Testing Laboratory 3785

FCC Radio Test Report

FCC ID	:	**C3K2028**
Equipment	:	**Computing Device**
Brand Name	:	**Microsoft Corporation**
Model Name	:	**2028**
Applicant	:	**Microsoft Corporation One Microsoft Way Redmond, WA 98052-6399, U.S.A.**
Manufacturer	:	**Microsoft Corporation One Microsoft Way Redmond, WA 98052-6399, U.S.A.**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Mar. 16, 2022, and testing was started from Apr. 02, 2022 and completed on Jul. 28, 2022. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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

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History of this test report

Report No.	Version	Description	Issued Date
FR230421AL	01	Initial issue of report	Aug. 09, 2022
FR230421AL	02	1. Add Duty Cycle plots This report is the latest version replacing for the report issued on Aug. 09, 2022	Aug. 18, 2022
FR230421AL	03	Revised typo This report is the latest version replacing for the report issued on Aug. 18, 2022	Sep. 13, 2022
FR230421AL	04	The Equipment Name and accessory was updated This report is the latest version replacing for the report issued on Sep. 13, 2022	Sep. 16, 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: Ben Tseng

Report Producer: Jenny Yang

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

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1 (Aux)	AWAN	AYP8Y-100012A(1415-09AW0QS) AYL00-000003A(1415-09AN0QS)	PIFA	I-Pex	2.4G+5G
2 (Main)	AWAN	AYP8Y-100011A(1415-09AM0QS) AYL00-000002A(1415-09AP0QS)	PIFA	I-Pex	2.4G+5G
3	AWAN	AYL8Y-100000A (1415-09AQ0QS)	PIFA	I-Pex	BT/BT LE

Ant.	Port	Gain (dBi)					
		2.4G	5G				BT/BT LE
			U-NII-1	U-NII-2A	U-NII-2C	U-NII-3	
1	1	7.32	6.35	6.35	6.49	6.49	-
2	2	6.07	6.2	6.35	6.15	5.03	-
3	1	-	-	-	-	-	2.91

Note 1: The EUT has three antennas.

Note 2: Transmit signals are uncorrelated.

For 2.4GHz function:

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

Support diversity function that each single chain was tested and recorded in this test report.

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

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For BT/BT LE function:

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

Ant. 3 (port 1) could transmit/receive.

For 5GHz function:
For IEEE 802.11 a mode (1TX/1RX)
Support diversity function that each single chain was tested and recorded in this test report.
For IEEE 802.11 n/ac/ax mode (2TX/2RX)
Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition					
EUT Power Type	From Switching 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:				

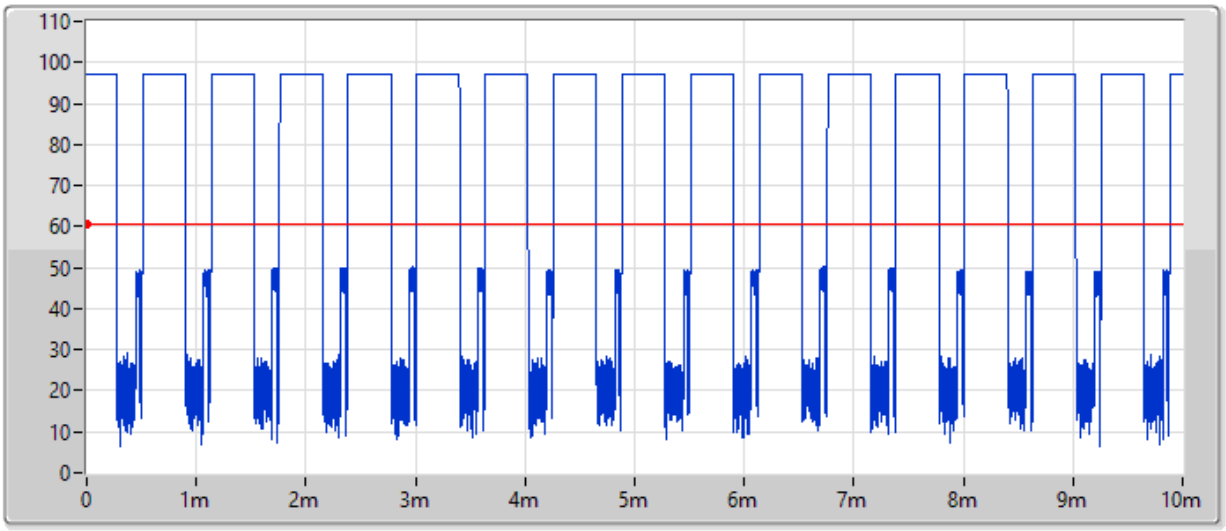
1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.627	2.03	391.875u	3k
BT-LE(2Mbps)	0.334	4.76	208.75u	10k

