

FCC Radio Test Report

FCC ID : 2AFZZ16SG
Equipment : Mobile Phone
Brand Name : Redmi
Model Name : 2201116SG
Applicant : Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road,
Haidian District, Beijing, China, 100085
Manufacturer : Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road,
Haidian District, Beijing, China, 100085
Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 14, 2021, and testing was started from Dec. 06, 2021 and completed on Dec. 20, 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



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TEL : 886-3-3273456
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Report Template No.: HE1-C9 Ver4.2
FCC ID: 2AFZZ16SG

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: Ben Tseng

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 $\pi/4$ -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
1	MI	K6S	PIFA	I-pex

Ant.	Gain (dBi)					
	2.4G	Bluetooth	5G			
			UNII-1	UNII-2A	UNII-2C	UNII-3
1	-3.7	-3.7	-3.6	-3.9	-3.8	-4.3

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

Ant. 1 could transmit/receive simultaneously.

For BT function:

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

Ant. 1 and could transmit/receive simultaneously.

For 5GHz function:

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

Ant. 1 could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter / Host system / Battery		
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)	0.77	1.14	2.887m	1k
BT-EDR(2Mbps)	0.77	1.14	2.889m	1k
BT-EDR(3Mbps)	0.771	1.13	2.893m	1k

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			
	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	Edward Wang	21.5~22.0°C / 50~54%	15/Dec/2021
RF Conducted	TH01-HY	Barry Hsiao	23.2~26.9°C / 50~60%	16/Dec/2021~20/Dec/2021
Radiated	03CH03-HY	Edward Wang	19.6~22.6°C / 47~58%	06/Dec/2021~09/Dec/2021
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan			
	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	QRCT4
-----------------------	-------

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

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
1	USB Mode ; CTX
2	Adapter Mode ; Charging

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.		
1	USB Mode ; CTX		
2	Adapter Mode ; Charging		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

2.3 Accessories

AC Adapter	Brand Name	MI	Model Name	MDY-12-EJ
	Manufacturer	Salcomp		
	Power Rating	I/P: 100 - 240 Vac, 50/60Hz, 1.7A, Normal O/P:5.0Vdc, 3.0A, 15W, fast O/P: 5.0 - 20 Vdc, 6.2 - 3.25A, 67W		
Battery 1	Brand Name	MI	Model Name	BN5E
	Manufacturer	Dongguan Amperex Technology Limited		
	Power Rating	3.87 Vdc, 4900 mAh	Type	Li-ion
Battery 2	Brand Name	MI	Model Name	BN5E
	Manufacturer	Zhejiang sunwoda electronic Co., Ltd		
	Power Rating	3.87 Vdc, 4900 mAh	Type	Li-ion
USB Cable 1	Brand Name	MI	Model Name	H26250
	Manufacturer	Dehong		
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 2	Brand Name	MI	Model Name	L26250
	Manufacturer	Lux		
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		

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

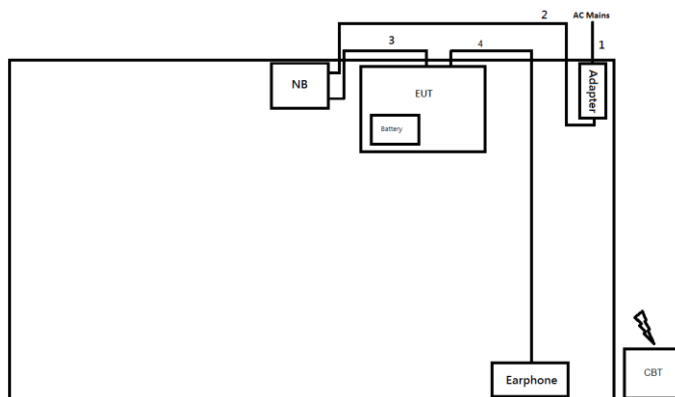
2.4 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	HP	HSTNN-142C	-	-
2	AC Power Cable	Power sync	AC Power Cable	-	-
3	Adapter (For NB)	HP	HSTNN-CA40	-	-
4	Earphone	MI	EM023	-	Provided by Customer
5	Bluetooth Tester	R&S	CBT	-	Remote

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Bluetooth Tester	R&S	CBT	-	-
2	Notebook	HP	HSTNN-142C	-	-
3	Adapter (For NB)	HP	HSTNN-CA40	-	-

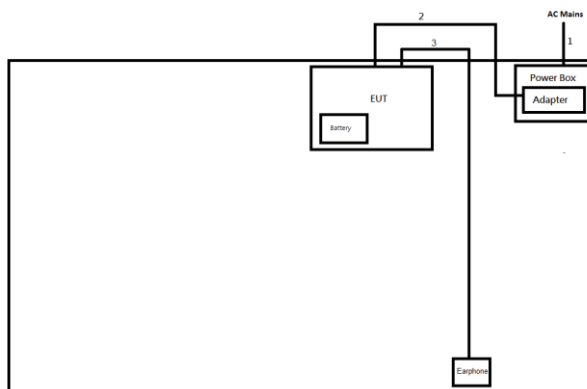
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test - USB Mode

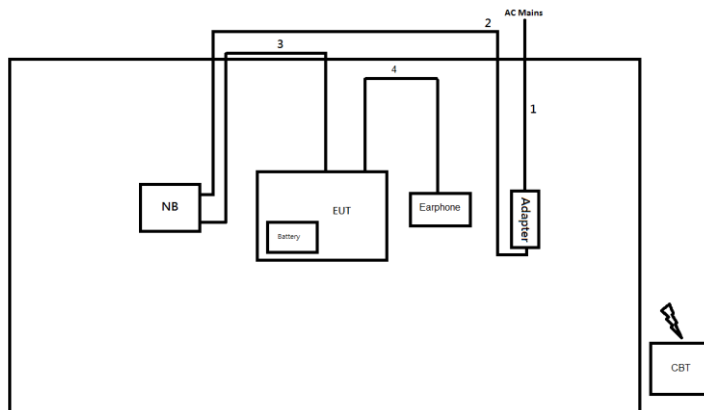


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-
3	USB cable	No	1.0	-
4	Audio cable	No	1.25	-

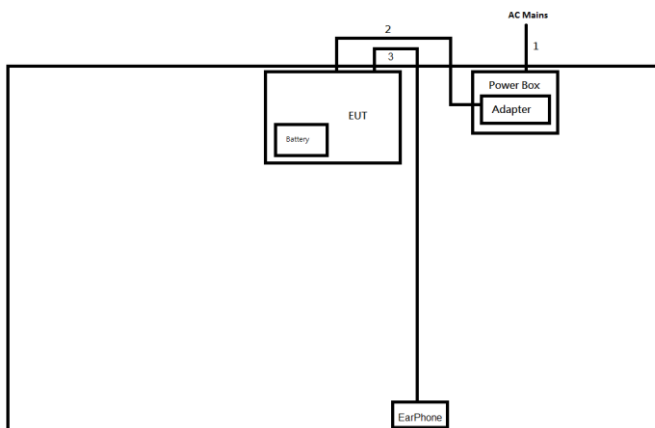
Test Setup Diagram – AC Line Conducted Emission Test - Adapter Mode



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	No	1.0	-
3	Audio cable	No	1.25	-

Test Setup Diagram - Radiated Test - USB Mode


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-
3	USB cable	No	1.0	-
4	Audio cable	No	1.25	-

Test Setup Diagram - Radiated Test - Adapter Mode


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	No	1.0	-
3	Audio cable	No	1.25	-

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

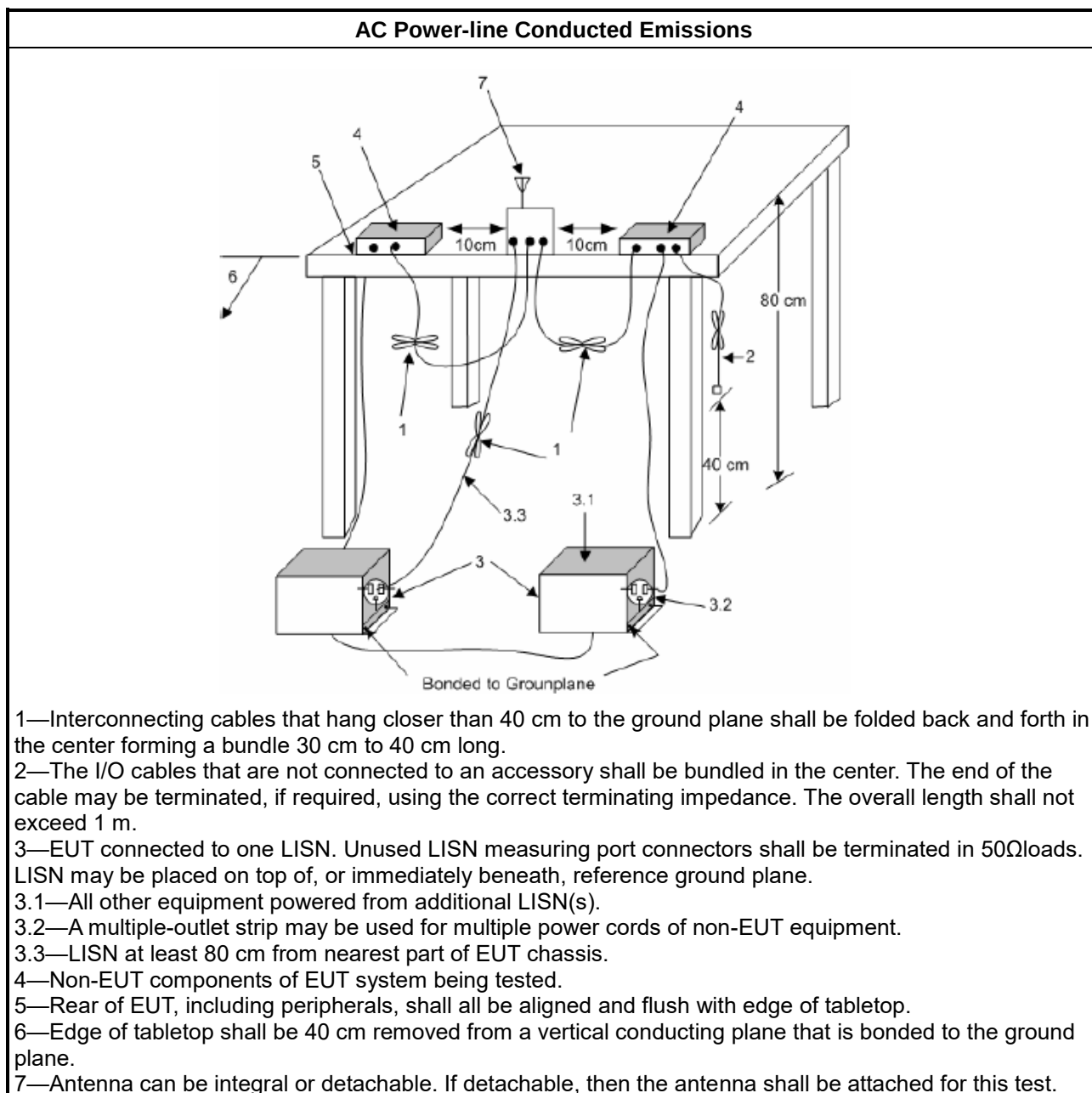
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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



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:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

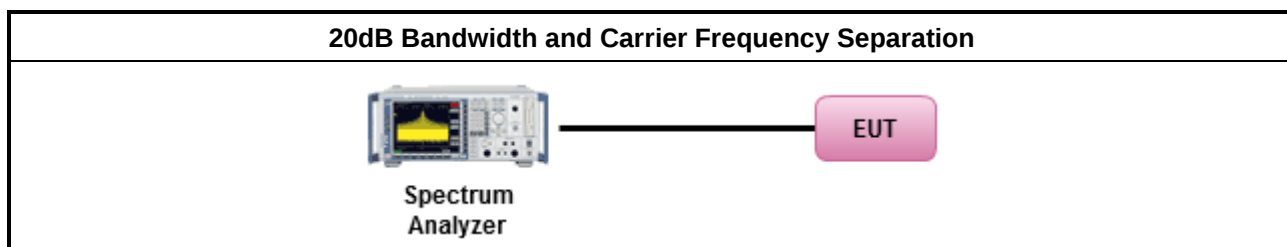
3.2.2 Measuring Instruments

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



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:	
	$N \geq 75$; Power 30dBm; EIRP 36dBm
	$75 > N \geq 15$; Power 21dBm; EIRP 27dBm
N: Number of Hopping Frequencies	

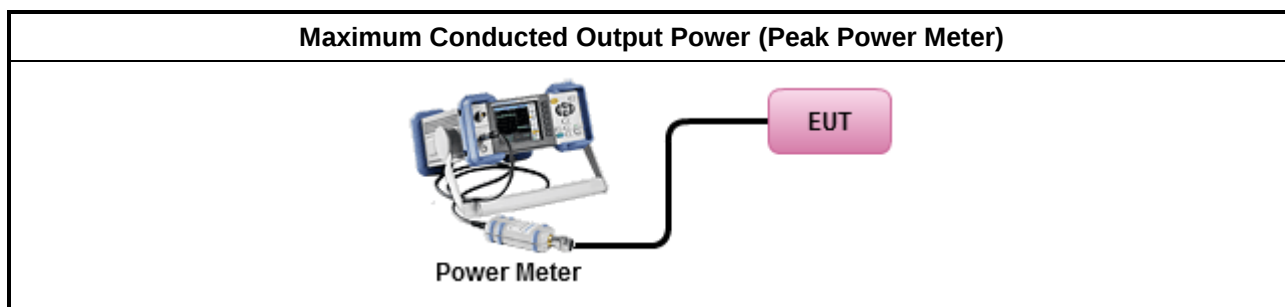
3.3.2 Measuring Instruments

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



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:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (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

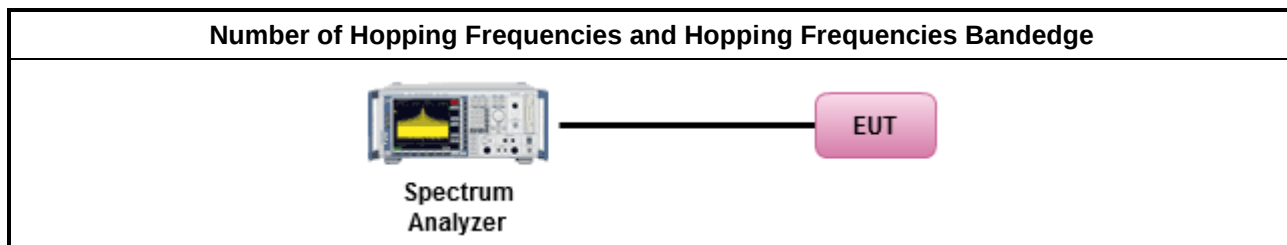
3.4.3 Measuring Instruments

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



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:	
	$N \geq 75$; 0.4s in $N \times 0.4$ period
	$75 > N \geq 15$; 0.4s in $N \times 0.4$ period
N: Number of Hopping Frequencies	

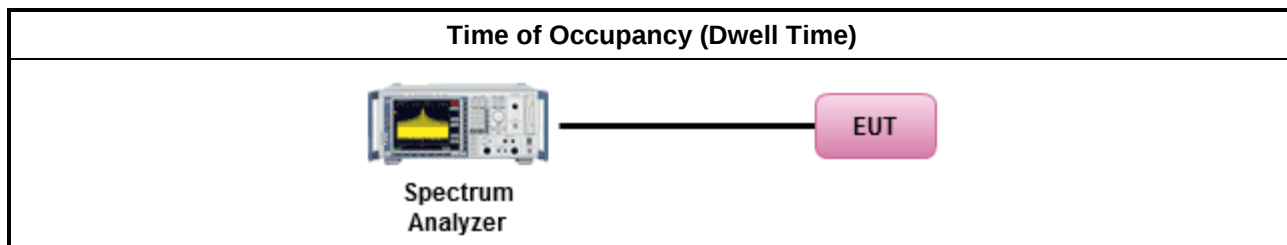
3.5.2 Measuring Instruments

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



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.	

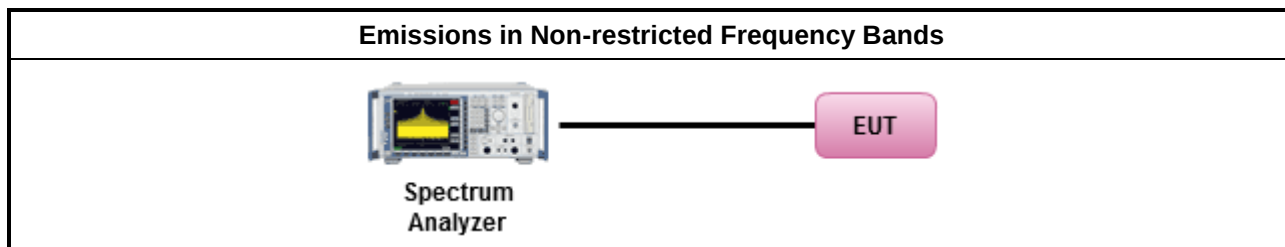
3.6.2 Measuring Instruments

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



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 below 30 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

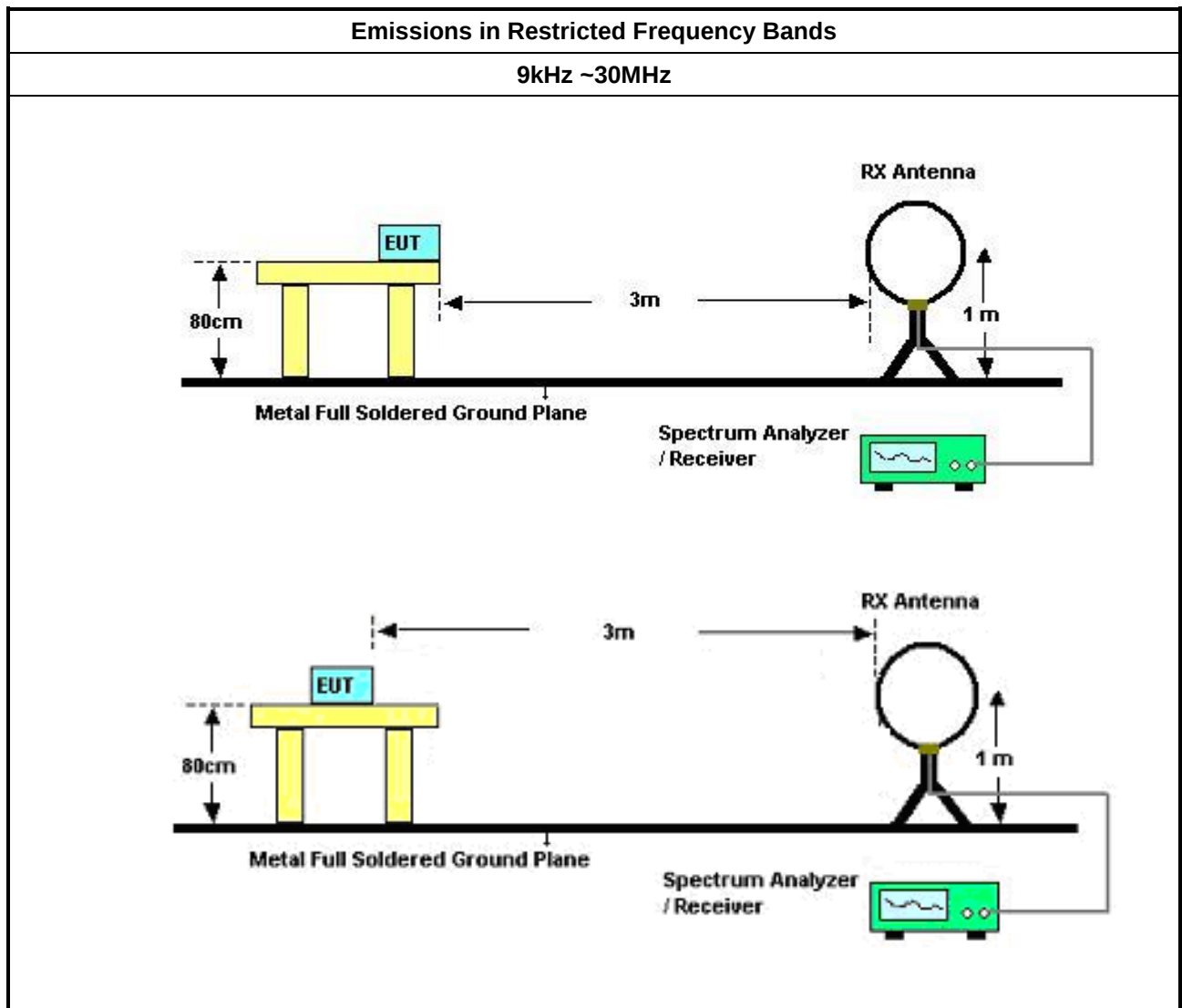
Test Method	
The average emission levels shall be measured in [hopping duty factor].	
Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall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

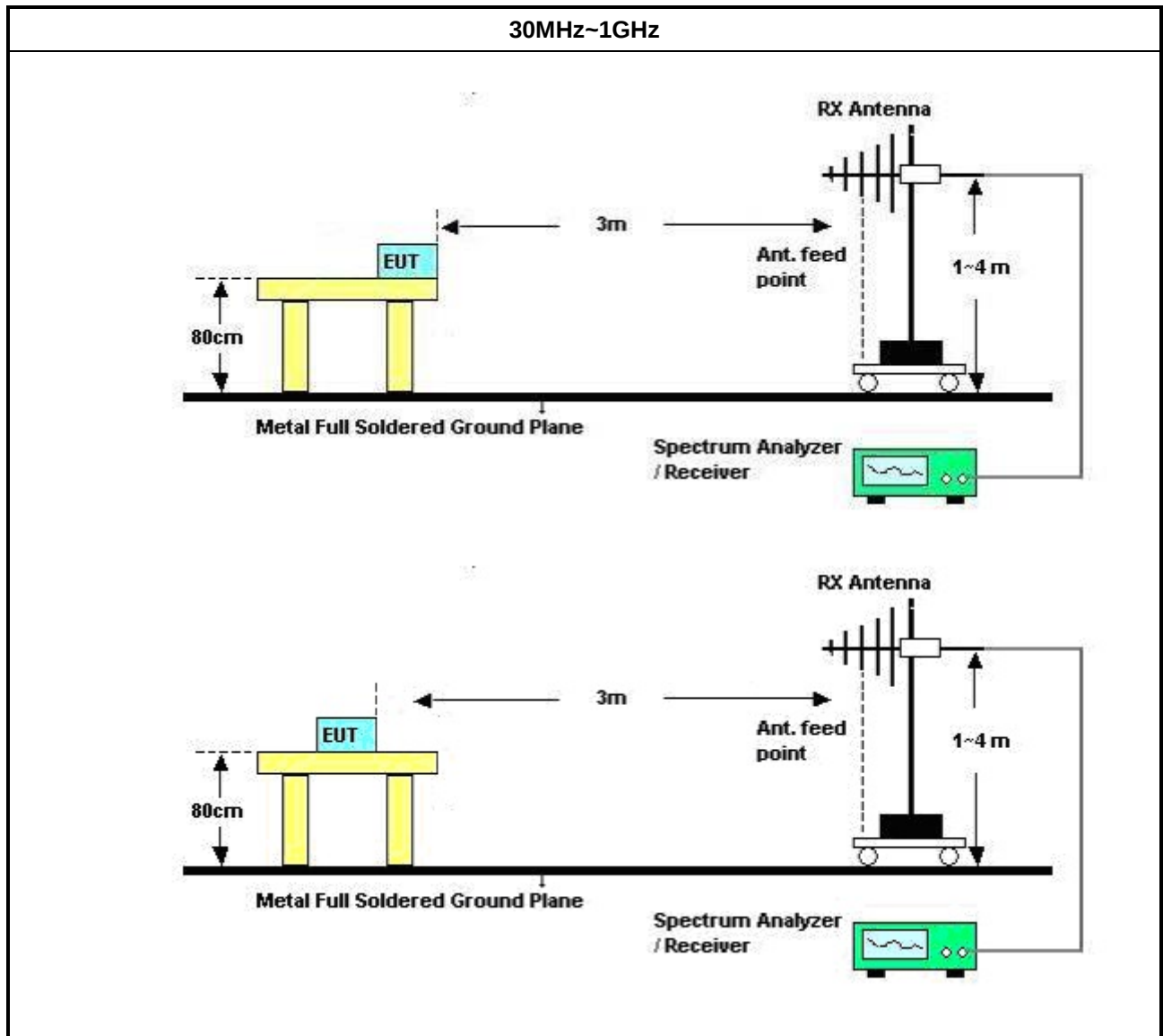
3.7.4 Measurement Results Calculation

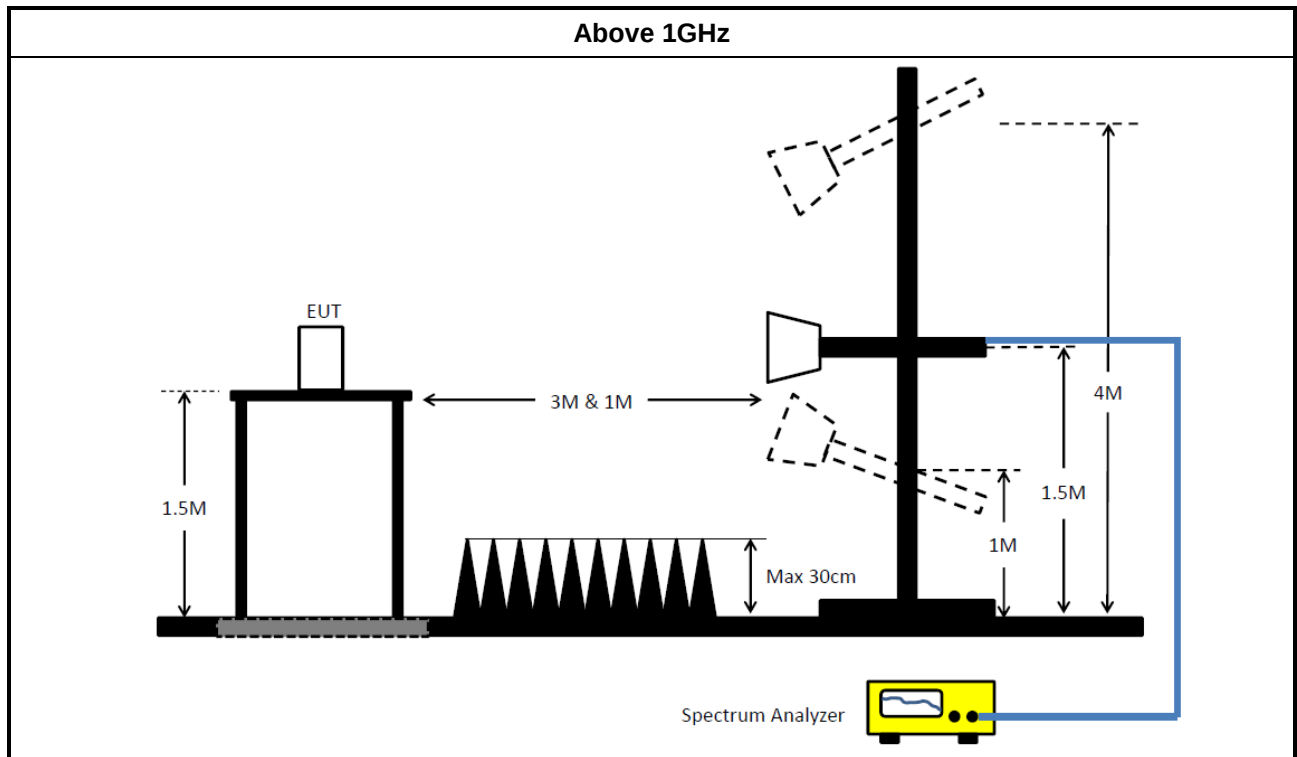
The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.7.5 Test Setup







