FCC Radio Test Report

FCC ID	:	**TTUBPLINKC**
Equipment	:	**Wireless Audio Dongle**
Brand Name	:	**Bang & Olufsen**
Model Name	:	**Beoplay Link C**
Applicant	:	**Bang & Olufsen A/S** **Bang og Olufsen Allé 1, 7600 Struer, Denmark**
Manufacturer	:	**Bang & Olufsen A/S** **Bang og Olufsen Allé 1, 7600 Struer, Denmark**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Sep. 28, 2021, and testing was started from Dec. 13, 2021 and completed on Jan. 03, 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.

Jackson Tsai

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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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR191709FS	01	Initial issue of report	Jan. 12, 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: Ann Hou

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	Channel Number
2400-2483.5	GFSK(1Mbps)	2402-2480	0-39 [40]
2400-2483.5	GFSK(2Mbps)	2404-2478	0-37 [38]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	GFSK(1Mbps)	1	1TX
2.4-2.4835GHz	GFSK(2Mbps)	2	1TX

GFSK(1Mbps)							
Channel	Freq.(MHz)	Channel	Freq.(MHz)	Channel	Freq.(MHz)	Channel	Freq.(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

GFSK(2Mbps)							
Channel	Freq.(MHz)	Channel	Freq.(MHz)	Channel	Freq.(MHz)	Channel	Freq.(MHz)
0	2404	10	2424	20	2444	30	2464
1	2406	11	2426	21	2446	31	2466
2	2408	12	2428	22	2448	32	2468
3	2410	13	2430	23	2450	33	2470
4	2412	14	2432	24	2452	34	2472
5	2414	15	2434	25	2454	35	2474
6	2416	16	2436	26	2456	36	2476
7	2418	17	2438	27	2458	37	2478
8	2420	18	2440	28	2460		
9	2422	19	2442	29	2462		

Note:
- SRD uses a GFSK (1Mbps/2Mbps).
- SRD uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	SUNITEC	BG100C	PCB Antenna	N/A	1

Note 1: The EUT has one antenna.

For SRD 2.4GHz function:

For SRD 2.4G mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From Host system			
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
GFSK(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
GFSK(2Mbps)	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	21.4~22.4°C / 51~55%	13/Dec/2021
RF Conducted	TH01-HY	Barry Hsiao	24~26.9°C / 56~60%	23/Dec/2021~03/Jan/2022
Radiated	03CH02-HY	Lego Lin	20.3~23.5°C / 50~60%	23/Dec/2021
☐ 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.				

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 Version	NxH TestSuite vb8c1fe4b0795cfef0e6de96881610dfcfe724b38

Mode	Power Setting
GFSK(1Mbps)	-
2402MHz	-4
2440MHz	-4
2480MHz	-4
GFSK(2Mbps)	-
2404MHz	-4
2440MHz	-4
2478MHz	-4

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	USB 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)
Non-AFH Mode configuration was found to be the worst case and measured during the test.	

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	USB mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT			V

2.3 Accessories

Accessories				
C-A Adapter	**Brand Name**	Bang & Olufsen	**Model Name**	ADP100AC

Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

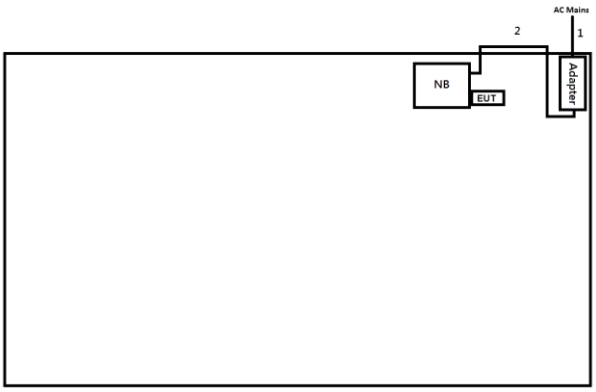
Support Equipment – AC Conduction					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	HP	HSTNN-142C	-	-
2	AC Power Cable	Power sync	AC Power Cable	-	-
3	Adapter	HP	HSTNN-CA40	-	For NB

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	HP	HSTNN-142C	-	-
2	Adapter for NB	HP	HSTNN-CA40	-	-
3	DC Power Supply	GW	GPS-3030DD	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	HP	HSTNN-142C	-	-
2	AC Power Cable	Power sync	AC Power Cable	-	-
3	Adapter	HP	HSTNN-CA40	-	For NB

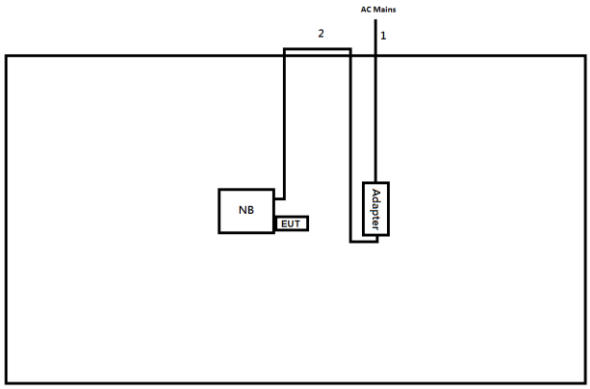
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	DC Power cable	No	1.5

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	DC Power cable	No	1.5

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

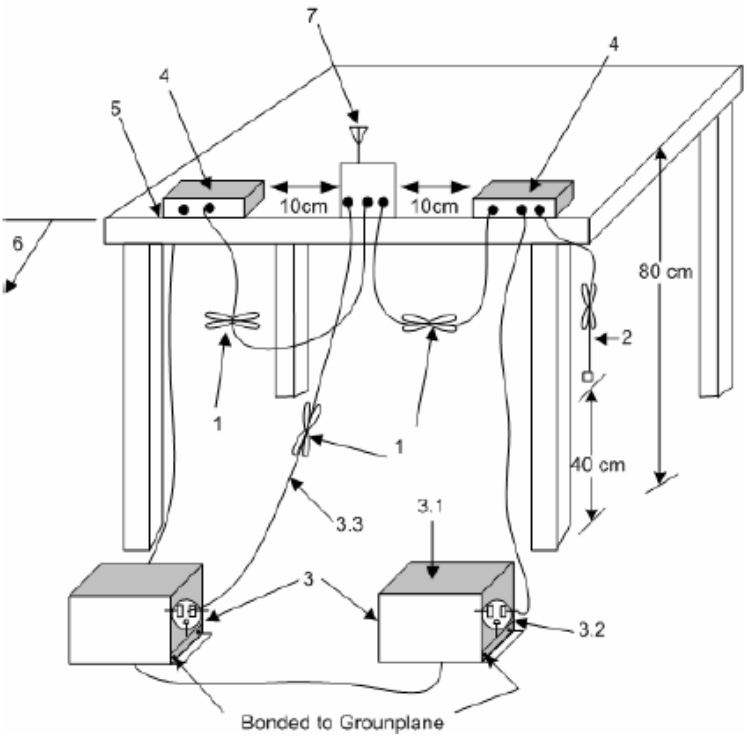
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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	

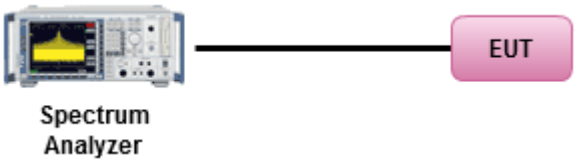
3.2.2 Measuring Instruments

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

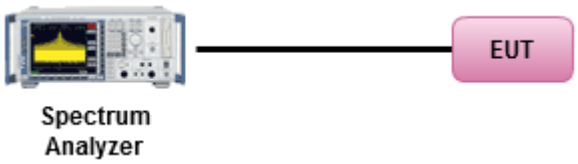
3.4.3 Measuring Instruments

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	

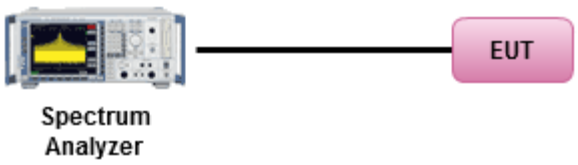
3.5.2 Measuring Instruments

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)


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

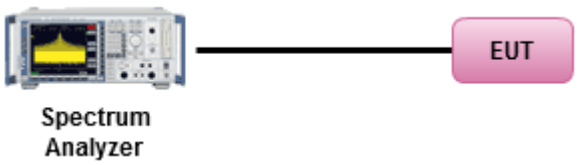
Refer a test equipment and calibration data table in this test report.

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

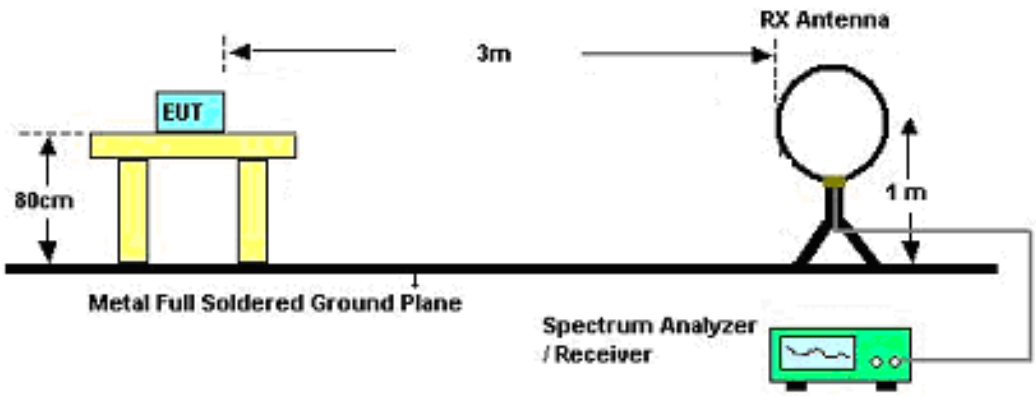
Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions 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

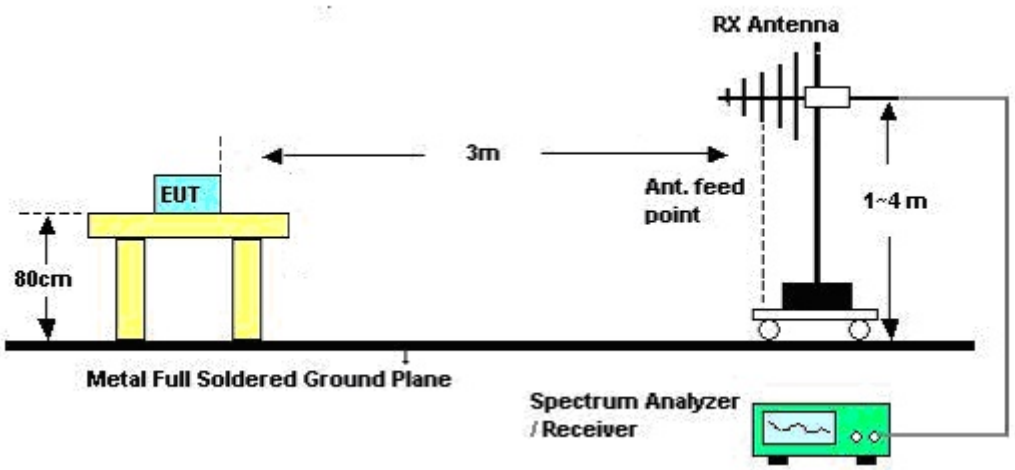
The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

3.7.5 Test Setup

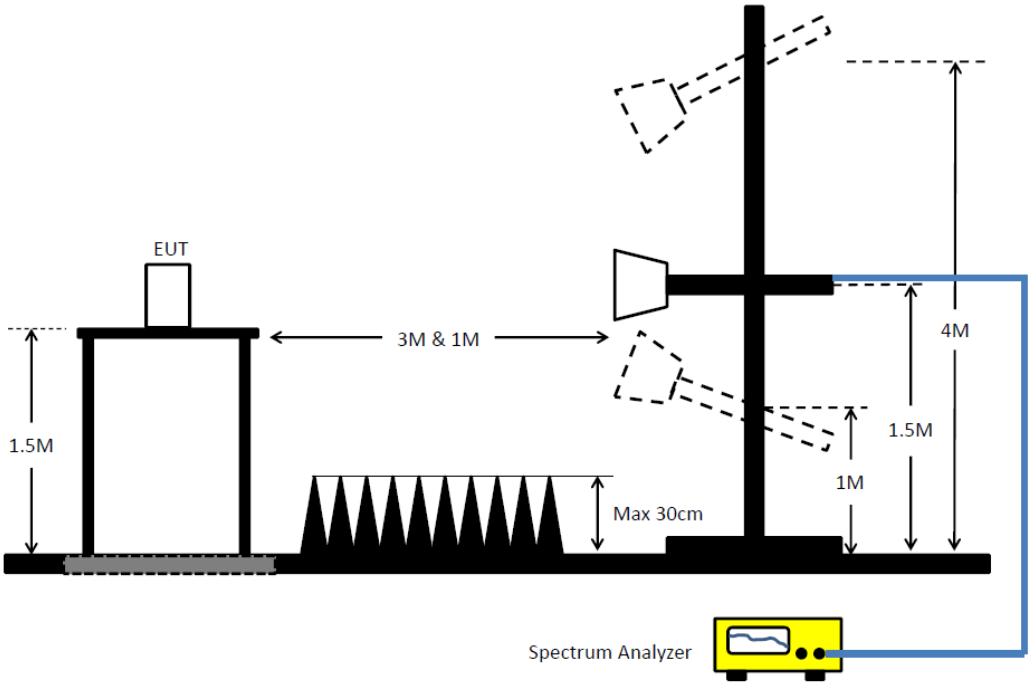
Emissions in Restricted Frequency Bands
9kHz ~30MHz



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
LISN	R&S	ENV216	100003	9kHz ~ 30MHz	15/Dec/2020	14/Dec/2021
RF Cable 5m	TITAN	TITAN	CO04-cable-01	0.1MHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	15/Sep/2021	14/Sep/2022

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Mar/2021	29/Mar/2022
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	23/Feb/2021	22/Feb/2022
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	23/Feb/2021	22/Feb/2022

Instrument for Radiated Test

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
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	01/Aug/2021	31/Jul/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
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	03/Nov/2021	02/Nov/2022
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	04/Sep/2021	03/Sep/2022
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	04/Jun/2021	03/Jun/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
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192 /4	1GHz~40GHz	06/Apr/2021	05/Apr/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	11/Mar/2021	10/Mar/2022
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	09/Mar/2021	08/Mar/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

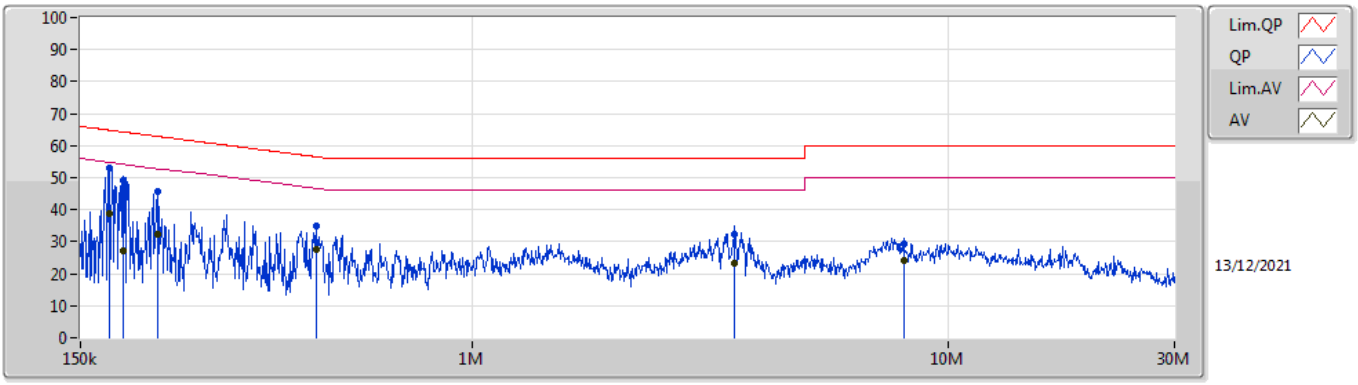
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	172.493k	53.00	64.83	-11.83	Line

Mode Configure

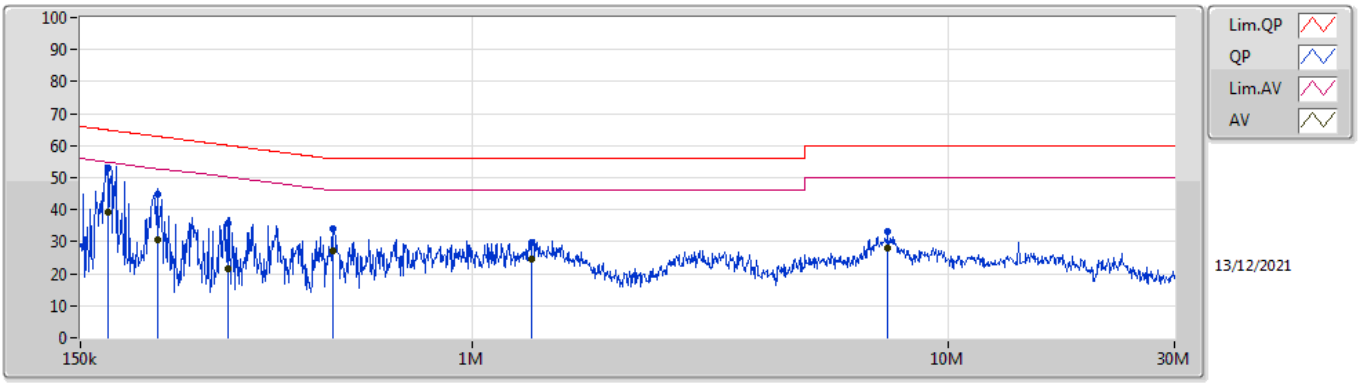
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	172.493k	53.00	64.83	-11.83	Line	-
Mode 1	Pass	AV	172.493k	38.83	54.83	-16.00	Line	-
Mode 1	Pass	QP	184.605k	49.05	64.28	-15.23	Line	-
Mode 1	Pass	AV	184.605k	27.20	54.28	-27.08	Line	-
Mode 1	Pass	QP	217.434k	45.53	62.92	-17.39	Line	-
Mode 1	Pass	AV	217.434k	32.25	52.92	-20.67	Line	-
Mode 1	Pass	QP	471.701k	34.77	56.48	-21.71	Line	-
Mode 1	Pass	AV	471.701k	27.60	46.48	-18.88	Line	-
Mode 1	Pass	QP	3.57M	32.26	56.00	-23.74	Line	-
Mode 1	Pass	AV	3.57M	23.24	46.00	-22.76	Line	-
Mode 1	Pass	QP	8.092M	29.13	60.00	-30.87	Line	-
Mode 1	Pass	AV	8.092M	24.21	50.00	-25.79	Line	-
Mode 1	Pass	QP	171.121k	52.87	64.91	-12.04	Neutral	-
Mode 1	Pass	AV	171.121k	39.20	54.91	-15.71	Neutral	-
Mode 1	Pass	QP	217.434k	44.72	62.92	-18.20	Neutral	-
Mode 1	Pass	AV	217.434k	30.73	52.92	-22.19	Neutral	-
Mode 1	Pass	QP	306.497k	35.66	60.07	-24.41	Neutral	-
Mode 1	Pass	AV	306.497k	21.76	50.07	-28.31	Neutral	-
Mode 1	Pass	QP	510.906k	34.10	56.00	-21.90	Neutral	-
Mode 1	Pass	AV	510.906k	27.29	46.00	-18.71	Neutral	-
Mode 1	Pass	QP	1.337M	29.91	56.00	-26.09	Neutral	-
Mode 1	Pass	AV	1.337M	24.47	46.00	-21.53	Neutral	-
Mode 1	Pass	QP	7.471M	33.15	60.00	-26.85	Neutral	-
Mode 1	Pass	AV	7.471M	28.18	50.00	-21.82	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	172.493k	53.00	64.83	-11.83	19.64	Line	-	33.36	9.69	0.04	9.91
AV	172.493k	38.83	54.83	-16.00	19.64	Line	-	19.19	9.69	0.04	9.91
QP	184.605k	49.05	64.28	-15.23	19.63	Line	-	29.42	9.68	0.04	9.91
AV	184.605k	27.20	54.28	-27.08	19.63	Line	-	7.57	9.68	0.04	9.91
QP	217.434k	45.53	62.92	-17.39	19.63	Line	-	25.90	9.68	0.04	9.91
AV	217.434k	32.25	52.92	-20.67	19.63	Line	-	12.62	9.68	0.04	9.91
QP	471.701k	34.77	56.48	-21.71	19.64	Line	-	15.13	9.67	0.06	9.91
AV	471.701k	27.60	46.48	-18.88	19.64	Line	-	7.96	9.67	0.06	9.91
QP	3.57M	32.26	56.00	-23.74	19.75	Line	-	12.51	9.70	0.13	9.92
AV	3.57M	23.24	46.00	-22.76	19.75	Line	-	3.49	9.70	0.13	9.92
QP	8.092M	29.13	60.00	-30.87	19.89	Line	-	9.24	9.77	0.19	9.93
AV	8.092M	24.21	50.00	-25.79	19.89	Line	-	4.32	9.77	0.19	9.93

