FCC Radio Test Report

FCC ID	**:**	**HV4CTL6100WLA**
Equipment	**:**	**Pen Tablet**
Brand Name	**:**	**Wacom**
Model Name	**:**	**CTL-6100WL, CTL-6100WLA**
Applicant	**:**	**Wacom Co., Ltd. 2-510-1 Toyonodai, Kazo-shi, Saitama 349-1148 Japan**
Manufacturer	**:**	**Wacom Co., Ltd. 2-510-1 Toyonodai, Kazo-shi, Saitama 349-1148 Japan**
Standard	**:**	**47 CFR FCC Part 15.247**

The product was received on Sep. 15, 2021, and testing was started from Sep. 27, 2021 and completed on Nov. 02, 2021. 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: Allen Lin

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
FR7N1310-09AD	01	Initial issue of report	Nov. 19, 2021

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: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR(1Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(2Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(3Mbps)	1	1TX

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

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	B861U	PCB	I-PEX	0

Note 1: The EUT has one antenna.

For BT function:

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

Only Ant. 1 (port 1) can be used as transmitting/receiving.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter / 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
BT-BR(1Mbps)	0.738	1.32	2.876m	1k
BT-EDR(2Mbps)	0.739	1.31	2.881m	1k
BT-EDR(3Mbps)	0.74	1.31	2.883m	1k

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

1.1.5 Table for Multiple Listing

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

Model Name	Description
CTL-6100WL, CTL-6100WLA	All the models are identical, the different model served as marketing strategy.

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	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
(TAF: 3785**)**	**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	20.1~23.9°C / 54~62%	01/Oct/2021
RF Conducted	TH06-HY	Johnny Yu	20.1~26.9°C / 50~60%	27/Sep/2021~02/Nov/2021
☒ Wen 33rd.St.	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
(TAF: 3785**)**	**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	03CH09-HY	Daniel Hsu	22.2~23.5°C / 53~55%	28/Sep/2021~29/Sep/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 Version	Airoha.Tool.Kit_V1.6.3

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	54
2440MHz	54
2480MHz	54
BT-EDR(2Mbps)	-
2402MHz	61
2440MHz	61
2480MHz	61
BT-EDR(3Mbps)	-
2402MHz	61
2440MHz	61
2480MHz	61

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.	

Note 1: From Sporton Project No.:FR7N1309-07AD.

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				
Battery	**Brand Name**	Wacom	**Model Name**	PR-234385G
	Manufacturer	TCL Hyperpower Batteries		
	Power Rating	3.8Vdc, 1260mAh	**Type**	Li-ion
Touch Pen	**Brand Name**	Wacom	**Model Name**	LP-1100
Micro USB Cable	**Brand Name**	Wacom	**Model Name**	STJ-A393
	signal line	1.5 meter, shielded cable, w/o ferrite core		

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

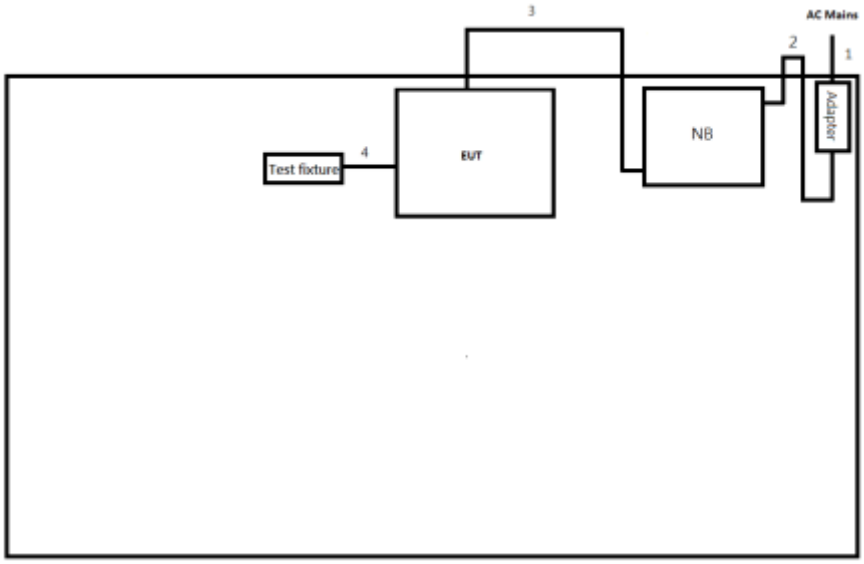
2.4 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	HP	HSTNN-Q85C	-	-
2	Adapter for NB	HP	PPP012L-E	-	-
3	Test Fixture	-	-	-	Provided by Customer
4	Test Fixture Cable	-	-	-	Provided by Customer

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Fixture	-	-	-	Provided by Customer
2	Notebook	Dell	E5540	-	-

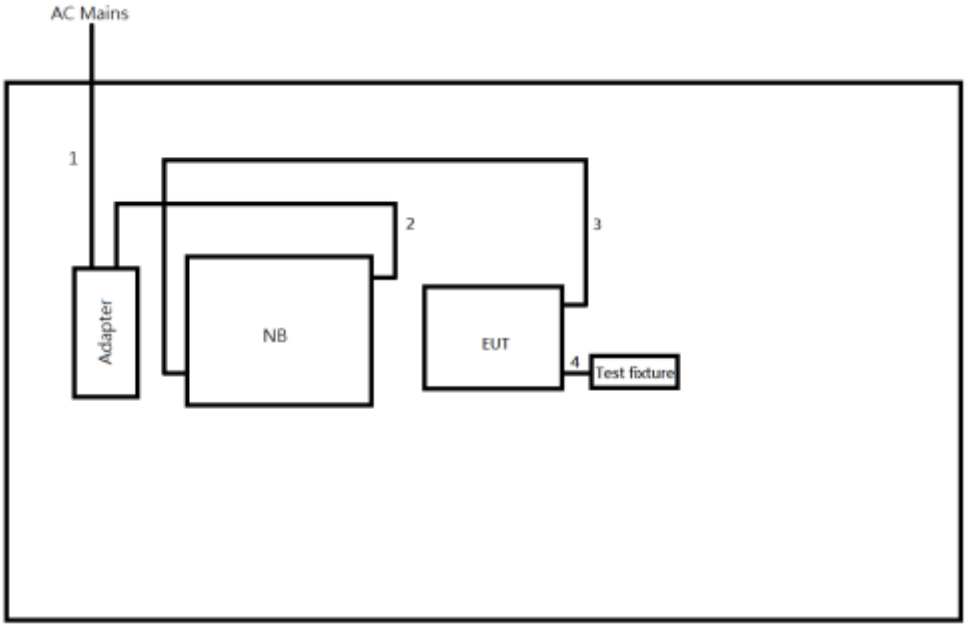
2.5 Test Setup Diagram

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	1.8	-
3	USB cable	Yes	1.5	-
4	Test fixture cable	No	0.22	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.8	-
3	USB cable	Yes	1.5	-
4	Test fixture cable	No	0.22	-

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

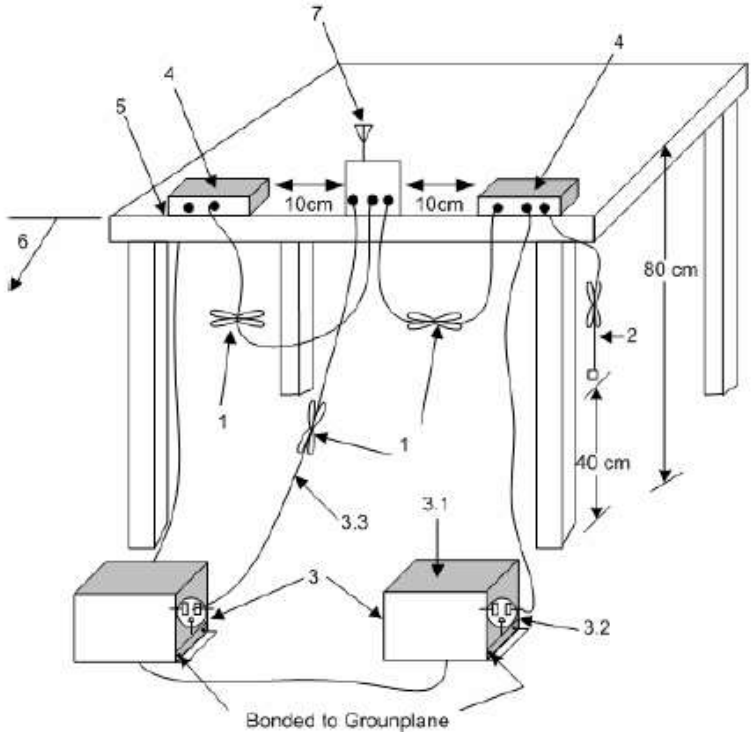
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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 50Ωloads. 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	

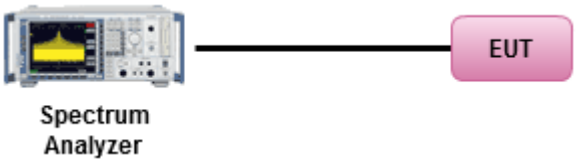
3.2.2 Measuring Instruments

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	

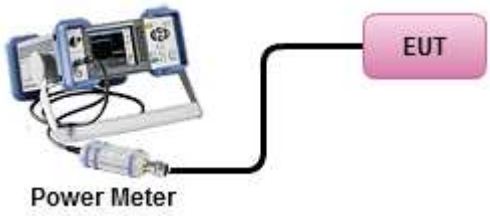
3.3.2 Measuring Instruments

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

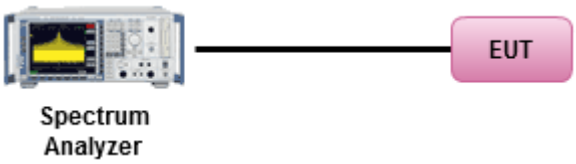
3.4.3 Measuring Instruments

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	

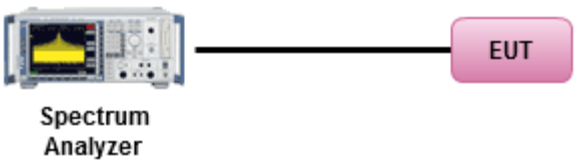
3.5.2 Measuring Instruments

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.	

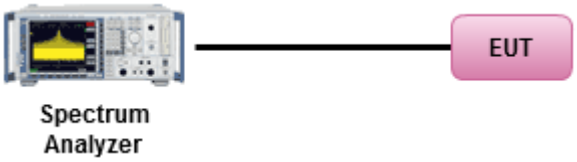
3.6.2 Measuring Instruments

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.

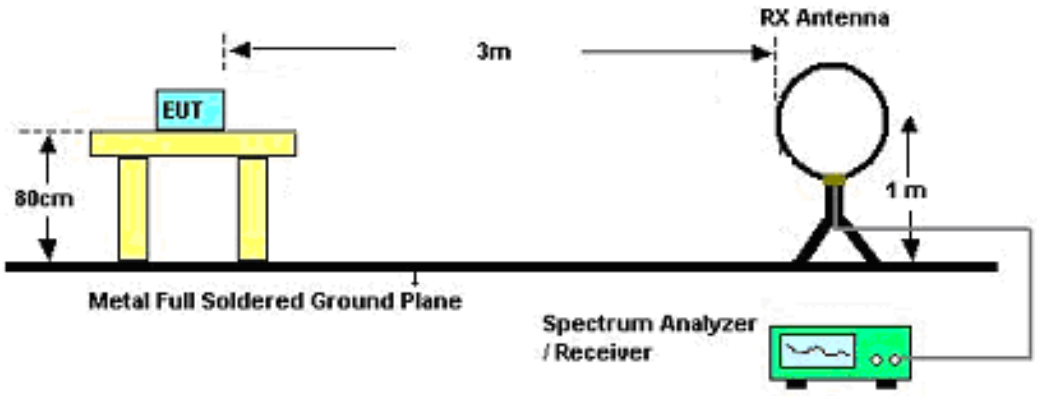
3.7.3 Test Procedures

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.

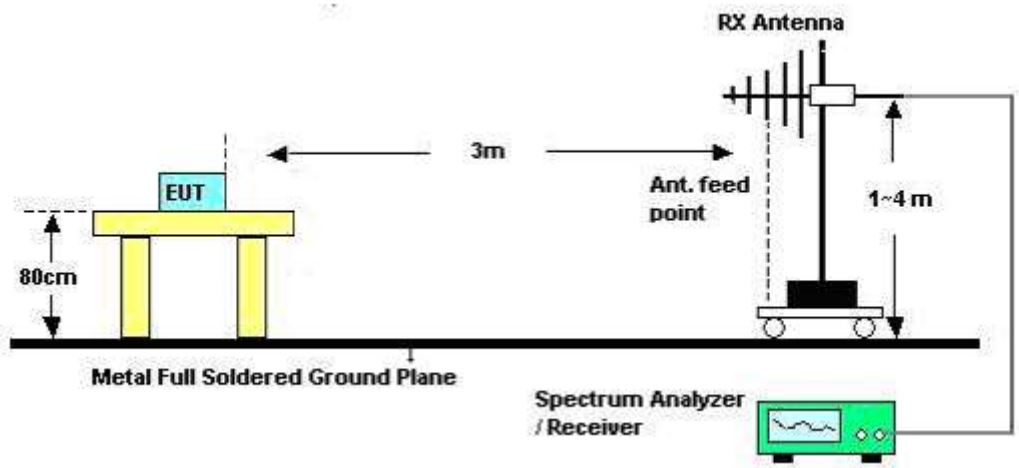
3.7.4 Measurement Results Calculation

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

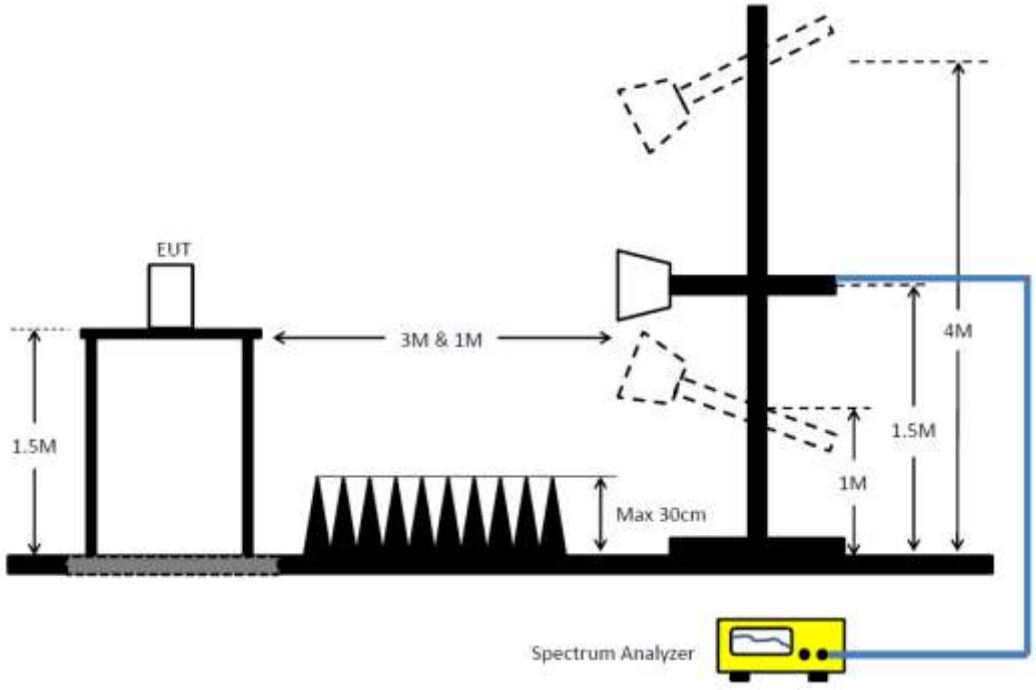
3.7.5 Test Setup

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	ESR	102052	9kHz ~ 3.6GHz	19/Apr/2021	18/Apr/2022
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	11/Nov/2020	10/Nov/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 Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz~1GHz 3m	26/Mar/2021	25/Mar/2022
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	18/Mar/2021	17/Mar/2022
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	13/Aug/2021	12/Aug/2022
Amplifier	EMC	EMC9135	980232	9kHz~1GHz	12/Apr/2021	11/Apr/2022
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	23/Jul/2021	22/Jul/2022
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MT J6102-05	35418 & 3	30MHz~1GHz	04/Sep/2021	03/Sep/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	9kHz~30MHz	30/Aug/2021	29/Aug/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
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

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
Signal Generator	R&S	SMB100A	181239	100kHz~40GHz	30/Dec/2020	29/Dec/2021
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

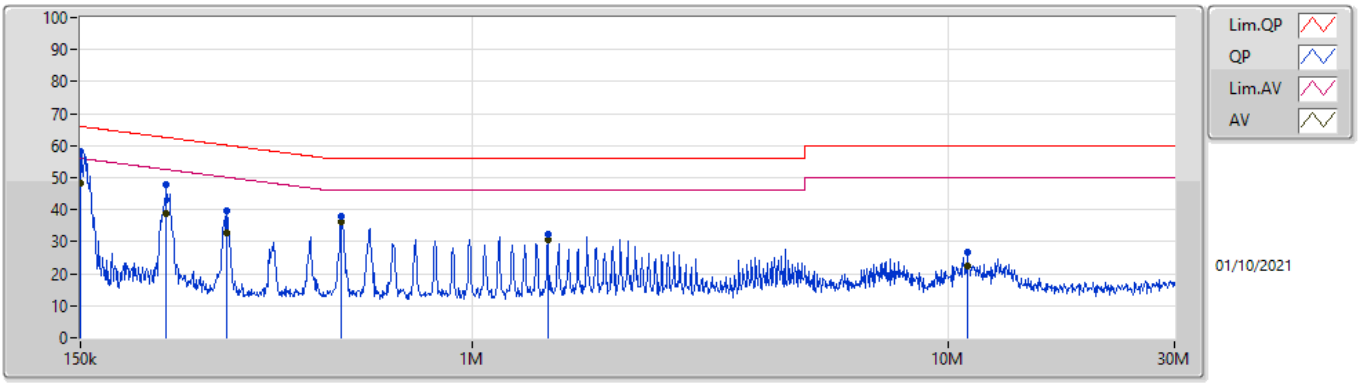
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	58.96	65.96	-7.00	Neutral

Mode Configure

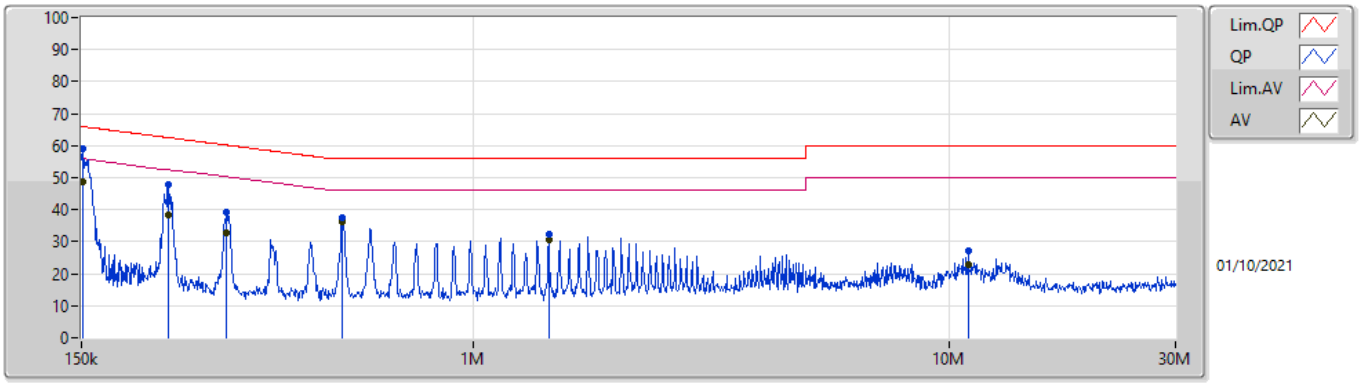
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	150k	57.99	66.00	-8.01	Line	-
Mode 1	Pass	AV	150k	48.49	56.00	-7.51	Line	-
Mode 1	Pass	QP	227.194k	47.93	62.56	-14.63	Line	-
Mode 1	Pass	AV	227.194k	38.59	52.56	-13.97	Line	-
Mode 1	Pass	QP	304.059k	39.47	60.13	-20.66	Line	-
Mode 1	Pass	AV	304.059k	32.94	50.13	-17.19	Line	-
Mode 1	Pass	QP	531.714k	37.85	56.00	-18.15	Line	-
Mode 1	Pass	AV	531.714k	36.37	46.00	-9.63	Line	-
Mode 1	Pass	QP	1.442M	32.15	56.00	-23.85	Line	-
Mode 1	Pass	AV	1.442M	30.54	46.00	-15.46	Line	-
Mode 1	Pass	QP	11.004M	26.76	60.00	-33.24	Line	-
Mode 1	Pass	AV	11.004M	22.52	50.00	-27.48	Line	-
Mode 1	Pass	QP	150.6k	58.96	65.96	-7.00	Neutral	-
Mode 1	Pass	AV	150.6k	48.87	55.96	-7.09	Neutral	-
Mode 1	Pass	QP	228.103k	47.94	62.52	-14.58	Neutral	-
Mode 1	Pass	AV	228.103k	38.51	52.52	-14.01	Neutral	-
Mode 1	Pass	QP	302.848k	39.19	60.17	-20.98	Neutral	-
Mode 1	Pass	AV	302.848k	32.63	50.17	-17.54	Neutral	-
Mode 1	Pass	QP	531.714k	37.70	56.00	-18.30	Neutral	-
Mode 1	Pass	AV	531.714k	36.14	46.00	-9.86	Neutral	-
Mode 1	Pass	QP	1.442M	32.23	56.00	-23.77	Neutral	-
Mode 1	Pass	AV	1.442M	30.72	46.00	-15.28	Neutral	-
Mode 1	Pass	QP	11.004M	27.11	60.00	-32.89	Neutral	-
Mode 1	Pass	AV	11.004M	22.97	50.00	-27.03	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	150k	57.99	66.00	-8.01	19.62	Line	-	38.37	9.69	0.04	9.89
AV	150k	48.49	56.00	-7.51	19.62	Line	-	28.87	9.69	0.04	9.89
QP	227.194k	47.93	62.56	-14.63	19.61	Line	-	28.32	9.68	0.04	9.89
AV	227.194k	38.59	52.56	-13.97	19.61	Line	-	18.98	9.68	0.04	9.89
QP	304.059k	39.47	60.13	-20.66	19.61	Line	-	19.86	9.67	0.05	9.89
AV	304.059k	32.94	50.13	-17.19	19.61	Line	-	13.33	9.67	0.05	9.89
QP	531.714k	37.85	56.00	-18.15	19.63	Line	-	18.22	9.67	0.07	9.89
AV	531.714k	36.37	46.00	-9.63	19.63	Line	-	16.74	9.67	0.07	9.89
QP	1.442M	32.15	56.00	-23.85	19.65	Line	-	12.50	9.68	0.09	9.88
AV	1.442M	30.54	46.00	-15.46	19.65	Line	-	10.89	9.68	0.09	9.88
QP	11.004M	26.76	60.00	-33.24	19.81	Line	-	6.95	9.71	0.21	9.89
AV	11.004M	22.52	50.00	-27.48	19.81	Line	-	2.71	9.71	0.21	9.89