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	101274	9kHz ~ 30MHz	13/May/2021	12/May/2022
LISN (Support Unit)	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127477	9kHz ~ 30MHz	25/Feb/2021	24/Feb/2022
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	26/Oct/2021	25/Oct/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	03CH03-HY	30MHz~1GHz 3m	03/Aug/2021	02/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	03/Aug/2021	02/Aug/2022
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	12/Oct/2021	11/Oct/2022
Amplifier	HP	8447D	2944A08033	10kHz~1.3GHz	13/Apr/2021	12/Apr/2022
Microwave Preamplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	15/Jul/2021	14/Jul/2022
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	17/Oct/2021	16/Oct/2022
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	2267	1GHz~18GHz	14/Sep/2021	13/Sep/2022
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	16/Jun/2021	15/Jun/2022
RF Cable-R03m	Jye Bao	RG142	MY37335/4+CB0 21-1+CB021-2	30MHz~1GHz	17/Mar/2021	16/Mar/2022
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	28/Jul/2021	27/Jul/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

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
Programmable Temp. & Humi. Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20~100℃	21/May/2021	20/May/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



Conducted Emissions at Powerline

Appendix A.2

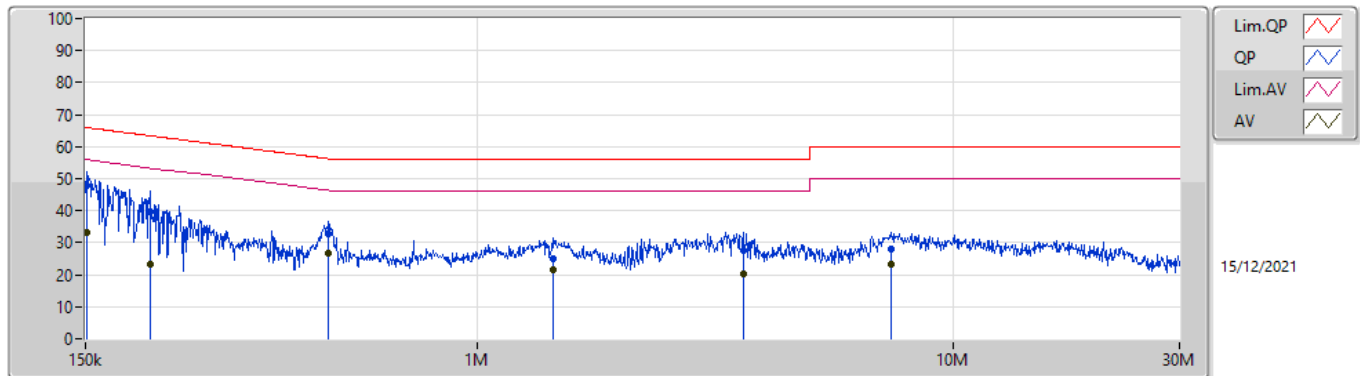
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	153.636k	47.90	65.81	-17.91	Neutral
Mode 2	Pass	AV	6.981M	27.56	50.00	-22.44	Line

Mode Configure

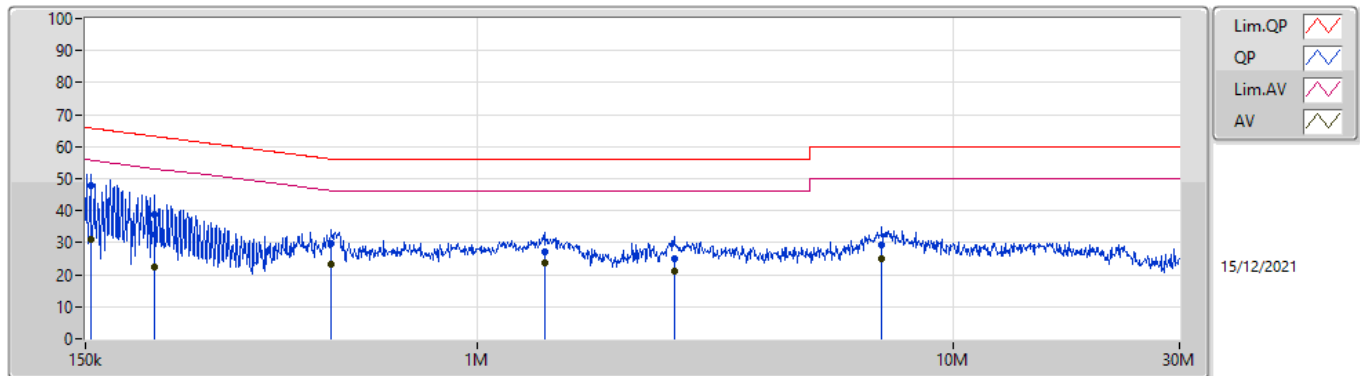
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	151.202k	47.92	65.92	-18.00	Line	-
Mode 1	Pass	AV	151.202k	33.20	55.92	-22.72	Line	-
Mode 1	Pass	QP	204.796k	39.86	63.42	-23.56	Line	-
Mode 1	Pass	AV	204.796k	23.30	53.42	-30.12	Line	-
Mode 1	Pass	QP	487.008k	32.68	56.21	-23.53	Line	-
Mode 1	Pass	AV	487.008k	26.85	46.21	-19.36	Line	-
Mode 1	Pass	QP	1.442M	25.08	56.00	-30.92	Line	-
Mode 1	Pass	AV	1.442M	21.38	46.00	-24.62	Line	-
Mode 1	Pass	QP	3.627M	27.46	56.00	-28.54	Line	-
Mode 1	Pass	AV	3.627M	20.27	46.00	-25.73	Line	-
Mode 1	Pass	QP	7.412M	27.94	60.00	-32.06	Line	-
Mode 1	Pass	AV	7.412M	23.44	50.00	-26.56	Line	-
Mode 1	Pass	QP	153.636k	47.90	65.81	-17.91	Neutral	-
Mode 1	Pass	AV	153.636k	31.06	55.81	-24.75	Neutral	-
Mode 1	Pass	QP	209.76k	38.62	63.21	-24.59	Neutral	-
Mode 1	Pass	AV	209.76k	22.60	53.21	-30.61	Neutral	-
Mode 1	Pass	QP	492.876k	29.69	56.11	-26.42	Neutral	-
Mode 1	Pass	AV	492.876k	23.25	46.11	-22.86	Neutral	-
Mode 1	Pass	QP	1.386M	27.32	56.00	-28.68	Neutral	-
Mode 1	Pass	AV	1.386M	23.70	46.00	-22.30	Neutral	-
Mode 1	Pass	QP	2.594M	25.21	56.00	-30.79	Neutral	-
Mode 1	Pass	AV	2.594M	21.31	46.00	-24.69	Neutral	-
Mode 1	Pass	QP	7.093M	29.29	60.00	-30.71	Neutral	-
Mode 1	Pass	AV	7.093M	24.99	50.00	-25.01	Neutral	-
Mode 2	Pass	QP	151.807k	36.10	65.90	-29.80	Line	-
Mode 2	Pass	AV	151.807k	25.92	55.90	-29.98	Line	-
Mode 2	Pass	QP	397.299k	28.58	57.91	-29.33	Line	-
Mode 2	Pass	AV	397.299k	18.39	47.91	-29.52	Line	-
Mode 2	Pass	QP	922.424k	17.88	56.00	-38.12	Line	-
Mode 2	Pass	AV	922.424k	15.21	46.00	-30.79	Line	-
Mode 2	Pass	QP	2.15M	28.46	56.00	-27.54	Line	-
Mode 2	Pass	AV	2.15M	21.53	46.00	-24.47	Line	-
Mode 2	Pass	QP	6.981M	32.26	60.00	-27.74	Line	-
Mode 2	Pass	AV	6.981M	27.56	50.00	-22.44	Line	-
Mode 2	Pass	QP	21.953M	22.10	60.00	-37.90	Line	-
Mode 2	Pass	AV	21.953M	19.24	50.00	-30.76	Line	-
Mode 2	Pass	QP	151.202k	35.53	65.92	-30.39	Neutral	-
Mode 2	Pass	AV	151.202k	24.01	55.92	-31.91	Neutral	-
Mode 2	Pass	QP	194.439k	30.77	63.84	-33.07	Neutral	-
Mode 2	Pass	AV	194.439k	19.92	53.84	-33.92	Neutral	-
Mode 2	Pass	QP	415.134k	24.56	57.55	-32.99	Neutral	-
Mode 2	Pass	AV	415.134k	18.96	47.55	-28.59	Neutral	-
Mode 2	Pass	QP	2.211M	27.48	56.00	-28.52	Neutral	-
Mode 2	Pass	AV	2.211M	19.88	46.00	-26.12	Neutral	-
Mode 2	Pass	QP	7.265M	31.07	60.00	-28.93	Neutral	-
Mode 2	Pass	AV	7.265M	26.98	50.00	-23.02	Neutral	-
Mode 2	Pass	QP	23.778M	20.53	60.00	-39.47	Neutral	-
Mode 2	Pass	AV	23.778M	18.09	50.00	-31.91	Neutral	-

Conducted Emissions at Powerline_Mode 1



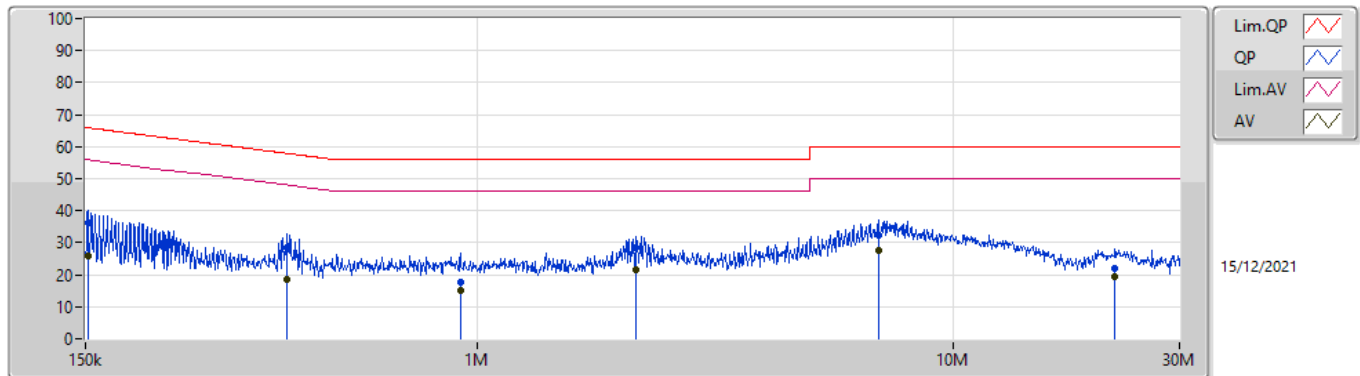
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	151.202k	47.92	65.92	-18.00	19.64	Line	-	28.28	9.69	0.04	9.91			
AV	151.202k	33.20	55.92	-22.72	19.64	Line	-	13.56	9.69	0.04	9.91			
QP	204.796k	39.86	63.42	-23.56	19.63	Line	-	20.23	9.68	0.04	9.91			
AV	204.796k	23.30	53.42	-30.12	19.63	Line	-	3.67	9.68	0.04	9.91			
QP	487.008k	32.68	56.21	-23.53	19.65	Line	-	13.03	9.68	0.06	9.91			
AV	487.008k	26.85	46.21	-19.36	19.65	Line	-	7.20	9.68	0.06	9.91			
QP	1.442M	25.08	56.00	-30.92	19.70	Line	-	5.38	9.69	0.09	9.92			
AV	1.442M	21.38	46.00	-24.62	19.70	Line	-	1.68	9.69	0.09	9.92			
QP	3.627M	27.46	56.00	-28.54	19.75	Line	-	7.71	9.70	0.13	9.92			
AV	3.627M	20.27	46.00	-25.73	19.75	Line	-	0.52	9.70	0.13	9.92			
QP	7.412M	27.94	60.00	-32.06	19.83	Line	-	8.11	9.72	0.18	9.93			
AV	7.412M	23.44	50.00	-26.56	19.83	Line	-	3.61	9.72	0.18	9.93			

Conducted Emissions at Powerline_Mode 1



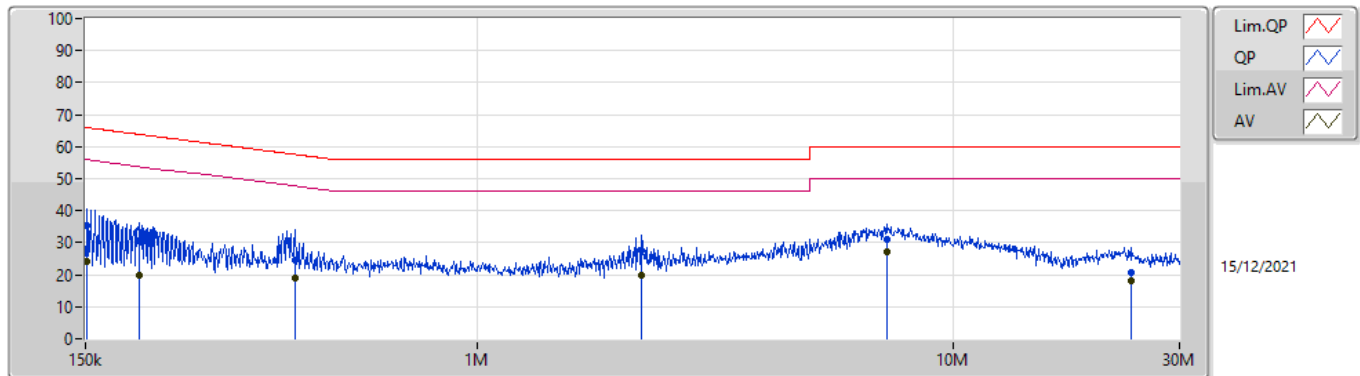
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	153.636k	47.90	65.81	-17.91	19.64	Neutral	-	28.26	9.69	0.04	9.91			
AV	153.636k	31.06	55.81	-24.75	19.64	Neutral	-	11.42	9.69	0.04	9.91			
QP	209.76k	38.62	63.21	-24.59	19.62	Neutral	-	19.00	9.67	0.04	9.91			
AV	209.76k	22.60	53.21	-30.61	19.62	Neutral	-	2.98	9.67	0.04	9.91			
QP	492.876k	29.69	56.11	-26.42	19.64	Neutral	-	10.05	9.67	0.06	9.91			
AV	492.876k	23.25	46.11	-22.86	19.64	Neutral	-	3.61	9.67	0.06	9.91			
QP	1.386M	27.32	56.00	-28.68	19.68	Neutral	-	7.64	9.67	0.09	9.92			
AV	1.386M	23.70	46.00	-22.30	19.68	Neutral	-	4.02	9.67	0.09	9.92			
QP	2.594M	25.21	56.00	-30.79	19.72	Neutral	-	5.49	9.68	0.12	9.92			
AV	2.594M	21.31	46.00	-24.69	19.72	Neutral	-	1.59	9.68	0.12	9.92			
QP	7.093M	29.29	60.00	-30.71	19.83	Neutral	-	9.46	9.72	0.18	9.93			
AV	7.093M	24.99	50.00	-25.01	19.83	Neutral	-	5.16	9.72	0.18	9.93			

Conducted Emissions at Powerline_Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	151.807k	36.10	65.90	-29.80	19.64	Line	-	16.46	9.69	0.04	9.91			
AV	151.807k	25.92	55.90	-29.98	19.64	Line	-	6.28	9.69	0.04	9.91			
QP	397.299k	28.58	57.91	-29.33	19.65	Line	-	8.93	9.68	0.06	9.91			
AV	397.299k	18.39	47.91	-29.52	19.65	Line	-	-1.26	9.68	0.06	9.91			
QP	922.424k	17.88	56.00	-38.12	19.68	Line	-	-1.80	9.68	0.08	9.92			
AV	922.424k	15.21	46.00	-30.79	19.68	Line	-	-4.47	9.68	0.08	9.92			
QP	2.15M	28.46	56.00	-27.54	19.71	Line	-	8.75	9.69	0.10	9.92			
AV	2.15M	21.53	46.00	-24.47	19.71	Line	-	1.82	9.69	0.10	9.92			
QP	6.981M	32.26	60.00	-27.74	19.83	Line	-	12.43	9.72	0.18	9.93			
AV	6.981M	27.56	50.00	-22.44	19.83	Line	-	7.73	9.72	0.18	9.93			
QP	21.953M	22.10	60.00	-37.90	19.90	Line	-	2.20	9.66	0.31	9.93			
AV	21.953M	19.24	50.00	-30.76	19.90	Line	-	-0.66	9.66	0.31	9.93			

Conducted Emissions at Powerline_Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	151.202k	35.53	65.92	-30.39	19.64	Neutral	-	15.89	9.69	0.04	9.91			
AV	151.202k	24.01	55.92	-31.91	19.64	Neutral	-	4.37	9.69	0.04	9.91			
QP	194.439k	30.77	63.84	-33.07	19.62	Neutral	-	11.15	9.67	0.04	9.91			
AV	194.439k	19.92	53.84	-33.92	19.62	Neutral	-	0.30	9.67	0.04	9.91			
QP	415.134k	24.56	57.55	-32.99	19.64	Neutral	-	4.92	9.67	0.06	9.91			
AV	415.134k	18.96	47.55	-28.59	19.64	Neutral	-	-0.68	9.67	0.06	9.91			
QP	2.211M	27.48	56.00	-28.52	19.71	Neutral	-	7.77	9.68	0.11	9.92			
AV	2.211M	19.88	46.00	-26.12	19.71	Neutral	-	0.17	9.68	0.11	9.92			
QP	7.265M	31.07	60.00	-28.93	19.83	Neutral	-	11.24	9.72	0.18	9.93			
AV	7.265M	26.98	50.00	-23.02	19.83	Neutral	-	7.15	9.72	0.18	9.93			
QP	23.778M	20.53	60.00	-39.47	19.98	Neutral	-	0.55	9.73	0.32	9.93			
AV	23.778M	18.09	50.00	-31.91	19.98	Neutral	-	-1.89	9.73	0.32	9.93			

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	922.5k	853.323k	853KF1D	885k	847.076k
BT-EDR(2Mbps)	1.31M	1.196M	1M20G1D	1.279M	1.192M
BT-EDR(3Mbps)	1.293M	1.202M	1M20G1D	1.284M	1.197M

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

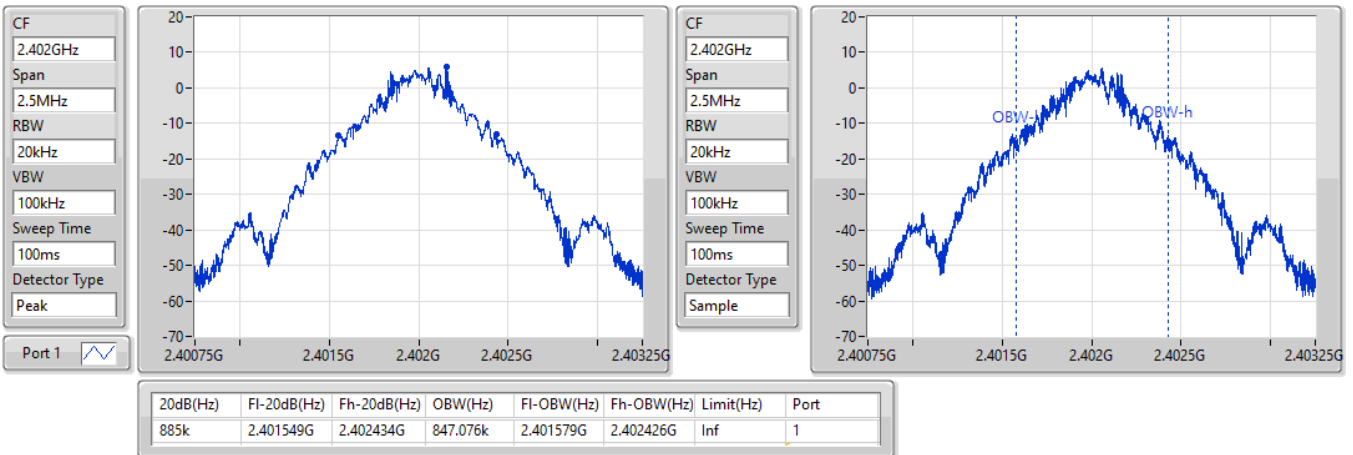
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	885k	847.076k
2440MHz	Pass	Inf	922.5k	853.323k
2480MHz	Pass	Inf	890k	853.323k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.279M	1.192M
2440MHz	Pass	Inf	1.31M	1.194M
2480MHz	Pass	Inf	1.31M	1.196M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.293M	1.197M
2440MHz	Pass	Inf	1.286M	1.198M
2480MHz	Pass	Inf	1.284M	1.202M

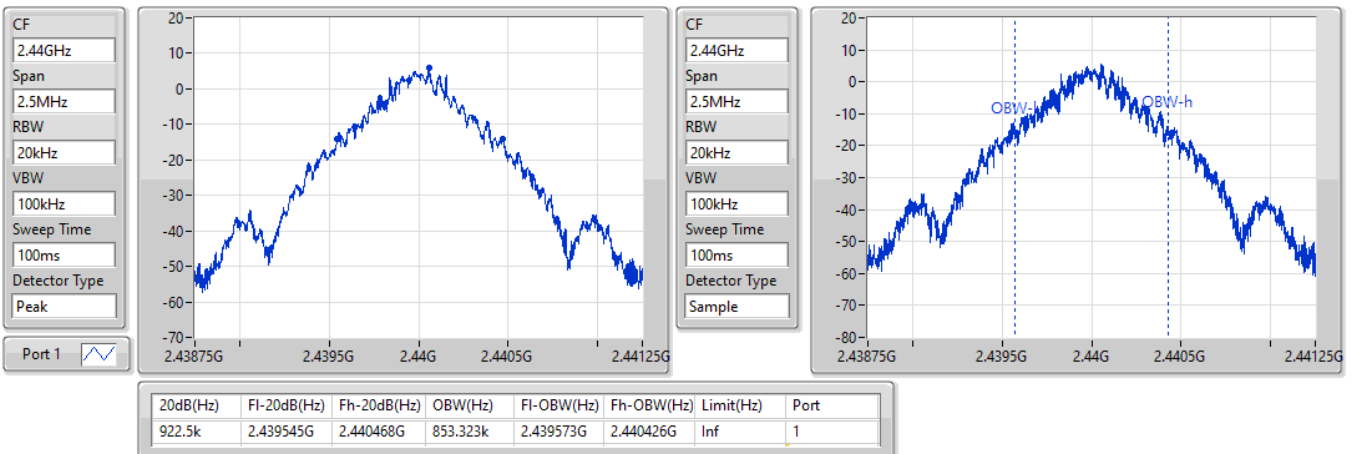
Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-BR(1Mbps)
2402MHz
EBW-FS

