FCC Radio Test Report

FCC ID	:	**RX3-WBU058LGA**
Equipment	:	**IEEE 802.11 a/b/g/n/ac/ax 2x2+Bluetooth v5.2 Wireless Adapter**
Brand Name	:	**Foxconn**
Model Name	:	**WBU058-LGA**
Applicant	:	**Hon Hai Precision Industry Co., Ltd. No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan City 33859, Taiwan**
Manufacturer	:	**Hon Hai Precision Industry Co., Ltd. No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan City 33859, Taiwan**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Sep. 24, 2021, and testing was started from Oct. 04, 2021 and completed on Nov. 04, 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.

Jackson Tsai

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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

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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR192341AL	01	Initial issue of report	Feb. 15, 2022

Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

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

Reviewed by: Sam Tsai

Report Producer: Ann Hou

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:
- Bluetooth LE uses a GFSK (1Mbps/2Mbps) modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Group	Ant.	Brand	Model Name	Antenna Type	Connector	Remark
A	1	Foxconn	79012F500-600-G	PIFA	I-PEX	WiFi
	2	Foxconn	79012F500-600-G	PIFA	I-PEX	
B	3	Foxconn	79012F300-600-G	PIFA	I-PEX	WiFi
	4	Foxconn	79012F300-600-G	PIFA	I-PEX	
C	5	Foxconn	79012F400-600-G	PIFA	I-PEX	WiFi
	6	Foxconn	79012F400-600-G	PIFA	I-PEX	
D	7	Foxconn	79012F200-600-G	PIFA	I-PEX	BT
	8	Foxconn	79012F200-600-G	PIFA	I-PEX	
E	9	Foxconn	79012F700-600-G	PIFA	I-PEX	BT
	10	Foxconn	79012F700-600-G	PIFA	I-PEX	
F	11	Foxconn	79012F600-600-G	PIFA	I-PEX	BT
	12	Foxconn	79012F600-600-G	PIFA	I-PEX	

Ant.	Port	Gain (dBi)					
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	BT
1	1	1.62	3.22	3.22	3.58	3.39	-
2	2	1.62	3.22	3.22	3.58	3.39	-
3	1	-0.73	1.83	1.83	2.56	2.45	-
4	2	-0.73	1.83	1.83	2.56	2.45	-
5	1	0.51	2.32	2.32	2.21	2.07	-
6	2	0.51	2.32	2.32	2.21	2.07	-
7	1	-	-	-	-	-	0.09
8	2	-	-	-	-	-	0.09
9	1	-	-	-	-	-	0.78
10	2	-	-	-	-	-	0.78
11	1	-	-	-	-	-	-0.02
12	2	-	-	-	-	-	-0.02

Note 1: The EUT has twelve antennas.

Note 2: EUT can match with above antennas for using. Higher gain (Group A and Group E) in each group of antenna was used to perform the worst configuration and result of that was recorded as the final test result.

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax mode (2TX/2RX)

Port 1 and port 2 could transmit/receive simultaneously.

For BT function:

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

Support diversity function and pre-tested on each single chain, the worst case was Ant. 9(port 1) and it was recorded in this test report.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (2TX/2RX)

Port 1 and port 2 could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From DC Power supply			
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-LE(1Mbps)	0.851	0.7	2.128m	1k
BT-LE(2Mbps)	0.599	2.23	1.072m	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 (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction	CO04-HY	Edward Wang	22.3~24.4°C / 54~58%	15/Oct/2021
RF Conducted	TH06-HY	Alan Chien	20.1~26.9°C / 50~60%	04/Oct/2021~04/Nov/2021
☒ Wen 33rd.St. (**TAF:** 3785)	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		**FAX:** 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
Radiated	03CH09-HY	Ryan Hsiao	22.3~24.7°C / 53~60%	05/Oct/2021~07/Oct/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	QATool_Dbgv0.0.2.39

Mode	Power Setting
BT-LE(1Mbps)_Nss1_1TX(Port1)	-
2402MHz	3
2440MHz	3
2480MHz	3
BT-LE(2Mbps)_Nss1_1TX(Port1)	-
2402MHz	3
2440MHz	3
2480MHz	3

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	DC Power Supply mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	DC Power Supply mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	2.4GHz WLAN+Bluetooth
2	5GHz WLAN+Bluetooth
3	6GHz WLAN+Bluetooth
Refer to Sporton Test Report No.: FA192341 for Co-location RF Exposure Evaluation.	

2.3 Support Equipment

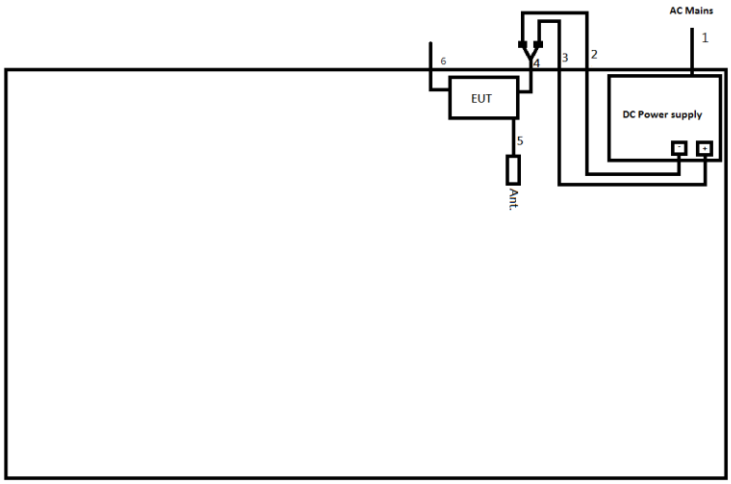
Support Equipment – AC Conduction					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	DC Power Supply	GW	GPS-3030DD	-	-
2	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
3	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	DC Power Supply	GW	GPS-3030DD	-	-
4	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
5	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	DC Power Supply	GW	GPS-3030DD	-	-
2	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
3	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

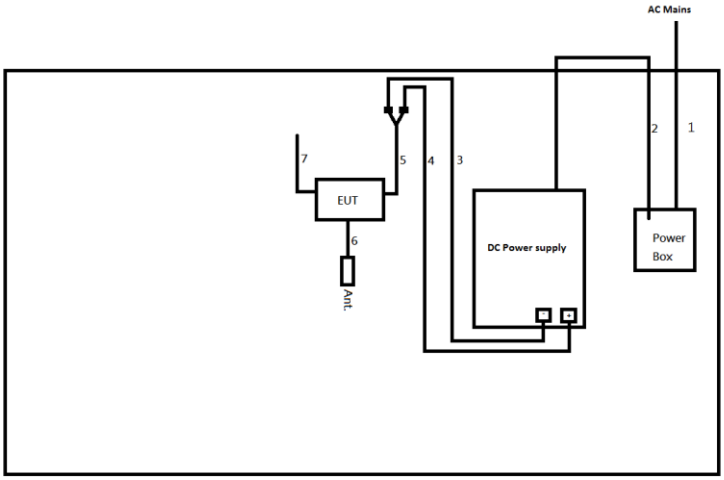
2.4 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	DC Power cable(-)	No	1.0
3	DC Power cable(+)	No	1.0
4	DC Power cable	No	0.28
5	Ant. cable	No	0.2
6	USB cable	No	0.25

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	AC Power cable	No	1.8
3	DC Power cable(-)	No	1.0
4	DC Power cable(+)	No	1.0
5	DC Power cable	No	0.28

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

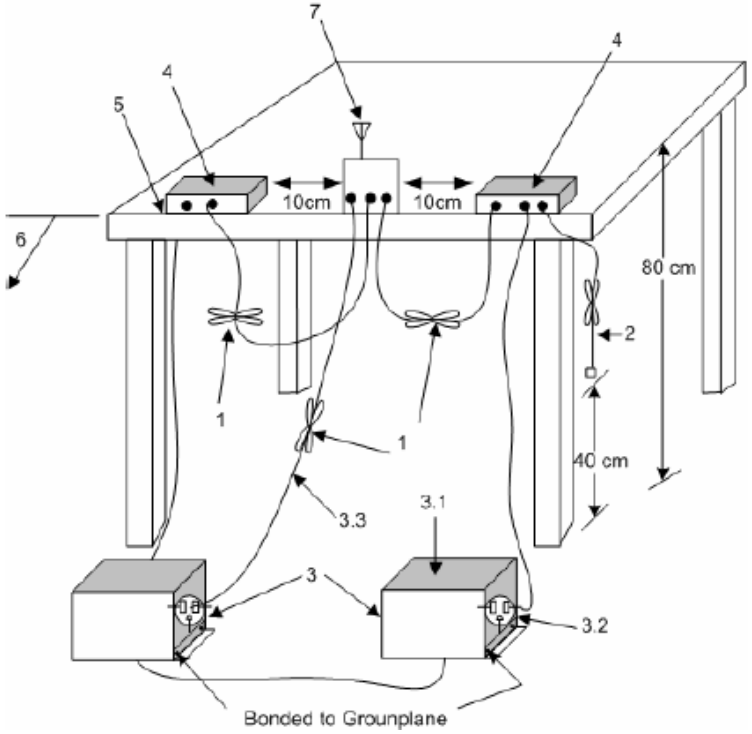
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

3.1.4 Measurement Results Calculation

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

3.1.5 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

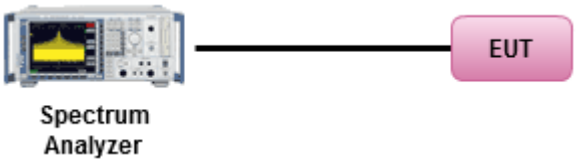
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
	☐ Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
e.i.r.p. Power Limit:		
▪ 2400-2483.5 MHz Band		
	▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)	
	▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm	
	▪ Smart antenna system (SAS)	
		- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
	☐ Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
	☐ Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
▪ Maximum Average Conducted Output Power	
	☐ Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
	☒ Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD)≤8 dBm/3kHz

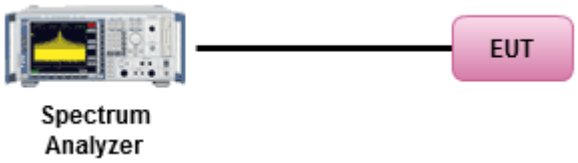
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		▪ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
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 level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.	

3.5.2 Measuring Instruments

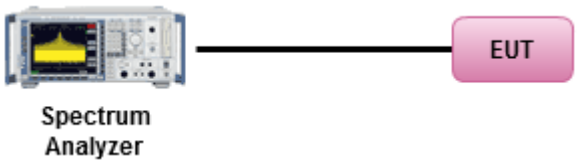
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 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.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or 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 KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
▪ For the transmitter band-edge emissions shall be measured using following options below:	
	▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
▪ Use the following spectrum analyzer settings:	
	▪ Set RBW=100 kHz for f < 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.
▪ 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.

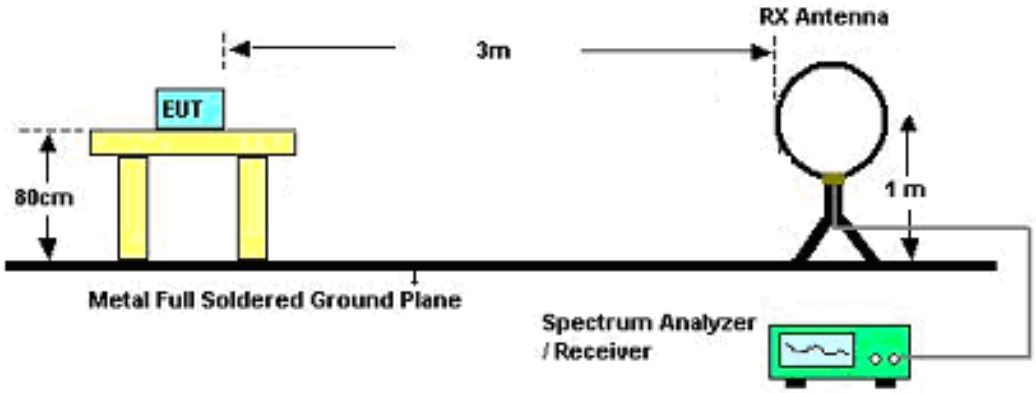
3.6.4 Measurement Results Calculation

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

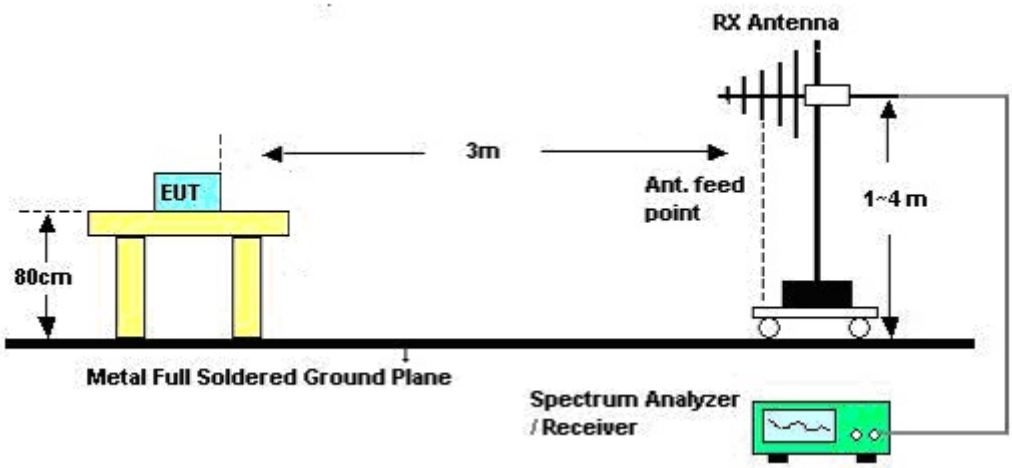
3.6.5 Test Setup

Emissions in Restricted Frequency Bands

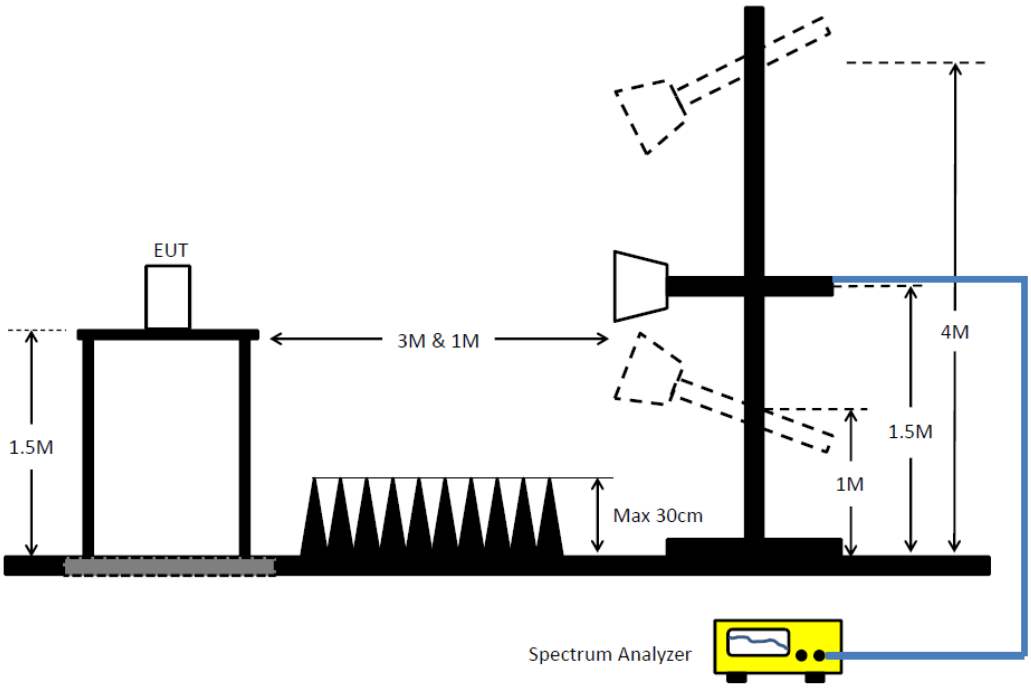
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.6 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.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

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	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
SENSE-EMI	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	10Hz~40GHz	26/Mar/2021	25/Mar/2022
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Signal Generator	Keysight	N5171B	MY53051240	9kHz~6GHz	23/Nov/2020	22/Nov/2021
SENSE 15247_FS	Sporton	v5.10.7.13	N/A	N/A	N/A	N/A

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+SUHNE R	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
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022
SENSE 15247_FS	Sporton	v5.10.7.13	N/A	N/A	N/A	N/A