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	58.96	65.96	-7.00	19.62	Neutral	-	39.34	9.69	0.04	9.89
AV	150.6k	48.87	55.96	-7.09	19.62	Neutral	-	29.25	9.69	0.04	9.89
QP	228.103k	47.94	62.52	-14.58	19.61	Neutral	-	28.33	9.68	0.04	9.89
AV	228.103k	38.51	52.52	-14.01	19.61	Neutral	-	18.90	9.68	0.04	9.89
QP	302.848k	39.19	60.17	-20.98	19.61	Neutral	-	19.58	9.67	0.05	9.89
AV	302.848k	32.63	50.17	-17.54	19.61	Neutral	-	13.02	9.67	0.05	9.89
QP	531.714k	37.70	56.00	-18.30	19.63	Neutral	-	18.07	9.67	0.07	9.89
AV	531.714k	36.14	46.00	-9.86	19.63	Neutral	-	16.51	9.67	0.07	9.89
QP	1.442M	32.23	56.00	-23.77	19.65	Neutral	-	12.58	9.68	0.09	9.88
AV	1.442M	30.72	46.00	-15.28	19.65	Neutral	-	11.07	9.68	0.09	9.88
QP	11.004M	27.11	60.00	-32.89	19.83	Neutral	-	7.28	9.73	0.21	9.89
AV	11.004M	22.97	50.00	-27.03	19.83	Neutral	-	3.14	9.73	0.21	9.89

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)	936.25k	893.303k	893KF1D	936.25k	887.056k
BT-EDR(2Mbps)	1.281M	1.187M	1M19G1D	1.251M	1.184M
BT-EDR(3Mbps)	1.256M	1.202M	1M20G1D	1.251M	1.192M

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

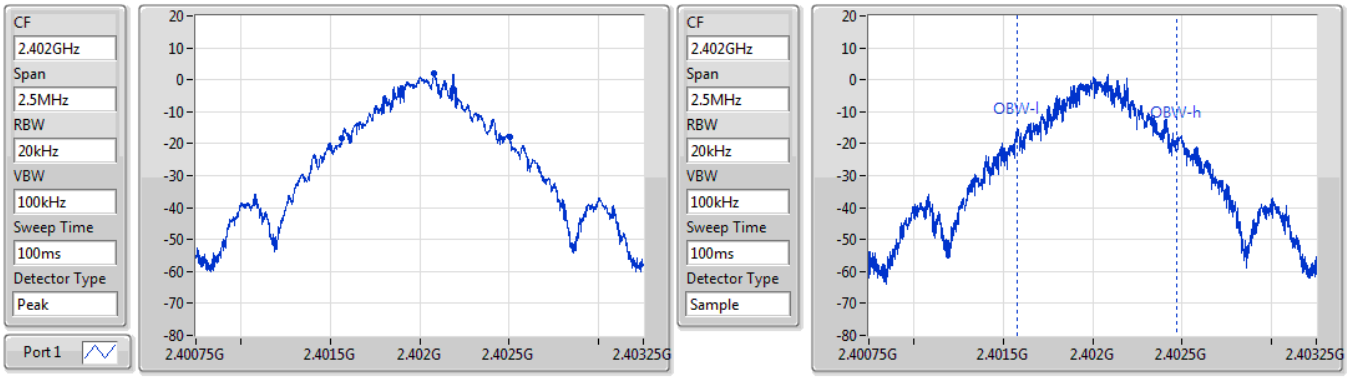
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	936.25k	890.805k
2440MHz	Pass	Inf	936.25k	887.056k
2480MHz	Pass	Inf	936.25k	893.303k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.281M	1.187M
2440MHz	Pass	Inf	1.251M	1.184M
2480MHz	Pass	Inf	1.281M	1.186M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.251M	1.192M
2440MHz	Pass	Inf	1.254M	1.198M
2480MHz	Pass	Inf	1.256M	1.202M

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

BT-BR(1Mbps) EBW-FS

2402MHz

02/11/2021

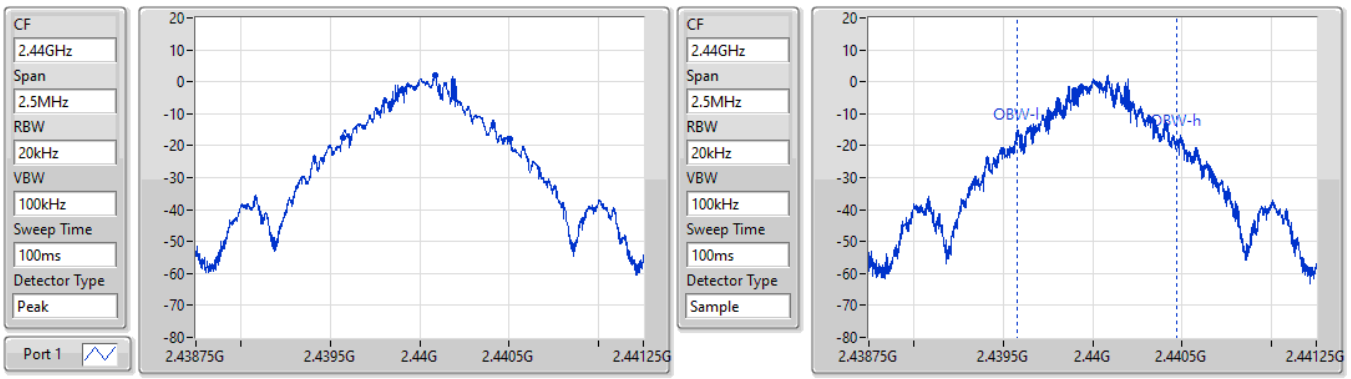


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
936.25k	2.401566G	2.402503G	890.805k	2.401581G	2.402472G	Inf	1

BT-BR(1Mbps) EBW-FS

2440MHz

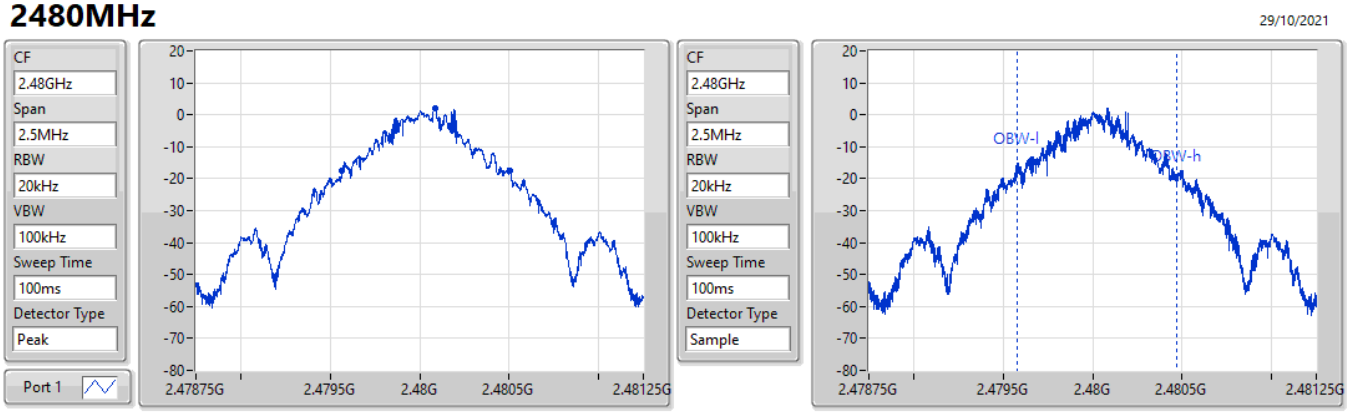
29/10/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
936.25k	2.439569G	2.440505G	887.056k	2.439581G	2.440469G	Inf	1

BT-BR(1Mbps) EBW-FS

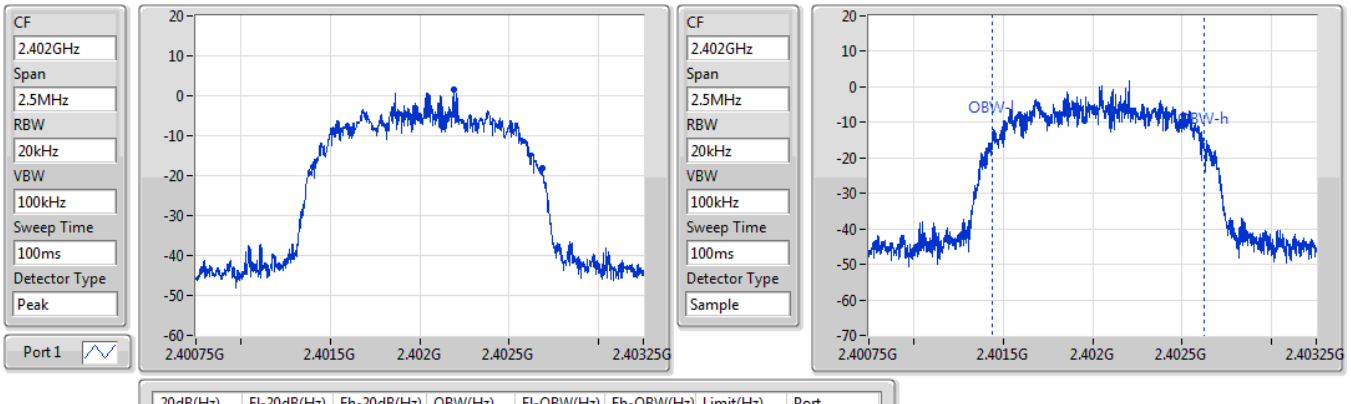
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
936.25k	2.479568G	2.480504G	893.303k	2.47958G	2.480474G	Inf	1

BT-EDR(2Mbps) EBW-FS

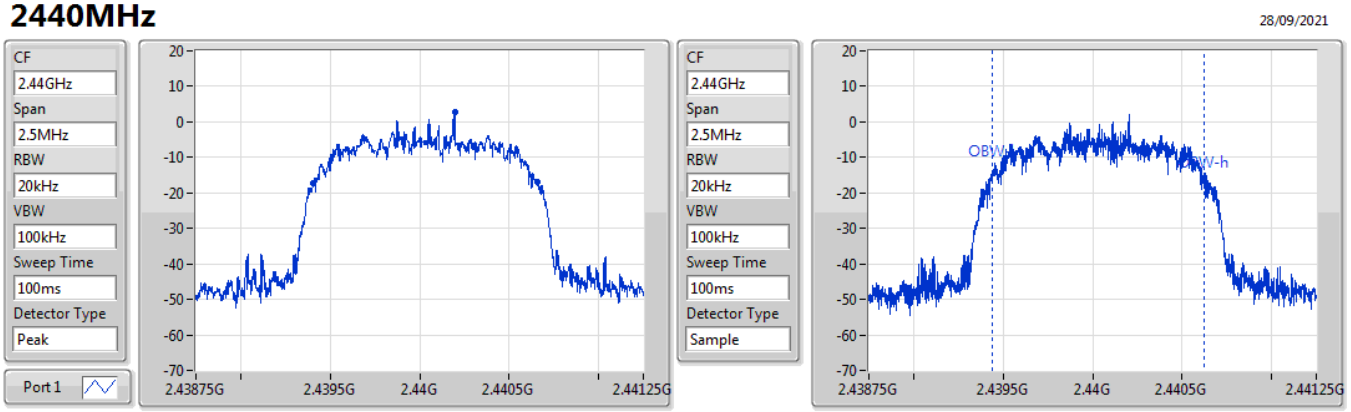
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.281M	2.401403G	2.402684G	1.187M	2.401439G	2.402626G	Inf	1

BT-EDR(2Mbps) EBW-FS

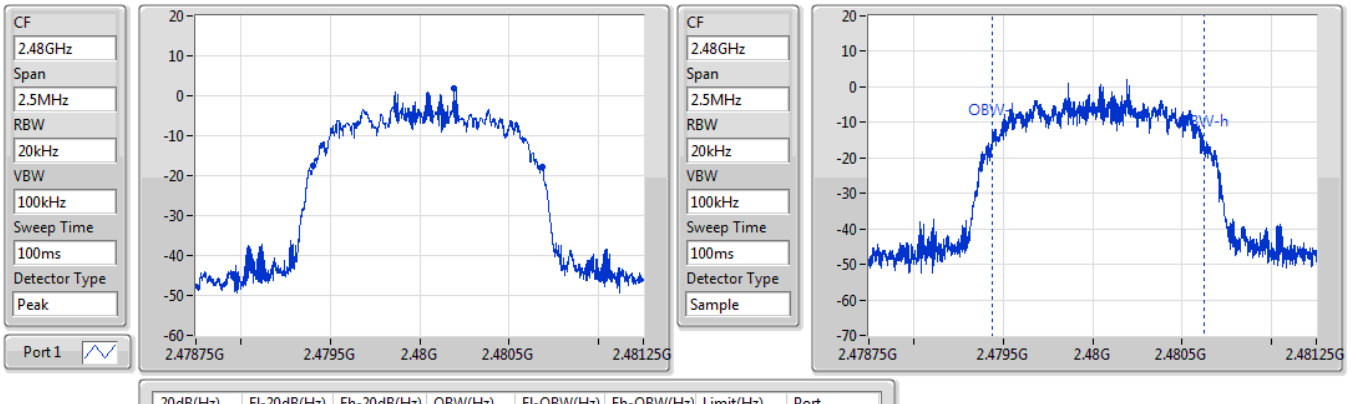
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.251M	2.439405G	2.440656G	1.184M	2.43944G	2.440625G	Inf	1

BT-EDR(2Mbps) EBW-FS

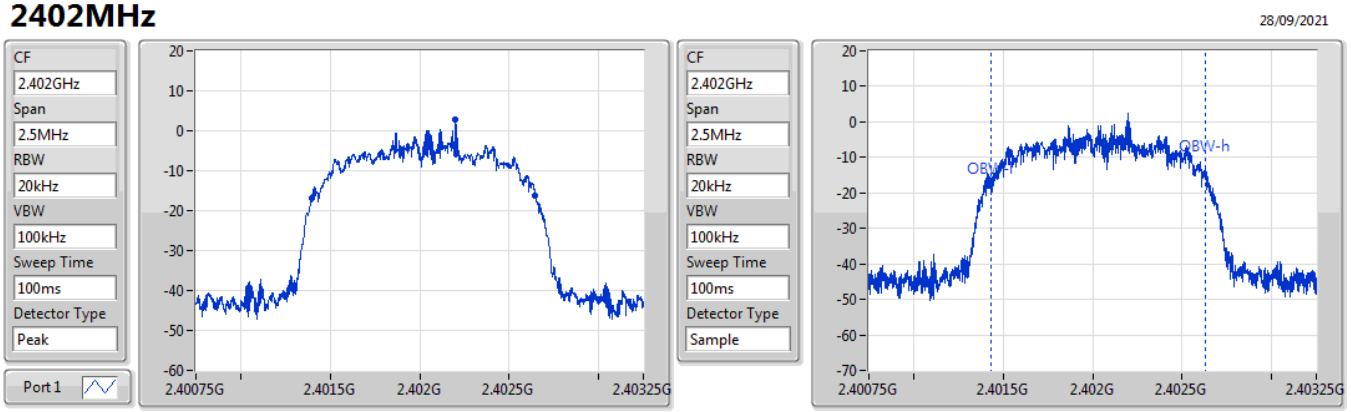
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.281M	2.479404G	2.480685G	1.186M	2.47944G	2.480626G	Inf	1

BT-EDR(3Mbps) EBW-FS

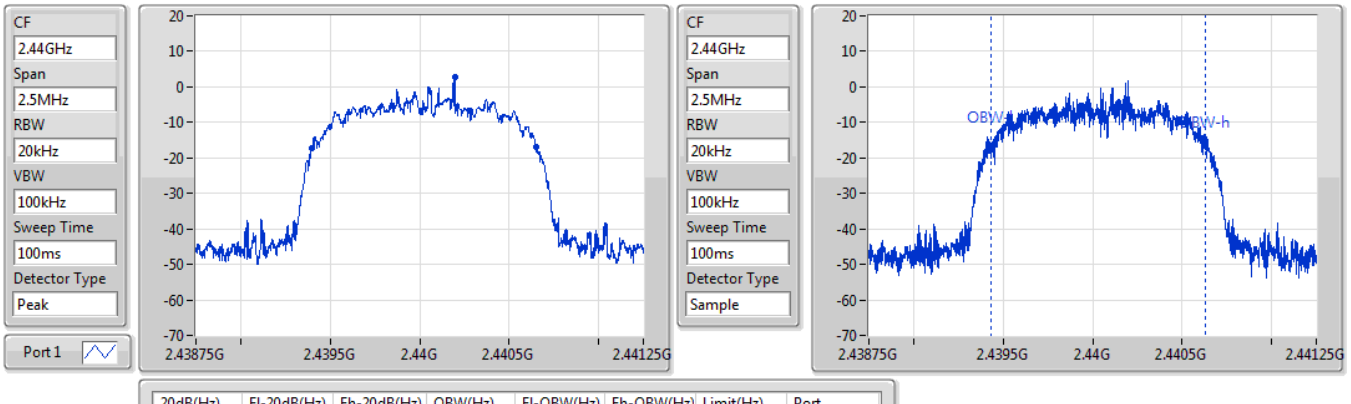
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.251M	2.401396G	2.402648G	1.192M	2.401435G	2.402627G	Inf	1

BT-EDR(3Mbps) EBW-FS

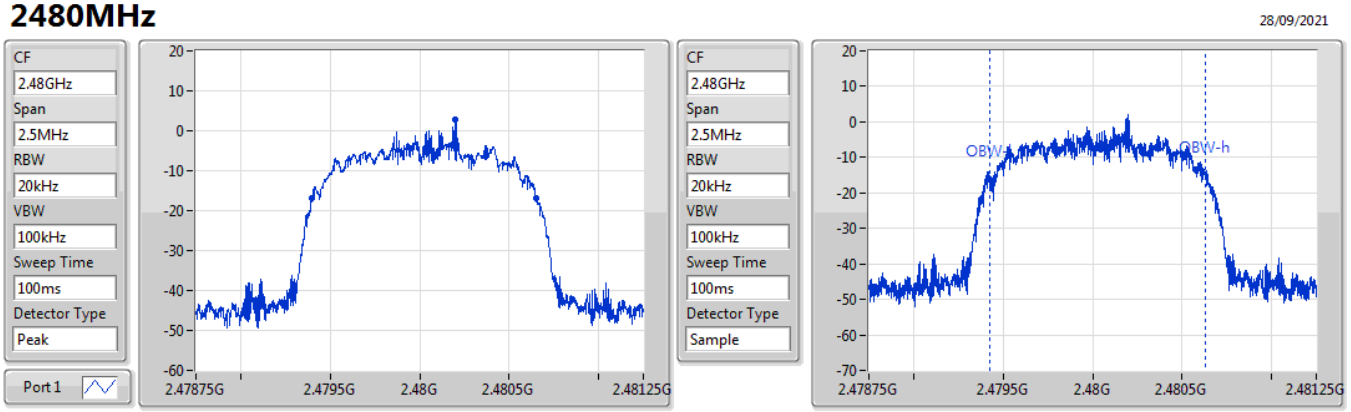
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.254M	2.439395G	2.440649G	1.198M	2.439432G	2.44063G	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
1.256M	2.479396G	2.480653G	1.202M	2.479428G	2.48063G	Inf	1

Summary

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

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402187G	2.403187G	1.0005M	623.5425k
2440MHz	Pass	2.440188G	2.441189G	1.0005M	623.5425k
2480MHz	Pass	2.479188G	2.480189G	1.0005M	623.5425k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402197G	2.403198G	1.0005M	834.498k
2440MHz	Pass	2.440197G	2.441196G	999k	833.166k
2480MHz	Pass	2.479197G	2.480198G	1.0005M	853.146k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402194G	2.403195G	1.0005M	833.166k
2440MHz	Pass	2.440196G	2.441196G	1.0005M	835.164k
2480MHz	Pass	2.479197G	2.480196G	999k	836.496k

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

2.402G/2.403GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402187G	2.403187G	1.0005M	623.5425k

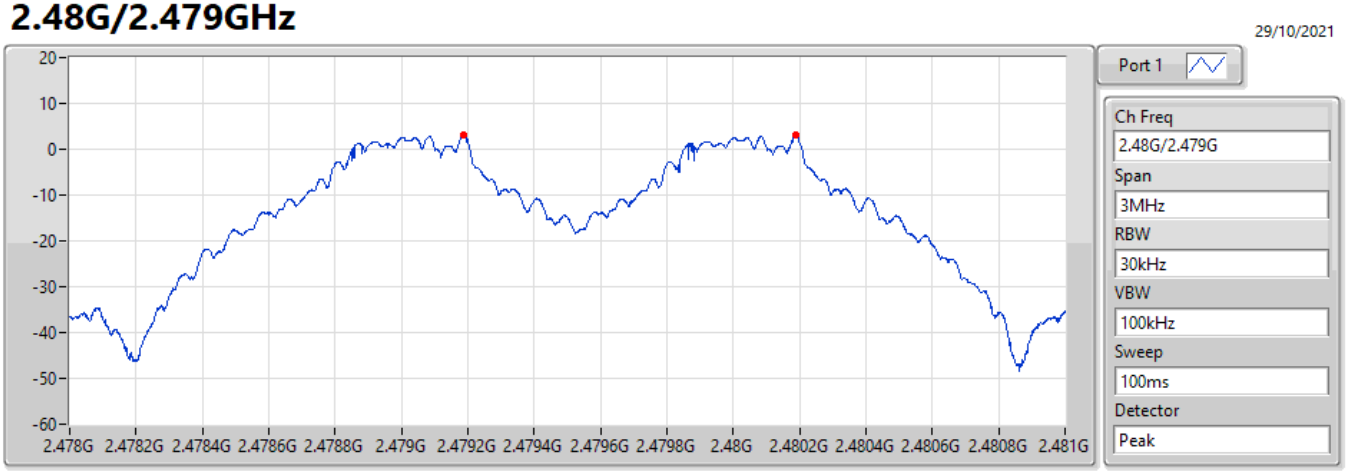
BT-BR(1Mbps) **Channel Separation-FS**

2.44G/2.441GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440188G	2.441189G	1.0005M	623.5425k

BT-BR(1Mbps) Channel Separation-FS

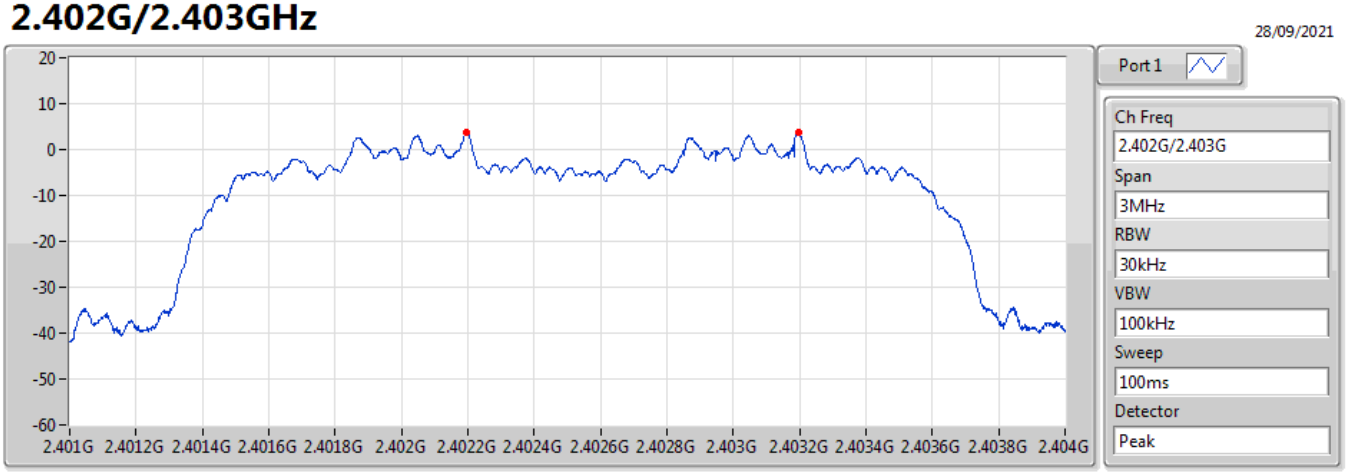
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479188G	2.480189G	1.0005M	623.5425k

