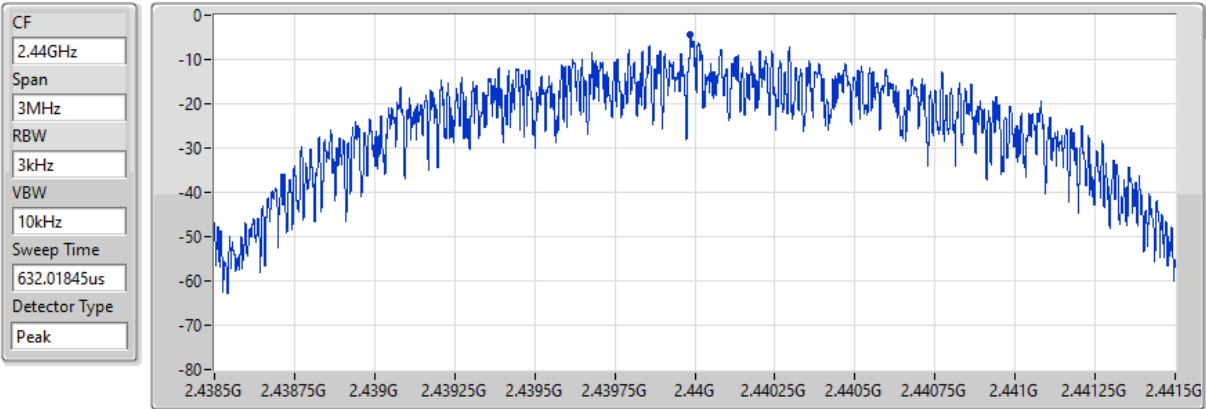
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.29	-6.29	-6.29

BT-LE(2Mbps)

PSD

2440MHz

01/12/2021



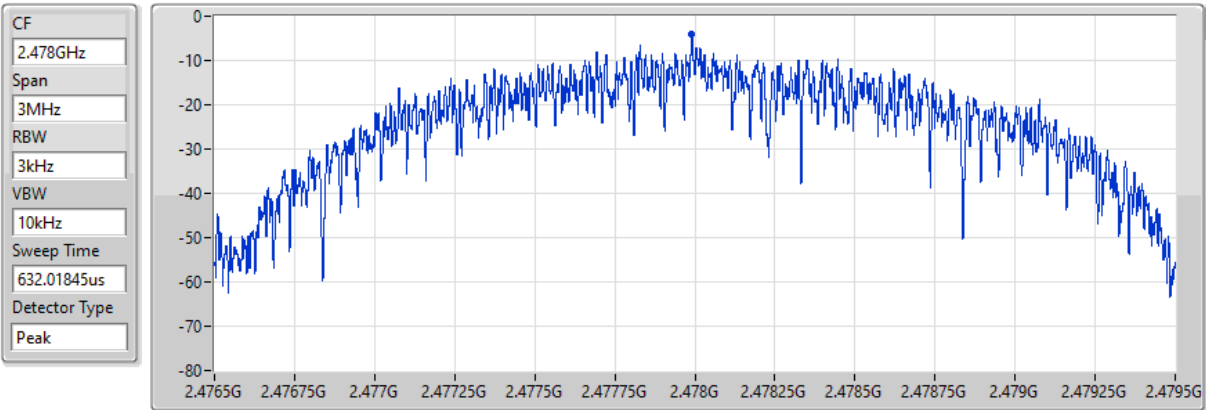
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.52	-4.52	-4.52

BT-LE(2Mbps)

PSD

2478MHz

01/12/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.12	-4.12	-4.12



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-2.03
BT-LE(2Mbps)	-4.12

RBW = 3kHz;



Result

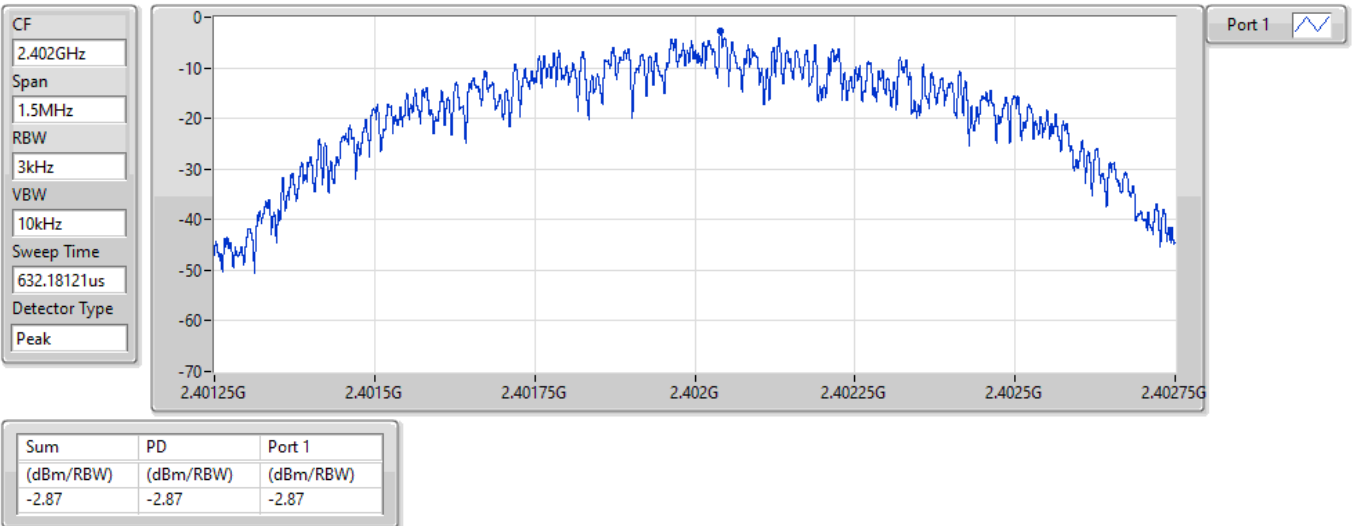
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.50	-2.87	8.00
2440MHz	Pass	3.50	-2.03	8.00
2480MHz	Pass	3.50	-3.27	8.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	3.50	-6.29	8.00
2440MHz	Pass	3.50	-4.52	8.00
2478MHz	Pass	3.50	-4.12	8.00

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

BT-LE(1Mbps)

2402MHz

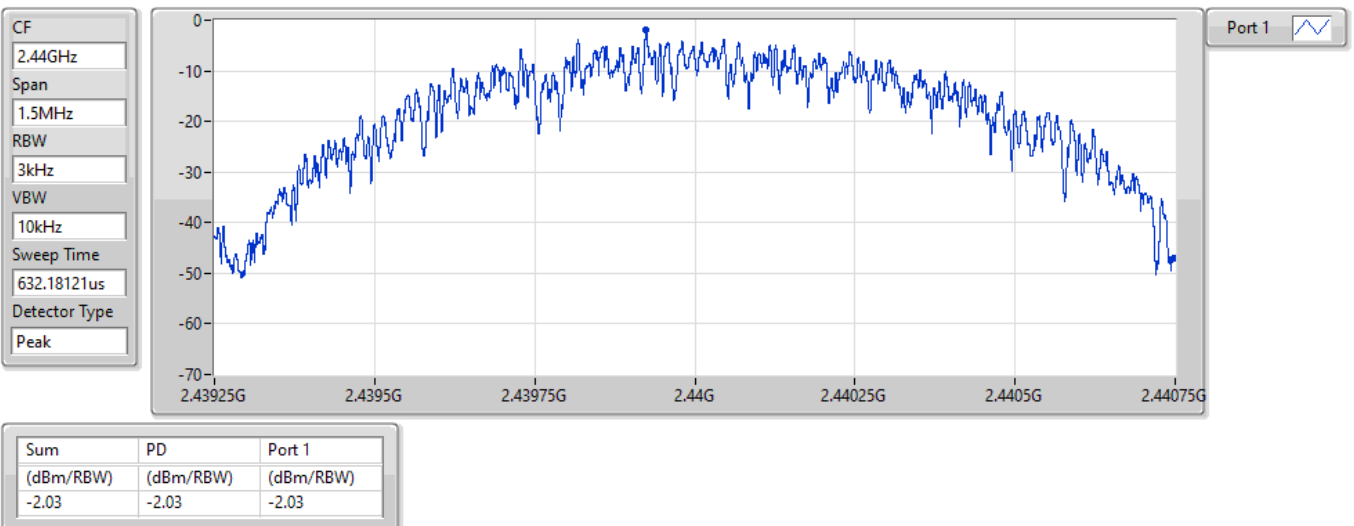
01/12/2021



BT-LE(1Mbps)

2440MHz

01/12/2021

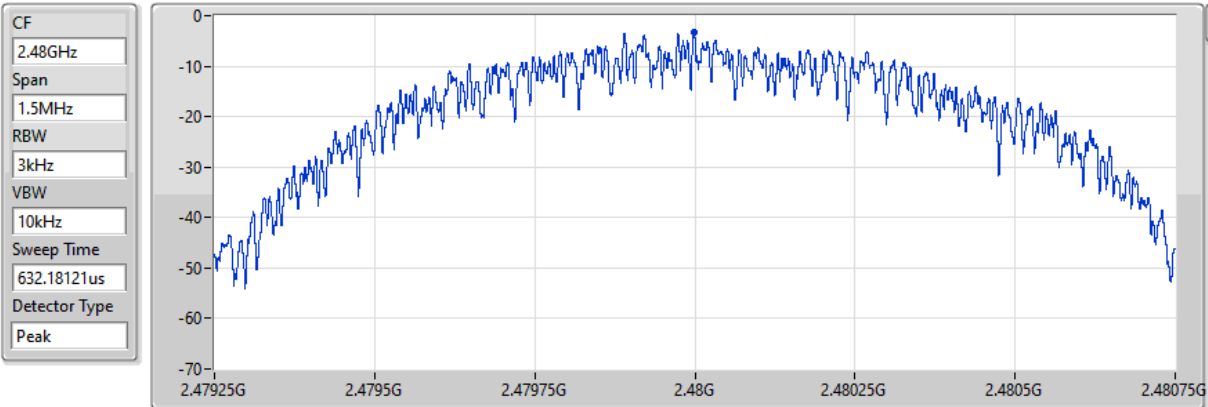


BT-LE(1Mbps)

PSD

2480MHz

21/12/2021



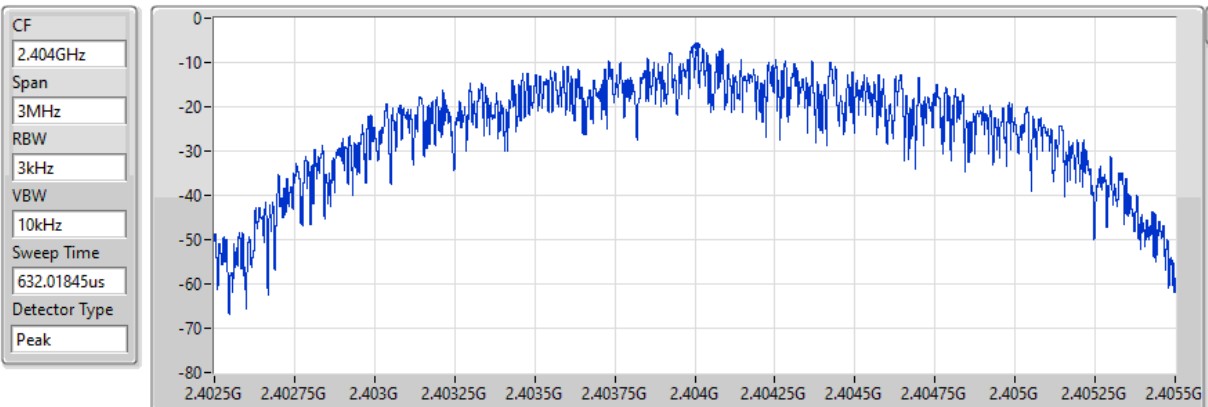
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.27	-3.27	-3.27

BT-LE(2Mbps)

PSD

2404MHz

01/12/2021



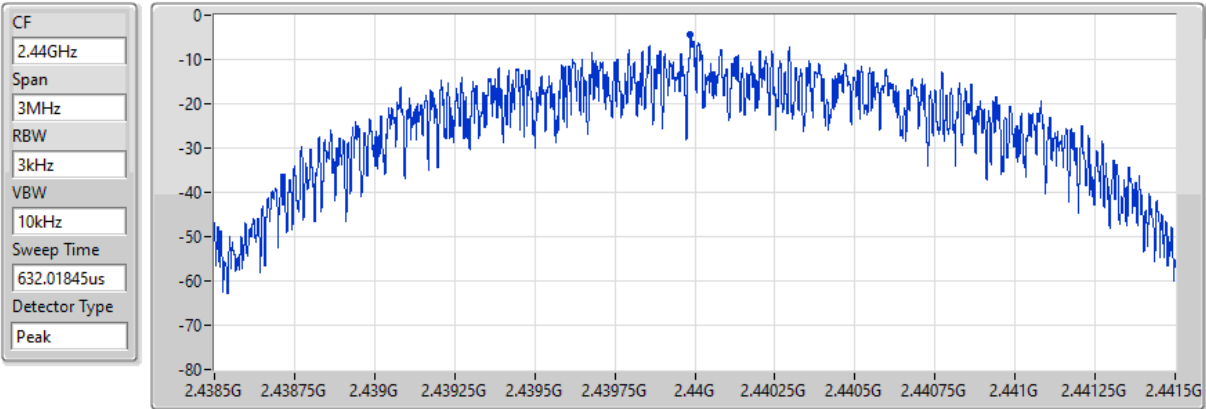
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.29	-6.29	-6.29

BT-LE(2Mbps)

PSD

2440MHz

01/12/2021



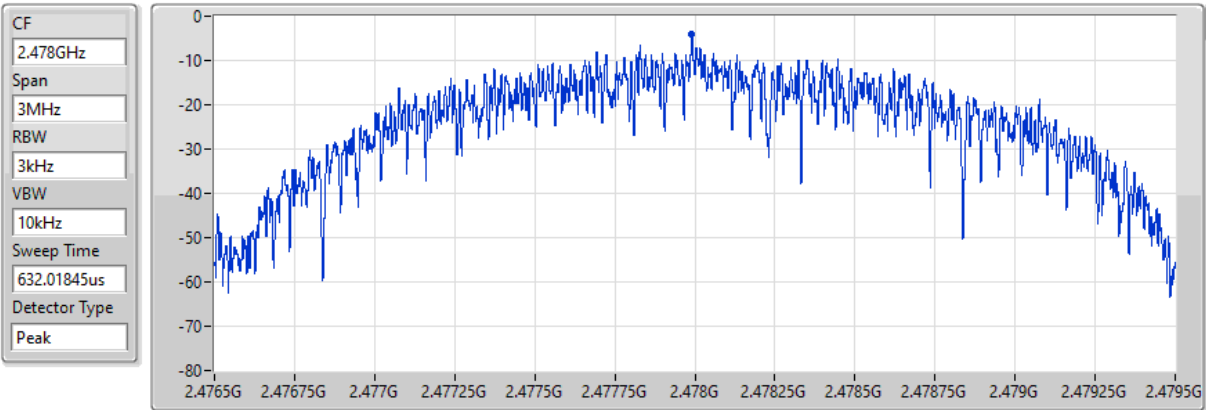
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.52	-4.52	-4.52

BT-LE(2Mbps)

PSD

2478MHz

01/12/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.12	-4.12	-4.12



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-2.03
BT-LE(2Mbps)	-4.12

RBW = 3kHz;

Result

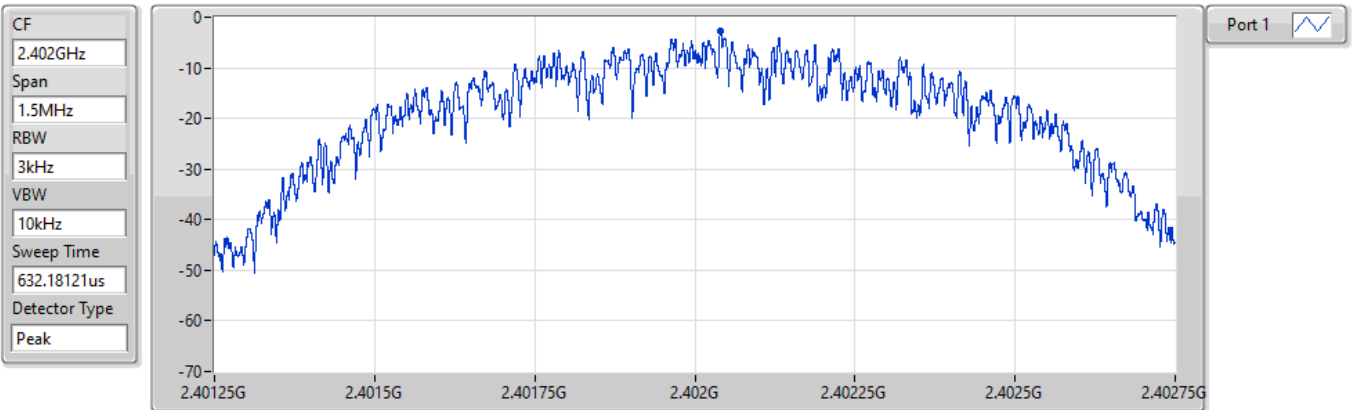
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.00	-2.87	8.00
2440MHz	Pass	3.00	-2.03	8.00
2480MHz	Pass	3.00	-3.27	8.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	3.00	-6.29	8.00
2440MHz	Pass	3.00	-4.52	8.00
2478MHz	Pass	3.00	-4.12	8.00

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

BT-LE(1Mbps)

2402MHz

01/12/2021

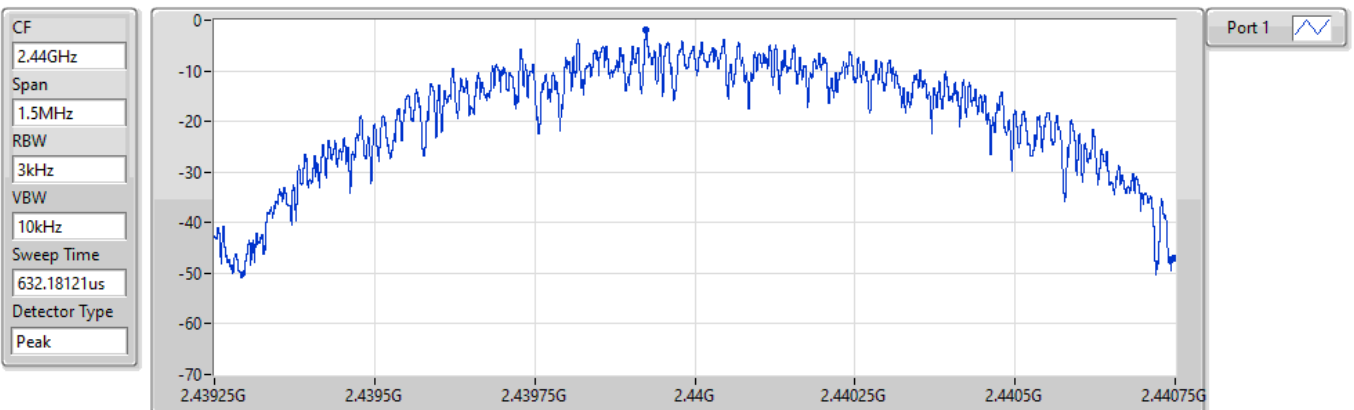


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.87	-2.87	-2.87

BT-LE(1Mbps)

2440MHz

01/12/2021



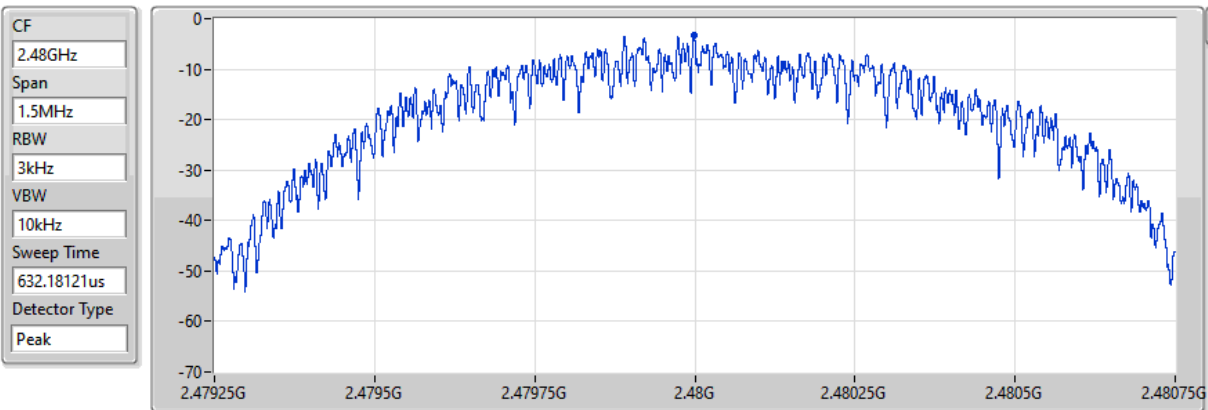
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.03	-2.03	-2.03

BT-LE(1Mbps)

PSD

2480MHz

21/12/2021



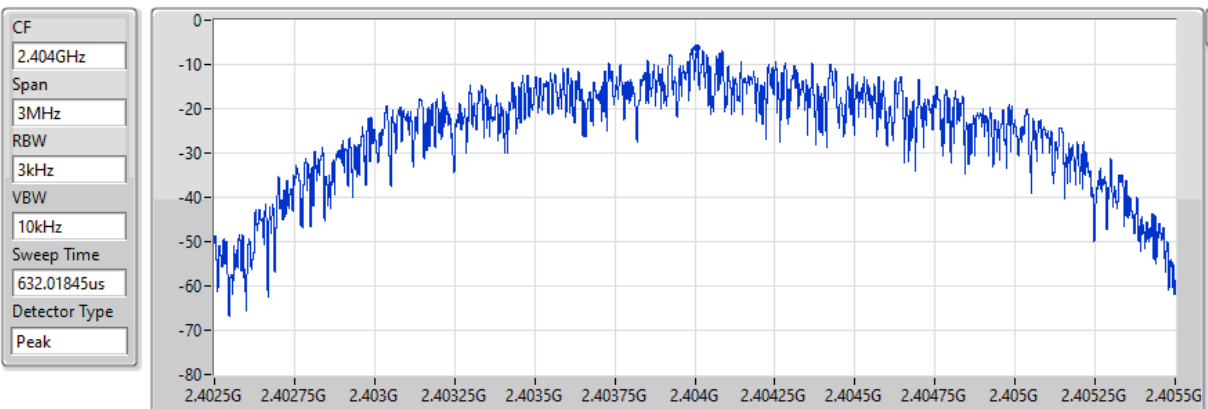
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.27	-3.27	-3.27

BT-LE(2Mbps)

PSD

2404MHz

01/12/2021



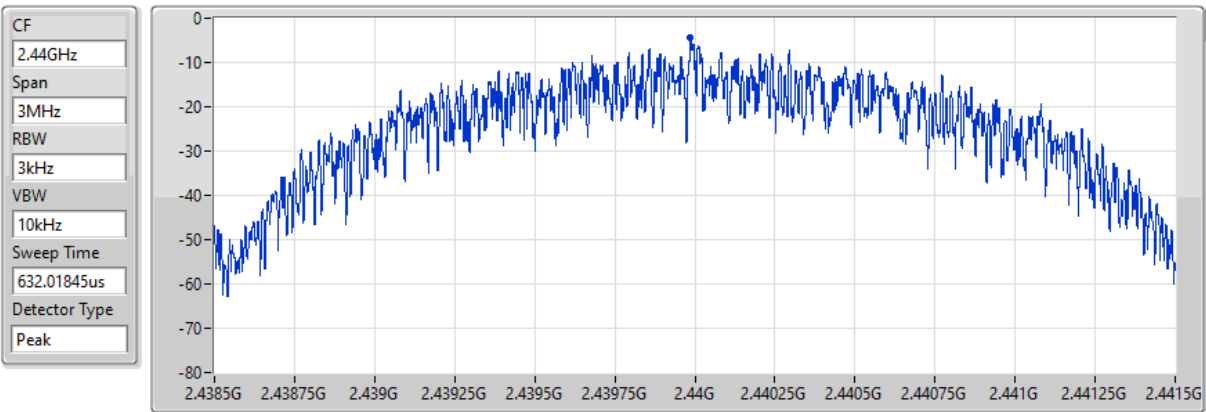
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.29	-6.29	-6.29

BT-LE(2Mbps)

PSD

2440MHz

01/12/2021



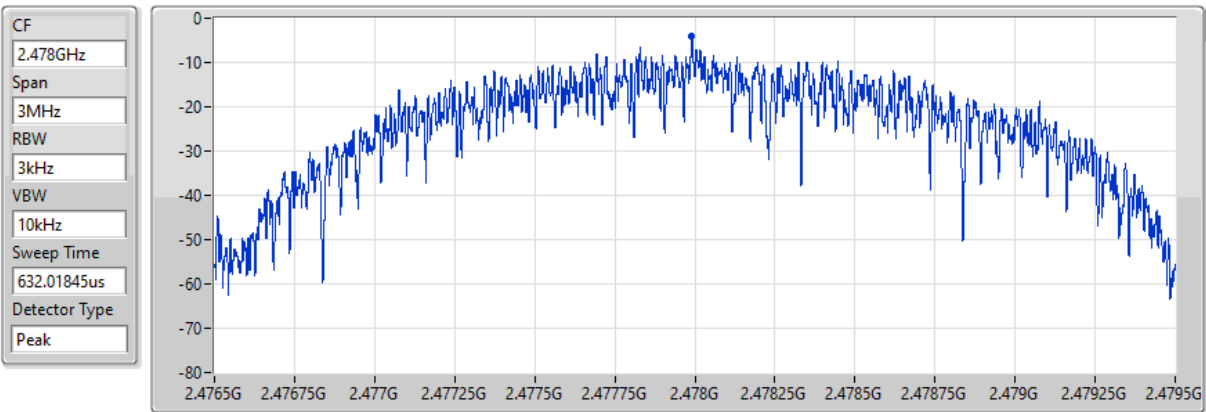
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.52	-4.52	-4.52

BT-LE(2Mbps)

PSD

2478MHz

01/12/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.12	-4.12	-4.12

**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	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
BT-LE(2Mbps)	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1

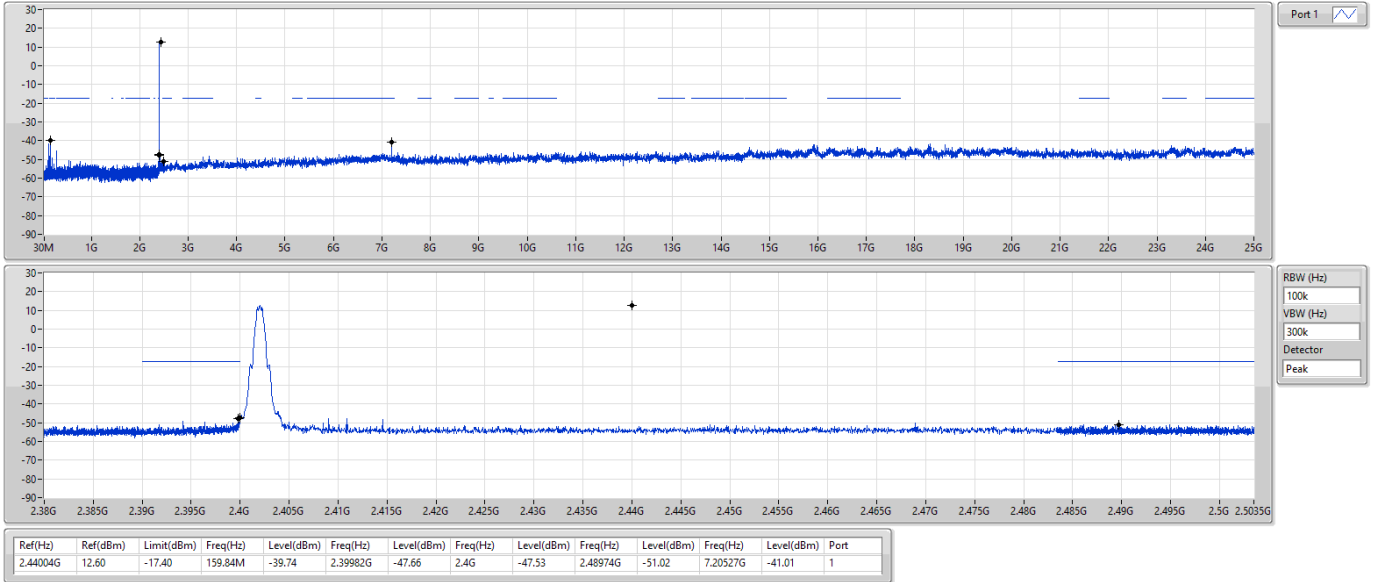
Result

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	2.44004G	12.60	-17.40	159.84M	-39.74	2.39982G	-47.66	2.4G	-47.53	2.48974G	-51.02	7.20527G	-41.01	1
2440MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
2480MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.53	2.39399G	-51.27	2.4835G	-52.97	2.48517G	-49.97	16.26855G	-42.31	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	2.44004G	12.48	-17.52	159.84M	-40.01	2.39908G	-50.94	2.4G	-54.86	2.48393G	-50.27	16.23761G	-43.03	1
2440MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1
2478MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.88	2.39986G	-51.63	2.4835G	-53.92	2.48532G	-48.84	16.60318G	-42.13	1

