Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	W7Z-ZB220508
Equipment	:	Zigbee/Thread/BLE/NFC Hostless Module
Brand Name	:	California Eastern Laboratories
Model Name	:	CELK32SP2
Applicant	:	California Eastern Laboratories 5201 Great America Parkway, Suite 320, Santa Clara, CA 95054
Manufacturer	:	California Eastern Laboratories 5201 Great America Parkway, Suite 320, Santa Clara, CA 95054
Standard	:	47 CFR FCC Part 15.247

The product was received on Aug. 11, 2022, and testing was started from Aug. 18, 2022 and completed on Nov. 11, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR270838AA	01	Initial issue of report	Nov. 30, 2022

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: Vicky Huang

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

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

1.1.2 Antenna Information

Ant.	Port	Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	California Eastern Laboratories	CELK32SP2	PCB	N/A	2.21

Note 1: The EUT has one antenna.

Note 2: The above information was declared by manufacturer.

For Bluetooth Function (1TX/1RX):

Port 1 can be used as transmitting/receiving antenna.

For Zigbee Function (1TX/1RX):

Port 1 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.65	1.87	406.25u	3k
BT-LE(2Mbps)	0.354	4.51	221.25u	10k

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	Tera Term v.4.75			
Support Mode	☒	LE 1M PHY: 1 Mb/s		
	☐	LE Coded PHY (S=2): 500 Kb/s		
	☐	LE Coded PHY (S=8): 125 Kb/s		
	☒	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 15.247
- ANSI C63.10-2013

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

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

1.3 Testing Location Information

Testing Location Information	
Test Lab.：Sporton International Inc. Hsinchu Laboratory	
Hsinchu (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) 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	TH02-CB	Caster Chang	21.5~22.1 / 66~68	Nov. 11, 2022
Radiated below 1GHz	03CH05-CB	Simmon Cheng	24.6~25.7 / 60~63	Sep. 02, 2022
Radiated above 1GHz	03CH02-CB	Simmon Cheng	22.7~23.8 / 56~60	Aug. 19, 2022~ Nov. 04, 2022
AC Conduction	CO02-CB	Peter Wu	23~24 / 58~59	Aug. 18, 2022

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
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

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	-5
2404MHz	-3
2440MHz	-2
2478MHz	-8
2480MHz	-15
BT-LE(2Mbps)	-
2402MHz	-6
2404MHz	-3
2440MHz	-3
2478MHz	-8
2480MHz	-17

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 + Bluetooth function
2	EUT + Zigbee funciton
For operating mode 1 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT in X axis + Bluetooth function
2	EUT in Y axis + Bluetooth function
3	EUT in Z axis + Bluetooth function
4	EUT in X axis + Zigbee function
5	EUT in Y axis + Zigbee function
6	EUT in Z axis + Zigbee function
For operating mode 4 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 was found at X axis. So the measurement will follow this same test configuration.
1	EUT in X axis_Blutetooth function

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:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Fixture	Azurewave	3-24840-I1H	N/A
C	Earphone	SHYARO CHI	MIC-04	N/A
D	Mouse	Logitech	M-U0026	N/A
E	Wireless Connectivity Tester	R&S	CMW270	N/A

For Radiated (below 1GHz):

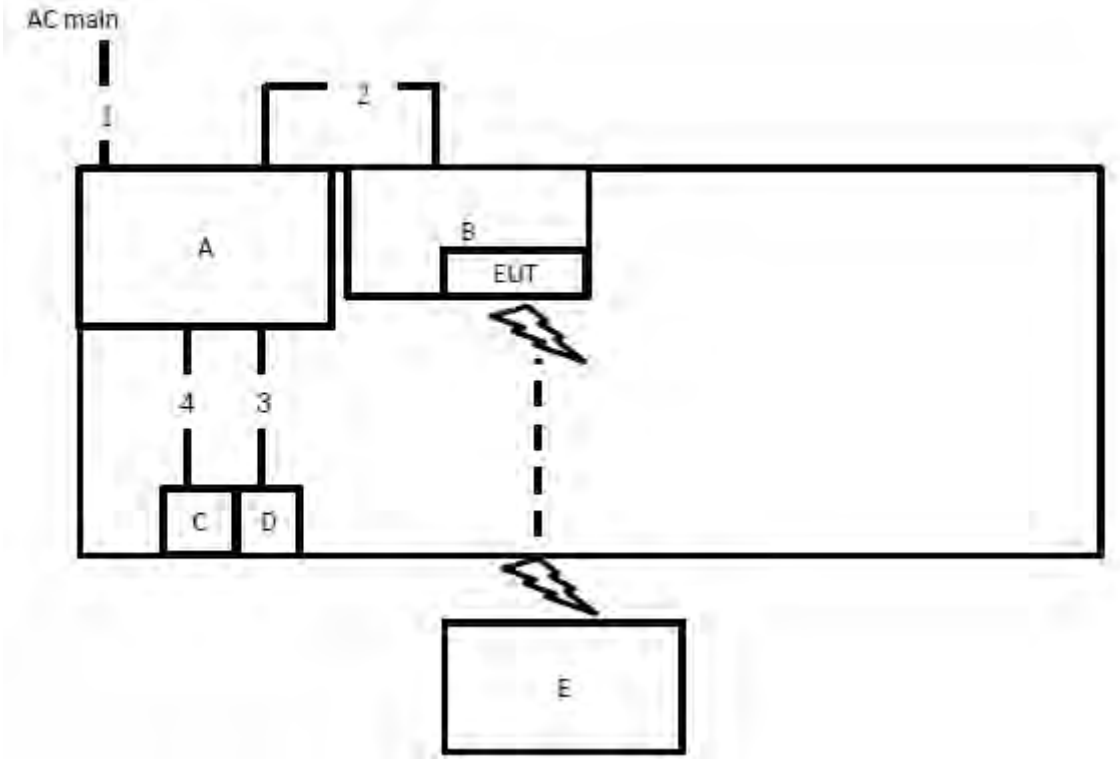
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Fixture	Azurewave	3-24840-I1H	N/A
C	Mouse	Logitech	M-U0026	N/A
D	Earphone	SHYARO CHI	MIC-04	N/A

For Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Fixture	Azurewave	3-25410-I2	N/A

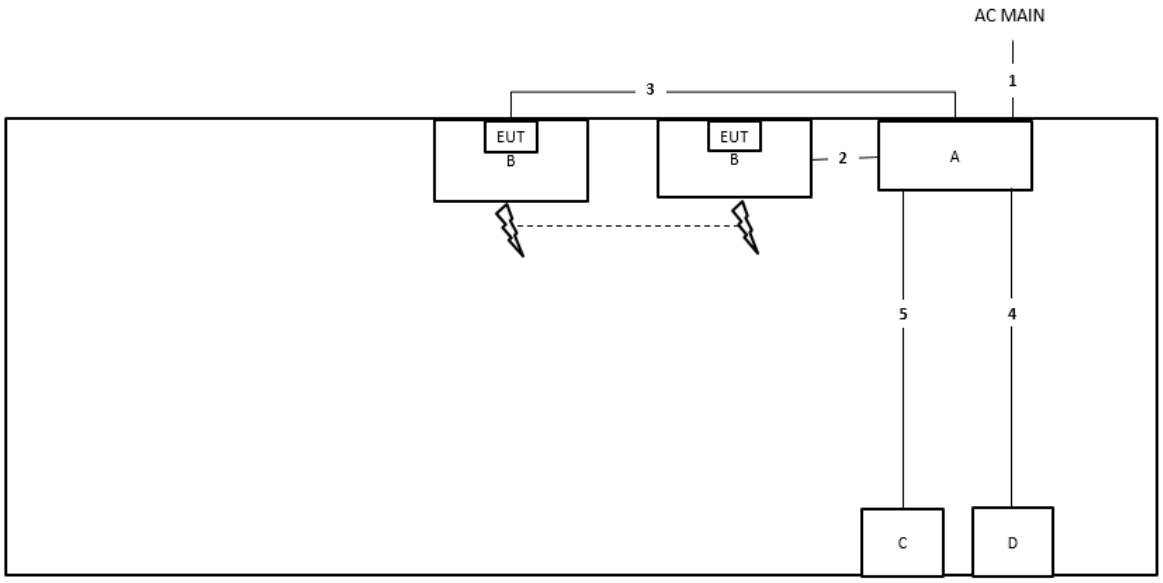
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



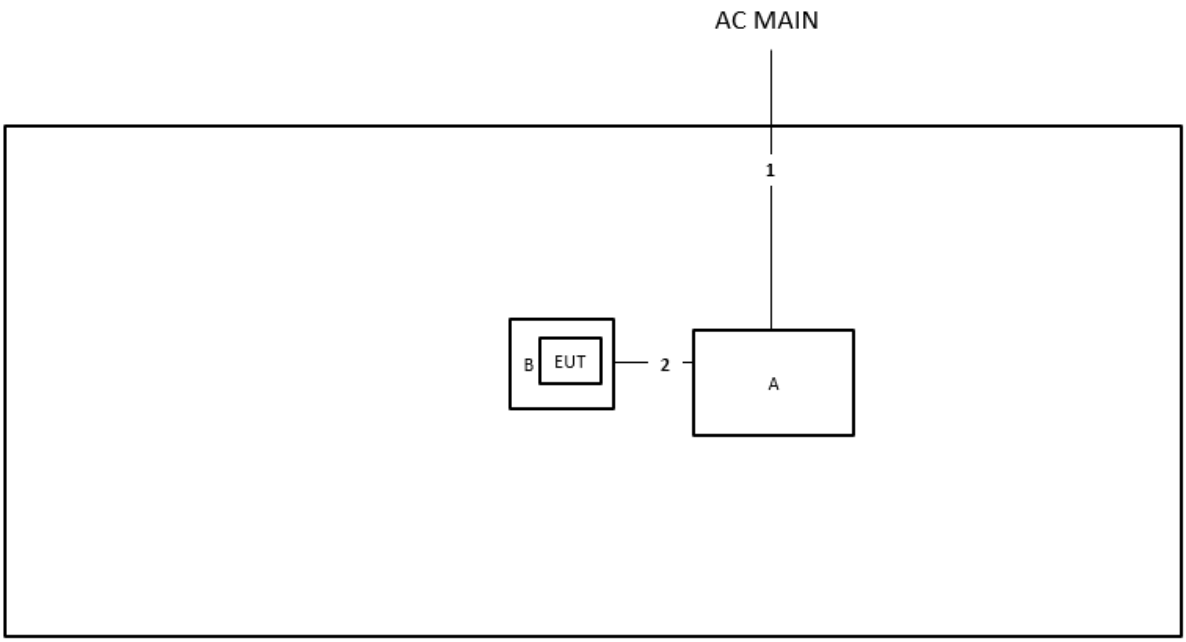
Item	Connection	Shielded	Length
1	Power cable	No	3.1m
2	USB cable*2	Yes	1m
3	USB Cable	Yes	1.5m
4	Audio Cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	USB Cable	Yes	1.5m
3	USB Cable	Yes	1.5m
4	USB Cable	Yes	1m
5	Audio Cable	No	1m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable* 2	Yes	1m

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

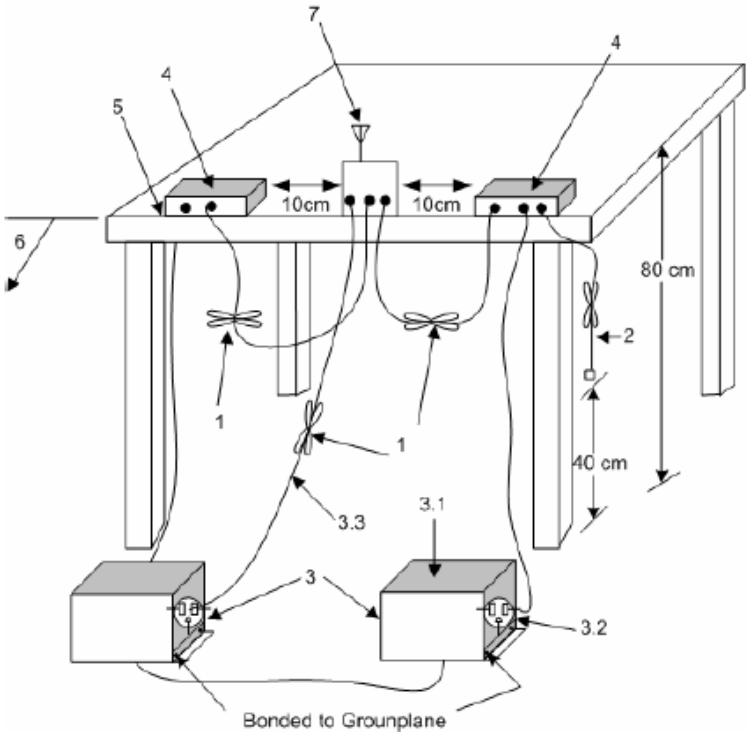
Refer a test equipment and calibration data table in this test report.

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

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

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:
▪ 6 dB bandwidth ≥ 500 kHz.

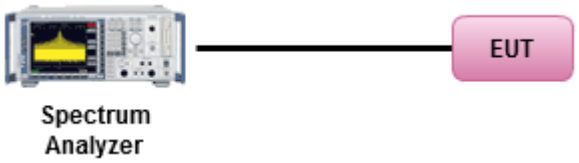
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


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	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ 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
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ 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)
	☐ 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).
	☒ 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).
▪ For conducted measurement.	
	▪ 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.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


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

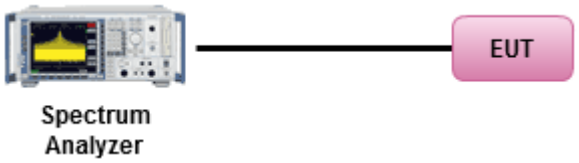
3.4.2 Measuring Instruments

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).			
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.		
	[duty cycle ≥ 98% or external video / power trigger]		
▪ For conducted measurement.			
	▪ If The EUT supports multiple transmit chains using options given below:		
		☐	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.
		☐	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,
		☐	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

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

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

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

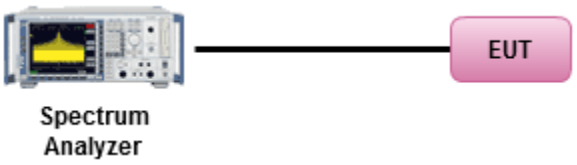
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


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 below30 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.

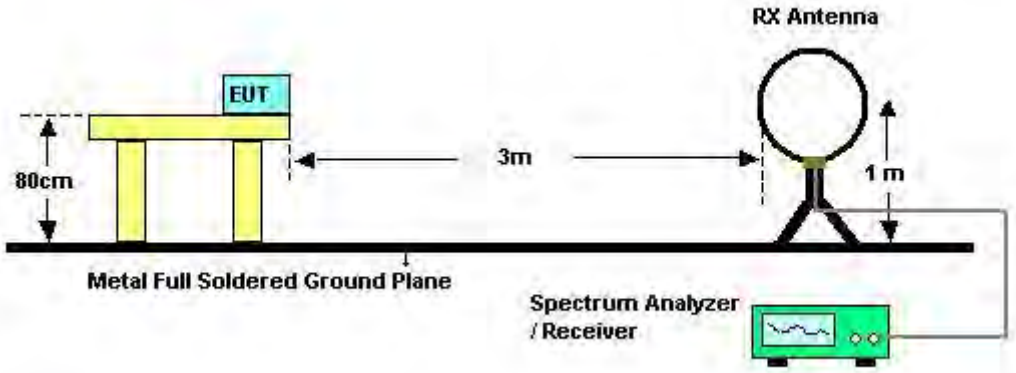
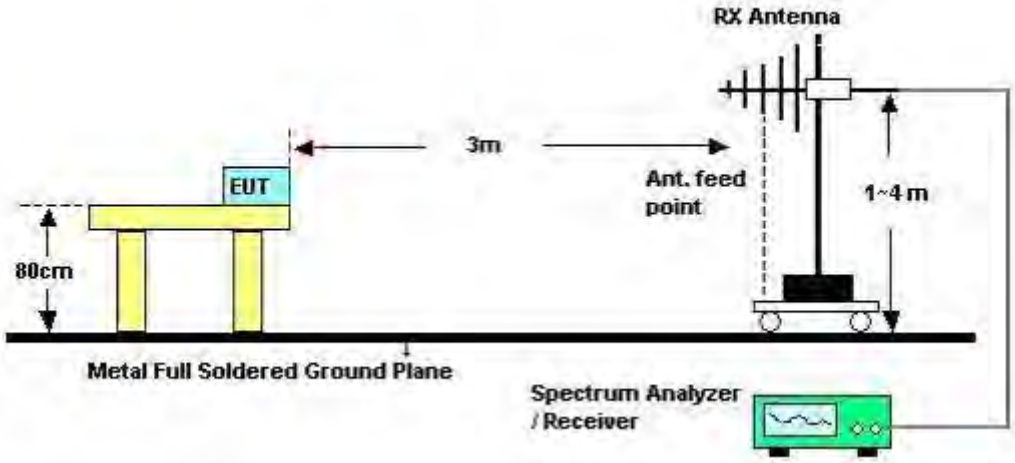
3.6.2 Measuring Instruments

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

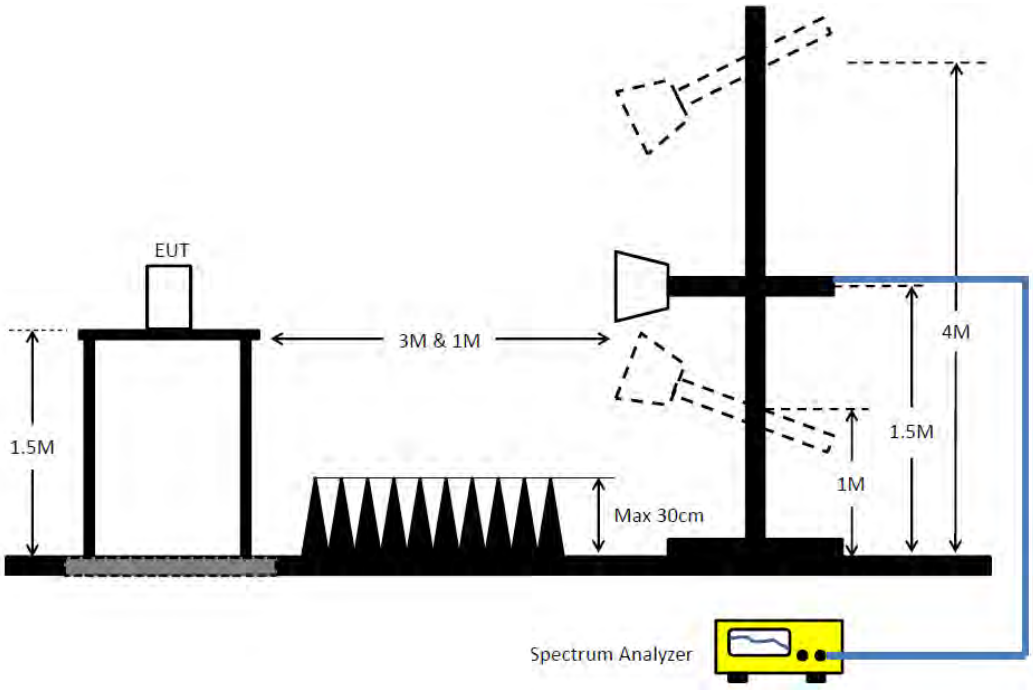
3.6.3 Test Procedures

Test Method
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
▪ For the transmitter unwanted emissions shall be measured using following options below:
▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:
▪ 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.
▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
▪ 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).
▪ 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
▪ 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