BT-EDR(2Mbps) Channel Separation-FS

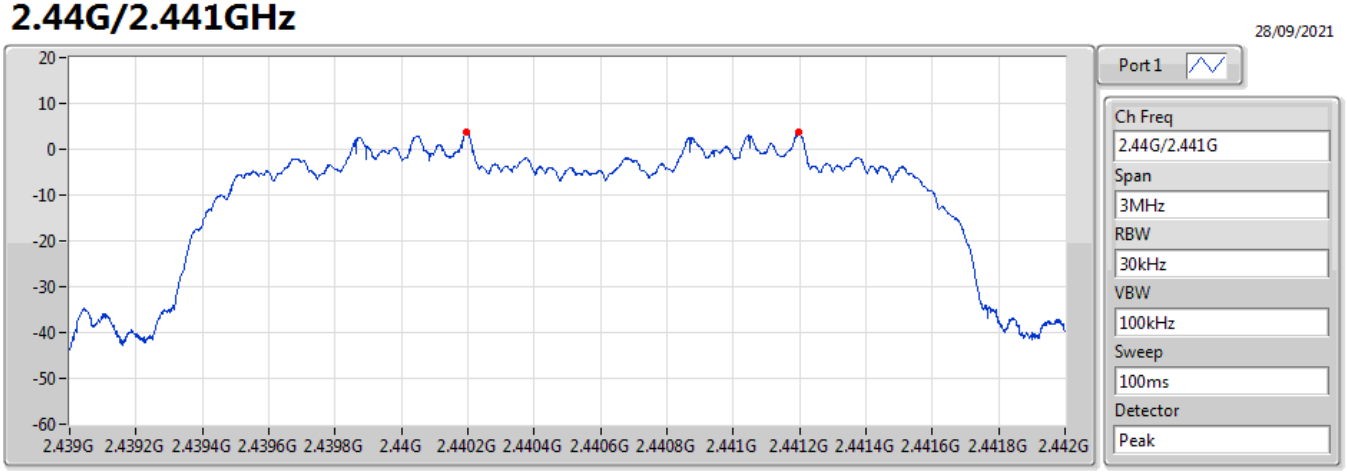
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402197G	2.403198G	1.0005M	834.498k

BT-EDR(2Mbps) Channel Separation-FS

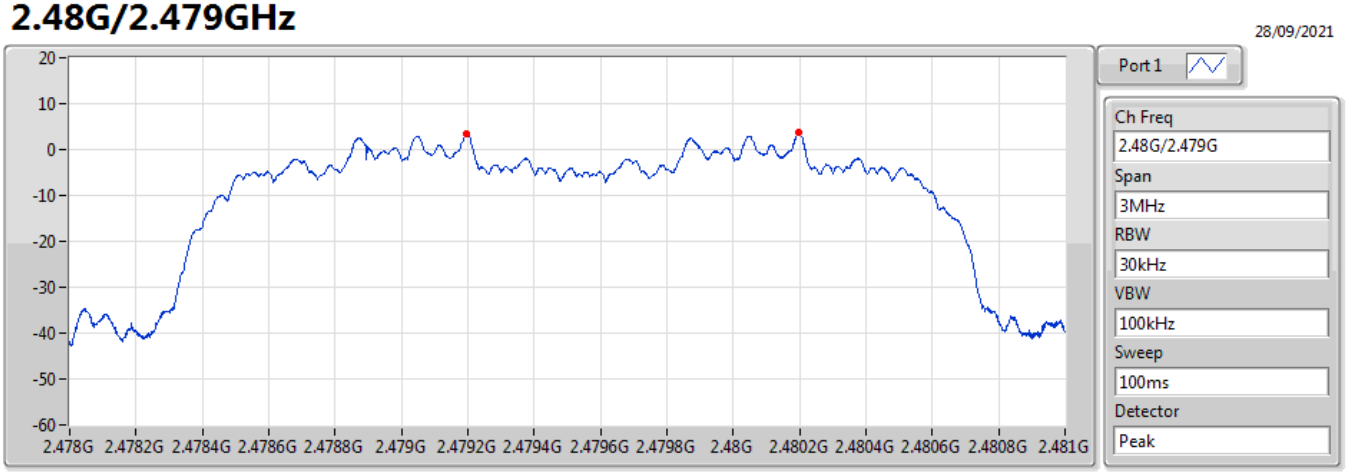
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440197G	2.441196G	999k	833.166k

BT-EDR(2Mbps) Channel Separation-FS

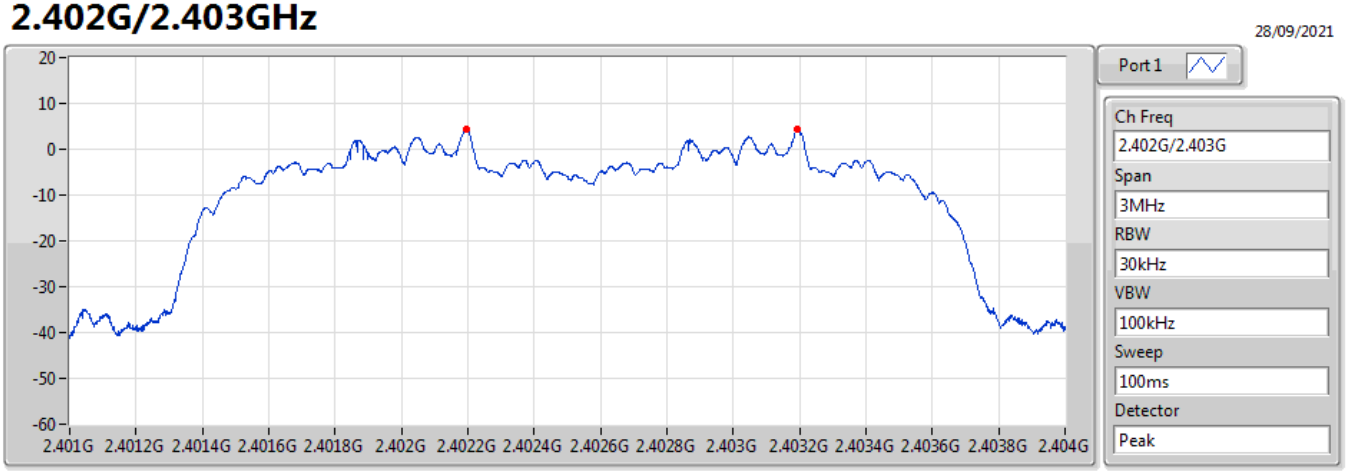
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479197G	2.480198G	1.0005M	853.146k

BT-EDR(3Mbps) Channel Separation-FS

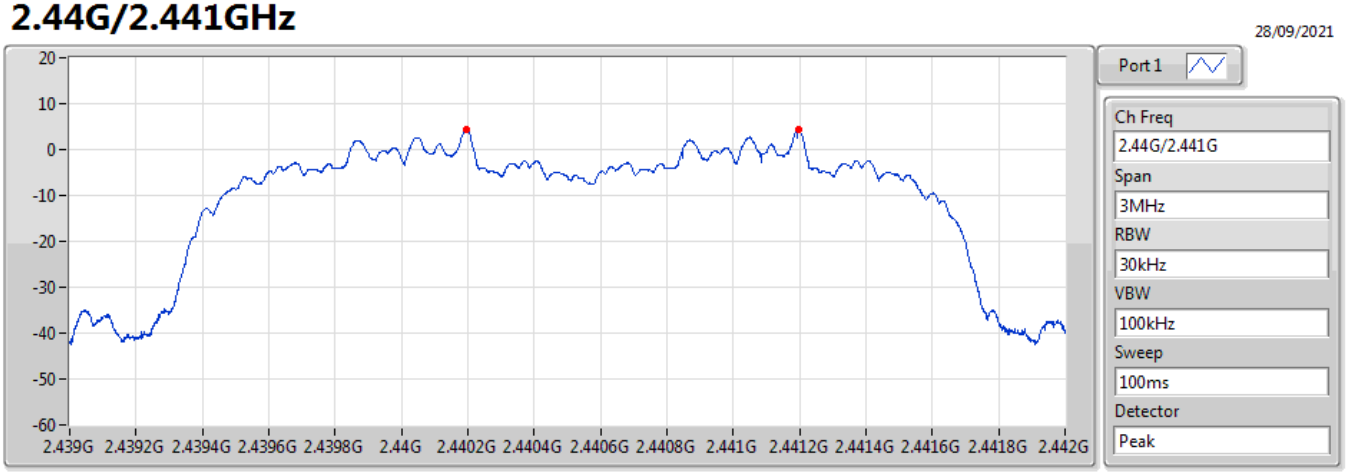
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402194G	2.403195G	1.0005M	833.166k

BT-EDR(3Mbps) Channel Separation-FS

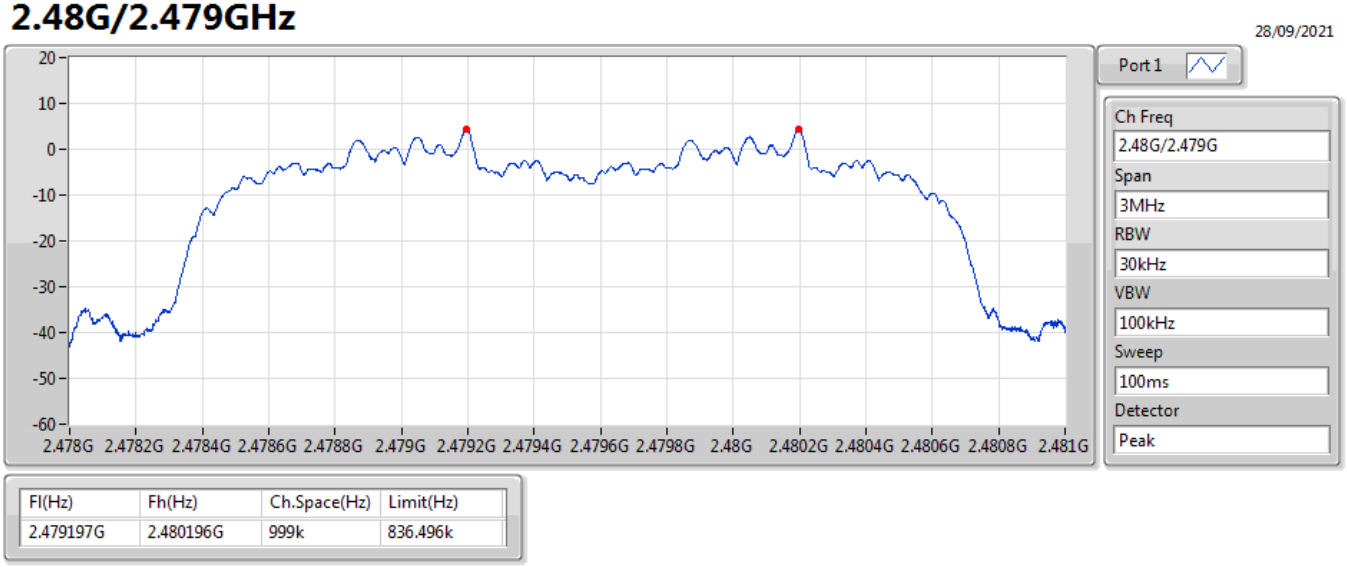
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440196G	2.441196G	1.0005M	835.164k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479197G	2.480196G	999k	836.496k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.79	0.00379
BT-EDR(2Mbps)	7.55	0.00569
BT-EDR(3Mbps)	7.94	0.00622

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	0.00	5.55	21.00
2440MHz	Pass	0.00	5.79	21.00
2480MHz	Pass	0.00	5.74	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	0.00	7.46	21.00
2440MHz	Pass	0.00	7.55	21.00
2480MHz	Pass	0.00	7.38	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	0.00	7.94	21.00
2440MHz	Pass	0.00	7.94	21.00
2480MHz	Pass	0.00	7.83	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.69	0.00371
BT-EDR(2Mbps)	5.19	0.00330
BT-EDR(3Mbps)	5.36	0.00344

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	0.00	5.13	21.00
2440MHz	Pass	0.00	5.56	21.00
2480MHz	Pass	0.00	5.69	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	0.00	4.93	21.00
2440MHz	Pass	0.00	5.19	21.00
2480MHz	Pass	0.00	4.17	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	0.00	5.36	21.00
2440MHz	Pass	0.00	5.31	21.00
2480MHz	Pass	0.00	5.04	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

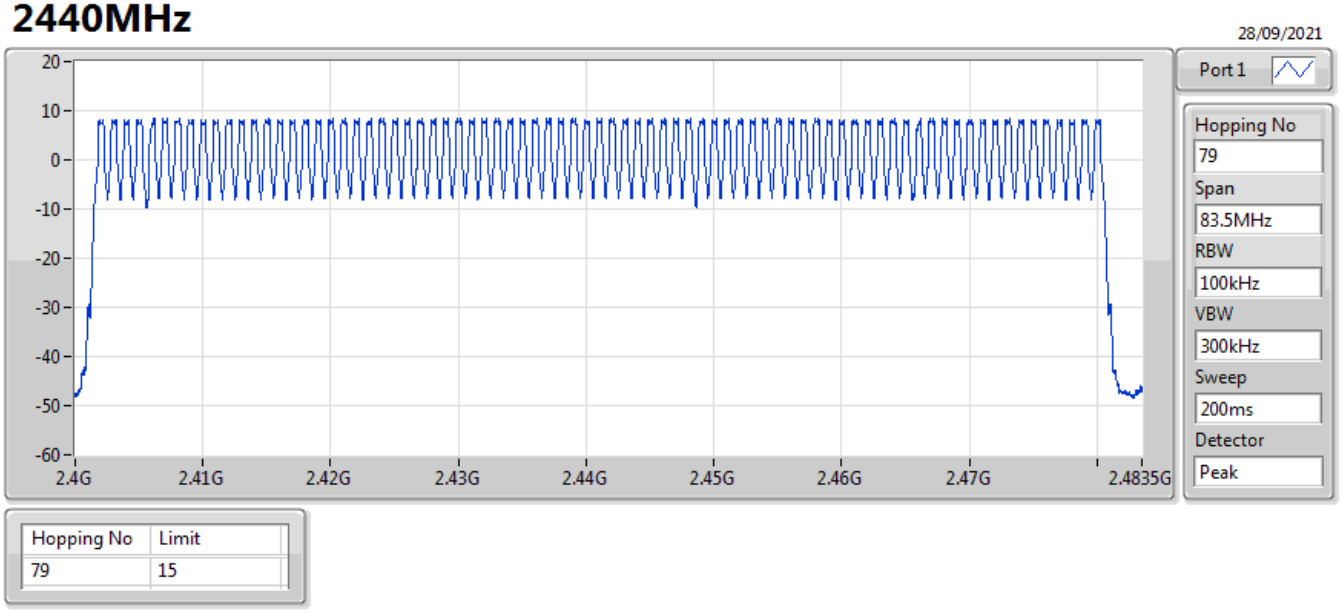
Result

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)

2440MHz

Hopping-FS

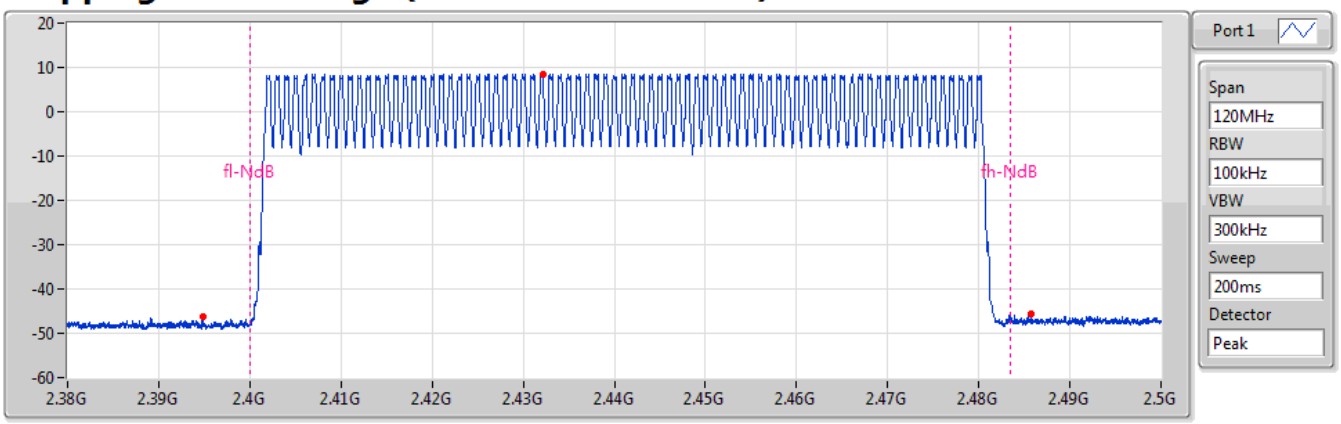


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

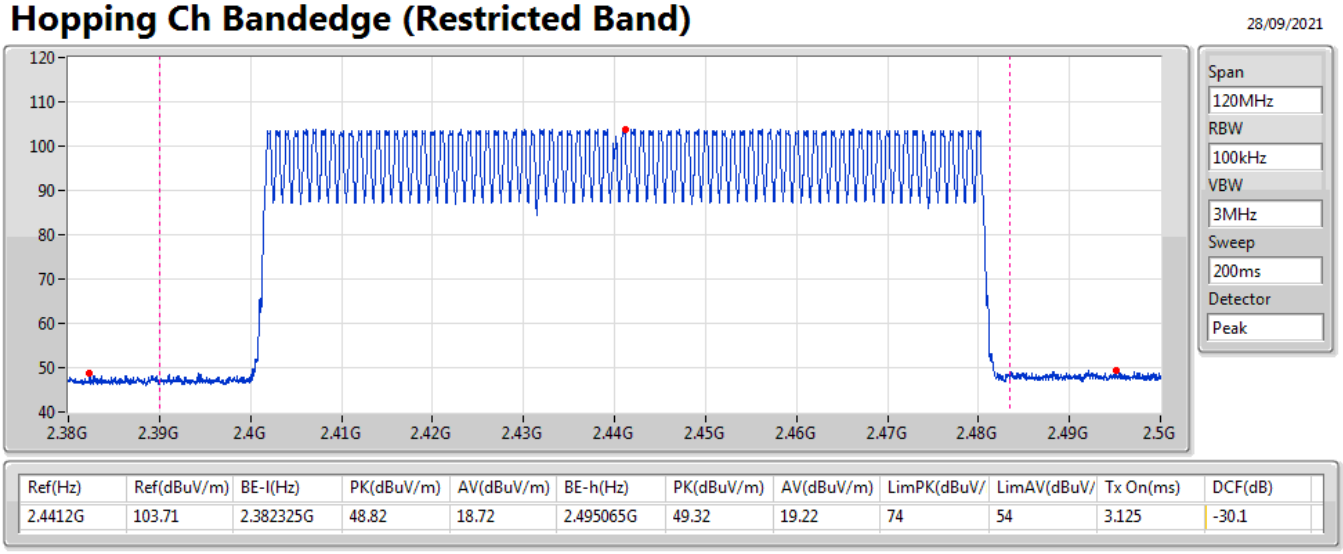


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-11.53	2.432185G	8.47	2.394805G	-46.32	2.485765G	-45.7

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

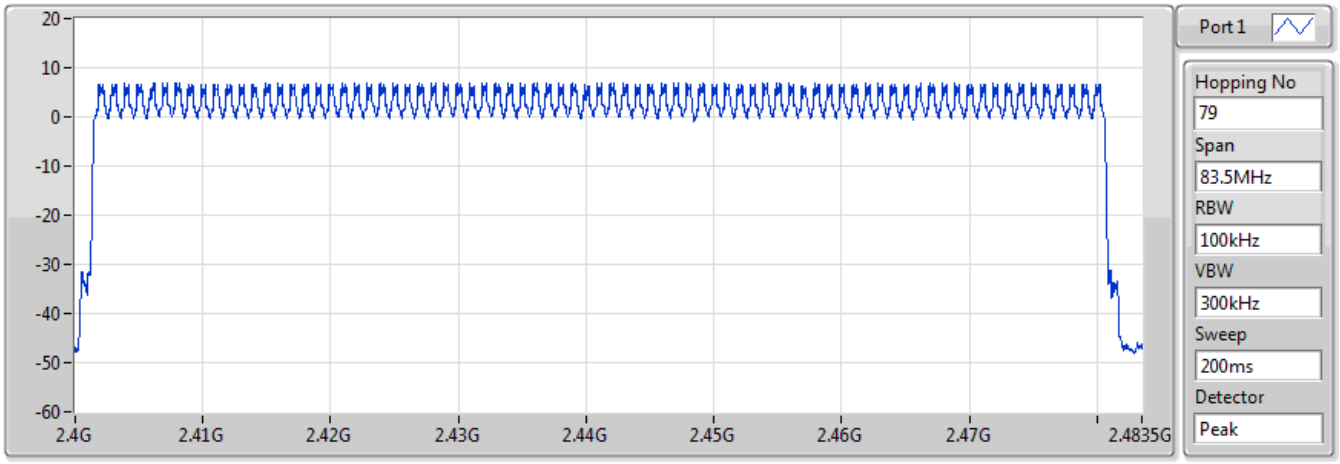


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.4412G	103.71	2.382325G	48.82	18.72	2.495065G	49.32	19.22	74	54	3.125	-30.1

BT-EDR(2Mbps)