BT-LE(1Mbps)

CSEndB-DTS

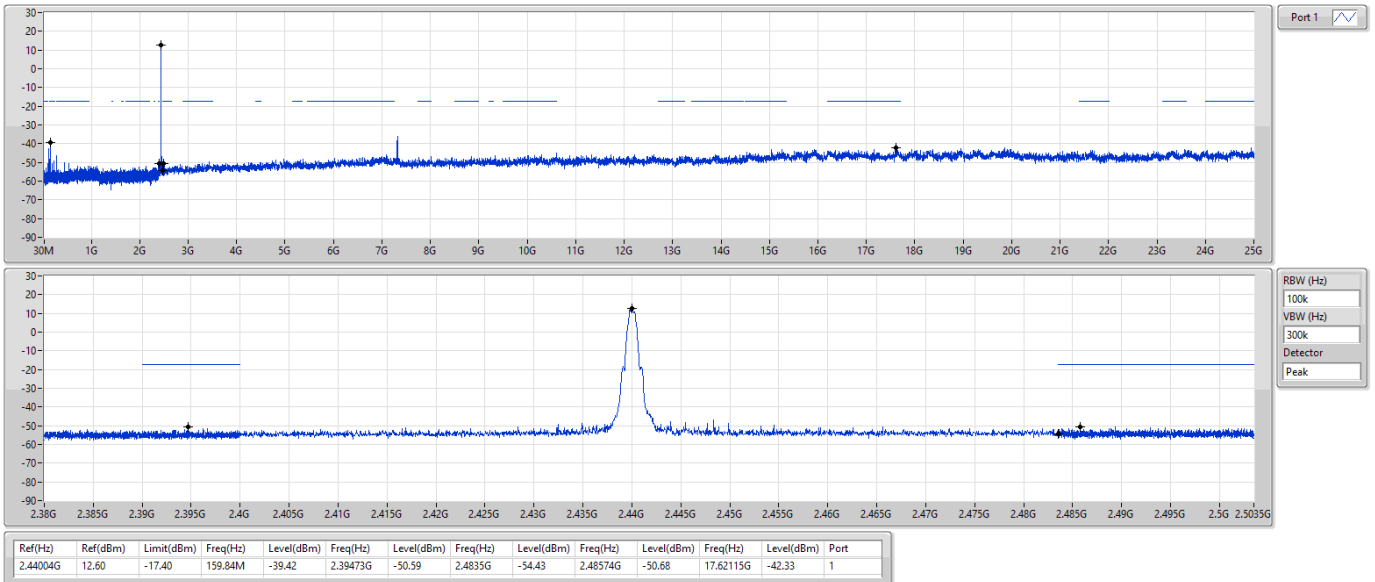
2402MHz



BT-LE(1Mbps)

CSEndB-DTS

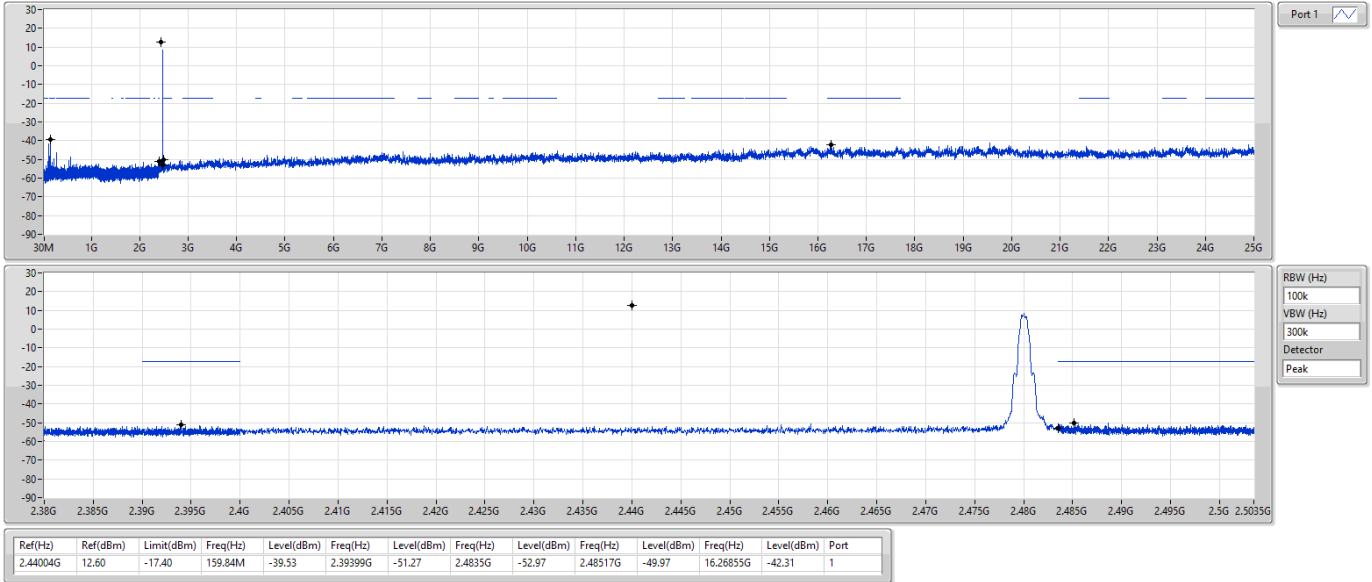
2440MHz



BT-LE(1Mbps)

CSEndB-DTS

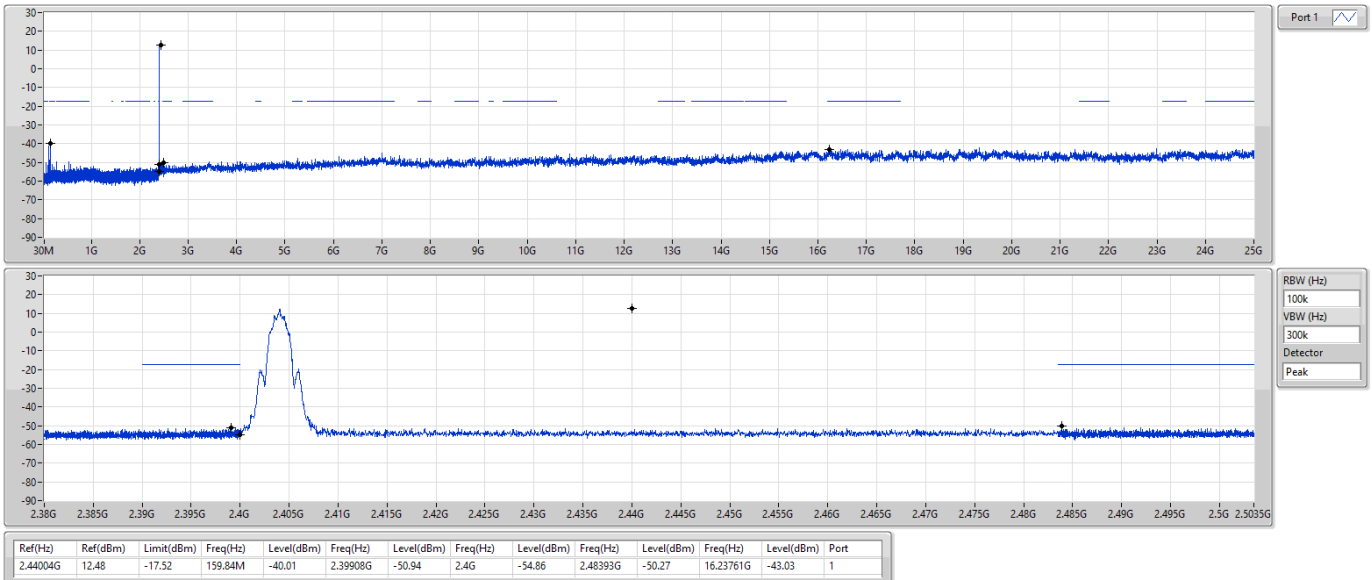
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

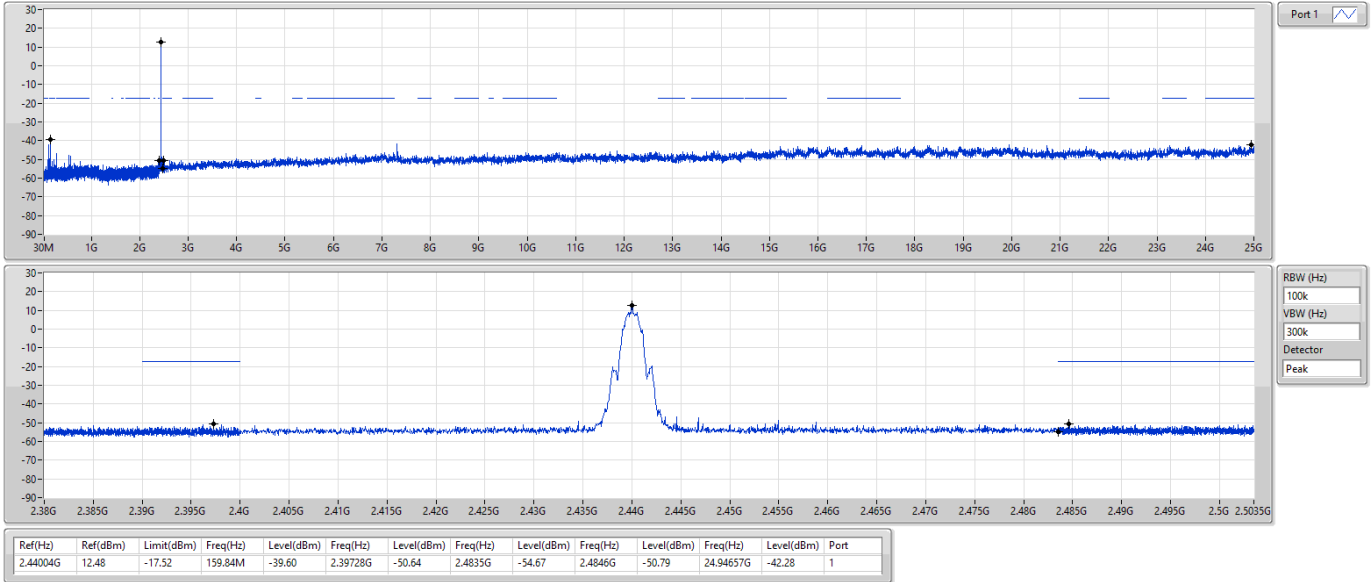
2404MHz



BT-LE(2Mbps)

CSEndB-DTS

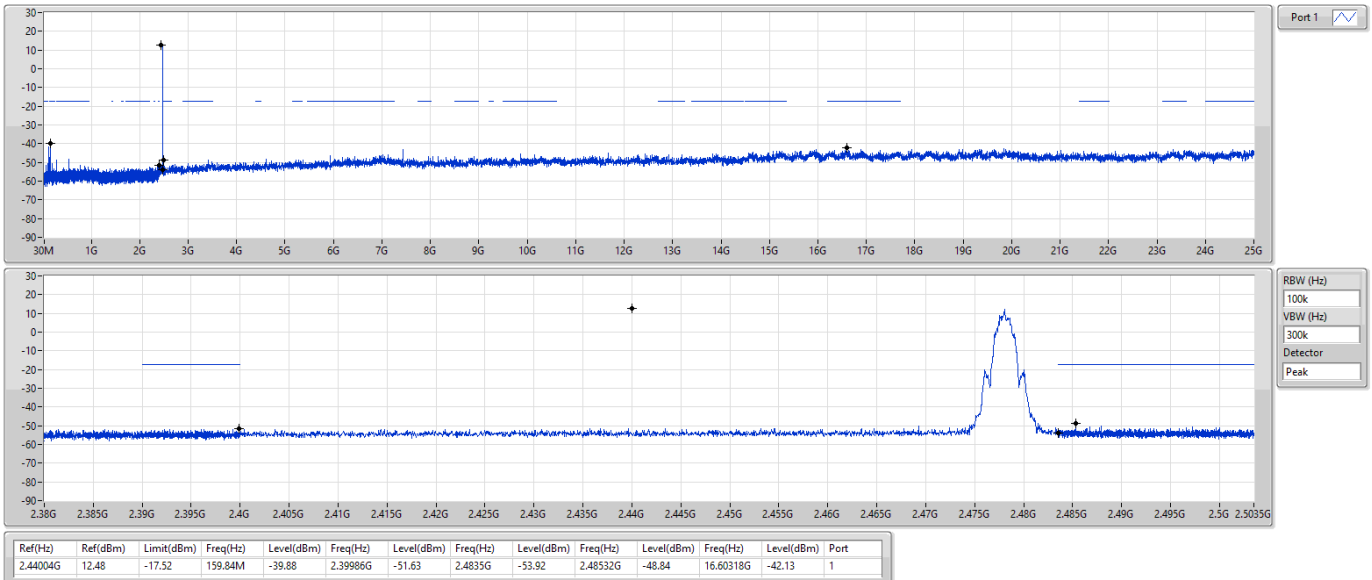
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2478MHz



**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	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
BT-LE(2Mbps)	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1

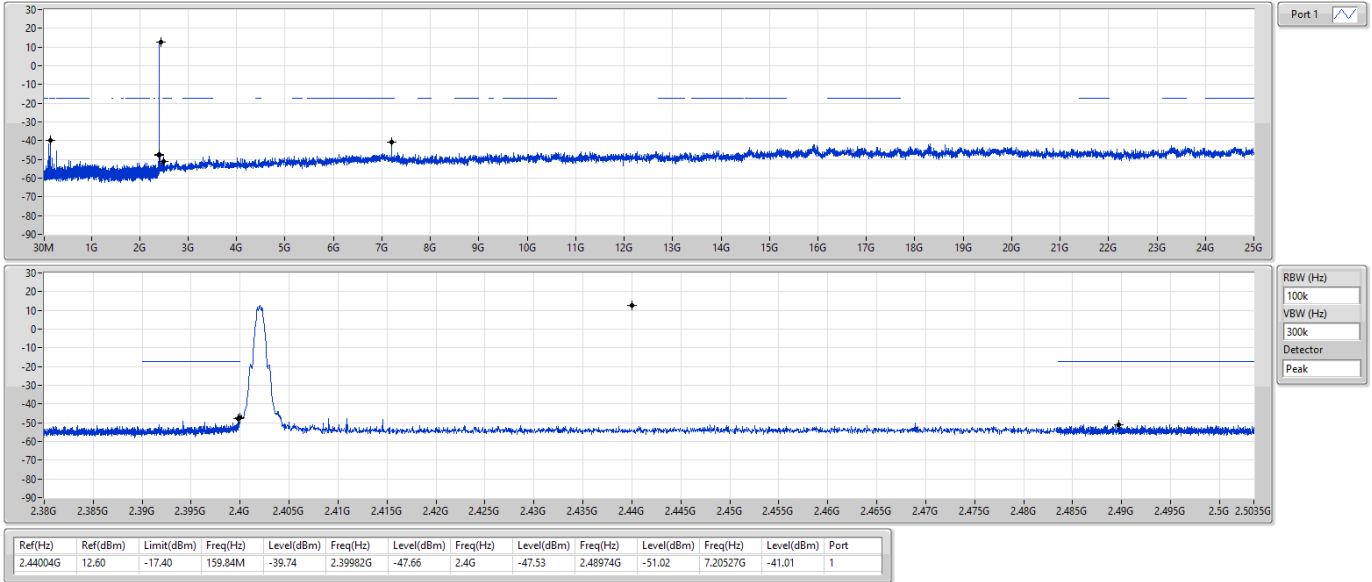
Result

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	2.44004G	12.60	-17.40	159.84M	-39.74	2.39982G	-47.66	2.4G	-47.53	2.48974G	-51.02	7.20527G	-41.01	1
2440MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
2480MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.53	2.39399G	-51.27	2.4835G	-52.97	2.48517G	-49.97	16.26855G	-42.31	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	2.44004G	12.48	-17.52	159.84M	-40.01	2.39908G	-50.94	2.4G	-54.86	2.48393G	-50.27	16.23761G	-43.03	1
2440MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1
2478MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.88	2.39986G	-51.63	2.4835G	-53.92	2.48532G	-48.84	16.60318G	-42.13	1

BT-LE(1Mbps)

CSEndB-DTS

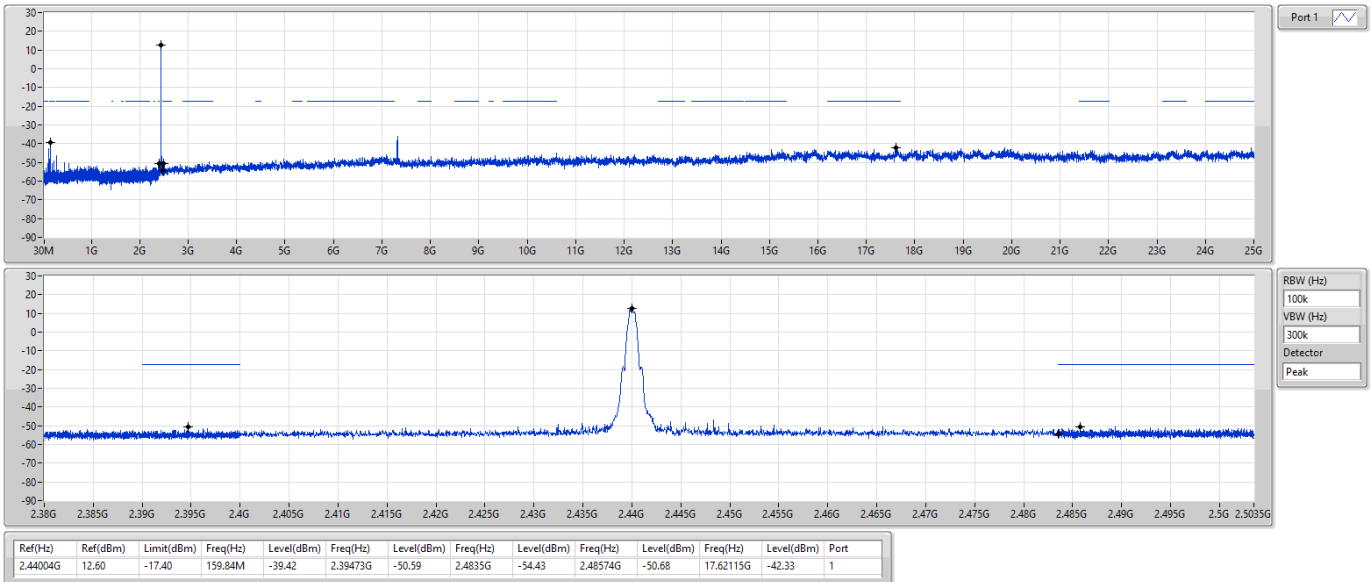
2402MHz



BT-LE(1Mbps)

CSEndB-DTS

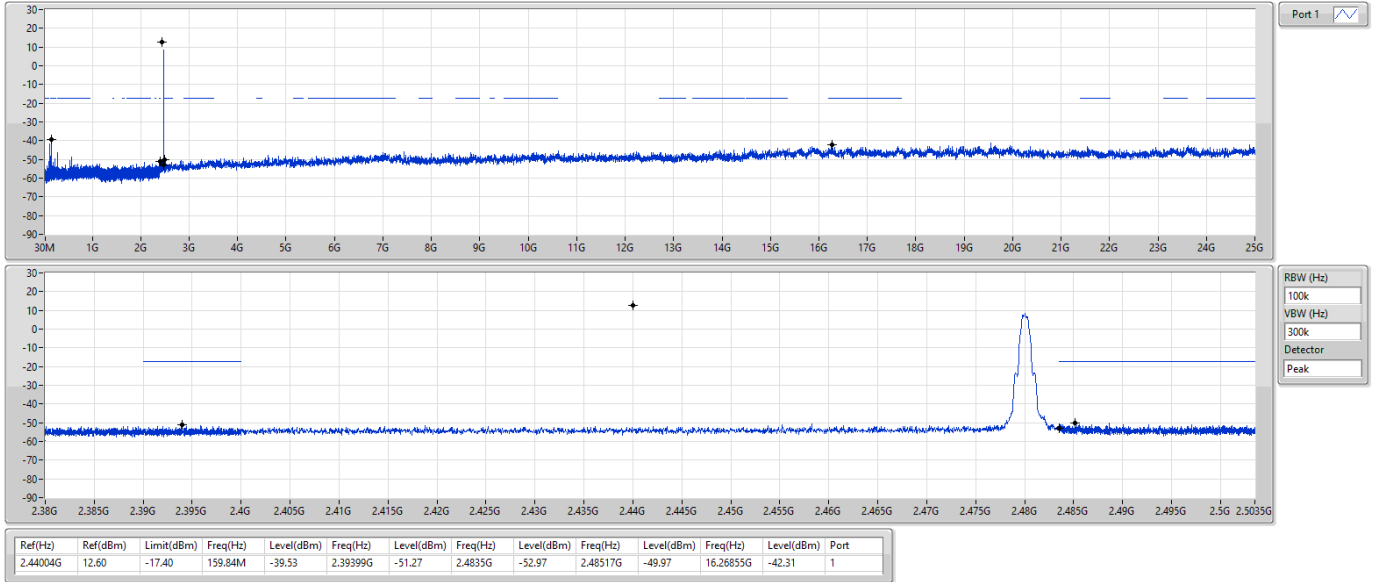
2440MHz



BT-LE(1Mbps)

CSEndB-DTS

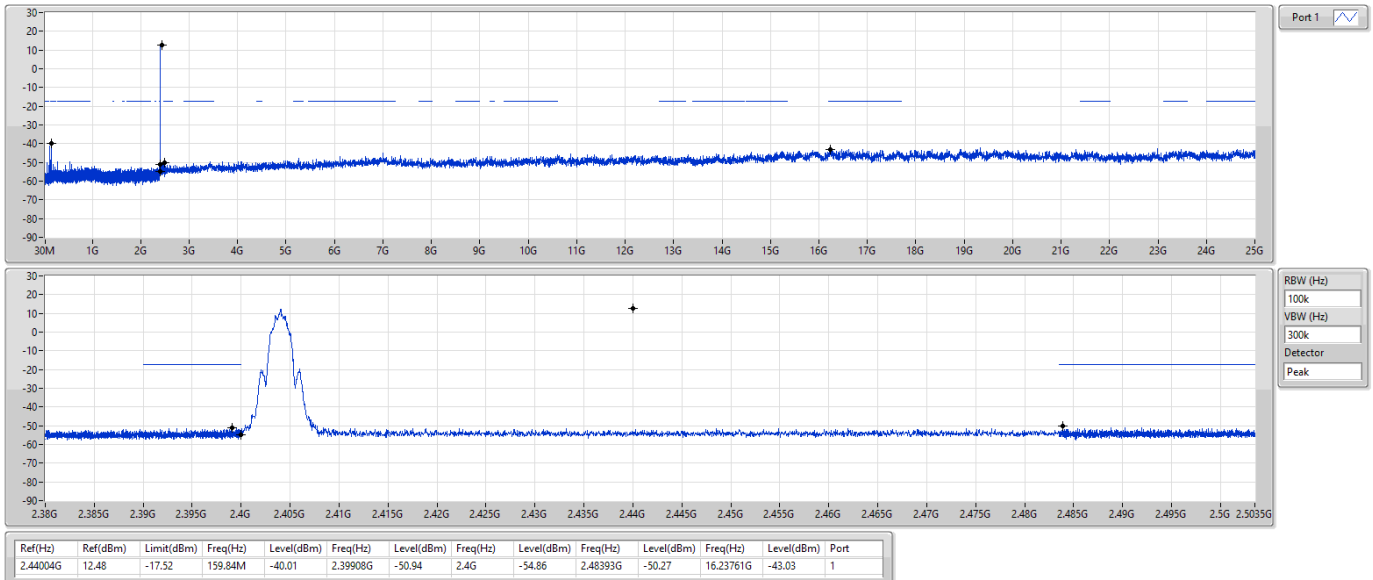
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

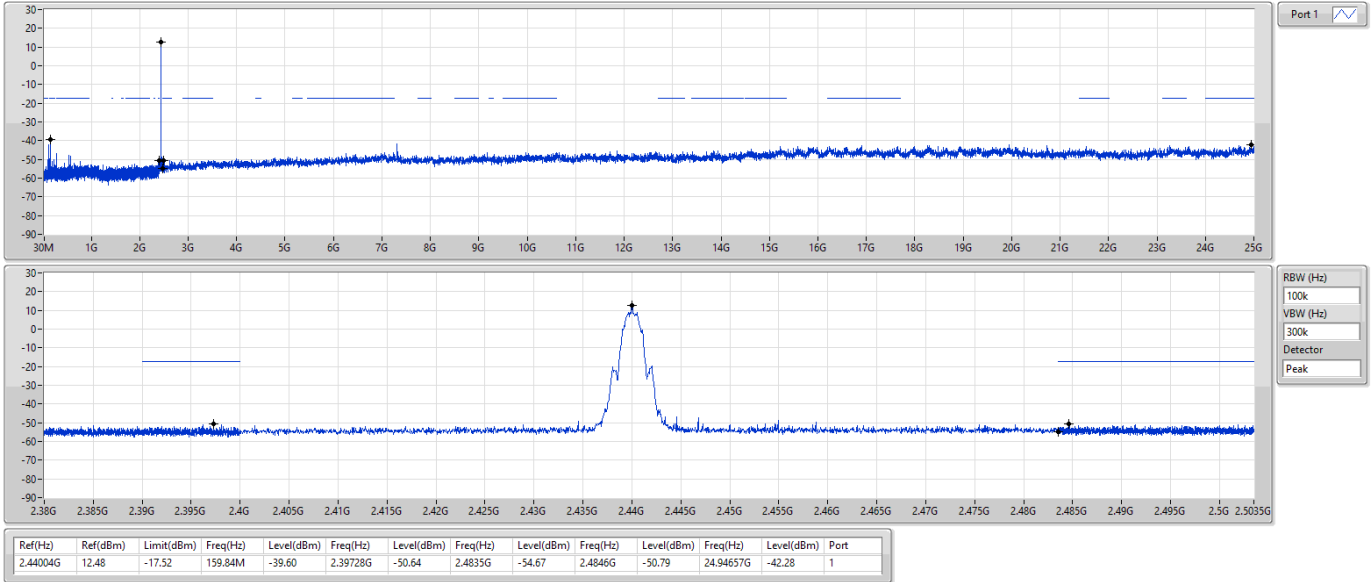
2404MHz



BT-LE(2Mbps)

CSEndB-DTS

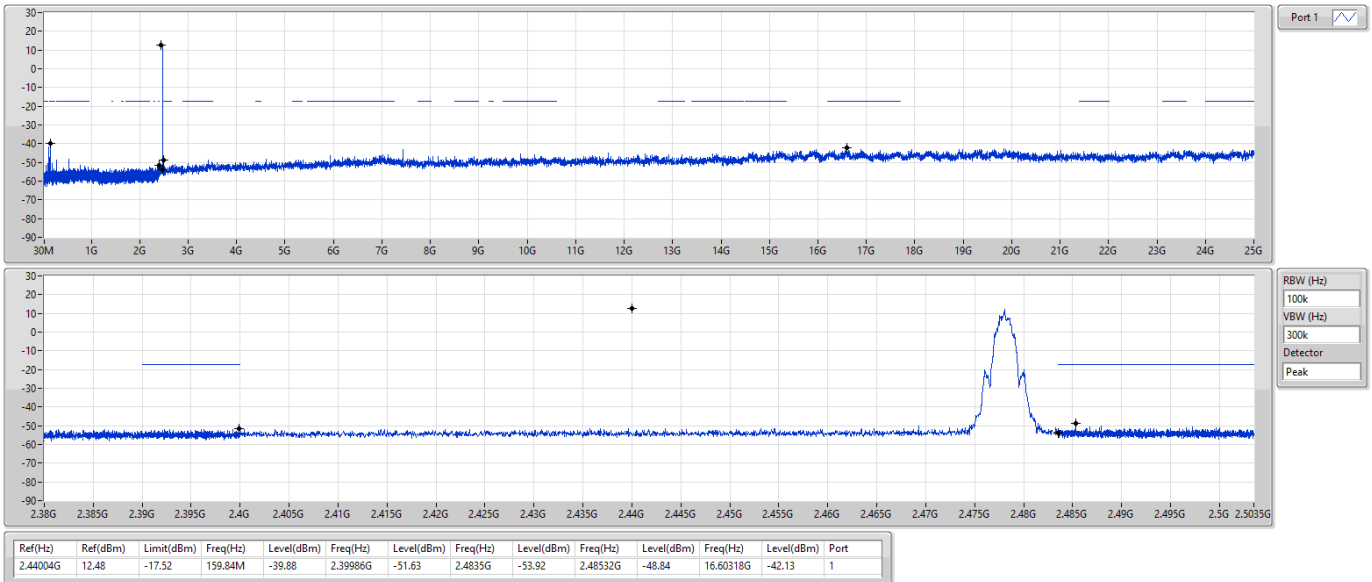
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2478MHz