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	171.121k	52.87	64.91	-12.04	19.64	Neutral	-	33.23	9.69	0.04	9.91
AV	171.121k	39.20	54.91	-15.71	19.64	Neutral	-	19.56	9.69	0.04	9.91
QP	217.434k	44.72	62.92	-18.20	19.63	Neutral	-	25.09	9.68	0.04	9.91
AV	217.434k	30.73	52.92	-22.19	19.63	Neutral	-	11.10	9.68	0.04	9.91
QP	306.497k	35.66	60.07	-24.41	19.63	Neutral	-	16.03	9.67	0.05	9.91
AV	306.497k	21.76	50.07	-28.31	19.63	Neutral	-	2.13	9.67	0.05	9.91
QP	510.906k	34.10	56.00	-21.90	19.65	Neutral	-	14.45	9.67	0.07	9.91
AV	510.906k	27.29	46.00	-18.71	19.65	Neutral	-	7.64	9.67	0.07	9.91
QP	1.337M	29.91	56.00	-26.09	19.69	Neutral	-	10.22	9.68	0.09	9.92
AV	1.337M	24.47	46.00	-21.53	19.69	Neutral	-	4.78	9.68	0.09	9.92
QP	7.471M	33.15	60.00	-26.85	19.89	Neutral	-	13.26	9.78	0.18	9.93
AV	7.471M	28.18	50.00	-21.82	19.89	Neutral	-	8.29	9.78	0.18	9.93

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
GFSK(1Mbps)	1.1M	1.023M	1M02F1D	1.093M	1.011M
GFSK(2Mbps)	2.103M	2.003M	2M00F1D	2.058M	1.998M

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

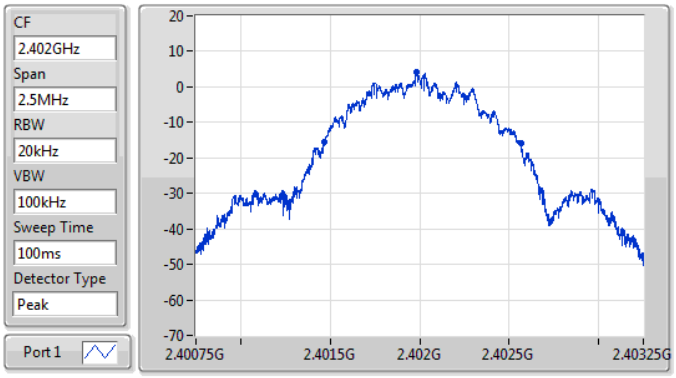
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
GFSK(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.098M	1.014M
2440MHz	Pass	Inf	1.093M	1.011M
2480MHz	Pass	Inf	1.1M	1.023M
GFSK(2Mbps)	-	-	-	-
2404MHz	Pass	Inf	2.093M	1.998M
2440MHz	Pass	Inf	2.103M	2.002M
2478MHz	Pass	Inf	2.058M	2.003M

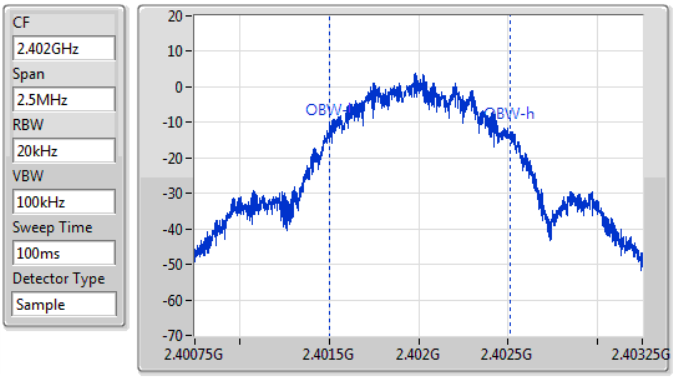
Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

GFSK(1Mbps) EBW-FS

2402MHz

24/12/2021



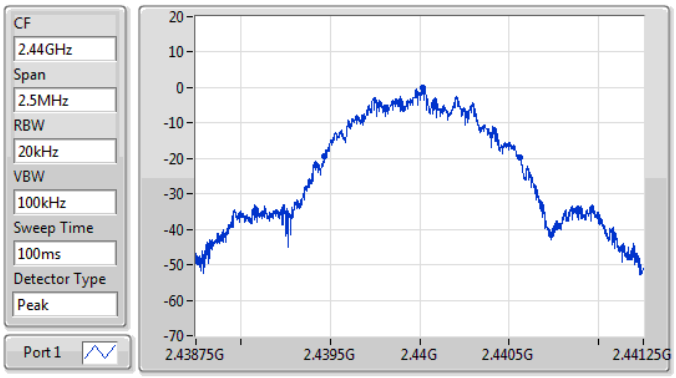


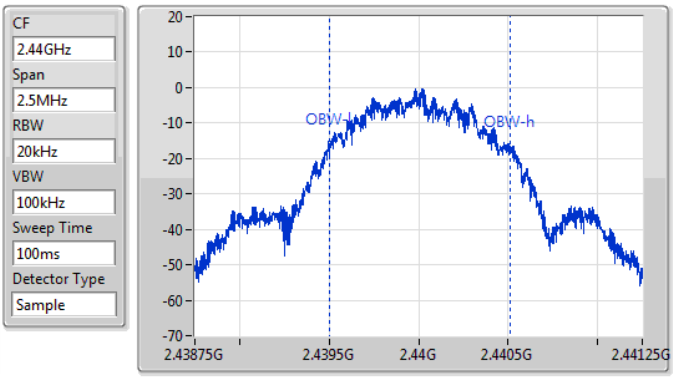
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.098M	2.401468G	2.402565G	1.014M	2.401499G	2.402513G	Inf	1

GFSK(1Mbps) EBW-FS

2440MHz

28/12/2021



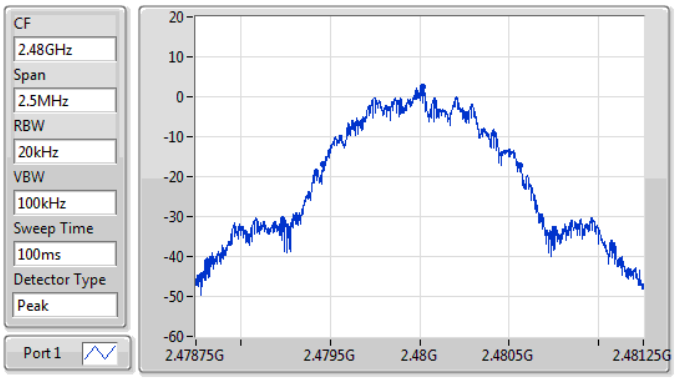


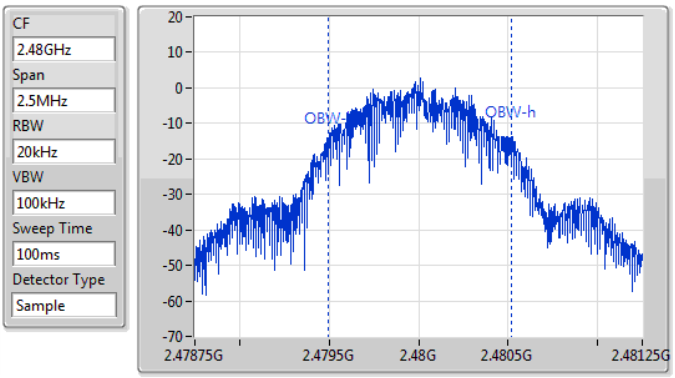
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.093M	2.43947G	2.440563G	1.011M	2.439502G	2.440512G	Inf	1

GFSK(1Mbps) EBW-FS

2480MHz

24/12/2021



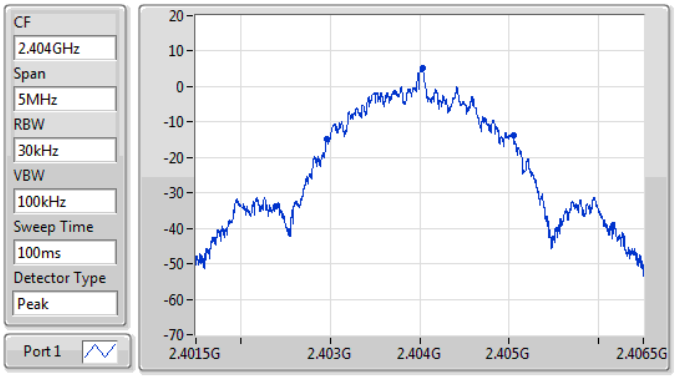


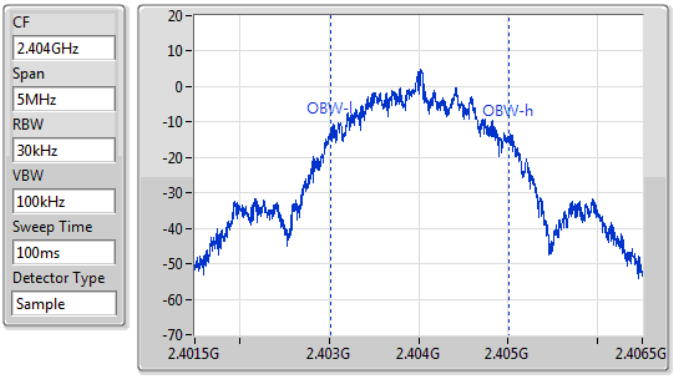
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.1M	2.479464G	2.480564G	1.023M	2.479495G	2.480518G	Inf	1

GFSK(2Mbps) EBW-FS

2404MHz

28/12/2021



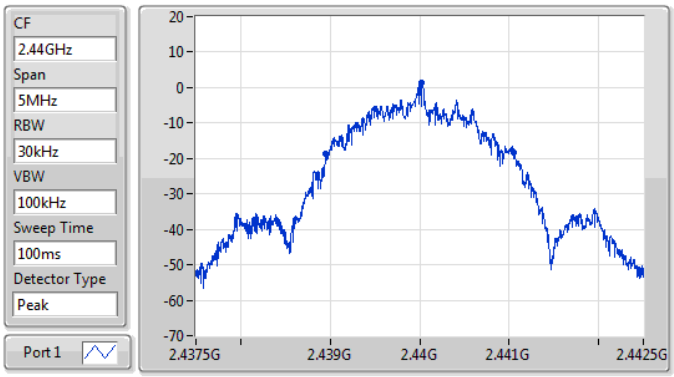


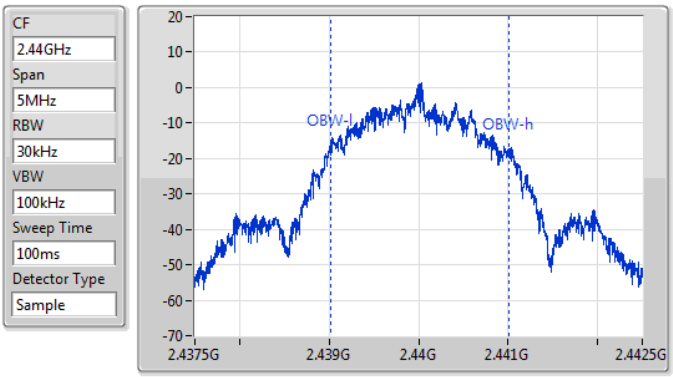
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.093M	2.402963G	2.405055G	1.998M	2.403013G	2.405011G	Inf	1

GFSK(2Mbps) EBW-FS

2440MHz

28/12/2021



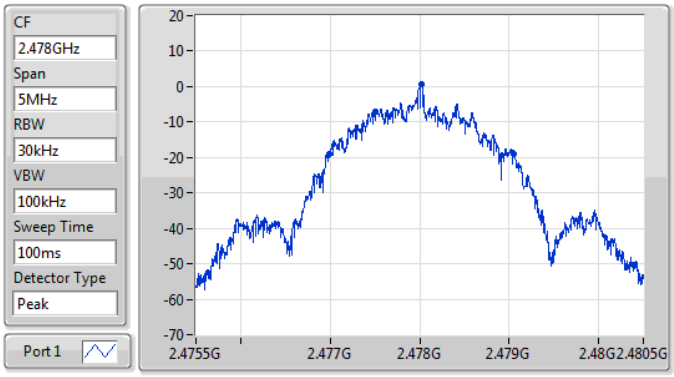


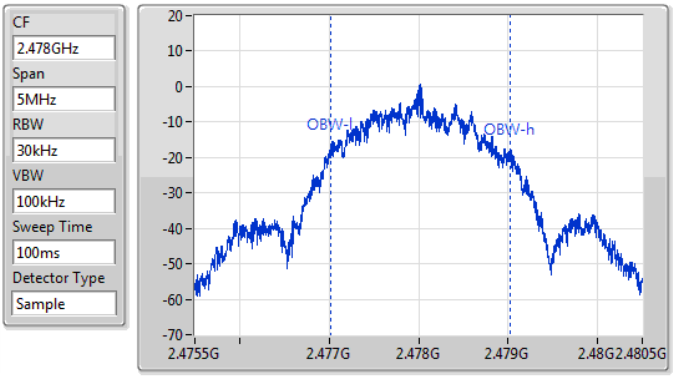
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.103M	2.438955G	2.441058G	2.002M	2.439014G	2.441016G	Inf	1

GFSK(2Mbps) EBW-FS

2478MHz

28/12/2021





20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.058M	2.476995G	2.479053G	2.003M	2.477014G	2.479017G	Inf	1

Summary

Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
GFSK(1Mbps)	1.9975M	1.99M
GFSK(2Mbps)	2.004M	1.996M

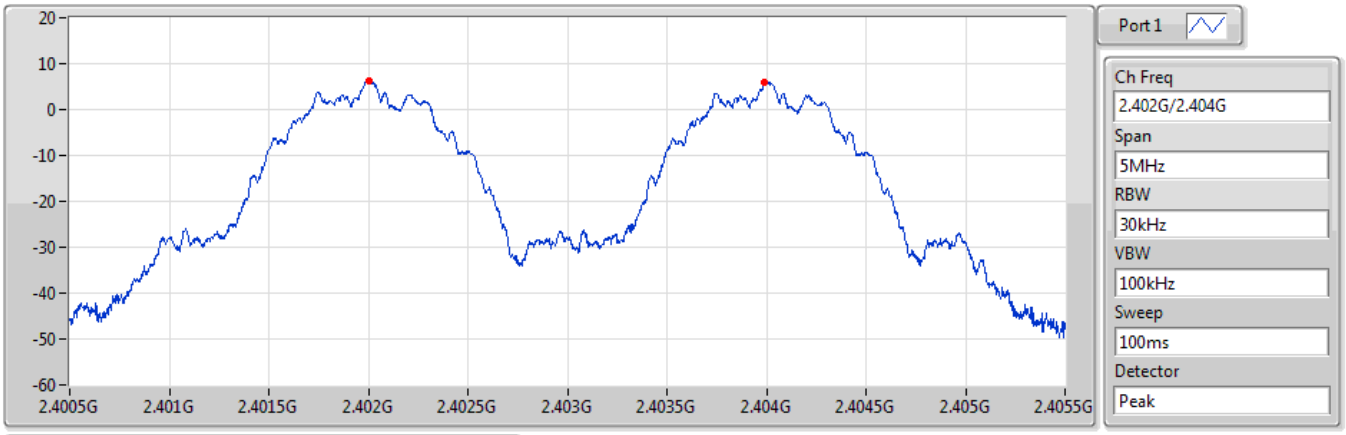
Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
GFSK(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402003G	2.403993G	1.99M	731.268k
2440MHz	Pass	2.44G	2.441998G	1.9975M	727.938k
2480MHz	Pass	2.478005G	2.48G	1.995M	732.6k
GFSK(2Mbps)	-	-	-	-	-
2404MHz	Pass	2.404028G	2.406029G	2.001M	1.393938M
2440MHz	Pass	2.440022G	2.442026G	2.004M	1.400598M
2478MHz	Pass	2.476027G	2.478023G	1.996M	1.370628M