16/12/2021

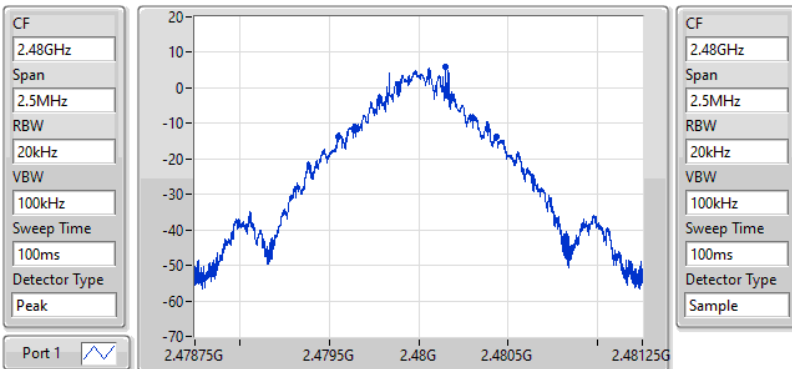

BT-BR(1Mbps)
2440MHz
EBW-FS

16/12/2021



BT-BR(1Mbps)

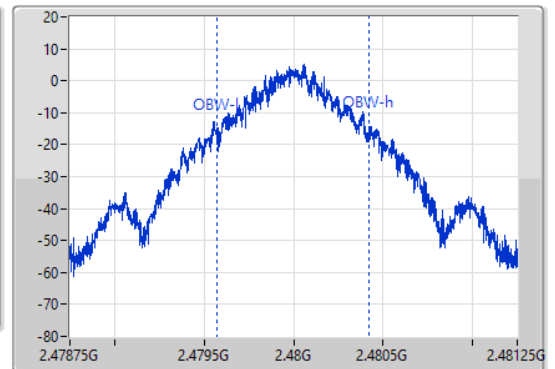
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
890k	2.479548G	2.480438G	853.323k	2.47957G	2.480424G	Inf	1

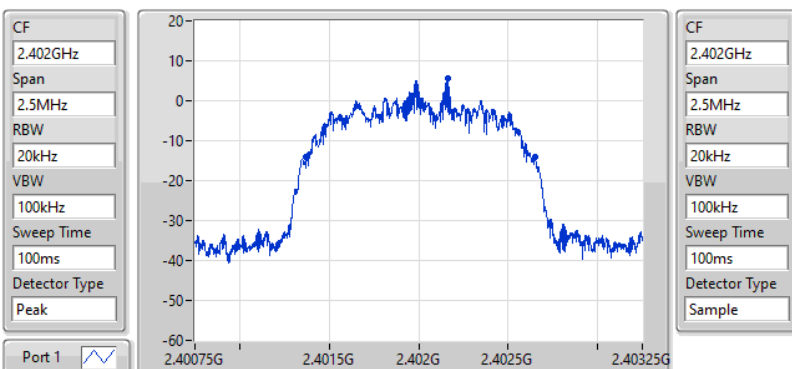
EBW-FS

16/12/2021



BT-EDR(2Mbps)

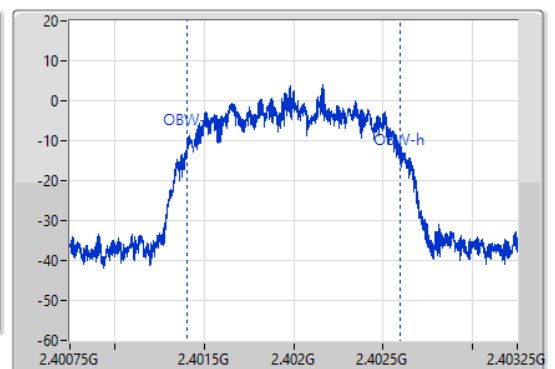
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.279M	2.401371G	2.40265G	1.192M	2.401407G	2.402598G	Inf	1

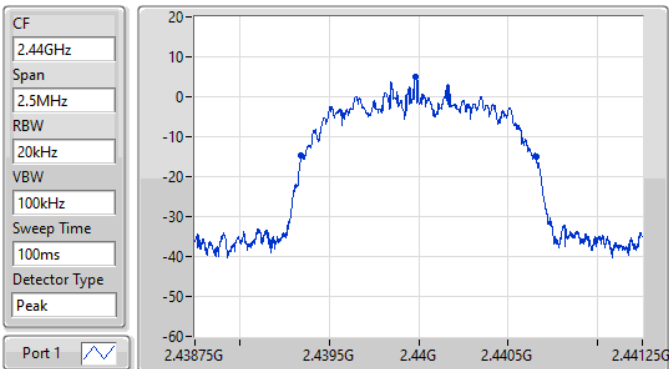
EBW-FS

16/12/2021



BT-EDR(2Mbps)

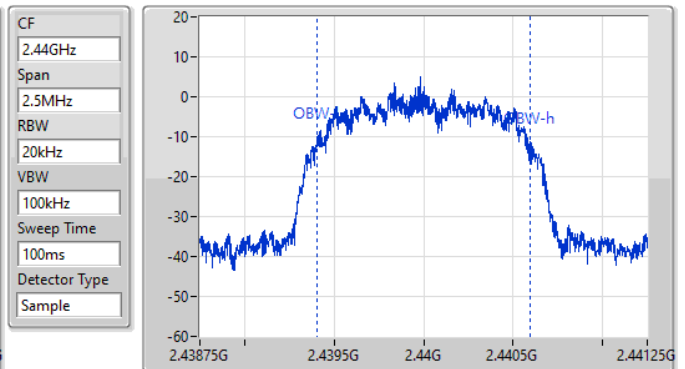
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.31M	2.439345G	2.440655G	1.194M	2.439404G	2.440598G	Inf	1

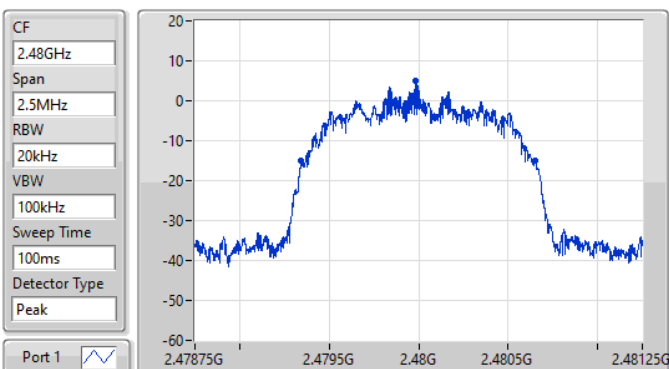
EBW-FS

16/12/2021



BT-EDR(2Mbps)

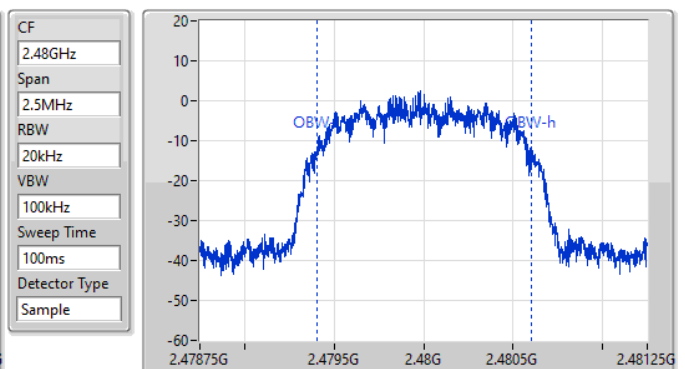
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.31M	2.479344G	2.480654G	1.196M	2.479404G	2.4806G	Inf	1

EBW-FS

16/12/2021

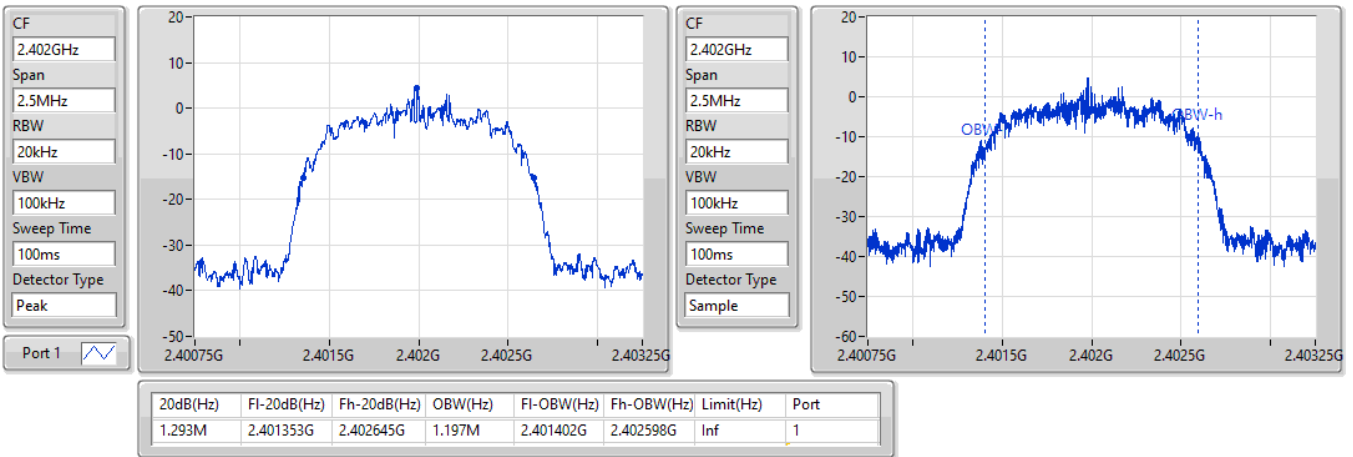


BT-EDR(3Mbps)

EBW-FS

2402MHz

16/12/2021

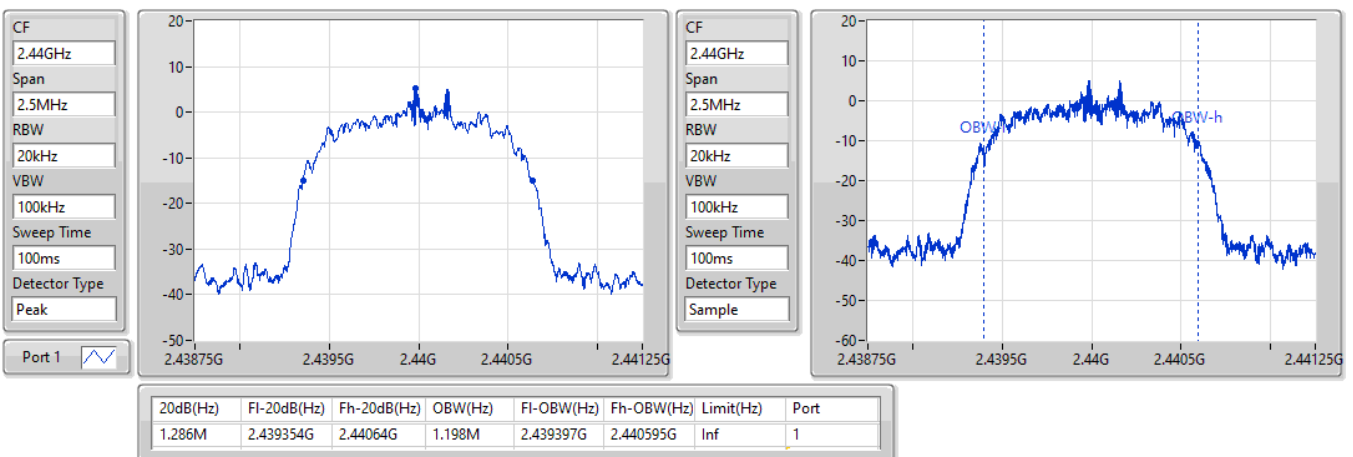


BT-EDR(3Mbps)

EBW-FS

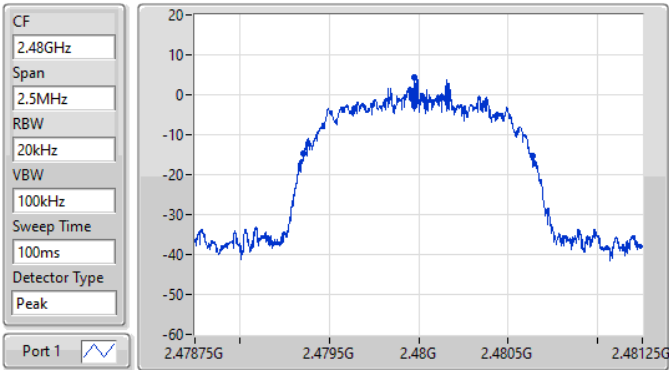
2440MHz

16/12/2021



BT-EDR(3Mbps)

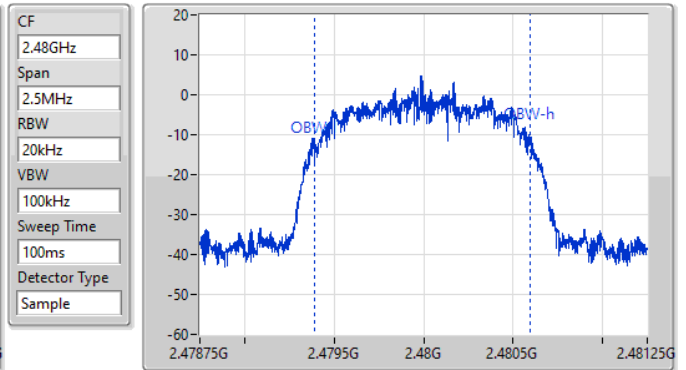
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.284M	2.479355G	2.480639G	1.202M	2.479394G	2.480596G	Inf	1

EBW-FS

16/12/2021





Summary

Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.0005M	1.0005M
BT-EDR(2Mbps)	1.005M	997.5k
BT-EDR(3Mbps)	1.002M	997.5k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.40199G	2.402991G	1.0005M	589.41k
2440MHz	Pass	2.439989G	2.440989G	1.0005M	614.385k
2480MHz	Pass	2.478989G	2.479989G	1.0005M	592.74k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.40199G	2.402988G	997.5k	851.814k
2440MHz	Pass	2.43999G	2.440989G	999k	872.46k
2480MHz	Pass	2.478987G	2.479992G	1.005M	872.46k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.401986G	2.402988G	1.002M	861.138k
2440MHz	Pass	2.43999G	2.440988G	997.5k	856.476k
2480MHz	Pass	2.47899G	2.479991G	1.0005M	855.144k

BT-BR(1Mbps)

2.402G/2.403GHz

Channel Separation-FS

16/12/2021



BT-BR(1Mbps)

2.44G/2.441GHz

Channel Separation-FS

16/12/2021



BT-BR(1Mbps)

2.48G/2.479GHz

Channel Separation-FS

16/12/2021

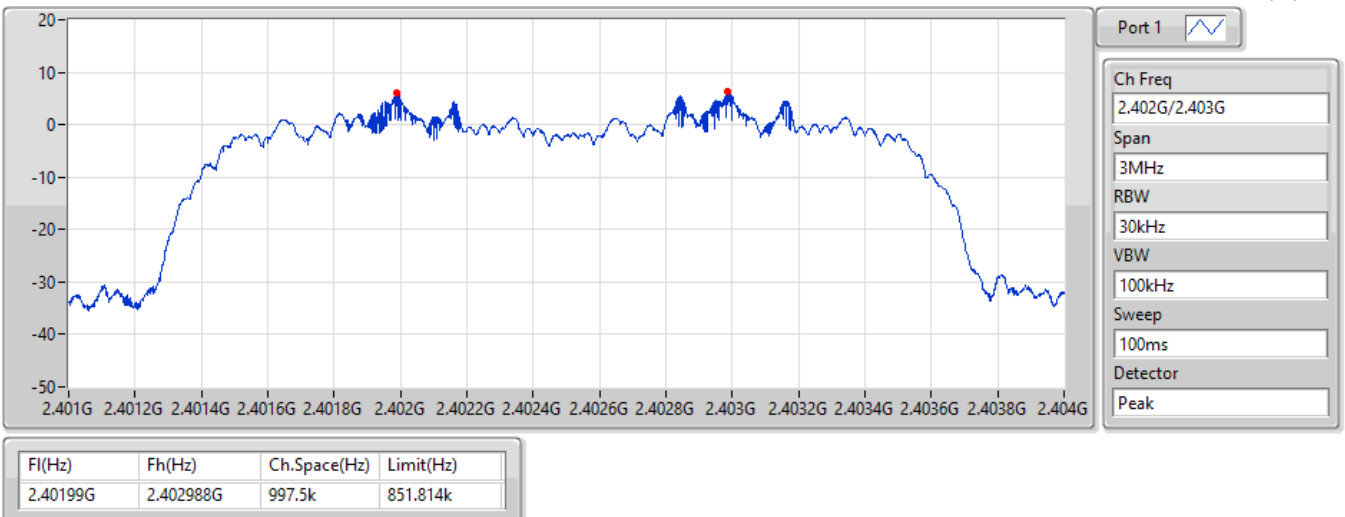


BT-EDR(2Mbps)

2.402G/2.403GHz

Channel Separation-FS

16/12/2021



BT-EDR(2Mbps)

2.44G/2.441GHz

Channel Separation-FS

16/12/2021

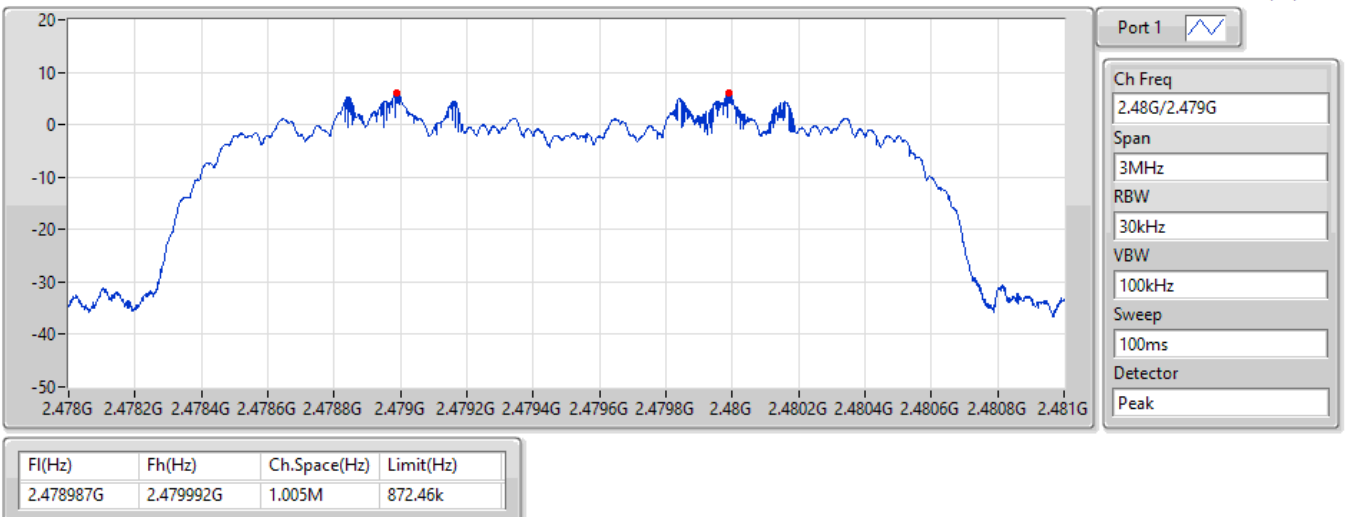


BT-EDR(2Mbps)

2.48G/2.479GHz

Channel Separation-FS

16/12/2021



BT-EDR(3Mbps)

2.402G/2.403GHz

Channel Separation-FS

16/12/2021



BT-EDR(3Mbps)

2.44G/2.441GHz

Channel Separation-FS

16/12/2021



BT-EDR(3Mbps)

2.48G/2.479GHz

Channel Separation-FS

16/12/2021





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	10.02	0.01005
BT-EDR(2Mbps)	11.45	0.01396
BT-EDR(3Mbps)	11.74	0.01493



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	-3.70	9.86	21.00
2440MHz	Pass	-3.70	10.02	21.00
2480MHz	Pass	-3.70	9.78	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	-3.70	11.13	21.00
2440MHz	Pass	-3.70	11.45	21.00
2480MHz	Pass	-3.70	11.20	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	-3.70	11.34	21.00
2440MHz	Pass	-3.70	11.74	21.00
2480MHz	Pass	-3.70	11.49	21.00

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



Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	9.78	0.00951
BT-EDR(2Mbps)	9.05	0.00804
BT-EDR(3Mbps)	9.25	0.00841



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	-3.70	9.54	21.00
2440MHz	Pass	-3.70	9.78	21.00
2480MHz	Pass	-3.70	9.52	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	-3.70	8.98	21.00
2440MHz	Pass	-3.70	9.05	21.00
2480MHz	Pass	-3.70	8.95	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	-3.70	9.00	21.00
2440MHz	Pass	-3.70	9.25	21.00
2480MHz	Pass	-3.70	8.99	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

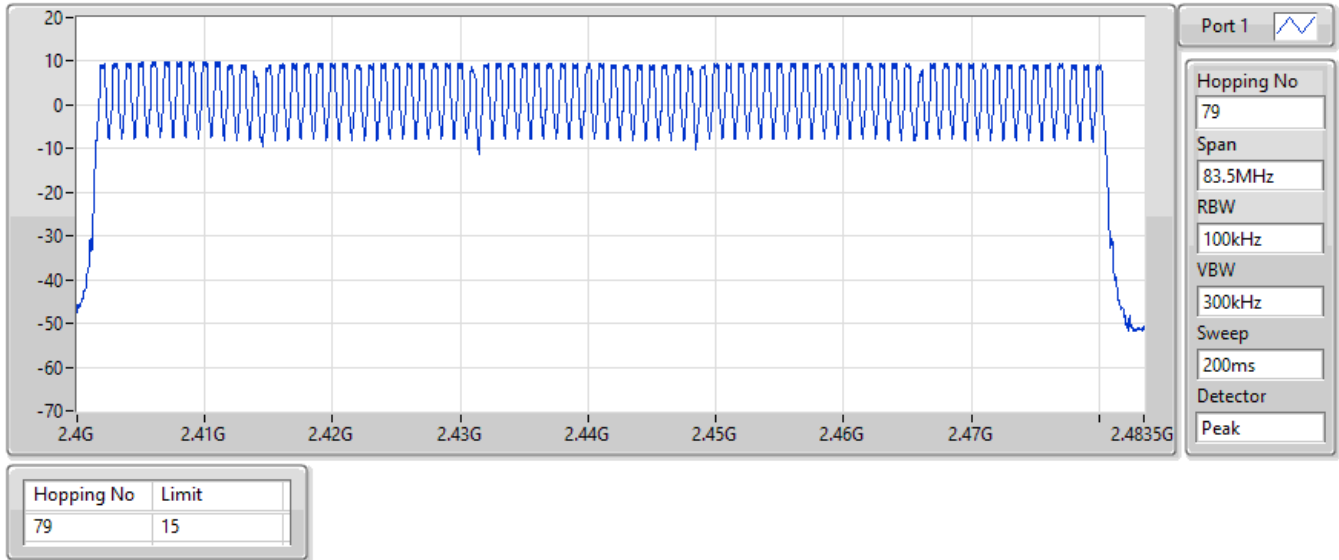
Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2440MHz	Pass	79	15

BT-BR(1Mbps)