Emissions in Restricted Frequency Bands
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Jan. 07, 2022	Jan. 06, 2023	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Dec. 22, 2021	Dec. 21, 2022	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 06, 2022	May 05, 2023	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 19, 2021	Oct. 18, 2022	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2022	Mar. 17, 2023	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 25, 2022	Mar. 24, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 19, 2022	Apr. 18, 2023	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH02-CB)

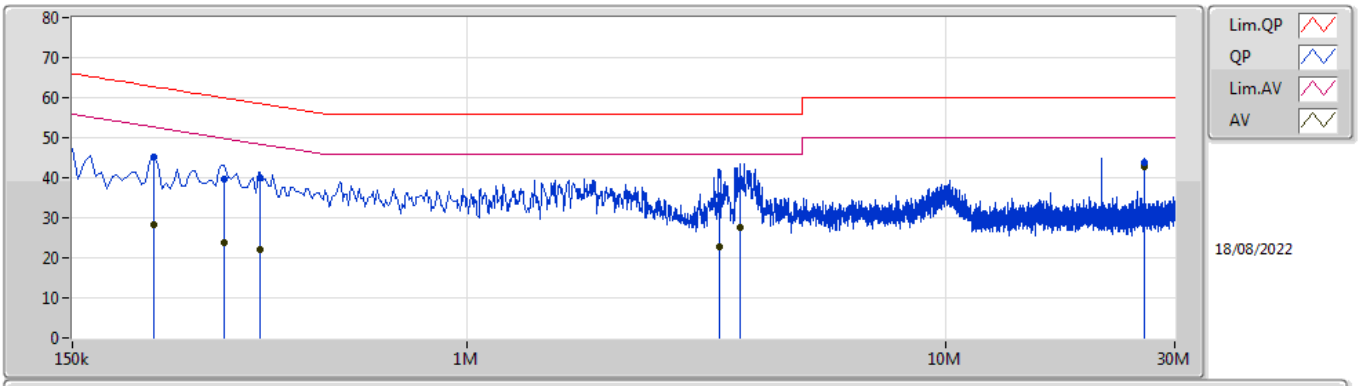
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSP	100593	9kHz~40GHz	Apr. 08, 2022	Apr. 07, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Aug. 15, 2022	Aug. 14, 2023	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 17, 2022	Oct. 16, 2023	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 17, 2022	Oct. 16, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
Switch	SPTCB	SP-SWI	SWI-02	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH02-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

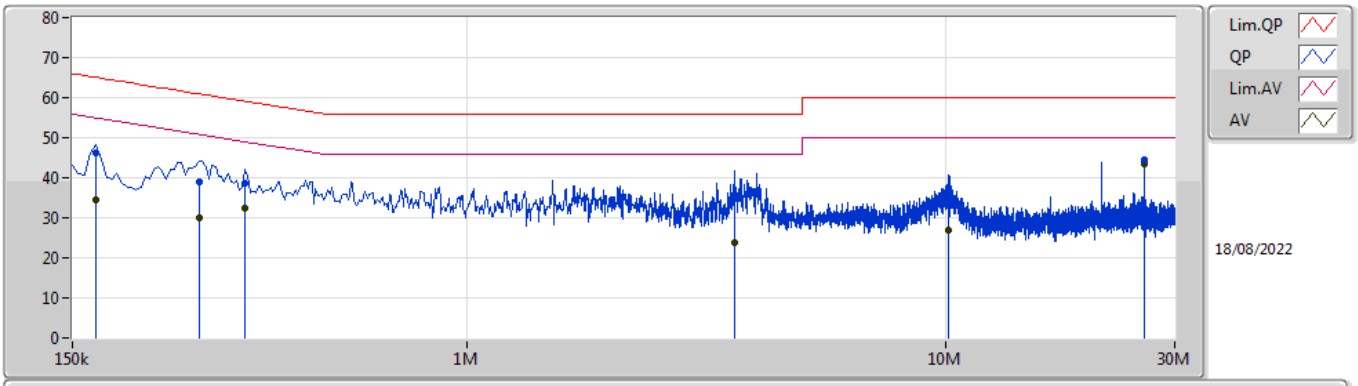
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	25.872M	43.54	50.00	-6.46	Neutral

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	222k	45.19	62.75	-17.56	10.21	Line	-	34.98	0.12	0.02	10.07
AV	222k	28.32	52.75	-24.43	10.21	Line	-	18.11	0.12	0.02	10.07
QP	312k	39.49	59.92	-20.43	10.23	Line	-	29.26	0.12	0.02	10.09
AV	312k	23.82	49.92	-26.10	10.23	Line	-	13.59	0.12	0.02	10.09
QP	370.5k	39.90	58.49	-18.59	10.24	Line	-	29.66	0.12	0.02	10.10
AV	370.5k	21.94	48.49	-26.55	10.24	Line	-	11.70	0.12	0.02	10.10
QP	3.354M	35.49	56.00	-20.51	10.45	Line	-	25.04	0.21	0.06	10.18
AV	3.354M	22.86	46.00	-23.14	10.45	Line	-	12.41	0.21	0.06	10.18
QP	3.723M	39.26	56.00	-16.74	10.48	Line	-	28.78	0.22	0.07	10.19
AV	3.723M	27.66	46.00	-18.34	10.48	Line	-	17.18	0.22	0.07	10.19
QP	25.872M	43.67	60.00	-16.33	10.84	Line	-	32.83	0.41	0.21	10.22
AV	25.872M	42.76	50.00	-7.24	10.84	Line	"Worst"	31.92	0.41	0.21	10.22

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	168k	46.20	65.06	-18.86	10.27	Neutral	-	35.93	0.16	0.02	10.09
AV	168k	34.39	55.06	-20.67	10.27	Neutral	-	24.12	0.16	0.02	10.09
QP	276k	39.08	60.93	-21.85	10.26	Neutral	-	28.82	0.16	0.02	10.08
AV	276k	30.08	50.93	-20.85	10.26	Neutral	-	19.82	0.16	0.02	10.08
QP	343.5k	38.65	59.12	-20.47	10.28	Neutral	-	28.37	0.16	0.02	10.10
AV	343.5k	32.49	49.12	-16.63	10.28	Neutral	-	22.21	0.16	0.02	10.10
QP	3.611M	34.85	56.00	-21.15	10.47	Neutral	-	24.38	0.22	0.07	10.18
AV	3.611M	23.95	46.00	-22.05	10.47	Neutral	-	13.48	0.22	0.07	10.18
QP	10.145M	34.64	60.00	-25.36	10.55	Neutral	-	24.09	0.29	0.07	10.19
AV	10.145M	26.78	50.00	-23.22	10.55	Neutral	-	16.23	0.29	0.07	10.19
QP	25.872M	44.37	60.00	-15.63	10.79	Neutral	-	33.58	0.36	0.21	10.22
AV	25.872M	43.54	50.00	-6.46	10.79	Neutral	"Worst"	32.75	0.36	0.21	10.22

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)	665k	1.024M	1M02F1D	660k	1.021M
BT-LE(2Mbps)	1.135M	2.028M	2M03F1D	1.123M	2.017M

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

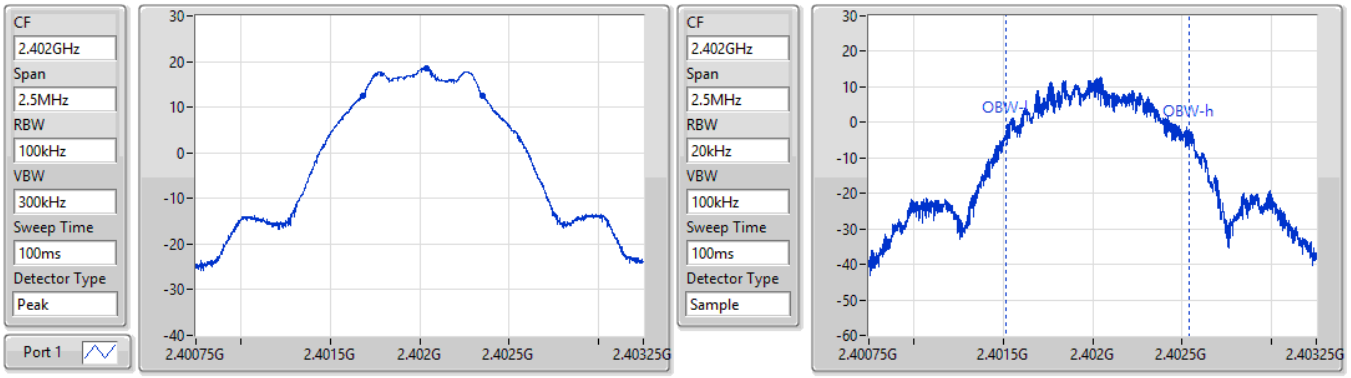
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	663.75k	1.022M
2440MHz	Pass	500k	660k	1.021M
2480MHz	Pass	500k	665k	1.024M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.123M	2.028M
2440MHz	Pass	500k	1.13M	2.017M
2480MHz	Pass	500k	1.135M	2.017M

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

BT-LE(1Mbps) EBW-DTS

2402MHz

11/11/2022

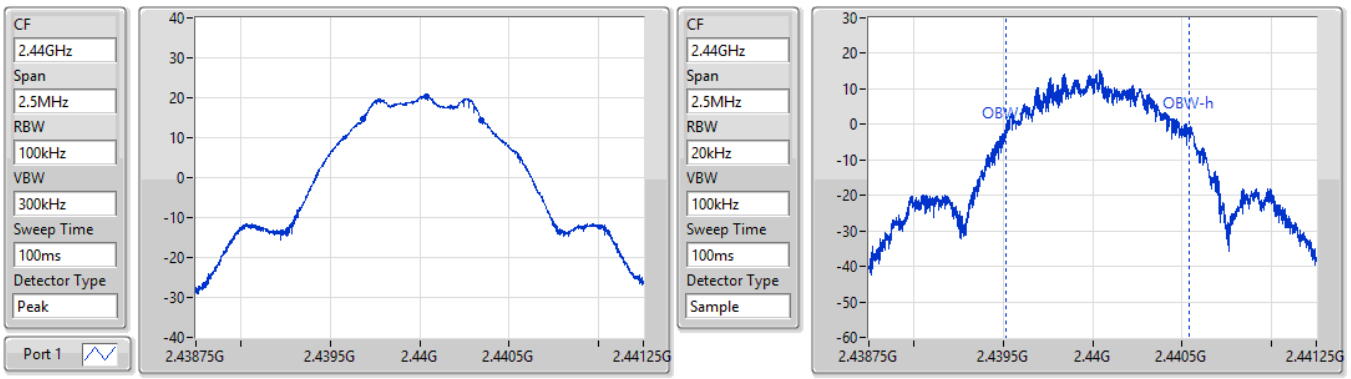


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
663.75k	2.401686G	2.40235G	1.022M	2.401518G	2.402539G	500k	1

BT-LE(1Mbps) EBW-DTS

2440MHz

11/11/2022

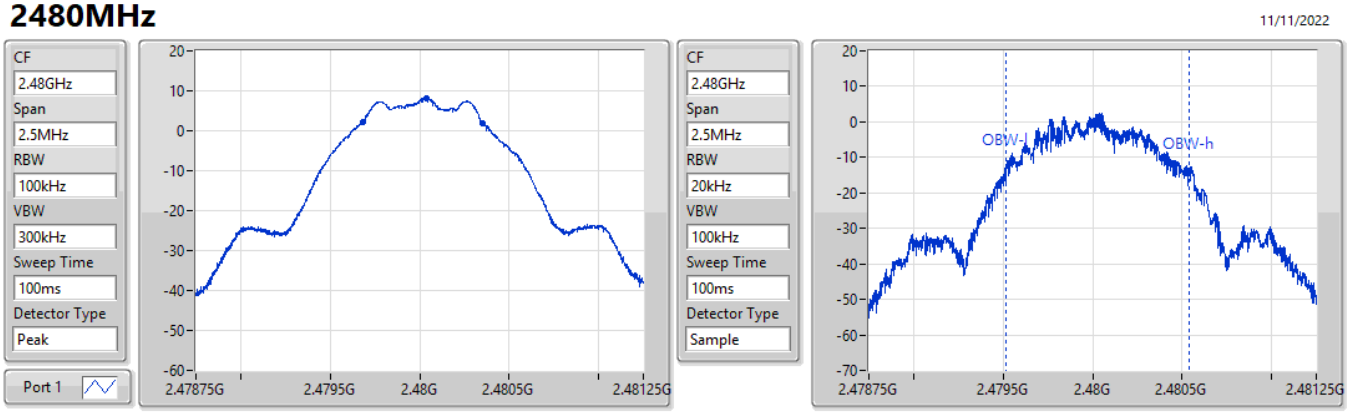


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
660k	2.439685G	2.440345G	1.021M	2.439518G	2.440539G	500k	1

BT-LE(1Mbps)

EBW-DTS

2480MHz

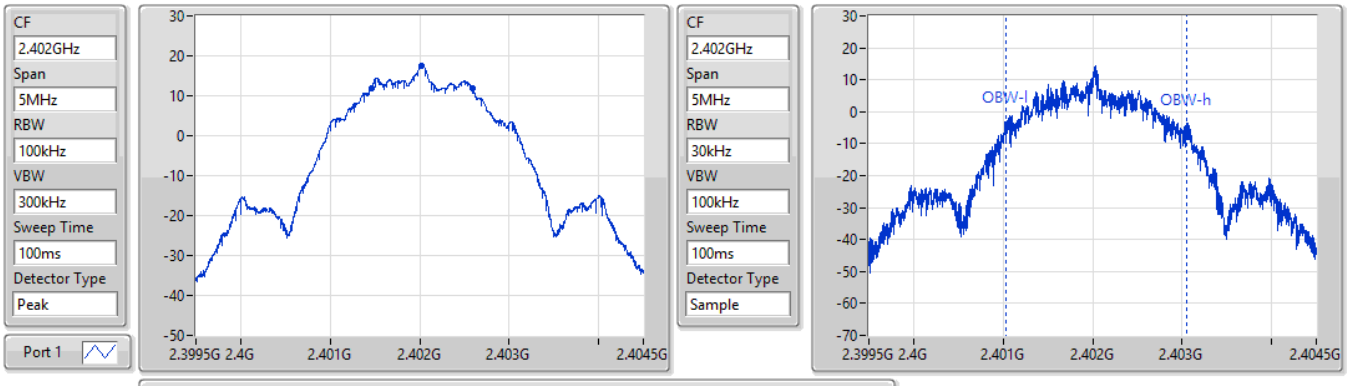


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
665k	2.479685G	2.48035G	1.024M	2.479519G	2.480543G	500k	1

BT-LE(2Mbps)

EBW-DTS

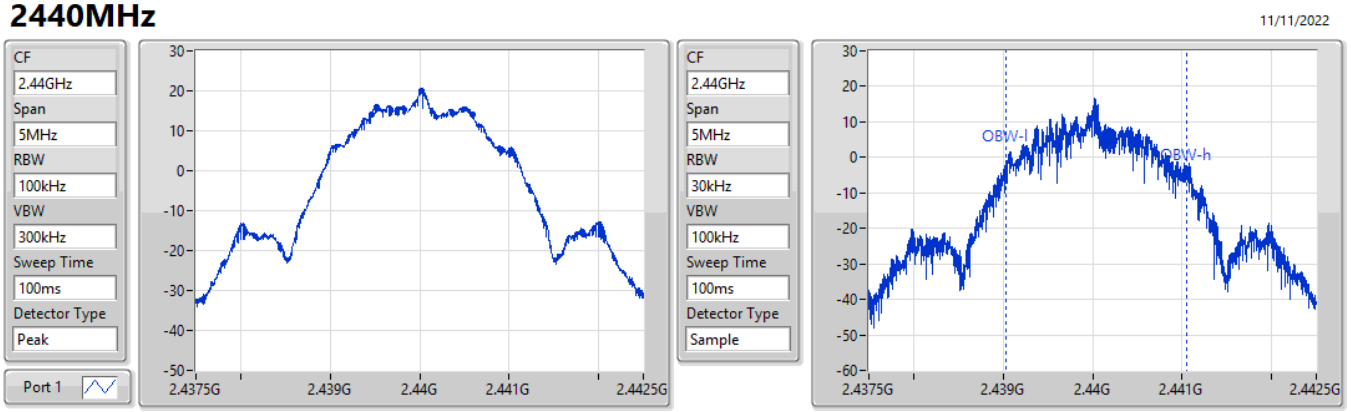
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.123M	2.401465G	2.402588G	2.028M	2.401028G	2.403057G	500k	1

BT-LE(2Mbps) **EBW-DTS**

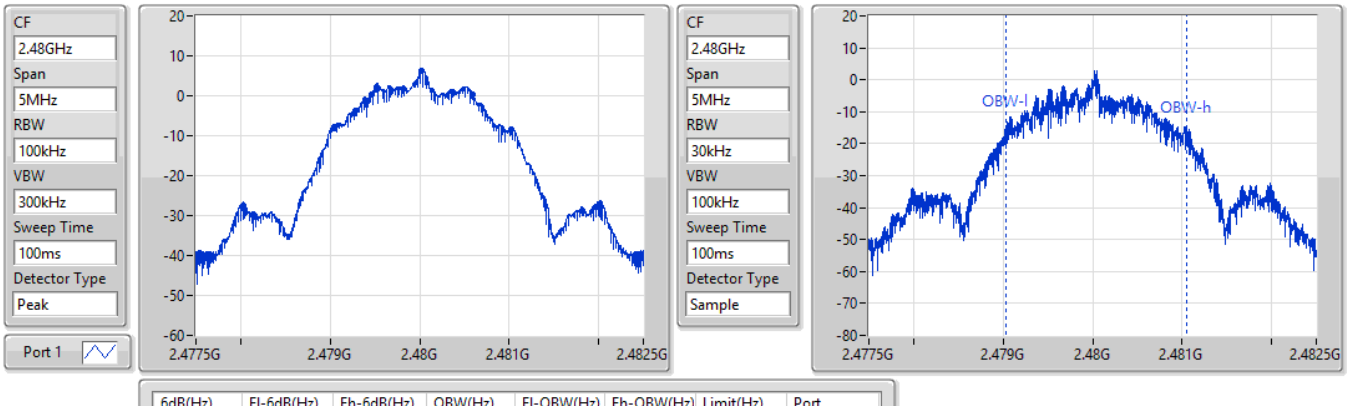
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.13M	2.439458G	2.440588G	2.017M	2.439032G	2.44105G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.135M	2.479463G	2.480598G	2.017M	2.479033G	2.48105G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	20.17	0.10399
BT-LE(2Mbps)	19.74	0.09419