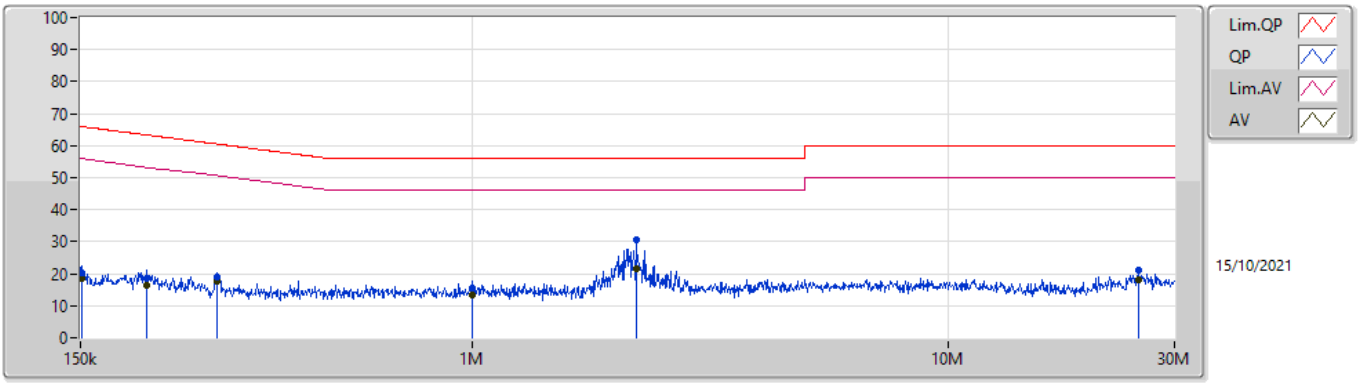
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	2.211M	21.76	46.00	-24.24	Line

Mode Configure

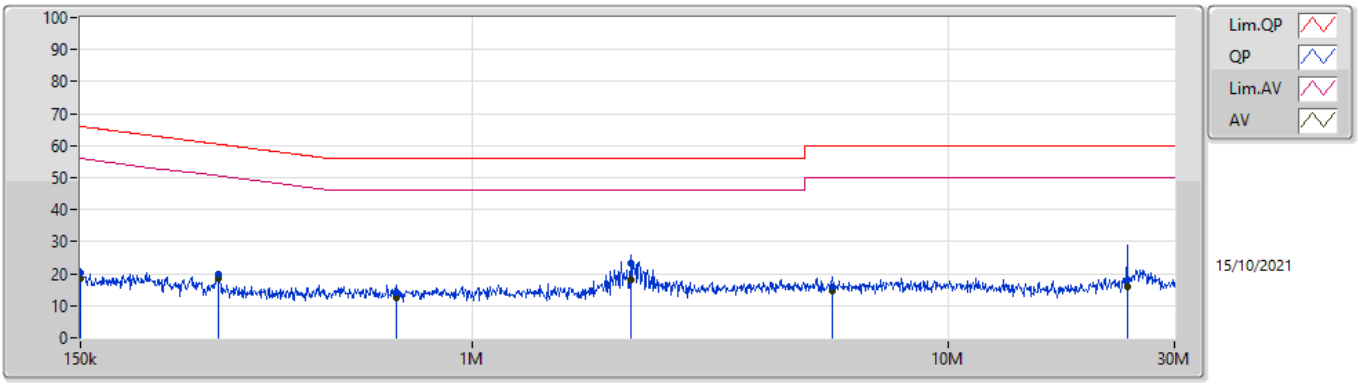
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	150.6k	20.43	65.96	-45.53	Line	-
Mode 1	Pass	AV	150.6k	18.41	55.96	-37.55	Line	-
Mode 1	Pass	QP	207.263k	18.69	63.30	-44.61	Line	-
Mode 1	Pass	AV	207.263k	16.42	53.30	-36.88	Line	-
Mode 1	Pass	QP	289.837k	19.12	60.53	-41.41	Line	-
Mode 1	Pass	AV	289.837k	17.64	50.53	-32.89	Line	-
Mode 1	Pass	QP	999.091k	15.48	56.00	-40.52	Line	-
Mode 1	Pass	AV	999.091k	13.29	46.00	-32.71	Line	-
Mode 1	Pass	QP	2.211M	30.69	56.00	-25.31	Line	-
Mode 1	Pass	AV	2.211M	21.76	46.00	-24.24	Line	-
Mode 1	Pass	QP	25.245M	21.08	60.00	-38.92	Line	-
Mode 1	Pass	AV	25.245M	18.22	50.00	-31.78	Line	-
Mode 1	Pass	QP	150k	20.19	66.00	-45.81	Neutral	-
Mode 1	Pass	AV	150k	18.39	56.00	-37.61	Neutral	-
Mode 1	Pass	QP	292.16k	19.65	60.46	-40.81	Neutral	-
Mode 1	Pass	AV	292.16k	18.33	50.46	-32.13	Neutral	-
Mode 1	Pass	QP	691.995k	14.33	56.00	-41.67	Neutral	-
Mode 1	Pass	AV	691.995k	12.57	46.00	-33.43	Neutral	-
Mode 1	Pass	QP	2.15M	23.26	56.00	-32.74	Neutral	-
Mode 1	Pass	AV	2.15M	18.07	46.00	-27.93	Neutral	-
Mode 1	Pass	QP	5.718M	15.93	60.00	-44.07	Neutral	-
Mode 1	Pass	AV	5.718M	14.69	50.00	-35.31	Neutral	-
Mode 1	Pass	QP	23.873M	18.30	60.00	-41.70	Neutral	-
Mode 1	Pass	AV	23.873M	15.81	50.00	-34.19	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150.6k	20.43	65.96	-45.53	19.62	Line	-	0.81	9.69	0.04	9.89
AV	150.6k	18.41	55.96	-37.55	19.62	Line	-	-1.21	9.69	0.04	9.89
QP	207.263k	18.69	63.30	-44.61	19.61	Line	-	-0.92	9.68	0.04	9.89
AV	207.263k	16.42	53.30	-36.88	19.61	Line	-	-3.19	9.68	0.04	9.89
QP	289.837k	19.12	60.53	-41.41	19.61	Line	-	-0.49	9.67	0.05	9.89
AV	289.837k	17.64	50.53	-32.89	19.61	Line	-	-1.97	9.67	0.05	9.89
QP	999.091k	15.48	56.00	-40.52	19.64	Line	-	-4.16	9.67	0.08	9.89
AV	999.091k	13.29	46.00	-32.71	19.64	Line	-	-6.35	9.67	0.08	9.89
QP	2.211M	30.69	56.00	-25.31	19.67	Line	-	11.02	9.68	0.11	9.88
AV	2.211M	21.76	46.00	-24.24	19.67	Line	-	2.09	9.68	0.11	9.88
QP	25.245M	21.08	60.00	-38.92	19.80	Line	-	1.28	9.59	0.32	9.89
AV	25.245M	18.22	50.00	-31.78	19.80	Line	-	-1.58	9.59	0.32	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	150k	20.19	66.00	-45.81	19.62	Neutral	-	0.57	9.69	0.04	9.89
AV	150k	18.39	56.00	-37.61	19.62	Neutral	-	-1.23	9.69	0.04	9.89
QP	292.16k	19.65	60.46	-40.81	19.61	Neutral	-	0.04	9.67	0.05	9.89
AV	292.16k	18.33	50.46	-32.13	19.61	Neutral	-	-1.28	9.67	0.05	9.89
QP	691.995k	14.33	56.00	-41.67	19.63	Neutral	-	-5.30	9.67	0.07	9.89
AV	691.995k	12.57	46.00	-33.43	19.63	Neutral	-	-7.06	9.67	0.07	9.89
QP	2.15M	23.26	56.00	-32.74	19.66	Neutral	-	3.60	9.68	0.10	9.88
AV	2.15M	18.07	46.00	-27.93	19.66	Neutral	-	-1.59	9.68	0.10	9.88
QP	5.718M	15.93	60.00	-44.07	19.76	Neutral	-	-3.83	9.71	0.16	9.89
AV	5.718M	14.69	50.00	-35.31	19.76	Neutral	-	-5.07	9.71	0.16	9.89
QP	23.873M	18.30	60.00	-41.70	19.94	Neutral	-	-1.64	9.73	0.32	9.89
AV	23.873M	15.81	50.00	-34.19	19.94	Neutral	-	-4.13	9.73	0.32	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-LE(1Mbps)_Nss1_1TX(Port1)	666.25k	1.041M	1M04F1D	663.75k	1.037M
BT-LE(2Mbps)_Nss1_1TX(Port1)	1.23M	2.071M	2M07F1D	1.173M	2.061M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

Result

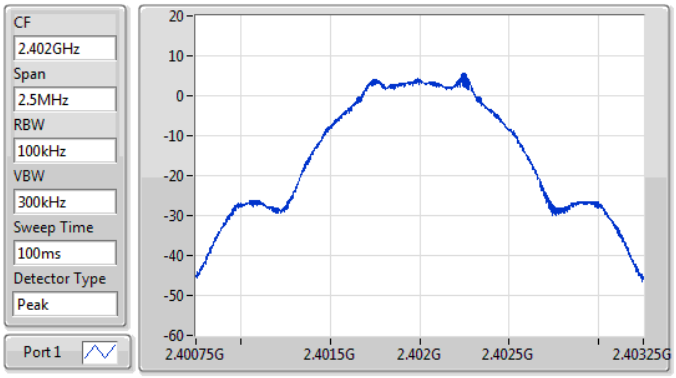
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	500k	666.25k	1.041M
2440MHz	Pass	500k	663.75k	1.039M
2480MHz	Pass	500k	665k	1.037M
BT-LE(2Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	500k	1.23M	2.071M
2440MHz	Pass	500k	1.178M	2.061M
2480MHz	Pass	500k	1.173M	2.061M

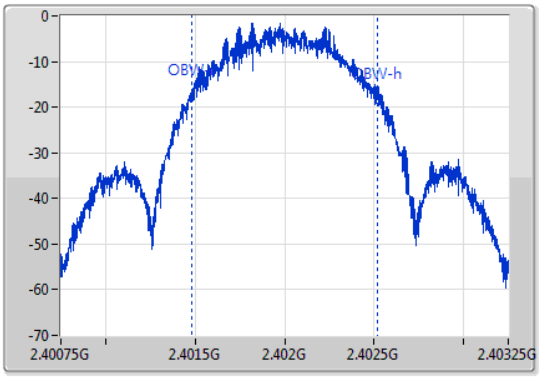
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)_Nss1_1TX(Port1) EBW-DTS

2402MHz

19/10/2021



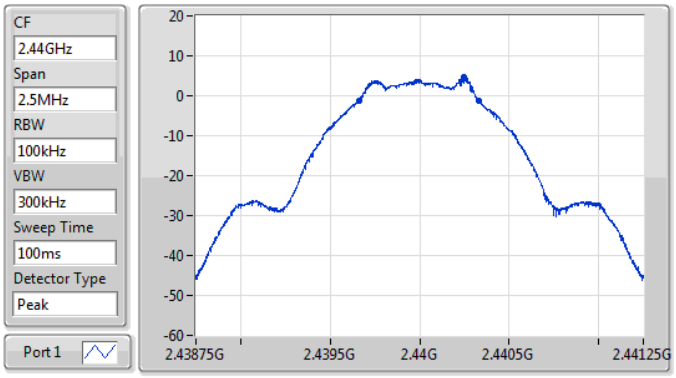


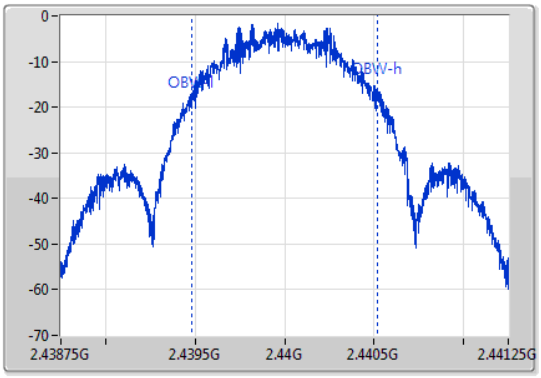
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
666.25k	2.401664G	2.40233G	1.041M	2.40148G	2.402521G	500k	1

BT-LE(1Mbps)_Nss1_1TX(Port1) EBW-DTS

2440MHz

19/10/2021



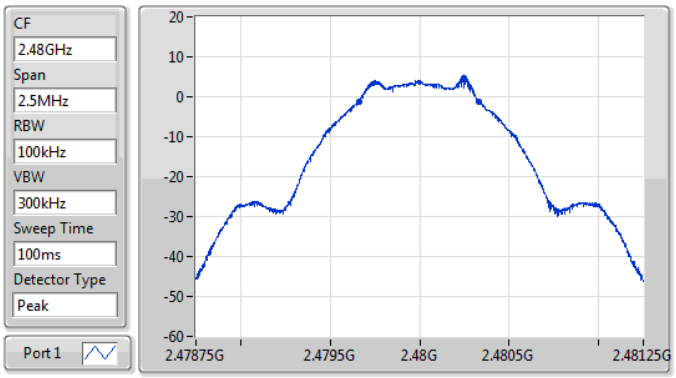


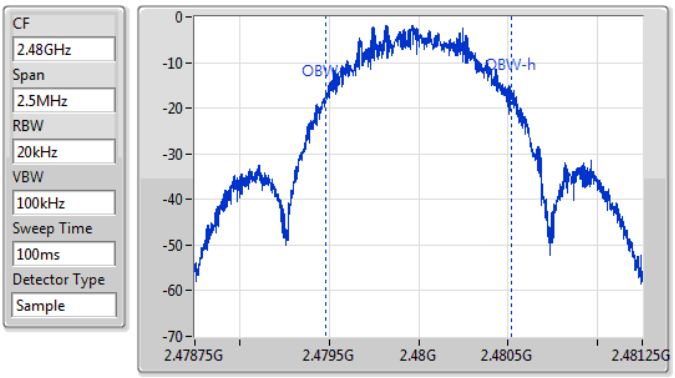
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
663.75k	2.439665G	2.440329G	1.039M	2.439483G	2.440522G	500k	1

BT-LE(1Mbps)_Nss1_1TX(Port1) EBW-DTS

2480MHz

19/10/2021



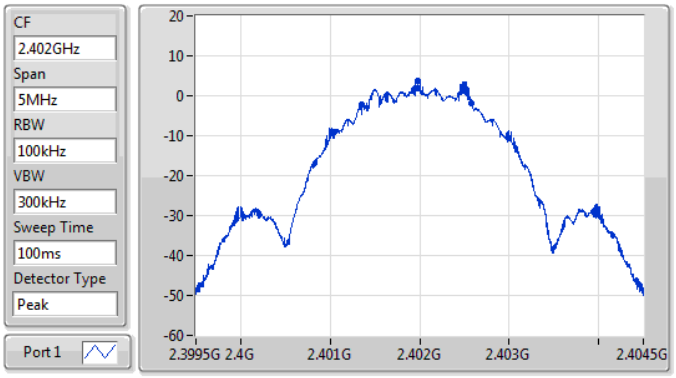


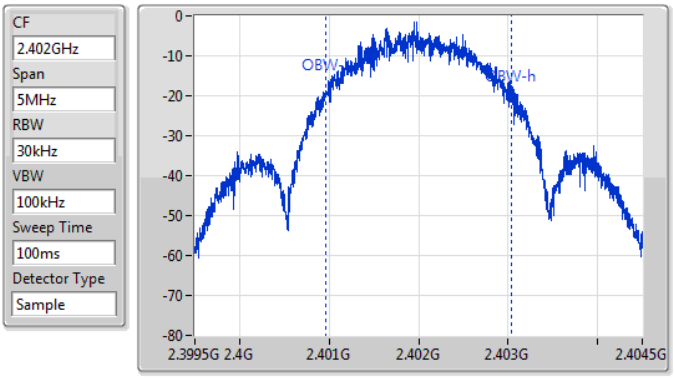
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
665k	2.479664G	2.480329G	1.037M	2.479484G	2.480521G	500k	1

BT-LE(2Mbps)_Nss1_1TX(Port1) EBW-DTS

2402MHz

19/10/2021



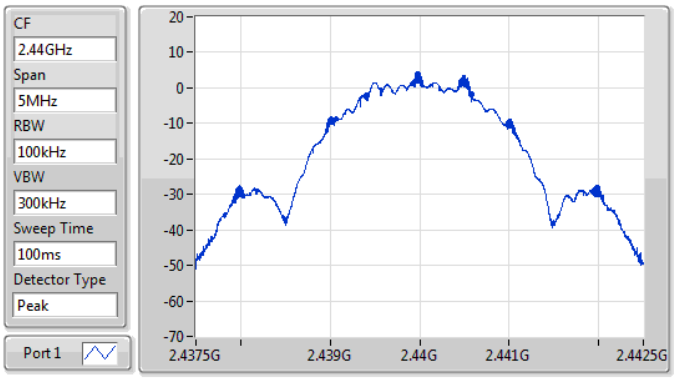


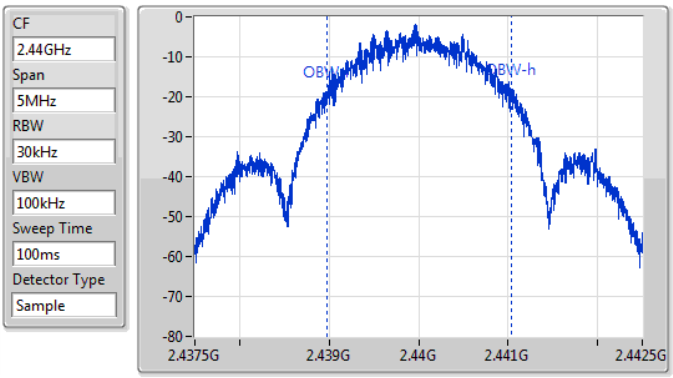
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.23M	2.40135G	2.40258G	2.071M	2.400963G	2.403034G	500k	1

