Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	TLZ-XM549
Equipment	:	IEEE 802.11 1X1 a/b/g/n/ac/ax Wireless LAN + Bluetooth 5.3 + 802.15.4 Tri-radio 12 x 12 LGA Module
Brand Name	:	AzureWave
Model Name	:	AW-XM549 , AW-XM549-I , AW-XM553 , AW-XM553-I
Applicant	:	AzureWave Technologies, Inc. 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231
Manufacturer	:	AzureWave Technologies, Inc. 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231
Standard	:	47 CFR FCC Part 15.247

The product was received on Dec. 16, 2022, and testing was started from Dec. 16, 2022 and completed on Sep. 13, 2023. 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
FR2O0715AC	01	Initial issue of report	Oct. 12, 2023

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)	20dB Bandwidth	PASS	-
3.2	15.247(a)	Carrier Frequency Separation	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Band edge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen
Report Producer: Viola Huang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number
2400-2483.5	BR / EDR	2402-2480	0-78 [79]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR	1	1
2.4-2.4835GHz	BT-EDR	1	1

Note:
- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of π/4-DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA Antenna	I-PEX	Note1
2	1	CEL	0032-02-07-00-001	PIFA Antenna	I-PEX	

Note1:

Ant.	Gain (dBi)	
	WLAN 2.4GHz/Bluetooth/Thread	WLAN 5GHz
1	2.98	5.16
2	1.30	4.30

Note 2: The above information was declared by manufacturer.
Note 3: The EUT has two antennas. Only the highest gain antenna was selected to test and record in this report. Thus, Antenna 1 was selected to perform the test.

<For WLAN 2.4GHz function>

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

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

<For WLAN 5GHz function>

For IEEE 802.11a/n/ac/ax (1TX/1RX):

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

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

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

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

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.771	1.13	2.895m	1k
BT-EDR(3Mbps)	0.77	1.14	2.891m	1k

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

1.1.4 EUT Operational Condition

EUT Power Type	From host system
Test Software Version	DutApiMimoApApp(1.0.0.32)

1.1.5 Table for Multiple Listing

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

Model Name	Description
AW-XM549	All the models are identical, the difference model served as marketing strategy.
AW-XM549-I	
AW-XM553	
AW-XM553-I	

Note 1: From the above models, model: AW-XM549 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.6 Table for EUT Combination

EUT	Hardware Version	Description
1	01H	The difference between 01H and 02H is the layout of DC-DC power. All RF layouts are the same.
2	02H	

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

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

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

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Sean Ku	22.4~22.6 / 52~59	Dec. 20, 2022~Jan. 18, 2023
Radiated below 1GHz	03CH01-CB	Black Lu	22.7~24 / 57~61	Jun. 16, 2023 ~ Aug. 16, 2023
Radiated above 1GHz	03CH01-CB	Ederson Huang	22~23.9 / 57~63	Dec. 16, 2022~Jan. 17, 2023
AC Conduction	CO01-CB	Ryan Huang	22~23 / 50~51	Sep. 01, 2023~Sep. 13, 2023

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)

For test date before Jun. 01, 2023

Test Items	Uncertainty	Remark
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%

For test date after May 31, 2023

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	12
2440MHz	12
2480MHz	12
BT-EDR(2Mbps)	-
2402MHz	12
2440MHz	12
2480MHz	12
BT-EDR(3Mbps)	-
2402MHz	12
2440MHz	12
2480MHz	12

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 2 + WLAN 2.4GHz + Bluetooth
2	EUT 2 + WLAN 5GHz + Bluetooth
3	EUT 2 + Thread
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT 1 + Thread
For operating mode 3 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequencies Hopping Bandedge Time of Occupancy (Dwell Time) 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 2 in X axis + WLAN 2.4GHz + Bluetooth
2	EUT 2 in Y axis + WLAN 2.4GHz + Bluetooth
3	EUT 2 in Z axis + WLAN 2.4GHz + Bluetooth
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT 2 in Z axis + WLAN 5GHz + Bluetooth
Mode 4 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode.	
5	EUT 1 in Z axis + WLAN 5GHz + Bluetooth
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 6~7 will follow this same test mode.	
6	EUT 2 in Z axis + Thread
7	EUT 1 in Z axis + Thread
For operating mode 7 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. The worst-case was listed below, thus the measurement will follow this same test configuration.
1	EUT 2 in X axis

Note: The WLAN and Bluetooth function can't work at the same time.

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	EUT NB	ACER	N16Q1	N/A
B	Earphone	SHYARO CHI	MIC-04	N/A
C	Mouse	Logitech	M-U0026	N/A
D	Test Fixture	Azurewave	2460-I4	N/A
E	Client NB	DELL	E6430	N/A
F	Client	Azurewave	AW-XM549	N/A
G	Test Fixture	Azurewave	2460-I4	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Test Fixture	Azurewave	2460-I4	N/A
B	Notebook	DELL	E6230	N/A
C	Client	Azurewave	AW-XM549	N/A
D	Test Fixture	Azurewave	2460-I4	N/A
E	Notebook	DELL	E6230	N/A
F	Earphone	e-Power	S90W	N/A
G	Mouse	Logitech	M-U0026	N/A

For Radiated (above 1GHz):

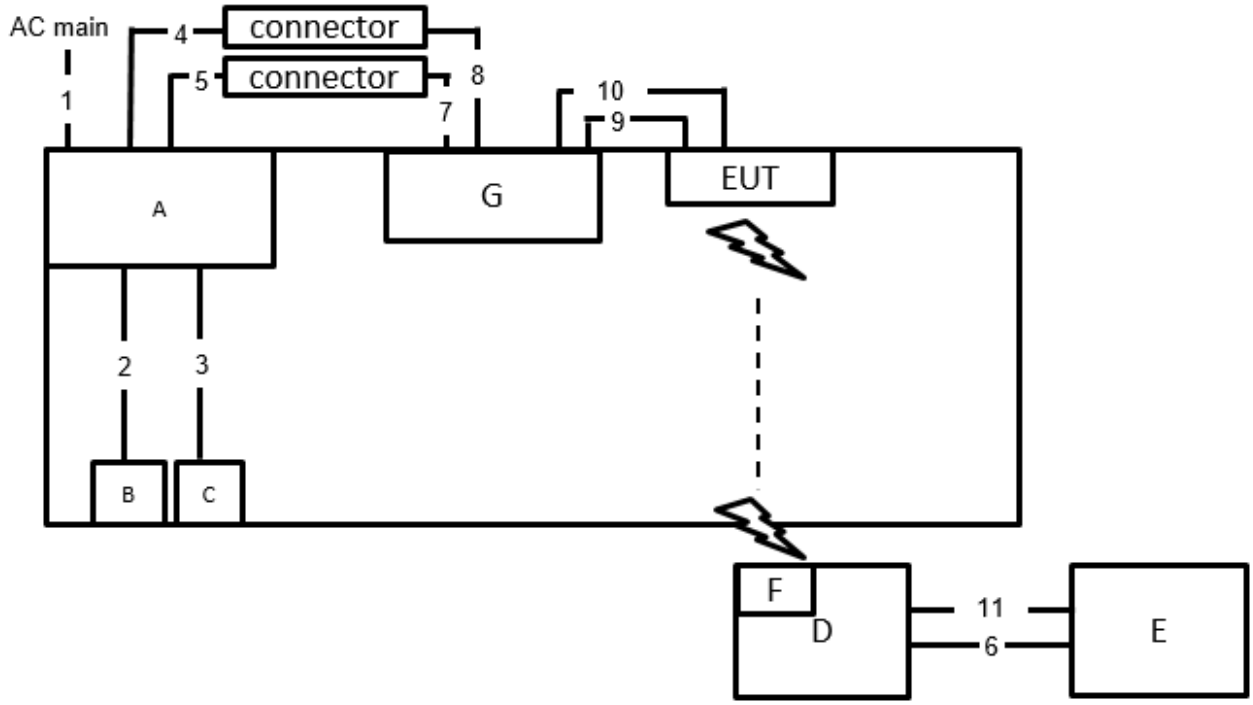
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Notebook	ACER	JALA0	N/A
C	Test Fixture	Azurewave	2510-I1	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	ACER	E4730	N/A
B	Notebook	DELL	E4300	N/A
C	Test Fixture	Azurewave	2510-I1	N/A

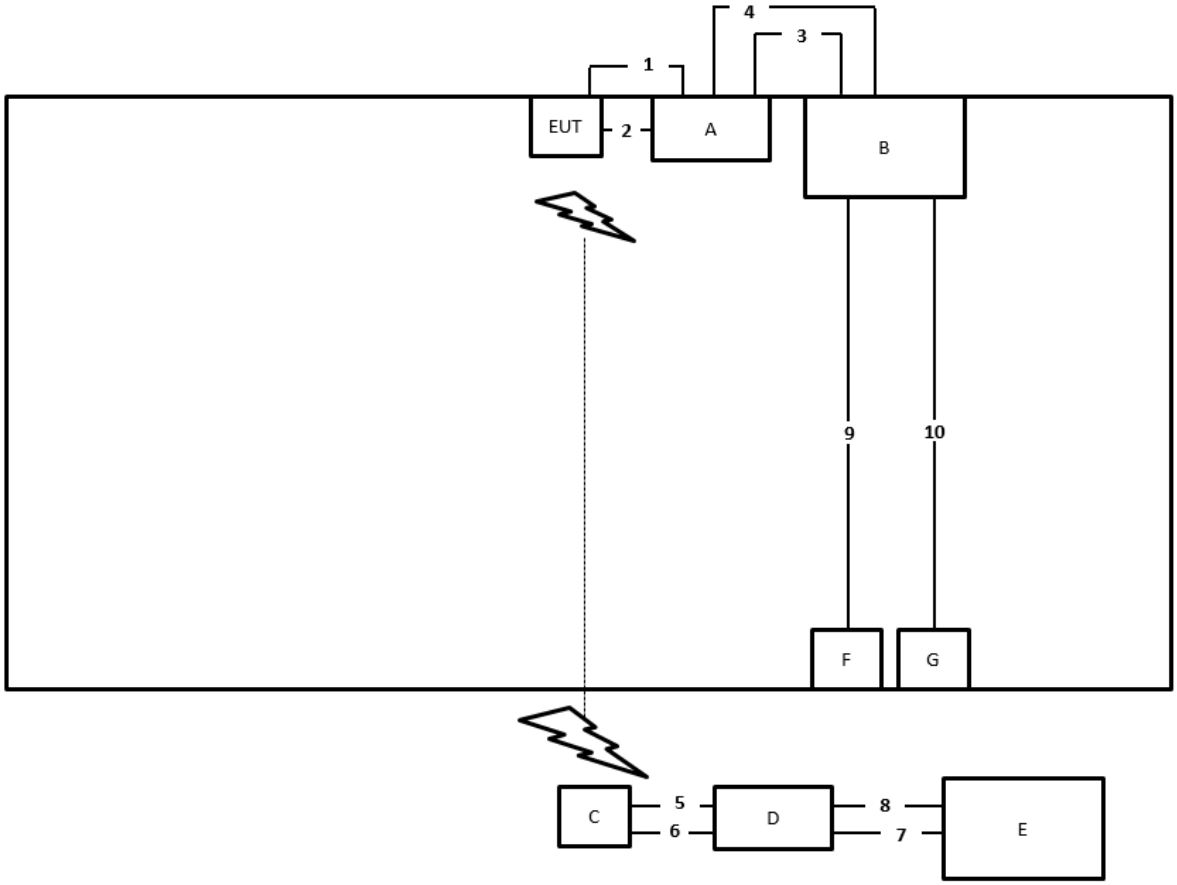
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



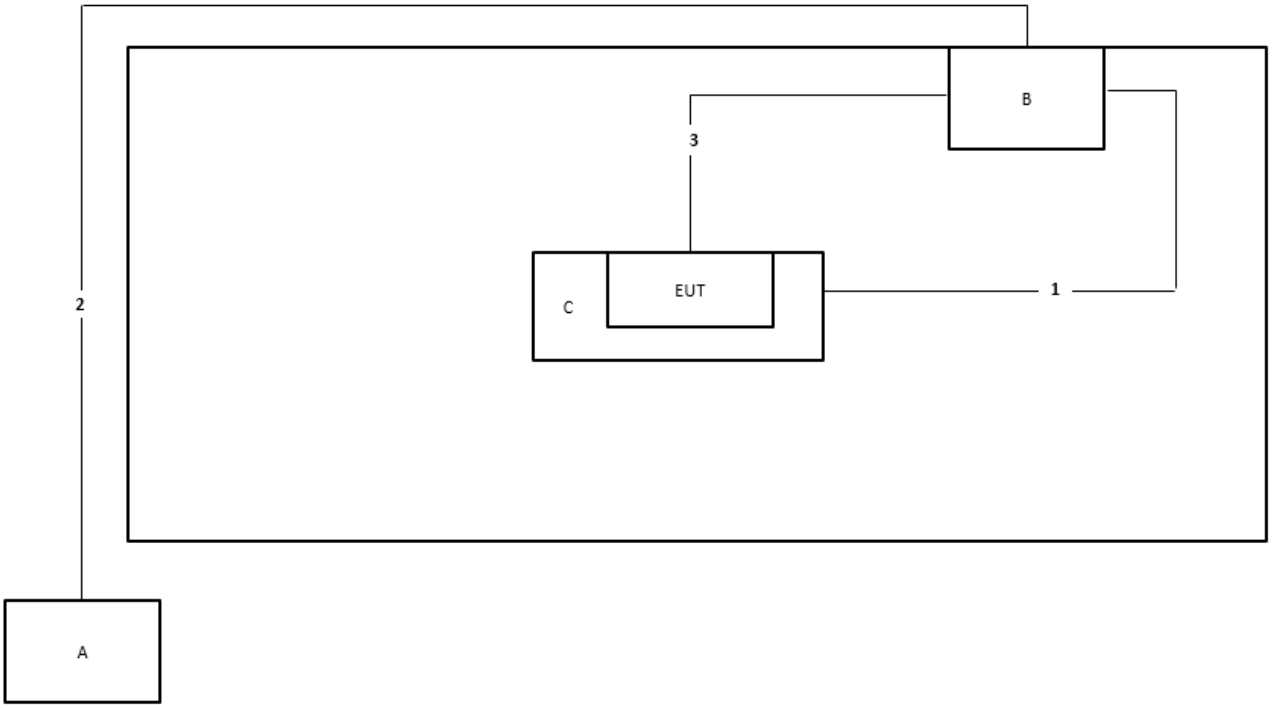
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	Audio cable	No	1.2m
3	USB cable	Yes	1.8m
4	USB cable	Yes	1.7m
5	USB cable	Yes	1.7m
6	USB cable	Yes	0.5m
7	USB cable	Yes	0.5m
8	USB cable	Yes	0.5m
9	Type C to Micro USB cable	Yes	0.6m
10	Dupont cable	No	0.2m
11	USB cable	Yes	0.7m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	USB to Type C cable	Yes	1m
2	Console cable*7	No	0.13m
3	USB to Type C cable	Yes	1m
4	Micro USB to Micro cable	Yes	0.12m
5	USB to Type C cable	Yes	1m
6	Console cable*7	No	0.13m
7	USB to Type C cable	Yes	1m
8	Micro USB to Micro cable	Yes	0.12m
9	Earphone	No	1m
10	Mouse	Yes	1m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	USB to Micro cable	Yes	0.5m
2	RJ-45 cable	No	10m
3	USB to Micro cable	Yes	0.5m

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

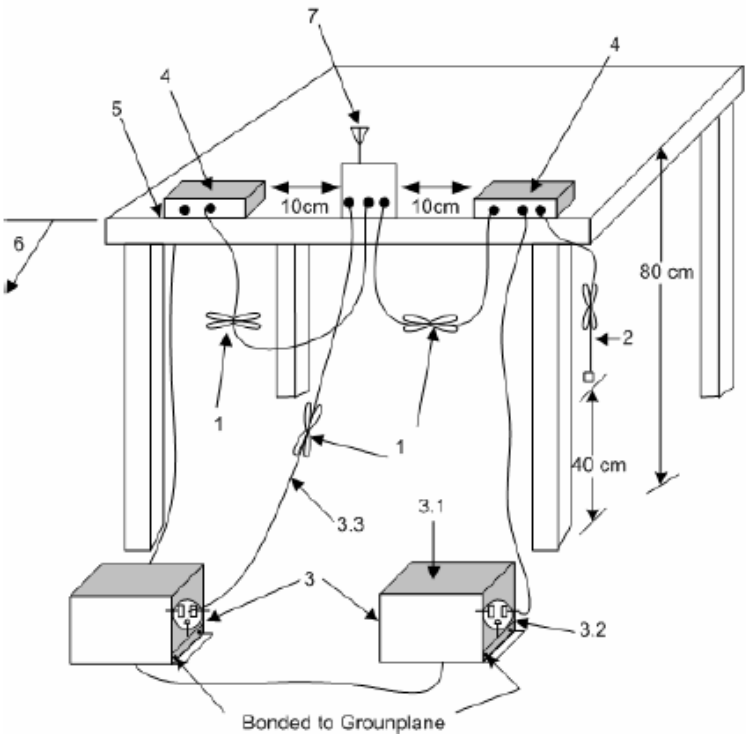
Refer a test equipment and calibration data table in this test report.

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

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 20dB Bandwidth and Carrier Frequency Separation

3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems
▪ 902-928 MHz Band:
▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz.
▪ 50 >N≥25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz.
▪ 2400-2483.5 MHz Band:
▪ N ≥75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz).
▪ 75>N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz).
▪ 5725-5850 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz.
N:Number of Hopping Frequencies; **ChS**: Hopping Channel Separation

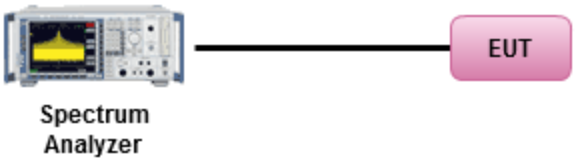
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.9.1 for 20 dB bandwidth measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.2.4 Test Setup

20dB Bandwidth and Carrier Frequency Separation


3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit
▪ 902-928 MHz Band:
▪ N ≥50; Power 30dBm; EIRP 36dBm
▪ 50 >N≥ 25; Power 23.98dBm; EIRP 29.98dBm
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75; Power 30dBm; EIRP 36dBm
▪ 75 >N ≥ 15; Power 21dBm; EIRP 27dBm
▪ 5725-5850 MHz Band:
▪ N ≥ 75; Power 30dBm; EIRP 36dBm
N:Number of Hopping Frequencies

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement.

3.3.4 Test Setup

Maximum Conducted Output Power (Peak Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit
▪ 902-928 MHz Band:
▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz.
▪ 50 >N≥ 25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz.
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz).
▪ 75 >N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz).
▪ 5725-5850 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz.
N:Number of Hopping Frequencies; **ChS** : Hopping Channel Separation

3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

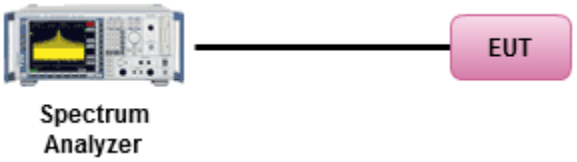
3.4.3 Measuring Instruments

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

3.4.4 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

3.4.5 Test Setup

Number of Hopping Frequencies and Hopping Frequencies Bandedge


3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems
▪ 902-928 MHz Band:
▪ N ≥50; 0.4s in 20s period
▪ 50 >N≥ 25; 0.4s in 10s period
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75; 0.4s in N x 0.4 period
▪ 75 >N ≥ 15; 0.4s in N x 0.4 period
▪ 5725-5850 MHz Band:
▪ N ≥ 75; 0.4s in 30s period
N:Number of Hopping Frequencies

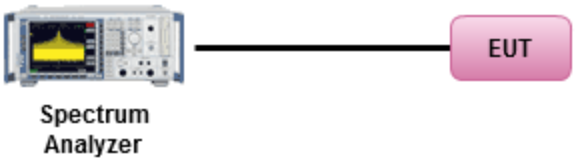
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.
▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle.
▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms.DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel.

3.5.4 Test Setup

Time of Occupancy (Dwell Time)


3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

3.6 Emissions in Non-restricted Frequency Bands

3.6.1 Emissions in Non-restricted Frequency Bands Limit

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

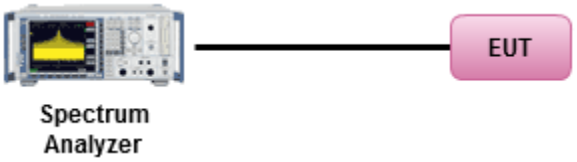
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.

3.6.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

3.7 Emissions in Restricted Frequency Bands

3.7.1 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.

3.7.2 Measuring Instruments

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

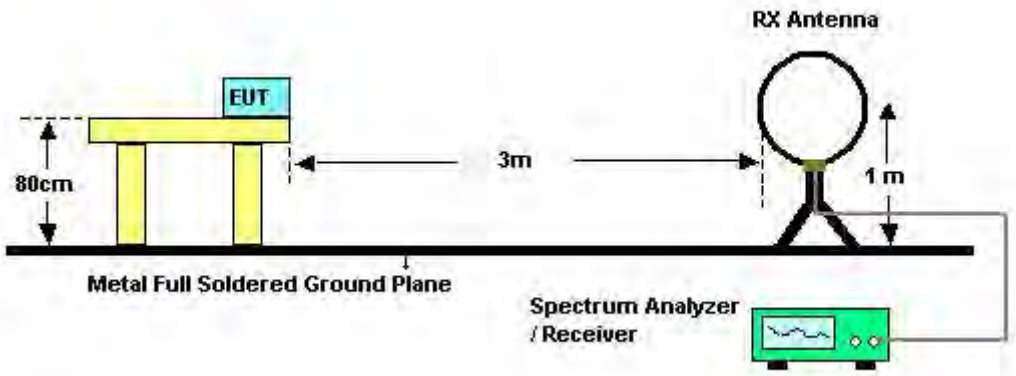
3.7.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [hopping 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 ANSI C63.10, clause 4.1.4.2.1 QP value.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.

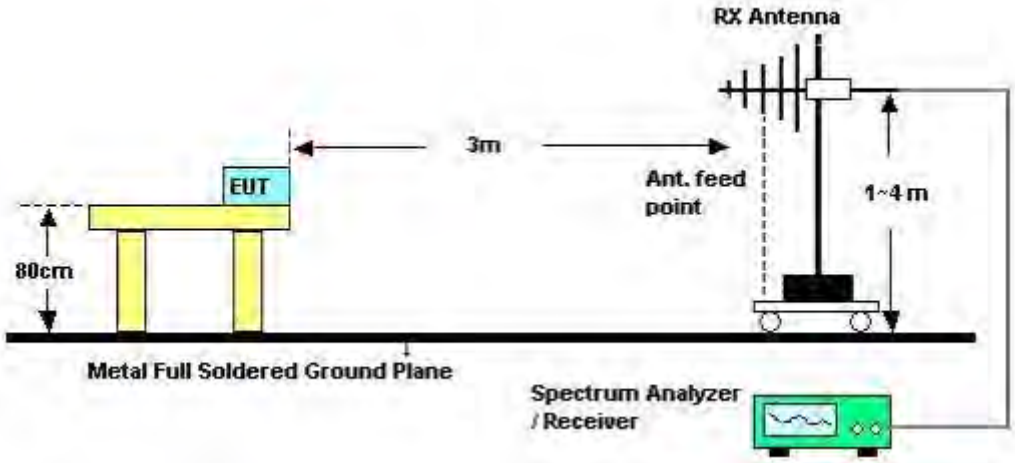
3.7.4 Test Setup

Emissions in Restricted Frequency Bands

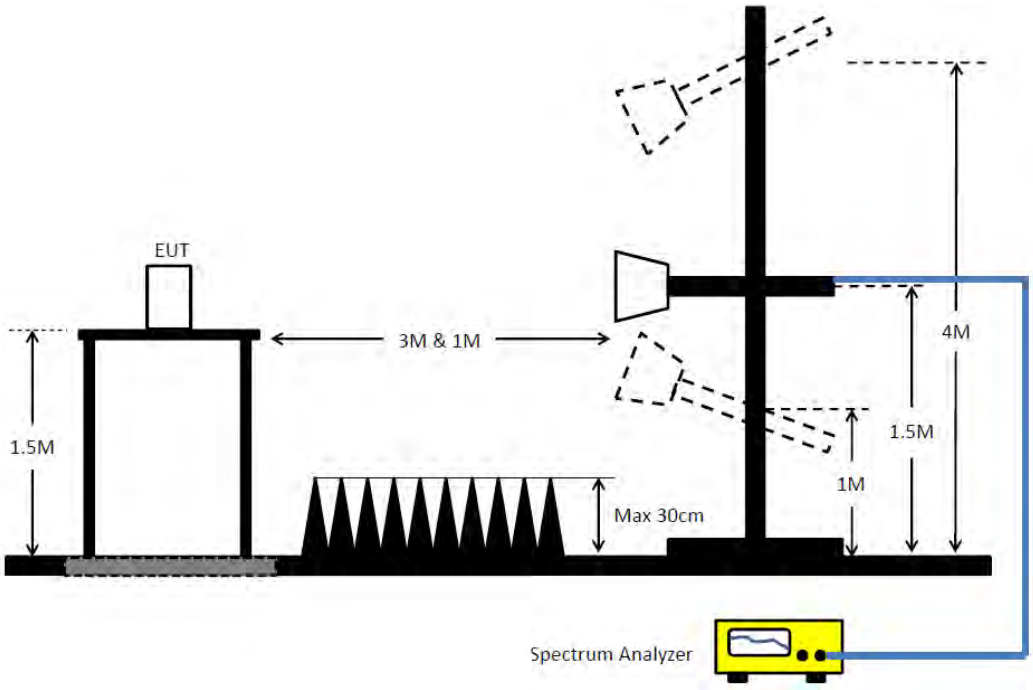
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.7.5 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.

3.7.6 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.