2440MHz

Hopping-FS

16/12/2021

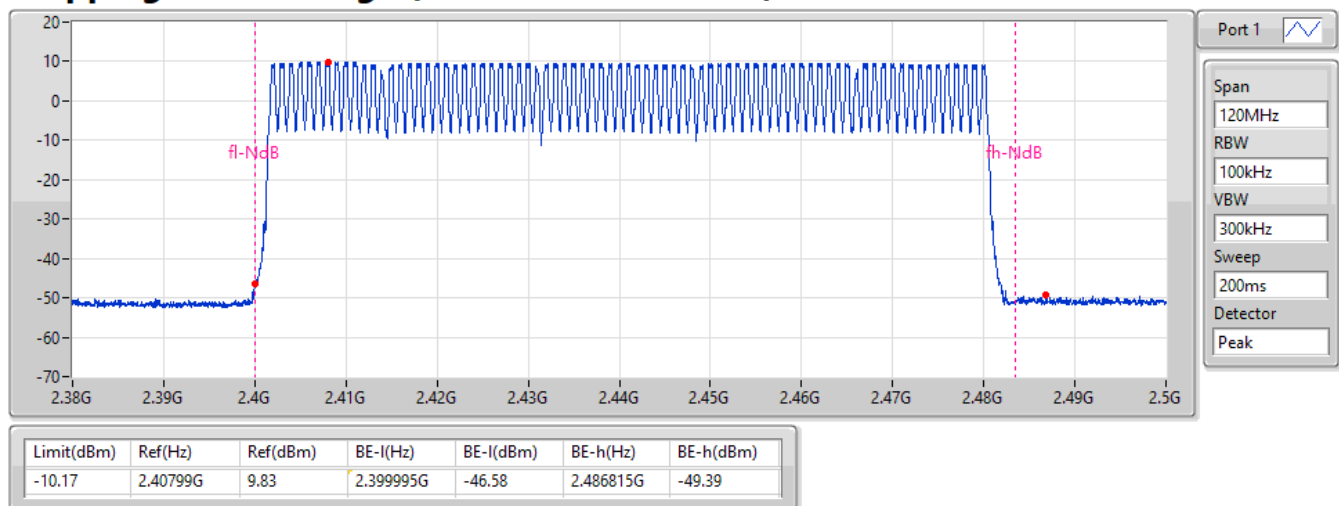


BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

16/12/2021

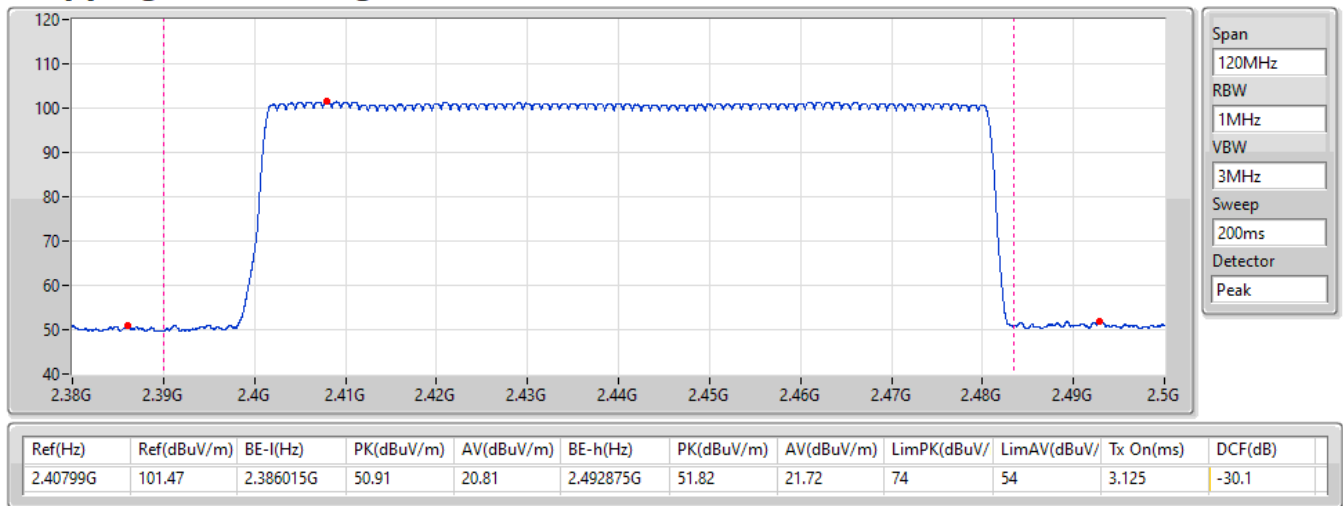


BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

16/12/2021

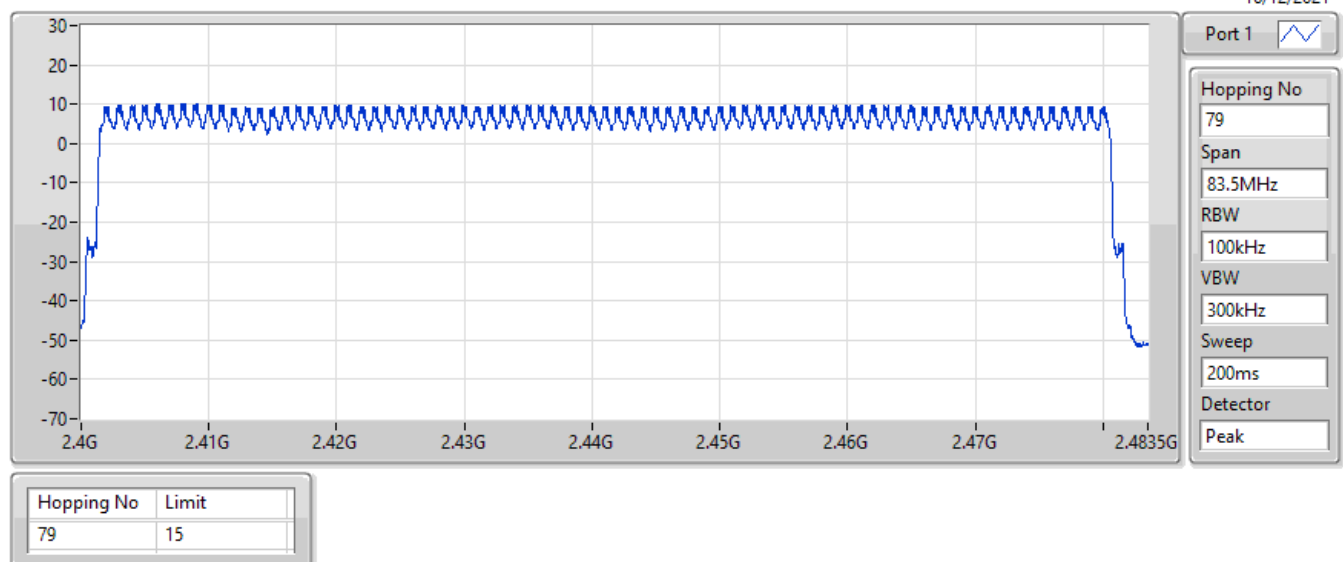


BT-EDR(2Mbps)

2440MHz

Hopping-FS

16/12/2021

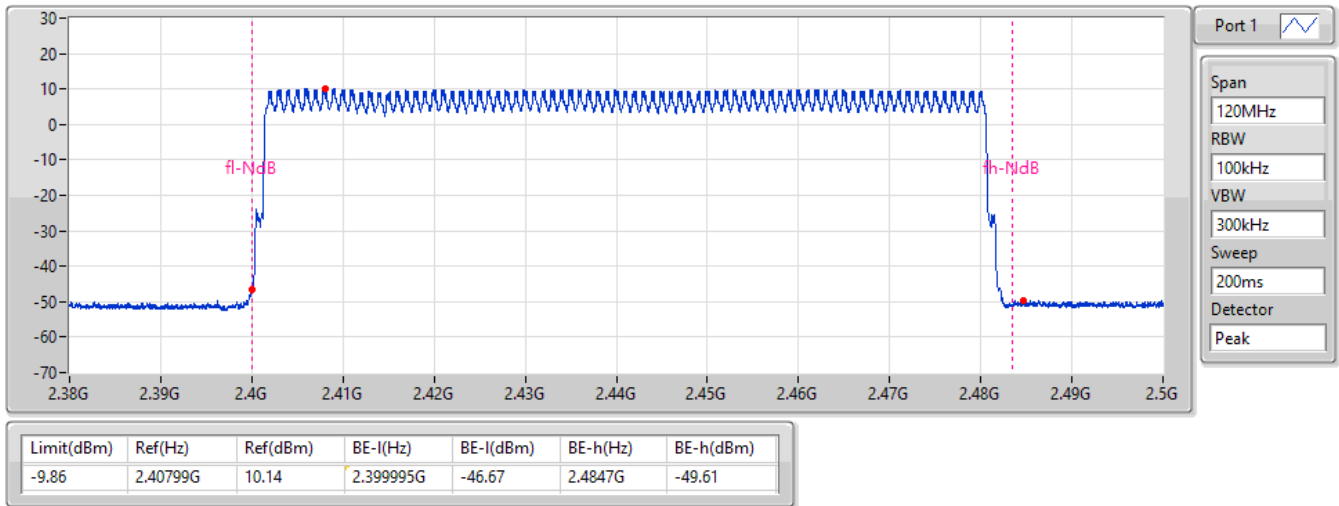


BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

16/12/2021

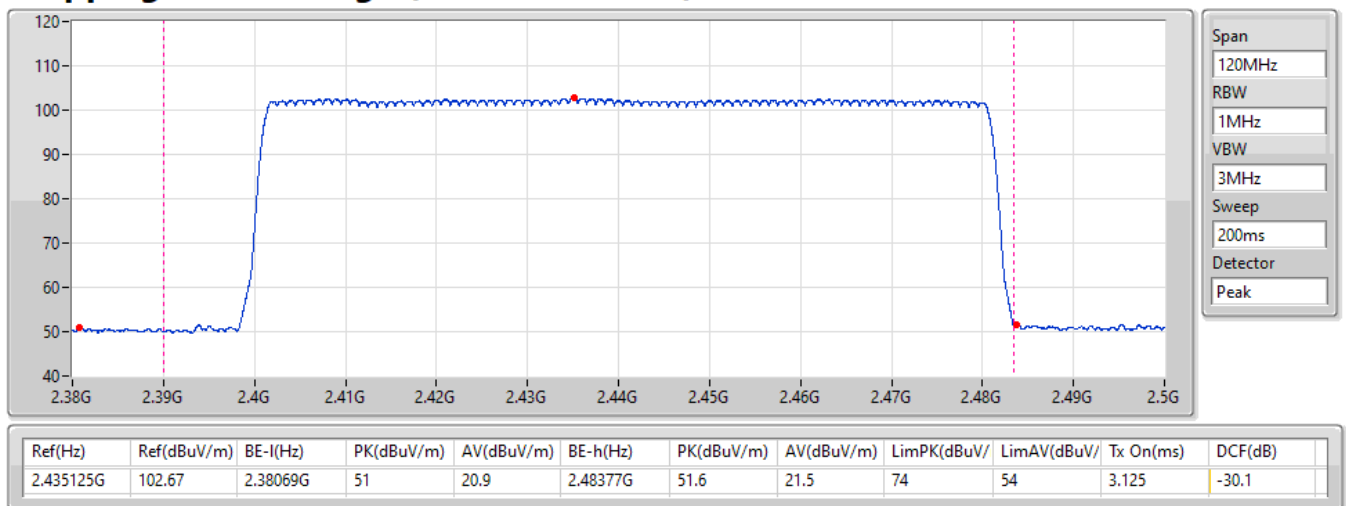


BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

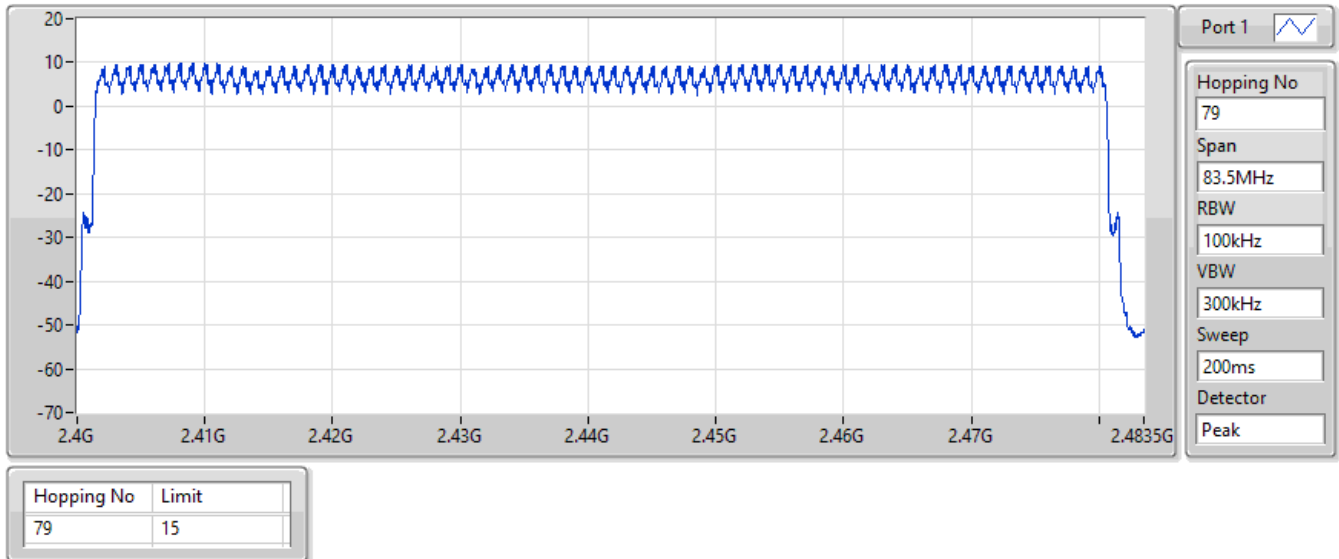
16/12/2021



BT-EDR(3Mbps) 2440MHz

Hopping-FS

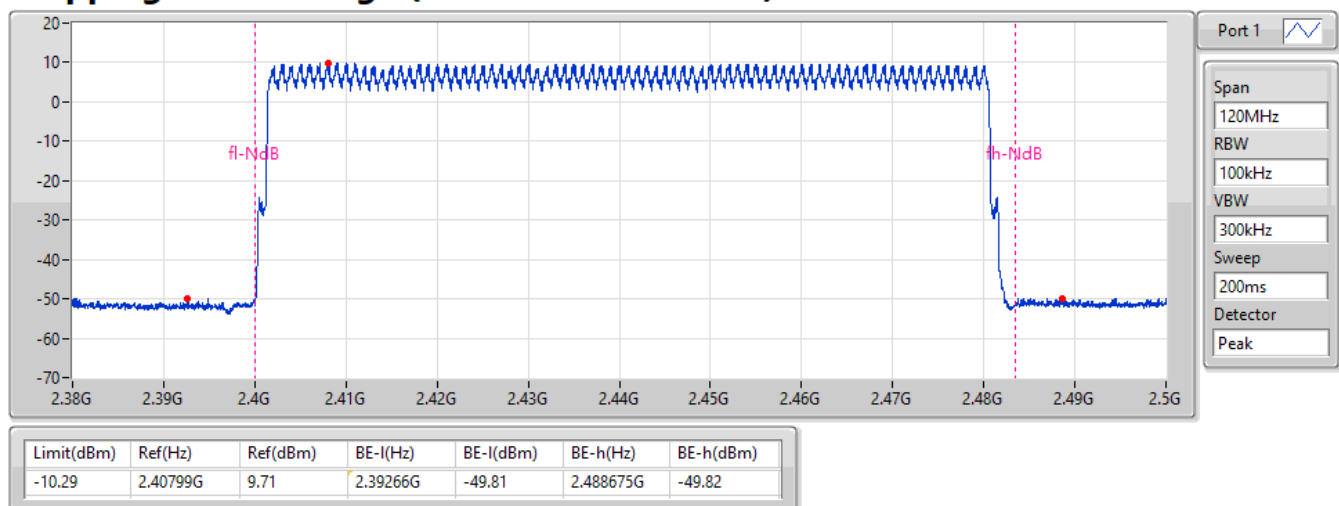
16/12/2021



BT-EDR(3Mbps) 2440MHz

Hopping Ch Bandedge (Non-restricted Band)

16/12/2021

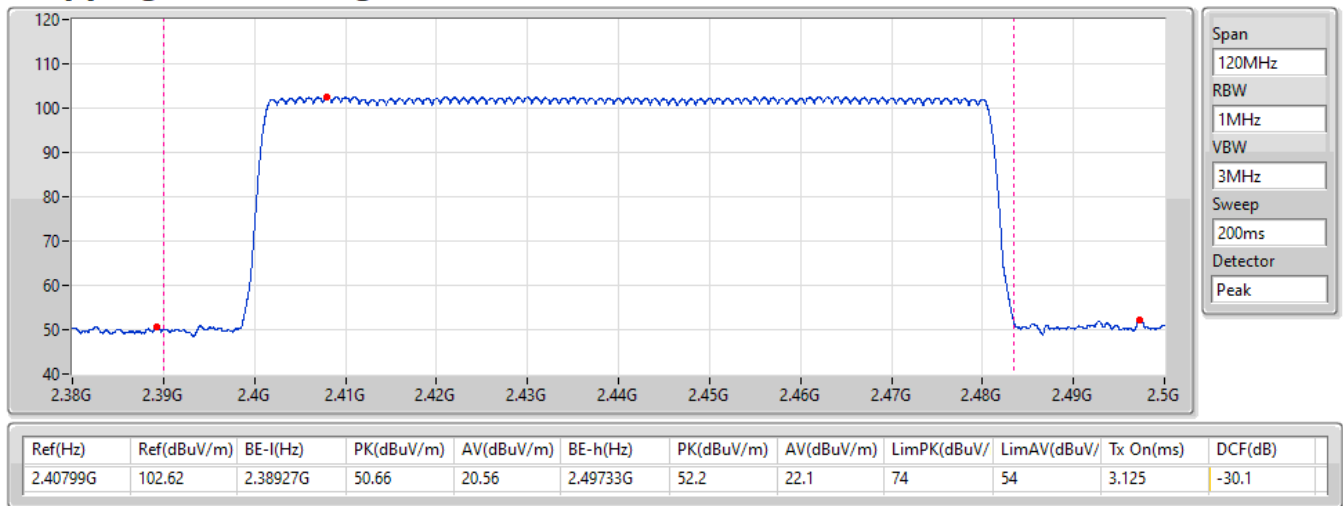


BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

16/12/2021





Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	307.94075m_DH5
BT-EDR(2Mbps)	308.36715m_DH5
BT-EDR(3Mbps)	310.3126m_DH5

Result

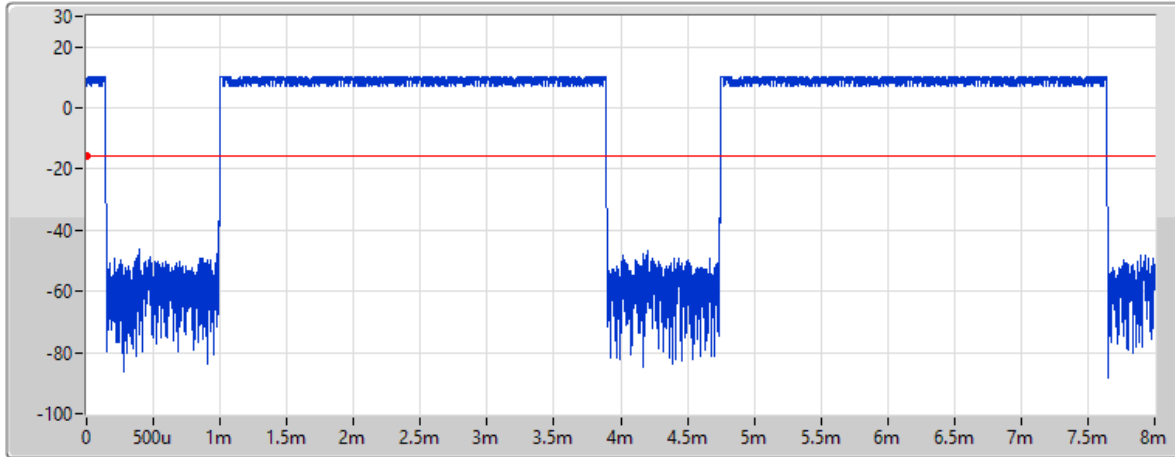
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	307.94075m_DH5	400m	2.88875m
2440MHz	Pass	8	153.90375m_DH5-AFH	400m	2.8875m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.36715m_DH5	400m	2.89275m
2440MHz	Pass	8	154.1969m_DH5-AFH	400m	2.893m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	310.3126m_DH5	400m	2.911m
2440MHz	Pass	8	154.583325m_DH5-AFH	400m	2.90025m

BT-BR(1Mbps)

Dwell-FS

2440MHz

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.88875ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	307.94075m_DH5	400m	2.88875m

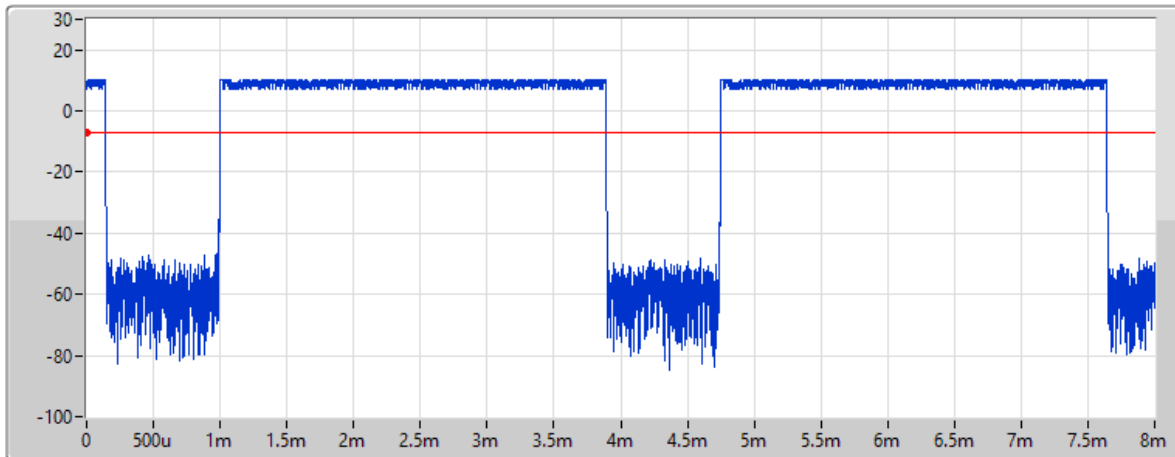
DH5

BT-BR(1Mbps)

Dwell-FS

2440MHz

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.8875ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	153.90375m_DH5-AFH	400m	2.8875m

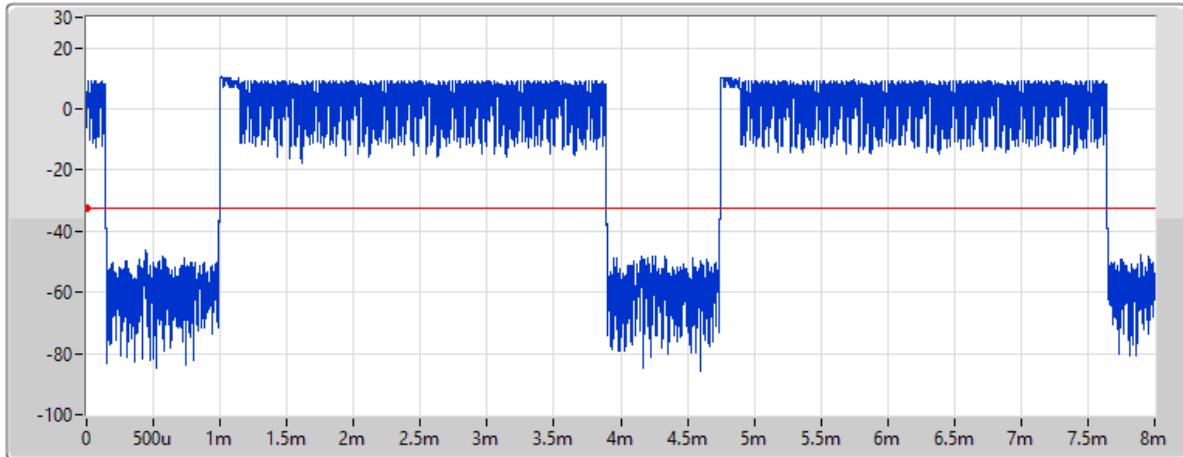
DH5-AFH

BT-EDR(2Mbps)

2440MHz

Dwell-FS

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.89275ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.36715m_DH5	400m	2.89275m

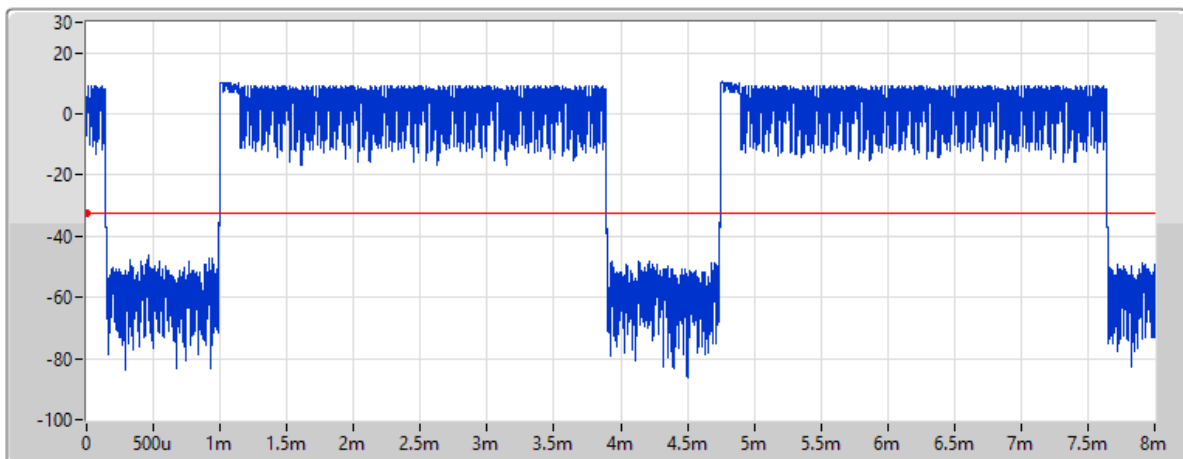
DH5

BT-EDR(2Mbps)

2440MHz

Dwell-FS

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.893ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.1969m_DH5-AFH	400m	2.893m

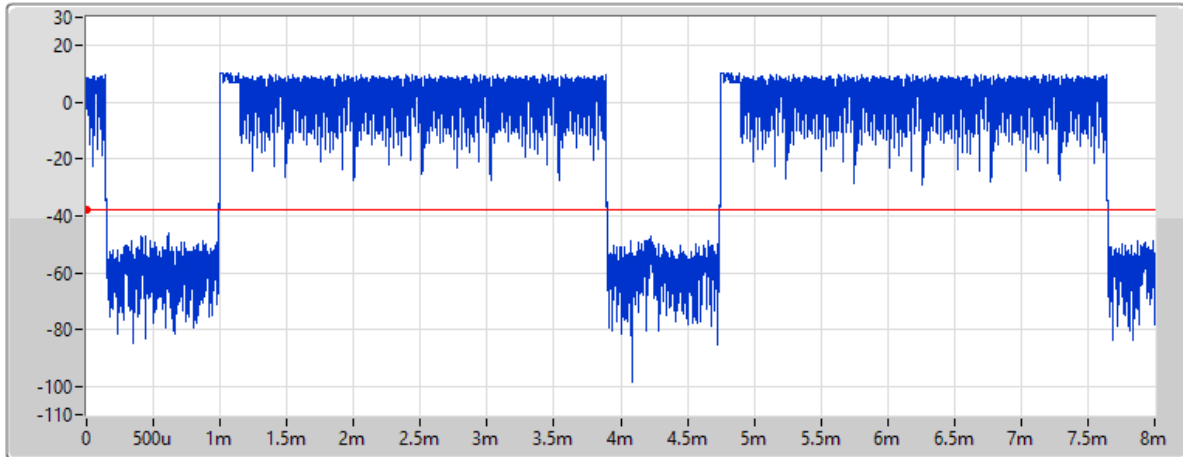
DH5-AFH

BT-EDR(3Mbps)