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

BT-LE(1Mbps)

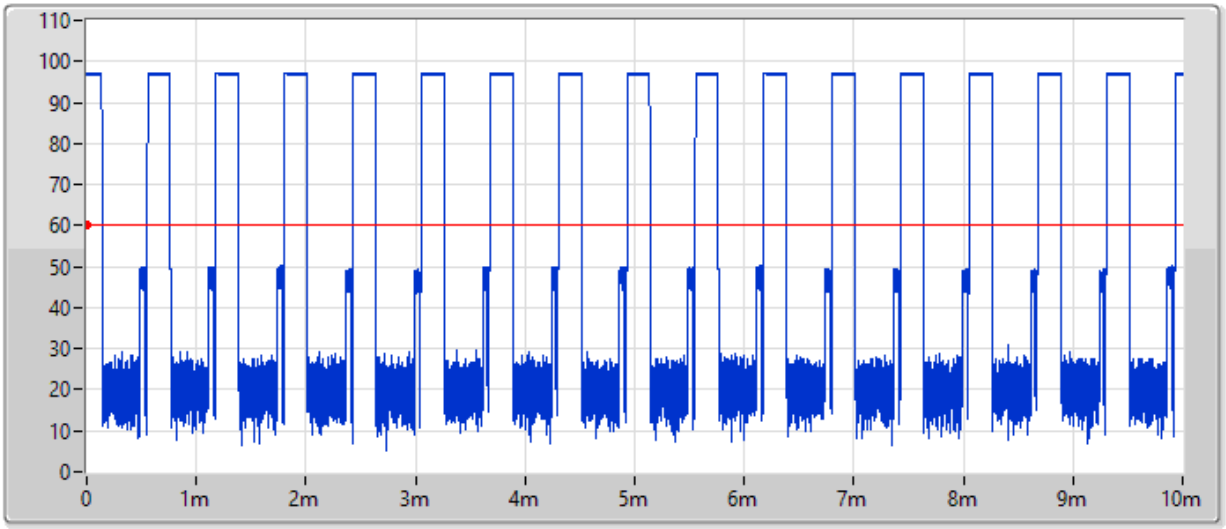
DC;BT-LE;BWch:1.0



Ch Freq	RBW	VBW	Sweep Time	Total Sample	Sample Time	TX Time	DC
2.402GHz	3MHz	10MHz	10ms	32001	312.5ns	6.270313ms	0.627

BT-LE(2Mbps)

DC;BT-LE2;BWch:2.0



Ch Freq	RBW	VBW	Sweep Time	Total Sample	Sample Time	TX Time	DC
2.402GHz	3MHz	10MHz	10ms	32001	312.5ns	3.3375ms	0.334

1.2 Testing Applied Standards

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

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

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

- KDB 558074 D01 v05r02
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
(TAF: 3785**)**	**TEL:** 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction	CO04-HY	Wayne Chiu	21.4~22.4°C / 55~58%	27/Jul/2022~28/Jul/2022
RF Conducted	TH01-HY	Johnny Yu	22.3~26.9°C / 54~59%	08/Apr/2022~08/Jul/2022
Radiated	03CH03-HY	Daniel Lin	20.7~25.3°C / 51~66%	02/Apr/2022~19/Jul/2022
☐ Wen 33rd.St.	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
(TAF: 3785**)**	**TEL:** 886-3-318-0787		**FAX:** 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				

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	DRTU.00918.22.120.0

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	Switching power supply mode
2	Switching power supply mode, Full port

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	Switching power supply mode	
2	Switching power supply mode, Full port	
Operating Mode > 1GHz	CTX	
Orthogonal Planes of EUT	**Y Plane**	**Z Plane**
		
Worst Planes of EUT	V	

2.3 Accessories

Accessories		
Keyboard	Brand Name	Microsoft
mouse	Brand Name	Microsoft
pen	Brand Name	Microsoft
power supply	Brand Name	WELLSHIN