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

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. 20, 2023	Feb. 19, 2024	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 16, 2023	Feb. 15, 2024	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 09, 2023	Feb. 08, 2024	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	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. 23, 2023	Mar. 22, 2024	Radiation (03CH01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH01-CB	30 MHz ~ 1 GHz	Jan. 16, 2023	Jan. 15, 2024	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Feb. 19, 2023	Feb. 18, 2024	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 04, 2022	Nov. 03, 2023	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH0301	20230109-2	10M~1GHz	Jan. 13, 2023	Jan. 12, 2024	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 19, 2022	May 18, 2023	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 16, 2022	Nov. 15, 2023	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101437	10kHz ~ 44GHz	Nov. 29, 2022	Nov. 29, 2023	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2022	May 26, 2023	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 29, 2023	May 28, 2024	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 22, 2023	Feb. 21, 2024	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 22, 2023	Feb. 21, 2024	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

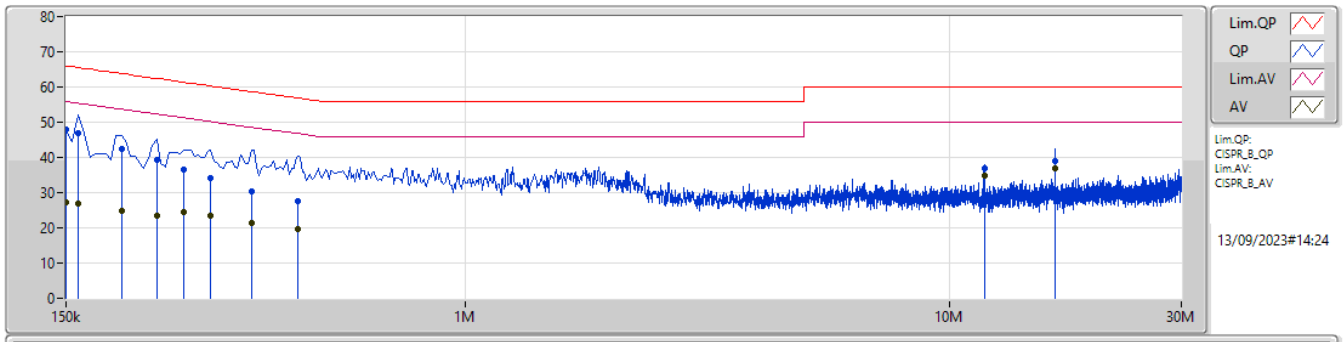
Note: Calibration Interval of instruments listed above is one year.

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

Summary

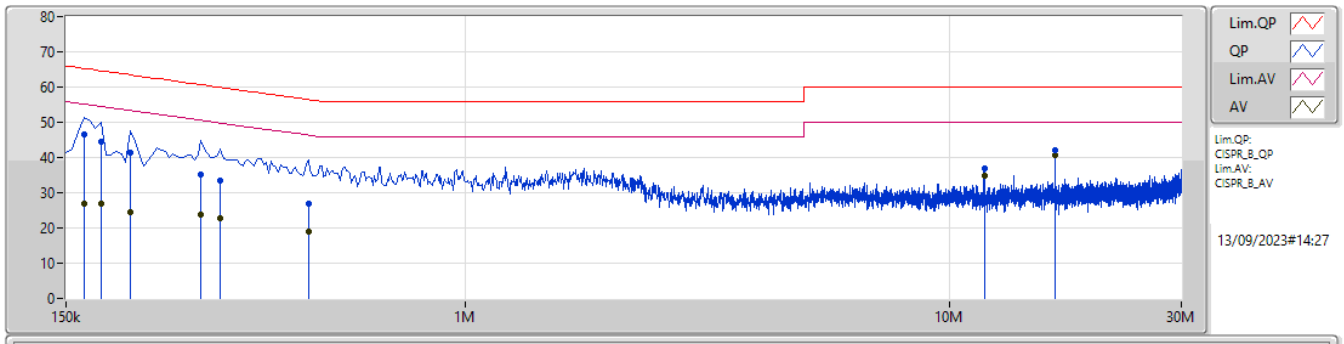
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	16.463M	40.53	50.00	-9.47	Neutral

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	48.00	66.00	-18.00	10.00	Line	-	38.00	0.09	0.04	9.87
AV	150k	27.10	56.00	-28.90	10.00	Line	-	17.10	0.09	0.04	9.87
QP	159k	46.84	65.52	-18.68	10.00	Line	-	36.84	0.09	0.04	9.87
AV	159k	26.89	55.52	-28.63	10.00	Line	-	16.89	0.09	0.04	9.87
QP	195k	42.35	63.82	-21.47	9.98	Line	-	32.37	0.08	0.04	9.86
AV	195k	24.92	53.82	-28.90	9.98	Line	-	14.94	0.08	0.04	9.86
QP	231k	39.17	62.41	-23.24	9.99	Line	-	29.18	0.08	0.04	9.87
AV	231k	23.45	52.41	-28.96	9.99	Line	-	13.46	0.08	0.04	9.87
QP	262.5k	36.53	61.35	-24.82	10.01	Line	-	26.52	0.08	0.05	9.88
AV	262.5k	24.59	51.35	-26.76	10.01	Line	-	14.58	0.08	0.05	9.88
QP	298.5k	34.18	60.28	-26.10	10.02	Line	-	24.16	0.09	0.05	9.88
AV	298.5k	23.28	50.28	-27.00	10.02	Line	-	13.26	0.09	0.05	9.88
QP	361.5k	30.49	58.70	-28.21	10.04	Line	-	20.45	0.09	0.06	9.89
AV	361.5k	21.26	48.70	-27.44	10.04	Line	-	11.22	0.09	0.06	9.89
QP	451.5k	27.55	56.84	-29.29	10.05	Line	-	17.50	0.09	0.06	9.90
AV	451.5k	19.58	46.84	-27.26	10.05	Line	-	9.53	0.09	0.06	9.90
QP	11.76M	36.79	60.00	-23.21	10.38	Line	-	26.41	0.26	0.16	9.96
AV	11.76M	34.94	50.00	-15.06	10.38	Line	-	24.56	0.26	0.16	9.96
QP	16.467M	38.83	60.00	-21.17	10.47	Line	-	28.36	0.29	0.19	9.99
AV	16.467M	36.92	50.00	-13.08	10.47	Line	"Worst"	26.45	0.29	0.19	9.99

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	163.5k	46.38	65.27	-18.89	9.98	Neutral	-	36.40	0.07	0.04	9.87
AV	163.5k	26.91	55.27	-28.36	9.98	Neutral	-	16.93	0.07	0.04	9.87
QP	177k	44.42	64.62	-20.20	9.98	Neutral	-	34.44	0.07	0.04	9.87
AV	177k	26.81	54.62	-27.81	9.98	Neutral	-	16.83	0.07	0.04	9.87
QP	204k	41.51	63.44	-21.93	9.97	Neutral	-	31.54	0.07	0.04	9.86
AV	204k	24.44	53.44	-29.00	9.97	Neutral	-	14.47	0.07	0.04	9.86
QP	285k	35.16	60.67	-25.51	10.00	Neutral	-	25.16	0.07	0.05	9.88
AV	285k	23.86	50.67	-26.81	10.00	Neutral	-	13.86	0.07	0.05	9.88
QP	312k	33.57	59.92	-26.35	10.01	Neutral	-	23.56	0.07	0.05	9.89
AV	312k	22.75	49.92	-27.17	10.01	Neutral	-	12.74	0.07	0.05	9.89
QP	474k	26.77	56.44	-29.67	10.03	Neutral	-	16.74	0.07	0.06	9.90
AV	474k	19.11	46.44	-27.33	10.03	Neutral	-	9.08	0.07	0.06	9.90
QP	11.76M	36.79	60.00	-23.21	10.36	Neutral	-	26.43	0.24	0.16	9.96
AV	11.76M	34.93	50.00	-15.07	10.36	Neutral	-	24.57	0.24	0.16	9.96
QP	16.463M	42.12	60.00	-17.88	10.45	Neutral	-	31.67	0.27	0.19	9.99
AV	16.463M	40.53	50.00	-9.47	10.45	Neutral	"Worst"	30.08	0.27	0.19	9.99

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	957k	873.313k	873KF1D	951.5k	870.815k
BT-EDR(3Mbps)	1.298M	1.194M	1M19G1D	1.295M	1.192M
BT-EDR(2Mbps)	1.328M	1.184M	1M18G1D	1.317M	1.182M

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

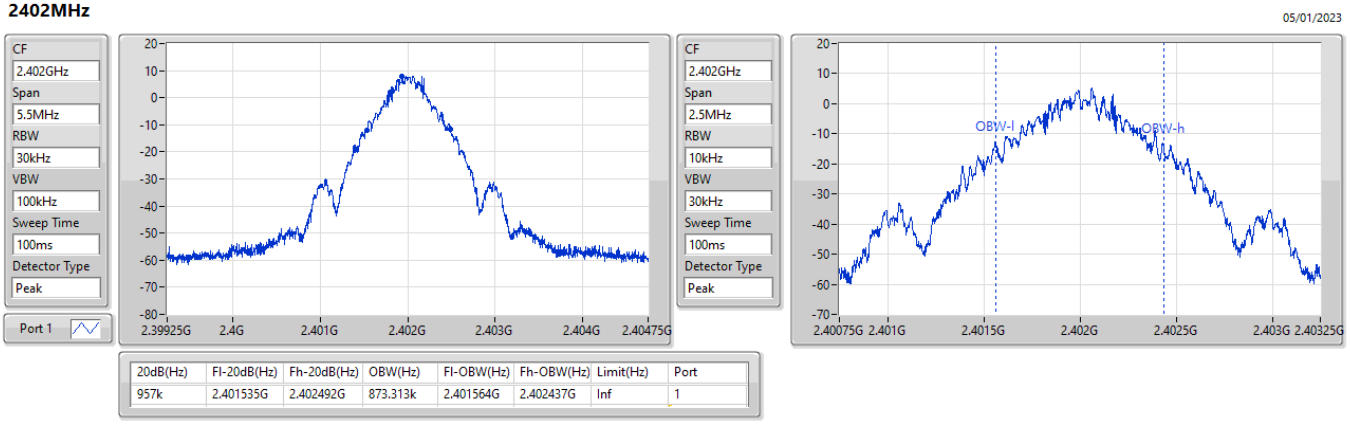
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	957k	873.313k
2440MHz	Pass	Inf	954.25k	870.815k
2480MHz	Pass	Inf	951.5k	872.064k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.317M	1.182M
2440MHz	Pass	Inf	1.328M	1.184M
2480MHz	Pass	Inf	1.323M	1.184M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.298M	1.192M
2440MHz	Pass	Inf	1.295M	1.194M
2480MHz	Pass	Inf	1.295M	1.194M

Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

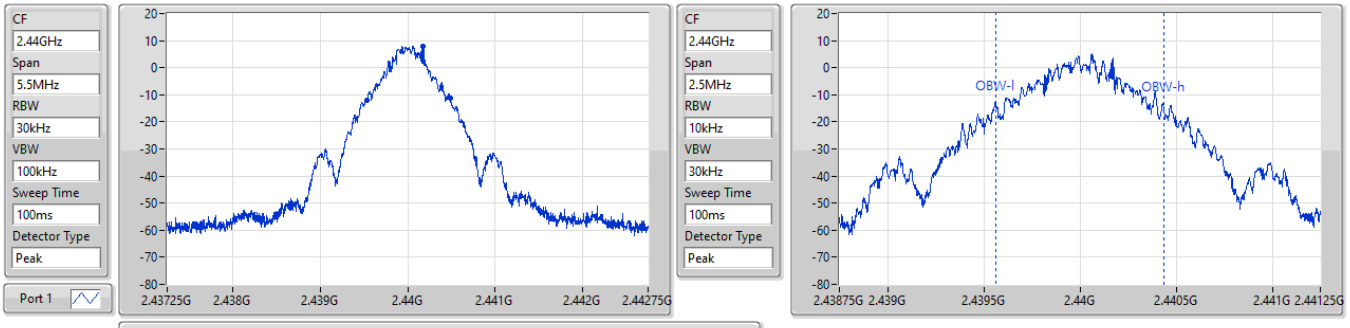
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
957k	2.401535G	2.402492G	873.313k	2.401564G	2.402437G	Inf	1

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

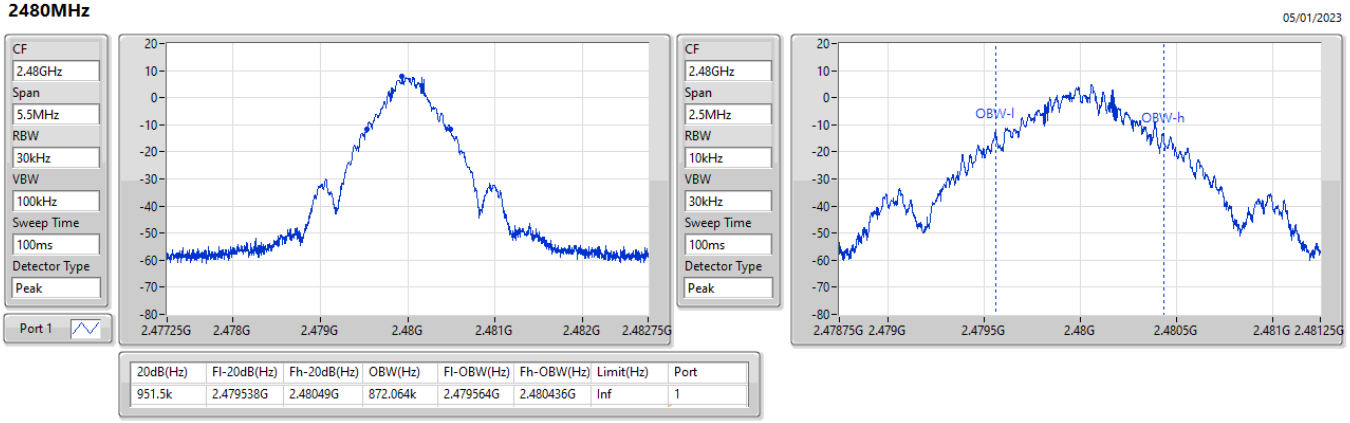
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
954.25k	2.439535G	2.44049G	870.815k	2.439565G	2.440436G	Inf	1

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

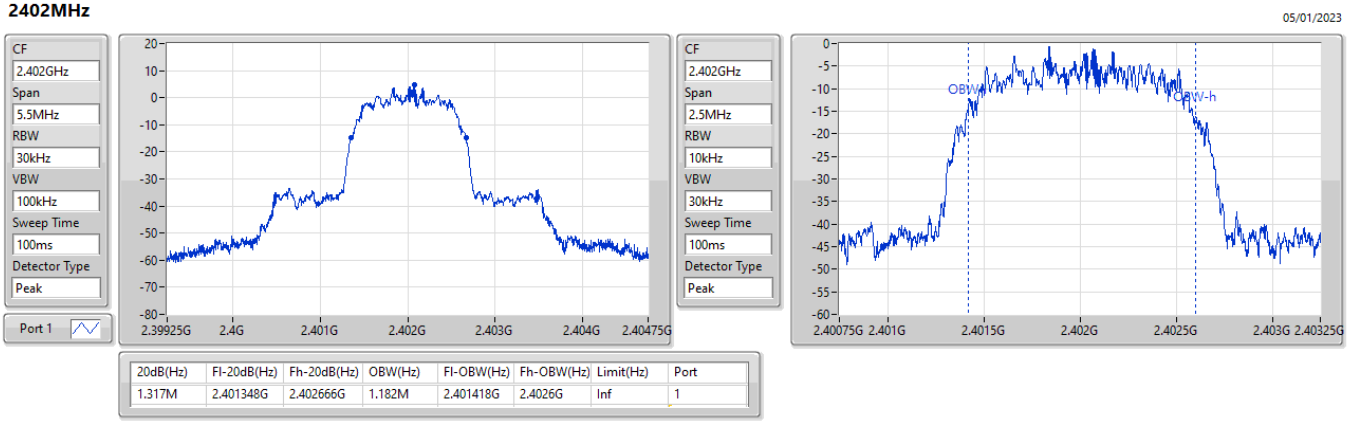
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
951.5k	2.479538G	2.48049G	872.064k	2.479564G	2.480436G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

2402MHz

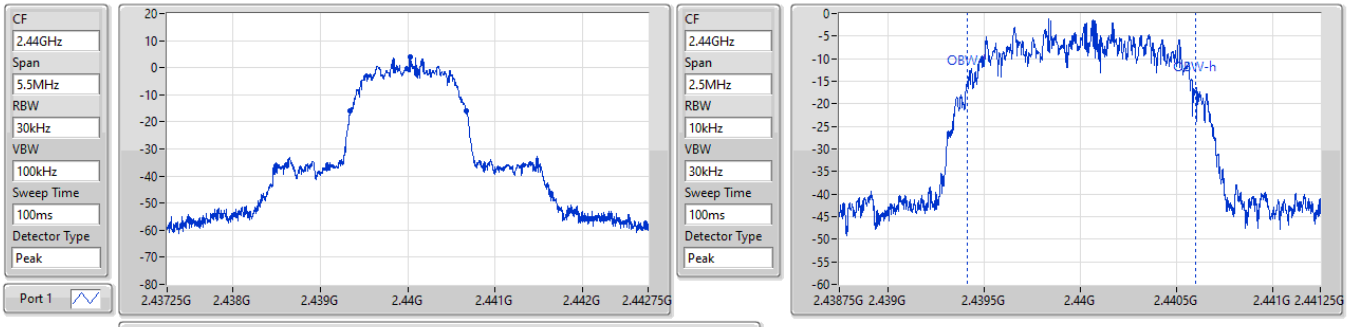


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.317M	2.401348G	2.402666G	1.182M	2.401418G	2.4026G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

2440MHz

05/01/2023

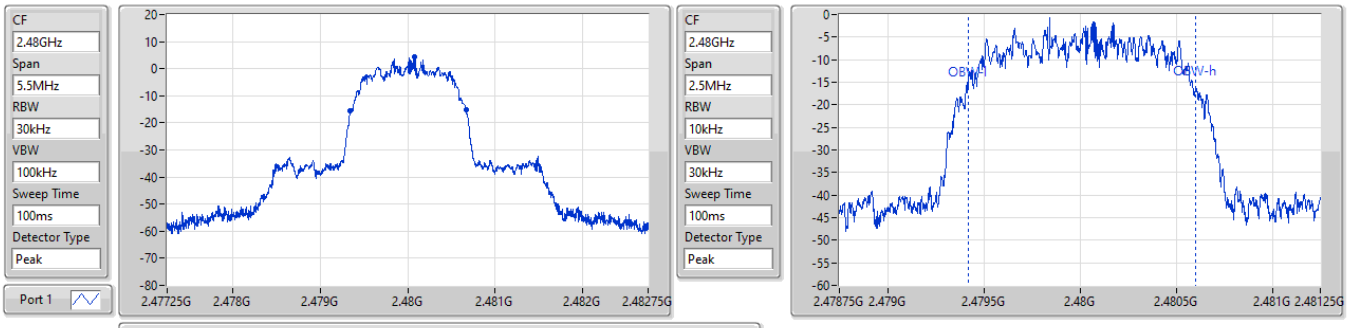


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.328M	2.439343G	2.440671G	1.184M	2.439417G	2.440601G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

2480MHz

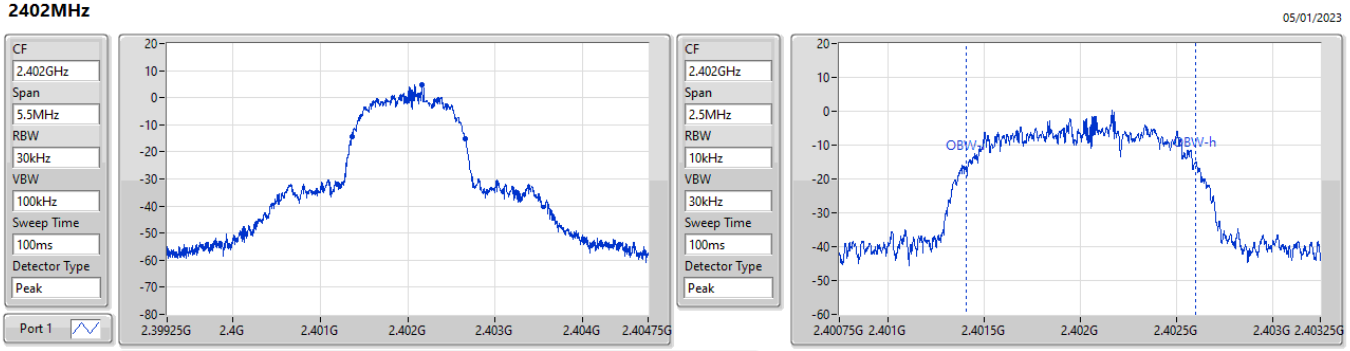
05/01/2023



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.323M	2.479346G	2.480668G	1.184M	2.479418G	2.480602G	Inf	1

2.4-2.4835GHz_BT-EDR(3Mbps) **EBW-FS**

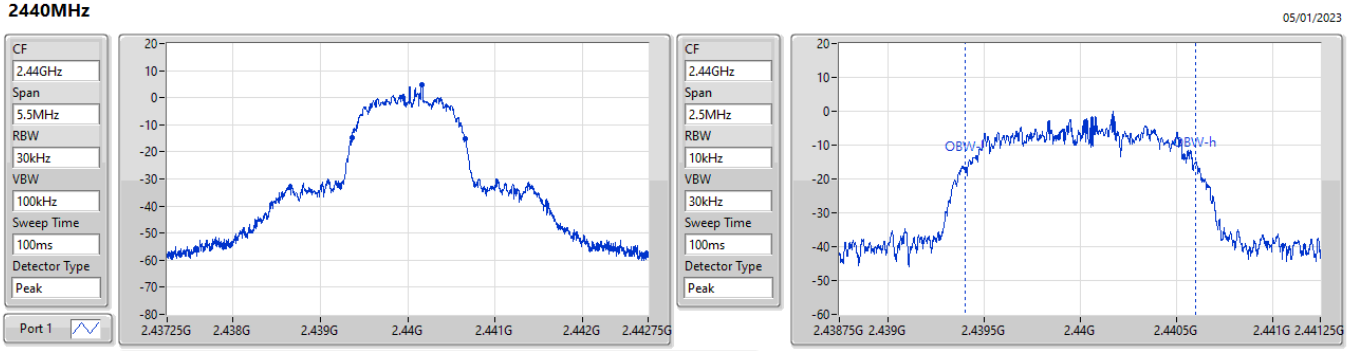
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.298M	2.401362G	2.40266G	1.192M	2.401408G	2.4026G	Inf	1

2.4-2.4835GHz_BT-EDR(3Mbps) **EBW-FS**

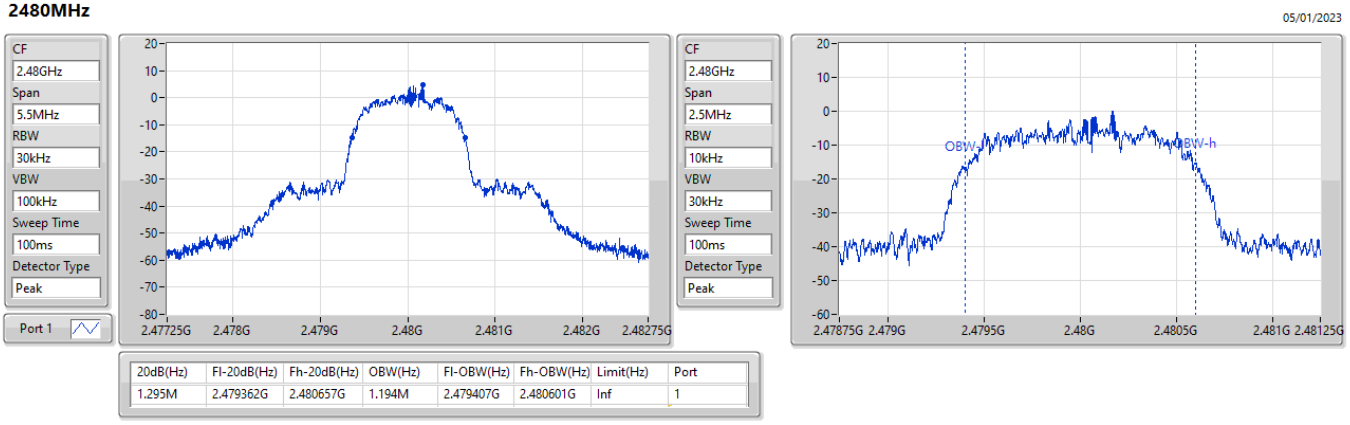
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.295M	2.439362G	2.440657G	1.194M	2.439407G	2.440601G	Inf	1

2.4-2.4835GHz_BT-EDR(3Mbps) **EBW-FS**

2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.295M	2.479362G	2.480657G	1.194M	2.479407G	2.480601G	Inf	1

Summary

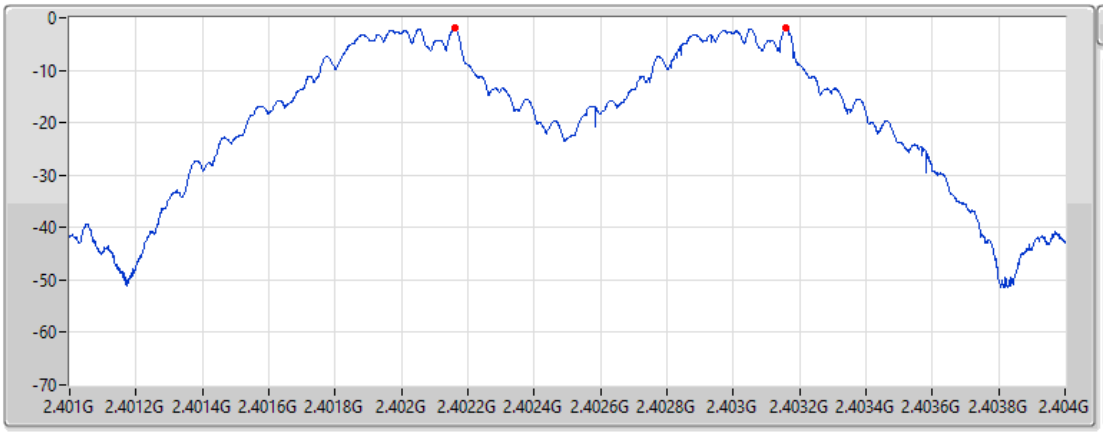
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	999k
BT-EDR(3Mbps)	1.0005M	1.0005M
BT-EDR(2Mbps)	1.0005M	999k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.40216G	2.40316G	1.0005M	622.71k
2440MHz	Pass	2.44016G	2.441159G	999k	624.375k
2480MHz	Pass	2.479158G	2.48016G	1.002M	624.375k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401977G	2.402976G	999k	873.126k
2440MHz	Pass	2.439977G	2.440977G	1.0005M	873.126k
2480MHz	Pass	2.478975G	2.479976G	1.0005M	873.126k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402161G	2.403162G	1.0005M	843.156k
2440MHz	Pass	2.440161G	2.441162G	1.0005M	838.494k
2480MHz	Pass	2.479161G	2.480162G	1.0005M	851.148k