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	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
BT-LE(2Mbps)	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1

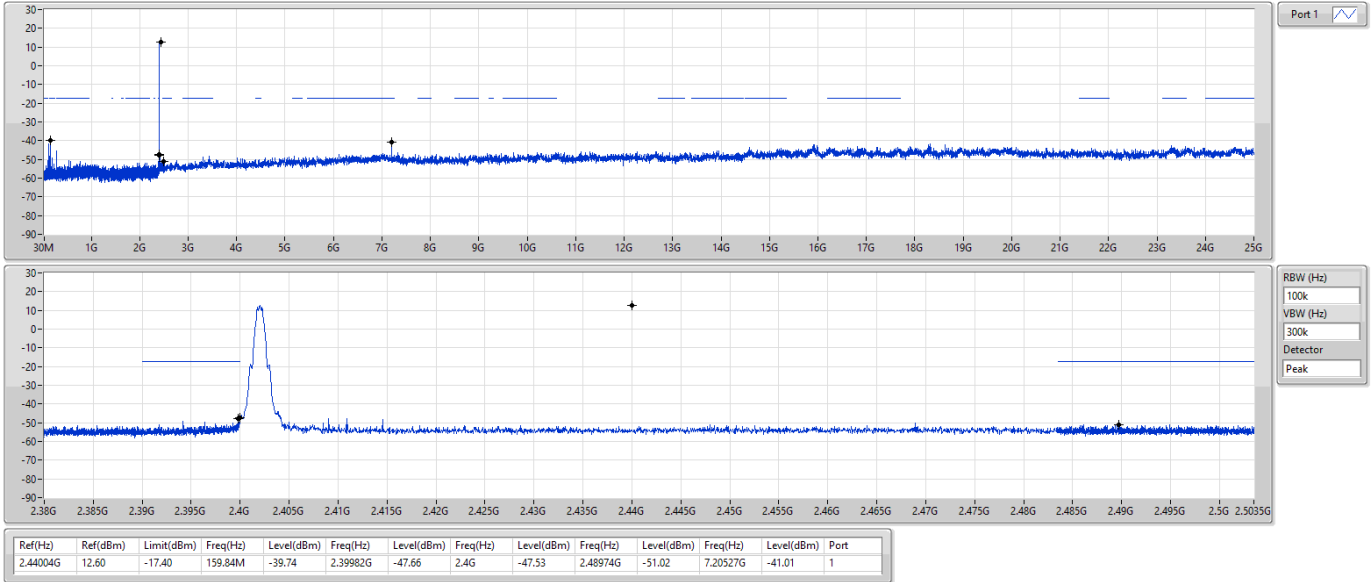
Result

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	2.44004G	12.60	-17.40	159.84M	-39.74	2.39982G	-47.66	2.4G	-47.53	2.48974G	-51.02	7.20527G	-41.01	1
2440MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.42	2.39473G	-50.59	2.4835G	-54.43	2.48574G	-50.68	17.62115G	-42.33	1
2480MHz	Pass	2.44004G	12.60	-17.40	159.84M	-39.53	2.39399G	-51.27	2.4835G	-52.97	2.48517G	-49.97	16.26855G	-42.31	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	2.44004G	12.48	-17.52	159.84M	-40.01	2.39908G	-50.94	2.4G	-54.86	2.48393G	-50.27	16.23761G	-43.03	1
2440MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.60	2.39728G	-50.64	2.4835G	-54.67	2.4846G	-50.79	24.94657G	-42.28	1
2478MHz	Pass	2.44004G	12.48	-17.52	159.84M	-39.88	2.39986G	-51.63	2.4835G	-53.92	2.48532G	-48.84	16.60318G	-42.13	1

BT-LE(1Mbps)

CSEndB-DTS

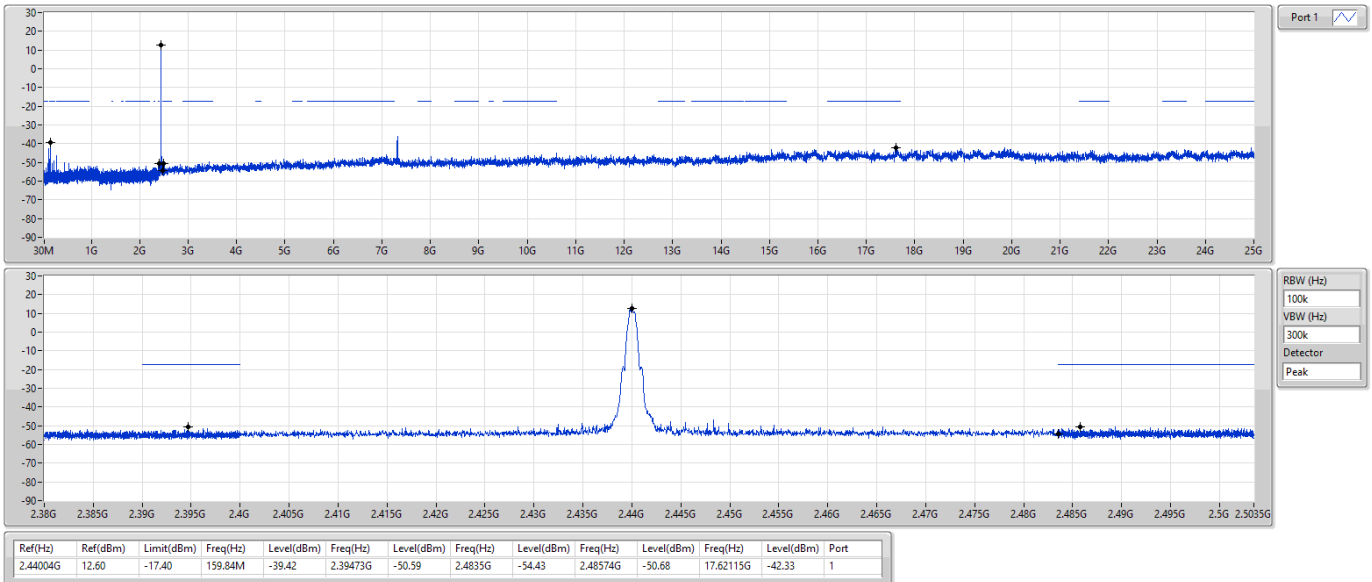
2402MHz



BT-LE(1Mbps)

CSEndB-DTS

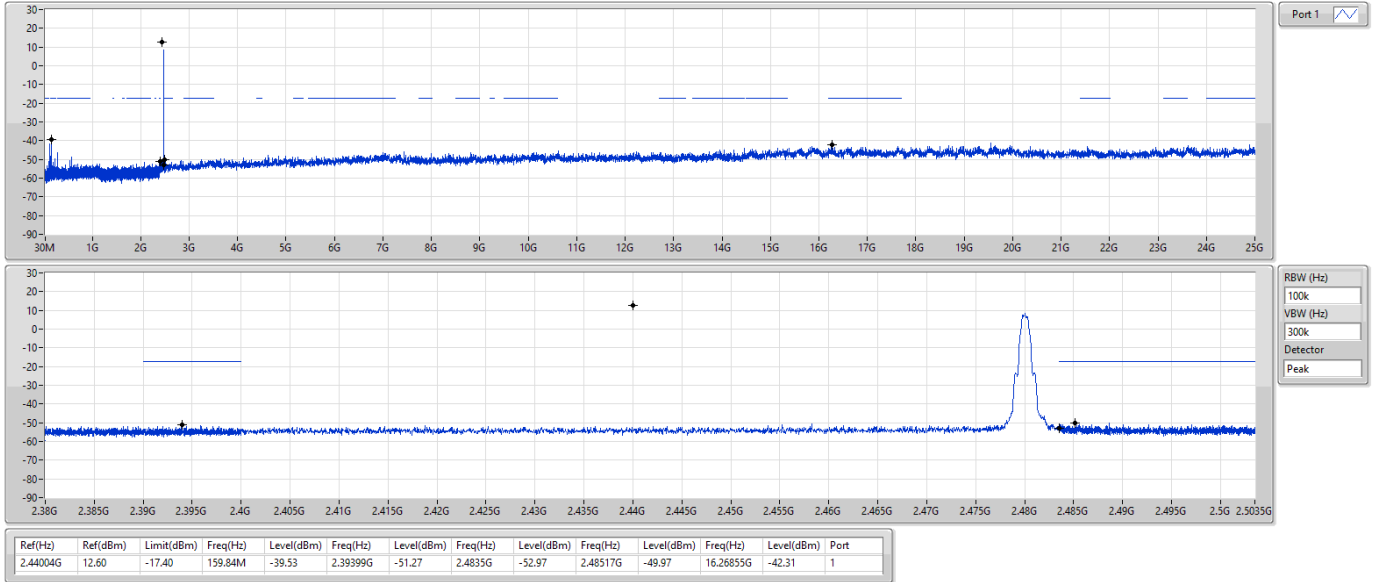
2440MHz



BT-LE(1Mbps)

CSEndB-DTS

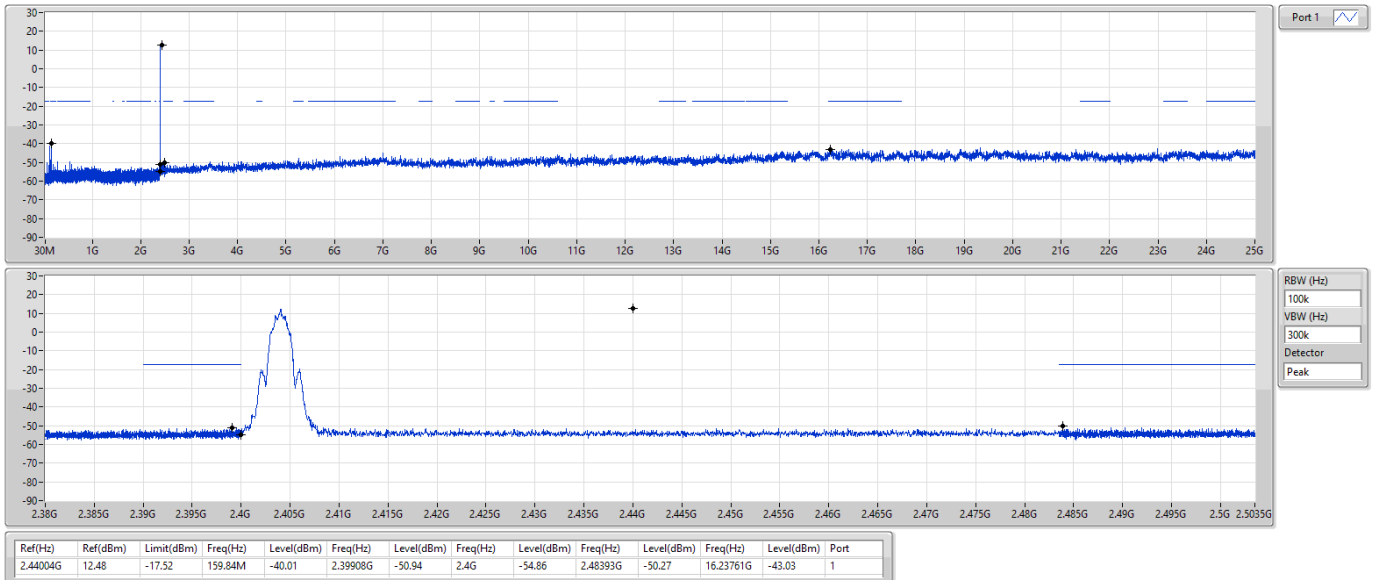
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

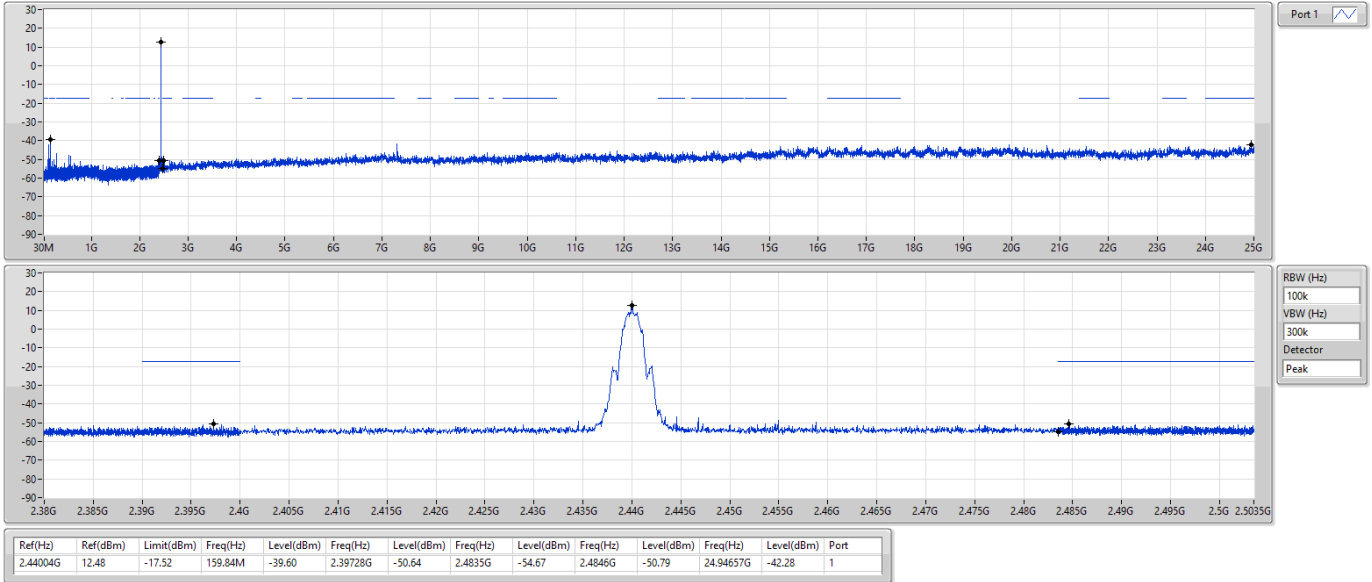
2404MHz



BT-LE(2Mbps)

CSEndB-DTS

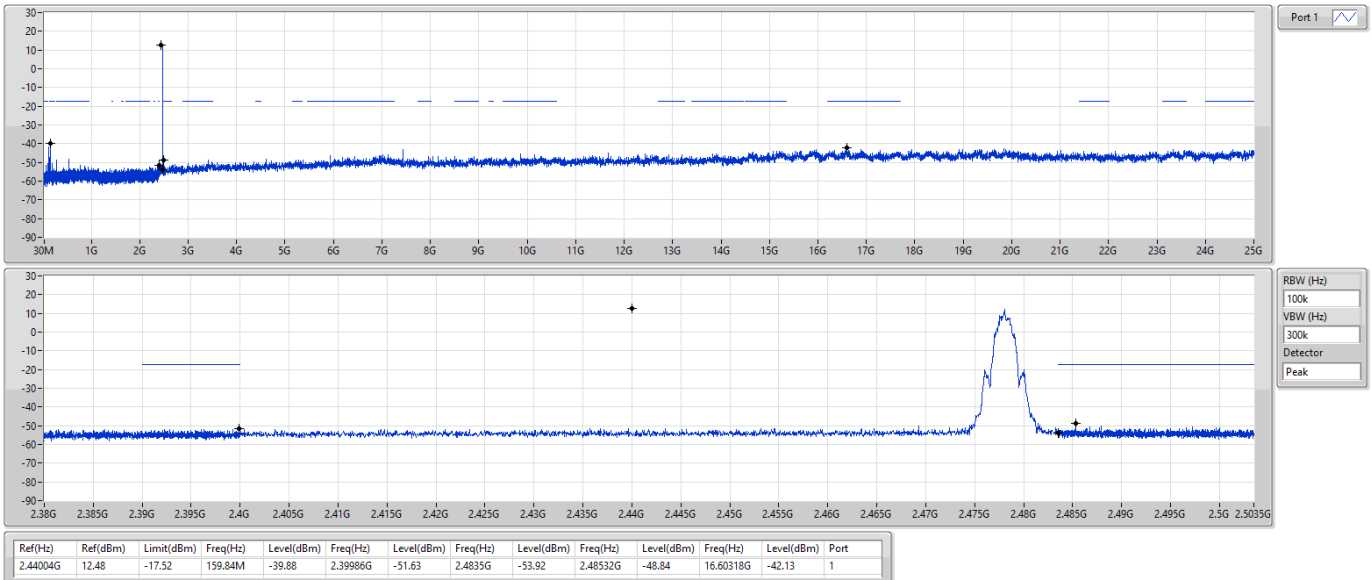
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2478MHz





Radiated Emissions below 1GHz

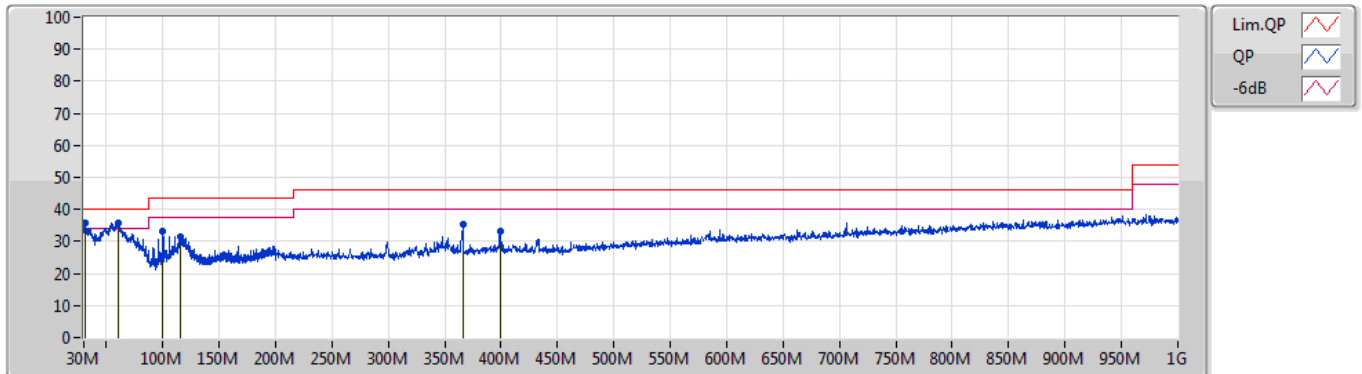
Appendix F.1

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	PK	60.01M	35.92	40.00	-4.08	Vertical

Mode 3

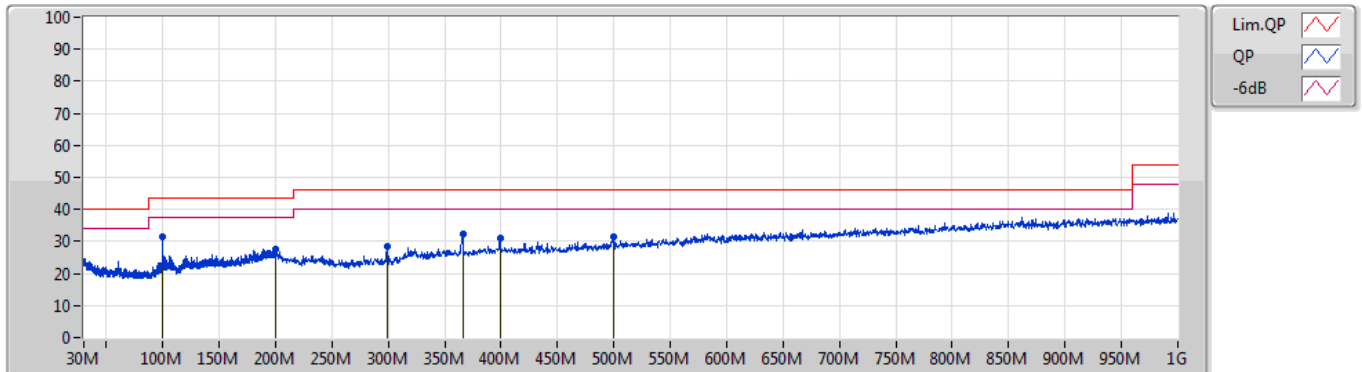
18/05/2022



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	30.85M	35.61	40.00	-4.39	-13.16	3	Vertical	55	1.00	-	48.77	14.00	0.73	27.89
PK	60.01M	35.92	40.00	-4.08	-16.67	3	Vertical	193	1.00	"Worst"	52.59	9.80	1.30	27.77
PK	99.62M	33.36	43.50	-10.14	-16.35	3	Vertical	79	1.00	-	49.71	9.56	1.90	27.81
PK	115.6M	31.39	43.50	-12.11	-15.05	3	Vertical	190	2.00	-	46.44	10.50	2.13	27.68
PK	366.4M	35.26	46.00	-10.74	-7.69	3	Vertical	4	2.00	-	42.95	15.38	3.97	27.04
PK	399.6M	33.01	46.00	-12.99	-7.02	3	Vertical	38	2.00	-	40.03	16.22	4.10	27.34

Mode 3

18/05/2022



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	100.04M	31.53	43.50	-11.97	-16.31	3	Horizontal	133	1.00	"Worst"	47.84	9.60	1.90	27.81
PK	199.92M	27.68	43.50	-15.82	-9.56	3	Horizontal	229	3.00	-	37.24	14.51	3.20	27.27
PK	299.6M	28.37	46.00	-17.63	-9.67	3	Horizontal	286	1.00	-	38.04	13.20	3.50	26.37
PK	366.4M	32.51	46.00	-13.49	-7.69	3	Horizontal	214	2.00	-	40.20	15.38	3.97	27.04
PK	399.6M	31.24	46.00	-14.76	-7.02	3	Horizontal	11	1.00	-	38.26	16.22	4.10	27.34
PK	499.6M	31.66	46.00	-14.34	-5.79	3	Horizontal	15	1.00	-	37.45	17.51	4.60	27.90

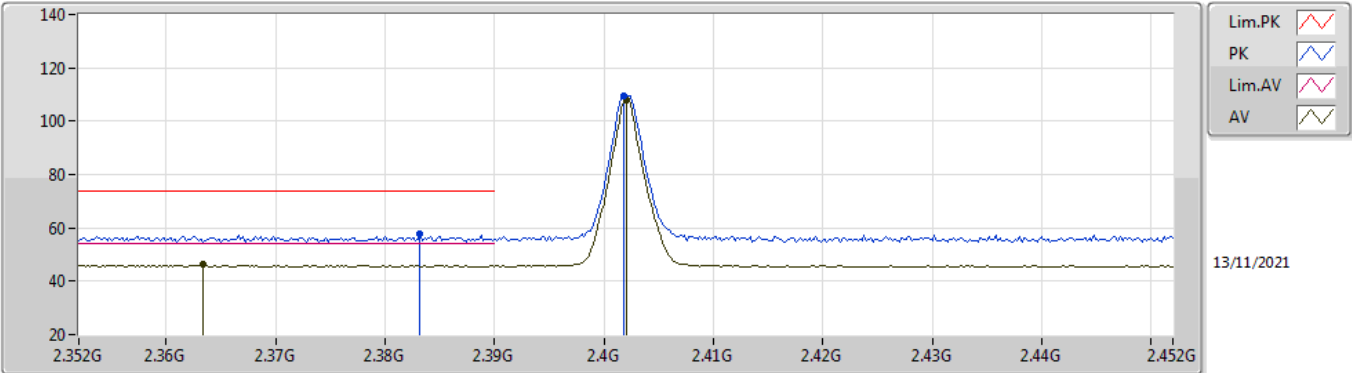


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4994G	49.94	54.00	-4.06	3	Vertical	86	2.10	-

BT-LE(1Mbps)

2402MHz_TX

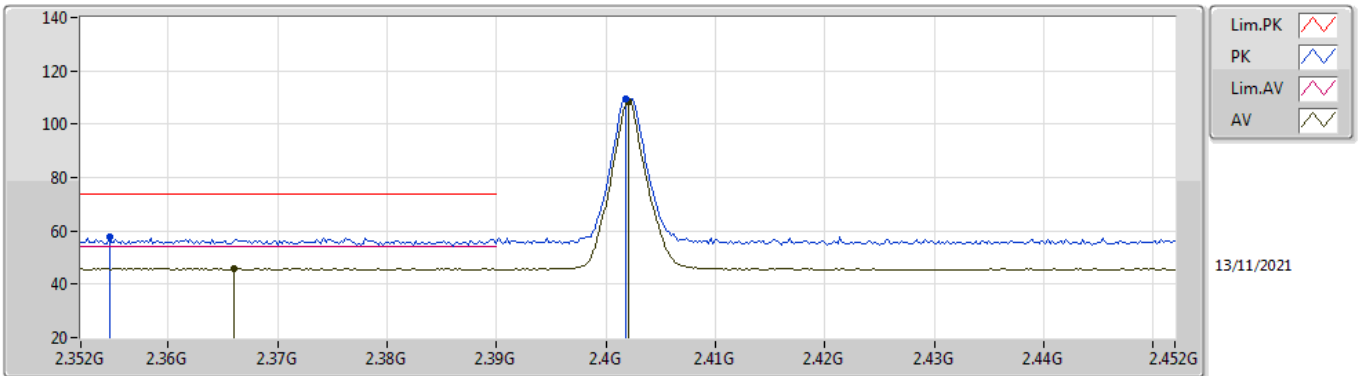


EUT Z_1TX
Setting 0x55
03-D-C-5

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	2.3832G	57.67	74.00	-16.33	24.96	3	Vertical	70	1.28	-	28.33	4.38	-	
AV	2.3634G	46.17	54.00	-7.83	13.44	3	Vertical	70	1.28	-	28.37	4.36	-	
PK	2.4018G	109.29	Inf	-Inf	76.59	3	Vertical	70	1.28	-	28.30	4.40	-	
AV	2.402G	107.83	Inf	-Inf	75.13	3	Vertical	70	1.28	-	28.30	4.40	-	

BT-LE(1Mbps)

2402MHz_TX

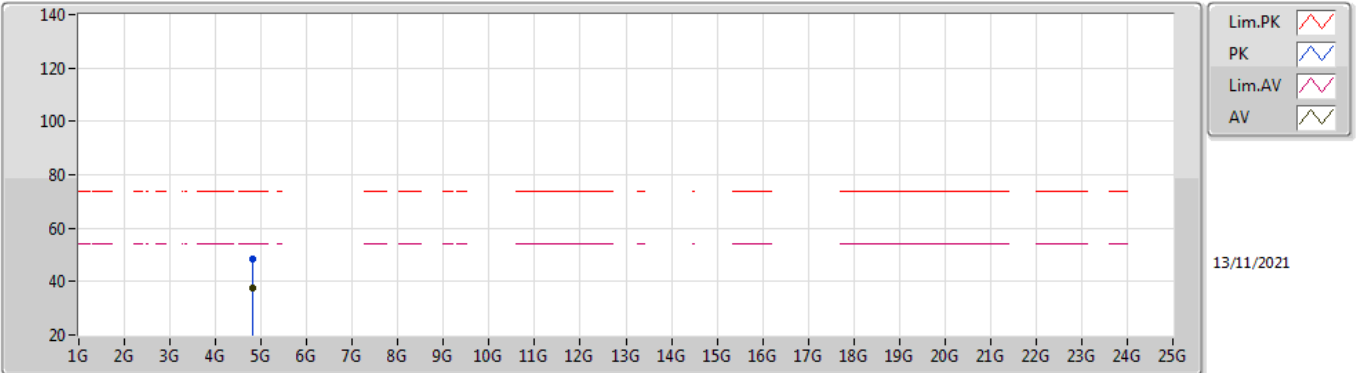


EUT Z_1TX
Setting 0x55
03-D-C-5

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	2.3546G	57.90	74.00	-16.10	25.16	3	Horizontal	33	1.93	-	28.39	4.35	-	
AV	2.366G	46.04	54.00	-7.96	13.30	3	Horizontal	33	1.93	-	28.37	4.37	-	
PK	2.4018G	109.68	Inf	-Inf	76.98	3	Horizontal	33	1.93	-	28.30	4.40	-	
AV	2.402G	108.26	Inf	-Inf	75.56	3	Horizontal	33	1.93	-	28.30	4.40	-	

