Testing Laboratory
3787

RADIO TEST REPORT

FCC ID	:	2AYRA-03791
Equipment	:	Linksys Velop Micro-Router 6
Brand Name	:	LINKSYS
Model Name	:	LN1100, LN1110, LN1115
Applicant	:	Linksys USA, Inc. 121 Theory, Irvine, CA. 92617, USA
Standard	:	47 CFR FCC Part 15.247

The product was received on Aug. 10, 2023, and testing was started from Aug. 14, 2023 and completed on Sep. 26, 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
FR380925AC	01	Initial issue of report	Nov. 29, 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: Cathy Chiu

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(1Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(2Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(3Mbps)	1	1TX

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.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Galtronics	02102140-07935E1(DB1)	PCB Antenna	I-PEX	Note1
2	Galtronics	02102140-07935E2(DB2)	PCB Antenna	I-PEX	
3	Gemtek	WRTQ-388AX	Printed Antenna	N/A	

Note1:

Ant.	Port			Antenna Gain (dBi)					
				WLAN 2.4GHz	WLAN 5GHz				Bluetooth
	2.4GHz	5GHz	Bluetooth		UNII 1	UNII 2A	UNII 2C	UNII 3	
1	2	1	-	4.69	3.86	3.86	4.05	4.05	-
2	1	2	-	4.69	4.88	5.01	4.88	4.89	-
3	-	-	1	-	-	-	-	-	2.86

Note2: The above information was declared by manufacturer.

Note3: Directional gain information

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

Ex.

Directional Gain (NSS1) formula : $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

$NSS1(g1,1) = 10^{G1/20}$; $NSS1(g1,2) = 10^{G2/20}$; $NSS1(g1,2) = 10^{G3/20}$; $NSS1(g1,2) = 10^{G4/20}$

$gj,k = (Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2$

$DG = 10 \log[(Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2 / N_{ANT}] => 10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$

Where ;

2.4G G1= 4.69 dBi ;G2= 4.69 dBi ;

5G UNII-1 G1 = 3.86 dBi; G2 = 4.88 dBi;

5G UNII-2A G1 = 3.86 dBi; G2 = 5.01 dBi;

5G UNII-2C G1 = 4.05 dBi; G2 = 4.88 dBi;

5G UNII-3 G1 = 4.05 dBi; G2 = 4.89 dBi;

2.4G DG = 7.70 dBi

5G UNII-1 DG = 7.40 dBi

5G UNII-2A DG = 7.46 dBi

5G UNII-2C DG = 7.49 dB

5G UNII-3 DG = 7.49 dBi

For 2.4GHz function:
For IEEE 802**.11b/g/n/VHT/ax (2TX/2RX):**
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:
For IEEE 802.11a/n/ac/ax (2TX/2RX):
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.

For Bluetooth 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)	0.777	1.1	2.888m	1k
BT-EDR(2Mbps)	0.752	1.24	2.889m	1k
BT-EDR(3Mbps)	0.785	1.05	2.891m	1k

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter
Test Software Version	QPSR Version 5.0-00202

1.1.5 Table for Multiple Listing

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

Model Name	Description
LN1100	All the models are identical, the difference model served as marketing strategy.
LN1110	
LN1115	

Note 1: From the above models, model: LN110 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 support function

Function
AP Router
Mesh

Note1: For above table list, only AP Router mode was tested and recorded in this test.
Note2: 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 (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	TH03-CB	Owen Hsu	24.3-25.2 / 56-67	Aug. 21, 2023~ Sep. 26, 2023
Radiated (Below 1GHz)	03CH04-CB	Roy Mai	23-24 / 56-59	Aug. 15, 2023~ Sep. 21, 2023
Radiated (Above 1GHz)	03CH02-CB	Roy Mai	22.4-23.5 / 55-58	Aug. 15, 2023~ Sep. 21, 2023
AC Conduction	CO01-CB	Ryan Huang	21~22 / 61~62	Aug. 14, 2023~ Aug. 28, 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)

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%
Radiated Emission (1GHz ~ 18GHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	8
BT-EDR(2Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	9
BT-EDR(3Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	9

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 + Adapter 1
2	EUT + Adapter 2
3	EUT + Adapter 3
For operating mode 2 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	CTX
For WLAN 2.4GHz/5GHz: After evaluating, the worst case was found at Y axis from Emissions in Restricted Frequency Bands above 1GHz. So the measurement will follow this same test configuration. For Bluetooth: After evaluating, the worst case was found at Z axis from Emissions in Restricted Frequency Bands above 1GHz. So the measurement will follow this same test configuration.	
1	EUT in Y axis + WLAN 2.4GHz + Adapter 1
2	EUT in Y axis + WLAN 2.4GHz + Adapter 2
3	EUT in Y axis + WLAN 2.4GHz + Adapter 3
Mode 3 has been evaluated to be the worst case among Mode 1 ~ 3, thus measurement for Mode 4 ~ 5 will follow this same test mode.	
4	EUT in Y axis + WLAN 5GHz + Adapter 3
5	EUT in Z axis + Bluetooth + Adapter 3
For operating mode 3 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
After evaluating, the worst case was found at Z axis, thus the measurement will follow this same test configuration.	
1	EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA380925 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter 1	Ktec	KSA-18W-120150VU	INPUT: 100-240V ~ 50/60Hz, 0.5A OUTPUT: 12V, 1.5A
Adapter 2	MOSO	MS-V1500R120-018H0-US	INPUT: 100-240V ~ 50/60Hz, 0.6A, max. OUTPUT: 12.0V, 1.5A
Adapter 3	Ktec	KSA-18W-120150D5	INPUT: 100-240V ~ 50/60Hz, 0.5A OUTPUT: 12.0V, 1.5A, 18.0W
Others			
RJ-45 cable 1*1, non-shielded, 1m (Black)			
RJ-45 cable 2*1, non-shielded, 1m (White)			
Plug*1 (Only for adapter 3 use)			

Note: From the above, RJ-45 cable 2 was selected as representative cable for the test and its data was recorded in this report.

2.5 Support Equipment

For AC Conduction:

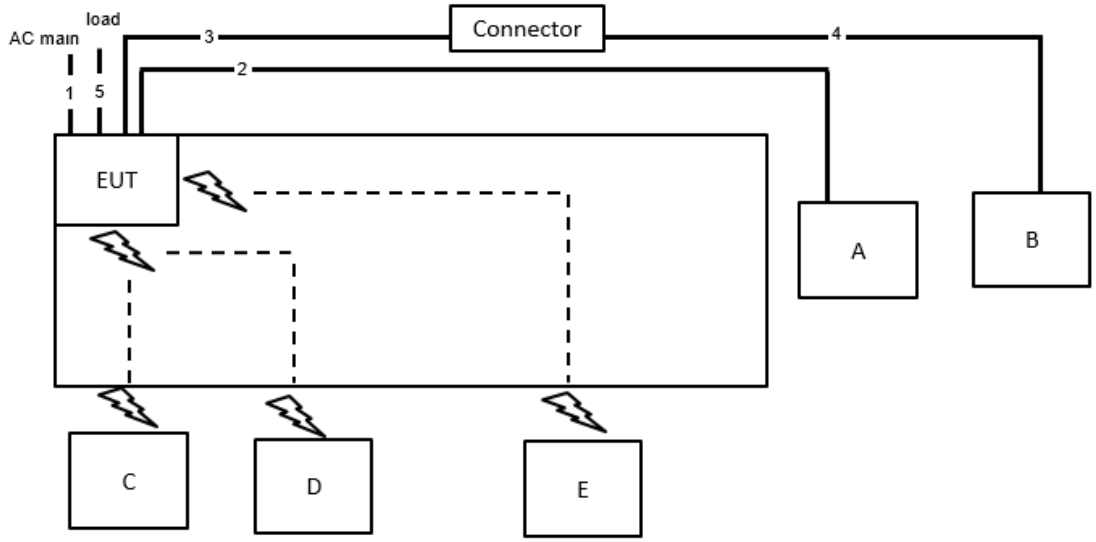
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E6430	N/A
B	WAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	Smart Phone	Samsung	Galaxy J2	N/A

For Radiated (below 1GHz), Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A

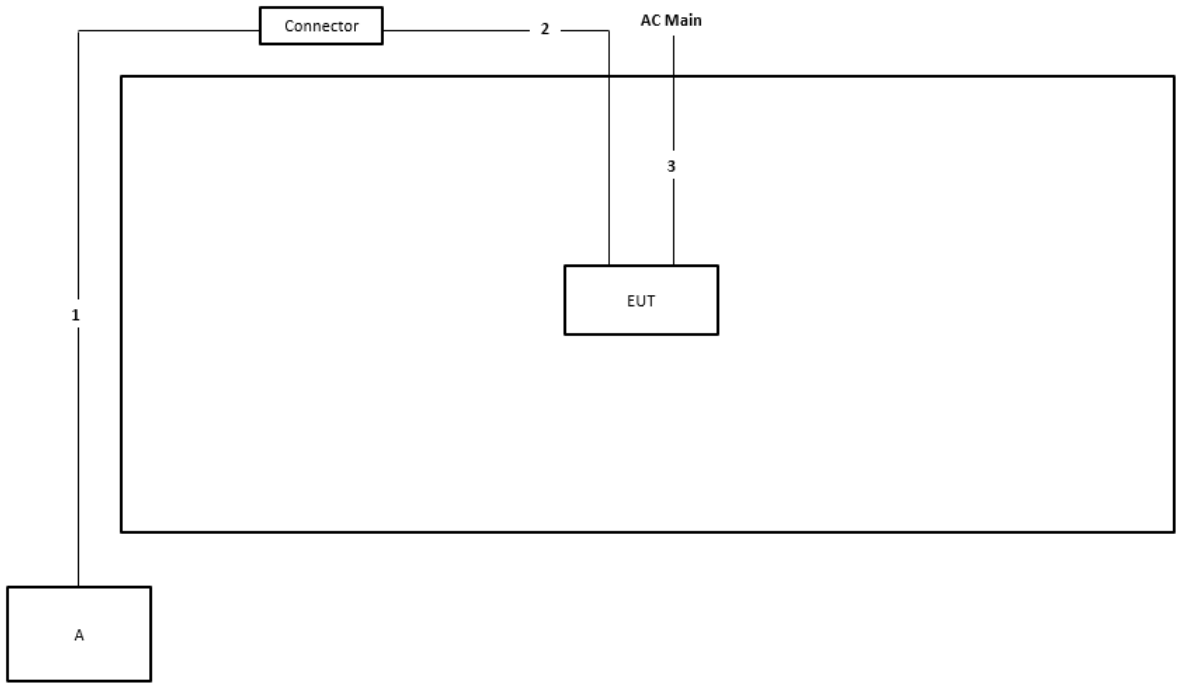
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power Cable	No	1.6m
2	RJ-45 Cable	No	10m
3	RJ-45 Cable	No	1m
4	RJ-45 Cable	No	10m
5	RJ-45 Cable*3	No	1.5m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1m
3	Power Cable	No	1.6m

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

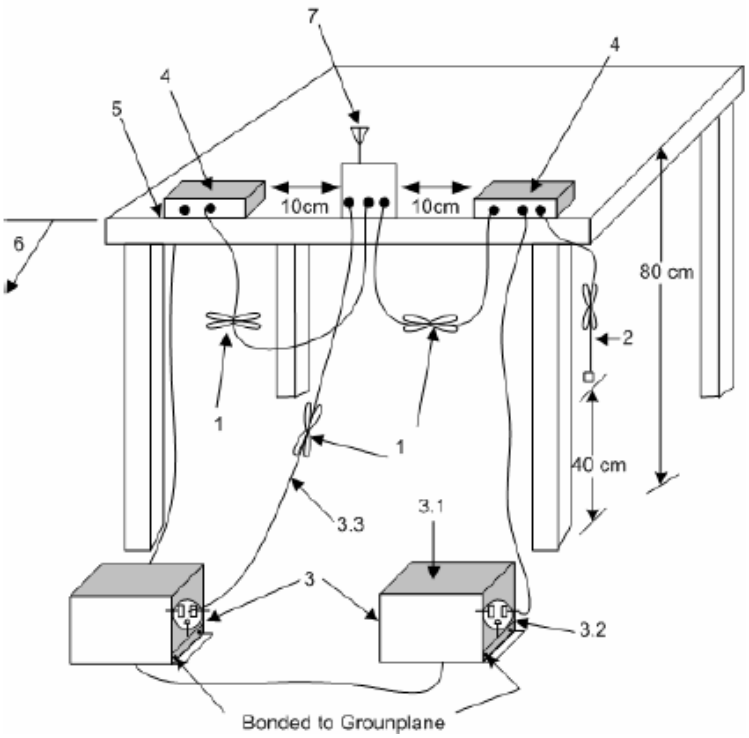
Refer a test equipment and calibration data table in this test report.

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

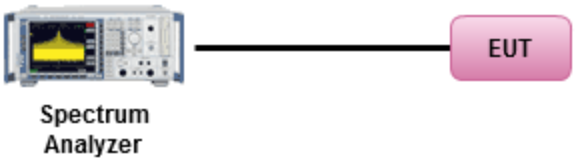
3.2.2 Measuring Instruments

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

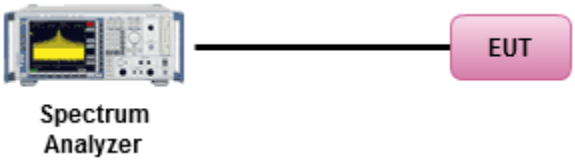
3.4.3 Measuring Instruments

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

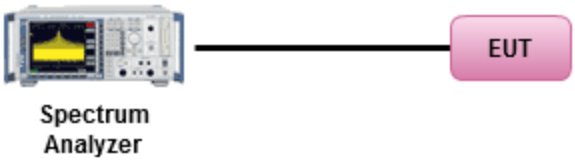
3.5.2 Measuring Instruments

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.	

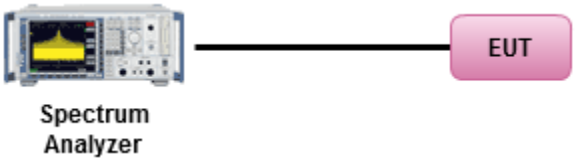
3.6.2 Measuring Instruments

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.

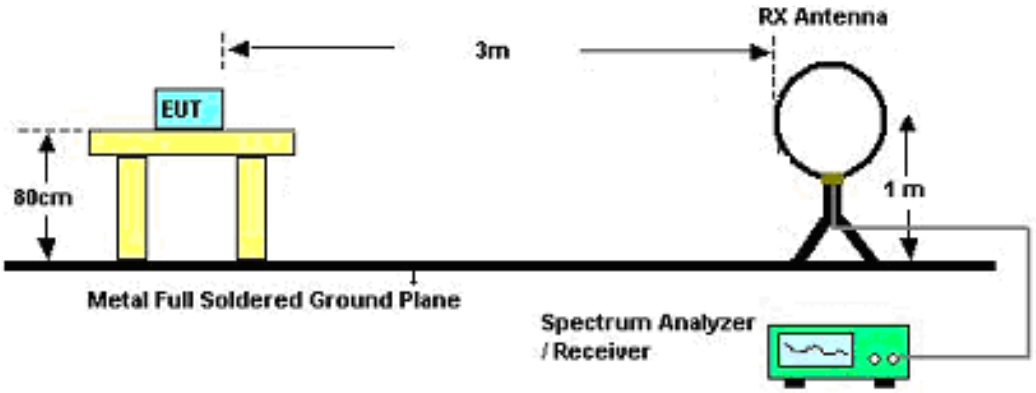
3.7.3 Test Procedures

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.

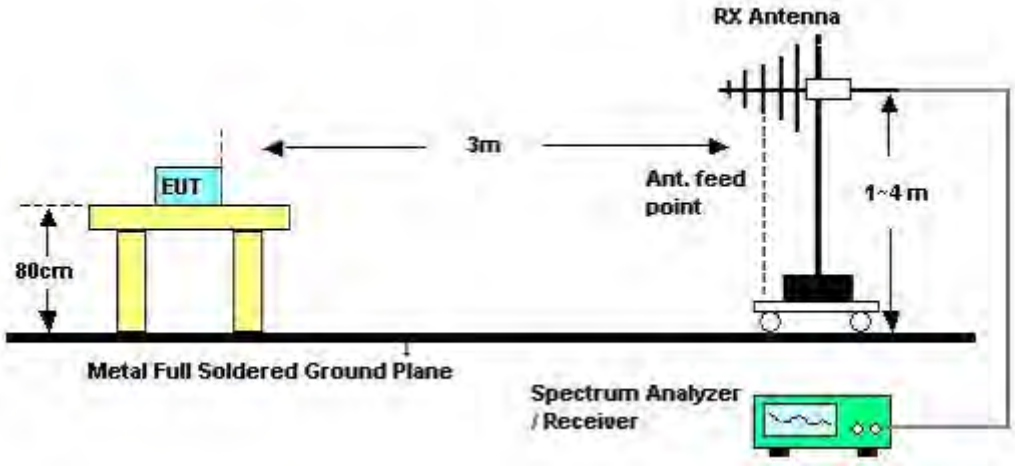
3.7.4 Test Setup

Emissions in Restricted Frequency Bands

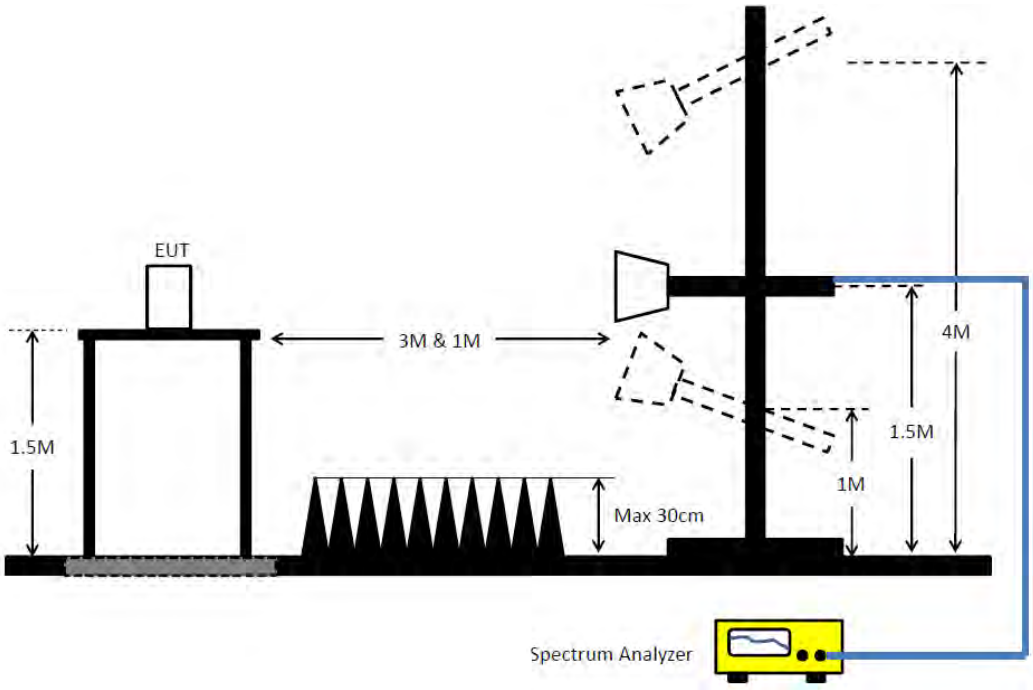
9kHz ~30MHz



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 (03CH04-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 01, 2023	Jul. 31, 2024	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N0607	30MHz ~ 1GHz	Oct. 08, 2022	Oct. 07, 2023	Radiation (03CH04-CB)
Pre-Amplifier	EMCI	EMC330N	980391	20MHz ~ 3GHz	May 23, 2023	May 22, 2024	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 21, 2023	Mar. 20, 2024	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+67	30MHz – 1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 25, 2023	Mar. 24, 2024	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 18, 2023	Apr. 17, 2024	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 28, 2023	Jun. 27, 2024	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Dec. 05, 2022	Dec. 04, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)

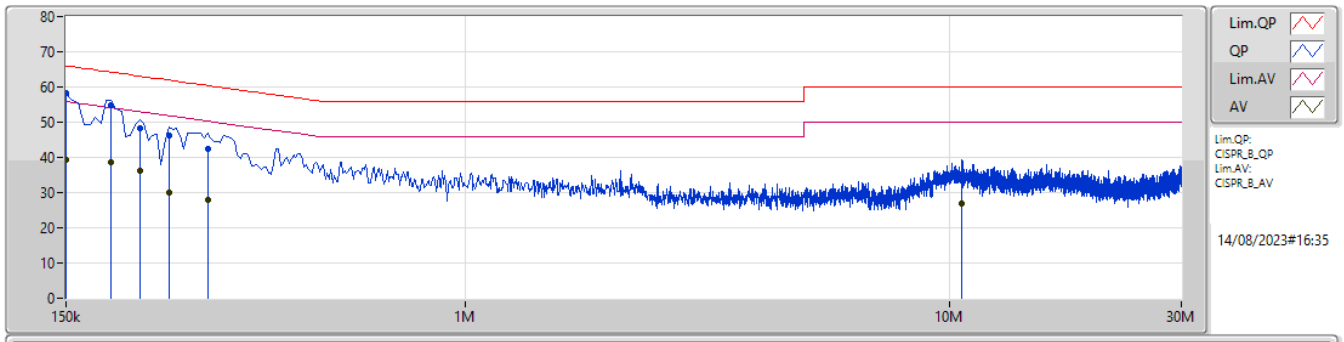
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 30, 2022	Dec. 29, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1531344	300MHz~40GHz	Aug. 01, 2023	Jul. 31, 2024	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1728002	300MHz~40GHz	Aug. 01, 2023	Jul. 31, 2024	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-11	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-12	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-13	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

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

Summary

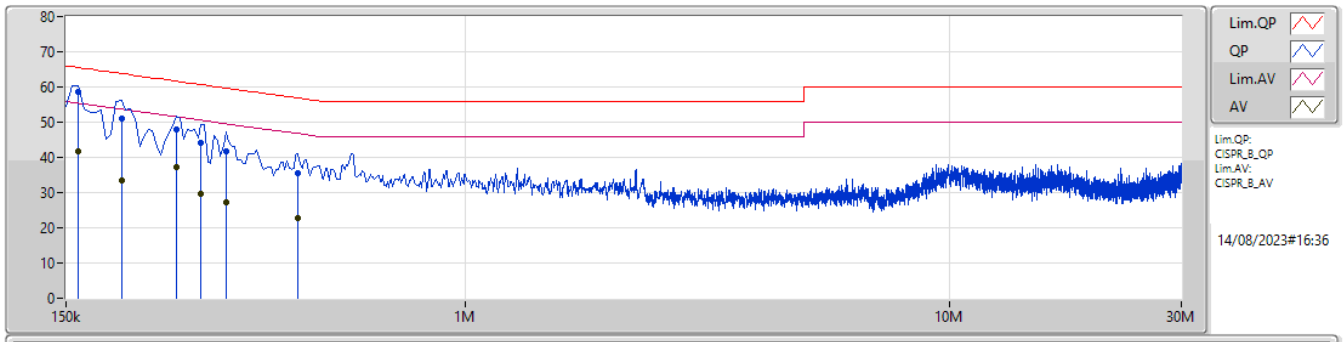
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	159k	58.53	65.52	-6.99	Neutral

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	58.12	66.00	-7.88	10.00	Line	"Worst"	48.12	0.09	0.04	9.87
AV	150k	39.32	56.00	-16.68	10.00	Line	-	29.32	0.09	0.04	9.87
QP	186k	54.88	64.20	-9.32	9.98	Line	-	44.90	0.08	0.04	9.86
AV	186k	38.56	54.20	-15.64	9.98	Line	-	28.58	0.08	0.04	9.86
QP	213k	48.32	63.09	-14.77	9.98	Line	-	38.34	0.08	0.04	9.86
AV	213k	36.18	53.09	-16.91	9.98	Line	-	26.20	0.08	0.04	9.86
QP	244.5k	46.22	61.95	-15.73	10.00	Line	-	36.22	0.08	0.05	9.87
AV	244.5k	30.00	51.95	-21.95	10.00	Line	-	20.00	0.08	0.05	9.87
QP	294k	42.36	60.42	-18.06	10.02	Line	-	32.34	0.09	0.05	9.88
AV	294k	27.88	50.42	-22.54	10.02	Line	-	17.86	0.09	0.05	9.88
QP	10.595M	33.38	60.00	-26.62	10.36	Line	-	23.02	0.25	0.16	9.95
AV	10.595M	26.74	50.00	-23.26	10.36	Line	-	16.38	0.25	0.16	9.95

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	159k	58.53	65.52	-6.99	9.98	Neutral	"Worst"	48.55	0.07	0.04	9.87
AV	159k	41.64	55.52	-13.88	9.98	Neutral	-	31.66	0.07	0.04	9.87
QP	195k	51.13	63.82	-12.69	9.97	Neutral	-	41.16	0.07	0.04	9.86
AV	195k	33.53	53.82	-20.29	9.97	Neutral	-	23.56	0.07	0.04	9.86
QP	253.5k	48.02	61.64	-13.62	9.99	Neutral	-	38.03	0.07	0.05	9.87
AV	253.5k	37.20	51.64	-14.44	9.99	Neutral	-	27.21	0.07	0.05	9.87
QP	285k	44.26	60.67	-16.41	10.00	Neutral	-	34.26	0.07	0.05	9.88
AV	285k	29.64	50.67	-21.03	10.00	Neutral	-	19.64	0.07	0.05	9.88
QP	321k	41.68	59.67	-17.99	10.01	Neutral	-	31.67	0.07	0.05	9.89
AV	321k	27.15	49.67	-22.52	10.01	Neutral	-	17.14	0.07	0.05	9.89
QP	451.5k	35.59	56.84	-21.25	10.03	Neutral	-	25.56	0.07	0.06	9.90
AV	451.5k	22.77	46.84	-24.07	10.03	Neutral	-	12.74	0.07	0.06	9.90