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.21	18.18	30.00
2404MHz	Pass	2.21	19.73	30.00
2440MHz	Pass	2.21	20.17	30.00
2478MHz	Pass	2.21	14.58	30.00
2480MHz	Pass	2.21	7.72	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.21	17.13	30.00
2404MHz	Pass	2.21	19.48	30.00
2440MHz	Pass	2.21	19.74	30.00
2478MHz	Pass	2.21	14.64	30.00
2480MHz	Pass	2.21	5.71	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	4.29
BT-LE(2Mbps)	2.51

RBW = 3kHz;

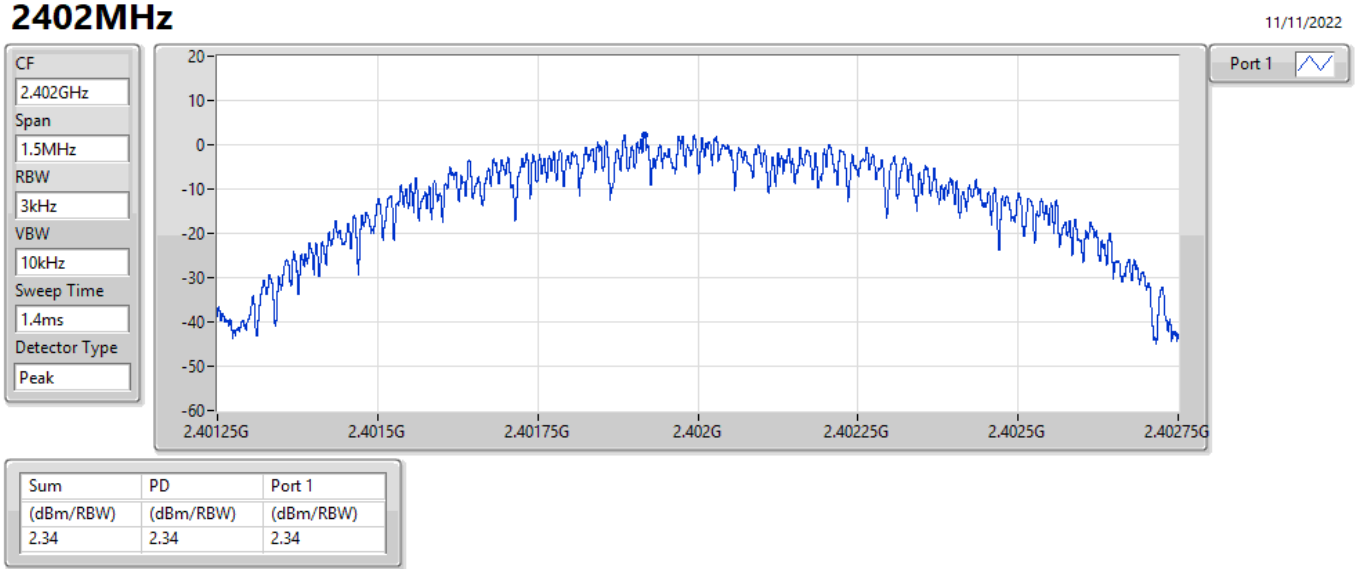
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.21	2.34	8.00
2440MHz	Pass	2.21	4.29	8.00
2480MHz	Pass	2.21	-8.15	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.21	-0.11	8.00
2440MHz	Pass	2.21	2.51	8.00
2480MHz	Pass	2.21	-12.13	8.00

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

BT-LE(1Mbps) PSD

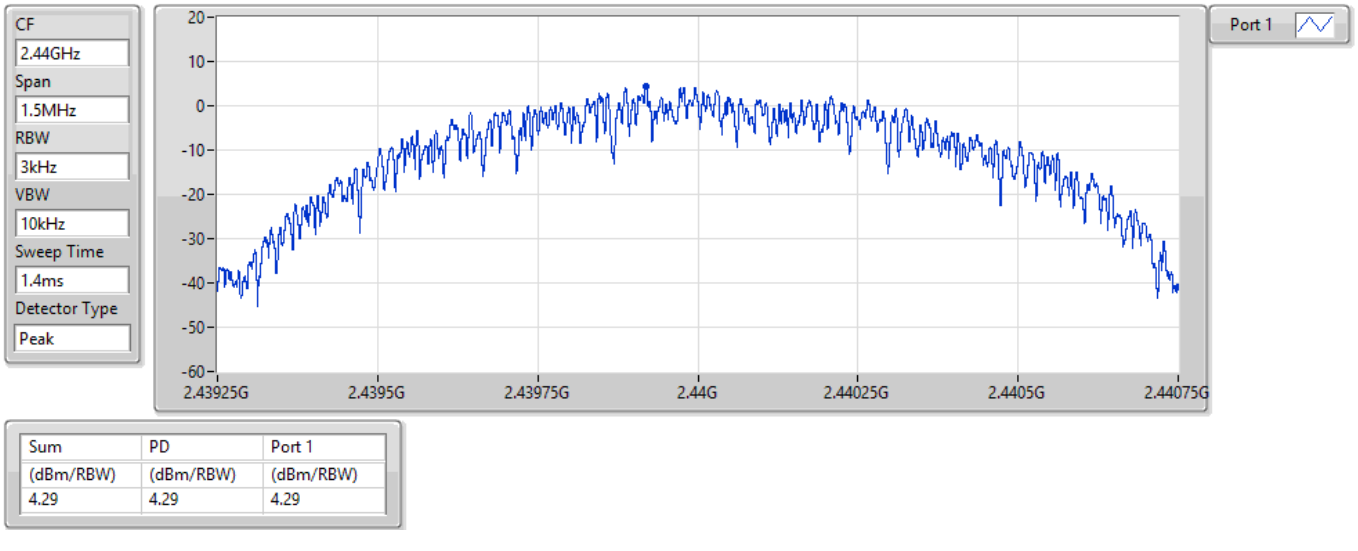
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.34	2.34	2.34

BT-LE(1Mbps) PSD

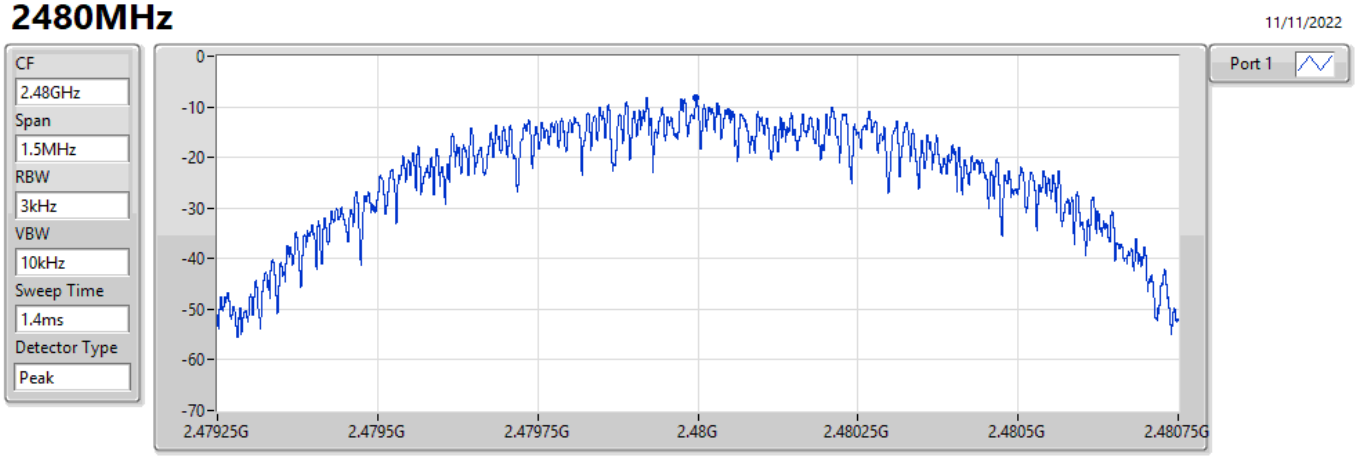
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.29	4.29	4.29

BT-LE(1Mbps) PSD

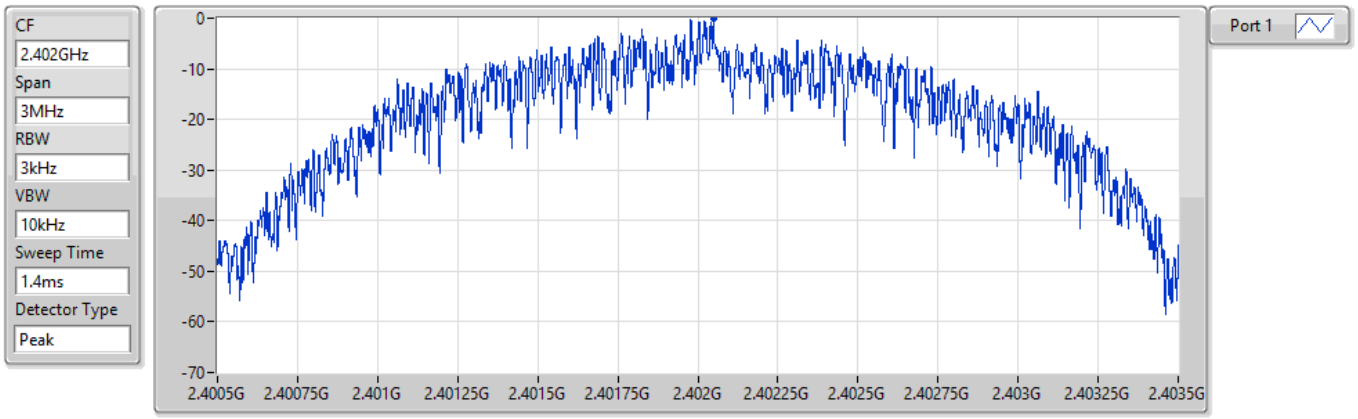
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.15	-8.15	-8.15

BT-LE(2Mbps) PSD

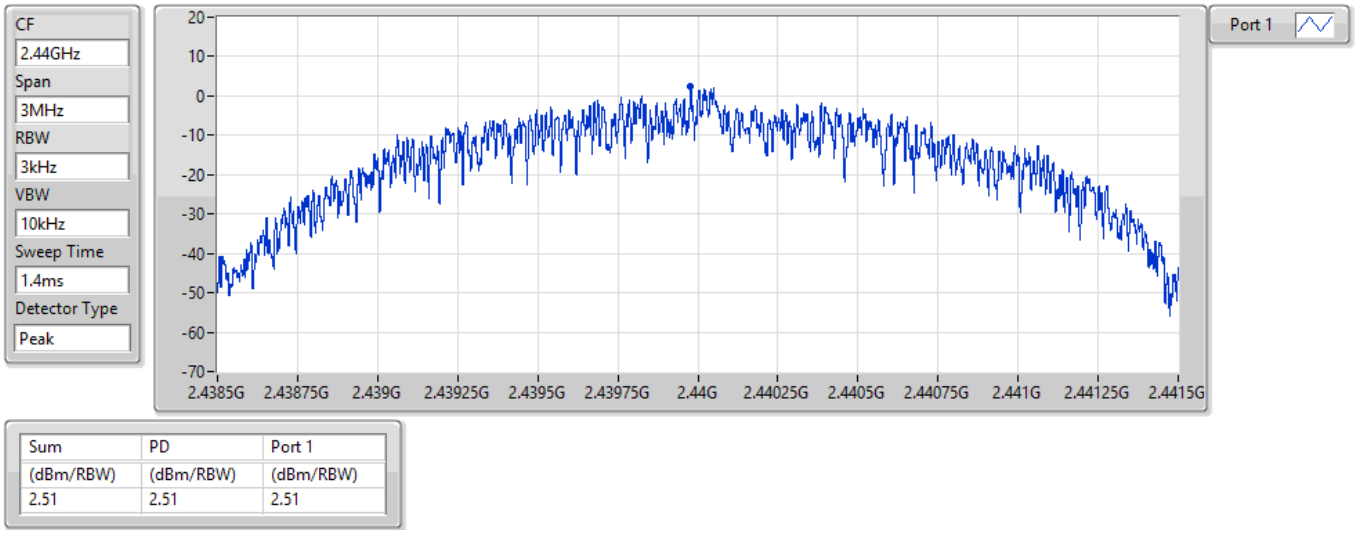
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.11	-0.11	-0.11

BT-LE(2Mbps) PSD

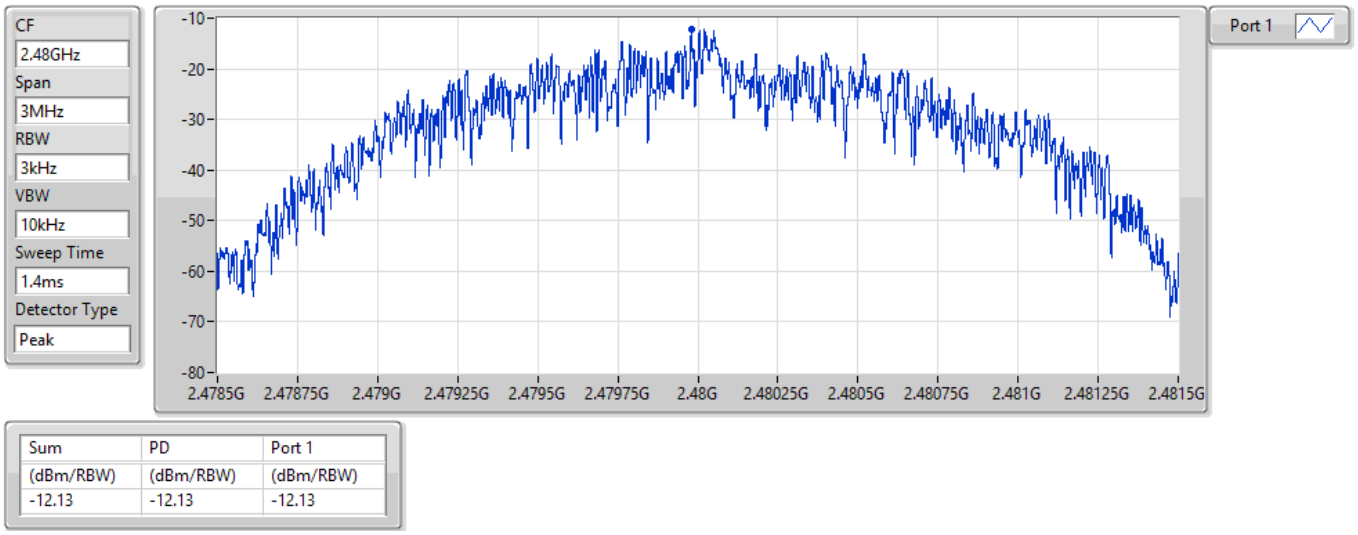
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.51	2.51	2.51

BT-LE(2Mbps) PSD

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.13	-12.13	-12.13

Summary

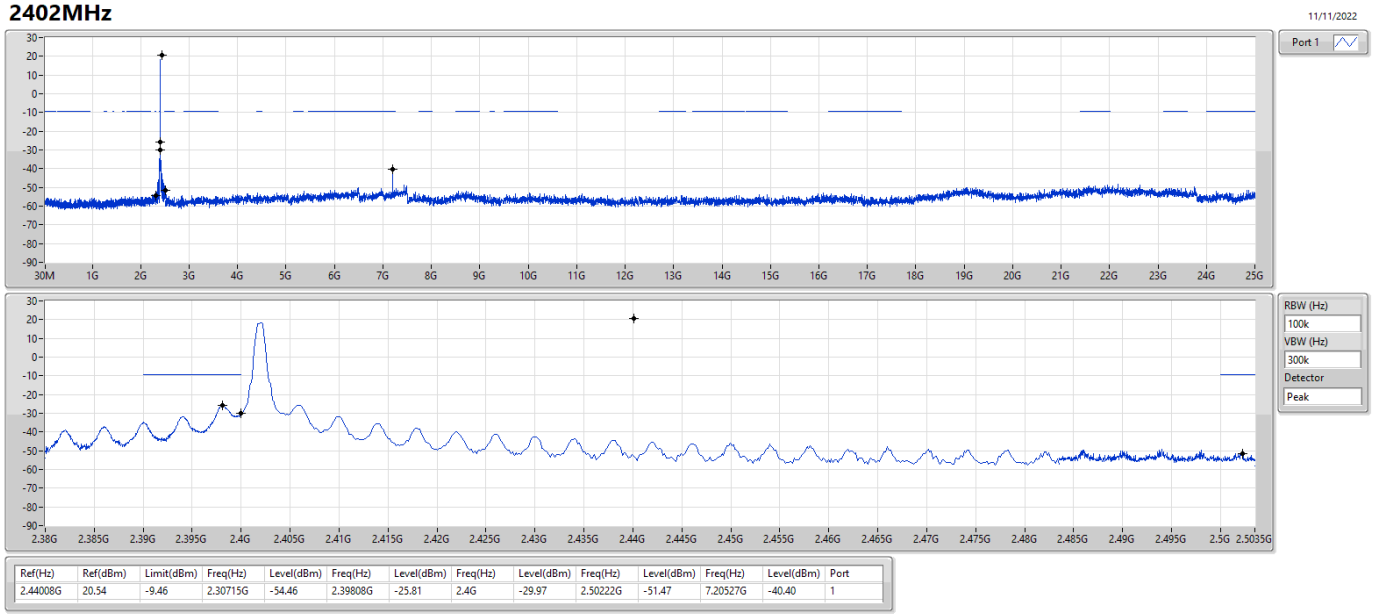
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44008G	20.54	-9.46	2.30715G	-54.46	2.39808G	-25.81	2.4G	-29.97	2.50222G	-51.47	7.20527G	-40.40	1
BT-LE(2Mbps)	Pass	2.44008G	19.98	-10.02	2.30715G	-52.99	2.4G	-15.91	2.4G	-15.37	2.50214G	-51.61	21.71551G	-48.06	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	2.44008G	20.54	-9.46	2.30715G	-54.46	2.39808G	-25.81	2.4G	-29.97	2.50222G	-51.47	7.20527G	-40.40	1
2440MHz	Pass	2.44008G	20.54	-9.46	2.3048G	-51.01	2.39996G	-42.09	2.4G	-41.88	2.50018G	-45.76	23.30995G	-48.72	1
2480MHz	Pass	2.44008G	20.54	-9.46	2.0698G	-54.00	2.39596G	-51.94	2.4G	-54.58	2.50018G	-47.86	21.67052G	-47.90	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44008G	19.98	-10.02	2.30715G	-52.99	2.4G	-15.91	2.4G	-15.37	2.50214G	-51.61	21.71551G	-48.06	1
2440MHz	Pass	2.44008G	19.98	-10.02	2.30128G	-49.02	2.39996G	-41.93	2.4G	-42.92	2.50006G	-46.15	21.65083G	-48.36	1
2480MHz	Pass	2.44008G	19.98	-10.02	2.17085G	-54.46	2.3976G	-52.27	2.4G	-57.00	2.5001G	-49.23	21.5721G	-48.59	1