BT-LE(2Mbps)_Nss1_1TX(Port1) EBW-DTS

2440MHz

19/10/2021



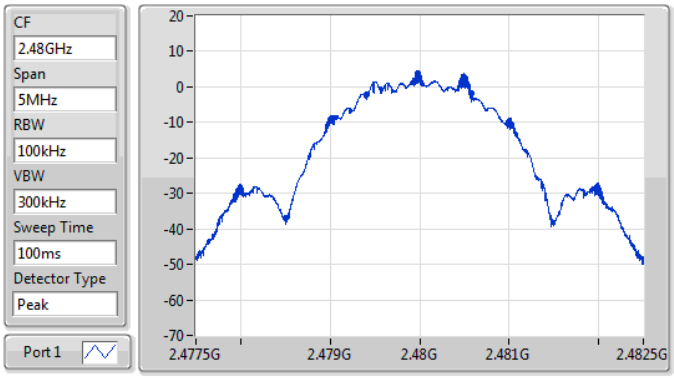


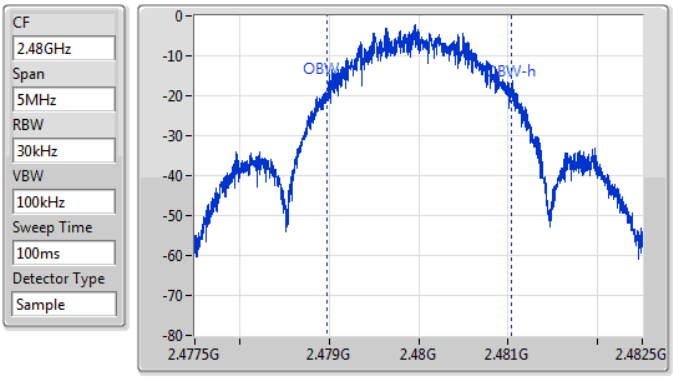
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.178M	2.439405G	2.440583G	2.061M	2.438971G	2.441032G	500k	1

BT-LE(2Mbps)_Nss1_1TX(Port1) EBW-DTS

2480MHz

19/10/2021





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.173M	2.479405G	2.480578G	2.061M	2.478973G	2.481034G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)_Nss1_1TX(Port1)	5.34	0.00342
BT-LE(2Mbps)_Nss1_1TX(Port1)	5.18	0.00330

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	0.78	5.02	30.00
2440MHz	Pass	0.78	5.13	30.00
2480MHz	Pass	0.78	5.34	30.00
BT-LE(2Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	0.78	5.08	30.00
2440MHz	Pass	0.78	5.13	30.00
2480MHz	Pass	0.78	5.18	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)_Nss1_1TX(Port1)	-12.01
BT-LE(2Mbps)_Nss1_1TX(Port1)	-14.20

RBW = 3kHz;

Result

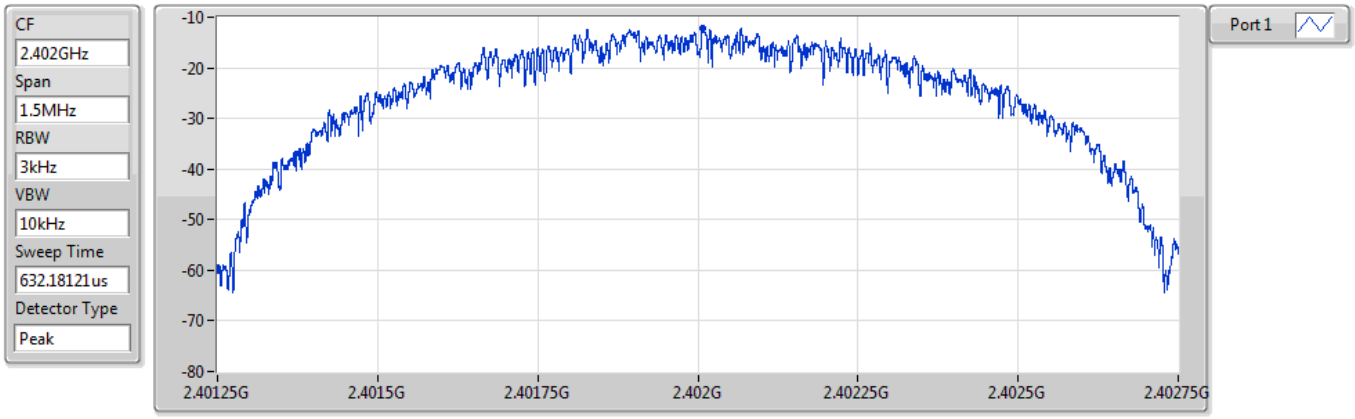
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	0.78	-12.12	8.00
2440MHz	Pass	0.78	-12.25	8.00
2480MHz	Pass	0.78	-12.01	8.00
BT-LE(2Mbps)_Nss1_1TX(Port1)	-	-	-	-
2402MHz	Pass	0.78	-16.73	8.00
2440MHz	Pass	0.78	-14.74	8.00
2480MHz	Pass	0.78	-14.20	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

BT-LE(1Mbps)_Nss1_1TX(Port1) PSD

2402MHz

19/10/2021

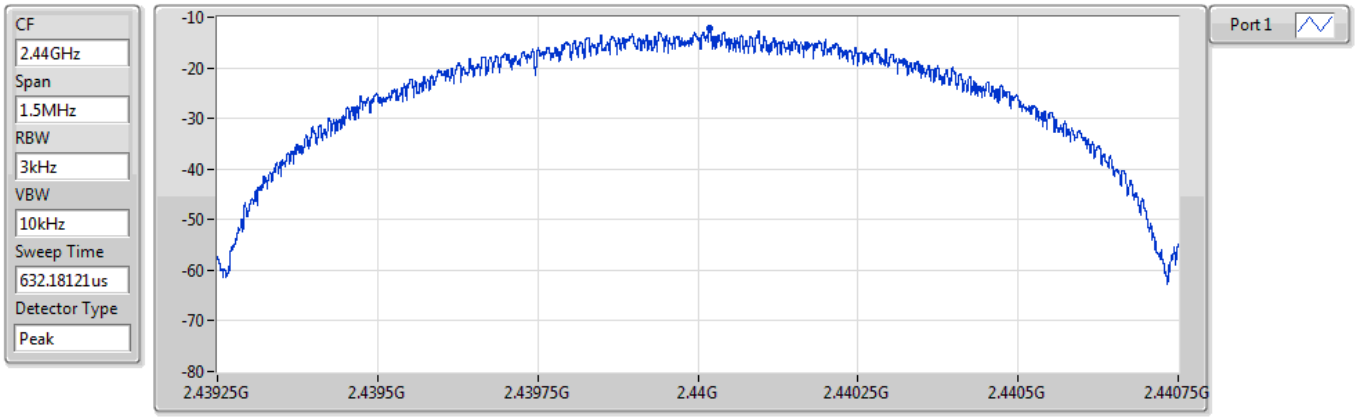


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.12	-12.12	-12.12

BT-LE(1Mbps)_Nss1_1TX(Port1) PSD

2440MHz

19/10/2021

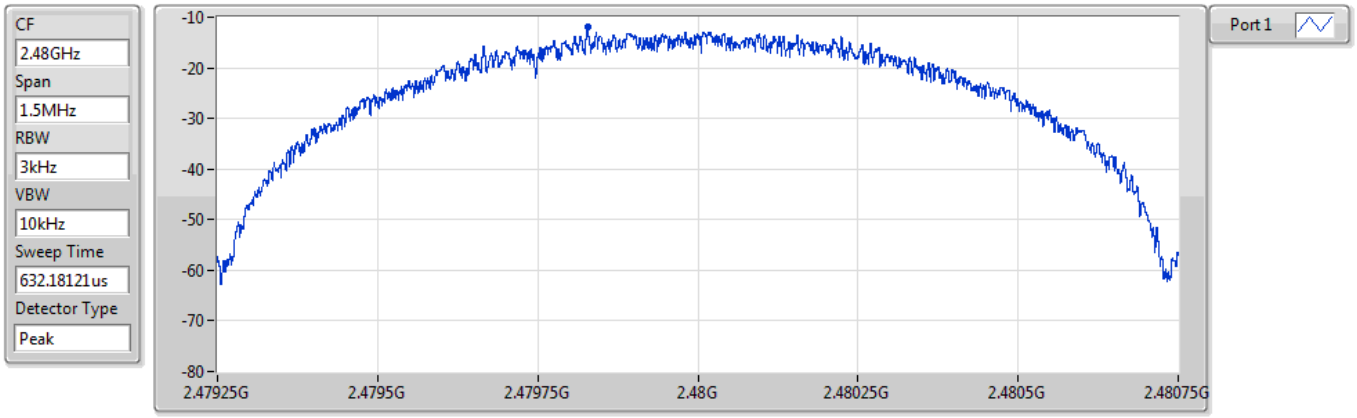


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.25	-12.25	-12.25

BT-LE(1Mbps)_Nss1_1TX(Port1) PSD

2480MHz

19/10/2021

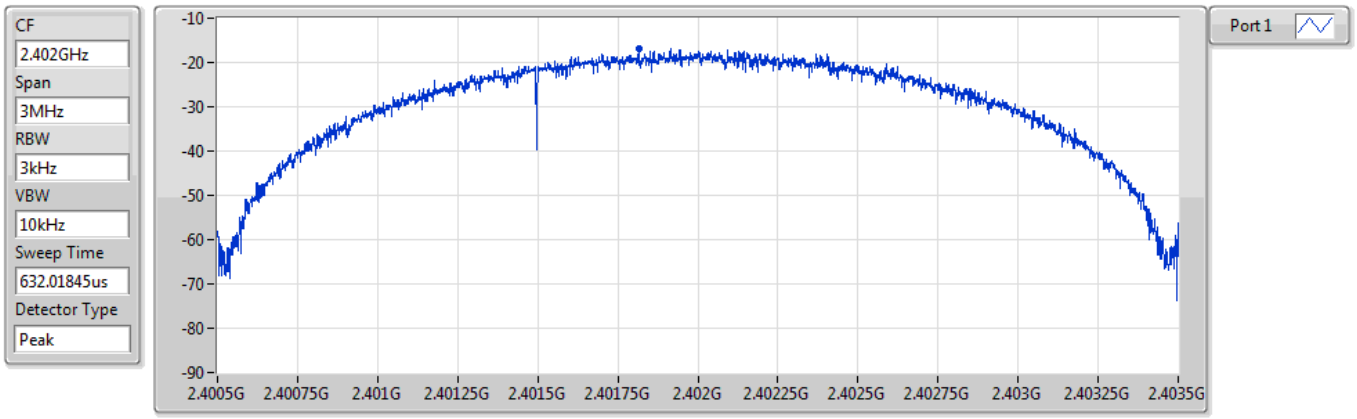


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.01	-12.01	-12.01

BT-LE(2Mbps)_Nss1_1TX(Port1) PSD

2402MHz

19/10/2021

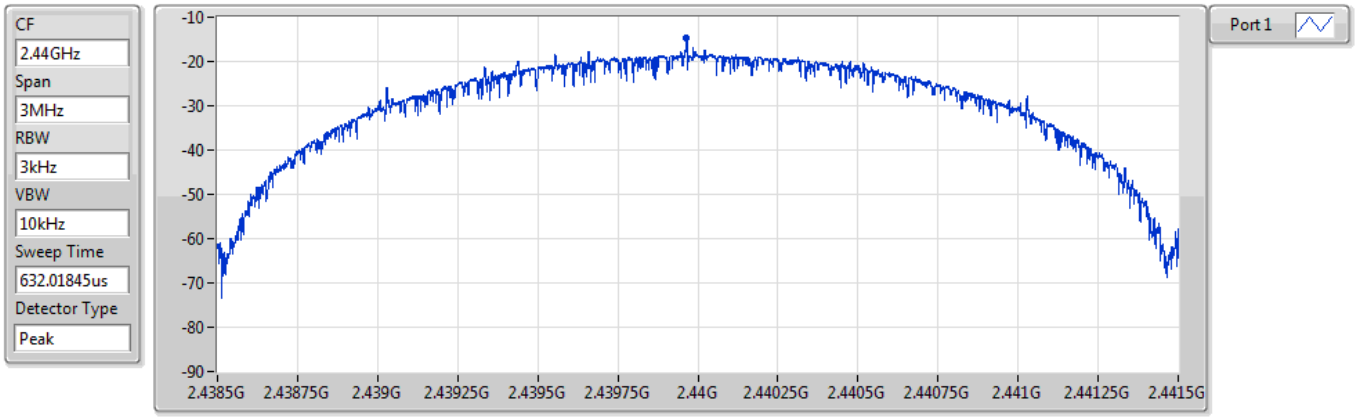


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.73	-16.73	-16.73

BT-LE(2Mbps)_Nss1_1TX(Port1) PSD

2440MHz

19/10/2021

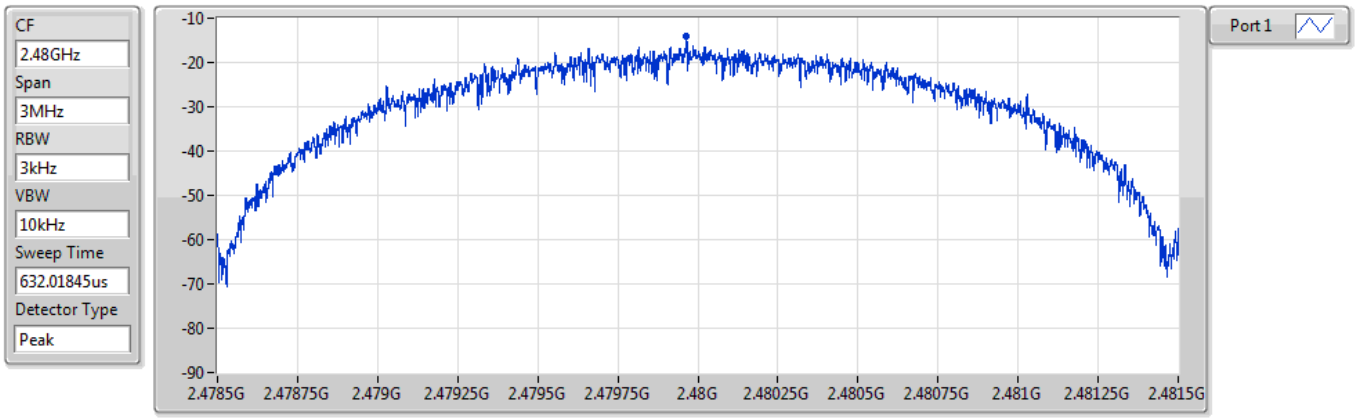


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.74	-14.74	-14.74

BT-LE(2Mbps)_Nss1_1TX(Port1) PSD

2480MHz

19/10/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.20	-14.20	-14.20

Summary

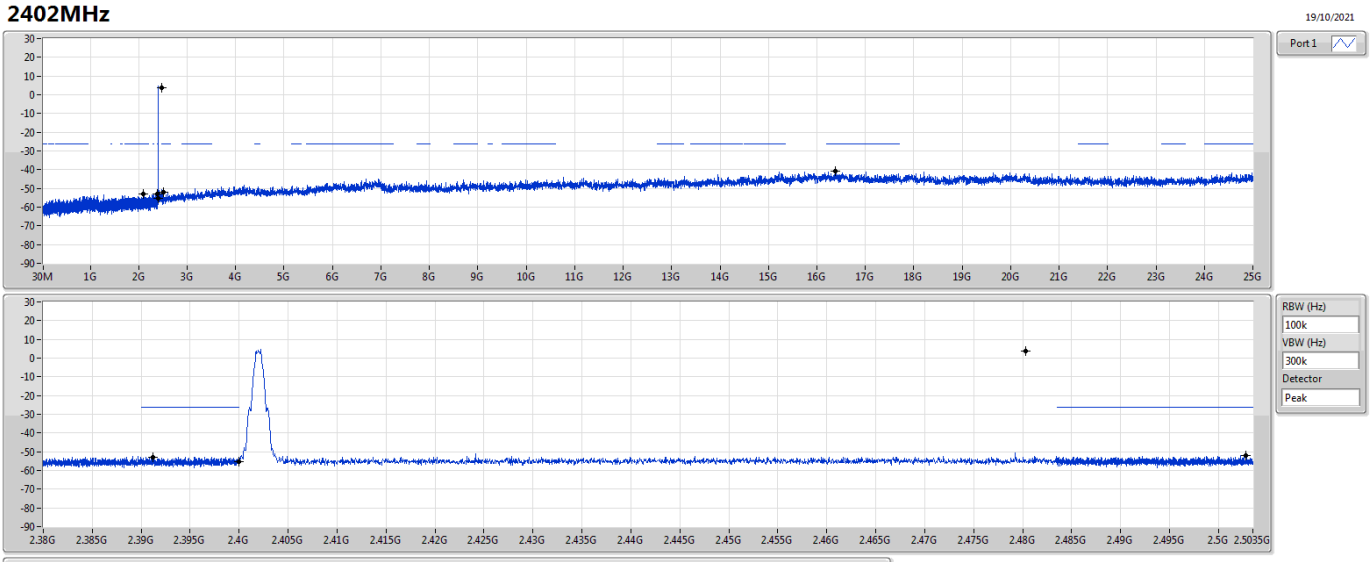
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)_Nss1_1TX(Port1)	Pass	2.48029G	3.80	-26.20	1.95671G	-53.41	2.39382G	-52.77	2.4G	-55.27	2.48843G	-50.71	15.21121G	-40.79	1
BT-LE(2Mbps)_Nss1_1TX(Port1)	Pass	2.47999G	3.89	-26.11	2.19347G	-53.05	2.39999G	-28.05	2.4G	-30.90	2.49369G	-51.16	16.38665G	-41.15	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-LE(1Mbps)_Nss1_1TX(Port1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48029G	3.80	-26.20	2.09301G	-53.13	2.3912G	-52.78	2.4G	-55.42	2.50282G	-51.94	16.38946G	-40.76	1
2440MHz	Pass	2.48029G	3.80	-26.20	1.95671G	-53.41	2.39382G	-52.77	2.4G	-55.27	2.48843G	-50.71	15.21121G	-40.79	1
2480MHz	Pass	2.48029G	3.80	-26.20	1.97139G	-52.85	2.39411G	-52.12	2.4835G	-55.14	2.49948G	-51.48	16.52726G	-40.86	1
BT-LE(2Mbps)_Nss1_1TX(Port1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.47999G	3.89	-26.11	2.19347G	-53.05	2.39999G	-28.05	2.4G	-30.90	2.49369G	-51.16	16.38665G	-41.15	1
2440MHz	Pass	2.47999G	3.89	-26.11	2.19024G	-52.31	2.39485G	-51.82	2.4835G	-55.35	2.48847G	-51.45	16.2573G	-40.87	1
2480MHz	Pass	2.47999G	3.89	-26.11	1.62594G	-53.52	2.3934G	-51.78	2.4G	-55.29	2.48372G	-52.01	16.24886G	-41.73	1