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)	921.25k	840.811k	841KF1D	877.25k	829.33k
BT-EDR(2Mbps)	1.312M	1.189M	1M19G1D	1.309M	1.186M
BT-EDR(3Mbps)	1.282M	1.198M	1M20G1D	1.273M	1.197M

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

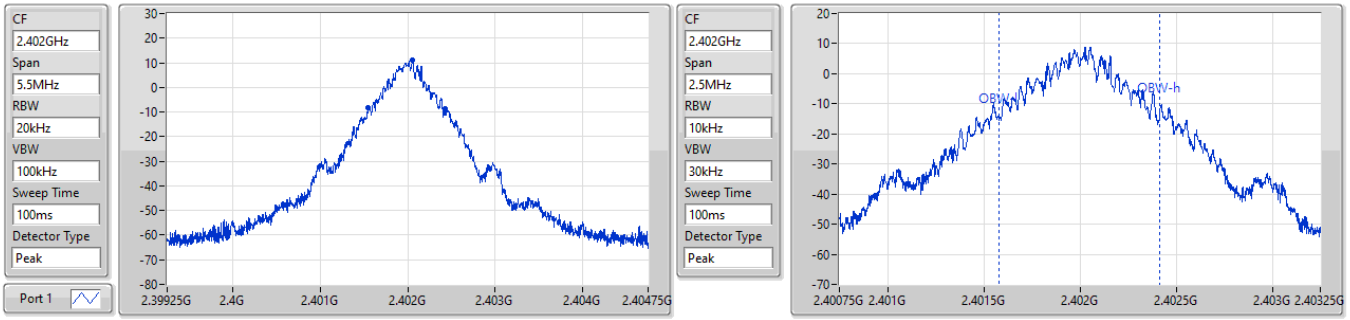
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	877.25k	836.896k
2440MHz	Pass	Inf	921.25k	840.811k
2480MHz	Pass	Inf	877.25k	829.33k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.309M	1.188M
2440MHz	Pass	Inf	1.312M	1.189M
2480MHz	Pass	Inf	1.312M	1.186M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.282M	1.198M
2440MHz	Pass	Inf	1.282M	1.198M
2480MHz	Pass	Inf	1.273M	1.197M

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

29/08/2023

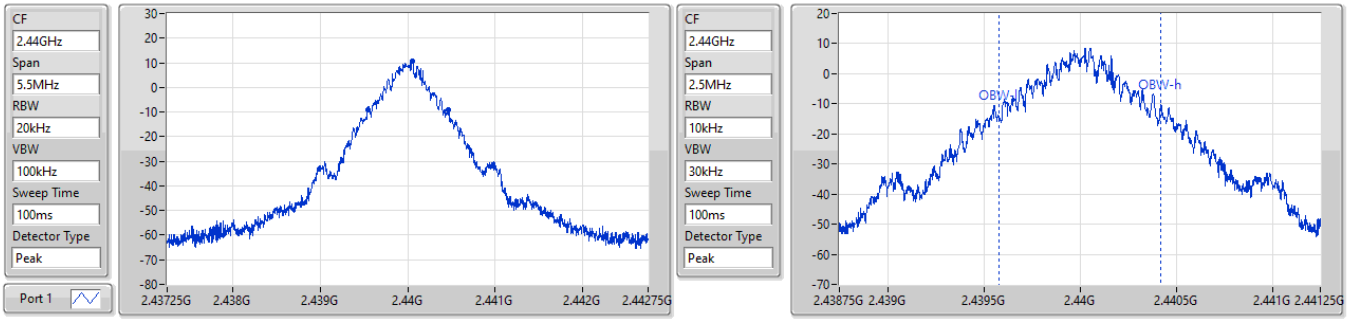


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
877.25k	2.401546G	2.402424G	836.896k	2.40158G	2.402417G	Inf	1

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

2440MHz

29/08/2023

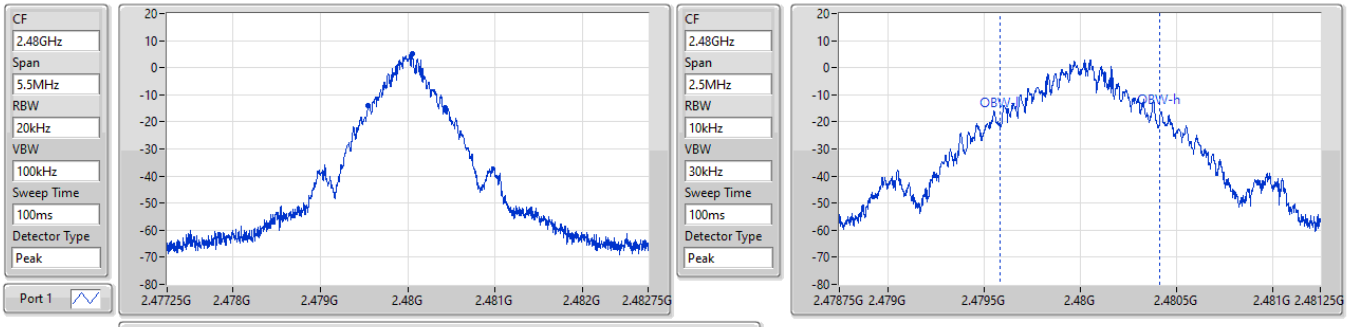


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
921.25k	2.439544G	2.440465G	840.811k	2.439579G	2.44042G	Inf	1

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

2480MHz

29/08/2023

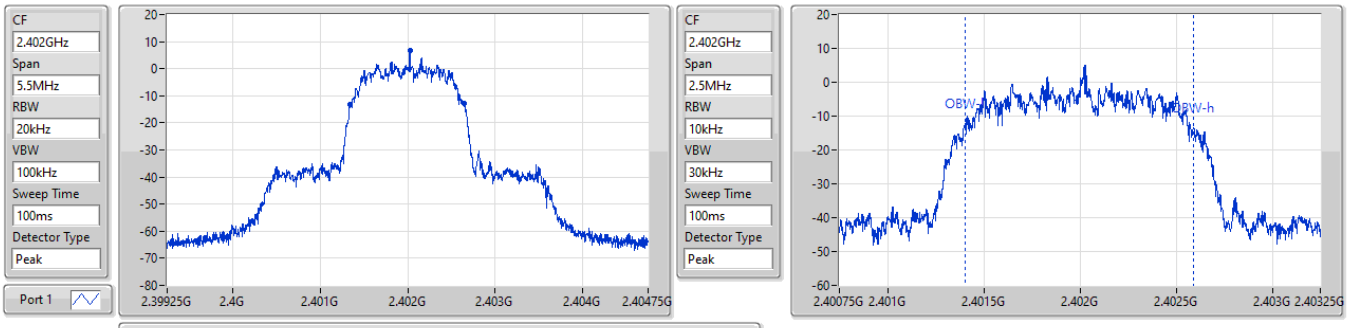


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
877.25k	2.479546G	2.480424G	829.33k	2.479586G	2.480415G	Inf	1

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

2402MHz

29/08/2023

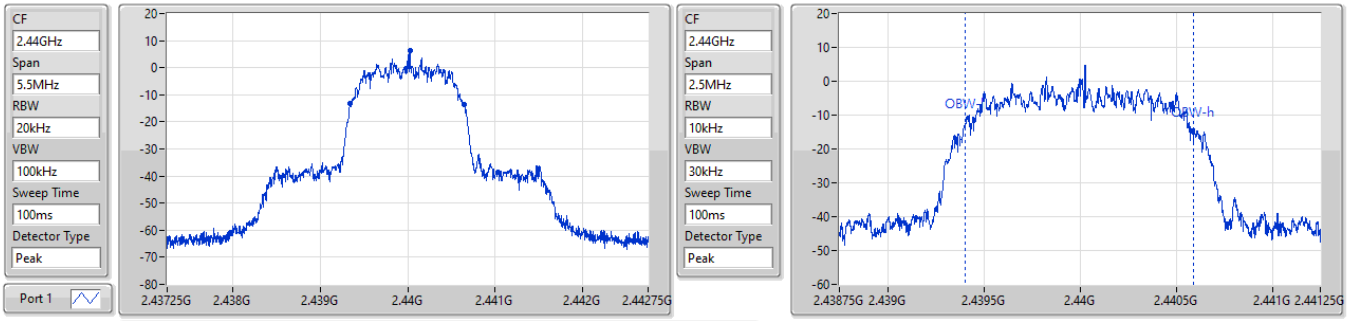


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.309M	2.40134G	2.402649G	1.188M	2.401403G	2.402592G	Inf	1

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

2440MHz

29/08/2023

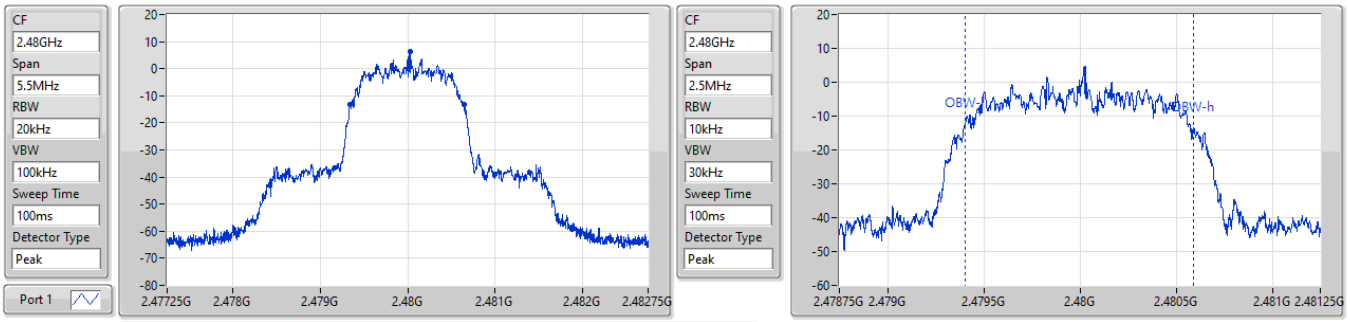


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.312M	2.43934G	2.440652G	1.189M	2.439403G	2.440592G	Inf	1

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

2480MHz

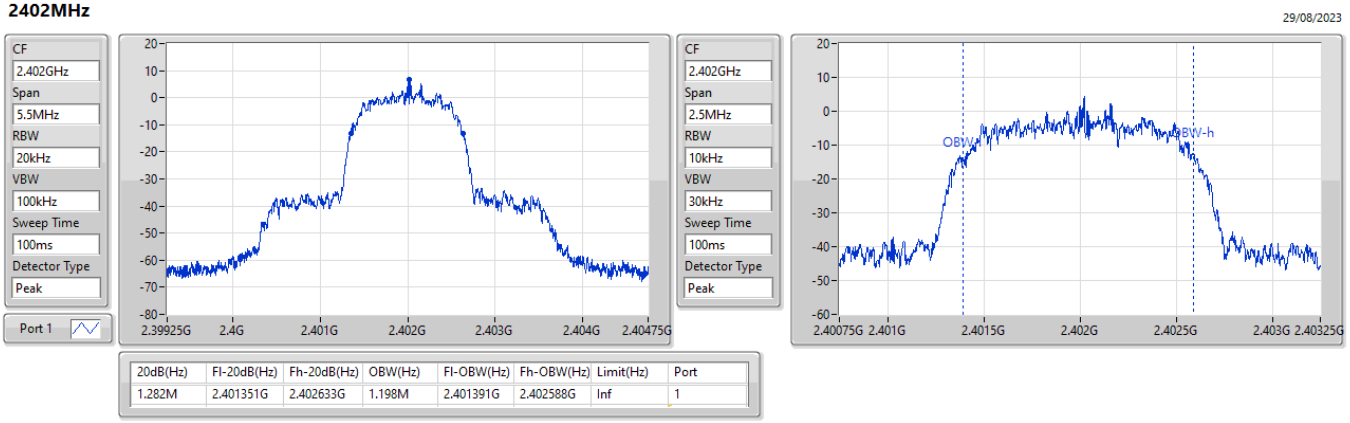
29/08/2023



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.312M	2.47934G	2.480652G	1.186M	2.479404G	2.48059G	Inf	1

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

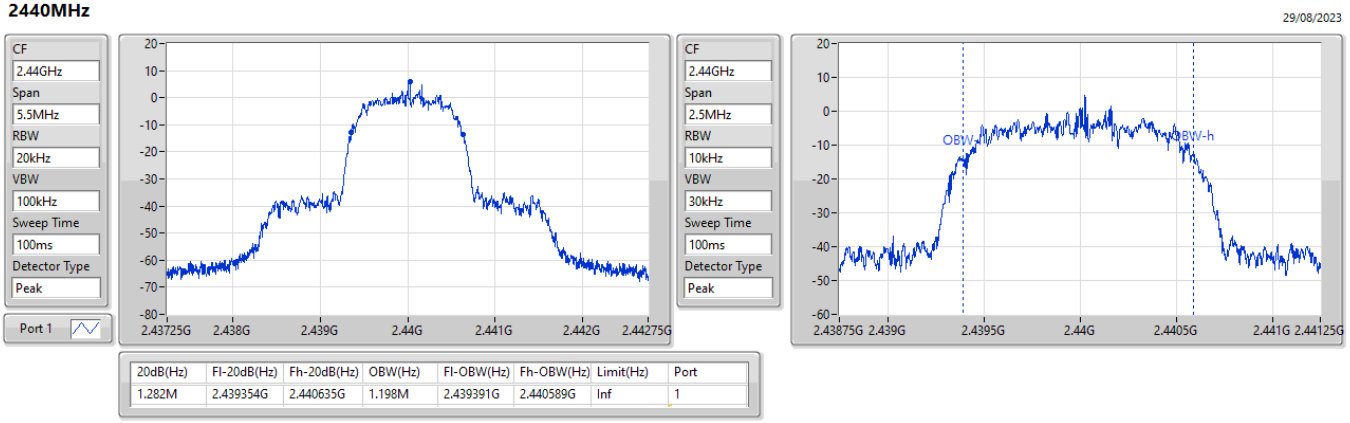
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.282M	2.401351G	2.402633G	1.198M	2.401391G	2.402588G	Inf	1

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

2440MHz

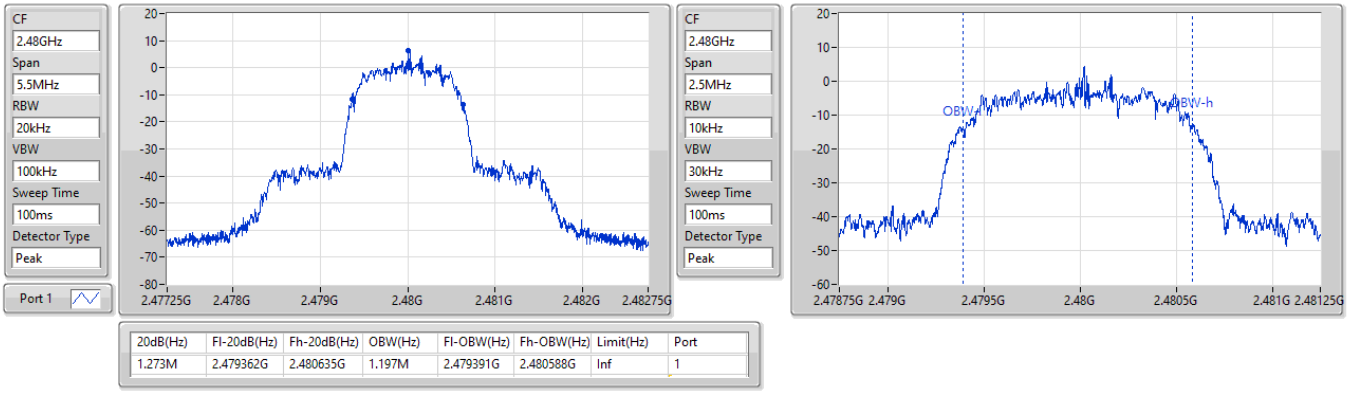


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.282M	2.439354G	2.440635G	1.198M	2.439391G	2.440589G	Inf	1

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

2480MHz

29/08/2023



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.273M	2.479362G	2.480635G	1.197M	2.479391G	2.480588G	Inf	1

Summary

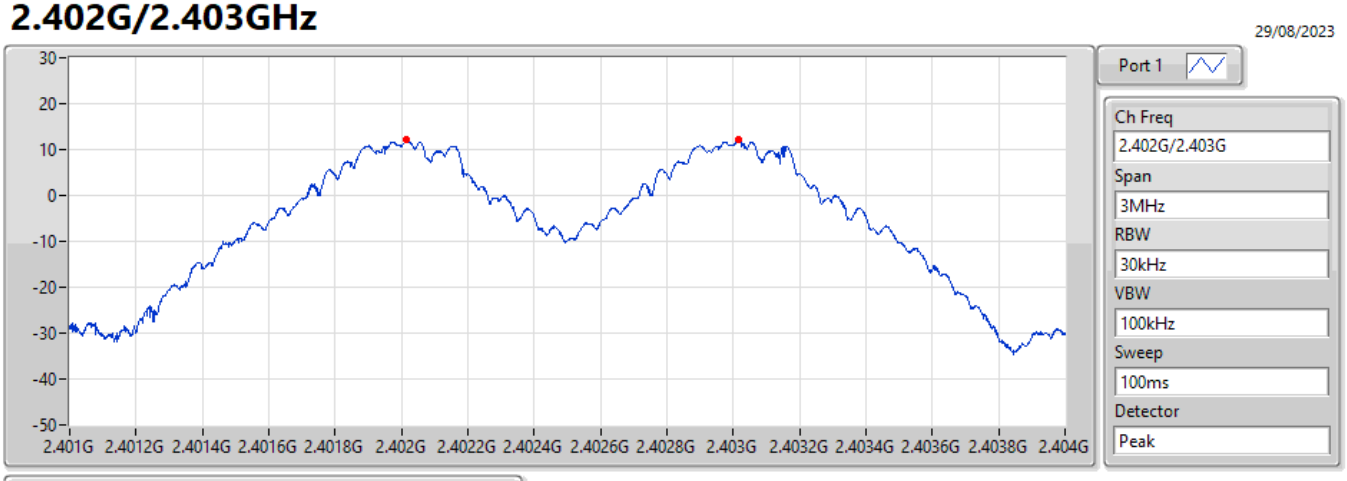
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	1.002M
BT-EDR(2Mbps)	1.002M	999k
BT-EDR(3Mbps)	1.002M	997.5k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402014G	2.403016G	1.002M	586.08k
2440MHz	Pass	2.440014G	2.441016G	1.002M	613.5525k
2480MHz	Pass	2.479011G	2.480013G	1.002M	584.2485k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402011G	2.403013G	1.002M	871.794k
2440MHz	Pass	2.440013G	2.441012G	999k	873.792k
2480MHz	Pass	2.479013G	2.480013G	1.0005M	873.792k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402011G	2.403013G	1.002M	853.812k
2440MHz	Pass	2.440011G	2.441012G	1.0005M	853.812k
2480MHz	Pass	2.479014G	2.480012G	997.5k	847.818k

2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402014G	2.403016G	1.002M	586.08k

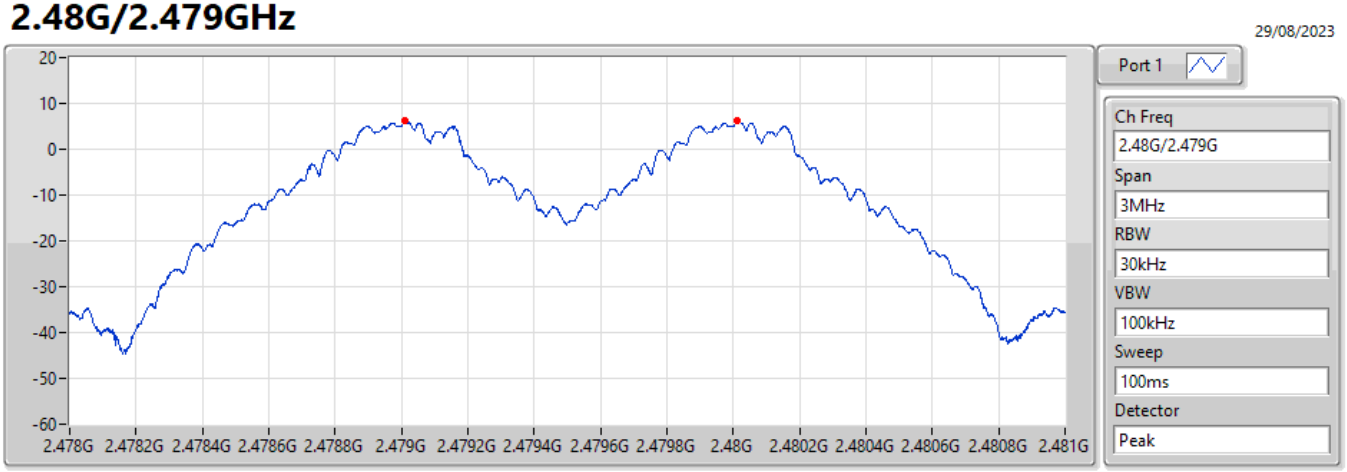
2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

2.44G/2.441GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440014G	2.441016G	1.002M	613.5525k

2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

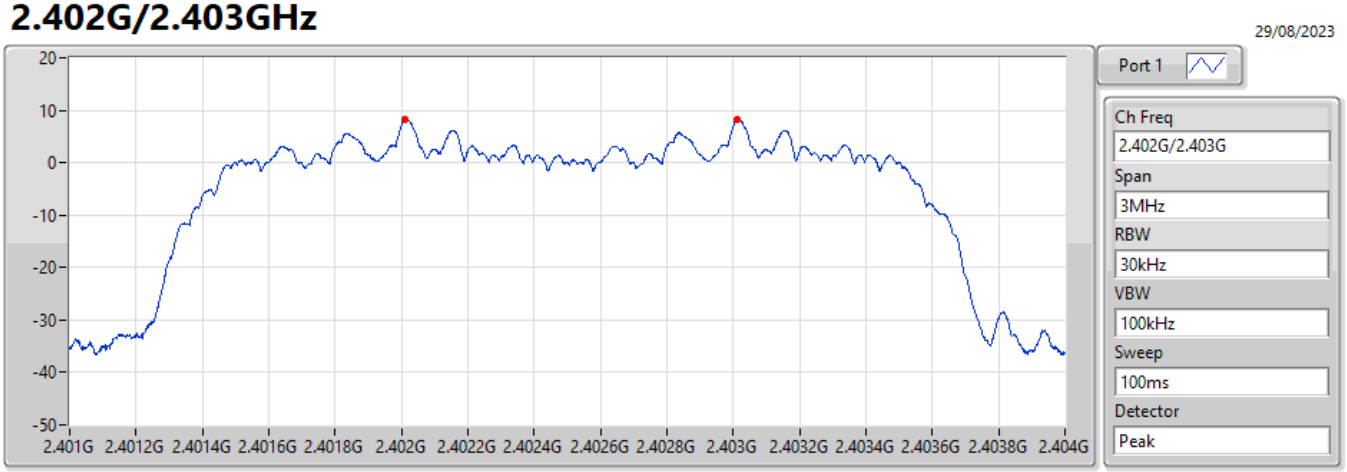
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479011G	2.480013G	1.002M	584.2485k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

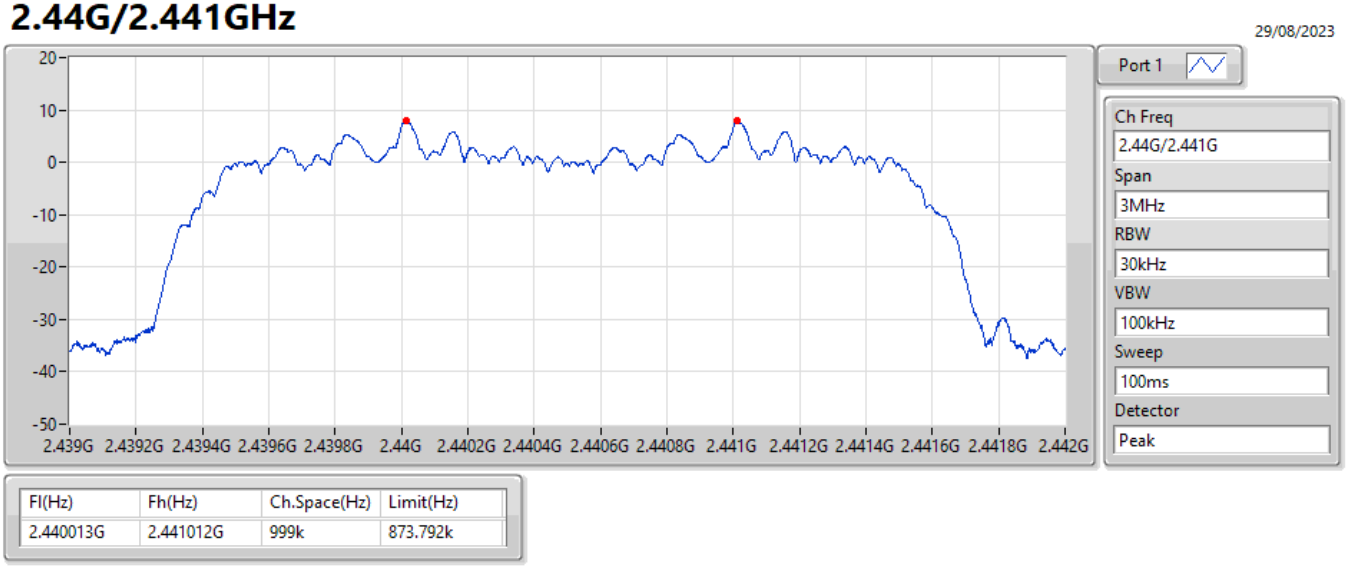
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402011G	2.403013G	1.002M	871.794k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