2440MHz

Hopping-FS

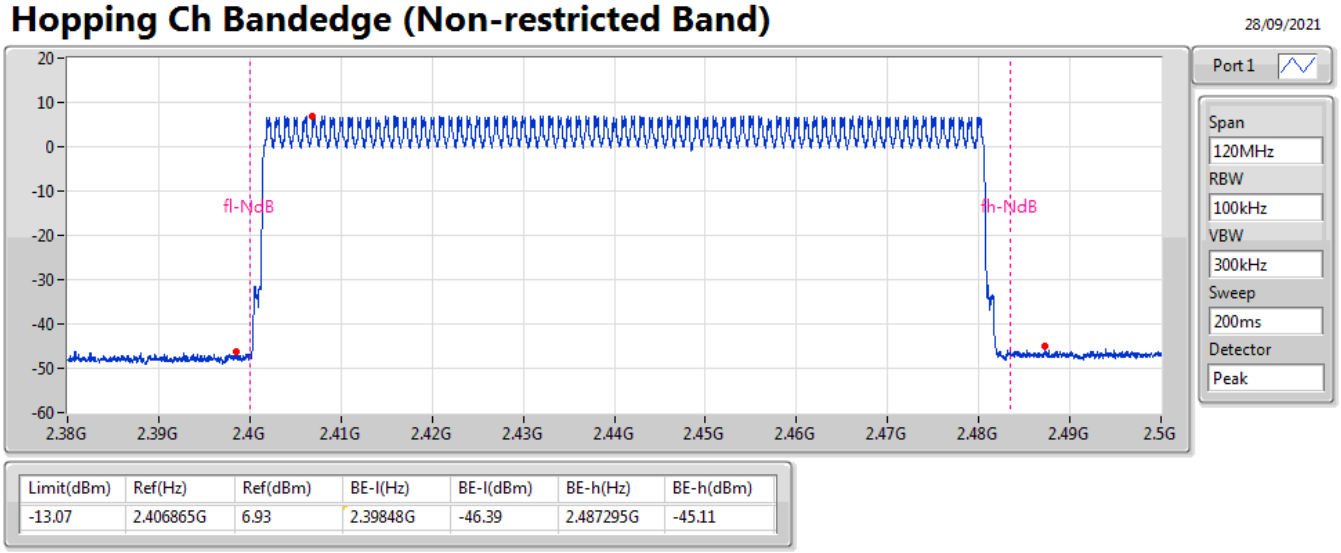


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

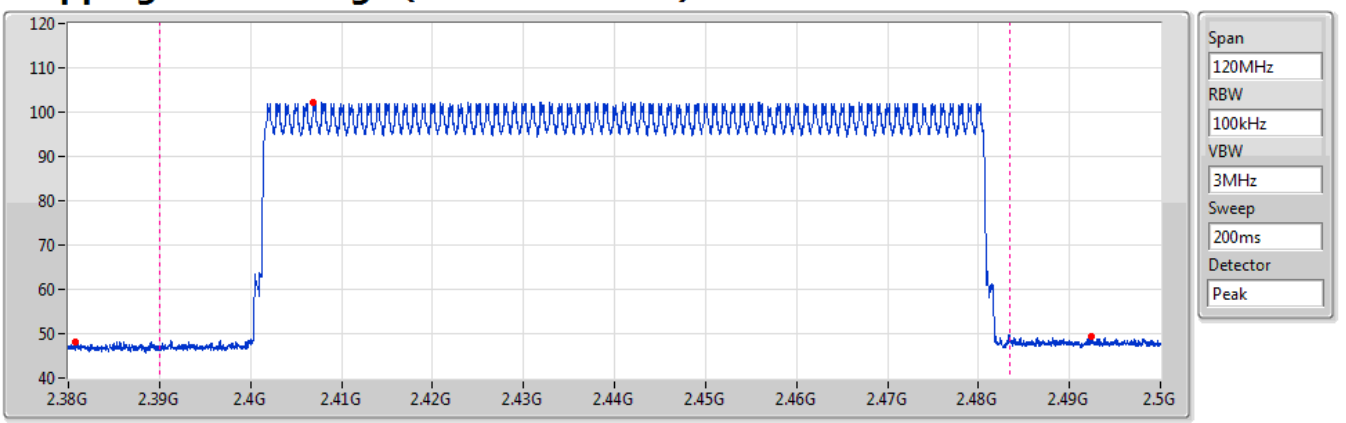


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-13.07	2.406865G	6.93	2.39848G	-46.39	2.487295G	-45.11

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

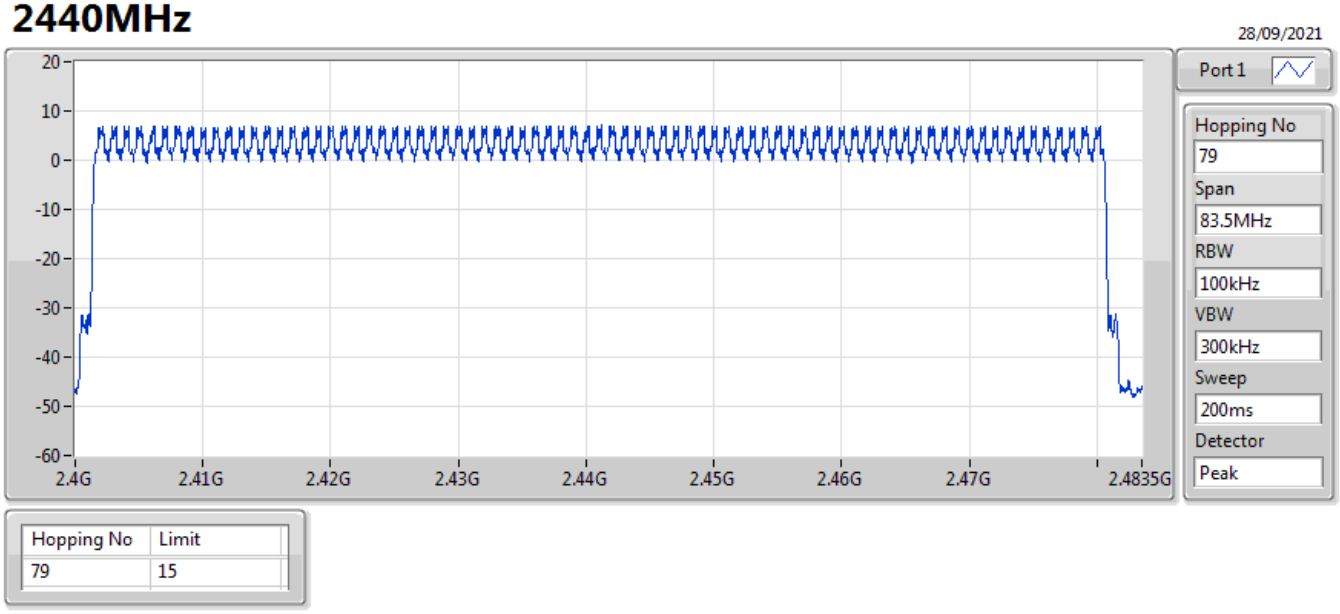


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.406865G	102.15	2.380705G	48.23	18.13	2.49244G	49.37	19.27	74	54	3.125	-30.1

BT-EDR(3Mbps)

Hopping-FS

2440MHz

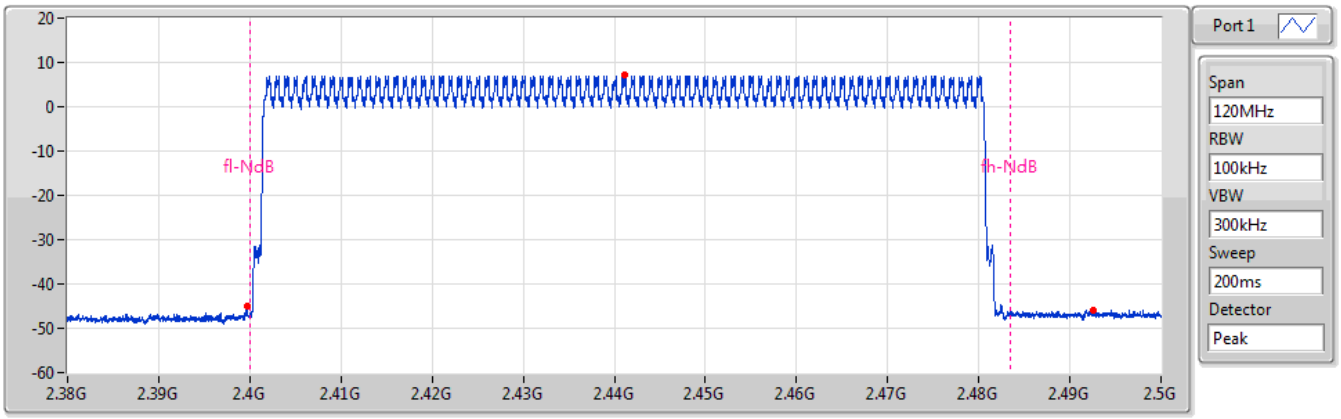


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

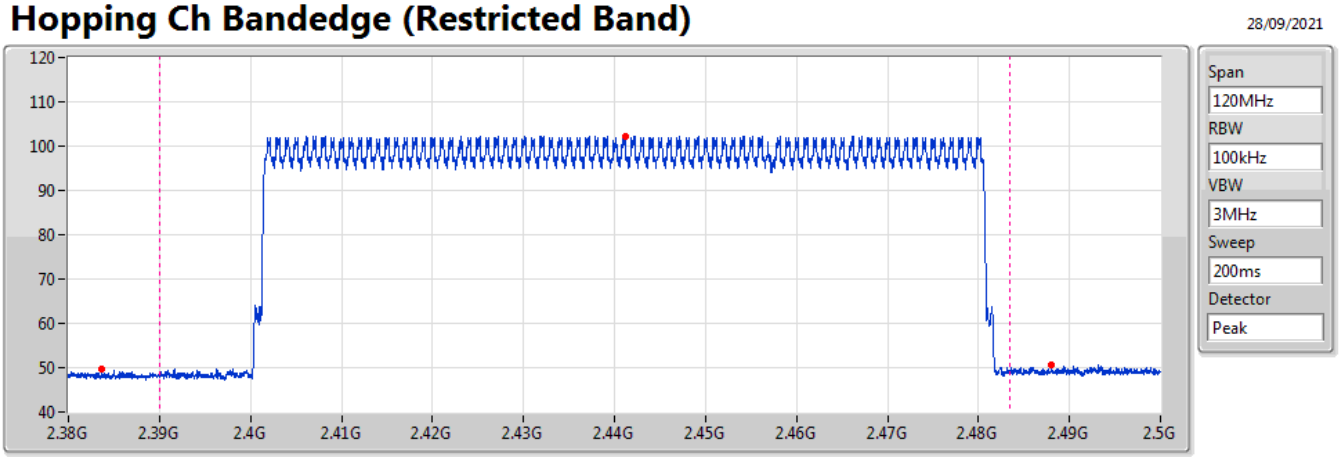


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-12.96	2.4412G	7.04	2.399665G	-45.06	2.49262G	-45.79

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)
2.4412G	102.25	2.38363G	49.55	19.45	2.488G	50.51	20.41	74	54	3.125	-30.1

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	306.9014m_DH5
BT-EDR(2Mbps)	307.35445m_DH5
BT-EDR(3Mbps)	307.67425m_DH5

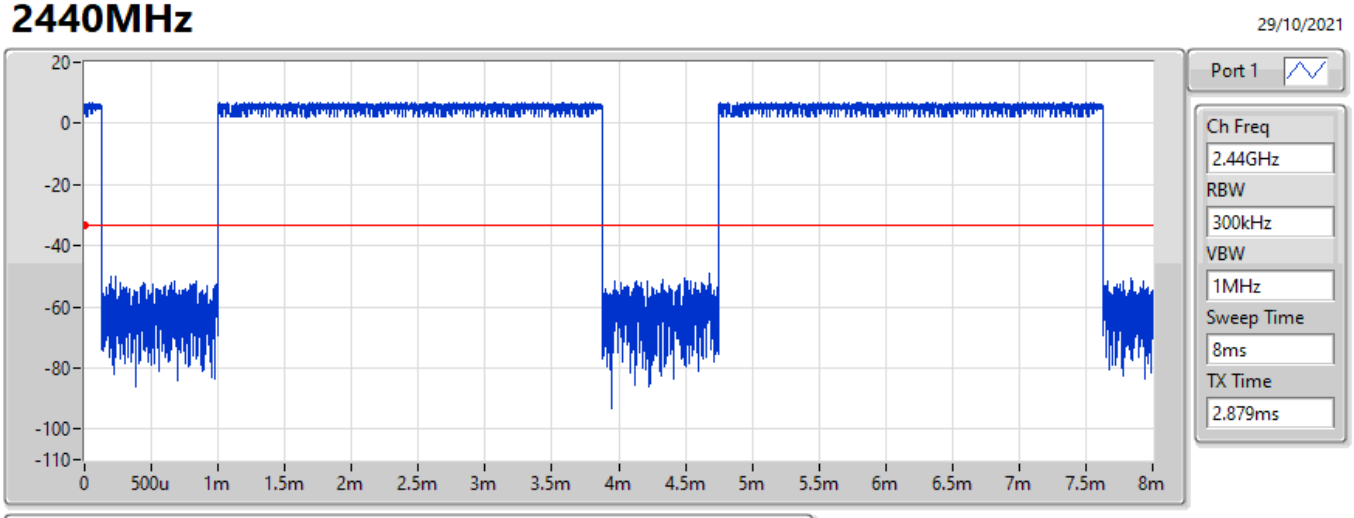
Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	306.9014m_DH5	400m	2.879m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	307.35445m_DH5	400m	2.88325m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	307.67425m_DH5	400m	2.88625m

BT-BR(1Mbps)

Dwell-FS

2440MHz



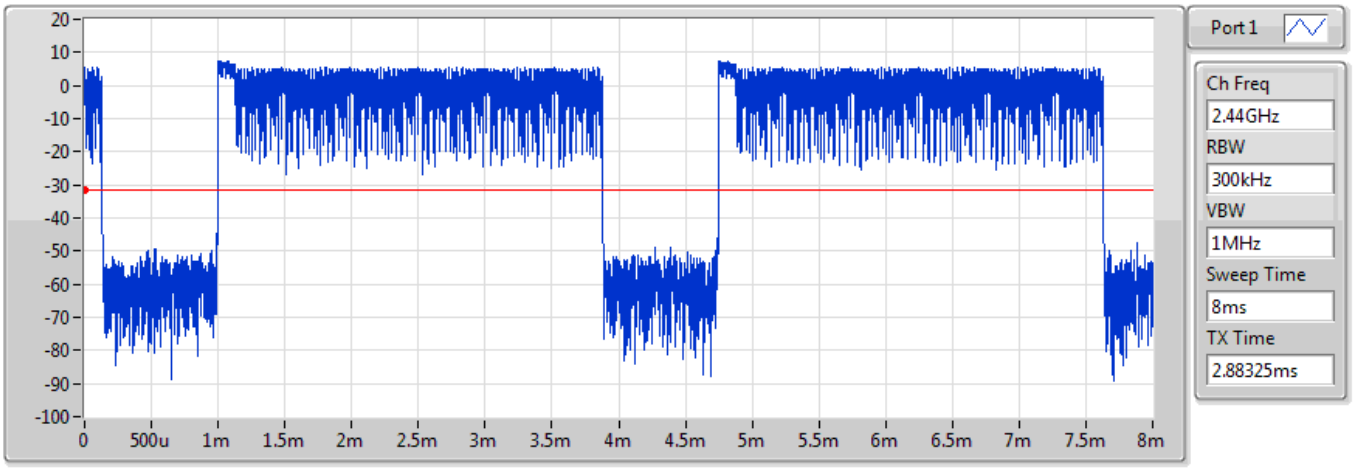
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	306.9014m_DH5	400m	2.879m

DH5

BT-EDR(2Mbps)

Dwell-FS

2440MHz

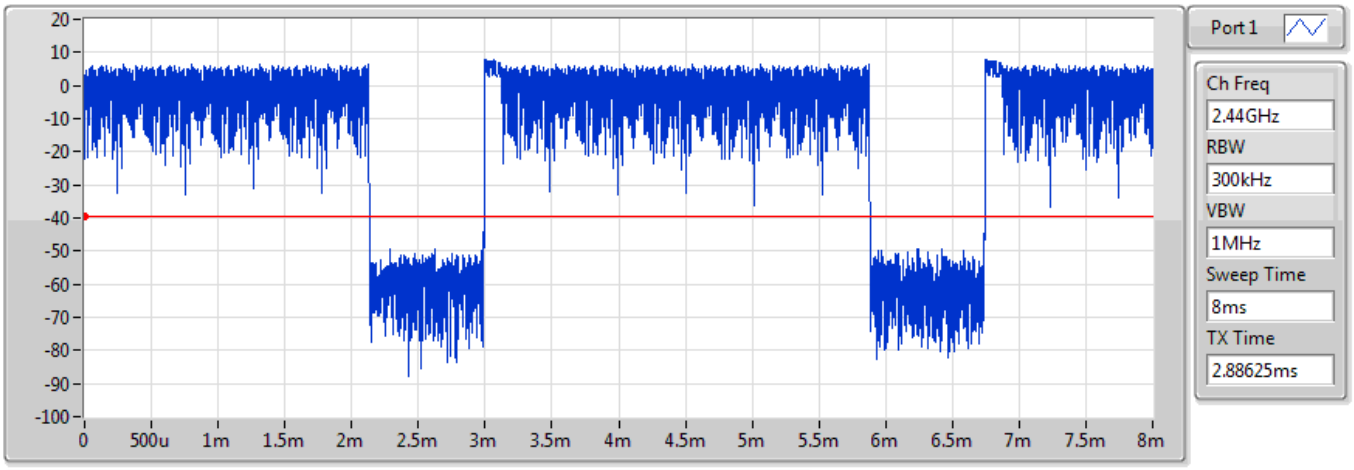


Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	307.35445m_DH5	400m	2.88325m

DH5

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

2440MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	307.67425m_DH5	400m	2.88625m

DH5

Summary

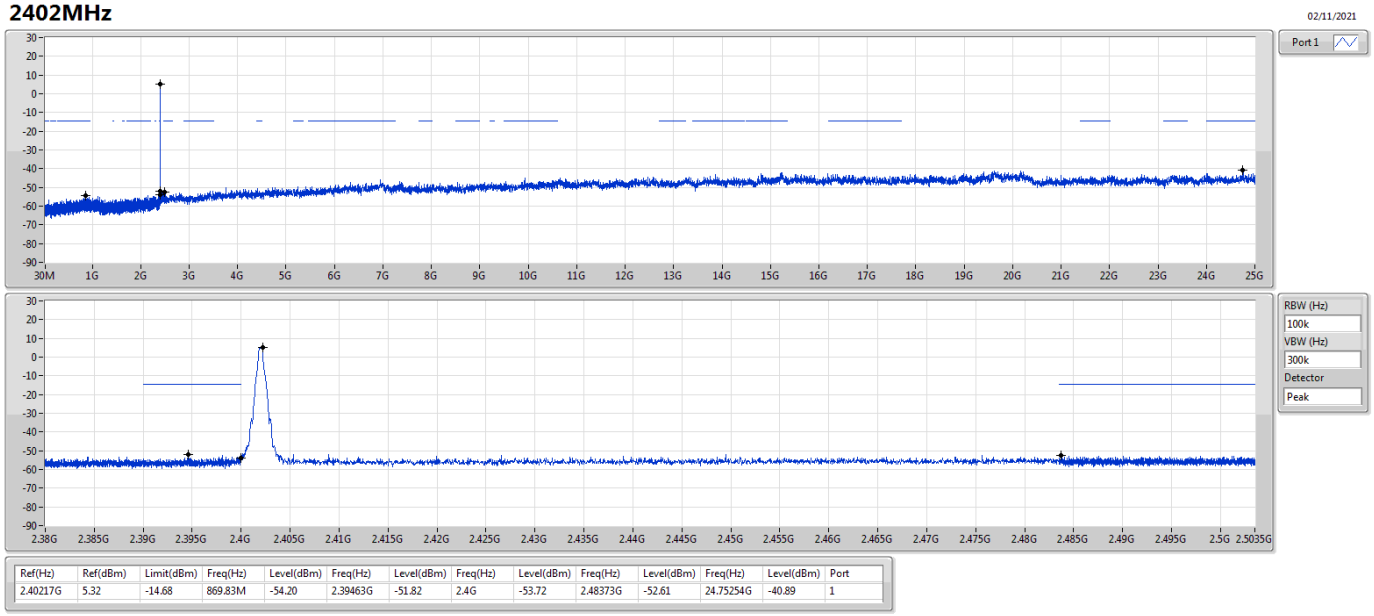
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.40217G	5.32	-14.68	869.83M	-54.20	2.39463G	-51.82	2.4G	-53.72	2.48373G	-52.61	24.75254G	-40.89	1
BT-EDR(2Mbps)	Pass	2.40217G	6.19	-13.81	1.83157G	-54.21	2.39981G	-49.08	2.4G	-52.58	2.50012G	-51.52	24.04109G	-42.53	1
BT-EDR(3Mbps)	Pass	2.40217G	6.46	-13.54	2.01311G	-53.77	2.39952G	-48.70	2.4G	-49.84	2.49378G	-52.20	24.33073G	-40.73	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	2.40217G	5.32	-14.68	869.83M	-54.20	2.39463G	-51.82	2.4G	-53.72	2.48373G	-52.61	24.75254G	-40.89	1
2440MHz	Pass	2.44008G	4.89	-15.11	2.11798G	-55.51	2.39102G	-54.90	2.4G	-56.11	2.50022G	-53.10	21.88705G	-42.47	1
2480MHz	Pass	2.47987G	5.07	-14.93	1.90589G	-55.78	2.39493G	-54.95	2.4835G	-55.75	2.48978G	-54.28	24.57257G	-42.43	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	6.19	-13.81	1.83157G	-54.21	2.39981G	-49.08	2.4G	-52.58	2.50012G	-51.52	24.04109G	-42.53	1
2440MHz	Pass	2.43987G	5.95	-14.05	2.06716G	-55.30	2.39121G	-53.05	2.4835G	-55.32	2.48874G	-52.65	24.7666G	-40.73	1
2480MHz	Pass	2.47991G	6.01	-13.99	1.62888G	-54.76	2.39527G	-53.35	2.4835G	-52.58	2.49451G	-52.40	15.2562G	-41.78	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	6.46	-13.54	2.01311G	-53.77	2.39952G	-48.70	2.4G	-49.84	2.49378G	-52.20	24.33073G	-40.73	1
2440MHz	Pass	2.43987G	6.52	-13.48	2.11504G	-54.07	2.39815G	-53.01	2.4G	-54.24	2.4981G	-52.52	15.22527G	-41.36	1
2480MHz	Pass	2.4802G	6.47	-13.53	2.30744G	-54.02	2.39448G	-53.88	2.4835G	-54.51	2.49095G	-52.11	15.20559G	-41.99	1

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

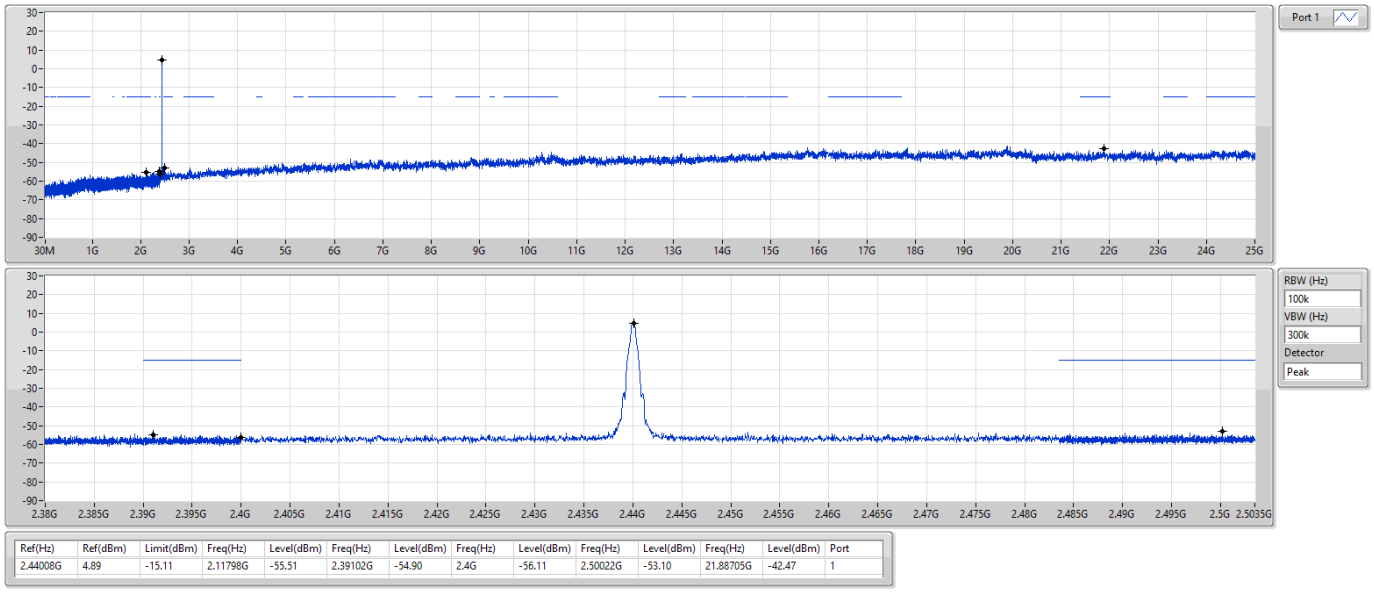
2402MHz



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
2.40217G	5.32	-14.68	869.83M	-54.20	2.39463G	-51.82	2.4G	-53.72	2.48373G	-52.61	24.75254G	-40.89	1