2440MHz

Dwell-FS

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.911ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.3126m_DH5	400m	2.911m

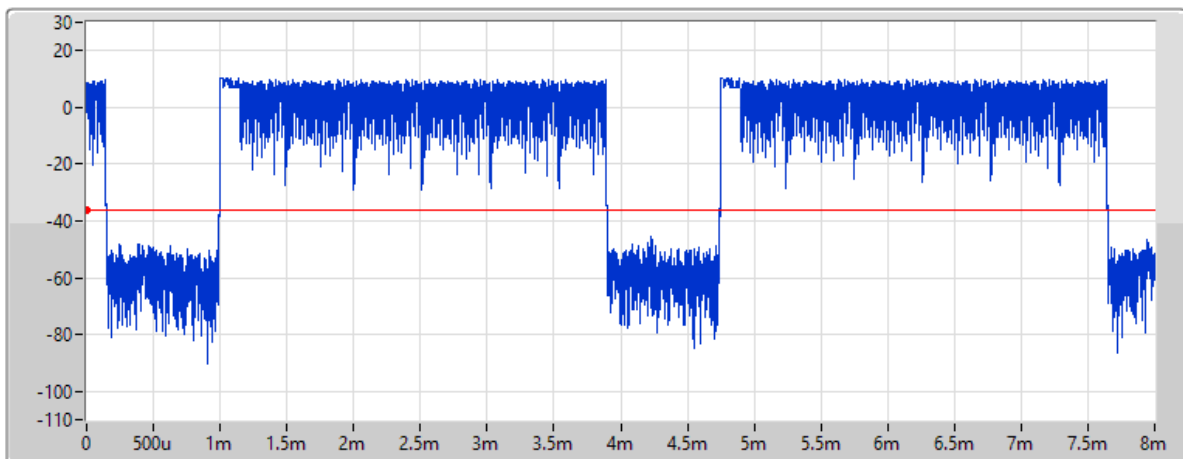
DH5

BT-EDR(3Mbps)

2440MHz

Dwell-FS

16/12/2021



Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.90025ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.583325m_DH5-AFI	400m	2.90025m

DH5-AFH



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.40213G	8.92	-11.08	1.9852G	-52.62	2.39988G	-47.62	2.4G	-53.39	2.50299G	-50.96	24.58944G	-40.29	1
BT-EDR(2Mbps)	Pass	2.40217G	8.71	-11.29	2.16174G	-52.42	2.39999G	-47.10	2.4G	-50.40	2.49804G	-50.73	24.19013G	-40.44	1
BT-EDR(3Mbps)	Pass	2.40213G	8.99	-11.01	2.18554G	-53.18	2.39987G	-47.09	2.4G	-47.05	2.48877G	-51.50	24.42915G	-40.03	1

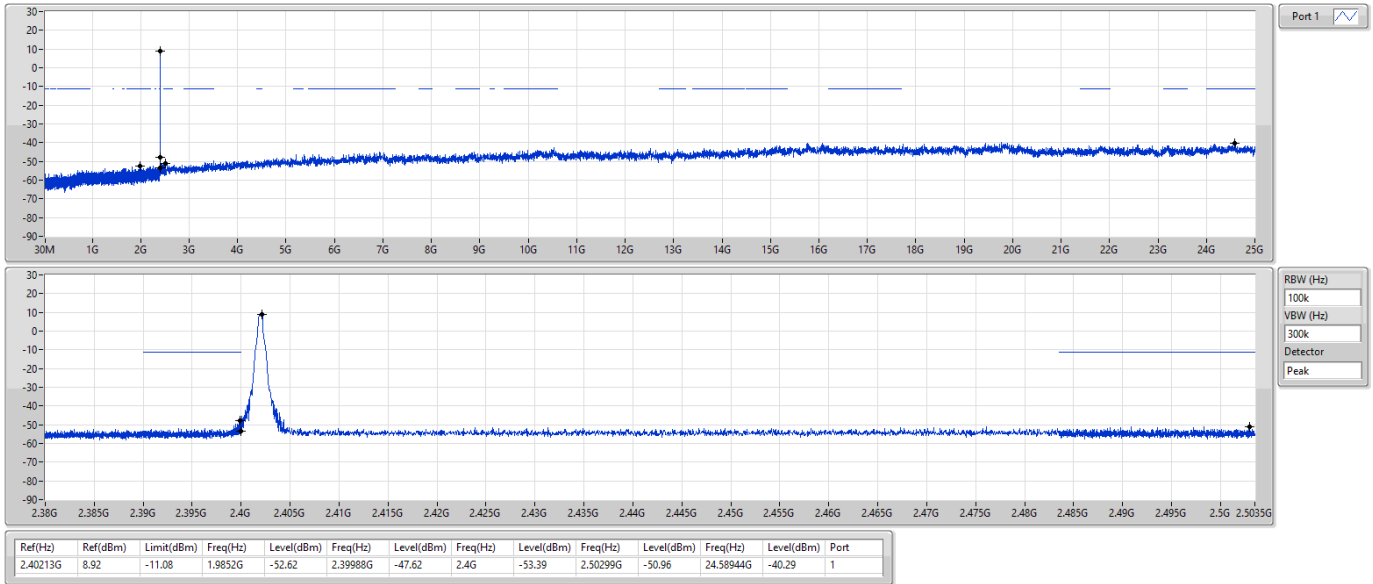
Result

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	2.40213G	8.92	-11.08	1.9852G	-52.62	2.39988G	-47.62	2.4G	-53.39	2.50299G	-50.96	24.58944G	-40.29	1
2440MHz	Pass	2.44004G	8.73	-11.27	2.07509G	-53.11	2.39727G	-52.22	2.4G	-54.06	2.49832G	-51.12	24.77504G	-40.35	1
2480MHz	Pass	2.48008G	8.42	-11.58	1.99196G	-52.94	2.39007G	-51.30	2.4835G	-53.93	2.5022G	-51.43	24.15076G	-39.92	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	8.71	-11.29	2.16174G	-52.42	2.39999G	-47.10	2.4G	-50.40	2.49804G	-50.73	24.19013G	-40.44	1
2440MHz	Pass	2.44G	9.03	-10.97	2.1544G	-52.88	2.39515G	-51.54	2.4835G	-54.07	2.48617G	-50.61	24.87065G	-40.20	1
2480MHz	Pass	2.47987G	8.33	-11.67	1.99813G	-52.82	2.39931G	-51.99	2.4835G	-53.79	2.48681G	-50.46	24.16201G	-39.93	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40213G	8.99	-11.01	2.18554G	-53.18	2.39987G	-47.09	2.4G	-47.05	2.48877G	-51.50	24.42915G	-40.03	1
2440MHz	Pass	2.44012G	8.74	-11.26	2.18877G	-53.68	2.39244G	-50.75	2.4835G	-52.77	2.50024G	-51.34	17.43555G	-40.62	1
2480MHz	Pass	2.47999G	7.69	-12.31	1.97022G	-53.64	2.39896G	-52.14	2.4835G	-54.88	2.49758G	-50.52	24.14513G	-39.92	1

BT-BR(1Mbps)

CSENdB-FS

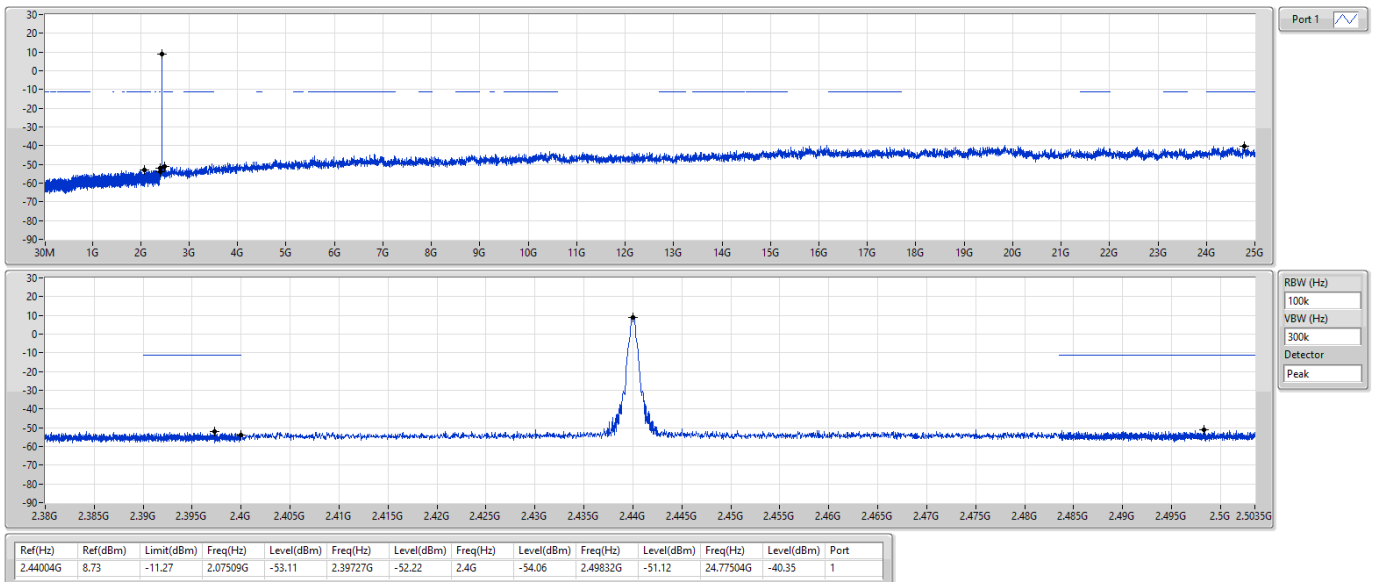
2402MHz



BT-BR(1Mbps)

CSENdB-FS

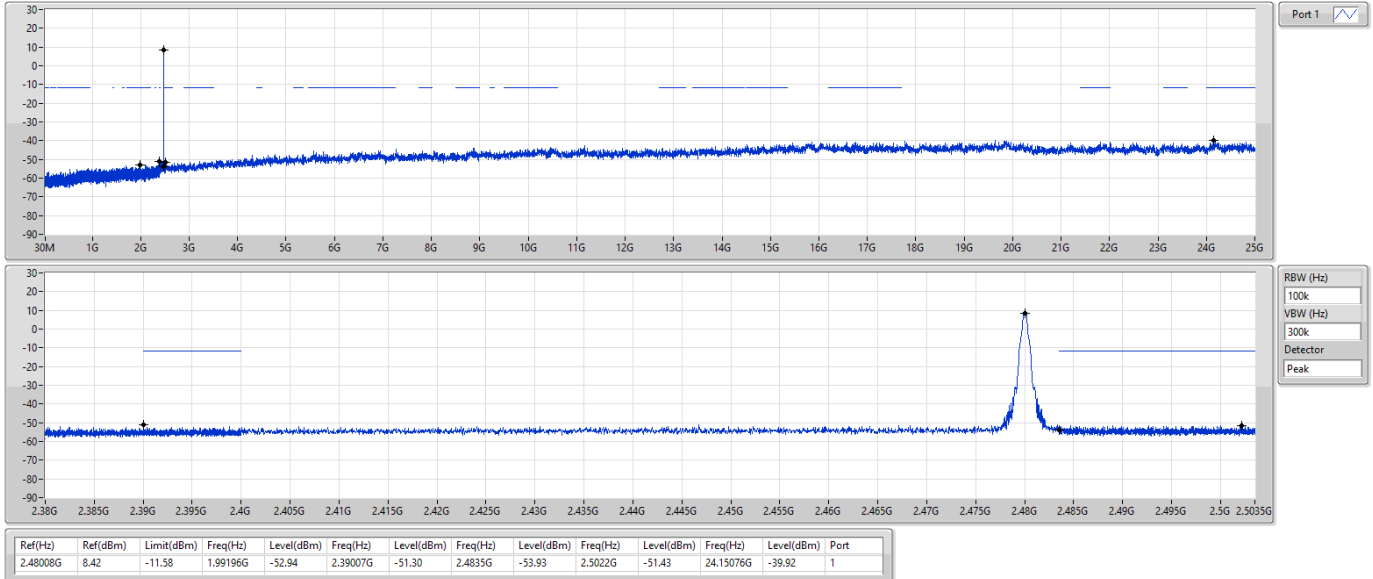
2440MHz



BT-BR(1Mbps)

CSEndB-FS

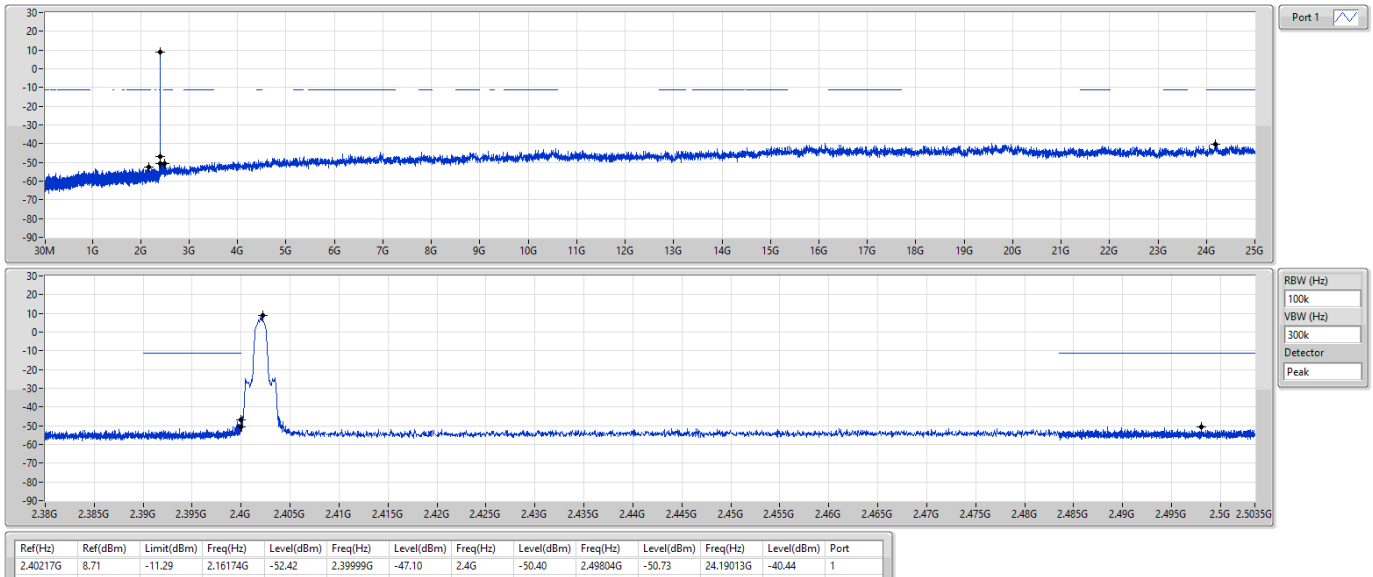
2480MHz



BT-EDR(2Mbps)

CSEndB-FS

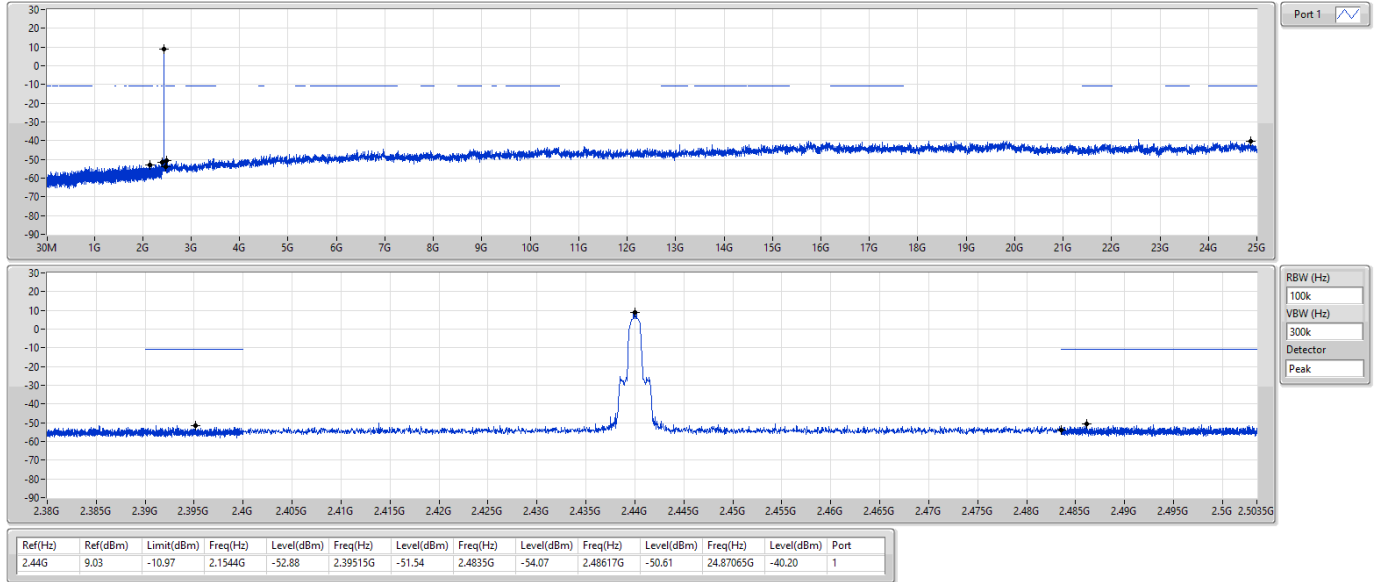
2402MHz



BT-EDR(2Mbps)

CSEndB-FS

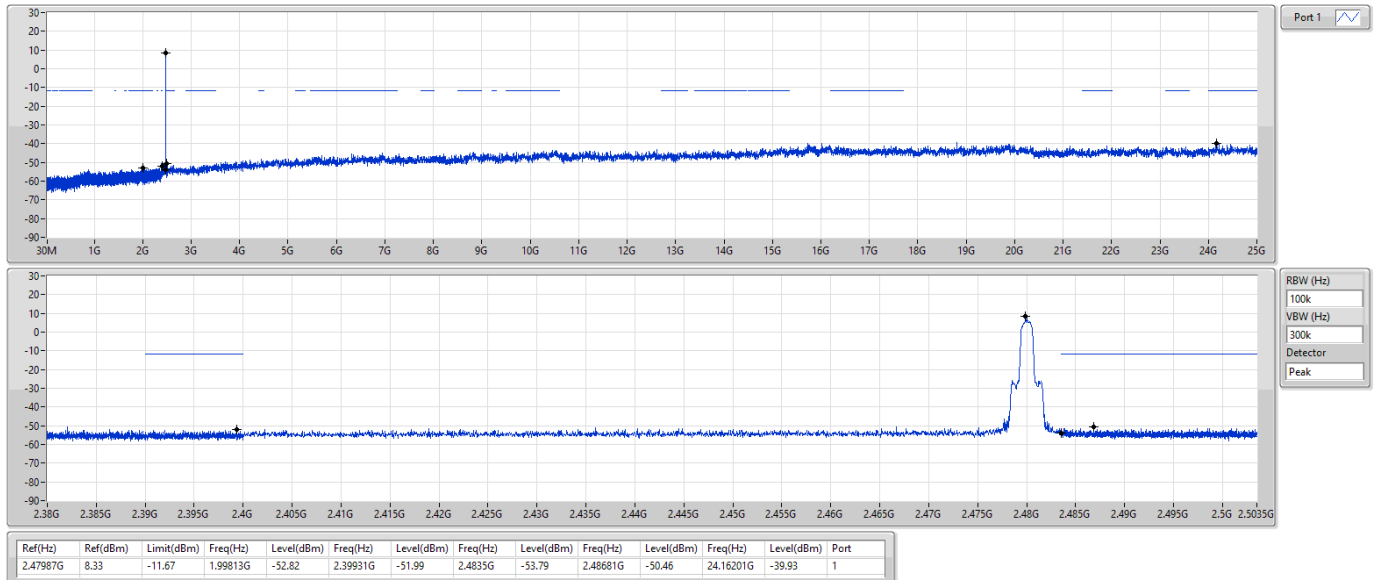
2440MHz



BT-EDR(2Mbps)

CSEndB-FS

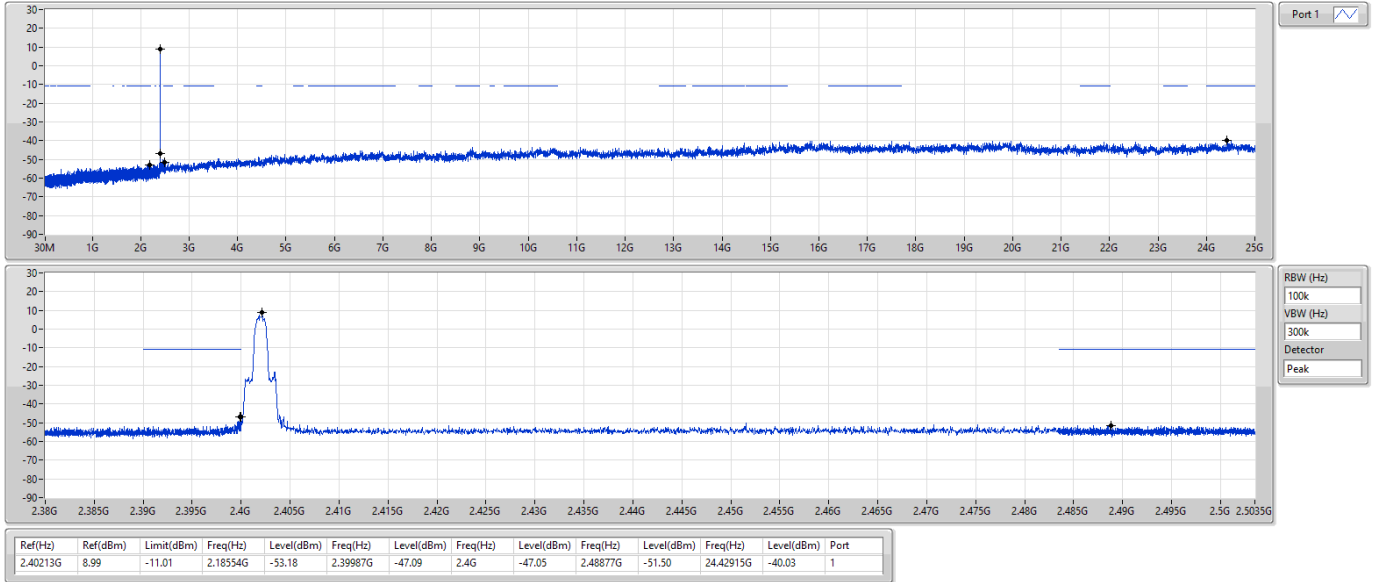
2480MHz



BT-EDR(3Mbps)

CSEndB-FS

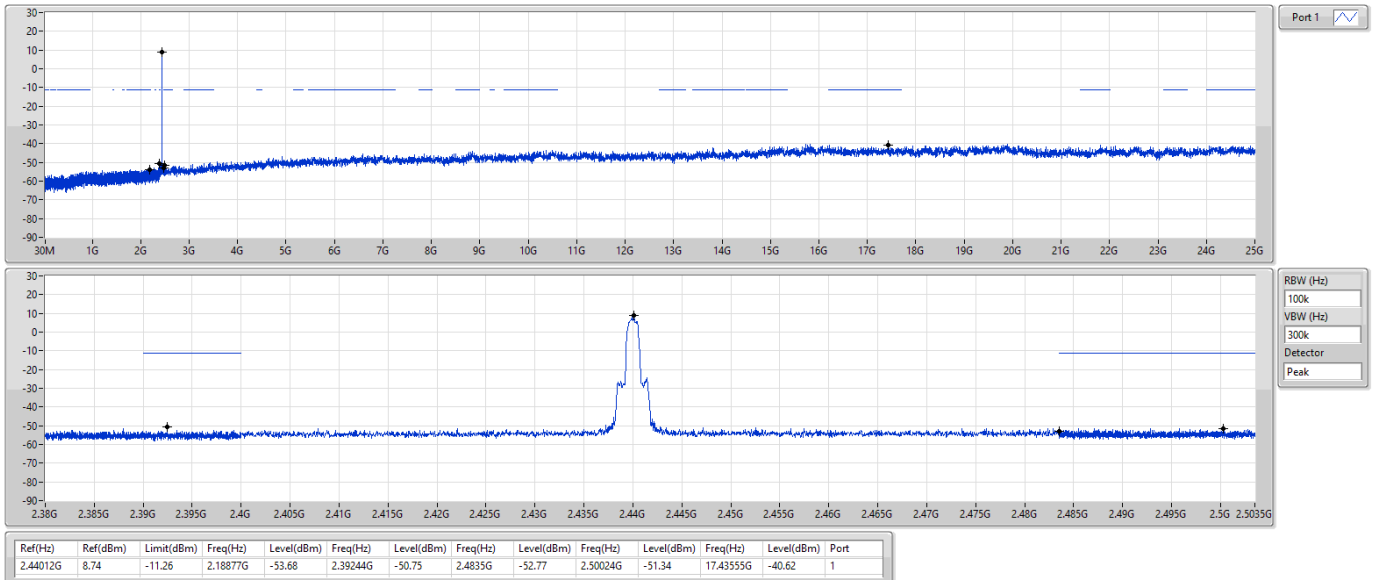
2402MHz



BT-EDR(3Mbps)