GFSK(1Mbps) Channel Separation-FS

2.402G/2.404GHz

28/12/2021

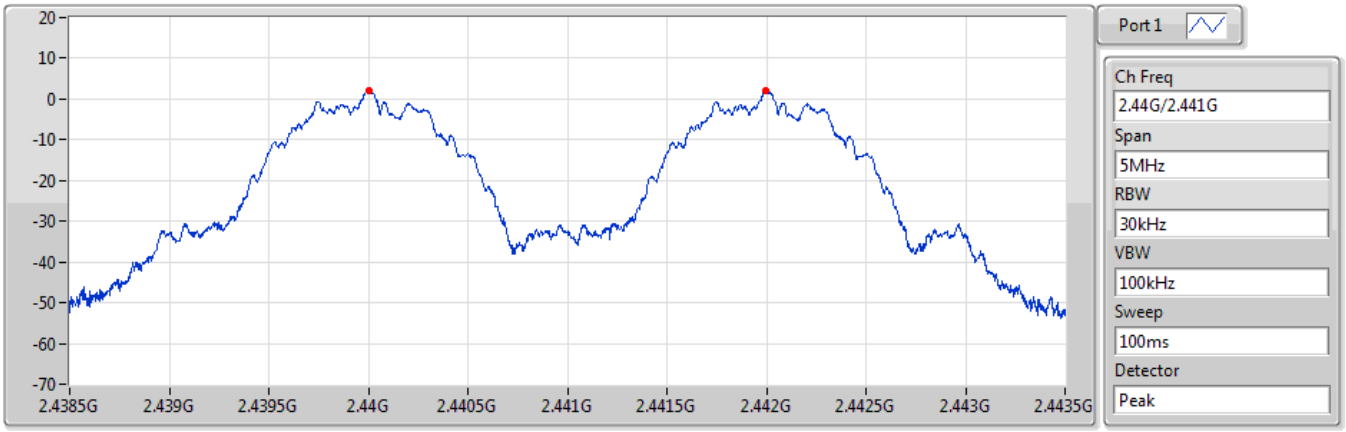


Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402003G	2.403993G	1.99M	731.268k

GFSK(1Mbps) Channel Separation-FS

2.44G/2.441GHz

28/12/2021

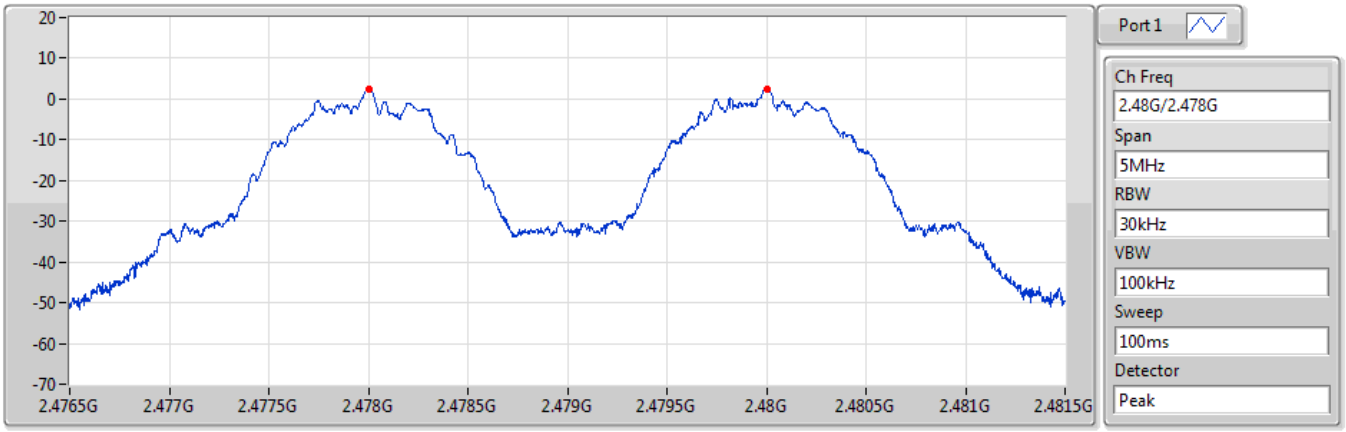


Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.44G	2.441998G	1.9975M	727.938k

GFSK(1Mbps) Channel Separation-FS

2.48G/2.478GHz

28/12/2021

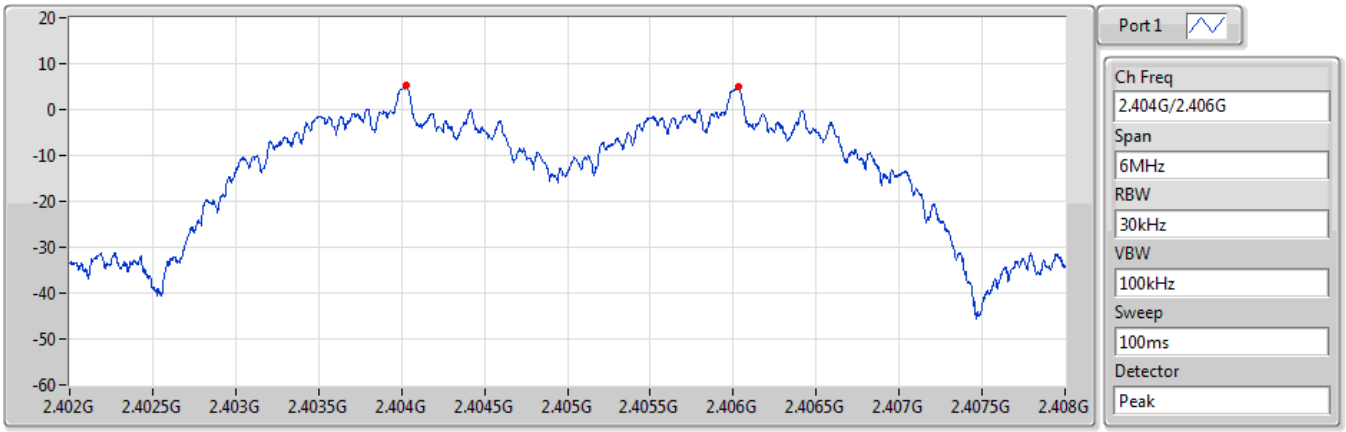


Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478005G	2.48G	1.995M	732.6k

GFSK(2Mbps) Channel Separation-FS

2.404G/2.406GHz

28/12/2021



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.404028G	2.406029G	2.001M	1.393938M

GFSK(2Mbps) Channel Separation-FS

2.44G/2.442GHz

28/12/2021

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440022G	2.442026G	2.004M	1.400598M

GFSK(2Mbps) Channel Separation-FS

2.478G/2.476GHz

03/01/2022

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.476027G	2.478023G	1.996M	1.370628M

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
GFSK(1Mbps)	11.91	0.01552
GFSK(2Mbps)	10.95	0.01245

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
GFSK(1Mbps)	-	-	-	-
2402MHz	Pass	1.00	11.91	21.00
2440MHz	Pass	1.00	11.42	21.00
2480MHz	Pass	1.00	11.77	21.00
GFSK(2Mbps)	-	-	-	-
2404MHz	Pass	1.00	10.95	21.00
2440MHz	Pass	1.00	10.75	21.00
2478MHz	Pass	1.00	10.25	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
GFSK(1Mbps)	11.75	0.01496
GFSK(2Mbps)	9.19	0.00830

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
GFSK(1Mbps)	-	-	-	-
2402MHz	Pass	1.00	11.75	21.00
2440MHz	Pass	1.00	11.31	21.00
2480MHz	Pass	1.00	11.54	21.00
GFSK(2Mbps)	-	-	-	-
2404MHz	Pass	1.00	9.08	21.00
2440MHz	Pass	1.00	9.19	21.00
2478MHz	Pass	1.00	8.99	21.00

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

Summary

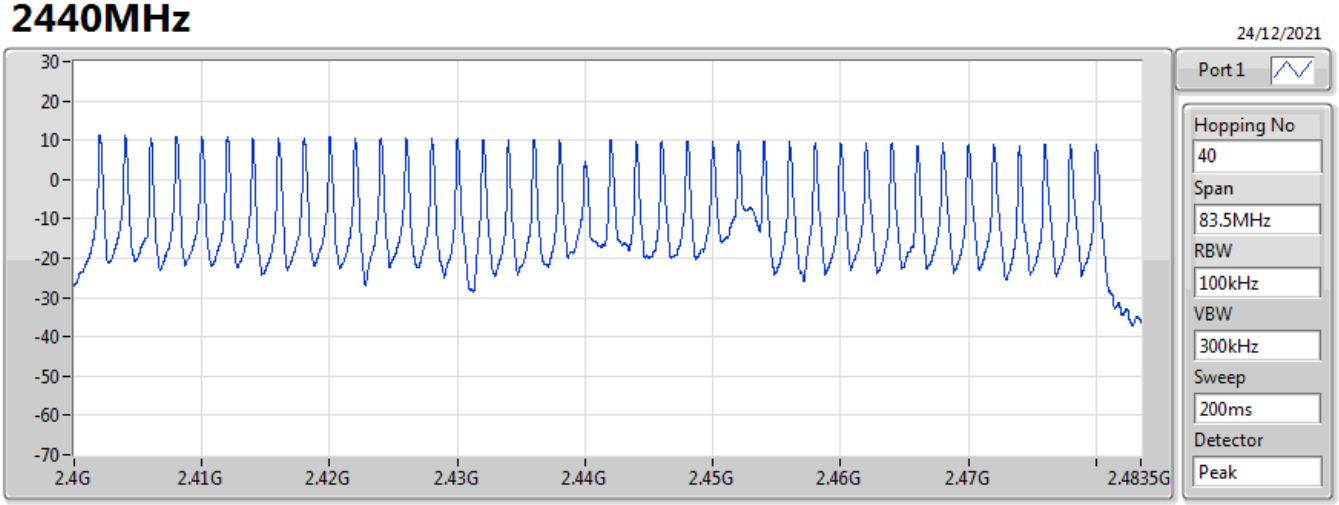
Mode	Max-Hop No
2.4-2.4835GHz	-
GFSK(1Mbps)	40
GFSK(2Mbps)	38

Result

Mode	Result	Hopping No	Limit
GFSK(1Mbps)	-	-	-
2440MHz	Pass	40	15
GFSK(2Mbps)	-	-	-
2440MHz	Pass	38	15

GFSK(1Mbps) Hopping-FS

2440MHz

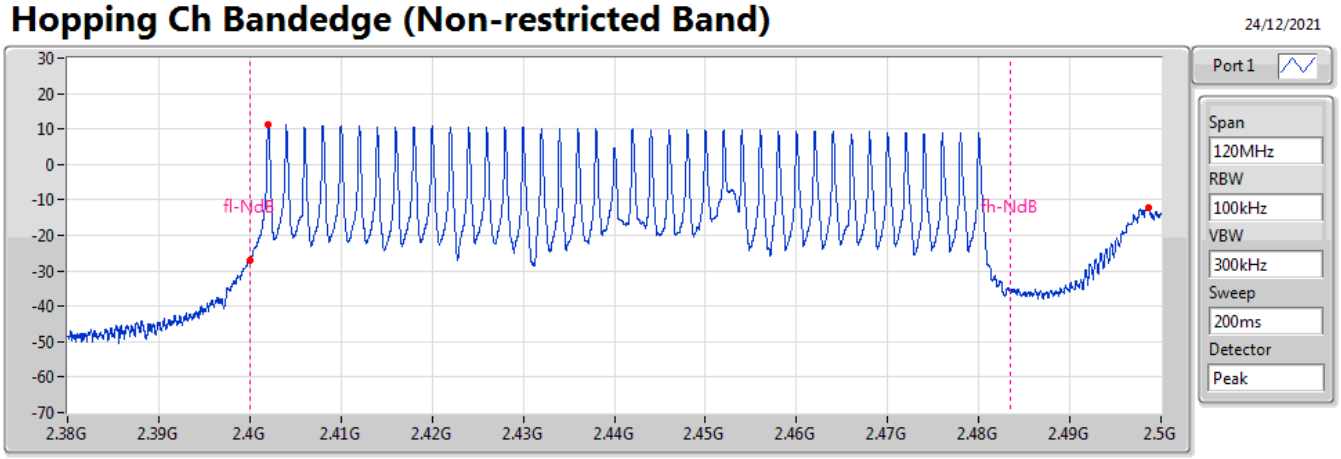


Hopping No	Limit
40	15

GFSK(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)



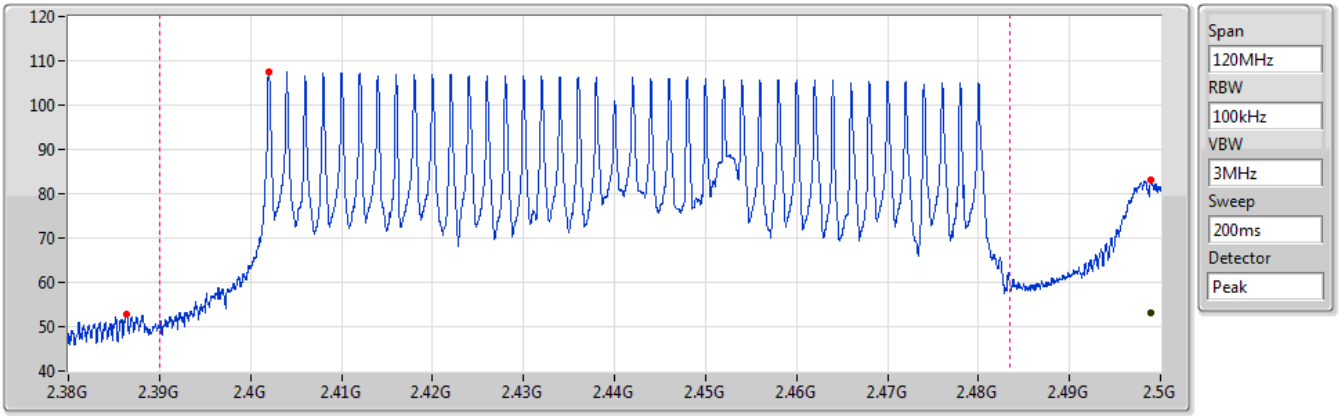
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-8.83	2.40199G	11.17	2.399995G	-26.85	2.49868G	-12.17

GFSK(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

24/12/2021



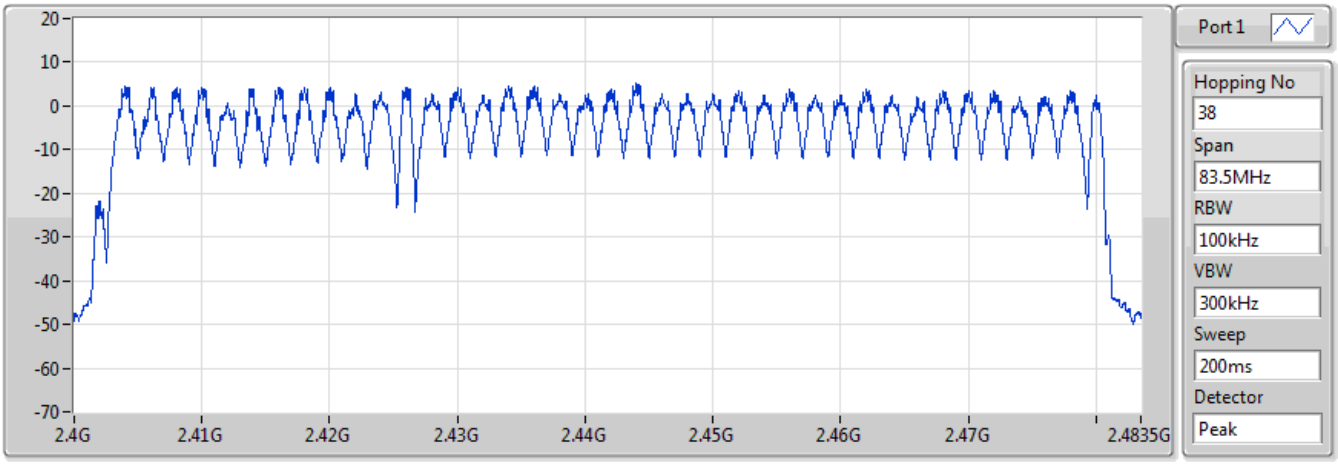
Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.40199G	107.4	2.386375G	52.87	22.77	2.498995G	83.15	53.05	74	54	3.125	-30.1

GFSK(2Mbps)

Hopping-FS

2440MHz

23/12/2021



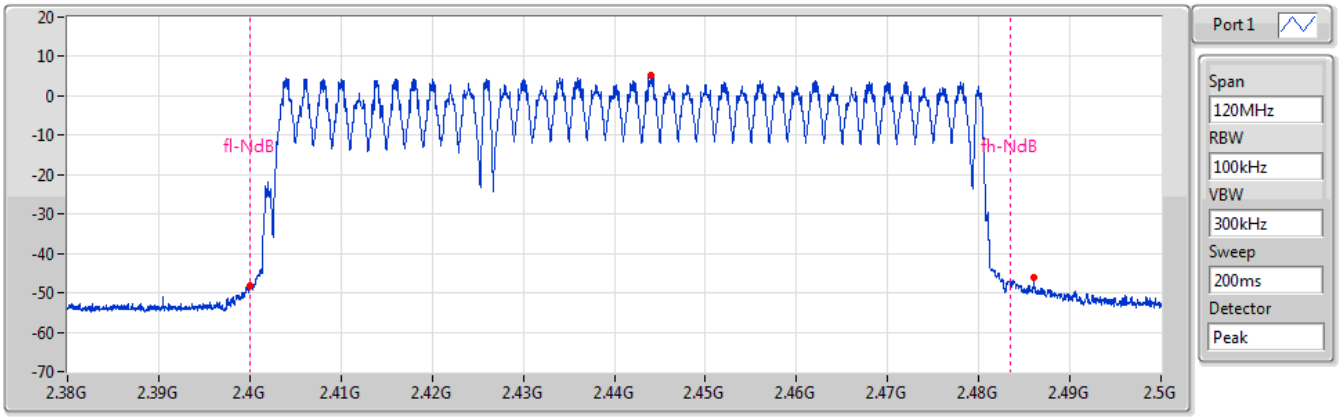
Hopping No	Limit
38	15

GFSK(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

23/12/2021



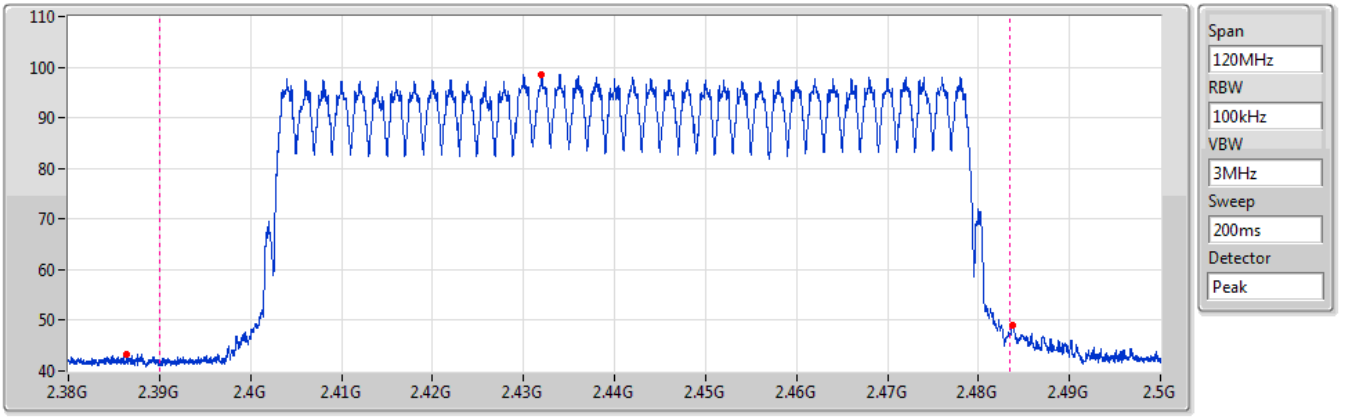
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.73	2.444005G	5.27	2.39998G	-48.19	2.486035G	-45.93