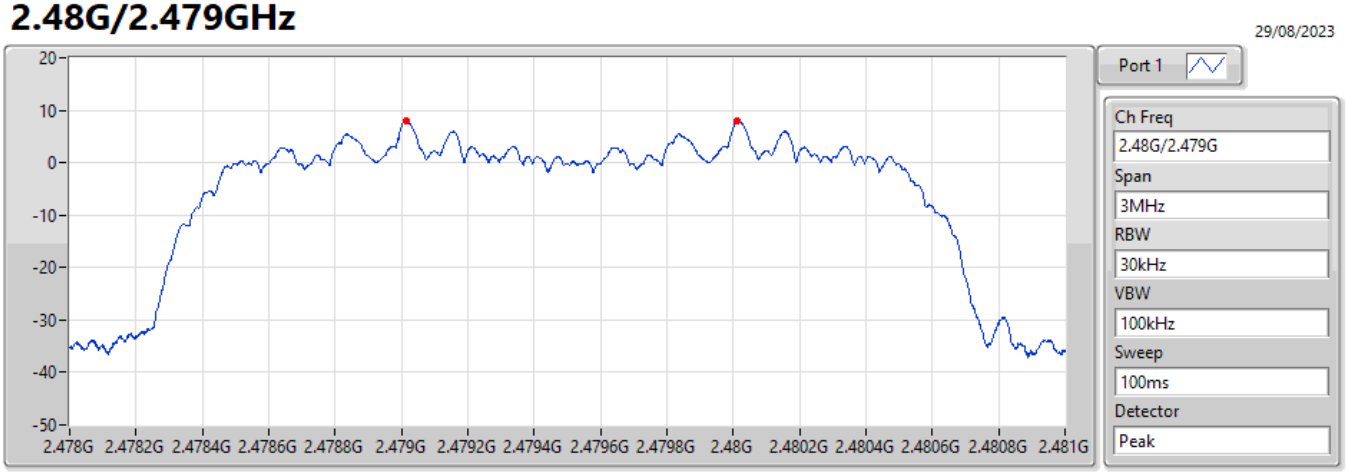
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440013G	2.441012G	999k	873.792k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

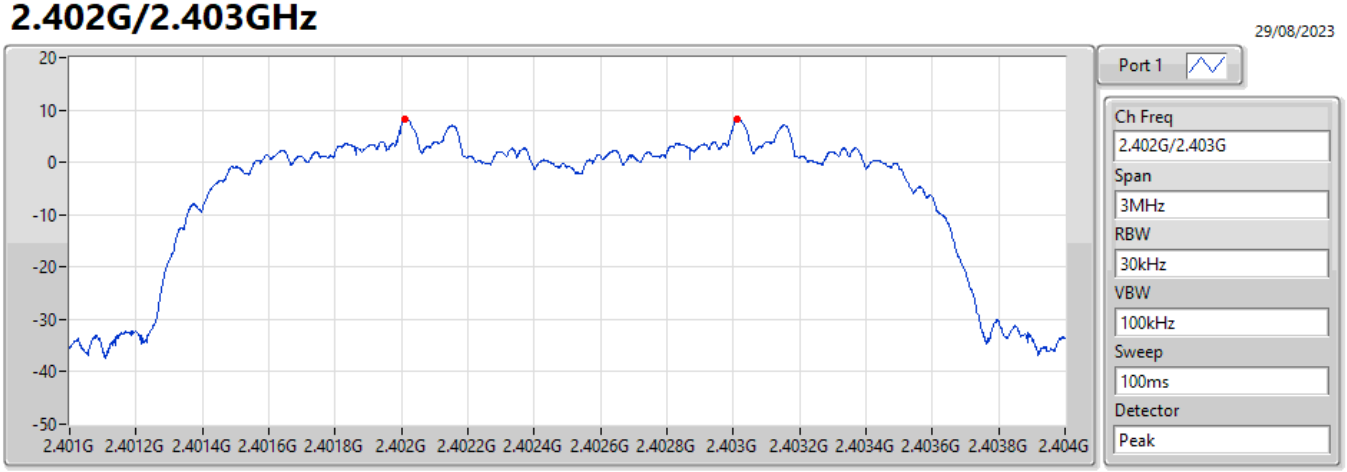
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479013G	2.480013G	1.0005M	873.792k

2.4-2.4835GHz_BT-EDR(3Mbps) Channel Separation-FS

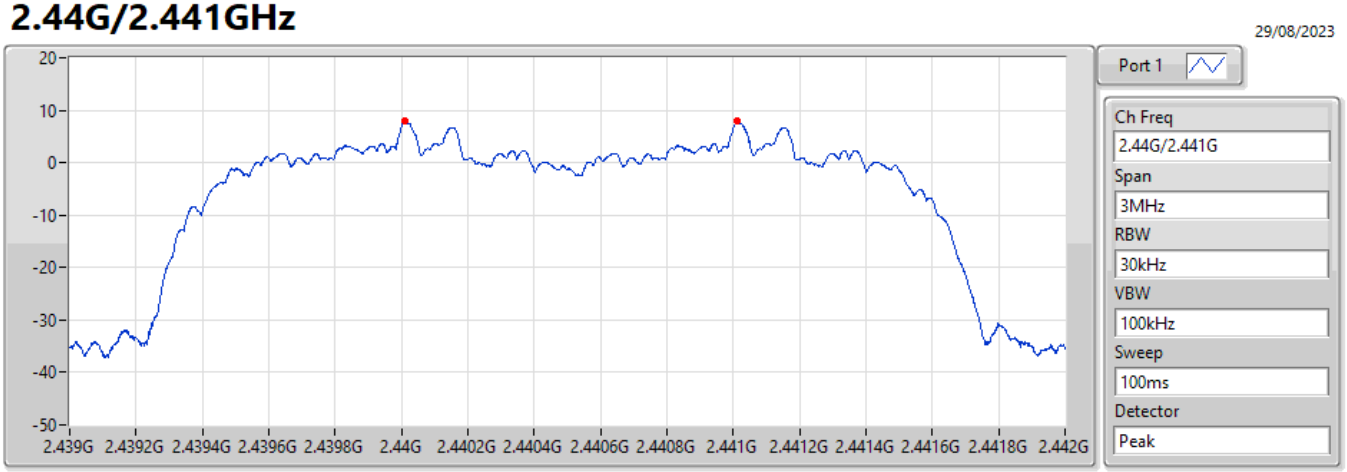
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402011G	2.403013G	1.002M	853.812k

2.4-2.4835GHz_BT-EDR(3Mbps) Channel Separation-FS

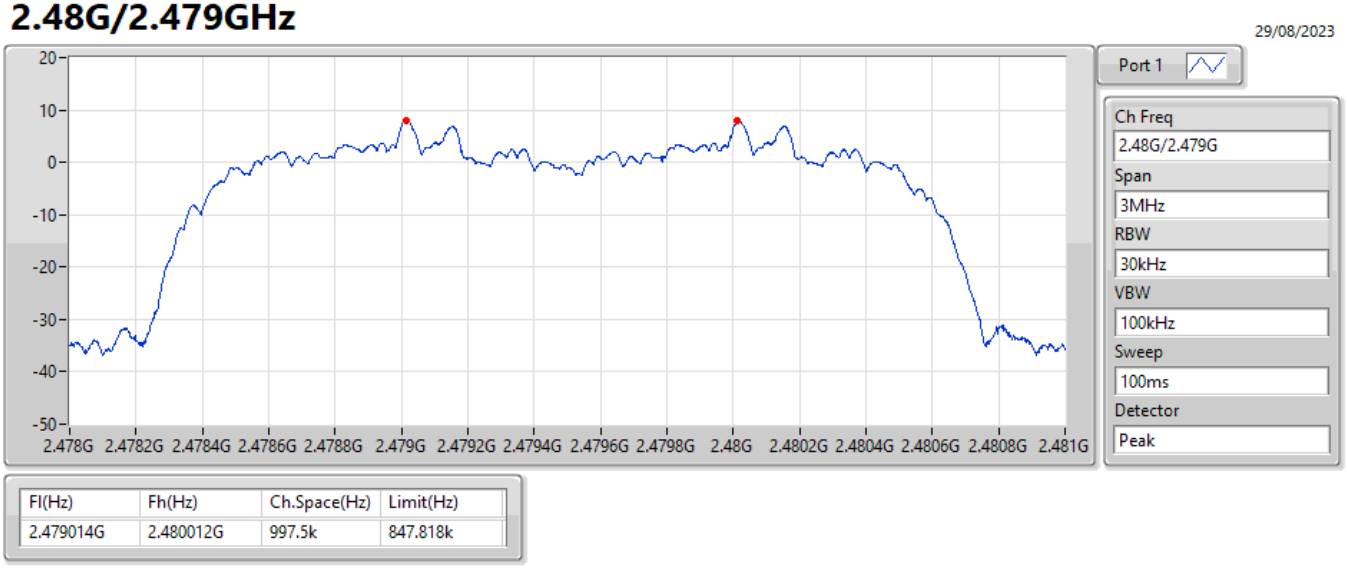
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440011G	2.441012G	1.0005M	853.812k

2.4-2.4835GHz_BT-EDR(3Mbps) **Channel Separation-FS**

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479014G	2.480012G	997.5k	847.818k

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	14.12	0.02582
BT-EDR(2Mbps)	9.99	0.00998
BT-EDR(3Mbps)	9.96	0.00991

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.86	14.12	21.00
2440MHz	Pass	2.86	13.86	21.00
2480MHz	Pass	2.86	8.20	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.86	9.99	21.00
2440MHz	Pass	2.86	9.59	21.00
2480MHz	Pass	2.86	9.72	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.86	9.96	21.00
2440MHz	Pass	2.86	9.60	21.00
2480MHz	Pass	2.86	9.73	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)	14.43	0.02773
BT-EDR(2Mbps)	12.41	0.01742
BT-EDR(3Mbps)	12.86	0.01932

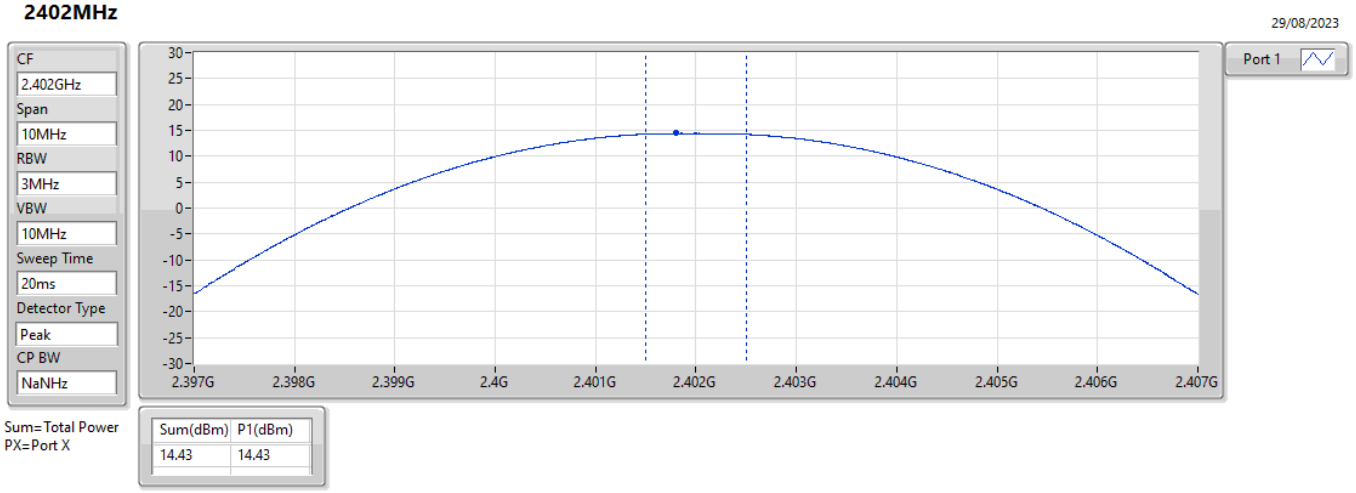
Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.86	14.43	21.00
2440MHz	Pass	2.86	14.23	21.00
2480MHz	Pass	2.86	8.69	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.86	12.41	21.00
2440MHz	Pass	2.86	12.11	21.00
2480MHz	Pass	2.86	12.23	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.86	12.86	21.00
2440MHz	Pass	2.86	12.57	21.00
2480MHz	Pass	2.86	12.69	21.00

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

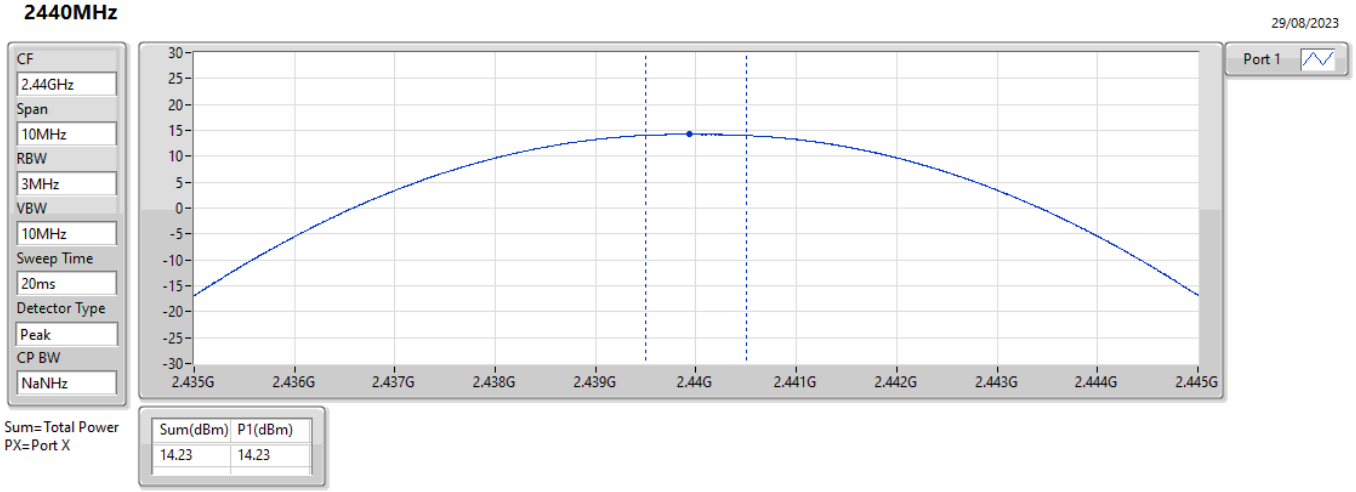
2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2402MHz



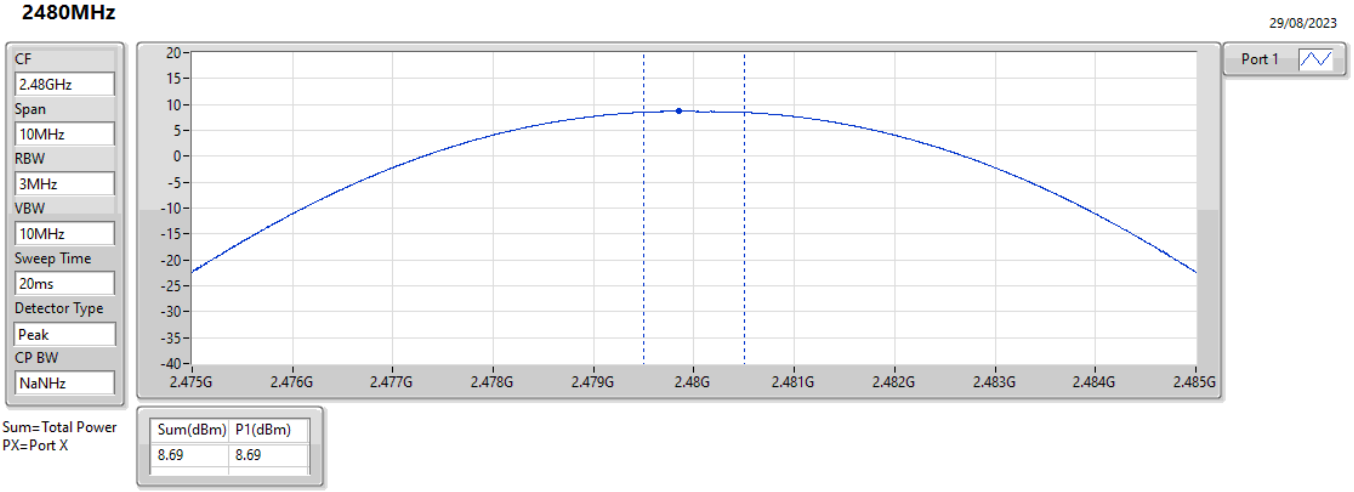
2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2440MHz



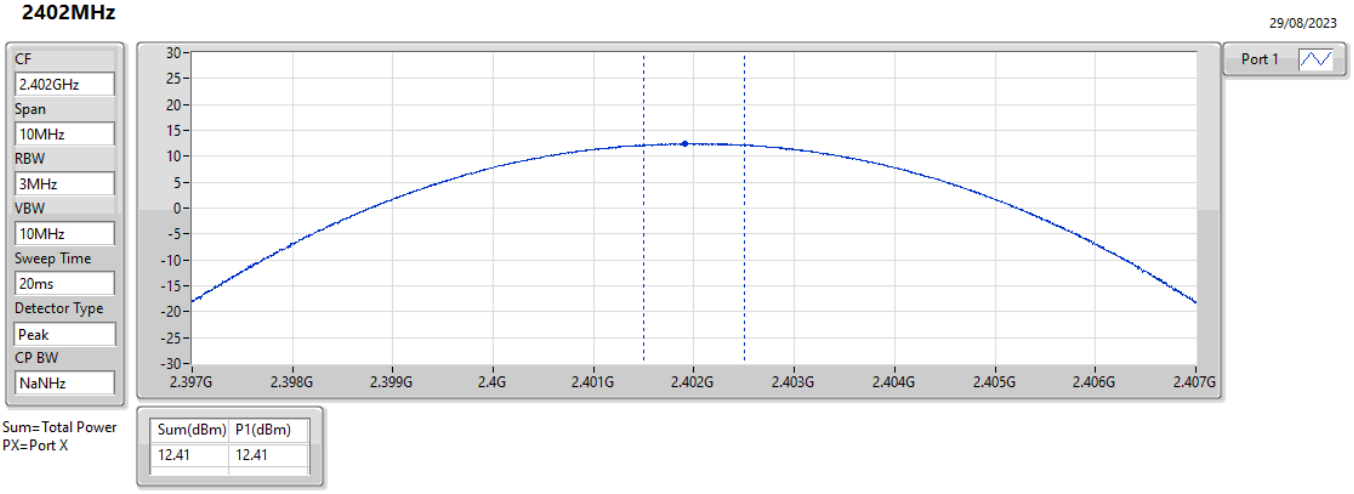
2.4-2.4835GHz_BT-BR(1Mbps) **PK Power-FS**

2480MHz



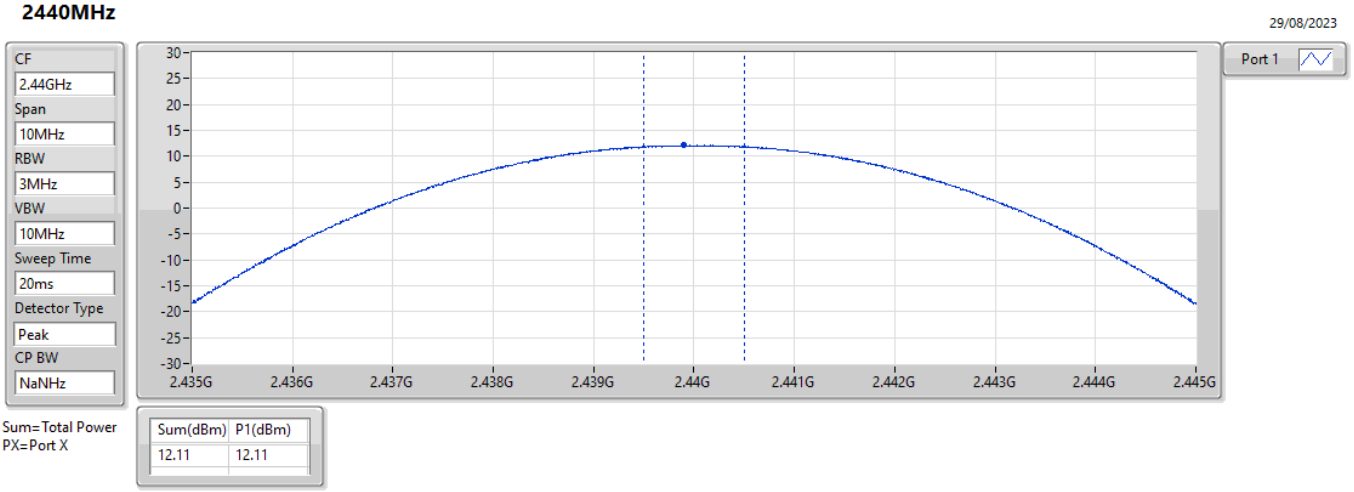
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2402MHz



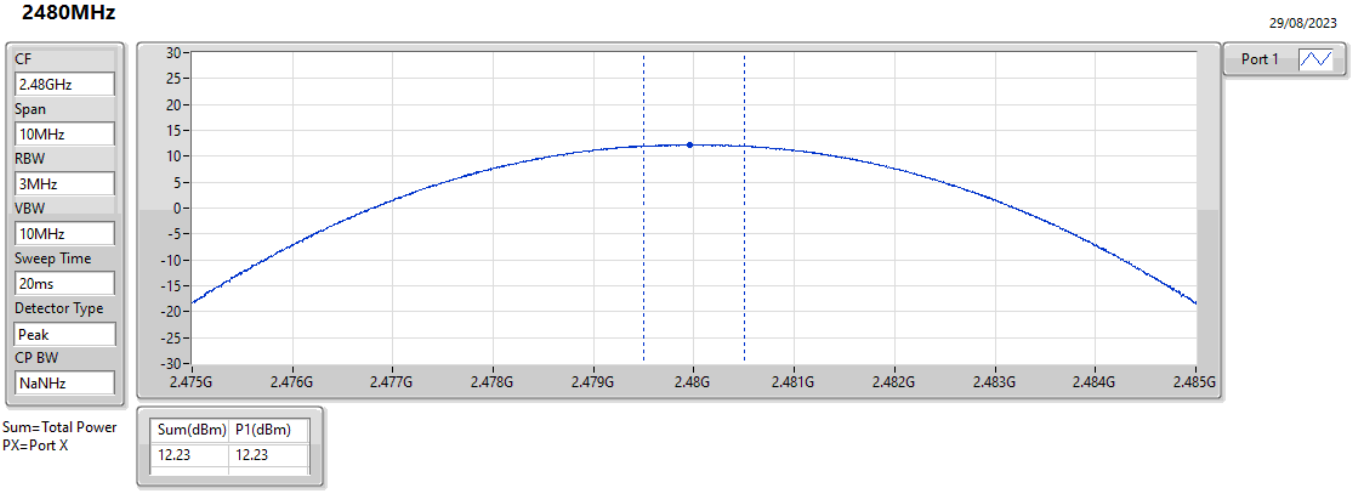
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2440MHz



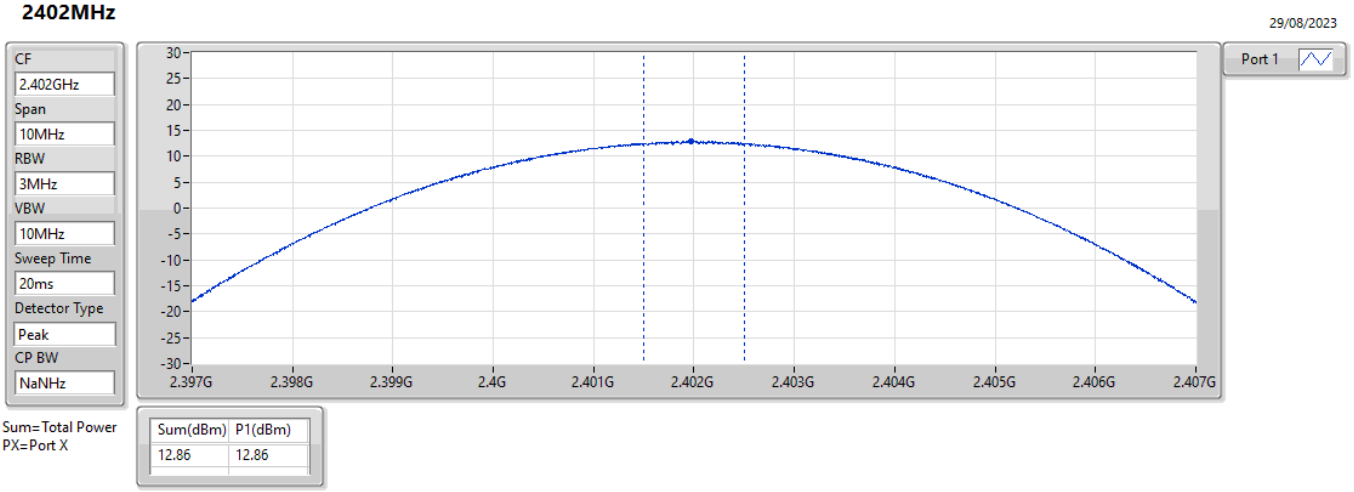
2.4-2.4835GHz_BT-EDR(2Mbps) **PK Power-FS**