BT-LE(1Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

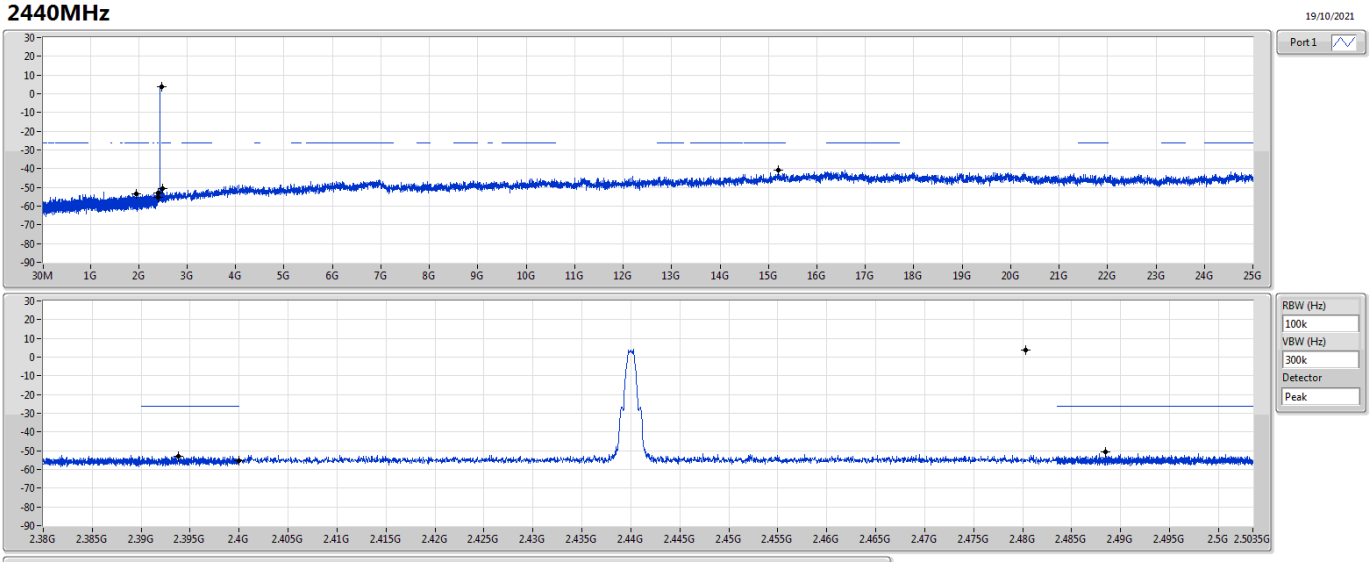
2402MHz



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
2.48029G	3.80	-26.20	2.09301G	-53.13	2.3912G	-52.78	2.4G	-55.42	2.50282G	-51.94	16.38946G	-40.76	1

BT-LE(1Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

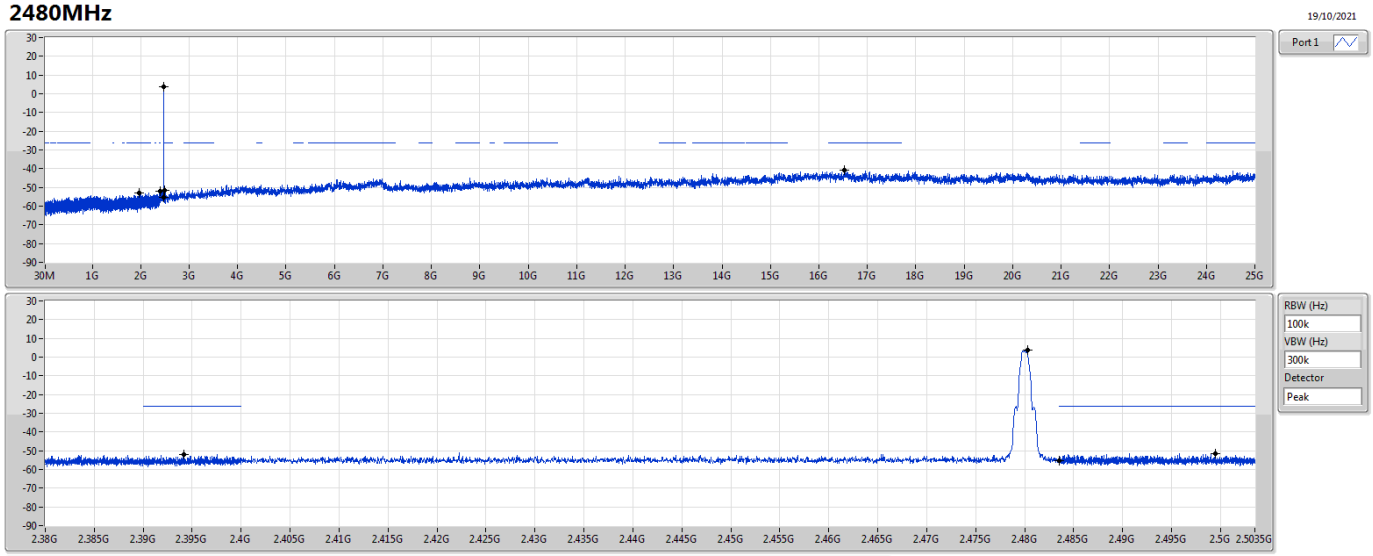
2440MHz



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
2.48029G	3.80	-26.20	1.95671G	-53.41	2.39382G	-52.77	2.4G	-55.27	2.48843G	-50.71	15.21121G	-40.79	1

BT-LE(1Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

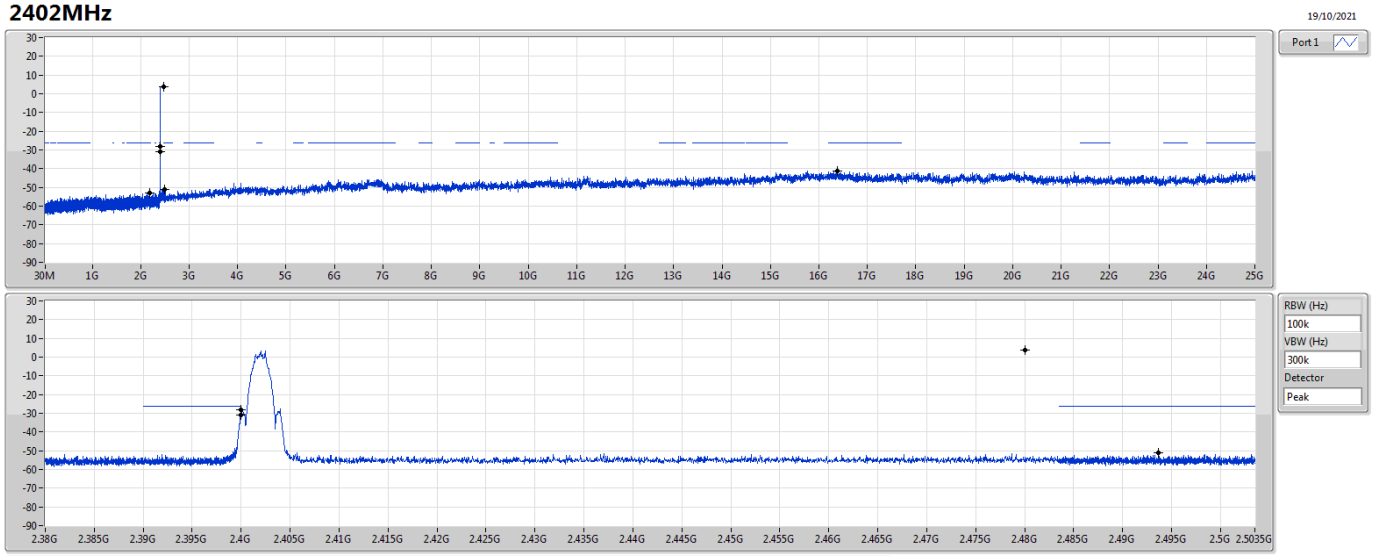
2480MHz



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
2.48029G	3.80	-26.20	1.97139G	-52.85	2.39411G	-52.12	2.4835G	-55.14	2.49948G	-51.48	16.52726G	-40.86	1

BT-LE(2Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

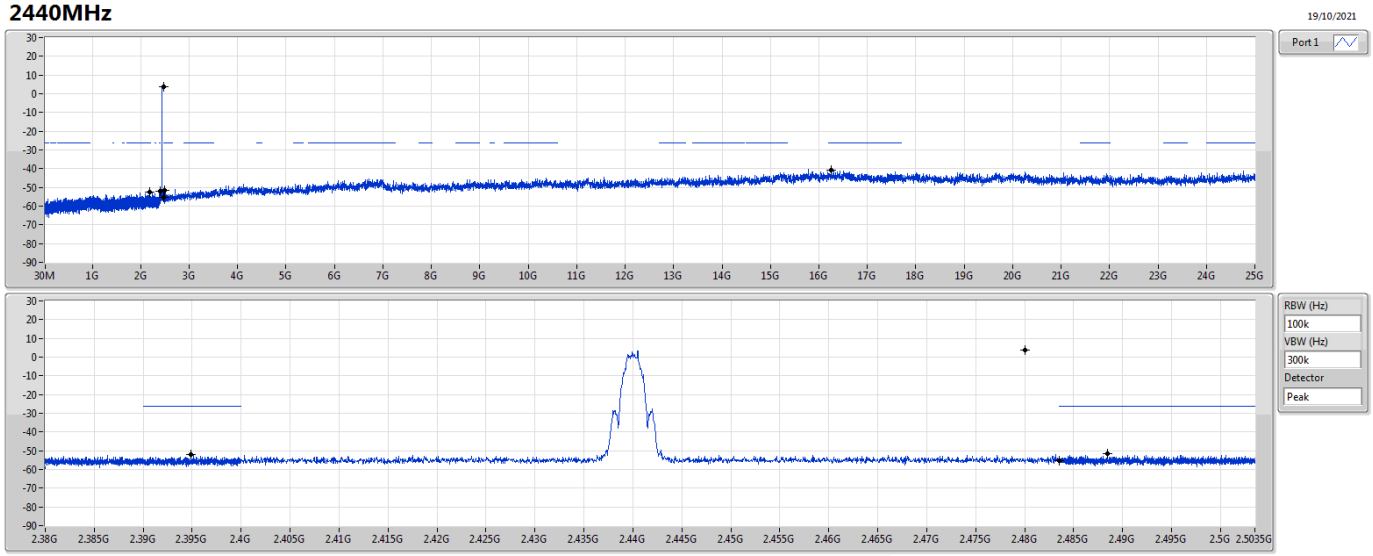
2402MHz



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
2.47999G	3.89	-26.11	2.19347G	-53.05	2.39999G	-28.05	2.4G	-30.90	2.49369G	-51.16	16.38665G	-41.15	1

BT-LE(2Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

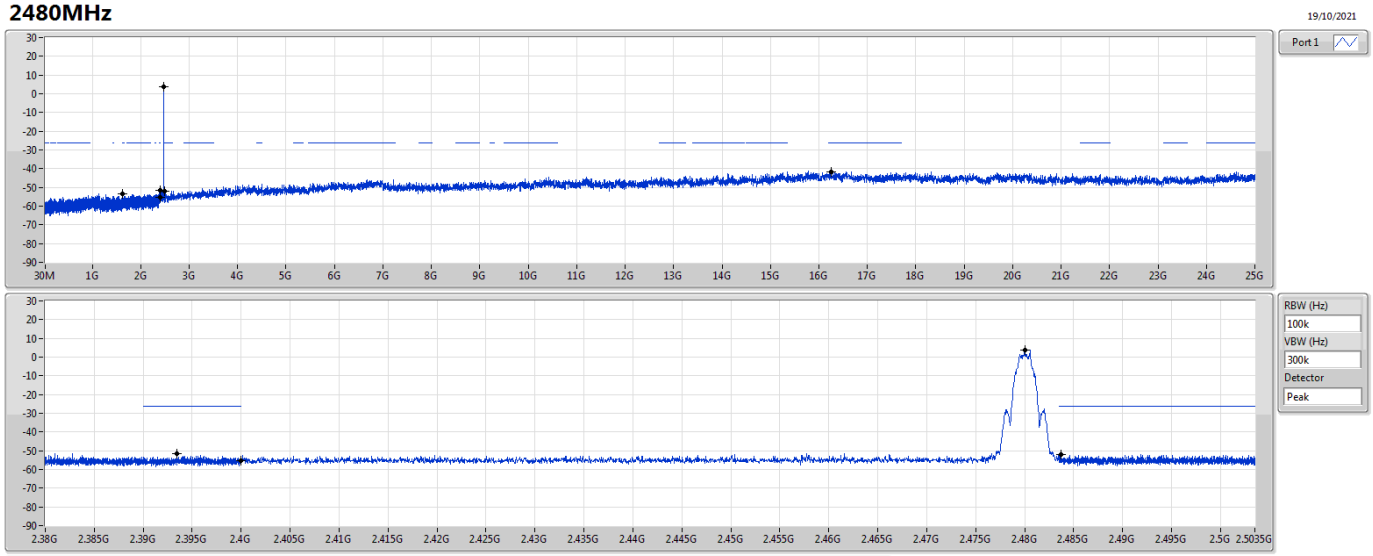
2440MHz



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
2.47999G	3.89	-26.11	2.19024G	-52.31	2.39485G	-51.82	2.4835G	-55.35	2.48847G	-51.45	16.2573G	-40.87	1

BT-LE(2Mbps)_Nss1_1TX(Port1) **CSENdB-DTS**

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
2.47999G	3.89	-26.11	1.62594G	-53.52	2.3934G	-51.78	2.4G	-55.29	2.48372G	-52.01	16.24886G	-41.73	1