GFSK(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

23/12/2021



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)
2.432005G	98.57	2.38642G	43.4	13.3	2.483815G	49.13	19.03	74	54	3.125	-30.1

Summary

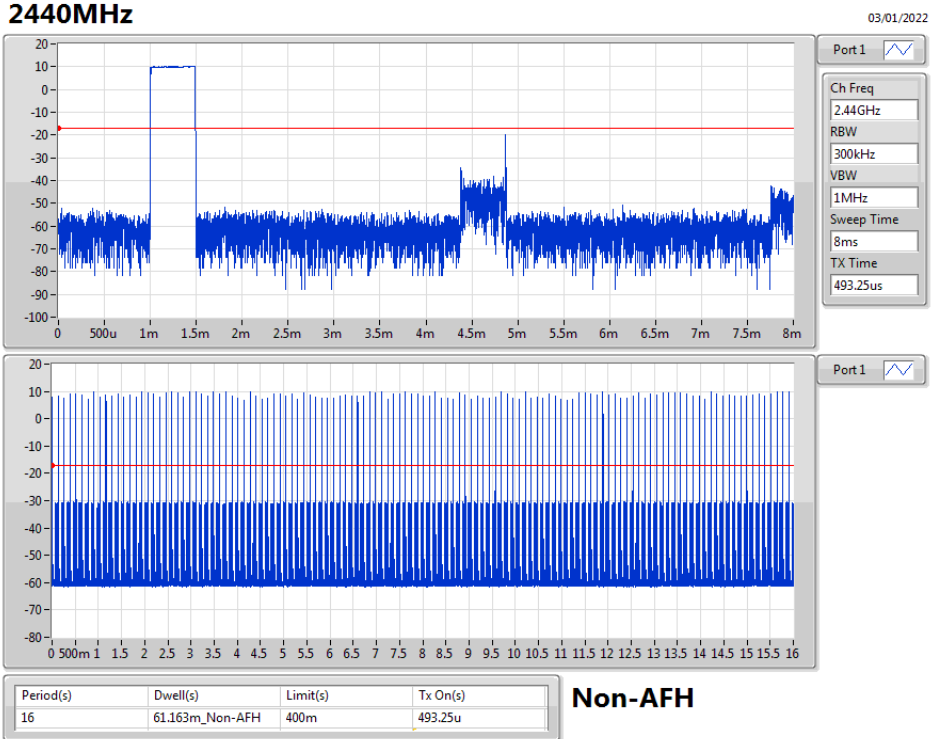
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
GFSK(1Mbps)	61.163m_Non-AFH
GFSK(2Mbps)	76.5765m_AFH

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
GFSK(1Mbps)	-	-	-	-	-
2440MHz	Pass	16	61.163m_Non-AFH	400m	493.25u
GFSK(2Mbps)	-	-	-	-	-
2440MHz	Pass	15.2	76.5765m_AFH	400m	994.5u

GFSK(1Mbps) **Dwell-FS**

2440MHz

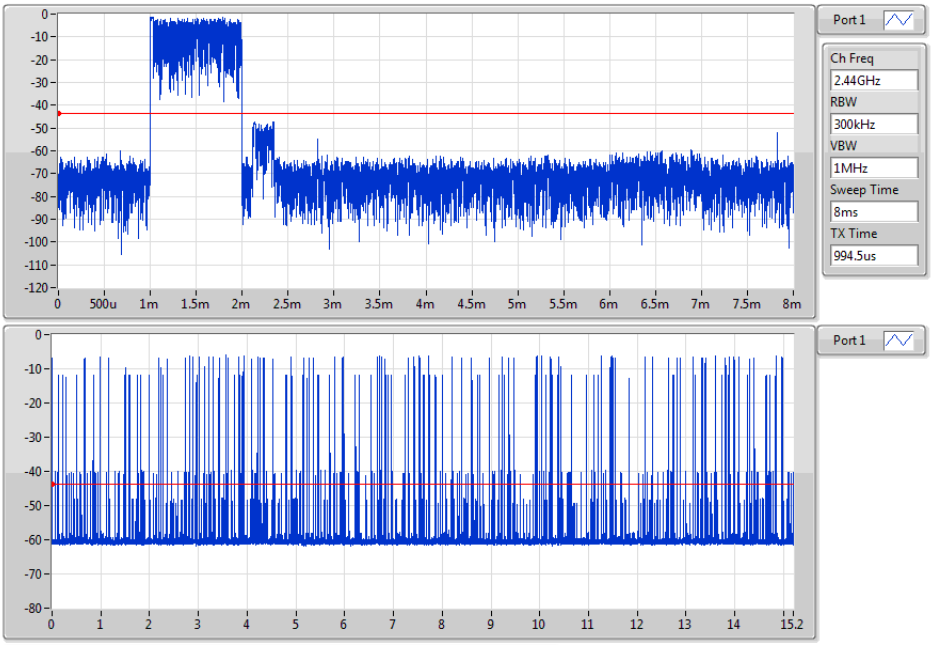


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
16	61.163m_Non-AFH	400m	493.25u

Non-AFH

GFSK(2Mbps) **Dwell-FS**

2440MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
15.2	76.5765m_AFH	400m	994.5u

AFH

Summary

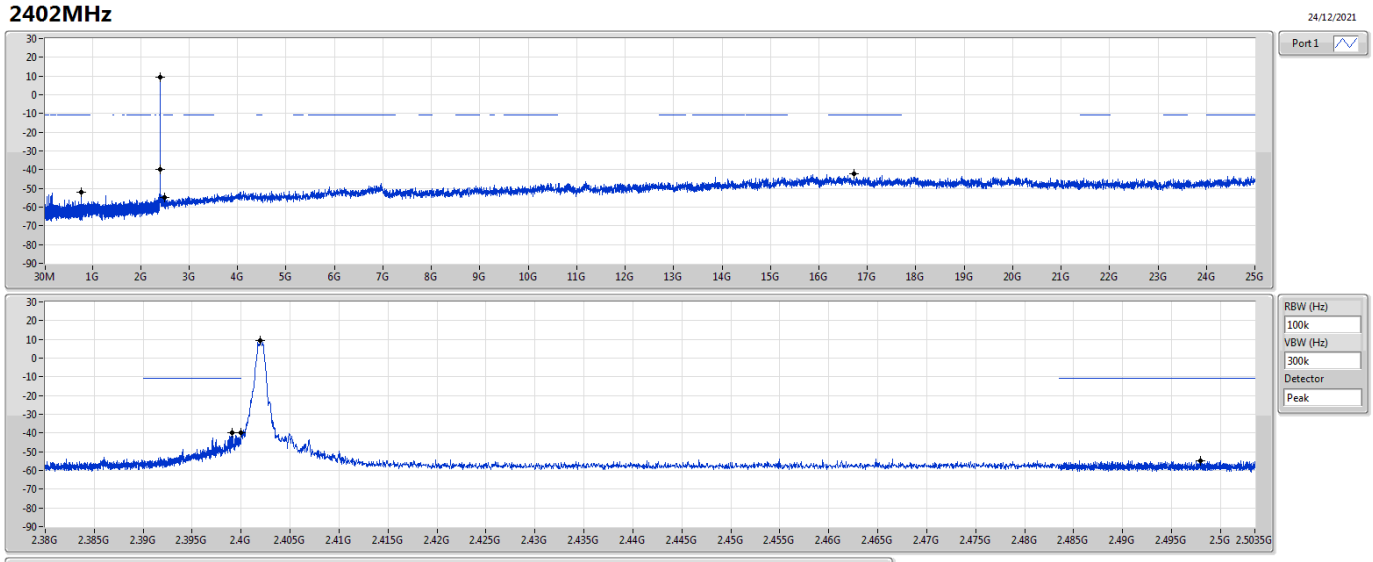
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GFSK(1Mbps)	Pass	2.40196G	9.17	-10.83	767.9M	-52.06	2.39908G	-39.78	2.4G	-39.87	2.49796G	-54.61	16.72129G	-42.33	1
GFSK(2Mbps)	Pass	2.40401G	8.69	-11.31	767.9M	-52.38	2.39993G	-44.85	2.4G	-46.76	2.49714G	-53.87	16.24886G	-43.05	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
GFSK(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	9.17	-10.83	767.9M	-52.06	2.39908G	-39.78	2.4G	-39.87	2.49796G	-54.61	16.72129G	-42.33	1
2440MHz	Pass	2.44004G	7.85	-12.15	99.62M	-53.21	2.39761G	-54.58	2.4835G	-57.97	2.50157G	-54.46	16.26573G	-42.82	1
2480MHz	Pass	2.48003G	8.19	-11.81	767.9M	-52.18	2.39856G	-55.14	2.4835G	-46.65	2.48539G	-44.85	16.60318G	-42.87	1
GFSK(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	2.40401G	8.69	-11.31	767.9M	-52.38	2.39993G	-44.85	2.4G	-46.76	2.49714G	-53.87	16.24886G	-43.05	1
2440MHz	Pass	2.44G	8.15	-11.85	2.09183G	-54.07	2.39107G	-54.48	2.4G	-56.51	2.48665G	-54.37	24.56694G	-42.35	1
2478MHz	Pass	2.47803G	6.86	-13.14	165.71M	-52.26	2.3936G	-55.22	2.4835G	-50.93	2.48366G	-49.13	16.29948G	-42.99	1

GFSK(1Mbps) **CSENdB-FS**

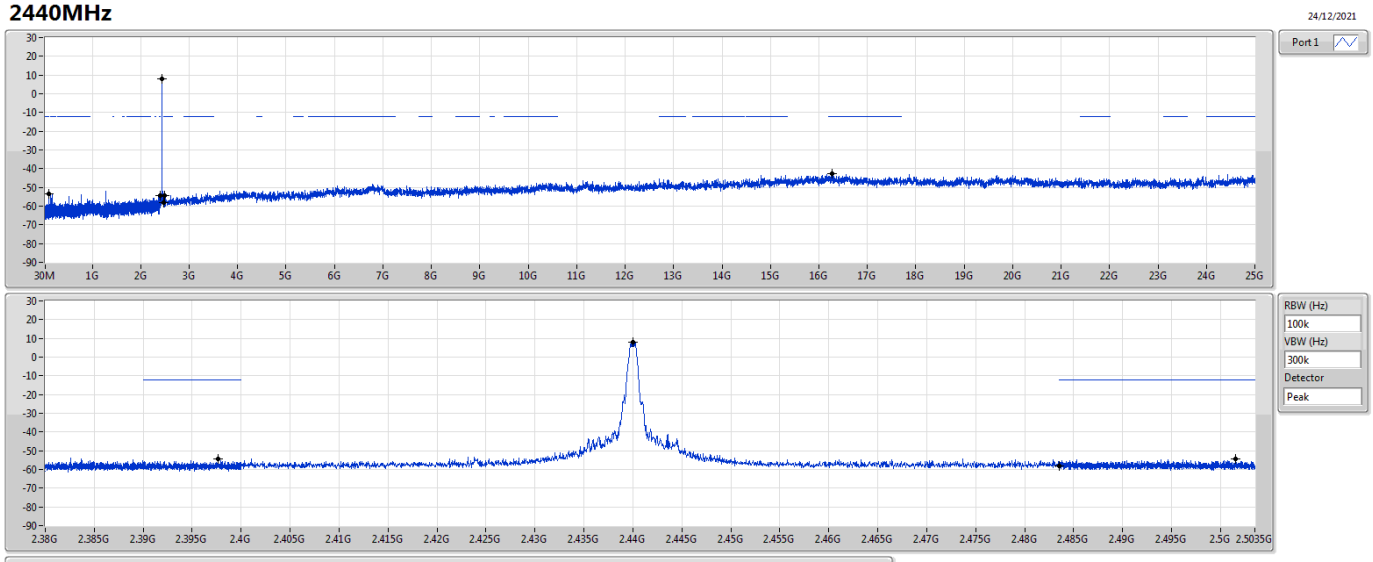
2402MHz



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
2.40196G	9.17	-10.83	767.9M	-52.06	2.39908G	-39.78	2.4G	-39.87	2.49796G	-54.61	16.72129G	-42.33	1

GFSK(1Mbps) **CSENdB-FS**

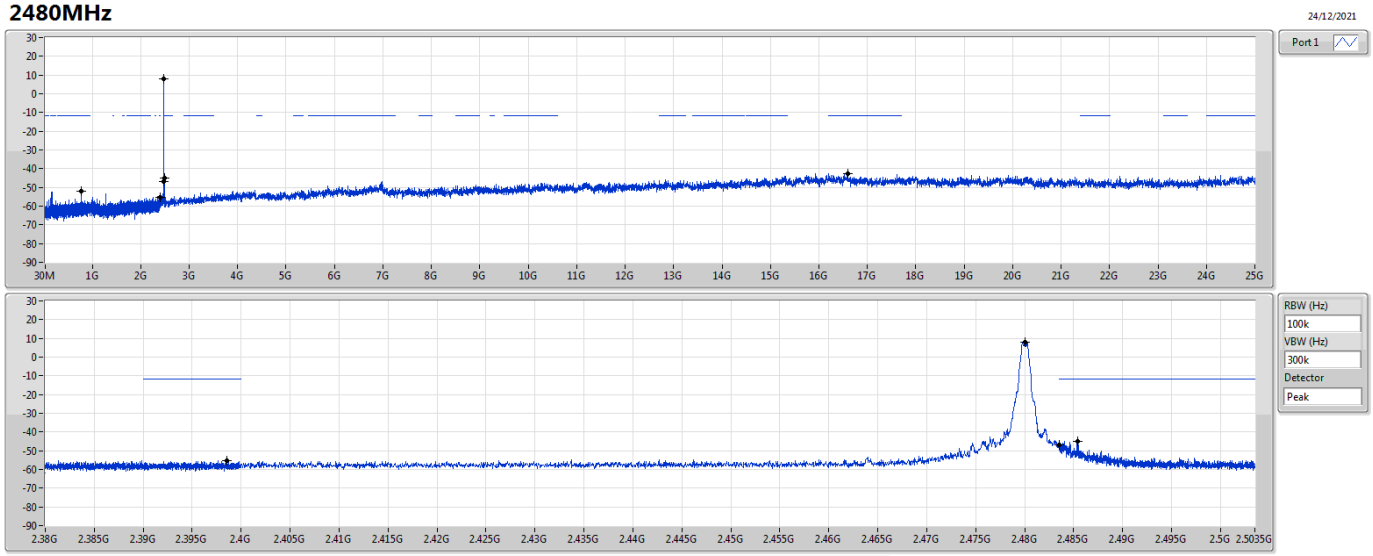
2440MHz



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	7.85	-12.15	99.62M	-53.21	2.39761G	-54.58	2.4835G	-57.97	2.50157G	-54.46	16.26573G	-42.82	1

GFSK(1Mbps) **CSENdB-FS**

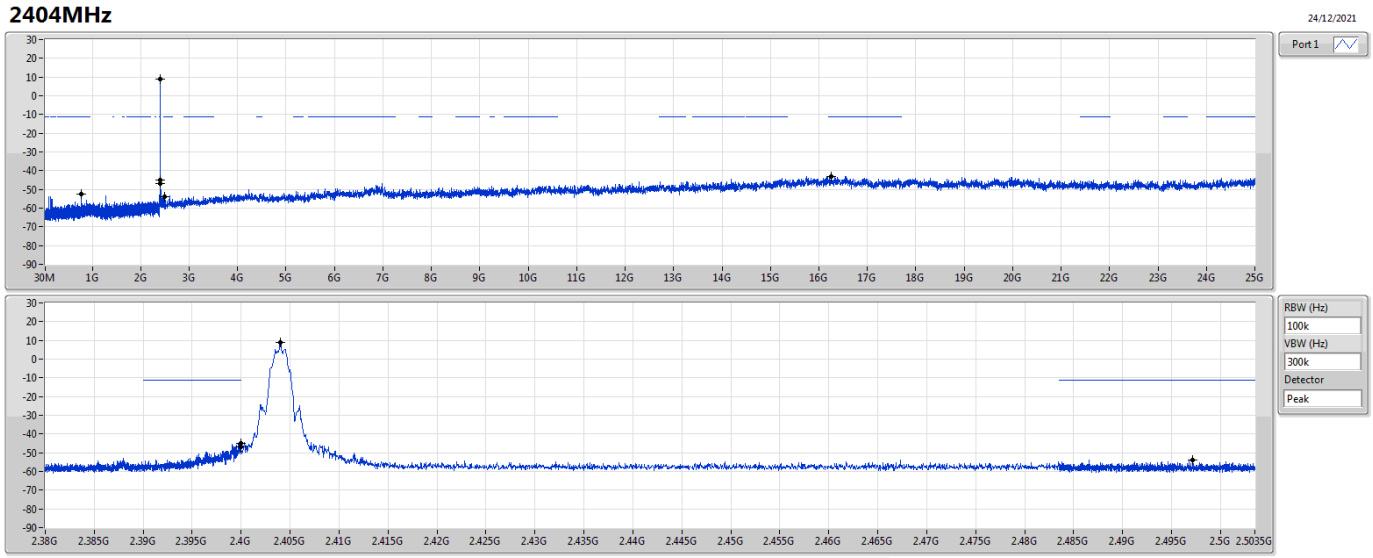
2480MHz



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	8.19	-11.81	767.9M	-52.18	2.39856G	-55.14	2.4835G	-46.65	2.48539G	-44.85	16.60318G	-42.87	1

GFSK(2Mbps) **CSENdB-FS**

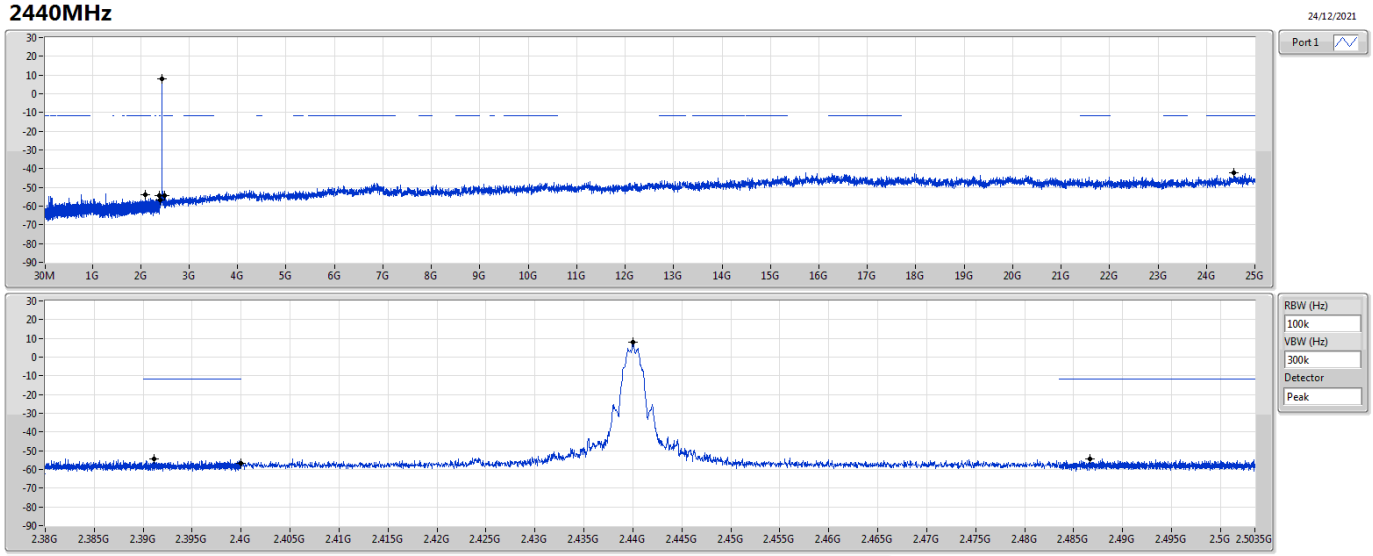
2404MHz



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
2.40401G	8.69	-11.31	767.9M	-52.38	2.39993G	-44.85	2.4G	-46.76	2.49714G	-53.87	16.24886G	-43.05	1