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

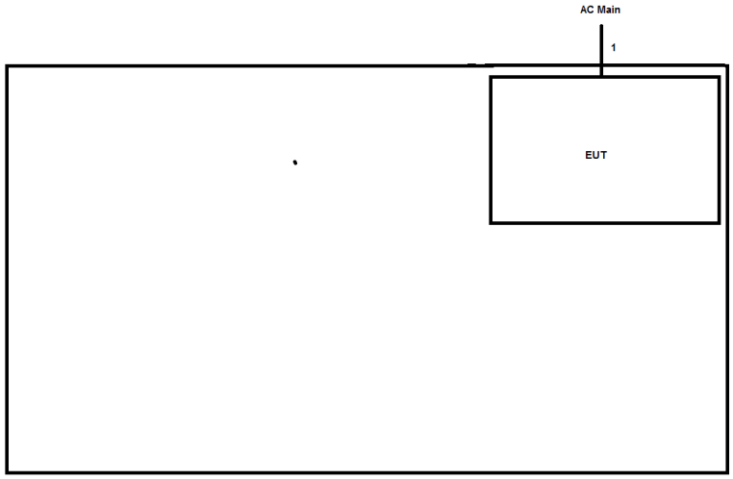
2.4 Support Equipment

Support Equipment – AC Conduction					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	IPod	APPLE	A1199	-	-
2	30-pin to USB Original cable	APPLE	MA591GC	-	-
3	Mouse(USB)	Lenovo	MOGOUO	-	-
4	earphone	APPLE	MD827FE/A	-	-
5	Portable SSD(3.1)	TRANSCEND	TS240GESD240C	-	-
6	USB 3.0 Flash	SandDisk	SDDDC-128G-G36	-	-
7	USB 3.0 Flash	SandDisk	SDDDC-128G-G36	-	-
8	load	Sporton	Sporton	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	IPod	APPLE	A1199	-	-
2	30-pin to USB Original cable	APPLE	MA591GC	-	-
3	Mouse(USB)	Lenovo	MOGOUO	-	-
4	earphone	APPLE	MD827FE/A	-	-
5	Portable SSD(3.1)	TRANSCEND	TS240GESD240C	-	-
6	USB 3.0 Flash	SandDisk	SDDDC-128G-G36	-	-
7	USB 3.0 Flash	SandDisk	SDDDC-128G-G36	-	-
8	load	Sporton	Sporton	-	-

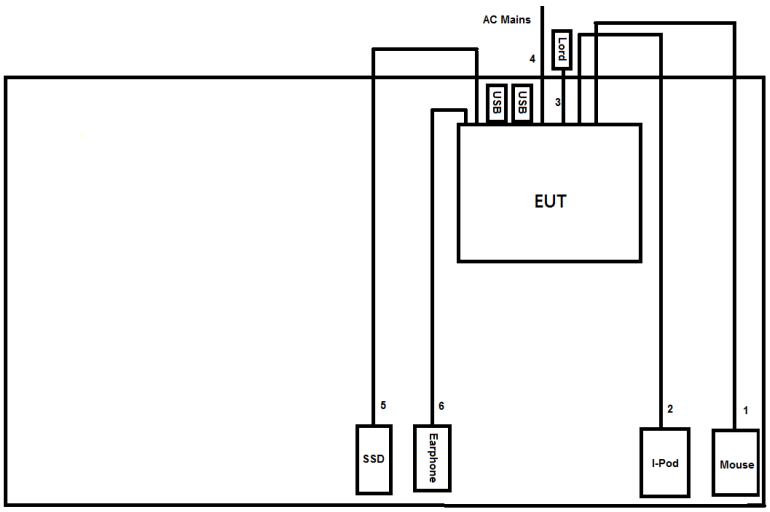
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