Summary

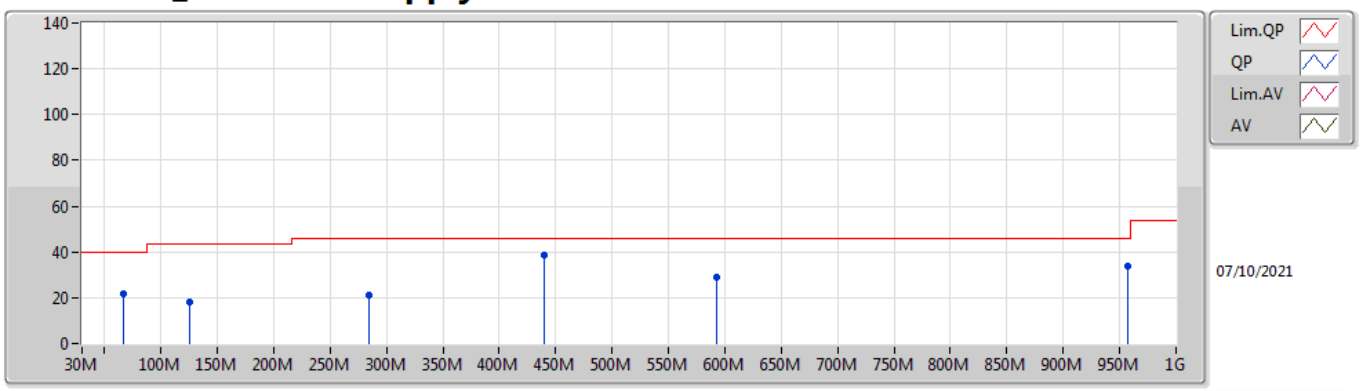
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)_1TX(Port1)	Pass	PK	439.34M	38.38	46.00	-7.62	3	Vertical	360	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)_1TX(Port1)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	66.86M	21.68	40.00	-18.32	3	Vertical	360	1.00	-
2440MHz	Pass	PK	125.06M	18.24	43.50	-25.26	3	Vertical	360	1.00	-
2440MHz	Pass	PK	284.14M	20.93	46.00	-25.07	3	Vertical	360	1.00	-
2440MHz	Pass	PK	439.34M	38.38	46.00	-7.62	3	Vertical	360	1.00	-
2440MHz	Pass	PK	592.6M	28.83	46.00	-17.17	3	Vertical	360	1.00	-
2440MHz	Pass	PK	957.32M	33.51	46.00	-12.49	3	Vertical	360	1.00	-
2440MHz	Pass	PK	30M	20.74	40.00	-19.26	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	127M	15.36	43.50	-28.14	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	319.06M	24.55	46.00	-21.45	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	478.14M	22.51	46.00	-23.49	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	691.54M	26.00	46.00	-20.00	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	957.32M	33.68	46.00	-12.32	3	Horizontal	0	1.00	-

BT-LE(2Mbps)_1TX(Port1)

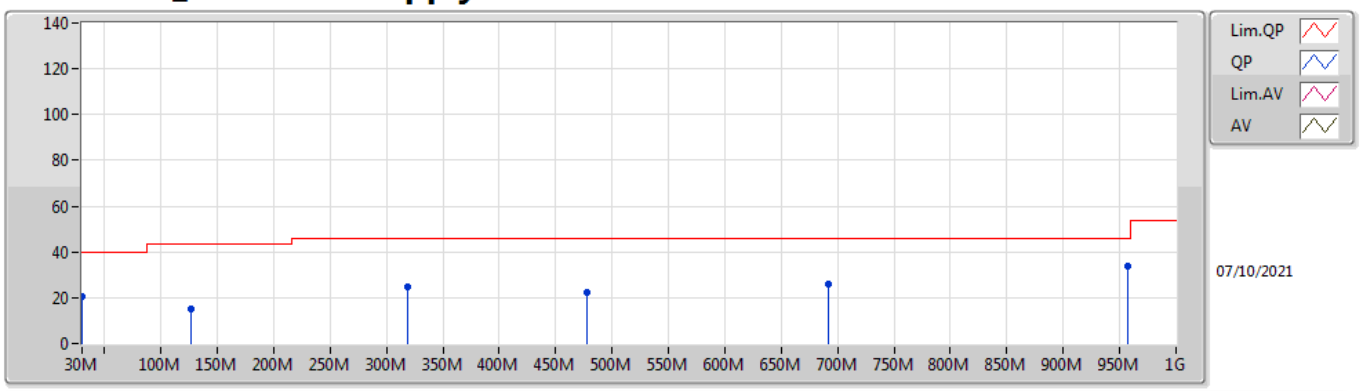
2440MHz_DC Power Supply



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	66.86M	21.68	40.00	-18.32	-24.87	3	Vertical	360	1.00	-	46.55	11.31	0.83	37.01
PK	125.06M	18.24	43.50	-25.26	-18.75	3	Vertical	360	1.00	-	36.99	16.76	1.10	36.61
PK	284.14M	20.93	46.00	-25.07	-16.72	3	Vertical	360	1.00	-	37.65	18.08	1.62	36.42
PK	439.34M	38.38	46.00	-7.62	-12.40	3	Vertical	360	1.00	-	50.78	22.15	2.06	36.61
PK	592.6M	28.83	46.00	-17.17	-9.85	3	Vertical	360	1.00	-	38.68	24.80	2.46	37.11
PK	957.32M	33.51	46.00	-12.49	-4.25	3	Vertical	360	1.00	-	37.76	30.14	3.11	37.50

BT-LE(2Mbps)_1TX(Port1)

2440MHz_DC Power Supply



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	30M	20.74	40.00	-19.26	-12.86	3	Horizontal	0	1.00	-	33.60	23.73	0.56	37.15
PK	127M	15.36	43.50	-28.14	-18.70	3	Horizontal	0	1.00	-	34.06	16.78	1.11	36.59
PK	319.06M	24.55	46.00	-21.45	-16.17	3	Horizontal	0	1.00	-	40.72	18.59	1.71	36.47
PK	478.14M	22.51	46.00	-23.49	-11.86	3	Horizontal	0	1.00	-	34.37	22.80	2.17	36.83
PK	691.54M	26.00	46.00	-20.00	-8.87	3	Horizontal	0	1.00	-	34.87	25.74	2.67	37.28
PK	957.32M	33.68	46.00	-12.32	-4.25	3	Horizontal	0	1.00	-	37.93	30.14	3.11	37.50

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-LE(1Mbps)_1TX(Port1)	Pass	AV	2.4842G	45.25	54.00	-8.75	3	Horizontal	322	1.47	-
BT-LE(2Mbps)_1TX(Port1)	Pass	AV	2.4835G	45.24	54.00	-8.76	3	Horizontal	318	1.50	-

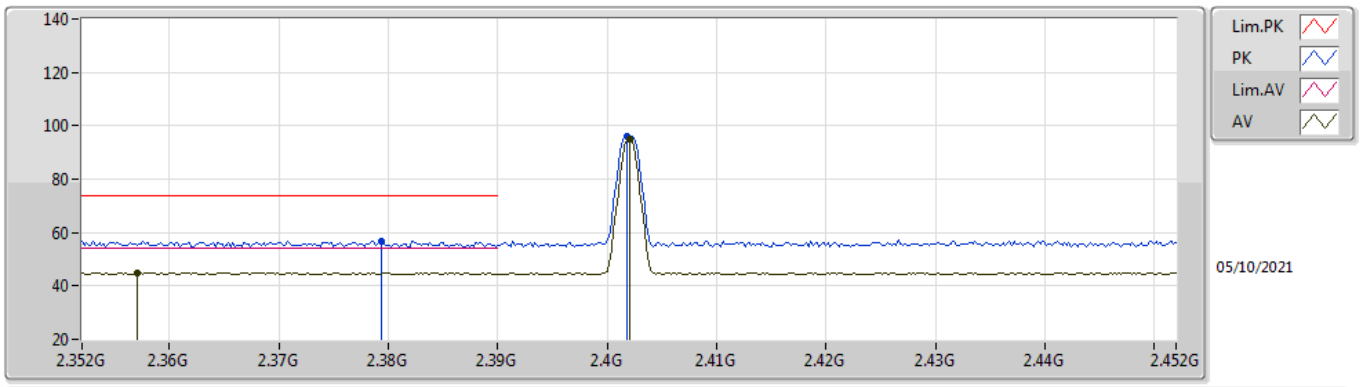
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)_1TX(Port1)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.357G	45.04	54.00	-8.96	3	Vertical	187	1.50	-
2402MHz	Pass	AV	2.402G	95.00	Inf	-Inf	3	Vertical	187	1.50	-
2402MHz	Pass	PK	2.3794G	56.94	74.00	-17.06	3	Vertical	187	1.50	-
2402MHz	Pass	PK	2.4018G	95.99	Inf	-Inf	3	Vertical	187	1.50	-
2402MHz	Pass	AV	2.3708G	45.10	54.00	-8.90	3	Horizontal	324	1.59	-
2402MHz	Pass	AV	2.402G	95.51	Inf	-Inf	3	Horizontal	324	1.59	-
2402MHz	Pass	PK	2.364G	57.73	74.00	-16.27	3	Horizontal	324	1.59	-
2402MHz	Pass	PK	2.4018G	96.44	Inf	-Inf	3	Horizontal	324	1.59	-
2402MHz	Pass	AV	4.80313G	32.93	54.00	-21.07	3	Vertical	239	2.52	-
2402MHz	Pass	PK	4.80305G	45.42	74.00	-28.58	3	Vertical	239	2.52	-
2402MHz	Pass	AV	4.8034G	32.85	54.00	-21.15	3	Horizontal	250	2.31	-
2402MHz	Pass	PK	4.80383G	45.21	74.00	-28.79	3	Horizontal	250	2.31	-
2440MHz	Pass	AV	2.3496G	44.97	54.00	-9.03	3	Vertical	187	1.41	-
2440MHz	Pass	AV	2.44G	93.99	Inf	-Inf	3	Vertical	187	1.41	-
2440MHz	Pass	AV	2.4852G	44.99	54.00	-9.01	3	Vertical	187	1.41	-
2440MHz	Pass	PK	2.372G	57.32	74.00	-16.68	3	Vertical	187	1.41	-
2440MHz	Pass	PK	2.4396G	95.00	Inf	-Inf	3	Vertical	187	1.41	-
2440MHz	Pass	PK	2.4876G	56.99	74.00	-17.01	3	Vertical	187	1.41	-
2440MHz	Pass	AV	2.3448G	44.91	54.00	-9.09	3	Horizontal	322	1.76	-
2440MHz	Pass	AV	2.44G	96.26	Inf	-Inf	3	Horizontal	322	1.76	-
2440MHz	Pass	AV	2.484G	44.99	54.00	-9.01	3	Horizontal	322	1.76	-
2440MHz	Pass	PK	2.356G	57.01	74.00	-16.99	3	Horizontal	322	1.76	-
2440MHz	Pass	PK	2.4396G	97.21	Inf	-Inf	3	Horizontal	322	1.76	-
2440MHz	Pass	PK	2.4912G	56.90	74.00	-17.10	3	Horizontal	322	1.76	-
2440MHz	Pass	AV	4.87976G	31.78	54.00	-22.22	3	Vertical	47	2.45	-
2440MHz	Pass	PK	4.88049G	44.71	74.00	-29.29	3	Vertical	47	2.45	-
2440MHz	Pass	AV	4.88064G	31.81	54.00	-22.19	3	Horizontal	54	1.92	-
2440MHz	Pass	PK	4.88065G	43.91	74.00	-30.09	3	Horizontal	54	1.92	-
2480MHz	Pass	AV	2.48G	94.66	Inf	-Inf	3	Vertical	186	1.00	-
2480MHz	Pass	AV	2.4936G	45.15	54.00	-8.85	3	Vertical	186	1.00	-
2480MHz	Pass	PK	2.4798G	95.62	Inf	-Inf	3	Vertical	186	1.00	-
2480MHz	Pass	PK	2.4854G	57.88	74.00	-16.12	3	Vertical	186	1.00	-
2480MHz	Pass	AV	2.48G	97.21	Inf	-Inf	3	Horizontal	322	1.47	-
2480MHz	Pass	AV	2.4842G	45.25	54.00	-8.75	3	Horizontal	322	1.47	-
2480MHz	Pass	PK	2.4798G	98.16	Inf	-Inf	3	Horizontal	322	1.47	-
2480MHz	Pass	PK	2.4856G	56.94	74.00	-17.06	3	Horizontal	322	1.47	-
2480MHz	Pass	AV	4.95994G	32.50	54.00	-21.50	3	Vertical	172	2.89	-
2480MHz	Pass	PK	4.96011G	44.53	74.00	-29.47	3	Vertical	172	2.89	-
2480MHz	Pass	AV	4.95966G	32.41	54.00	-21.59	3	Horizontal	307	2.53	-
2480MHz	Pass	PK	4.961G	44.88	74.00	-29.12	3	Horizontal	307	2.53	-
BT-LE(2Mbps)_1TX(Port1)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.361G	45.07	54.00	-8.93	3	Vertical	187	1.51	-
2402MHz	Pass	AV	2.402G	92.83	Inf	-Inf	3	Vertical	187	1.51	-
2402MHz	Pass	PK	2.3564G	57.31	74.00	-16.69	3	Vertical	187	1.51	-
2402MHz	Pass	PK	2.4016G	96.11	Inf	-Inf	3	Vertical	187	1.51	-
2402MHz	Pass	AV	2.3868G	44.98	54.00	-9.02	3	Horizontal	324	1.57	-
2402MHz	Pass	AV	2.402G	93.29	Inf	-Inf	3	Horizontal	324	1.57	-
2402MHz	Pass	PK	2.3688G	57.27	74.00	-16.73	3	Horizontal	324	1.57	-
2402MHz	Pass	PK	2.4024G	96.39	Inf	-Inf	3	Horizontal	324	1.57	-
2402MHz	Pass	AV	4.80312G	32.86	54.00	-21.14	3	Vertical	207	2.80	-
2402MHz	Pass	PK	4.80399G	44.83	74.00	-29.17	3	Vertical	207	2.80	-
2402MHz	Pass	AV	4.80396G	32.83	54.00	-21.17	3	Horizontal	-0.1	1.50	-
2402MHz	Pass	PK	4.80328G	45.64	74.00	-28.36	3	Horizontal	-0.1	1.50	-
2440MHz	Pass	AV	2.3864G	44.80	54.00	-9.20	3	Vertical	186	1.50	-
2440MHz	Pass	AV	2.44G	90.11	Inf	-Inf	3	Vertical	186	1.50	-
2440MHz	Pass	AV	2.4988G	45.12	54.00	-8.88	3	Vertical	186	1.50	-
2440MHz	Pass	PK	2.3888G	57.00	74.00	-17.00	3	Vertical	186	1.50	-
2440MHz	Pass	PK	2.4396G	94.65	Inf	-Inf	3	Vertical	186	1.50	-
2440MHz	Pass	PK	2.4856G	57.62	74.00	-16.38	3	Vertical	186	1.50	-
2440MHz	Pass	AV	2.3592G	44.97	54.00	-9.03	3	Horizontal	322	2.28	-

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	94.28	Inf	-Inf	3	Horizontal	322	2.28	-
2440MHz	Pass	AV	2.496G	45.12	54.00	-8.88	3	Horizontal	322	2.28	-
2440MHz	Pass	PK	2.3588G	57.52	74.00	-16.48	3	Horizontal	322	2.28	-
2440MHz	Pass	PK	2.4396G	97.24	Inf	-Inf	3	Horizontal	322	2.28	-
2440MHz	Pass	PK	2.4856G	56.99	74.00	-17.01	3	Horizontal	322	2.28	-
2440MHz	Pass	AV	4.8799G	31.80	54.00	-22.20	3	Vertical	30	1.97	-
2440MHz	Pass	PK	4.87932G	44.74	74.00	-29.26	3	Vertical	30	1.97	-
2440MHz	Pass	AV	4.87944G	31.88	54.00	-22.12	3	Horizontal	209	1.24	-
2440MHz	Pass	PK	4.88006G	44.39	74.00	-29.61	3	Horizontal	209	1.24	-
2480MHz	Pass	AV	2.48G	92.53	Inf	-Inf	3	Vertical	183	1.65	-
2480MHz	Pass	AV	2.4932G	45.09	54.00	-8.91	3	Vertical	183	1.65	-
2480MHz	Pass	PK	2.4794G	95.54	Inf	-Inf	3	Vertical	183	1.65	-
2480MHz	Pass	PK	2.4884G	57.92	74.00	-16.08	3	Vertical	183	1.65	-
2480MHz	Pass	AV	2.48G	95.03	Inf	-Inf	3	Horizontal	318	1.50	-
2480MHz	Pass	AV	2.4835G	45.24	54.00	-8.76	3	Horizontal	318	1.50	-
2480MHz	Pass	PK	2.4794G	97.99	Inf	-Inf	3	Horizontal	318	1.50	-
2480MHz	Pass	PK	2.4952G	57.80	74.00	-16.20	3	Horizontal	318	1.50	-
2480MHz	Pass	AV	4.96056G	32.45	54.00	-21.55	3	Vertical	36	2.17	-
2480MHz	Pass	PK	4.95934G	45.88	74.00	-28.12	3	Vertical	36	2.17	-
2480MHz	Pass	AV	4.96084G	33.10	54.00	-20.90	3	Horizontal	34	3.00	-
2480MHz	Pass	PK	4.96085G	46.63	74.00	-27.37	3	Horizontal	34	3.00	-

BT-LE(1Mbps)_1TX(Port1)