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

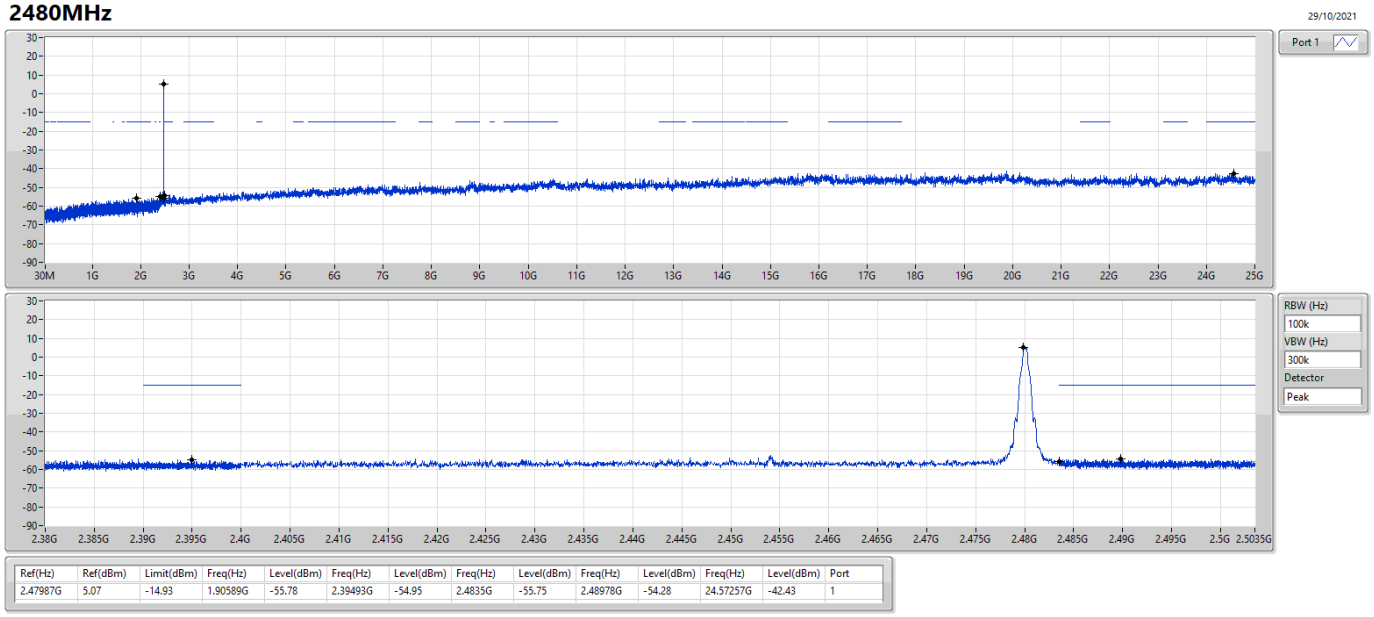
2440MHz



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
2.44008G	4.89	-15.11	2.11798G	-55.51	2.39102G	-54.90	2.4G	-56.11	2.50022G	-53.10	21.88705G	-42.47	1

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

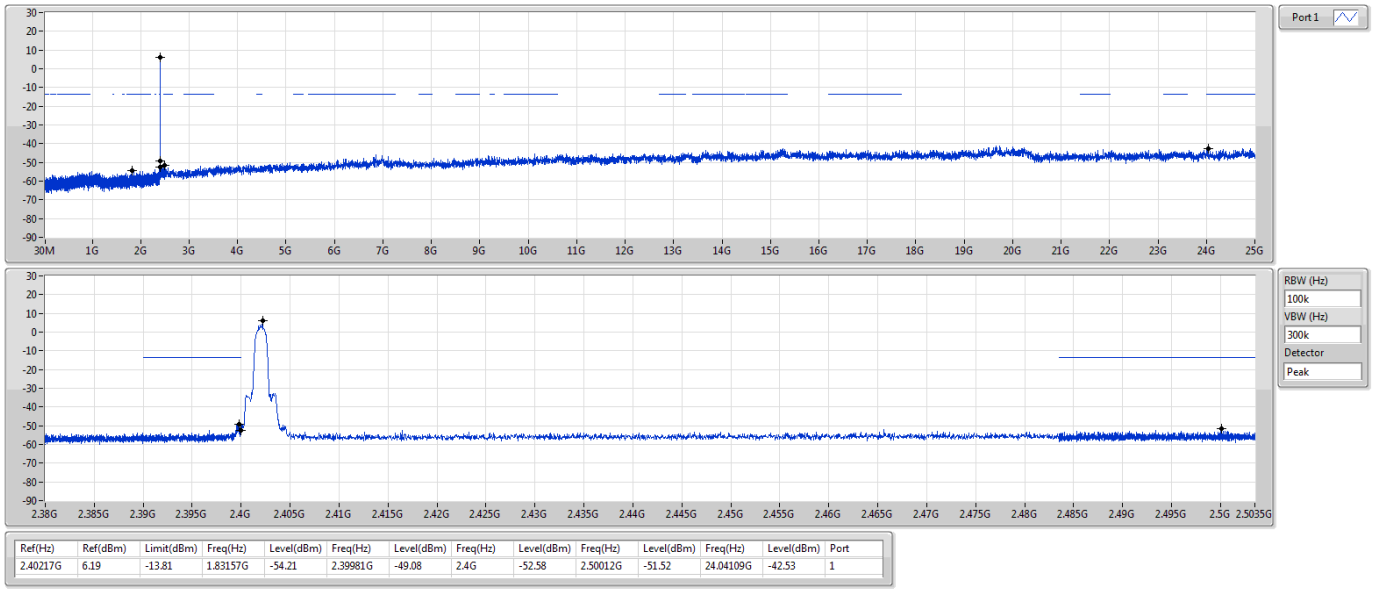
2480MHz



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
2.47987G	5.07	-14.93	1.90589G	-55.78	2.39493G	-54.95	2.4835G	-55.75	2.48978G	-54.28	24.57257G	-42.43	1

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

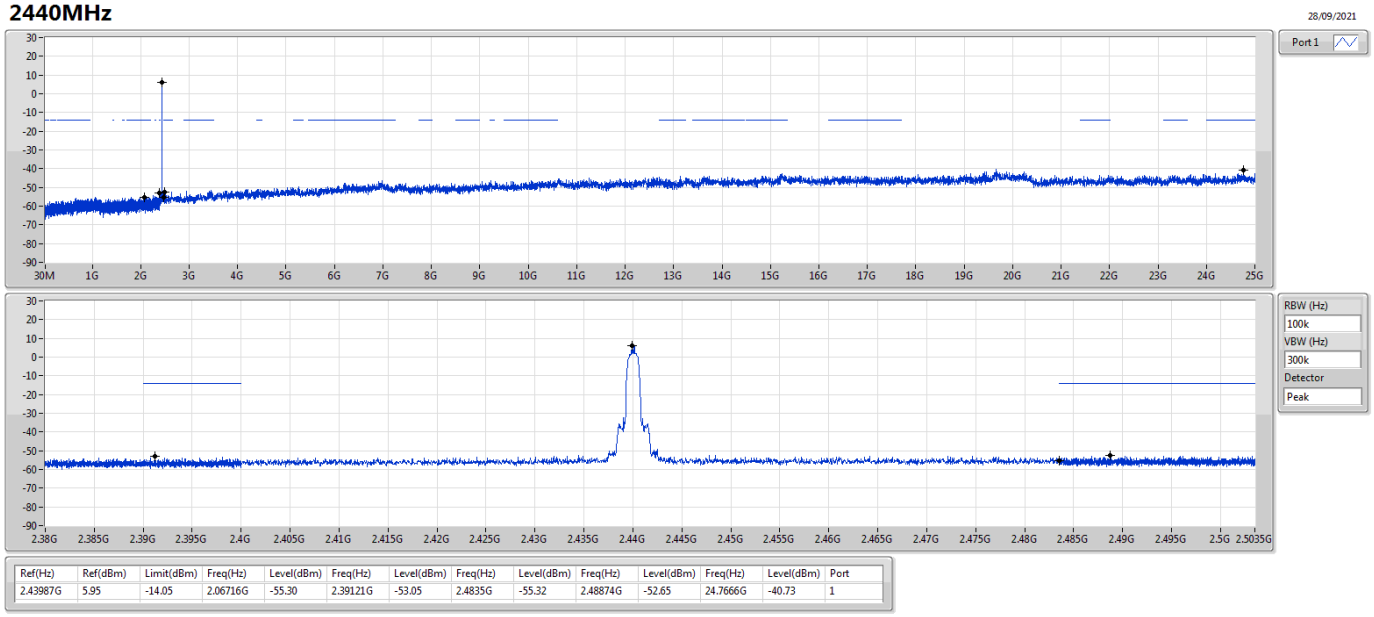
2402MHz



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
2.40217G	6.19	-13.81	1.83157G	-54.21	2.39981G	-49.08	2.4G	-52.58	2.50012G	-51.52	24.04109G	-42.53	1

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

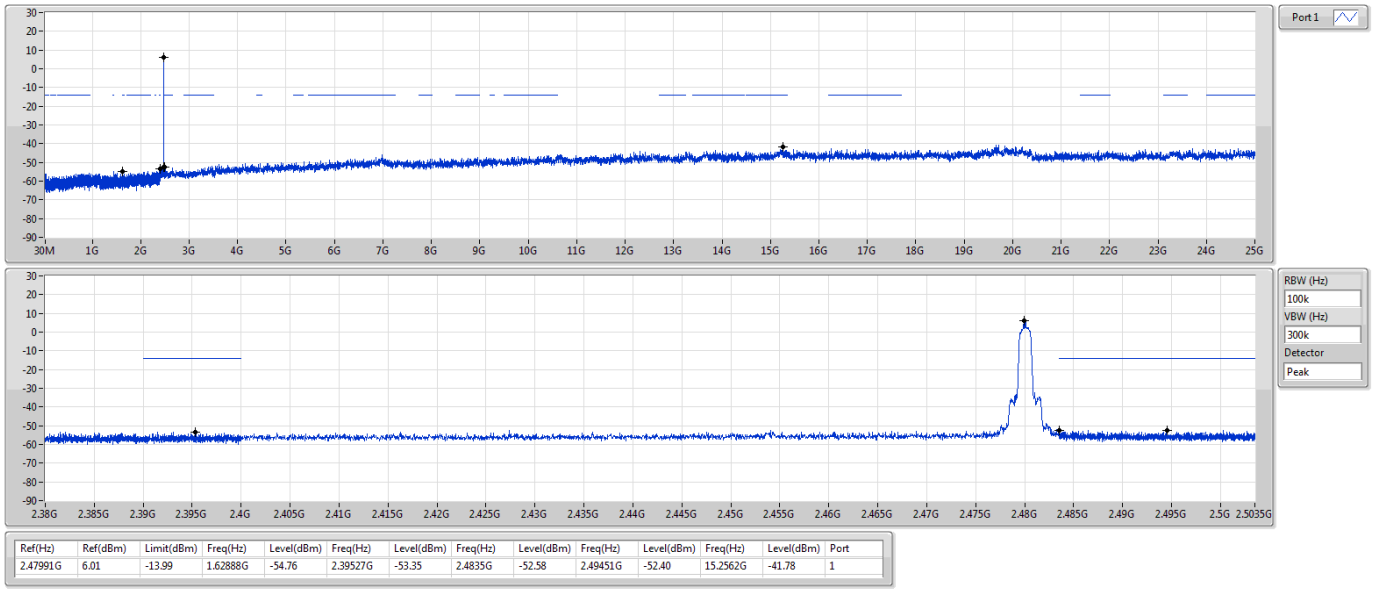
2440MHz



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
2.43987G	5.95	-14.05	2.06716G	-55.30	2.39121G	-53.05	2.4835G	-55.32	2.48874G	-52.65	24.7666G	-40.73	1

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

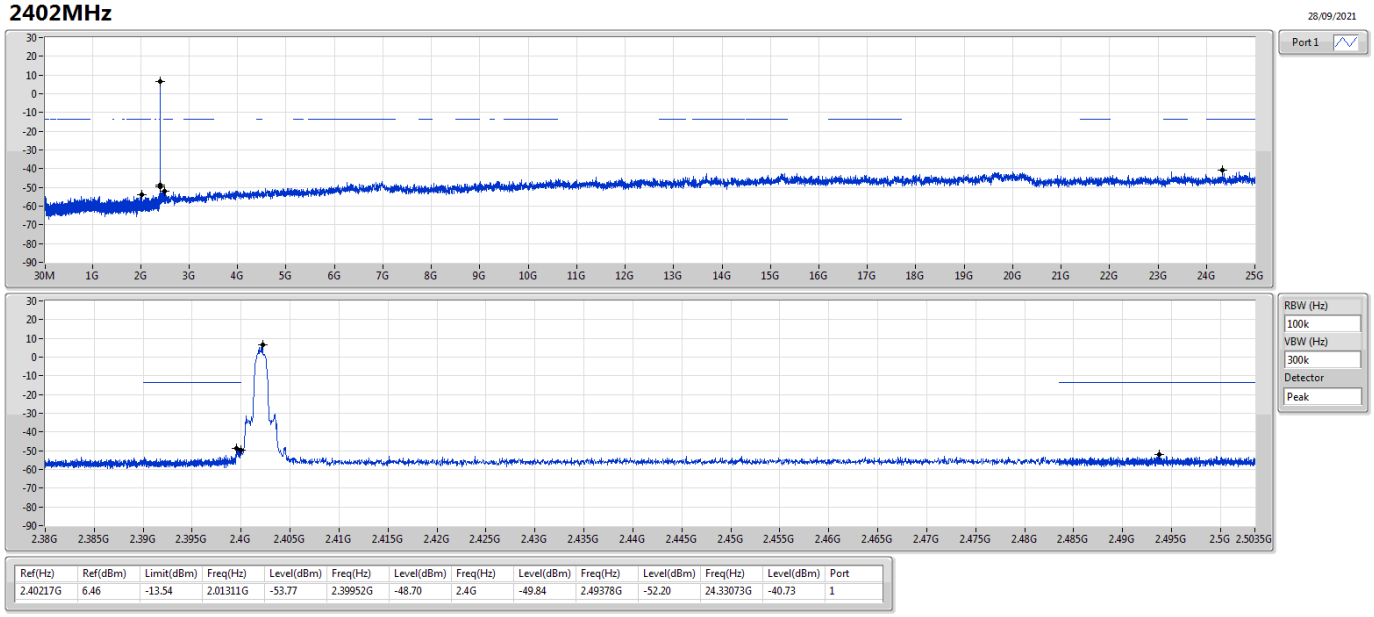
2480MHz



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
2.47991G	6.01	-13.99	1.62888G	-54.76	2.39527G	-53.35	2.4835G	-52.58	2.49451G	-52.40	15.2562G	-41.78	1

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

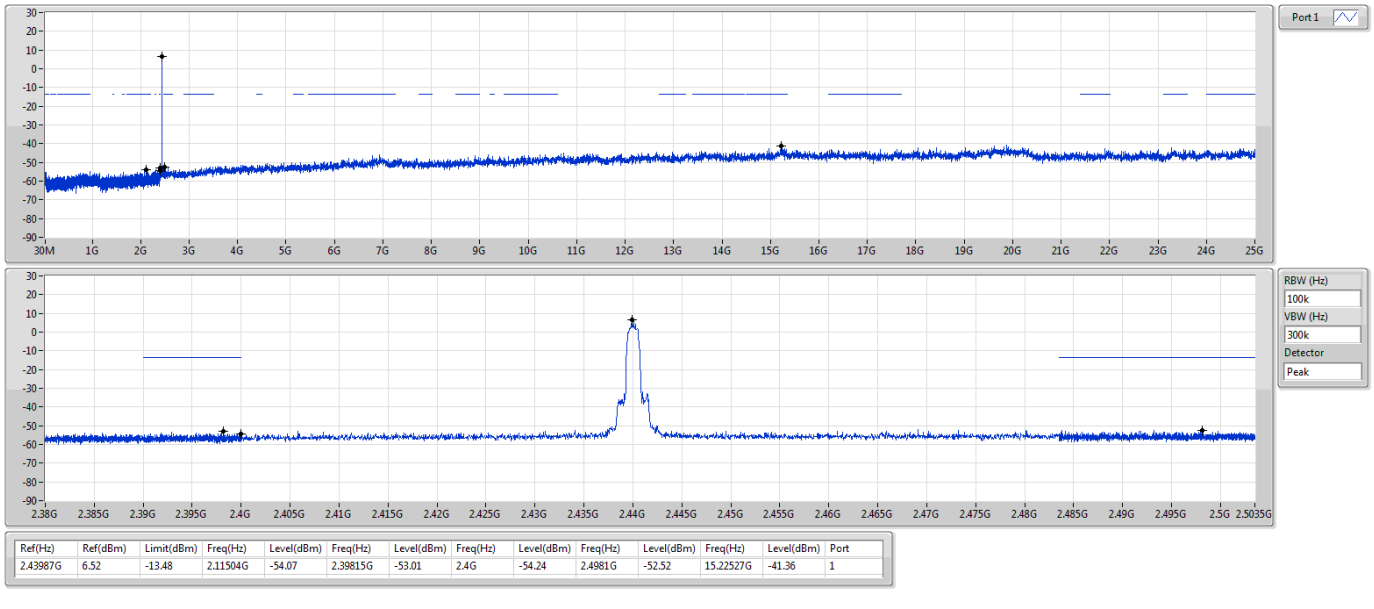
2402MHz



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
2.40217G	6.46	-13.54	2.01311G	-53.77	2.39952G	-48.70	2.4G	-49.84	2.49378G	-52.20	24.33073G	-40.73	1

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

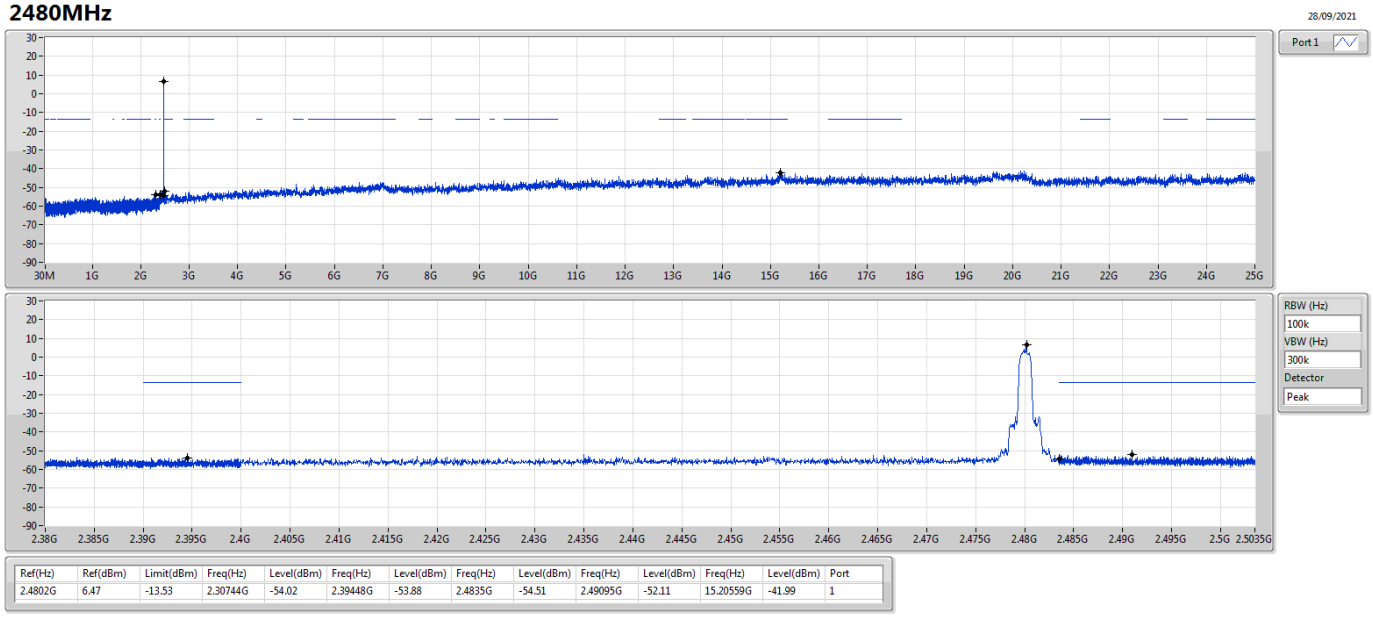
2440MHz



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
2.43987G	6.52	-13.48	2.11504G	-54.07	2.39815G	-53.01	2.4G	-54.24	2.4981G	-52.52	15.22527G	-41.36	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
2.4802G	6.47	-13.53	2.30744G	-54.02	2.39448G	-53.88	2.4835G	-54.51	2.49095G	-52.11	15.20559G	-41.99	1

Summary

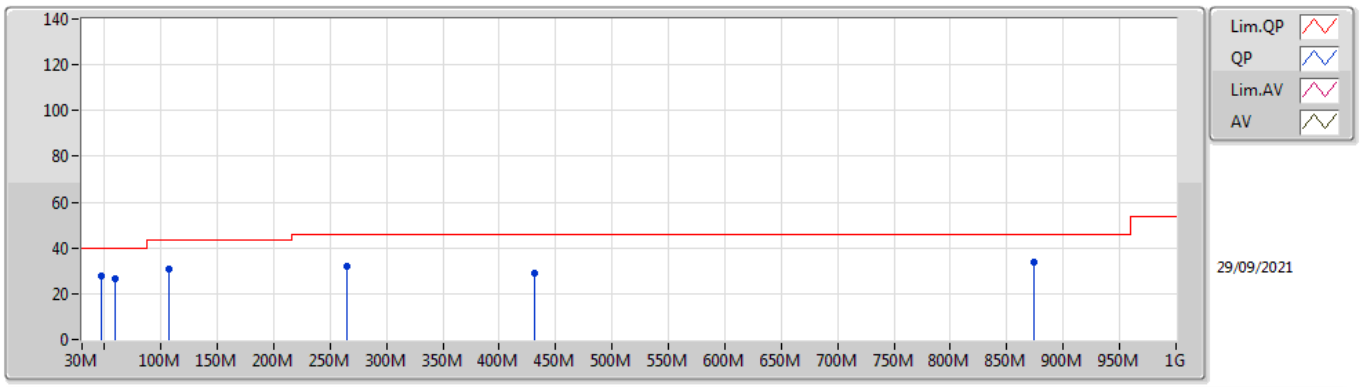
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	264.74M	40.96	46.00	-5.04	3	Horizontal	0	1.00	-