BT-LE(1Mbps)

2402MHz_TX

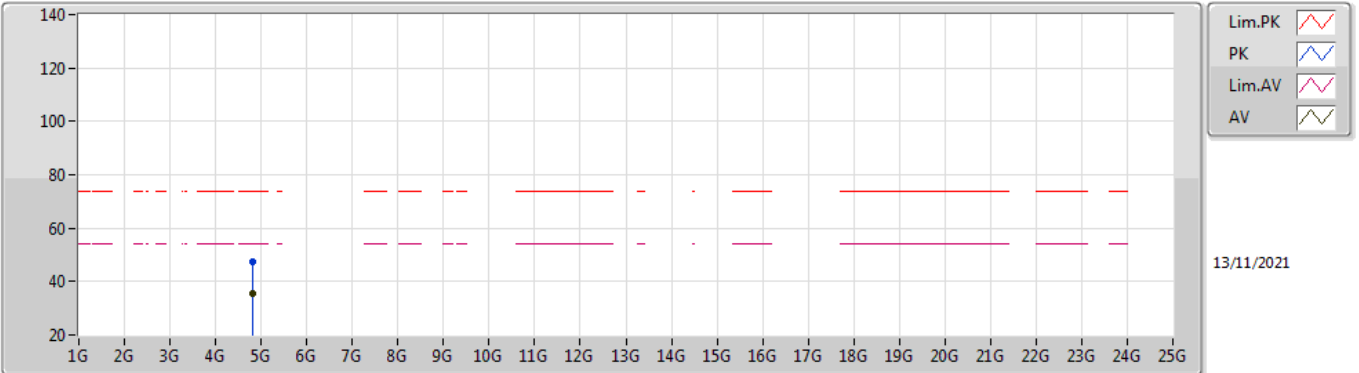


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	4.80355G	48.36	74.00	-25.64	43.29	3	Vertical	329	1.80	-	33.40	7.10	35.43
AV	4.80368G	37.60	54.00	-16.40	32.53	3	Vertical	329	1.80	-	33.40	7.10	35.43

BT-LE(1Mbps)

2402MHz_TX

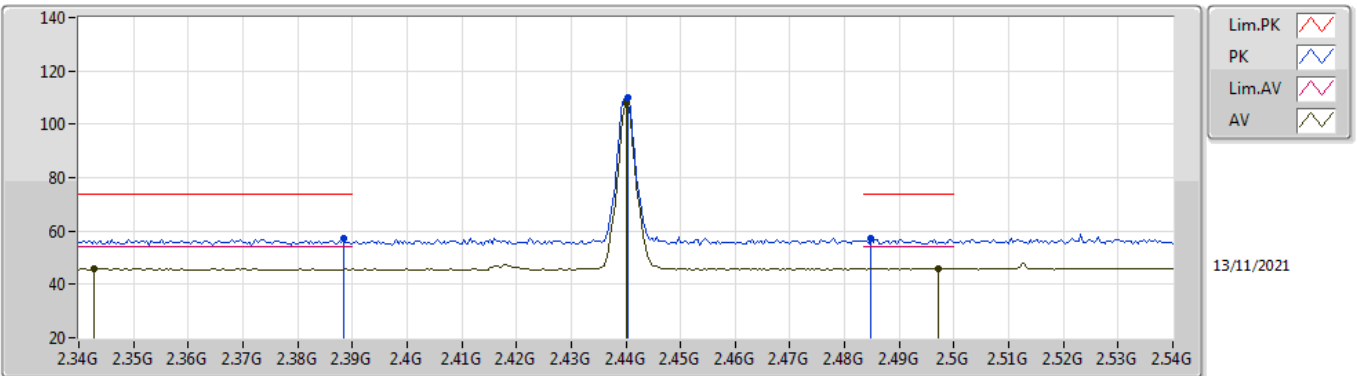


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	4.8032G	47.44	74.00	-26.56	42.37	3	Horizontal	357	1.82	-	33.40	7.10	35.43
AV	4.80398G	35.45	54.00	-18.55	30.38	3	Horizontal	357	1.82	-	33.40	7.10	35.43

BT-LE(1Mbps)

2440MHz_TX

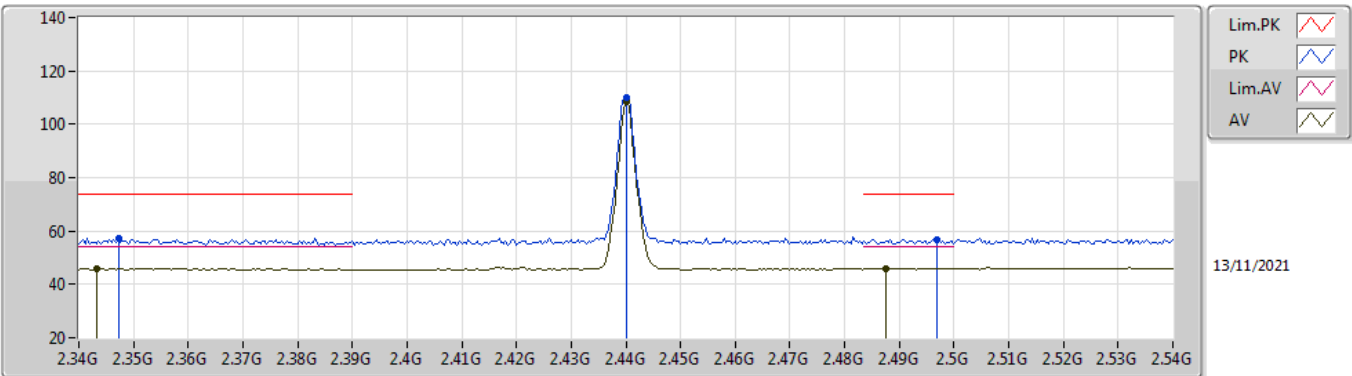


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	2.3884G	57.40	74.00	-16.60	24.69	3	Vertical	74	1.25	-	28.32	4.39	-
AV	2.3428G	45.98	54.00	-8.02	13.28	3	Vertical	74	1.25	-	28.36	4.34	-
PK	2.4404G	109.80	Inf	-Inf	77.00	3	Vertical	74	1.25	-	28.38	4.42	-
AV	2.44G	108.17	Inf	-Inf	75.37	3	Vertical	74	1.25	-	28.38	4.42	-
PK	2.4848G	57.32	74.00	-16.68	24.27	3	Vertical	74	1.25	-	28.61	4.44	-
AV	2.4972G	46.10	54.00	-7.90	12.97	3	Vertical	74	1.25	-	28.68	4.45	-

BT-LE(1Mbps)

2440MHz_TX

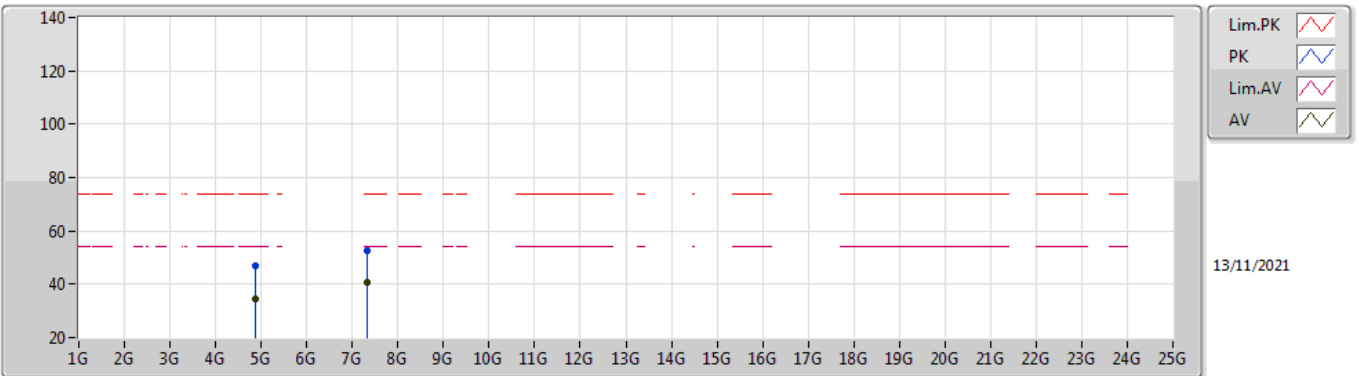


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	2.3472G	57.18	74.00	-16.82	24.45	3	Horizontal	35	1.92	-	28.38	4.35	-
AV	2.3432G	45.97	54.00	-8.03	13.27	3	Horizontal	35	1.92	-	28.36	4.34	-
PK	2.44G	110.22	Inf	-Inf	77.42	3	Horizontal	35	1.92	-	28.38	4.42	-
AV	2.44G	108.64	Inf	-Inf	75.84	3	Horizontal	35	1.92	-	28.38	4.42	-
PK	2.4968G	56.98	74.00	-17.02	23.85	3	Horizontal	35	1.92	-	28.68	4.45	-
AV	2.4876G	46.04	54.00	-7.96	12.97	3	Horizontal	35	1.92	-	28.63	4.44	-

BT-LE(1Mbps)

2440MHz_TX

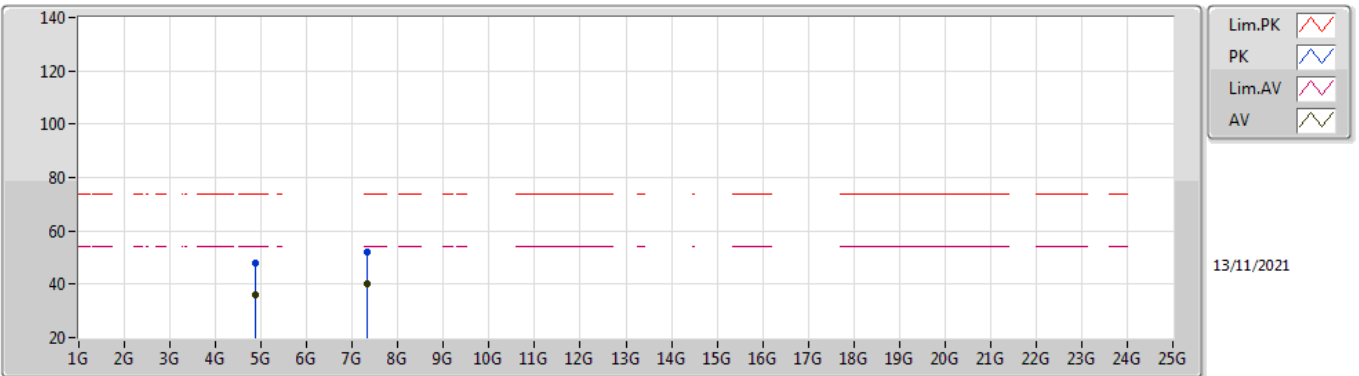


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	4.87616G	46.78	74.00	-27.22	41.61	3	Vertical	278	2.15	-	33.50	7.06	35.39
AV	4.8825G	34.43	54.00	-19.57	29.23	3	Vertical	278	2.15	-	33.53	7.06	35.39
PK	7.32132G	52.48	74.00	-21.52	42.49	3	Vertical	28	2.95	-	37.00	8.56	35.57
AV	7.31944G	40.94	54.00	-13.06	30.95	3	Vertical	28	2.95	-	37.00	8.56	35.57

BT-LE(1Mbps)

2440MHz_TX

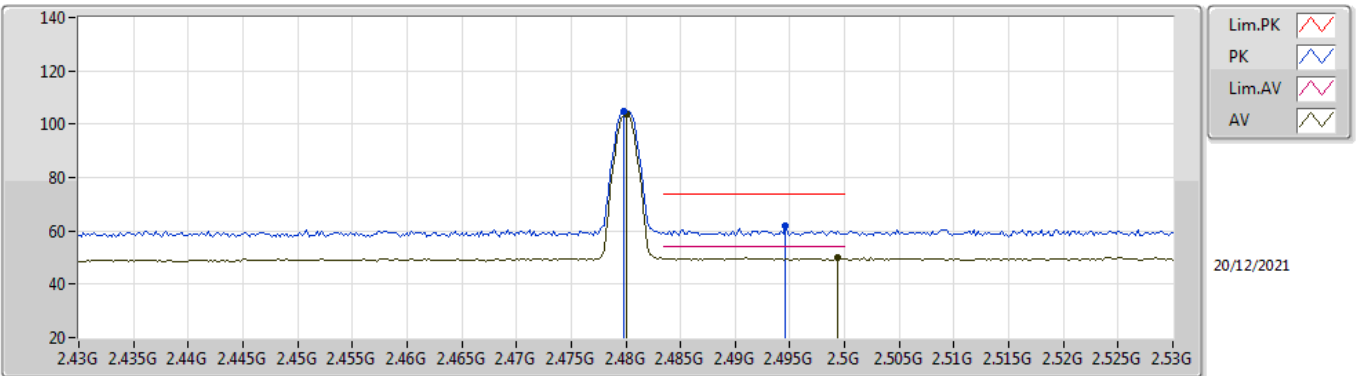


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	4.88042G	48.02	74.00	-25.98	42.83	3	Horizontal	23	1.59	-	33.52	7.06	35.39
AV	4.88036G	36.26	54.00	-17.74	31.07	3	Horizontal	23	1.59	-	33.52	7.06	35.39
PK	7.32G	51.85	74.00	-22.15	41.86	3	Horizontal	275	2.49	-	37.00	8.56	35.57
AV	7.32062G	40.20	54.00	-13.80	30.21	3	Horizontal	275	2.49	-	37.00	8.56	35.57

BT-LE(1Mbps)

2480MHz_TX

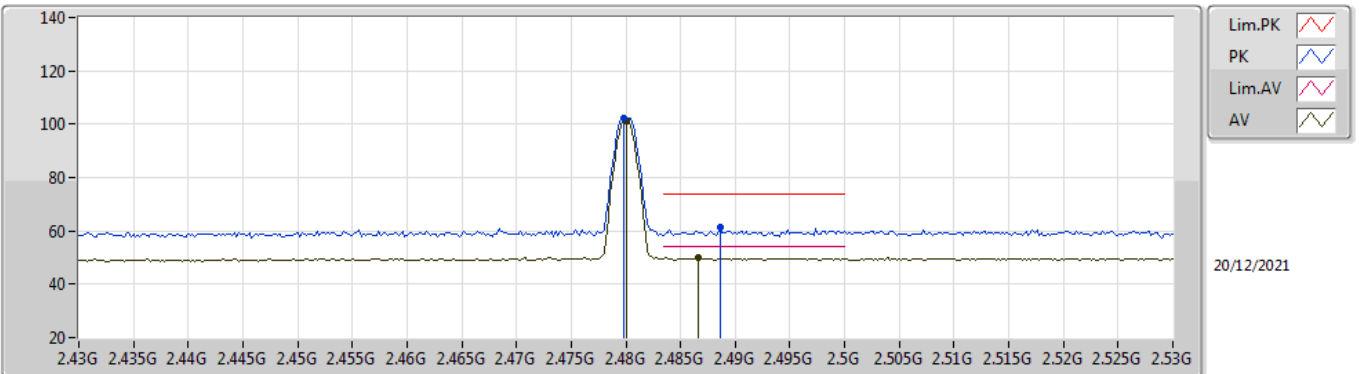


EUT_Z_1TX
Setting 0x55
03-I-K-4

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	104.65	Inf	-Inf	71.63	3	Vertical	86	2.10	-	28.58	4.44	-	
AV	2.48G	103.77	Inf	-Inf	70.75	3	Vertical	86	2.10	-	28.58	4.44	-	
PK	2.4946G	61.80	74.00	-12.20	28.68	3	Vertical	86	2.10	-	28.67	4.45	-	
AV	2.4994G	49.94	54.00	-4.06	16.79	3	Vertical	86	2.10	-	28.70	4.45	-	

BT-LE(1Mbps)

2480MHz_TX

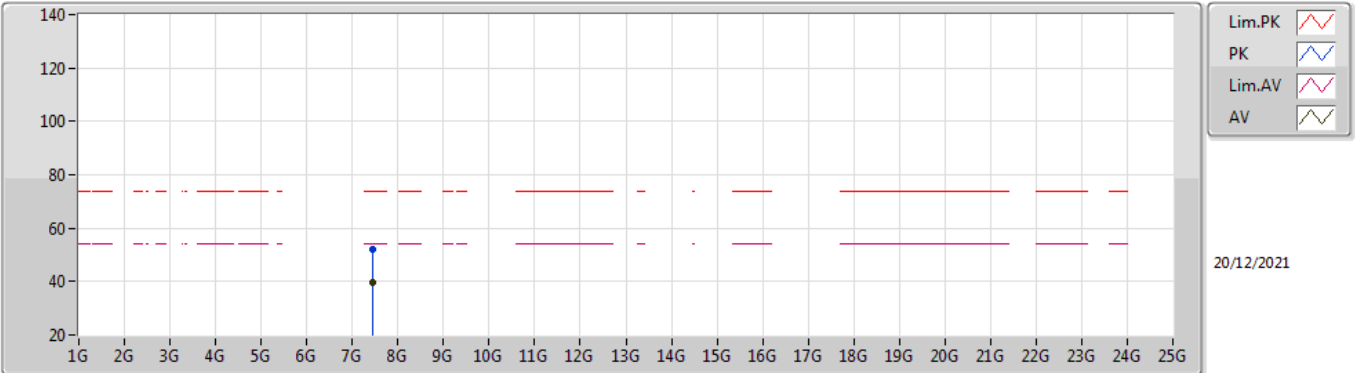


EUT_Z_1TX
Setting 0x55
03-I-K-4

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	102.26	Inf	-Inf	69.24	3	Horizontal	205	1.61	-	28.58	4.44	-	
AV	2.48G	101.36	Inf	-Inf	68.34	3	Horizontal	205	1.61	-	28.58	4.44	-	
PK	2.4886G	61.18	74.00	-12.82	28.11	3	Horizontal	205	1.61	-	28.63	4.44	-	
AV	2.4866G	49.88	54.00	-4.12	16.82	3	Horizontal	205	1.61	-	28.62	4.44	-	

BT-LE(1Mbps)

2480MHz_TX

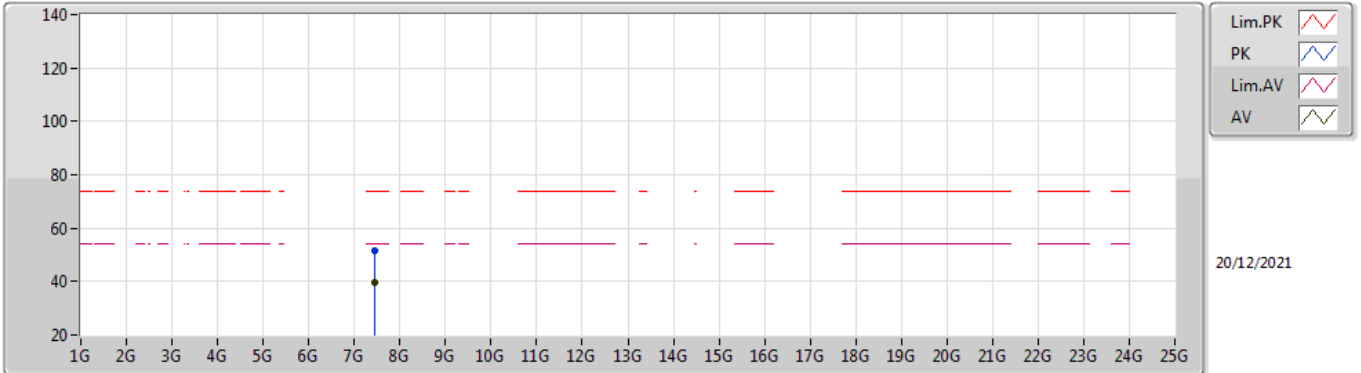


EUT_Z_1TX
Setting 0x55
03-I-K-4

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA	
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)	
PK	7.4422G	51.85	74.00	-22.15	41.67	3	Vertical	65	1.88	-	37.02	8.76	35.60	
AV	7.4397G	39.41	54.00	-14.59	29.23	3	Vertical	65	1.88	-	37.02	8.76	35.60	

BT-LE(1Mbps)

2480MHz_TX

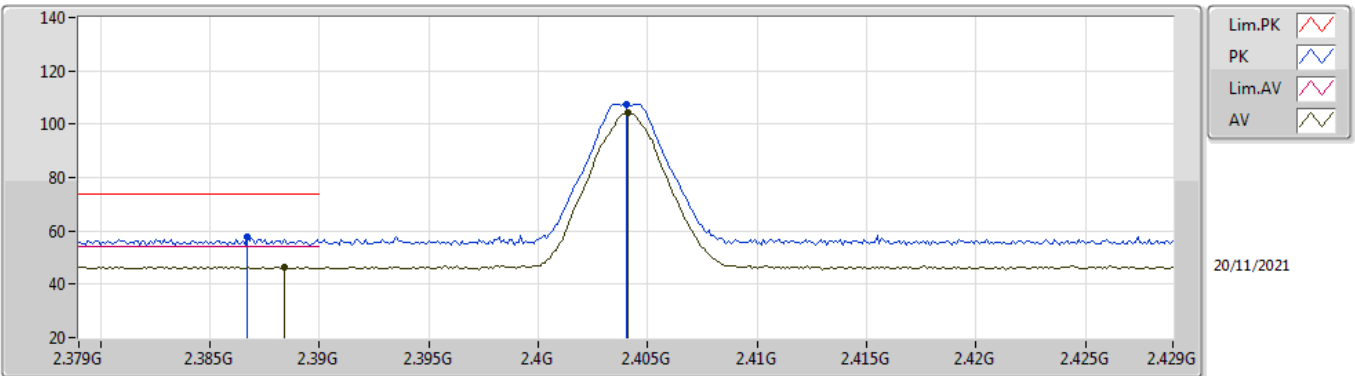


EUT_Z_1TX
Setting 0x55
03-I-K-4

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	7.4353G	51.62	74.00	-22.38	41.43	3	Horizontal	210	2.01	-	37.03	8.76	35.60
AV	7.43896G	39.89	54.00	-14.11	29.71	3	Horizontal	210	2.01	-	37.02	8.76	35.60

BT-LE(2Mbps)

2404MHz_TX

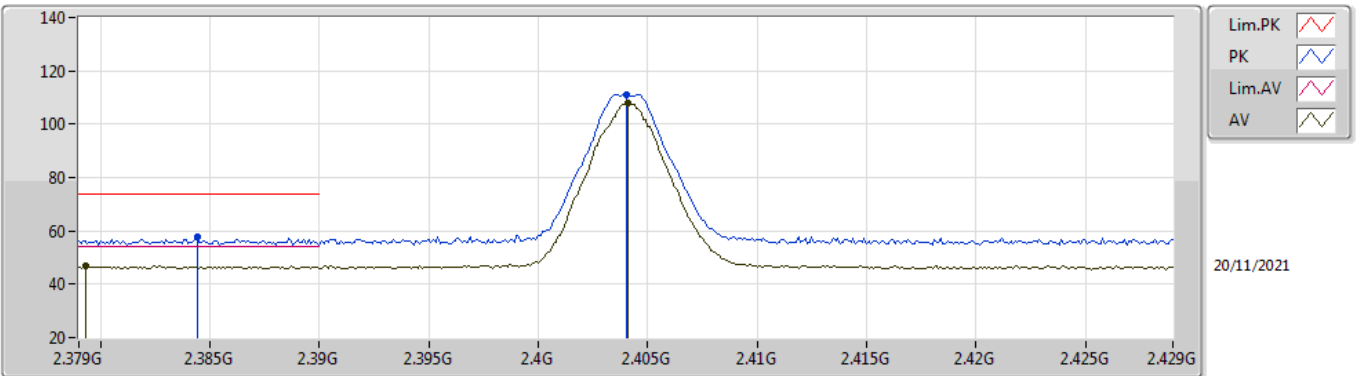


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	2.3867G	57.93	74.00	-16.07	25.21	3	Vertical	59	1.80	-	28.33	4.39	-	
AV	2.3884G	46.62	54.00	-7.38	13.91	3	Vertical	59	1.80	-	28.32	4.39	-	
PK	2.404G	107.61	Inf	-Inf	74.90	3	Vertical	59	1.80	-	28.31	4.40	-	
AV	2.4041G	104.40	Inf	-Inf	71.69	3	Vertical	59	1.80	-	28.31	4.40	-	

BT-LE(2Mbps)

2404MHz_TX

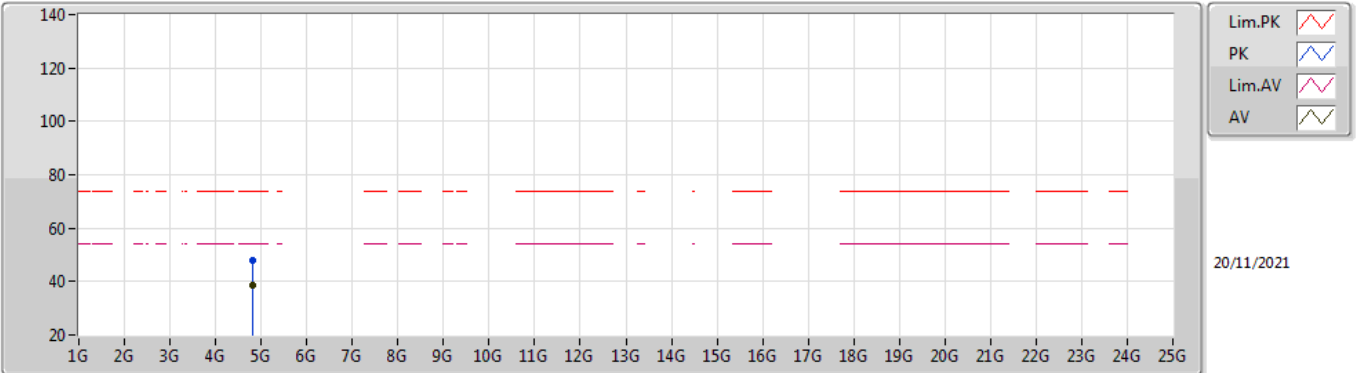


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	2.3844G	57.67	74.00	-16.33	24.96	3	Horizontal	137	2.21	-	28.33	4.38	-	
AV	2.3793G	46.87	54.00	-7.13	14.15	3	Horizontal	137	2.21	-	28.34	4.38	-	
PK	2.404G	111.05	Inf	-Inf	78.34	3	Horizontal	137	2.21	-	28.31	4.40	-	
AV	2.4041G	108.03	Inf	-Inf	75.32	3	Horizontal	137	2.21	-	28.31	4.40	-	

BT-LE(2Mbps)

2404MHz_TX

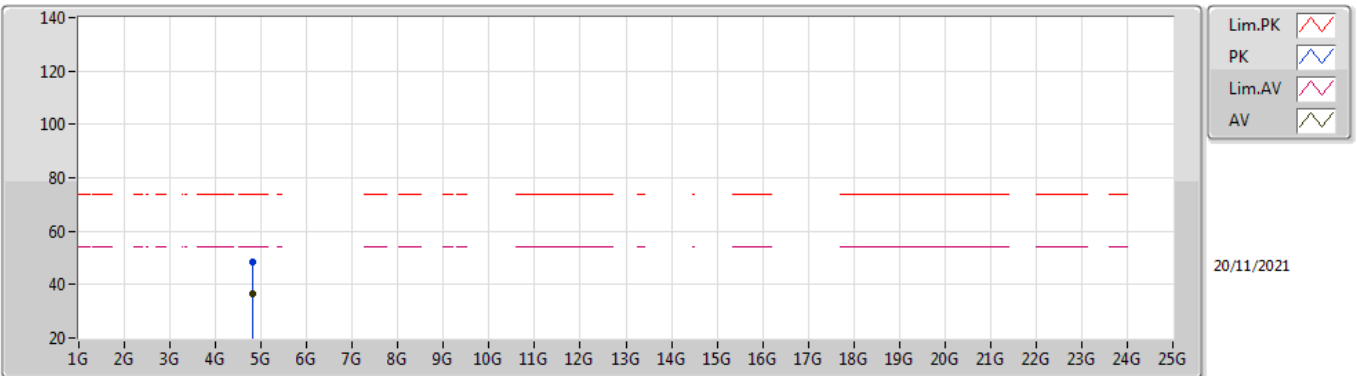


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	4.80794G	47.92	74.00	-26.08	42.85	3	Vertical	311	1.97	-	33.40	7.10	35.43	
AV	4.80908G	38.48	54.00	-15.52	33.41	3	Vertical	311	1.97	-	33.40	7.10	35.43	

BT-LE(2Mbps)