CSEndB-FS

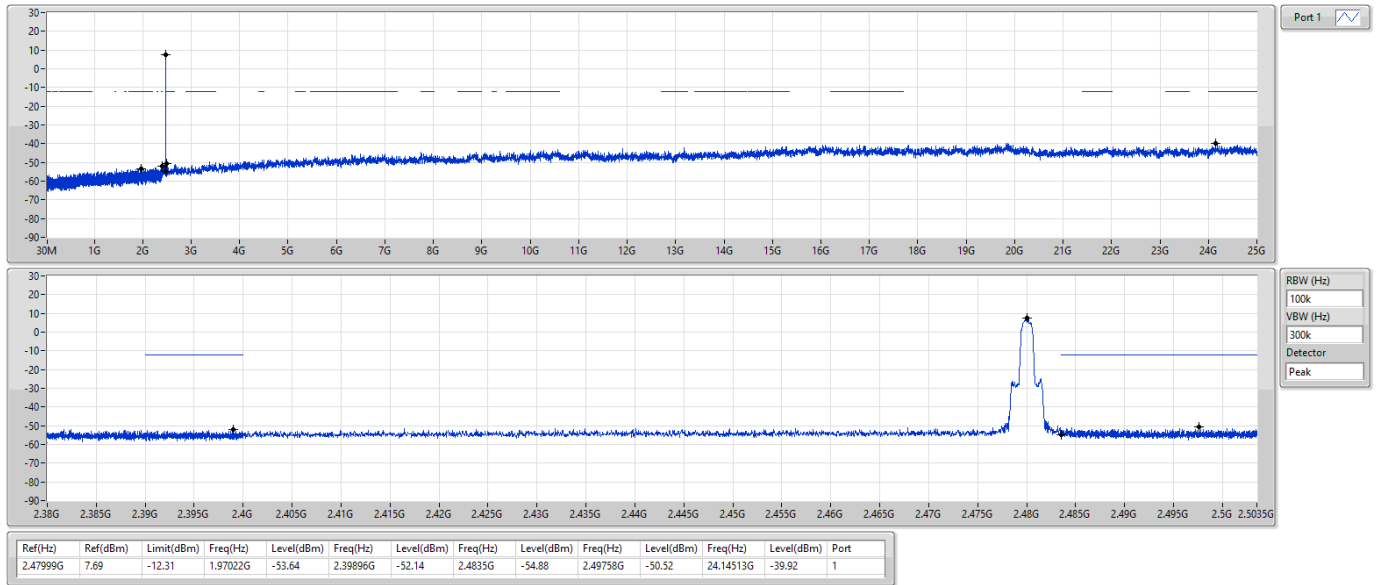
2440MHz



BT-EDR(3Mbps)

CSEndB-FS

2480MHz





Summary

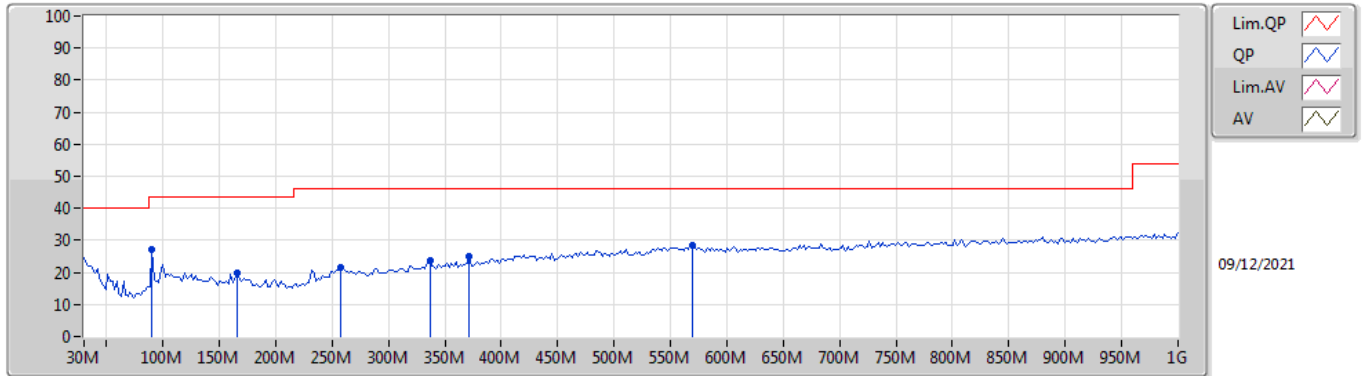
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	90.14M	27.36	43.50	-16.14	3	Vertical	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	90.14M	27.36	43.50	-16.14	3	Vertical	0	1.00	-
2440MHz	Pass	PK	165.8M	19.63	43.50	-23.87	3	Vertical	0	1.00	-
2440MHz	Pass	PK	256.98M	21.37	46.00	-24.63	3	Vertical	0	1.00	-
2440MHz	Pass	PK	336.52M	23.87	46.00	-22.13	3	Vertical	0	1.00	-
2440MHz	Pass	PK	371.44M	24.88	46.00	-21.12	3	Vertical	0	1.00	-
2440MHz	Pass	PK	569.32M	28.46	46.00	-17.54	3	Vertical	0	1.00	-
2440MHz	Pass	PK	90.14M	20.72	43.50	-22.78	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	142.52M	19.81	43.50	-23.69	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	307.42M	21.15	46.00	-24.85	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	332.64M	23.51	46.00	-22.49	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	423.82M	26.51	46.00	-19.49	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	580.96M	28.12	46.00	-17.88	3	Horizontal	360	1.00	-

BT-BR(1Mbps)

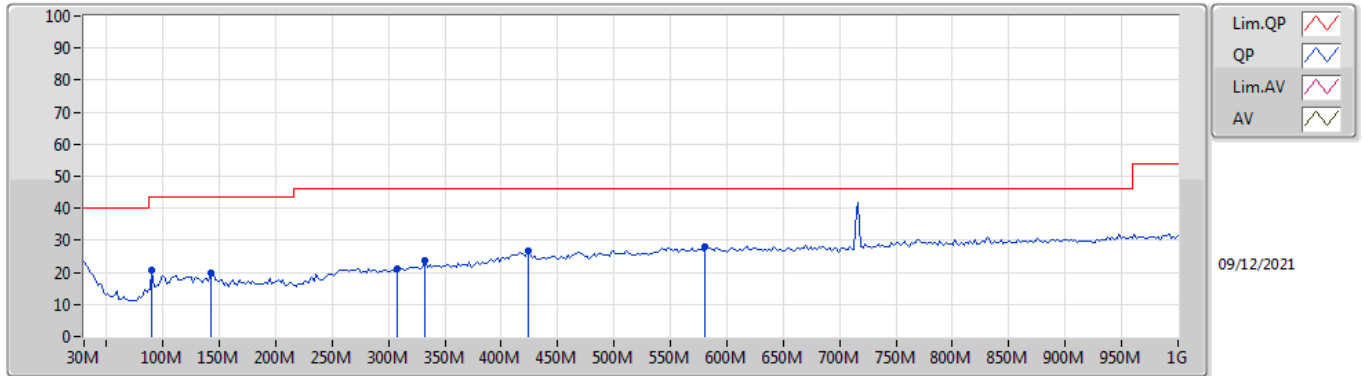
2440MHz_USB



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	90.14M	27.36	43.50	-16.14	-11.86	3	Vertical	0	1.00	-	39.22	14.03	1.58	27.47
PK	165.8M	19.63	43.50	-23.87	-10.14	3	Vertical	0	1.00	-	29.77	14.88	2.16	27.18
PK	256.98M	21.37	46.00	-24.63	-5.68	3	Vertical	0	1.00	-	27.05	18.35	2.70	26.73
PK	336.52M	23.87	46.00	-22.13	-4.76	3	Vertical	0	1.00	-	28.63	18.99	3.17	26.92
PK	371.44M	24.88	46.00	-21.12	-3.80	3	Vertical	0	1.00	-	28.68	19.95	3.34	27.09
PK	569.32M	28.46	46.00	-17.54	0.06	3	Vertical	0	1.00	-	28.40	23.96	4.20	28.10

BT-BR(1Mbps)

2440MHz_USB



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	90.14M	20.72	43.50	-22.78	-11.86	3	Horizontal	360	1.00	-	32.58	14.03	1.58	27.47
PK	142.52M	19.81	43.50	-23.69	-9.25	3	Horizontal	360	1.00	-	29.06	16.01	2.01	27.27
PK	307.42M	21.15	46.00	-24.85	-5.33	3	Horizontal	360	1.00	-	26.48	18.52	2.97	26.82
PK	332.64M	23.51	46.00	-22.49	-4.82	3	Horizontal	360	1.00	-	28.33	18.95	3.14	26.91
PK	423.82M	26.51	46.00	-19.49	-2.13	3	Horizontal	360	1.00	-	28.64	21.80	3.56	27.49
PK	580.96M	28.12	46.00	-17.88	0.02	3	Horizontal	360	1.00	-	28.10	23.83	4.27	28.08



Radiated Emissions below 1GHz

Appendix G.2

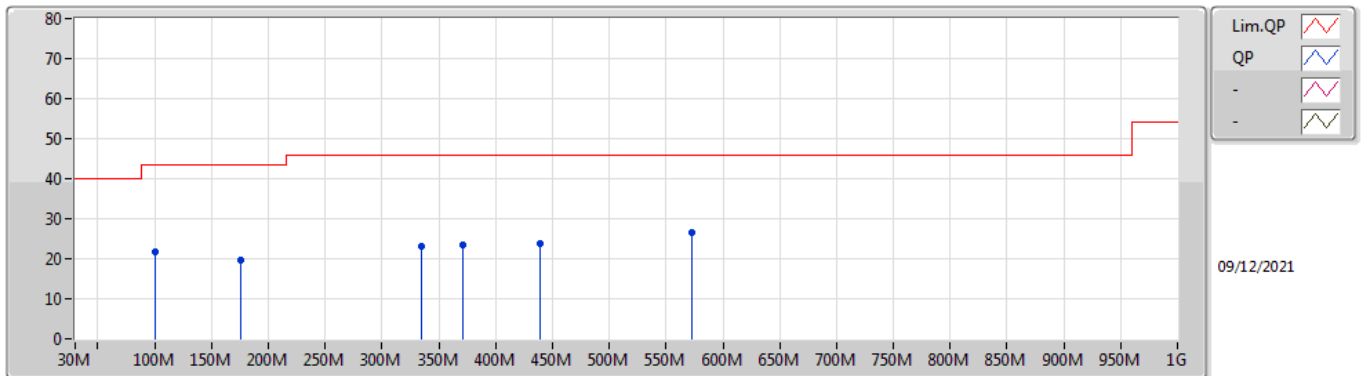
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	563.5M	26.52	46.00	-19.48	Horizontal

Result

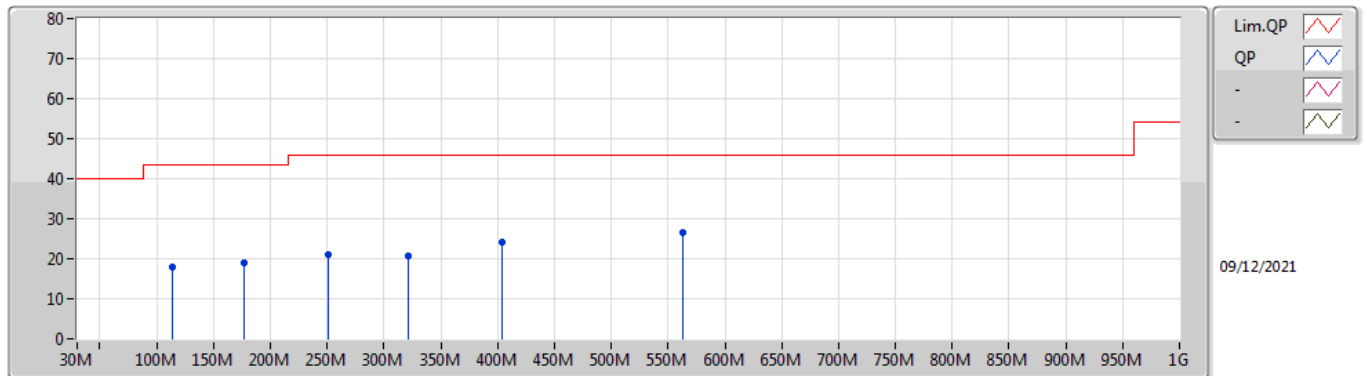
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 2	Pass	PK	99.84M	21.79	43.50	-21.71	-9.84	3	Vertical	0	1.00	-
Mode 2	Pass	PK	175.5M	19.64	43.50	-23.86	-10.43	3	Vertical	0	1.00	-
Mode 2	Pass	PK	334.58M	23.08	46.00	-22.92	-4.78	3	Vertical	0	1.00	-
Mode 2	Pass	PK	371.44M	23.44	46.00	-22.56	-3.80	3	Vertical	0	1.00	-
Mode 2	Pass	PK	439.34M	23.94	46.00	-22.06	-2.06	3	Vertical	0	1.00	-
Mode 2	Pass	PK	573.2M	26.43	46.00	-19.57	0.04	3	Vertical	0	1.00	-
Mode 2	Pass	PK	113.42M	18.02	43.50	-25.48	-8.43	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	177.44M	19.05	43.50	-24.45	-10.49	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	251.16M	20.96	46.00	-25.04	-6.37	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	321M	20.68	46.00	-25.32	-5.04	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	404.42M	24.14	46.00	-21.86	-2.67	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	563.5M	26.52	46.00	-19.48	0.13	3	Horizontal	360	1.00	-

Radiated Emissions below 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	99.84M	21.79	43.50	-21.71	-9.84	3	Vertical	0	1.00	-	31.63	15.85	1.70	27.39
PK	175.5M	19.64	43.50	-23.86	-10.43	3	Vertical	0	1.00	-	30.07	14.50	2.22	27.15
PK	334.58M	23.08	46.00	-22.92	-4.78	3	Vertical	0	1.00	-	27.86	18.97	3.16	26.91
PK	371.44M	23.44	46.00	-22.56	-3.80	3	Vertical	0	1.00	-	27.24	19.95	3.34	27.09
PK	439.34M	23.94	46.00	-22.06	-2.06	3	Vertical	0	1.00	-	26.00	21.95	3.63	27.64
PK	573.2M	26.43	46.00	-19.57	0.04	3	Vertical	0	1.00	-	26.39	23.91	4.22	28.09

Radiated Emissions below 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	113.42M	18.02	43.50	-25.48	-8.43	3	Horizontal	360	1.00	-	26.45	17.12	1.83	27.38
PK	177.44M	19.05	43.50	-24.45	-10.49	3	Horizontal	360	1.00	-	29.54	14.43	2.23	27.15
PK	251.16M	20.96	46.00	-25.04	-6.37	3	Horizontal	360	1.00	-	27.33	17.67	2.68	26.72
PK	321M	20.68	46.00	-25.32	-5.04	3	Horizontal	360	1.00	-	25.72	18.77	3.06	26.87
PK	404.42M	24.14	46.00	-21.86	-2.67	3	Horizontal	360	1.00	-	26.81	21.16	3.47	27.30
PK	563.5M	26.52	46.00	-19.48	0.13	3	Horizontal	360	1.00	-	26.39	24.08	4.16	28.11



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	2.4936G	59.66	74.00	-14.34	3	Horizontal	184	1.30	-
BT-EDR(3Mbps)	Pass	PK	2.4872G	60.05	74.00	-13.95	3	Vertical	157	1.03	-

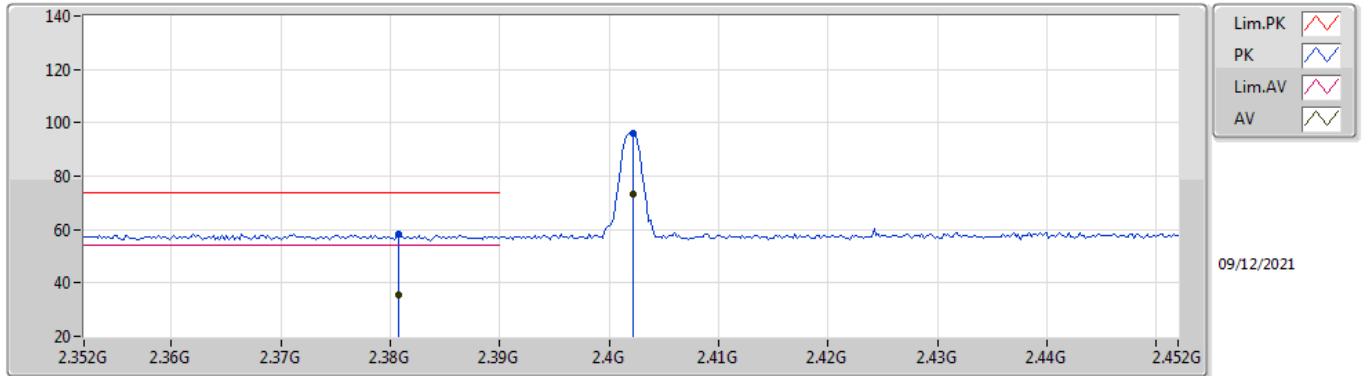
Result

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	2.3808G	35.71	54.00	-18.29	3	Vertical	211	2.95	-
2402MHz	Pass	AV	2.4022G	73.39	Inf	-Inf	3	Vertical	211	2.95	-
2402MHz	Pass	PK	2.3808G	58.21	74.00	-15.79	3	Vertical	211	2.95	-
2402MHz	Pass	PK	2.4022G	95.89	Inf	-Inf	3	Vertical	211	2.95	-
2402MHz	Pass	AV	2.37G	36.12	54.00	-17.88	3	Horizontal	185	1.12	-
2402MHz	Pass	AV	2.4022G	82.40	Inf	-Inf	3	Horizontal	185	1.12	-
2402MHz	Pass	PK	2.37G	58.62	74.00	-15.38	3	Horizontal	185	1.12	-
2402MHz	Pass	PK	2.4022G	104.90	Inf	-Inf	3	Horizontal	185	1.12	-
2402MHz	Pass	AV	4.8019G	26.45	54.00	-27.55	3	Vertical	172	2.01	-
2402MHz	Pass	PK	4.8019G	48.95	74.00	-25.05	3	Vertical	172	2.01	-
2402MHz	Pass	AV	4.7999G	22.88	54.00	-31.12	3	Horizontal	270	1.42	-
2402MHz	Pass	PK	4.7999G	45.38	74.00	-28.62	3	Horizontal	270	1.42	-
2440MHz	Pass	AV	2.3648G	36.69	54.00	-17.31	3	Vertical	155	2.53	-
2440MHz	Pass	AV	2.44G	77.75	Inf	-Inf	3	Vertical	155	2.53	-
2440MHz	Pass	AV	2.488G	36.56	54.00	-17.44	3	Vertical	155	2.53	-
2440MHz	Pass	PK	2.3648G	59.19	74.00	-14.81	3	Vertical	155	2.53	-
2440MHz	Pass	PK	2.44G	100.25	Inf	-Inf	3	Vertical	155	2.53	-
2440MHz	Pass	PK	2.488G	59.06	74.00	-14.94	3	Vertical	155	2.53	-
2440MHz	Pass	AV	2.3668G	36.76	54.00	-17.24	3	Horizontal	184	1.10	-
2440MHz	Pass	AV	2.44G	82.47	Inf	-Inf	3	Horizontal	184	1.10	-
2440MHz	Pass	AV	2.496G	36.86	54.00	-17.14	3	Horizontal	184	1.10	-
2440MHz	Pass	PK	2.3668G	59.26	74.00	-14.74	3	Horizontal	184	1.10	-
2440MHz	Pass	PK	2.44G	104.97	Inf	-Inf	3	Horizontal	184	1.10	-
2440MHz	Pass	PK	2.496G	59.36	74.00	-14.64	3	Horizontal	184	1.10	-
2440MHz	Pass	AV	4.8802G	24.07	54.00	-29.93	3	Vertical	221	1.86	-
2440MHz	Pass	PK	4.8802G	46.57	74.00	-27.43	3	Vertical	221	1.86	-
2440MHz	Pass	AV	4.8818G	21.67	54.00	-32.33	3	Horizontal	222	1.50	-
2440MHz	Pass	PK	4.8818G	44.17	74.00	-29.83	3	Horizontal	222	1.50	-
2480MHz	Pass	AV	2.4798G	73.80	Inf	-Inf	3	Vertical	209	3.00	-
2480MHz	Pass	AV	2.4836G	36.73	54.00	-17.27	3	Vertical	209	3.00	-
2480MHz	Pass	PK	2.4798G	96.30	Inf	-Inf	3	Vertical	209	3.00	-
2480MHz	Pass	PK	2.4836G	59.23	74.00	-14.77	3	Vertical	209	3.00	-
2480MHz	Pass	AV	2.4798G	80.56	Inf	-Inf	3	Horizontal	184	1.30	-
2480MHz	Pass	AV	2.4936G	37.16	54.00	-16.84	3	Horizontal	184	1.30	-
2480MHz	Pass	PK	2.4798G	103.06	Inf	-Inf	3	Horizontal	184	1.30	-
2480MHz	Pass	PK	2.4936G	59.66	74.00	-14.34	3	Horizontal	184	1.30	-
2480MHz	Pass	AV	4.96122G	24.23	54.00	-29.77	3	Vertical	221	2.02	-
2480MHz	Pass	PK	4.96122G	46.73	74.00	-27.27	3	Vertical	221	2.02	-
2480MHz	Pass	AV	4.95995G	23.07	54.00	-30.93	3	Horizontal	234	1.39	-
2480MHz	Pass	PK	4.95995G	45.57	74.00	-28.43	3	Horizontal	234	1.39	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.385G	35.97	54.00	-18.03	3	Vertical	156	1.00	-
2402MHz	Pass	AV	2.402G	78.77	Inf	-Inf	3	Vertical	156	1.00	-
2402MHz	Pass	PK	2.385G	58.47	74.00	-15.53	3	Vertical	156	1.00	-
2402MHz	Pass	PK	2.402G	101.27	Inf	-Inf	3	Vertical	156	1.00	-
2402MHz	Pass	AV	2.3522G	36.59	54.00	-17.41	3	Horizontal	185	1.13	-
2402MHz	Pass	AV	2.402G	82.97	Inf	-Inf	3	Horizontal	185	1.13	-
2402MHz	Pass	PK	2.3522G	59.09	74.00	-14.91	3	Horizontal	185	1.13	-
2402MHz	Pass	PK	2.402G	105.47	Inf	-Inf	3	Horizontal	185	1.13	-
2402MHz	Pass	AV	4.8006G	23.22	54.00	-30.78	3	Vertical	184	2.04	-
2402MHz	Pass	PK	4.8006G	45.72	74.00	-28.28	3	Vertical	184	2.04	-
2402MHz	Pass	AV	4.80648G	22.30	54.00	-31.70	3	Horizontal	269	1.28	-
2402MHz	Pass	PK	4.80648G	44.80	74.00	-29.20	3	Horizontal	269	1.28	-
2440MHz	Pass	AV	2.362G	35.97	54.00	-18.03	3	Vertical	157	1.03	-
2440MHz	Pass	AV	2.44G	78.87	Inf	-Inf	3	Vertical	157	1.03	-
2440MHz	Pass	AV	2.4872G	37.55	54.00	-16.45	3	Vertical	157	1.03	-
2440MHz	Pass	PK	2.362G	58.47	74.00	-15.53	3	Vertical	157	1.03	-
2440MHz	Pass	PK	2.44G	101.37	Inf	-Inf	3	Vertical	157	1.03	-
2440MHz	Pass	PK	2.4872G	60.05	74.00	-13.95	3	Vertical	157	1.03	-
2440MHz	Pass	AV	2.3516G	37.31	54.00	-16.69	3	Horizontal	188	1.10	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2440MHz	Pass	AV	2.44G	83.04	Inf	-Inf	3	Horizontal	188	1.10	-
2440MHz	Pass	AV	2.498G	36.86	54.00	-17.14	3	Horizontal	188	1.10	-
2440MHz	Pass	PK	2.3516G	59.81	74.00	-14.19	3	Horizontal	188	1.10	-
2440MHz	Pass	PK	2.44G	105.54	Inf	-Inf	3	Horizontal	188	1.10	-
2440MHz	Pass	PK	2.498G	59.36	74.00	-14.64	3	Horizontal	188	1.10	-
2440MHz	Pass	AV	4.87928G	23.87	54.00	-30.13	3	Vertical	202	2.29	-
2440MHz	Pass	PK	4.87928G	46.37	74.00	-27.63	3	Vertical	202	2.29	-
2440MHz	Pass	AV	4.88106G	21.89	54.00	-32.11	3	Horizontal	236	2.22	-
2440MHz	Pass	PK	4.88106G	44.39	74.00	-29.61	3	Horizontal	236	2.22	-
2480MHz	Pass	AV	2.48G	75.52	Inf	-Inf	3	Vertical	156	1.19	-
2480MHz	Pass	AV	2.495G	37.10	54.00	-16.90	3	Vertical	156	1.19	-
2480MHz	Pass	PK	2.48G	98.02	Inf	-Inf	3	Vertical	156	1.19	-
2480MHz	Pass	PK	2.495G	59.60	74.00	-14.40	3	Vertical	156	1.19	-
2480MHz	Pass	AV	2.48G	80.79	Inf	-Inf	3	Horizontal	184	1.06	-
2480MHz	Pass	AV	2.4936G	36.78	54.00	-17.22	3	Horizontal	184	1.06	-
2480MHz	Pass	PK	2.48G	103.29	Inf	-Inf	3	Horizontal	184	1.06	-
2480MHz	Pass	PK	2.4936G	59.28	74.00	-14.72	3	Horizontal	184	1.06	-
2480MHz	Pass	AV	4.96032G	24.46	54.00	-29.54	3	Vertical	206	2.15	-
2480MHz	Pass	PK	4.96032G	46.96	74.00	-27.04	3	Vertical	206	2.15	-
2480MHz	Pass	AV	4.95876G	22.86	54.00	-31.14	3	Horizontal	235	1.72	-
2480MHz	Pass	PK	4.95876G	45.36	74.00	-28.64	3	Horizontal	235	1.72	-