2480MHz



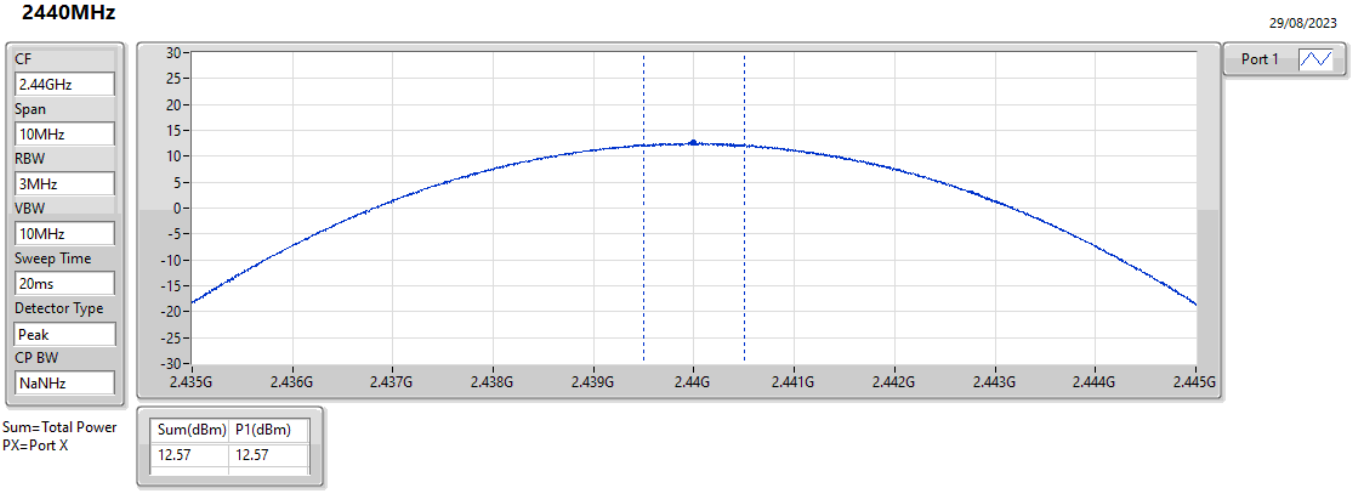
2.4-2.4835GHz_BT-EDR(3Mbps) **PK Power-FS**

2402MHz



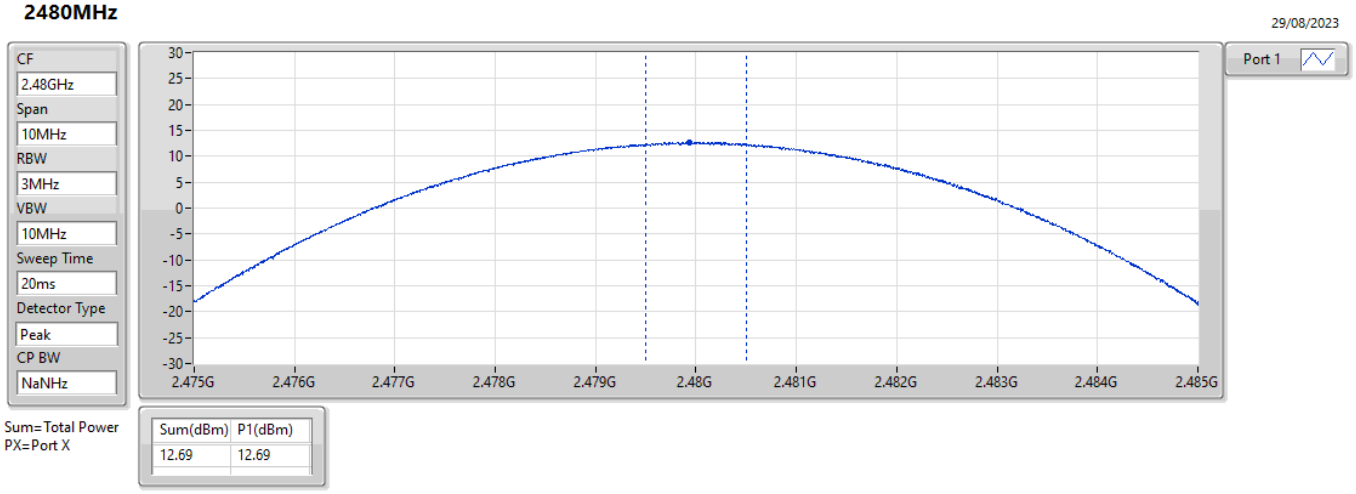
2.4-2.4835GHz_BT-EDR(3Mbps) **PK Power-FS**

2440MHz



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

2480MHz



Summary

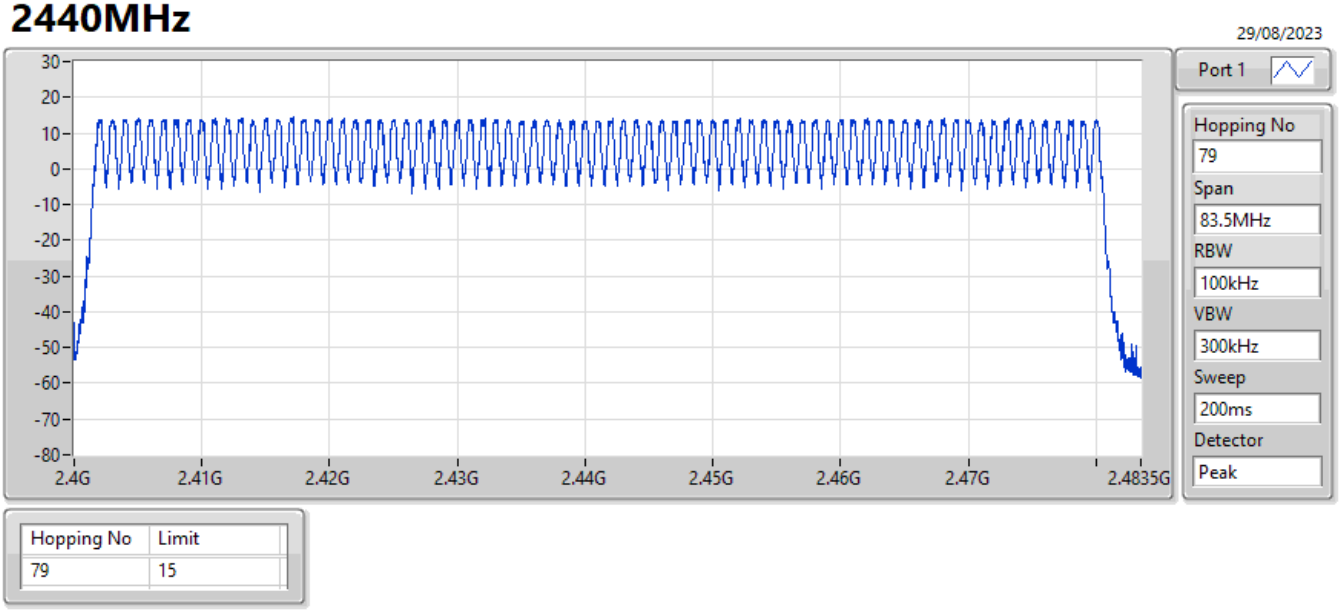
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

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

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

2440MHz

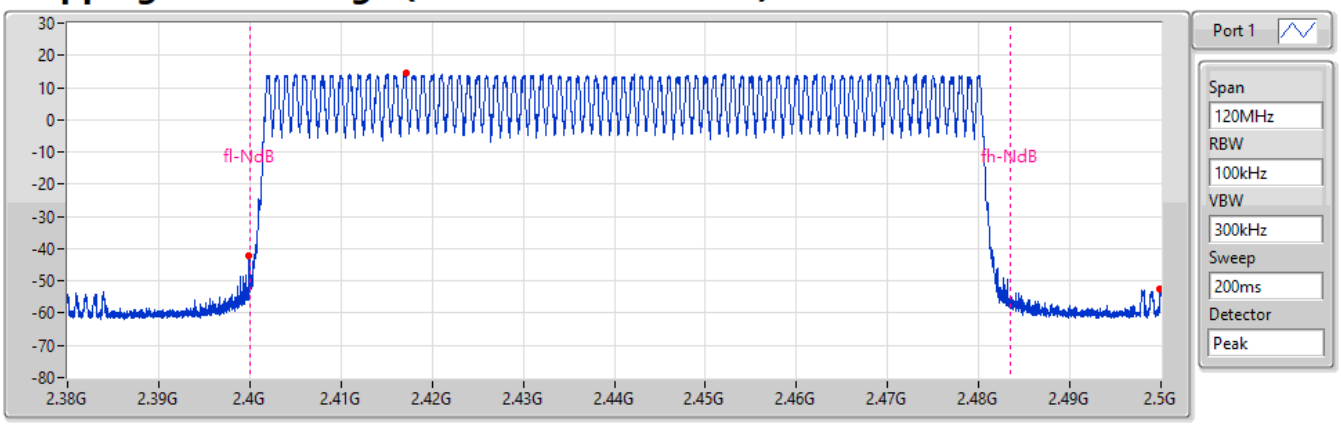


Hopping No	Limit
79	15

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

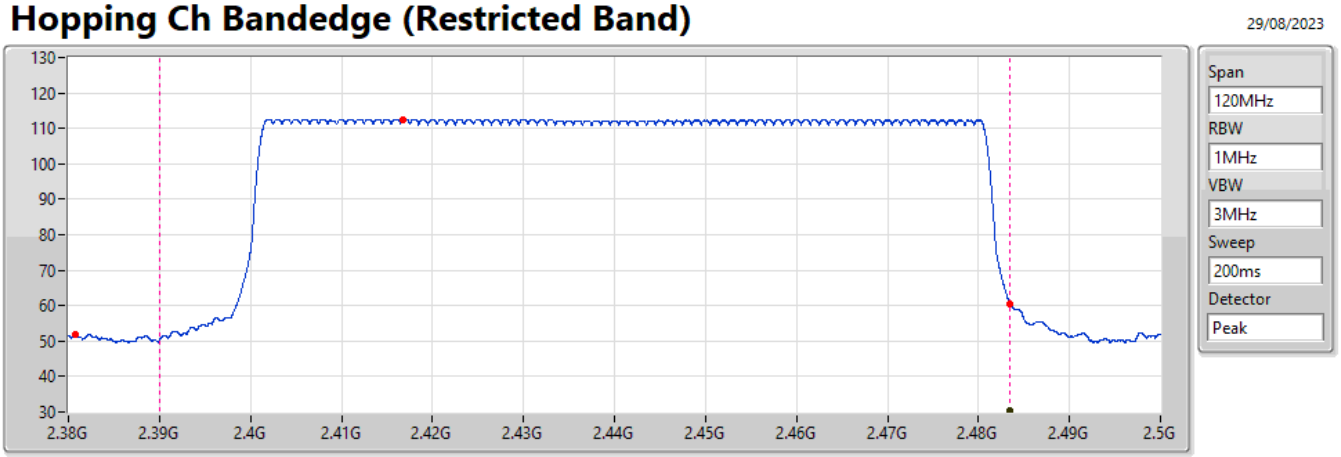


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-5.67	2.41714G	14.33	2.39986G	-42.02	2.499895G	-52.6

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

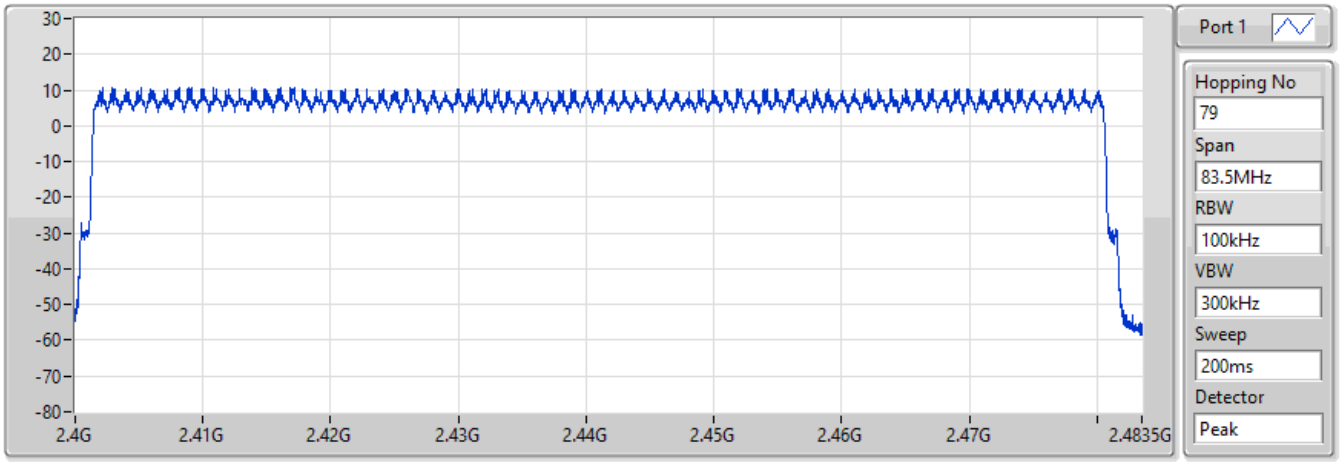


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.416825G	112.51	2.380705G	52.03	21.93	2.483515G	60.31	30.21	74	54	3.125	-30.1

2.4-2.4835GHz_BT-EDR(2Mbps)

Hopping-FS

2440MHz

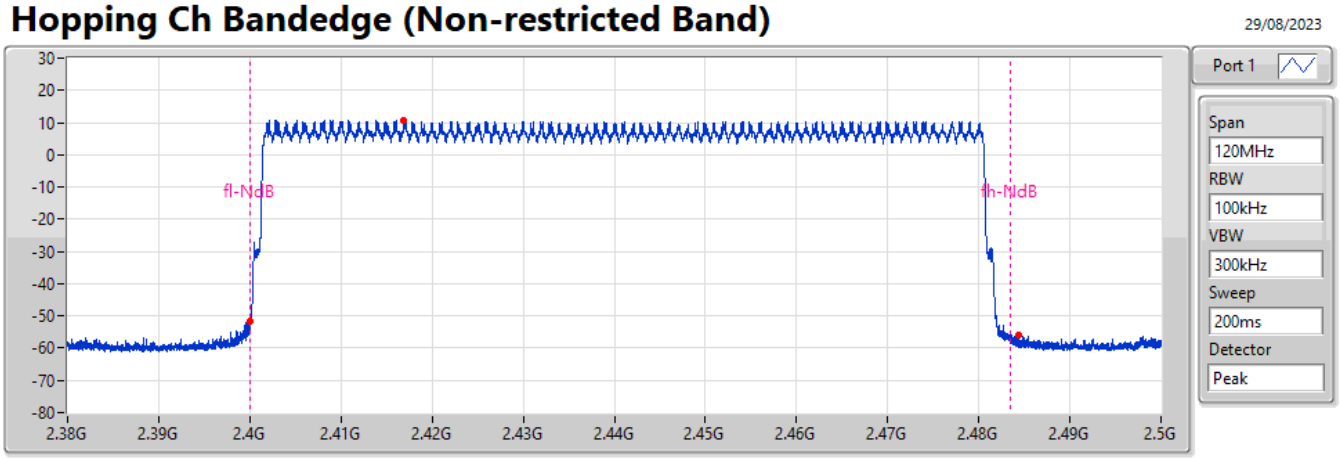


Hopping No	Limit
79	15

2.4-2.4835GHz_BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

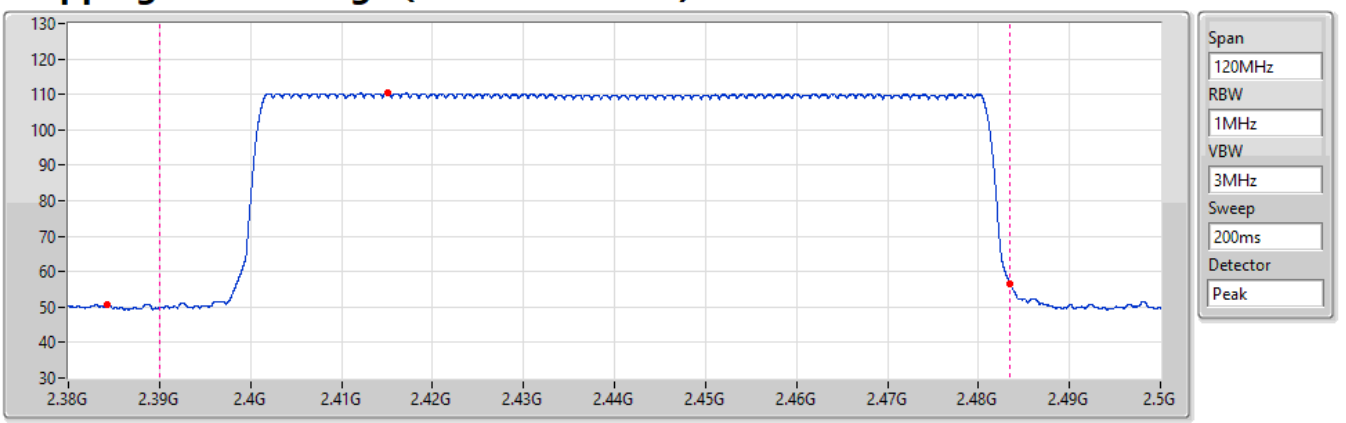


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-9.33	2.41684G	10.67	2.399965G	-51.63	2.484415G	-55.95

2.4-2.4835GHz_BT-EDR(2Mbps)

2440MHz

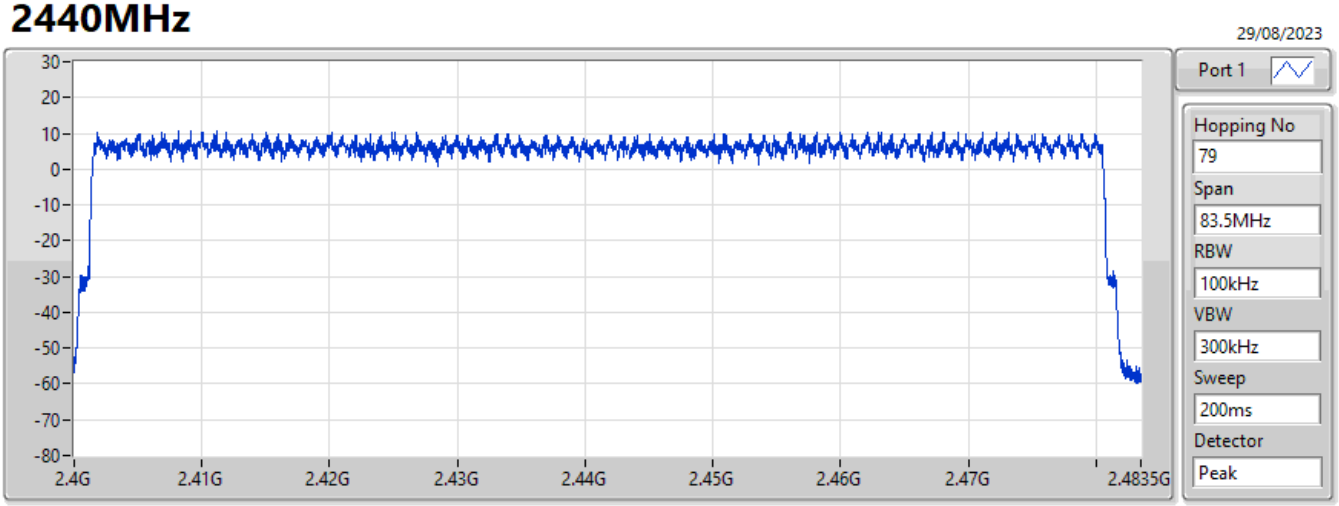
Hopping Ch Bandedge (Restricted Band)



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	110.3	2.384305G	50.81	20.71	2.483515G	56.42	26.32	74	54	3.125	-30.1

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

2440MHz

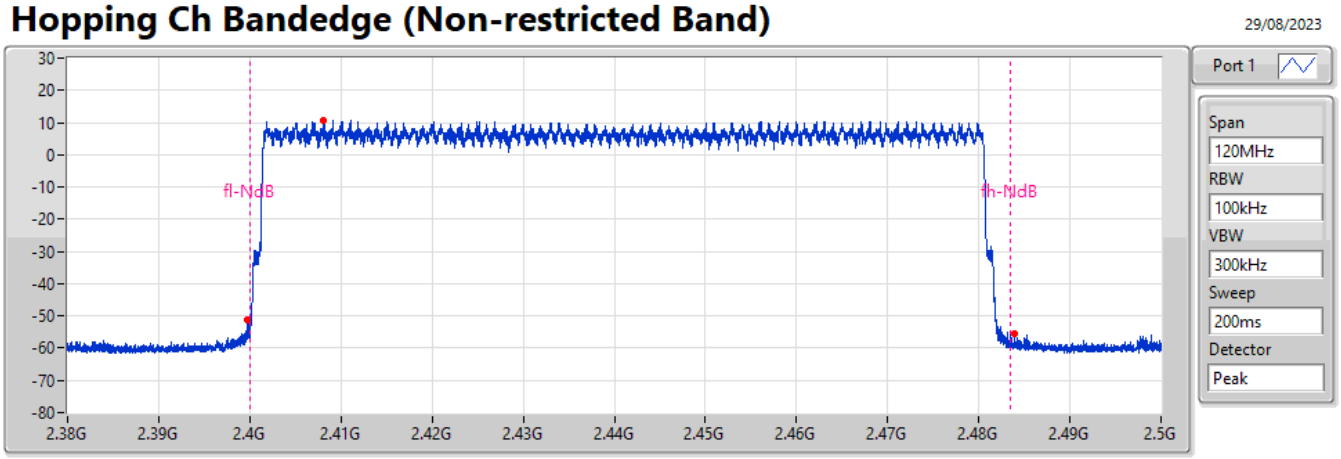


Hopping No	Limit
79	15

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

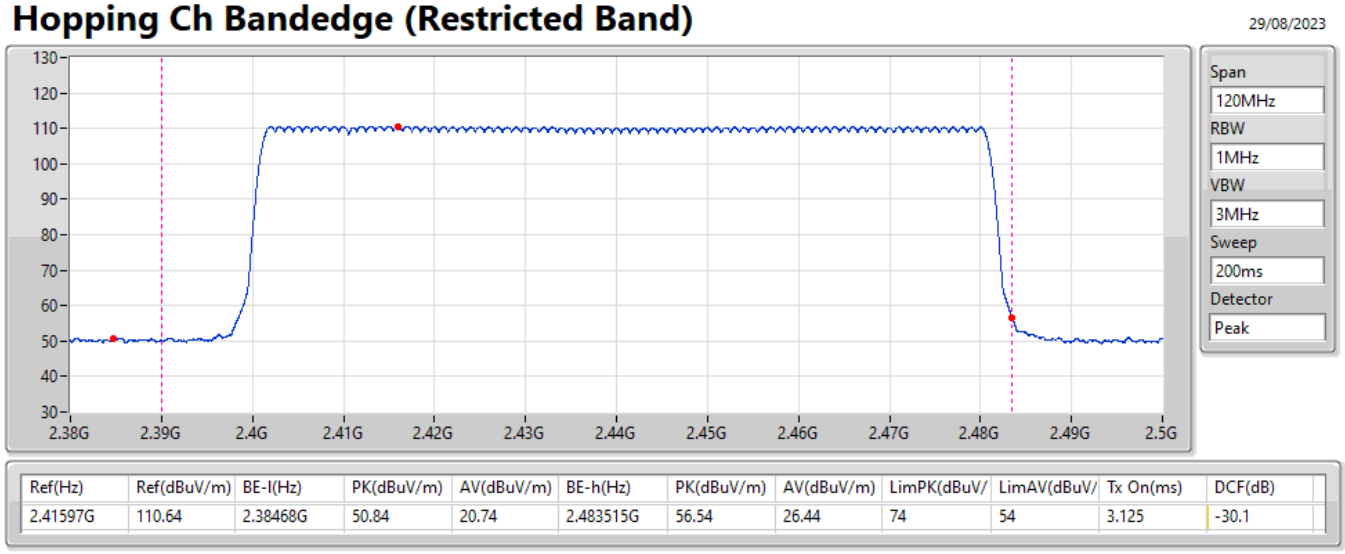


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-9.32	2.40814G	10.68	2.399785G	-51.23	2.483875G	-55.57

2.4-2.4835GHz_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)
2.41597G	110.64	2.38468G	50.84	20.74	2.483515G	56.54	26.44	74	54	3.125	-30.1