GFSK(2Mbps) **CSENdB-FS**

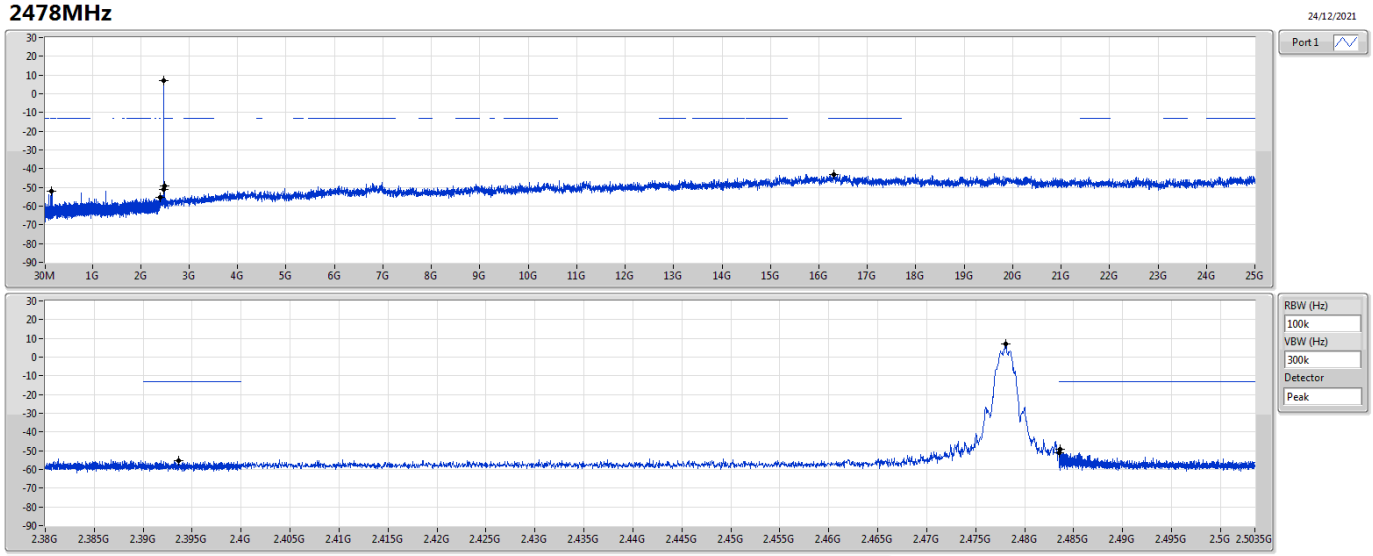
2440MHz



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
2.44G	8.15	-11.85	2.09183G	-54.07	2.39107G	-54.48	2.4G	-56.51	2.48665G	-54.37	24.56694G	-42.35	1

GFSK(2Mbps) **CSENdB-FS**

2478MHz



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
2.47803G	6.86	-13.14	165.71M	-52.26	2.3936G	-55.22	2.4835G	-50.93	2.48366G	-49.13	16.29948G	-42.99	1

Summary

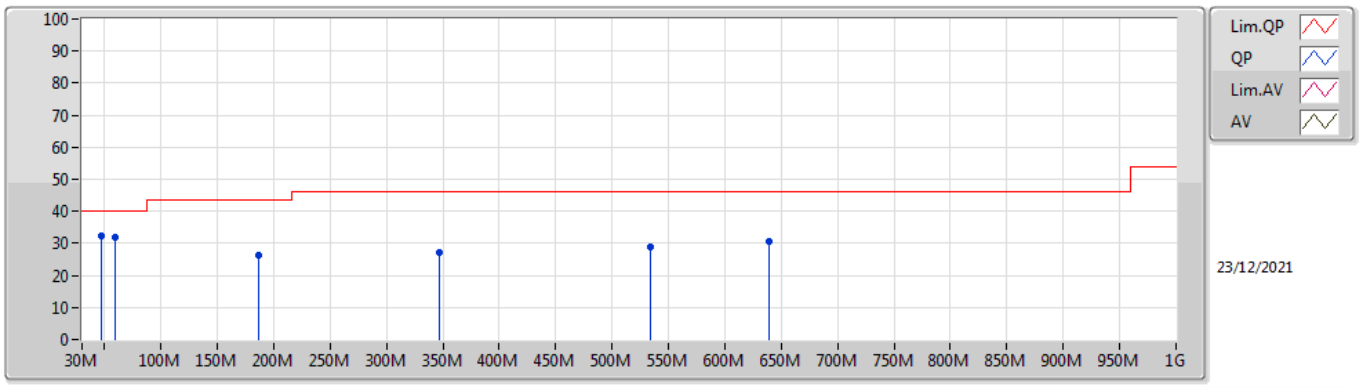
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
GFSK(2Mbps)	Pass	PK	47.46M	32.23	40.00	-7.77	3	Vertical	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
GFSK(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	47.46M	32.23	40.00	-7.77	3	Vertical	0	1.00	-
2440MHz	Pass	PK	59.1M	31.94	40.00	-8.06	3	Vertical	0	1.00	-
2440MHz	Pass	PK	187.14M	26.33	43.50	-17.17	3	Vertical	0	1.00	-
2440MHz	Pass	PK	346.22M	27.04	46.00	-18.96	3	Vertical	0	1.00	-
2440MHz	Pass	PK	534.4M	29.00	46.00	-17.00	3	Vertical	0	1.00	-
2440MHz	Pass	PK	639.16M	30.65	46.00	-15.35	3	Vertical	0	1.00	-
2440MHz	Pass	PK	33.88M	31.30	40.00	-8.70	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	41.64M	28.48	40.00	-11.52	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	280.26M	23.85	46.00	-22.15	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	427.7M	28.30	46.00	-17.70	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	503.36M	29.40	46.00	-16.60	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	709M	31.20	46.00	-14.80	3	Horizontal	360	1.00	-

GFSK(2Mbps)

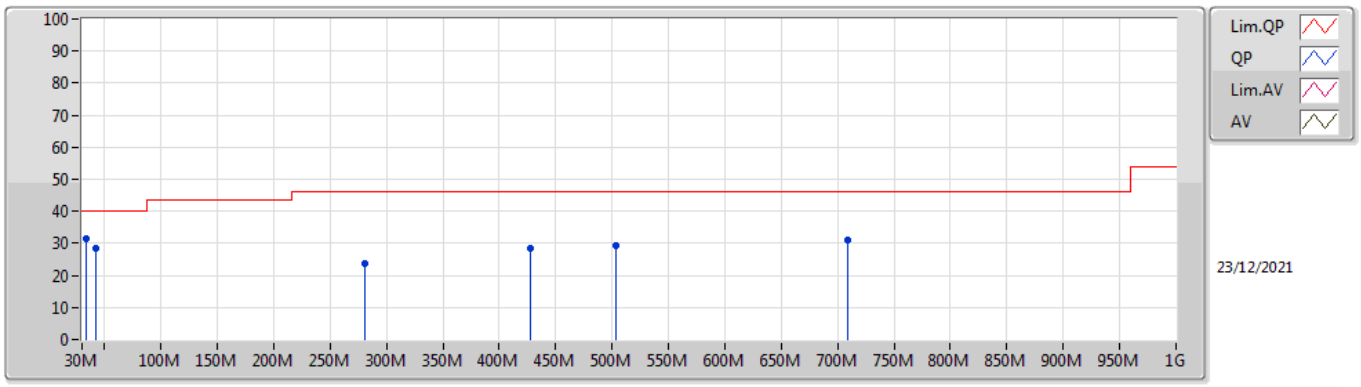
2440MHz_USB



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	47.46M	32.23	40.00	-7.77	-12.45	3	Vertical	0	1.00	-	44.68	14.15	1.04	27.64
PK	59.1M	31.94	40.00	-8.06	-15.06	3	Vertical	0	1.00	-	47.00	11.57	1.13	27.76
PK	187.14M	26.33	43.50	-17.17	-11.21	3	Vertical	0	1.00	-	37.54	14.30	1.90	27.41
PK	346.22M	27.04	46.00	-18.96	-5.35	3	Vertical	0	1.00	-	32.39	19.42	2.54	27.31
PK	534.4M	29.00	46.00	-17.00	-2.23	3	Vertical	0	1.00	-	31.23	22.94	3.16	28.33
PK	639.16M	30.65	46.00	-15.35	-0.55	3	Vertical	0	1.00	-	31.20	24.27	3.43	28.25

GFSK(2Mbps)

2440MHz_USB



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	33.88M	31.30	40.00	-8.70	-5.10	3	Horizontal	360	1.00	-	36.40	21.11	0.90	27.11
PK	41.64M	28.48	40.00	-11.52	-9.66	3	Horizontal	360	1.00	-	38.14	16.80	0.98	27.44
PK	280.26M	23.85	46.00	-22.15	-6.75	3	Horizontal	360	1.00	-	30.60	18.01	2.28	27.04
PK	427.7M	28.30	46.00	-17.70	-3.34	3	Horizontal	360	1.00	-	31.64	21.77	2.83	27.94
PK	503.36M	29.40	46.00	-16.60	-2.53	3	Horizontal	360	1.00	-	31.93	22.73	3.09	28.35
PK	709M	31.20	46.00	-14.80	-0.36	3	Horizontal	360	1.00	-	31.56	24.23	3.62	28.21

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	-	-	-	-	-	-	-	-	-	-	-
GFSK(1Mbps)	Pass	AV	2.4835G	49.92	54.00	-4.08	3	Horizontal	304	1.26	-
GFSK(2Mbps)	Pass	AV	4.80802G	49.77	54.00	-4.23	3	Vertical	221	2.87	-

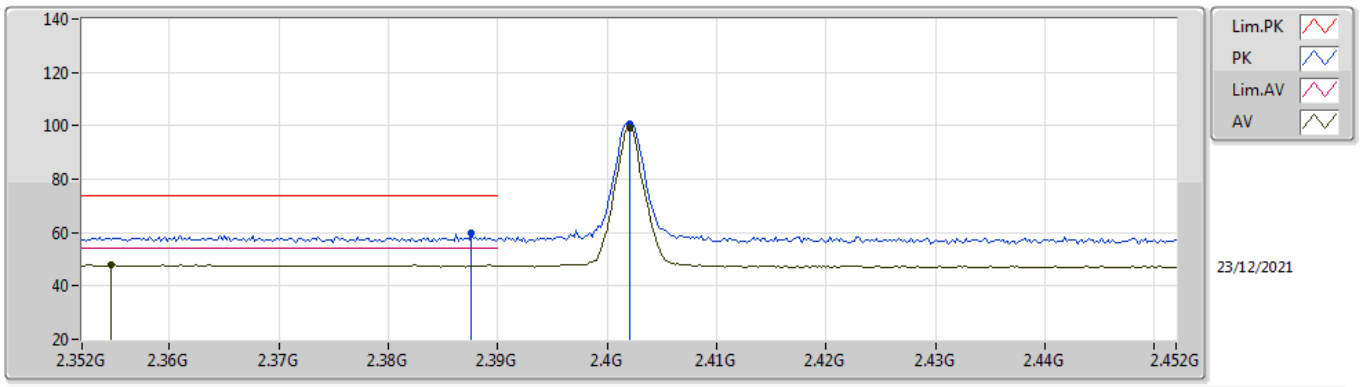
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
GFSK(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3546G	47.91	54.00	-6.09	3	Vertical	327	2.80	-
2402MHz	Pass	AV	2.402G	99.10	Inf	-Inf	3	Vertical	327	2.80	-
2402MHz	Pass	PK	2.3876G	59.61	74.00	-14.39	3	Vertical	327	2.80	-
2402MHz	Pass	PK	2.402G	100.89	Inf	-Inf	3	Vertical	327	2.80	-
2402MHz	Pass	AV	2.3898G	47.91	54.00	-6.09	3	Horizontal	305	1.15	-
2402MHz	Pass	AV	2.402G	104.84	Inf	-Inf	3	Horizontal	305	1.15	-
2402MHz	Pass	PK	2.362G	59.22	74.00	-14.78	3	Horizontal	305	1.15	-
2402MHz	Pass	PK	2.402G	106.75	Inf	-Inf	3	Horizontal	305	1.15	-
2402MHz	Pass	AV	4.80394G	45.82	54.00	-8.18	3	Vertical	51	1.13	-
2402MHz	Pass	PK	4.80342G	52.02	74.00	-21.98	3	Vertical	51	1.13	-
2402MHz	Pass	AV	4.80386G	46.72	54.00	-7.28	3	Horizontal	174	2.86	-
2402MHz	Pass	PK	4.80356G	52.83	74.00	-21.17	3	Horizontal	174	2.86	-
2440MHz	Pass	AV	2.3416G	47.94	54.00	-6.06	3	Vertical	162	1.15	-
2440MHz	Pass	AV	2.44G	97.00	Inf	-Inf	3	Vertical	162	1.15	-
2440MHz	Pass	AV	2.4844G	47.48	54.00	-6.52	3	Vertical	162	1.15	-
2440MHz	Pass	PK	2.3528G	59.19	74.00	-14.81	3	Vertical	162	1.15	-
2440MHz	Pass	PK	2.44G	99.10	Inf	-Inf	3	Vertical	162	1.15	-
2440MHz	Pass	PK	2.4864G	58.71	74.00	-15.29	3	Vertical	162	1.15	-
2440MHz	Pass	AV	2.342G	48.07	54.00	-5.93	3	Horizontal	302	1.12	-
2440MHz	Pass	AV	2.44G	103.06	Inf	-Inf	3	Horizontal	302	1.12	-
2440MHz	Pass	AV	2.4928G	47.44	54.00	-6.56	3	Horizontal	302	1.12	-
2440MHz	Pass	PK	2.3504G	58.57	74.00	-15.43	3	Horizontal	302	1.12	-
2440MHz	Pass	PK	2.44G	104.89	Inf	-Inf	3	Horizontal	302	1.12	-
2440MHz	Pass	PK	2.4916G	58.90	74.00	-15.10	3	Horizontal	302	1.12	-
2440MHz	Pass	AV	4.87996G	44.41	54.00	-9.59	3	Vertical	162	1.53	-
2440MHz	Pass	AV	7.31938G	39.65	54.00	-14.35	3	Vertical	43	2.69	-
2440MHz	Pass	PK	4.88053G	51.11	74.00	-22.89	3	Vertical	162	1.53	-
2440MHz	Pass	PK	7.32086G	50.86	74.00	-23.14	3	Vertical	43	2.69	-
2440MHz	Pass	AV	4.87996G	47.17	54.00	-6.83	3	Horizontal	175	2.93	-
2440MHz	Pass	AV	7.31936G	45.27	54.00	-8.73	3	Horizontal	72	1.21	-
2440MHz	Pass	PK	4.8801G	52.98	74.00	-21.02	3	Horizontal	175	2.93	-
2440MHz	Pass	PK	7.32014G	54.72	74.00	-19.28	3	Horizontal	72	1.21	-
2480MHz	Pass	AV	2.48G	94.78	Inf	-Inf	3	Vertical	171	1.10	-
2480MHz	Pass	AV	2.4835G	48.06	54.00	-5.94	3	Vertical	171	1.10	-
2480MHz	Pass	PK	2.4802G	96.79	Inf	-Inf	3	Vertical	171	1.10	-
2480MHz	Pass	PK	2.4848G	59.41	74.00	-14.59	3	Vertical	171	1.10	-
2480MHz	Pass	AV	2.48G	99.97	Inf	-Inf	3	Horizontal	304	1.26	-
2480MHz	Pass	AV	2.4835G	49.92	54.00	-4.08	3	Horizontal	304	1.26	-
2480MHz	Pass	PK	2.4802G	102.05	Inf	-Inf	3	Horizontal	304	1.26	-
2480MHz	Pass	PK	2.4838G	60.96	74.00	-13.04	3	Horizontal	304	1.26	-
2480MHz	Pass	AV	4.95998G	48.78	54.00	-5.22	3	Vertical	205	2.83	-
2480MHz	Pass	AV	7.43938G	39.50	54.00	-14.50	3	Vertical	35	2.63	-
2480MHz	Pass	PK	4.96032G	54.70	74.00	-19.30	3	Vertical	205	2.83	-
2480MHz	Pass	PK	7.43952G	50.52	74.00	-23.48	3	Vertical	35	2.63	-
2480MHz	Pass	AV	4.96G	46.08	54.00	-7.92	3	Horizontal	198	1.20	-
2480MHz	Pass	AV	7.43942G	43.19	54.00	-10.81	3	Horizontal	48	1.10	-
2480MHz	Pass	PK	4.96014G	52.54	74.00	-21.46	3	Horizontal	198	1.20	-
2480MHz	Pass	PK	7.43914G	53.06	74.00	-20.94	3	Horizontal	48	1.10	-
GFSK(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	AV	2.3822G	48.83	54.00	-5.17	3	Vertical	162	1.08	-
2404MHz	Pass	AV	2.404G	98.52	Inf	-Inf	3	Vertical	162	1.08	-
2404MHz	Pass	PK	2.3718G	59.24	74.00	-14.76	3	Vertical	162	1.08	-
2404MHz	Pass	PK	2.404G	101.77	Inf	-Inf	3	Vertical	162	1.08	-
2404MHz	Pass	AV	2.364G	48.94	54.00	-5.06	3	Horizontal	304	1.00	-
2404MHz	Pass	AV	2.404G	103.95	Inf	-Inf	3	Horizontal	304	1.00	-
2404MHz	Pass	PK	2.3894G	59.13	74.00	-14.87	3	Horizontal	304	1.00	-
2404MHz	Pass	PK	2.404G	107.22	Inf	-Inf	3	Horizontal	304	1.00	-
2404MHz	Pass	PK	4.80804G	55.02	74.00	-18.98	3	Vertical	221	2.87	-
2404MHz	Pass	AV	4.80802G	49.77	54.00	-4.23	3	Vertical	221	2.87	-
2404MHz	Pass	AV	4.808G	46.92	54.00	-7.08	3	Horizontal	172	2.99	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2404MHz	Pass	PK	4.80798G	52.44	74.00	-21.56	3	Horizontal	172	2.99	-
2440MHz	Pass	AV	2.366G	48.94	54.00	-5.06	3	Vertical	167	1.00	-
2440MHz	Pass	AV	2.44G	96.70	Inf	-Inf	3	Vertical	167	1.00	-
2440MHz	Pass	AV	2.4936G	48.32	54.00	-5.68	3	Vertical	167	1.00	-
2440MHz	Pass	PK	2.3428G	59.25	74.00	-14.75	3	Vertical	167	1.00	-
2440MHz	Pass	PK	2.44G	100.56	Inf	-Inf	3	Vertical	167	1.00	-
2440MHz	Pass	PK	2.4976G	58.42	74.00	-15.58	3	Vertical	167	1.00	-
2440MHz	Pass	AV	2.3484G	48.92	54.00	-5.08	3	Horizontal	306	1.30	-
2440MHz	Pass	AV	2.44G	102.28	Inf	-Inf	3	Horizontal	306	1.30	-
2440MHz	Pass	AV	2.4948G	48.52	54.00	-5.48	3	Horizontal	306	1.30	-
2440MHz	Pass	PK	2.342G	58.95	74.00	-15.05	3	Horizontal	306	1.30	-
2440MHz	Pass	PK	2.44G	106.45	Inf	-Inf	3	Horizontal	306	1.30	-
2440MHz	Pass	PK	2.5G	58.00	74.00	-16.00	3	Horizontal	306	1.30	-
2440MHz	Pass	AV	4.88006G	46.11	54.00	-7.89	3	Vertical	55	1.00	-
2440MHz	Pass	AV	7.32002G	41.95	54.00	-12.05	3	Vertical	45	2.51	-
2440MHz	Pass	PK	4.88002G	51.31	74.00	-22.69	3	Vertical	55	1.00	-
2440MHz	Pass	PK	7.32164G	50.21	74.00	-23.79	3	Vertical	45	2.51	-
2440MHz	Pass	AV	4.88004G	47.10	54.00	-6.90	3	Horizontal	173	2.78	-
2440MHz	Pass	AV	7.32008G	47.96	54.00	-6.04	3	Horizontal	67	1.01	-
2440MHz	Pass	PK	4.87998G	52.49	74.00	-21.51	3	Horizontal	173	2.78	-
2440MHz	Pass	PK	7.32008G	55.40	74.00	-18.60	3	Horizontal	67	1.01	-
2478MHz	Pass	AV	2.478G	95.73	Inf	-Inf	3	Vertical	171	1.14	-
2478MHz	Pass	AV	2.4974G	48.34	54.00	-5.66	3	Vertical	171	1.14	-
2478MHz	Pass	PK	2.4782G	99.15	Inf	-Inf	3	Vertical	171	1.14	-
2478MHz	Pass	PK	2.4835G	59.50	74.00	-14.50	3	Vertical	171	1.14	-
2478MHz	Pass	AV	2.478G	101.90	Inf	-Inf	3	Horizontal	306	1.26	-
2478MHz	Pass	AV	2.4835G	49.65	54.00	-4.35	3	Horizontal	306	1.26	-
2478MHz	Pass	PK	2.4782G	105.16	Inf	-Inf	3	Horizontal	306	1.26	-
2478MHz	Pass	PK	2.4835G	62.84	74.00	-11.16	3	Horizontal	306	1.26	-
2478MHz	Pass	AV	4.95602G	49.10	54.00	-4.90	3	Vertical	205	2.82	-
2478MHz	Pass	AV	7.43396G	41.38	54.00	-12.62	3	Vertical	89	1.15	-
2478MHz	Pass	PK	4.95644G	54.15	74.00	-19.85	3	Vertical	205	2.82	-
2478MHz	Pass	PK	7.4334G	50.27	74.00	-23.73	3	Vertical	89	1.15	-
2478MHz	Pass	AV	4.95598G	46.30	54.00	-7.70	3	Horizontal	198	1.06	-
2478MHz	Pass	AV	7.434G	45.82	54.00	-8.18	3	Horizontal	47	1.02	-
2478MHz	Pass	PK	4.95634G	51.84	74.00	-22.16	3	Horizontal	198	1.06	-
2478MHz	Pass	PK	7.4339G	53.39	74.00	-20.61	3	Horizontal	47	1.02	-