BT-BR(1Mbps)

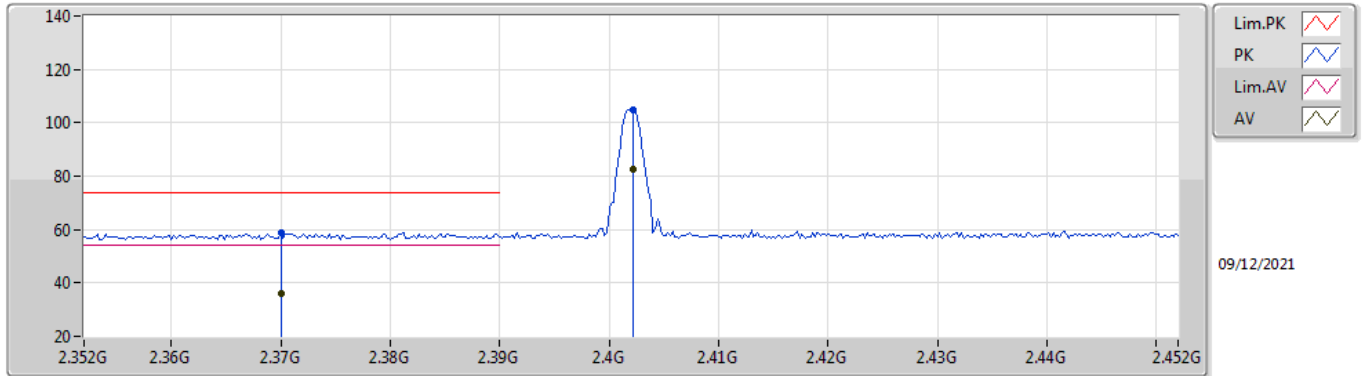
2402MHz_TX



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	2.3808G	35.71	54.00	-18.29	31.72	3	Vertical	211	2.95	-	3.99	27.36	4.36	-
AV	2.4022G	73.39	Inf	-Inf	31.79	3	Vertical	211	2.95	-	41.60	27.41	4.38	-
PK	2.3808G	58.21	74.00	-15.79	31.72	3	Vertical	211	2.95	-	26.49	27.36	4.36	-
PK	2.4022G	95.89	Inf	-Inf	31.79	3	Vertical	211	2.95	-	64.10	27.41	4.38	-

BT-BR(1Mbps)

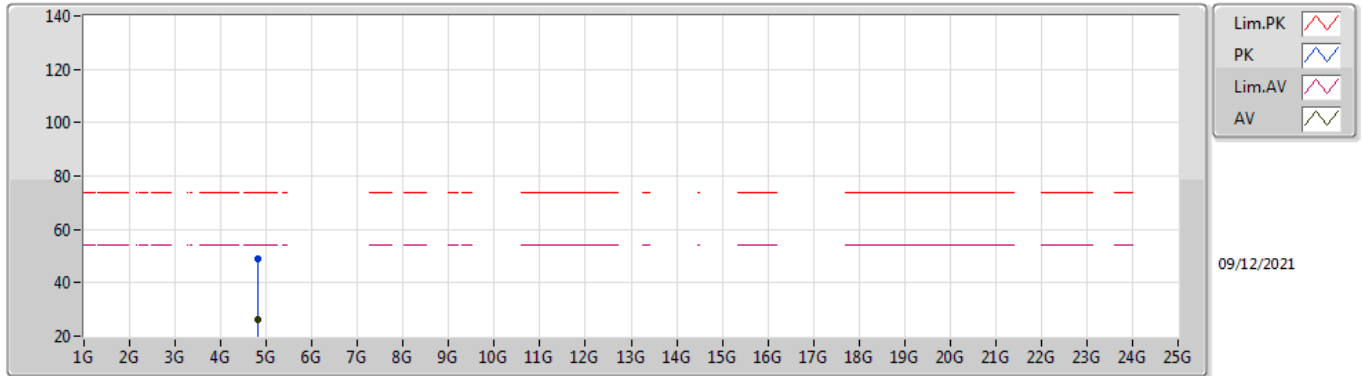
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.37G	36.12	54.00	-17.88	31.69	3	Horizontal	185	1.12	-	4.43	27.34	4.35	-
AV	2.4022G	82.40	Inf	-Inf	31.79	3	Horizontal	185	1.12	-	50.61	27.41	4.38	-
PK	2.37G	58.62	74.00	-15.38	31.69	3	Horizontal	185	1.12	-	26.93	27.34	4.35	-
PK	2.4022G	104.90	Inf	-Inf	31.79	3	Horizontal	185	1.12	-	73.11	27.41	4.38	-

BT-BR(1Mbps)

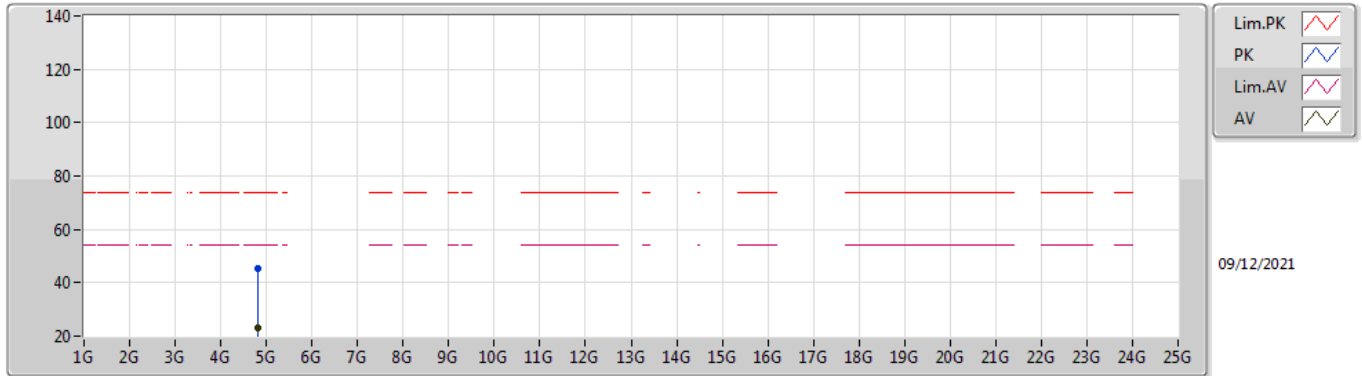
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8019G	26.45	54.00	-27.55	4.32	3	Vertical	172	2.01	-	22.13	32.51	6.26	34.45
PK	4.8019G	48.95	74.00	-25.05	4.32	3	Vertical	172	2.01	-	44.63	32.51	6.26	34.45

BT-BR(1Mbps)

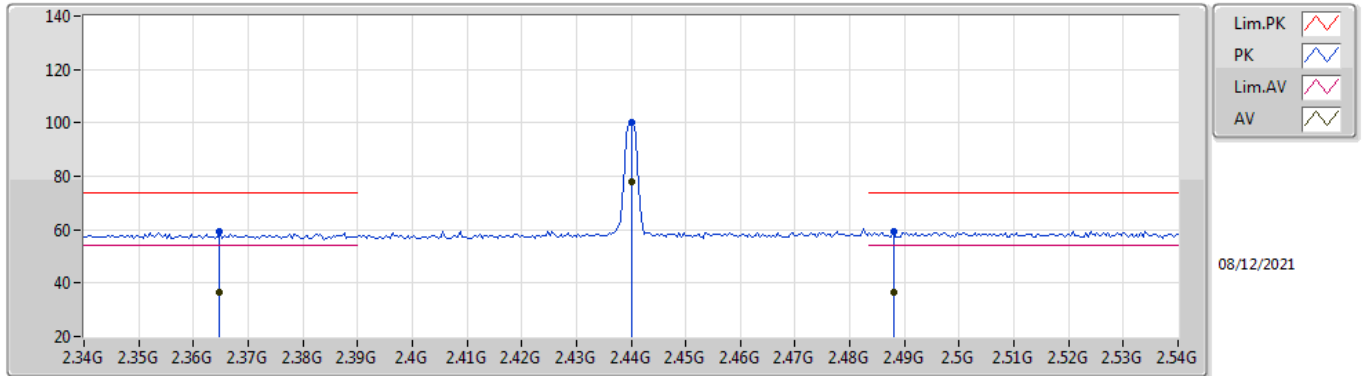
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.7999G	22.88	54.00	-31.12	4.31	3	Horizontal	270	1.42	-	18.57	32.50	6.26	34.45
PK	4.7999G	45.38	74.00	-28.62	4.31	3	Horizontal	270	1.42	-	41.07	32.50	6.26	34.45

BT-BR(1Mbps)

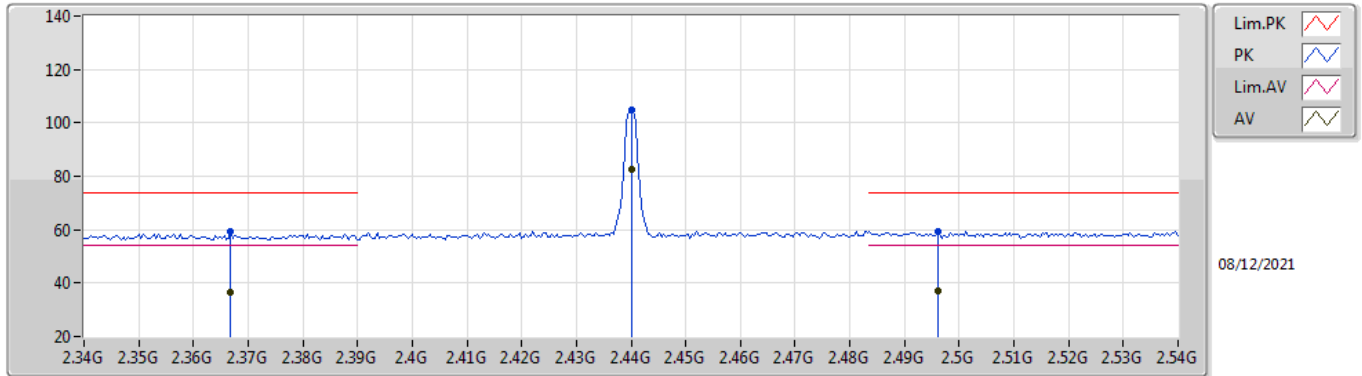
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3648G	36.69	54.00	-17.31	31.67	3	Vertical	155	2.53	-	5.02	27.33	4.34	-
AV	2.44G	77.75	Inf	-Inf	32.00	3	Vertical	155	2.53	-	45.75	27.56	4.44	-
AV	2.488G	36.56	54.00	-17.44	32.34	3	Vertical	155	2.53	-	4.22	27.83	4.51	-
PK	2.3648G	59.19	74.00	-14.81	31.67	3	Vertical	155	2.53	-	27.52	27.33	4.34	-
PK	2.44G	100.25	Inf	-Inf	32.00	3	Vertical	155	2.53	-	68.25	27.56	4.44	-
PK	2.488G	59.06	74.00	-14.94	32.34	3	Vertical	155	2.53	-	26.72	27.83	4.51	-

BT-BR(1Mbps)

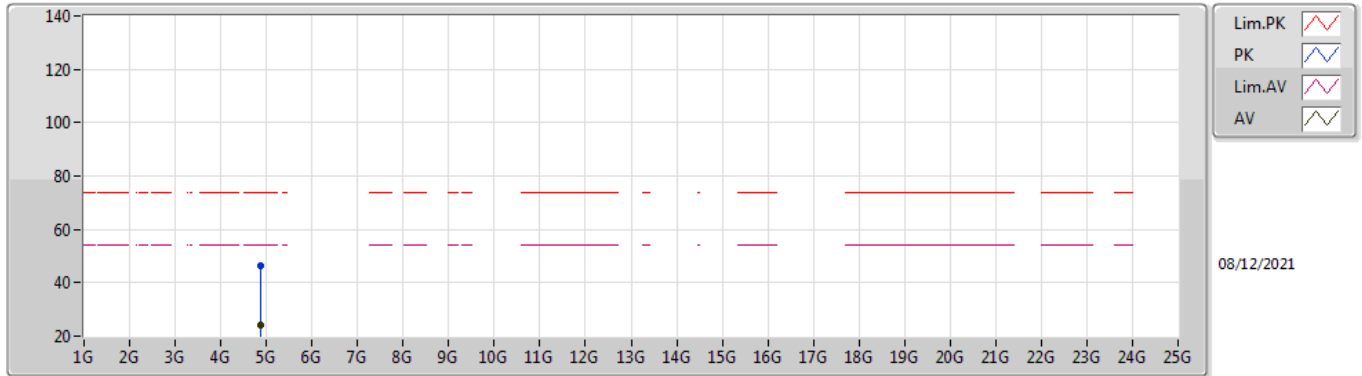
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3668G	36.76	54.00	-17.24	31.68	3	Horizontal	184	1.10	-	5.08	27.33	4.35	-
AV	2.44G	82.47	Inf	-Inf	32.00	3	Horizontal	184	1.10	-	50.47	27.56	4.44	-
AV	2.496G	36.86	54.00	-17.14	32.40	3	Horizontal	184	1.10	-	4.46	27.88	4.52	-
PK	2.3668G	59.26	74.00	-14.74	31.68	3	Horizontal	184	1.10	-	27.58	27.33	4.35	-
PK	2.44G	104.97	Inf	-Inf	32.00	3	Horizontal	184	1.10	-	72.97	27.56	4.44	-
PK	2.496G	59.36	74.00	-14.64	32.40	3	Horizontal	184	1.10	-	26.96	27.88	4.52	-

BT-BR(1Mbps)

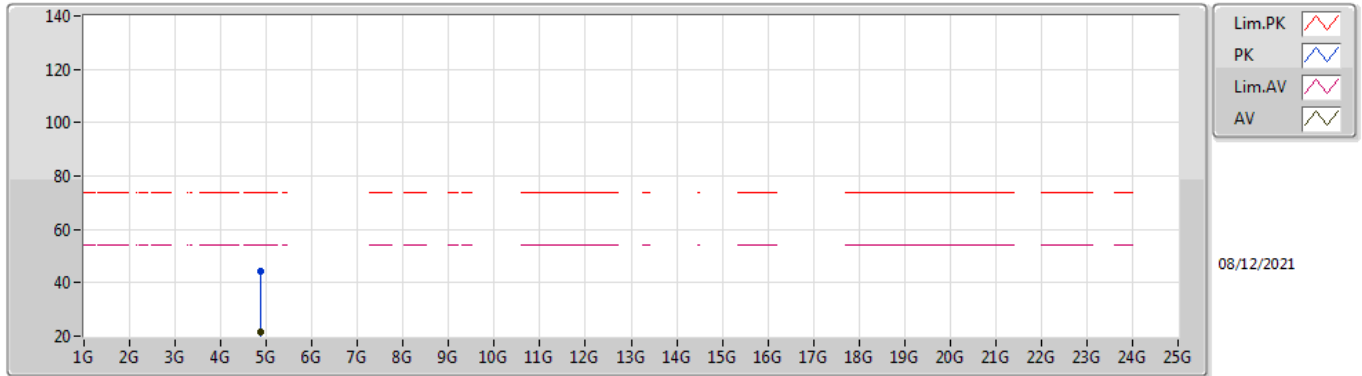
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8802G	24.07	54.00	-29.93	4.63	3	Vertical	221	1.86	-	19.44	32.76	6.31	34.44
PK	4.8802G	46.57	74.00	-27.43	4.63	3	Vertical	221	1.86	-	41.94	32.76	6.31	34.44

BT-BR(1Mbps)

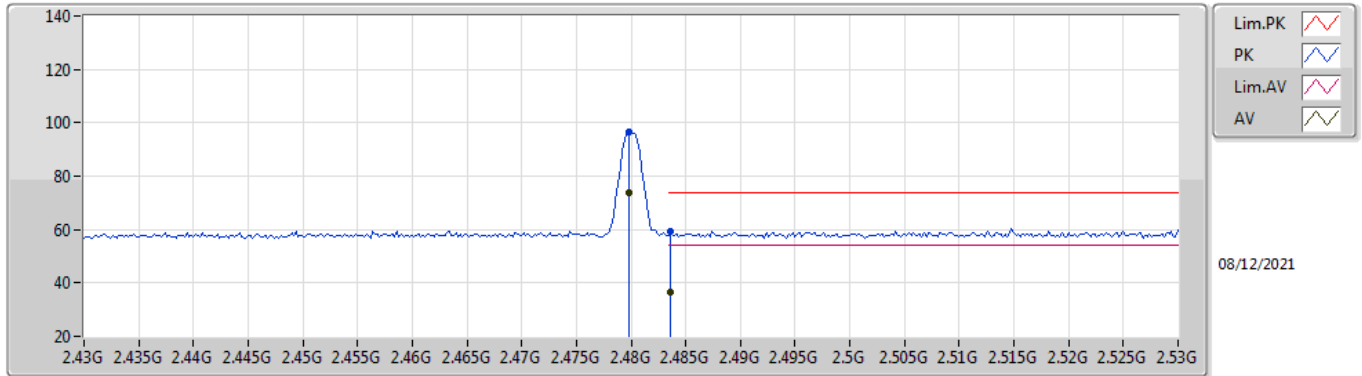
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8818G	21.67	54.00	-32.33	4.63	3	Horizontal	222	1.50	-	17.04	32.76	6.31	34.44
PK	4.8818G	44.17	74.00	-29.83	4.63	3	Horizontal	222	1.50	-	39.54	32.76	6.31	34.44

BT-BR(1Mbps)

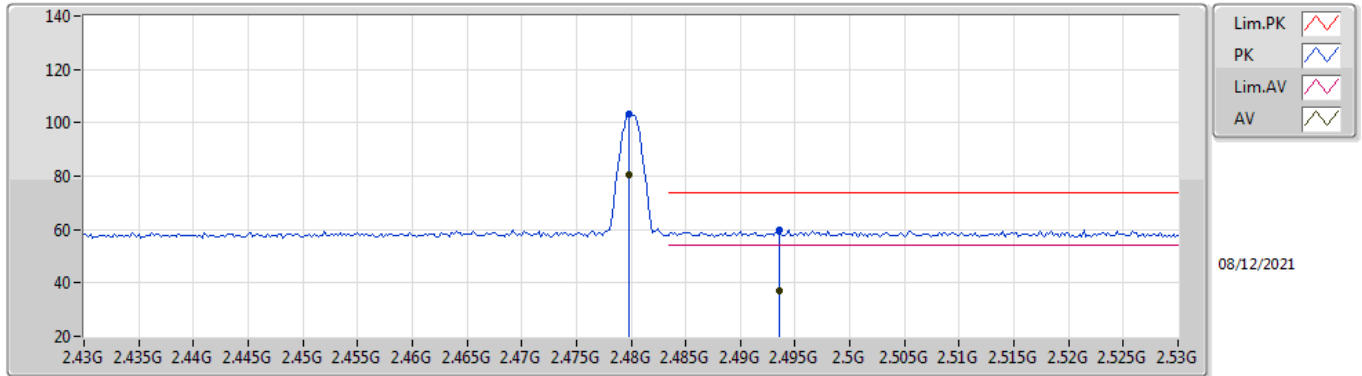
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.4798G	73.80	Inf	-Inf	32.28	3	Vertical	209	3.00	-	41.52	27.78	4.50	-
AV	2.4836G	36.73	54.00	-17.27	32.30	3	Vertical	209	3.00	-	4.43	27.80	4.50	-
PK	2.4798G	96.30	Inf	-Inf	32.28	3	Vertical	209	3.00	-	64.02	27.78	4.50	-
PK	2.4836G	59.23	74.00	-14.77	32.30	3	Vertical	209	3.00	-	26.93	27.80	4.50	-

BT-BR(1Mbps)

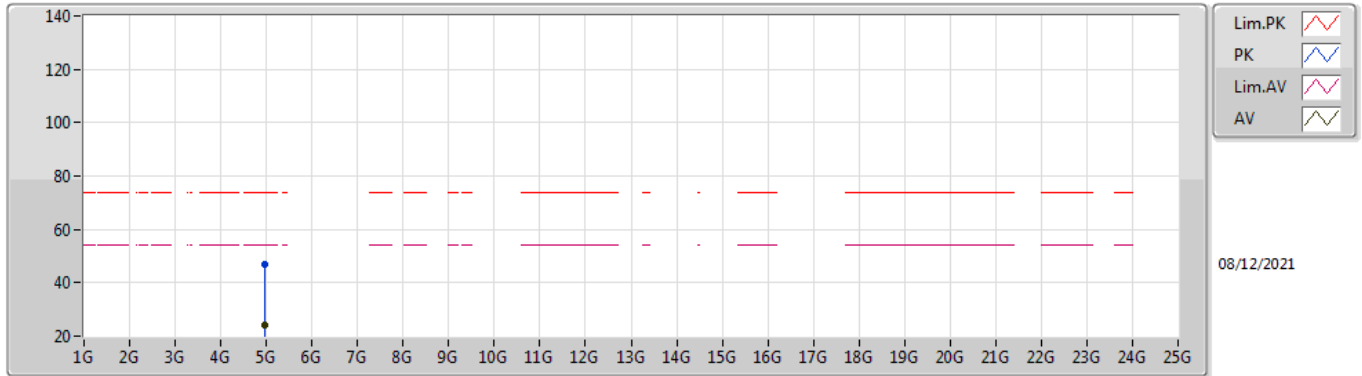
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.4798G	80.56	Inf	-Inf	32.28	3	Horizontal	184	1.30	-	48.28	27.78	4.50	-
AV	2.4936G	37.16	54.00	-16.84	32.38	3	Horizontal	184	1.30	-	4.78	27.86	4.52	-
PK	2.4798G	103.06	Inf	-Inf	32.28	3	Horizontal	184	1.30	-	70.78	27.78	4.50	-
PK	2.4936G	59.66	74.00	-14.34	32.38	3	Horizontal	184	1.30	-	27.28	27.86	4.52	-

BT-BR(1Mbps)

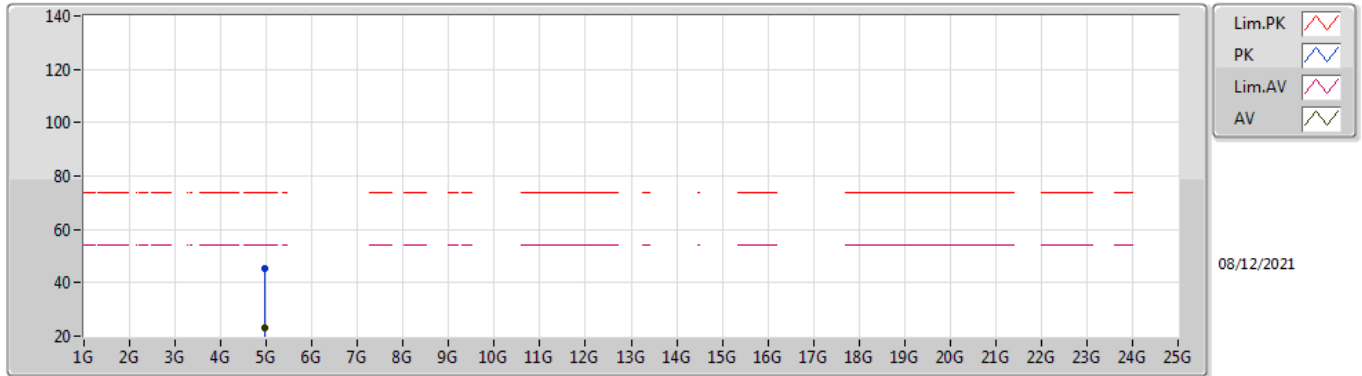
2480MHz_TX



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	4.96122G	24.23	54.00	-29.77	5.07	3	Vertical	221	2.02	-	19.16	33.14	6.36	34.43
PK	4.96122G	46.73	74.00	-27.27	5.07	3	Vertical	221	2.02	-	41.66	33.14	6.36	34.43

BT-BR(1Mbps)

