Testing Laboratory 3785

FCC Radio Test Report

FCC ID	:	**YL6-1438852R**
Equipment	:	**Wireless Module**
Brand Name	:	**ALARM.COM**
Model Name	:	**ADC-WM8852-A**
Applicant	:	**Alarm.com Incorporated 8281 Greensboro Drive, Suite 100, Tysons, VA 22102 United States**
Manufacturer	:	**Alarm.com Incorporated 8281 Greensboro Drive, Suite 100, Tysons, VA 22102 United States**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Dec. 07, 2021, and testing was started from Dec. 20, 2021 and completed on Jan. 24, 2022. We, SPORTON INTERNATIONAL INC. Hsinhua 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. Hsinhua Laboratory, the test report shall not be reproduced except in full.

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR1D0419AD	01	Initial issue of report	Feb. 24, 2022

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	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 Bandedge	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	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None

Reviewed by: Sam Tsai

Report Producer: Jenny Yang

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

Source	Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	1	PSA	WCBN3511L_PCA	Dipole	I-Pex	2.4G+5G
	2	PSA	WCBN3511L_PCA	Dipole	I-Pex	2.4G+5G+BT
2	3	INPAQ	RFFPA301205IMLB401	Dipole	I-Pex	2.4G+5G
	4	INPAQ	RFFPA301213IMLB401	Dipole	I-Pex	2.4G+5G
3	5	LYNwave	ALX18F-222A A4-00	Dipole	I-Pex	2.4G+5G
	6	LYNwave	ALX18F-222A A5-00	Dipole	I-Pex	2.4G+5G
4	7	LITEON	3010001121L7	Dipole	I-Pex	2.4G+5G
	8	LITEON	3010001122L7	Dipole	I-Pex	2.4G+5G

Source	Ant.	Port	Gain (dBi)		
			2.4G	5G	BT
1	1	1	5.3	5.71	-
	2	2	5.3	5.71	5.3
2	3	1	3.94	5.3	-
	4	2	3.78	4.28	-
3	5	1	4.9	5.4	-
	6	2	5.2	4.7	-
4	7	1	5.1	5.6	-
	8	2	3.5	5.5	-

Note 1: The EUT has eight antennas.
Note 2: The EUT can be matched with the above antennas and Source 1 antennas were used to perform the worst configuration and result of that was recorded as the final test result.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax mode (2TX/2RX)
Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.
Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.
Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.
Ant. 7 (port 1) and Ant. 8 (port 2) could transmit/receive simultaneously.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Only Ant. 2 (port 2) can be used as transmitting/receiving.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (2TX/2RX)
Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.
Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.
Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.
Ant. 7 (port 1) and Ant. 8 (port 2) could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From Test Fixture			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
Type of EUT				
☒	Stand-alone			
☐	Combined (EUT where the radio part is fully integrated within another device)			
	Combined Equipment - Brand Name / Model No.:	…		
☐	Plug-in radio (EUT intended for a variety of host systems)			
	Host System - Brand Name / Model No.:	…		
☐	Other:			

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-EDR(2Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-EDR(3Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013

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

- KDB 558074 D01 v05r02
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua **(TAF:** 3785**)**	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction	CO04-HY	Daniel Lin	20.1~21.1°C / 56~58%	08/Jan/2022
RF Conducted	TH06-HY	Alan Chien	20.1~26.9°C / 50~60%	28/Dec/2021~10/Jan/2022
Radiated (below 1G)	03CH02-HY	Jack Tang	21.4~22.6°C / 53~ 54%	24/Jan/2022
☒ Wen 33rd.St. **(TAF:** 3785**)**	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		**FAX:** 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
Radiated (above 1G)	03CH09-HY	Daniel Hsu	20.0~26.9°C / 46~60%	20/Dec/2021~27/Dec/2021

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)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software	Bluetooth RF Test Tool

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	CTX
1	Fixture mode

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	
	☒	Non-adaptive frequency hopping systems (Non-AFH)
	☐	adaptive frequency hopping systems (AFH)

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
1	Fixture mode
Operating Mode > 1GHz	CTX
Orthogonal Planes of EUT	**Z Plane**
	

2.3 Support Equipment

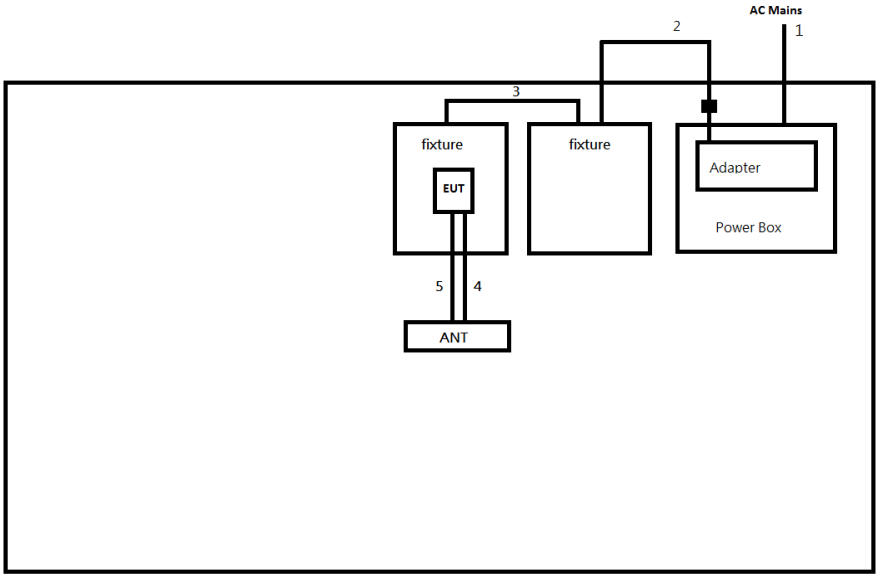
Support Equipment – AC Conduction					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Fixture	-	-	-	Provided by Customer
2	Adapter	APD	WB-12G12FU	-	-

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	Lenovo	TP0001A	-	-
2	Adapter for NB	Lenovo	42T4432	-	-
3	Fixture	-	-	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Fixture	-	-	-	Provided by Customer
2	Adapter	APD	WB-12G12FU	-	-

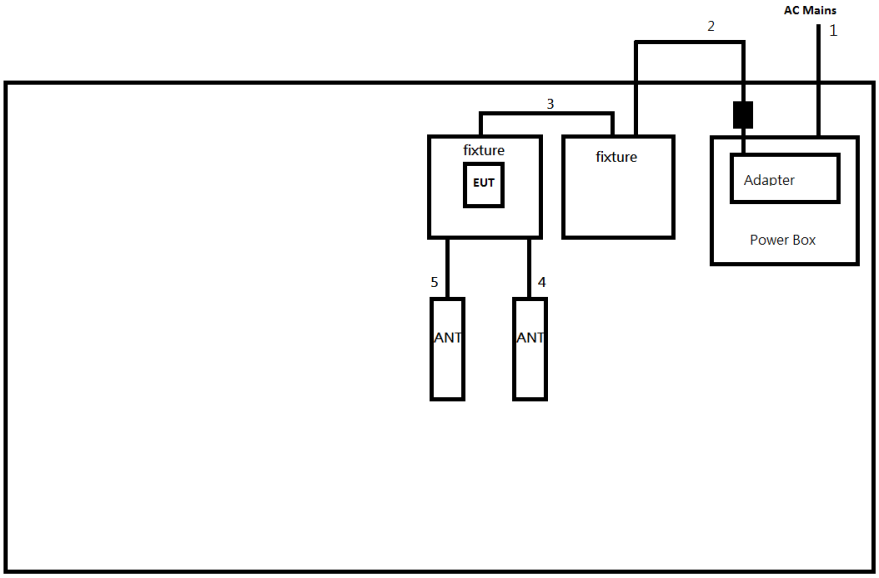
2.4 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	2.5	-
3	DC Power cable	No	0.15	-
4	RF Cable	No	0.2	-
5	RF Cable	No	0.2	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	2.5	-
3	DC Power cable	No	0.15	-
4	RF Cable	No	0.2	-
5	RF Cable	No	0.2	-

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

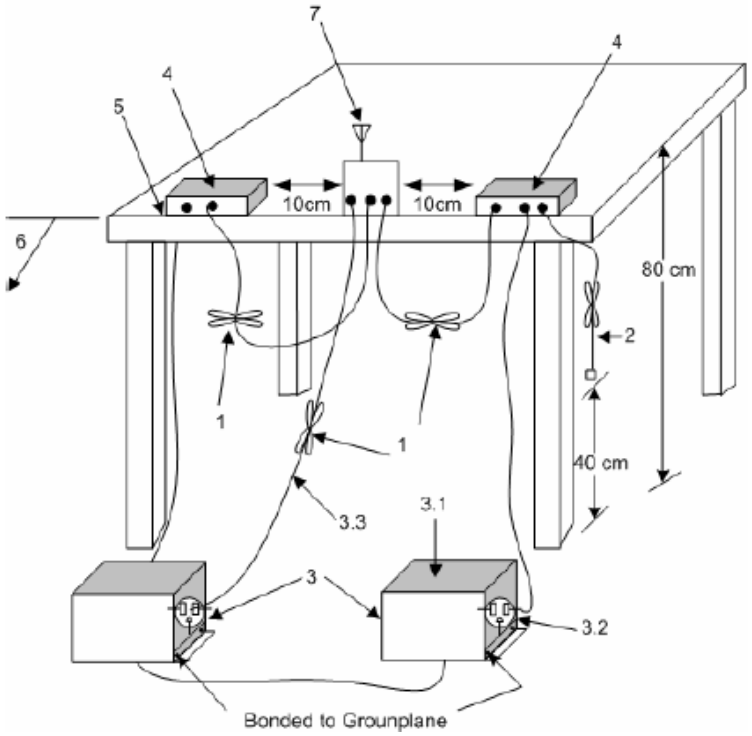
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) +LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 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 50Ω 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.

3.1.6 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	
▪ 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).
N:Number of Hopping Frequencies; **ChS**: Hopping Channel Separation	

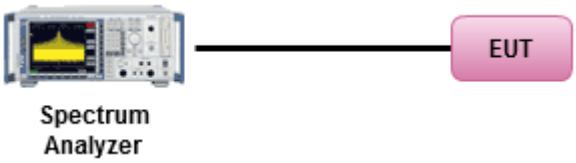
3.2.2 Measuring Instruments

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 6.9.2 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	
▪ 2400-2483.5 MHz Band:	
	▪ N ≥ 75; Power 30dBm; EIRP 36dBm
	▪ 75 >N ≥ 15; Power 21dBm; EIRP 27dBm
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	
▪ 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).
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

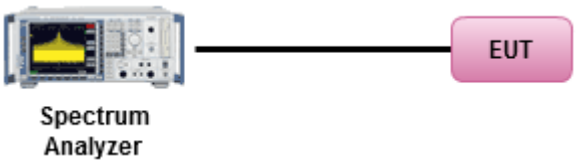
3.4.3 Measuring Instruments

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

Time of Occupancy (Dwell Time) Limit for Frequency Hopping Systems	
▪ 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
N:Number of Hopping Frequencies	

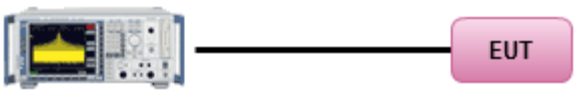
3.5.2 Measuring Instruments

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)
 Spectrum Analyzer

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 (dB)**
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.	

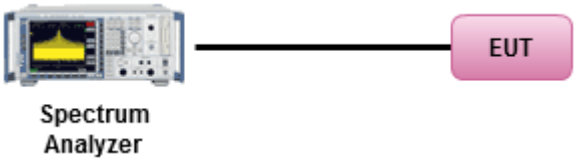
3.6.2 Measuring Instruments

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.

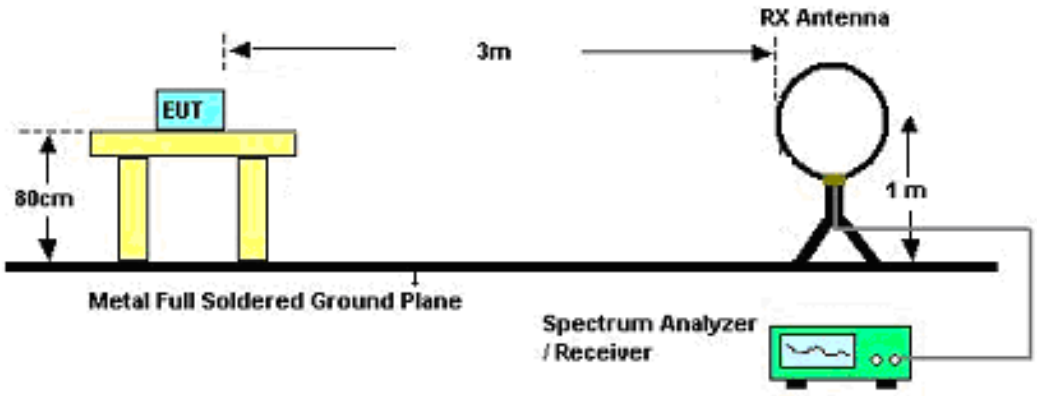
3.7.3 Test Procedures

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.
▪	KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
	▪ Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

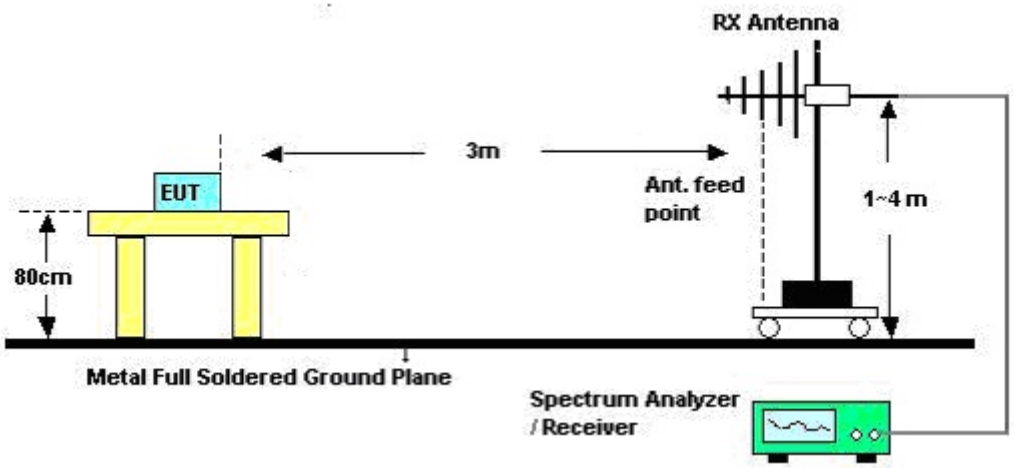
3.7.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

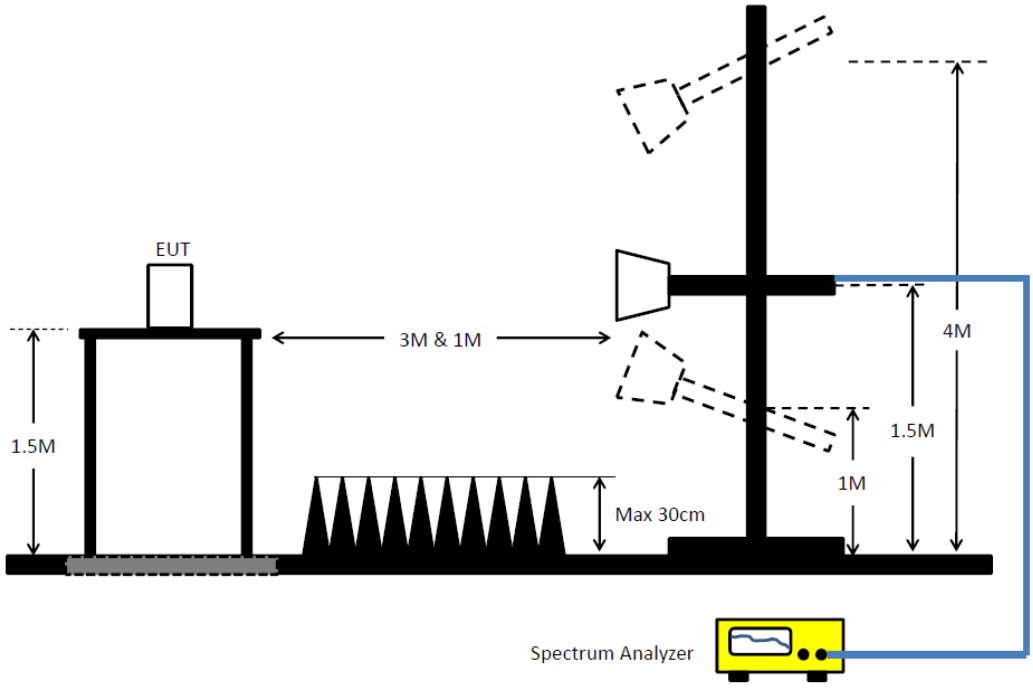
3.7.5 Test Setup

Emissions in Restricted Frequency Bands
9kHz ~30MHz


30MHz~1GHz



Above 1GHz



3.7.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	21/May/2021	20/May/2022
Two-Line V-Network	R&S	ENV216	100003	9kHz ~ 30MHz	23/Dec/2021	22/Dec/2022
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9kHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	26/Oct/2021	25/Oct/2022
SENSE-EMI	Sporton	V5.10.7.14	N/A	N/A	N/A	N/A

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	20/Oct/2021	19/Oct/2022
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	25/Mar/2021	24/Mar/2022
SENSE-15247_FS	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A

Instrument for Radiated Test (03CH02-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3m	02/Aug/2021	01/Aug/2022
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	12/Mar/2021	11/Mar/2022
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	29/Jun/2021	28/Jun/2022
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	04/Sep/2021	03/Sep/2022
RF Cable	MVE	400LL	MVE-1-0802	9kHz~30MHz	05/May/2021	04/May/2022
RF Cable	MVE	400LL	MVE-1-0802	30MHz~1GHz	05/May/2021	04/May/2022
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022
SENSE-15247_FS	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A

Instrument for Radiated Test (03CH09-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	18/Mar/2021	17/Mar/2022
EXA Signal Analyer	KEYSIGHT	N9010A	MY54200882	10Hz~44GHz	01/Oct/2021	30/Sep/2022
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	23/Jul/2021	22/Jul/2022
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	18/May/2021	17/May/2022
RF Cable-low	Jye Bao	RG142	CB031+324530/4	30MHz~1GHz	09/Feb/2021	08/Feb/2022
RF CABLE 5m+3m+1m	HUBER+ SUHNER	SUCOFLEX104	CB009	1GHz~40GHz	13/Aug/2021	12/Aug/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	11/Mar/2021	10/Mar/2022
SENSE-15247_FS	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A

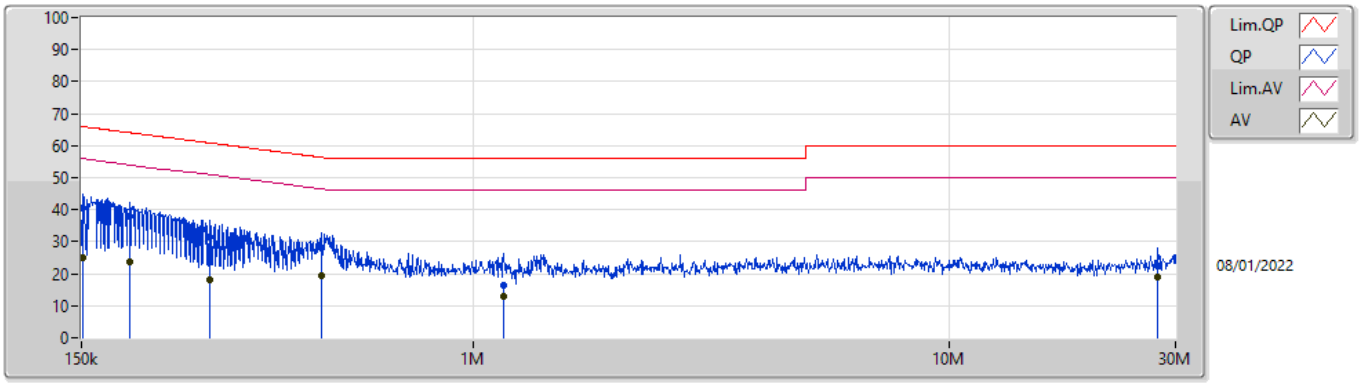
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	500k	32.40	46.00	-13.60	Neutral

Result

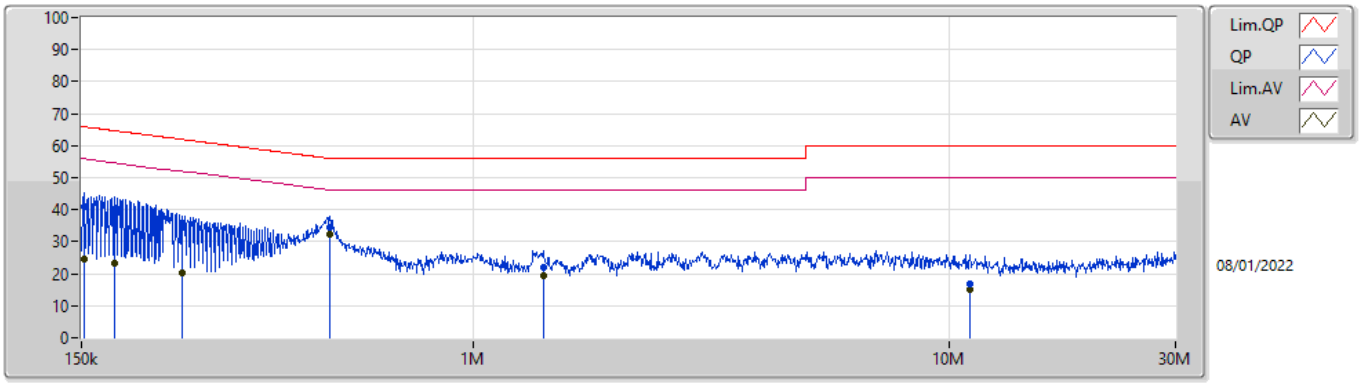
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	150.6k	40.37	65.96	-25.59	Line	-
Mode 1	Pass	AV	150.6k	24.93	55.96	-31.03	Line	-
Mode 1	Pass	QP	189.837k	38.03	64.05	-26.02	Line	-
Mode 1	Pass	AV	189.837k	23.76	54.05	-30.29	Line	-
Mode 1	Pass	QP	278.495k	31.48	60.86	-29.38	Line	-
Mode 1	Pass	AV	278.495k	18.25	50.86	-32.61	Line	-
Mode 1	Pass	QP	481.211k	28.01	56.33	-28.32	Line	-
Mode 1	Pass	AV	481.211k	19.47	46.33	-26.86	Line	-
Mode 1	Pass	QP	1.158M	16.37	56.00	-39.63	Line	-
Mode 1	Pass	AV	1.158M	12.88	46.00	-33.12	Line	-
Mode 1	Pass	QP	27.563M	22.23	60.00	-37.77	Line	-
Mode 1	Pass	AV	27.563M	18.91	50.00	-31.09	Line	-
Mode 1	Pass	QP	151.807k	40.97	65.90	-24.93	Neutral	-
Mode 1	Pass	AV	151.807k	24.72	55.90	-31.18	Neutral	-
Mode 1	Pass	QP	176.674k	40.21	64.64	-24.43	Neutral	-
Mode 1	Pass	AV	176.674k	23.43	54.64	-31.21	Neutral	-
Mode 1	Pass	QP	245.097k	34.60	61.93	-27.33	Neutral	-
Mode 1	Pass	AV	245.097k	20.26	51.93	-31.67	Neutral	-
Mode 1	Pass	QP	500k	34.62	56.00	-21.38	Neutral	-
Mode 1	Pass	AV	500k	32.40	46.00	-13.60	Neutral	-
Mode 1	Pass	QP	1.403M	21.82	56.00	-34.18	Neutral	-
Mode 1	Pass	AV	1.403M	19.56	46.00	-26.44	Neutral	-
Mode 1	Pass	QP	11.093M	16.65	60.00	-43.35	Neutral	-
Mode 1	Pass	AV	11.093M	15.19	50.00	-34.81	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150.6k	40.37	65.96	-25.59	19.56	Line	-	20.81	9.61	0.04	9.91
AV	150.6k	24.93	55.96	-31.03	19.56	Line	-	5.37	9.61	0.04	9.91
QP	189.837k	38.03	64.05	-26.02	19.56	Line	-	18.47	9.61	0.04	9.91
AV	189.837k	23.76	54.05	-30.29	19.56	Line	-	4.20	9.61	0.04	9.91
QP	278.495k	31.48	60.86	-29.38	19.57	Line	-	11.91	9.61	0.05	9.91
AV	278.495k	18.25	50.86	-32.61	19.57	Line	-	-1.32	9.61	0.05	9.91
QP	481.211k	28.01	56.33	-28.32	19.57	Line	-	8.44	9.60	0.06	9.91
AV	481.211k	19.47	46.33	-26.86	19.57	Line	-	-0.10	9.60	0.06	9.91
QP	1.158M	16.37	56.00	-39.63	19.61	Line	-	-3.24	9.61	0.08	9.92
AV	1.158M	12.88	46.00	-33.12	19.61	Line	-	-6.73	9.61	0.08	9.92
QP	27.563M	22.23	60.00	-37.77	20.01	Line	-	2.22	9.74	0.33	9.94
AV	27.563M	18.91	50.00	-31.09	20.01	Line	-	-1.10	9.74	0.33	9.94