BT-LE(1Mbps) **CSENdB-DTS**

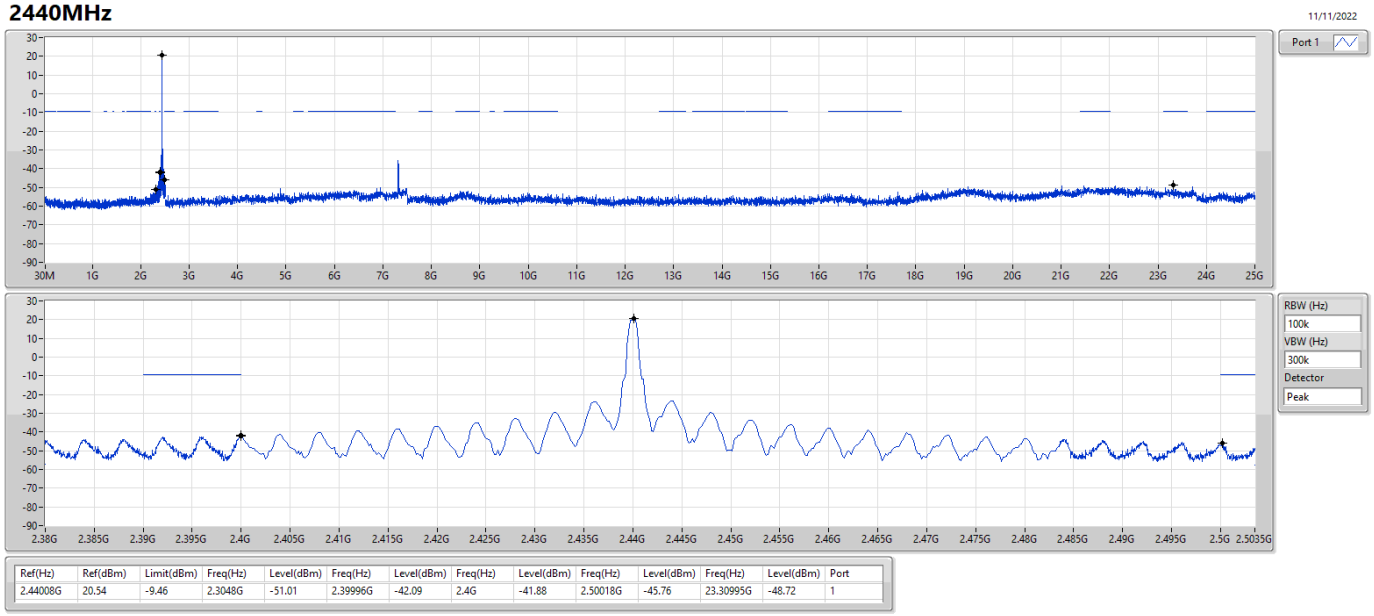
2402MHz



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
2.44008G	20.54	-9.46	2.30715G	-54.46	2.39808G	-25.81	2.4G	-29.97	2.50222G	-51.47	7.20527G	-40.40	1

BT-LE(1Mbps) **CSENdB-DTS**

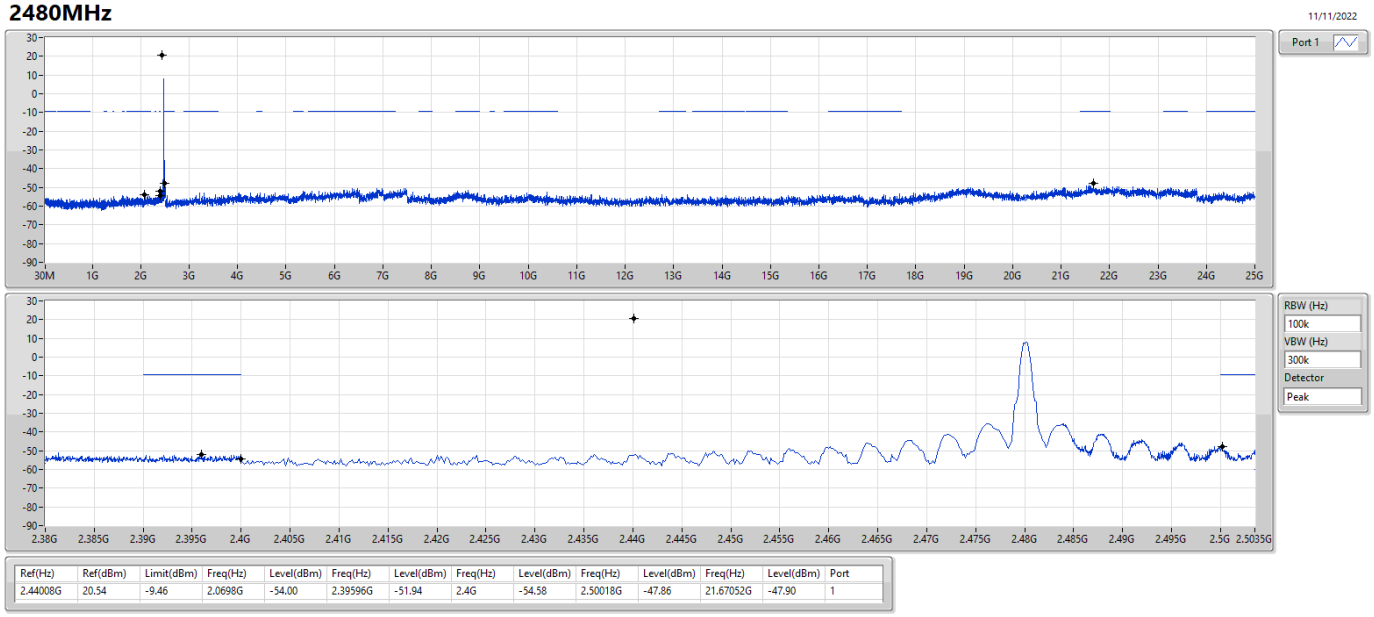
2440MHz



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
2.44008G	20.54	-9.46	2.3048G	-51.01	2.39996G	-42.09	2.4G	-41.88	2.50018G	-45.76	23.30995G	-48.72	1

BT-LE(1Mbps) **CSENdB-DTS**

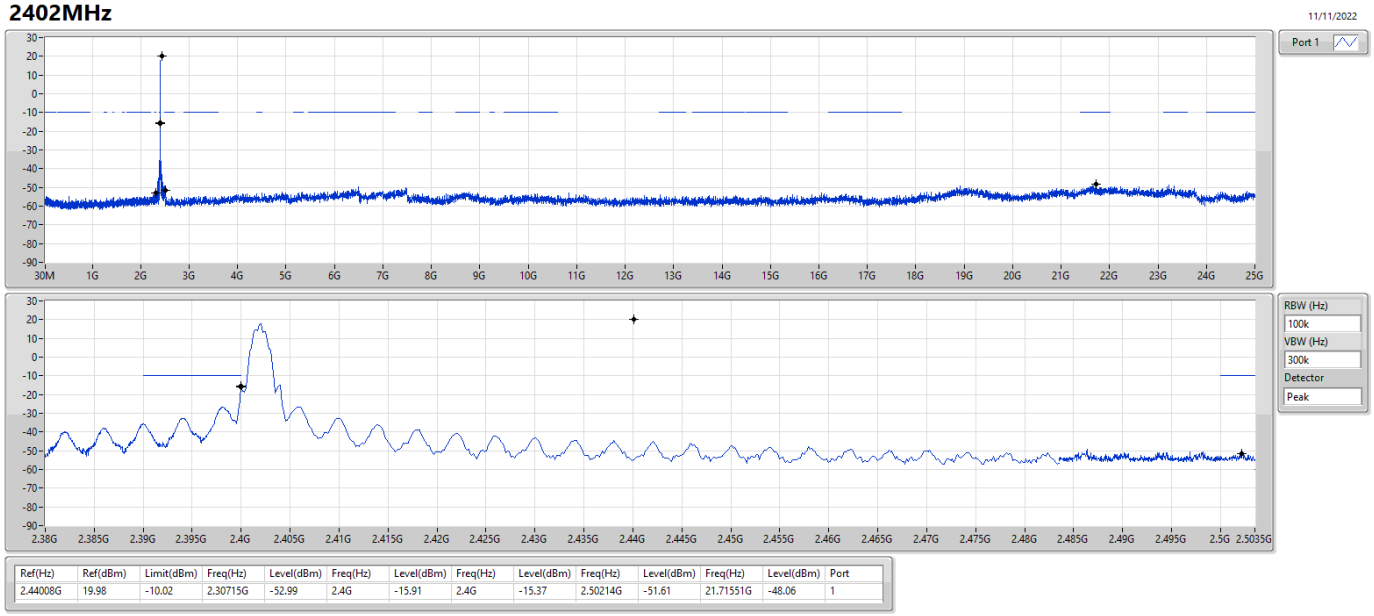
2480MHz



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
2.44008G	20.54	-9.46	2.0698G	-54.00	2.39596G	-51.94	2.4G	-54.58	2.50018G	-47.86	21.67052G	-47.90	1

BT-LE(2Mbps) **CSENdB-DTS**

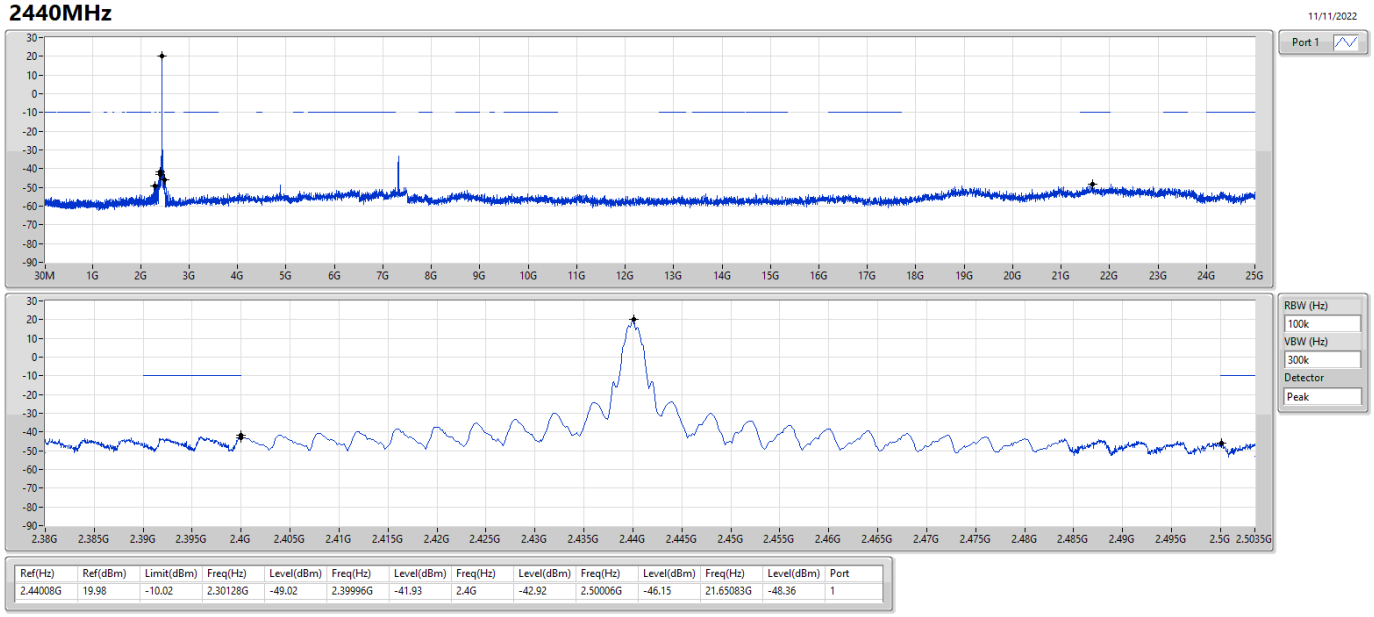
2402MHz



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
2.44008G	19.98	-10.02	2.30715G	-52.99	2.4G	-15.91	2.4G	-15.37	2.50214G	-51.61	21.71551G	-48.06	1

BT-LE(2Mbps) **CSENdB-DTS**

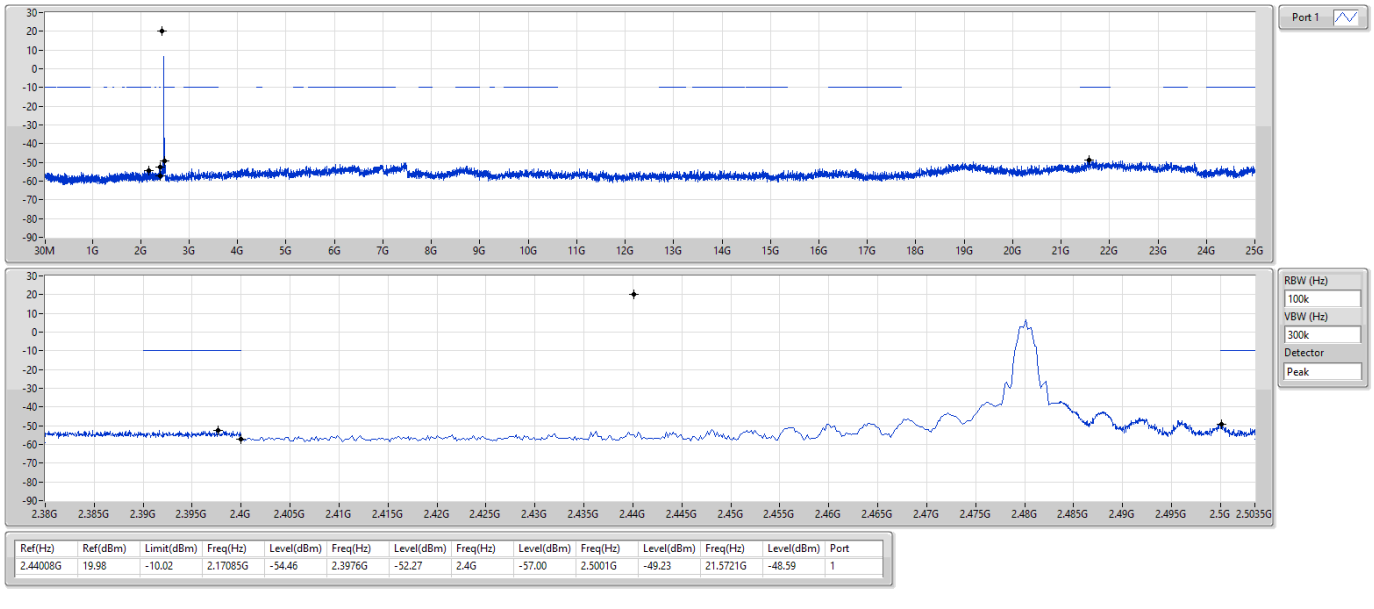
2440MHz



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
2.44008G	19.98	-10.02	2.30128G	-49.02	2.39996G	-41.93	2.4G	-42.92	2.50006G	-46.15	21.65083G	-48.36	1

BT-LE(2Mbps) **CSENdB-DTS**

2480MHz

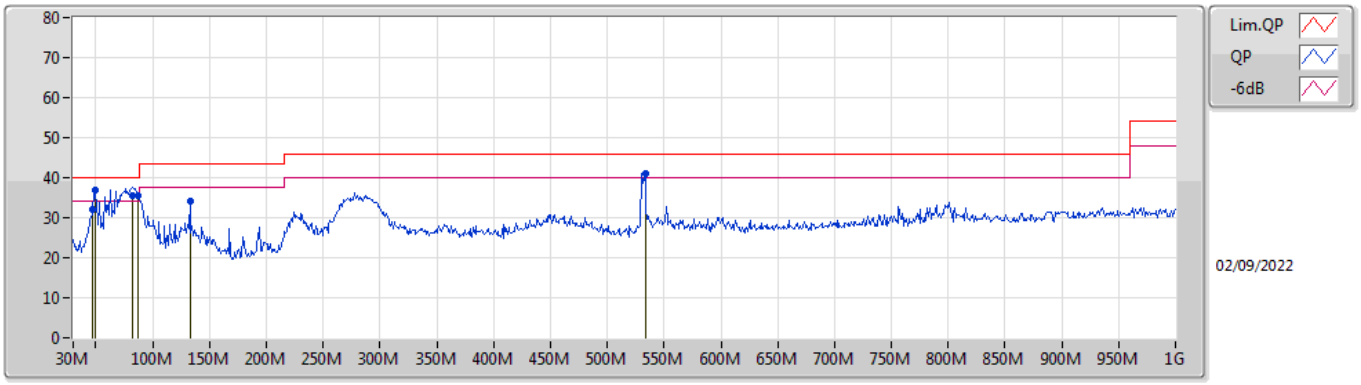


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44008G	19.98	-10.02	2.17085G	-54.46	2.3976G	-52.27	2.4G	-57.00	2.5001G	-49.23	21.5721G	-48.59	1

Summary

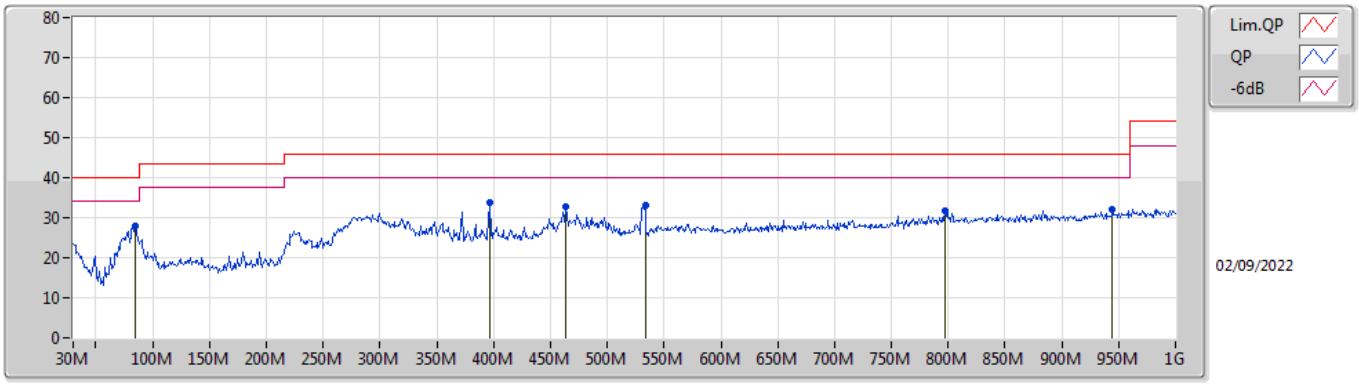
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 4	Pass	PK	49.4M	36.99	40.00	-3.01	Vertical