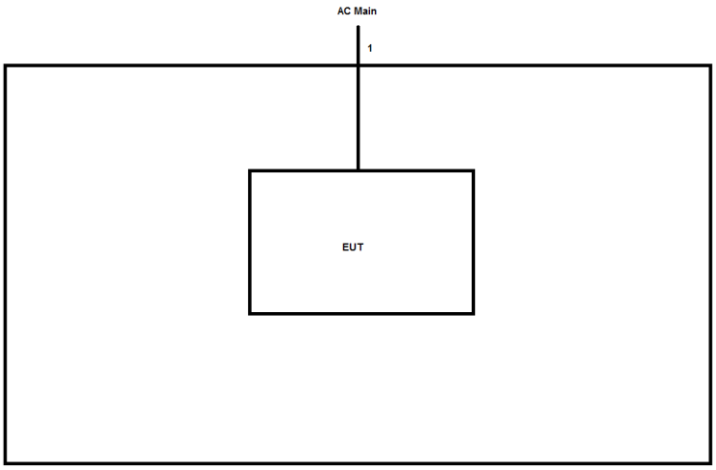
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-

Test Setup Diagram – AC Line Conducted Emission Test (Full port)



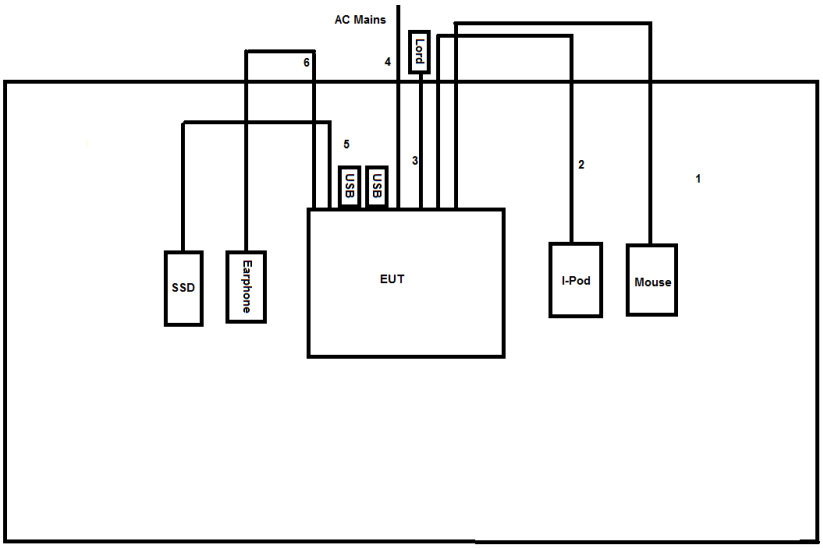
Item	Connection	Shielded	Length(m)	Remark
1	USB cable	No	1.0	-
2	30-pin to USB Original Cable	No	1.0	-
3	RJ45 cable	No	1.0	-
4	AC Power cable	No	1.8	-
5	USB cable	No	1.0	-
6	Audio cable	No	1.25	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-

Test Setup Diagram - Radiated Test(Full port)



Item	Connection	Shielded	Length(m)	Remark
1	USB cable	No	1.0	-
2	30-pin to USB Original Cable	No	1.0	-
3	RJ45 cable	No	1.0	-
4	AC Power cable	No	1.8	-
5	USB cable	No	1.0	-
6	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

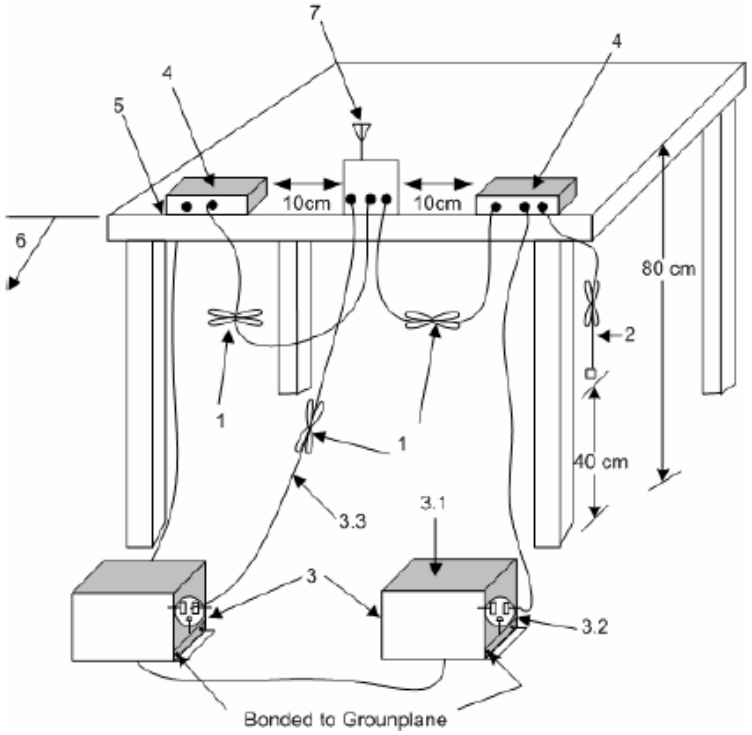
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