BT-BR(1Mbps) Channel Separation-FS

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.40216G	2.40316G	1.0005M	622.71k

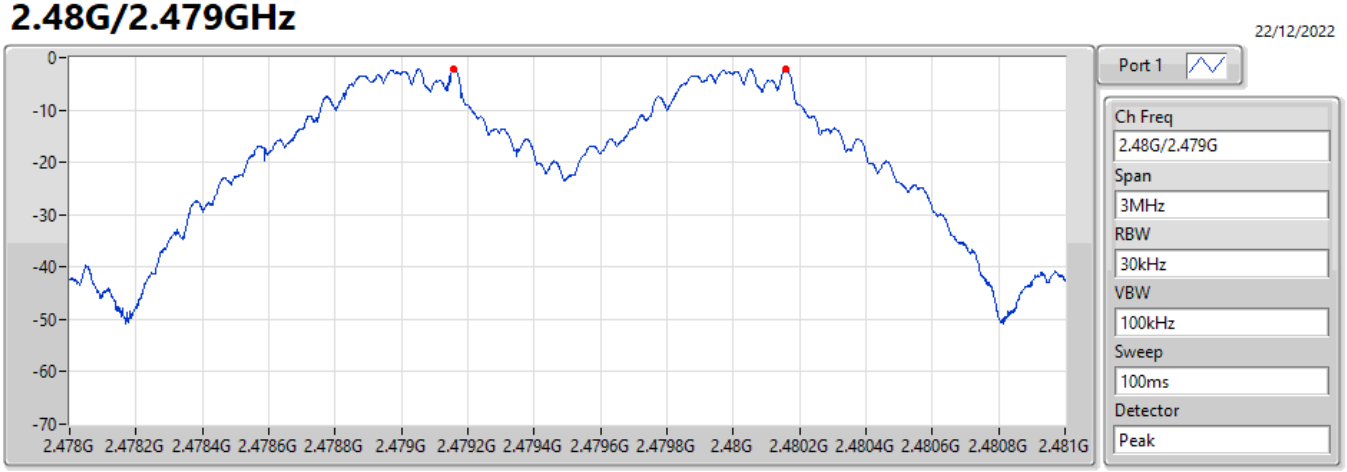
BT-BR(1Mbps) Channel Separation-FS

2.44G/2.441GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.44016G	2.441159G	999k	624.375k

BT-BR(1Mbps) Channel Separation-FS

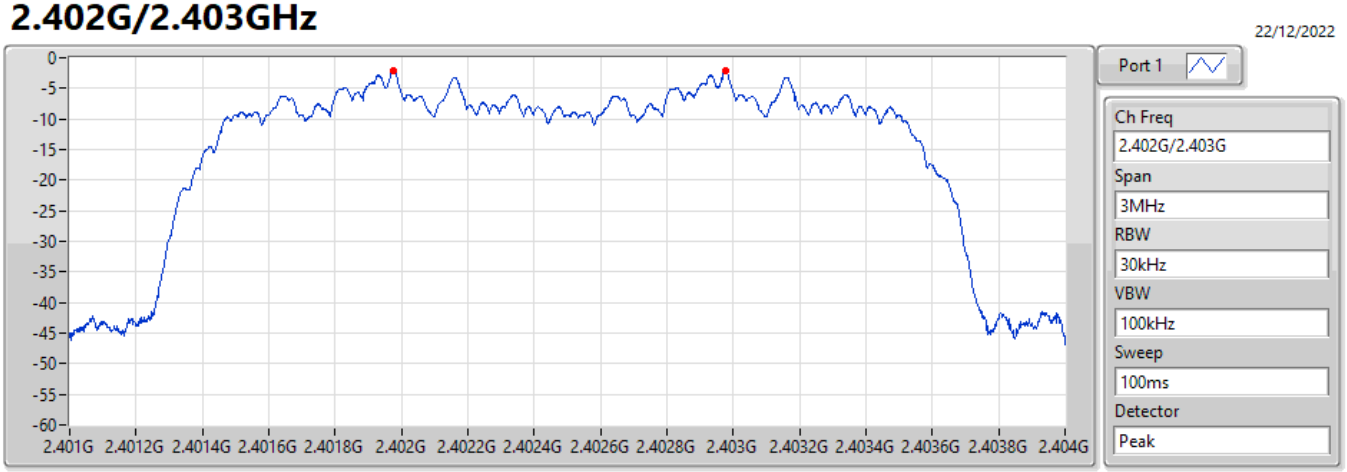
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479158G	2.48016G	1.002M	624.375k

BT-EDR(2Mbps) Channel Separation-FS

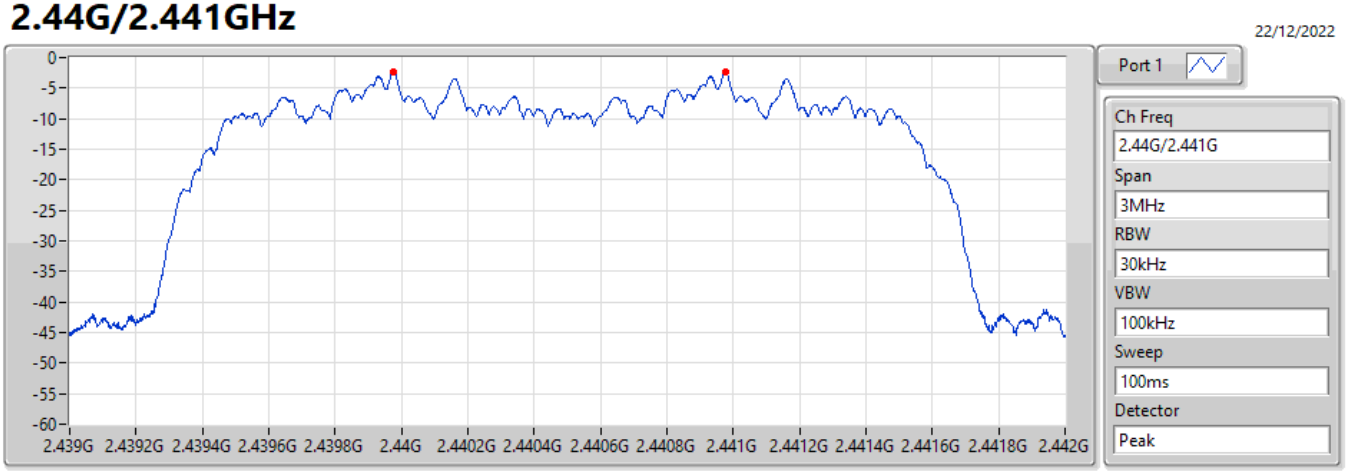
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401977G	2.402976G	999k	873.126k

BT-EDR(2Mbps) Channel Separation-FS

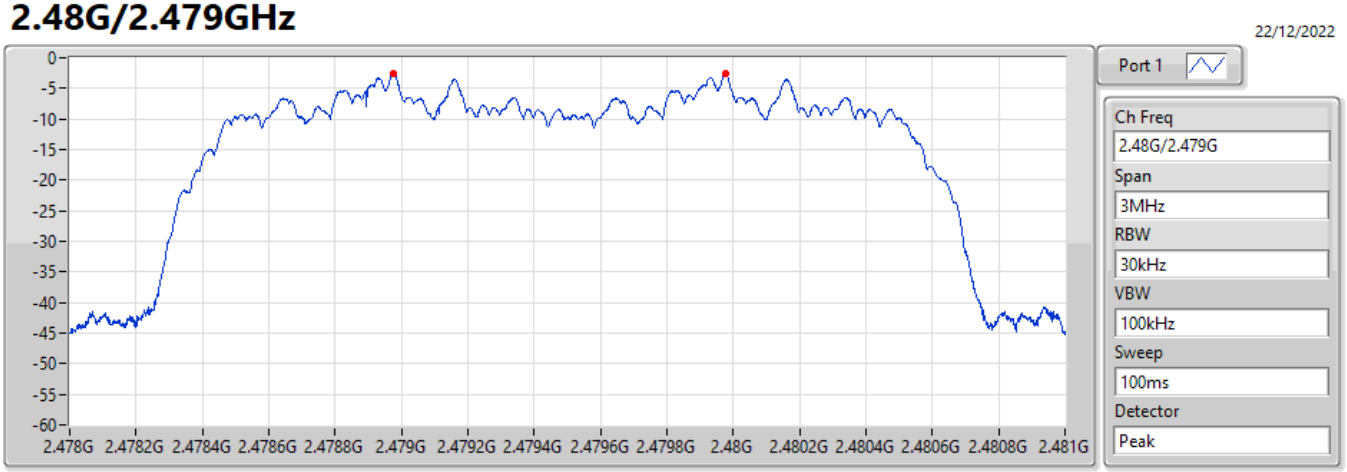
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439977G	2.440977G	1.0005M	873.126k

BT-EDR(2Mbps) Channel Separation-FS

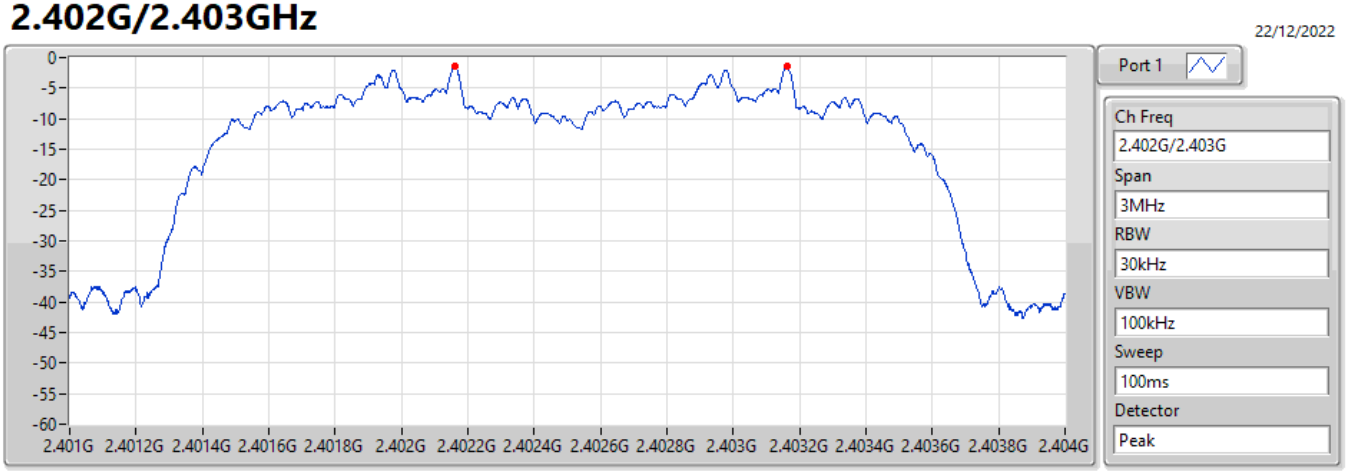
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478975G	2.479976G	1.0005M	873.126k

BT-EDR(3Mbps) Channel Separation-FS

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402161G	2.403162G	1.0005M	843.156k

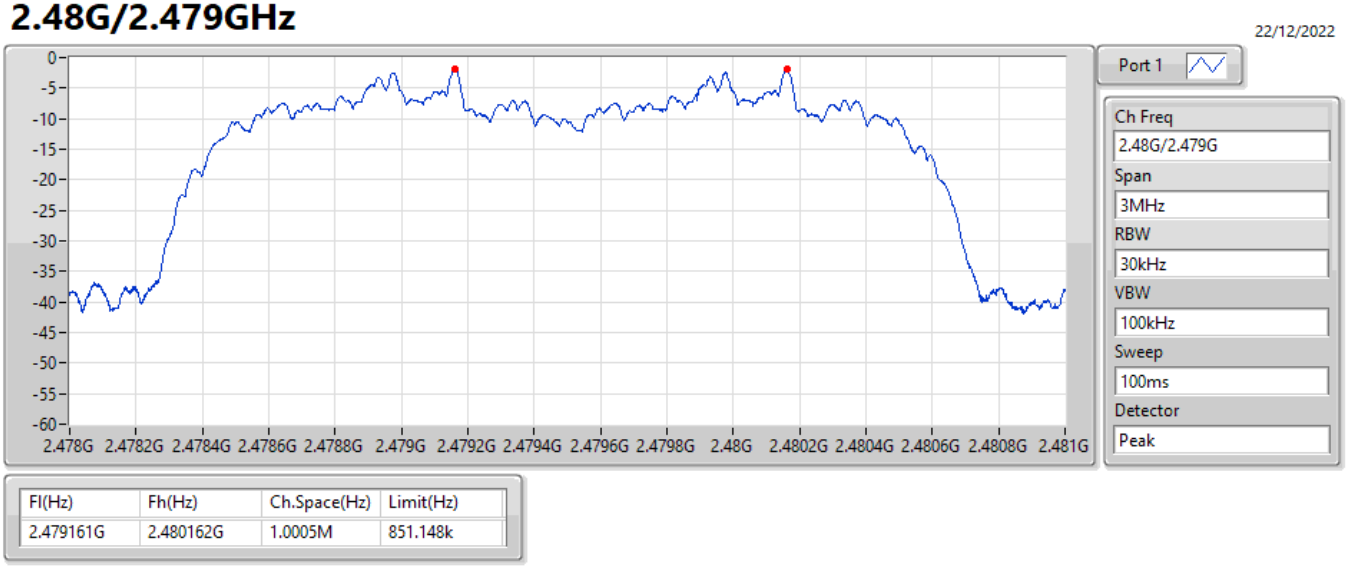
BT-EDR(3Mbps) Channel Separation-FS

2.44G/2.441GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440161G	2.441162G	1.0005M	838.494k

BT-EDR(3Mbps) **Channel Separation-FS**

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479161G	2.480162G	1.0005M	851.148k

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	11.03	0.01268
BT-EDR(3Mbps)	8.13	0.00650
BT-EDR(2Mbps)	8.08	0.00643

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.98	11.03	21.00
2440MHz	Pass	2.98	10.90	21.00
2480MHz	Pass	2.98	10.72	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.98	8.08	21.00
2440MHz	Pass	2.98	7.90	21.00
2480MHz	Pass	2.98	7.82	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.98	8.13	21.00
2440MHz	Pass	2.98	7.89	21.00
2480MHz	Pass	2.98	7.82	21.00

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

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	11.35	0.01365
BT-EDR(3Mbps)	10.41	0.01099
BT-EDR(2Mbps)	10.09	0.01021

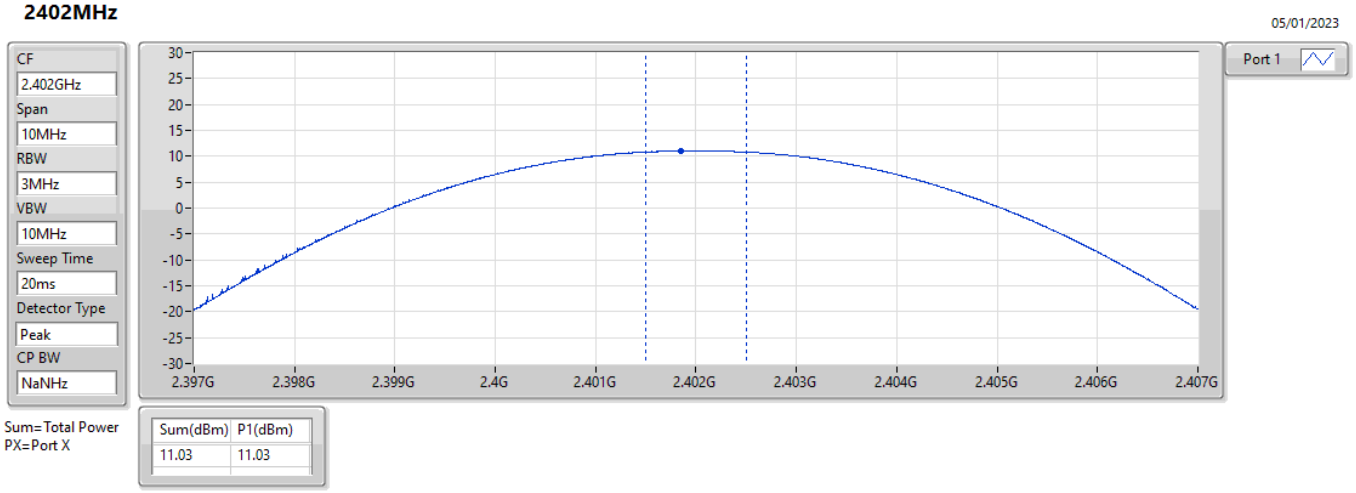
Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.98	11.35	21.00
2440MHz	Pass	2.98	11.03	21.00
2480MHz	Pass	2.98	10.82	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.98	10.09	21.00
2440MHz	Pass	2.98	9.90	21.00
2480MHz	Pass	2.98	9.84	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.98	10.41	21.00
2440MHz	Pass	2.98	10.18	21.00
2480MHz	Pass	2.98	10.10	21.00

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

2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2402MHz

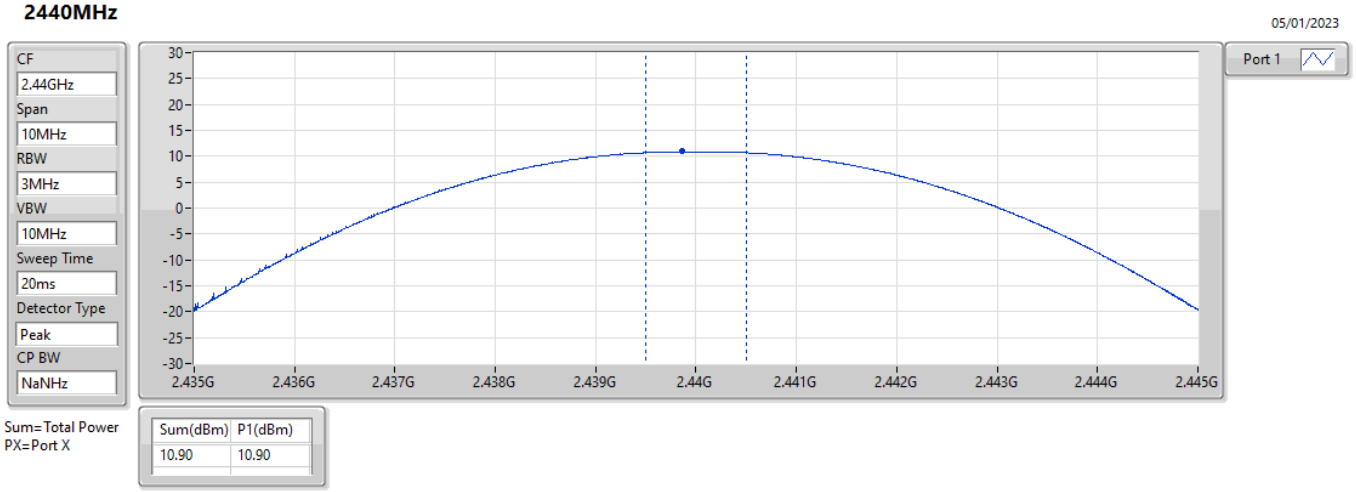


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
11.03	11.03

2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2440MHz

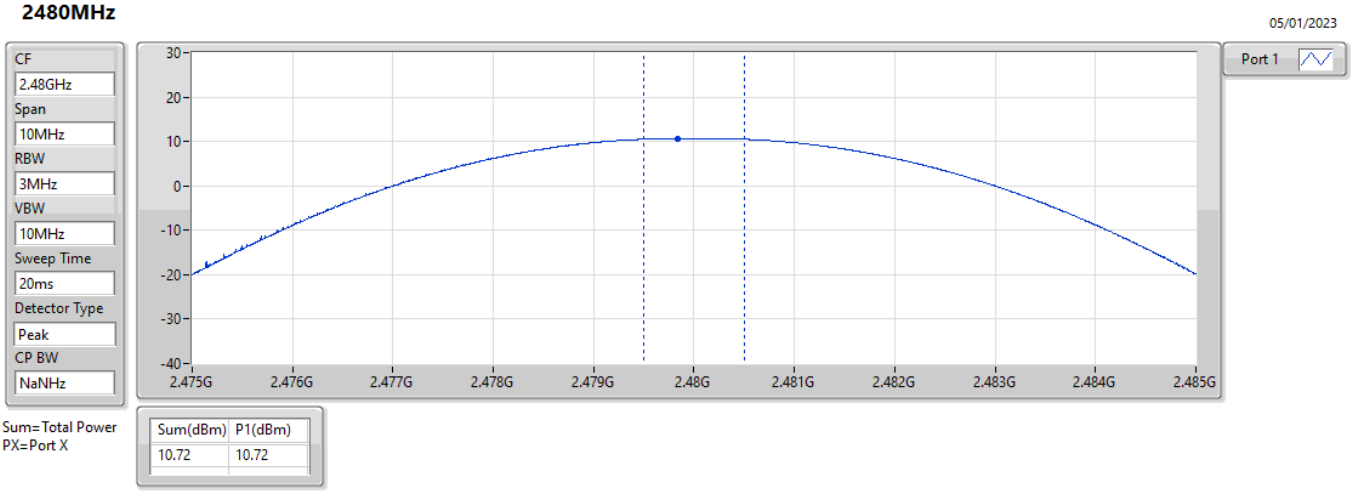


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
10.90	10.90

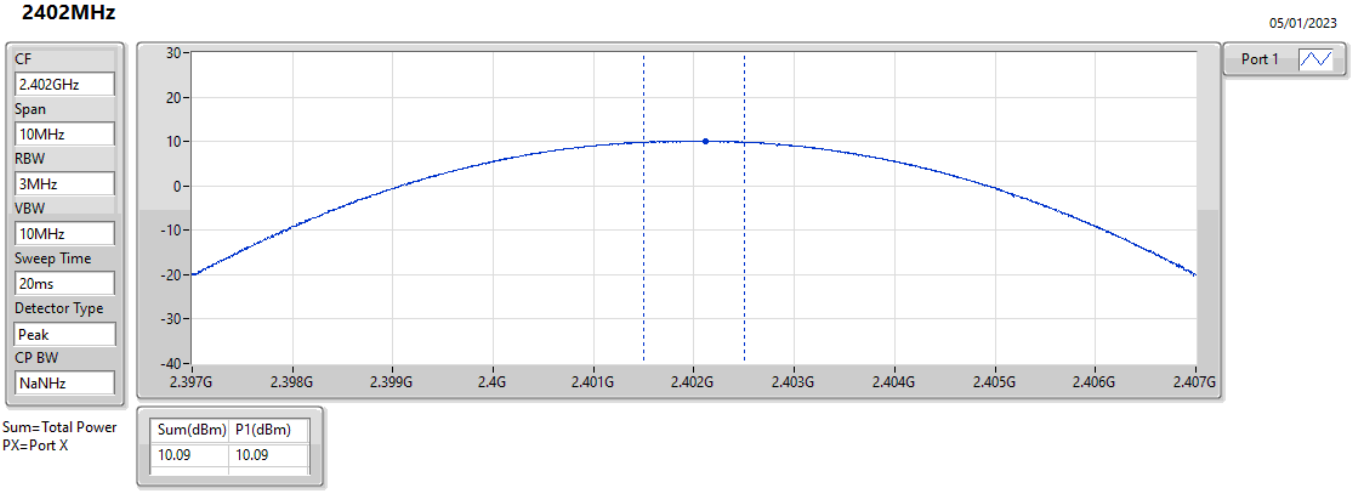
2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2480MHz



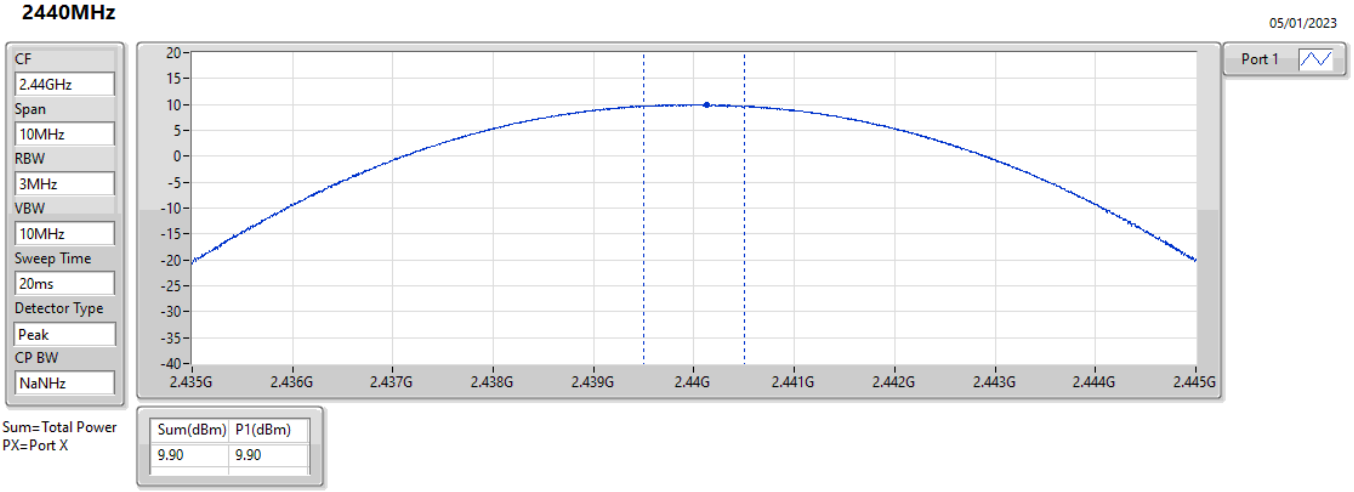
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2402MHz