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	47.46M	27.83	40.00	-12.17	3	Vertical	360	1.00	-
2440MHz	Pass	PK	59.1M	26.47	40.00	-13.53	3	Vertical	360	1.00	-
2440MHz	Pass	PK	107.6M	30.88	43.50	-12.62	3	Vertical	360	1.00	-
2440MHz	Pass	PK	264.74M	32.20	46.00	-13.80	3	Vertical	360	1.00	-
2440MHz	Pass	PK	431.58M	28.75	46.00	-17.25	3	Vertical	360	1.00	-
2440MHz	Pass	PK	873.9M	33.60	46.00	-12.40	3	Vertical	360	1.00	-
2440MHz	Pass	PK	47.46M	25.48	40.00	-14.52	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	107.6M	35.59	43.50	-7.91	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	200.72M	34.90	43.50	-8.60	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	264.74M	40.96	46.00	-5.04	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	367.56M	29.71	46.00	-16.29	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	400.54M	28.85	46.00	-17.15	3	Horizontal	0	1.00	-

BT-BR(1Mbps)

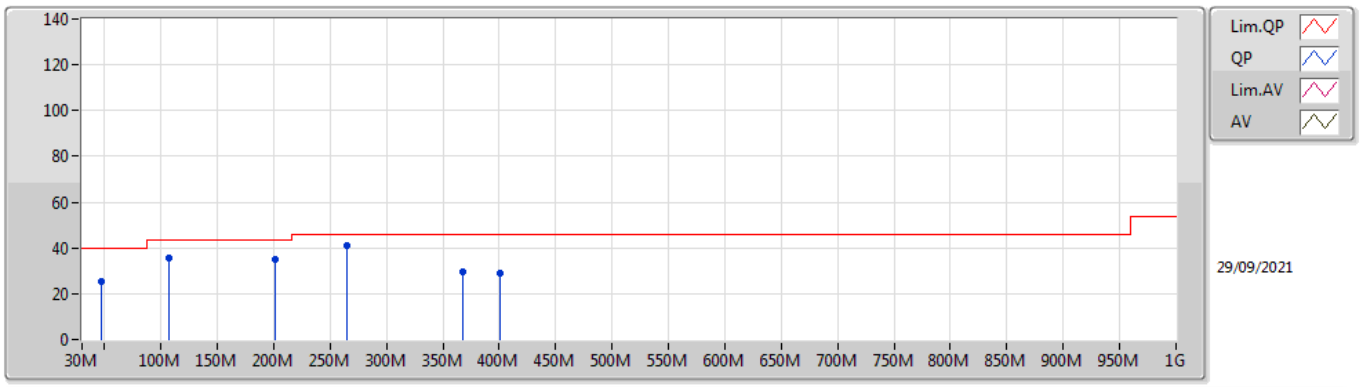
2440MHz_USB



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	27.83	40.00	-12.17	-21.53	3	Vertical	360	1.00	-	49.36	14.75	0.80	37.08
PK	59.1M	26.47	40.00	-13.53	-25.19	3	Vertical	360	1.00	-	51.66	11.06	0.82	37.07
PK	107.6M	30.88	43.50	-12.62	-19.63	3	Vertical	360	1.00	-	50.51	16.00	1.01	36.64
PK	264.74M	32.20	46.00	-13.80	-15.64	3	Vertical	360	1.00	-	47.84	19.21	1.55	36.40
PK	431.58M	28.75	46.00	-17.25	-12.49	3	Vertical	360	1.00	-	41.24	22.08	2.03	36.60
PK	873.9M	33.60	46.00	-12.40	-6.21	3	Vertical	360	1.00	-	39.81	28.41	2.97	37.59

BT-BR(1Mbps)

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	25.48	40.00	-14.52	-21.53	3	Horizontal	0	1.00	-	47.01	14.75	0.80	37.08
PK	107.6M	35.59	43.50	-7.91	-19.63	3	Horizontal	0	1.00	-	55.22	16.00	1.01	36.64
PK	200.72M	34.90	43.50	-8.60	-20.70	3	Horizontal	0	1.00	-	55.60	14.25	1.32	36.27
PK	264.74M	40.96	46.00	-5.04	-15.64	3	Horizontal	0	1.00	-	56.60	19.21	1.55	36.40
PK	367.56M	29.71	46.00	-16.29	-14.78	3	Horizontal	0	1.00	-	44.49	19.94	1.82	36.54
PK	400.54M	28.85	46.00	-17.15	-13.59	3	Horizontal	0	1.00	-	42.44	21.07	1.91	36.57

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	2.4952G	34.73	54.00	-9.01	3	Vertical	262	1.50	-
BT-EDR(3Mbps)	Pass	PK	2.4835G	61.82	74.00	-12.18	3	Horizontal	6	1.50	-

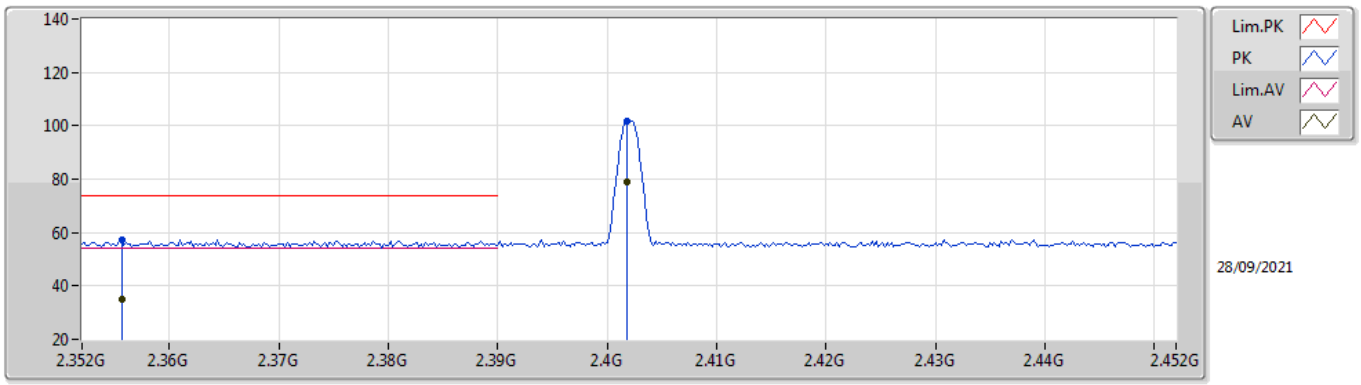
Result

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	2.3556G	34.79	54.00	-19.21	3	Vertical	266	1.41	-
2402MHz	Pass	AV	2.4018G	79.19	Inf	-Inf	3	Vertical	266	1.41	-
2402MHz	Pass	PK	2.3556G	57.29	74.00	-16.71	3	Vertical	266	1.41	-
2402MHz	Pass	PK	2.4018G	101.69	Inf	-Inf	3	Vertical	266	1.41	-
2402MHz	Pass	AV	2.3768G	34.85	54.00	-19.15	3	Horizontal	6	1.50	-
2402MHz	Pass	AV	2.4018G	81.37	Inf	-Inf	3	Horizontal	6	1.50	-
2402MHz	Pass	PK	2.3768G	57.35	74.00	-16.65	3	Horizontal	6	1.50	-
2402MHz	Pass	PK	2.4018G	103.87	Inf	-Inf	3	Horizontal	6	1.50	-
2402MHz	Pass	AV	4.80421G	33.57	54.00	-20.43	3	Vertical	304	1.01	-
2402MHz	Pass	PK	4.80421G	56.07	74.00	-17.93	3	Vertical	304	1.01	-
2402MHz	Pass	AV	4.80422G	29.86	54.00	-24.14	3	Horizontal	17.1	1.10	-
2402MHz	Pass	PK	4.80422G	52.36	74.00	-21.64	3	Horizontal	17.1	1.10	-
2440MHz	Pass	AV	2.3608G	35.02	54.00	-9.21	3	Vertical	262	1.50	-
2440MHz	Pass	AV	2.44G	77	Inf	-Inf	3	Vertical	262	1.50	-
2440MHz	Pass	AV	2.4952G	34.73	54.00	-9.01	3	Vertical	262	1.50	-
2440MHz	Pass	PK	2.3608G	57.52	74.00	-16.48	3	Vertical	262	1.50	-
2440MHz	Pass	PK	2.44G	99.50	Inf	-Inf	3	Vertical	262	1.50	-
2440MHz	Pass	PK	2.4952G	57.23	74.00	-16.77	3	Vertical	262	1.50	-
2440MHz	Pass	AV	2.3772G	34.54	54.00	-19.46	3	Horizontal	8	1.34	-
2440MHz	Pass	AV	2.44G	79.66	Inf	-Inf	3	Horizontal	8	1.34	-
2440MHz	Pass	AV	2.484G	34.89	54.00	-19.11	3	Horizontal	8	1.34	-
2440MHz	Pass	PK	2.3772G	57.04	74.00	-16.96	3	Horizontal	8	1.34	-
2440MHz	Pass	PK	2.44G	102.16	Inf	-Inf	3	Horizontal	8	1.34	-
2440MHz	Pass	PK	2.484G	57.39	74.00	-16.61	3	Horizontal	8	1.34	-
2440MHz	Pass	AV	4.8802G	32.08	54.00	-21.92	3	Vertical	302	1.04	-
2440MHz	Pass	AV	7.3203G	30.53	54.00	-23.47	3	Vertical	142	1.00	-
2440MHz	Pass	PK	4.8802G	54.58	74.00	-19.42	3	Vertical	302	1.04	-
2440MHz	Pass	PK	7.3203G	53.03	74.00	-20.97	3	Vertical	142	1.00	-
2440MHz	Pass	AV	4.87994G	28.91	54.00	-25.09	3	Horizontal	42	1.00	-
2440MHz	Pass	AV	7.31946G	30.31	54.00	-23.69	3	Horizontal	338	2.32	-
2440MHz	Pass	PK	4.87994G	51.41	74.00	-22.59	3	Horizontal	42	1.00	-
2440MHz	Pass	PK	7.31946G	52.81	74.00	-21.19	3	Horizontal	338	2.32	-
2480MHz	Pass	AV	2.4798G	75.43	Inf	-Inf	3	Vertical	258	1.38	-
2480MHz	Pass	AV	2.4886G	35.74	54.00	-18.26	3	Vertical	258	1.38	-
2480MHz	Pass	PK	2.4798G	97.93	Inf	-Inf	3	Vertical	258	1.38	-
2480MHz	Pass	PK	2.4886G	58.24	74.00	-15.76	3	Vertical	258	1.38	-
2480MHz	Pass	AV	2.4802G	77.81	Inf	-Inf	3	Horizontal	7	1.50	-
2480MHz	Pass	AV	2.4924G	35.31	54.00	-18.69	3	Horizontal	7	1.50	-
2480MHz	Pass	PK	2.4802G	100.31	Inf	-Inf	3	Horizontal	7	1.50	-
2480MHz	Pass	PK	2.4924G	57.81	74.00	-16.19	3	Horizontal	7	1.50	-
2480MHz	Pass	AV	4.9598G	32.46	54.00	-21.54	3	Vertical	303	1.08	-
2480MHz	Pass	AV	7.43979G	30.55	54.00	-23.45	3	Vertical	37	1.00	-
2480MHz	Pass	PK	4.9598G	54.96	74.00	-19.04	3	Vertical	303	1.08	-
2480MHz	Pass	PK	7.43979G	53.05	74.00	-20.95	3	Vertical	37	1.00	-
2480MHz	Pass	AV	4.96007G	29.09	54.00	-24.91	3	Horizontal	39	1.09	-
2480MHz	Pass	AV	7.43959G	30.17	54.00	-23.83	3	Horizontal	352	2.52	-
2480MHz	Pass	PK	4.96007G	51.59	74.00	-22.41	3	Horizontal	39	1.09	-
2480MHz	Pass	PK	7.43959G	52.67	74.00	-21.33	3	Horizontal	352	2.52	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3868G	34.53	54.00	-19.47	3	Vertical	267	1.42	-
2402MHz	Pass	AV	2.4022G	77.44	Inf	-Inf	3	Vertical	267	1.42	-
2402MHz	Pass	PK	2.3868G	57.03	74.00	-16.97	3	Vertical	267	1.42	-
2402MHz	Pass	PK	2.4022G	99.94	Inf	-Inf	3	Vertical	267	1.42	-
2402MHz	Pass	AV	2.3624G	35.37	54.00	-18.63	3	Horizontal	7	1.50	-
2402MHz	Pass	AV	2.4018G	80.19	Inf	-Inf	3	Horizontal	7	1.50	-
2402MHz	Pass	PK	2.3624G	57.87	74.00	-16.13	3	Horizontal	7	1.50	-
2402MHz	Pass	PK	2.4018G	102.69	Inf	-Inf	3	Horizontal	7	1.50	-
2402MHz	Pass	AV	4.80418G	31.71	54.00	-22.29	3	Vertical	299	1.02	-
2402MHz	Pass	PK	4.80418G	54.21	74.00	-19.79	3	Vertical	299	1.02	-
2402MHz	Pass	AV	4.80398G	27.62	54.00	-26.38	3	Horizontal	23	1.03	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	4.80398G	50.12	74.00	-23.88	3	Horizontal	23	1.03	-
2440MHz	Pass	AV	2.3536G	35.04	54.00	-18.96	3	Vertical	260	1.58	-
2440MHz	Pass	AV	2.44G	76.39	Inf	-Inf	3	Vertical	260	1.58	-
2440MHz	Pass	AV	2.4848G	34.59	54.00	-19.41	3	Vertical	260	1.58	-
2440MHz	Pass	PK	2.3536G	57.54	74.00	-16.46	3	Vertical	260	1.58	-
2440MHz	Pass	PK	2.44G	98.89	Inf	-Inf	3	Vertical	260	1.58	-
2440MHz	Pass	PK	2.4848G	57.09	74.00	-16.91	3	Vertical	260	1.58	-
2440MHz	Pass	AV	2.3804G	35.19	54.00	-18.81	3	Horizontal	8	1.32	-
2440MHz	Pass	AV	2.4404G	78.60	Inf	-Inf	3	Horizontal	8	1.32	-
2440MHz	Pass	AV	2.5G	34.93	54.00	-19.07	3	Horizontal	8	1.32	-
2440MHz	Pass	PK	2.3804G	57.69	74.00	-16.31	3	Horizontal	8	1.32	-
2440MHz	Pass	PK	2.4404G	101.10	Inf	-Inf	3	Horizontal	8	1.32	-
2440MHz	Pass	PK	2.5G	57.43	74.00	-16.57	3	Horizontal	8	1.32	-
2440MHz	Pass	AV	4.88G	28.65	54.00	-25.35	3	Vertical	307	1.00	-
2440MHz	Pass	AV	7.32073G	29.17	54.00	-24.83	3	Vertical	0	1.03	-
2440MHz	Pass	PK	4.88G	51.15	74.00	-22.85	3	Vertical	307	1.00	-
2440MHz	Pass	PK	7.32073G	51.67	74.00	-22.33	3	Vertical	0	1.03	-
2440MHz	Pass	AV	4.88G	27.20	54.00	-26.80	3	Horizontal	27	1.00	-
2440MHz	Pass	AV	7.32017G	29.49	54.00	-24.51	3	Horizontal	341	2.29	-
2440MHz	Pass	PK	4.88G	49.70	74.00	-24.30	3	Horizontal	27	1.00	-
2440MHz	Pass	PK	7.32017G	51.99	74.00	-22.01	3	Horizontal	341	2.29	-
2480MHz	Pass	AV	2.4798G	74.52	Inf	-Inf	3	Vertical	258	1.38	-
2480MHz	Pass	AV	2.4835G	38.79	54.00	-15.21	3	Vertical	258	1.38	-
2480MHz	Pass	PK	2.4798G	97.02	Inf	-Inf	3	Vertical	258	1.38	-
2480MHz	Pass	PK	2.4835G	61.29	74.00	-12.71	3	Vertical	258	1.38	-
2480MHz	Pass	AV	2.4798G	76.87	Inf	-Inf	3	Horizontal	6	1.50	-
2480MHz	Pass	AV	2.4835G	39.32	54.00	-14.68	3	Horizontal	6	1.50	-
2480MHz	Pass	PK	2.4798G	99.37	Inf	-Inf	3	Horizontal	6	1.50	-
2480MHz	Pass	PK	2.4835G	61.82	74.00	-12.18	3	Horizontal	6	1.50	-
2480MHz	Pass	AV	4.96004G	27.37	54.00	-26.63	3	Vertical	30	2.38	-
2480MHz	Pass	AV	7.43954G	28.57	54.00	-25.43	3	Vertical	360	1.00	-
2480MHz	Pass	PK	4.96004G	49.87	74.00	-24.13	3	Vertical	30	2.38	-
2480MHz	Pass	PK	7.43954G	51.07	74.00	-22.93	3	Vertical	360	1.00	-
2480MHz	Pass	AV	4.96009G	26.46	54.00	-27.54	3	Horizontal	30	1.01	-
2480MHz	Pass	AV	7.4391G	28.65	54.00	-25.35	3	Horizontal	175	2.03	-
2480MHz	Pass	PK	4.96009G	48.96	74.00	-25.04	3	Horizontal	30	1.01	-
2480MHz	Pass	PK	7.4391G	51.15	74.00	-22.85	3	Horizontal	175	2.03	-

BT-BR(1Mbps)

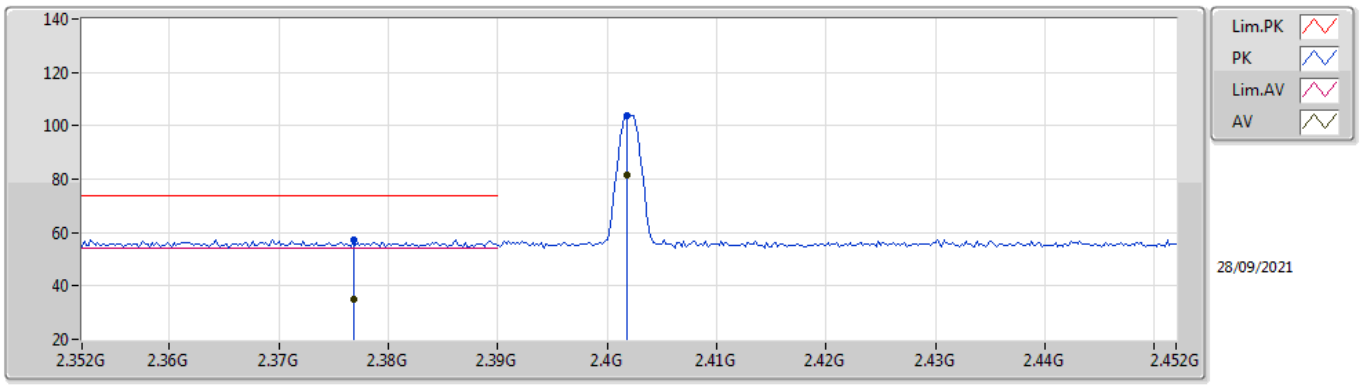
2402MHz_TX



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	2.3556G	34.79	54.00	-19.21	32.32	3	Vertical	266	1.41	-	2.47	27.78	4.54	-
AV	2.4018G	79.19	Inf	-Inf	32.18	3	Vertical	266	1.41	-	47.01	27.60	4.58	-
PK	2.3556G	57.29	74.00	-16.71	32.32	3	Vertical	266	1.41	-	24.97	27.78	4.54	-
PK	2.4018G	101.69	Inf	-Inf	32.18	3	Vertical	266	1.41	-	69.51	27.60	4.58	-

BT-BR(1Mbps)

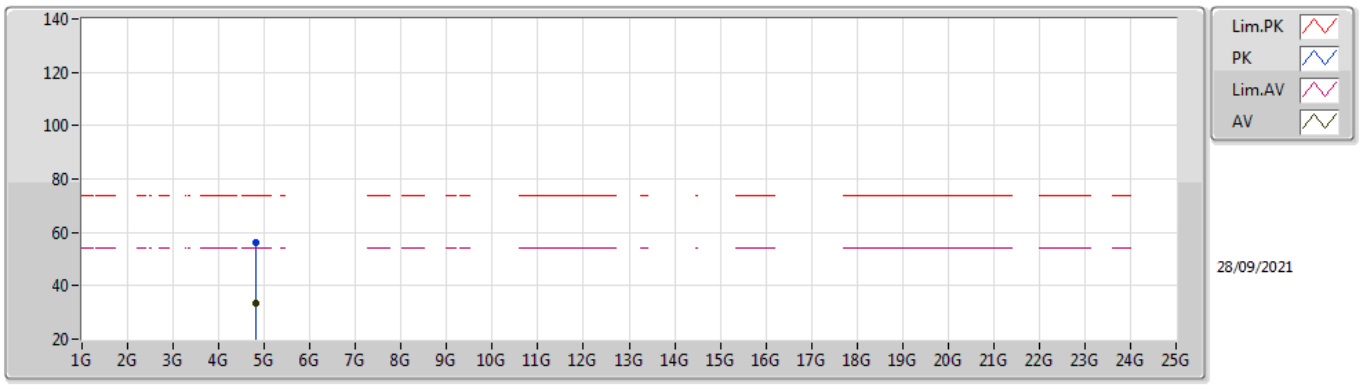
2402MHz_TX



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	2.3768G	34.85	54.00	-19.15	32.25	3	Horizontal	6	1.50	-	2.60	27.69	4.56	-
AV	2.4018G	81.37	Inf	-Inf	32.18	3	Horizontal	6	1.50	-	49.19	27.60	4.58	-
PK	2.3768G	57.35	74.00	-16.65	32.25	3	Horizontal	6	1.50	-	25.10	27.69	4.56	-
PK	2.4018G	103.87	Inf	-Inf	32.18	3	Horizontal	6	1.50	-	71.69	27.60	4.58	-

BT-BR(1Mbps)

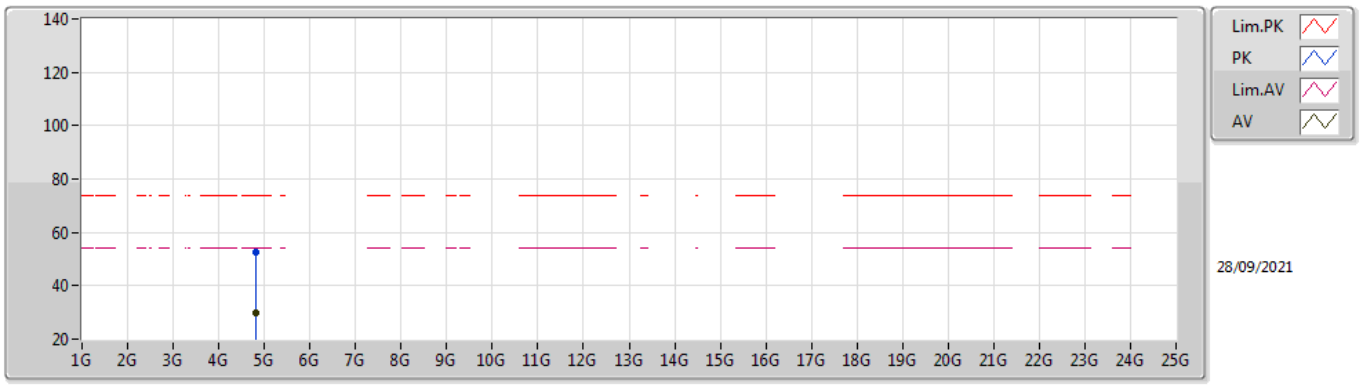
2402MHz_TX



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	4.80421G	33.57	54.00	-20.43	2.95	3	Vertical	304	1.01	-	30.62	31.10	6.66	34.81
PK	4.80421G	56.07	74.00	-17.93	2.95	3	Vertical	304	1.01	-	53.12	31.10	6.66	34.81