Mode 4



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	47.46M	32.23	40.00	-7.77	-15.88	3	Vertical	192	1.00	-	48.11	14.91	1.05	31.84
PK	49.4M	36.99	40.00	-3.01	-16.49	3	Vertical	183	1.00	"Worst"	53.48	14.28	1.09	31.86
QP	82.38M	35.57	40.00	-4.43	-17.53	3	Vertical	228	1.25	-	53.10	13.03	1.40	31.96
PK	87.23M	35.49	40.00	-4.51	-16.49	3	Vertical	288	1.00	-	51.98	14.02	1.44	31.95
PK	132.82M	34.23	43.50	-9.27	-12.78	3	Vertical	234	1.00	-	47.01	17.49	1.73	32.00
PK	533.43M	41.10	46.00	-4.90	-5.16	3	Vertical	146	1.25	-	46.26	23.50	3.73	32.39

Mode 4



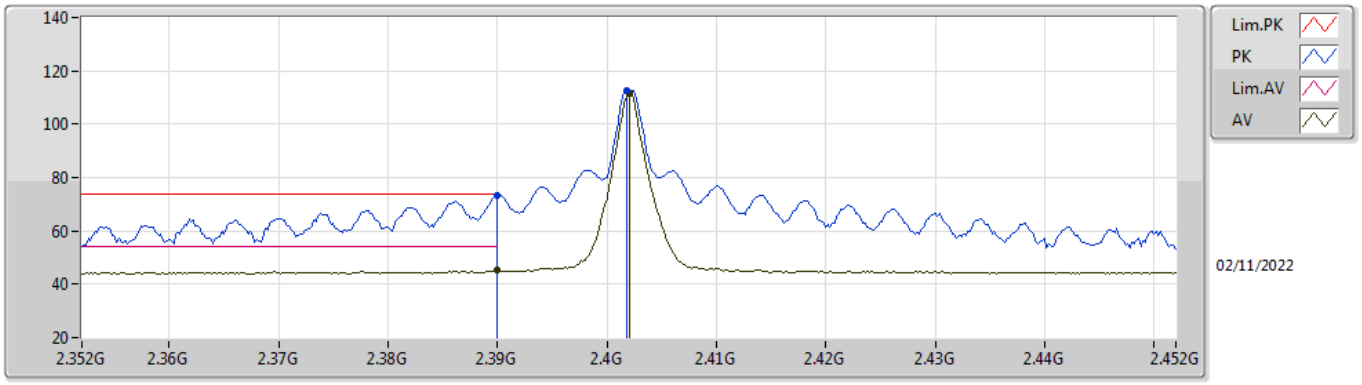
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	84.32M	28.02	40.00	-11.98	-17.09	3	Horizontal	183	2.00	"Worst"	45.11	13.46	1.40	31.95
PK	396.66M	33.93	46.00	-12.07	-7.57	3	Horizontal	258	1.00	-	41.50	21.40	3.19	32.16
PK	463.59M	32.65	46.00	-13.35	-5.92	3	Horizontal	144	2.00	-	38.57	22.85	3.53	32.30
PK	533.43M	33.01	46.00	-12.99	-5.16	3	Horizontal	74	2.00	-	38.17	23.50	3.73	32.39
PK	797.27M	31.63	46.00	-14.37	-2.04	3	Horizontal	299	2.00	-	33.67	25.59	4.89	32.52
PK	944.71M	32.01	46.00	-13.99	-0.49	3	Horizontal	52	1.00	-	32.50	26.42	5.57	32.48

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	PK	2.39G	73.97	74.00	-0.03	3	Horizontal	230	3.00	-

BT-LE(1Mbps)

2402MHz_TX

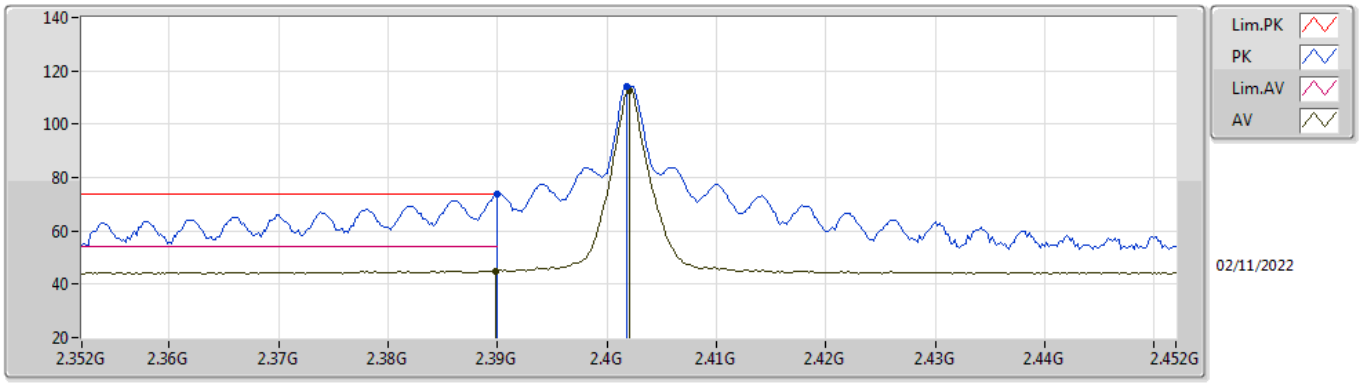


EUT X_1TX
Setting -5
02-B-R-5

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	2.39G	73.09	74.00	-0.91	41.51	3	Vertical	93	1.74	-	28.38	3.20	-
AV	2.39G	45.42	54.00	-8.58	13.84	3	Vertical	93	1.74	-	28.38	3.20	-
PK	2.4018G	112.83	Inf	-Inf	81.23	3	Vertical	93	1.74	-	28.40	3.20	-
AV	2.402G	111.38	Inf	-Inf	79.78	3	Vertical	93	1.74	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

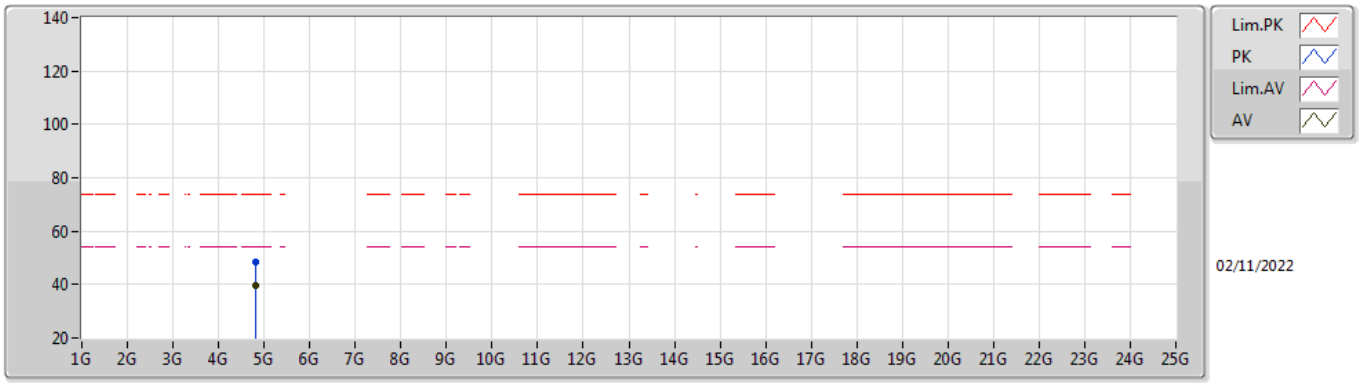


EUT X_1TX
Setting -5
02-B-R-5

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	2.39G	73.97	74.00	-0.03	42.39	3	Horizontal	230	3.00	-	28.38	3.20	-
AV	2.3898G	45.06	54.00	-8.94	13.49	3	Horizontal	230	3.00	-	28.38	3.19	-
PK	2.4018G	114.14	Inf	-Inf	82.54	3	Horizontal	230	3.00	-	28.40	3.20	-
AV	2.402G	112.66	Inf	-Inf	81.06	3	Horizontal	230	3.00	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

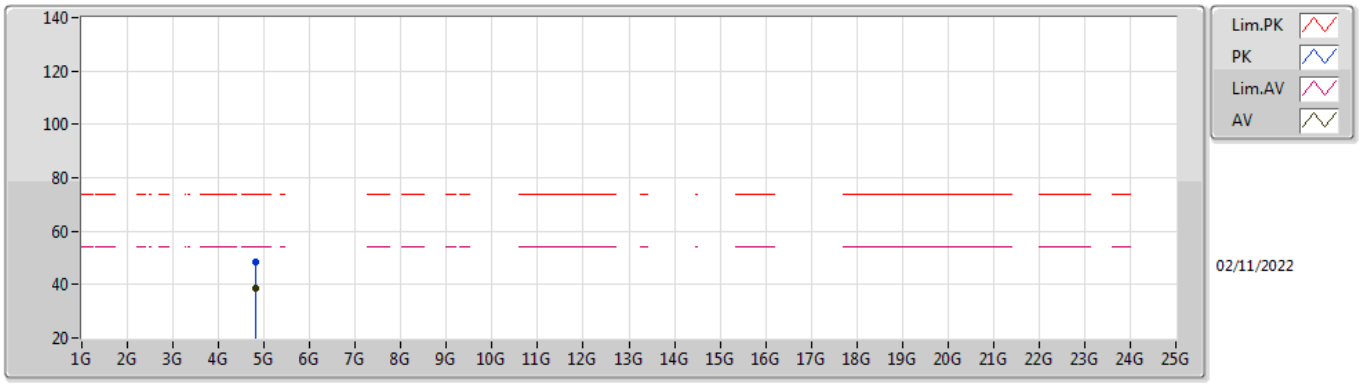


EUT X_1TX
Setting -5
02-B-R-5

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	4.8039G	48.60	74.00	-25.40	40.99	3	Vertical	210	2.15	-	32.82	5.60	30.81
AV	4.80406G	39.40	54.00	-14.60	31.79	3	Vertical	210	2.15	-	32.82	5.60	30.81

BT-LE(1Mbps)

2402MHz_TX

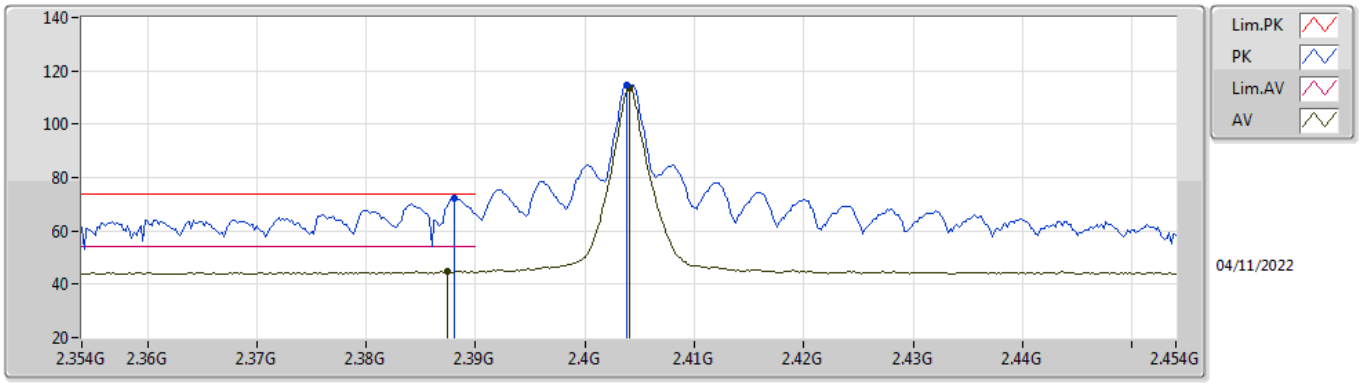


EUT X_1TX
Setting -5
02-B-R-5

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	4.80462G	48.31	74.00	-25.69	40.69	3	Horizontal	287	1.12	-	32.83	5.60	30.81
AV	4.80398G	38.40	54.00	-15.60	30.79	3	Horizontal	287	1.12	-	32.82	5.60	30.81

BT-LE(1Mbps)

2404MHz_TX

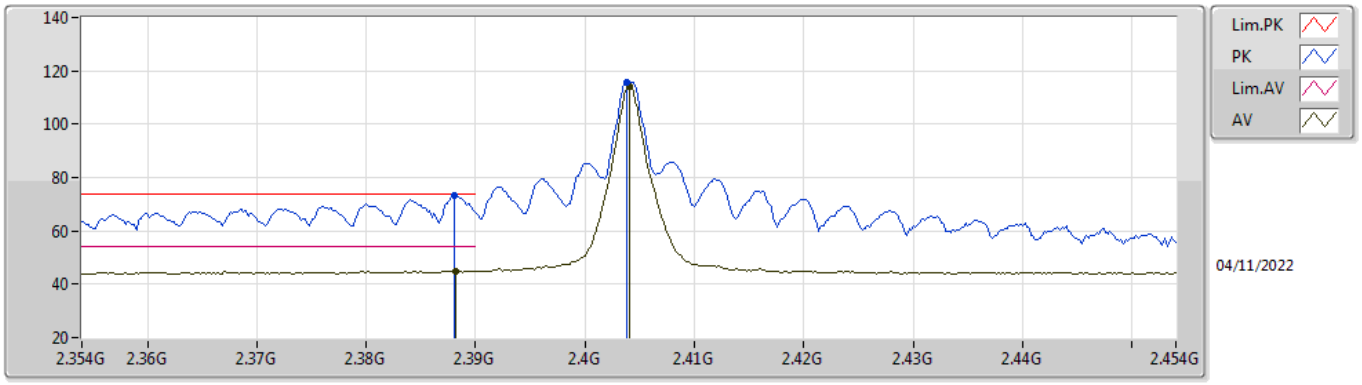


EUT X_1TX
Setting -3
02-B-R-5

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	2.388G	72.33	74.00	-1.67	40.76	3	Vertical	68	2.46	-	28.38	3.19	-
AV	2.3874G	44.96	54.00	-9.04	13.40	3	Vertical	68	2.46	-	28.37	3.19	-
PK	2.4038G	114.82	Inf	-Inf	83.22	3	Vertical	68	2.46	-	28.40	3.20	-
AV	2.404G	113.39	Inf	-Inf	81.79	3	Vertical	68	2.46	-	28.40	3.20	-

BT-LE(1Mbps)

2404MHz_TX

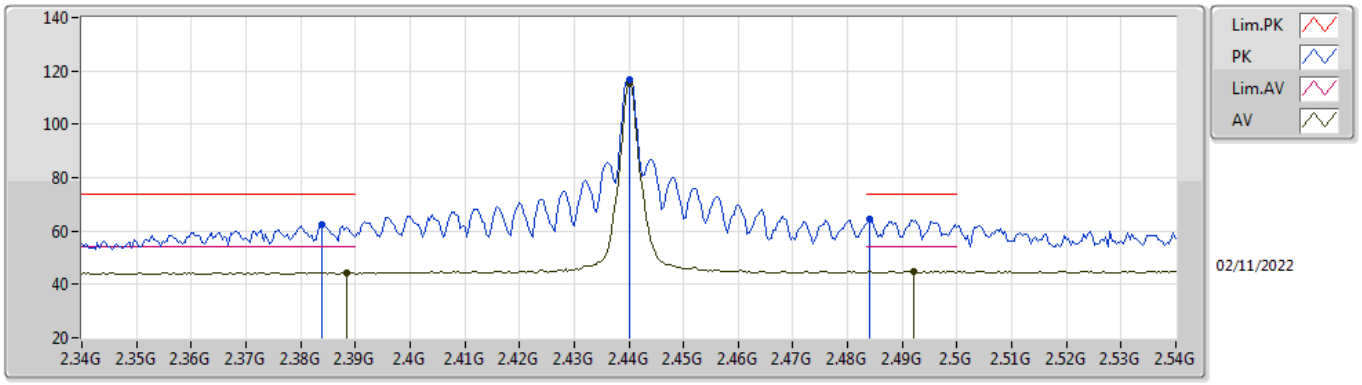


EUT X_1TX
Setting -3
02-B-R-5

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	2.388G	73.43	74.00	-0.57	41.86	3	Horizontal	229	3.00	-	28.38	3.19	-
AV	2.3882G	45.07	54.00	-8.93	13.50	3	Horizontal	229	3.00	-	28.38	3.19	-
PK	2.4038G	115.79	Inf	-Inf	84.19	3	Horizontal	229	3.00	-	28.40	3.20	-
AV	2.404G	114.39	Inf	-Inf	82.79	3	Horizontal	229	3.00	-	28.40	3.20	-

BT-LE(1Mbps)

2440MHz_TX

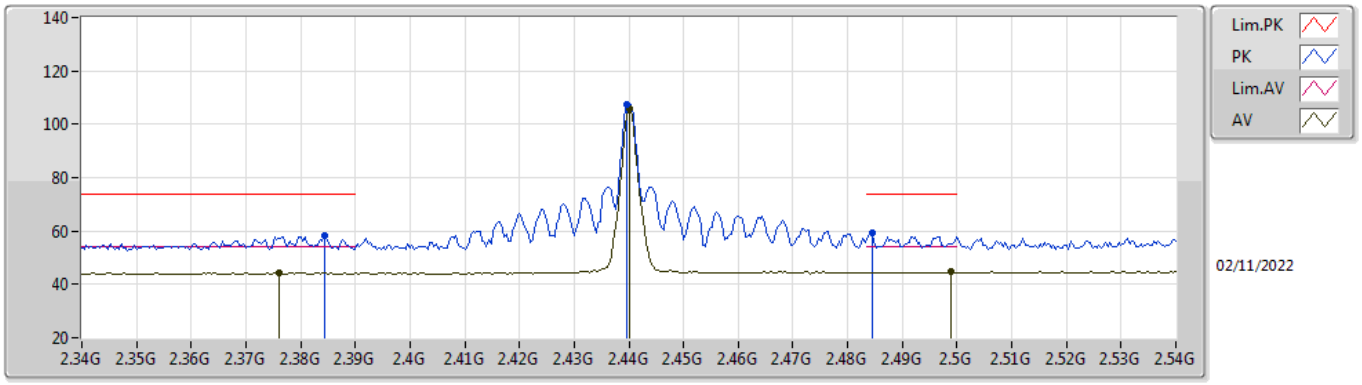


EUT X_1TX
Setting -2
02-B-R-5

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	2.384G	62.23	74.00	-11.77	30.67	3	Vertical	127	2.62	-	28.37	3.19	-
AV	2.3884G	44.48	54.00	-9.52	12.91	3	Vertical	127	2.62	-	28.38	3.19	-
PK	2.44G	116.88	Inf	-Inf	85.26	3	Vertical	127	2.62	-	28.40	3.22	-
AV	2.44G	115.33	Inf	-Inf	83.71	3	Vertical	127	2.62	-	28.40	3.22	-
PK	2.484G	64.63	74.00	-9.37	32.85	3	Vertical	127	2.62	-	28.54	3.24	-
AV	2.492G	44.92	54.00	-9.08	13.10	3	Vertical	127	2.62	-	28.57	3.25	-