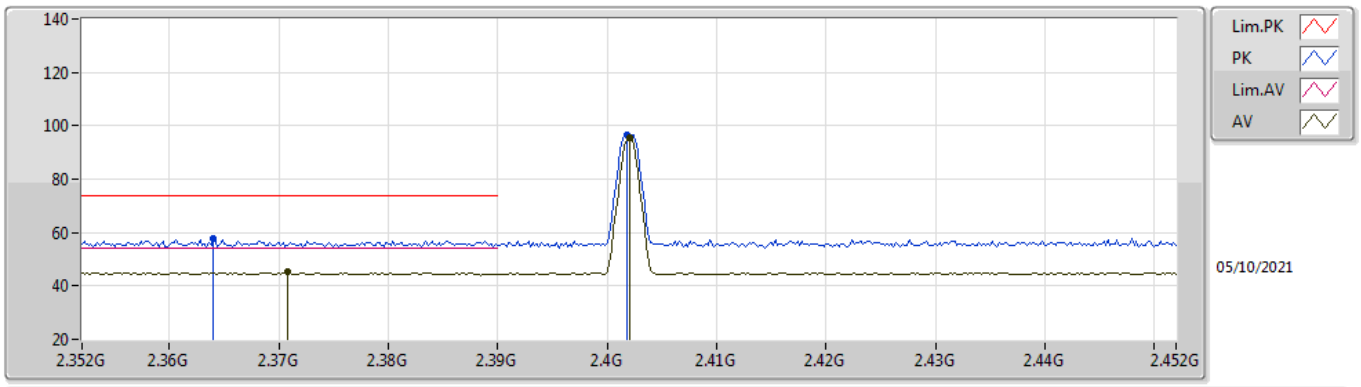
2402MHz_TX



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	2.357G	45.04	54.00	-8.96	32.31	3	Vertical	187	1.50	-	12.73	27.77	4.54	-
AV	2.402G	95.00	Inf	-Inf	32.18	3	Vertical	187	1.50	-	62.82	27.60	4.58	-
PK	2.3794G	56.94	74.00	-17.06	32.24	3	Vertical	187	1.50	-	24.70	27.68	4.56	-
PK	2.4018G	95.99	Inf	-Inf	32.18	3	Vertical	187	1.50	-	63.81	27.60	4.58	-

BT-LE(1Mbps)_1TX(Port1)

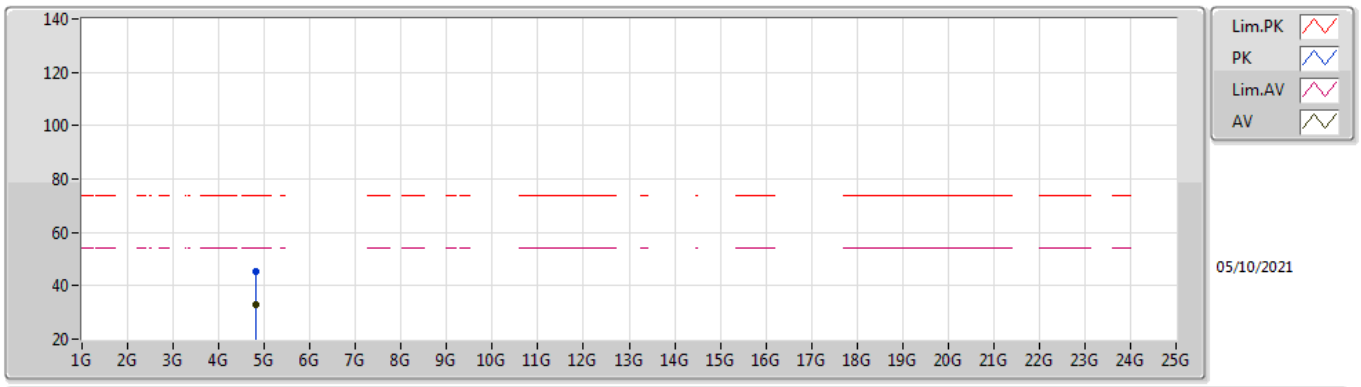
2402MHz_TX



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	2.3708G	45.10	54.00	-8.90	32.27	3	Horizontal	324	1.59	-	12.83	27.72	4.55	-
AV	2.402G	95.51	Inf	-Inf	32.18	3	Horizontal	324	1.59	-	63.33	27.60	4.58	-
PK	2.364G	57.73	74.00	-16.27	32.29	3	Horizontal	324	1.59	-	25.44	27.74	4.55	-
PK	2.4018G	96.44	Inf	-Inf	32.18	3	Horizontal	324	1.59	-	64.26	27.60	4.58	-

BT-LE(1Mbps)_1TX(Port1)

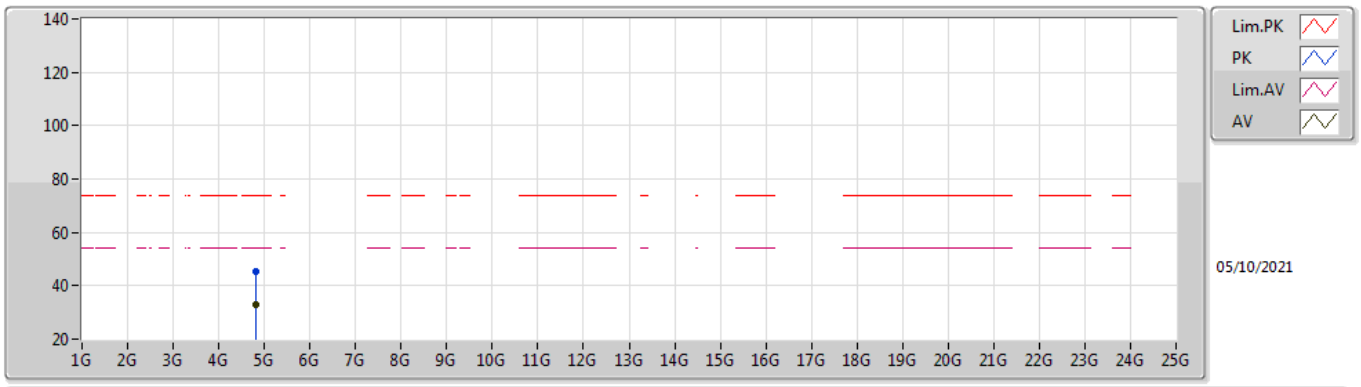
2402MHz_TX



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	4.80313G	32.93	54.00	-21.07	2.95	3	Vertical	239	2.52	-	29.98	31.10	6.66	34.81
PK	4.80305G	45.42	74.00	-28.58	2.95	3	Vertical	239	2.52	-	42.47	31.10	6.66	34.81

BT-LE(1Mbps)_1TX(Port1)

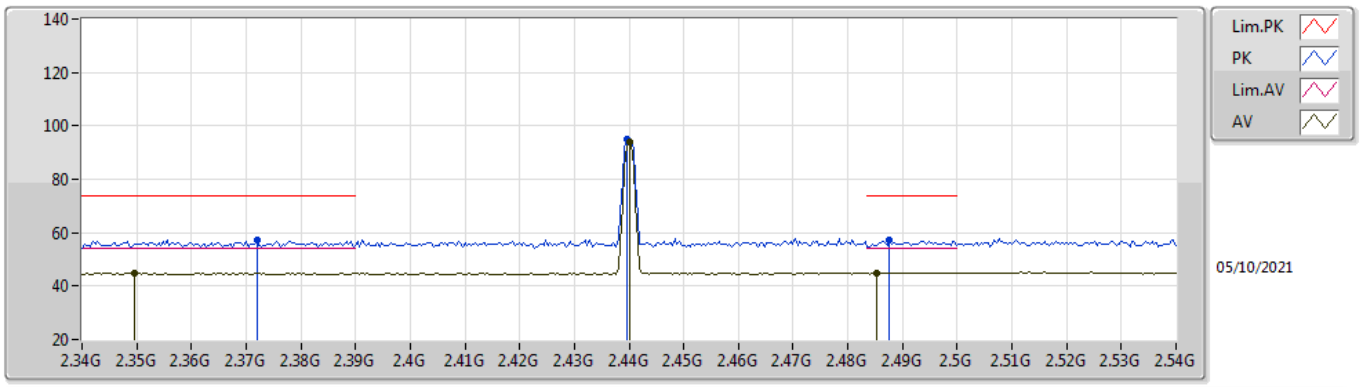
2402MHz_TX



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	4.8034G	32.85	54.00	-21.15	2.95	3	Horizontal	250	2.31	-	29.90	31.10	6.66	34.81
PK	4.80383G	45.21	74.00	-28.79	2.95	3	Horizontal	250	2.31	-	42.26	31.10	6.66	34.81

BT-LE(1Mbps)_1TX(Port1)

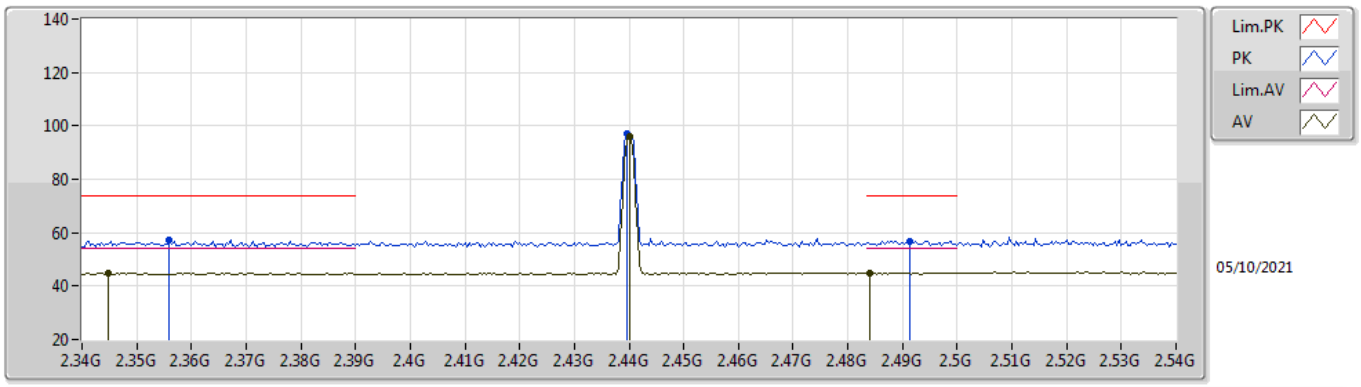
2440MHz_TX



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	2.3496G	44.97	54.00	-9.03	32.33	3	Vertical	187	1.41	-	12.64	27.80	4.53	-
AV	2.44G	93.99	Inf	-Inf	32.12	3	Vertical	187	1.41	-	61.87	27.52	4.60	-
AV	2.4852G	44.99	54.00	-9.01	32.11	3	Vertical	187	1.41	-	12.88	27.50	4.61	-
PK	2.372G	57.32	74.00	-16.68	32.26	3	Vertical	187	1.41	-	25.06	27.71	4.55	-
PK	2.4396G	95.00	Inf	-Inf	32.12	3	Vertical	187	1.41	-	62.88	27.52	4.60	-
PK	2.4876G	56.99	74.00	-17.01	32.12	3	Vertical	187	1.41	-	24.87	27.50	4.62	-

BT-LE(1Mbps)_1TX(Port1)

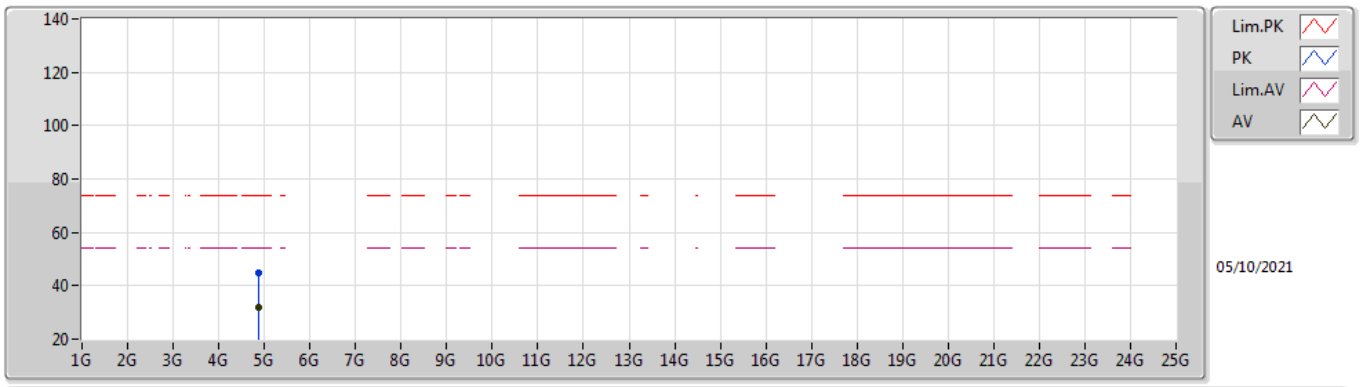
2440MHz_TX



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	2.3448G	44.91	54.00	-9.09	32.33	3	Horizontal	322	1.76	-	12.58	27.80	4.53	-
AV	2.44G	96.26	Inf	-Inf	32.12	3	Horizontal	322	1.76	-	64.14	27.52	4.60	-
AV	2.484G	44.99	54.00	-9.01	32.11	3	Horizontal	322	1.76	-	12.88	27.50	4.61	-
PK	2.356G	57.01	74.00	-16.99	32.32	3	Horizontal	322	1.76	-	24.69	27.78	4.54	-
PK	2.4396G	97.21	Inf	-Inf	32.12	3	Horizontal	322	1.76	-	65.09	27.52	4.60	-
PK	2.4912G	56.90	74.00	-17.10	32.12	3	Horizontal	322	1.76	-	24.78	27.50	4.62	-

BT-LE(1Mbps)_1TX(Port1)

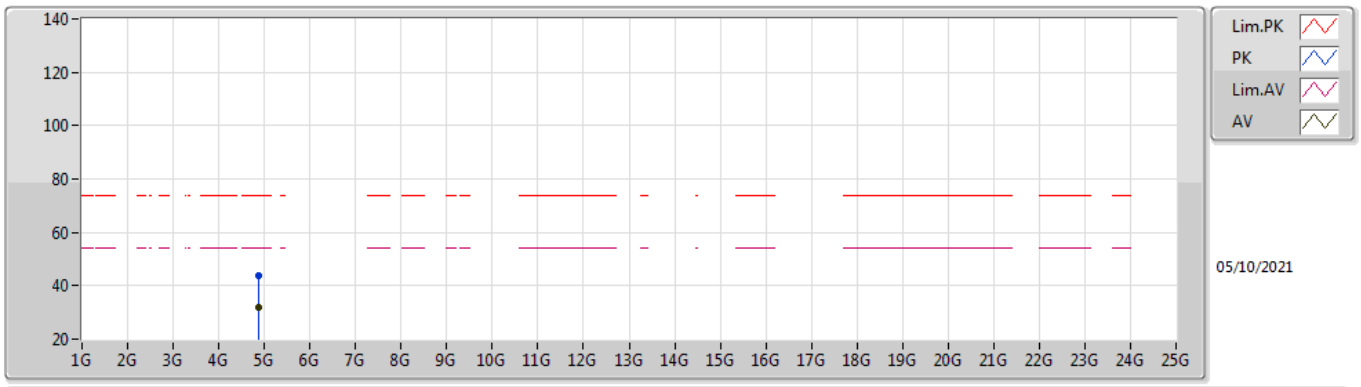
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87976G	31.78	54.00	-22.22	3.03	3	Vertical	47	2.45	-	28.75	31.10	6.72	34.79
PK	4.88049G	44.71	74.00	-29.29	3.03	3	Vertical	47	2.45	-	41.68	31.10	6.72	34.79

BT-LE(1Mbps)_1TX(Port1)

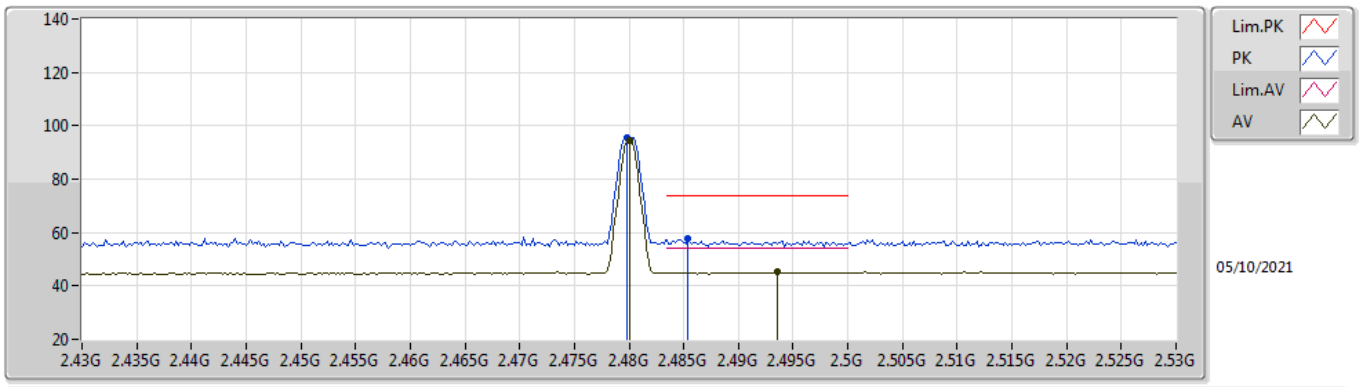
2440MHz_TX



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	4.88064G	31.81	54.00	-22.19	3.03	3	Horizontal	54	1.92	-	28.78	31.10	6.72	34.79
PK	4.88065G	43.91	74.00	-30.09	3.03	3	Horizontal	54	1.92	-	40.88	31.10	6.72	34.79