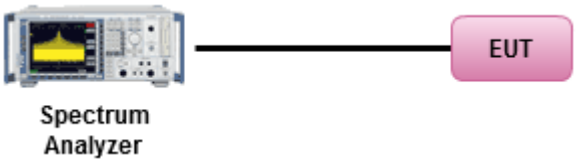
3.2.2 Measuring Instruments

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 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} ≤ 6 dBi, then P_{Out} ≤ 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 + 8dB dBm	
e.i.r.p. Power Limit:			
▪ 2400-2483.5 MHz Band			
	▪ Point-to-multipoint systems (P2M): P_{eirp} ≤ 36 dBm (4 W)		
	▪ Point-to-point systems (P2P): P_{eirp} ≤ MAX(36, [P_{Out} + G_{TX}]) dBm		
	▪ Smart antenna system (SAS)		
		- Single beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Overlap beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Aggregate power on all beams: P_{eirp} ≤ 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

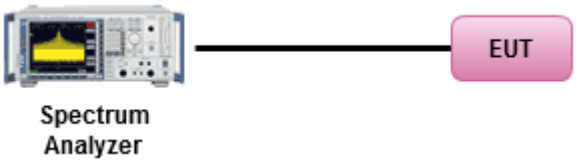
3.4.2 Measuring Instruments

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.	

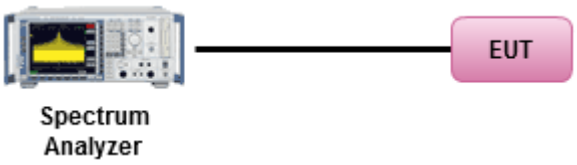
3.5.2 Measuring Instruments

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.