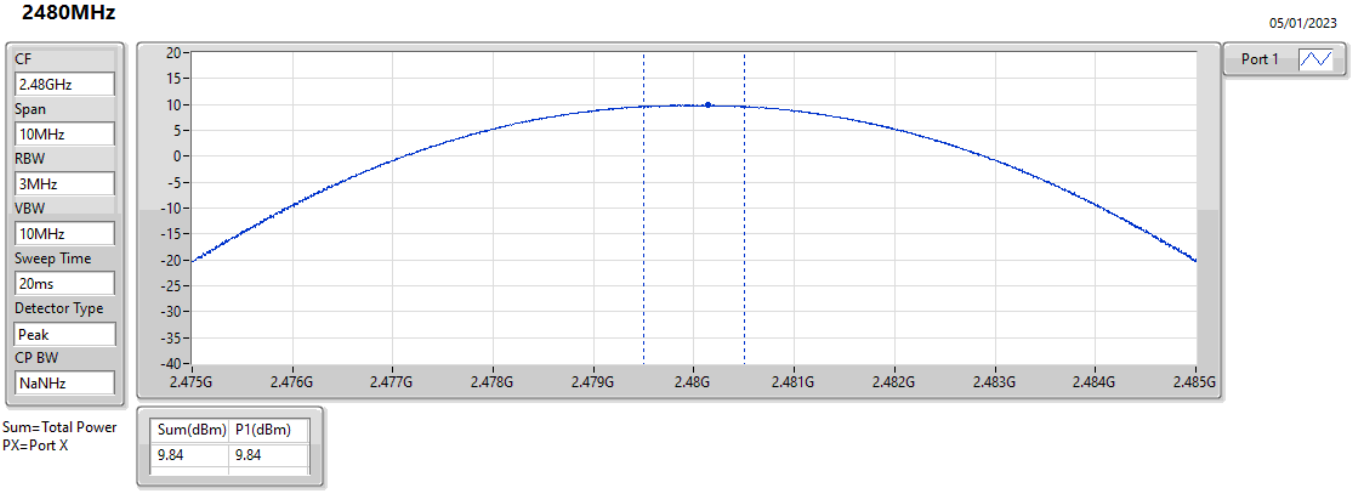
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2440MHz



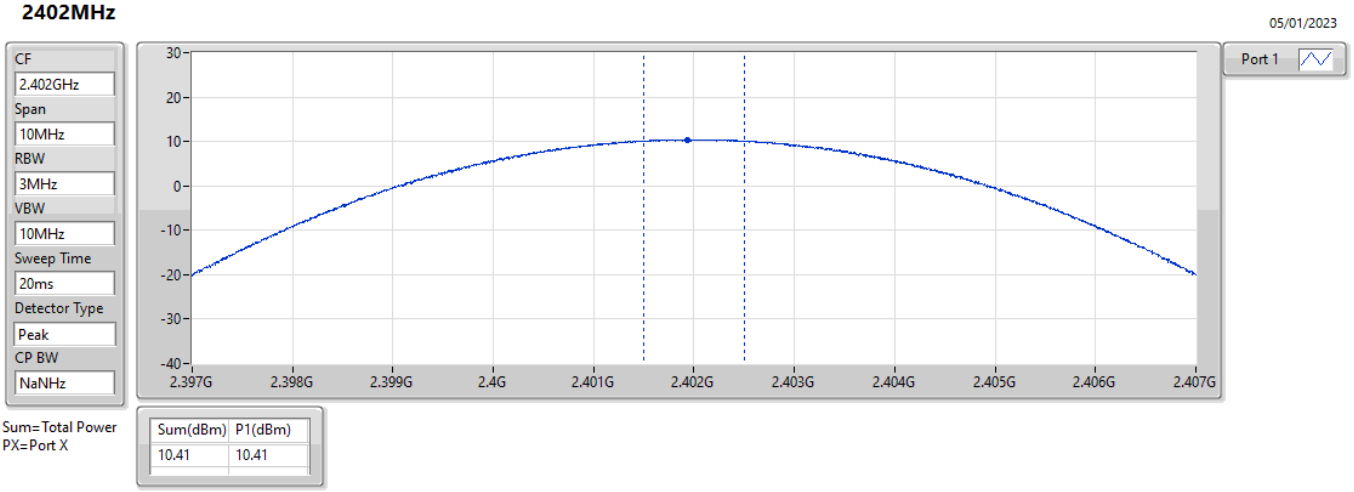
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2480MHz



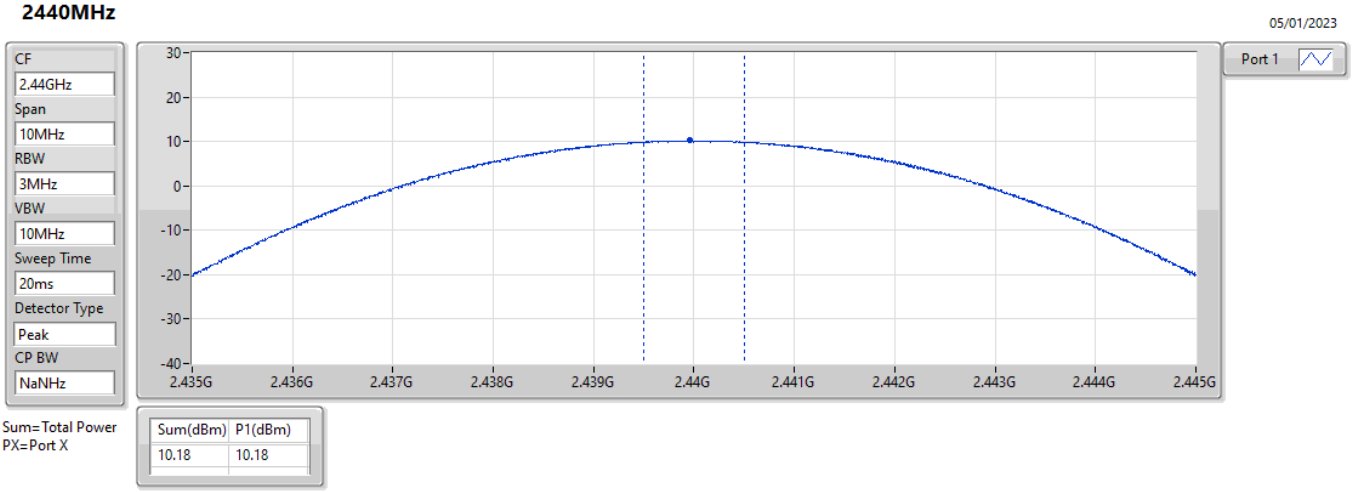
2.4-2.4835GHz_BT-EDR(3Mbps) **PK Power-FS**

2402MHz



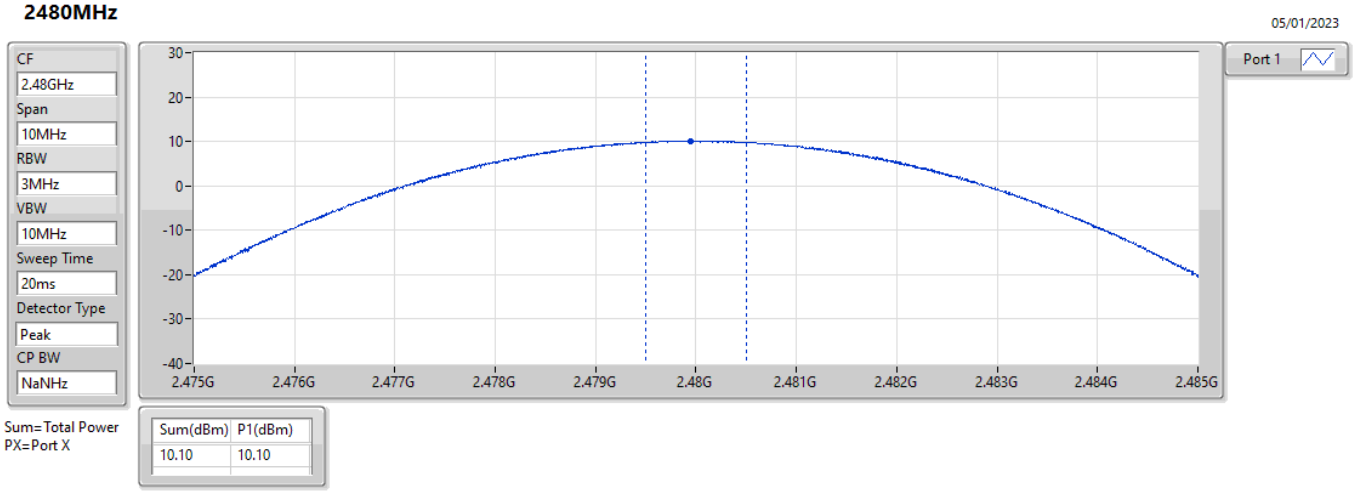
2.4-2.4835GHz_BT-EDR(3Mbps) **PK Power-FS**

2440MHz



2.4-2.4835GHz_BT-EDR(3Mbps) **PK Power-FS**

2480MHz



Summary

Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(3Mbps)	79
BT-EDR(2Mbps)	79

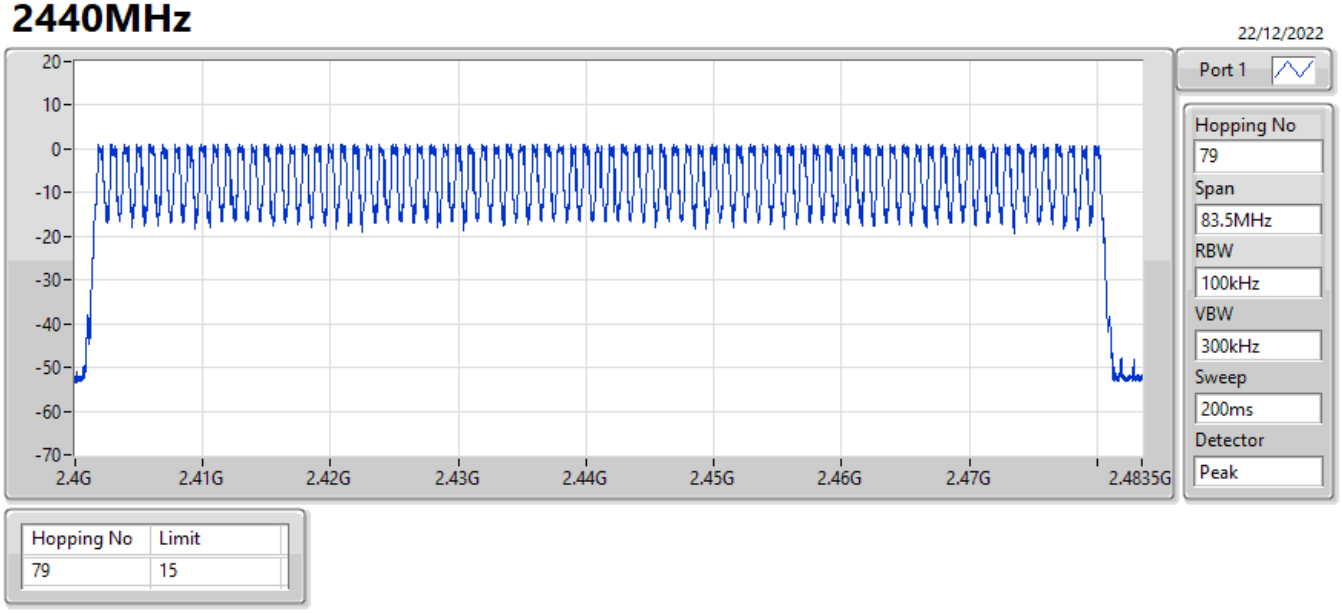
Result

Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2440MHz	Pass	79	15

BT-BR(1Mbps)

2440MHz

Hopping-FS

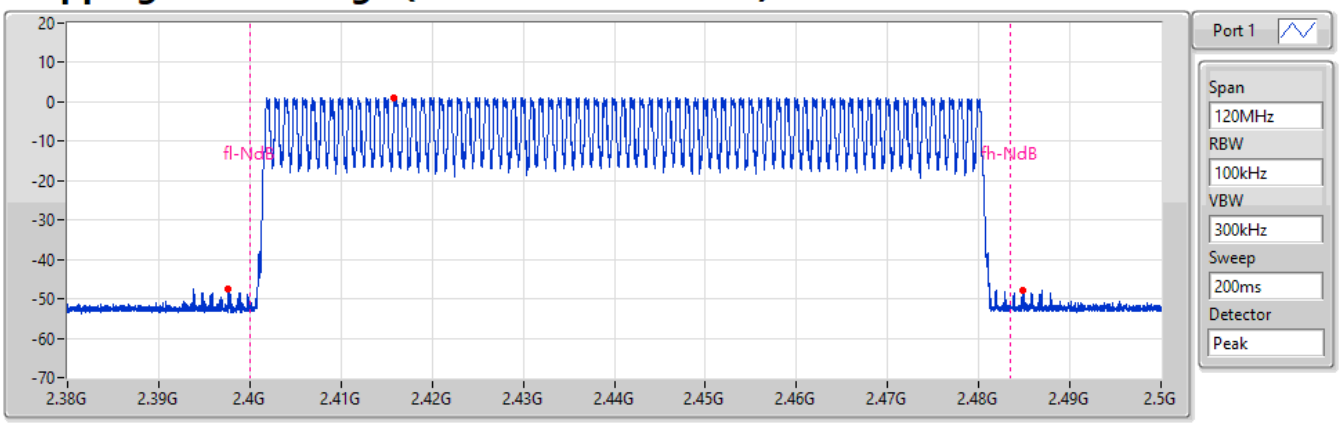


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

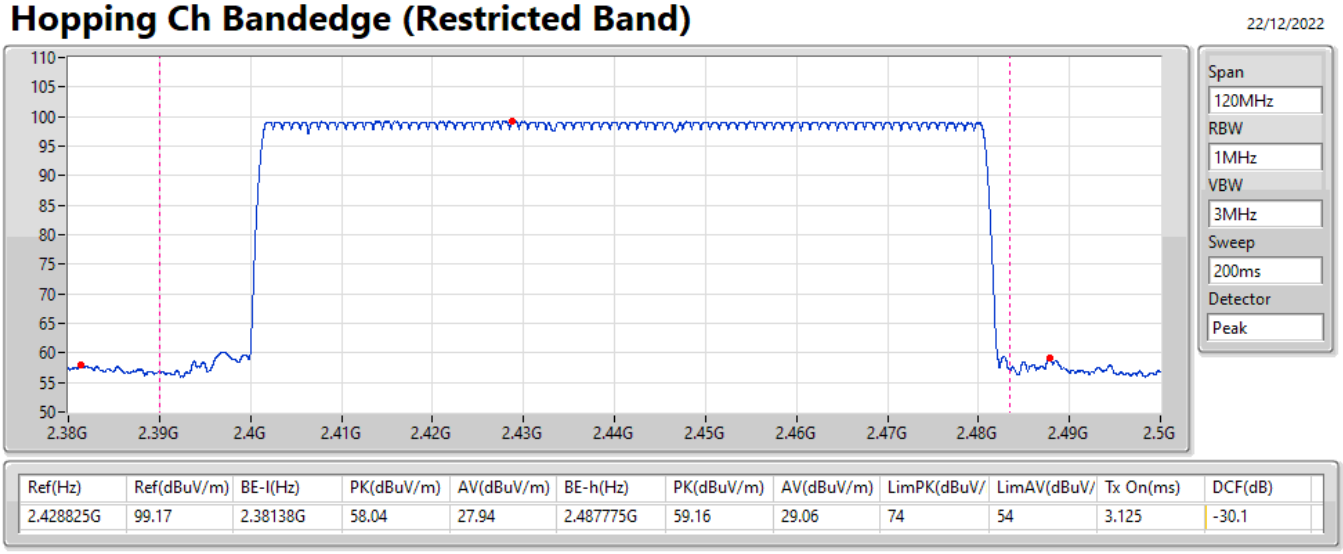


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-18.97	2.41582G	1.03	2.397565G	-47.39	2.484895G	-47.73

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

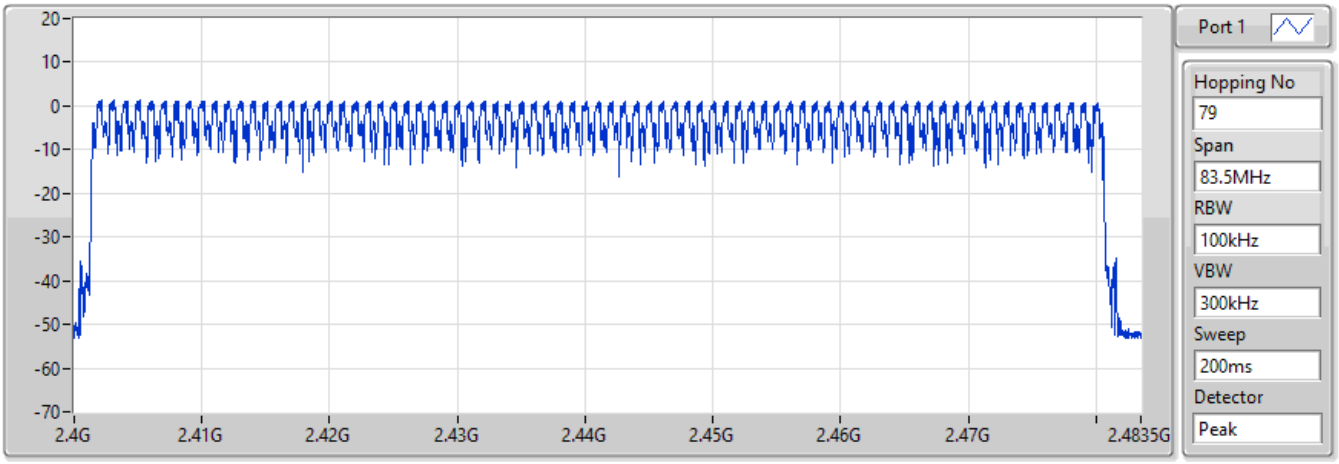


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.428825G	99.17	2.38138G	58.04	27.94	2.487775G	59.16	29.06	74	54	3.125	-30.1

BT-EDR(2Mbps)

Hopping-FS

2440MHz

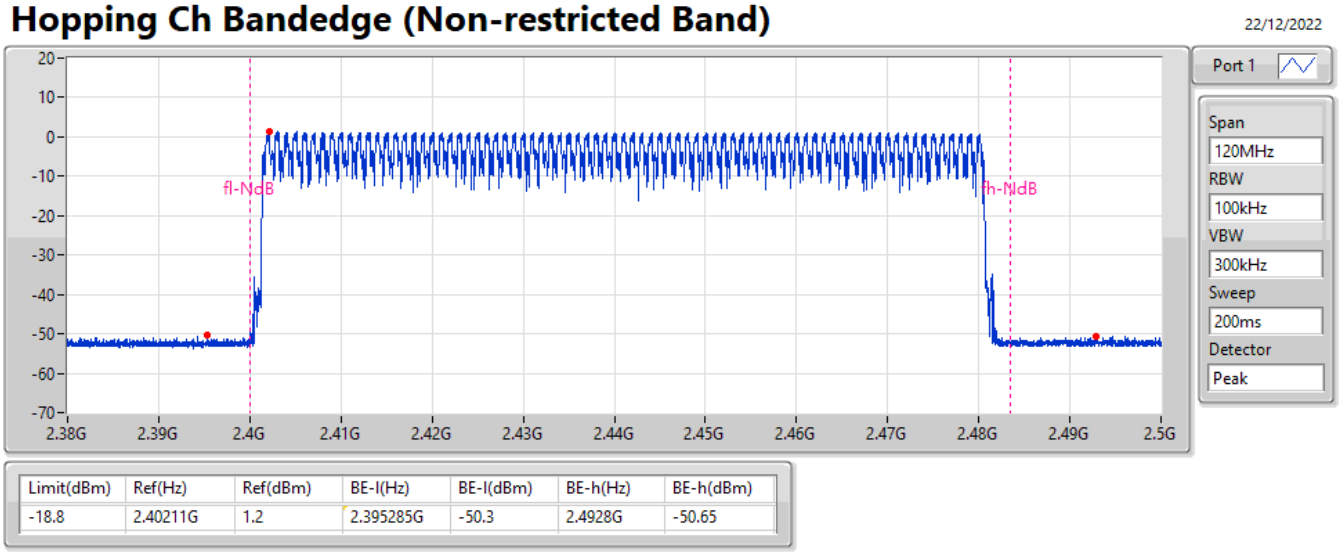


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

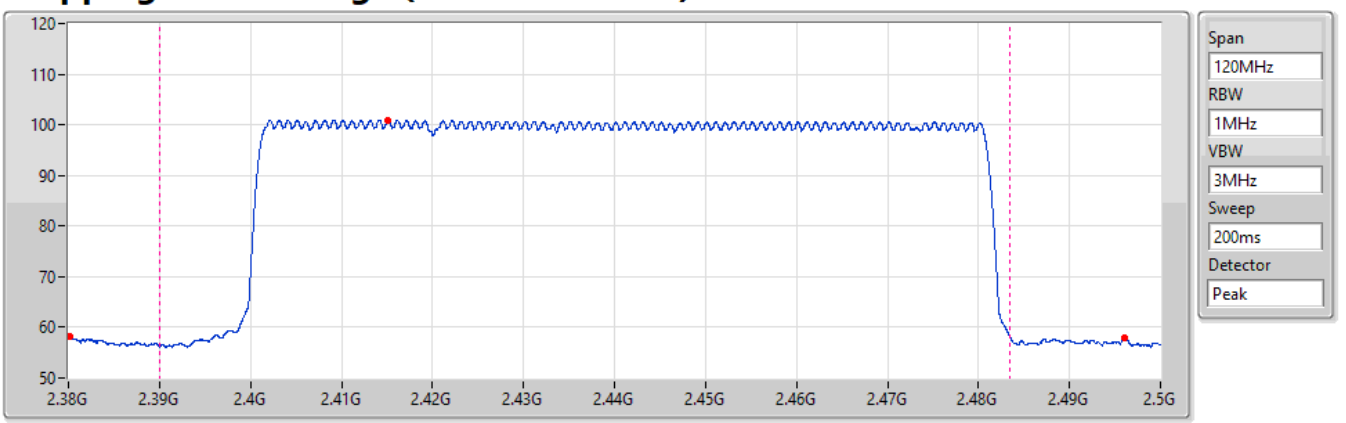


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-18.8	2.40211G	1.2	2.395285G	-50.3	2.4928G	-50.65

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

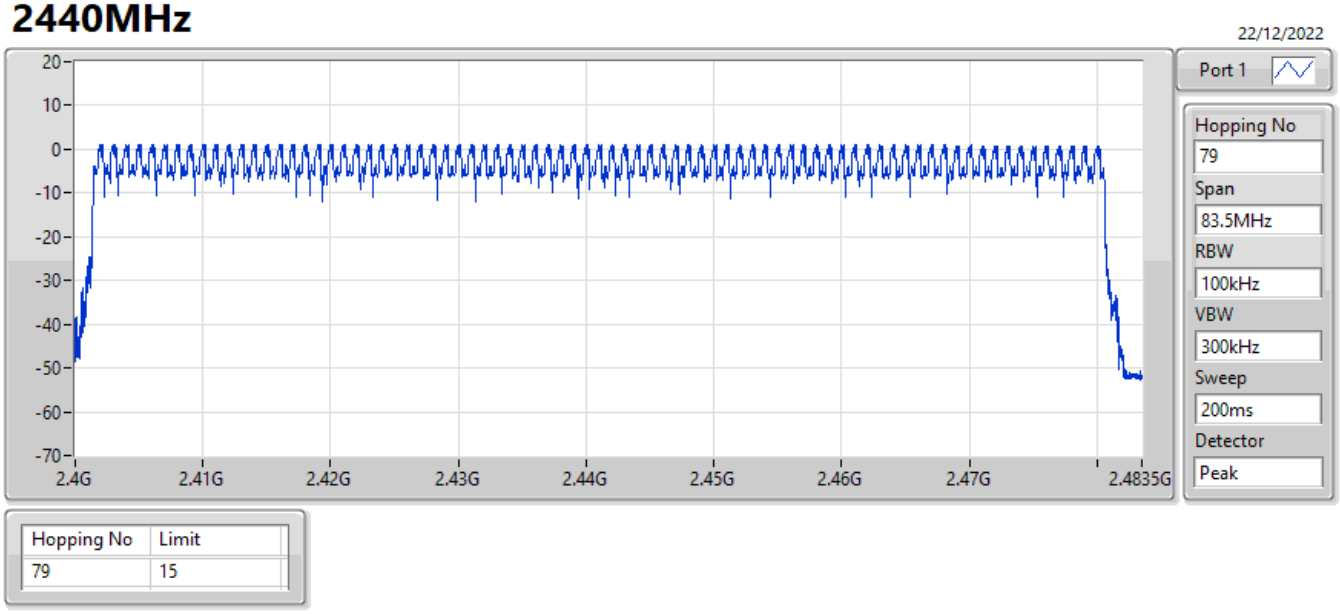


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.41513G	100.87	2.38018G	58.27	28.17	2.496055G	58	27.9	74	54	3.125	-30.1

BT-EDR(3Mbps)