Summary

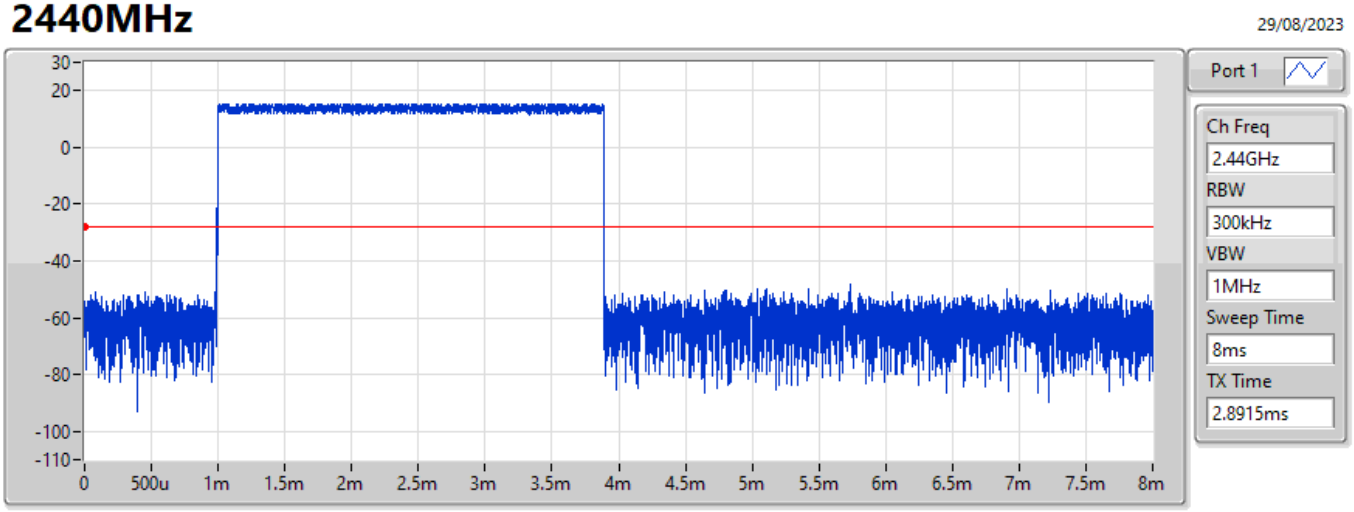
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	308.2339m_DH5
BT-EDR(2Mbps)	308.2872m_DH5
BT-EDR(3Mbps)	308.52705m_DH5

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.2339m_DH5	400m	2.8915m
2440MHz	Pass	8	154.11695m_DH5-AFH	400m	2.8915m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.2872m_DH5	400m	2.892m
2440MHz	Pass	8	154.130275m_DH5-AFH	400m	2.89175m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.52705m_DH5	400m	2.89425m
2440MHz	Pass	8	154.2502m_DH5-AFH	400m	2.894m

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

2440MHz

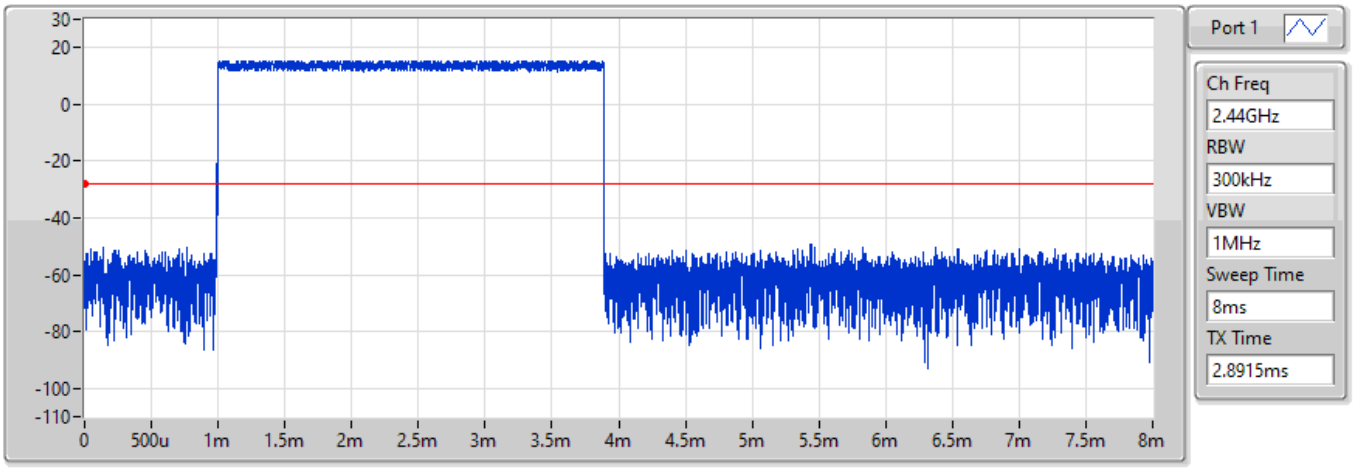


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.2339m_DH5	400m	2.8915m

DH5

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

2440MHz



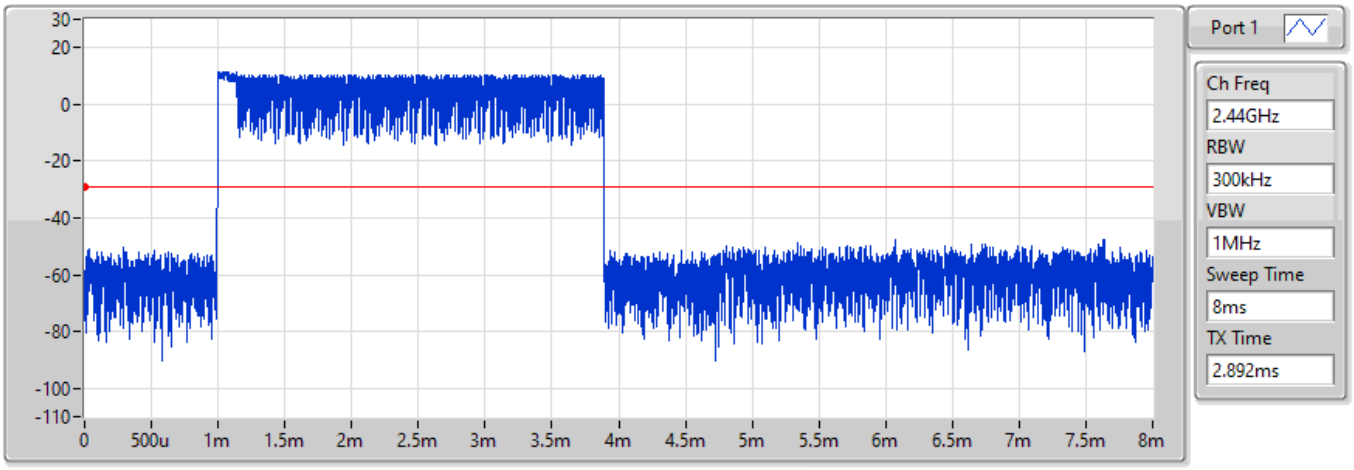
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.11695m_DH5-AFH	400m	2.8915m

DH5-AFH

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

2440MHz

29/08/2023



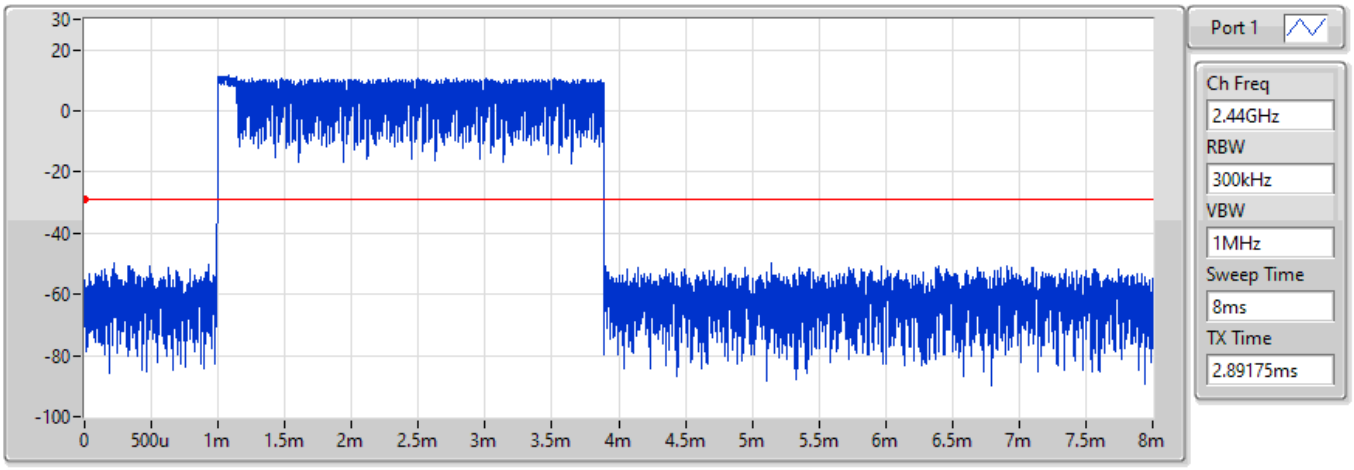
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.2872m_DH5	400m	2.892m

DH5

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

2440MHz

29/08/2023

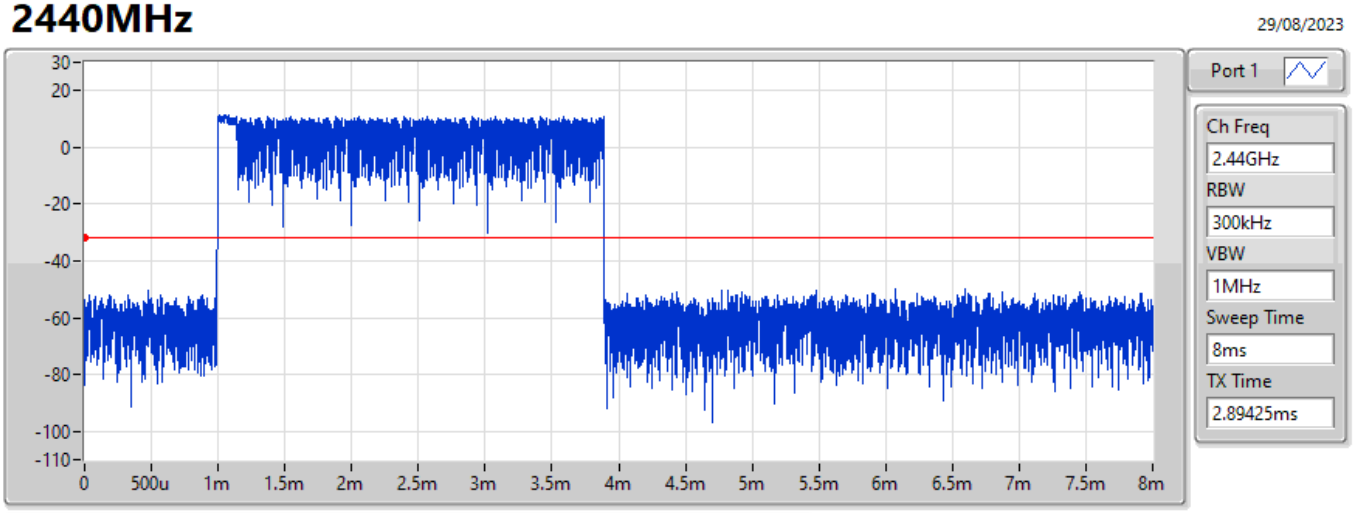


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.130275m_DH5-AFI	400m	2.89175m

DH5-AFH

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

2440MHz

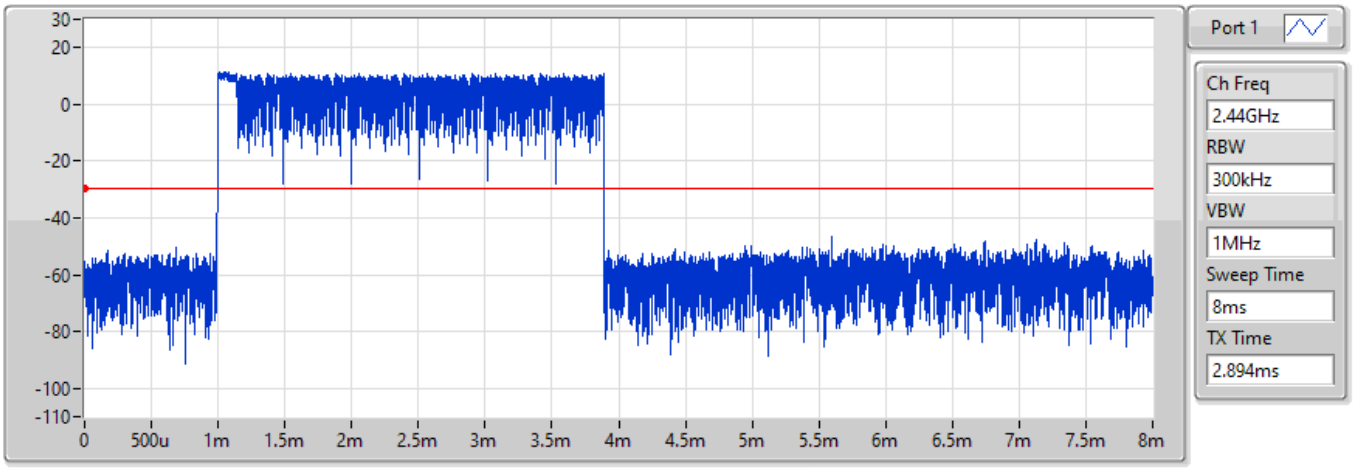


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.52705m_DH5	400m	2.89425m

DH5

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

2440MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.2502m_DH5-AFH	400m	2.894m

DH5-AFH

Summary

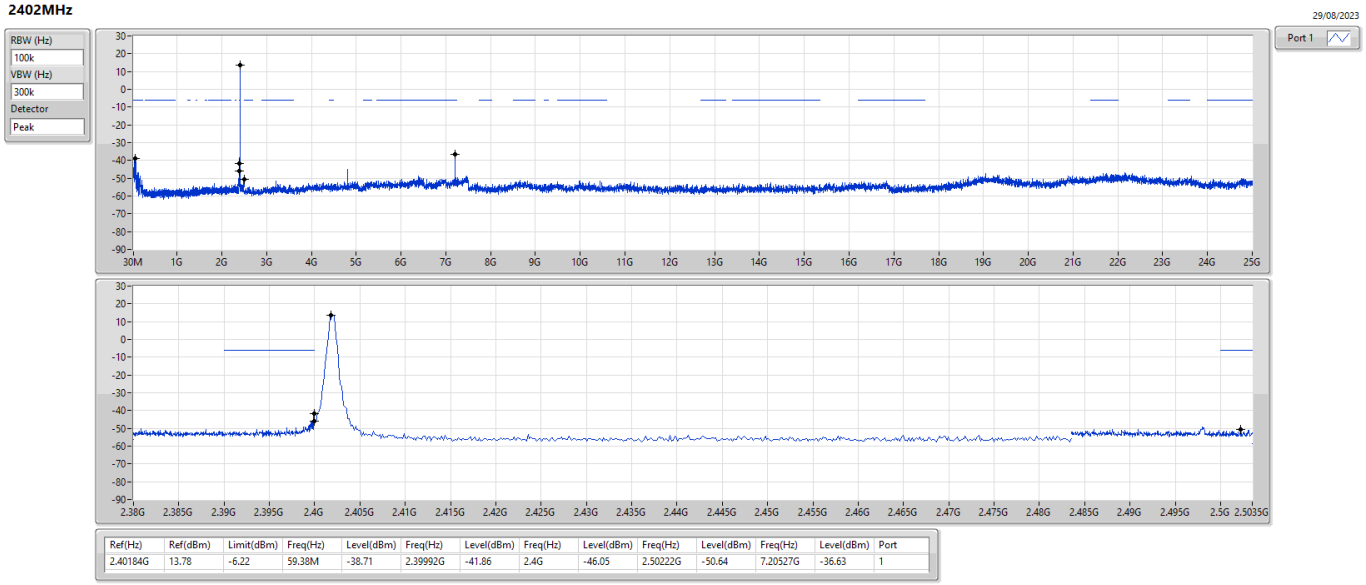
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.48016G	8.12	-11.88	49.98M	-39.98	2.39728G	-51.28	2.4G	-56.74	2.5001G	-51.09	21.62271G	-46.88	1
BT-EDR(2Mbps)	Pass	2.48016G	10.26	-9.74	58.2M	-40.20	2.39664G	-51.19	2.4G	-54.10	2.5019G	-51.43	21.6424G	-46.65	1
BT-EDR(3Mbps)	Pass	2.44008G	10.05	-9.95	49.98M	-39.86	2.39952G	-51.32	2.4G	-57.02	2.50194G	-51.46	21.8758G	-46.74	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	2.40184G	13.78	-6.22	59.38M	-38.71	2.39992G	-41.86	2.4G	-46.05	2.50222G	-50.64	7.20527G	-36.63	1
2440MHz	Pass	2.44008G	13.57	-6.43	59.38M	-39.60	2.39896G	-50.32	2.4G	-56.82	2.50006G	-51.52	21.65365G	-46.10	1
2480MHz	Pass	2.48016G	8.12	-11.88	49.98M	-39.98	2.39728G	-51.28	2.4G	-56.74	2.5001G	-51.09	21.62271G	-46.88	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	10.04	-9.96	49.98M	-40.67	2.39964G	-49.63	2.4G	-49.38	2.50262G	-51.29	7.20527G	-46.63	1
2440MHz	Pass	2.43991G	10.17	-9.83	57.03M	-40.99	2.39668G	-51.46	2.4G	-55.54	2.50218G	-51.69	21.68739G	-47.38	1
2480MHz	Pass	2.48016G	10.26	-9.74	58.2M	-40.20	2.39664G	-51.19	2.4G	-54.10	2.5019G	-51.43	21.6424G	-46.65	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	10.57	-9.43	58.2M	-40.46	2.4G	-49.23	2.4G	-47.71	2.50294G	-50.82	7.20527G	-45.53	1
2440MHz	Pass	2.44008G	10.05	-9.95	49.98M	-39.86	2.39952G	-51.32	2.4G	-57.02	2.50194G	-51.46	21.8758G	-46.74	1
2480MHz	Pass	2.48016G	9.59	-10.41	49.98M	-41.05	2.39716G	-51.14	2.4G	-57.00	2.5003G	-50.80	21.5974G	-46.02	1

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

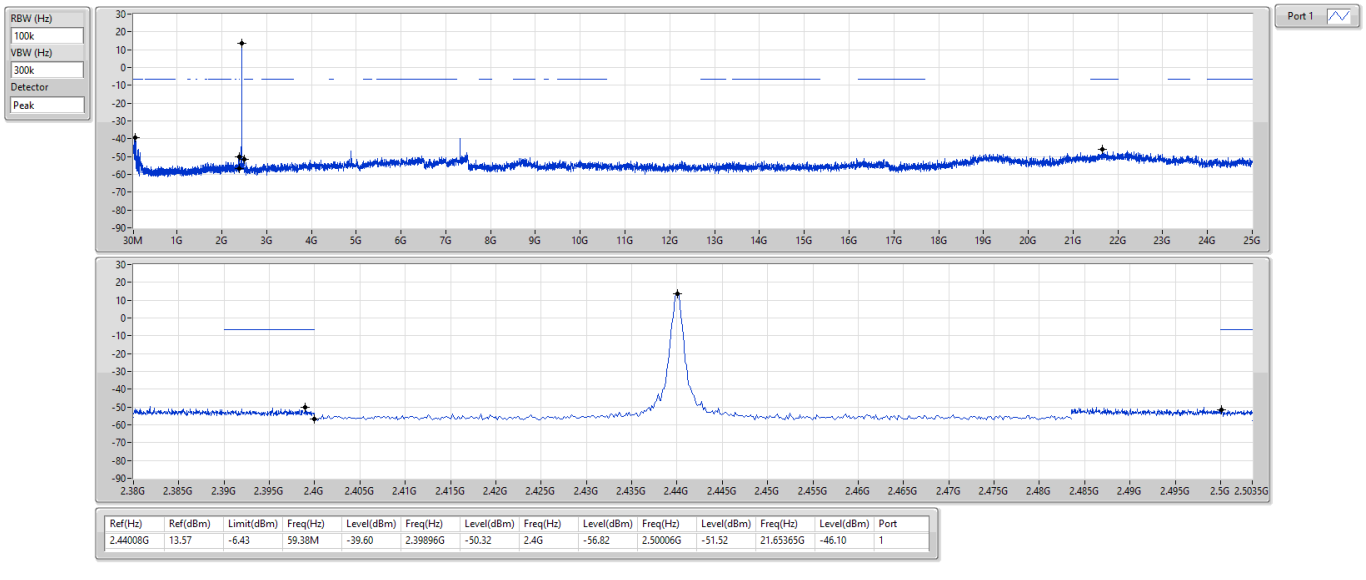
2402MHz



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
2.40184G	13.78	-6.22	59.38M	-38.71	2.39992G	-41.86	2.4G	-46.05	2.50222G	-50.64	7.20527G	-36.63	1

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

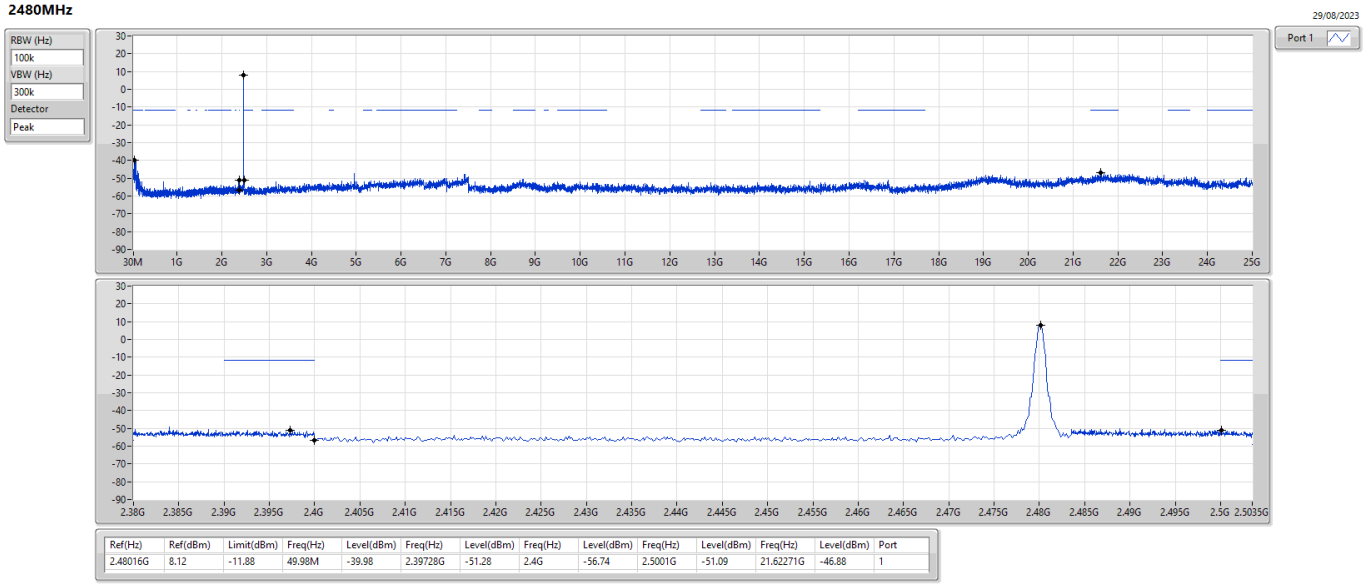
2440MHz



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
2.44008G	13.57	-6.43	59.38M	-39.60	2.39896G	-50.32	2.4G	-56.82	2.50006G	-51.52	21.65365G	-46.10	1

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

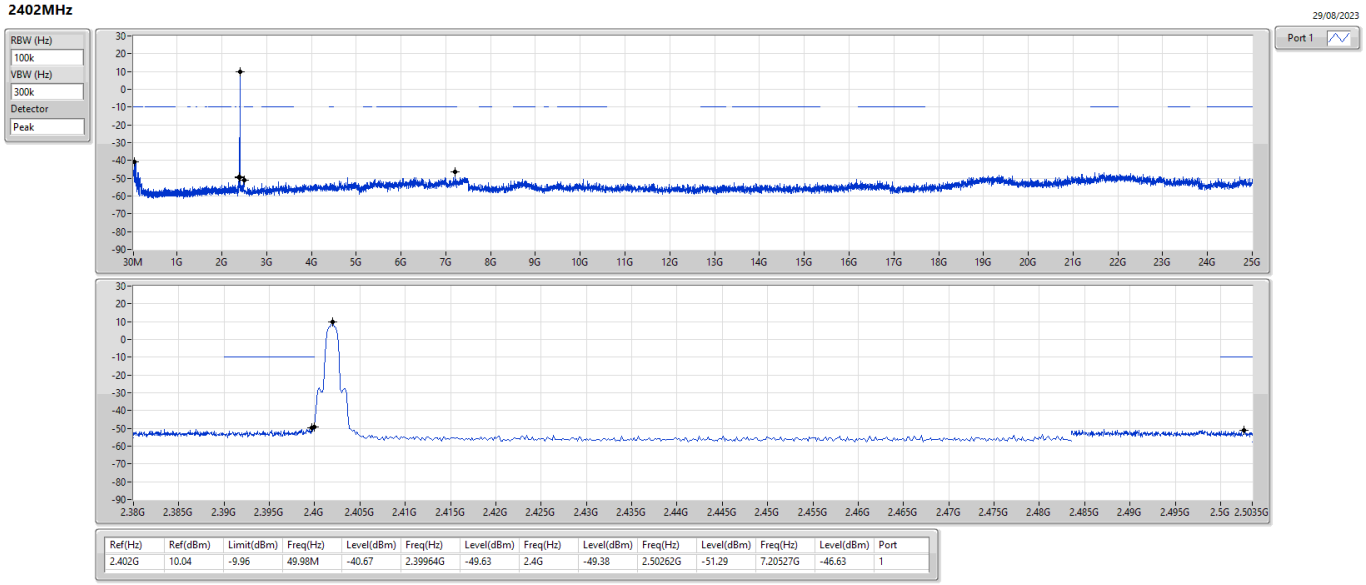
2480MHz



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	8.12	-11.88	49.98M	-39.98	2.39728G	-51.28	2.4G	-56.74	2.5001G	-51.09	21.62271G	-46.88	1