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	151.807k	40.97	65.90	-24.93	19.55	Neutral	-	21.42	9.60	0.04	9.91
AV	151.807k	24.72	55.90	-31.18	19.55	Neutral	-	5.17	9.60	0.04	9.91
QP	176.674k	40.21	64.64	-24.43	19.55	Neutral	-	20.66	9.60	0.04	9.91
AV	176.674k	23.43	54.64	-31.21	19.55	Neutral	-	3.88	9.60	0.04	9.91
QP	245.097k	34.60	61.93	-27.33	19.56	Neutral	-	15.04	9.60	0.05	9.91
AV	245.097k	20.26	51.93	-31.67	19.56	Neutral	-	0.70	9.60	0.05	9.91
QP	500k	34.62	56.00	-21.38	19.57	Neutral	-	15.05	9.60	0.06	9.91
AV	500k	32.40	46.00	-13.60	19.57	Neutral	-	12.83	9.60	0.06	9.91
QP	1.403M	21.82	56.00	-34.18	19.63	Neutral	-	2.19	9.62	0.09	9.92
AV	1.403M	19.56	46.00	-26.44	19.63	Neutral	-	-0.07	9.62	0.09	9.92
QP	11.093M	16.65	60.00	-43.35	19.92	Neutral	-	-3.27	9.78	0.21	9.93
AV	11.093M	15.19	50.00	-34.81	19.92	Neutral	-	-4.73	9.78	0.21	9.93

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)	938.75k	885.807k	886KF1D	936.25k	882.059k
BT-EDR(2Mbps)	1.349M	1.198M	1M20G1D	1.349M	1.196M
BT-EDR(3Mbps)	1.344M	1.212M	1M21G1D	1.344M	1.211M

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

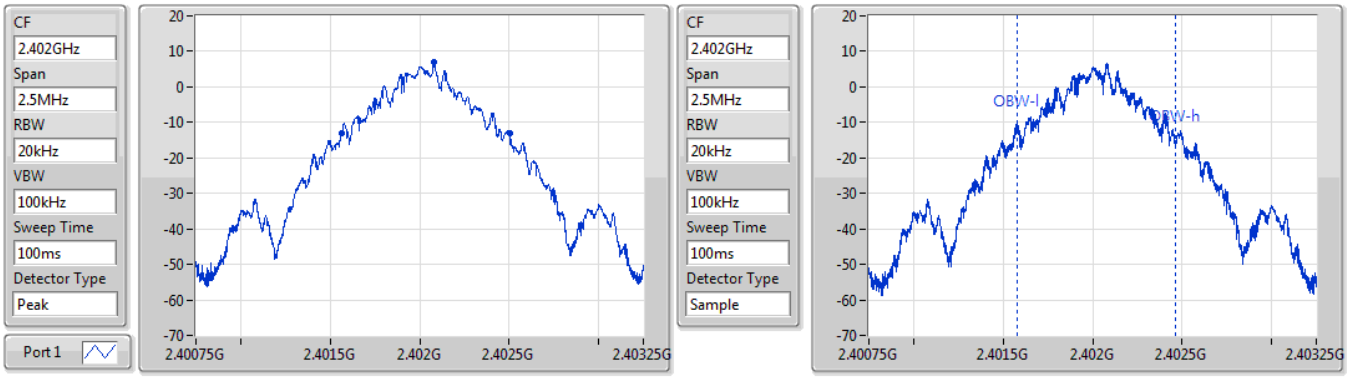
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	938.75k	884.558k
2440MHz	Pass	Inf	936.25k	882.059k
2480MHz	Pass	Inf	937.5k	885.807k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.349M	1.198M
2440MHz	Pass	Inf	1.349M	1.198M
2480MHz	Pass	Inf	1.349M	1.196M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.344M	1.211M
2440MHz	Pass	Inf	1.344M	1.212M
2480MHz	Pass	Inf	1.344M	1.211M

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

BT-BR(1Mbps) EBW-FS

2402MHz

28/12/2021

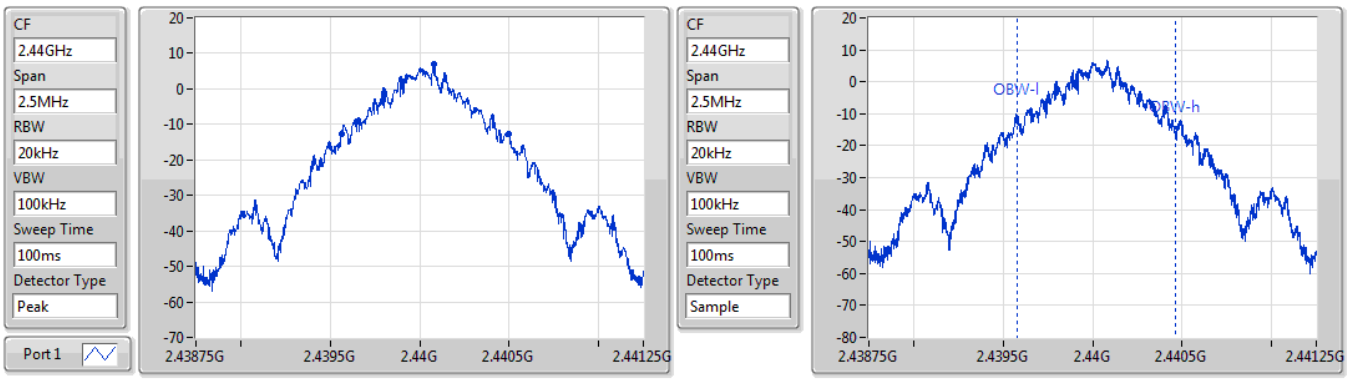


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
938.75k	2.401564G	2.402503G	884.558k	2.401579G	2.402464G	Inf	1

BT-BR(1Mbps) EBW-FS

2440MHz

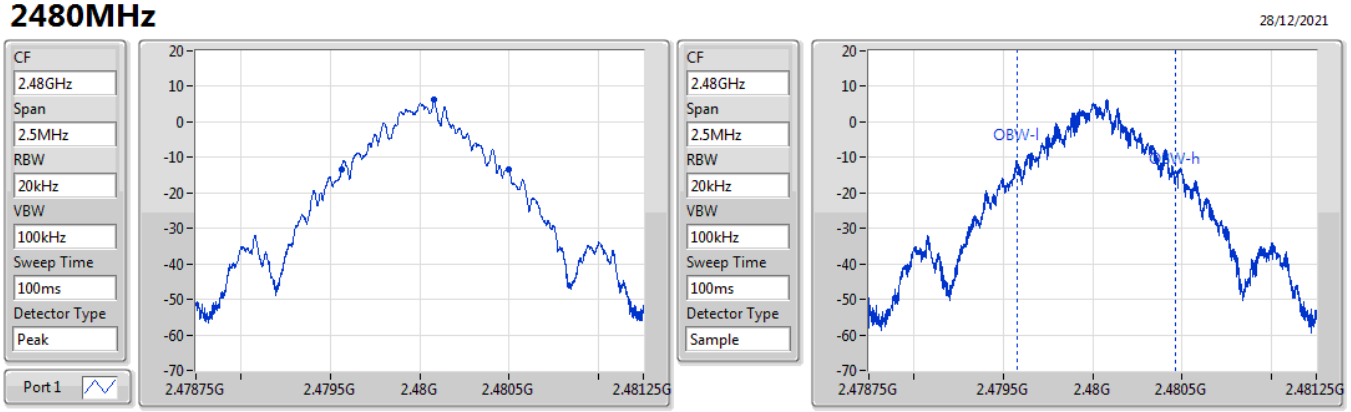
28/12/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
936.25k	2.439564G	2.4405G	882.059k	2.439578G	2.44046G	Inf	1

BT-BR(1Mbps) EBW-FS

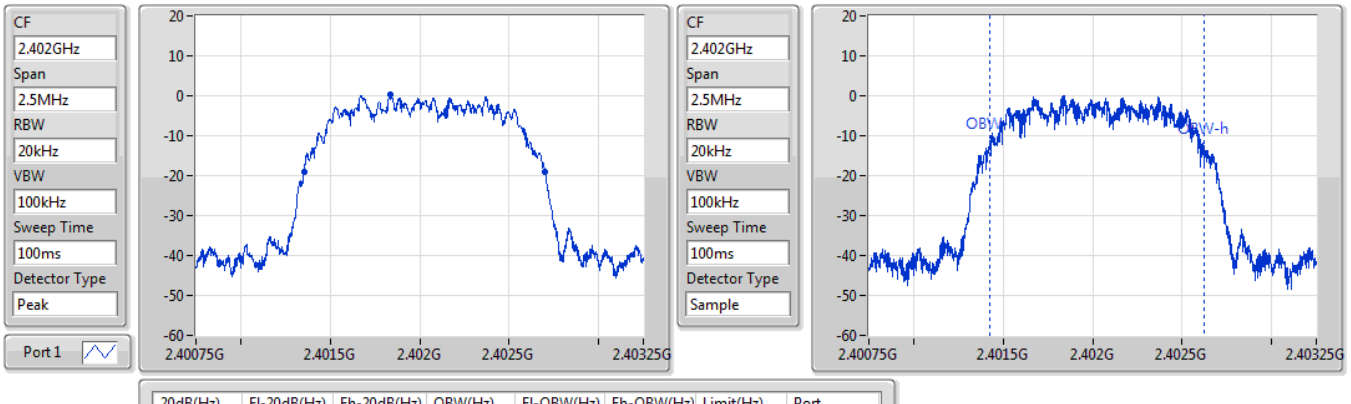
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
937.5k	2.479564G	2.480501G	885.807k	2.479579G	2.480465G	Inf	1

BT-EDR(2Mbps) EBW-FS

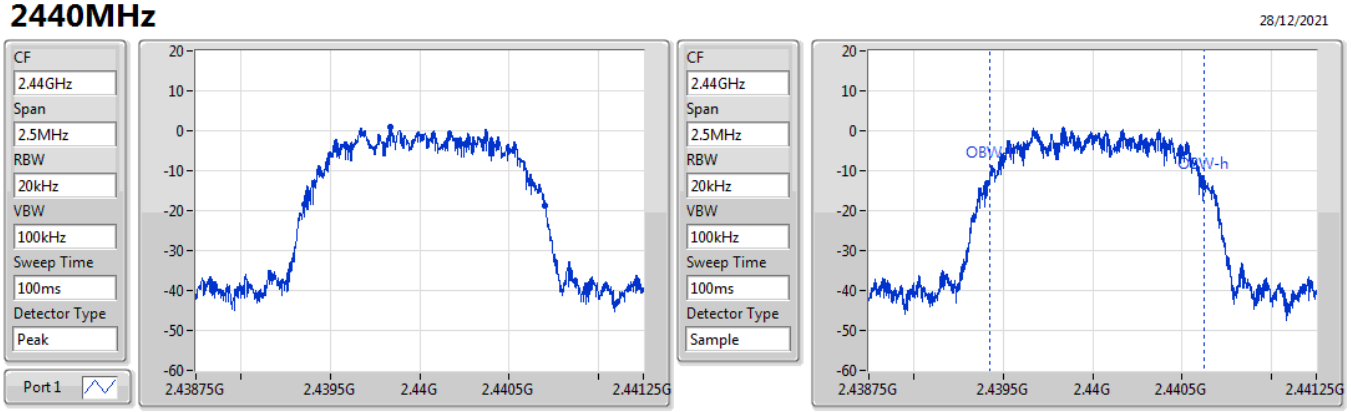
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.349M	2.401353G	2.402701G	1.198M	2.401424G	2.402622G	Inf	1

BT-EDR(2Mbps) EBW-FS

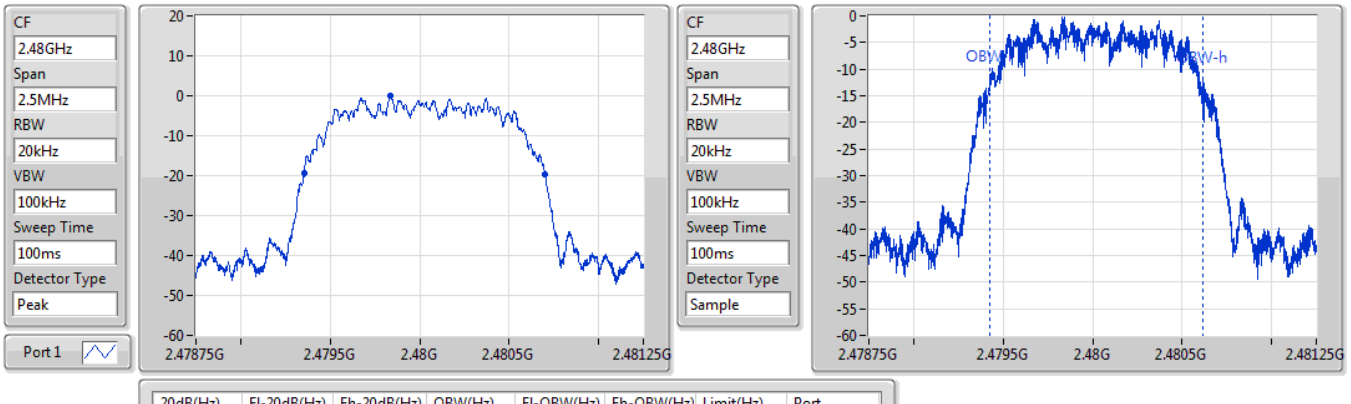
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.349M	2.439354G	2.440703G	1.198M	2.439424G	2.440622G	Inf	1

BT-EDR(2Mbps) EBW-FS

2480MHz

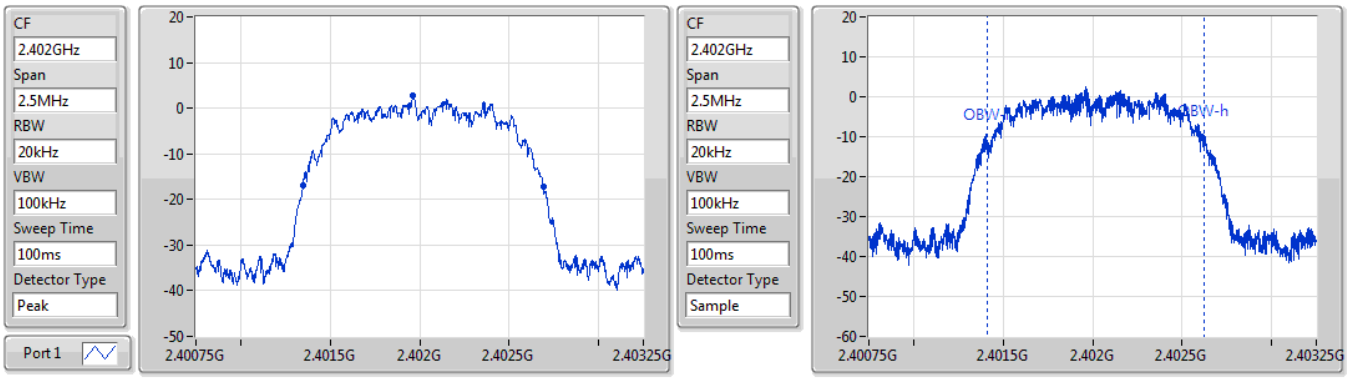


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.349M	2.479354G	2.480703G	1.196M	2.479424G	2.48062G	Inf	1

BT-EDR(3Mbps) EBW-FS

2402MHz

28/12/2021

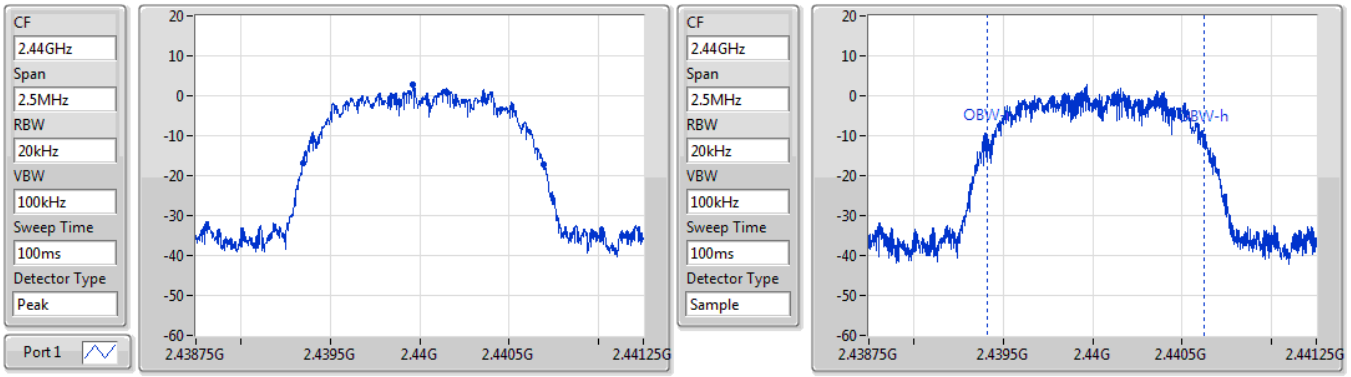


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.344M	2.401348G	2.402691G	1.211M	2.40141G	2.402621G	Inf	1

BT-EDR(3Mbps) EBW-FS

2440MHz

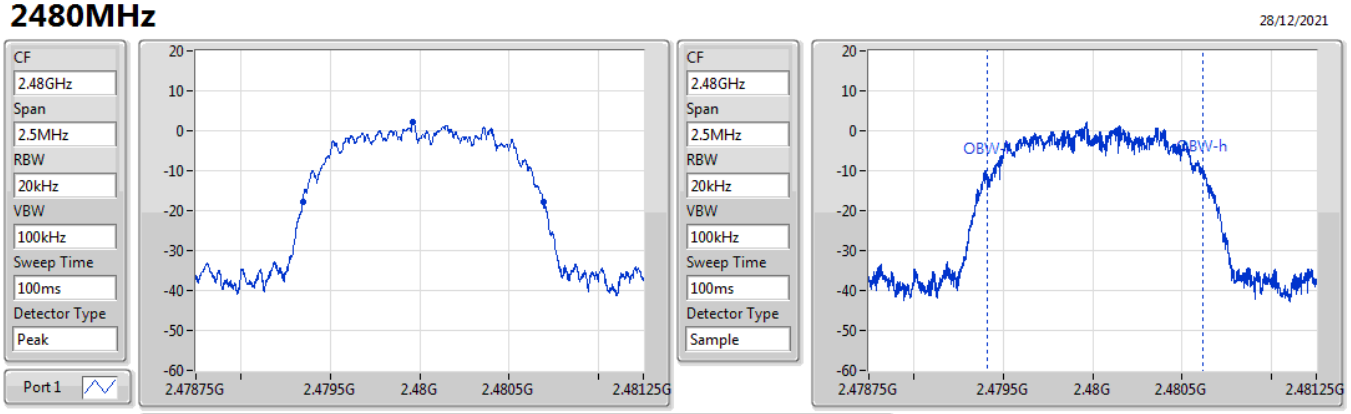
28/12/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.344M	2.439348G	2.440691G	1.212M	2.43941G	2.440622G	Inf	1

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
1.344M	2.479348G	2.480691G	1.211M	2.479409G	2.48062G	Inf	1

Summary

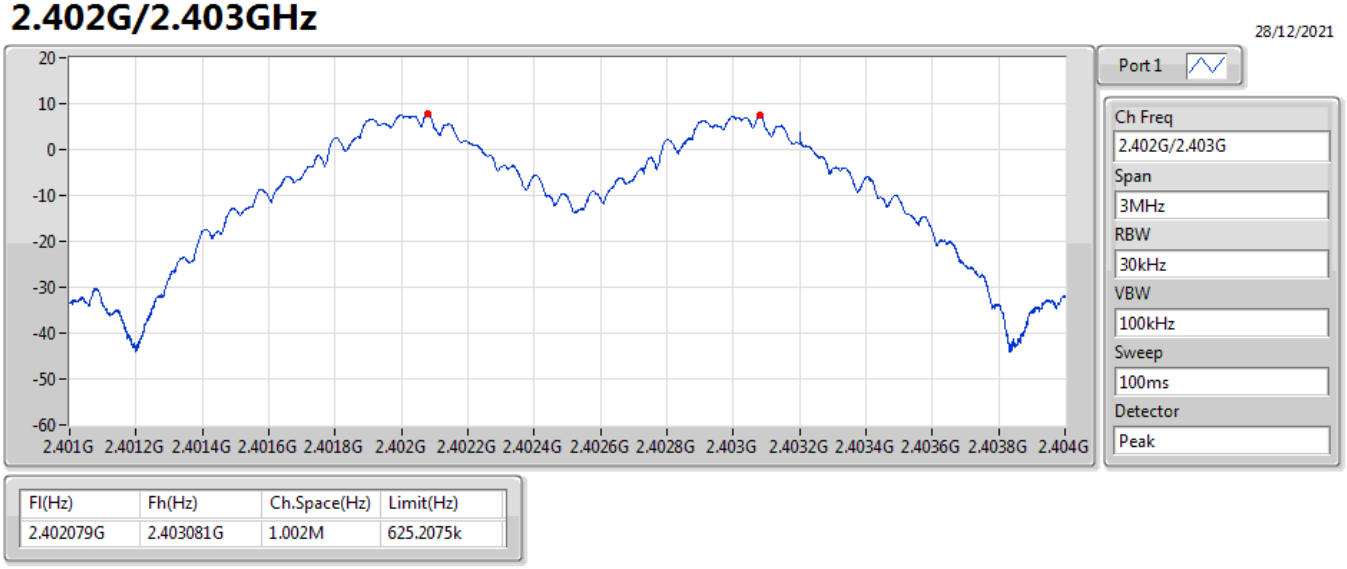
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	997.5k
BT-EDR(2Mbps)	1.2645M	1.0005M
BT-EDR(3Mbps)	1.0005M	999k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402079G	2.403081G	1.002M	625.2075k
2440MHz	Pass	2.44008G	2.441078G	997.5k	623.5425k
2480MHz	Pass	2.479079G	2.480081G	1.002M	624.375k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401839G	2.402839G	1.0005M	898.434k
2440MHz	Pass	2.43984G	2.440841G	1.0005M	898.434k
2480MHz	Pass	2.478839G	2.480103G	1.2645M	898.434k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402149G	2.403148G	999k	895.104k
2440MHz	Pass	2.439968G	2.440968G	1.0005M	895.104k
2480MHz	Pass	2.478966G	2.479967G	1.0005M	895.104k