GFSK(1Mbps)

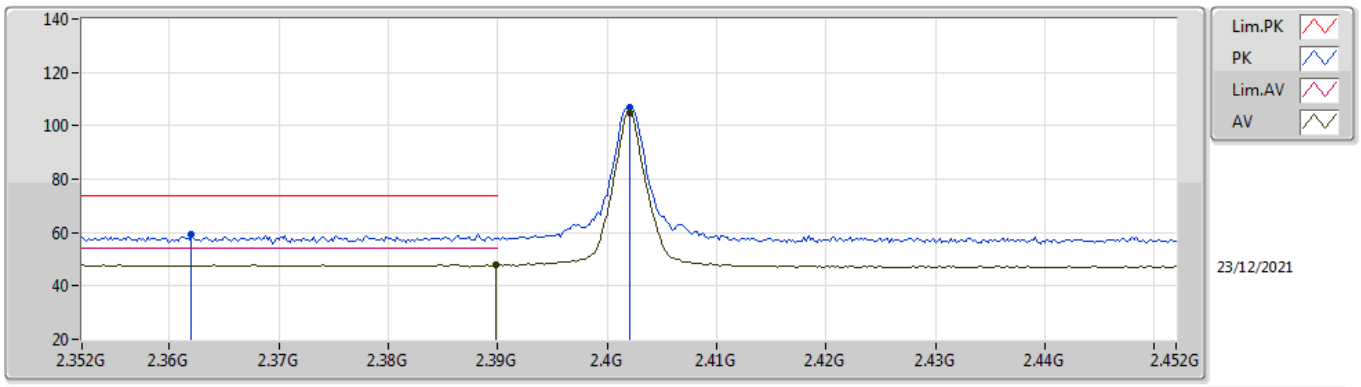
2402MHz_TX



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	2.3546G	47.91	54.00	-6.09	35.03	3	Vertical	327	2.80	-	12.88	27.79	7.24	-
AV	2.402G	99.10	Inf	-Inf	34.95	3	Vertical	327	2.80	-	64.15	27.69	7.26	-
PK	2.3876G	59.61	74.00	-14.39	34.97	3	Vertical	327	2.80	-	24.64	27.72	7.25	-
PK	2.402G	100.89	Inf	-Inf	34.95	3	Vertical	327	2.80	-	65.94	27.69	7.26	-

GFSK(1Mbps)

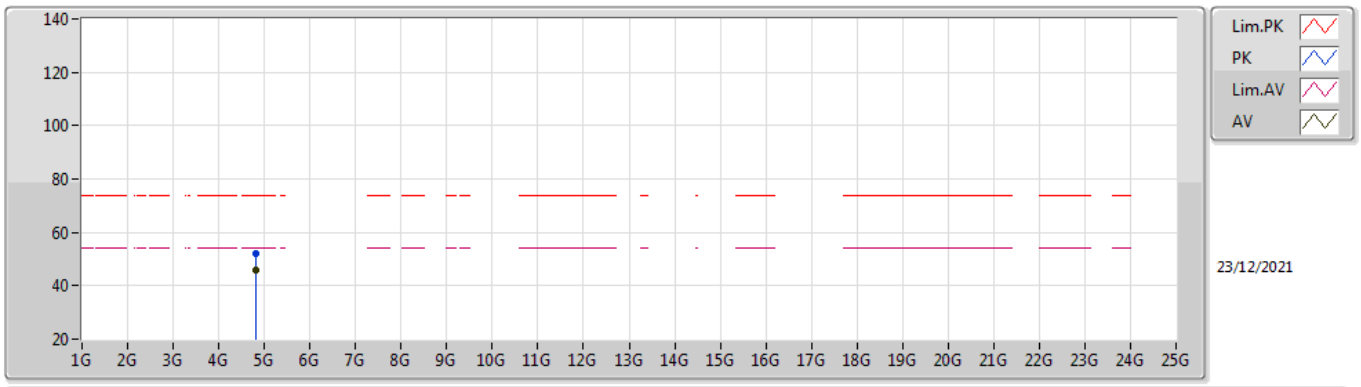
2402MHz_TX



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	2.3898G	47.91	54.00	-6.09	34.98	3	Horizontal	305	1.15	-	12.93	27.72	7.26	-
AV	2.402G	104.84	Inf	-Inf	34.95	3	Horizontal	305	1.15	-	69.89	27.69	7.26	-
PK	2.362G	59.22	74.00	-14.78	35.02	3	Horizontal	305	1.15	-	24.20	27.78	7.24	-
PK	2.402G	106.75	Inf	-Inf	34.95	3	Horizontal	305	1.15	-	71.80	27.69	7.26	-

GFSK(1Mbps)

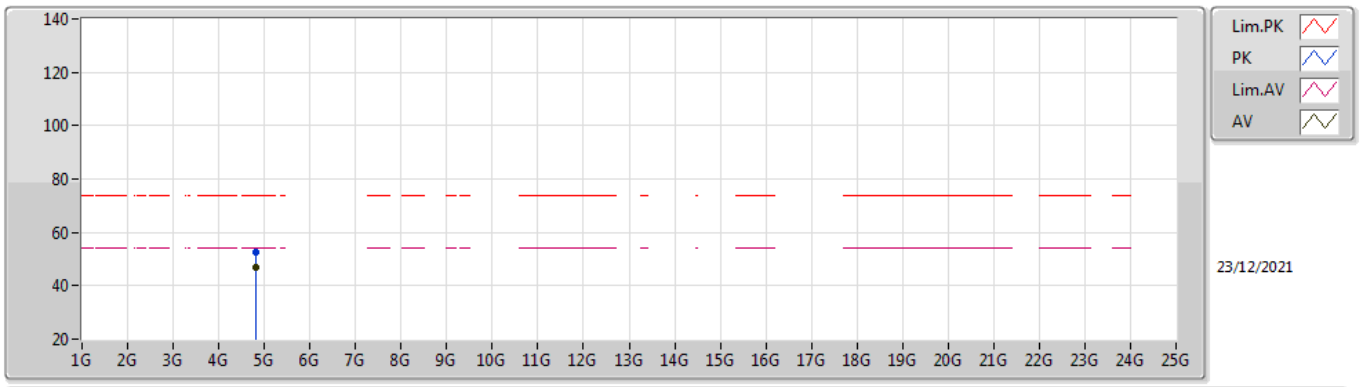
2402MHz_TX



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	4.80394G	45.82	54.00	-8.18	5.82	3	Vertical	51	1.13	-	40.00	31.11	8.90	34.19
PK	4.80342G	52.02	74.00	-21.98	5.82	3	Vertical	51	1.13	-	46.20	31.11	8.90	34.19

GFSK(1Mbps)

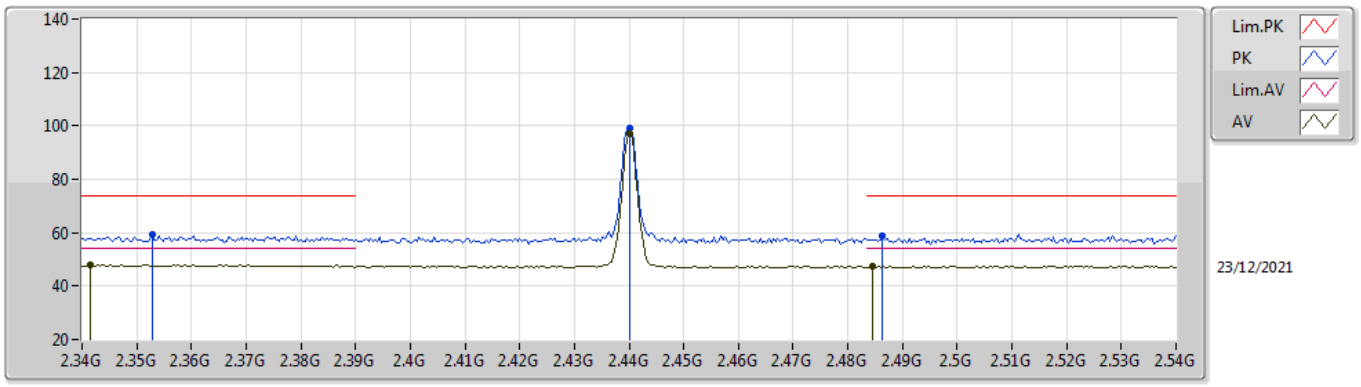
2402MHz_TX



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	4.80386G	46.72	54.00	-7.28	5.82	3	Horizontal	174	2.86	-	40.90	31.11	8.90	34.19
PK	4.80356G	52.83	74.00	-21.17	5.82	3	Horizontal	174	2.86	-	47.01	31.11	8.90	34.19

GFSK(1Mbps)

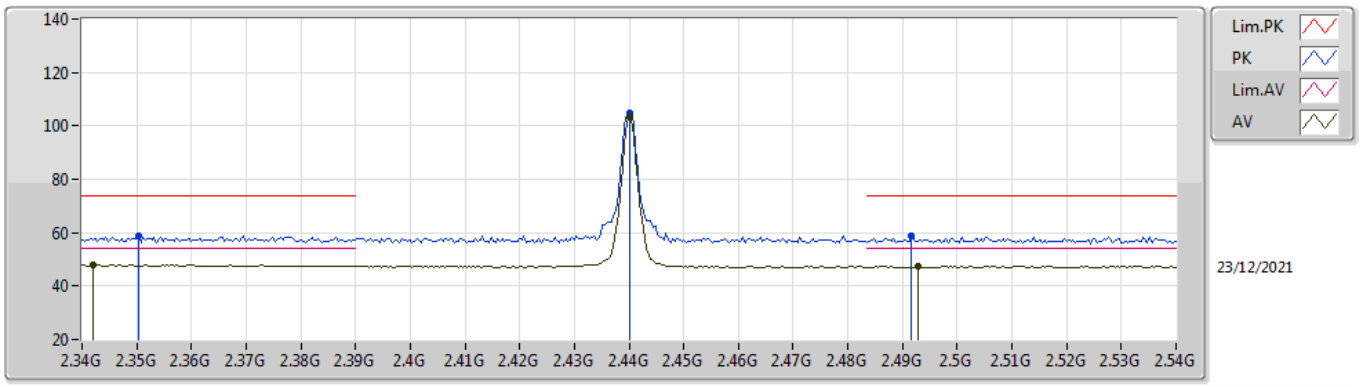
2440MHz_TX



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	2.3416G	47.94	54.00	-6.06	35.05	3	Vertical	162	1.15	-	12.89	27.82	7.23	-
AV	2.44G	97.00	Inf	-Inf	34.75	3	Vertical	162	1.15	-	62.25	27.46	7.29	-
AV	2.4844G	47.48	54.00	-6.52	34.73	3	Vertical	162	1.15	-	12.75	27.40	7.33	-
PK	2.3528G	59.19	74.00	-14.81	35.03	3	Vertical	162	1.15	-	24.16	27.79	7.24	-
PK	2.44G	99.10	Inf	-Inf	34.75	3	Vertical	162	1.15	-	64.35	27.46	7.29	-
PK	2.4864G	58.71	74.00	-15.29	34.73	3	Vertical	162	1.15	-	23.98	27.40	7.33	-

GFSK(1Mbps)

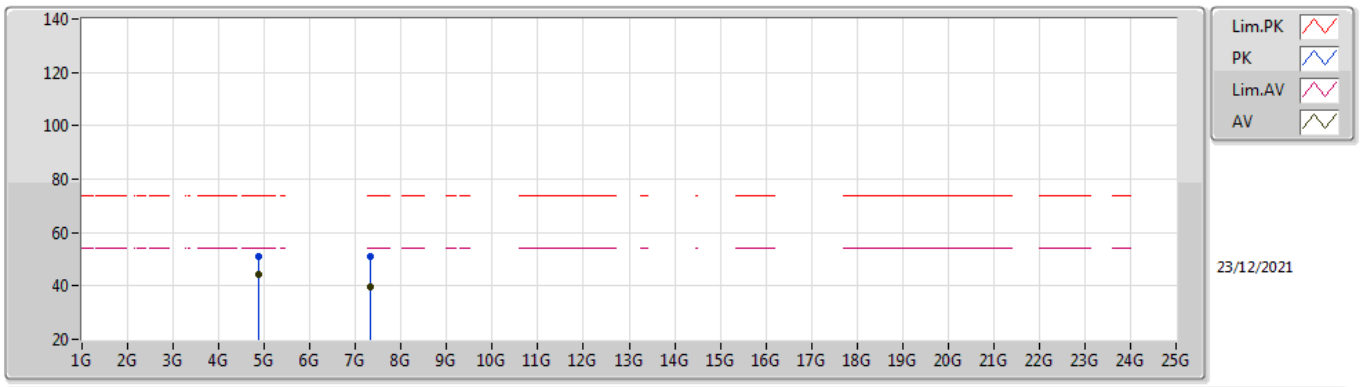
2440MHz_TX



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	2.342G	48.07	54.00	-5.93	35.05	3	Horizontal	302	1.12	-	13.02	27.82	7.23	-
AV	2.44G	103.06	Inf	-Inf	34.75	3	Horizontal	302	1.12	-	68.31	27.46	7.29	-
AV	2.4928G	47.44	54.00	-6.56	34.73	3	Horizontal	302	1.12	-	12.71	27.40	7.33	-
PK	2.3504G	58.57	74.00	-15.43	35.04	3	Horizontal	302	1.12	-	23.53	27.80	7.24	-
PK	2.44G	104.89	Inf	-Inf	34.75	3	Horizontal	302	1.12	-	70.14	27.46	7.29	-
PK	2.4916G	58.90	74.00	-15.10	34.73	3	Horizontal	302	1.12	-	24.17	27.40	7.33	-

GFSK(1Mbps)