2404MHz_TX

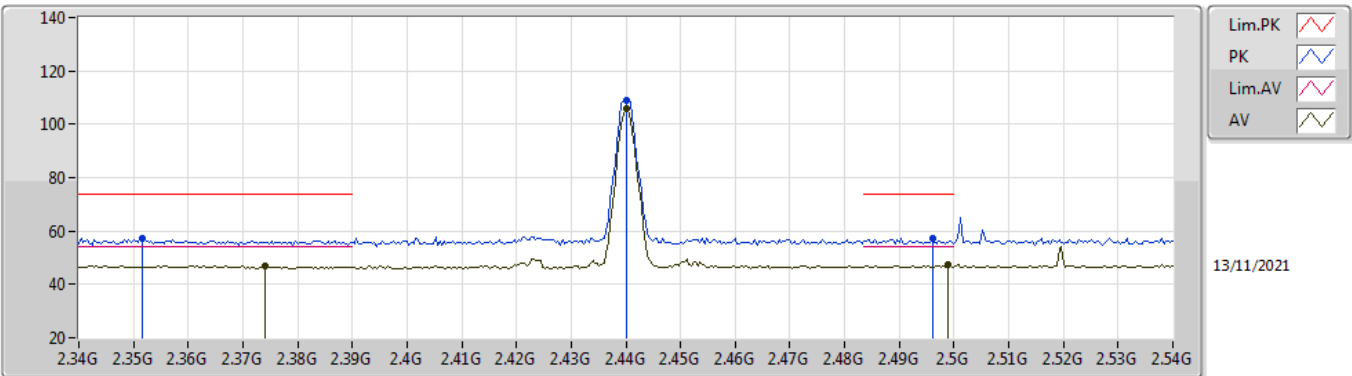


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	4.80568G	48.30	74.00	-25.70	43.23	3	Horizontal	0	1.80	-	33.40	7.10	35.43	
AV	4.80802G	36.33	54.00	-17.67	31.26	3	Horizontal	0	1.80	-	33.40	7.10	35.43	

BT-LE(2Mbps)

2440MHz_TX

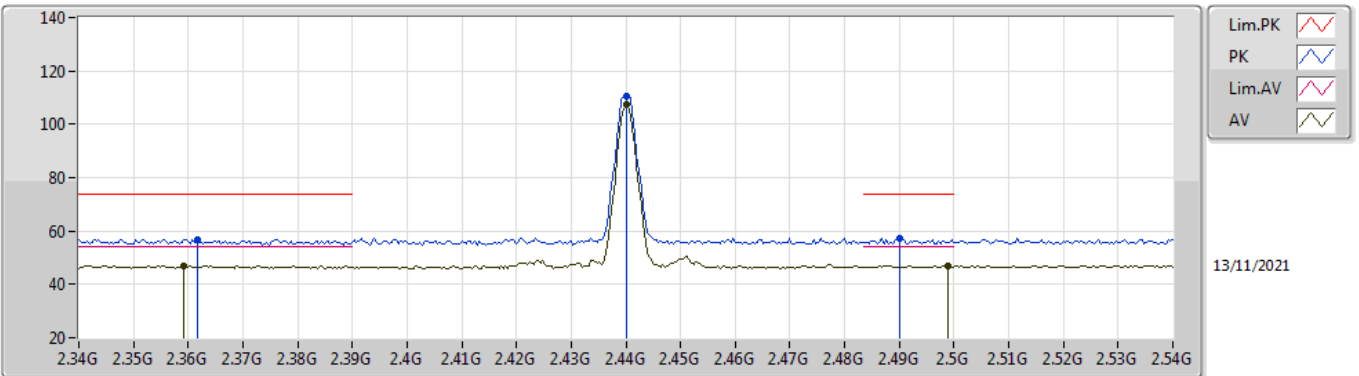


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	2.3516G	57.01	74.00	-16.99	24.26	3	Vertical	84	1.34	-	28.40	4.35	-
AV	2.374G	47.11	54.00	-6.89	14.39	3	Vertical	84	1.34	-	28.35	4.37	-
PK	2.44G	108.90	Inf	-Inf	76.10	3	Vertical	84	1.34	-	28.38	4.42	-
AV	2.44G	105.80	Inf	-Inf	73.00	3	Vertical	84	1.34	-	28.38	4.42	-
PK	2.496G	57.30	74.00	-16.70	24.17	3	Vertical	84	1.34	-	28.68	4.45	-
AV	2.4988G	47.33	54.00	-6.67	14.19	3	Vertical	84	1.34	-	28.69	4.45	-

BT-LE(2Mbps)

2440MHz_TX

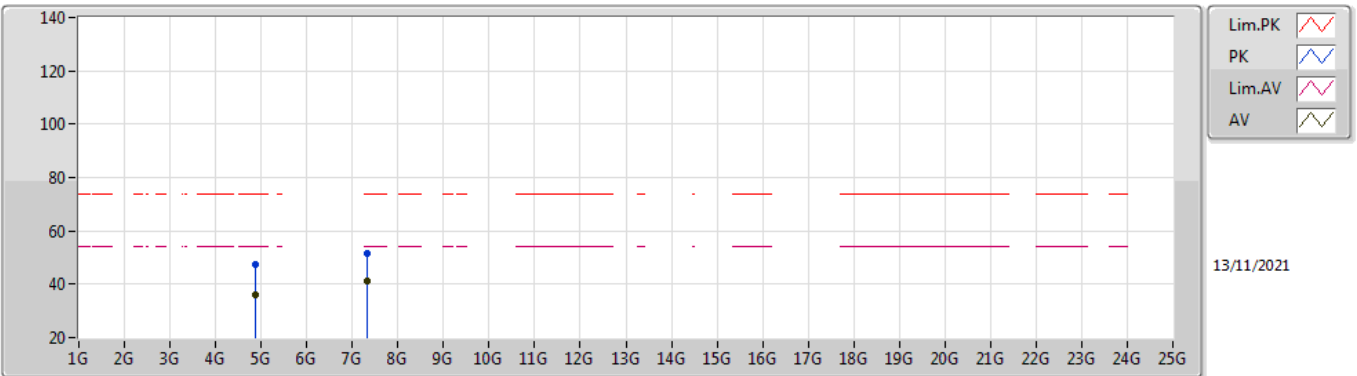


EUT_Z_1TX
Setting 0x55
03-D-C-5

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)
AV	2.3592G	47.07	54.00	-6.93	14.33	3	Horizontal	37	1.92	-	28.38	4.36	-
PK	2.3616G	56.68	74.00	-17.32	23.94	3	Horizontal	37	1.92	-	28.38	4.36	-
PK	2.44G	110.27	Inf	-Inf	77.47	3	Horizontal	37	1.92	-	28.38	4.42	-
AV	2.44G	107.22	Inf	-Inf	74.42	3	Horizontal	37	1.92	-	28.38	4.42	-
PK	2.49G	57.34	74.00	-16.66	24.25	3	Horizontal	37	1.92	-	28.64	4.45	-
AV	2.4988G	46.99	54.00	-7.01	13.85	3	Horizontal	37	1.92	-	28.69	4.45	-

BT-LE(2Mbps)

2440MHz_TX

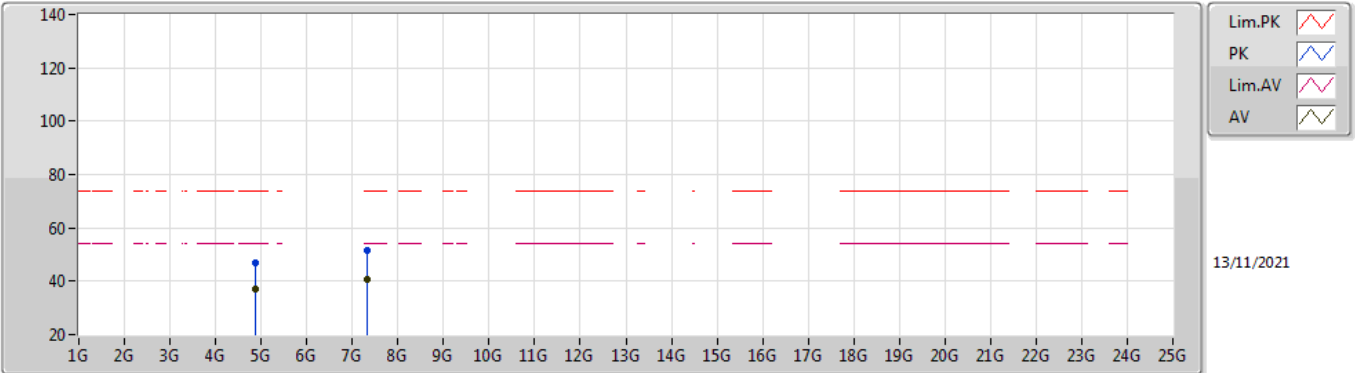


EUT_Z_1TX
Setting 0x55
03-D-C-5

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	4.8827G	47.41	74.00	-26.59	42.21	3	Vertical	140	2.55	-	33.53	7.06	35.39	
AV	4.88232G	36.19	54.00	-17.81	30.99	3	Vertical	140	2.55	-	33.53	7.06	35.39	
PK	7.31976G	51.63	74.00	-22.37	41.64	3	Vertical	34	2.43	-	37.00	8.56	35.57	
AV	7.31778G	41.13	54.00	-12.87	31.15	3	Vertical	34	2.43	-	37.00	8.55	35.57	

BT-LE(2Mbps)

2440MHz_TX

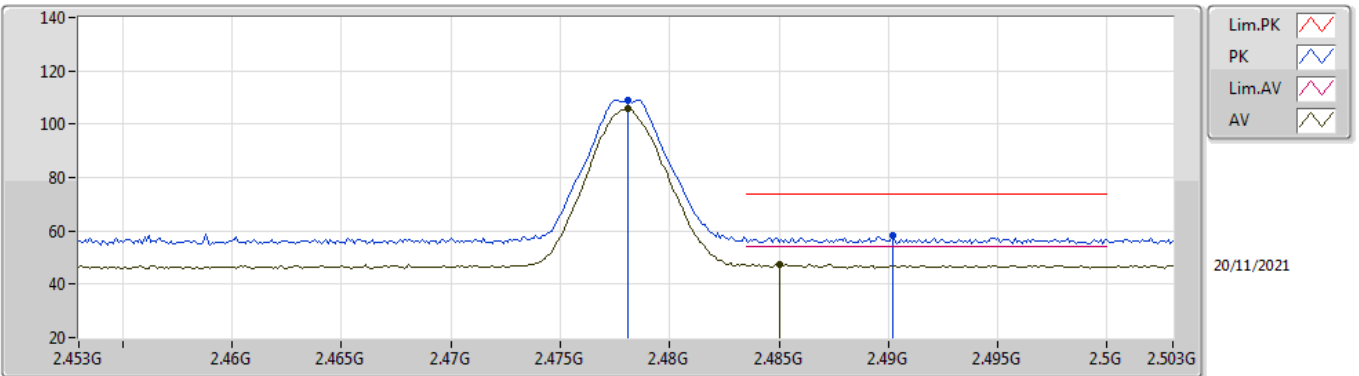


EUT Z_1TX
Setting 0x55
03-D-C-5

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	4.88378G	47.02	74.00	-26.98	41.81	3	Horizontal	246	1.18	-	33.54	7.06	35.39
AV	4.88004G	36.88	54.00	-17.12	31.69	3	Horizontal	246	1.18	-	33.52	7.06	35.39
PK	7.3234G	51.30	74.00	-22.70	41.30	3	Horizontal	110	1.82	-	37.00	8.57	35.57
AV	7.31814G	40.87	54.00	-13.13	30.89	3	Horizontal	110	1.82	-	37.00	8.55	35.57

BT-LE(2Mbps)

2478MHz_TX

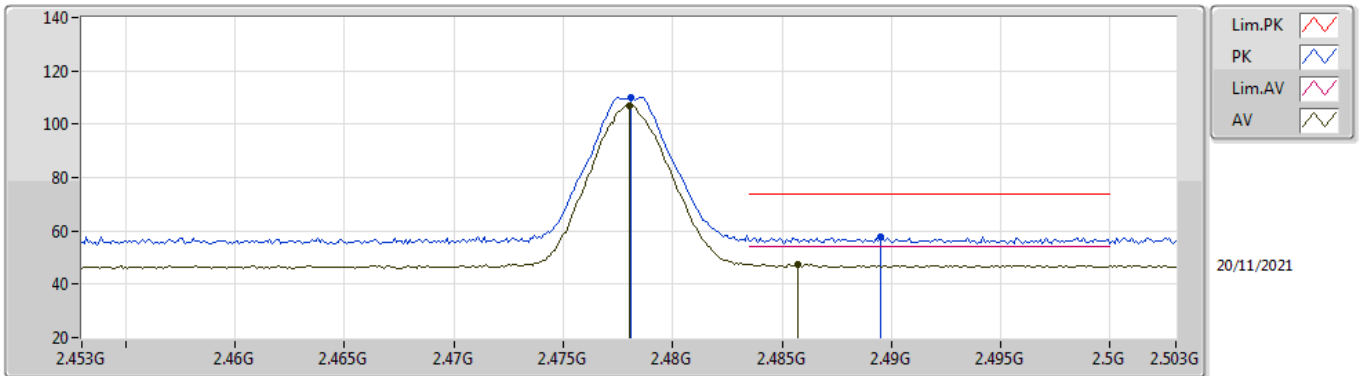


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	2.4781G	108.93	Inf	-Inf	75.92	3	Vertical	50	1.75	-	28.57	4.44	-	
AV	2.4781G	105.95	Inf	-Inf	72.94	3	Vertical	50	1.75	-	28.57	4.44	-	
PK	2.4902G	58.07	74.00	-15.93	24.98	3	Vertical	50	1.75	-	28.64	4.45	-	
AV	2.485G	47.47	54.00	-6.53	14.42	3	Vertical	50	1.75	-	28.61	4.44	-	

BT-LE(2Mbps)

2478MHz_TX

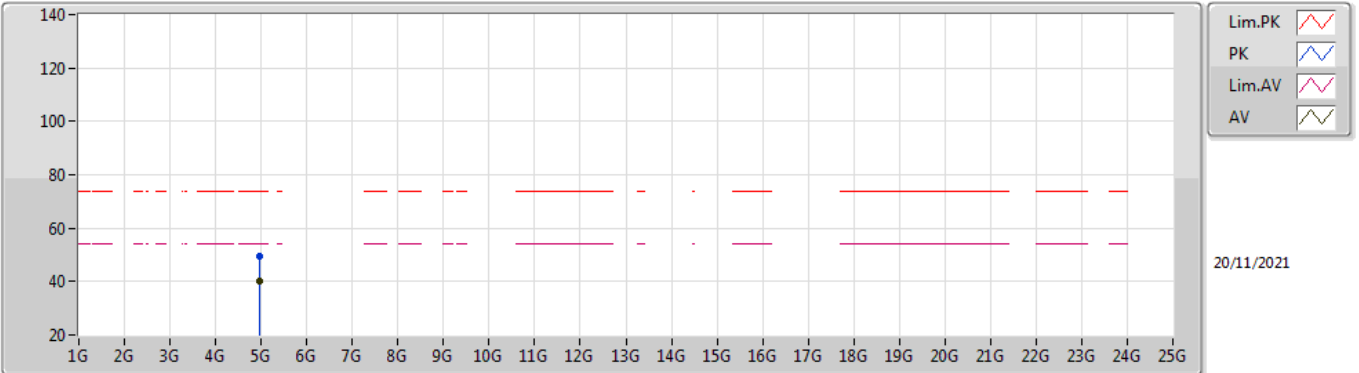


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	2.4781G	109.90	Inf	-Inf	76.89	3	Horizontal	15	2.90	-	28.57	4.44	-	
AV	2.478G	107.01	Inf	-Inf	74.00	3	Horizontal	15	2.90	-	28.57	4.44	-	
PK	2.4895G	57.67	74.00	-16.33	24.59	3	Horizontal	15	2.90	-	28.64	4.44	-	
AV	2.4857G	47.47	54.00	-6.53	14.42	3	Horizontal	15	2.90	-	28.61	4.44	-	

BT-LE(2Mbps)

2478MHz_TX

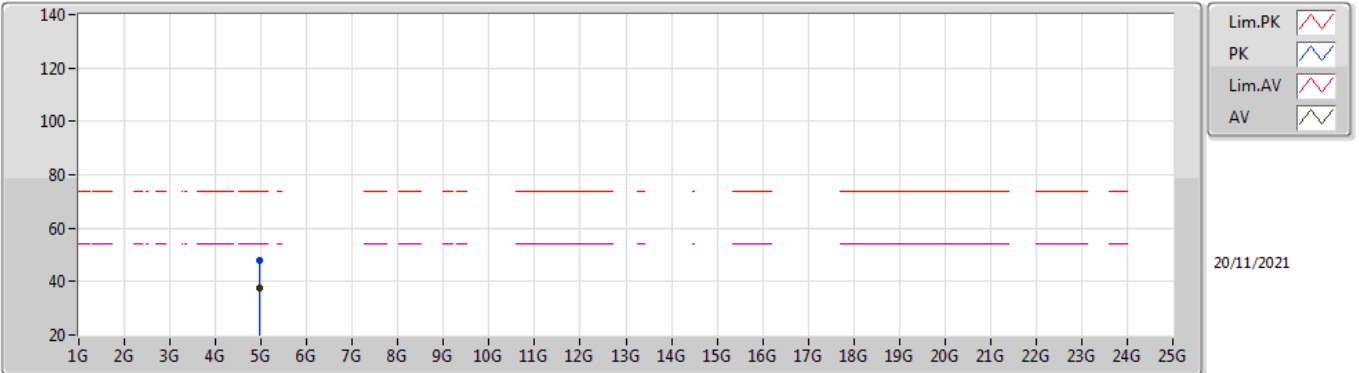


EUT_Z_1TX
Setting 0x55
03-D-B-2

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	4.95522G	49.25	74.00	-24.75	43.87	3	Vertical	249	2.37	-	33.71	7.02	35.35	
AV	4.95516G	39.97	54.00	-14.03	34.59	3	Vertical	249	2.37	-	33.71	7.02	35.35	

BT-LE(2Mbps)

2478MHz_TX



EUT_Z_1TX
Setting 0x55
03-D-B-2

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	4.96212G	47.79	74.00	-26.21	42.40	3	Horizontal	316	2.42	-	33.72	7.02	35.35	
AV	4.95588G	37.40	54.00	-16.60	32.02	3	Horizontal	316	2.42	-	33.71	7.02	35.35	

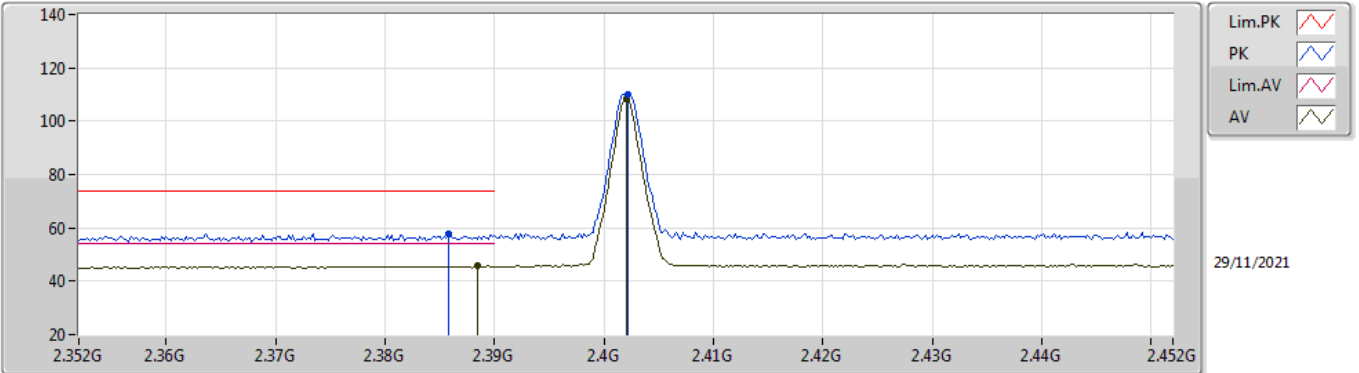


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	47.95	54.00	-6.05	3	Vertical	166	1.45	-

BT-LE(1Mbps)

2402MHz_TX

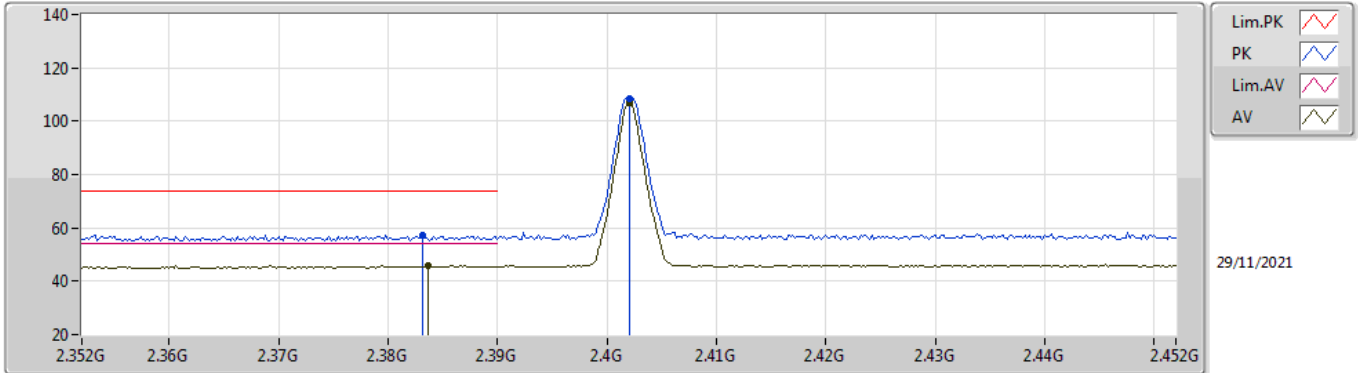


EUT Z_1TX
Setting 0x55
02-B-K-5

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	2.3858G	57.70	74.00	-16.30	26.54	3	Vertical	350	1.80	-	28.37	2.79	-	
AV	2.3884G	45.91	54.00	-8.09	14.74	3	Vertical	350	1.80	-	28.38	2.79	-	
PK	2.4022G	110.25	Inf	-Inf	79.05	3	Vertical	350	1.80	-	28.40	2.80	-	
AV	2.402G	108.57	Inf	-Inf	77.37	3	Vertical	350	1.80	-	28.40	2.80	-	

BT-LE(1Mbps)

2402MHz_TX

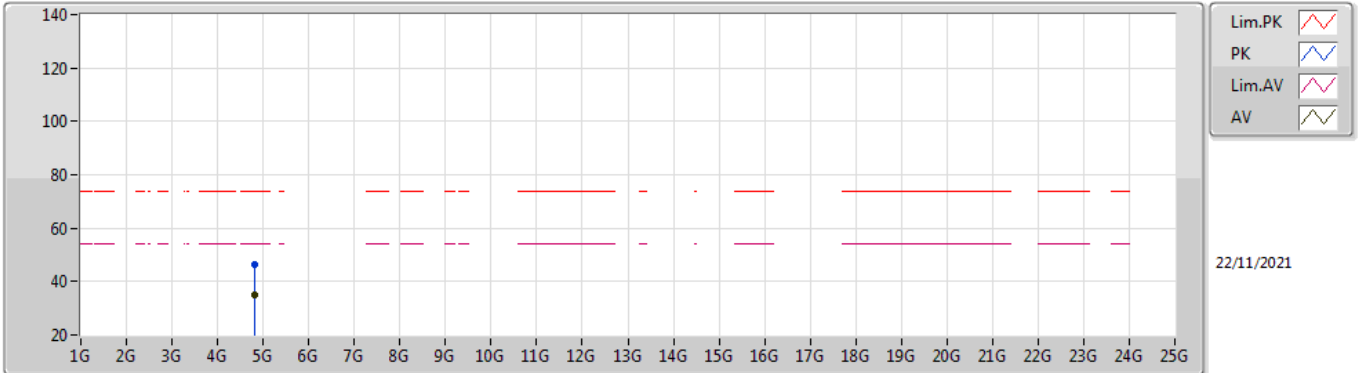


EUT Z_1TX
Setting 0x55
02-B-K-5

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	2.3832G	57.43	74.00	-16.57	26.27	3	Horizontal	144	2.32	-	28.37	2.79	-	
AV	2.3836G	45.87	54.00	-8.13	14.71	3	Horizontal	144	2.32	-	28.37	2.79	-	
PK	2.402G	108.27	Inf	-Inf	77.07	3	Horizontal	144	2.32	-	28.40	2.80	-	
AV	2.402G	106.77	Inf	-Inf	75.57	3	Horizontal	144	2.32	-	28.40	2.80	-	

BT-LE(1Mbps)

2402MHz_TX

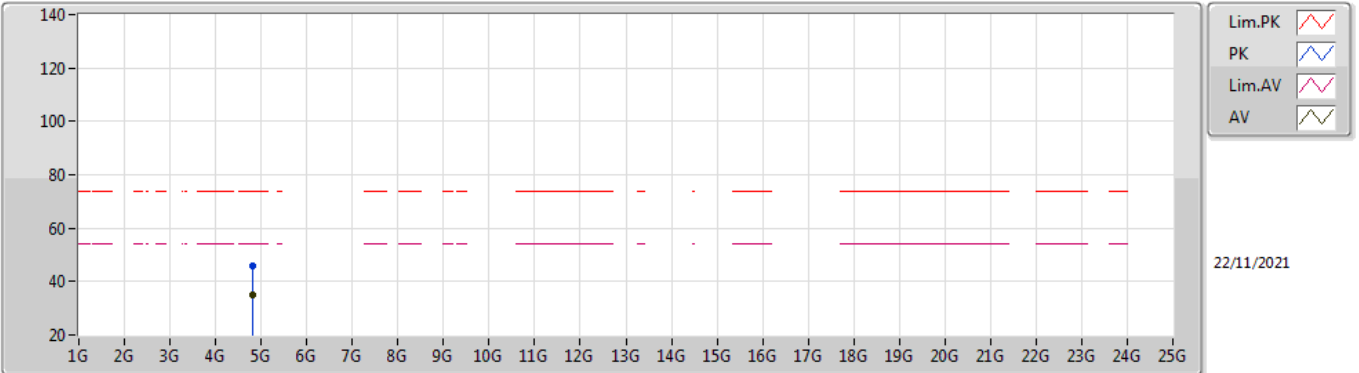


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	46.38	74.00	-27.62	40.80	3	Vertical	177	1.91	-	32.71	5.10	32.23
AV	4.80381G	35.08	54.00	-18.92	29.49	3	Vertical	177	1.91	-	32.72	5.10	32.23

BT-LE(1Mbps)

2402MHz_TX

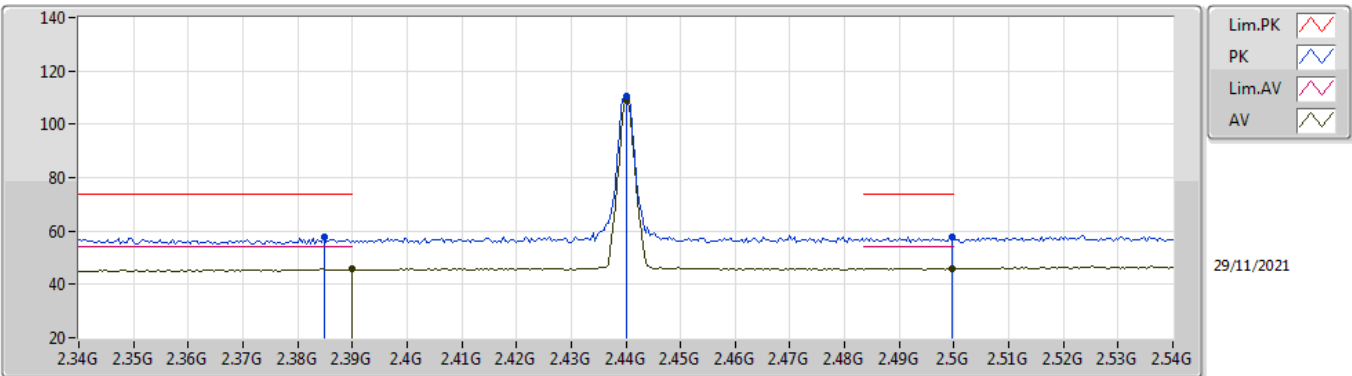


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	45.79	74.00	-28.21	40.21	3	Horizontal	316	2.41	-	32.71	5.10	32.23	
AV	4.80435G	34.93	54.00	-19.07	29.34	3	Horizontal	316	2.41	-	32.72	5.10	32.23	

BT-LE(1Mbps)