BT-BR(1Mbps) **Channel Separation-FS**

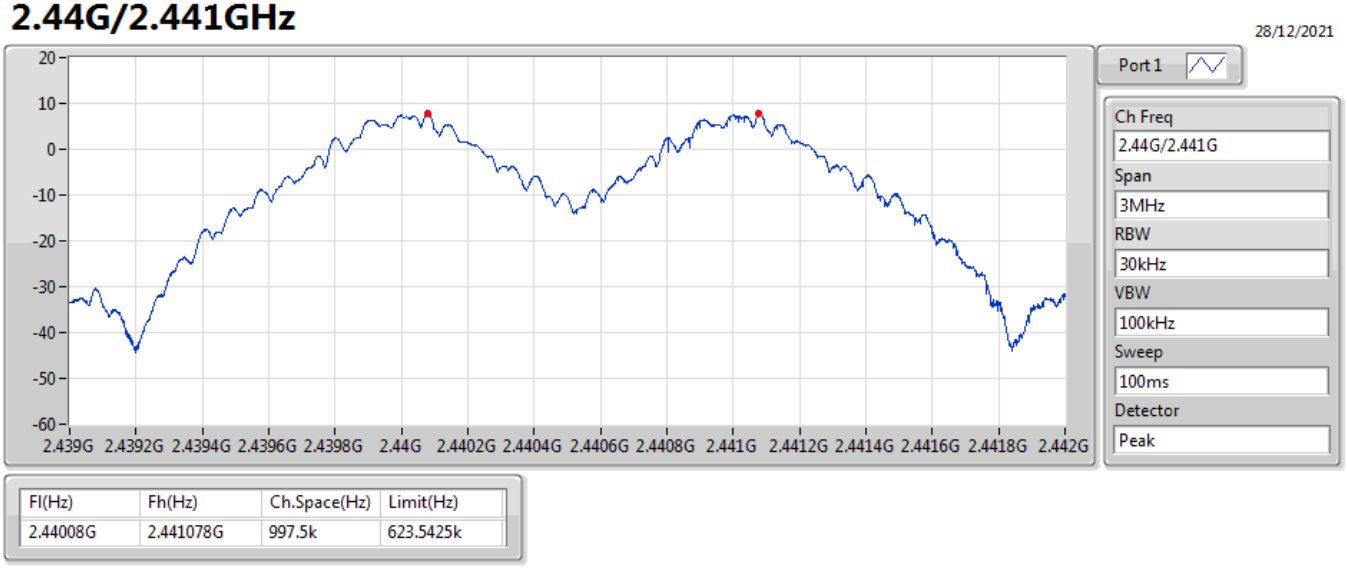
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402079G	2.403081G	1.002M	625.2075k

BT-BR(1Mbps) **Channel Separation-FS**

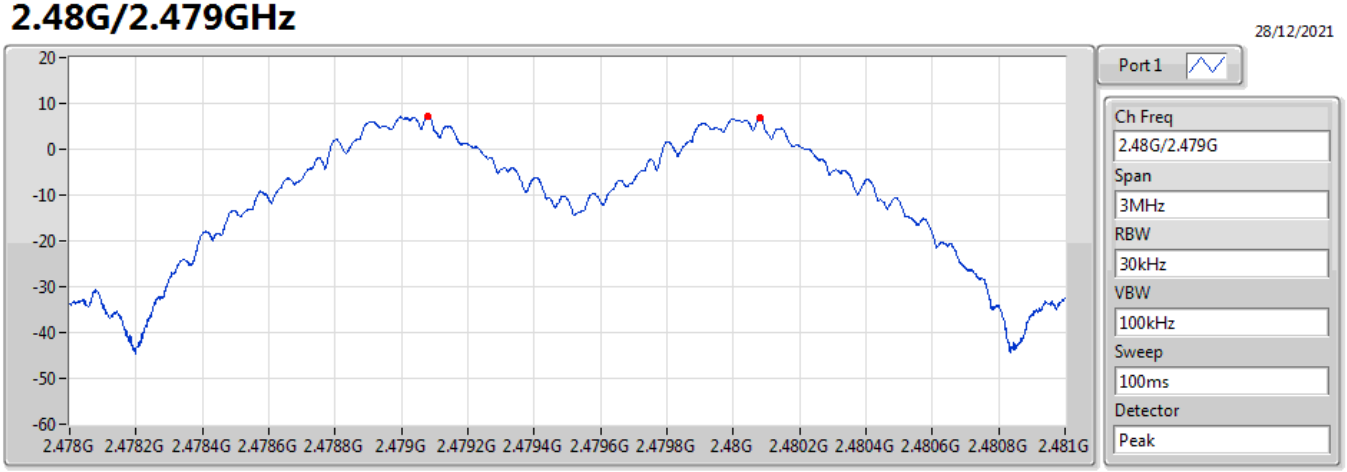
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.44008G	2.441078G	997.5k	623.5425k

BT-BR(1Mbps) **Channel Separation-FS**

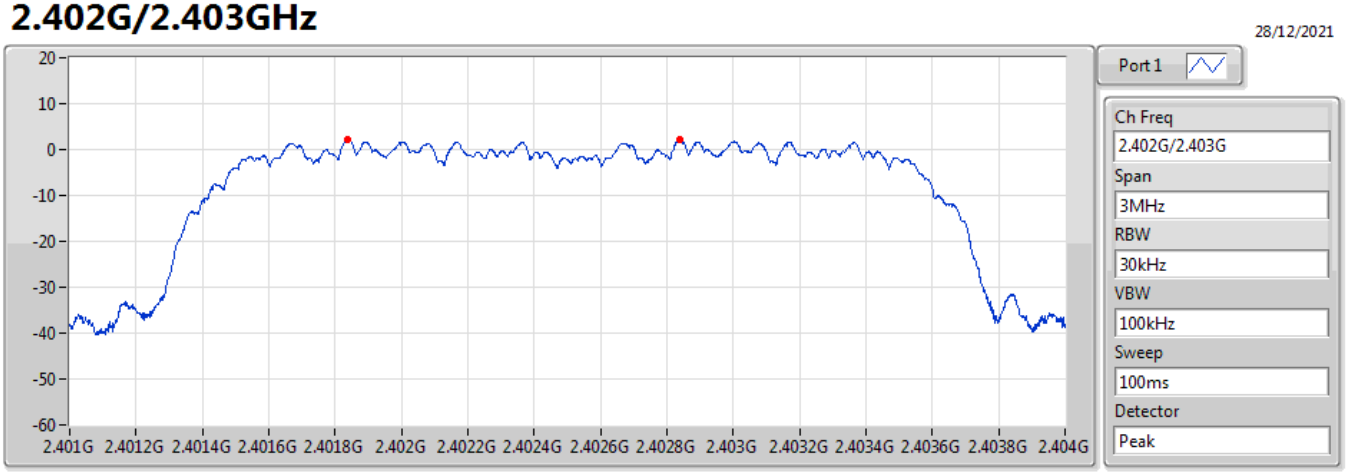
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479079G	2.480081G	1.002M	624.375k

BT-EDR(2Mbps) **Channel Separation-FS**

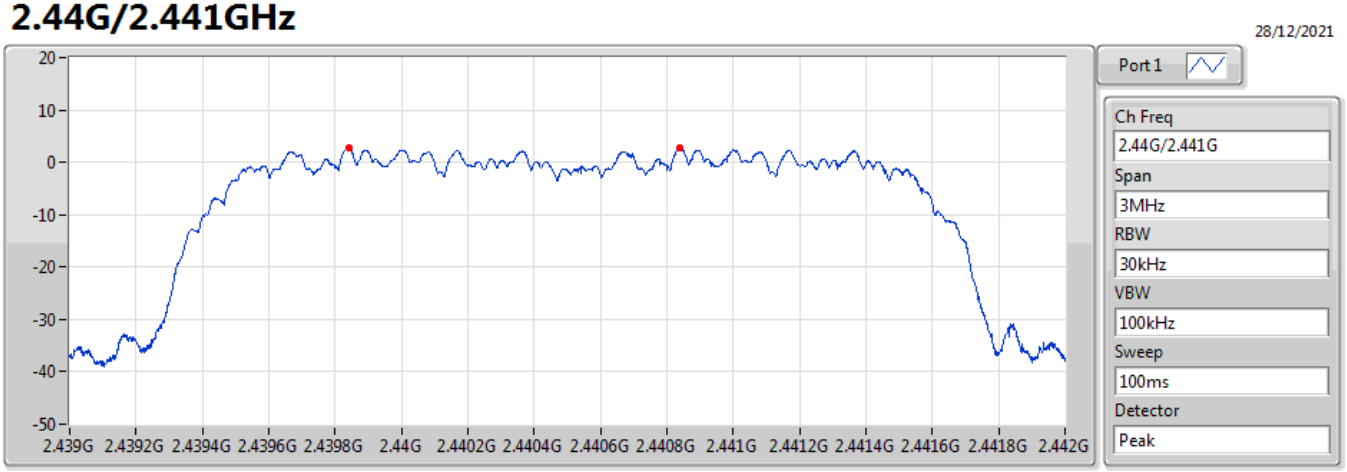
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401839G	2.402839G	1.0005M	898.434k

BT-EDR(2Mbps) Channel Separation-FS

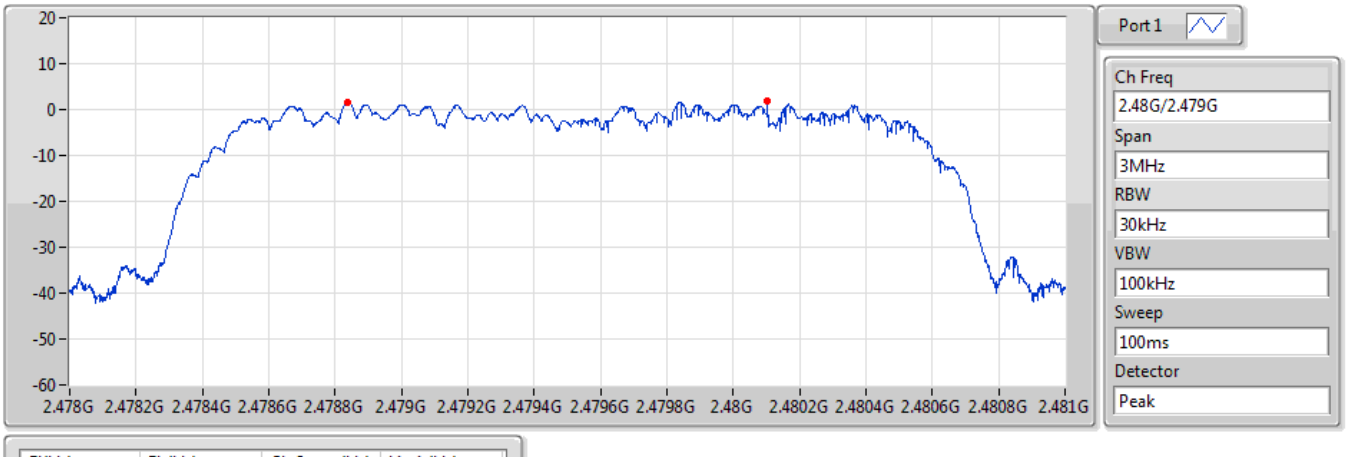
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.43984G	2.440841G	1.0005M	898.434k

BT-EDR(2Mbps) Channel Separation-FS

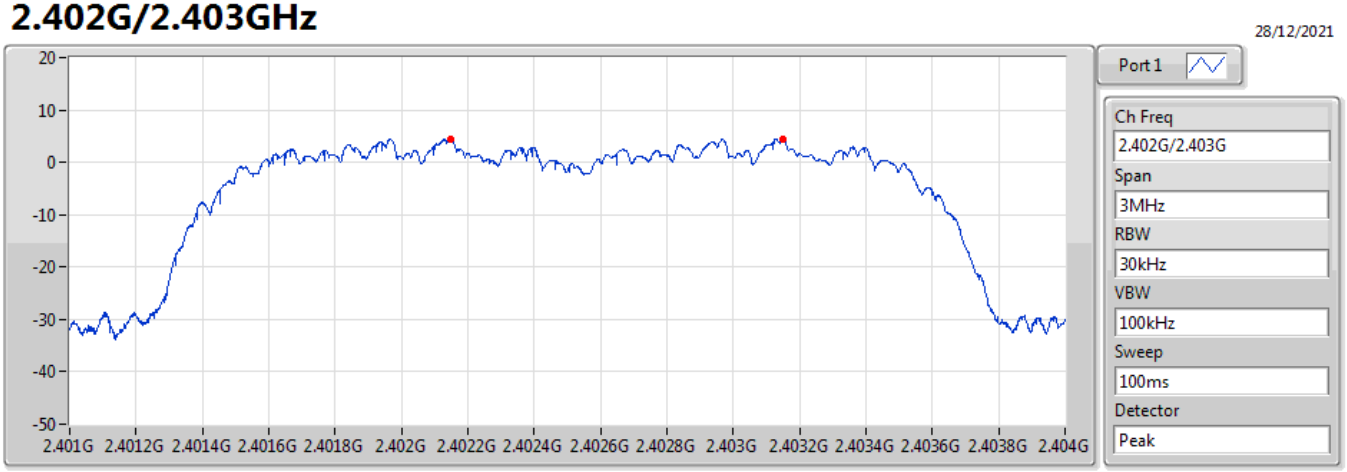
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478839G	2.480103G	1.2645M	898.434k

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

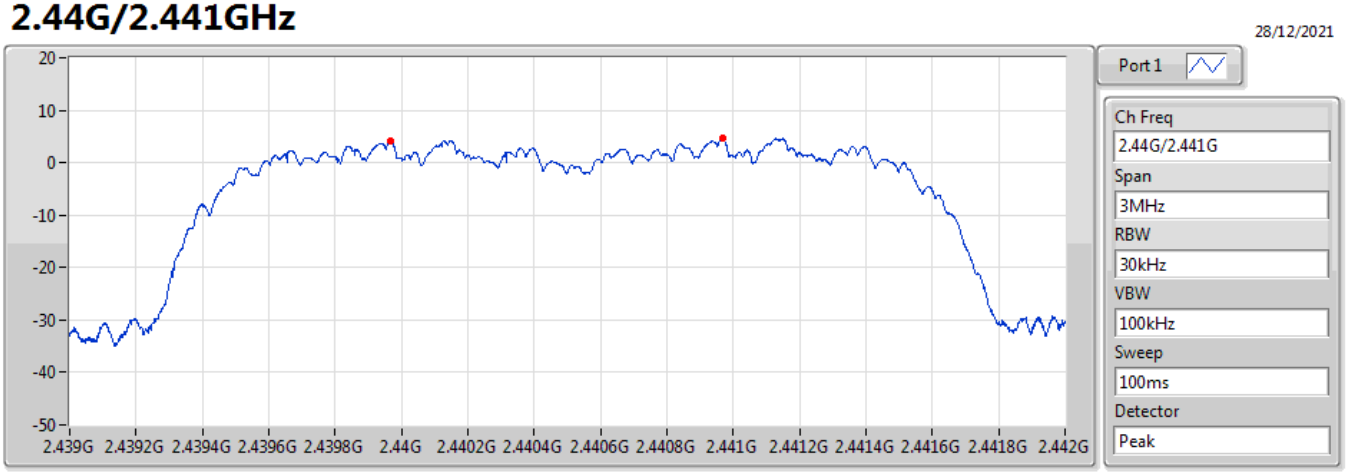
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402149G	2.403148G	999k	895.104k

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

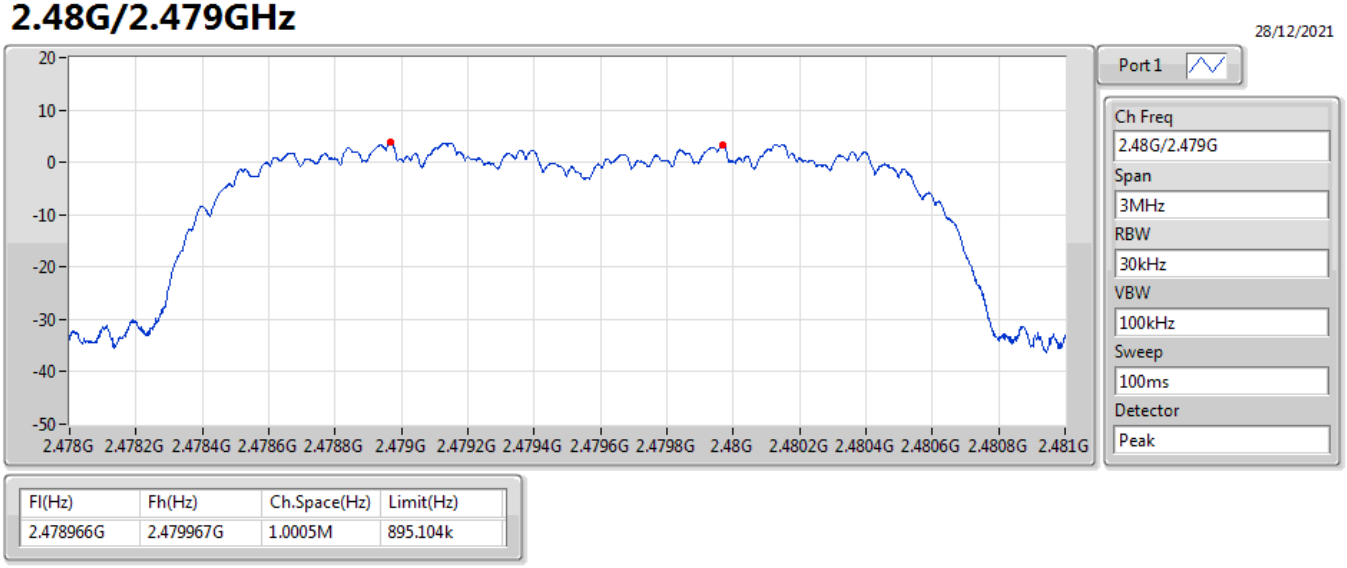
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439968G	2.440968G	1.0005M	895.104k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478966G	2.479967G	1.0005M	895.104k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	11.61	0.01449
BT-EDR(2Mbps)	11.69	0.01476
BT-EDR(3Mbps)	13.55	0.02265

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	5.30	11.45	21.00
2440MHz	Pass	5.30	11.61	21.00
2480MHz	Pass	5.30	11.01	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	5.30	11.13	21.00
2440MHz	Pass	5.30	11.69	21.00
2480MHz	Pass	5.30	11.25	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	5.30	13.43	21.00
2440MHz	Pass	5.30	13.55	21.00
2480MHz	Pass	5.30	13.07	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	11.29	0.01346
BT-EDR(2Mbps)	9.24	0.00839
BT-EDR(3Mbps)	11.06	0.01276

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	5.30	11.12	21.00
2440MHz	Pass	5.30	11.29	21.00
2480MHz	Pass	5.30	10.65	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	5.30	8.60	21.00
2440MHz	Pass	5.30	9.24	21.00
2480MHz	Pass	5.30	8.76	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	5.30	10.93	21.00
2440MHz	Pass	5.30	11.06	21.00
2480MHz	Pass	5.30	10.45	21.00

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

Summary

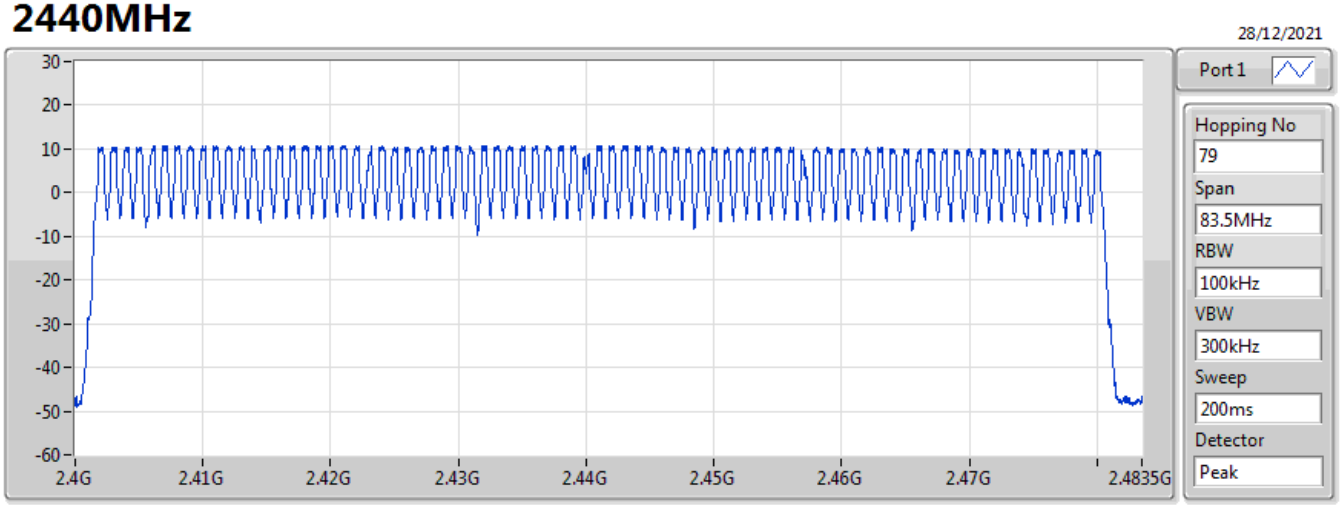
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