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

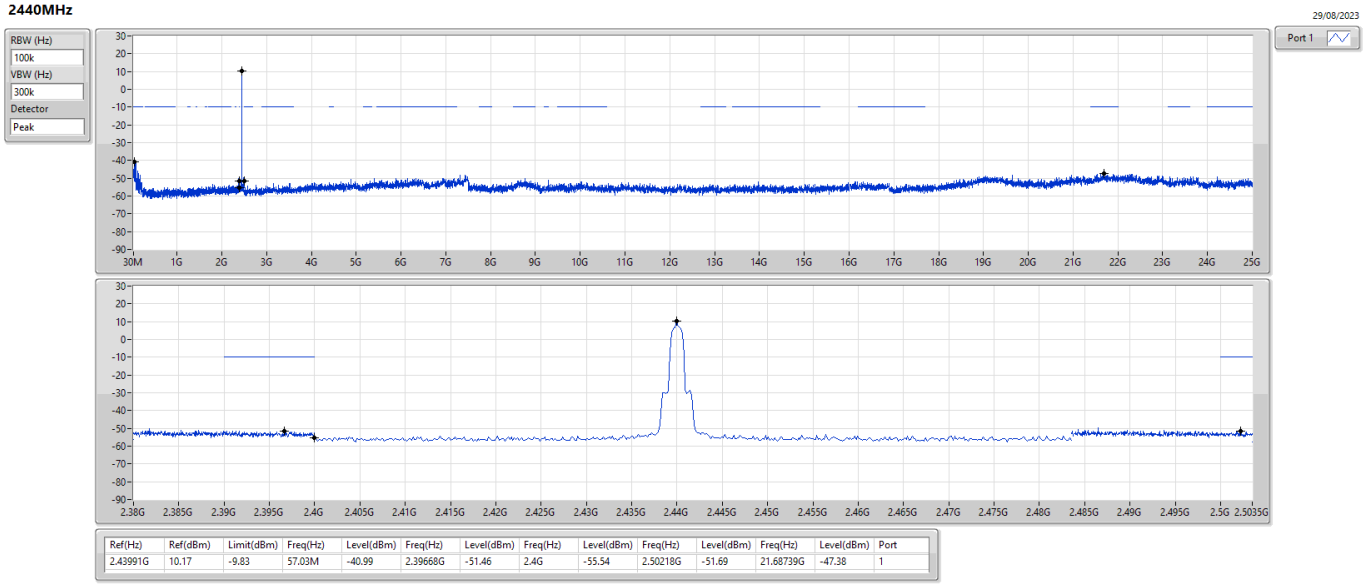
2402MHz



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
2.402G	10.04	-9.96	49.98M	-40.67	2.39964G	-49.63	2.4G	-49.38	2.50262G	-51.29	7.20527G	-46.63	1

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

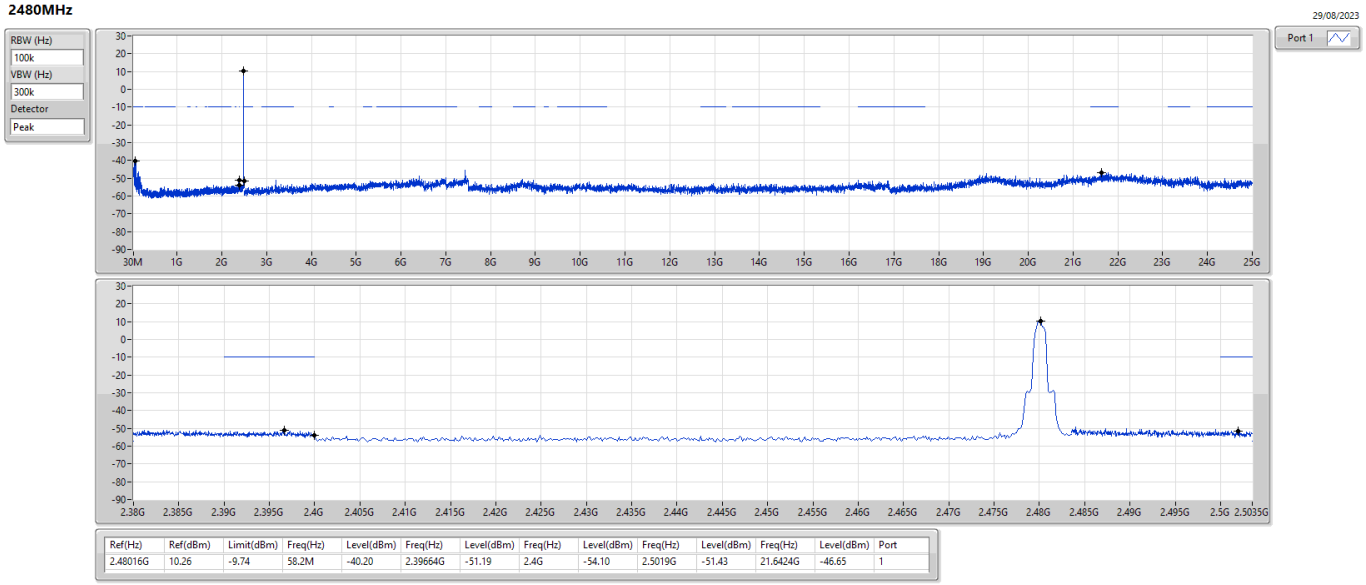
2440MHz



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	10.17	-9.83	57.03M	-40.99	2.39668G	-51.46	2.4G	-55.54	2.50218G	-51.69	21.68739G	-47.38	1

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

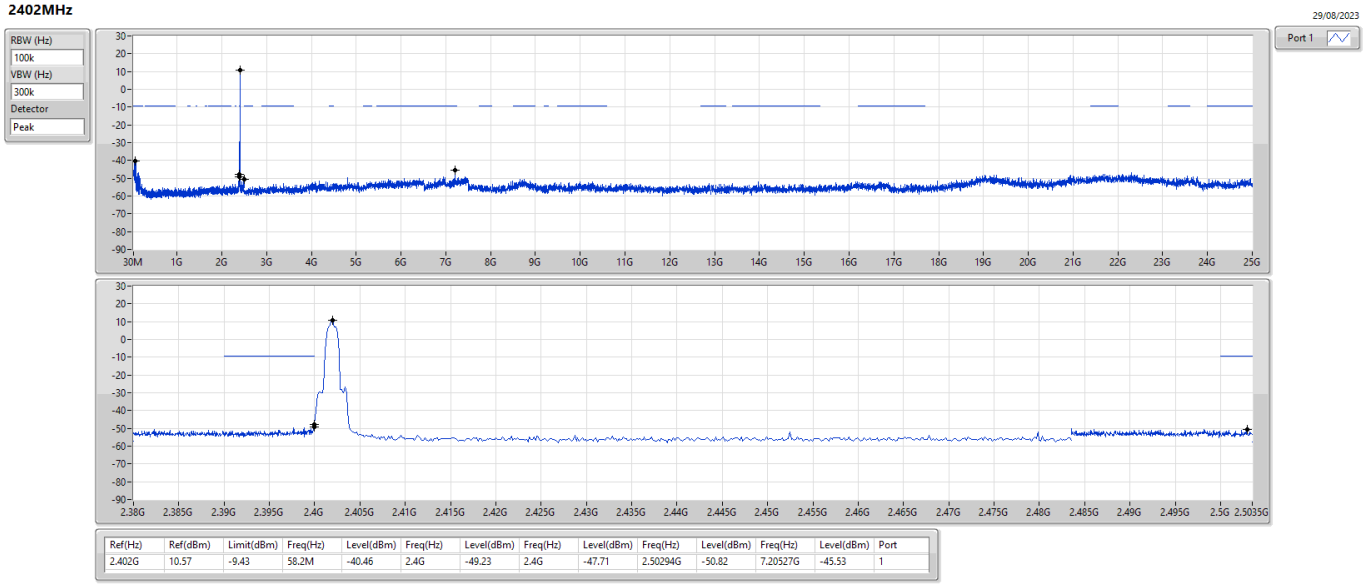
2480MHz



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
2.48016G	10.26	-9.74	58.2M	-40.20	2.39664G	-51.19	2.4G	-54.10	2.5019G	-51.43	21.6424G	-46.65	1

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

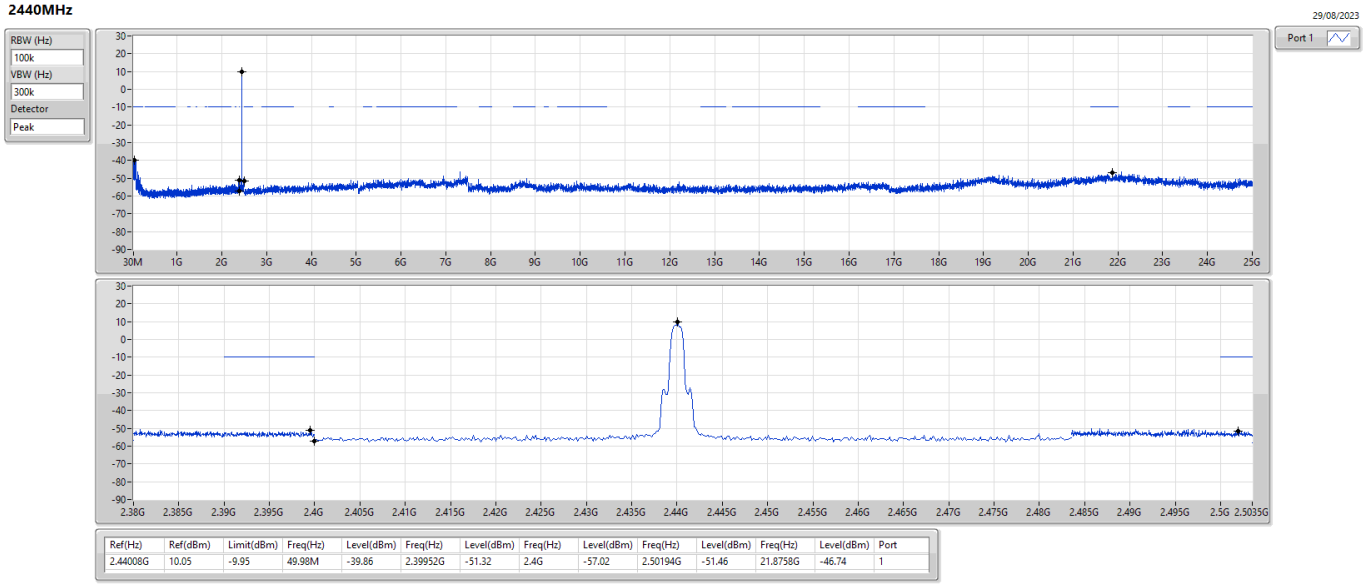
2402MHz



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
2.402G	10.57	-9.43	58.2M	-40.46	2.4G	-49.23	2.4G	-47.71	2.50294G	-50.82	7.20527G	-45.53	1

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

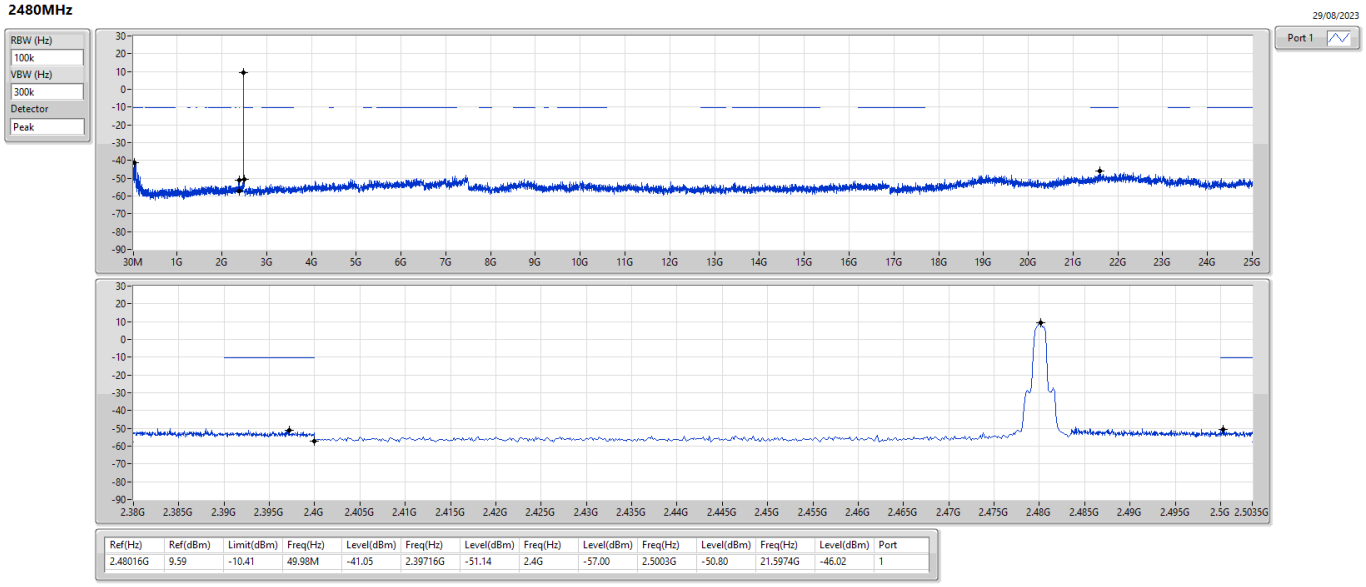
2440MHz



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
2.44008G	10.05	-9.95	49.98M	-39.86	2.39952G	-51.32	2.4G	-57.02	2.50194G	-51.46	21.8758G	-46.74	1

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

2480MHz

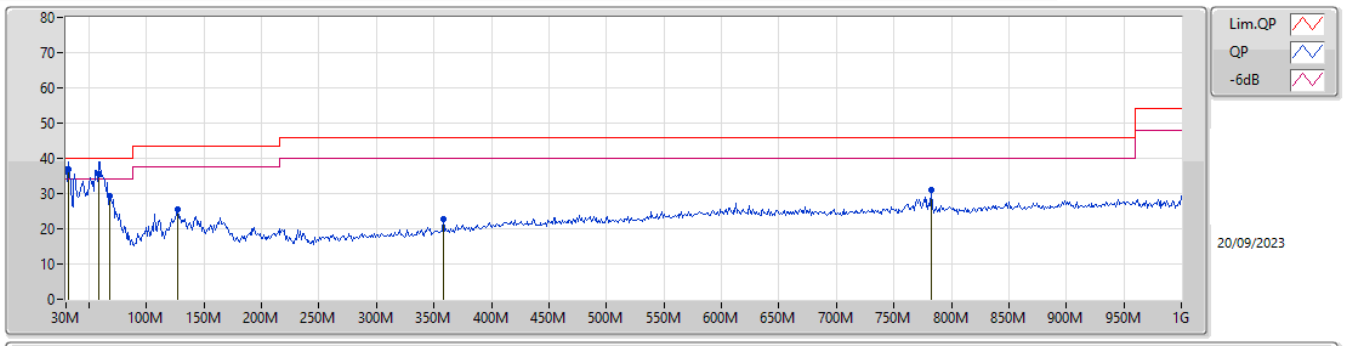


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48016G	9.59	-10.41	49.98M	-41.05	2.39716G	-51.14	2.4G	-57.00	2.5003G	-50.80	21.5974G	-46.02	1

Summary

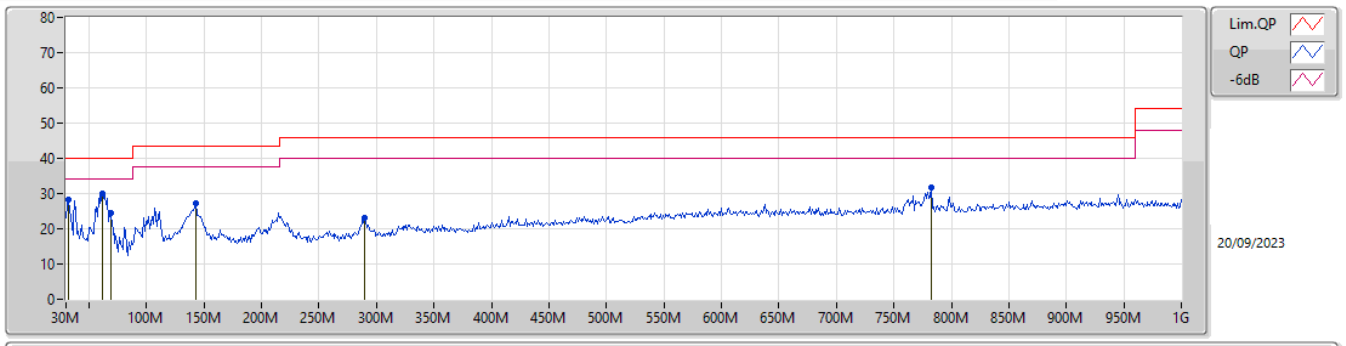
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	QP	31.94M	36.99	40.00	-3.01	Vertical

Mode 3



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	36.99	40.00	-3.01	-7.31	3	Vertical	162	2.00	"Worst"	44.30	23.26	0.65	31.22
QP	58.13M	35.43	40.00	-4.57	-17.84	3	Vertical	349	1.25	-	53.27	13.02	0.86	31.72
PK	67.83M	29.22	40.00	-10.78	-17.94	3	Vertical	197	1.00	-	47.16	12.89	0.91	31.74
PK	127M	25.57	43.50	-17.93	-12.40	3	Vertical	103	1.00	-	37.97	18.08	1.23	31.71
PK	357.86M	22.64	46.00	-23.36	-9.27	3	Vertical	2	1.25	-	31.91	20.48	2.07	31.82
PK	782.72M	30.95	46.00	-15.05	-3.48	3	Vertical	262	3.00	-	34.43	25.78	3.04	32.30

Mode 3



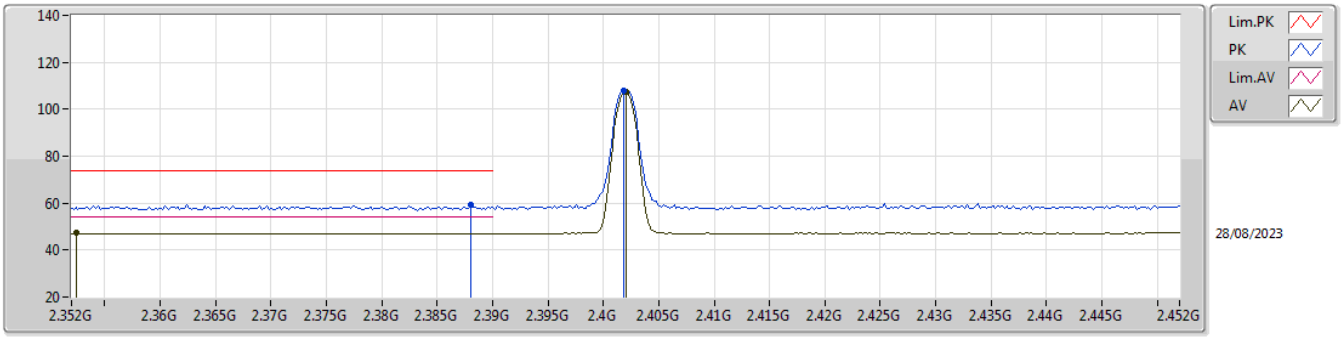
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	31.94M	28.26	40.00	-11.74	-7.31	3	Horizontal	213	2.00	-	35.57	23.26	0.65	31.22
PK	62.01M	30.17	40.00	-9.83	-17.93	3	Horizontal	264	2.00	"Worst"	48.10	12.94	0.88	31.75
PK	68.8M	24.63	40.00	-15.37	-17.90	3	Horizontal	256	2.00	-	42.53	12.92	0.91	31.73
PK	142.52M	27.08	43.50	-16.42	-13.44	3	Horizontal	86	3.00	-	40.52	17.08	1.30	31.82
PK	289.96M	23.21	46.00	-22.79	-11.08	3	Horizontal	0	1.00	-	34.29	18.88	1.87	31.83
PK	782.72M	31.66	46.00	-14.34	-3.48	3	Horizontal	288	1.25	-	35.14	25.78	3.04	32.30

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	4.87996G	50.45	54.00	-3.55	3	Horizontal	289	1.03	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

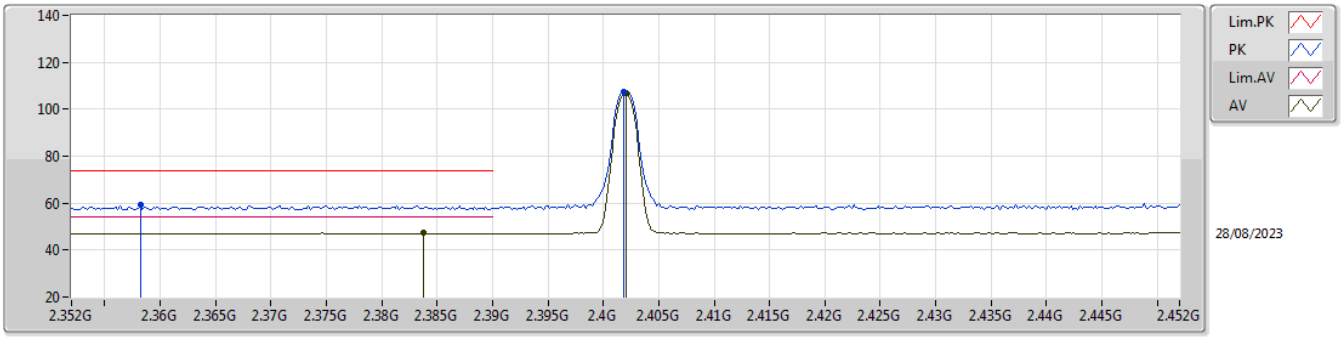


EUT Z_1TX
Setting 9
02-H-R-7

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	59.55	74.00	-14.45	27.96	3	Vertical	108	3.00	-	28.40	3.19	-
AV	2.3524G	47.24	54.00	-6.76	15.86	3	Vertical	108	3.00	-	28.20	3.18	-
PK	2.4018G	107.76	Inf	-Inf	76.16	3	Vertical	108	3.00	-	28.40	3.20	-
AV	2.402G	107.34	Inf	-Inf	75.74	3	Vertical	108	3.00	-	28.40	3.20	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

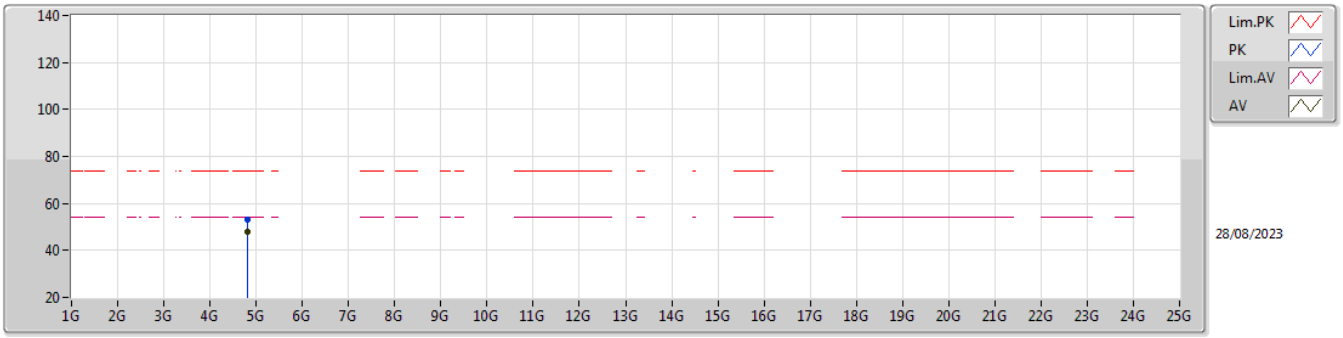


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3582G	59.09	74.00	-14.91	27.71	3	Horizontal	301	1.21	-	28.20	3.18	-
AV	2.3838G	47.30	54.00	-6.70	15.71	3	Horizontal	301	1.21	-	28.40	3.19	-
PK	2.4018G	107.44	Inf	-Inf	75.84	3	Horizontal	301	1.21	-	28.40	3.20	-
AV	2.402G	107.02	Inf	-Inf	75.42	3	Horizontal	301	1.21	-	28.40	3.20	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