2440MHz_TX

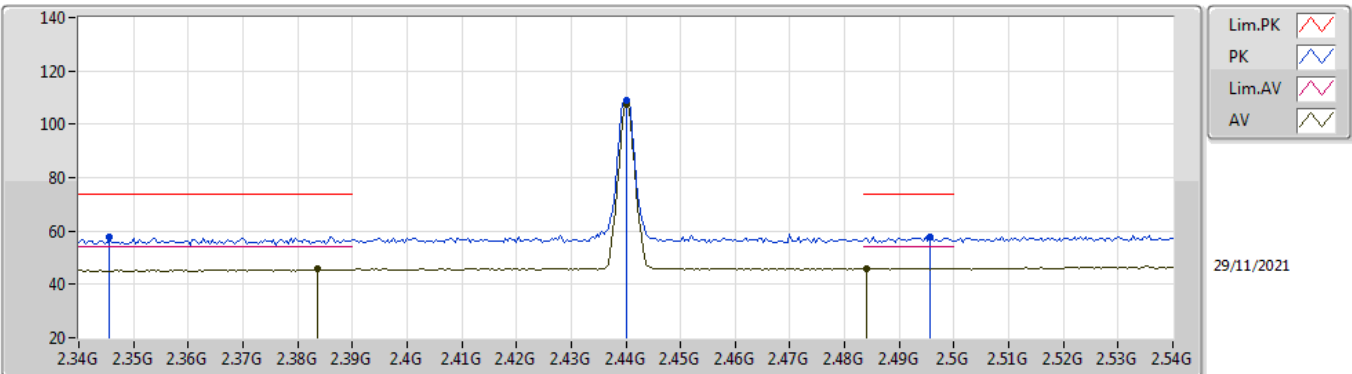


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.3848G	57.95	74.00	-16.05	26.79	3	Vertical	162	1.32	-	28.37	2.79	-
AV	2.39G	45.73	54.00	-8.27	14.56	3	Vertical	162	1.32	-	28.38	2.79	-
PK	2.44G	110.45	Inf	-Inf	79.21	3	Vertical	162	1.32	-	28.40	2.84	-
AV	2.44G	109.05	Inf	-Inf	77.81	3	Vertical	162	1.32	-	28.40	2.84	-
PK	2.4996G	57.94	74.00	-16.06	26.44	3	Vertical	162	1.32	-	28.60	2.90	-
AV	2.4996G	46.07	54.00	-7.93	14.57	3	Vertical	162	1.32	-	28.60	2.90	-

BT-LE(1Mbps)

2440MHz_TX

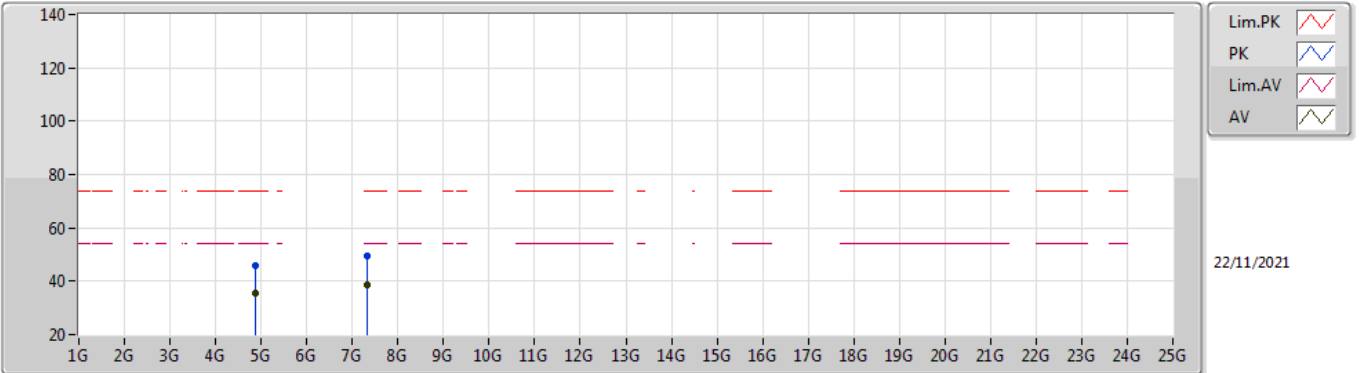


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.3456G	57.99	74.00	-16.01	26.94	3	Horizontal	158	2.20	-	28.28	2.77	-	
AV	2.3836G	45.62	54.00	-8.38	14.46	3	Horizontal	158	2.20	-	28.37	2.79	-	
PK	2.44G	109.08	Inf	-Inf	77.84	3	Horizontal	158	2.20	-	28.40	2.84	-	
AV	2.44G	107.65	Inf	-Inf	76.41	3	Horizontal	158	2.20	-	28.40	2.84	-	
PK	2.4956G	57.61	74.00	-16.39	26.13	3	Horizontal	158	2.20	-	28.58	2.90	-	
AV	2.484G	46.02	54.00	-7.98	14.60	3	Horizontal	158	2.20	-	28.54	2.88	-	

BT-LE(1Mbps)

2440MHz_TX

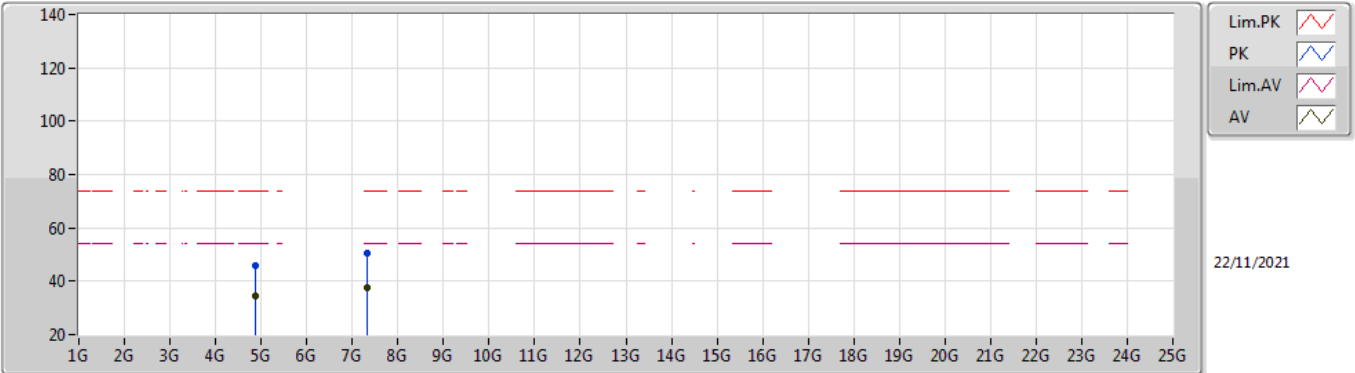


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.87998G	46.09	74.00	-27.91	40.23	3	Vertical	135	1.77	-	32.96	5.10	32.20
AV	4.88039G	35.76	54.00	-18.24	29.90	3	Vertical	135	1.77	-	32.96	5.10	32.20
PK	7.31933G	49.69	74.00	-24.31	39.93	3	Vertical	36	1.51	-	36.44	6.16	32.84
AV	7.3193G	38.80	54.00	-15.20	29.04	3	Vertical	36	1.51	-	36.44	6.16	32.84

BT-LE(1Mbps)

2440MHz_TX

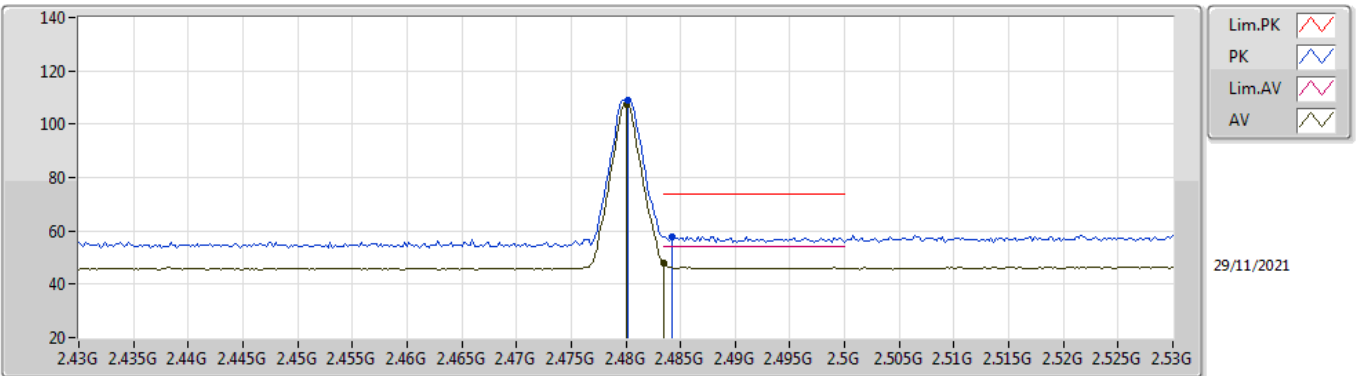


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.88071G	45.67	74.00	-28.33	39.81	3	Horizontal	219	1.86	-	32.96	5.10	32.20
AV	4.88034G	34.36	54.00	-19.64	28.50	3	Horizontal	219	1.86	-	32.96	5.10	32.20
PK	7.31999G	50.39	74.00	-23.61	40.63	3	Horizontal	20	2.90	-	36.44	6.16	32.84
AV	7.32067G	37.62	54.00	-16.38	27.86	3	Horizontal	20	2.90	-	36.44	6.16	32.84

BT-LE(1Mbps)

2480MHz_TX

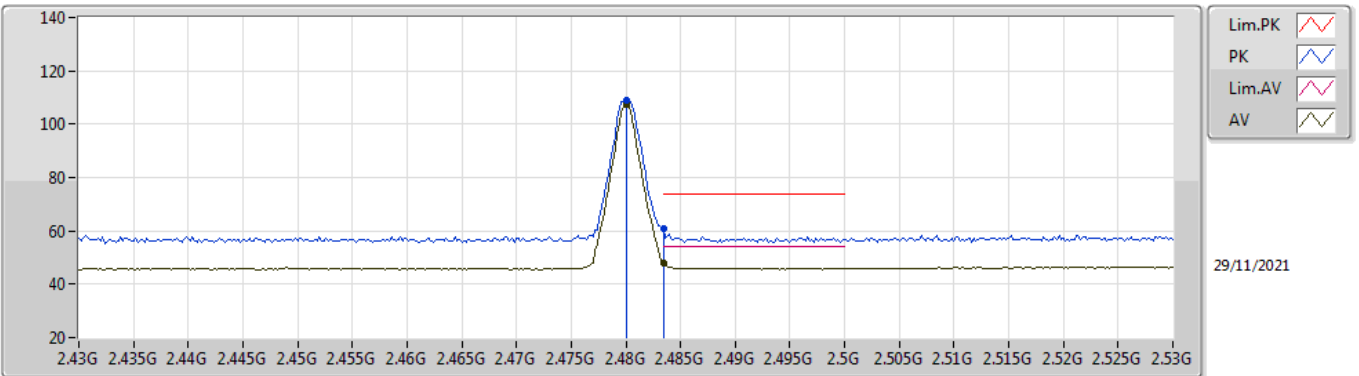


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.4802G	109.09	Inf	-Inf	77.69	3	Vertical	166	1.45	-	28.52	2.88	-	
AV	2.48G	107.62	Inf	-Inf	76.22	3	Vertical	166	1.45	-	28.52	2.88	-	
PK	2.4842G	57.98	74.00	-16.02	26.56	3	Vertical	166	1.45	-	28.54	2.88	-	
AV	2.4835G	47.95	54.00	-6.05	16.54	3	Vertical	166	1.45	-	28.53	2.88	-	

BT-LE(1Mbps)

2480MHz_TX

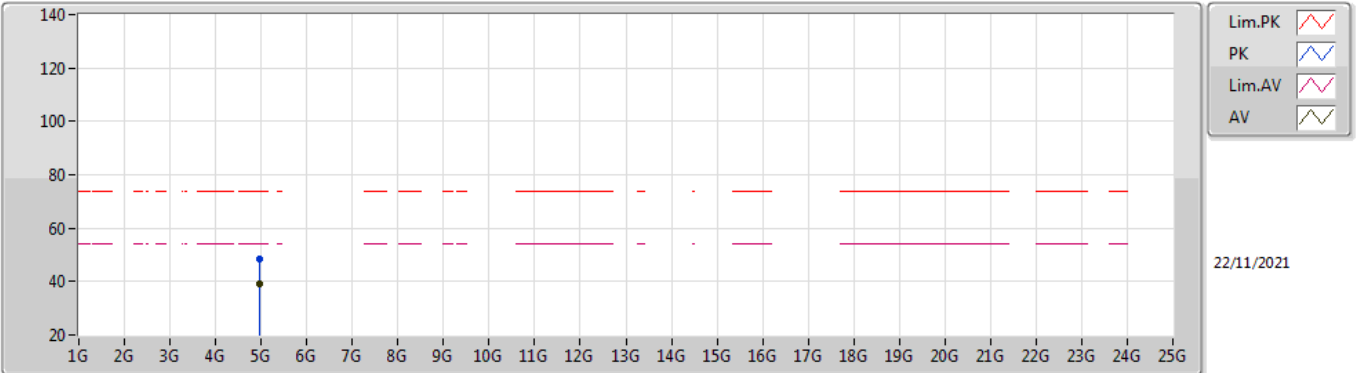


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	108.73	Inf	-Inf	77.33	3	Horizontal	147	2.40	-	28.52	2.88	-	
AV	2.48G	107.27	Inf	-Inf	75.87	3	Horizontal	147	2.40	-	28.52	2.88	-	
PK	2.4835G	60.75	74.00	-13.25	29.34	3	Horizontal	147	2.40	-	28.53	2.88	-	
AV	2.4835G	47.69	54.00	-6.31	16.28	3	Horizontal	147	2.40	-	28.53	2.88	-	

BT-LE(1Mbps)

2480MHz_TX

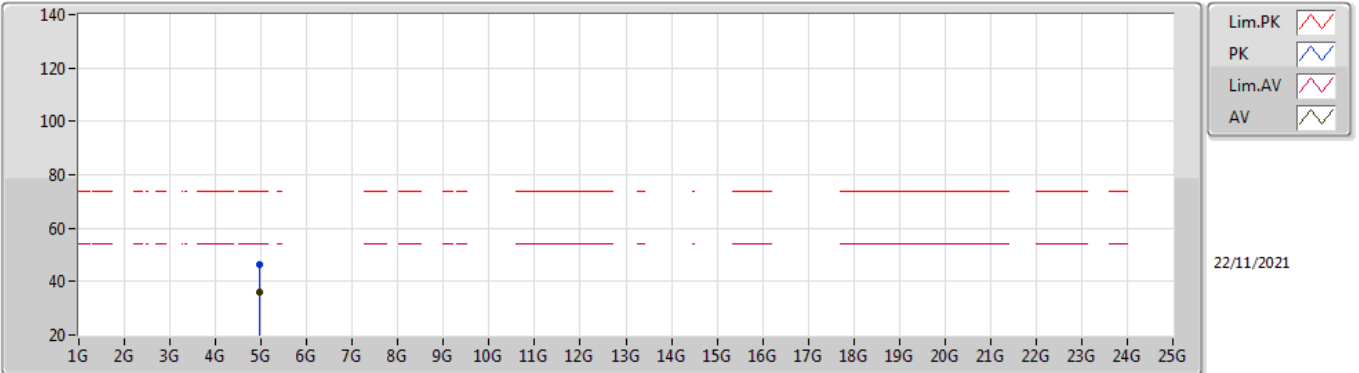


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.95999G	48.55	74.00	-25.45	42.34	3	Vertical	140	1.96	-	33.28	5.10	32.17	
AV	4.95994G	39.08	54.00	-14.92	32.87	3	Vertical	140	1.96	-	33.28	5.10	32.17	

BT-LE(1Mbps)

2480MHz_TX

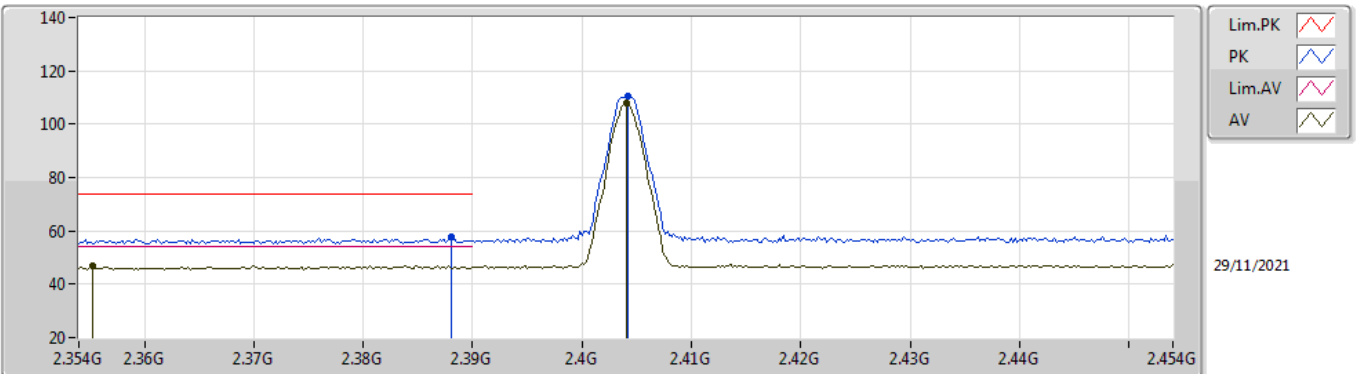


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.96023G	46.44	74.00	-27.56	40.23	3	Horizontal	220	2.06	-	33.28	5.10	32.17
AV	4.95996G	36.14	54.00	-17.86	29.93	3	Horizontal	220	2.06	-	33.28	5.10	32.17

BT-LE(2Mbps)

2404MHz_TX

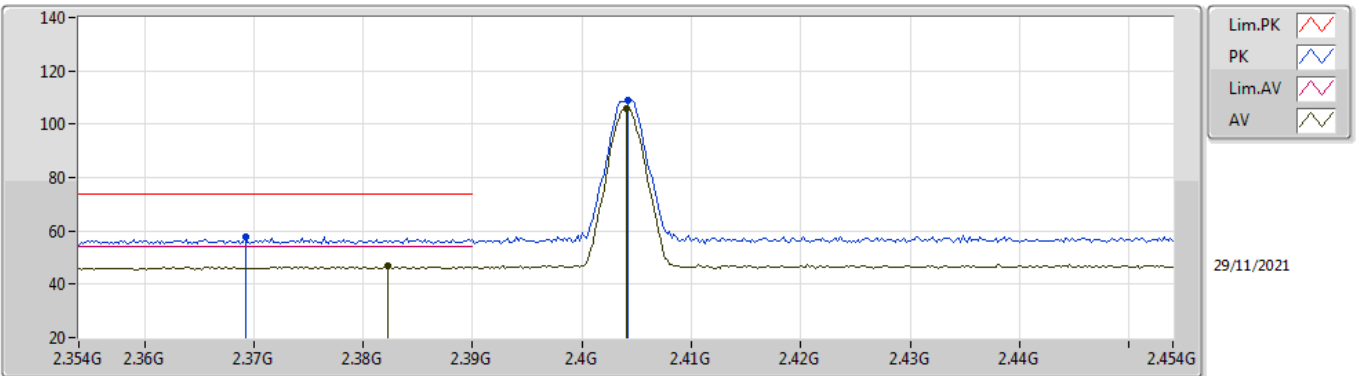


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.388G	57.60	74.00	-16.40	26.43	3	Vertical	352	1.80	-	28.38	2.79	-	
AV	2.3552G	46.88	54.00	-7.12	15.79	3	Vertical	352	1.80	-	28.31	2.78	-	
PK	2.4042G	110.37	Inf	-Inf	79.17	3	Vertical	352	1.80	-	28.40	2.80	-	
AV	2.404G	107.88	Inf	-Inf	76.68	3	Vertical	352	1.80	-	28.40	2.80	-	

BT-LE(2Mbps)

2404MHz_TX

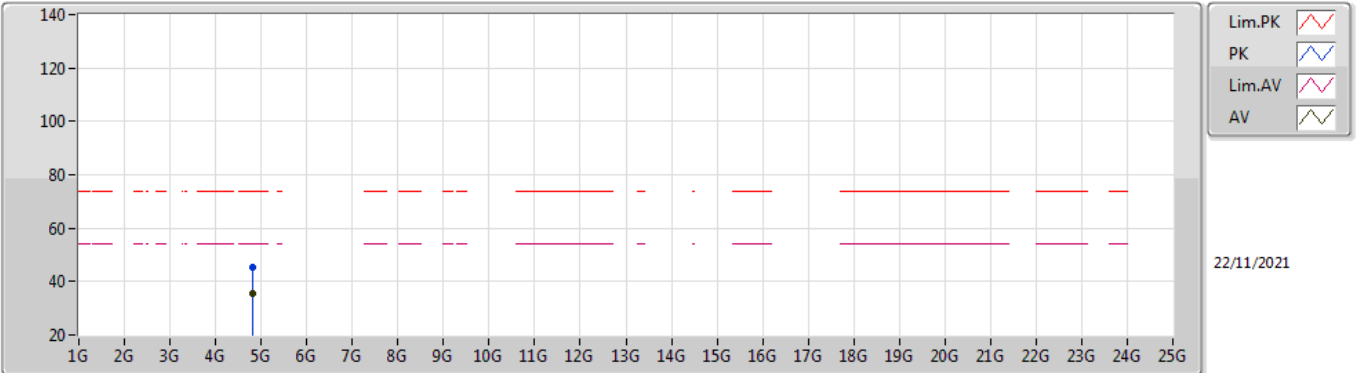


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.3692G	57.95	74.00	-16.05	26.83	3	Horizontal	143	2.32	-	28.34	2.78	-	
AV	2.3822G	46.89	54.00	-7.11	15.74	3	Horizontal	143	2.32	-	28.36	2.79	-	
PK	2.4042G	108.92	Inf	-Inf	77.72	3	Horizontal	143	2.32	-	28.40	2.80	-	
AV	2.404G	106.03	Inf	-Inf	74.83	3	Horizontal	143	2.32	-	28.40	2.80	-	

BT-LE(2Mbps)

2404MHz_TX

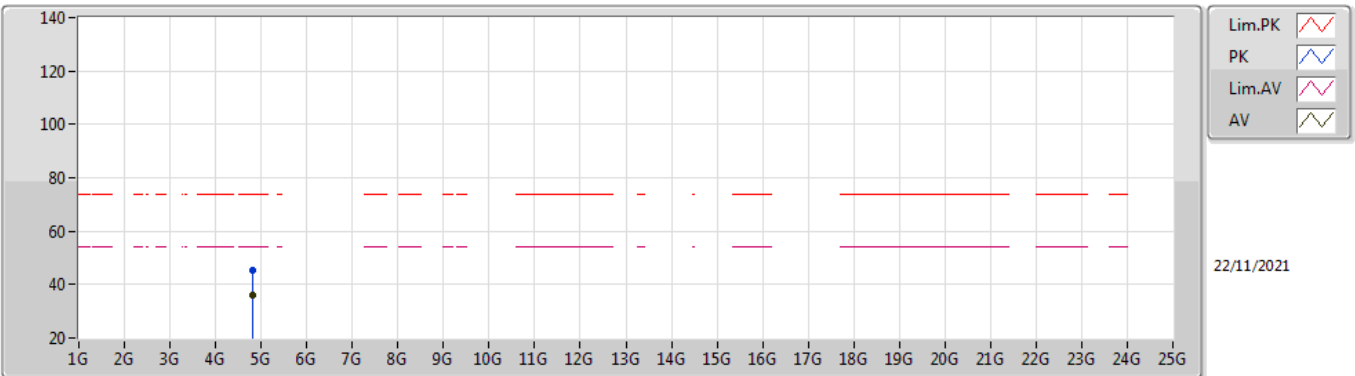


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.80789G	45.09	74.00	-28.91	39.49	3	Vertical	303	1.80	-	32.73	5.10	32.23	
AV	4.8079G	35.39	54.00	-18.61	29.79	3	Vertical	303	1.80	-	32.73	5.10	32.23	

BT-LE(2Mbps)

2404MHz_TX

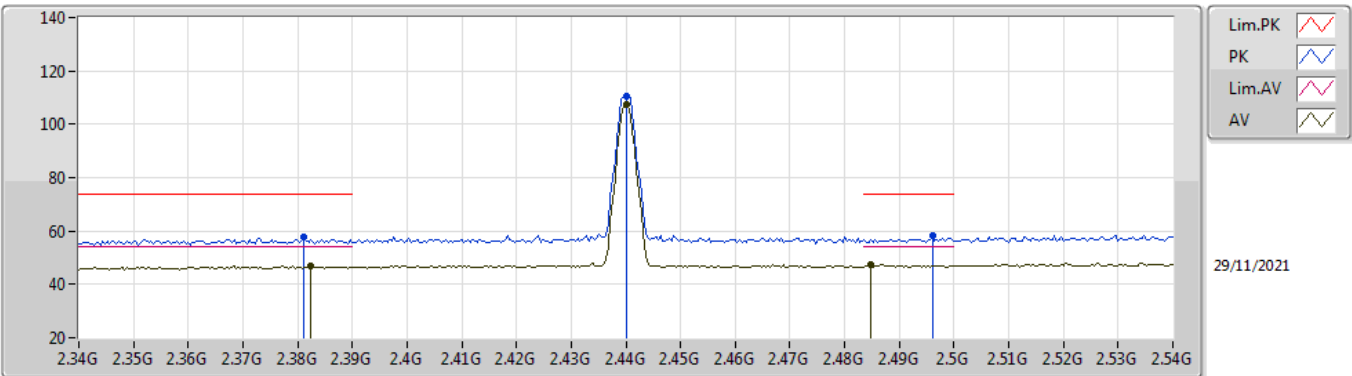


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.80709G	45.36	74.00	-28.64	39.76	3	Horizontal	315	2.41	-	32.73	5.10	32.23
AV	4.808G	35.93	54.00	-18.07	30.33	3	Horizontal	315	2.41	-	32.73	5.10	32.23

BT-LE(2Mbps)

2440MHz_TX

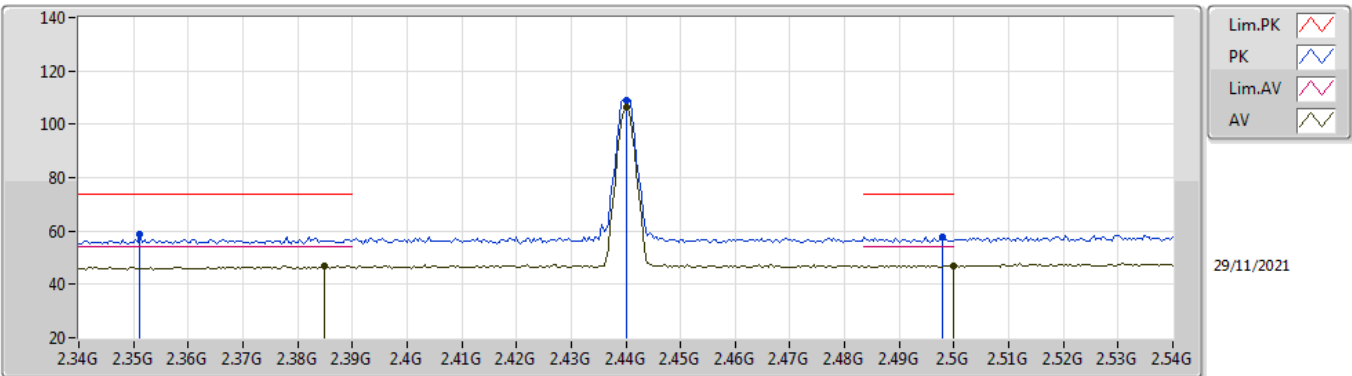


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.3812G	57.79	74.00	-16.21	26.64	3	Vertical	158	1.37	-	28.36	2.79	-
AV	2.3824G	46.87	54.00	-7.13	15.72	3	Vertical	158	1.37	-	28.36	2.79	-
PK	2.44G	110.35	Inf	-Inf	79.11	3	Vertical	158	1.37	-	28.40	2.84	-
AV	2.44G	107.41	Inf	-Inf	76.17	3	Vertical	158	1.37	-	28.40	2.84	-
PK	2.496G	58.03	74.00	-15.97	26.55	3	Vertical	158	1.37	-	28.58	2.90	-
AV	2.4848G	47.23	54.00	-6.77	15.81	3	Vertical	158	1.37	-	28.54	2.88	-

BT-LE(2Mbps)