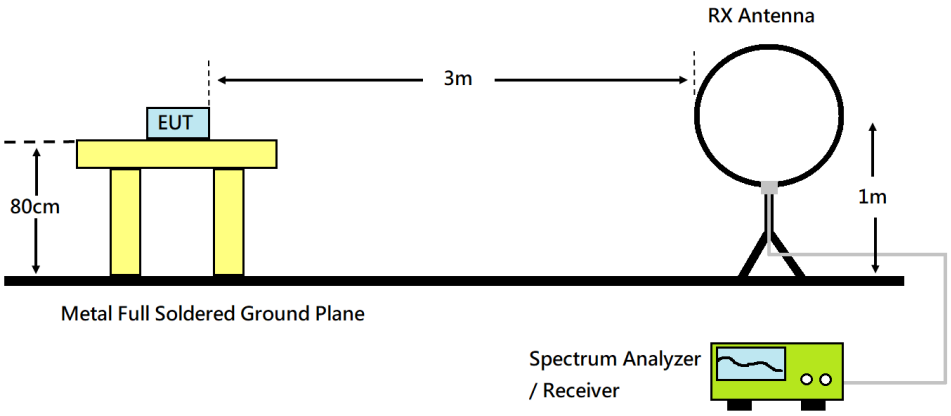
3.6.4 Measurement Results Calculation

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

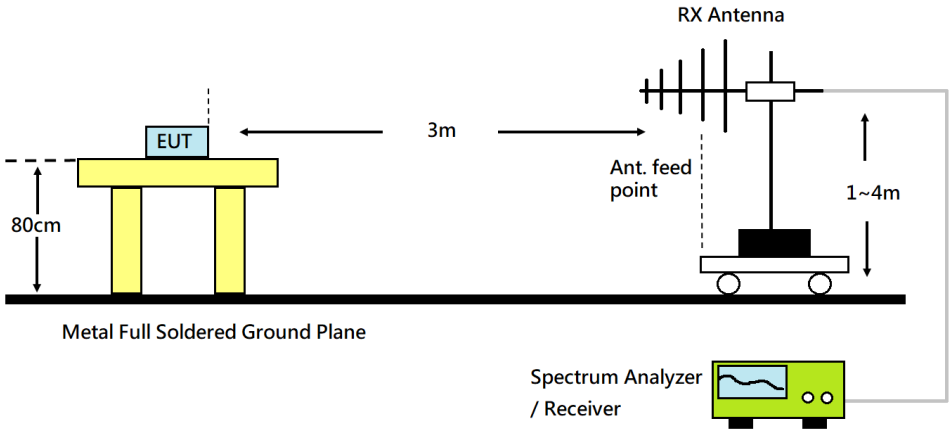
3.6.5 Test Setup

Emissions in Restricted Frequency Bands

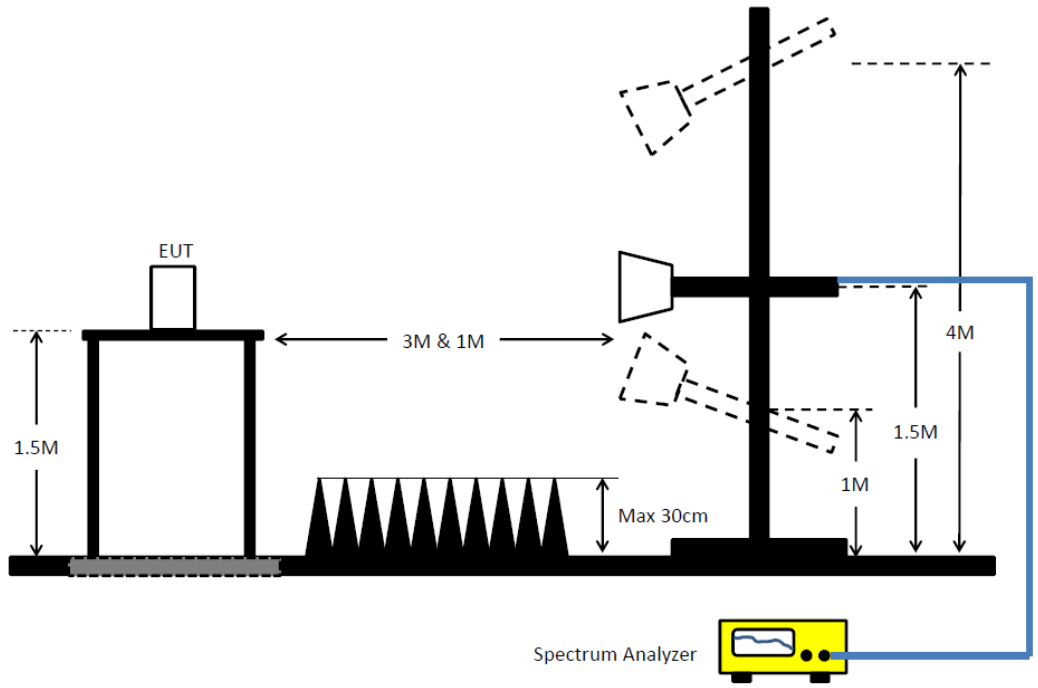
9kHz ~30MHz



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	13/May/2022	12/May/2023
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	18/Feb/2022	17/Feb/2023
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	01/Mar/2022	28/Feb/2023
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	26/Oct/2021	25/Oct/2022
Software	Sporton	SENSE-EMI	V5.10.8.2	-	NCR	NCR

NCR: No Calibration Required

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	01/Apr/2022	31/Mar/2023
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	21/Feb/2022	20/Feb/2023
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	21/Feb/2022	20/Feb/2023
SENSE-15247_FS	Sporton	V5.10.7.14	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	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	08/Apr/2022	07/Apr/2023
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	02267	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	CB021	9kHz~30MHz	13/Jun/2022	12/Jun/2023
RF Cable-R03m	Jye Bao	RG142	MY37335/4+CB021-1+CB021-2	30MHz~1GHz	22/Mar/2022	21/Mar/2023
RF CABLE 5+6m	HUBER+ SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	28/Jul/2021	27/Jul/2022
Microwave Preamplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	15/Jul/2021	14/Jul/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	18/Mar/2022	17/Mar/2023
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	08/Mar/2022	07/Mar/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	18/Mar/2022	17/Mar/2023
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	02/Jun/2021	01/Jun/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	13/May/2022	12/May/2023
SENSE-15247_FS	Sporton	v5.10.7.14	N/A	N/A	N/A	N/A