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

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

2440MHz

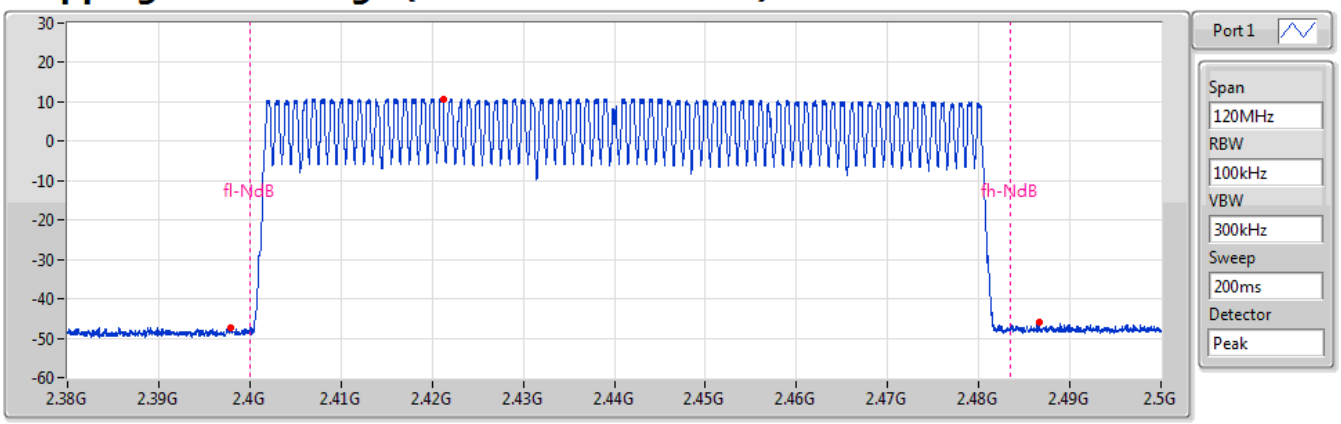


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

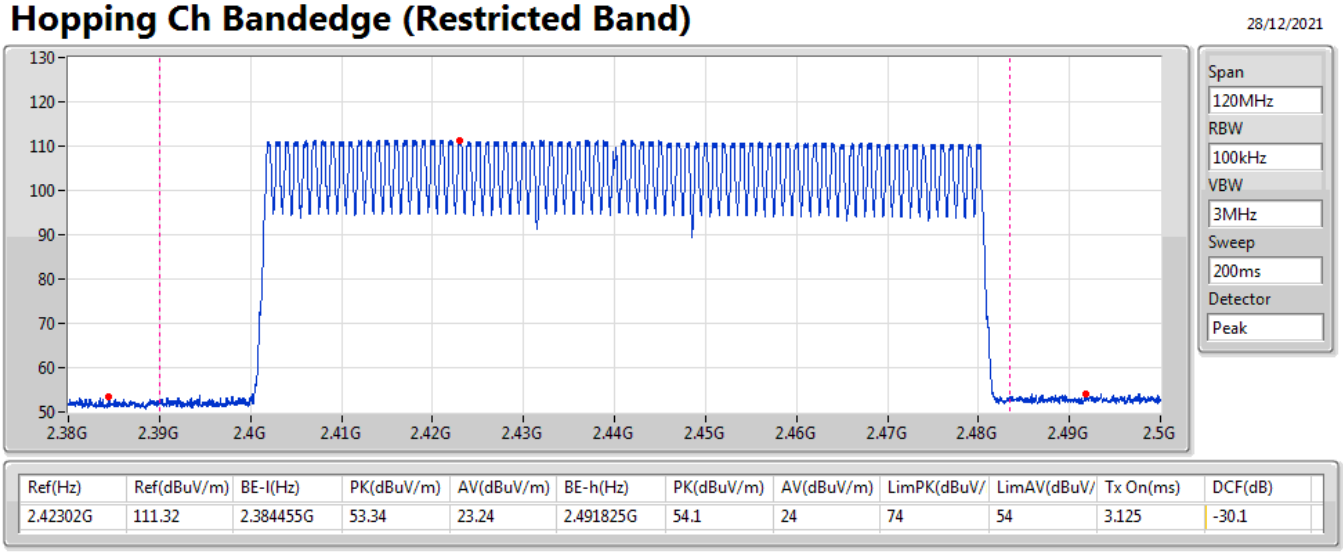


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-9.2	2.42119G	10.8	2.397925G	-47.22	2.486605G	-45.85

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

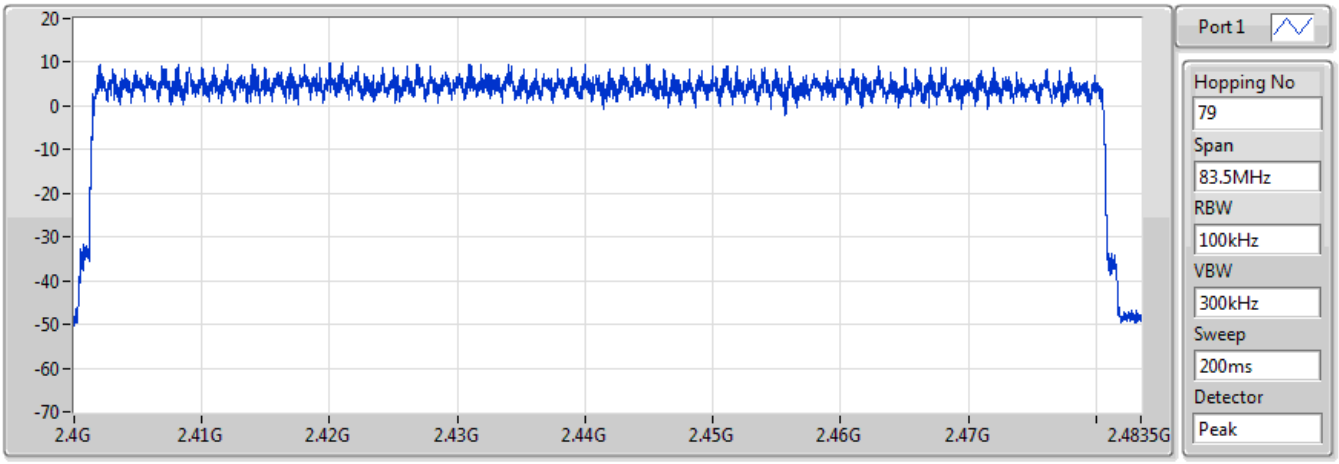


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.42302G	111.32	2.384455G	53.34	23.24	2.491825G	54.1	24	74	54	3.125	-30.1

BT-EDR(2Mbps)

Hopping-FS

2440MHz

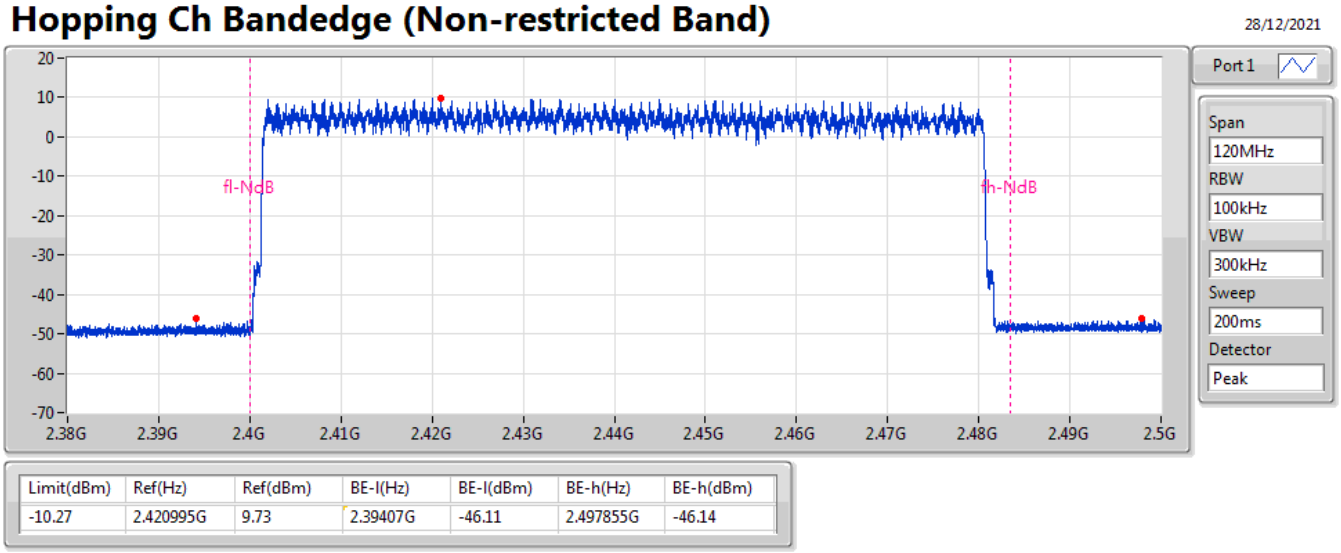


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

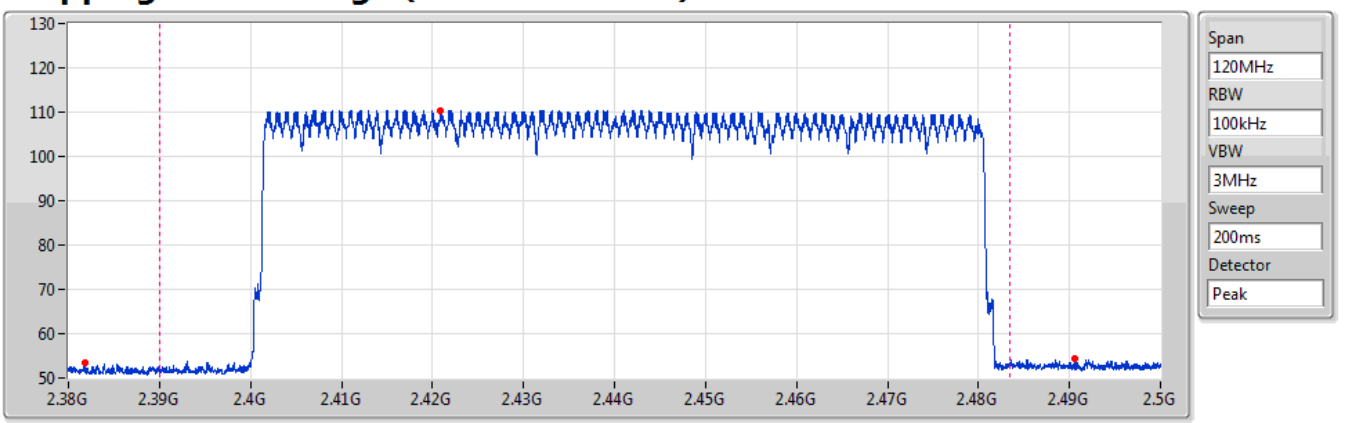


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-10.27	2.420995G	9.73	2.39407G	-46.11	2.497855G	-46.14

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

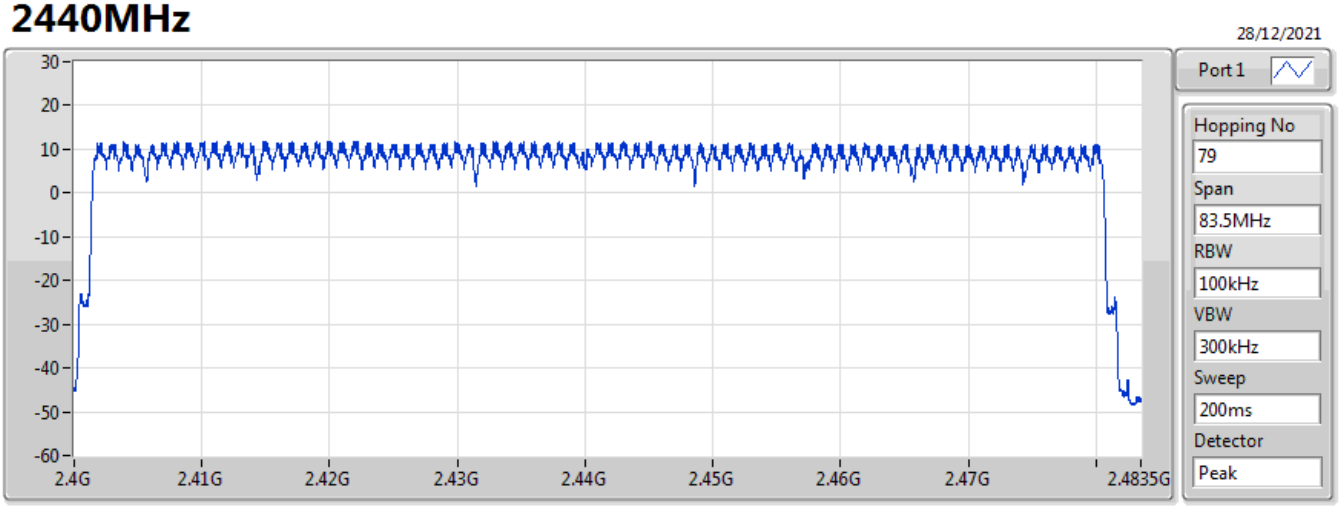


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.420845G	110.42	2.38177G	53.37	23.27	2.49055G	54.34	24.24	74	54	3.125	-30.1

BT-EDR(3Mbps)

Hopping-FS

2440MHz

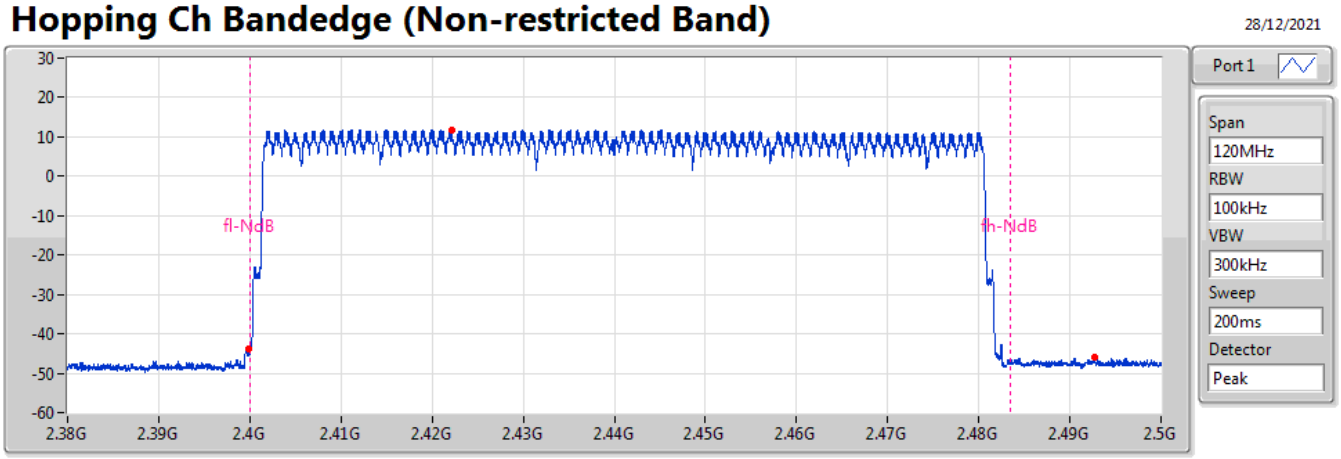


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

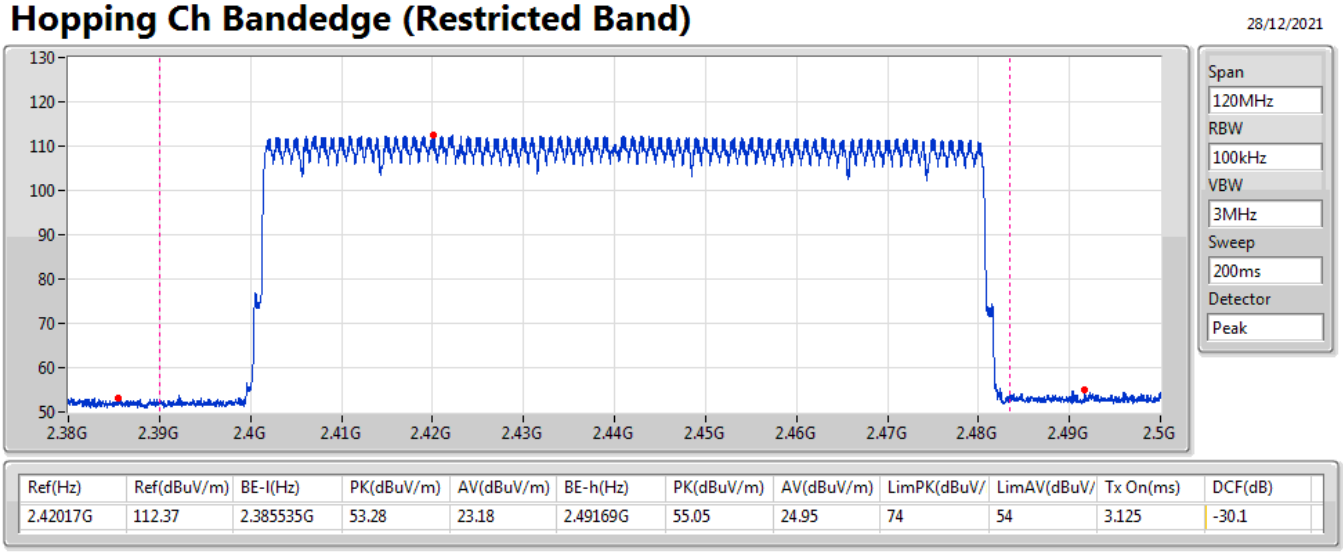


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-8.16	2.42218G	11.84	2.399875G	-43.67	2.49265G	-46.08

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)
2.42017G	112.37	2.385535G	53.28	23.18	2.49169G	55.05	24.95	74	54	3.125	-30.1

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	153.837125m_Non-AFH
BT-EDR(2Mbps)	154.103625m_Non-AFH
BT-EDR(3Mbps)	154.236875m_Non-AFH

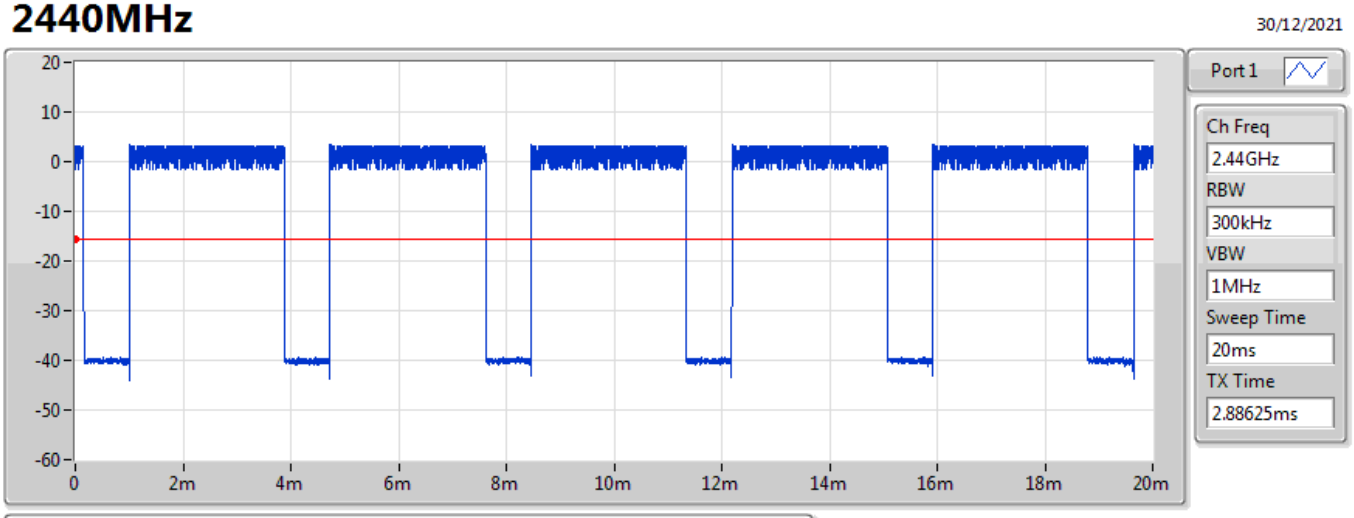
Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	8	153.837125m_Non-AFH	400m	2.88625m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	8	154.103625m_Non-AFH	400m	2.89125m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	8	154.236875m_Non-AFH	400m	2.89375m

BT-BR(1Mbps)

Dwell-FS

2440MHz



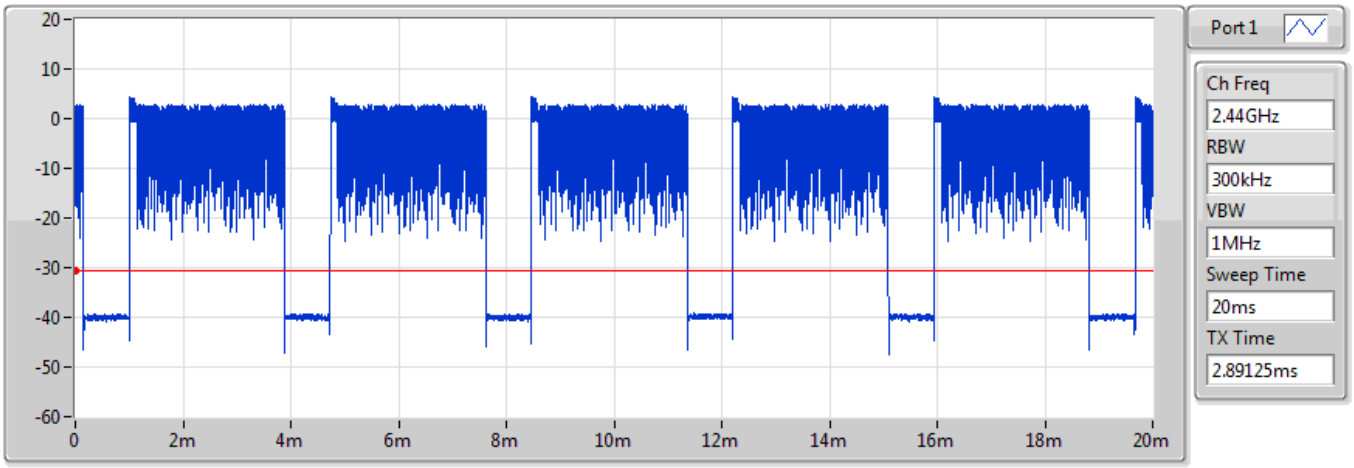
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	153.837125m_Non-AFI	400m	2.88625m

Non-AFH

BT-EDR(2Mbps)

Dwell-FS

2440MHz

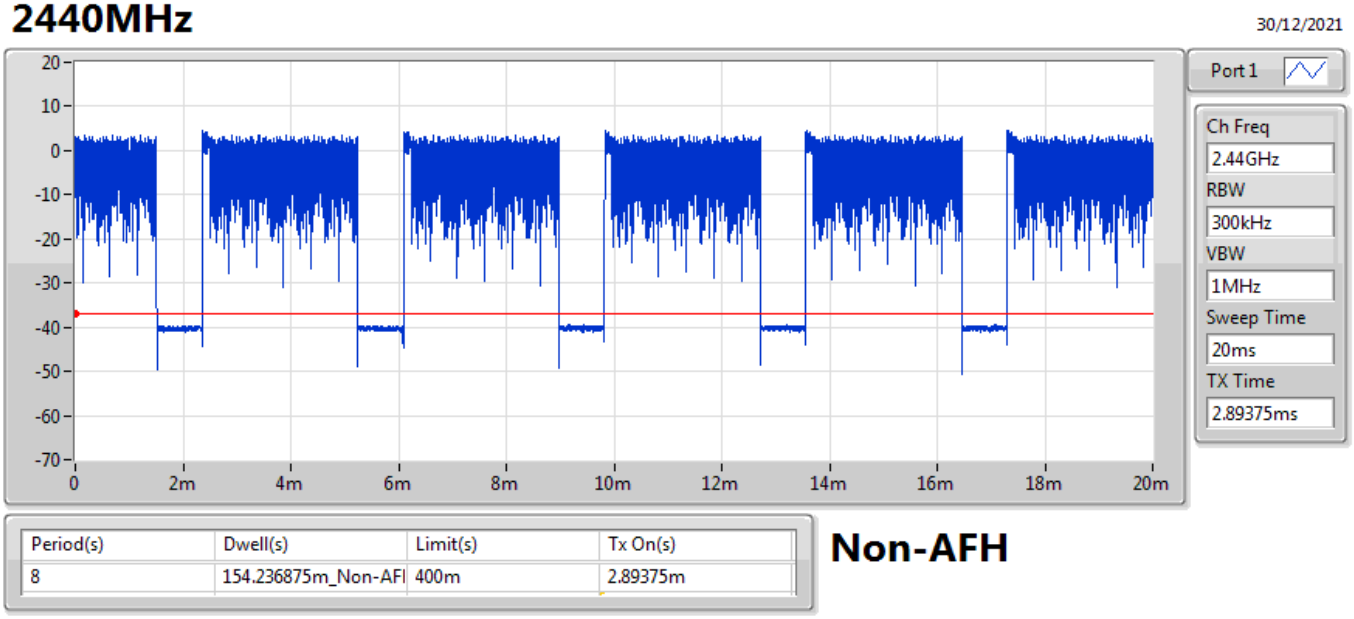


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.103625m_Non-AFI	400m	2.89125m

Non-AFH

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

2440MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.236875m_Non-AFI	400m	2.89375m