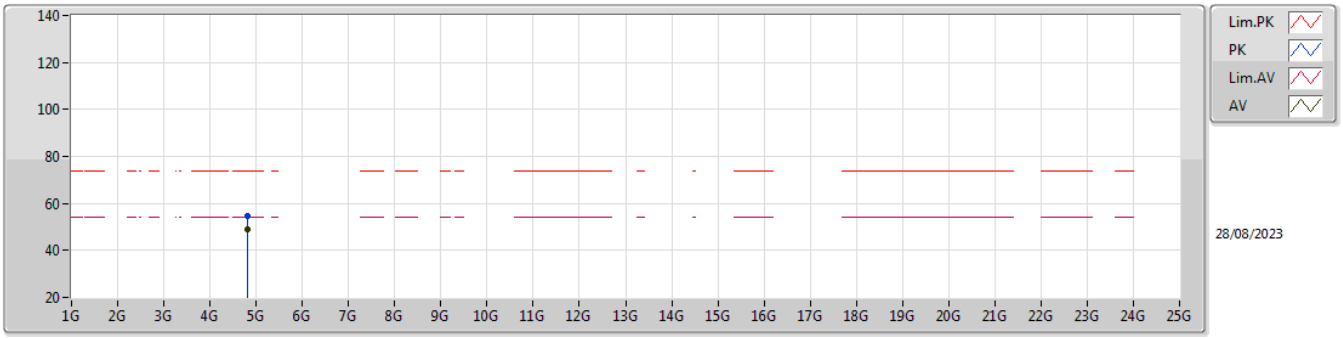


EUT Z_1TX
Setting 9
02-H-R-7

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	53.31	74.00	-20.69	45.58	3	Vertical	26	2.75	-	32.82	5.60	30.69
AV	4.80396G	47.73	54.00	-6.27	40.00	3	Vertical	26	2.75	-	32.82	5.60	30.69

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

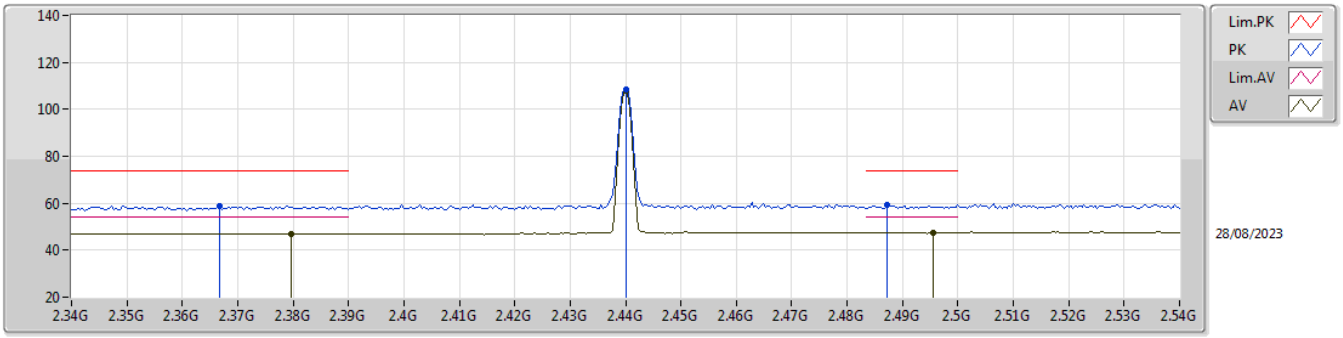


EUT Z_1TX
Setting 9
02-H-R-7

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	4.8037G	54.65	74.00	-19.35	46.92	3	Horizontal	194	1.13	-	32.82	5.60	30.69
AV	4.80398G	49.22	54.00	-4.78	41.49	3	Horizontal	194	1.13	-	32.82	5.60	30.69

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

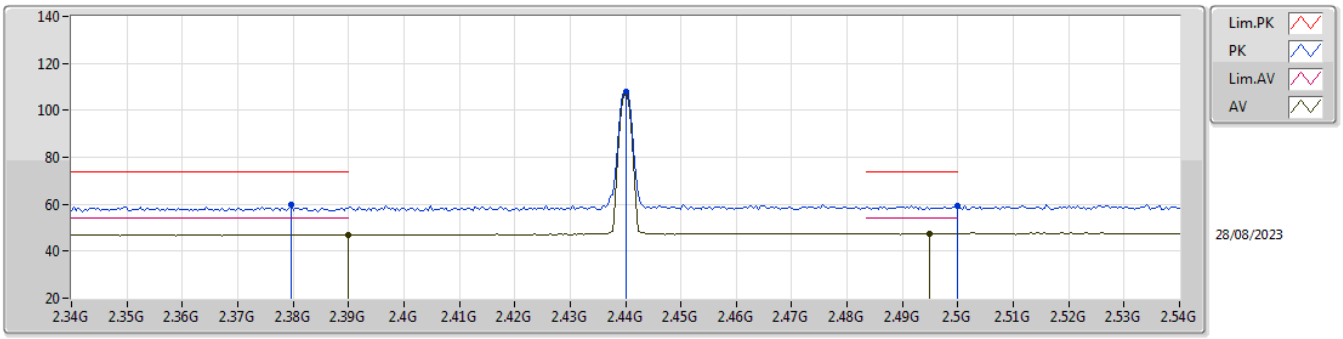


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3668G	58.99	74.00	-15.01	27.54	3	Vertical	241	2.97	-	28.27	3.18	-
AV	2.3796G	47.06	54.00	-6.94	15.47	3	Vertical	241	2.97	-	28.40	3.19	-
PK	2.44G	108.32	Inf	-Inf	76.70	3	Vertical	241	2.97	-	28.40	3.22	-
AV	2.44G	107.88	Inf	-Inf	76.26	3	Vertical	241	2.97	-	28.40	3.22	-
PK	2.4872G	59.32	74.00	-14.68	27.58	3	Vertical	241	2.97	-	28.50	3.24	-
AV	2.4956G	47.67	54.00	-6.33	15.86	3	Vertical	241	2.97	-	28.56	3.25	-

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

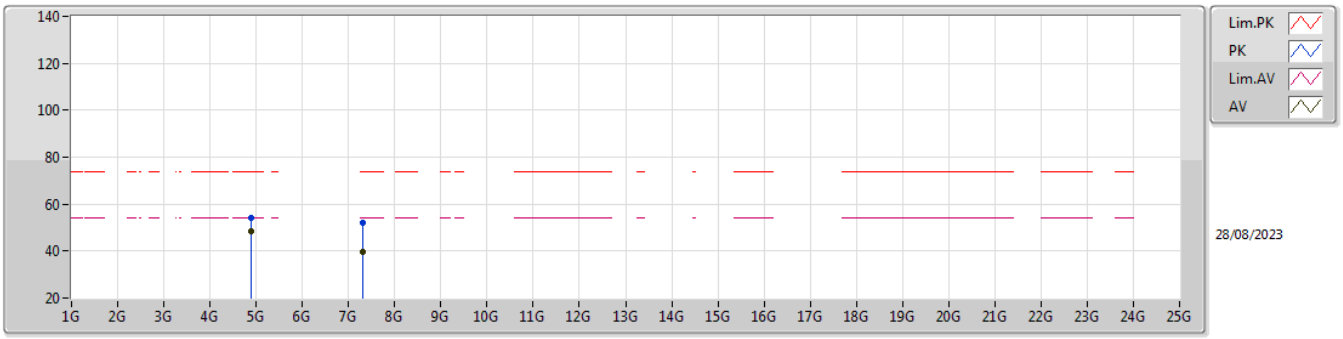


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3796G	59.68	74.00	-14.32	28.09	3	Horizontal	298	1.36	-	28.40	3.19	-
AV	2.39G	47.06	54.00	-6.94	15.46	3	Horizontal	298	1.36	-	28.40	3.20	-
PK	2.44G	107.92	Inf	-Inf	76.30	3	Horizontal	298	1.36	-	28.40	3.22	-
AV	2.44G	107.50	Inf	-Inf	75.88	3	Horizontal	298	1.36	-	28.40	3.22	-
PK	2.5G	59.24	74.00	-14.76	27.39	3	Horizontal	298	1.36	-	28.60	3.25	-
AV	2.4948G	47.67	54.00	-6.33	15.87	3	Horizontal	298	1.36	-	28.55	3.25	-

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

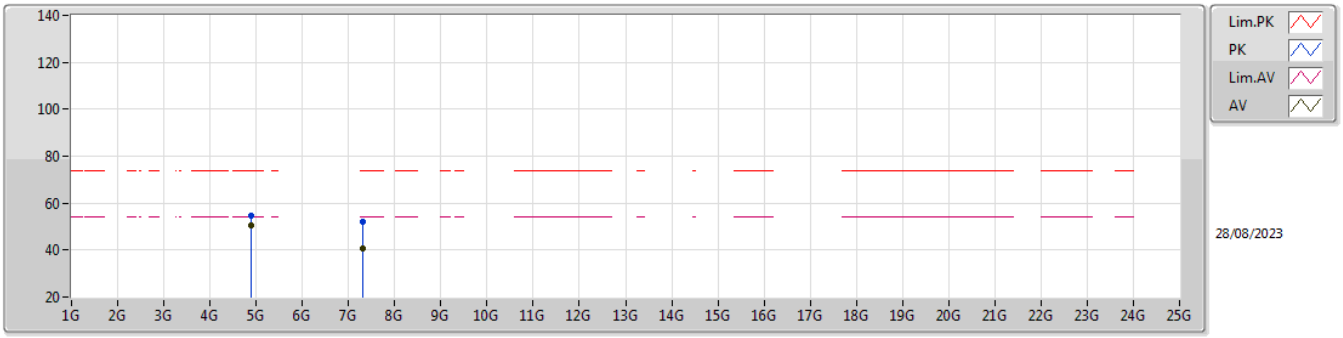


EUT Z_1TX
Setting 9
02-H-R-7

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	4.8803G	54.09	74.00	-19.91	45.93	3	Vertical	23	2.45	-	33.16	5.64	30.64
AV	4.87996G	48.51	54.00	-5.49	40.35	3	Vertical	23	2.45	-	33.16	5.64	30.64
PK	7.3211G	51.89	74.00	-22.11	40.53	3	Vertical	212	2.55	-	36.64	6.84	32.12
AV	7.31944G	39.45	54.00	-14.55	28.09	3	Vertical	212	2.55	-	36.64	6.84	32.12

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

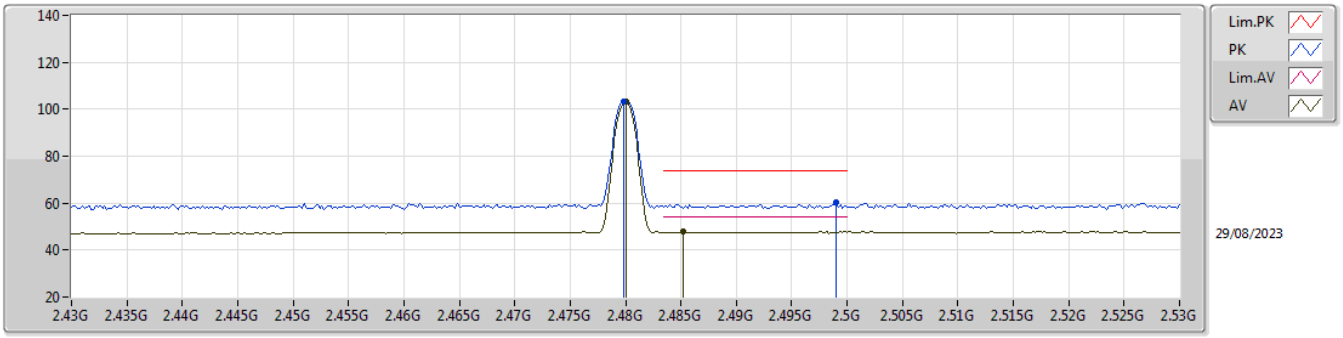


EUT Z_1TX
Setting 9
02-H-R-7

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	4.88036G	54.86	74.00	-19.14	46.70	3	Horizontal	289	1.03	-	33.16	5.64	30.64
AV	4.87996G	50.45	54.00	-3.55	42.29	3	Horizontal	289	1.03	-	33.16	5.64	30.64
PK	7.31982G	52.06	74.00	-21.94	40.70	3	Horizontal	267	2.52	-	36.64	6.84	32.12
AV	7.31968G	40.50	54.00	-13.50	29.14	3	Horizontal	267	2.52	-	36.64	6.84	32.12

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

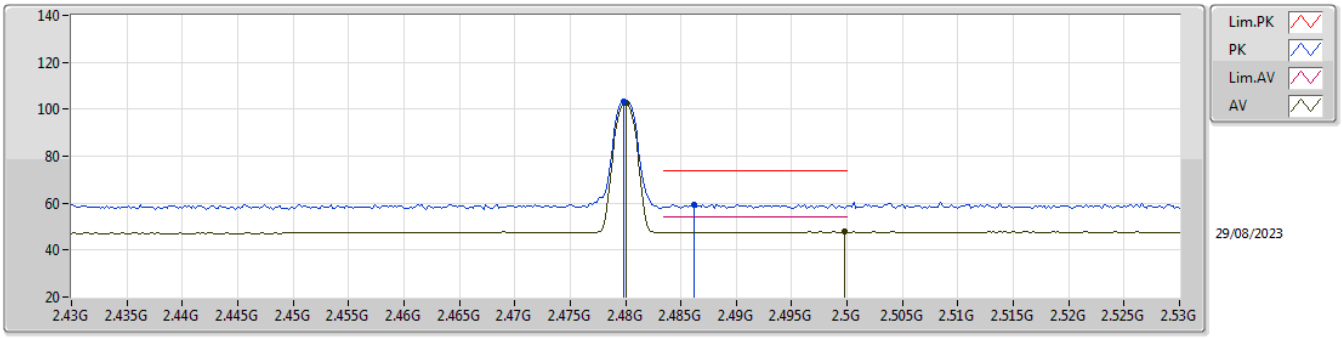


EUT Z_1TX
Setting 8
02-H-R-7

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	103.47	Inf	-Inf	71.73	3	Vertical	240	2.86	-	28.50	3.24	-
AV	2.48G	103.03	Inf	-Inf	71.29	3	Vertical	240	2.86	-	28.50	3.24	-
PK	2.499G	60.19	74.00	-13.81	28.35	3	Vertical	240	2.86	-	28.59	3.25	-
AV	2.4852G	47.90	54.00	-6.10	16.16	3	Vertical	240	2.86	-	28.50	3.24	-

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

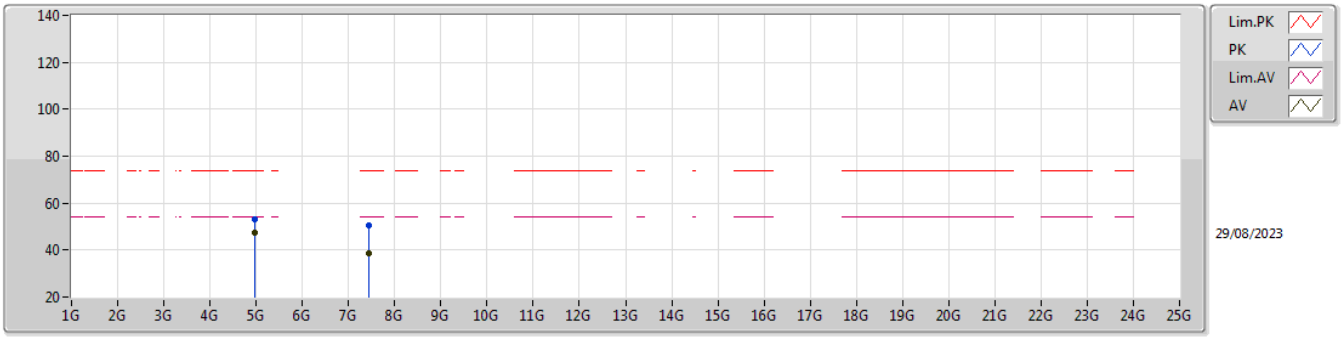


EUT Z_1TX
Setting 8
02-H-R-7

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	103.17	Inf	-Inf	71.43	3	Horizontal	307	1.19	-	28.50	3.24	-
AV	2.48G	102.77	Inf	-Inf	71.03	3	Horizontal	307	1.19	-	28.50	3.24	-
PK	2.4862G	59.45	74.00	-14.55	27.71	3	Horizontal	307	1.19	-	28.50	3.24	-
AV	2.4998G	47.95	54.00	-6.05	16.10	3	Horizontal	307	1.19	-	28.60	3.25	-

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

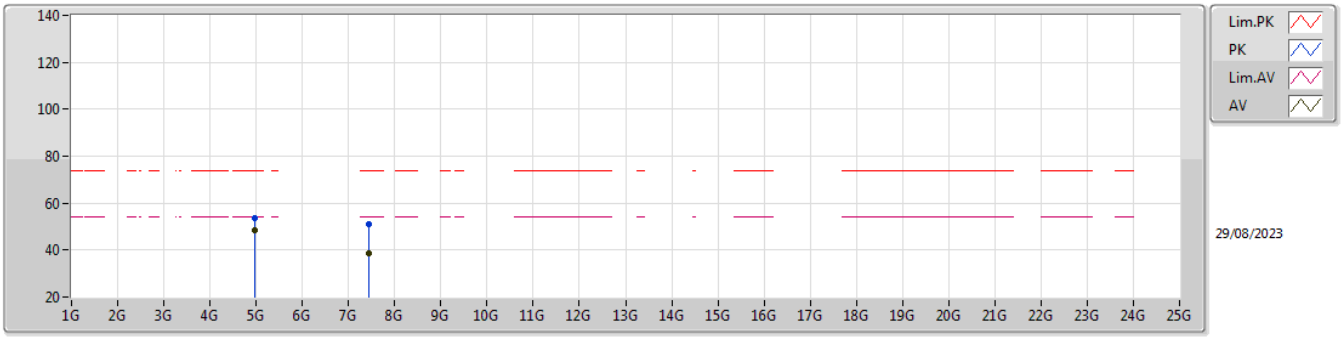


EUT Z_1TX
Setting 8
02-H-R-7

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	4.95972G	53.02	74.00	-20.98	44.61	3	Vertical	28	2.89	-	33.32	5.68	30.59
AV	4.96G	47.35	54.00	-6.65	38.94	3	Vertical	28	2.89	-	33.32	5.68	30.59
PK	7.43862G	50.33	74.00	-23.67	38.98	3	Vertical	15	2.78	-	36.70	6.84	32.19
AV	7.43656G	38.44	54.00	-15.56	27.08	3	Vertical	15	2.78	-	36.70	6.84	32.18

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

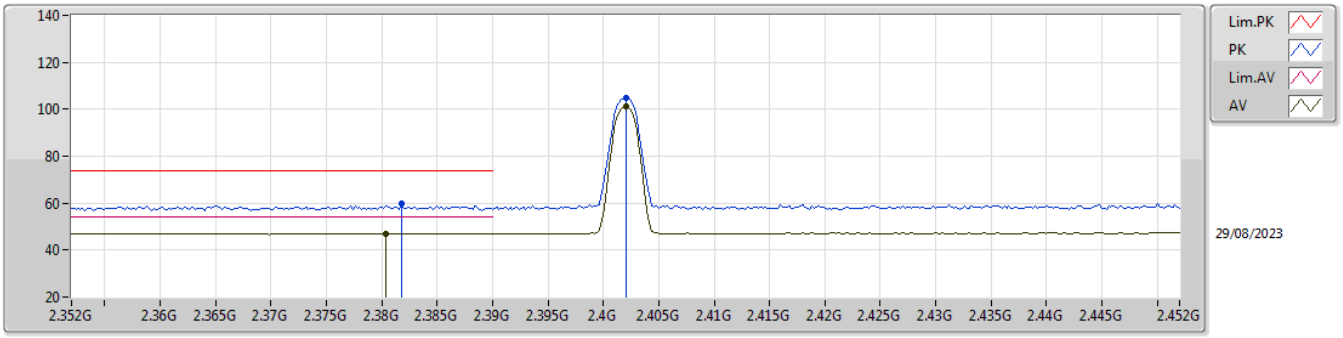


EUT Z_1TX
Setting 8
02-H-R-7

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	4.9603G	53.78	74.00	-20.22	45.37	3	Horizontal	115	2.64	-	33.32	5.68	30.59
AV	4.96G	48.24	54.00	-5.76	39.83	3	Horizontal	115	2.64	-	33.32	5.68	30.59
PK	7.43666G	50.89	74.00	-23.11	39.53	3	Horizontal	335	2.10	-	36.70	6.84	32.18
AV	7.4365G	38.81	54.00	-15.19	27.45	3	Horizontal	335	2.10	-	36.70	6.84	32.18

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

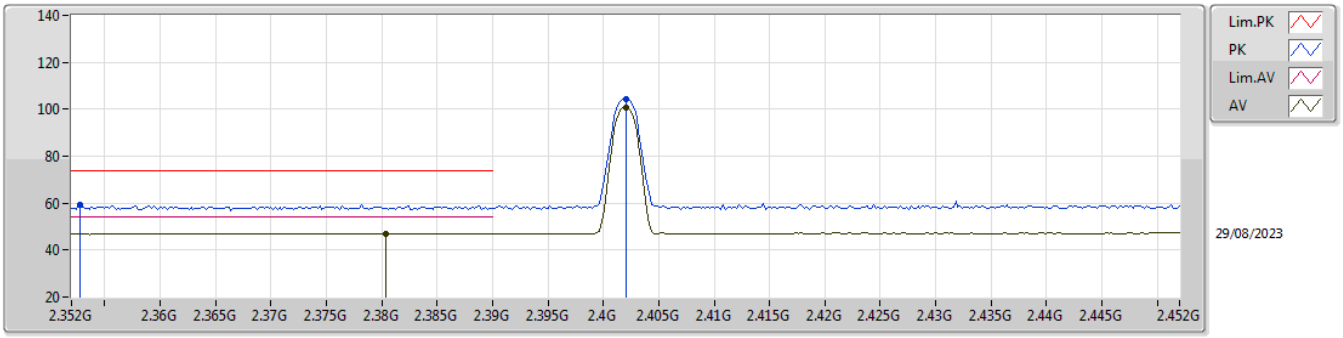


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3818G	59.85	74.00	-14.15	28.26	3	Vertical	108	3.00	-	28.40	3.19	-
AV	2.3804G	47.06	54.00	-6.94	15.47	3	Vertical	108	3.00	-	28.40	3.19	-
PK	2.402G	104.67	Inf	-Inf	73.07	3	Vertical	108	3.00	-	28.40	3.20	-
AV	2.402G	101.06	Inf	-Inf	69.46	3	Vertical	108	3.00	-	28.40	3.20	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

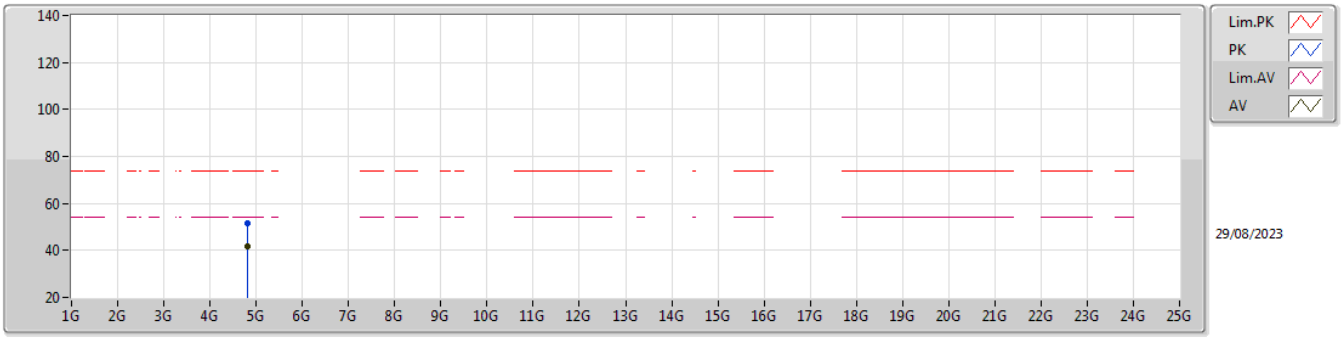


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3528G	59.18	74.00	-14.82	27.80	3	Horizontal	299	1.16	-	28.20	3.18	-
AV	2.3804G	47.06	54.00	-6.94	15.47	3	Horizontal	299	1.16	-	28.40	3.19	-
PK	2.402G	104.29	Inf	-Inf	72.69	3	Horizontal	299	1.16	-	28.40	3.20	-
AV	2.402G	100.69	Inf	-Inf	69.09	3	Horizontal	299	1.16	-	28.40	3.20	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