2440MHz

Hopping-FS

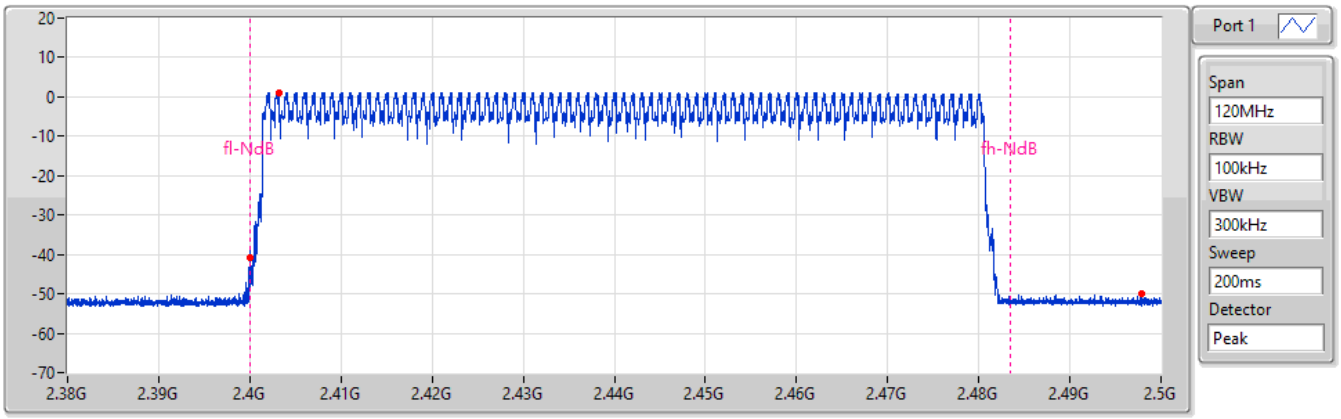


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

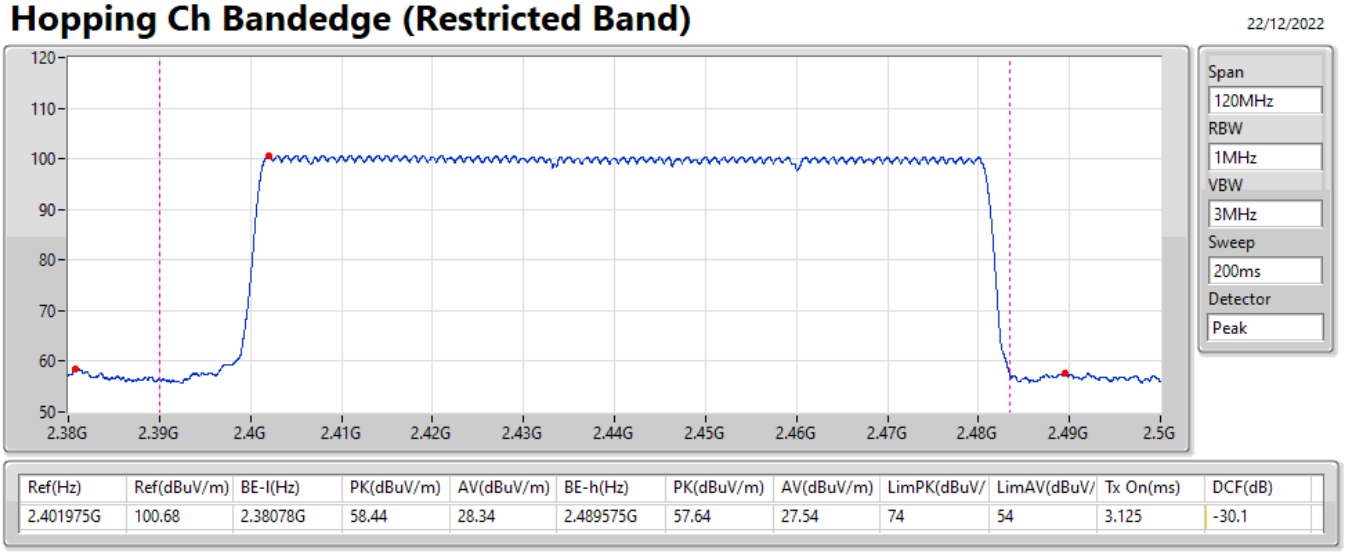


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-18.83	2.40316G	1.17	2.399995G	-40.8	2.497825G	-49.99

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)



Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.401975G	100.68	2.38078G	58.44	28.34	2.489575G	57.64	27.54	74	54	3.125	-30.1

Summary

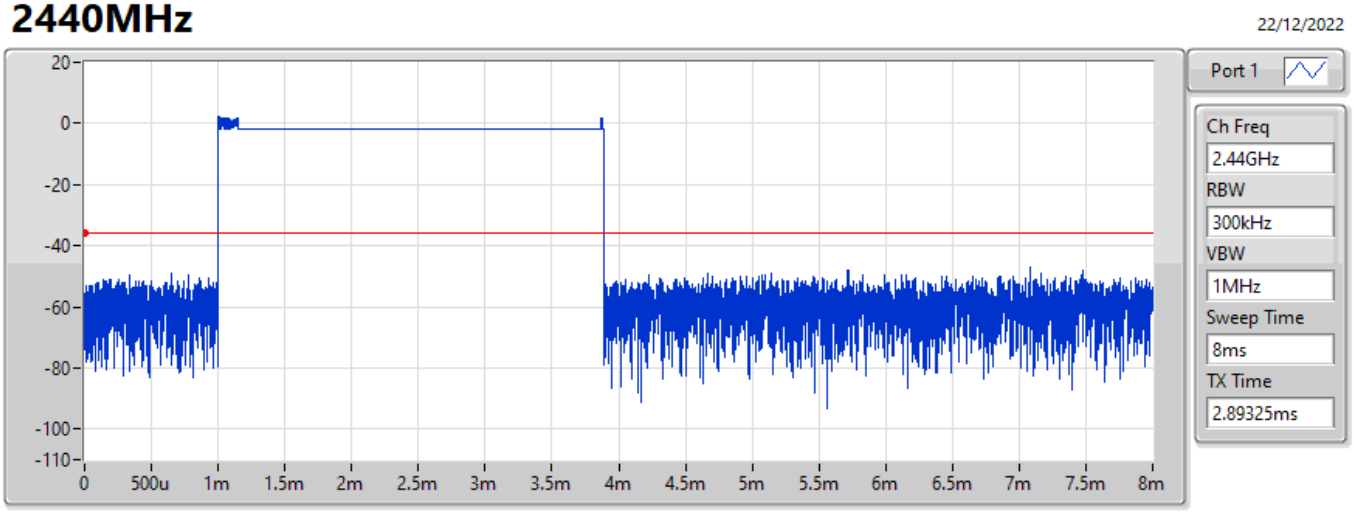
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	308.42045m_DH5
BT-EDR(3Mbps)	308.15395m_DH5
BT-EDR(2Mbps)	308.1273m_DH5

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.42045m_DH5	400m	2.89325m
2440MHz	Pass	8	154.17025m_DH5-AFH	400m	2.8925m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.1273m_DH5	400m	2.8905m
2440MHz	Pass	8	154.050325m_DH5-AFH	400m	2.89025m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.15395m_DH5	400m	2.89075m
2440MHz	Pass	8	154.0903m_DH5-AFH	400m	2.891m

BT-BR(1Mbps) **Dwell-FS**

2440MHz

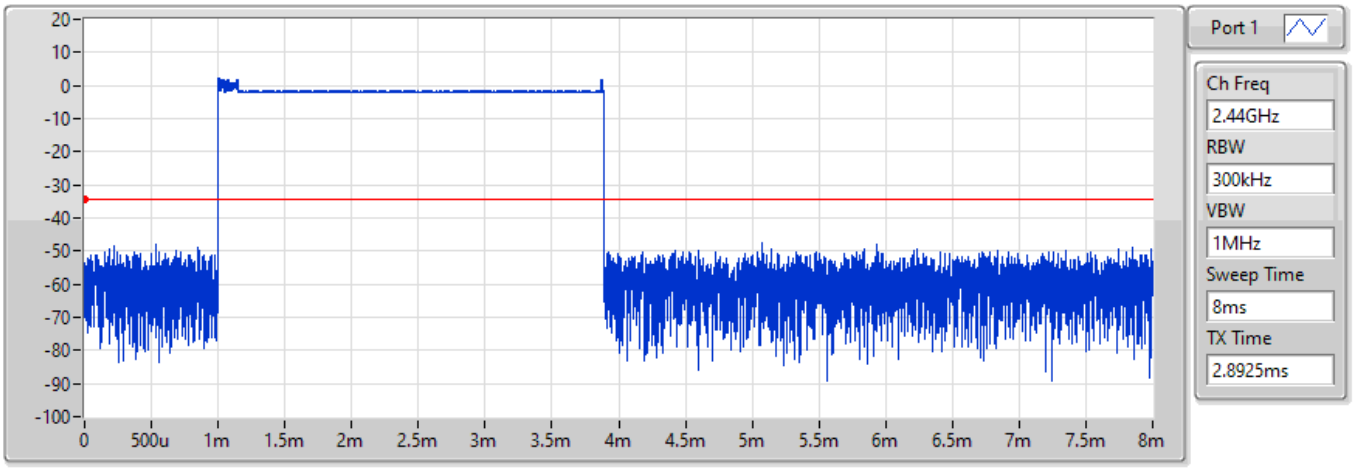


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.42045m_DH5	400m	2.89325m

DH5

BT-BR(1Mbps) **Dwell-FS**

2440MHz



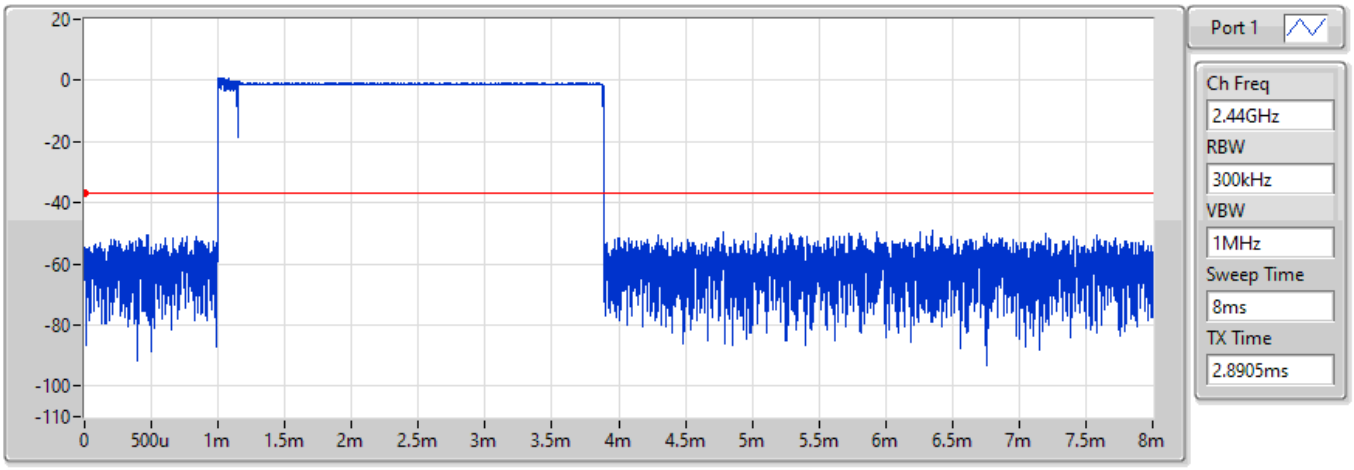
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.17025m_DH5-AFH	400m	2.8925m

DH5-AFH

BT-EDR(2Mbps) **Dwell-FS**

2440MHz

22/12/2022



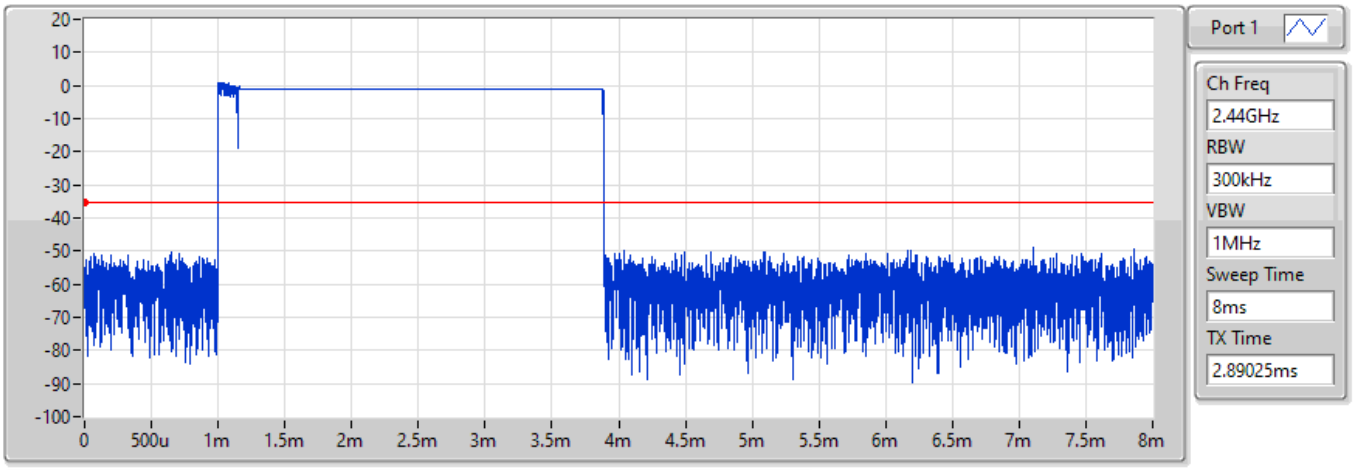
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.1273m_DH5	400m	2.8905m

DH5

BT-EDR(2Mbps) **Dwell-FS**

2440MHz

22/12/2022



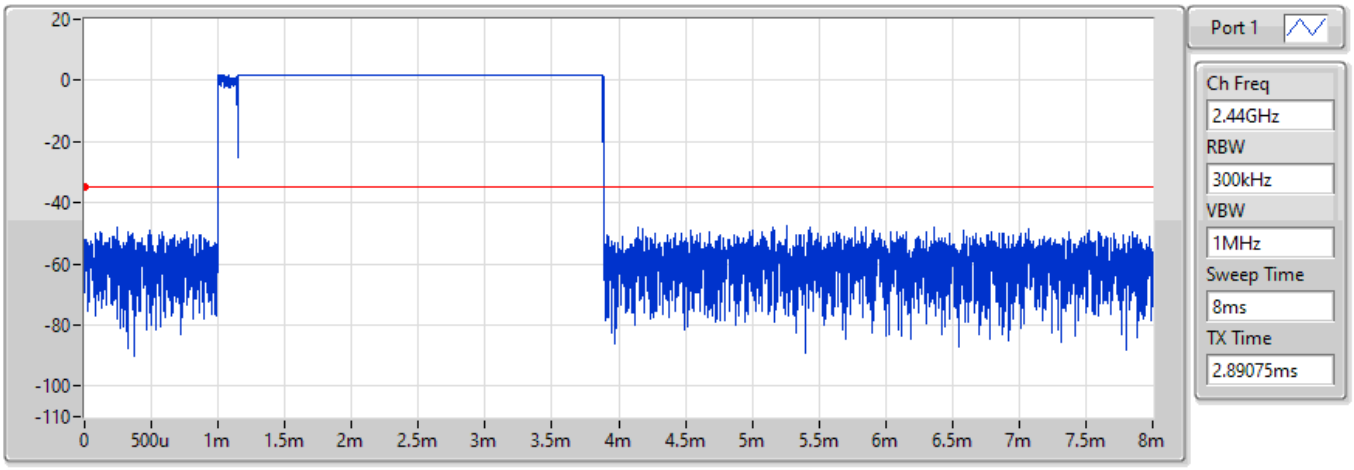
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.050325m_DH5-AFI	400m	2.89025m

DH5-AFH

BT-EDR(3Mbps) **Dwell-FS**

2440MHz

22/12/2022



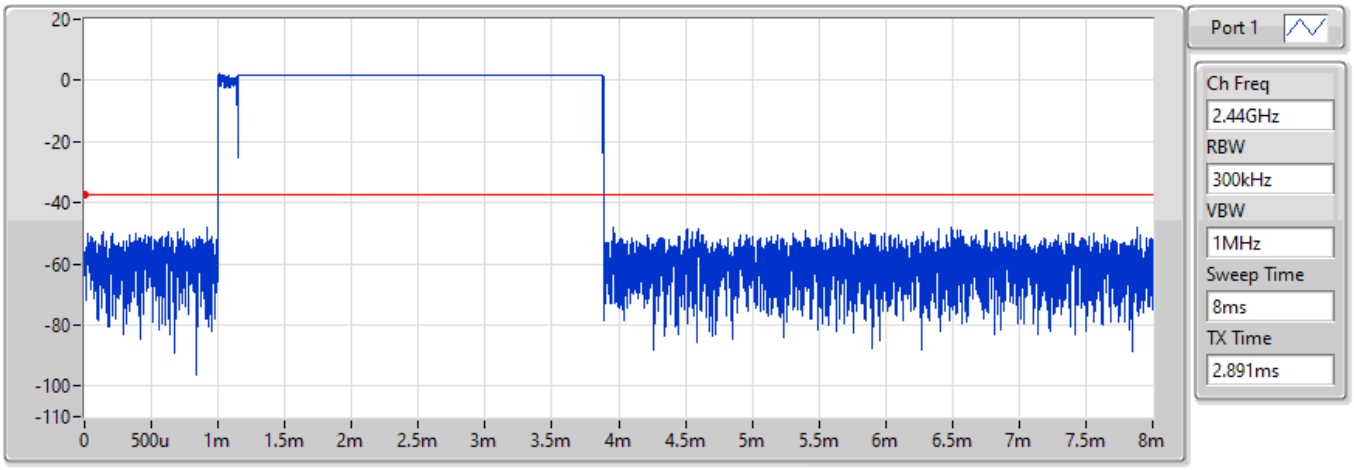
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.15395m_DH5	400m	2.89075m

DH5

BT-EDR(3Mbps) **Dwell-FS**

2440MHz

22/12/2022



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.0903m_DH5-AFH	400m	2.891m

DH5-AFH

Summary

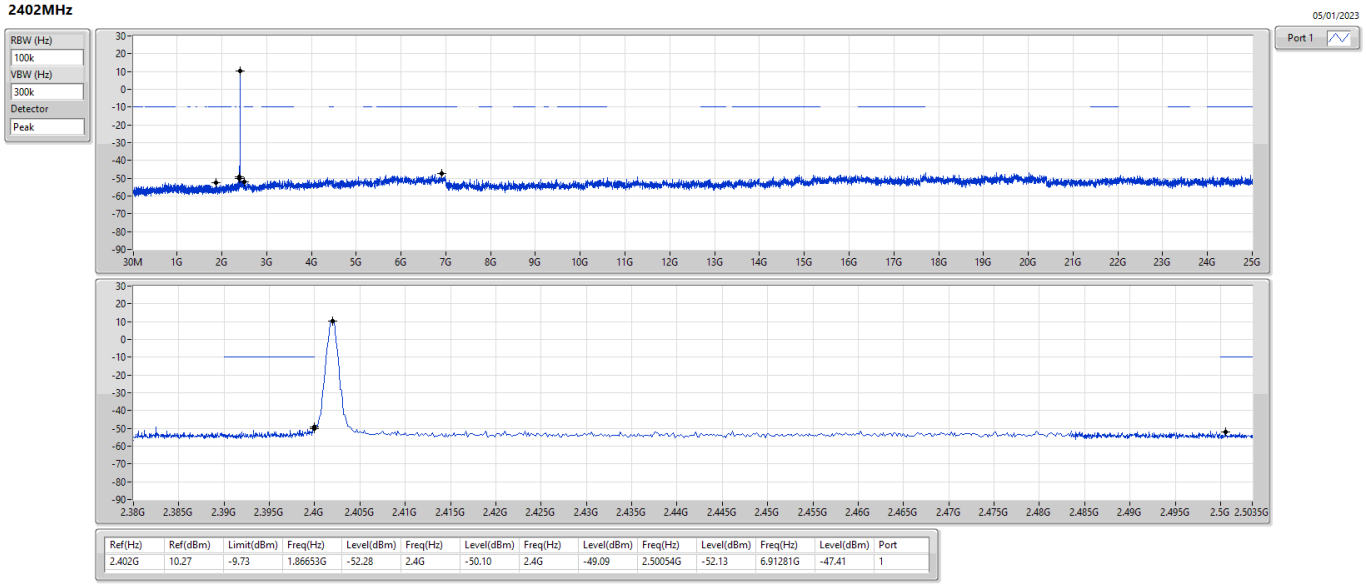
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.402G	10.27	-9.73	1.86653G	-52.28	2.4G	-50.10	2.4G	-49.09	2.50054G	-52.13	6.91281G	-47.41	1
BT-EDR(3Mbps)	Pass	2.40184G	6.47	-13.53	2.18965G	-52.68	2.39996G	-44.76	2.4G	-41.79	2.5005G	-52.15	16.53569G	-47.90	1
BT-EDR(2Mbps)	Pass	2.40184G	7.17	-12.83	618.68M	-52.51	2.39996G	-45.06	2.4G	-44.81	2.50238G	-52.53	23.43087G	-47.00	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-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	10.27	-9.73	1.86653G	-52.28	2.4G	-50.10	2.4G	-49.09	2.50054G	-52.13	6.91281G	-47.41	1
2440MHz	Pass	2.44025G	10.81	-9.19	2.18965G	-52.28	2.39992G	-50.34	2.4G	-54.32	2.50162G	-52.29	16.24043G	-47.00	1
2480MHz	Pass	2.48016G	9.89	-10.11	881.88M	-52.28	2.39256G	-51.80	2.4G	-54.48	2.50002G	-51.78	5.88922G	-47.52	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	7.17	-12.83	618.68M	-52.51	2.39996G	-45.06	2.4G	-44.81	2.50238G	-52.53	23.43087G	-47.00	1
2440MHz	Pass	2.43991G	7.62	-12.38	913.6M	-52.83	2.39272G	-51.29	2.4G	-54.31	2.50278G	-52.08	16.29385G	-47.68	1
2480MHz	Pass	2.47983G	7.54	-12.46	2.17438G	-52.09	2.39624G	-51.55	2.4G	-54.03	2.50126G	-51.61	6.70472G	-47.41	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	6.47	-13.53	2.18965G	-52.68	2.39996G	-44.76	2.4G	-41.79	2.5005G	-52.15	16.53569G	-47.90	1
2440MHz	Pass	2.44025G	7.31	-12.69	955.9M	-52.04	2.3932G	-51.73	2.4G	-54.10	2.5001G	-50.57	6.95499G	-46.87	1
2480MHz	Pass	2.43407G	7.58	-12.42	1.83833G	-53.25	2.39648G	-51.98	2.4G	-54.23	2.50038G	-52.21	6.99718G	-46.94	1

2.4-2.4835GHz_BT-BR(1Mbps) CSENdB-FS

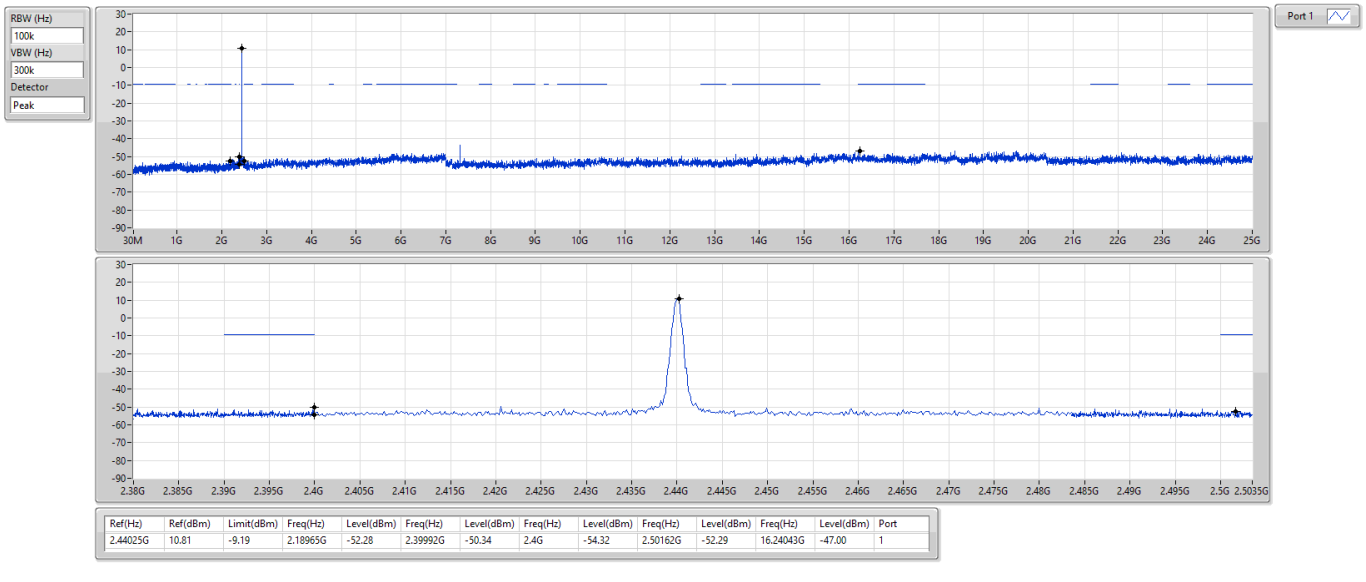
2402MHz



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
2.402G	10.27	-9.73	1.86653G	-52.28	2.4G	-50.10	2.4G	-49.09	2.50054G	-52.13	6.91281G	-47.41	1