Non-AFH

Summary

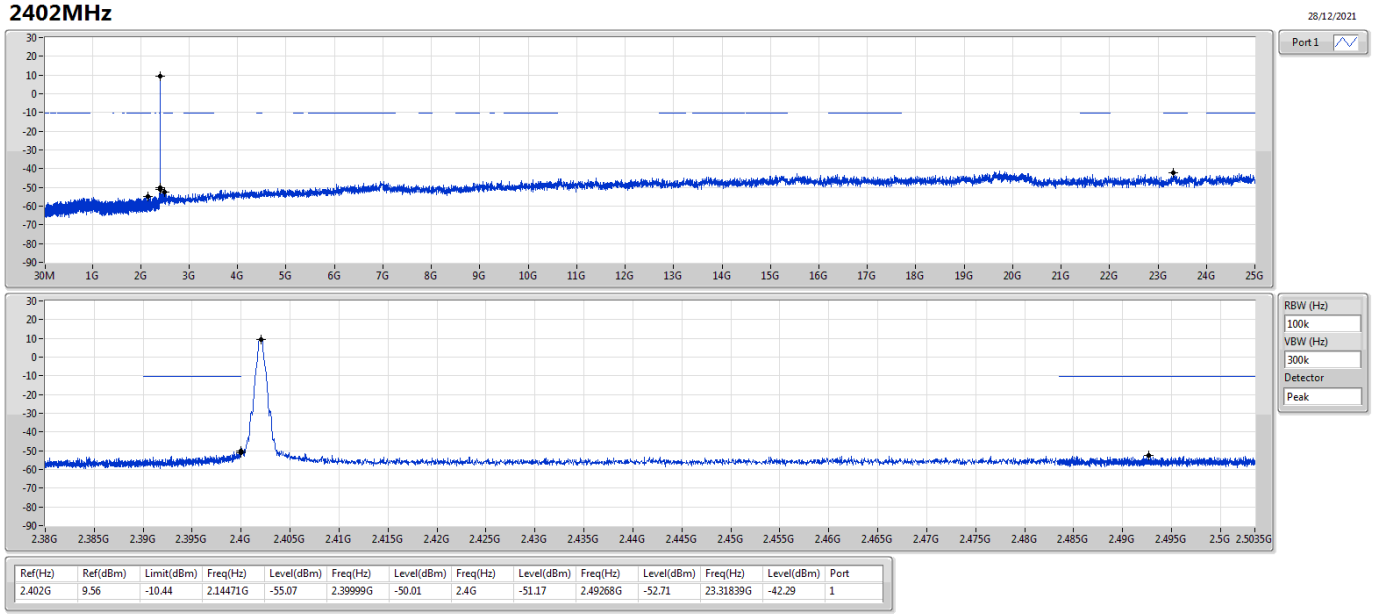
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.402G	9.56	-10.44	2.14471G	-55.07	2.39999G	-50.01	2.4G	-51.17	2.49268G	-52.71	23.31839G	-42.29	1
BT-EDR(2Mbps)	Pass	2.40205G	6.65	-13.35	2.00635G	-54.59	2.4G	-49.63	2.4G	-50.85	2.49129G	-52.14	15.2084G	-41.78	1
BT-EDR(3Mbps)	Pass	2.40209G	8.24	-11.76	1.98138G	-54.89	2.39973G	-45.94	2.4G	-47.91	2.4845G	-52.27	15.22527G	-42.14	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	9.56	-10.44	2.14471G	-55.07	2.39999G	-50.01	2.4G	-51.17	2.49268G	-52.71	23.31839G	-42.29	1
2440MHz	Pass	2.44004G	9.86	-10.14	2.04748G	-54.88	2.39693G	-53.49	2.4835G	-55.52	2.48694G	-52.63	24.64287G	-42.54	1
2480MHz	Pass	2.48003G	9.20	-10.80	806.38M	-54.52	2.39254G	-53.39	2.4835G	-54.37	2.48446G	-51.10	24.70192G	-42.63	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40205G	6.65	-13.35	2.00635G	-54.59	2.4G	-49.63	2.4G	-50.85	2.49129G	-52.14	15.2084G	-41.78	1
2440MHz	Pass	2.44004G	7.41	-12.59	2.09477G	-54.46	2.39488G	-53.77	2.4835G	-55.76	2.49317G	-51.87	15.22527G	-41.86	1
2480MHz	Pass	2.48008G	6.16	-13.84	2.11944G	-54.88	2.39073G	-53.94	2.4835G	-53.51	2.48803G	-51.72	24.72723G	-42.12	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40209G	8.24	-11.76	1.98138G	-54.89	2.39973G	-45.94	2.4G	-47.91	2.4845G	-52.27	15.22527G	-42.14	1
2440MHz	Pass	2.44012G	8.51	-11.49	2.30891G	-54.56	2.39087G	-53.76	2.4835G	-55.43	2.48374G	-52.25	24.94095G	-42.56	1
2480MHz	Pass	2.48012G	7.90	-12.10	2.16439G	-55.28	2.39837G	-52.83	2.4835G	-53.61	2.48387G	-51.67	16.50476G	-42.20	1

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

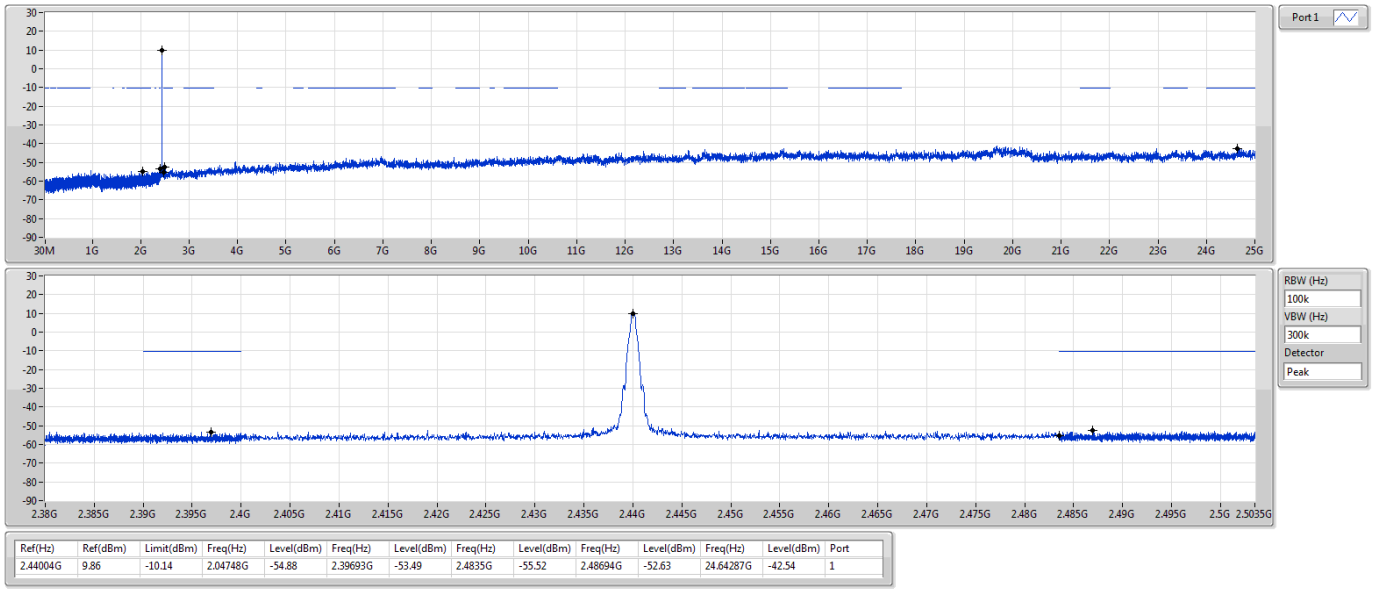
2402MHz



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	9.56	-10.44	2.14471G	-55.07	2.39999G	-50.01	2.4G	-51.17	2.49268G	-52.71	23.31839G	-42.29	1

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

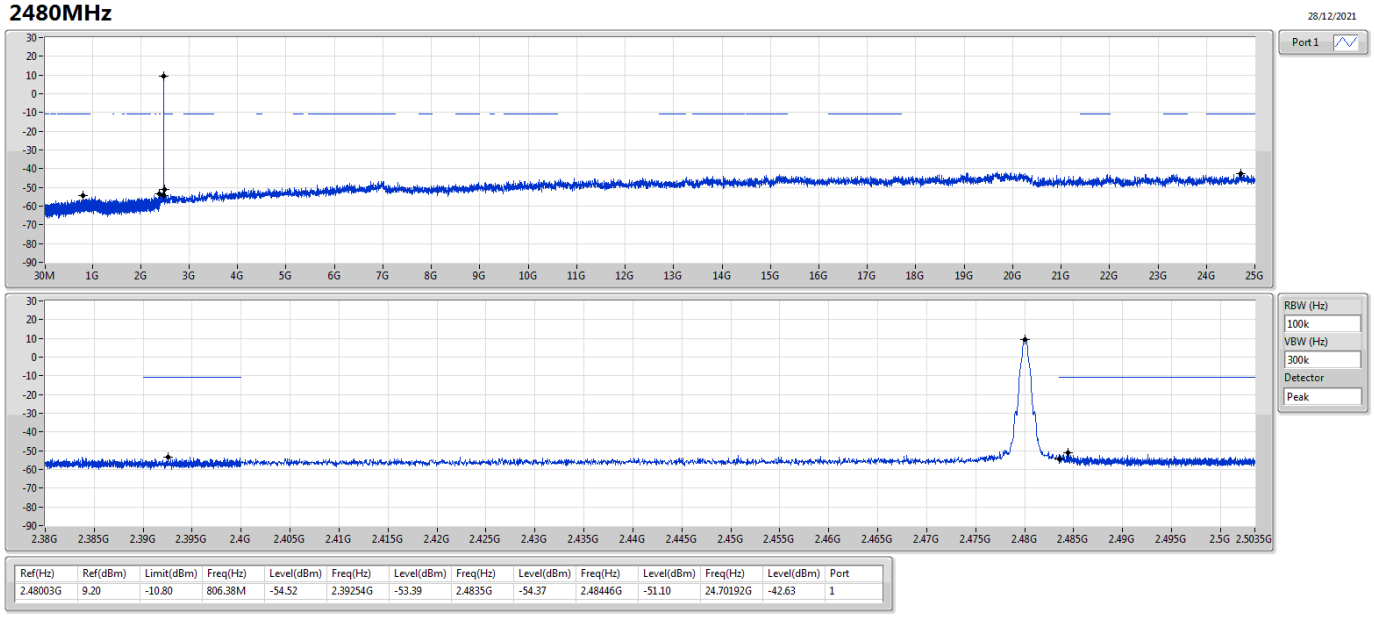
2440MHz



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
2.44004G	9.86	-10.14	2.04748G	-54.88	2.39693G	-53.49	2.4835G	-55.52	2.48694G	-52.63	24.64287G	-42.54	1

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

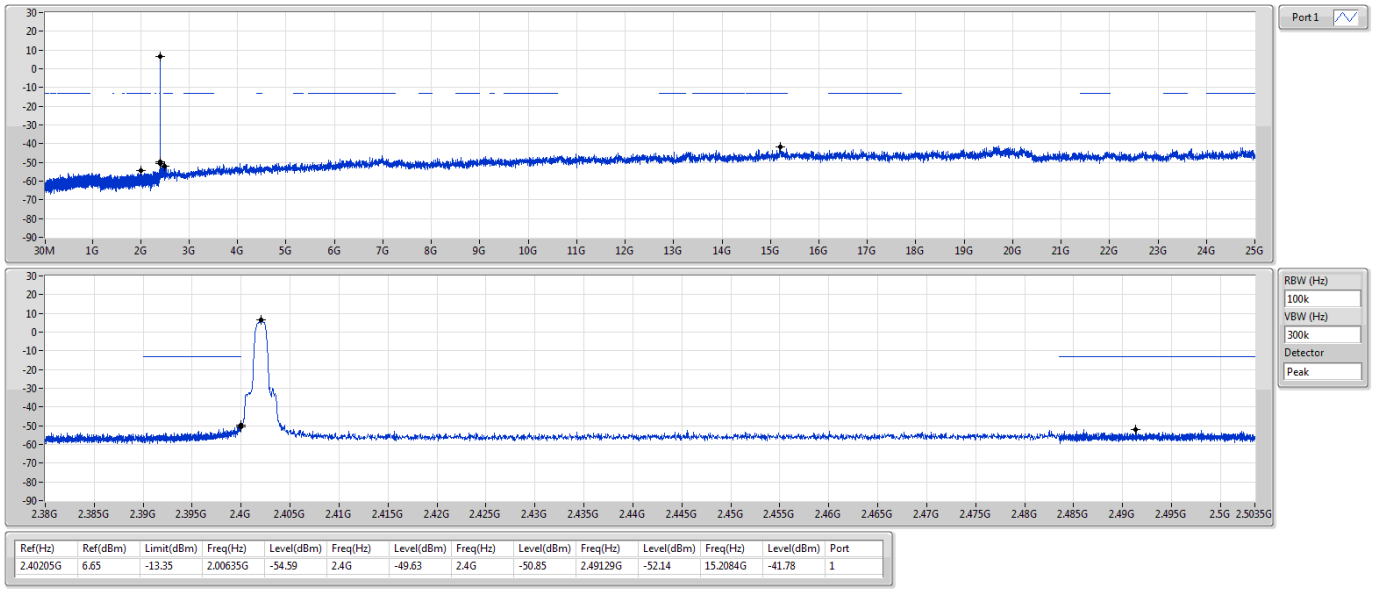
2480MHz



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
2.48003G	9.20	-10.80	806.38M	-54.52	2.39254G	-53.39	2.4835G	-54.37	2.48446G	-51.10	24.70192G	-42.63	1

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

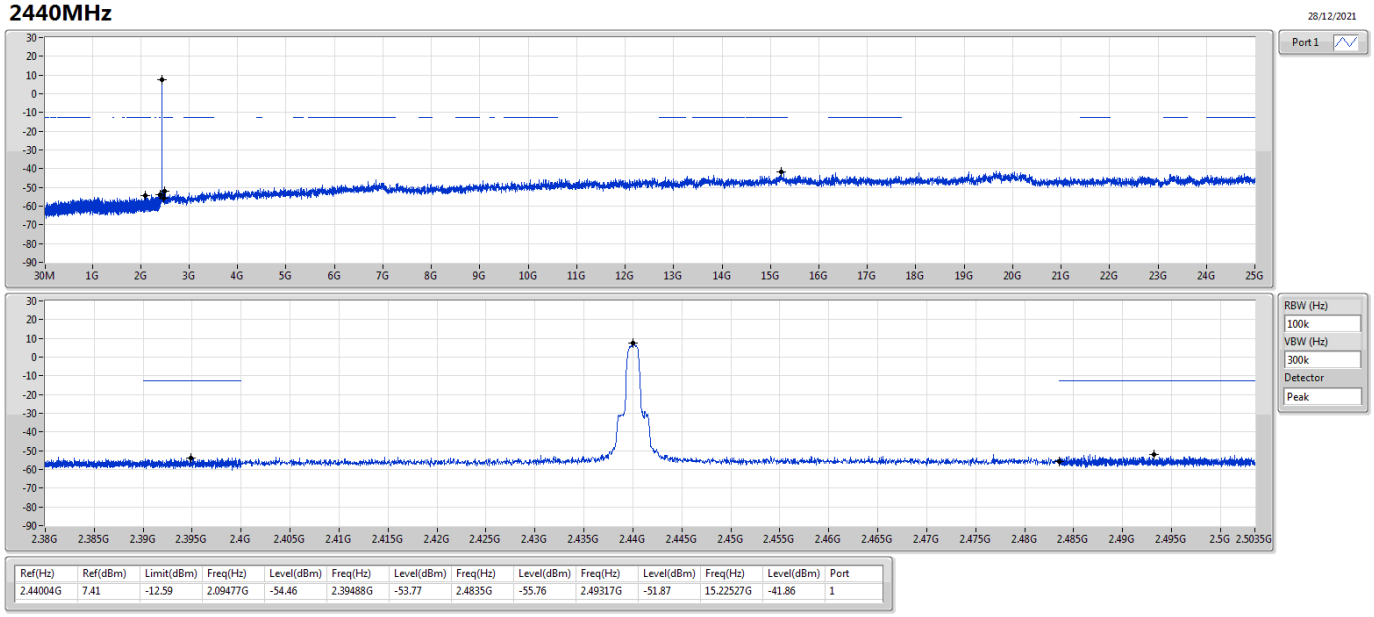
2402MHz



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
2.40205G	6.65	-13.35	2.00635G	-54.59	2.4G	-49.63	2.4G	-50.85	2.49129G	-52.14	15.2084G	-41.78	1

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

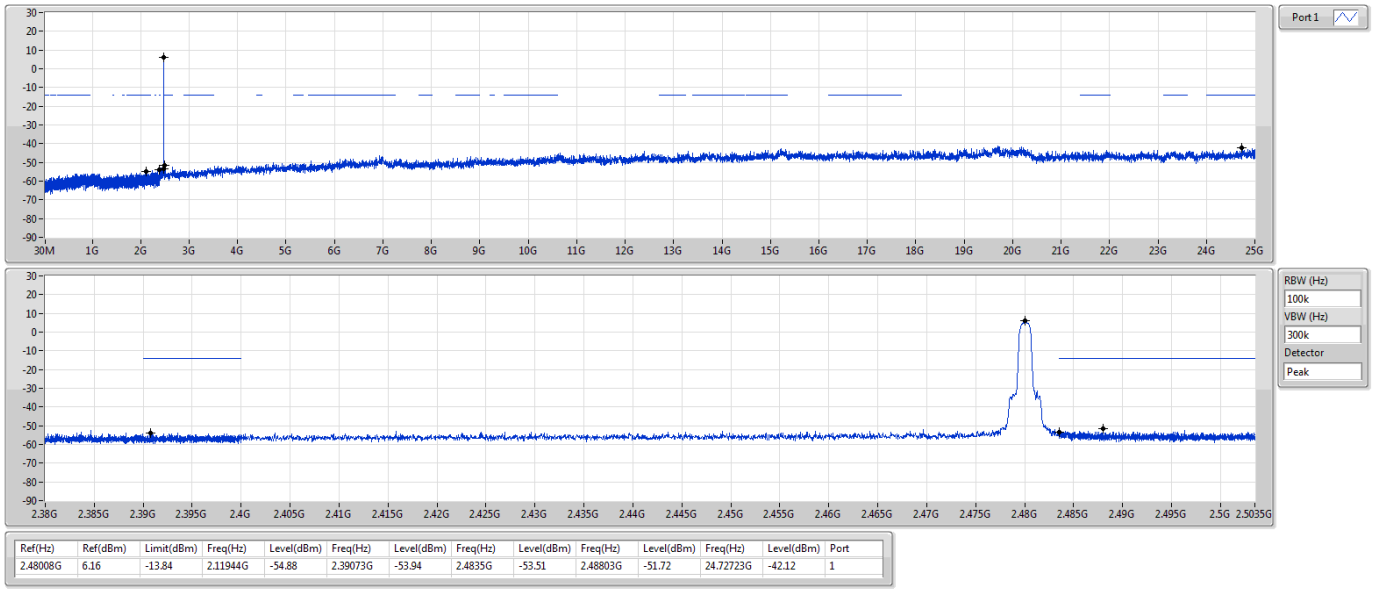
2440MHz



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
2.44004G	7.41	-12.59	2.09477G	-54.46	2.39488G	-53.77	2.4835G	-55.76	2.49317G	-51.87	15.22527G	-41.86	1

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

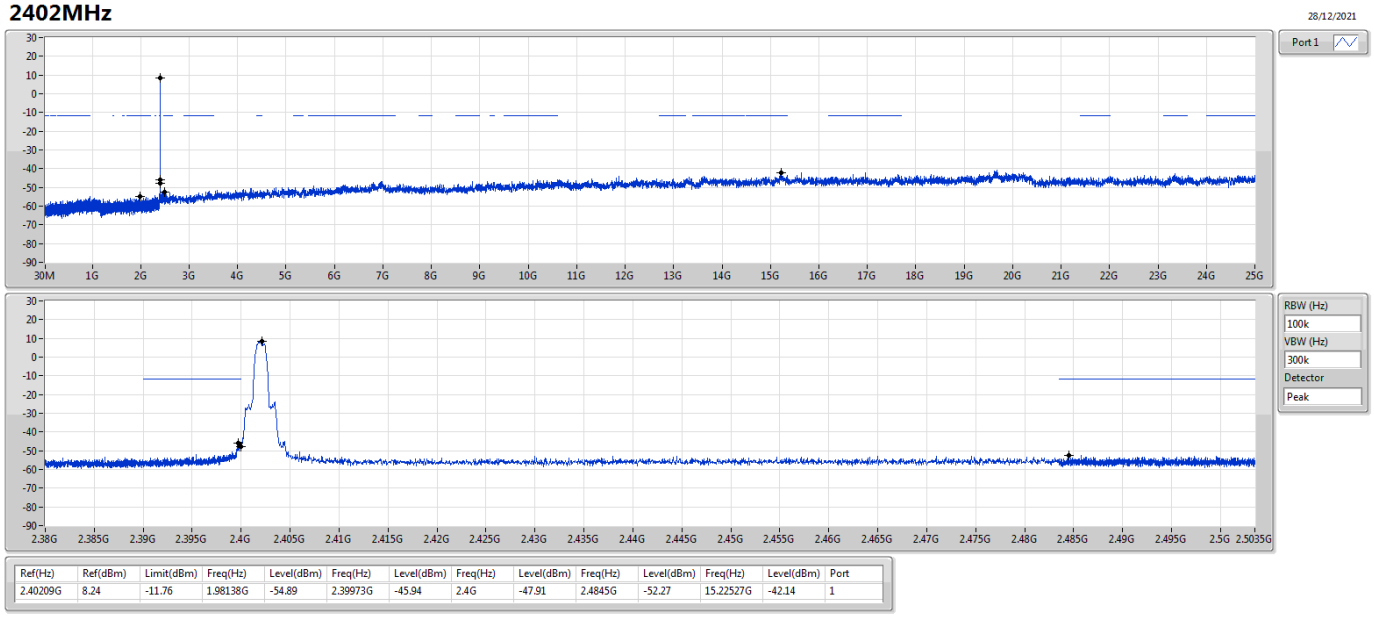
2480MHz



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
2.48008G	6.16	-13.84	2.11944G	-54.88	2.39073G	-53.94	2.4835G	-53.51	2.48803G	-51.72	24.72723G	-42.12	1

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

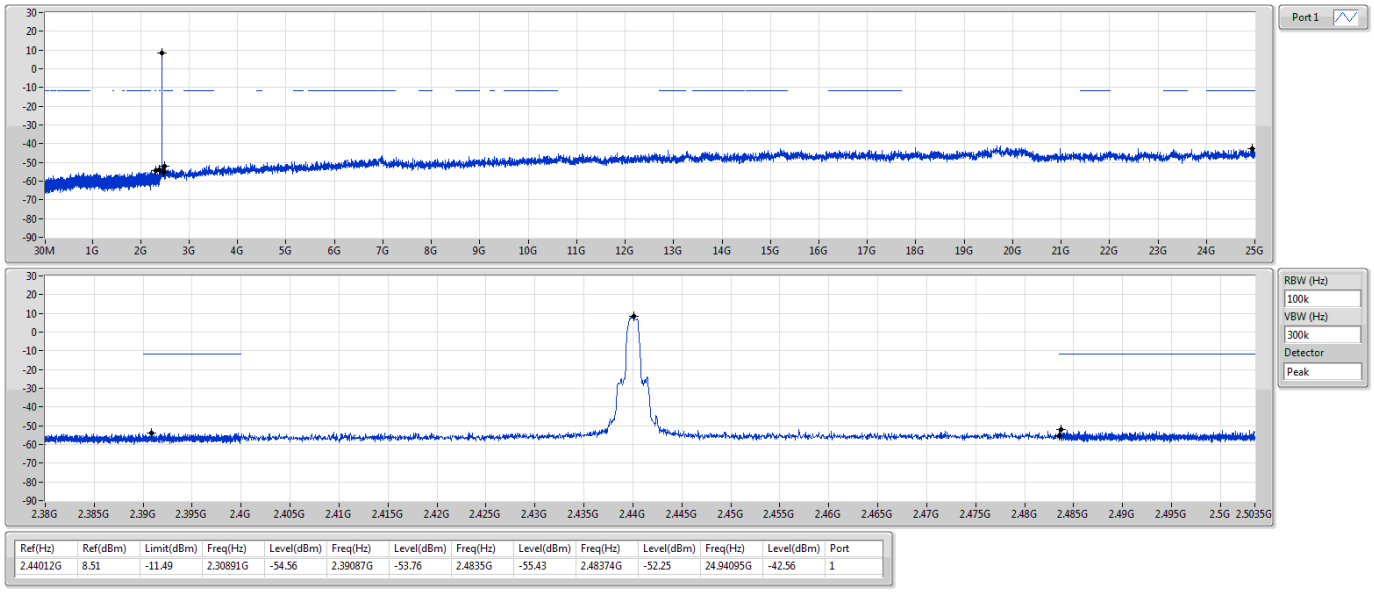
2402MHz



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
2.40209G	8.24	-11.76	1.98138G	-54.89	2.39973G	-45.94	2.4G	-47.91	2.4845G	-52.27	15.22527G	-42.14	1