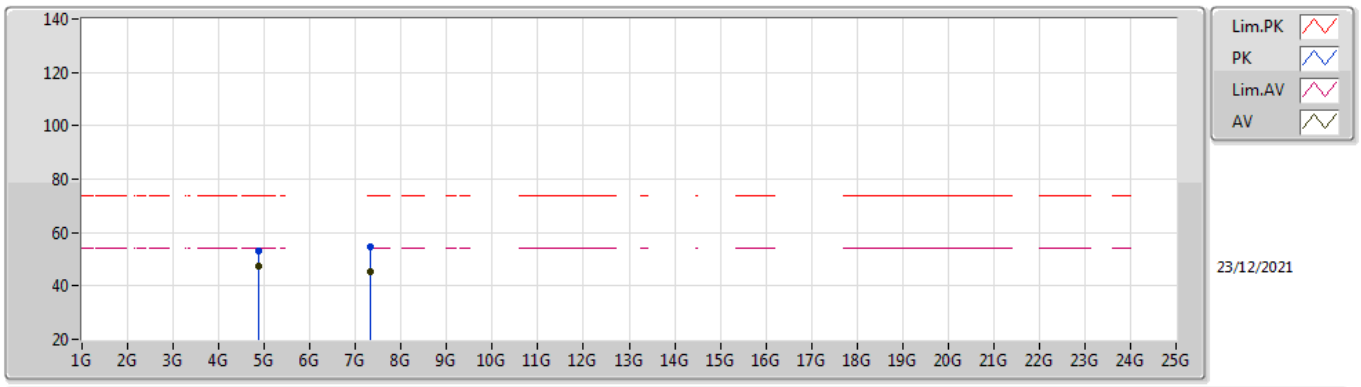
2440MHz_TX



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	4.87996G	44.41	54.00	-9.59	6.00	3	Vertical	162	1.53	-	38.41	31.20	8.96	34.16
AV	7.31938G	39.65	54.00	-14.35	12.49	3	Vertical	43	2.69	-	27.16	36.36	10.63	34.50
PK	4.88053G	51.11	74.00	-22.89	6.00	3	Vertical	162	1.53	-	45.11	31.20	8.96	34.16
PK	7.32086G	50.86	74.00	-23.14	12.49	3	Vertical	43	2.69	-	38.37	36.36	10.63	34.50

GFSK(1Mbps)

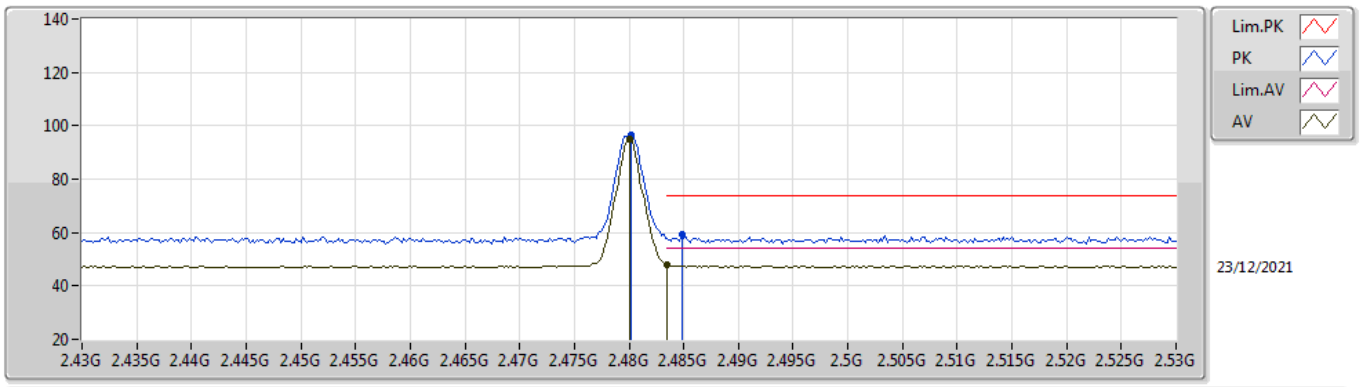
2440MHz_TX



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	4.87996G	47.17	54.00	-6.83	6.00	3	Horizontal	175	2.93	-	41.17	31.20	8.96	34.16
AV	7.31936G	45.27	54.00	-8.73	12.49	3	Horizontal	72	1.21	-	32.78	36.36	10.63	34.50
PK	4.8801G	52.98	74.00	-21.02	6.00	3	Horizontal	175	2.93	-	46.98	31.20	8.96	34.16
PK	7.32014G	54.72	74.00	-19.28	12.49	3	Horizontal	72	1.21	-	42.23	36.36	10.63	34.50

GFSK(1Mbps)

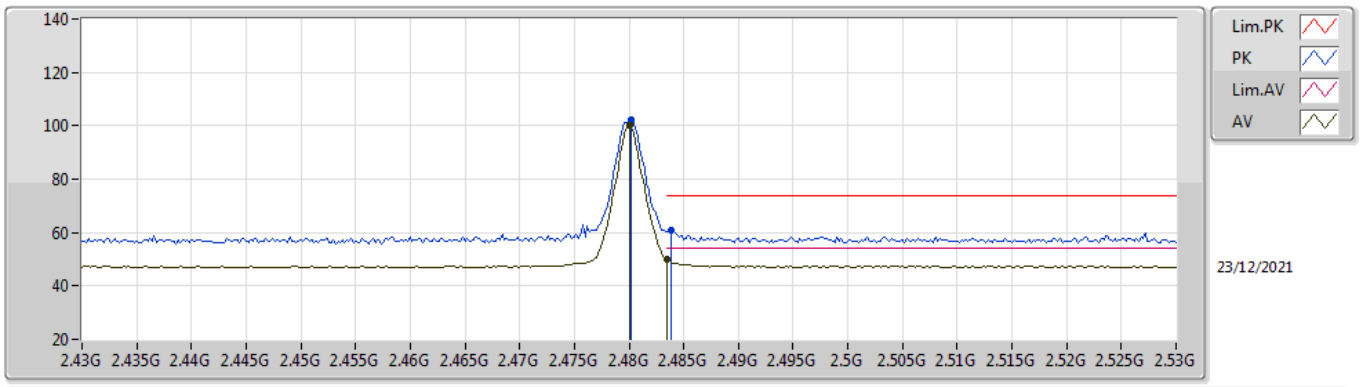
2480MHz_TX



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	2.48G	94.78	Inf	-Inf	34.72	3	Vertical	171	1.10	-	60.06	27.40	7.32	-
AV	2.4835G	48.06	54.00	-5.94	34.73	3	Vertical	171	1.10	-	13.33	27.40	7.33	-
PK	2.4802G	96.79	Inf	-Inf	34.72	3	Vertical	171	1.10	-	62.07	27.40	7.32	-
PK	2.4848G	59.41	74.00	-14.59	34.73	3	Vertical	171	1.10	-	24.68	27.40	7.33	-

GFSK(1Mbps)

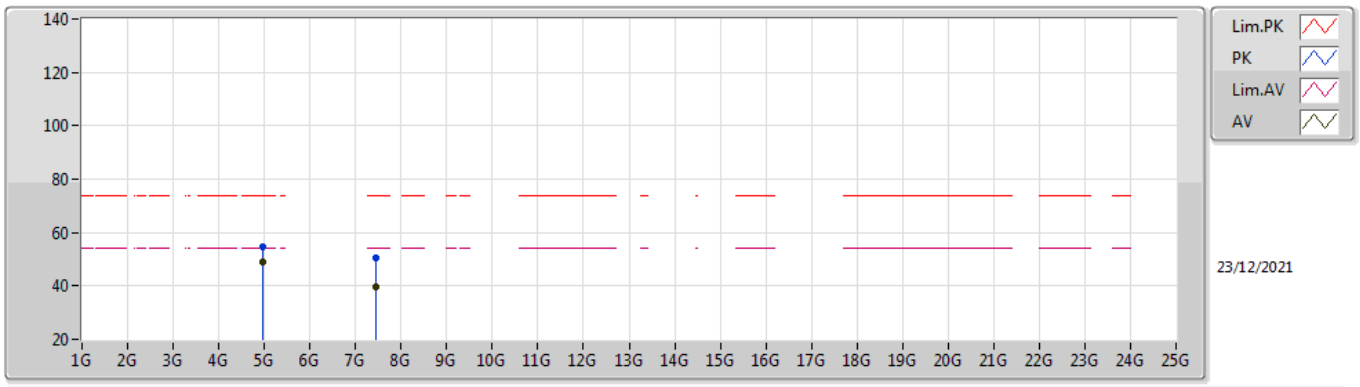
2480MHz_TX



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	2.48G	99.97	Inf	-Inf	34.72	3	Horizontal	304	1.26	-	65.25	27.40	7.32	-
AV	2.4835G	49.92	54.00	-4.08	34.73	3	Horizontal	304	1.26	-	15.19	27.40	7.33	-
PK	2.4802G	102.05	Inf	-Inf	34.72	3	Horizontal	304	1.26	-	67.33	27.40	7.32	-
PK	2.4838G	60.96	74.00	-13.04	34.73	3	Horizontal	304	1.26	-	26.23	27.40	7.33	-

GFSK(1Mbps)

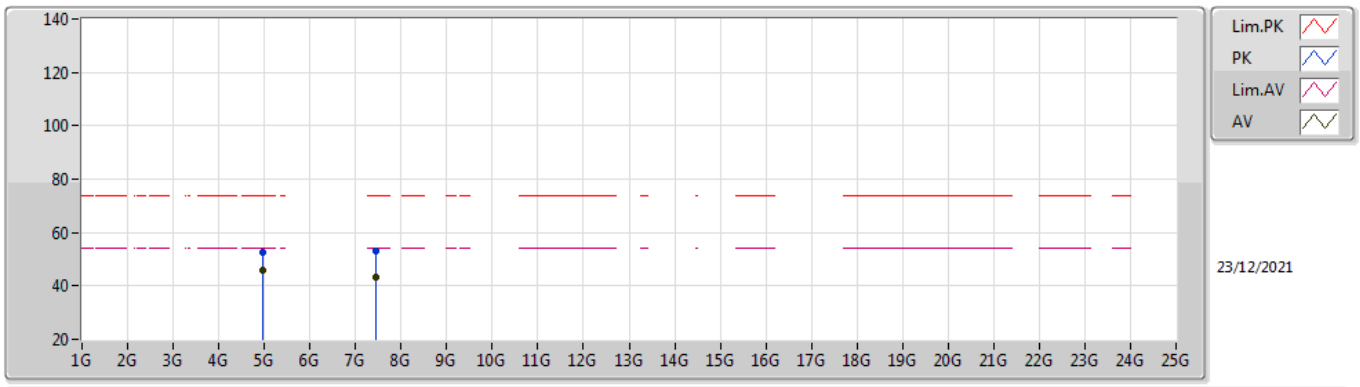
2480MHz_TX



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	4.95998G	48.78	54.00	-5.22	6.32	3	Vertical	205	2.83	-	42.46	31.42	9.02	34.12
AV	7.43938G	39.50	54.00	-14.50	12.51	3	Vertical	35	2.63	-	26.99	36.28	10.72	34.49
PK	4.96032G	54.70	74.00	-19.30	6.32	3	Vertical	205	2.83	-	48.38	31.42	9.02	34.12
PK	7.43952G	50.52	74.00	-23.48	12.51	3	Vertical	35	2.63	-	38.01	36.28	10.72	34.49

GFSK(1Mbps)

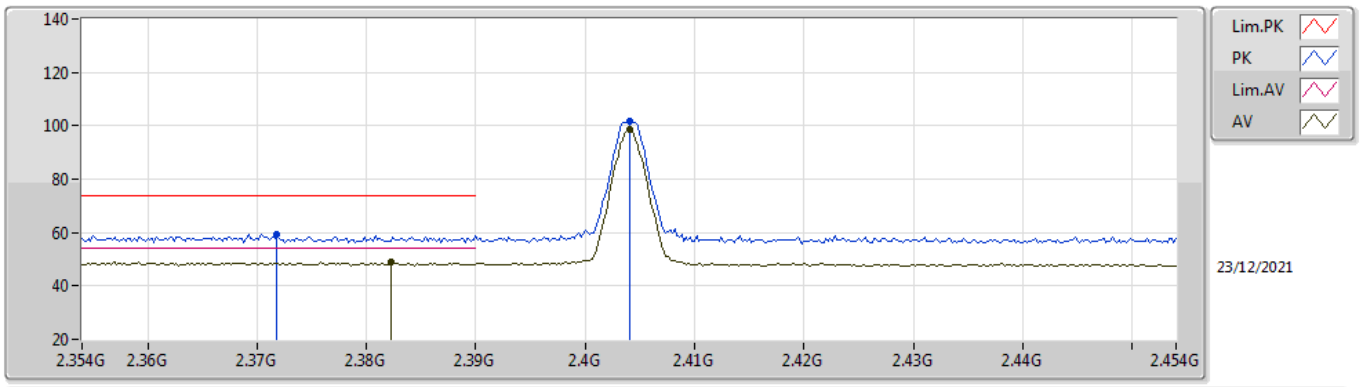
2480MHz_TX



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	4.96G	46.08	54.00	-7.92	6.32	3	Horizontal	198	1.20	-	39.76	31.42	9.02	34.12
AV	7.43942G	43.19	54.00	-10.81	12.51	3	Horizontal	48	1.10	-	30.68	36.28	10.72	34.49
PK	4.96014G	52.54	74.00	-21.46	6.32	3	Horizontal	198	1.20	-	46.22	31.42	9.02	34.12
PK	7.43914G	53.06	74.00	-20.94	12.51	3	Horizontal	48	1.10	-	40.55	36.28	10.72	34.49

GFSK(2Mbps)

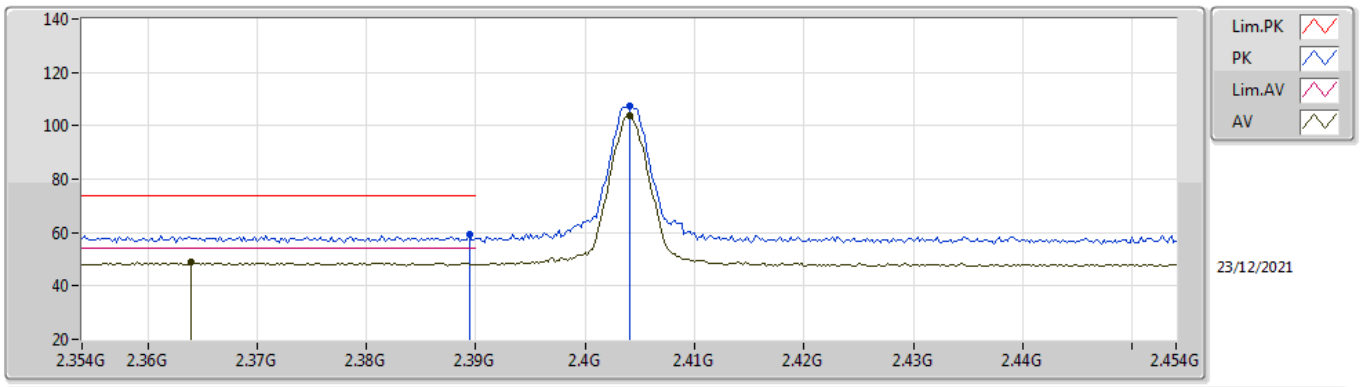
2404MHz_TX



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	2.3822G	48.83	54.00	-5.17	34.99	3	Vertical	162	1.08	-	13.84	27.74	7.25	-
AV	2.404G	98.52	Inf	-Inf	34.94	3	Vertical	162	1.08	-	63.58	27.68	7.26	-
PK	2.3718G	59.24	74.00	-14.76	35.01	3	Vertical	162	1.08	-	24.23	27.76	7.25	-
PK	2.404G	101.77	Inf	-Inf	34.94	3	Vertical	162	1.08	-	66.83	27.68	7.26	-

GFSK(2Mbps)

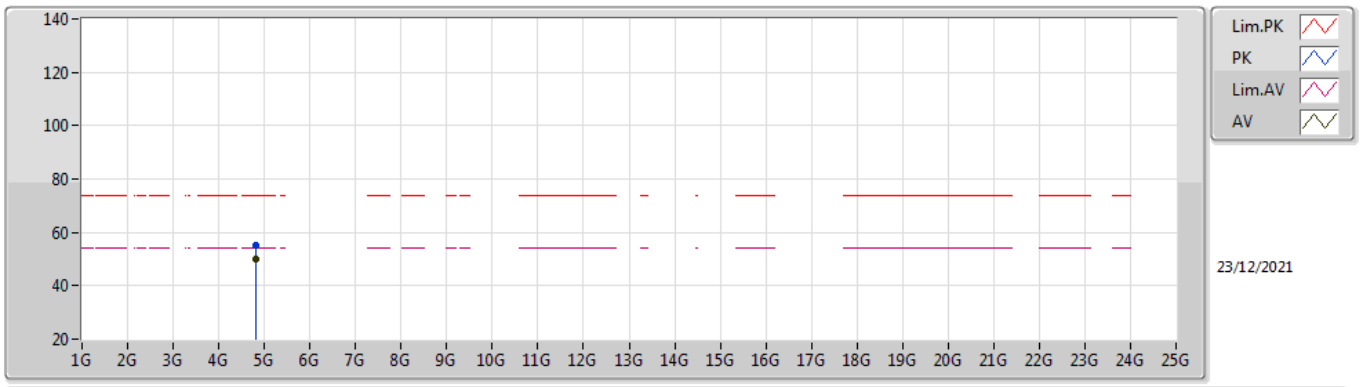
2404MHz_TX



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	2.364G	48.94	54.00	-5.06	35.01	3	Horizontal	304	1.00	-	13.93	27.77	7.24	-
AV	2.404G	103.95	Inf	-Inf	34.94	3	Horizontal	304	1.00	-	69.01	27.68	7.26	-
PK	2.3894G	59.13	74.00	-14.87	34.98	3	Horizontal	304	1.00	-	24.15	27.72	7.26	-
PK	2.404G	107.22	Inf	-Inf	34.94	3	Horizontal	304	1.00	-	72.28	27.68	7.26	-

GFSK(2Mbps)

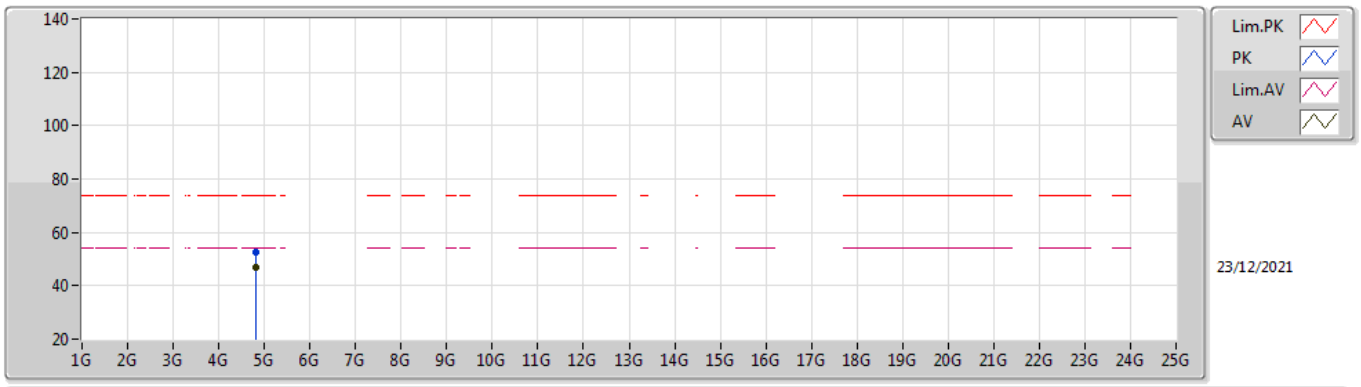
2404MHz_TX



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)
PK	4.80804G	55.02	74.00	-18.98	5.84	3	Vertical	221	2.87	-	49.18	31.12	8.91	34.19
AV	4.80802G	49.77	54.00	-4.23	5.84	3	Vertical	221	2.87	-	43.93	31.12	8.91	34.19