2.4-2.4835GHz_BT-BR(1Mbps) CSENdB-FS

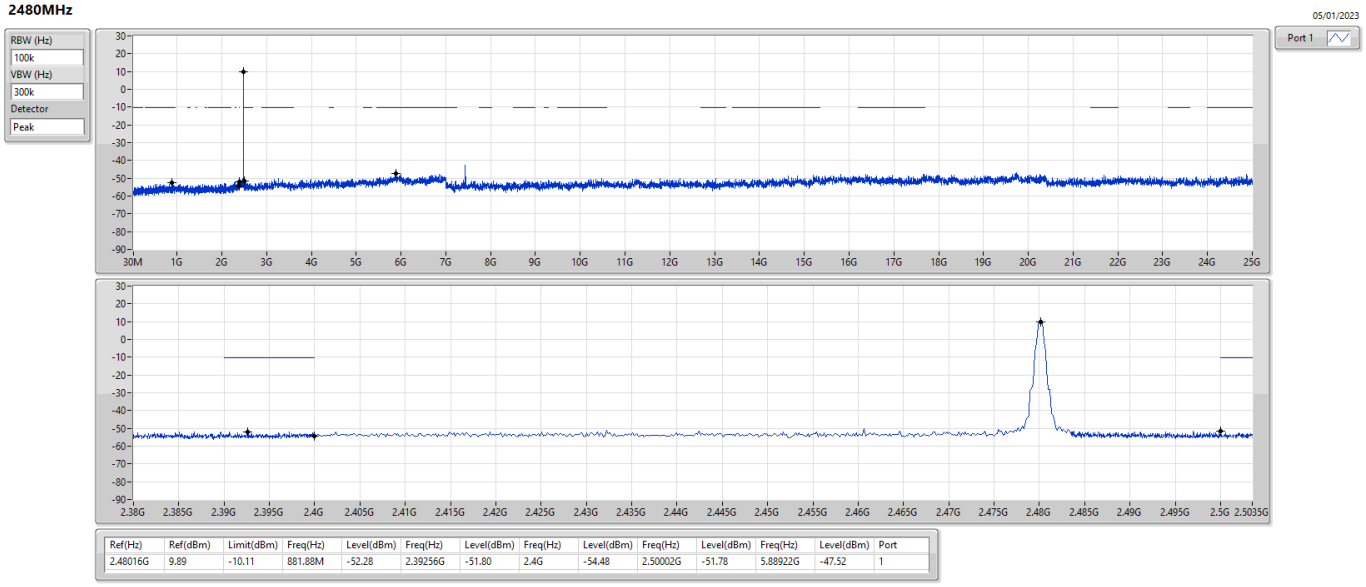
2440MHz



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
2.44025G	10.81	-9.19	2.18965G	-52.28	2.39992G	-50.34	2.4G	-54.32	2.50162G	-52.29	16.24043G	-47.00	1

2.4-2.4835GHz_BT-BR(1Mbps) CSENdB-FS

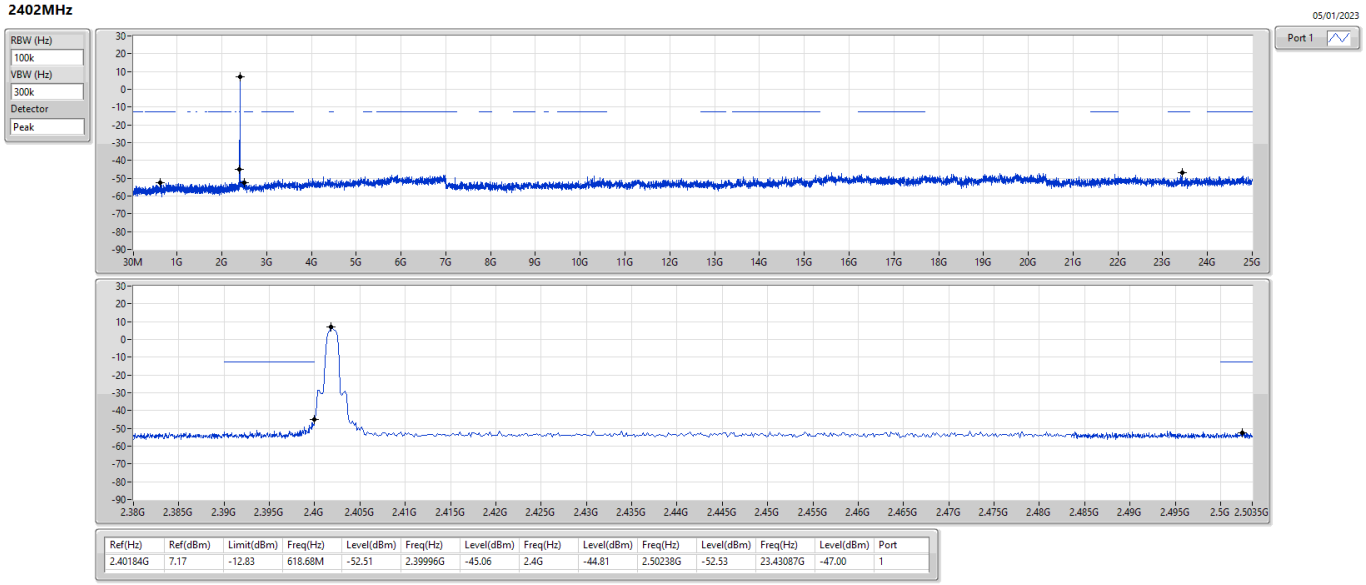
2480MHz



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
2.48016G	9.89	-10.11	881.88M	-52.28	2.39256G	-51.80	2.4G	-54.48	2.50002G	-51.78	5.88922G	-47.52	1

2.4-2.4835GHz_BT-EDR(2Mbps) CSENdB-FS

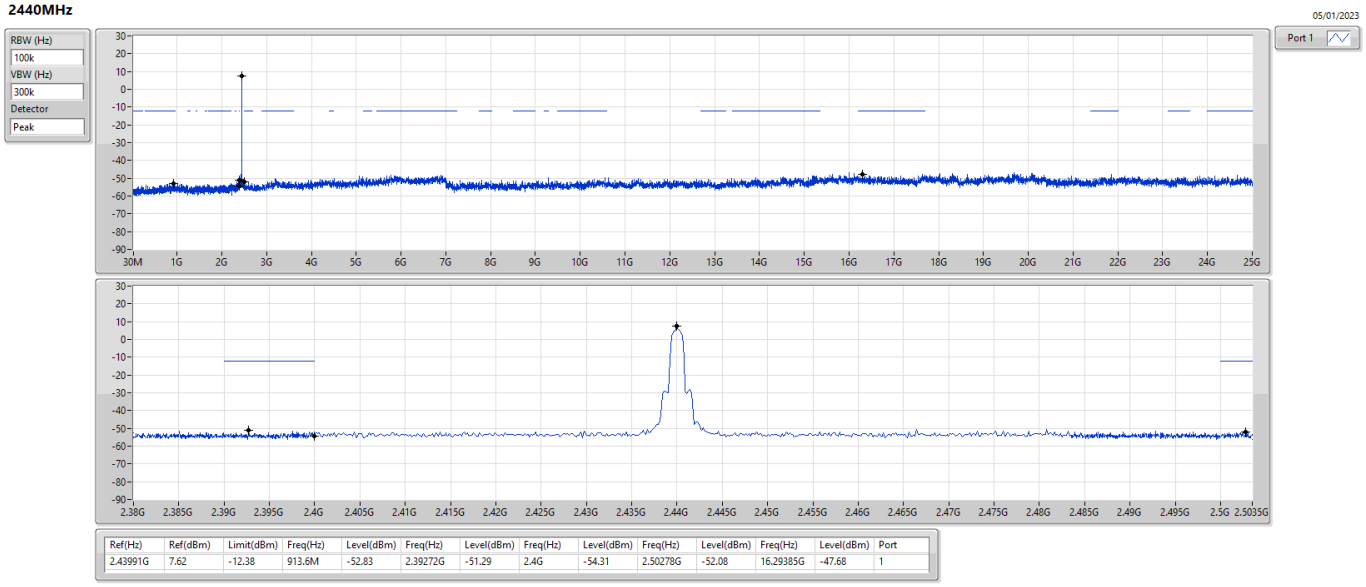
2402MHz



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
2.40184G	7.17	-12.83	618.68M	-52.51	2.39996G	-45.06	2.4G	-44.81	2.50238G	-52.53	23.43087G	-47.00	1

2.4-2.4835GHz_BT-EDR(2Mbps) CSENdB-FS

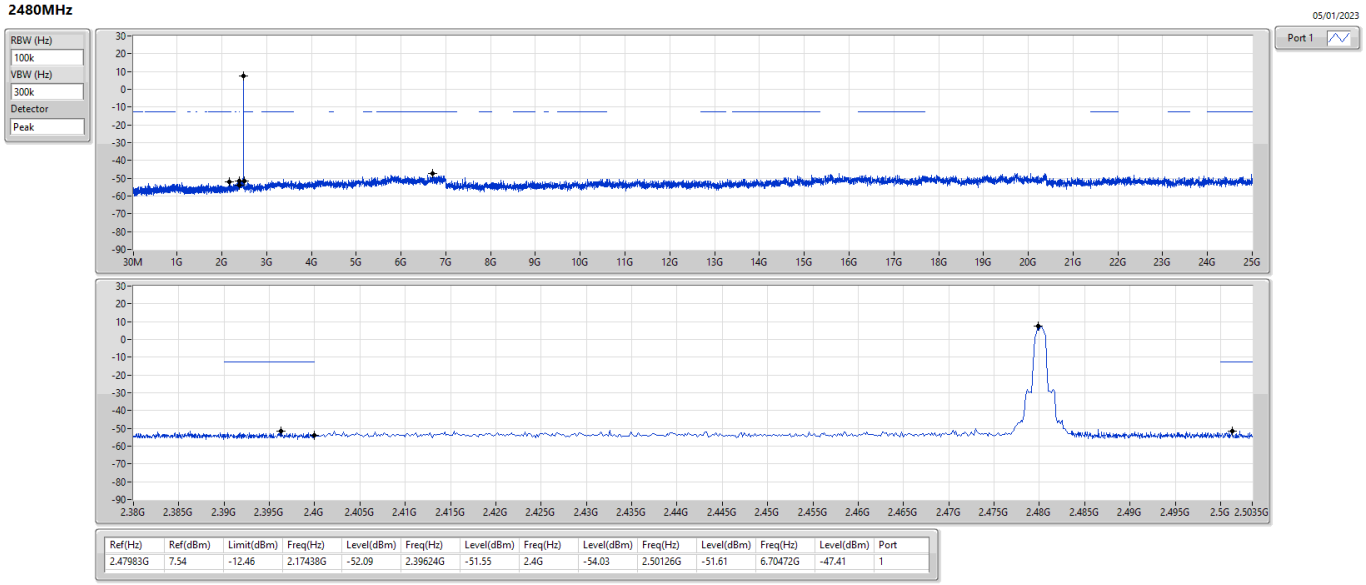
2440MHz



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
2.43991G	7.62	-12.38	913.6M	-52.83	2.39272G	-51.29	2.4G	-54.31	2.50278G	-52.08	16.29385G	-47.68	1

2.4-2.4835GHz_BT-EDR(2Mbps) CSENdB-FS

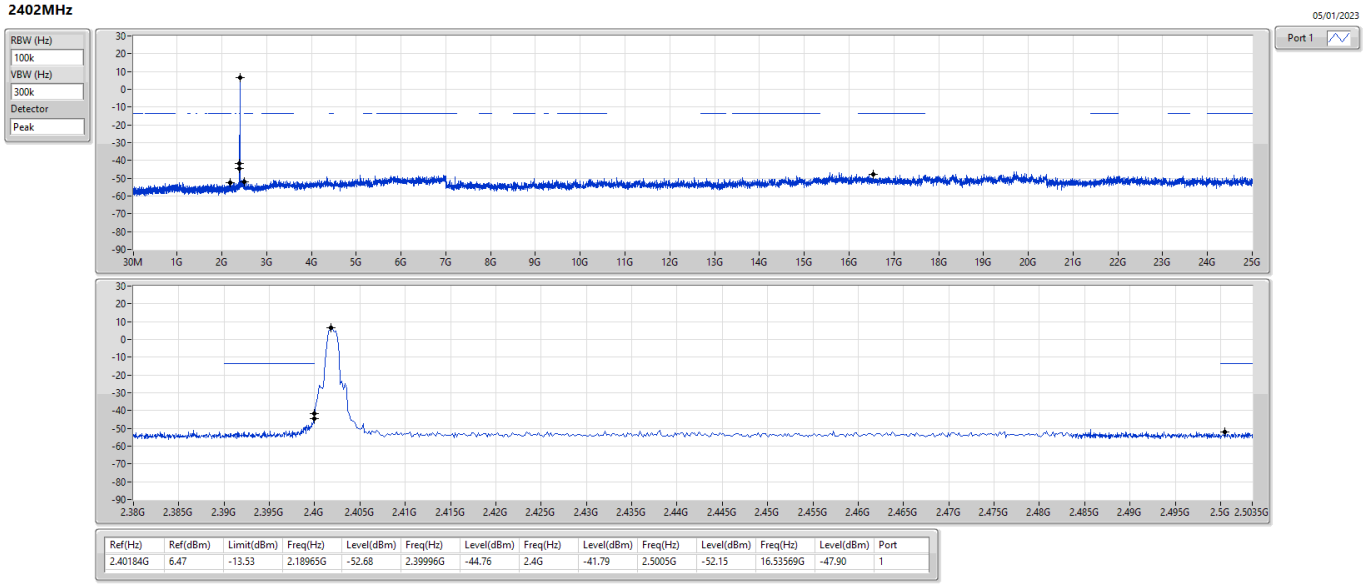
2480MHz



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
2.47983G	7.54	-12.46	2.17438G	-52.09	2.39624G	-51.55	2.4G	-54.03	2.50126G	-51.61	6.70472G	-47.41	1

2.4-2.4835GHz_BT-EDR(3Mbps) CSENdB-FS

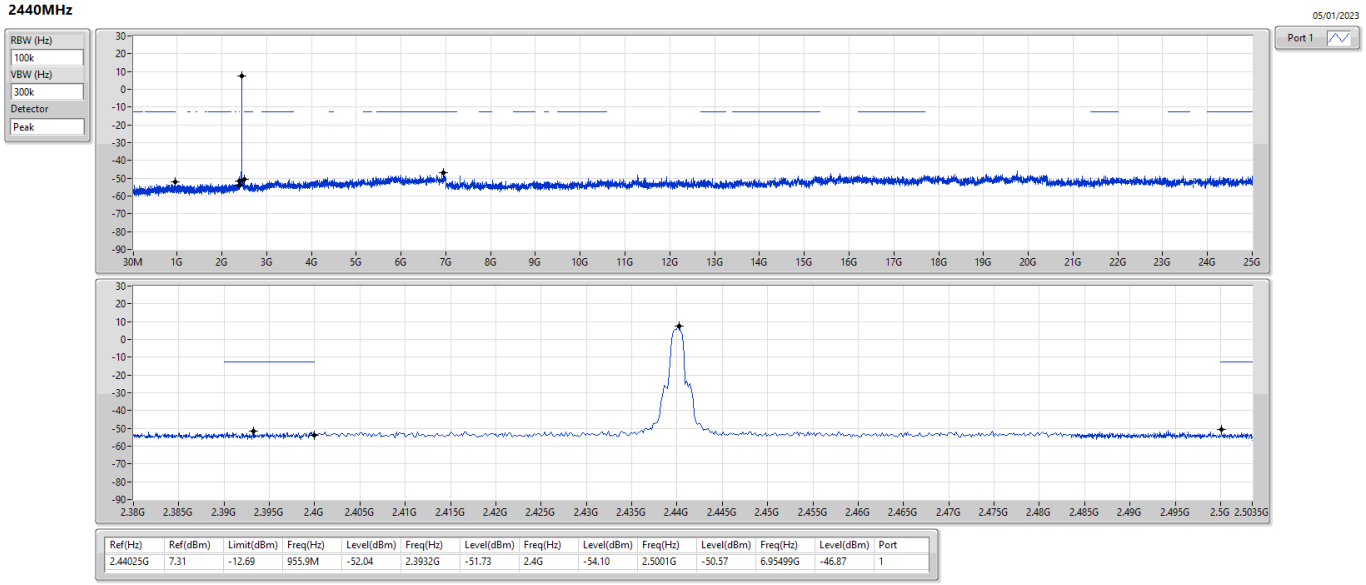
2402MHz



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
2.40184G	6.47	-13.53	2.18965G	-52.68	2.39996G	-44.76	2.4G	-41.79	2.5005G	-52.15	16.53569G	-47.90	1

2.4-2.4835GHz_BT-EDR(3Mbps) CSENdB-FS

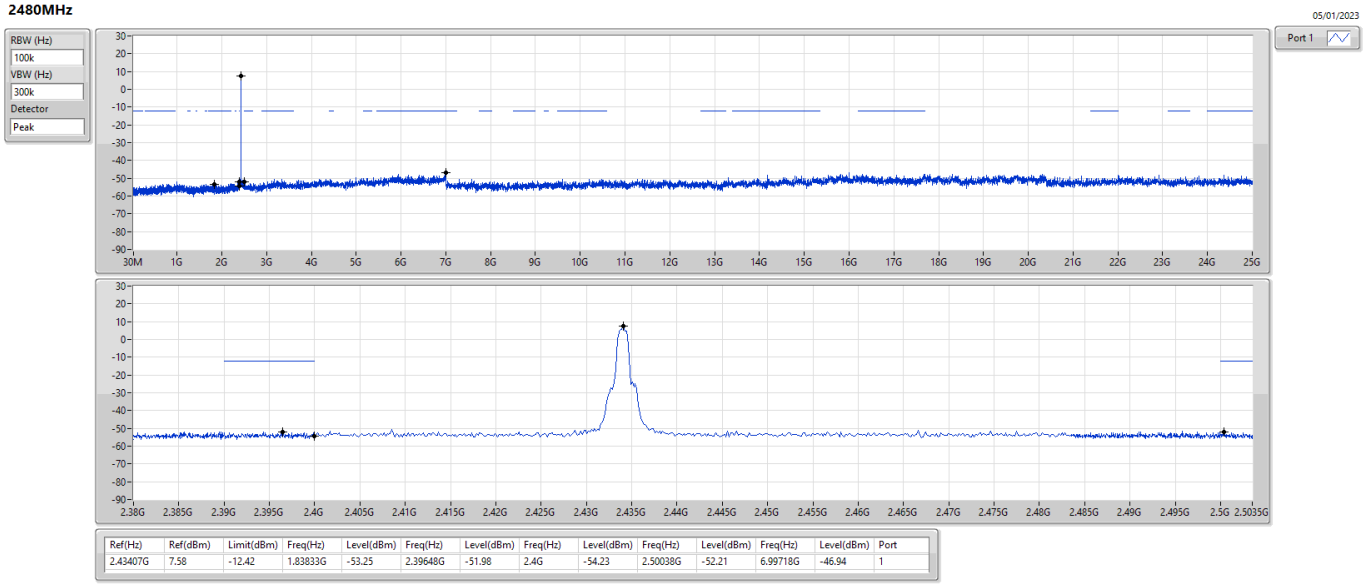
2440MHz



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
2.44025G	7.31	-12.69	955.9M	-52.04	2.3932G	-51.73	2.4G	-54.10	2.5001G	-50.57	6.95499G	-46.87	1

2.4-2.4835GHz_BT-EDR(3Mbps) CSENdB-FS

2480MHz

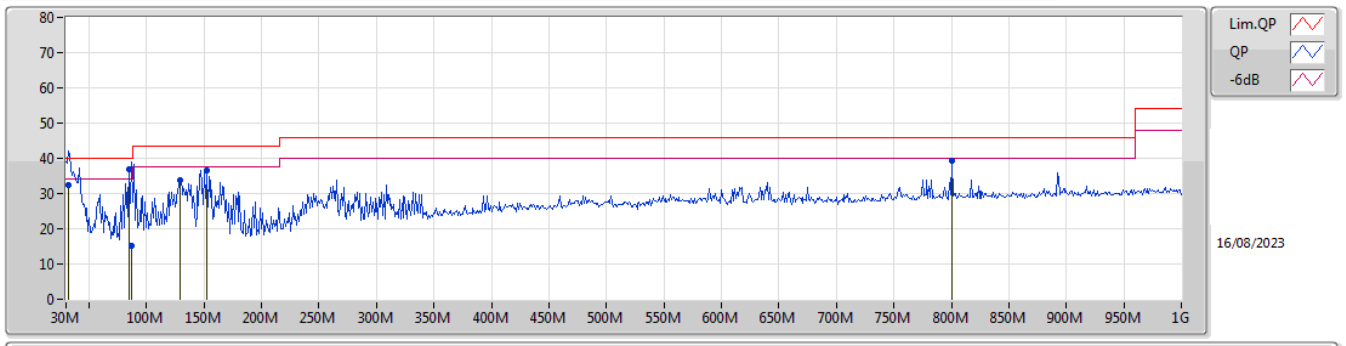


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43407G	7.58	-12.42	1.83833G	-53.25	2.39648G	-51.98	2.4G	-54.23	2.50038G	-52.21	6.99718G	-46.94	1

Summary

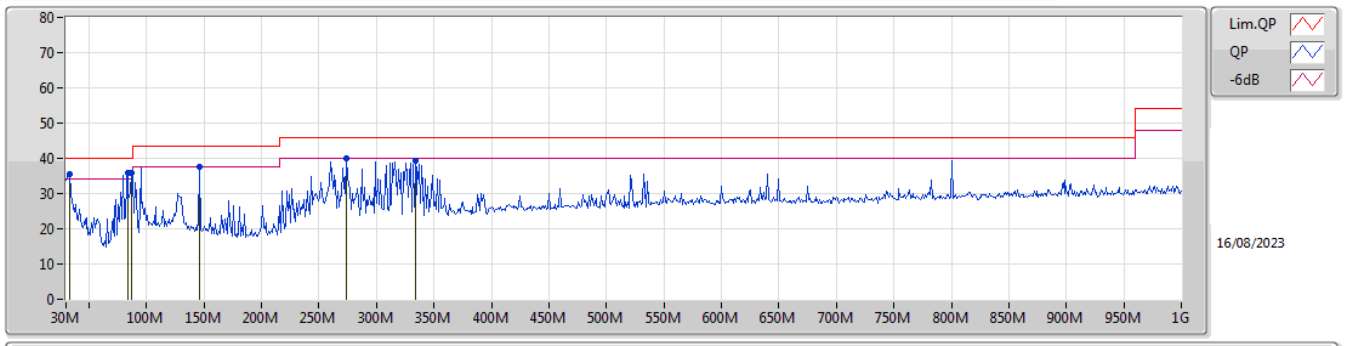
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 7	Pass	PK	85.29M	36.85	40.00	-3.15	Vertical

Mode 7



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)
QP	31.94M	32.32	40.00	-7.68	-20.88	3	Vertical	42	2.00	-	53.20	22.92	0.52	44.32
PK	85.29M	36.85	40.00	-3.15	-30.76	3	Vertical	137	1.00	"Worst"	67.61	13.04	0.80	44.60
QP	87.23M	15.27	40.00	-24.73	-30.41	3	Vertical	137	1.00	-	45.68	13.38	0.81	44.60
PK	128.94M	33.73	43.50	-9.77	-26.62	3	Vertical	97	1.00	-	60.35	17.02	0.98	44.62
PK	152.22M	36.65	43.50	-6.85	-28.12	3	Vertical	139	1.00	-	64.77	15.38	1.06	44.56
PK	800.18M	39.34	46.00	-6.66	-16.18	3	Vertical	31	1.00	-	55.52	24.98	2.33	43.49

Mode 7



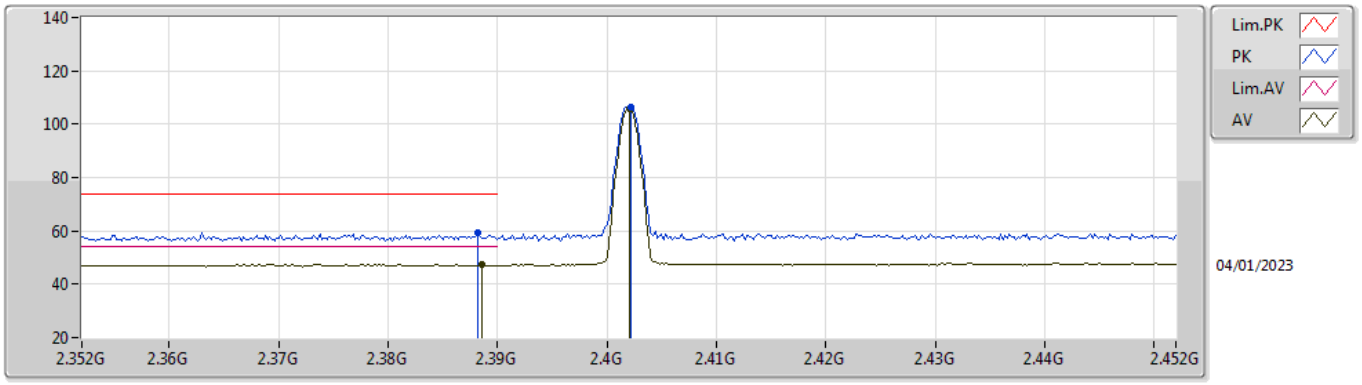
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	32.91M	35.63	40.00	-4.37	-21.55	3	Horizontal	187	1.00	-	57.18	22.25	0.52	44.32
PK	83.35M	35.87	40.00	-4.13	-31.12	3	Horizontal	305	1.00	-	66.99	12.69	0.79	44.60
PK	87.23M	35.99	40.00	-4.01	-30.41	3	Horizontal	305	1.00	"Worst"	66.40	13.38	0.81	44.60
PK	146.4M	37.56	43.50	-5.94	-27.72	3	Horizontal	83	1.50	-	65.28	15.82	1.04	44.58
PK	273.47M	40.16	46.00	-5.84	-24.87	3	Horizontal	81	1.50	-	65.03	18.04	1.41	44.32
PK	333.61M	39.43	46.00	-6.57	-23.83	3	Horizontal	26	1.00	-	63.26	18.84	1.55	44.22

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-EDR(3Mbps)	Pass	AV	2.4835G	48.73	54.00	-5.27	3	Vertical	48	1.80	-

BT-BR(1Mbps)