BT-LE(1Mbps)_1TX(Port1)

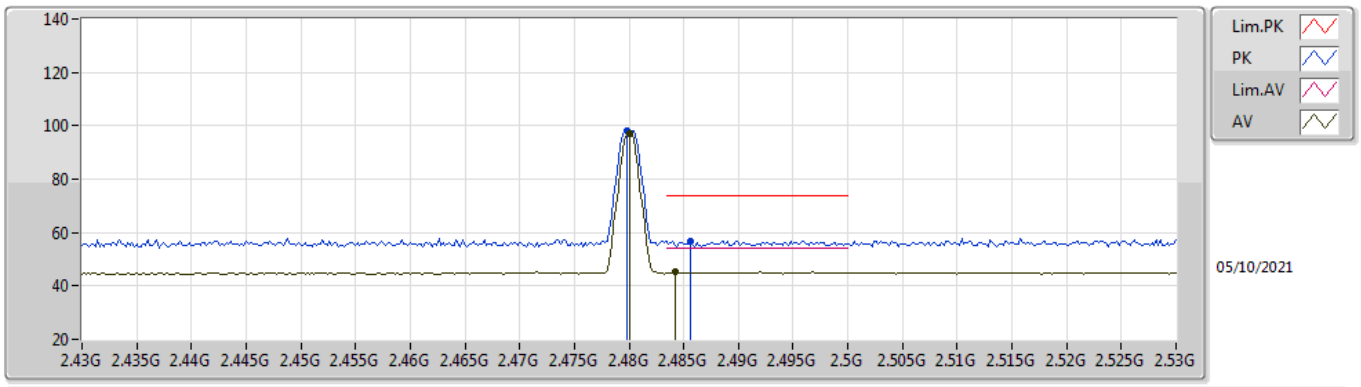
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	94.66	Inf	-Inf	32.11	3	Vertical	186	1.00	-	62.55	27.50	4.61	-
AV	2.4936G	45.15	54.00	-8.85	32.12	3	Vertical	186	1.00	-	13.03	27.50	4.62	-
PK	2.4798G	95.62	Inf	-Inf	32.11	3	Vertical	186	1.00	-	63.51	27.50	4.61	-
PK	2.4854G	57.88	74.00	-16.12	32.11	3	Vertical	186	1.00	-	25.77	27.50	4.61	-

BT-LE(1Mbps)_1TX(Port1)

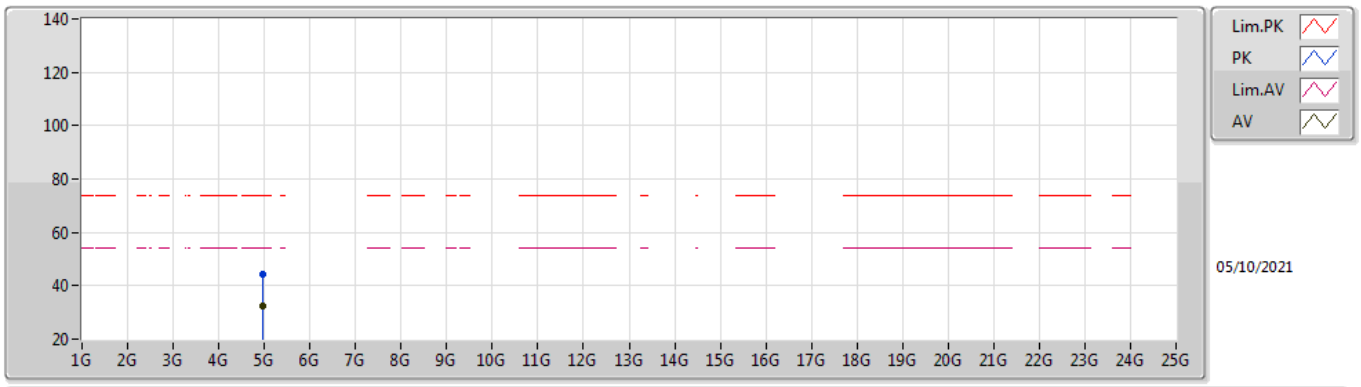
2480MHz_TX



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	97.21	Inf	-Inf	32.11	3	Horizontal	322	1.47	-	65.10	27.50	4.61	-
AV	2.4842G	45.25	54.00	-8.75	32.11	3	Horizontal	322	1.47	-	13.14	27.50	4.61	-
PK	2.4798G	98.16	Inf	-Inf	32.11	3	Horizontal	322	1.47	-	66.05	27.50	4.61	-
PK	2.4856G	56.94	74.00	-17.06	32.11	3	Horizontal	322	1.47	-	24.83	27.50	4.61	-

BT-LE(1Mbps)_1TX(Port1)

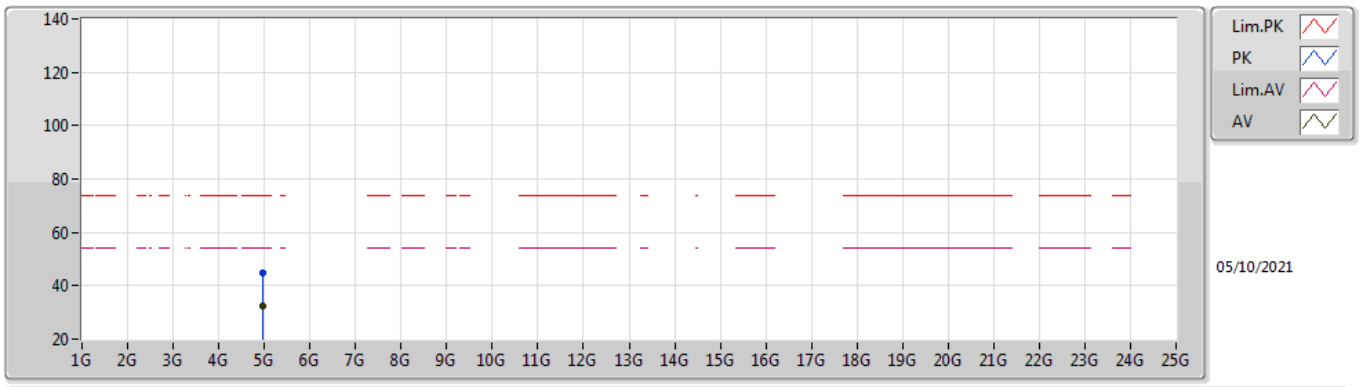
2480MHz_TX



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	4.95994G	32.50	54.00	-21.50	3.35	3	Vertical	172	2.89	-	29.15	31.34	6.78	34.77
PK	4.96011G	44.53	74.00	-29.47	3.35	3	Vertical	172	2.89	-	41.18	31.34	6.78	34.77

BT-LE(1Mbps)_1TX(Port1)

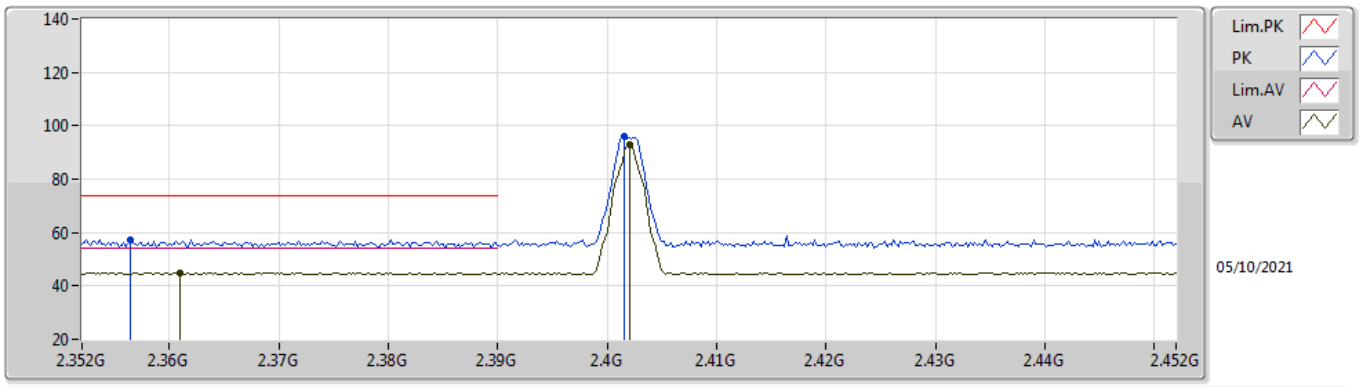
2480MHz_TX



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	4.95966G	32.41	54.00	-21.59	3.35	3	Horizontal	307	2.53	-	29.06	31.34	6.78	34.77
PK	4.961G	44.88	74.00	-29.12	3.35	3	Horizontal	307	2.53	-	41.53	31.34	6.78	34.77

BT-LE(2Mbps)_1TX(Port1)

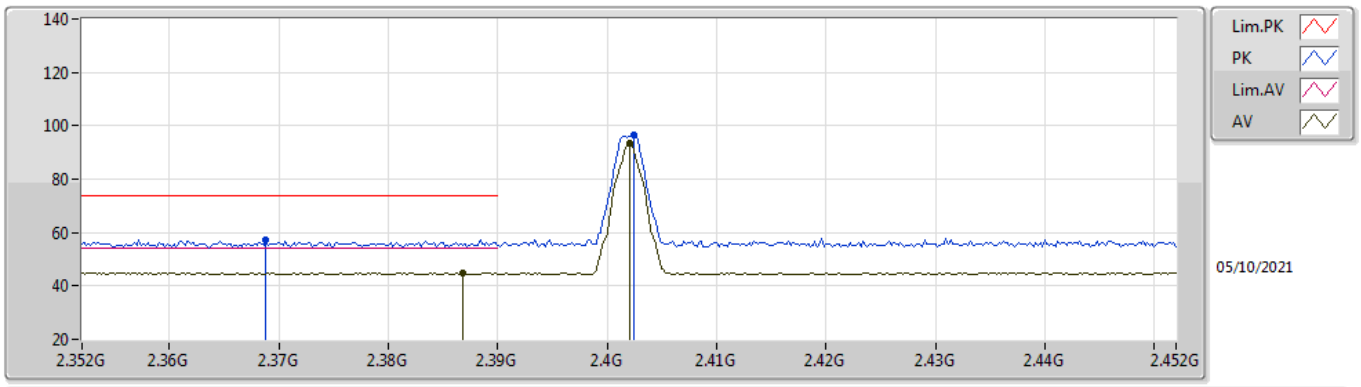
2402MHz_TX



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	2.361G	45.07	54.00	-8.93	32.30	3	Vertical	187	1.51	-	12.77	27.76	4.54	-
AV	2.402G	92.83	Inf	-Inf	32.18	3	Vertical	187	1.51	-	60.65	27.60	4.58	-
PK	2.3564G	57.31	74.00	-16.69	32.31	3	Vertical	187	1.51	-	25.00	27.77	4.54	-
PK	2.4016G	96.11	Inf	-Inf	32.18	3	Vertical	187	1.51	-	63.93	27.60	4.58	-

BT-LE(2Mbps)_1TX(Port1)

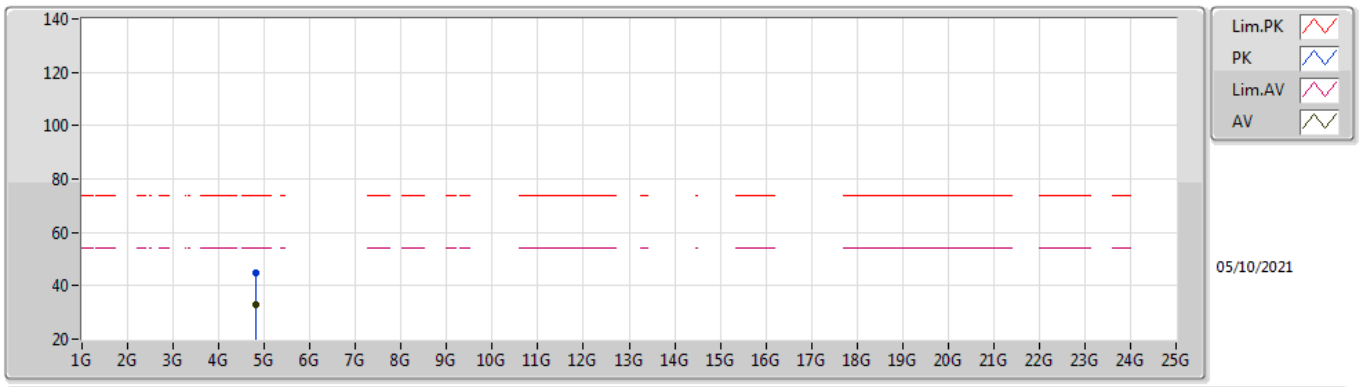
2402MHz_TX



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	44.98	54.00	-9.02	32.22	3	Horizontal	324	1.57	-	12.76	27.65	4.57	-
AV	2.402G	93.29	Inf	-Inf	32.18	3	Horizontal	324	1.57	-	61.11	27.60	4.58	-
PK	2.3688G	57.27	74.00	-16.73	32.27	3	Horizontal	324	1.57	-	25.00	27.72	4.55	-
PK	2.4024G	96.39	Inf	-Inf	32.18	3	Horizontal	324	1.57	-	64.21	27.60	4.58	-

BT-LE(2Mbps)_1TX(Port1)

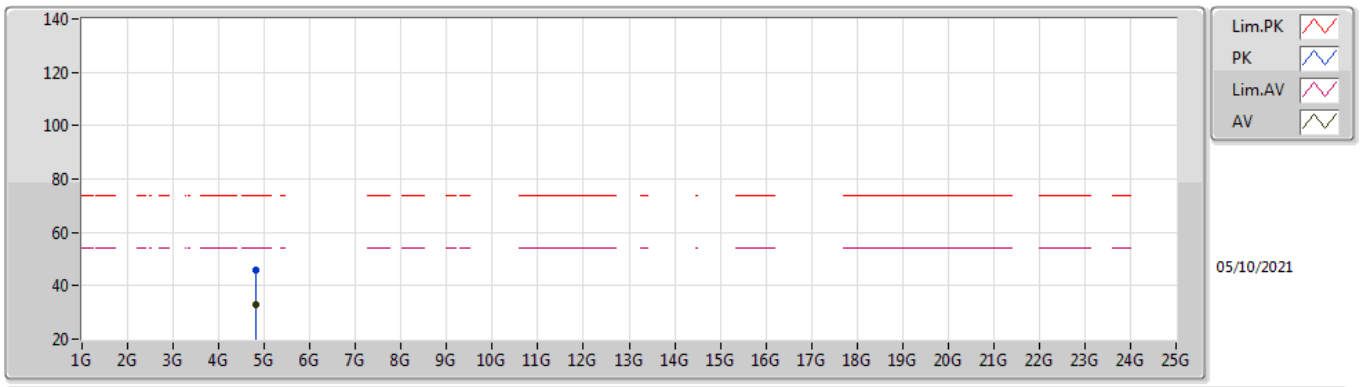
2402MHz_TX



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	4.80312G	32.86	54.00	-21.14	2.95	3	Vertical	207	2.80	-	29.91	31.10	6.66	34.81
PK	4.80399G	44.83	74.00	-29.17	2.95	3	Vertical	207	2.80	-	41.88	31.10	6.66	34.81

BT-LE(2Mbps)_1TX(Port1)

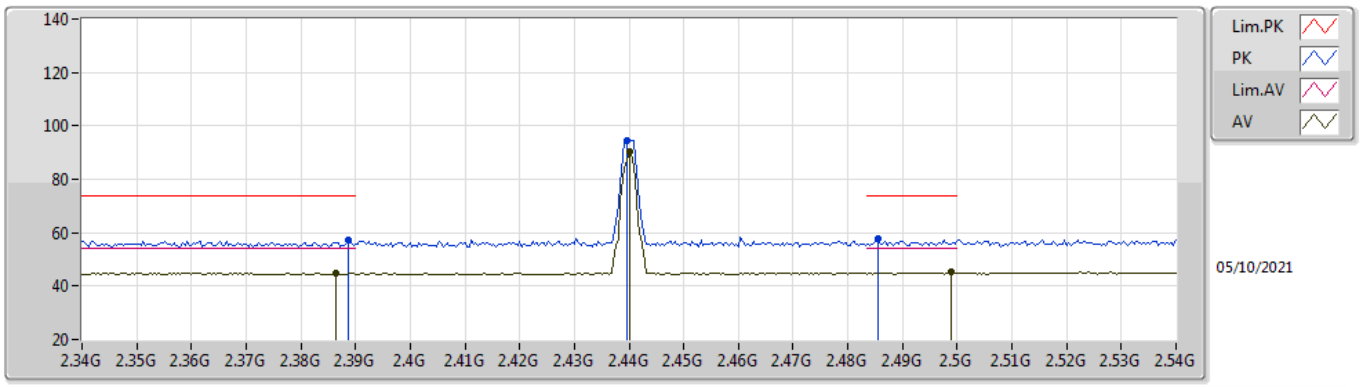
2402MHz_TX



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	4.80396G	32.83	54.00	-21.17	2.95	3	Horizontal	-0.1	1.50	-	29.88	31.10	6.66	34.81
PK	4.80328G	45.64	74.00	-28.36	2.95	3	Horizontal	-0.1	1.50	-	42.69	31.10	6.66	34.81