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

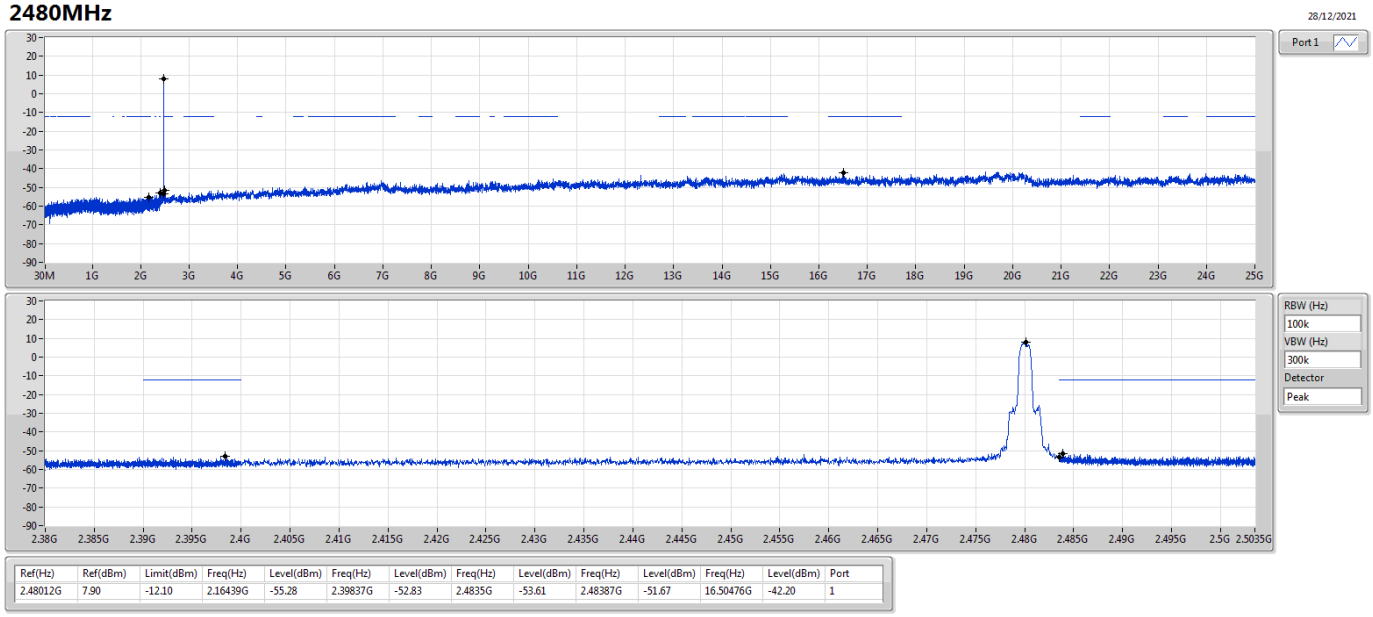
2440MHz



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
2.44012G	8.51	-11.49	2.30891G	-54.56	2.39087G	-53.76	2.4835G	-55.43	2.48374G	-52.25	24.94095G	-42.56	1

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
2.48012G	7.90	-12.10	2.16439G	-55.28	2.39837G	-52.83	2.4835G	-53.61	2.48387G	-51.67	16.50476G	-42.20	1

Summary

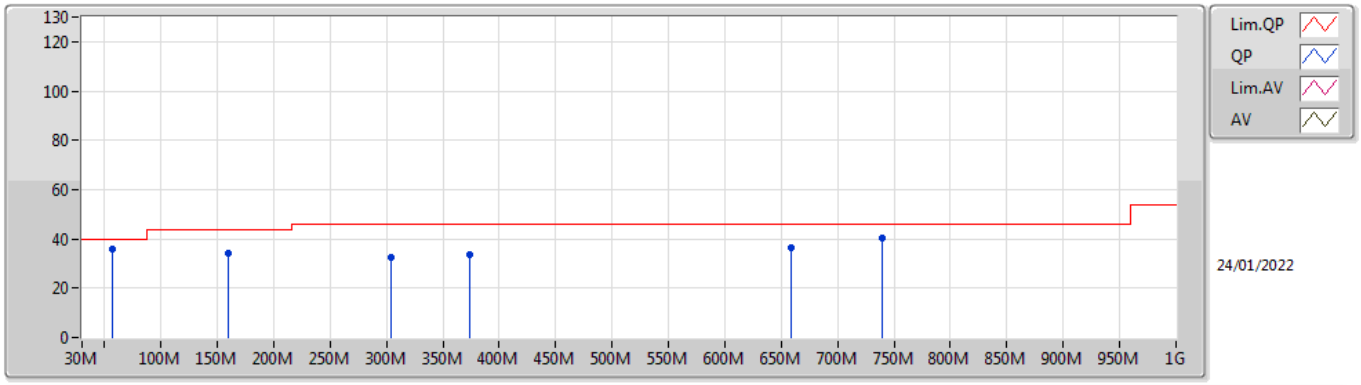
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	57.16M	36.13	40.00	-3.87	3	Vertical	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	57.16M	36.13	40.00	-3.87	3	Vertical	0	1.00	-
2440MHz	Pass	PK	159.98M	34.30	43.50	-9.20	3	Vertical	0	1.00	-
2440MHz	Pass	PK	303.54M	32.26	46.00	-13.74	3	Vertical	0	1.00	-
2440MHz	Pass	PK	373.38M	33.77	46.00	-12.23	3	Vertical	0	1.00	-
2440MHz	Pass	PK	658.56M	36.69	46.00	-9.31	3	Vertical	0	1.00	-
2440MHz	Pass	PK	740.04M	40.16	46.00	-5.84	3	Vertical	0	1.00	-
2440MHz	Pass	PK	57.16M	31.95	40.00	-8.05	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	165.8M	37.69	43.50	-5.81	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	414.12M	33.32	46.00	-12.68	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	627.52M	35.76	46.00	-10.24	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	658.56M	36.60	46.00	-9.40	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	743.92M	38.60	46.00	-7.40	3	Horizontal	360	1.00	-

BT-BR(1Mbps)

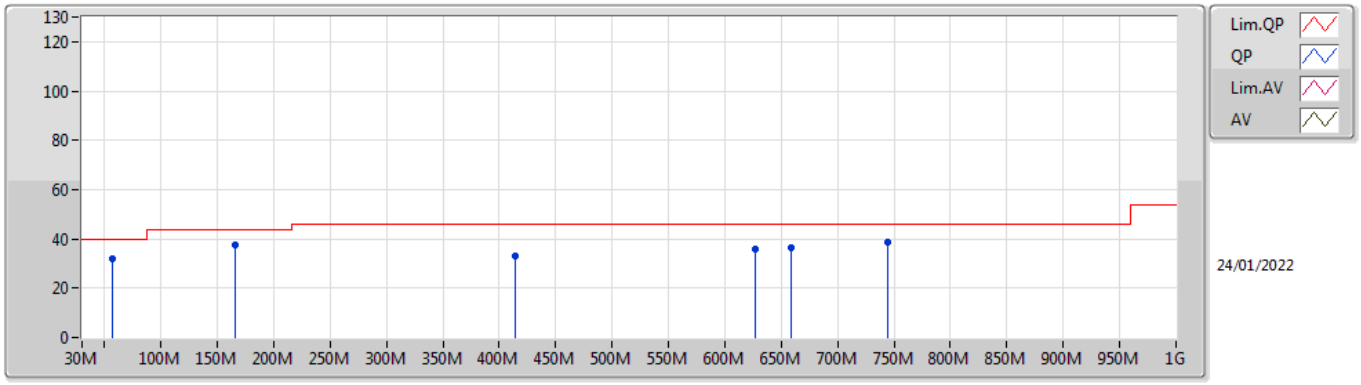
2440MHz_Test Fixture



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	57.16M	36.13	40.00	-3.87	-14.80	3	Vertical	0	1.00	-	50.93	11.83	1.12	27.75
PK	159.98M	34.30	43.50	-9.20	-10.53	3	Vertical	0	1.00	-	44.83	15.22	1.77	27.52
PK	303.54M	32.26	46.00	-13.74	-6.24	3	Vertical	0	1.00	-	38.50	18.47	2.37	27.08
PK	373.38M	33.77	46.00	-12.23	-4.86	3	Vertical	0	1.00	-	38.63	20.04	2.64	27.54
PK	658.56M	36.69	46.00	-9.31	-0.55	3	Vertical	0	1.00	-	37.24	24.18	3.48	28.21
PK	740.04M	40.16	46.00	-5.84	0.44	3	Vertical	0	1.00	-	39.72	24.86	3.68	28.10

BT-BR(1Mbps)

2440MHz_Test Fixture



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	57.16M	31.95	40.00	-8.05	-14.80	3	Horizontal	360	1.00	-	46.75	11.83	1.12	27.75
PK	165.8M	37.69	43.50	-5.81	-10.62	3	Horizontal	360	1.00	-	48.31	15.08	1.80	27.50
PK	414.12M	33.32	46.00	-12.68	-3.37	3	Horizontal	360	1.00	-	36.69	21.70	2.79	27.86
PK	627.52M	35.76	46.00	-10.24	-0.57	3	Horizontal	360	1.00	-	36.33	24.32	3.41	28.30
PK	658.56M	36.60	46.00	-9.40	-0.55	3	Horizontal	360	1.00	-	37.15	24.18	3.48	28.21
PK	743.92M	38.60	46.00	-7.40	0.46	3	Horizontal	360	1.00	-	38.14	24.86	3.69	28.09

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	PK	2.4932G	58.39	74.00	-15.61	3	Horizontal	302	1.03	-
BT-EDR(3Mbps)	Pass	PK	2.4844G	58.31	74.00	-15.69	3	Vertical	342	1.83	-

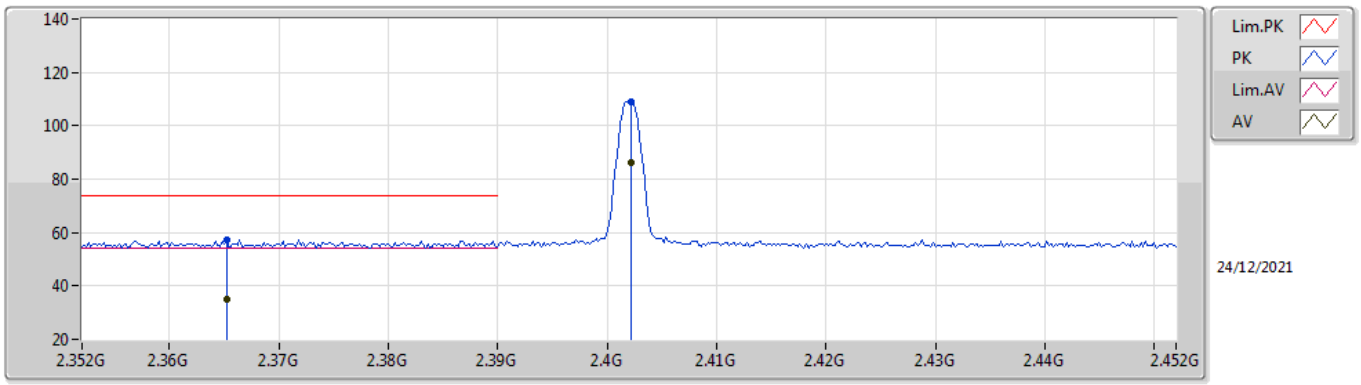
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3652G	35.00	54.00	-19.00	3	Vertical	320	1.15	-
2402MHz	Pass	AV	2.4022G	86.41	Inf	-Inf	3	Vertical	320	1.15	-
2402MHz	Pass	PK	2.3652G	57.50	74.00	-16.50	3	Vertical	320	1.15	-
2402MHz	Pass	PK	2.4022G	108.91	Inf	-Inf	3	Vertical	320	1.15	-
2402MHz	Pass	AV	2.3654G	34.72	54.00	-19.28	3	Horizontal	244	1.00	-
2402MHz	Pass	AV	2.4022G	80.08	Inf	-Inf	3	Horizontal	244	1.00	-
2402MHz	Pass	PK	2.3654G	57.22	74.00	-16.78	3	Horizontal	244	1.00	-
2402MHz	Pass	PK	2.4022G	102.58	Inf	-Inf	3	Horizontal	244	1.00	-
2402MHz	Pass	AV	4.80426G	24.42	54.00	-29.58	3	Vertical	350	1.28	-
2402MHz	Pass	PK	4.80426G	46.92	74.00	-27.08	3	Vertical	350	1.28	-
2402MHz	Pass	AV	4.80257G	23.46	54.00	-30.54	3	Horizontal	59	1.50	-
2402MHz	Pass	PK	4.80257G	45.96	74.00	-28.04	3	Horizontal	59	1.50	-
2440MHz	Pass	AV	2.3656G	34.64	54.00	-19.36	3	Vertical	17	1.39	-
2440MHz	Pass	AV	2.44G	85.97	Inf	-Inf	3	Vertical	17	1.39	-
2440MHz	Pass	AV	2.492G	34.50	54.00	-19.50	3	Vertical	17	1.39	-
2440MHz	Pass	PK	2.3656G	57.14	74.00	-16.86	3	Vertical	17	1.39	-
2440MHz	Pass	PK	2.44G	108.47	Inf	-Inf	3	Vertical	17	1.39	-
2440MHz	Pass	PK	2.492G	57.00	74.00	-17.00	3	Vertical	17	1.39	-
2440MHz	Pass	AV	2.3616G	34.61	54.00	-19.39	3	Horizontal	303	1.00	-
2440MHz	Pass	AV	2.44G	80.46	Inf	-Inf	3	Horizontal	303	1.00	-
2440MHz	Pass	AV	2.4928G	34.43	54.00	-19.57	3	Horizontal	303	1.00	-
2440MHz	Pass	PK	2.3616G	57.11	74.00	-16.89	3	Horizontal	303	1.00	-
2440MHz	Pass	PK	2.44G	102.96	Inf	-Inf	3	Horizontal	303	1.00	-
2440MHz	Pass	PK	2.4928G	56.93	74.00	-17.07	3	Horizontal	303	1.00	-
2440MHz	Pass	AV	4.87976G	25.14	54.00	-28.86	3	Vertical	356	1.50	-
2440MHz	Pass	PK	4.87976G	47.64	74.00	-26.36	3	Vertical	356	1.50	-
2440MHz	Pass	AV	4.87921G	22.70	54.00	-31.30	3	Horizontal	55	1.00	-
2440MHz	Pass	PK	4.87921G	45.20	74.00	-28.80	3	Horizontal	55	1.00	-
2480MHz	Pass	AV	2.4798G	87.08	Inf	-Inf	3	Vertical	343	1.83	-
2480MHz	Pass	AV	2.498G	34.87	54.00	-19.13	3	Vertical	343	1.83	-
2480MHz	Pass	PK	2.4798G	109.58	Inf	-Inf	3	Vertical	343	1.83	-
2480MHz	Pass	PK	2.498G	57.37	74.00	-16.63	3	Vertical	343	1.83	-
2480MHz	Pass	AV	2.4798G	80.34	Inf	-Inf	3	Horizontal	302	1.03	-
2480MHz	Pass	AV	2.4932G	35.89	54.00	-18.11	3	Horizontal	302	1.03	-
2480MHz	Pass	PK	2.4798G	102.84	Inf	-Inf	3	Horizontal	302	1.03	-
2480MHz	Pass	PK	2.4932G	58.39	74.00	-15.61	3	Horizontal	302	1.03	-
2480MHz	Pass	AV	4.96033G	24.48	54.00	-29.52	3	Vertical	332	1.54	-
2480MHz	Pass	PK	4.96033G	46.98	74.00	-27.02	3	Vertical	332	1.54	-
2480MHz	Pass	AV	4.9608G	22.58	54.00	-31.42	3	Horizontal	221	1.50	-
2480MHz	Pass	PK	4.9608G	45.08	74.00	-28.92	3	Horizontal	221	1.50	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.389G	35.47	54.00	-18.53	3	Vertical	323	1.48	-
2402MHz	Pass	AV	2.4022G	86.78	Inf	-Inf	3	Vertical	323	1.48	-
2402MHz	Pass	PK	2.389G	57.97	74.00	-16.03	3	Vertical	323	1.48	-
2402MHz	Pass	PK	2.4022G	109.28	Inf	-Inf	3	Vertical	323	1.48	-
2402MHz	Pass	AV	2.3856G	34.91	54.00	-19.09	3	Horizontal	248	1.00	-
2402MHz	Pass	AV	2.4022G	80.61	Inf	-Inf	3	Horizontal	248	1.00	-
2402MHz	Pass	PK	2.3856G	57.41	74.00	-16.59	3	Horizontal	248	1.00	-
2402MHz	Pass	PK	2.4022G	103.11	Inf	-Inf	3	Horizontal	248	1.00	-
2402MHz	Pass	AV	4.8043G	24.59	54.00	-29.41	3	Vertical	348	1.54	-
2402MHz	Pass	PK	4.8043G	47.09	74.00	-26.91	3	Vertical	348	1.54	-
2402MHz	Pass	AV	4.80421G	22.67	54.00	-31.33	3	Horizontal	231	2.14	-
2402MHz	Pass	PK	4.80421G	45.17	74.00	-28.83	3	Horizontal	231	2.14	-
2440MHz	Pass	AV	2.3472G	34.15	54.00	-19.85	3	Vertical	339	2.22	-
2440MHz	Pass	AV	2.44G	86.46	Inf	-Inf	3	Vertical	339	2.22	-
2440MHz	Pass	AV	2.4992G	34.48	54.00	-19.52	3	Vertical	339	2.22	-
2440MHz	Pass	PK	2.3472G	56.65	74.00	-17.35	3	Vertical	339	2.22	-
2440MHz	Pass	PK	2.44G	108.96	Inf	-Inf	3	Vertical	339	2.22	-
2440MHz	Pass	PK	2.4992G	56.98	74.00	-17.02	3	Vertical	339	2.22	-
2440MHz	Pass	AV	2.3636G	33.97	54.00	-20.03	3	Horizontal	304	1.00	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2440MHz	Pass	AV	2.44G	81.18	Inf	-Inf	3	Horizontal	304	1.00	-
2440MHz	Pass	AV	2.486G	34.16	54.00	-19.84	3	Horizontal	304	1.00	-
2440MHz	Pass	PK	2.3636G	56.47	74.00	-17.53	3	Horizontal	304	1.00	-
2440MHz	Pass	PK	2.44G	103.68	Inf	-Inf	3	Horizontal	304	1.00	-
2440MHz	Pass	PK	2.486G	56.66	74.00	-17.34	3	Horizontal	304	1.00	-
2440MHz	Pass	AV	4.87954G	24.65	54.00	-29.35	3	Vertical	334	1.50	-
2440MHz	Pass	PK	4.87954G	47.15	74.00	-26.85	3	Vertical	334	1.50	-
2440MHz	Pass	AV	4.88016G	23.17	54.00	-30.83	3	Horizontal	59	2.34	-
2440MHz	Pass	PK	4.88016G	45.67	74.00	-28.33	3	Horizontal	59	2.34	-
2480MHz	Pass	AV	2.48G	88.07	Inf	-Inf	3	Vertical	342	1.83	-
2480MHz	Pass	AV	2.4844G	35.81	54.00	-18.19	3	Vertical	342	1.83	-
2480MHz	Pass	PK	2.48G	110.57	Inf	-Inf	3	Vertical	342	1.83	-
2480MHz	Pass	PK	2.4844G	58.31	74.00	-15.69	3	Vertical	342	1.83	-
2480MHz	Pass	AV	2.4798G	81.22	Inf	-Inf	3	Horizontal	301	1.00	-
2480MHz	Pass	AV	2.4872G	34.98	54.00	-19.02	3	Horizontal	301	1.00	-
2480MHz	Pass	PK	2.4798G	103.72	Inf	-Inf	3	Horizontal	301	1.00	-
2480MHz	Pass	PK	2.4872G	57.48	74.00	-16.52	3	Horizontal	301	1.00	-
2480MHz	Pass	AV	4.95989G	24.46	54.00	-29.54	3	Vertical	334	1.61	-
2480MHz	Pass	PK	4.95989G	46.96	74.00	-27.04	3	Vertical	334	1.61	-
2480MHz	Pass	AV	4.96003G	21.94	54.00	-32.06	3	Horizontal	23	1.50	-
2480MHz	Pass	PK	4.96003G	44.44	74.00	-29.56	3	Horizontal	23	1.50	-

BT-BR(1Mbps)

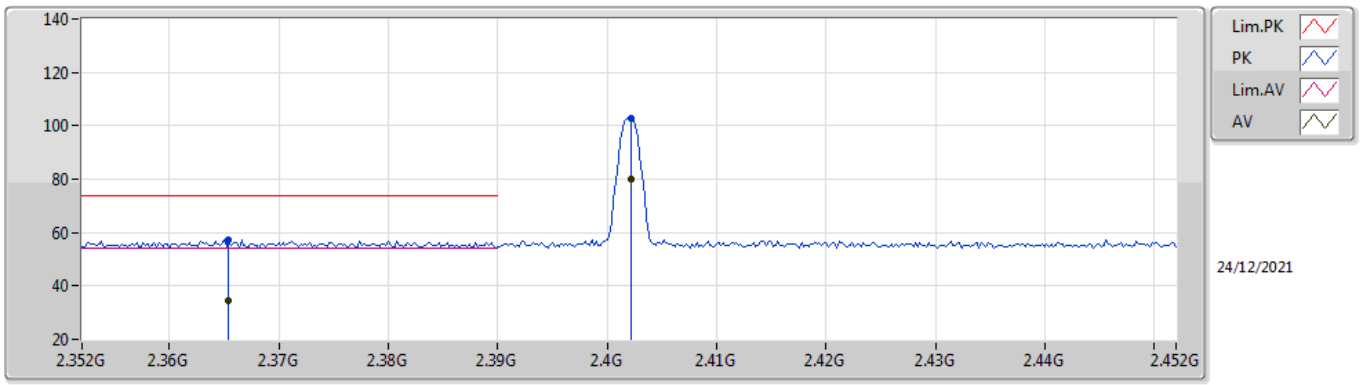
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3652G	35.00	54.00	-19.00	32.29	3	Vertical	320	1.15	-	2.71	27.74	4.55	-
AV	2.4022G	86.41	Inf	-Inf	32.18	3	Vertical	320	1.15	-	54.23	27.60	4.58	-
PK	2.3652G	57.50	74.00	-16.50	32.29	3	Vertical	320	1.15	-	25.21	27.74	4.55	-
PK	2.4022G	108.91	Inf	-Inf	32.18	3	Vertical	320	1.15	-	76.73	27.60	4.58	-