2402MHz_TX

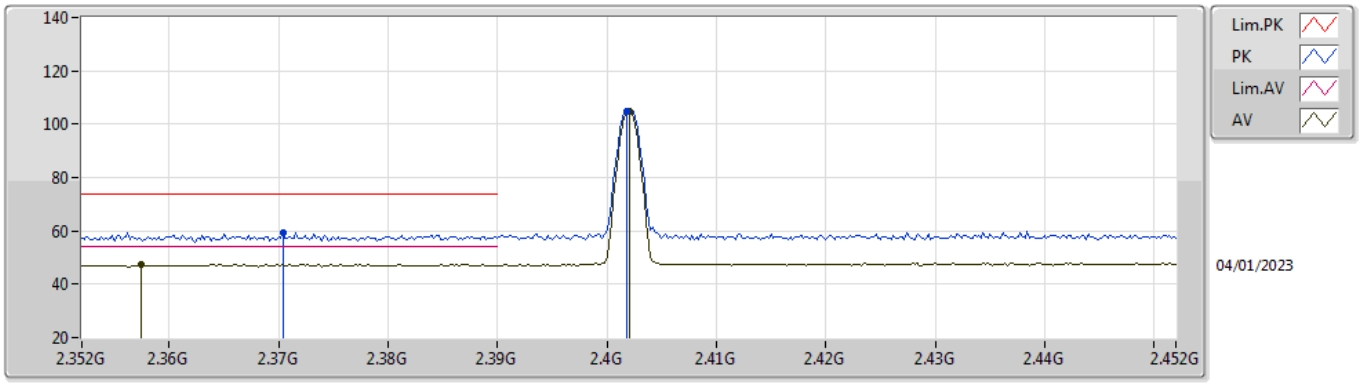


EUT X_1TX
Setting 12
01-P-K-5

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	59.38	74.00	-14.62	28.01	3	Vertical	56	1.76	-	27.78	3.59	-
AV	2.3886G	47.38	54.00	-6.62	16.01	3	Vertical	56	1.76	-	27.78	3.59	-
PK	2.4022G	106.18	Inf	-Inf	74.78	3	Vertical	56	1.76	-	27.80	3.60	-
AV	2.402G	105.75	Inf	-Inf	74.35	3	Vertical	56	1.76	-	27.80	3.60	-

BT-BR(1Mbps)

2402MHz_TX

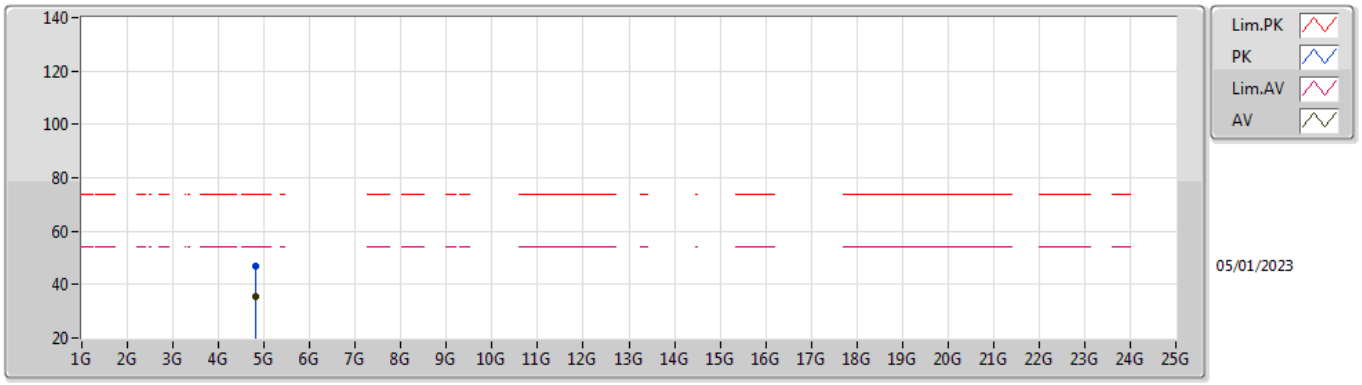


EUT X_1TX
Setting 12
01-P-K-5

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	2.3704G	59.51	74.00	-14.49	28.20	3	Horizontal	68	1.59	-	27.74	3.57	-
AV	2.3574G	47.40	54.00	-6.60	16.13	3	Horizontal	68	1.59	-	27.71	3.56	-
PK	2.4018G	105.07	Inf	-Inf	73.67	3	Horizontal	68	1.59	-	27.80	3.60	-
AV	2.402G	104.65	Inf	-Inf	73.25	3	Horizontal	68	1.59	-	27.80	3.60	-

BT-BR(1Mbps)

2402MHz_TX

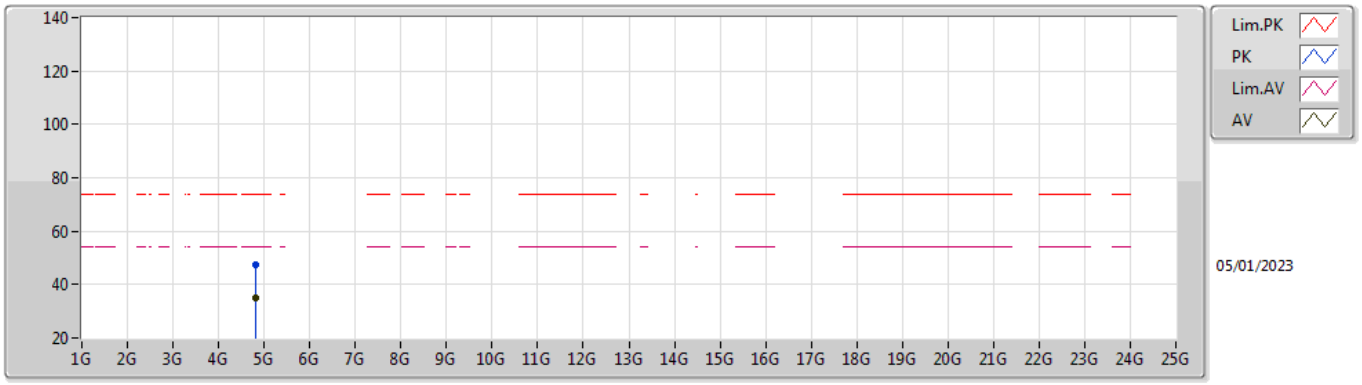


EUT X_1TX
Setting 12
01-P-K-5

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	4.80404G	47.09	74.00	-26.91	41.56	3	Vertical	285	2.99	-	32.72	5.70	32.89
AV	4.80728G	35.30	54.00	-18.70	29.74	3	Vertical	285	2.99	-	32.74	5.71	32.89

BT-BR(1Mbps)

2402MHz_TX

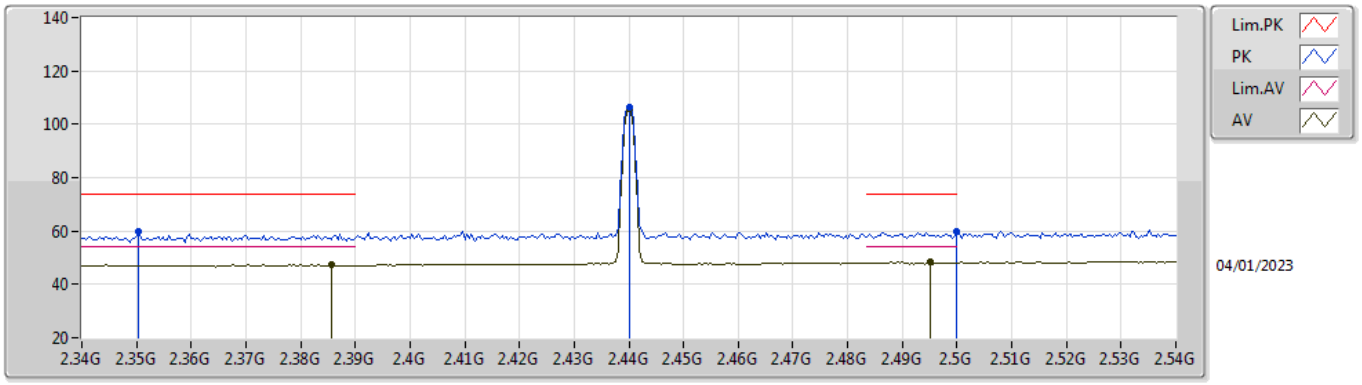


EUT X_1TX
Setting 12
01-P-K-5

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	4.8057G	47.33	74.00	-26.67	41.78	3	Horizontal	274	1.49	-	32.73	5.71	32.89
AV	4.80024G	35.24	54.00	-18.76	29.73	3	Horizontal	274	1.49	-	32.70	5.70	32.89

BT-BR(1Mbps)

2440MHz_TX

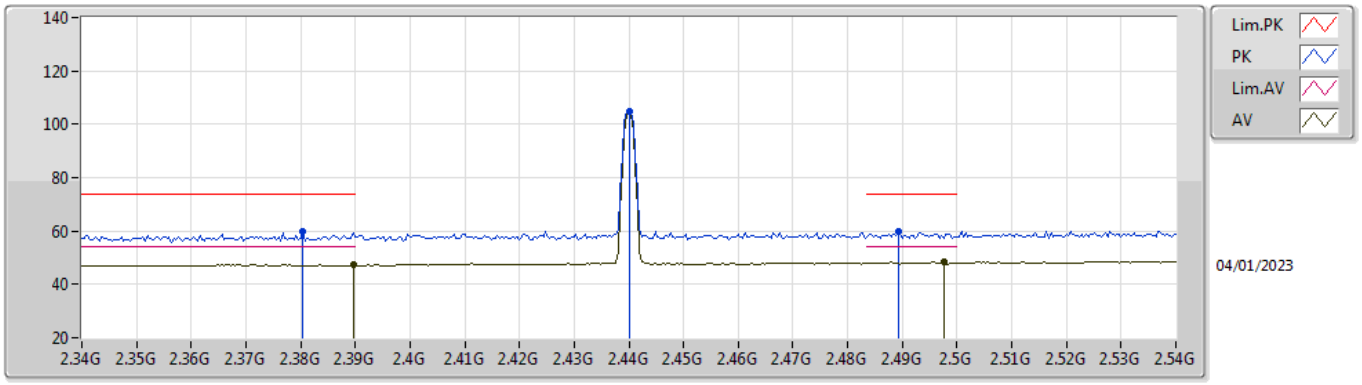


EUT X_1TX
Setting 12
01-P-K-5

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	2.3504G	59.58	74.00	-14.42	28.33	3	Vertical	48	1.80	-	27.70	3.55	-
AV	2.3856G	47.36	54.00	-6.64	16.00	3	Vertical	48	1.80	-	27.77	3.59	-
PK	2.44G	106.38	Inf	-Inf	74.88	3	Vertical	48	1.80	-	27.88	3.62	-
AV	2.44G	105.91	Inf	-Inf	74.41	3	Vertical	48	1.80	-	27.88	3.62	-
PK	2.5G	59.69	74.00	-14.31	27.84	3	Vertical	48	1.80	-	28.20	3.65	-
AV	2.4952G	48.26	54.00	-5.74	16.44	3	Vertical	48	1.80	-	28.17	3.65	-

BT-BR(1Mbps)

2440MHz_TX

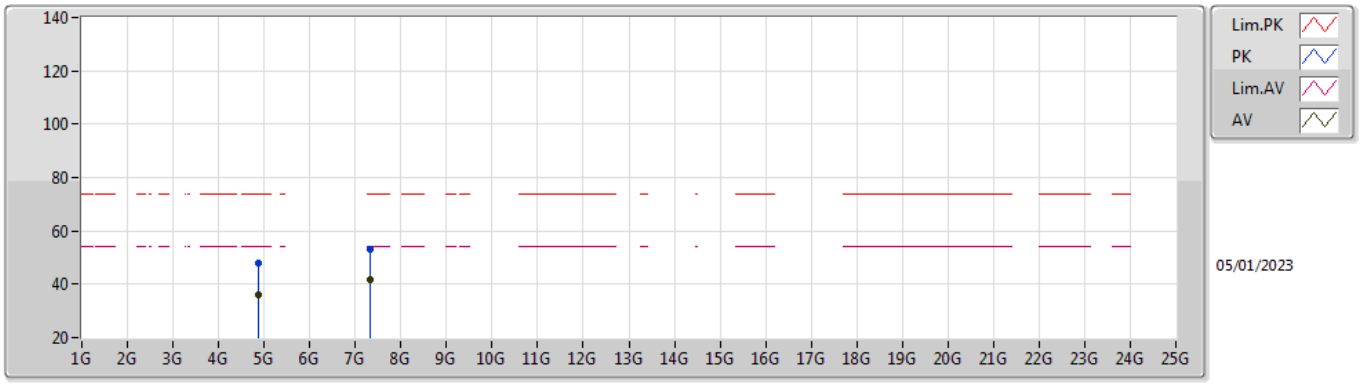


EUT X_1TX
Setting 12
01-P-K-5

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	2.3804G	59.75	74.00	-14.25	28.41	3	Horizontal	68	1.75	-	27.76	3.58	-
AV	2.3896G	47.39	54.00	-6.61	16.02	3	Horizontal	68	1.75	-	27.78	3.59	-
PK	2.44G	105.03	Inf	-Inf	73.53	3	Horizontal	68	1.75	-	27.88	3.62	-
AV	2.44G	104.61	Inf	-Inf	73.11	3	Horizontal	68	1.75	-	27.88	3.62	-
PK	2.4892G	59.67	74.00	-14.33	27.89	3	Horizontal	68	1.75	-	28.14	3.64	-
AV	2.4976G	48.29	54.00	-5.71	16.45	3	Horizontal	68	1.75	-	28.19	3.65	-

BT-BR(1Mbps)

2440MHz_TX

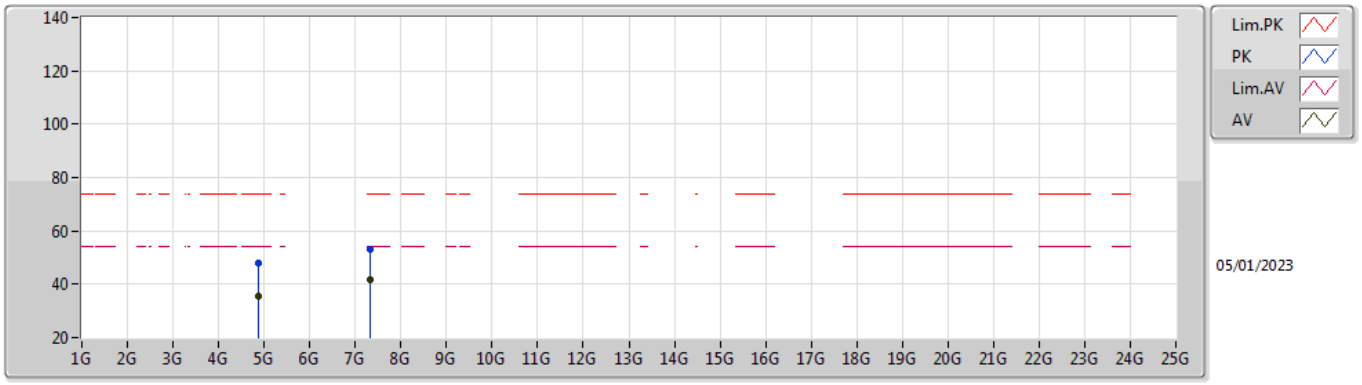


EUT X_1TX
Setting 12
01-P-K-5

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	4.87594G	47.78	74.00	-26.22	41.87	3	Vertical	59	1.49	-	33.00	5.78	32.87
AV	4.87778G	35.78	54.00	-18.22	29.87	3	Vertical	59	1.49	-	33.00	5.78	32.87
PK	7.32092G	53.19	74.00	-20.81	41.62	3	Vertical	307	1.21	-	37.60	7.16	33.19
AV	7.3152G	41.73	54.00	-12.27	30.15	3	Vertical	307	1.21	-	37.60	7.16	33.18

BT-BR(1Mbps)

2440MHz_TX

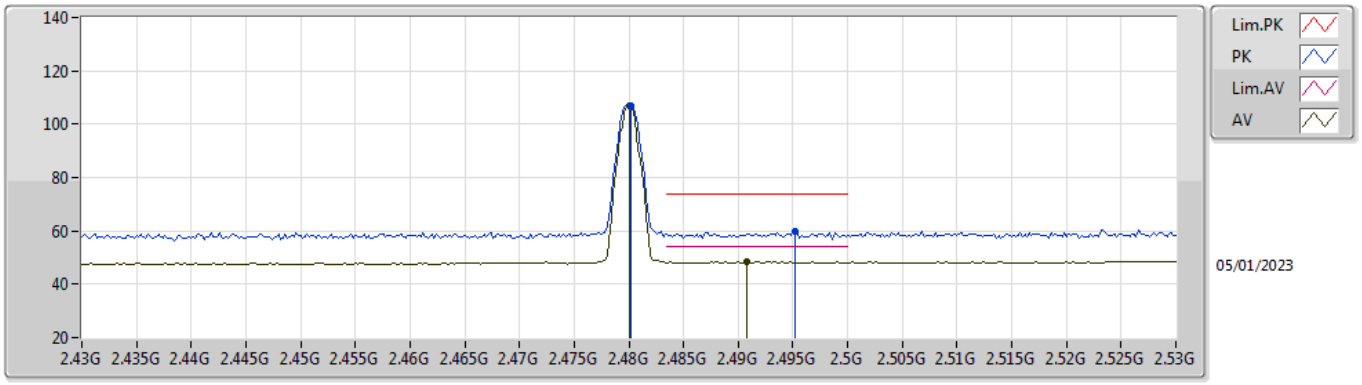


EUT X_1TX
Setting 12
01-P-K-5

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	4.88336G	48.18	74.00	-25.82	42.27	3	Horizontal	319	1.00	-	33.00	5.78	32.87
AV	4.88366G	35.64	54.00	-18.36	29.73	3	Horizontal	319	1.00	-	33.00	5.78	32.87
PK	7.31768G	53.24	74.00	-20.76	41.67	3	Horizontal	225	1.90	-	37.60	7.16	33.19
AV	7.3196G	41.55	54.00	-12.45	29.98	3	Horizontal	225	1.90	-	37.60	7.16	33.19

BT-BR(1Mbps)

2480MHz_TX

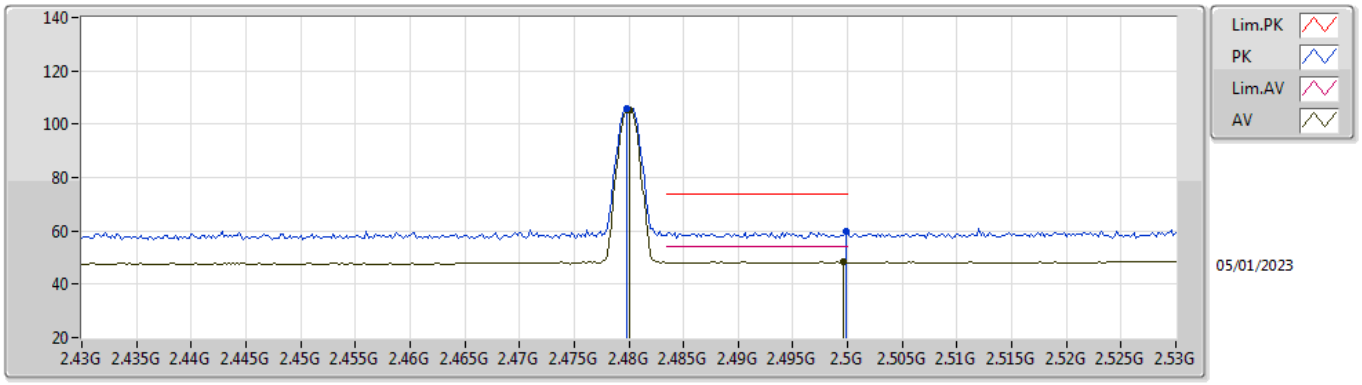


EUT X_1TX
Setting 12
01-P-K-5

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	107.07	Inf	-Inf	75.35	3	Vertical	48	1.80	-	28.08	3.64	-
AV	2.48G	106.65	Inf	-Inf	74.93	3	Vertical	48	1.80	-	28.08	3.64	-
PK	2.4952G	59.81	74.00	-14.19	27.99	3	Vertical	48	1.80	-	28.17	3.65	-
AV	2.4908G	48.52	54.00	-5.48	16.73	3	Vertical	48	1.80	-	28.14	3.65	-

BT-BR(1Mbps)

2480MHz_TX

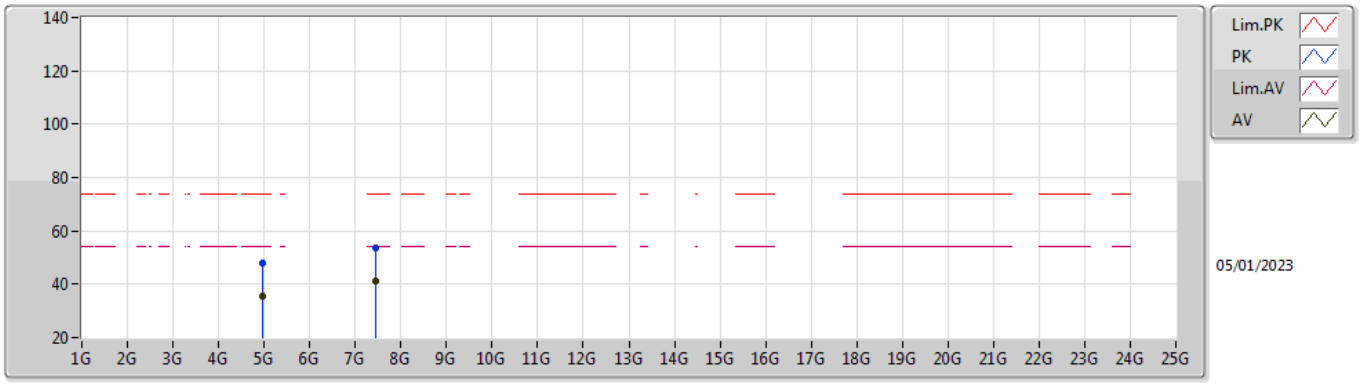


EUT X_1TX
Setting 12
01-P-K-5

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	2.4798G	106.10	Inf	-Inf	74.38	3	Horizontal	48	2.82	-	28.08	3.64	-
AV	2.48G	105.52	Inf	-Inf	73.80	3	Horizontal	48	2.82	-	28.08	3.64	-
PK	2.4998G	59.61	74.00	-14.39	27.76	3	Horizontal	48	2.82	-	28.20	3.65	-
AV	2.4996G	48.30	54.00	-5.70	16.45	3	Horizontal	48	2.82	-	28.20	3.65	-

BT-BR(1Mbps)

2480MHz_TX

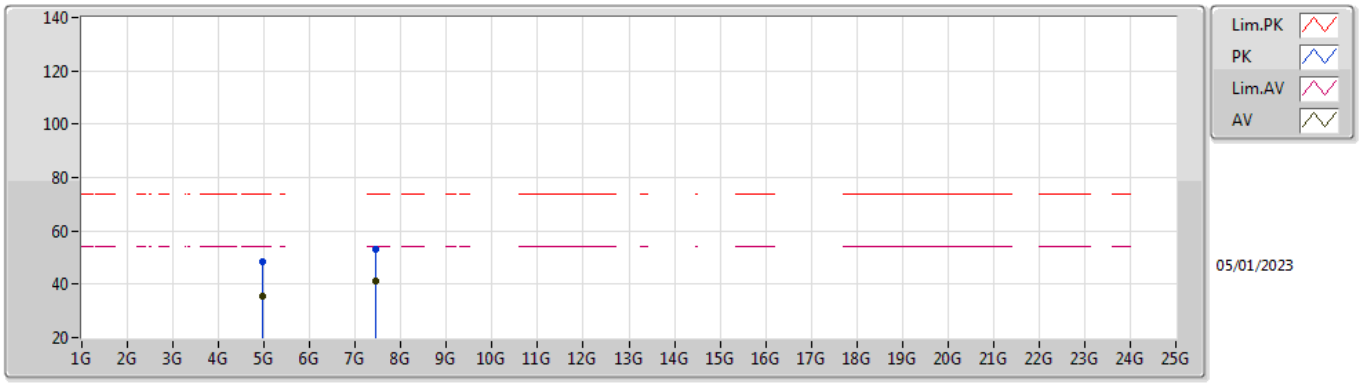


EUT X_1TX
Setting 12
01-P-K-5

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	4.96286G	48.17	74.00	-25.83	42.14	3	Vertical	10	2.52	-	33.03	5.86	32.86
AV	4.95504G	35.77	54.00	-18.23	29.76	3	Vertical	10	2.52	-	33.01	5.86	32.86
PK	7.43766G	53.37	74.00	-20.63	41.90	3	Vertical	53	1.39	-	37.50	7.22	33.25
AV	7.43656G	41.25	54.00	-12.75	29.78	3	Vertical	53	1.39	-	37.50	7.22	33.25

BT-BR(1Mbps)

2480MHz_TX

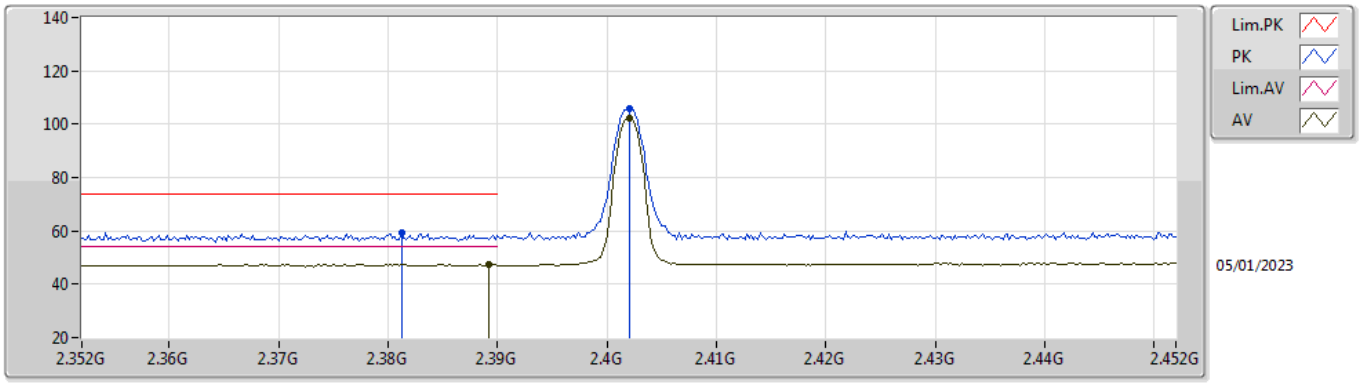


EUT X_1TX
Setting 12
01-P-K-5

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	4.95766G	48.34	74.00	-25.66	42.32	3	Horizontal	198	1.17	-	33.02	5.86	32.86
AV	4.96132G	35.73	54.00	-18.27	29.71	3	Horizontal	198	1.17	-	33.02	5.86	32.86
PK	7.43602G	52.94	74.00	-21.06	41.47	3	Horizontal	33	1.60	-	37.50	7.22	33.25
AV	7.43628G	41.15	54.00	-12.85	29.68	3	Horizontal	33	1.60	-	37.50	7.22	33.25