BT-LE(1Mbps)

2440MHz_TX

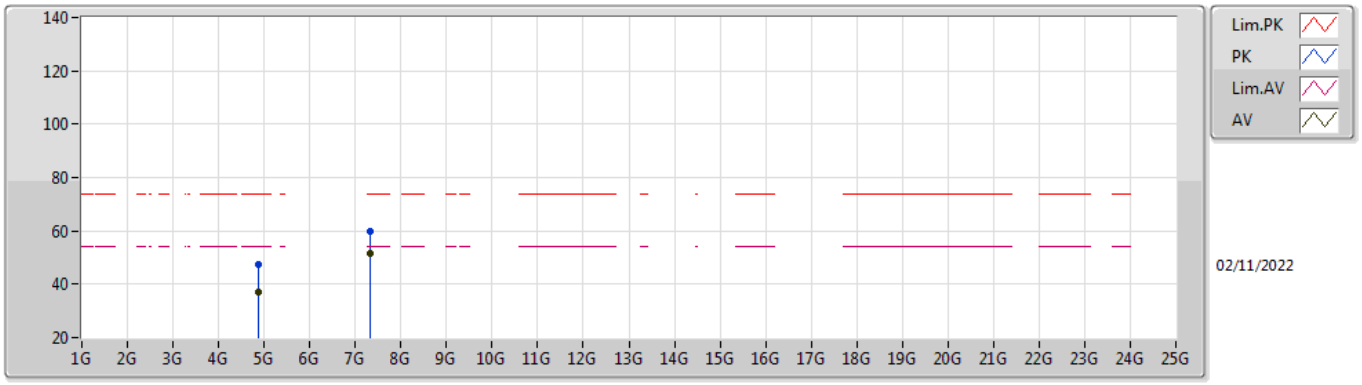


EUT X_1TX
Setting -2
02-B-R-5

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	2.3844G	58.53	74.00	-15.47	26.97	3	Horizontal	-0	1.80	-	28.37	3.19	-
AV	2.376G	44.30	54.00	-9.70	12.76	3	Horizontal	-0	1.80	-	28.35	3.19	-
PK	2.4396G	107.37	Inf	-Inf	75.75	3	Horizontal	-0	1.80	-	28.40	3.22	-
AV	2.44G	105.85	Inf	-Inf	74.23	3	Horizontal	-0	1.80	-	28.40	3.22	-
PK	2.4844G	59.37	74.00	-14.63	27.59	3	Horizontal	-0	1.80	-	28.54	3.24	-
AV	2.4988G	44.77	54.00	-9.23	12.92	3	Horizontal	-0	1.80	-	28.60	3.25	-

BT-LE(1Mbps)

2440MHz_TX

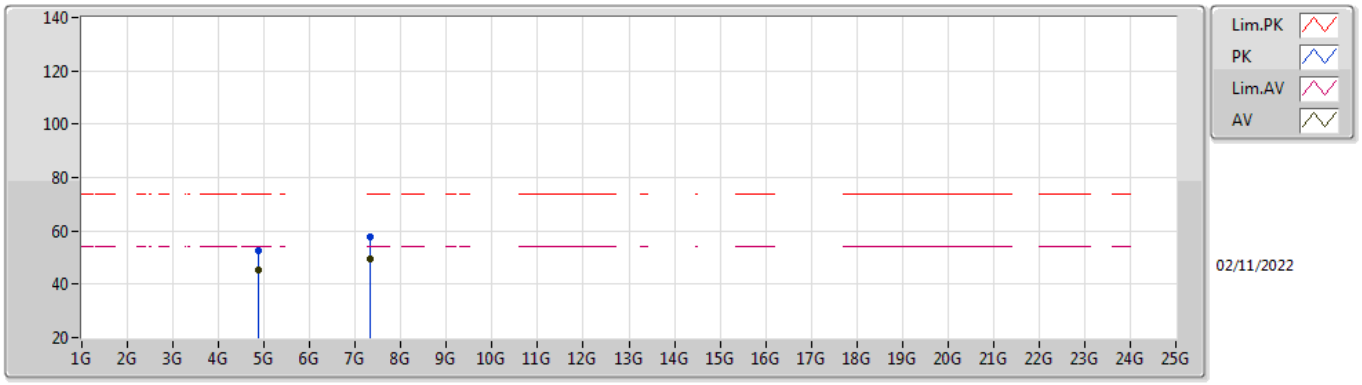


EUT X_1TX
Setting -2
02-B-R-5

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	4.87986G	47.67	74.00	-26.33	39.65	3	Vertical	-0	1.80	-	33.16	5.64	30.78
AV	4.87992G	36.91	54.00	-17.09	28.89	3	Vertical	-0	1.80	-	33.16	5.64	30.78
PK	7.31942G	59.89	74.00	-14.11	48.54	3	Vertical	342	2.90	-	36.44	6.84	31.93
AV	7.3195G	51.70	54.00	-2.30	40.35	3	Vertical	342	2.90	-	36.44	6.84	31.93

BT-LE(1Mbps)

2440MHz_TX

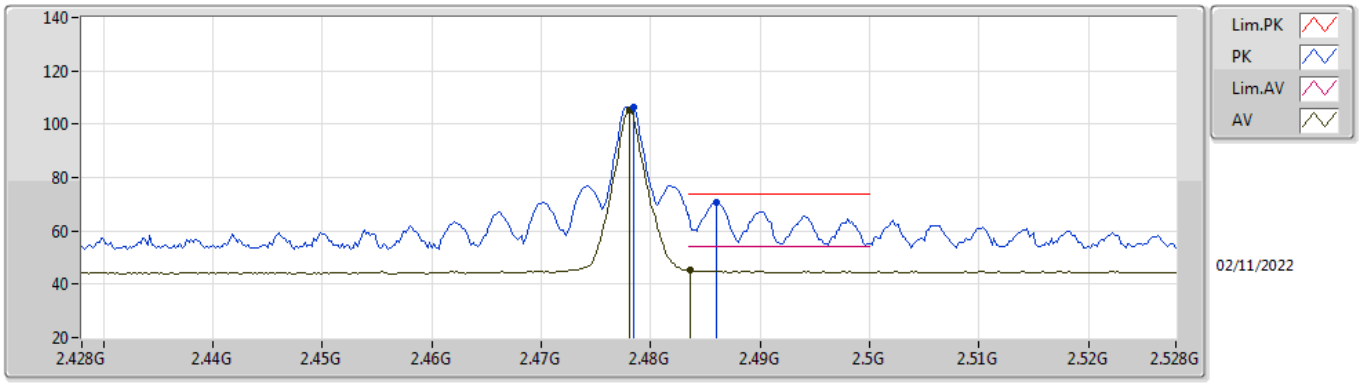


EUT X_1TX
Setting -2
02-B-R-5

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	4.88054G	52.54	74.00	-21.46	44.52	3	Horizontal	289	2.53	-	33.16	5.64	30.78
AV	4.88G	45.52	54.00	-8.48	37.50	3	Horizontal	289	2.53	-	33.16	5.64	30.78
PK	7.32076G	57.68	74.00	-16.32	46.33	3	Horizontal	218	1.90	-	36.44	6.84	31.93
AV	7.31938G	49.43	54.00	-4.57	38.08	3	Horizontal	218	1.90	-	36.44	6.84	31.93

BT-LE(1Mbps)

2478MHz_TX

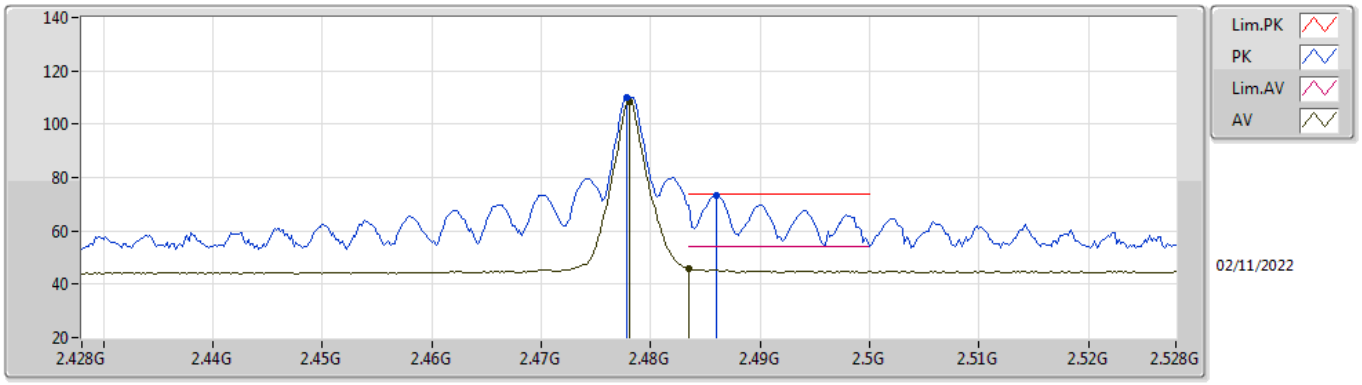


EUT X_1TX
Setting -8
02-B-R-5

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	2.4784G	106.55	Inf	-Inf	74.80	3	Vertical	297	1.80	-	28.51	3.24	-
AV	2.478G	105.14	Inf	-Inf	73.39	3	Vertical	297	1.80	-	28.51	3.24	-
PK	2.486G	70.93	74.00	-3.07	39.15	3	Vertical	297	1.80	-	28.54	3.24	-
AV	2.4836G	45.10	54.00	-8.90	13.33	3	Vertical	297	1.80	-	28.53	3.24	-

BT-LE(1Mbps)

2478MHz_TX

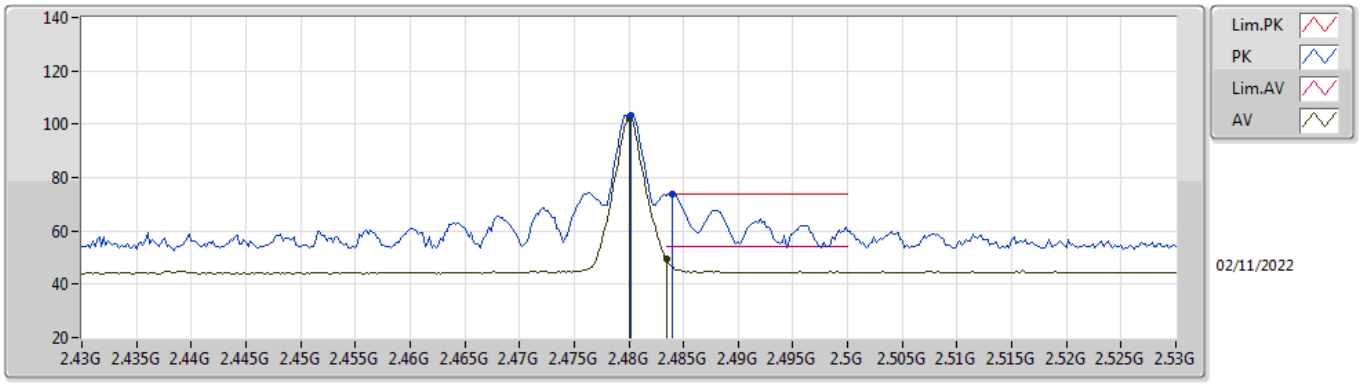


EUT X_1TX
Setting -8
02-B-R-5

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	2.4778G	109.94	Inf	-Inf	78.19	3	Horizontal	297	2.81	-	28.51	3.24	-
AV	2.478G	108.56	Inf	-Inf	76.81	3	Horizontal	297	2.81	-	28.51	3.24	-
PK	2.486G	73.39	74.00	-0.61	41.61	3	Horizontal	297	2.81	-	28.54	3.24	-
AV	2.4835G	45.76	54.00	-8.24	13.99	3	Horizontal	297	2.81	-	28.53	3.24	-

BT-LE(1Mbps)

2480MHz_TX

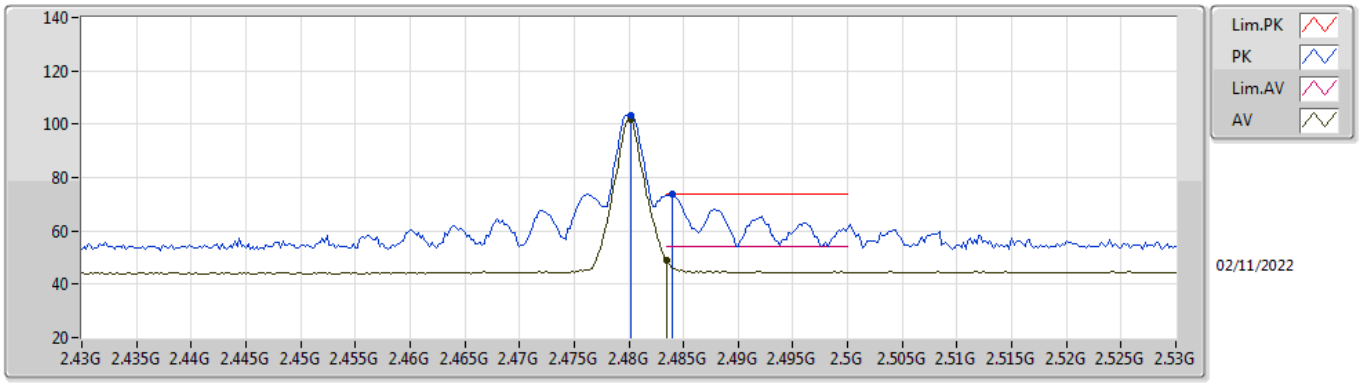


EUT X_1TX
Setting -15
02-B-R-5

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	2.4802G	103.45	Inf	-Inf	71.69	3	Vertical	61	2.60	-	28.52	3.24	-
AV	2.48G	102.04	Inf	-Inf	70.28	3	Vertical	61	2.60	-	28.52	3.24	-
PK	2.484G	73.89	74.00	-0.11	42.11	3	Vertical	61	2.60	-	28.54	3.24	-
AV	2.4835G	49.37	54.00	-4.63	17.60	3	Vertical	61	2.60	-	28.53	3.24	-

BT-LE(1Mbps)

2480MHz_TX

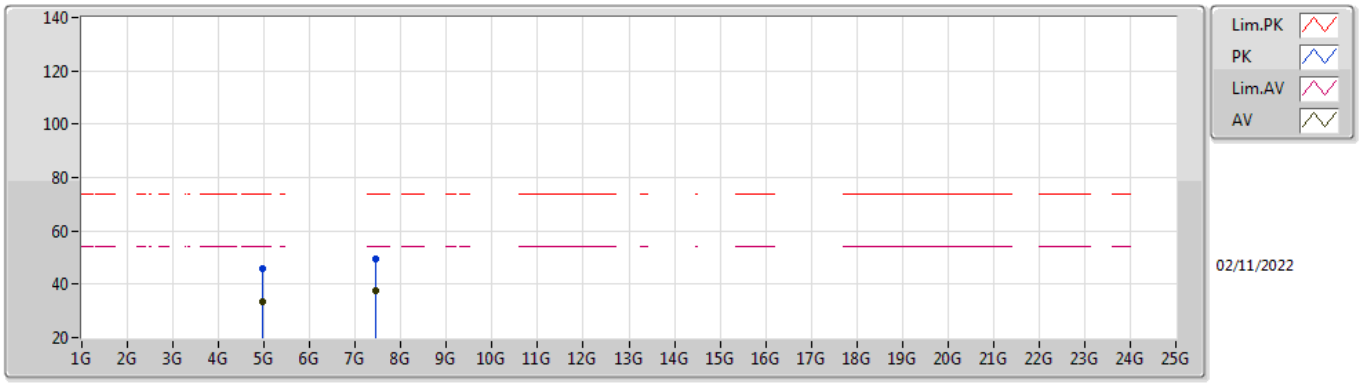


EUT X_1TX
Setting -15
02-B-R-5

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	2.4802G	103.05	Inf	-Inf	71.29	3	Horizontal	301	2.80	-	28.52	3.24	-
AV	2.4802G	101.61	Inf	-Inf	69.85	3	Horizontal	301	2.80	-	28.52	3.24	-
PK	2.484G	73.84	74.00	-0.16	42.06	3	Horizontal	301	2.80	-	28.54	3.24	-
AV	2.4835G	49.22	54.00	-4.78	17.45	3	Horizontal	301	2.80	-	28.53	3.24	-

BT-LE(1Mbps)

2480MHz_TX

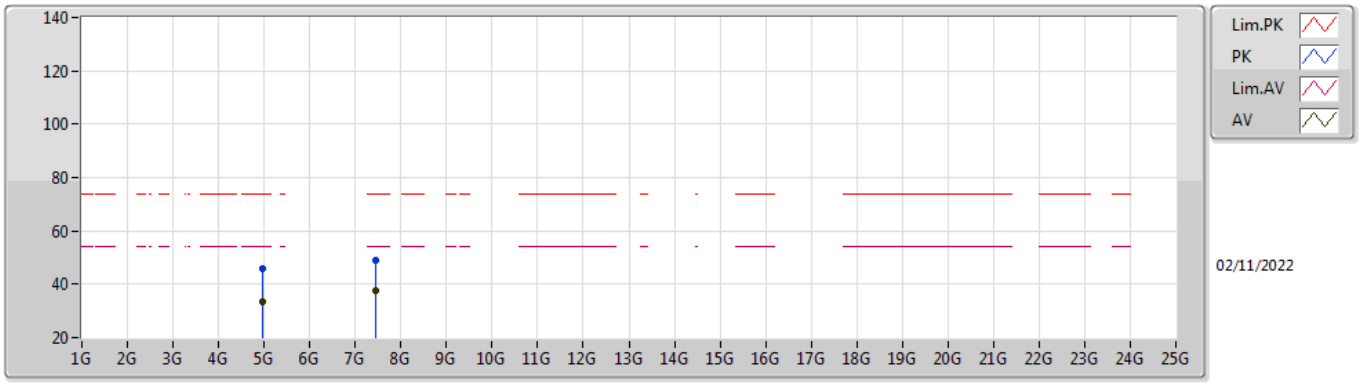


EUT X_1TX
Setting -15
02-B-R-5

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	4.95706G	45.77	74.00	-28.23	37.53	3	Vertical	115	1.79	-	33.31	5.68	30.75
AV	4.95592G	33.58	54.00	-20.42	25.34	3	Vertical	115	1.79	-	33.31	5.68	30.75
PK	7.44308G	49.61	74.00	-24.39	38.27	3	Vertical	11	1.74	-	36.50	6.84	32.00
AV	7.44012G	37.57	54.00	-16.43	26.23	3	Vertical	11	1.74	-	36.50	6.84	32.00