BT-BR(1Mbps)

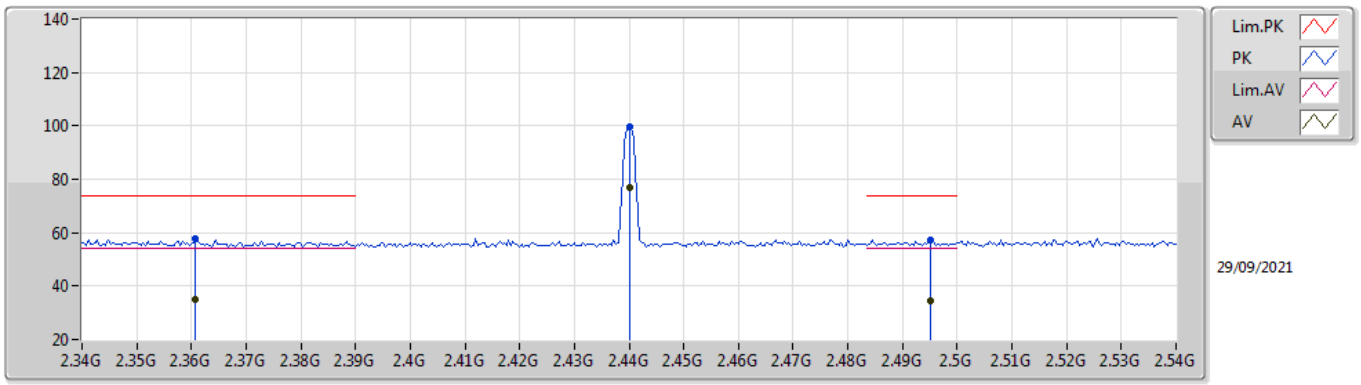
2402MHz_TX



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	4.80422G	29.86	54.00	-24.14	2.95	3	Horizontal	17.1	1.10	-	26.91	31.10	6.66	34.81
PK	4.80422G	52.36	74.00	-21.64	2.95	3	Horizontal	17.1	1.10	-	49.41	31.10	6.66	34.81

BT-BR(1Mbps)

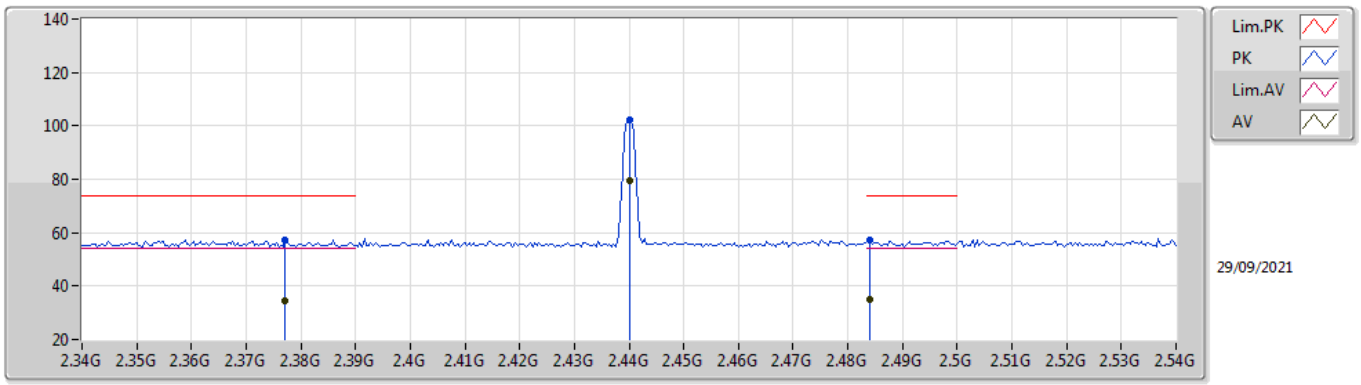
2440MHz_TX



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	2.3608G	35.02	54.00	-9.21	32.33	3	Vertical	262	1.50	-	12.46	27.80	4.53	-
AV	2.44G	77	Inf	-Inf	32.12	3	Vertical	262	1.50	-	66.99	27.52	4.60	-
AV	2.4952G	34.73	54.00	-9.01	32.12	3	Vertical	262	1.50	-	12.87	27.50	4.62	-
PK	2.3608G	57.52	74.00	-16.48	32.30	3	Vertical	262	1.50	-	25.22	27.76	4.54	-
PK	2.44G	99.50	Inf	-Inf	32.12	3	Vertical	262	1.50	-	67.38	27.52	4.60	-
PK	2.4952G	57.23	74.00	-16.77	32.12	3	Vertical	262	1.50	-	25.11	27.50	4.62	-

BT-BR(1Mbps)

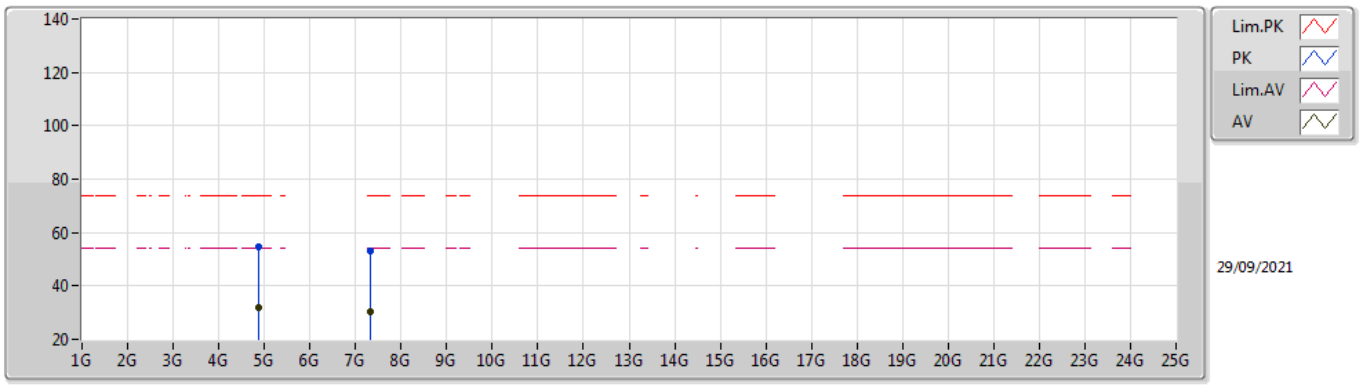
2440MHz_TX



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	2.3772G	34.54	54.00	-19.46	32.25	3	Horizontal	8	1.34	-	2.29	27.69	4.56	-
AV	2.44G	79.66	Inf	-Inf	32.12	3	Horizontal	8	1.34	-	47.54	27.52	4.60	-
AV	2.484G	34.89	54.00	-19.11	32.11	3	Horizontal	8	1.34	-	2.78	27.50	4.61	-
PK	2.3772G	57.04	74.00	-16.96	32.25	3	Horizontal	8	1.34	-	24.79	27.69	4.56	-
PK	2.44G	102.16	Inf	-Inf	32.12	3	Horizontal	8	1.34	-	70.04	27.52	4.60	-
PK	2.484G	57.39	74.00	-16.61	32.11	3	Horizontal	8	1.34	-	25.28	27.50	4.61	-

BT-BR(1Mbps)

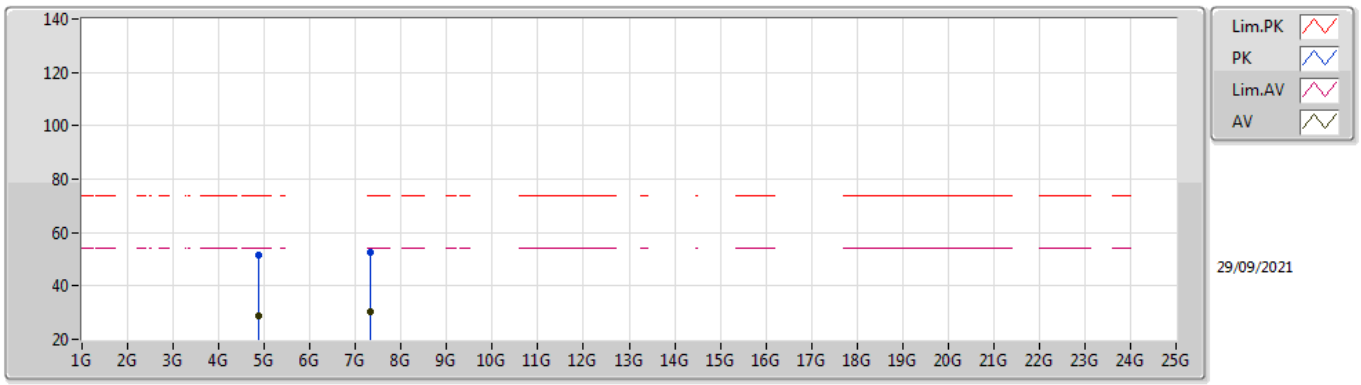
2440MHz_TX



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	4.8802G	32.08	54.00	-21.92	3.03	3	Vertical	302	1.04	-	29.05	31.10	6.72	34.79
AV	7.3203G	30.53	54.00	-23.47	9.41	3	Vertical	142	1.00	-	21.12	36.36	7.87	34.82
PK	4.8802G	54.58	74.00	-19.42	3.03	3	Vertical	302	1.04	-	51.55	31.10	6.72	34.79
PK	7.3203G	53.03	74.00	-20.97	9.41	3	Vertical	142	1.00	-	43.62	36.36	7.87	34.82

BT-BR(1Mbps)

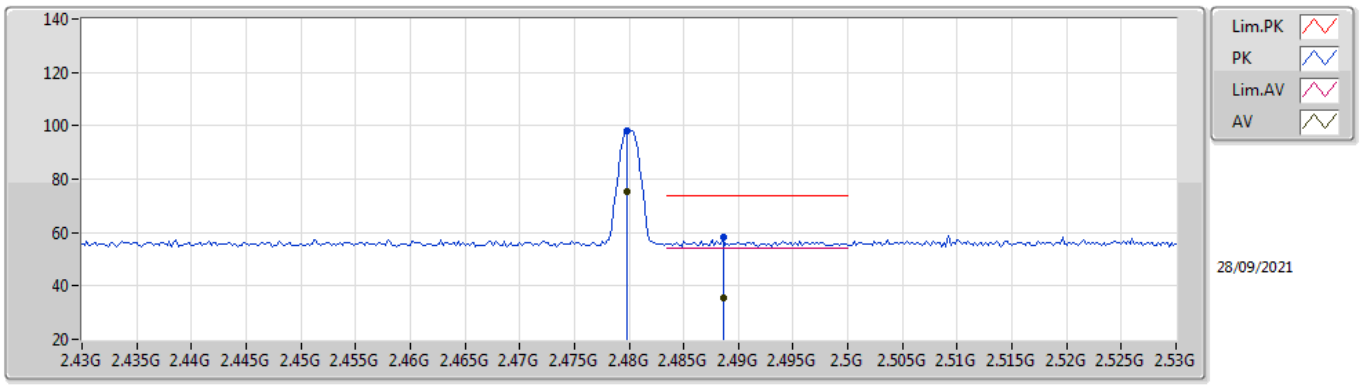
2440MHz_TX



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	4.87994G	28.91	54.00	-25.09	3.03	3	Horizontal	42	1.00	-	25.88	31.10	6.72	34.79
AV	7.31946G	30.31	54.00	-23.69	9.41	3	Horizontal	338	2.32	-	20.90	36.36	7.87	34.82
PK	4.87994G	51.41	74.00	-22.59	3.03	3	Horizontal	42	1.00	-	48.38	31.10	6.72	34.79
PK	7.31946G	52.81	74.00	-21.19	9.41	3	Horizontal	338	2.32	-	43.40	36.36	7.87	34.82

BT-BR(1Mbps)

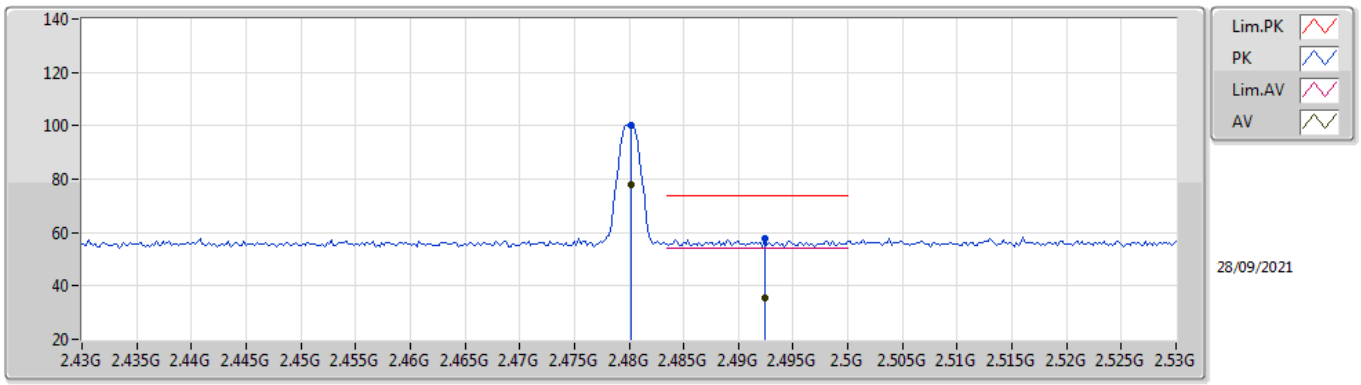
2480MHz_TX



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	75.43	Inf	-Inf	32.11	3	Vertical	258	1.38	-	43.32	27.50	4.61	-
AV	2.4886G	35.74	54.00	-18.26	32.12	3	Vertical	258	1.38	-	3.62	27.50	4.62	-
PK	2.4798G	97.93	Inf	-Inf	32.11	3	Vertical	258	1.38	-	65.82	27.50	4.61	-
PK	2.4886G	58.24	74.00	-15.76	32.12	3	Vertical	258	1.38	-	26.12	27.50	4.62	-

BT-BR(1Mbps)

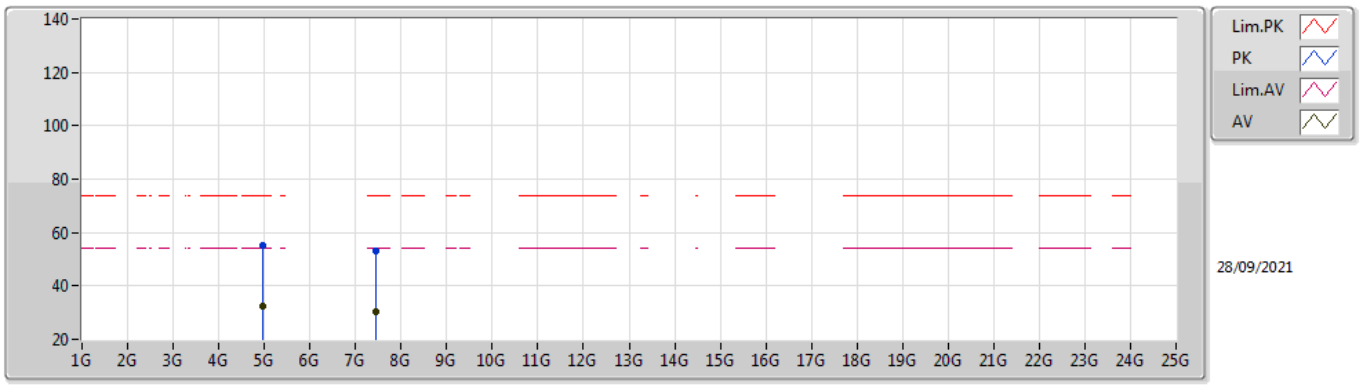
2480MHz_TX



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	2.4802G	77.81	Inf	-Inf	32.11	3	Horizontal	7	1.50	-	45.70	27.50	4.61	-
AV	2.4924G	35.31	54.00	-18.69	32.12	3	Horizontal	7	1.50	-	3.19	27.50	4.62	-
PK	2.4802G	100.31	Inf	-Inf	32.11	3	Horizontal	7	1.50	-	68.20	27.50	4.61	-
PK	2.4924G	57.81	74.00	-16.19	32.12	3	Horizontal	7	1.50	-	25.69	27.50	4.62	-

BT-BR(1Mbps)

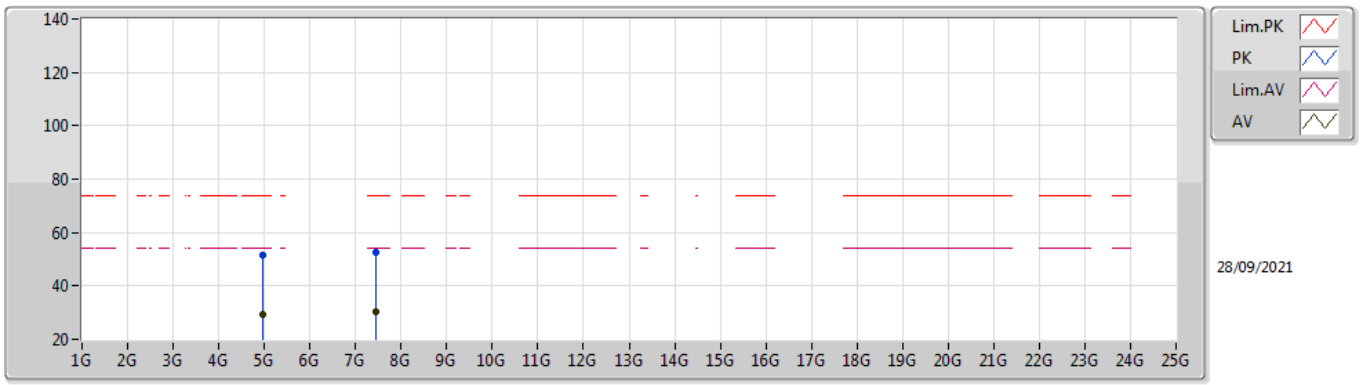
2480MHz_TX



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	4.9598G	32.46	54.00	-21.54	3.35	3	Vertical	303	1.08	-	29.11	31.34	6.78	34.77
AV	7.43979G	30.55	54.00	-23.45	9.50	3	Vertical	37	1.00	-	21.05	36.28	8.06	34.84
PK	4.9598G	54.96	74.00	-19.04	3.35	3	Vertical	303	1.08	-	51.61	31.34	6.78	34.77
PK	7.43979G	53.05	74.00	-20.95	9.50	3	Vertical	37	1.00	-	43.55	36.28	8.06	34.84

BT-BR(1Mbps)

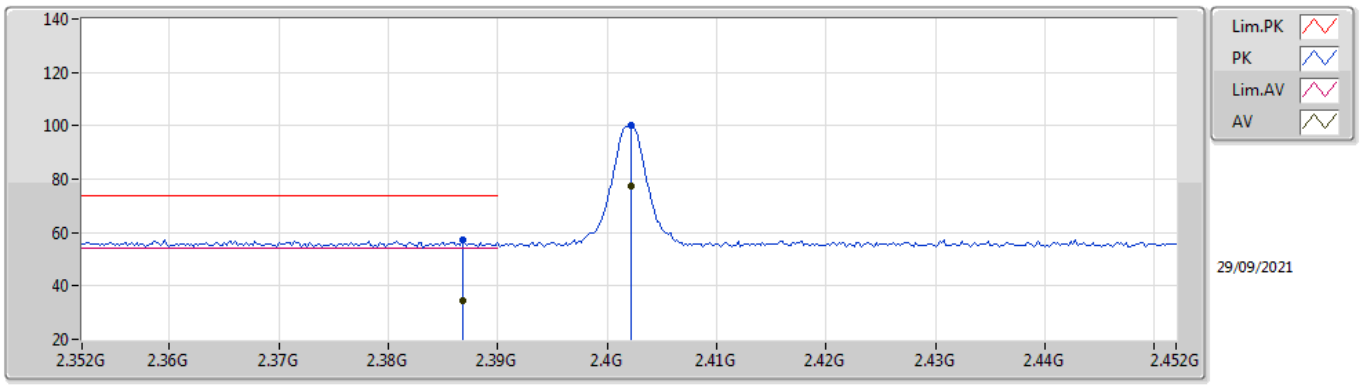
2480MHz_TX



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	4.96007G	29.09	54.00	-24.91	3.35	3	Horizontal	39	1.09	-	25.74	31.34	6.78	34.77
AV	7.43959G	30.17	54.00	-23.83	9.50	3	Horizontal	352	2.52	-	20.67	36.28	8.06	34.84
PK	4.96007G	51.59	74.00	-22.41	3.35	3	Horizontal	39	1.09	-	48.24	31.34	6.78	34.77
PK	7.43959G	52.67	74.00	-21.33	9.50	3	Horizontal	352	2.52	-	43.17	36.28	8.06	34.84

BT-EDR(3Mbps)

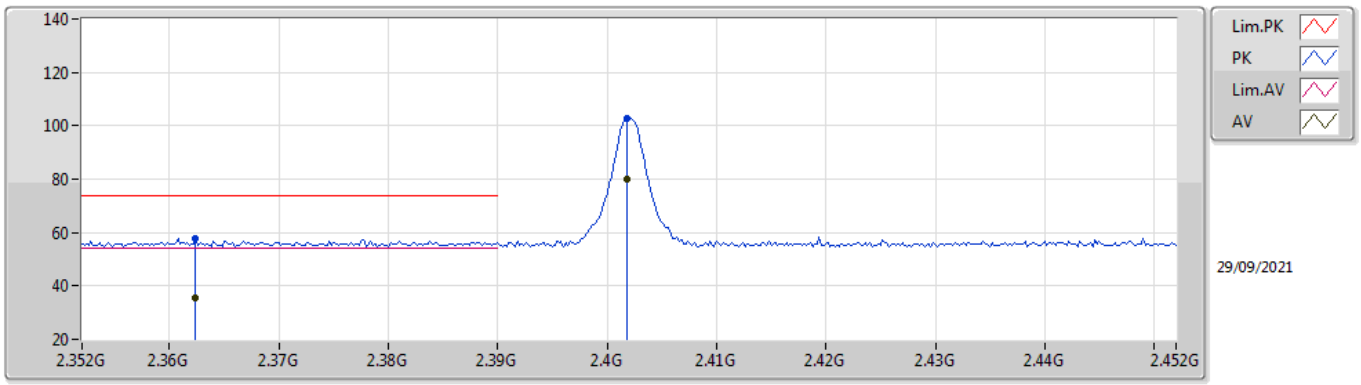
2402MHz_TX



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	2.3868G	34.53	54.00	-19.47	32.22	3	Vertical	267	1.42	-	2.31	27.65	4.57	-
AV	2.4022G	77.44	Inf	-Inf	32.18	3	Vertical	267	1.42	-	45.26	27.60	4.58	-
PK	2.3868G	57.03	74.00	-16.97	32.22	3	Vertical	267	1.42	-	24.81	27.65	4.57	-
PK	2.4022G	99.94	Inf	-Inf	32.18	3	Vertical	267	1.42	-	67.76	27.60	4.58	-