BT-LE(2Mbps)_1TX(Port1)

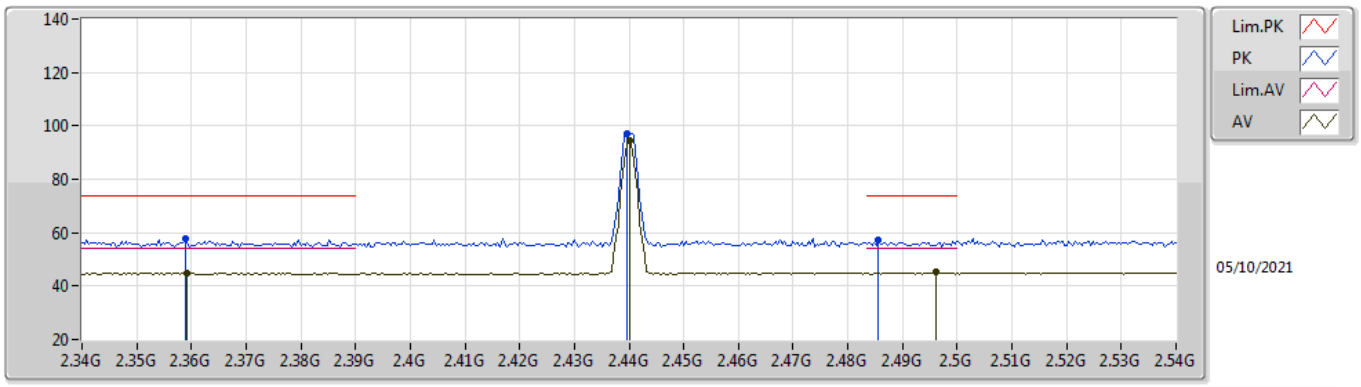
2440MHz_TX



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	2.3864G	44.80	54.00	-9.20	32.22	3	Vertical	186	1.50	-	12.58	27.65	4.57	-
AV	2.44G	90.11	Inf	-Inf	32.12	3	Vertical	186	1.50	-	57.99	27.52	4.60	-
AV	2.4988G	45.12	54.00	-8.88	32.12	3	Vertical	186	1.50	-	13.00	27.50	4.62	-
PK	2.3888G	57.00	74.00	-17.00	32.21	3	Vertical	186	1.50	-	24.79	27.64	4.57	-
PK	2.4396G	94.65	Inf	-Inf	32.12	3	Vertical	186	1.50	-	62.53	27.52	4.60	-
PK	2.4856G	57.62	74.00	-16.38	32.11	3	Vertical	186	1.50	-	25.51	27.50	4.61	-

BT-LE(2Mbps)_1TX(Port1)

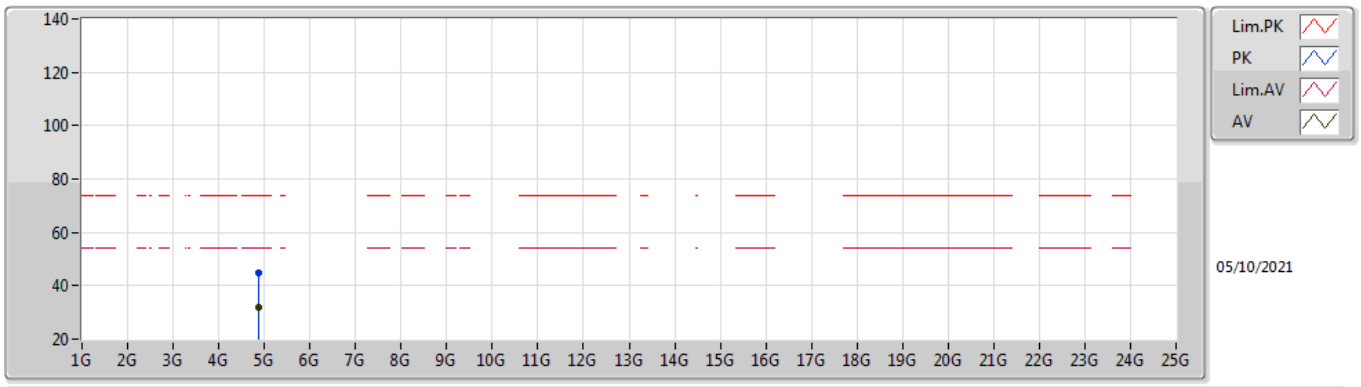
2440MHz_TX



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	2.3592G	44.97	54.00	-9.03	32.30	3	Horizontal	322	2.28	-	12.67	27.76	4.54	-
AV	2.44G	94.28	Inf	-Inf	32.12	3	Horizontal	322	2.28	-	62.16	27.52	4.60	-
AV	2.496G	45.12	54.00	-8.88	32.12	3	Horizontal	322	2.28	-	13.00	27.50	4.62	-
PK	2.3588G	57.52	74.00	-16.48	32.30	3	Horizontal	322	2.28	-	25.22	27.76	4.54	-
PK	2.4396G	97.24	Inf	-Inf	32.12	3	Horizontal	322	2.28	-	65.12	27.52	4.60	-
PK	2.4856G	56.99	74.00	-17.01	32.11	3	Horizontal	322	2.28	-	24.88	27.50	4.61	-

BT-LE(2Mbps)_1TX(Port1)

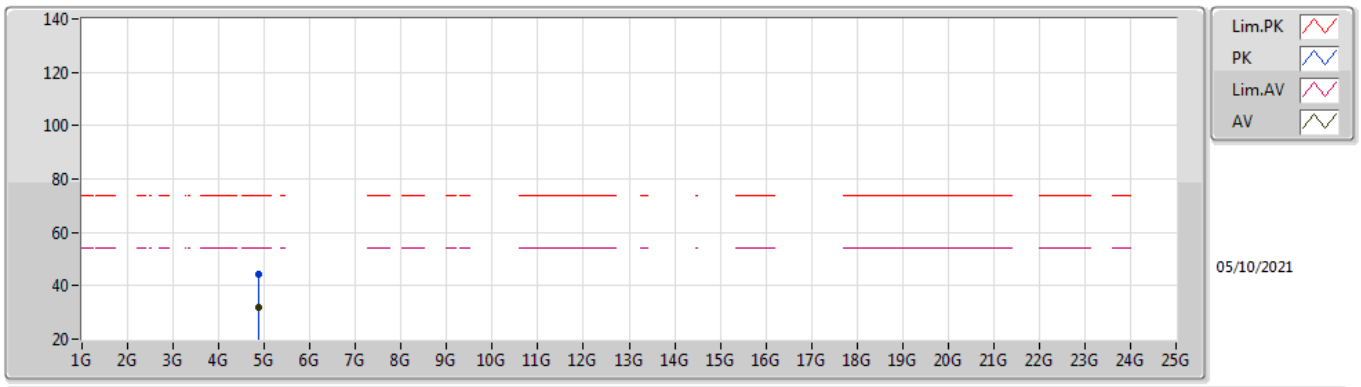
2440MHz_TX



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	4.8799G	31.80	54.00	-22.20	3.03	3	Vertical	30	1.97	-	28.77	31.10	6.72	34.79
PK	4.87932G	44.74	74.00	-29.26	3.03	3	Vertical	30	1.97	-	41.71	31.10	6.72	34.79

BT-LE(2Mbps)_1TX(Port1)

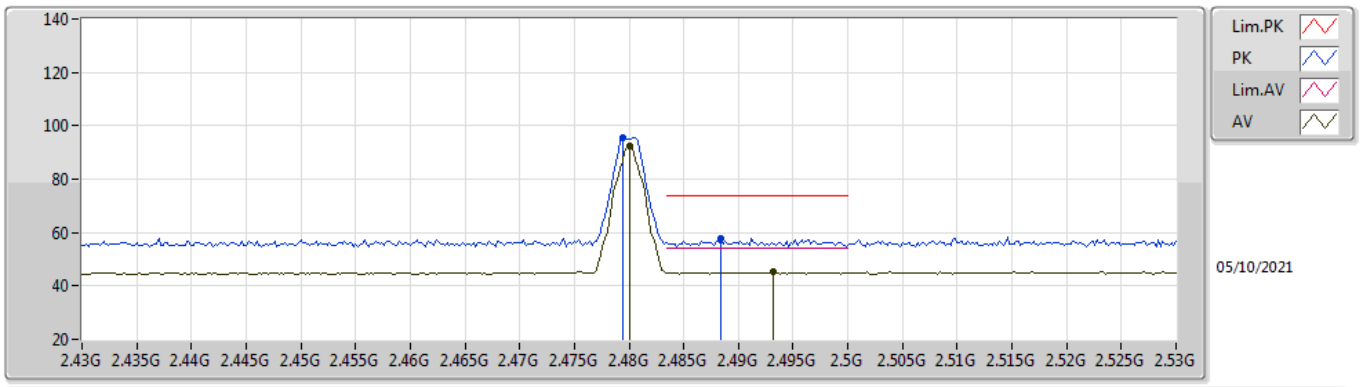
2440MHz_TX



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	4.87944G	31.88	54.00	-22.12	3.03	3	Horizontal	209	1.24	-	28.85	31.10	6.72	34.79
PK	4.88006G	44.39	74.00	-29.61	3.03	3	Horizontal	209	1.24	-	41.36	31.10	6.72	34.79

BT-LE(2Mbps)_1TX(Port1)

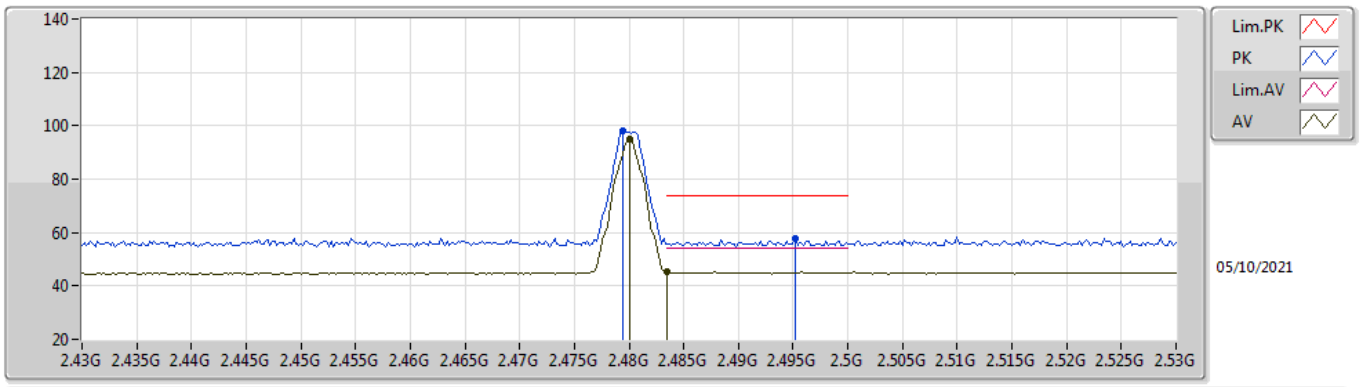
2480MHz_TX



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	92.53	Inf	-Inf	32.11	3	Vertical	183	1.65	-	60.42	27.50	4.61	-
AV	2.4932G	45.09	54.00	-8.91	32.12	3	Vertical	183	1.65	-	12.97	27.50	4.62	-
PK	2.4794G	95.54	Inf	-Inf	32.11	3	Vertical	183	1.65	-	63.43	27.50	4.61	-
PK	2.4884G	57.92	74.00	-16.08	32.12	3	Vertical	183	1.65	-	25.80	27.50	4.62	-

BT-LE(2Mbps)_1TX(Port1)

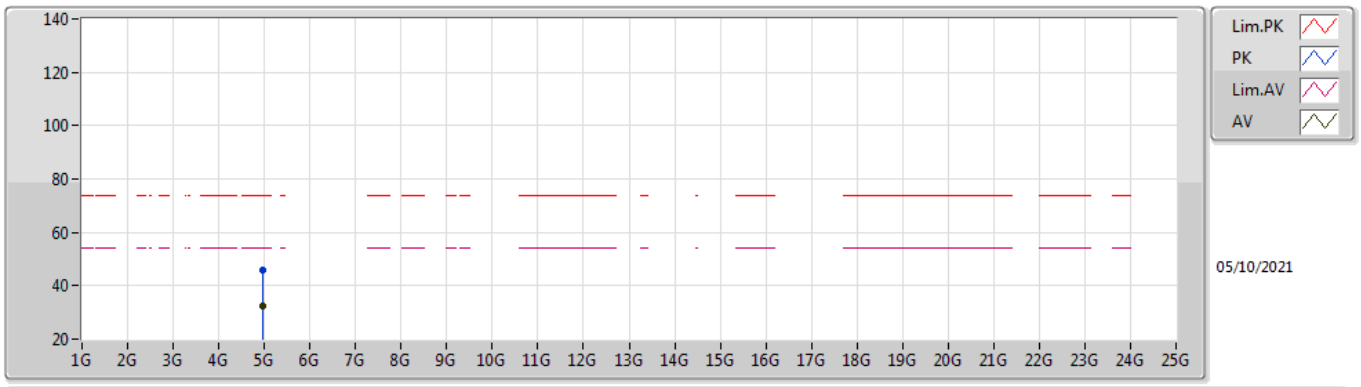
2480MHz_TX



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	95.03	Inf	-Inf	32.11	3	Horizontal	318	1.50	-	62.92	27.50	4.61	-
AV	2.4835G	45.24	54.00	-8.76	32.11	3	Horizontal	318	1.50	-	13.13	27.50	4.61	-
PK	2.4794G	97.99	Inf	-Inf	32.11	3	Horizontal	318	1.50	-	65.88	27.50	4.61	-
PK	2.4952G	57.80	74.00	-16.20	32.12	3	Horizontal	318	1.50	-	25.68	27.50	4.62	-

BT-LE(2Mbps)_1TX(Port1)

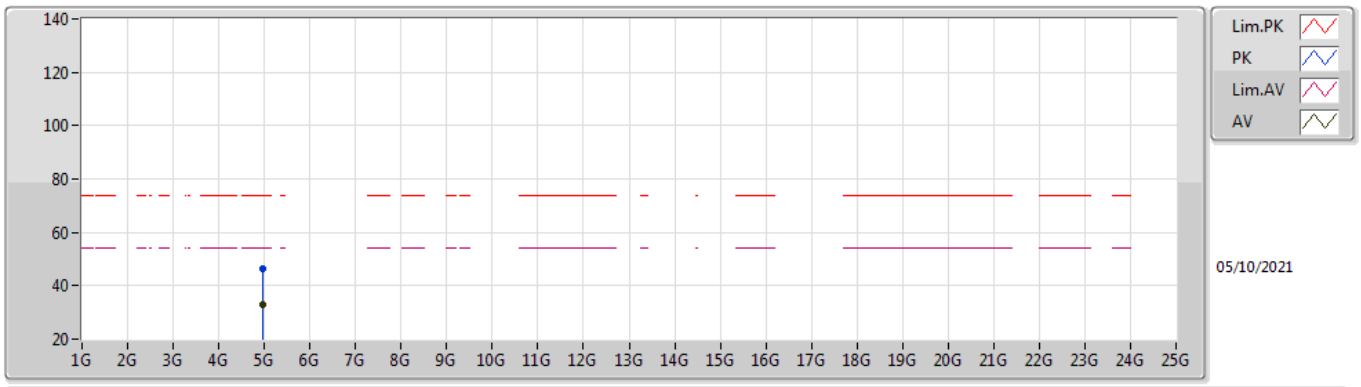
2480MHz_TX



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	4.96056G	32.45	54.00	-21.55	3.35	3	Vertical	36	2.17	-	29.10	31.34	6.78	34.77
PK	4.95934G	45.88	74.00	-28.12	3.35	3	Vertical	36	2.17	-	42.53	31.34	6.78	34.77

BT-LE(2Mbps)_1TX(Port1)

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	4.96084G	33.10	54.00	-20.90	3.35	3	Horizontal	34	3.00	-	29.75	31.34	6.78	34.77
PK	4.96085G	46.63	74.00	-27.37	3.35	3	Horizontal	34	3.00	-	43.28	31.34	6.78	34.77