GFSK(2Mbps)

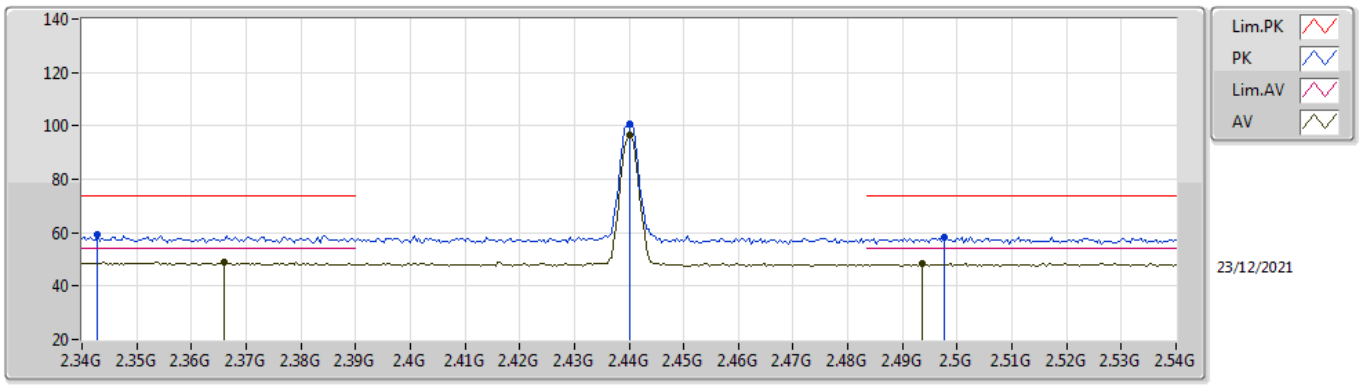
2404MHz_TX



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	4.808G	46.92	54.00	-7.08	5.84	3	Horizontal	172	2.99	-	41.08	31.12	8.91	34.19
PK	4.80798G	52.44	74.00	-21.56	5.84	3	Horizontal	172	2.99	-	46.60	31.12	8.91	34.19

GFSK(2Mbps)

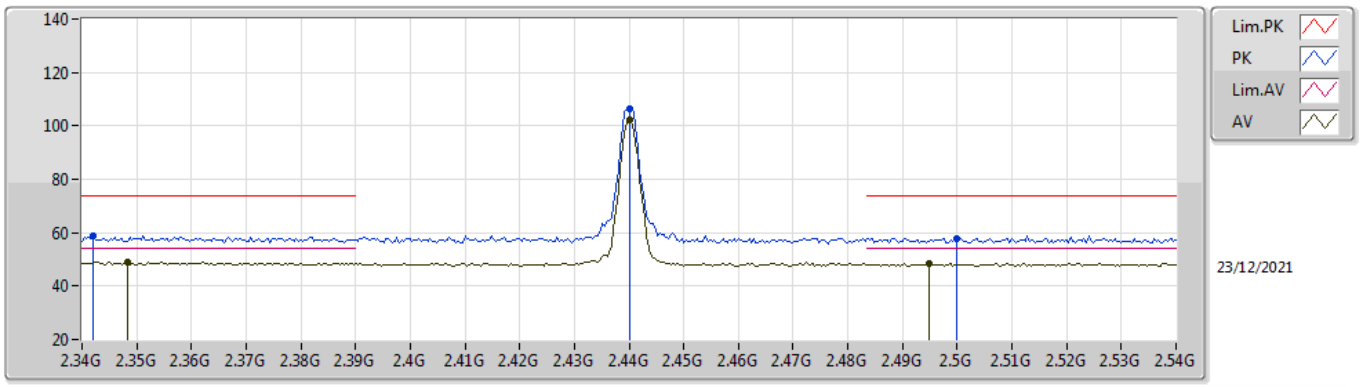
2440MHz_TX



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	2.366G	48.94	54.00	-5.06	35.01	3	Vertical	167	1.00	-	13.93	27.77	7.24	-
AV	2.44G	96.70	Inf	-Inf	34.75	3	Vertical	167	1.00	-	61.95	27.46	7.29	-
AV	2.4936G	48.32	54.00	-5.68	34.73	3	Vertical	167	1.00	-	13.59	27.40	7.33	-
PK	2.3428G	59.25	74.00	-14.75	35.04	3	Vertical	167	1.00	-	24.21	27.81	7.23	-
PK	2.44G	100.56	Inf	-Inf	34.75	3	Vertical	167	1.00	-	65.81	27.46	7.29	-
PK	2.4976G	58.42	74.00	-15.58	34.74	3	Vertical	167	1.00	-	23.68	27.40	7.34	-

GFSK(2Mbps)

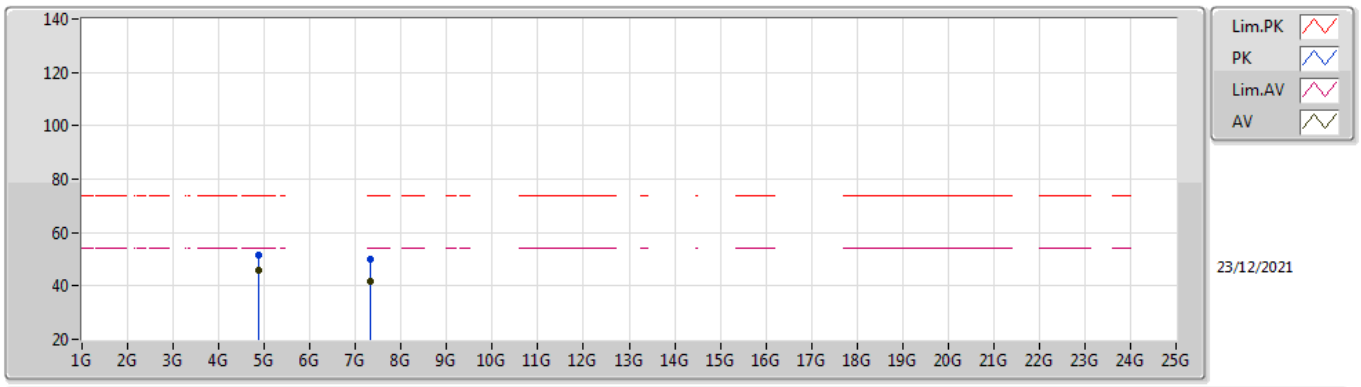
2440MHz_TX



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	2.3484G	48.92	54.00	-5.08	35.04	3	Horizontal	306	1.30	-	13.88	27.80	7.24	-
AV	2.44G	102.28	Inf	-Inf	34.75	3	Horizontal	306	1.30	-	67.53	27.46	7.29	-
AV	2.4948G	48.52	54.00	-5.48	34.74	3	Horizontal	306	1.30	-	13.78	27.40	7.34	-
PK	2.342G	58.95	74.00	-15.05	35.05	3	Horizontal	306	1.30	-	23.90	27.82	7.23	-
PK	2.44G	106.45	Inf	-Inf	34.75	3	Horizontal	306	1.30	-	71.70	27.46	7.29	-
PK	2.5G	58.00	74.00	-16.00	34.74	3	Horizontal	306	1.30	-	23.26	27.40	7.34	-

GFSK(2Mbps)

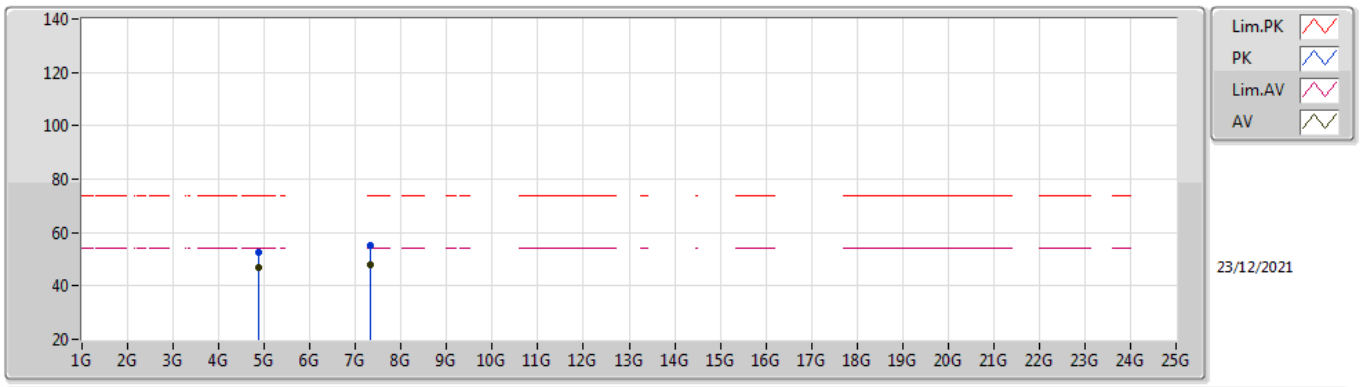
2440MHz_TX



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	4.88006G	46.11	54.00	-7.89	6.00	3	Vertical	55	1.00	-	40.11	31.20	8.96	34.16
AV	7.32002G	41.95	54.00	-12.05	12.49	3	Vertical	45	2.51	-	29.46	36.36	10.63	34.50
PK	4.88002G	51.31	74.00	-22.69	6.00	3	Vertical	55	1.00	-	45.31	31.20	8.96	34.16
PK	7.32164G	50.21	74.00	-23.79	12.49	3	Vertical	45	2.51	-	37.72	36.36	10.63	34.50

GFSK(2Mbps)

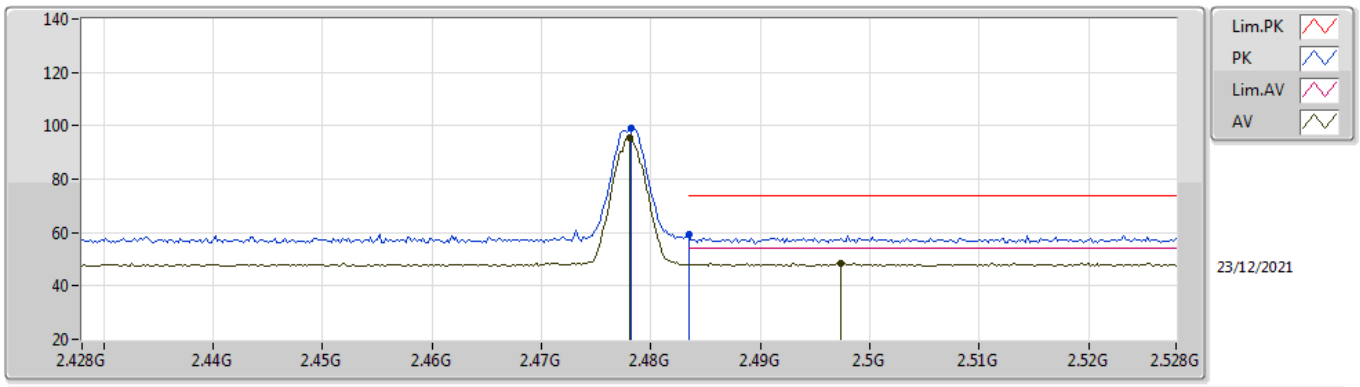
2440MHz_TX



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	4.88004G	47.10	54.00	-6.90	6.00	3	Horizontal	173	2.78	-	41.10	31.20	8.96	34.16
AV	7.32008G	47.96	54.00	-6.04	12.49	3	Horizontal	67	1.01	-	35.47	36.36	10.63	34.50
PK	4.87998G	52.49	74.00	-21.51	6.00	3	Horizontal	173	2.78	-	46.49	31.20	8.96	34.16
PK	7.32008G	55.40	74.00	-18.60	12.49	3	Horizontal	67	1.01	-	42.91	36.36	10.63	34.50

GFSK(2Mbps)

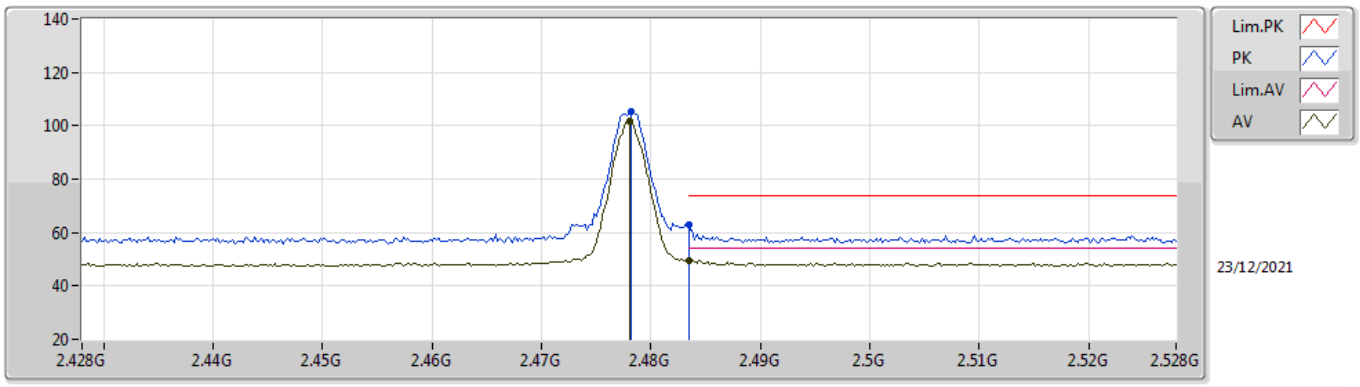
2478MHz_TX



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	2.478G	95.73	Inf	-Inf	34.72	3	Vertical	171	1.14	-	61.01	27.40	7.32	-
AV	2.4974G	48.34	54.00	-5.66	34.74	3	Vertical	171	1.14	-	13.60	27.40	7.34	-
PK	2.4782G	99.15	Inf	-Inf	34.72	3	Vertical	171	1.14	-	64.43	27.40	7.32	-
PK	2.4835G	59.50	74.00	-14.50	34.73	3	Vertical	171	1.14	-	24.77	27.40	7.33	-

GFSK(2Mbps)

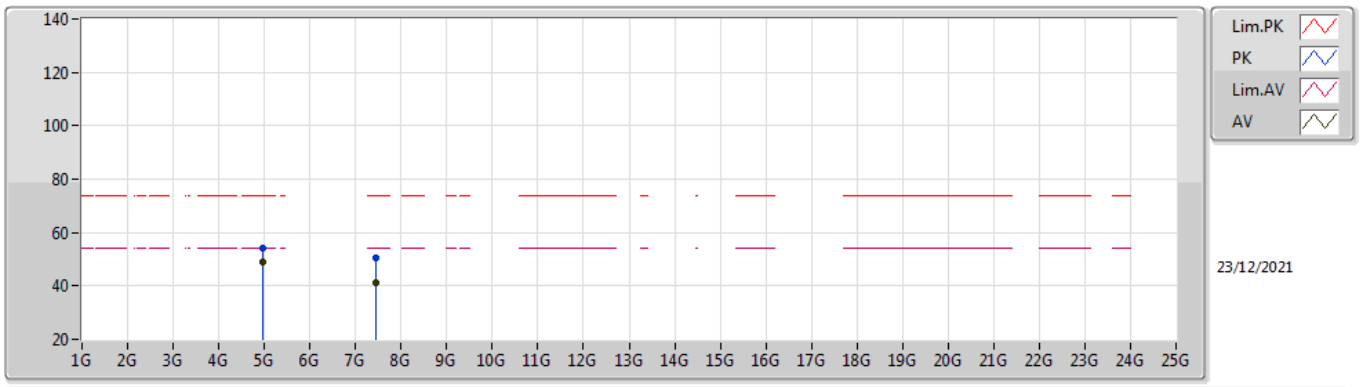
2478MHz_TX



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	2.478G	101.90	Inf	-Inf	34.72	3	Horizontal	306	1.26	-	67.18	27.40	7.32	-
AV	2.4835G	49.65	54.00	-4.35	34.73	3	Horizontal	306	1.26	-	14.92	27.40	7.33	-
PK	2.4782G	105.16	Inf	-Inf	34.72	3	Horizontal	306	1.26	-	70.44	27.40	7.32	-
PK	2.4835G	62.84	74.00	-11.16	34.73	3	Horizontal	306	1.26	-	28.11	27.40	7.33	-

GFSK(2Mbps)

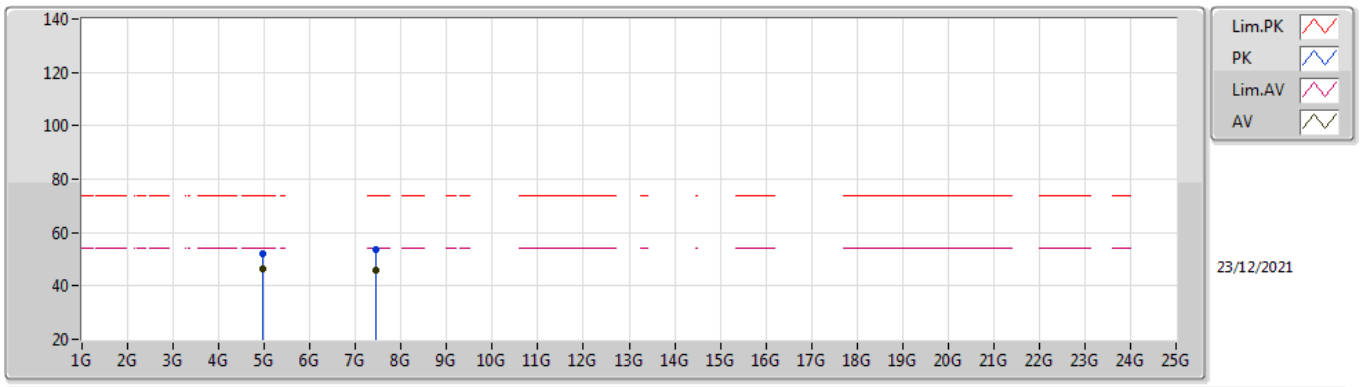
2478MHz_TX



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	4.95602G	49.10	54.00	-4.90	6.31	3	Vertical	205	2.82	-	42.79	31.41	9.02	34.12
AV	7.43396G	41.38	54.00	-12.62	12.50	3	Vertical	89	1.15	-	28.88	36.27	10.72	34.49
PK	4.95644G	54.15	74.00	-19.85	6.31	3	Vertical	205	2.82	-	47.84	31.41	9.02	34.12
PK	7.4334G	50.27	74.00	-23.73	12.50	3	Vertical	89	1.15	-	37.77	36.27	10.72	34.49

GFSK(2Mbps)

2478MHz_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	4.95598G	46.30	54.00	-7.70	6.31	3	Horizontal	198	1.06	-	39.99	31.41	9.02	34.12
AV	7.434G	45.82	54.00	-8.18	12.50	3	Horizontal	47	1.02	-	33.32	36.27	10.72	34.49
PK	4.95634G	51.84	74.00	-22.16	6.31	3	Horizontal	198	1.06	-	45.53	31.41	9.02	34.12
PK	7.4339G	53.39	74.00	-20.61	12.50	3	Horizontal	47	1.02	-	40.89	36.27	10.72	34.49