BT-EDR(3Mbps)

2402MHz_TX

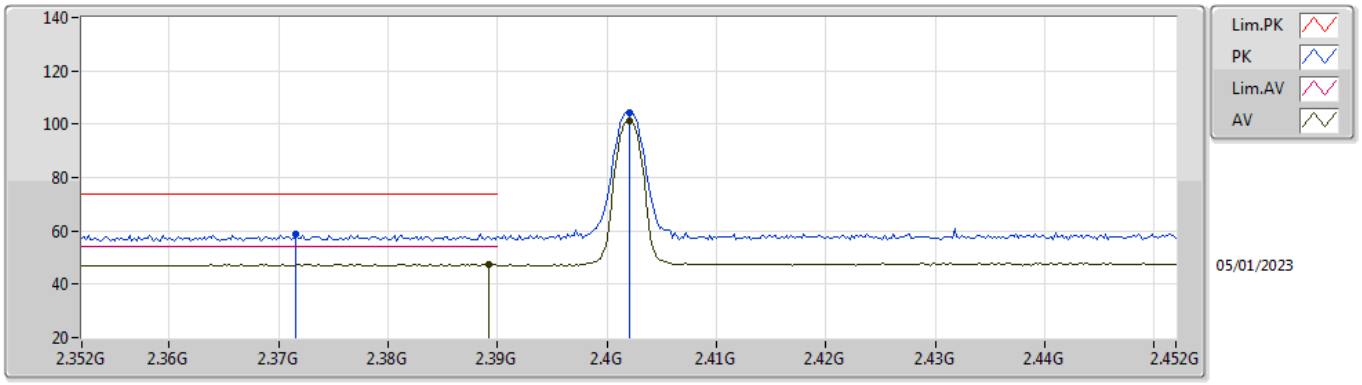


EUT X_1TX
Setting 12
01-P-K-5

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	2.3812G	59.39	74.00	-14.61	28.05	3	Vertical	56	1.94	-	27.76	3.58	-
AV	2.3892G	47.39	54.00	-6.61	16.02	3	Vertical	56	1.94	-	27.78	3.59	-
PK	2.402G	105.72	Inf	-Inf	74.32	3	Vertical	56	1.94	-	27.80	3.60	-
AV	2.402G	102.28	Inf	-Inf	70.88	3	Vertical	56	1.94	-	27.80	3.60	-

BT-EDR(3Mbps)

2402MHz_TX

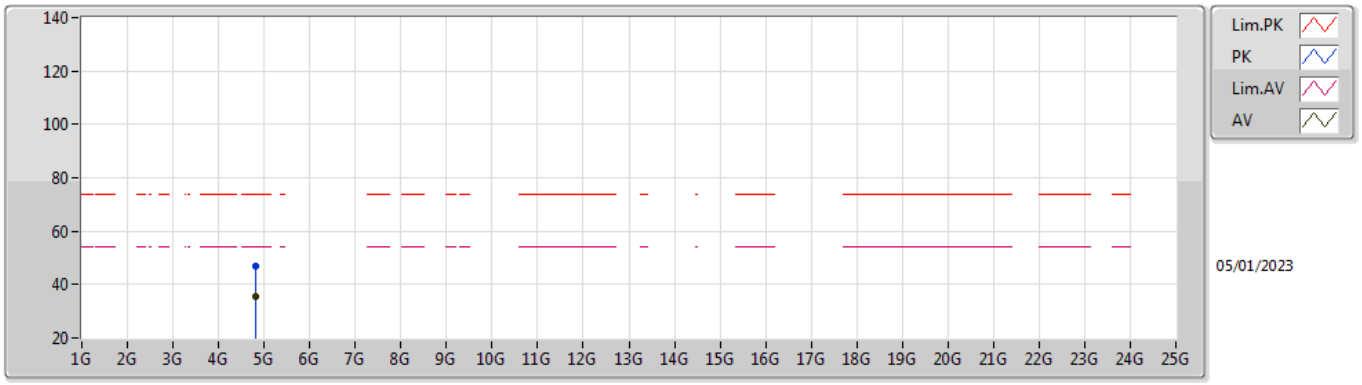


EUT X_1TX
Setting 12
01-P-K-5

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	2.3716G	58.84	74.00	-15.16	27.53	3	Horizontal	69	1.60	-	27.74	3.57	-
AV	2.3892G	47.39	54.00	-6.61	16.02	3	Horizontal	69	1.60	-	27.78	3.59	-
PK	2.402G	104.39	Inf	-Inf	72.99	3	Horizontal	69	1.60	-	27.80	3.60	-
AV	2.402G	100.96	Inf	-Inf	69.56	3	Horizontal	69	1.60	-	27.80	3.60	-

BT-EDR(3Mbps)

2402MHz_TX

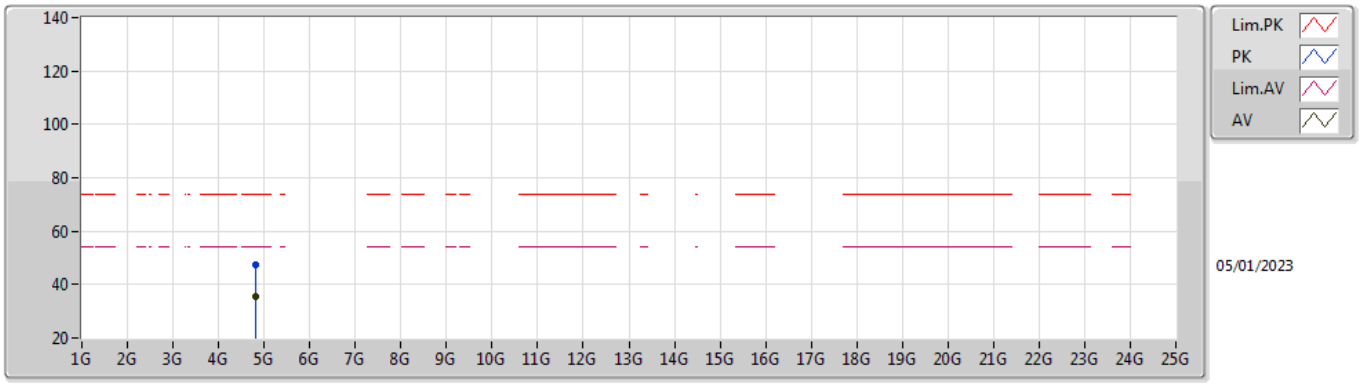


EUT X_1TX
Setting 12
01-P-K-5

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	4.80028G	47.12	74.00	-26.88	41.61	3	Vertical	279	1.41	-	32.70	5.70	32.89
AV	4.80764G	35.39	54.00	-18.61	29.82	3	Vertical	279	1.41	-	32.75	5.71	32.89

BT-EDR(3Mbps)

2402MHz_TX

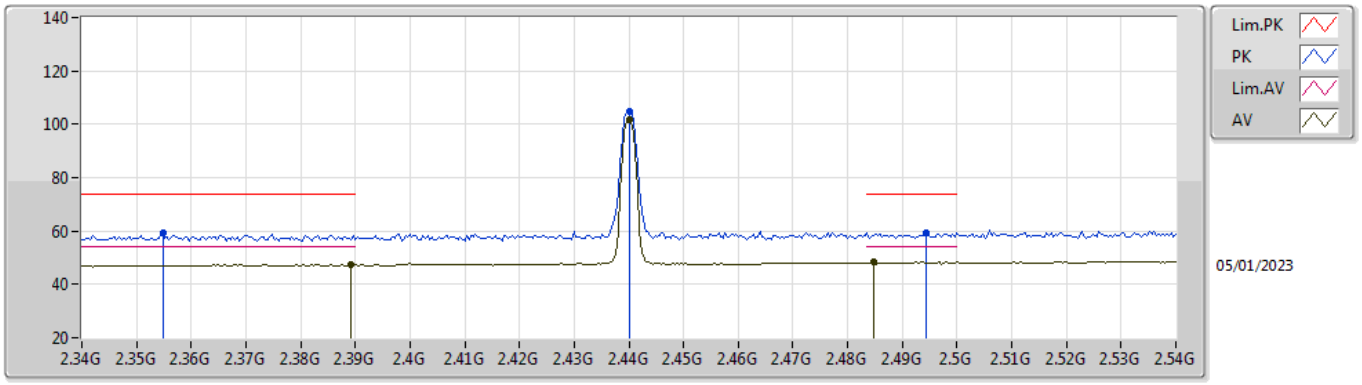


EUT X_1TX
Setting 12
01-P-K-5

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	4.80784G	47.16	74.00	-26.84	41.59	3	Horizontal	299	1.10	-	32.75	5.71	32.89
AV	4.80824G	35.31	54.00	-18.69	29.74	3	Horizontal	299	1.10	-	32.75	5.71	32.89

BT-EDR(3Mbps)

2440MHz_TX

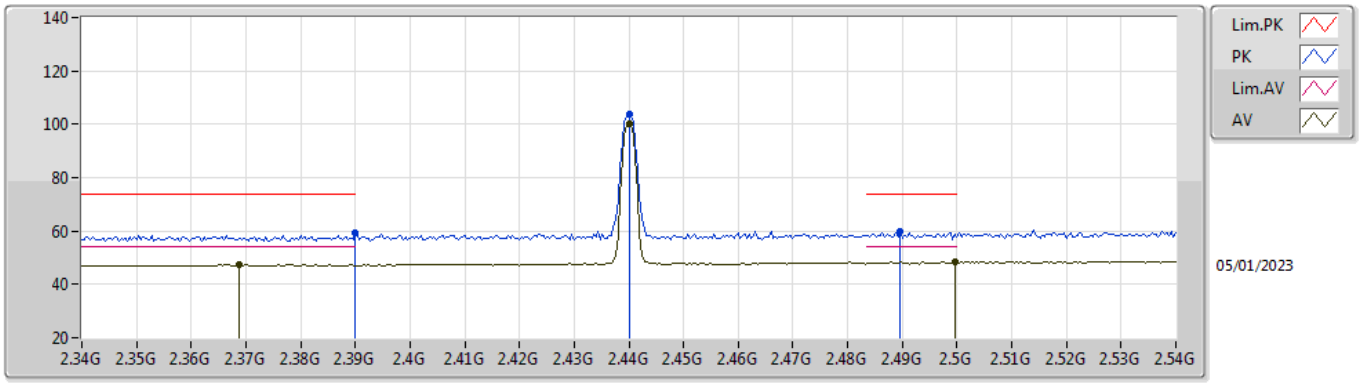


EUT X_1TX
Setting 12
01-P-K-5

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	2.3548G	59.09	74.00	-14.91	27.83	3	Vertical	48	1.80	-	27.71	3.55	-
AV	2.3892G	47.39	54.00	-6.61	16.02	3	Vertical	48	1.80	-	27.78	3.59	-
PK	2.44G	104.96	Inf	-Inf	73.46	3	Vertical	48	1.80	-	27.88	3.62	-
AV	2.44G	101.54	Inf	-Inf	70.04	3	Vertical	48	1.80	-	27.88	3.62	-
PK	2.4944G	59.23	74.00	-14.77	27.41	3	Vertical	48	1.80	-	28.17	3.65	-
AV	2.4848G	48.46	54.00	-5.54	16.71	3	Vertical	48	1.80	-	28.11	3.64	-

BT-EDR(3Mbps)

2440MHz_TX

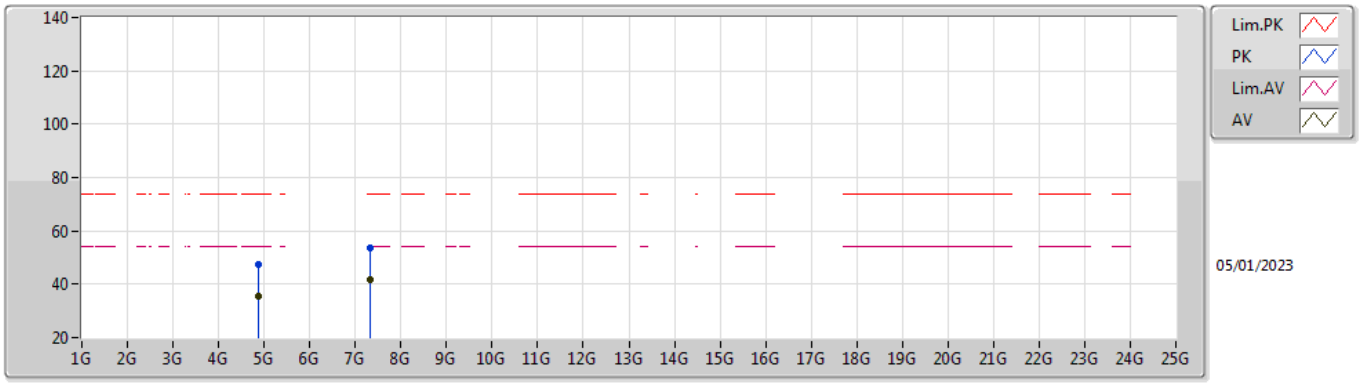


EUT X_1TX
Setting 12
01-P-K-5

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	59.24	74.00	-14.76	27.87	3	Horizontal	69	1.75	-	27.78	3.59	-
AV	2.3688G	47.50	54.00	-6.50	16.19	3	Horizontal	69	1.75	-	27.74	3.57	-
PK	2.44G	103.64	Inf	-Inf	72.14	3	Horizontal	69	1.75	-	27.88	3.62	-
AV	2.44G	100.20	Inf	-Inf	68.70	3	Horizontal	69	1.75	-	27.88	3.62	-
PK	2.4896G	59.98	74.00	-14.02	28.20	3	Horizontal	69	1.75	-	28.14	3.64	-
AV	2.4996G	48.30	54.00	-5.70	16.45	3	Horizontal	69	1.75	-	28.20	3.65	-

BT-EDR(3Mbps)

2440MHz_TX

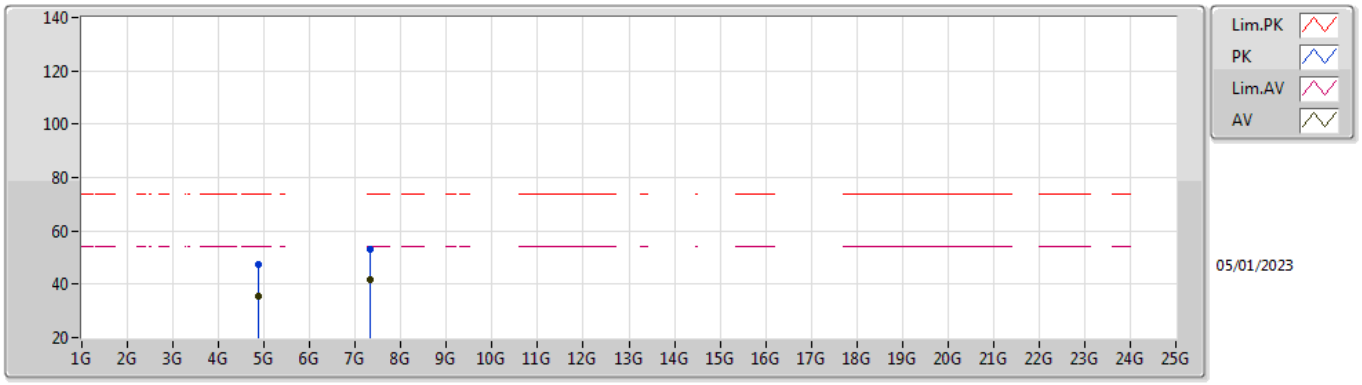


EUT X_1TX
Setting 12
01-P-K-5

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	4.8793G	47.63	74.00	-26.37	41.72	3	Vertical	254	2.13	-	33.00	5.78	32.87
AV	4.87554G	35.70	54.00	-18.30	29.79	3	Vertical	254	2.13	-	33.00	5.78	32.87
PK	7.32034G	53.52	74.00	-20.48	41.95	3	Vertical	349	1.44	-	37.60	7.16	33.19
AV	7.31548G	41.63	54.00	-12.37	30.05	3	Vertical	349	1.44	-	37.60	7.16	33.18

BT-EDR(3Mbps)

2440MHz_TX

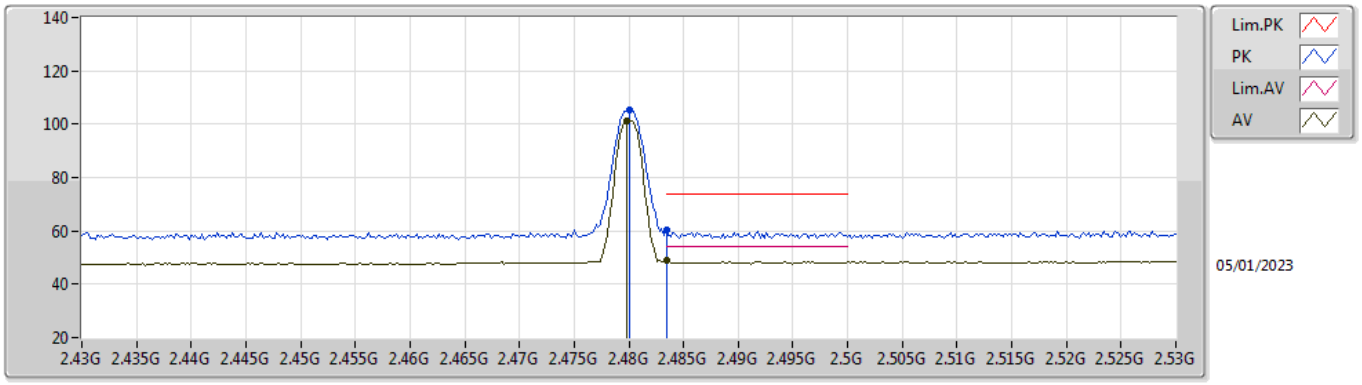


EUT X_1TX
Setting 12
01-P-K-5

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	4.88388G	47.66	74.00	-26.34	41.75	3	Horizontal	30	2.18	-	33.00	5.78	32.87
AV	4.87758G	35.63	54.00	-18.37	29.72	3	Horizontal	30	2.18	-	33.00	5.78	32.87
PK	7.31648G	52.86	74.00	-21.14	41.28	3	Horizontal	95	2.51	-	37.60	7.16	33.18
AV	7.32116G	41.60	54.00	-12.40	30.03	3	Horizontal	95	2.51	-	37.60	7.16	33.19

BT-EDR(3Mbps)

2480MHz_TX

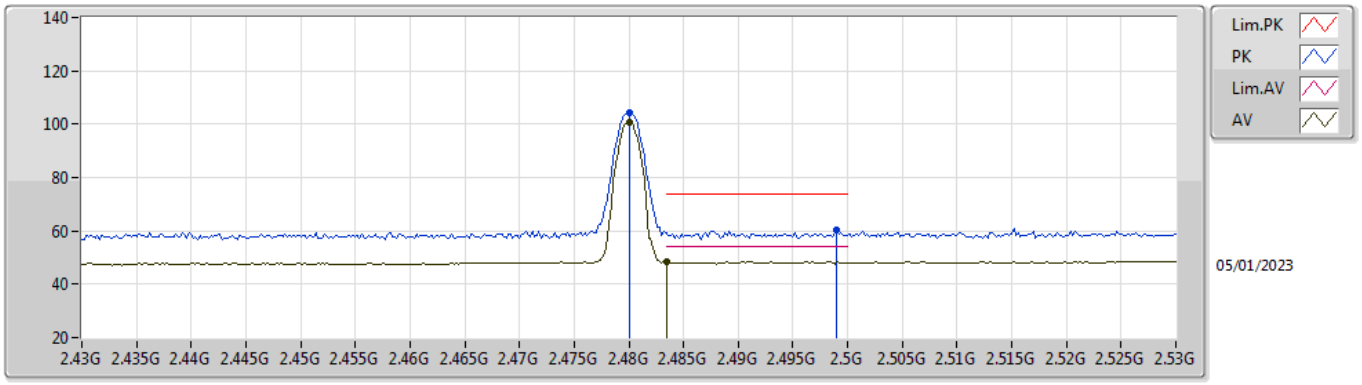


EUT X_1TX
Setting 12
01-P-K-5

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	2.48G	105.16	Inf	-Inf	73.44	3	Vertical	48	1.80	-	28.08	3.64	-
AV	2.4798G	101.38	Inf	-Inf	69.66	3	Vertical	48	1.80	-	28.08	3.64	-
PK	2.4835G	60.31	74.00	-13.69	28.57	3	Vertical	48	1.80	-	28.10	3.64	-
AV	2.4835G	48.73	54.00	-5.27	16.99	3	Vertical	48	1.80	-	28.10	3.64	-

BT-EDR(3Mbps)

2480MHz_TX

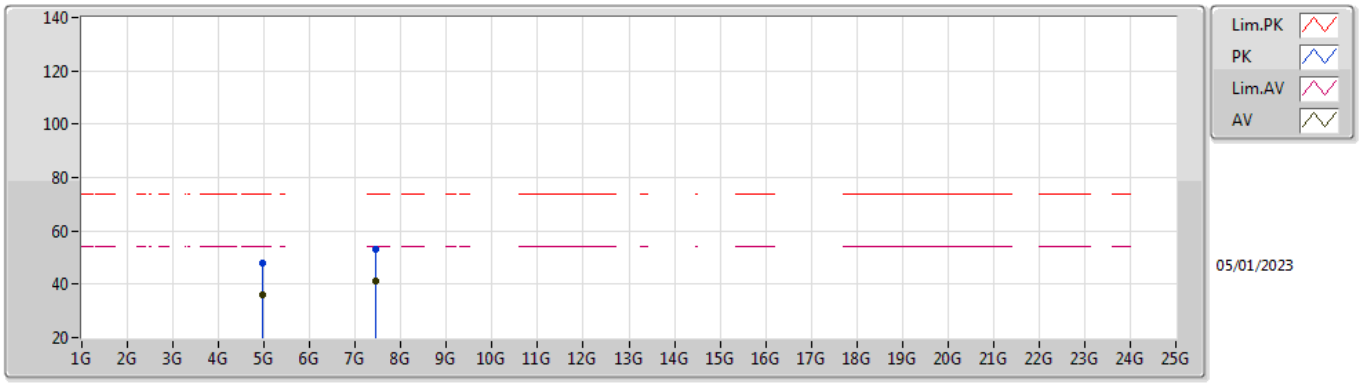


EUT X_1TX
Setting 12
01-P-K-5

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	2.48G	104.08	Inf	-Inf	72.36	3	Horizontal	48	2.81	-	28.08	3.64	-
AV	2.48G	100.72	Inf	-Inf	69.00	3	Horizontal	48	2.81	-	28.08	3.64	-
PK	2.499G	60.14	74.00	-13.86	28.30	3	Horizontal	48	2.81	-	28.19	3.65	-
AV	2.4835G	48.45	54.00	-5.55	16.71	3	Horizontal	48	2.81	-	28.10	3.64	-

BT-EDR(3Mbps)

2480MHz_TX

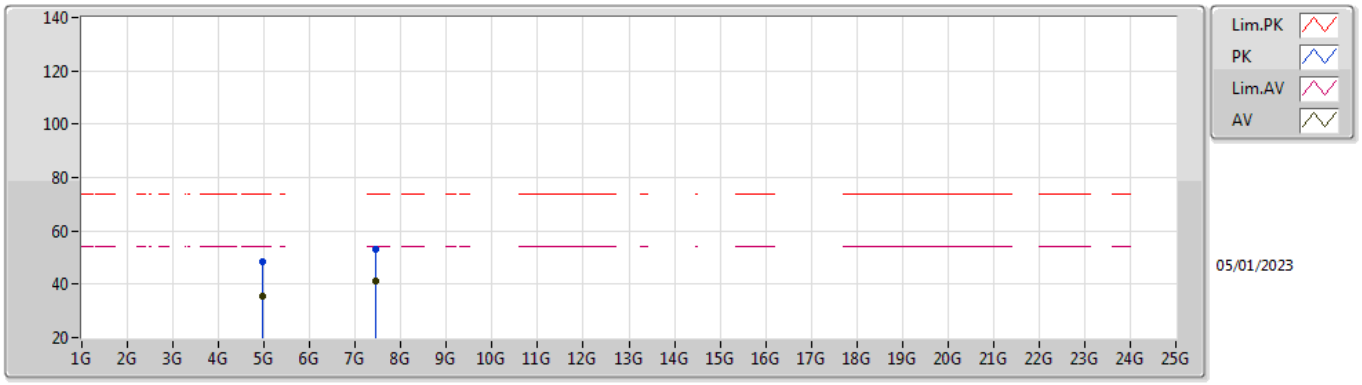


EUT X_1TX
Setting 12
01-P-K-5

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	4.96404G	47.80	74.00	-26.20	41.77	3	Vertical	241	1.44	-	33.03	5.86	32.86
AV	4.95806G	35.88	54.00	-18.12	29.86	3	Vertical	241	1.44	-	33.02	5.86	32.86
PK	7.44476G	53.23	74.00	-20.77	41.76	3	Vertical	122	2.29	-	37.50	7.22	33.25
AV	7.4447G	41.09	54.00	-12.91	29.62	3	Vertical	122	2.29	-	37.50	7.22	33.25

BT-EDR(3Mbps)

2480MHz_TX



EUT X_1TX
Setting 12
01-P-K-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	4.961G	48.28	74.00	-25.72	42.26	3	Horizontal	222	1.07	-	33.02	5.86	32.86
AV	4.96204G	35.65	54.00	-18.35	29.63	3	Horizontal	222	1.07	-	33.02	5.86	32.86
PK	7.435G	52.92	74.00	-21.08	41.45	3	Horizontal	91	2.28	-	37.50	7.22	33.25
AV	7.44436G	41.14	54.00	-12.86	29.67	3	Horizontal	91	2.28	-	37.50	7.22	33.25