BT-LE(1Mbps)

2480MHz_TX

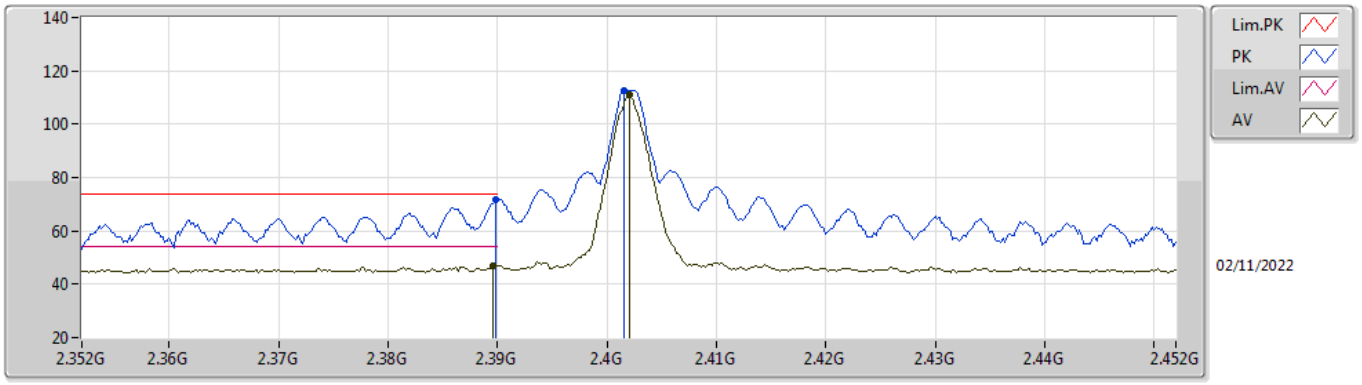


EUT X_1TX
Setting -15
02-B-R-5

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	4.95562G	45.78	74.00	-28.22	37.54	3	Horizontal	272	2.50	-	33.31	5.68	30.75
AV	4.95822G	33.44	54.00	-20.56	25.19	3	Horizontal	272	2.50	-	33.32	5.68	30.75
PK	7.43652G	49.04	74.00	-24.96	37.69	3	Horizontal	310	2.28	-	36.50	6.84	31.99
AV	7.43742G	37.38	54.00	-16.62	26.03	3	Horizontal	310	2.28	-	36.50	6.84	31.99

BT-LE(2Mbps)

2402MHz_TX

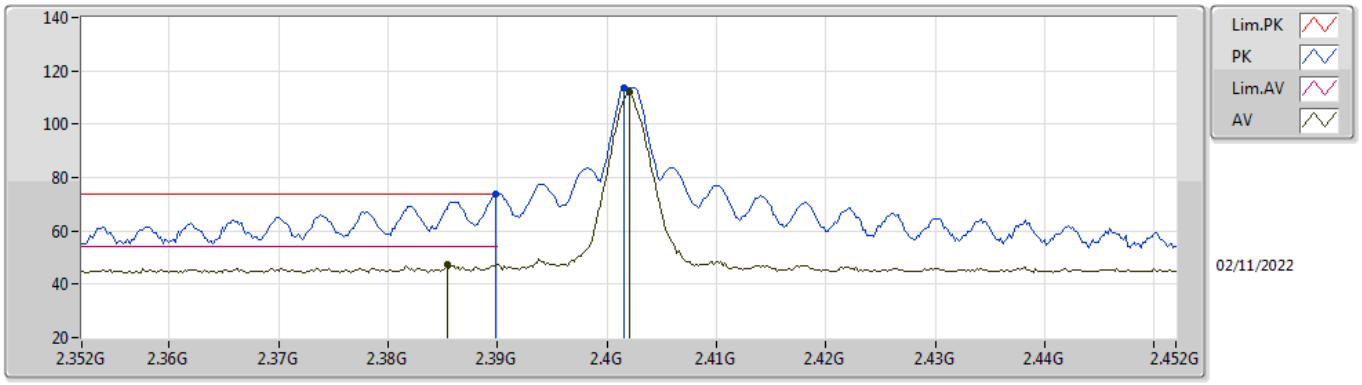


EUT X_1TX
Setting -6
02-F-G-4

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	2.3898G	71.82	74.00	-2.18	40.25	3	Vertical	98	1.97	-	28.38	3.19	-
AV	2.3896G	46.87	54.00	-7.13	15.30	3	Vertical	98	1.97	-	28.38	3.19	-
PK	2.4016G	112.77	Inf	-Inf	81.17	3	Vertical	98	1.97	-	28.40	3.20	-
AV	2.402G	111.00	Inf	-Inf	79.40	3	Vertical	98	1.97	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

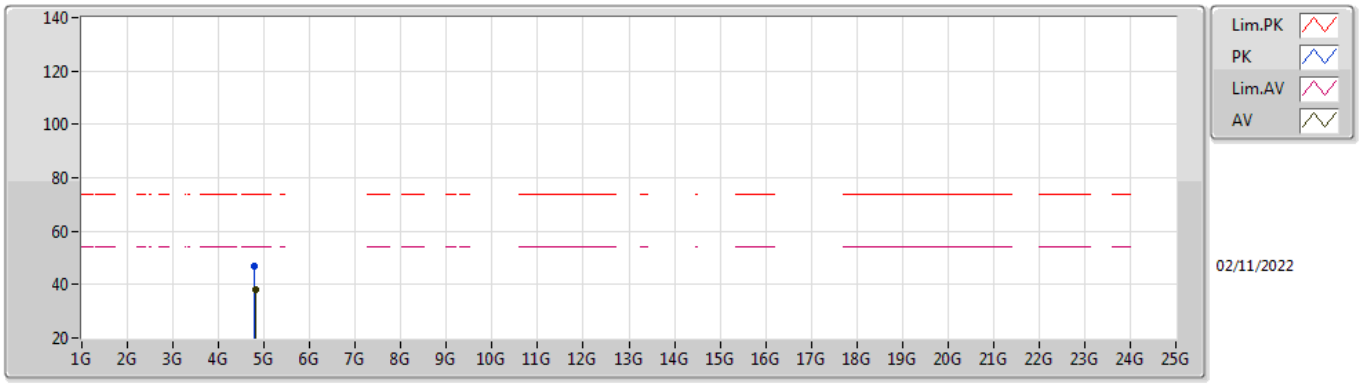


EUT X_1TX
Setting -6
02-F-G-4

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	2.3898G	73.83	74.00	-0.17	42.26	3	Horizontal	227	2.97	-	28.38	3.19	-
AV	2.3854G	47.42	54.00	-6.58	15.86	3	Horizontal	227	2.97	-	28.37	3.19	-
PK	2.4016G	113.82	Inf	-Inf	82.22	3	Horizontal	227	2.97	-	28.40	3.20	-
AV	2.402G	111.94	Inf	-Inf	80.34	3	Horizontal	227	2.97	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

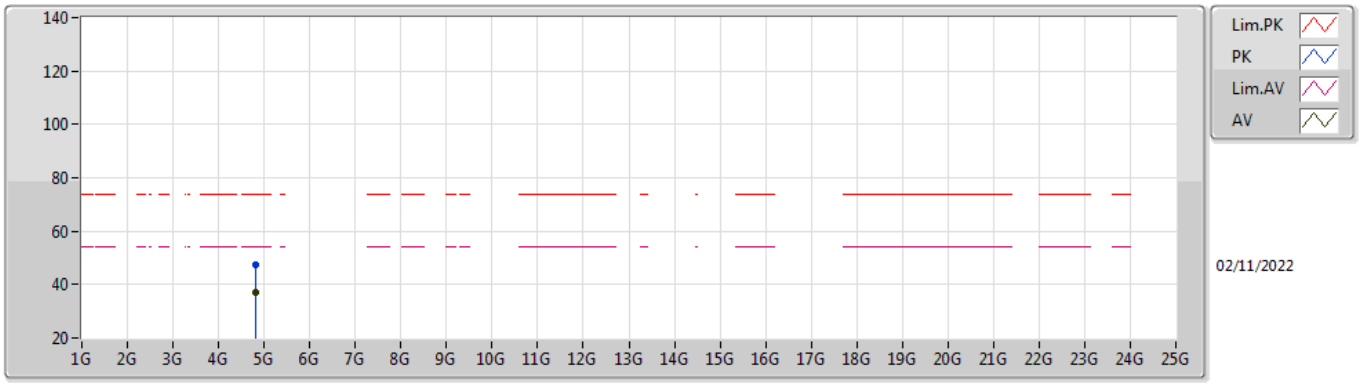


EUT X_1TX
Setting -6
02-F-G-4

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	4.7841G	47.05	74.00	-26.95	39.51	3	Vertical	210	1.80	-	32.77	5.59	30.82
AV	4.8039G	38.04	54.00	-15.96	30.43	3	Vertical	210	1.80	-	32.82	5.60	30.81

BT-LE(2Mbps)

2402MHz_TX

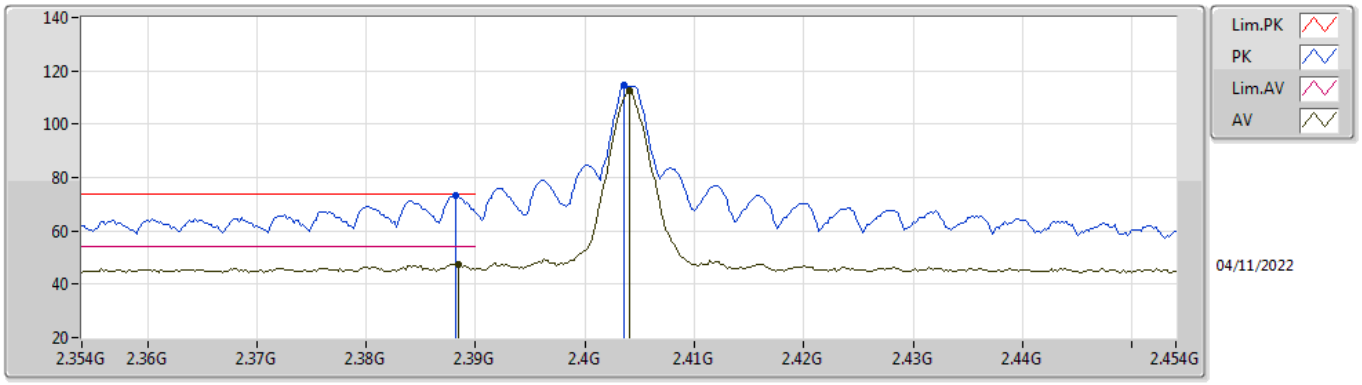


EUT X_1TX
Setting -6
02-F-G-4

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	4.8029G	47.29	74.00	-26.71	39.68	3	Horizontal	285	1.12	-	32.82	5.60	30.81
AV	4.8041G	37.18	54.00	-16.82	29.57	3	Horizontal	285	1.12	-	32.82	5.60	30.81

BT-LE(2Mbps)

2404MHz_TX

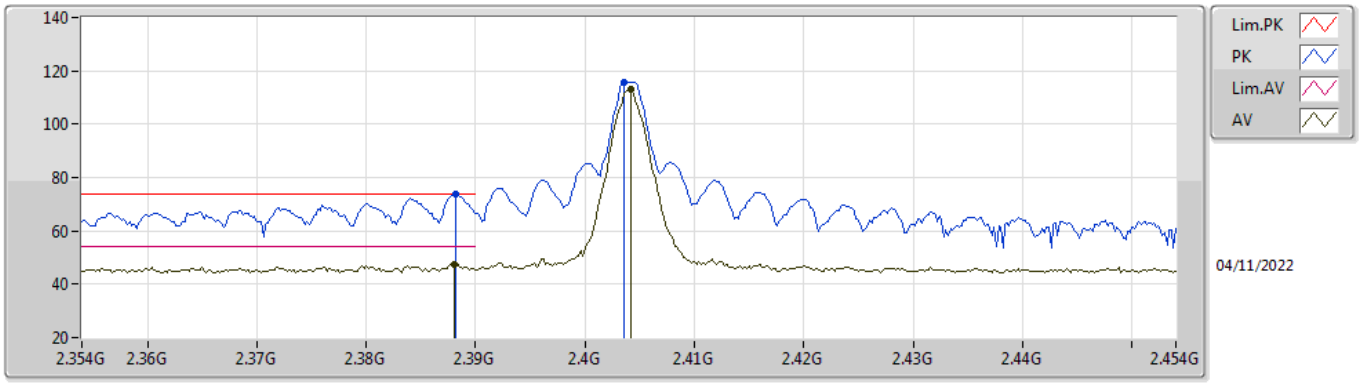


EUT X_1TX
Setting -3
02-B-R-5

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	2.3882G	73.45	74.00	-0.55	41.88	3	Vertical	54	2.44	-	28.38	3.19	-
AV	2.3884G	47.48	54.00	-6.52	15.91	3	Vertical	54	2.44	-	28.38	3.19	-
PK	2.4036G	114.45	Inf	-Inf	82.85	3	Vertical	54	2.44	-	28.40	3.20	-
AV	2.404G	112.46	Inf	-Inf	80.86	3	Vertical	54	2.44	-	28.40	3.20	-

BT-LE(2Mbps)

2404MHz_TX

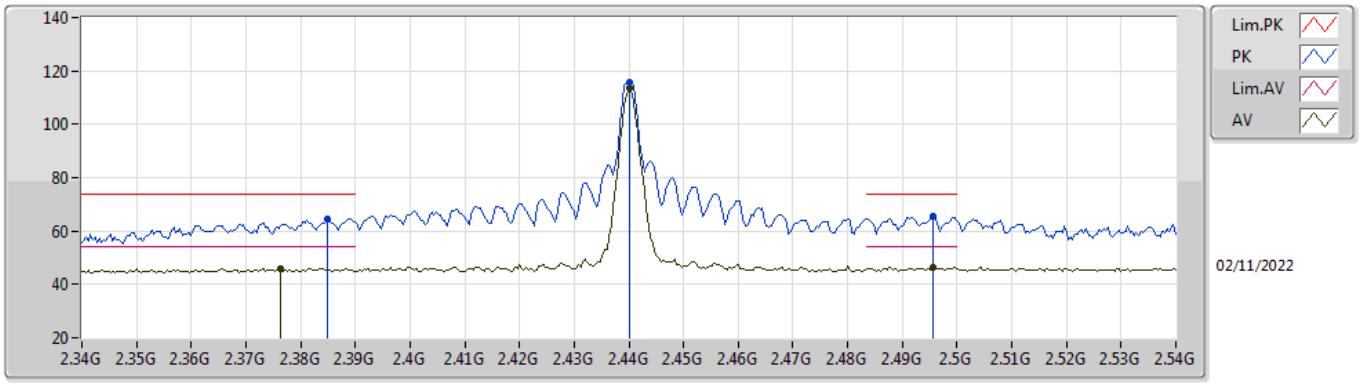


EUT X_1TX
Setting -3
02-B-R-5

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	2.3882G	73.55	74.00	-0.45	41.98	3	Horizontal	243	3.00	-	28.38	3.19	-
AV	2.388G	47.49	54.00	-6.51	15.92	3	Horizontal	243	3.00	-	28.38	3.19	-
PK	2.4036G	115.79	Inf	-Inf	84.19	3	Horizontal	243	3.00	-	28.40	3.20	-
AV	2.4042G	113.02	Inf	-Inf	81.42	3	Horizontal	243	3.00	-	28.40	3.20	-

BT-LE(2Mbps)

2440MHz_TX

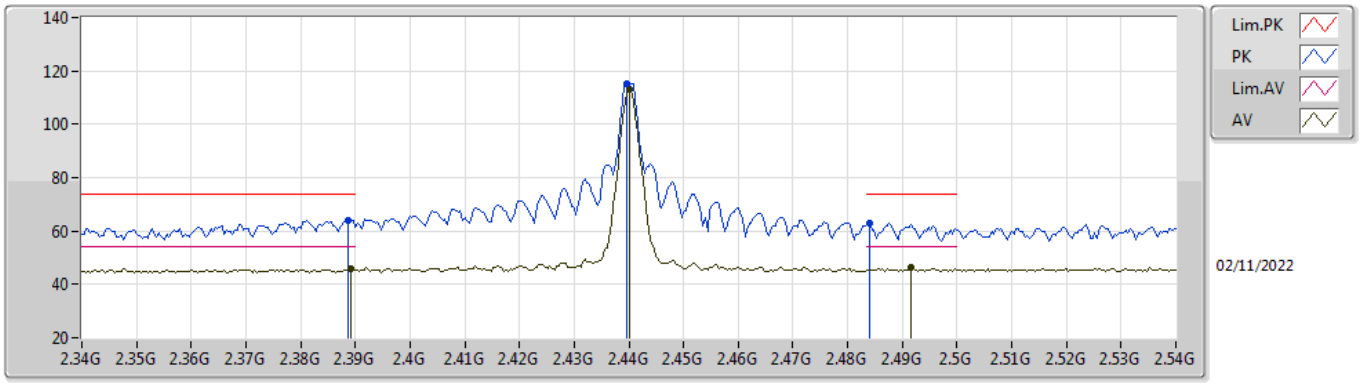


EUT X_1TX
Setting -3
02-F-G-4

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	2.3848G	64.58	74.00	-9.42	33.02	3	Vertical	126	2.65	-	28.37	3.19	-
AV	2.3764G	45.71	54.00	-8.29	14.17	3	Vertical	126	2.65	-	28.35	3.19	-
PK	2.44G	115.67	Inf	-Inf	84.05	3	Vertical	126	2.65	-	28.40	3.22	-
AV	2.44G	113.83	Inf	-Inf	82.21	3	Vertical	126	2.65	-	28.40	3.22	-
PK	2.4956G	65.34	74.00	-8.66	33.51	3	Vertical	126	2.65	-	28.58	3.25	-
AV	2.4956G	46.25	54.00	-7.75	14.42	3	Vertical	126	2.65	-	28.58	3.25	-

BT-LE(2Mbps)