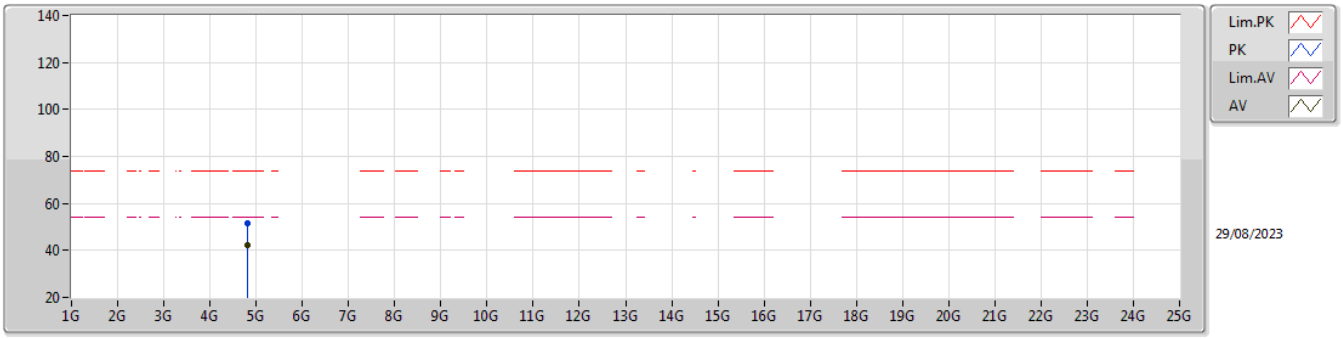


EUT Z_1TX
Setting 9
02-H-R-7

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	4.80446G	51.73	74.00	-22.27	43.99	3	Vertical	26	2.75	-	32.83	5.60	30.69
AV	4.80396G	41.88	54.00	-12.12	34.15	3	Vertical	26	2.75	-	32.82	5.60	30.69

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

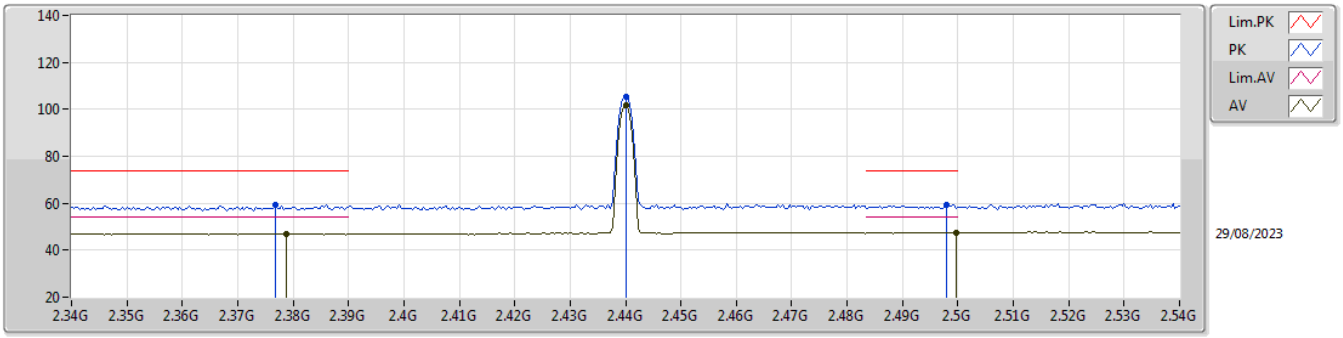


EUT Z_1TX
Setting 9
02-H-R-7

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	4.80398G	51.48	74.00	-22.52	43.75	3	Horizontal	193	1.13	-	32.82	5.60	30.69
AV	4.804G	42.28	54.00	-11.72	34.55	3	Horizontal	193	1.13	-	32.82	5.60	30.69

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

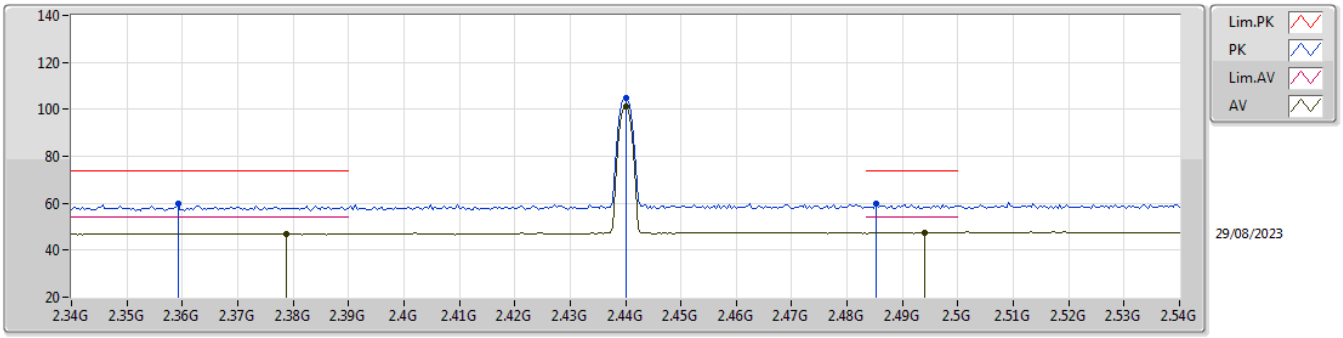


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3768G	59.30	74.00	-14.70	27.74	3	Vertical	242	2.96	-	28.37	3.19	-
AV	2.3788G	47.06	54.00	-6.94	15.48	3	Vertical	242	2.96	-	28.39	3.19	-
PK	2.44G	105.40	Inf	-Inf	73.78	3	Vertical	242	2.96	-	28.40	3.22	-
AV	2.44G	101.77	Inf	-Inf	70.15	3	Vertical	242	2.96	-	28.40	3.22	-
PK	2.498G	59.23	74.00	-14.77	27.40	3	Vertical	242	2.96	-	28.58	3.25	-
AV	2.4996G	47.44	54.00	-6.56	15.59	3	Vertical	242	2.96	-	28.60	3.25	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

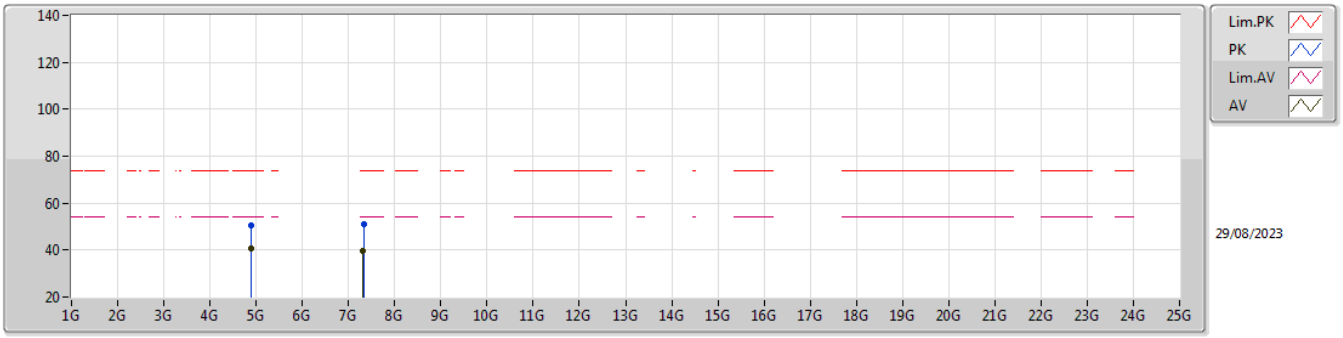


EUT Z_1TX
Setting 9
02-H-R-7

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	2.3592G	59.75	74.00	-14.25	28.37	3	Horizontal	297	1.36	-	28.20	3.18	-
AV	2.3788G	47.06	54.00	-6.94	15.48	3	Horizontal	297	1.36	-	28.39	3.19	-
PK	2.44G	104.82	Inf	-Inf	73.20	3	Horizontal	297	1.36	-	28.40	3.22	-
AV	2.44G	101.19	Inf	-Inf	69.57	3	Horizontal	297	1.36	-	28.40	3.22	-
PK	2.4852G	59.96	74.00	-14.04	28.22	3	Horizontal	297	1.36	-	28.50	3.24	-
AV	2.494G	47.66	54.00	-6.34	15.87	3	Horizontal	297	1.36	-	28.54	3.25	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

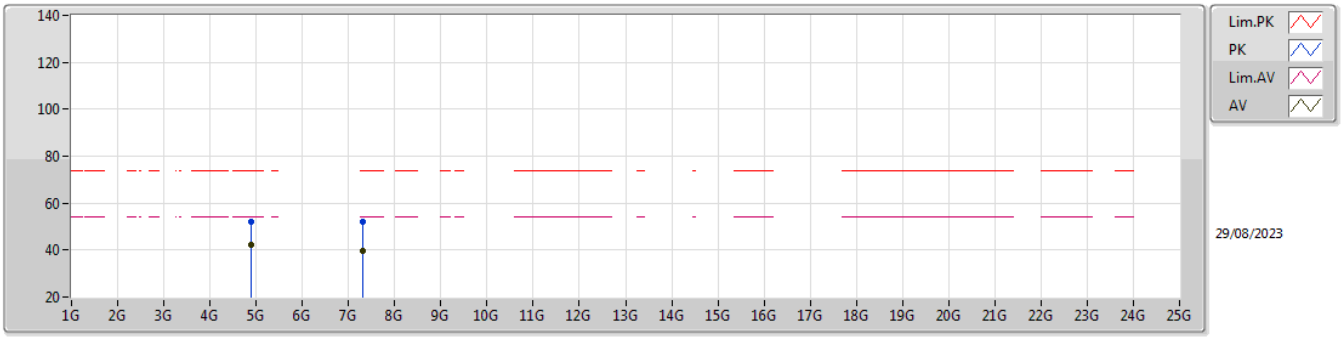


EUT Z_1TX
Setting 9
02-H-R-7

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	4.87954G	50.46	74.00	-23.54	42.30	3	Vertical	8	2.49	-	33.16	5.64	30.64
AV	4.87988G	40.47	54.00	-13.53	32.31	3	Vertical	8	2.49	-	33.16	5.64	30.64
PK	7.32308G	50.79	74.00	-23.21	39.42	3	Vertical	139	1.59	-	36.65	6.84	32.12
AV	7.32164G	39.51	54.00	-14.49	28.15	3	Vertical	139	1.59	-	36.64	6.84	32.12

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

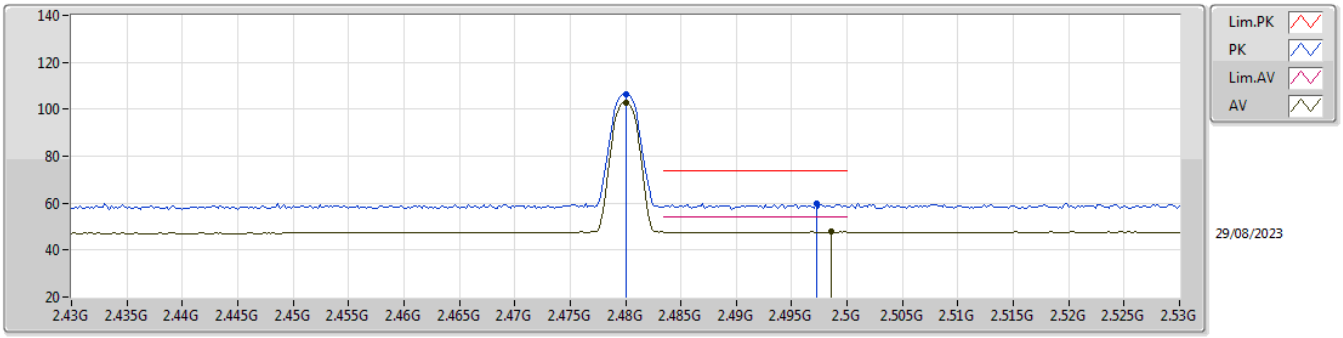


EUT Z_1TX
Setting 9
02-H-R-7

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	4.88012G	51.82	74.00	-22.18	43.66	3	Horizontal	288	1.01	-	33.16	5.64	30.64
AV	4.87988G	42.41	54.00	-11.59	34.25	3	Horizontal	288	1.01	-	33.16	5.64	30.64
PK	7.31972G	51.88	74.00	-22.12	40.52	3	Horizontal	340	1.80	-	36.64	6.84	32.12
AV	7.31886G	39.73	54.00	-14.27	28.37	3	Horizontal	340	1.80	-	36.64	6.84	32.12

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

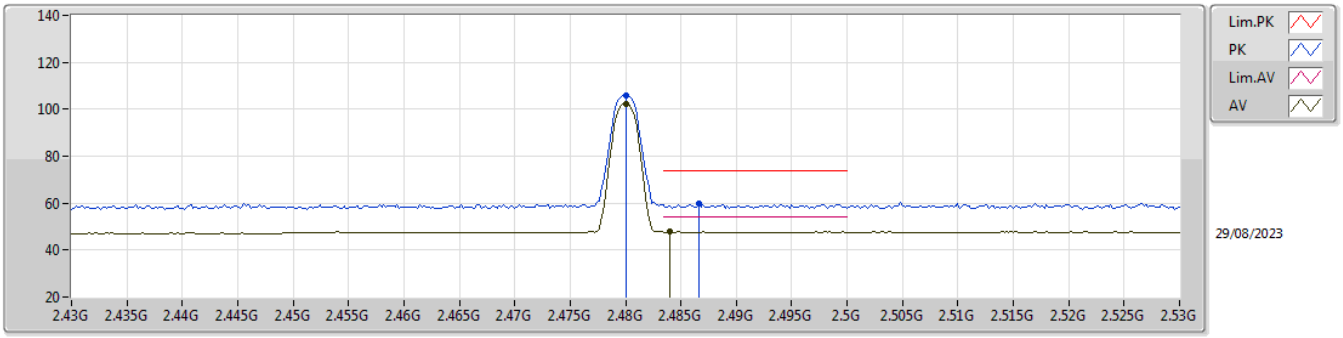


EUT Z_1TX
Setting 9
02-H-R-7

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	106.40	Inf	-Inf	74.66	3	Vertical	240	2.86	-	28.50	3.24	-
AV	2.48G	102.77	Inf	-Inf	71.03	3	Vertical	240	2.86	-	28.50	3.24	-
PK	2.4972G	59.81	74.00	-14.19	27.99	3	Vertical	240	2.86	-	28.57	3.25	-
AV	2.4986G	47.69	54.00	-6.31	15.85	3	Vertical	240	2.86	-	28.59	3.25	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

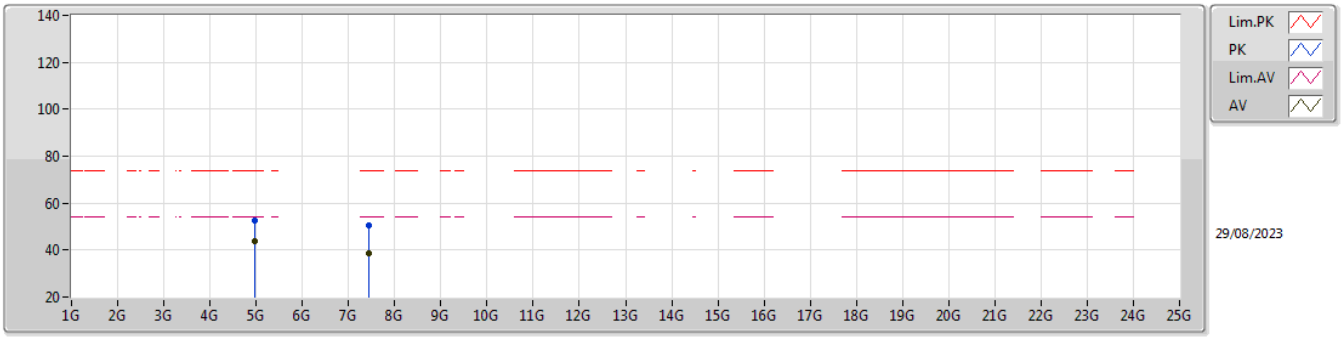


EUT Z_1TX
Setting 9
02-H-R-7

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	106.06	Inf	-Inf	74.32	3	Horizontal	303	1.52	-	28.50	3.24	-
AV	2.48G	102.45	Inf	-Inf	70.71	3	Horizontal	303	1.52	-	28.50	3.24	-
PK	2.4866G	59.64	74.00	-14.36	27.90	3	Horizontal	303	1.52	-	28.50	3.24	-
AV	2.484G	47.90	54.00	-6.10	16.16	3	Horizontal	303	1.52	-	28.50	3.24	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

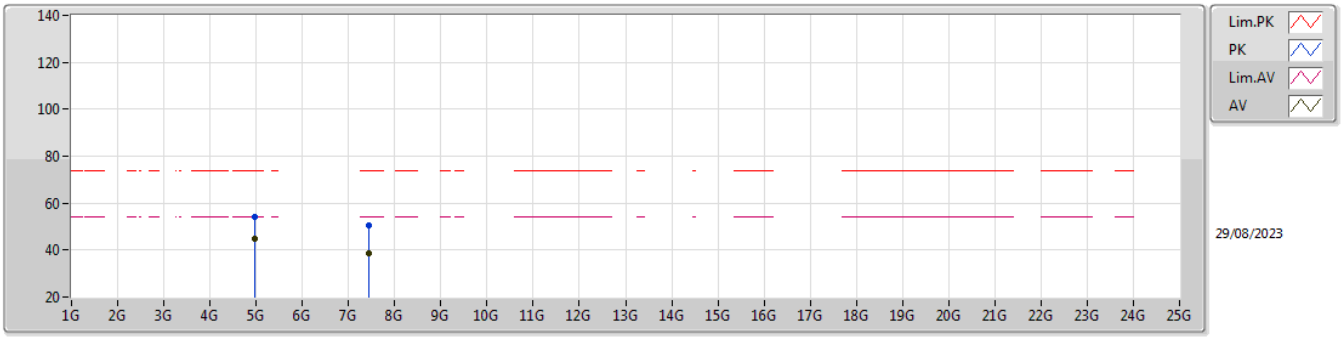


EUT Z_1TX
Setting 9
02-H-R-7

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	4.95992G	52.76	74.00	-21.24	44.35	3	Vertical	29	2.37	-	33.32	5.68	30.59
AV	4.96002G	43.70	54.00	-10.30	35.29	3	Vertical	29	2.37	-	33.32	5.68	30.59
PK	7.43592G	50.74	74.00	-23.26	39.38	3	Vertical	81	1.43	-	36.70	6.84	32.18
AV	7.44436G	38.62	54.00	-15.38	27.27	3	Vertical	81	1.43	-	36.70	6.84	32.19

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



EUT Z_1TX
Setting 9
02-H-R-7

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	4.96004G	54.13	74.00	-19.87	45.72	3	Horizontal	116	2.92	-	33.32	5.68	30.59
AV	4.95994G	44.98	54.00	-9.02	36.57	3	Horizontal	116	2.92	-	33.32	5.68	30.59
PK	7.43988G	50.64	74.00	-23.36	39.29	3	Horizontal	341	2.14	-	36.70	6.84	32.19
AV	7.43686G	38.74	54.00	-15.26	27.38	3	Horizontal	341	2.14	-	36.70	6.84	32.18

1. Photographs of Conducted Emissions Test Configuration

Test Mode: Mode 2

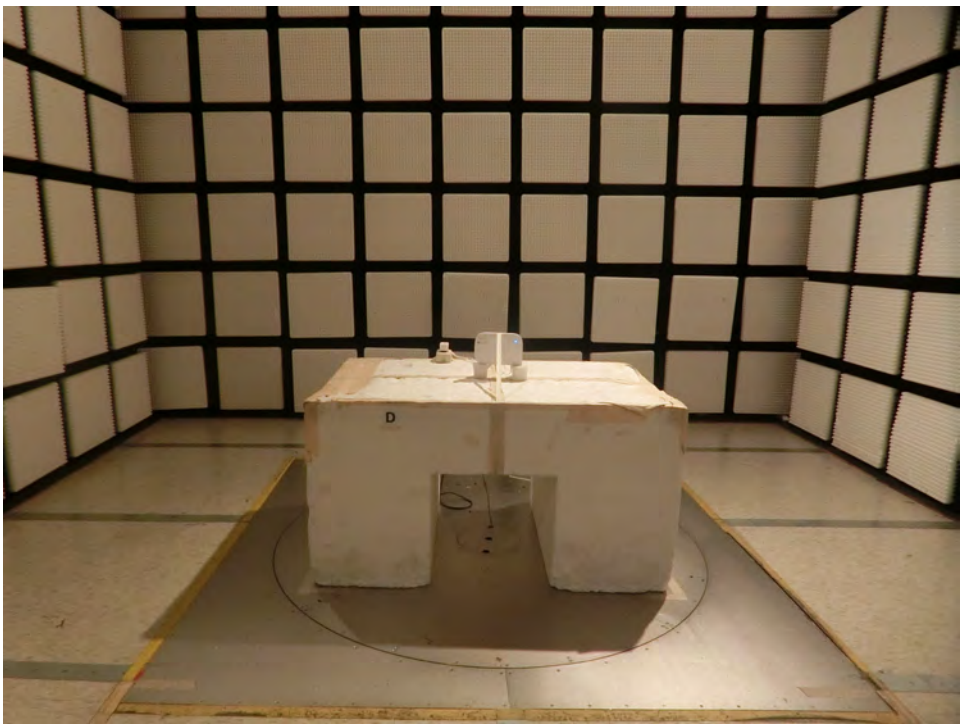
FRONT VIEW

REAR VIEW

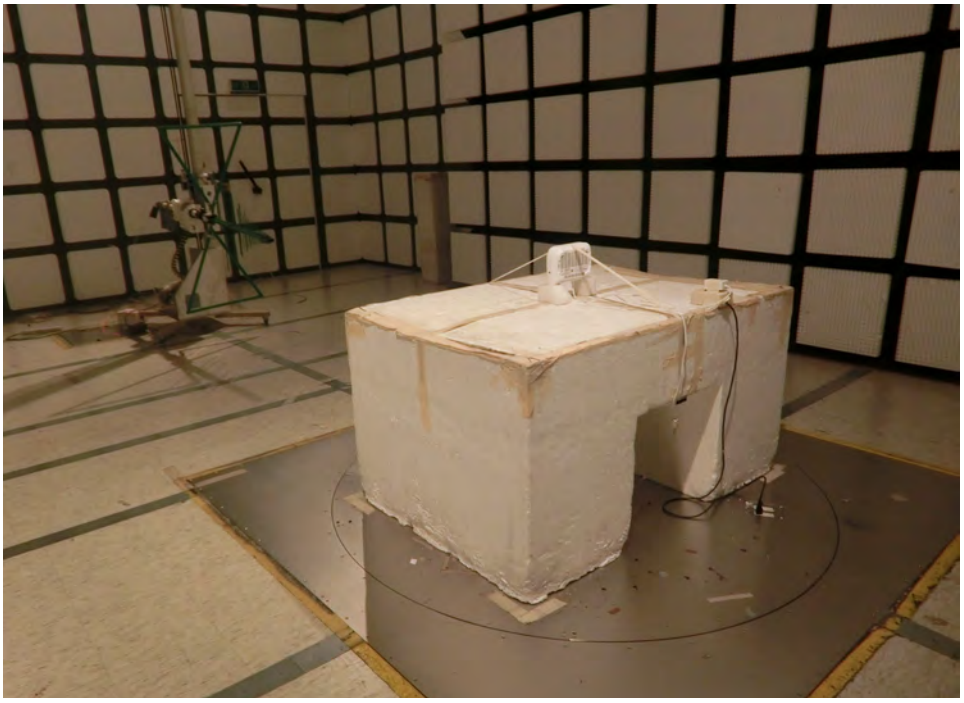
2. Photographs of Radiated Emissions Test Configuration

Test Configuration: 30MHz~1GHz / Test Mode: Mode 3

FRONT VIEW

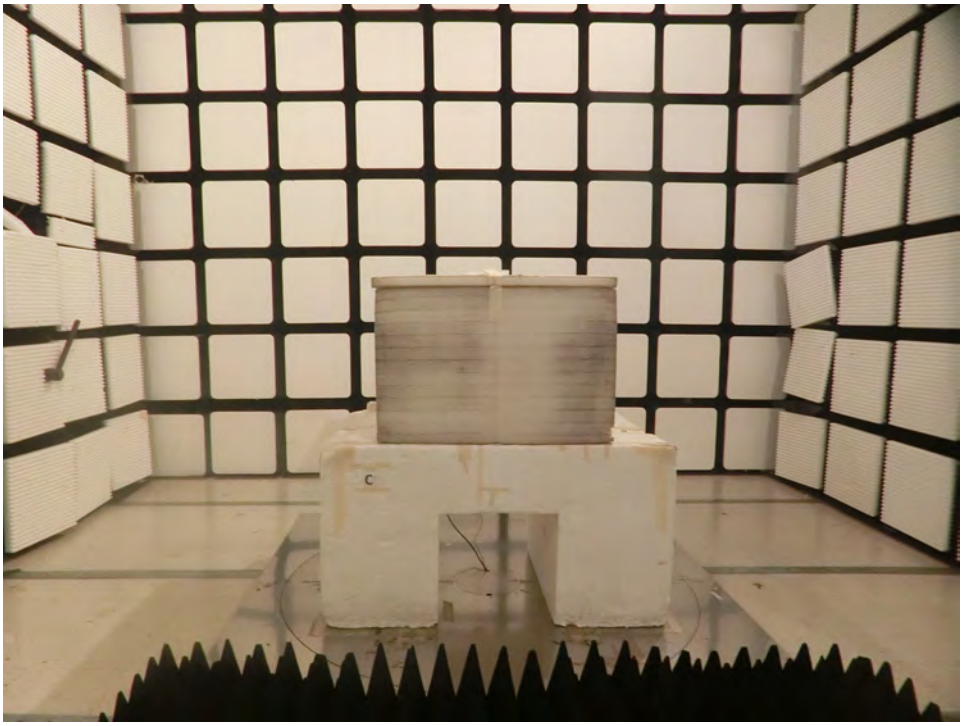


REAR VIEW



Test Configuration: Above 1GHz

FRONT VIEW



REAR VIEW

———THE END———