2440MHz_TX

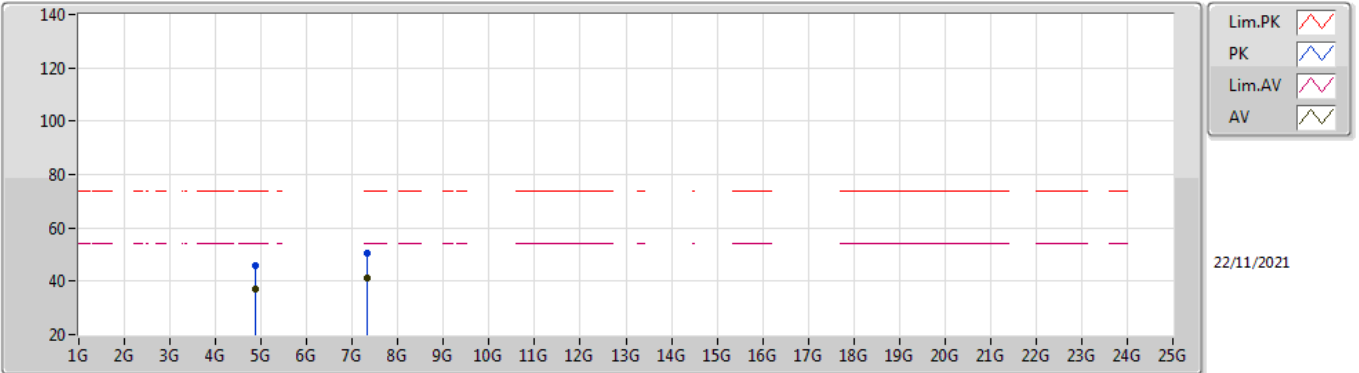


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.3512G	58.58	74.00	-15.42	27.50	3	Horizontal	158	2.22	-	28.30	2.78	-
AV	2.3848G	46.75	54.00	-7.25	15.59	3	Horizontal	158	2.22	-	28.37	2.79	-
PK	2.44G	109.21	Inf	-Inf	77.97	3	Horizontal	158	2.22	-	28.40	2.84	-
AV	2.44G	106.23	Inf	-Inf	74.99	3	Horizontal	158	2.22	-	28.40	2.84	-
PK	2.498G	58.01	74.00	-15.99	26.52	3	Horizontal	158	2.22	-	28.59	2.90	-
AV	2.5G	47.02	54.00	-6.98	15.52	3	Horizontal	158	2.22	-	28.60	2.90	-

BT-LE(2Mbps)

2440MHz_TX

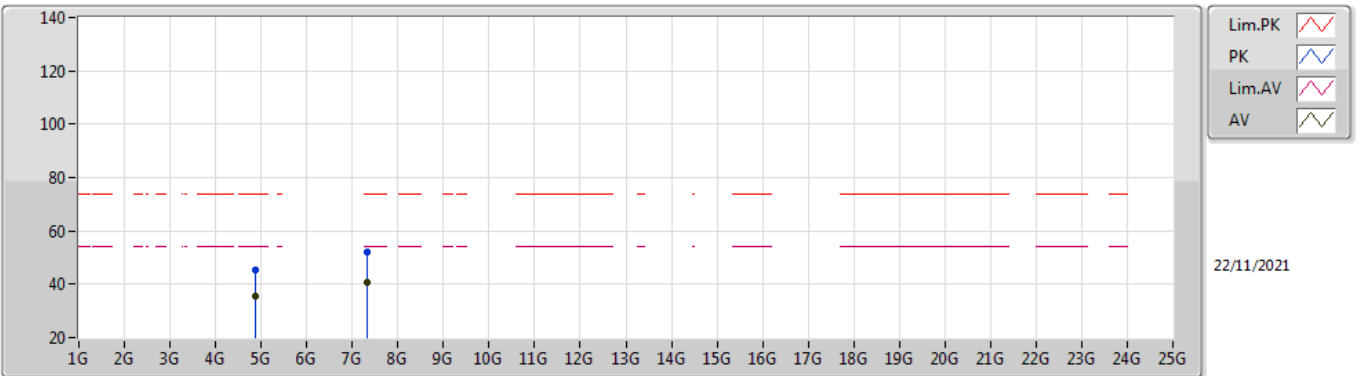


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.88097G	46.09	74.00	-27.91	40.23	3	Vertical	305	1.77	-	32.96	5.10	32.20
AV	4.87904G	37.30	54.00	-16.70	31.44	3	Vertical	305	1.77	-	32.96	5.10	32.20
PK	7.32166G	50.47	74.00	-23.53	40.71	3	Vertical	130	1.88	-	36.44	6.16	32.84
AV	7.32006G	41.38	54.00	-12.62	31.62	3	Vertical	130	1.88	-	36.44	6.16	32.84

BT-LE(2Mbps)

2440MHz_TX

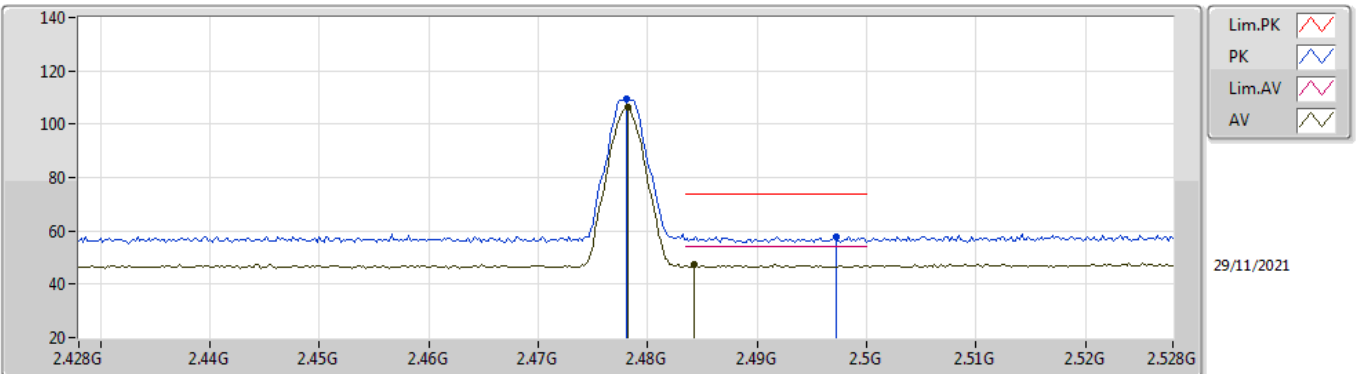


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.87894G	45.26	74.00	-28.74	39.40	3	Horizontal	217	1.98	-	32.96	5.10	32.20
AV	4.88013G	35.35	54.00	-18.65	29.49	3	Horizontal	217	1.98	-	32.96	5.10	32.20
PK	7.32004G	52.16	74.00	-21.84	42.40	3	Horizontal	277	1.96	-	36.44	6.16	32.84
AV	7.31862G	40.62	54.00	-13.38	30.85	3	Horizontal	277	1.96	-	36.44	6.16	32.83

BT-LE(2Mbps)

2478MHz_TX

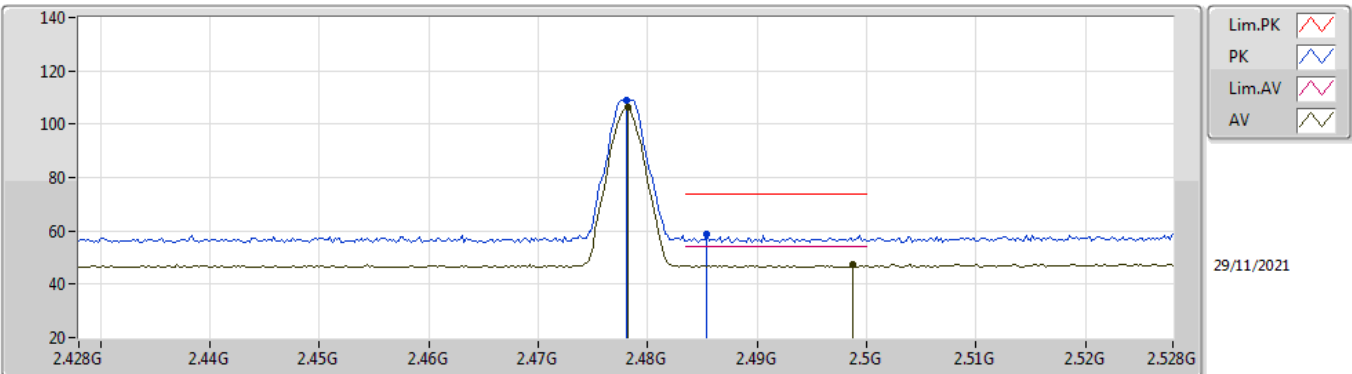


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.478G	109.26	Inf	-Inf	77.87	3	Vertical	166	1.47	-	28.51	2.88	-	
AV	2.4782G	106.34	Inf	-Inf	74.95	3	Vertical	166	1.47	-	28.51	2.88	-	
PK	2.4972G	57.91	74.00	-16.09	26.42	3	Vertical	166	1.47	-	28.59	2.90	-	
AV	2.4842G	47.29	54.00	-6.71	15.87	3	Vertical	166	1.47	-	28.54	2.88	-	

BT-LE(2Mbps)

2478MHz_TX

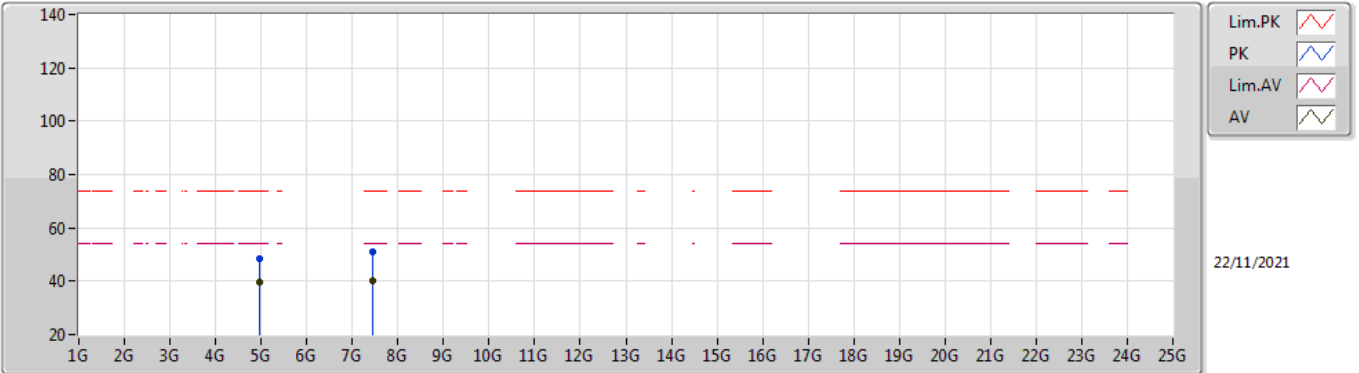


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	2.478G	109.13	Inf	-Inf	77.74	3	Horizontal	147	2.39	-	28.51	2.88	-	
AV	2.4782G	106.21	Inf	-Inf	74.82	3	Horizontal	147	2.39	-	28.51	2.88	-	
PK	2.4854G	58.80	74.00	-15.20	27.37	3	Horizontal	147	2.39	-	28.54	2.89	-	
AV	2.4988G	47.22	54.00	-6.78	15.72	3	Horizontal	147	2.39	-	28.60	2.90	-	

BT-LE(2Mbps)

2478MHz_TX

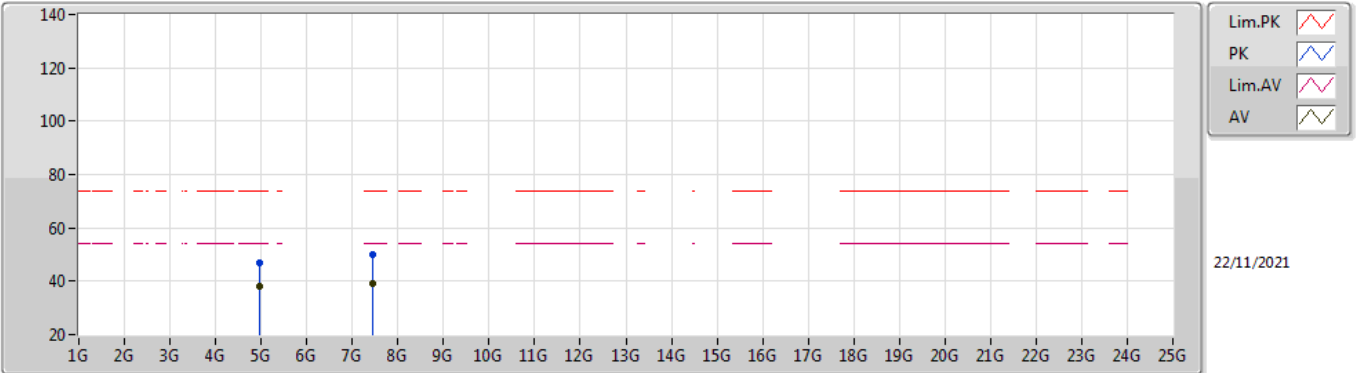


EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.95698G	48.68	74.00	-25.32	42.47	3	Vertical	138	1.97	-	33.29	5.10	32.18
AV	4.95612G	39.90	54.00	-14.10	33.69	3	Vertical	138	1.97	-	33.29	5.10	32.18
PK	7.43434G	50.99	74.00	-23.01	41.30	3	Vertical	128	1.67	-	36.53	6.20	33.04
AV	7.4327G	40.02	54.00	-13.98	30.32	3	Vertical	128	1.67	-	36.53	6.20	33.03

BT-LE(2Mbps)

2478MHz_TX



EUT_Z_1TX
Setting 0x55
02-B-K-5

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	4.95716G	47.13	74.00	-26.87	40.92	3	Horizontal	222	2.95	-	33.29	5.10	32.18	
AV	4.95608G	38.02	54.00	-15.98	31.81	3	Horizontal	222	2.95	-	33.29	5.10	32.18	
PK	7.43458G	49.91	74.00	-24.09	40.22	3	Horizontal	360	2.38	-	36.53	6.20	33.04	
AV	7.43269G	38.92	54.00	-15.08	29.22	3	Horizontal	360	2.38	-	36.53	6.20	33.03	

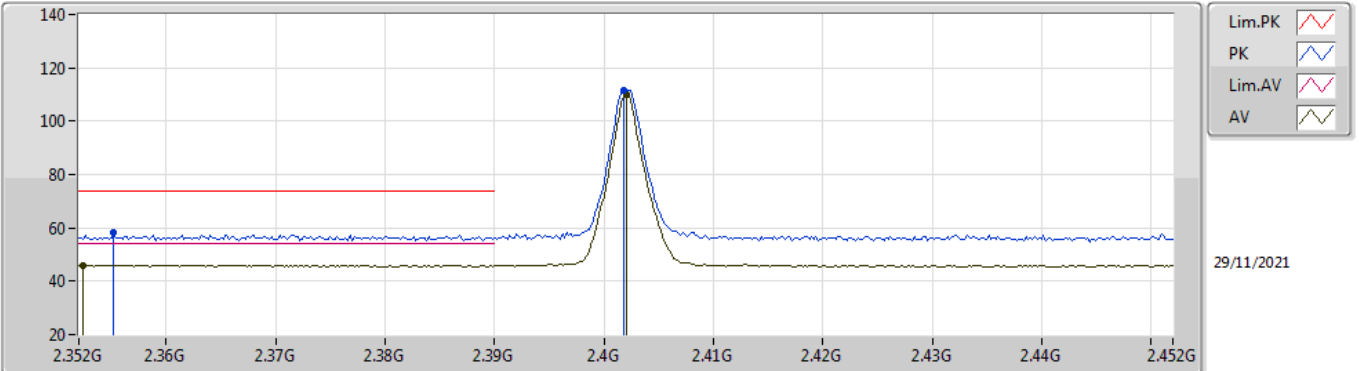


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4854G	50.11	54.00	-3.89	3	Vertical	56	1.85	-

BT-LE(1Mbps)

2402MHz_TX

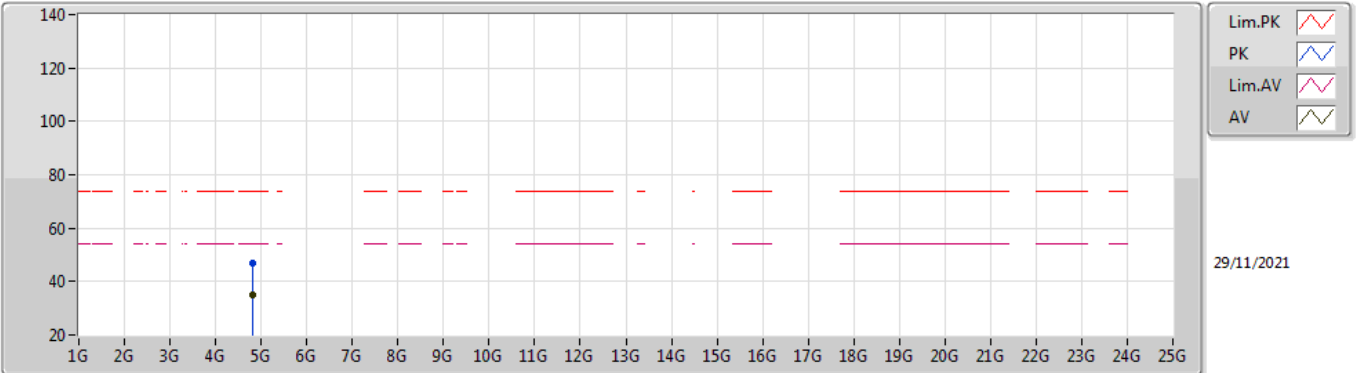


EUT V_1TX
Setting 0x55
03-C-K-5

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	2.3552G	58.52	74.00	-15.48	25.77	3	Vertical	360	1.78	-	28.39	4.36	-	
AV	2.3524G	46.10	54.00	-7.90	13.35	3	Vertical	360	1.78	-	28.40	4.35	-	
PK	2.4018G	111.43	Inf	-Inf	78.73	3	Vertical	360	1.78	-	28.30	4.40	-	
AV	2.402G	109.98	Inf	-Inf	77.28	3	Vertical	360	1.78	-	28.30	4.40	-	

BT-LE(1Mbps)

2402MHz_TX

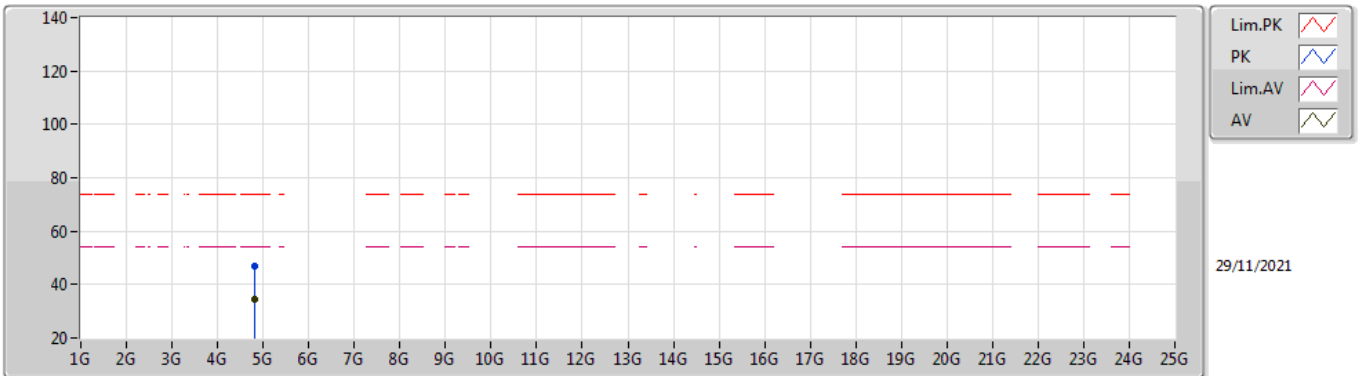


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.80267G	46.94	74.00	-27.06	41.87	3	Vertical	359	2.00	-	33.40	7.10	35.43	
AV	4.80577G	34.99	54.00	-19.01	29.92	3	Vertical	359	2.00	-	33.40	7.10	35.43	

BT-LE(1Mbps)

2402MHz_TX

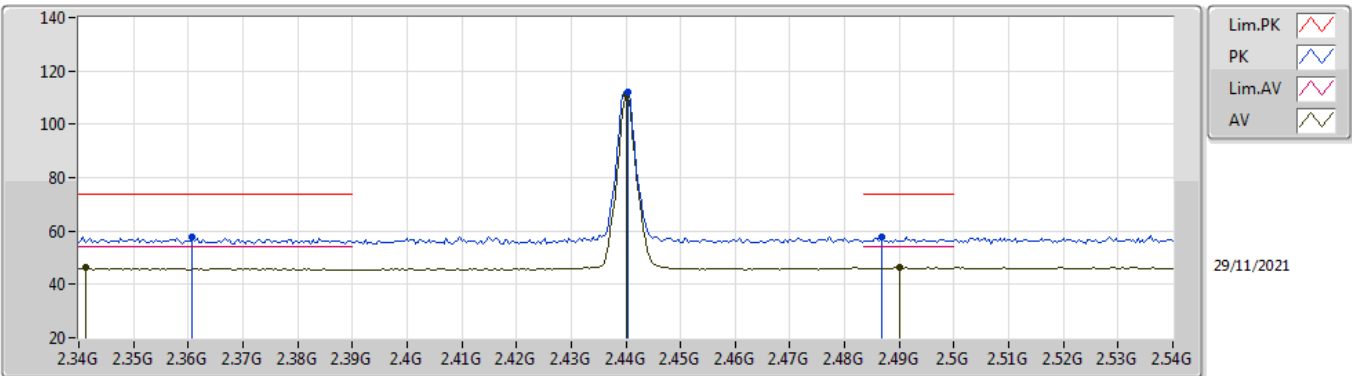


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.80413G	47.14	74.00	-26.86	42.07	3	Horizontal	110	2.02	-	33.40	7.10	35.43	
AV	4.80606G	34.69	54.00	-19.31	29.62	3	Horizontal	110	2.02	-	33.40	7.10	35.43	

BT-LE(1Mbps)

2440MHz_TX

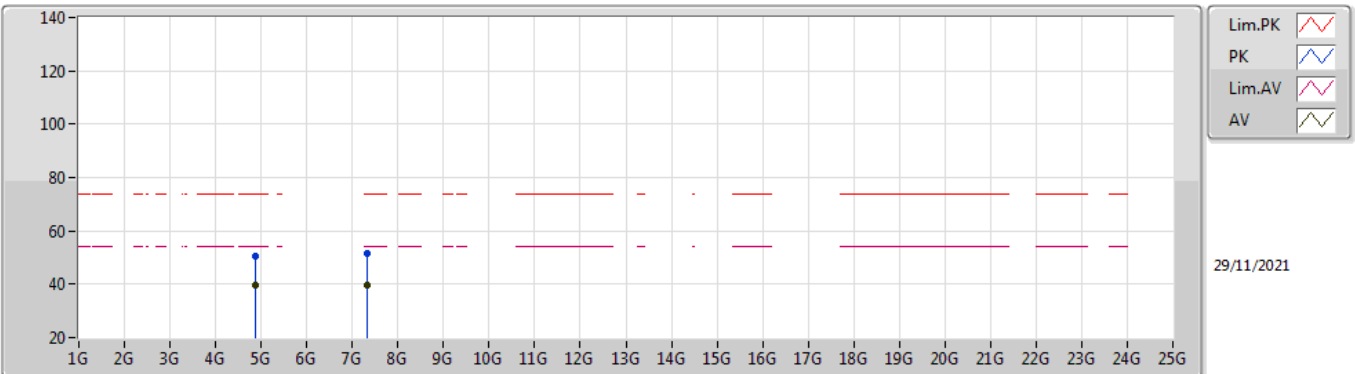


EUT V_1TX
Setting 0x55
03-C-K-5

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	57.81	74.00	-16.19	25.07	3	Vertical	146	1.93	-	28.38	4.36	-
AV	2.3412G	46.26	54.00	-7.74	13.57	3	Vertical	146	1.93	-	28.35	4.34	-
PK	2.4404G	112.22	Inf	-Inf	79.42	3	Vertical	146	1.93	-	28.38	4.42	-
AV	2.44G	110.78	Inf	-Inf	77.98	3	Vertical	146	1.93	-	28.38	4.42	-
PK	2.4868G	57.77	74.00	-16.23	24.71	3	Vertical	146	1.93	-	28.62	4.44	-
AV	2.49G	46.31	54.00	-7.69	13.22	3	Vertical	146	1.93	-	28.64	4.45	-

BT-LE(1Mbps)

2440MHz_TX

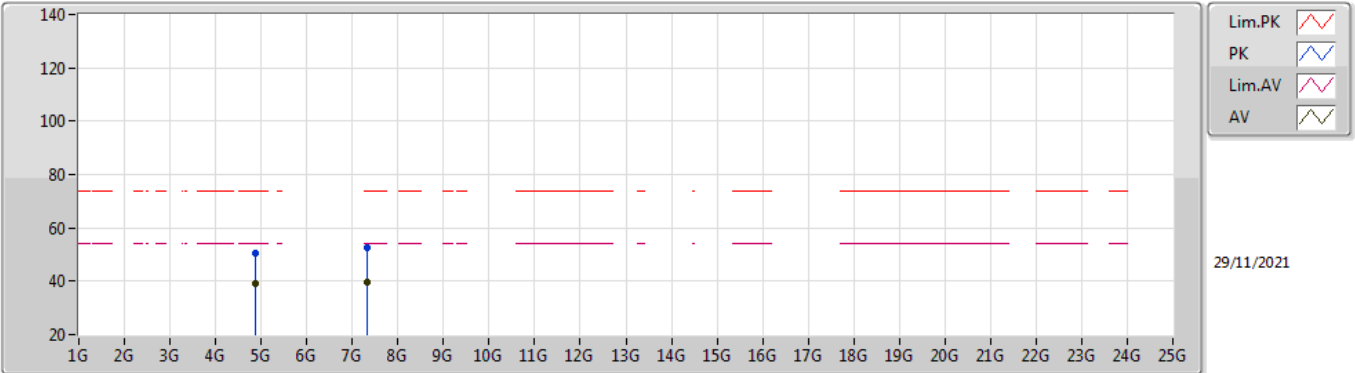


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.88027G	50.53	74.00	-23.47	45.34	3	Vertical	175	1.80	-	33.52	7.06	35.39
AV	4.87991G	39.40	54.00	-14.60	34.21	3	Vertical	175	1.80	-	33.52	7.06	35.39
PK	7.32196G	51.52	74.00	-22.48	41.52	3	Vertical	222	2.84	-	37.00	8.57	35.57
AV	7.31913G	39.57	54.00	-14.43	29.58	3	Vertical	222	2.84	-	37.00	8.56	35.57

BT-LE(1Mbps)

2440MHz_TX

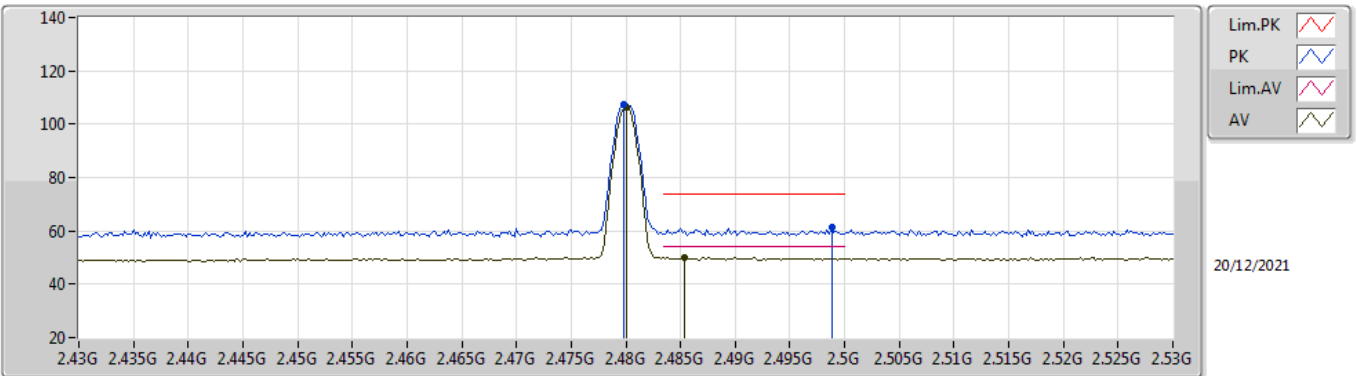


EUT_V_1TX
Setting 0x55
03-C-K-5

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	4.88049G	50.47	74.00	-23.53	45.28	3	Horizontal	152	1.62	-	33.52	7.06	35.39
AV	4.88011G	39.10	54.00	-14.90	33.91	3	Horizontal	152	1.62	-	33.52	7.06	35.39
PK	7.31864G	52.64	74.00	-21.36	42.65	3	Horizontal	210	1.09	-	37.00	8.56	35.57
AV	7.31955G	39.67	54.00	-14.33	29.68	3	Horizontal	210	1.09	-	37.00	8.56	35.57

BT-LE(1Mbps)