2440MHz_TX

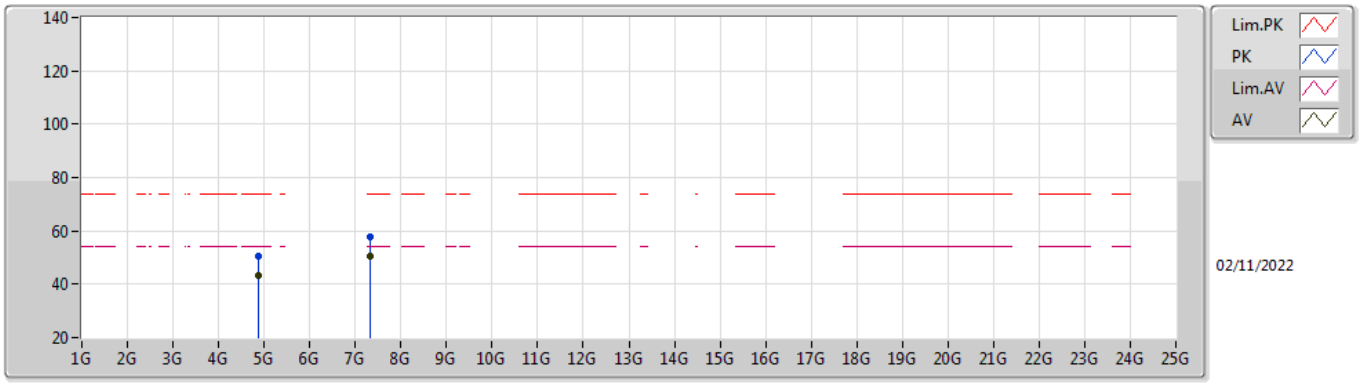


EUT X_1TX
Setting -3
02-F-G-4

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	2.3888G	64.19	74.00	-9.81	32.62	3	Horizontal	228	2.62	-	28.38	3.19	-
AV	2.3892G	46.05	54.00	-7.95	14.48	3	Horizontal	228	2.62	-	28.38	3.19	-
PK	2.4396G	115.38	Inf	-Inf	83.76	3	Horizontal	228	2.62	-	28.40	3.22	-
AV	2.44G	112.95	Inf	-Inf	81.33	3	Horizontal	228	2.62	-	28.40	3.22	-
PK	2.484G	63.17	74.00	-10.83	31.39	3	Horizontal	228	2.62	-	28.54	3.24	-
AV	2.4916G	46.45	54.00	-7.55	14.63	3	Horizontal	228	2.62	-	28.57	3.25	-

BT-LE(2Mbps)

2440MHz_TX

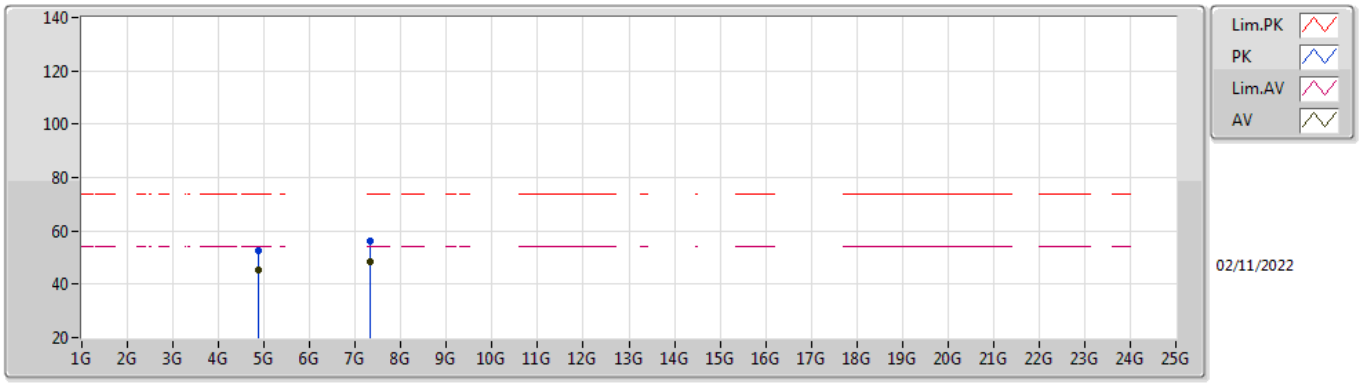


EUT X_1TX
Setting -3
02-F-G-4

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	4.87898G	50.42	74.00	-23.58	42.40	3	Vertical	42	1.00	-	33.16	5.64	30.78
AV	4.88006G	43.31	54.00	-10.69	35.29	3	Vertical	42	1.00	-	33.16	5.64	30.78
PK	7.32016G	57.80	74.00	-16.20	46.45	3	Vertical	346	2.72	-	36.44	6.84	31.93
AV	7.31992G	50.75	54.00	-3.25	39.40	3	Vertical	346	2.72	-	36.44	6.84	31.93

BT-LE(2Mbps)

2440MHz_TX

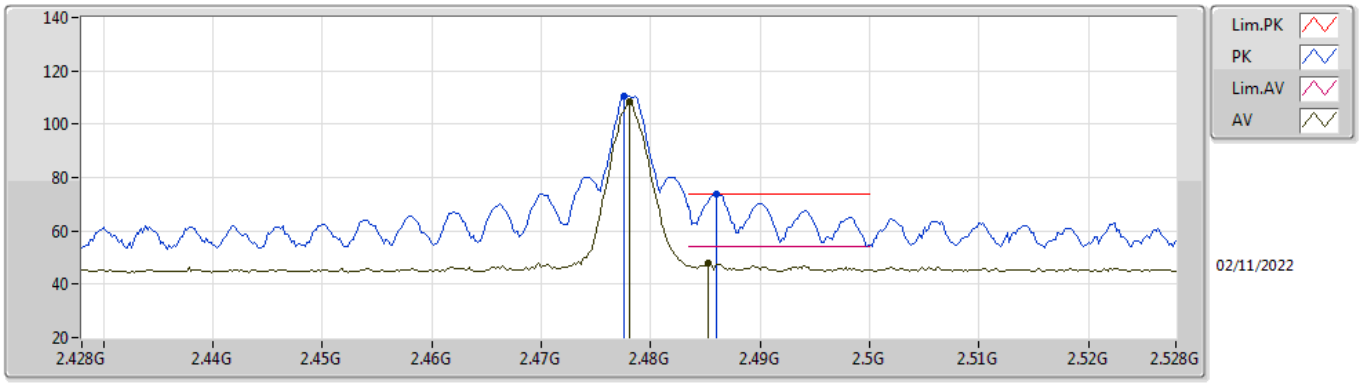


EUT X_1TX
Setting -3
02-F-G-4

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	4.88108G	52.42	74.00	-21.58	44.40	3	Horizontal	290	2.28	-	33.16	5.64	30.78
AV	4.87998G	45.52	54.00	-8.48	37.50	3	Horizontal	290	2.28	-	33.16	5.64	30.78
PK	7.32008G	56.09	74.00	-17.91	44.74	3	Horizontal	221	2.03	-	36.44	6.84	31.93
AV	7.3201G	48.33	54.00	-5.67	36.98	3	Horizontal	221	2.03	-	36.44	6.84	31.93

BT-LE(2Mbps)

2478MHz_TX

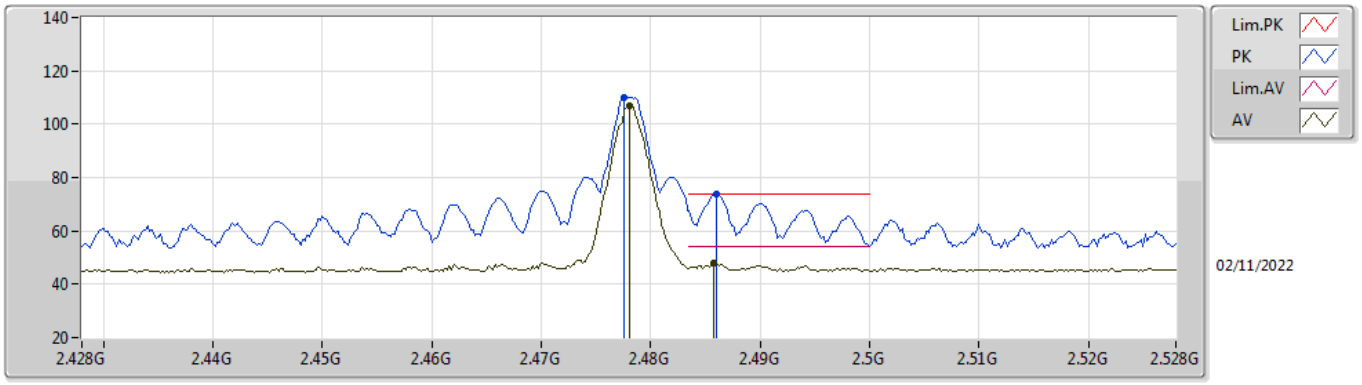


EUT X_1TX
Setting -8
02-F-G-4

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	2.4776G	110.33	Inf	-Inf	78.58	3	Vertical	188	1.06	-	28.51	3.24	-
AV	2.478G	108.44	Inf	-Inf	76.69	3	Vertical	188	1.06	-	28.51	3.24	-
PK	2.486G	73.92	74.00	-0.08	42.14	3	Vertical	188	1.06	-	28.54	3.24	-
AV	2.4852G	47.75	54.00	-6.25	15.97	3	Vertical	188	1.06	-	28.54	3.24	-

BT-LE(2Mbps)

2478MHz_TX

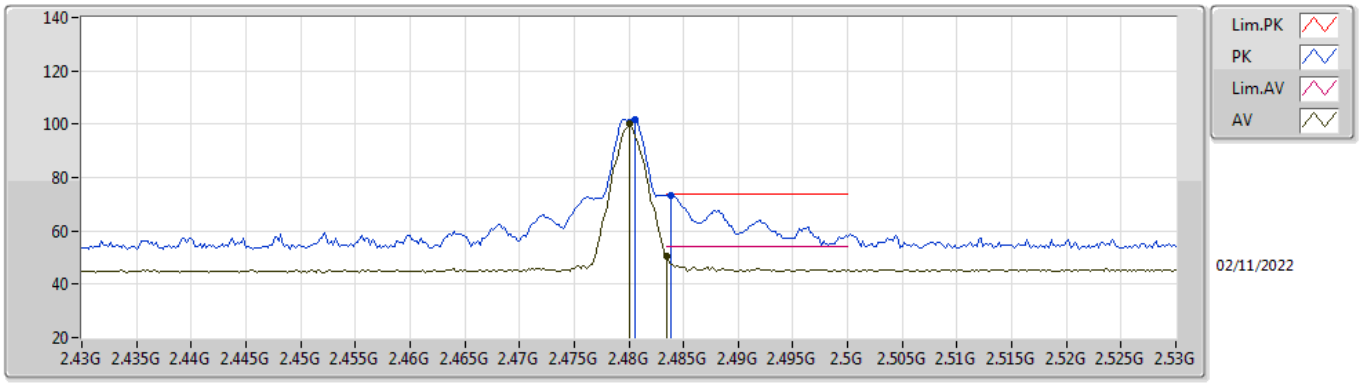


EUT X_1TX
Setting -8
02-F-G-4

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	2.4776G	110.02	Inf	-Inf	78.27	3	Horizontal	234	2.85	-	28.51	3.24	-
AV	2.478G	106.98	Inf	-Inf	75.23	3	Horizontal	234	2.85	-	28.51	3.24	-
PK	2.486G	73.85	74.00	-0.15	42.07	3	Horizontal	234	2.85	-	28.54	3.24	-
AV	2.4858G	47.91	54.00	-6.09	16.13	3	Horizontal	234	2.85	-	28.54	3.24	-

BT-LE(2Mbps)

2480MHz_TX

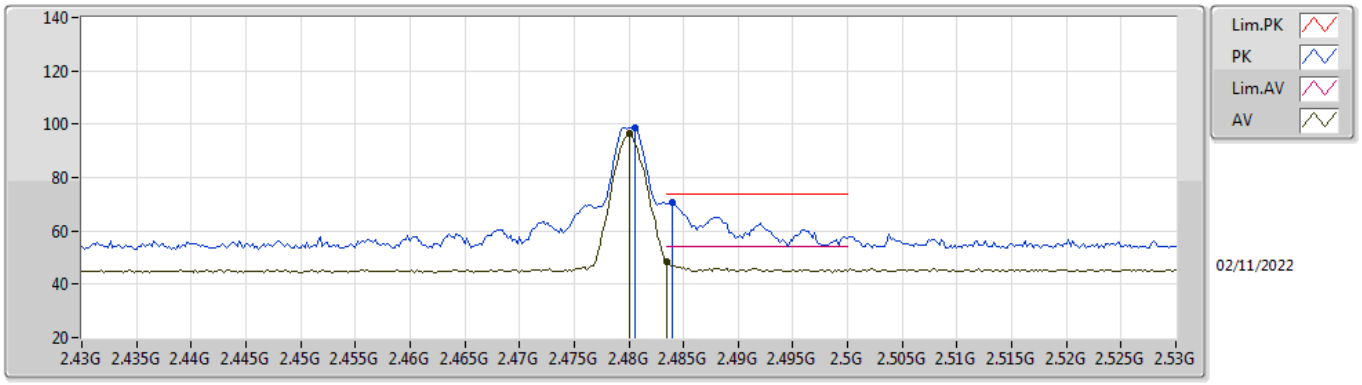


EUT X_1TX
Setting -17
02-F-G-4

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	2.4806G	101.93	Inf	-Inf	70.17	3	Vertical	139	2.63	-	28.52	3.24	-
AV	2.48G	99.99	Inf	-Inf	68.23	3	Vertical	139	2.63	-	28.52	3.24	-
PK	2.4838G	73.34	74.00	-0.66	41.56	3	Vertical	139	2.63	-	28.54	3.24	-
AV	2.4835G	50.46	54.00	-3.54	18.69	3	Vertical	139	2.63	-	28.53	3.24	-

BT-LE(2Mbps)

2480MHz_TX

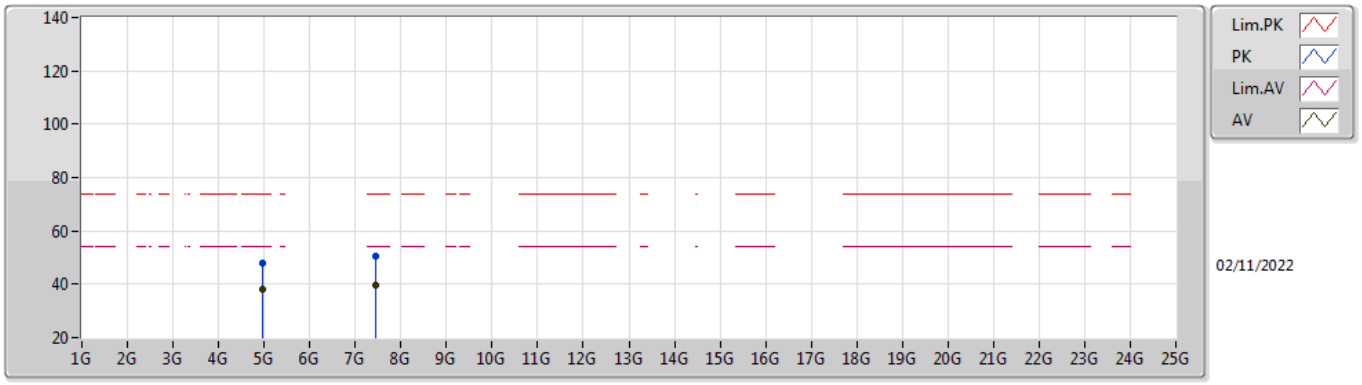


EUT X_1TX
Setting -17
02-F-G-4

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	2.4806G	98.74	Inf	-Inf	66.98	3	Horizontal	234	2.63	-	28.52	3.24	-
AV	2.48G	96.76	Inf	-Inf	65.00	3	Horizontal	234	2.63	-	28.52	3.24	-
PK	2.484G	70.61	74.00	-3.39	38.83	3	Horizontal	234	2.63	-	28.54	3.24	-
AV	2.4835G	48.26	54.00	-5.74	16.49	3	Horizontal	234	2.63	-	28.53	3.24	-

BT-LE(2Mbps)

2480MHz_TX

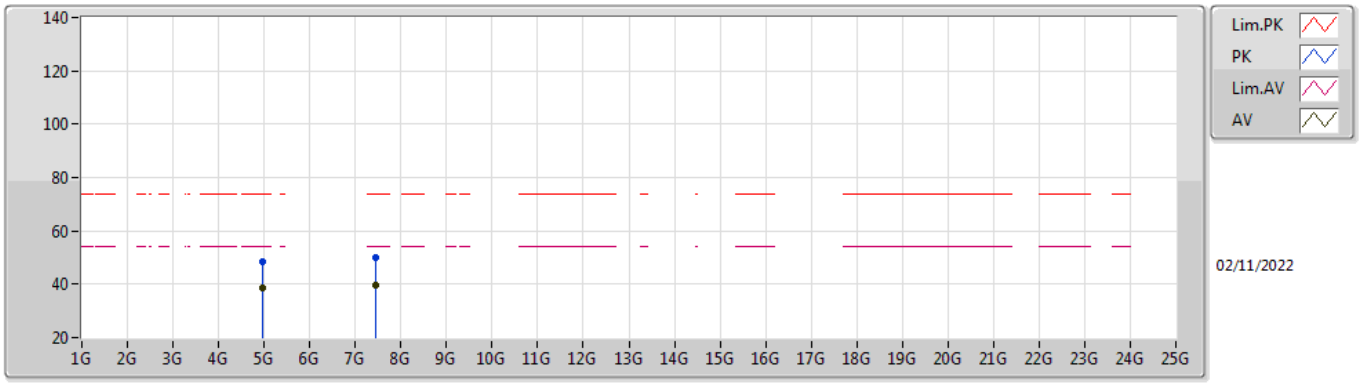


EUT X_1TX
Setting -17
02-F-G-4

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	4.9601G	47.80	74.00	-26.20	39.55	3	Vertical	352	3.00	-	33.32	5.68	30.75
AV	4.96008G	38.32	54.00	-15.68	30.07	3	Vertical	352	3.00	-	33.32	5.68	30.75
PK	7.4395G	50.69	74.00	-23.31	39.34	3	Vertical	215	1.80	-	36.50	6.84	31.99
AV	7.44242G	39.47	54.00	-14.53	28.13	3	Vertical	215	1.80	-	36.50	6.84	32.00

BT-LE(2Mbps)

2480MHz_TX



EUT X_1TX
Setting -17
02-F-G-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	4.96014G	48.36	74.00	-25.64	40.11	3	Horizontal	266	2.33	-	33.32	5.68	30.75
AV	4.9601G	38.69	54.00	-15.31	30.44	3	Horizontal	266	2.33	-	33.32	5.68	30.75
PK	7.43574G	50.14	74.00	-23.86	38.79	3	Horizontal	238	1.80	-	36.50	6.84	31.99
AV	7.44084G	39.60	54.00	-14.40	28.26	3	Horizontal	238	1.80	-	36.50	6.84	32.00