BT-BR(1Mbps)

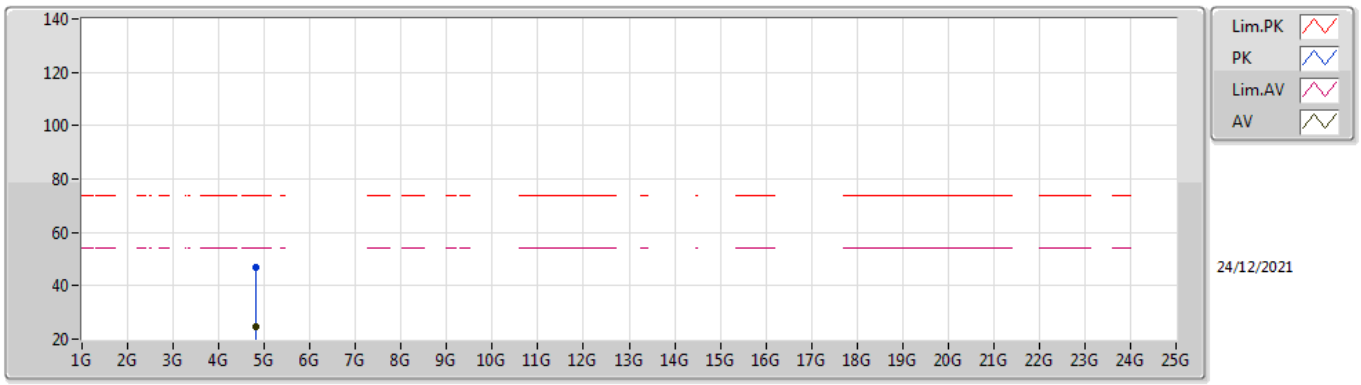
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3654G	34.72	54.00	-19.28	32.29	3	Horizontal	244	1.00	-	2.43	27.74	4.55	-
AV	2.4022G	80.08	Inf	-Inf	32.18	3	Horizontal	244	1.00	-	47.90	27.60	4.58	-
PK	2.3654G	57.22	74.00	-16.78	32.29	3	Horizontal	244	1.00	-	24.93	27.74	4.55	-
PK	2.4022G	102.58	Inf	-Inf	32.18	3	Horizontal	244	1.00	-	70.40	27.60	4.58	-

BT-BR(1Mbps)

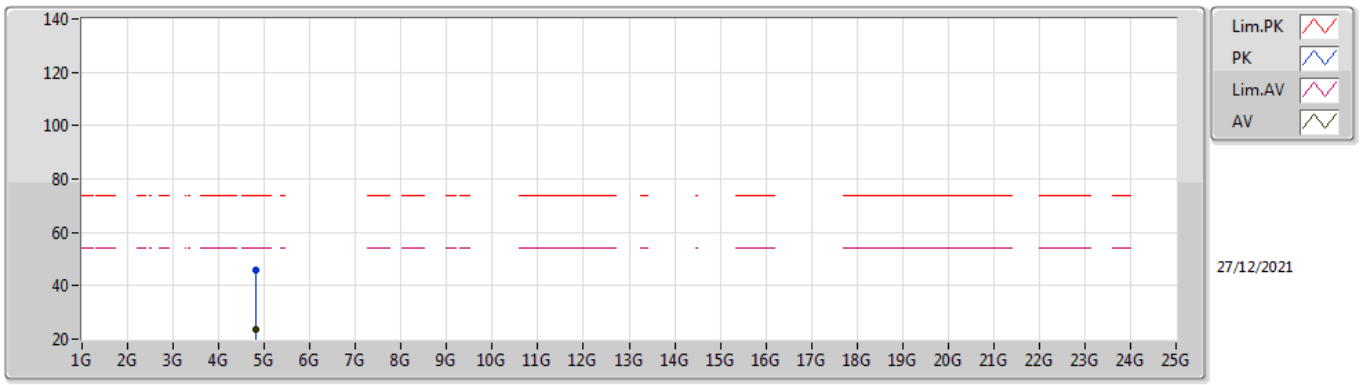
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80426G	24.42	54.00	-29.58	2.95	3	Vertical	350	1.28	-	21.47	31.10	6.66	34.81
PK	4.80426G	46.92	74.00	-27.08	2.95	3	Vertical	350	1.28	-	43.97	31.10	6.66	34.81

BT-BR(1Mbps)

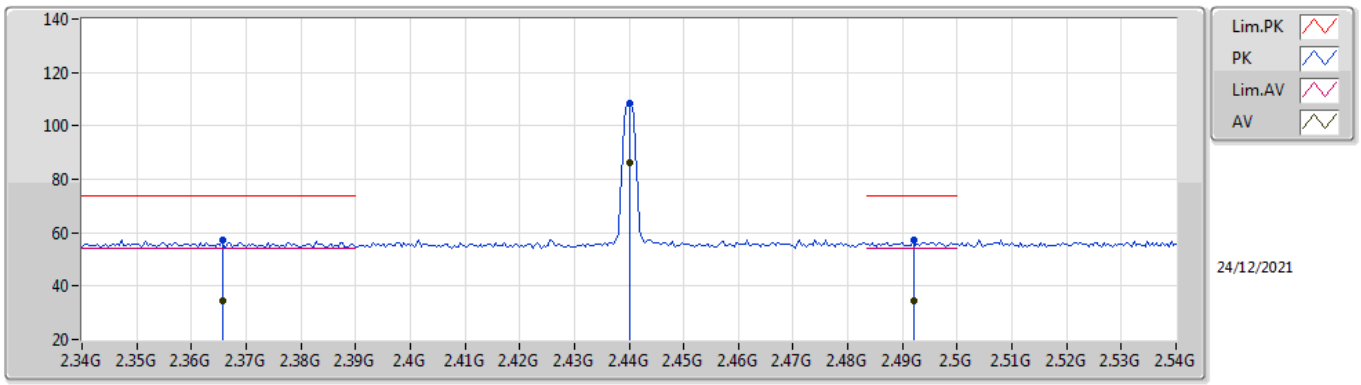
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80257G	23.46	54.00	-30.54	2.95	3	Horizontal	59	1.50	-	20.51	31.10	6.66	34.81
PK	4.80257G	45.96	74.00	-28.04	2.95	3	Horizontal	59	1.50	-	43.01	31.10	6.66	34.81

BT-BR(1Mbps)

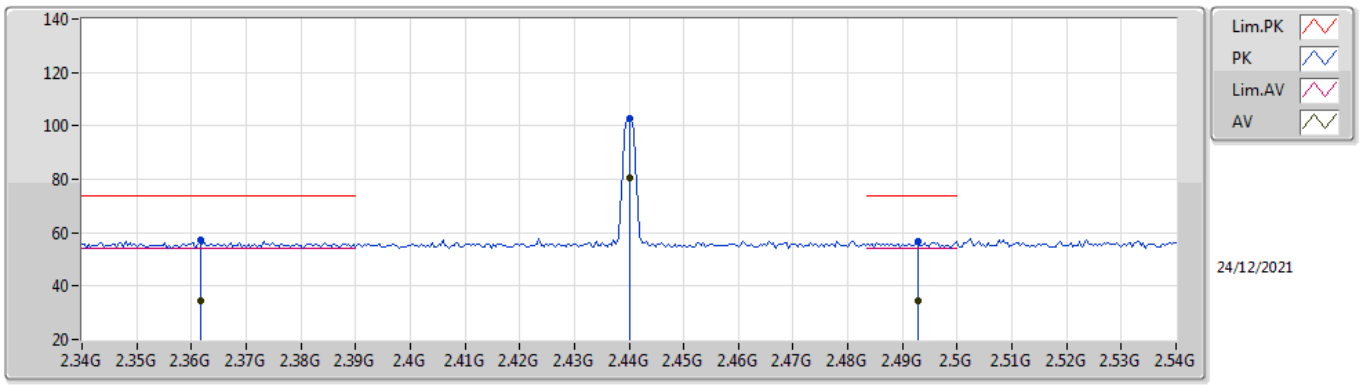
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3656G	34.64	54.00	-19.36	32.29	3	Vertical	17	1.39	-	2.35	27.74	4.55	-
AV	2.44G	85.97	Inf	-Inf	32.12	3	Vertical	17	1.39	-	53.85	27.52	4.60	-
AV	2.492G	34.50	54.00	-19.50	32.12	3	Vertical	17	1.39	-	2.38	27.50	4.62	-
PK	2.3656G	57.14	74.00	-16.86	32.29	3	Vertical	17	1.39	-	24.85	27.74	4.55	-
PK	2.44G	108.47	Inf	-Inf	32.12	3	Vertical	17	1.39	-	76.35	27.52	4.60	-
PK	2.492G	57.00	74.00	-17.00	32.12	3	Vertical	17	1.39	-	24.88	27.50	4.62	-

BT-BR(1Mbps)

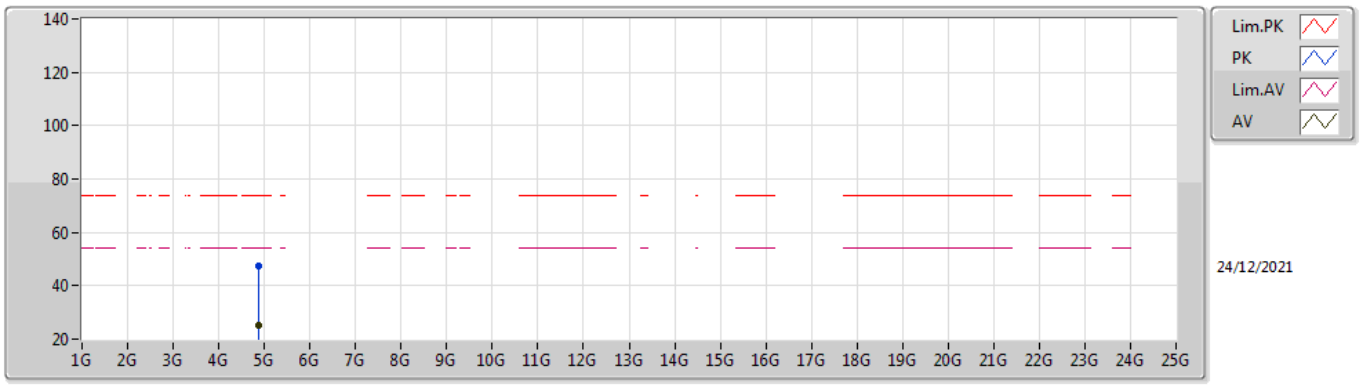
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3616G	34.61	54.00	-19.39	32.29	3	Horizontal	303	1.00	-	2.32	27.75	4.54	-
AV	2.44G	80.46	Inf	-Inf	32.12	3	Horizontal	303	1.00	-	48.34	27.52	4.60	-
AV	2.4928G	34.43	54.00	-19.57	32.12	3	Horizontal	303	1.00	-	2.31	27.50	4.62	-
PK	2.3616G	57.11	74.00	-16.89	32.29	3	Horizontal	303	1.00	-	24.82	27.75	4.54	-
PK	2.44G	102.96	Inf	-Inf	32.12	3	Horizontal	303	1.00	-	70.84	27.52	4.60	-
PK	2.4928G	56.93	74.00	-17.07	32.12	3	Horizontal	303	1.00	-	24.81	27.50	4.62	-

BT-BR(1Mbps)

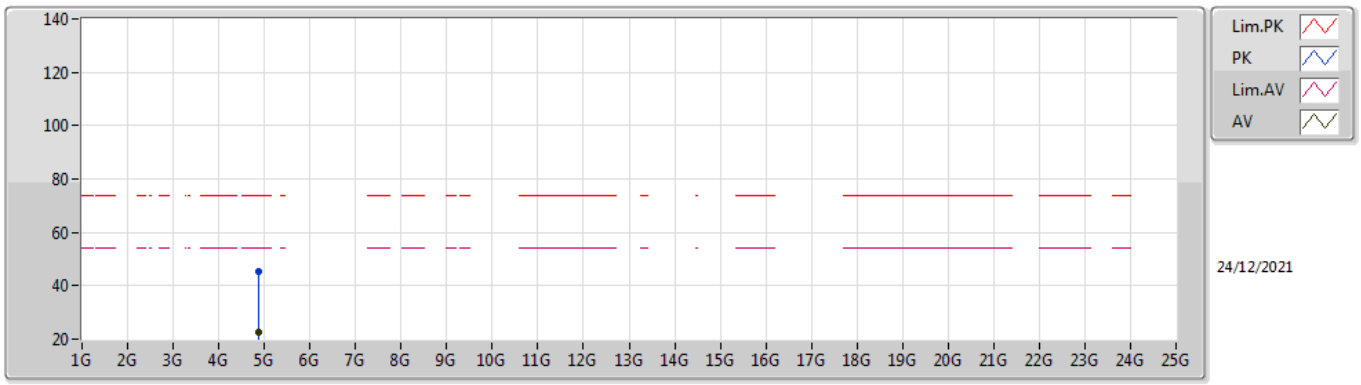
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87976G	25.14	54.00	-28.86	3.03	3	Vertical	356	1.50	-	22.11	31.10	6.72	34.79
PK	4.87976G	47.64	74.00	-26.36	3.03	3	Vertical	356	1.50	-	44.61	31.10	6.72	34.79

BT-BR(1Mbps)

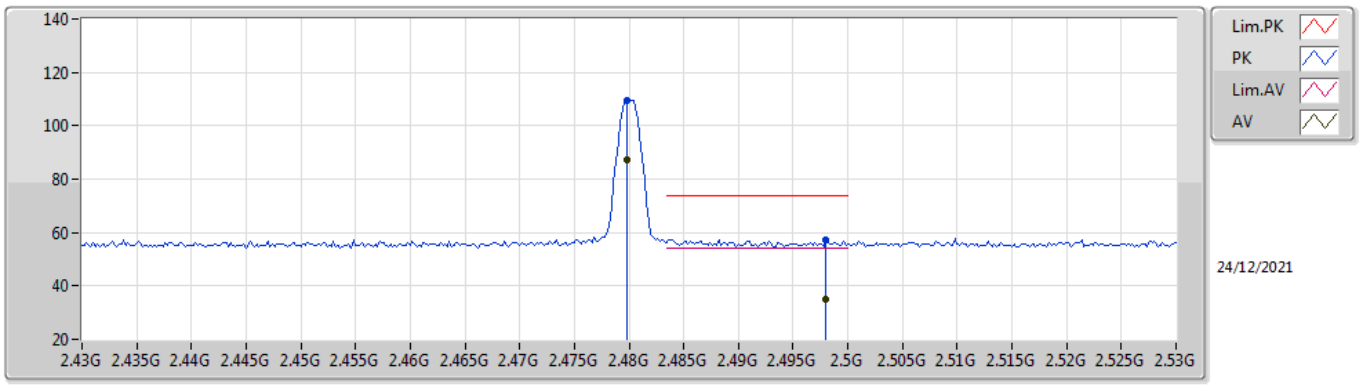
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87921G	22.70	54.00	-31.30	3.03	3	Horizontal	55	1.00	-	19.67	31.10	6.72	34.79
PK	4.87921G	45.20	74.00	-28.80	3.03	3	Horizontal	55	1.00	-	42.17	31.10	6.72	34.79

BT-BR(1Mbps)

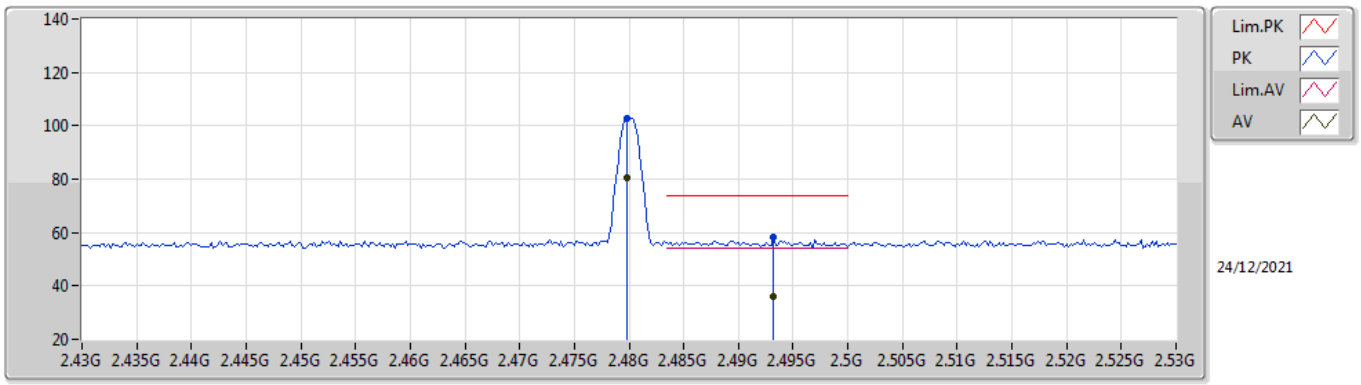
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	87.08	Inf	-Inf	32.11	3	Vertical	343	1.83	-	54.97	27.50	4.61	-
AV	2.498G	34.87	54.00	-19.13	32.12	3	Vertical	343	1.83	-	2.75	27.50	4.62	-
PK	2.4798G	109.58	Inf	-Inf	32.11	3	Vertical	343	1.83	-	77.47	27.50	4.61	-
PK	2.498G	57.37	74.00	-16.63	32.12	3	Vertical	343	1.83	-	25.25	27.50	4.62	-

BT-BR(1Mbps)

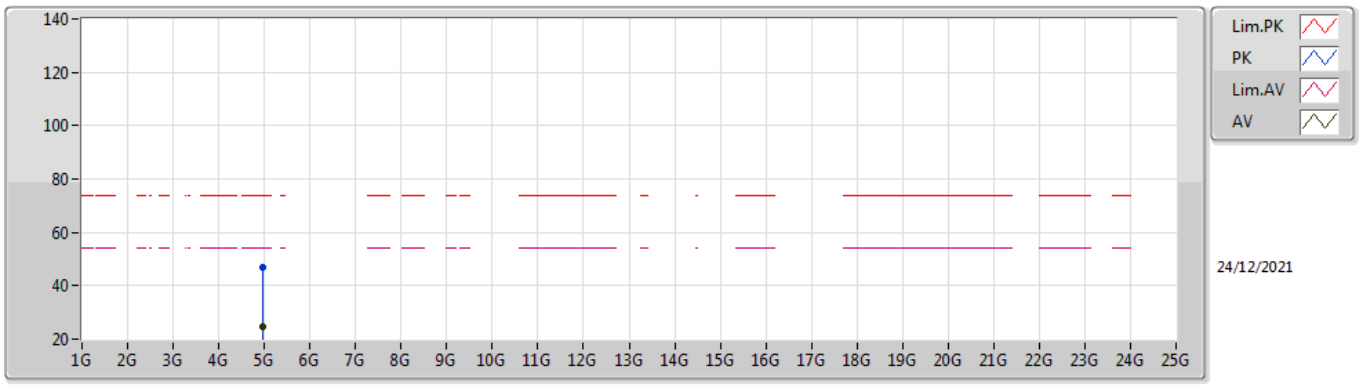
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	80.34	Inf	-Inf	32.11	3	Horizontal	302	1.03	-	48.23	27.50	4.61	-
AV	2.4932G	35.89	54.00	-18.11	32.12	3	Horizontal	302	1.03	-	3.77	27.50	4.62	-
PK	2.4798G	102.84	Inf	-Inf	32.11	3	Horizontal	302	1.03	-	70.73	27.50	4.61	-
PK	2.4932G	58.39	74.00	-15.61	32.12	3	Horizontal	302	1.03	-	26.27	27.50	4.62	-

BT-BR(1Mbps)

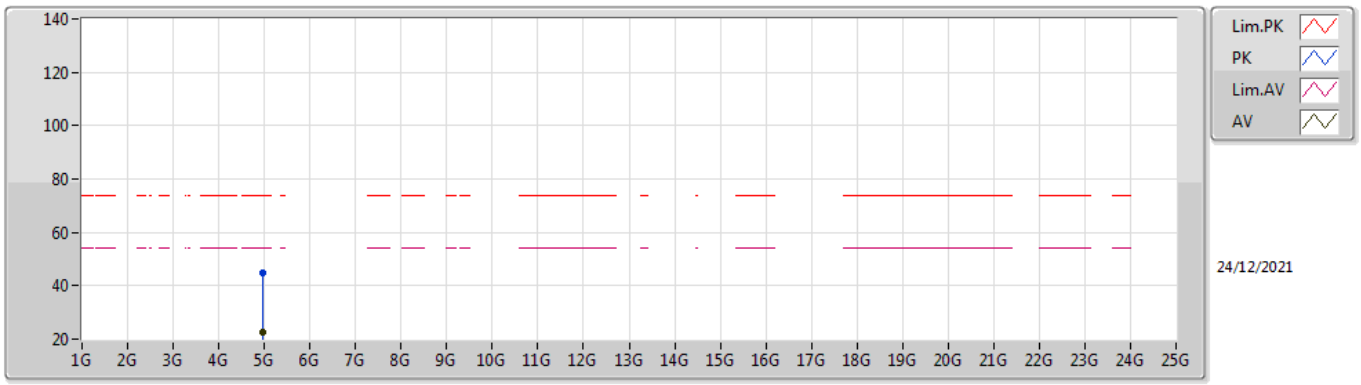
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.96033G	24.48	54.00	-29.52	3.35	3	Vertical	332	1.54	-	21.13	31.34	6.78	34.77
PK	4.96033G	46.98	74.00	-27.02	3.35	3	Vertical	332	1.54	-	43.63	31.34	6.78	34.77

BT-BR(1Mbps)

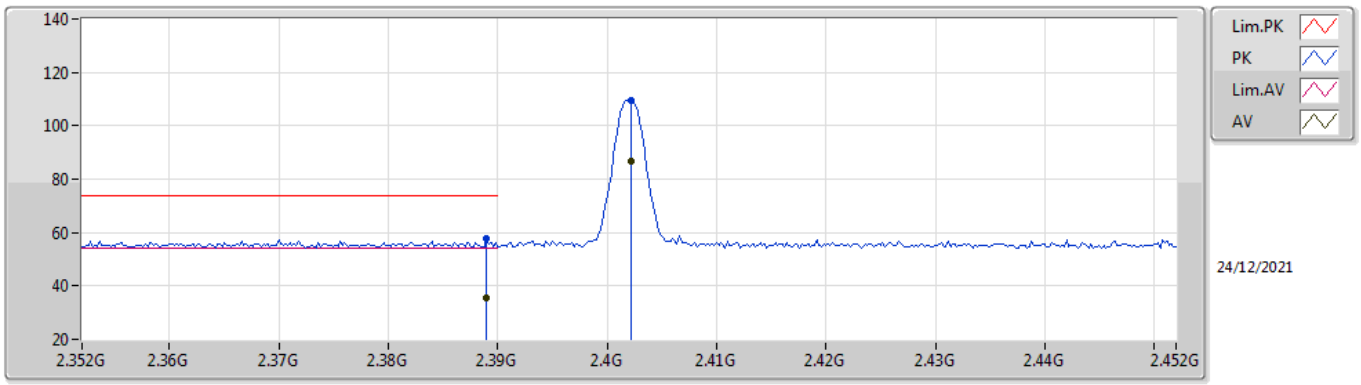
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.9608G	22.58	54.00	-31.42	3.35	3	Horizontal	221	1.50	-	19.23	31.34	6.78	34.77
PK	4.9608G	45.08	74.00	-28.92	3.35	3	Horizontal	221	1.50	-	41.73	31.34	6.78	34.77

BT-EDR(3Mbps)