BT-EDR(3Mbps)

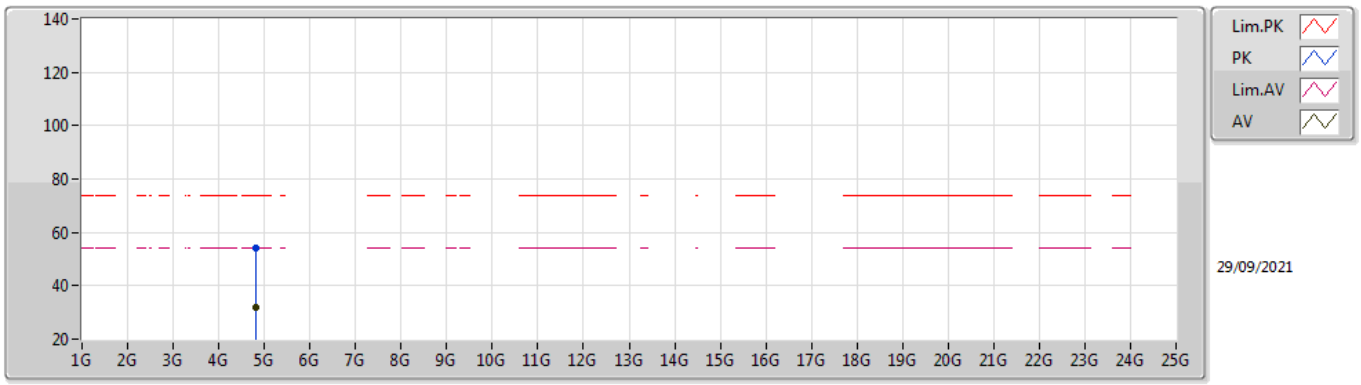
2402MHz_TX



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	2.3624G	35.37	54.00	-18.63	32.29	3	Horizontal	7	1.50	-	3.08	27.75	4.54	-
AV	2.4018G	80.19	Inf	-Inf	32.18	3	Horizontal	7	1.50	-	48.01	27.60	4.58	-
PK	2.3624G	57.87	74.00	-16.13	32.29	3	Horizontal	7	1.50	-	25.58	27.75	4.54	-
PK	2.4018G	102.69	Inf	-Inf	32.18	3	Horizontal	7	1.50	-	70.51	27.60	4.58	-

BT-EDR(3Mbps)

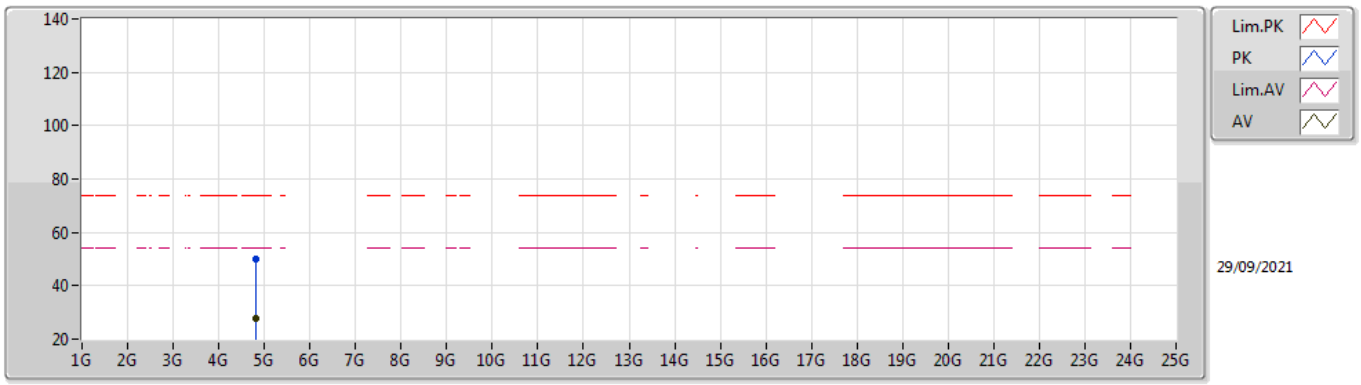
2402MHz_TX



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	4.80418G	31.71	54.00	-22.29	2.95	3	Vertical	299	1.02	-	28.76	31.10	6.66	34.81
PK	4.80418G	54.21	74.00	-19.79	2.95	3	Vertical	299	1.02	-	51.26	31.10	6.66	34.81

BT-EDR(3Mbps)

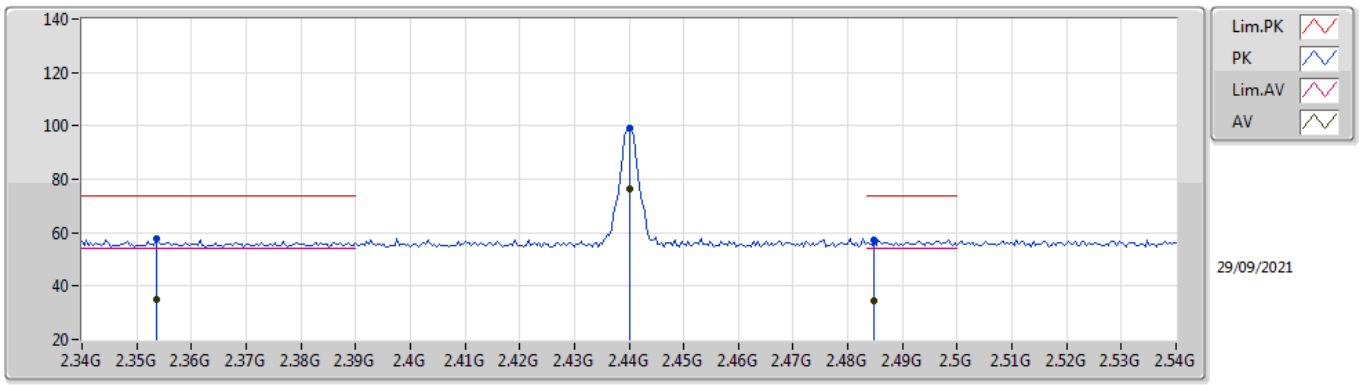
2402MHz_TX



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	4.80398G	27.62	54.00	-26.38	2.95	3	Horizontal	23	1.03	-	24.67	31.10	6.66	34.81
PK	4.80398G	50.12	74.00	-23.88	2.95	3	Horizontal	23	1.03	-	47.17	31.10	6.66	34.81

BT-EDR(3Mbps)

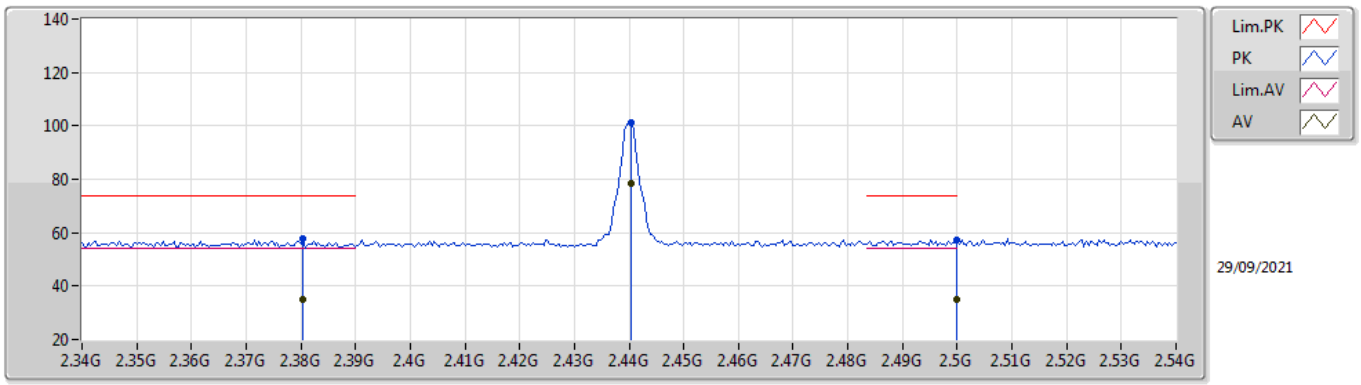
2440MHz_TX



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	2.3536G	35.04	54.00	-18.96	32.33	3	Vertical	260	1.58	-	2.71	27.79	4.54	-
AV	2.44G	76.39	Inf	-Inf	32.12	3	Vertical	260	1.58	-	44.27	27.52	4.60	-
AV	2.4848G	34.59	54.00	-19.41	32.11	3	Vertical	260	1.58	-	2.48	27.50	4.61	-
PK	2.3536G	57.54	74.00	-16.46	32.33	3	Vertical	260	1.58	-	25.21	27.79	4.54	-
PK	2.44G	98.89	Inf	-Inf	32.12	3	Vertical	260	1.58	-	66.77	27.52	4.60	-
PK	2.4848G	57.09	74.00	-16.91	32.11	3	Vertical	260	1.58	-	24.98	27.50	4.61	-

BT-EDR(3Mbps)

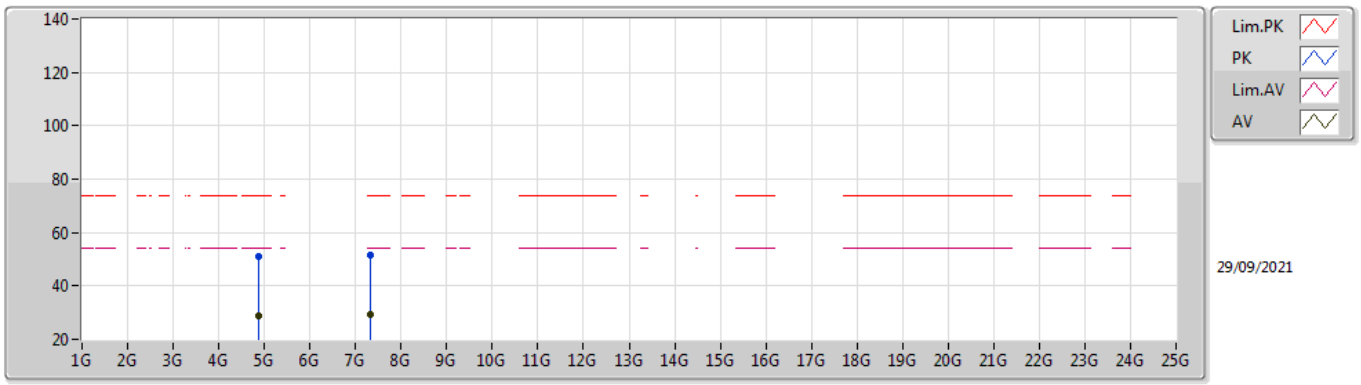
2440MHz_TX



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	2.3804G	35.19	54.00	-18.81	32.24	3	Horizontal	8	1.32	-	2.95	27.68	4.56	-
AV	2.4404G	78.60	Inf	-Inf	32.12	3	Horizontal	8	1.32	-	46.48	27.52	4.60	-
AV	2.5G	34.93	54.00	-19.07	32.12	3	Horizontal	8	1.32	-	2.81	27.50	4.62	-
PK	2.3804G	57.69	74.00	-16.31	32.24	3	Horizontal	8	1.32	-	25.45	27.68	4.56	-
PK	2.4404G	101.10	Inf	-Inf	32.12	3	Horizontal	8	1.32	-	68.98	27.52	4.60	-
PK	2.5G	57.43	74.00	-16.57	32.12	3	Horizontal	8	1.32	-	25.31	27.50	4.62	-

BT-EDR(3Mbps)

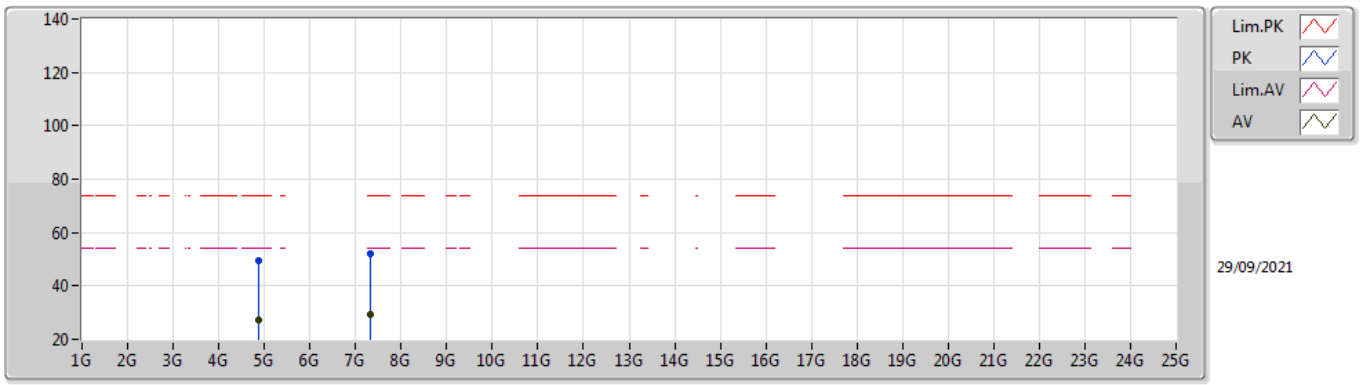
2440MHz_TX



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	4.88G	28.65	54.00	-25.35	3.03	3	Vertical	307	1.00	-	25.62	31.10	6.72	34.79
AV	7.32073G	29.17	54.00	-24.83	9.41	3	Vertical	0	1.03	-	19.76	36.36	7.87	34.82
PK	4.88G	51.15	74.00	-22.85	3.03	3	Vertical	307	1.00	-	48.12	31.10	6.72	34.79
PK	7.32073G	51.67	74.00	-22.33	9.41	3	Vertical	0	1.03	-	42.26	36.36	7.87	34.82

BT-EDR(3Mbps)

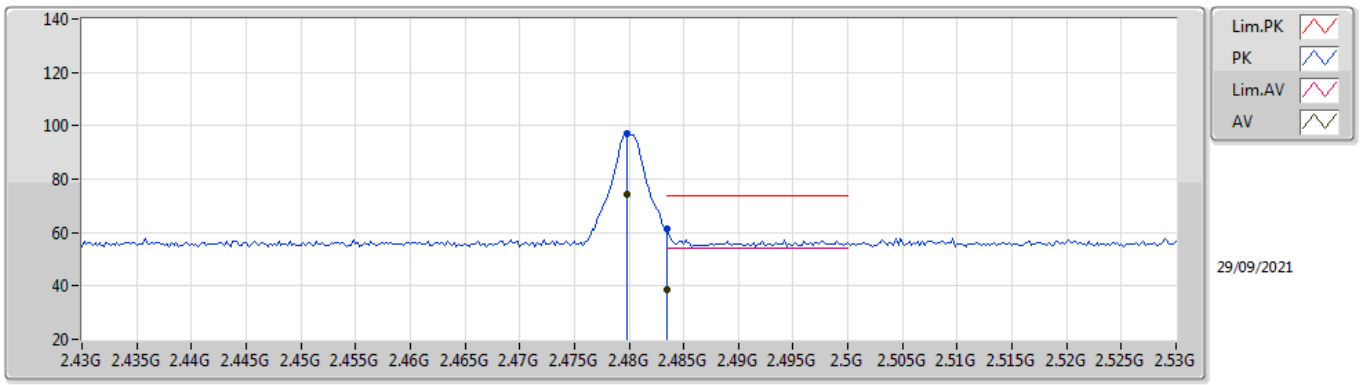
2440MHz_TX



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	4.88G	27.20	54.00	-26.80	3.03	3	Horizontal	27	1.00	-	24.17	31.10	6.72	34.79
AV	7.32017G	29.49	54.00	-24.51	9.41	3	Horizontal	341	2.29	-	20.08	36.36	7.87	34.82
PK	4.88G	49.70	74.00	-24.30	3.03	3	Horizontal	27	1.00	-	46.67	31.10	6.72	34.79
PK	7.32017G	51.99	74.00	-22.01	9.41	3	Horizontal	341	2.29	-	42.58	36.36	7.87	34.82

BT-EDR(3Mbps)

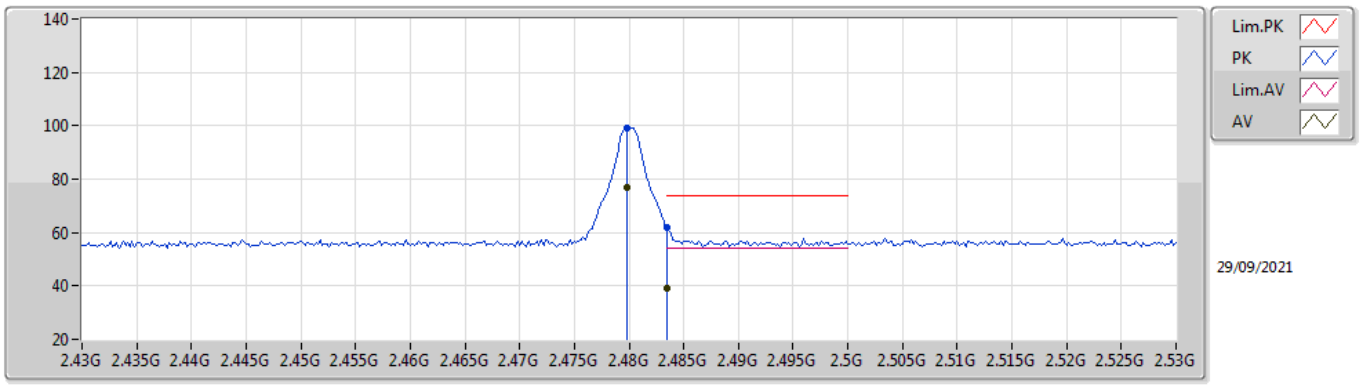
2480MHz_TX



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	74.52	Inf	-Inf	32.11	3	Vertical	258	1.38	-	42.41	27.50	4.61	-
AV	2.4835G	38.79	54.00	-15.21	32.11	3	Vertical	258	1.38	-	6.68	27.50	4.61	-
PK	2.4798G	97.02	Inf	-Inf	32.11	3	Vertical	258	1.38	-	64.91	27.50	4.61	-
PK	2.4835G	61.29	74.00	-12.71	32.11	3	Vertical	258	1.38	-	29.18	27.50	4.61	-

BT-EDR(3Mbps)

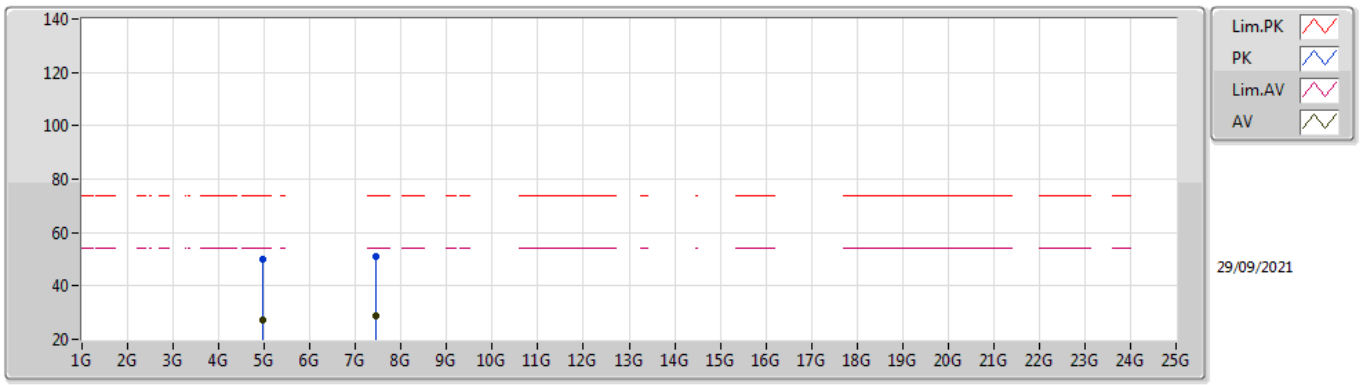
2480MHz_TX



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	76.87	Inf	-Inf	32.11	3	Horizontal	6	1.50	-	44.76	27.50	4.61	-
AV	2.4835G	39.32	54.00	-14.68	32.11	3	Horizontal	6	1.50	-	7.21	27.50	4.61	-
PK	2.4798G	99.37	Inf	-Inf	32.11	3	Horizontal	6	1.50	-	67.26	27.50	4.61	-
PK	2.4835G	61.82	74.00	-12.18	32.11	3	Horizontal	6	1.50	-	29.71	27.50	4.61	-

BT-EDR(3Mbps)

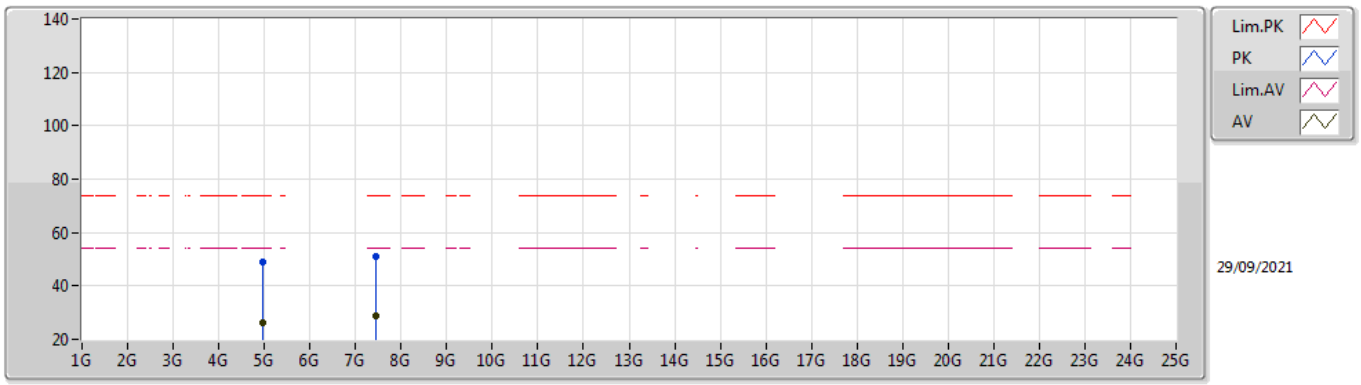
2480MHz_TX



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	4.96004G	27.37	54.00	-26.63	3.35	3	Vertical	30	2.38	-	24.02	31.34	6.78	34.77
AV	7.43954G	28.57	54.00	-25.43	9.50	3	Vertical	360	1.00	-	19.07	36.28	8.06	34.84
PK	4.96004G	49.87	74.00	-24.13	3.35	3	Vertical	30	2.38	-	46.52	31.34	6.78	34.77
PK	7.43954G	51.07	74.00	-22.93	9.50	3	Vertical	360	1.00	-	41.57	36.28	8.06	34.84

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	4.96009G	26.46	54.00	-27.54	3.35	3	Horizontal	30	1.01	-	23.11	31.34	6.78	34.77
AV	7.4391G	28.65	54.00	-25.35	9.49	3	Horizontal	175	2.03	-	19.16	36.28	8.05	34.84
PK	4.96009G	48.96	74.00	-25.04	3.35	3	Horizontal	30	1.01	-	45.61	31.34	6.78	34.77
PK	7.4391G	51.15	74.00	-22.85	9.49	3	Horizontal	175	2.03	-	41.66	36.28	8.05	34.84