2480MHz_TX

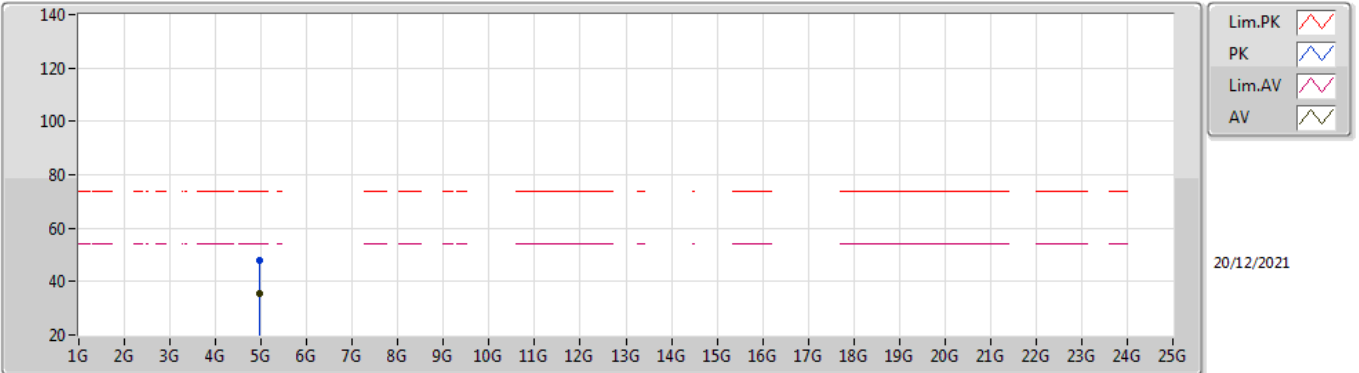


EUT V_1TX
Setting 0x55
03-I-K-4

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA	
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)	
PK	2.4798G	107.23	Inf	-Inf	74.21	3	Vertical	56	1.85	-	28.58	4.44	-	
AV	2.48G	106.31	Inf	-Inf	73.29	3	Vertical	56	1.85	-	28.58	4.44	-	
PK	2.4988G	61.22	74.00	-12.78	28.08	3	Vertical	56	1.85	-	28.69	4.45	-	
AV	2.4854G	50.11	54.00	-3.89	17.06	3	Vertical	56	1.85	-	28.61	4.44	-	

BT-LE(1Mbps)

2480MHz_TX

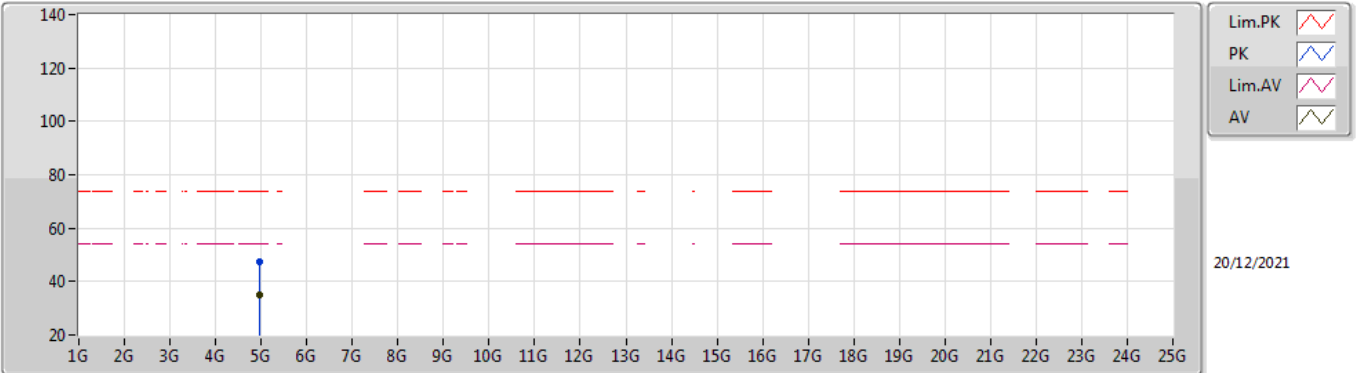


EUT V_1TX
Setting 0x55
03-I-K-4

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	4.96022G	47.69	74.00	-26.31	42.30	3	Vertical	217	2.06	-	33.72	7.02	35.35
AV	4.96121G	35.52	54.00	-18.48	30.13	3	Vertical	217	2.06	-	33.72	7.02	35.35

BT-LE(1Mbps)

2480MHz_TX

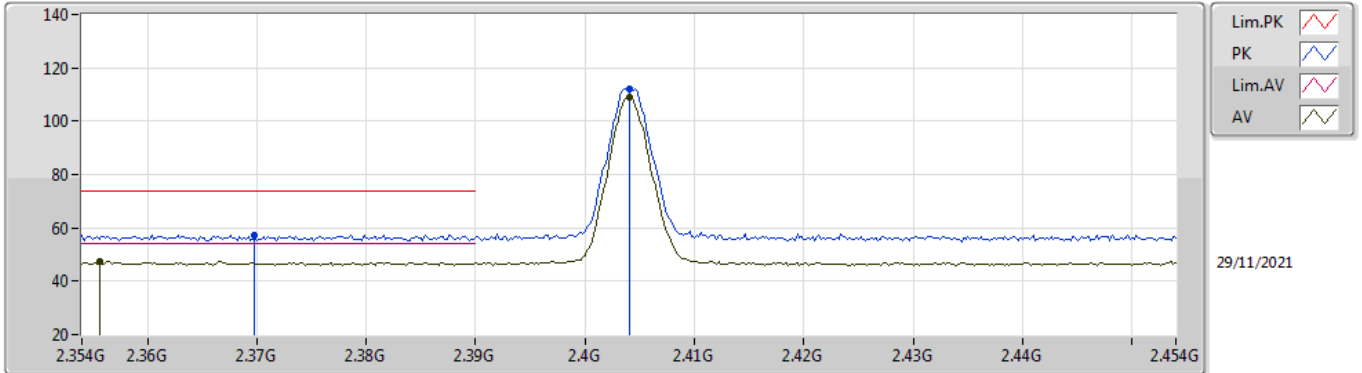


EUT V_1TX
Setting 0x55
03-I-K-4

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	4.9603G	47.42	74.00	-26.58	42.03	3	Horizontal	32	2.77	-	33.72	7.02	35.35
AV	4.96009G	34.93	54.00	-19.07	29.54	3	Horizontal	32	2.77	-	33.72	7.02	35.35

BT-LE(2Mbps)

2404MHz_TX

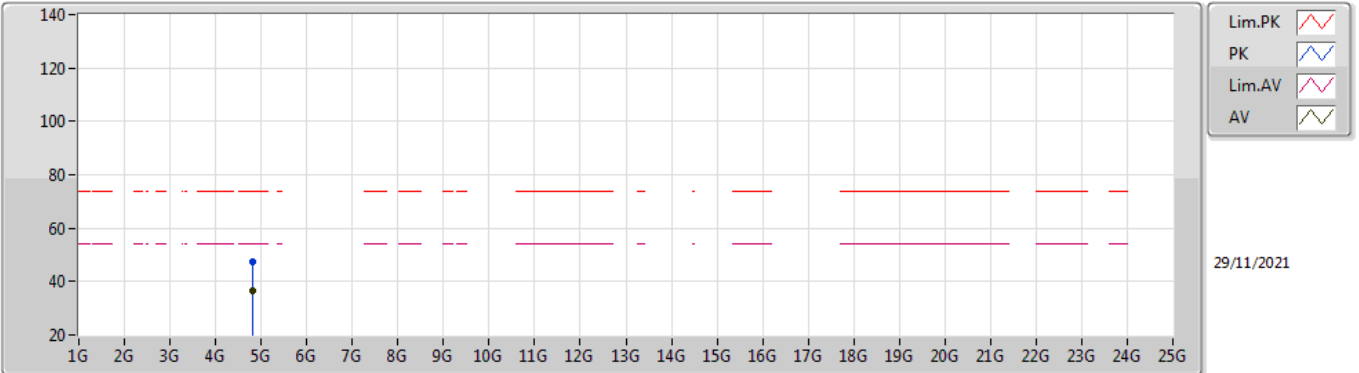


EUT V_1TX
Setting 0x55
03-C-K-5

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	57.40	74.00	-16.60	24.67	3	Vertical	360	1.59	-	28.36	4.37	-	
AV	2.3556G	47.36	54.00	-6.64	14.61	3	Vertical	360	1.59	-	28.39	4.36	-	
PK	2.404G	112.24	Inf	-Inf	79.53	3	Vertical	360	1.59	-	28.31	4.40	-	
AV	2.404G	109.07	Inf	-Inf	76.36	3	Vertical	360	1.59	-	28.31	4.40	-	

BT-LE(2Mbps)

2404MHz_TX

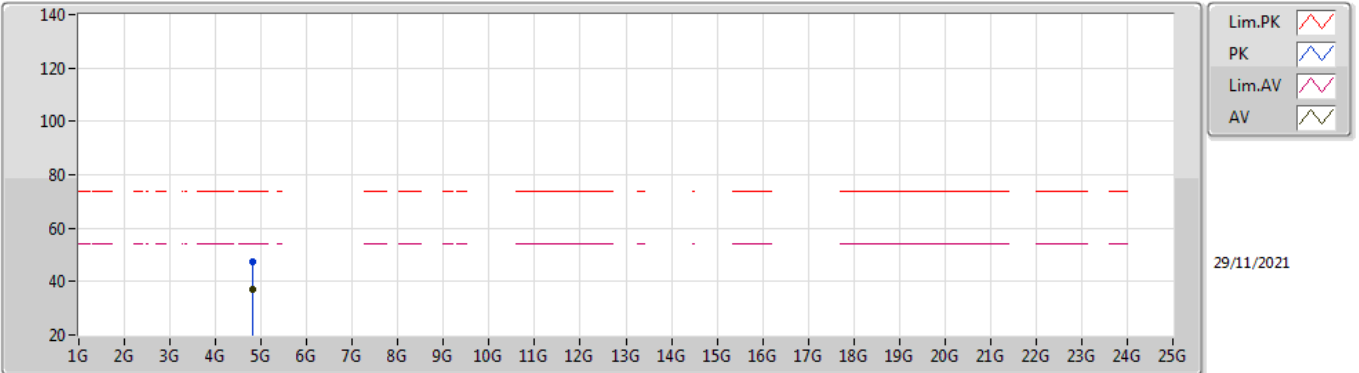


EUT Y_1TX
Setting 0x55
03-C-K-5

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	4.80935G	47.24	74.00	-26.76	42.17	3	Vertical	206	1.30	-	33.40	7.10	35.43	
AV	4.80727G	36.47	54.00	-17.53	31.40	3	Vertical	206	1.30	-	33.40	7.10	35.43	

BT-LE(2Mbps)

2404MHz_TX

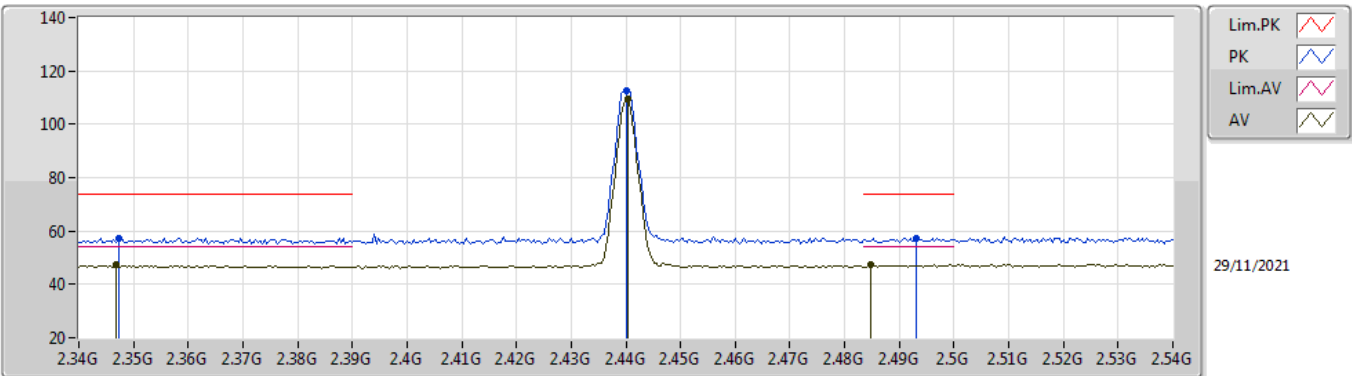


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.80954G	47.59	74.00	-26.41	42.52	3	Horizontal	60	1.29	-	33.40	7.10	35.43	
AV	4.80586G	36.91	54.00	-17.09	31.84	3	Horizontal	60	1.29	-	33.40	7.10	35.43	

BT-LE(2Mbps)

2440MHz_TX

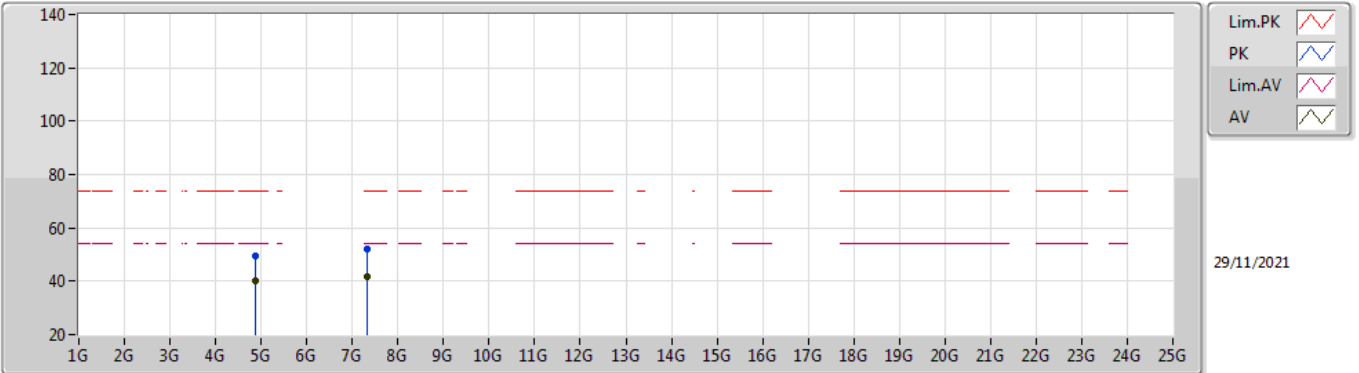


EUT V_1TX
Setting 0x55
03-C-K-5

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	2.3472G	57.37	74.00	-16.63	24.64	3	Vertical	147	1.93	-	28.38	4.35	-
AV	2.3468G	47.20	54.00	-6.80	14.47	3	Vertical	147	1.93	-	28.38	4.35	-
PK	2.44G	112.71	Inf	-Inf	79.91	3	Vertical	147	1.93	-	28.38	4.42	-
AV	2.4404G	109.58	Inf	-Inf	76.78	3	Vertical	147	1.93	-	28.38	4.42	-
PK	2.4932G	57.34	74.00	-16.66	24.23	3	Vertical	147	1.93	-	28.66	4.45	-
AV	2.4848G	47.26	54.00	-6.74	14.21	3	Vertical	147	1.93	-	28.61	4.44	-

BT-LE(2Mbps)

2440MHz_TX

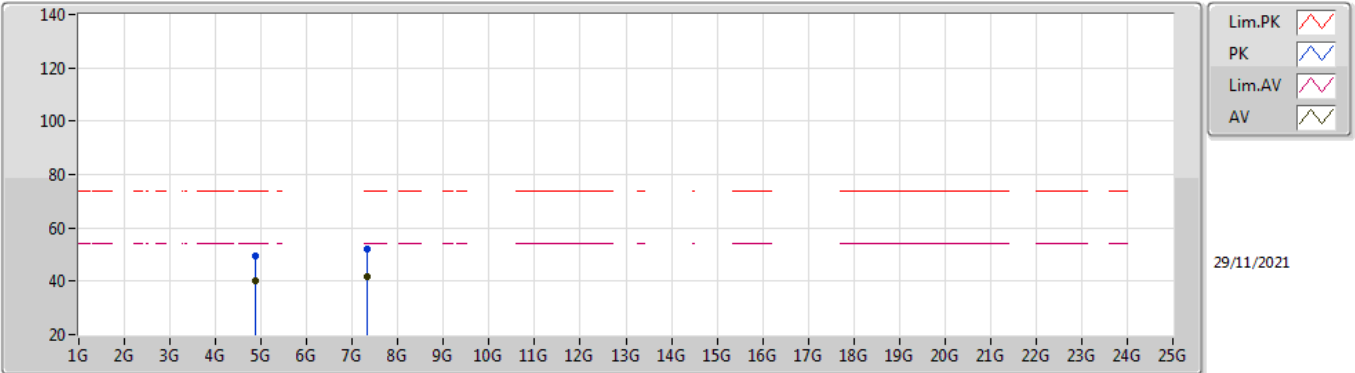


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.88091G	49.68	74.00	-24.32	44.49	3	Vertical	174	1.80	-	33.52	7.06	35.39	
AV	4.88011G	40.38	54.00	-13.62	35.19	3	Vertical	174	1.80	-	33.52	7.06	35.39	
PK	7.31858G	52.07	74.00	-21.93	42.08	3	Vertical	331	1.49	-	37.00	8.56	35.57	
AV	7.32218G	41.94	54.00	-12.06	31.94	3	Vertical	331	1.49	-	37.00	8.57	35.57	

BT-LE(2Mbps)

2440MHz_TX

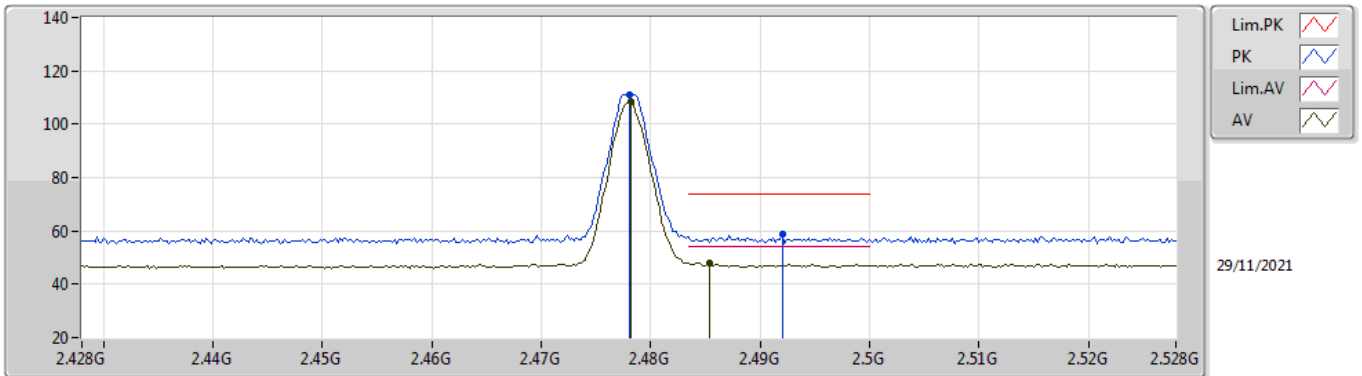


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.88111G	49.24	74.00	-24.76	44.05	3	Horizontal	169	1.53	-	33.52	7.06	35.39
AV	4.88014G	40.00	54.00	-14.00	34.81	3	Horizontal	169	1.53	-	33.52	7.06	35.39
PK	7.32135G	52.09	74.00	-21.91	42.10	3	Horizontal	207	1.75	-	37.00	8.56	35.57
AV	7.31817G	41.67	54.00	-12.33	31.69	3	Horizontal	207	1.75	-	37.00	8.55	35.57

BT-LE(2Mbps)

2478MHz_TX

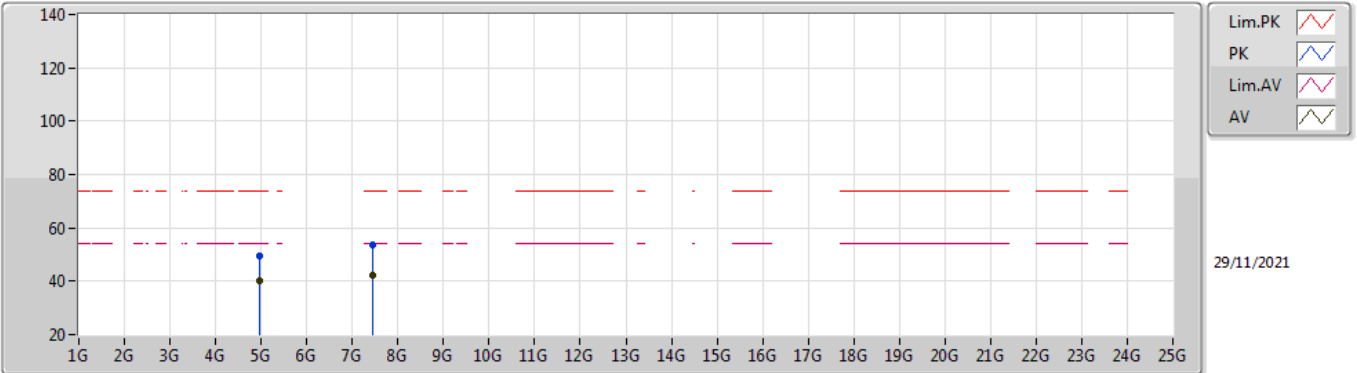


EUT V_1TX
Setting 0x55
03-C-K-5

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	2.478G	111.29	Inf	-Inf	78.28	3	Vertical	6	1.77	-	28.57	4.44	-	
AV	2.4782G	108.35	Inf	-Inf	75.34	3	Vertical	6	1.77	-	28.57	4.44	-	
PK	2.492G	58.71	74.00	-15.29	25.61	3	Vertical	6	1.77	-	28.65	4.45	-	
AV	2.4854G	47.93	54.00	-6.07	14.88	3	Vertical	6	1.77	-	28.61	4.44	-	

BT-LE(2Mbps)

2478MHz_TX

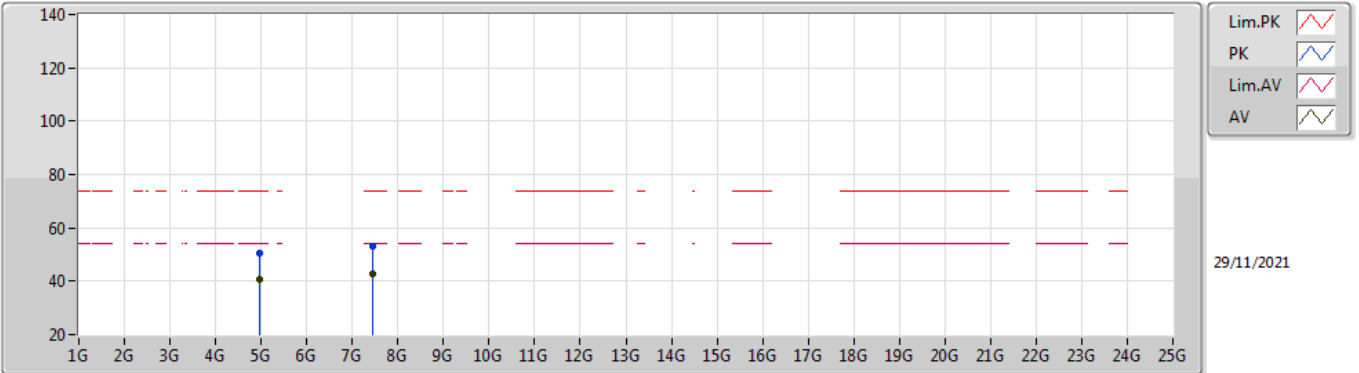


EUT V_1TX
Setting 0x55
03-C-K-5

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	4.95712G	49.58	74.00	-24.42	44.20	3	Vertical	178	1.59	-	33.71	7.02	35.35
AV	4.95603G	40.21	54.00	-13.79	34.83	3	Vertical	178	1.59	-	33.71	7.02	35.35
PK	7.43619G	53.38	74.00	-20.62	43.19	3	Vertical	204	1.80	-	37.03	8.76	35.60
AV	7.43301G	42.42	54.00	-11.58	32.22	3	Vertical	204	1.80	-	37.03	8.77	35.60

BT-LE(2Mbps)

2478MHz_TX



EUT V_1TX
Setting 0x55
03-C-K-5

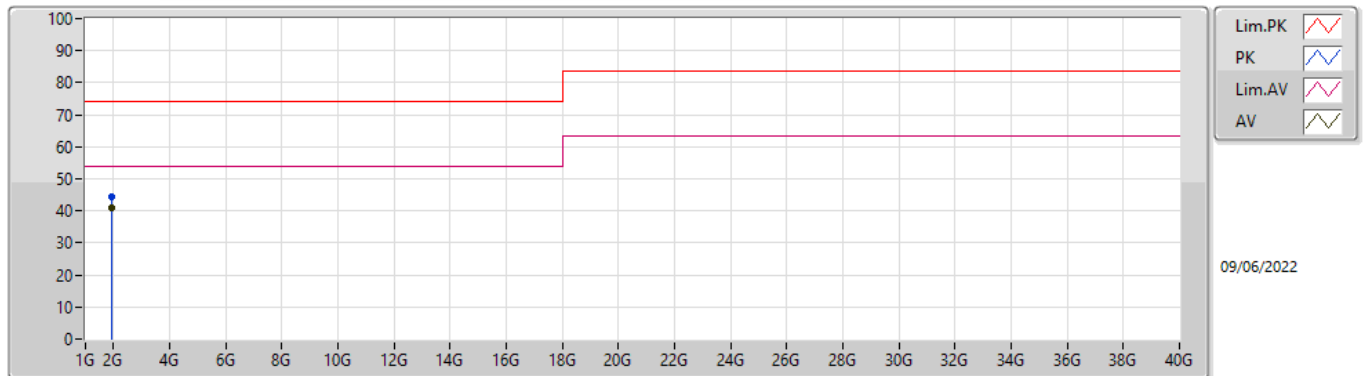
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	4.95709G	50.72	74.00	-23.28	45.34	3	Horizontal	176	1.74	-	33.71	7.02	35.35	
AV	4.95517G	40.76	54.00	-13.24	35.38	3	Horizontal	176	1.74	-	33.71	7.02	35.35	
PK	7.43504G	52.88	74.00	-21.12	42.69	3	Horizontal	285	2.92	-	37.03	8.76	35.60	
AV	7.43413G	42.79	54.00	-11.21	32.59	3	Horizontal	285	2.92	-	37.03	8.77	35.60	



Summary

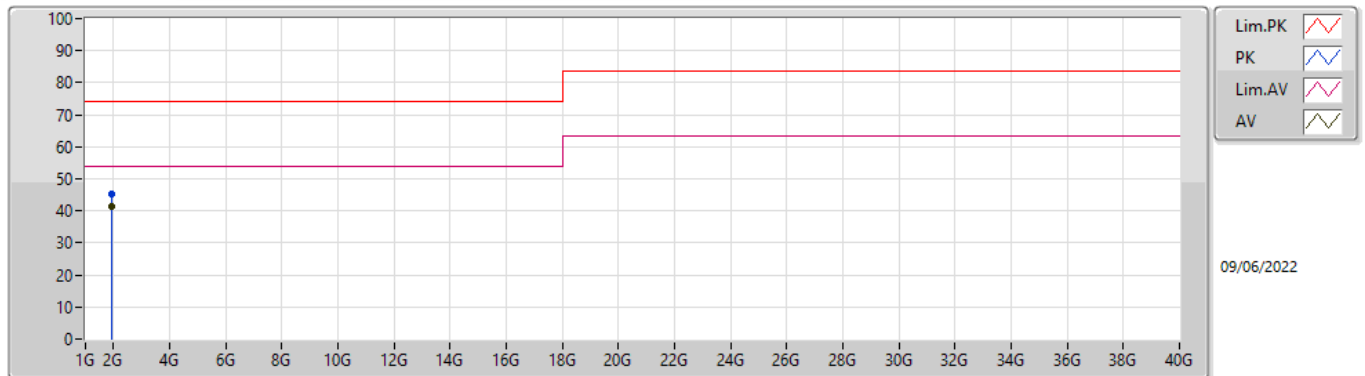
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 5	Pass	AV	1.92003G	41.31	54.00	-12.69	Horizontal

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	1.91998G	44.51	74.00	-29.49	-4.72	3	Vertical	152	1.83	-	49.23	27.06	3.02	34.80
AV	1.91998G	40.77	54.00	-13.23	-4.72	3	Vertical	152	1.83	"Worst"	45.49	27.06	3.02	34.80

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	1.91996G	45.26	74.00	-28.74	-4.72	3	Horizontal	124	2.26	-	49.98	27.06	3.02	34.80
AV	1.92003G	41.31	54.00	-12.69	-4.72	3	Horizontal	124	2.26	"Worst"	46.03	27.06	3.02	34.80