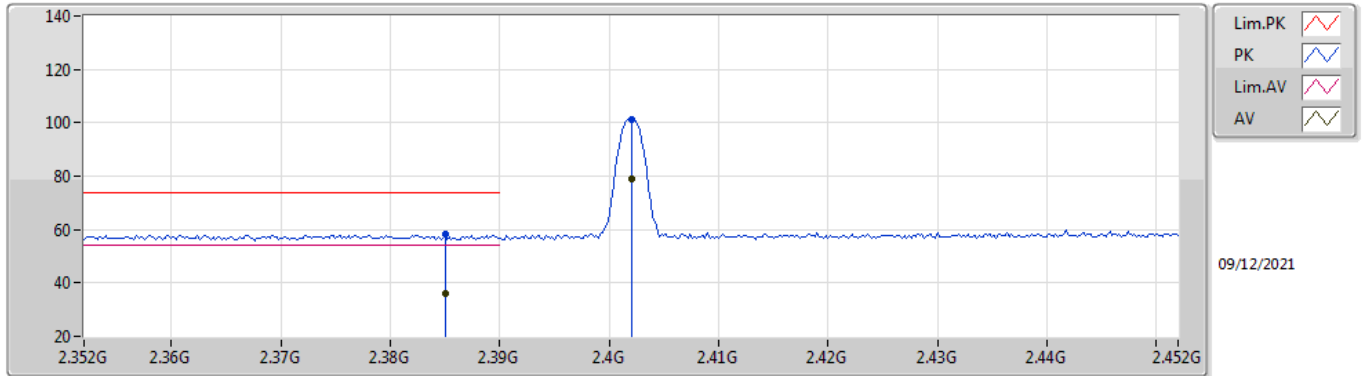
2480MHz_TX



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	4.95995G	23.07	54.00	-30.93	5.07	3	Horizontal	234	1.39	-	18.00	33.14	6.36	34.43
PK	4.95995G	45.57	74.00	-28.43	5.07	3	Horizontal	234	1.39	-	40.50	33.14	6.36	34.43

BT-EDR(3Mbps)

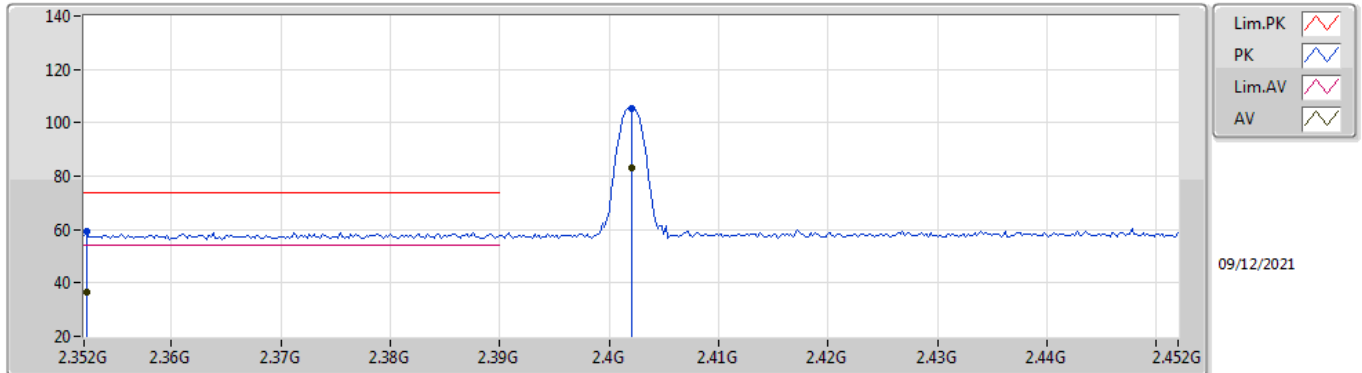
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.385G	35.97	54.00	-18.03	31.73	3	Vertical	156	1.00	-	4.24	27.37	4.36	-
AV	2.402G	78.77	Inf	-Inf	31.79	3	Vertical	156	1.00	-	46.98	27.41	4.38	-
PK	2.385G	58.47	74.00	-15.53	31.73	3	Vertical	156	1.00	-	26.74	27.37	4.36	-
PK	2.402G	101.27	Inf	-Inf	31.79	3	Vertical	156	1.00	-	69.48	27.41	4.38	-

BT-EDR(3Mbps)

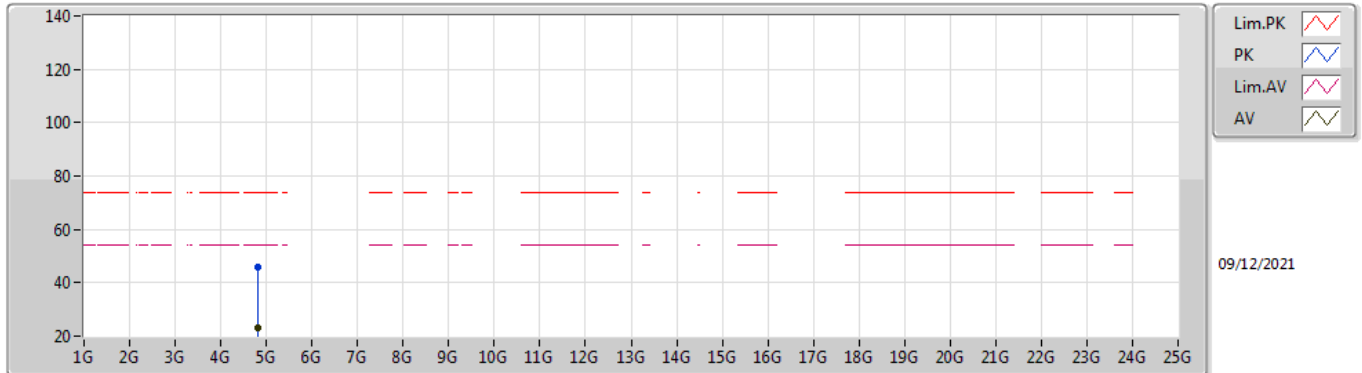
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3522G	36.59	54.00	-17.41	31.63	3	Horizontal	185	1.13	-	4.96	27.30	4.33	-
AV	2.402G	82.97	Inf	-Inf	31.79	3	Horizontal	185	1.13	-	51.18	27.41	4.38	-
PK	2.3522G	59.09	74.00	-14.91	31.63	3	Horizontal	185	1.13	-	27.46	27.30	4.33	-
PK	2.402G	105.47	Inf	-Inf	31.79	3	Horizontal	185	1.13	-	73.68	27.41	4.38	-

BT-EDR(3Mbps)

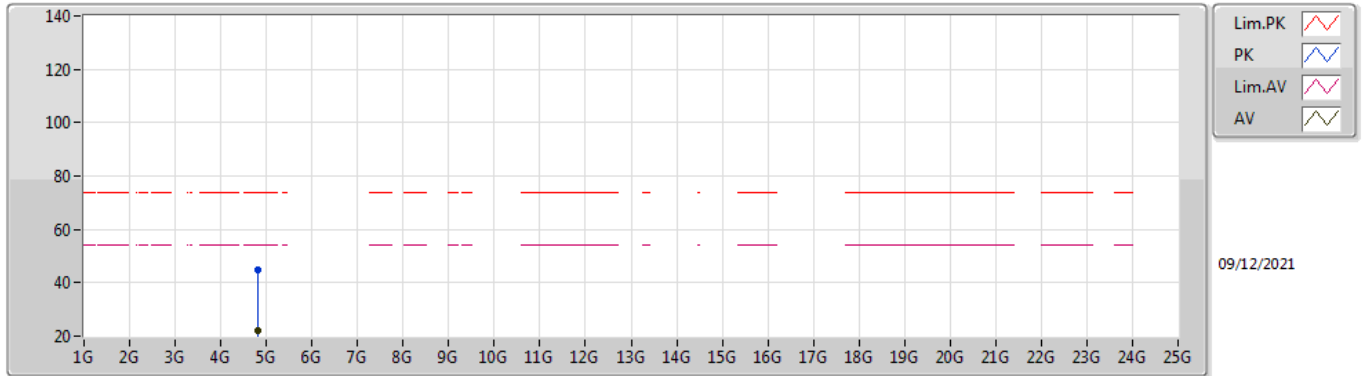
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8006G	23.22	54.00	-30.78	4.31	3	Vertical	184	2.04	-	18.91	32.50	6.26	34.45
PK	4.8006G	45.72	74.00	-28.28	4.31	3	Vertical	184	2.04	-	41.41	32.50	6.26	34.45

BT-EDR(3Mbps)

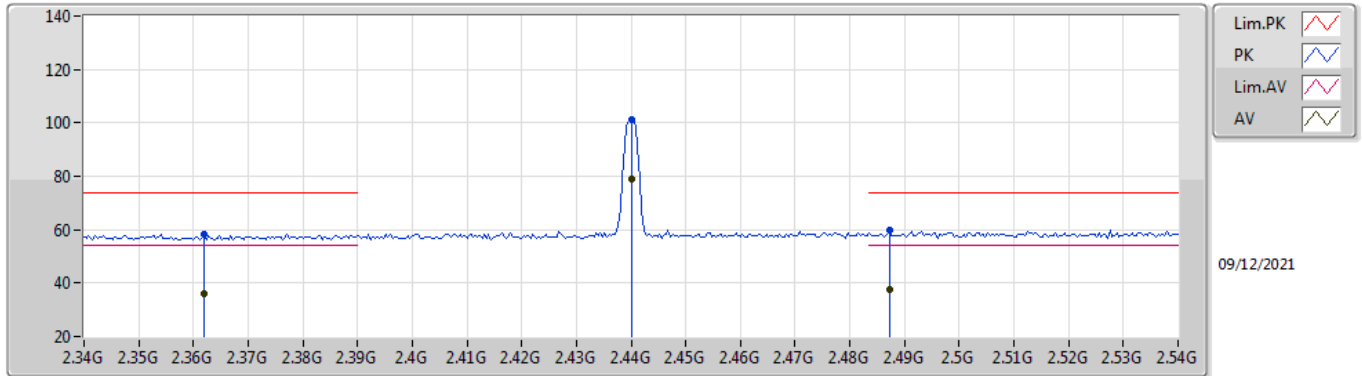
2402MHz_TX



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	4.80648G	22.30	54.00	-31.70	4.34	3	Horizontal	269	1.28	-	17.96	32.53	6.26	34.45
PK	4.80648G	44.80	74.00	-29.20	4.34	3	Horizontal	269	1.28	-	40.46	32.53	6.26	34.45

BT-EDR(3Mbps)

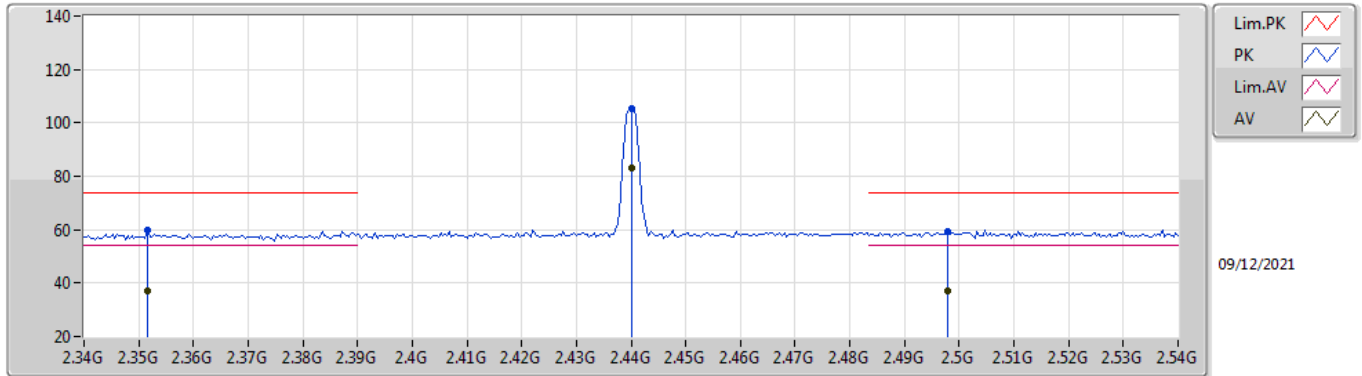
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.362G	35.97	54.00	-18.03	31.66	3	Vertical	157	1.03	-	4.31	27.32	4.34	-
AV	2.44G	78.87	Inf	-Inf	32.00	3	Vertical	157	1.03	-	46.87	27.56	4.44	-
AV	2.4872G	37.55	54.00	-16.45	32.33	3	Vertical	157	1.03	-	5.22	27.82	4.51	-
PK	2.362G	58.47	74.00	-15.53	31.66	3	Vertical	157	1.03	-	26.81	27.32	4.34	-
PK	2.44G	101.37	Inf	-Inf	32.00	3	Vertical	157	1.03	-	69.37	27.56	4.44	-
PK	2.4872G	60.05	74.00	-13.95	32.33	3	Vertical	157	1.03	-	27.72	27.82	4.51	-

BT-EDR(3Mbps)

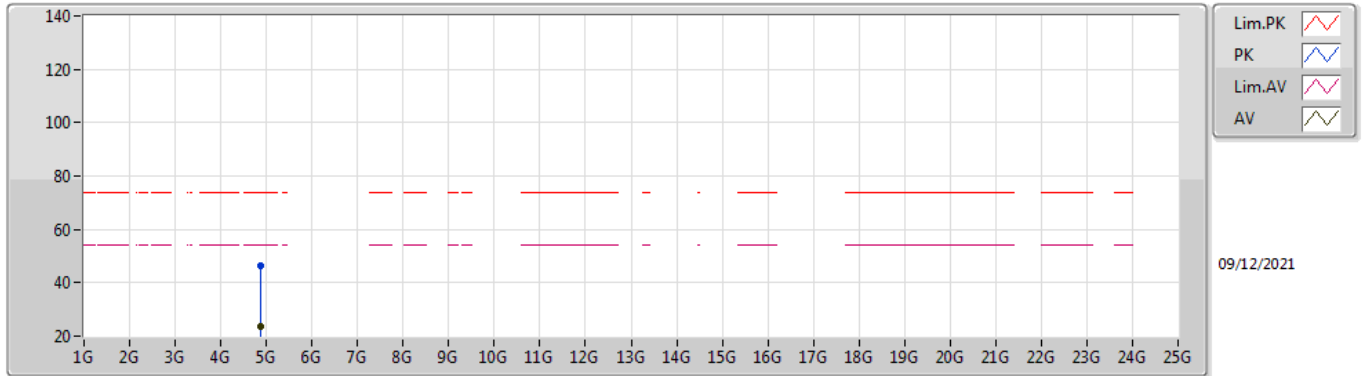
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3516G	37.31	54.00	-16.69	31.63	3	Horizontal	188	1.10	-	5.68	27.30	4.33	-
AV	2.44G	83.04	Inf	-Inf	32.00	3	Horizontal	188	1.10	-	51.04	27.56	4.44	-
AV	2.498G	36.86	54.00	-17.14	32.41	3	Horizontal	188	1.10	-	4.45	27.89	4.52	-
PK	2.3516G	59.81	74.00	-14.19	31.63	3	Horizontal	188	1.10	-	28.18	27.30	4.33	-
PK	2.44G	105.54	Inf	-Inf	32.00	3	Horizontal	188	1.10	-	73.54	27.56	4.44	-
PK	2.498G	59.36	74.00	-14.64	32.41	3	Horizontal	188	1.10	-	26.95	27.89	4.52	-

BT-EDR(3Mbps)

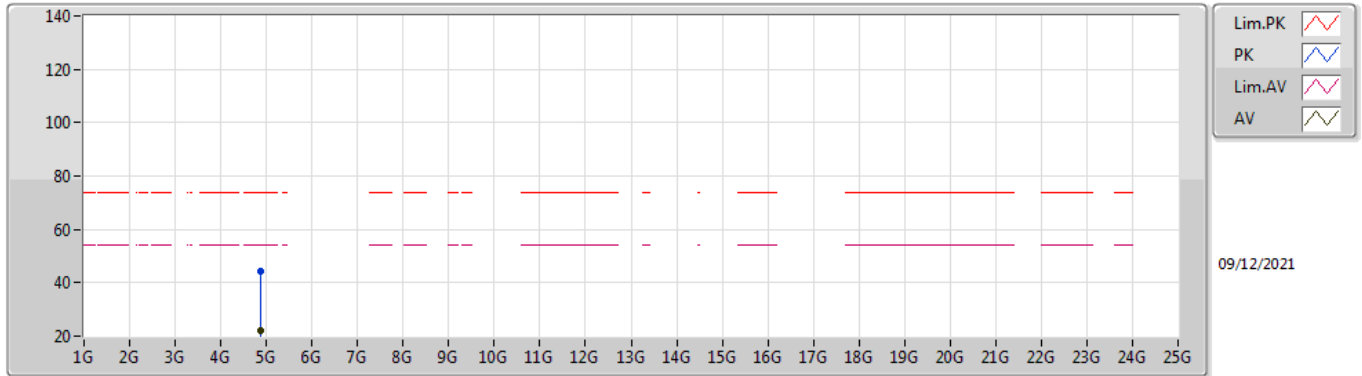
2440MHz_TX



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	4.87928G	23.87	54.00	-30.13	4.63	3	Vertical	202	2.29	-	19.24	32.76	6.31	34.44
PK	4.87928G	46.37	74.00	-27.63	4.63	3	Vertical	202	2.29	-	41.74	32.76	6.31	34.44

BT-EDR(3Mbps)

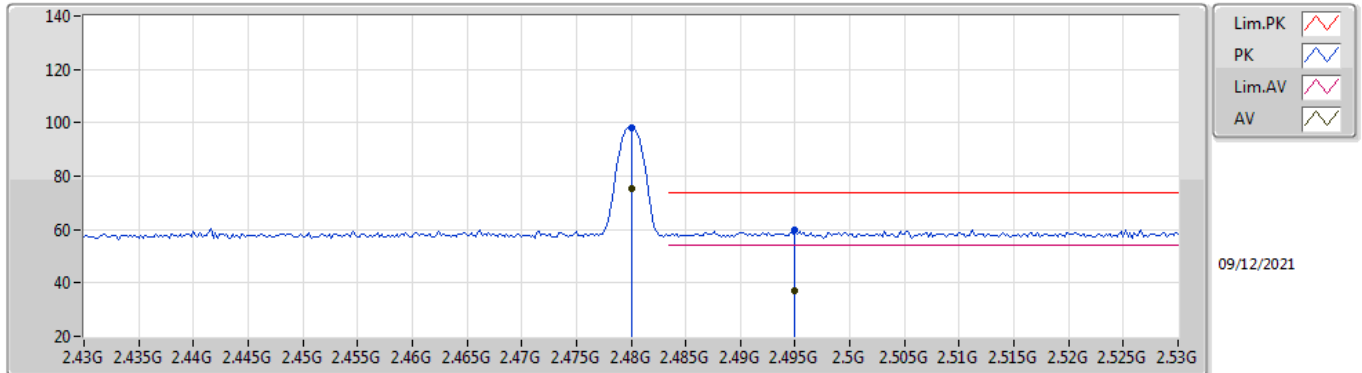
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88106G	21.89	54.00	-32.11	4.63	3	Horizontal	236	2.22	-	17.26	32.76	6.31	34.44
PK	4.88106G	44.39	74.00	-29.61	4.63	3	Horizontal	236	2.22	-	39.76	32.76	6.31	34.44

BT-EDR(3Mbps)

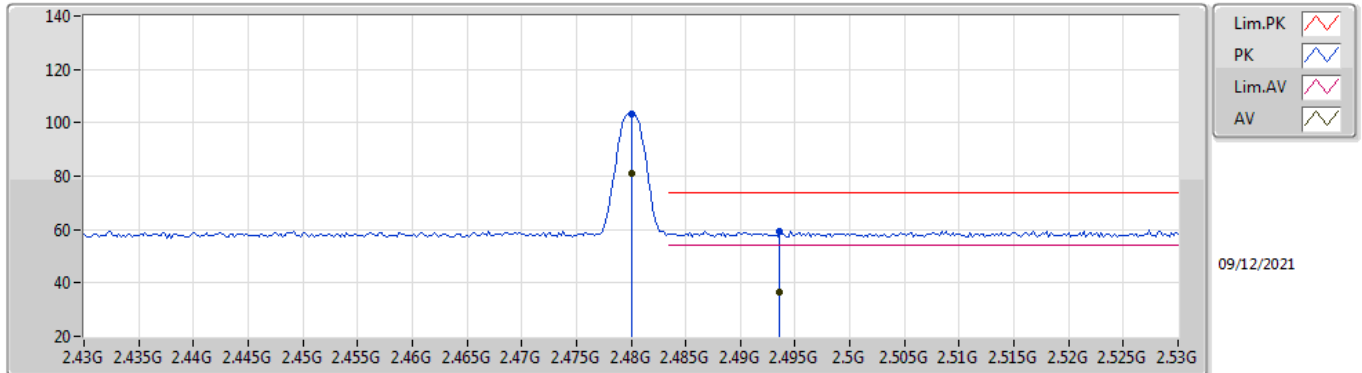
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	75.52	Inf	-Inf	32.28	3	Vertical	156	1.19	-	43.24	27.78	4.50	-
AV	2.495G	37.10	54.00	-16.90	32.39	3	Vertical	156	1.19	-	4.71	27.87	4.52	-
PK	2.48G	98.02	Inf	-Inf	32.28	3	Vertical	156	1.19	-	65.74	27.78	4.50	-
PK	2.495G	59.60	74.00	-14.40	32.39	3	Vertical	156	1.19	-	27.21	27.87	4.52	-

BT-EDR(3Mbps)

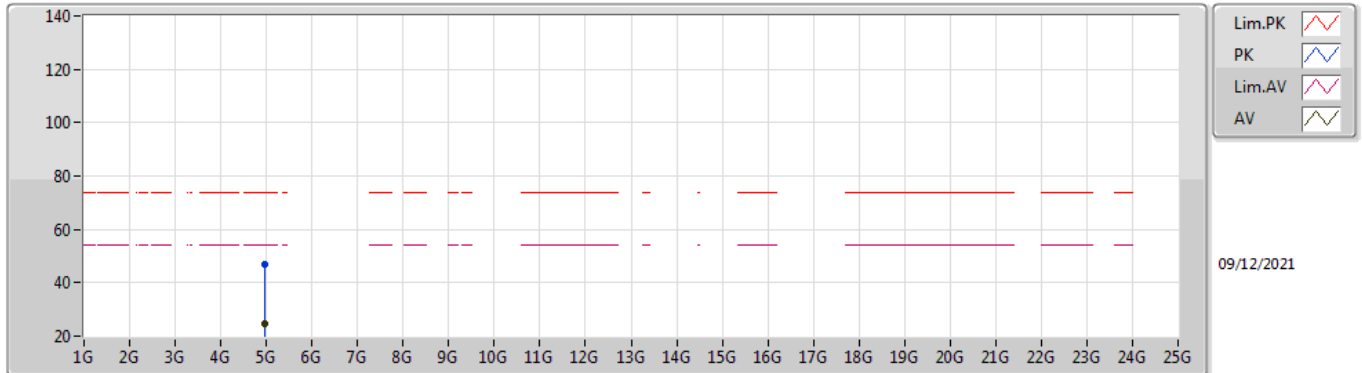
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	80.79	Inf	-Inf	32.28	3	Horizontal	184	1.06	-	48.51	27.78	4.50	-
AV	2.4936G	36.78	54.00	-17.22	32.38	3	Horizontal	184	1.06	-	4.40	27.86	4.52	-
PK	2.48G	103.29	Inf	-Inf	32.28	3	Horizontal	184	1.06	-	71.01	27.78	4.50	-
PK	2.4936G	59.28	74.00	-14.72	32.38	3	Horizontal	184	1.06	-	26.90	27.86	4.52	-

BT-EDR(3Mbps)

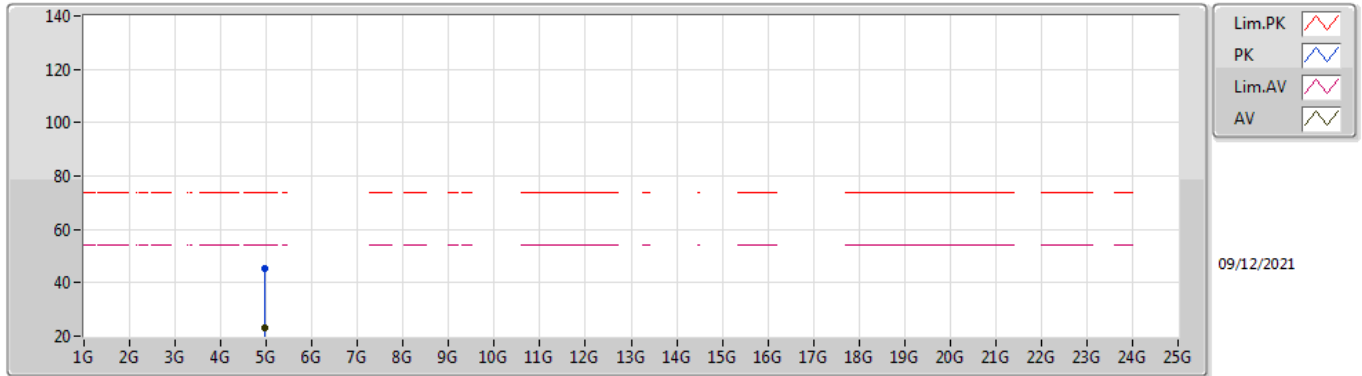
2480MHz_TX



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	4.96032G	24.46	54.00	-29.54	5.07	3	Vertical	206	2.15	-	19.39	33.14	6.36	34.43
PK	4.96032G	46.96	74.00	-27.04	5.07	3	Vertical	206	2.15	-	41.89	33.14	6.36	34.43

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	4.95876G	22.86	54.00	-31.14	5.07	3	Horizontal	235	1.72	-	17.79	33.14	6.36	34.43
PK	4.95876G	45.36	74.00	-28.64	5.07	3	Horizontal	235	1.72	-	40.29	33.14	6.36	34.43