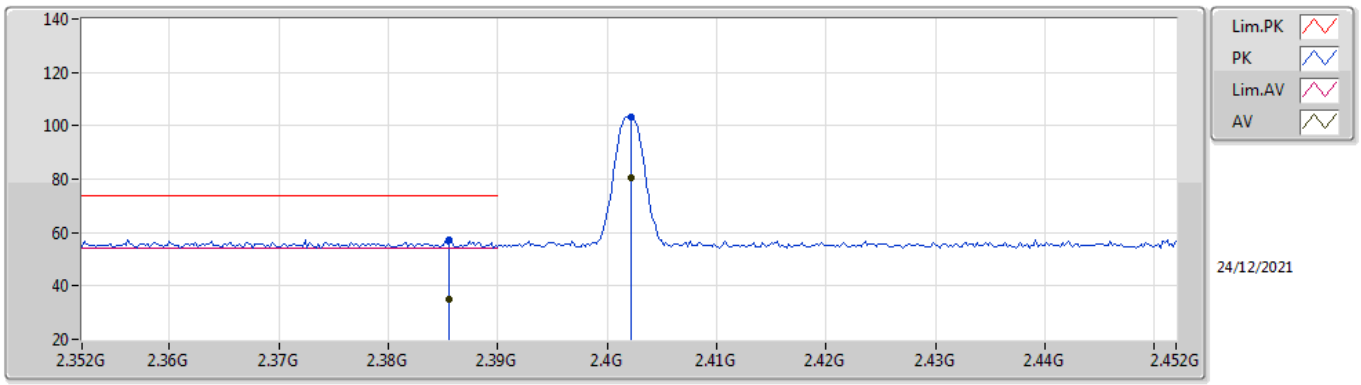
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.389G	35.47	54.00	-18.53	32.21	3	Vertical	323	1.48	-	3.26	27.64	4.57	-
AV	2.4022G	86.78	Inf	-Inf	32.18	3	Vertical	323	1.48	-	54.60	27.60	4.58	-
PK	2.389G	57.97	74.00	-16.03	32.21	3	Vertical	323	1.48	-	25.76	27.64	4.57	-
PK	2.4022G	109.28	Inf	-Inf	32.18	3	Vertical	323	1.48	-	77.10	27.60	4.58	-

BT-EDR(3Mbps)

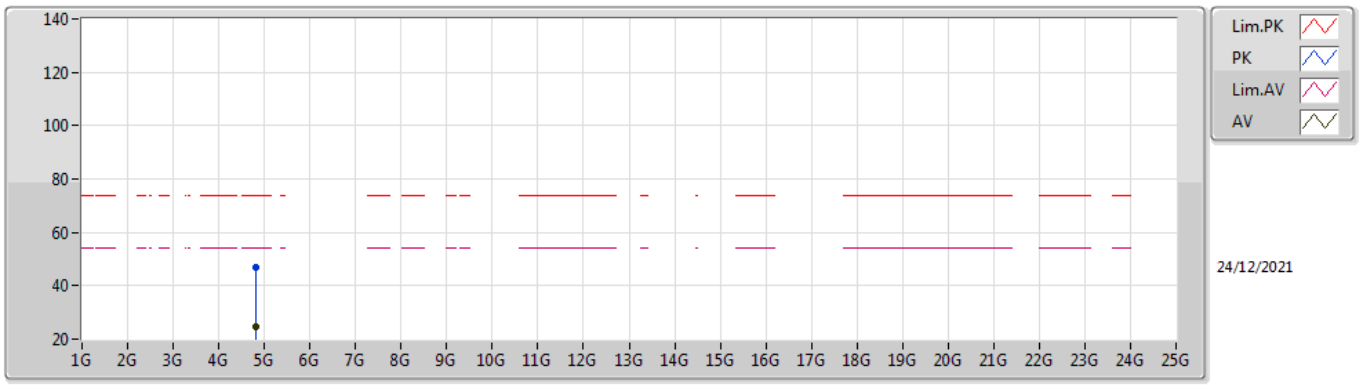
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3856G	34.91	54.00	-19.09	32.23	3	Horizontal	248	1.00	-	2.68	27.66	4.57	-
AV	2.4022G	80.61	Inf	-Inf	32.18	3	Horizontal	248	1.00	-	48.43	27.60	4.58	-
PK	2.3856G	57.41	74.00	-16.59	32.23	3	Horizontal	248	1.00	-	25.18	27.66	4.57	-
PK	2.4022G	103.11	Inf	-Inf	32.18	3	Horizontal	248	1.00	-	70.93	27.60	4.58	-

BT-EDR(3Mbps)

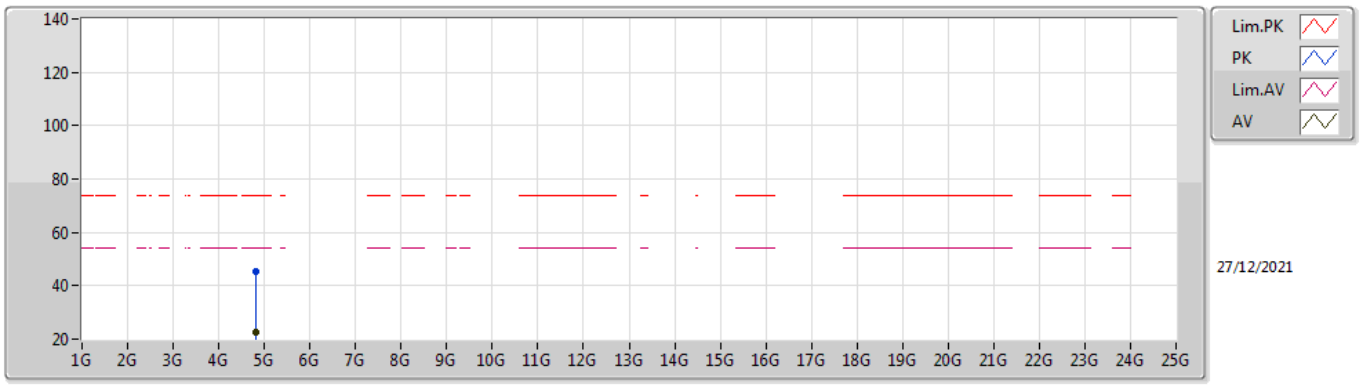
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.8043G	24.59	54.00	-29.41	2.95	3	Vertical	348	1.54	-	21.64	31.10	6.66	34.81
PK	4.8043G	47.09	74.00	-26.91	2.95	3	Vertical	348	1.54	-	44.14	31.10	6.66	34.81

BT-EDR(3Mbps)

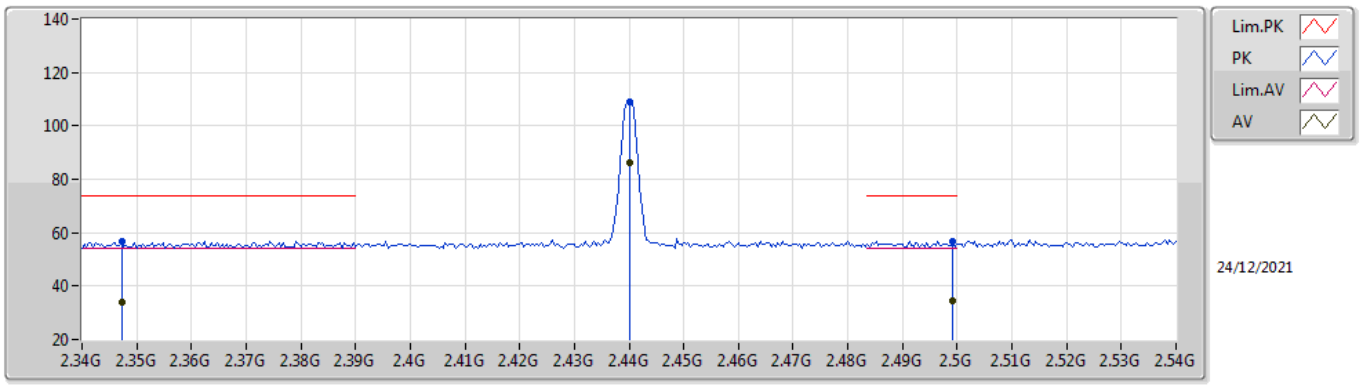
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80421G	22.67	54.00	-31.33	2.95	3	Horizontal	231	2.14	-	19.72	31.10	6.66	34.81
PK	4.80421G	45.17	74.00	-28.83	2.95	3	Horizontal	231	2.14	-	42.22	31.10	6.66	34.81

BT-EDR(3Mbps)

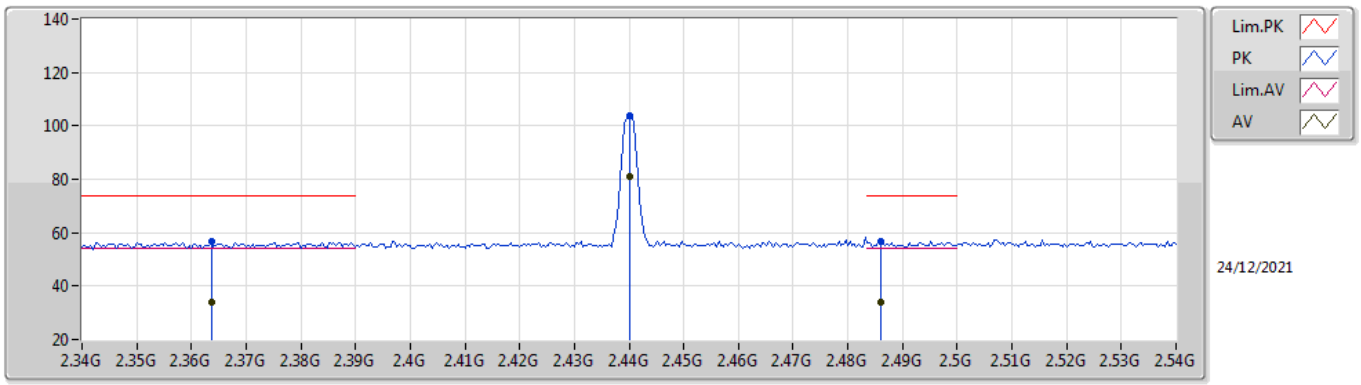
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3472G	34.15	54.00	-19.85	32.33	3	Vertical	339	2.22	-	1.82	27.80	4.53	-
AV	2.44G	86.46	Inf	-Inf	32.12	3	Vertical	339	2.22	-	54.34	27.52	4.60	-
AV	2.4992G	34.48	54.00	-19.52	32.12	3	Vertical	339	2.22	-	2.36	27.50	4.62	-
PK	2.3472G	56.65	74.00	-17.35	32.33	3	Vertical	339	2.22	-	24.32	27.80	4.53	-
PK	2.44G	108.96	Inf	-Inf	32.12	3	Vertical	339	2.22	-	76.84	27.52	4.60	-
PK	2.4992G	56.98	74.00	-17.02	32.12	3	Vertical	339	2.22	-	24.86	27.50	4.62	-

BT-EDR(3Mbps)

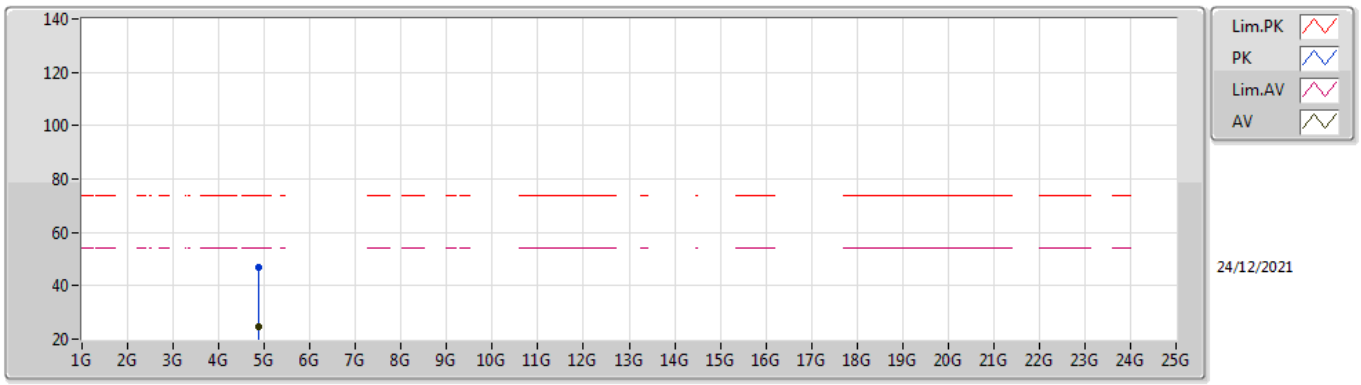
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3636G	33.97	54.00	-20.03	32.30	3	Horizontal	304	1.00	-	1.67	27.75	4.55	-
AV	2.44G	81.18	Inf	-Inf	32.12	3	Horizontal	304	1.00	-	49.06	27.52	4.60	-
AV	2.486G	34.16	54.00	-19.84	32.11	3	Horizontal	304	1.00	-	2.05	27.50	4.61	-
PK	2.3636G	56.47	74.00	-17.53	32.30	3	Horizontal	304	1.00	-	24.17	27.75	4.55	-
PK	2.44G	103.68	Inf	-Inf	32.12	3	Horizontal	304	1.00	-	71.56	27.52	4.60	-
PK	2.486G	56.66	74.00	-17.34	32.11	3	Horizontal	304	1.00	-	24.55	27.50	4.61	-

BT-EDR(3Mbps)

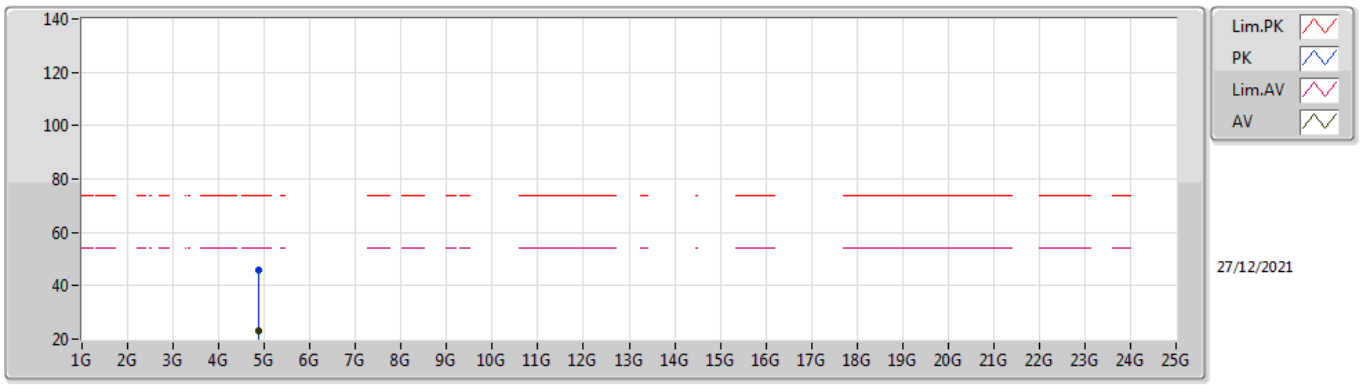
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87954G	24.65	54.00	-29.35	3.03	3	Vertical	334	1.50	-	21.62	31.10	6.72	34.79
PK	4.87954G	47.15	74.00	-26.85	3.03	3	Vertical	334	1.50	-	44.12	31.10	6.72	34.79

BT-EDR(3Mbps)

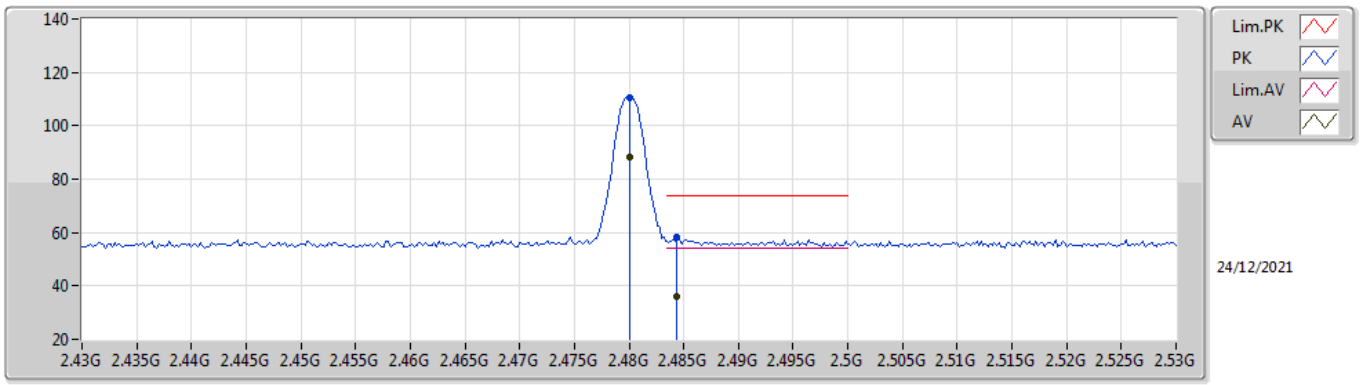
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88016G	23.17	54.00	-30.83	3.03	3	Horizontal	59	2.34	-	20.14	31.10	6.72	34.79
PK	4.88016G	45.67	74.00	-28.33	3.03	3	Horizontal	59	2.34	-	42.64	31.10	6.72	34.79

BT-EDR(3Mbps)

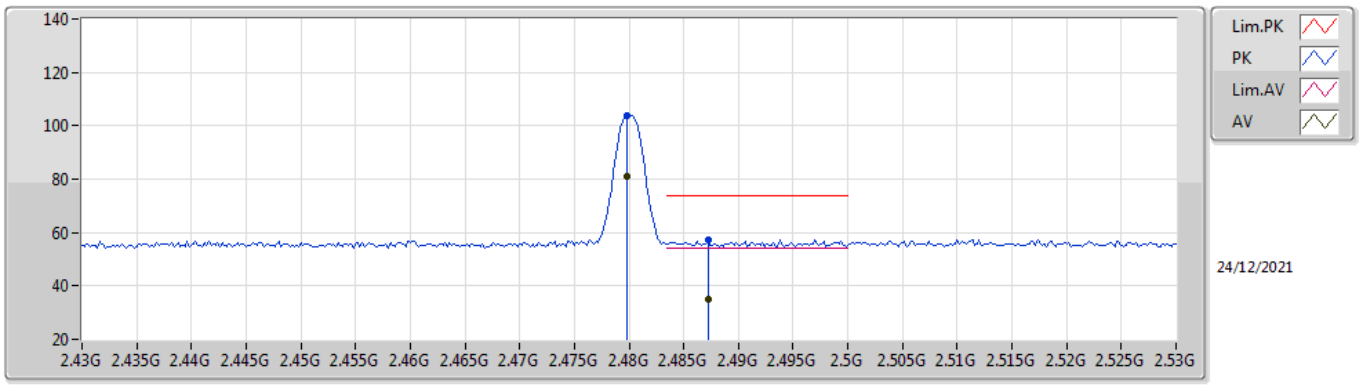
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	88.07	Inf	-Inf	32.11	3	Vertical	342	1.83	-	55.96	27.50	4.61	-
AV	2.4844G	35.81	54.00	-18.19	32.11	3	Vertical	342	1.83	-	3.70	27.50	4.61	-
PK	2.48G	110.57	Inf	-Inf	32.11	3	Vertical	342	1.83	-	78.46	27.50	4.61	-
PK	2.4844G	58.31	74.00	-15.69	32.11	3	Vertical	342	1.83	-	26.20	27.50	4.61	-

BT-EDR(3Mbps)

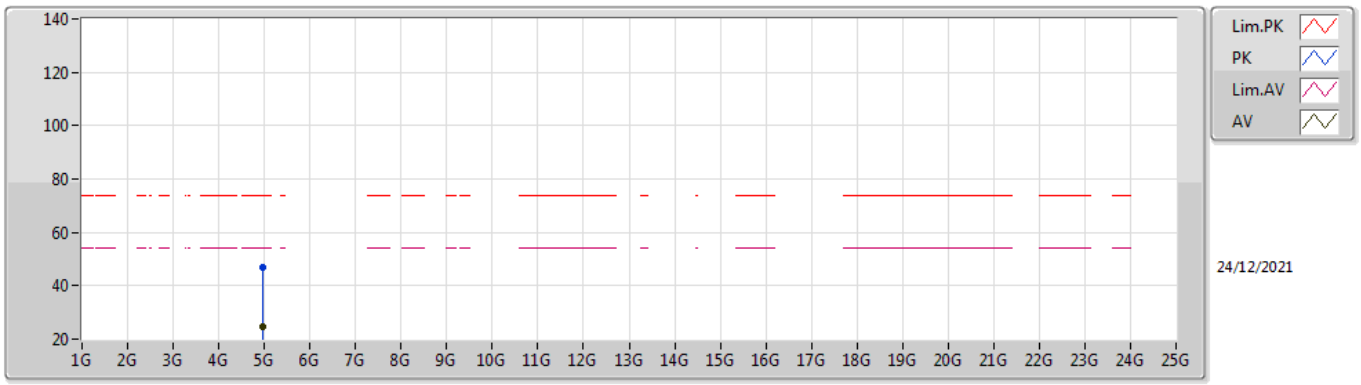
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	81.22	Inf	-Inf	32.11	3	Horizontal	301	1.00	-	49.11	27.50	4.61	-
AV	2.4872G	34.98	54.00	-19.02	32.11	3	Horizontal	301	1.00	-	2.87	27.50	4.61	-
PK	2.4798G	103.72	Inf	-Inf	32.11	3	Horizontal	301	1.00	-	71.61	27.50	4.61	-
PK	2.4872G	57.48	74.00	-16.52	32.11	3	Horizontal	301	1.00	-	25.37	27.50	4.61	-

BT-EDR(3Mbps)

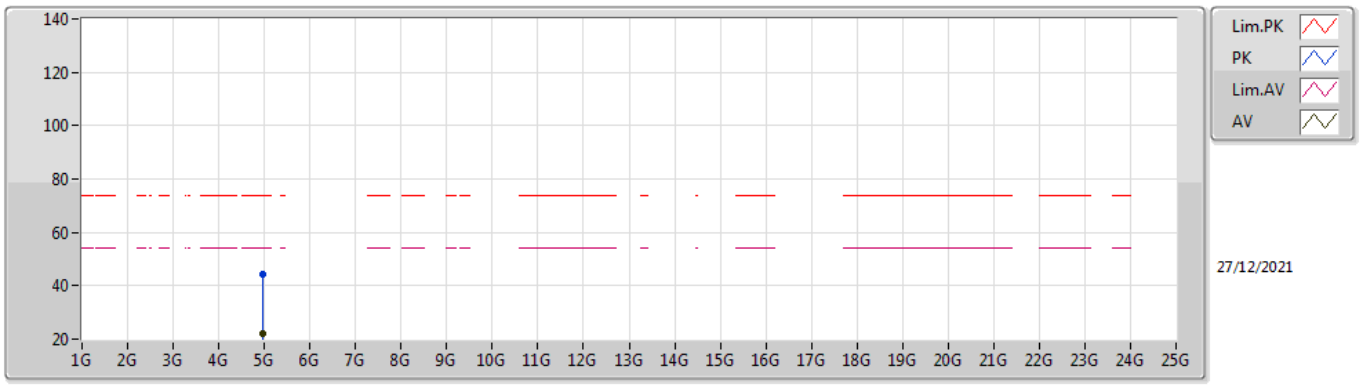
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.95989G	24.46	54.00	-29.54	3.35	3	Vertical	334	1.61	-	21.11	31.34	6.78	34.77
PK	4.95989G	46.96	74.00	-27.04	3.35	3	Vertical	334	1.61	-	43.61	31.34	6.78	34.77

BT-EDR(3Mbps)

2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.96003G	21.94	54.00	-32.06	3.35	3	Horizontal	23	1.50	-	18.59	31.34	6.78	34.77
PK	4.96003G	44.44	74.00	-29.56	3.35	3	Horizontal	23	1.50	-	41.09	31.34	6.78	34.77