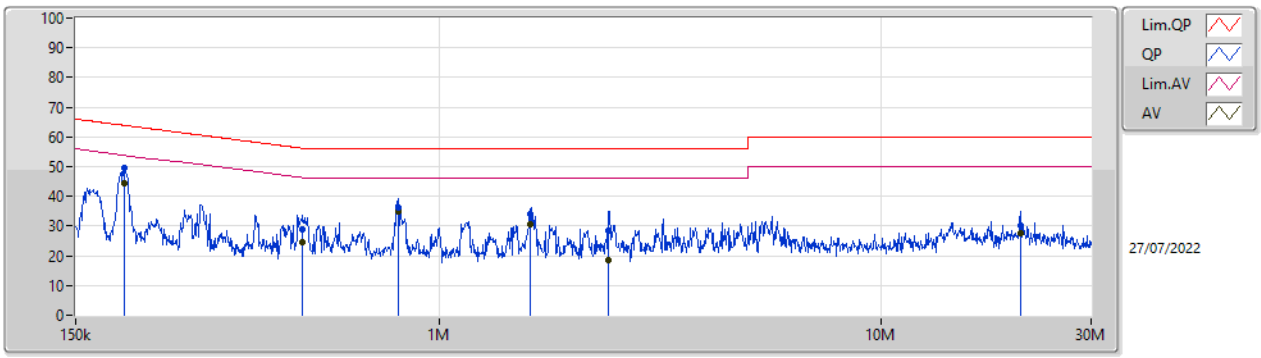
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	192.892k	44.75	53.92	-9.17	Neutral
Mode 2	Pass	AV	192.124k	44.87	53.93	-9.06	Line

Mode Configure

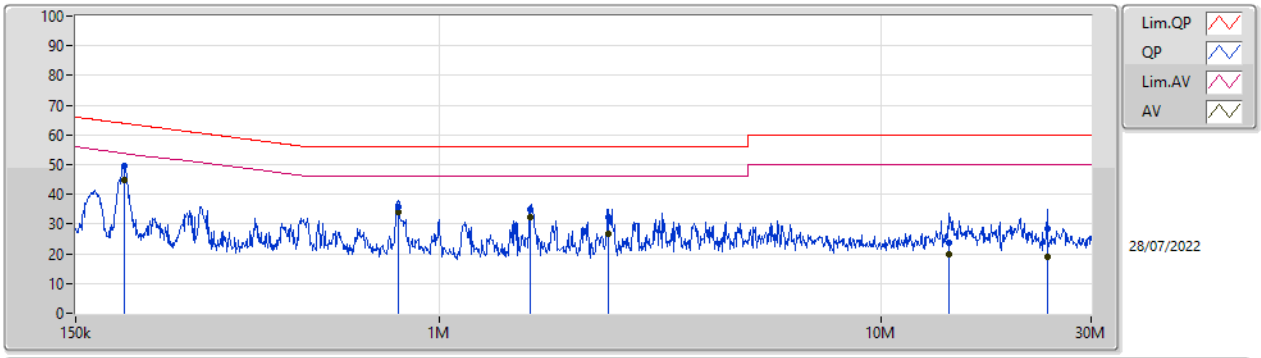
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	193.664k	49.49	63.88	-14.39	Line	-
Mode 1	Pass	AV	193.664k	44.53	53.88	-9.35	Line	-
Mode 1	Pass	QP	490.912k	29.00	56.15	-27.15	Line	-
Mode 1	Pass	AV	490.912k	24.51	46.15	-21.64	Line	-
Mode 1	Pass	QP	805.349k	36.36	56.00	-19.64	Line	-
Mode 1	Pass	AV	805.349k	34.93	46.00	-11.07	Line	-
Mode 1	Pass	QP	1.613M	33.97	56.00	-22.03	Line	-
Mode 1	Pass	AV	1.613M	30.55	46.00	-15.45	Line	-
Mode 1	Pass	QP	2.424M	28.50	56.00	-27.50	Line	-
Mode 1	Pass	AV	2.424M	18.36	46.00	-27.64	Line	-
Mode 1	Pass	QP	20.76M	30.15	60.00	-29.85	Line	-
Mode 1	Pass	AV	20.76M	27.76	50.00	-22.24	Line	-
Mode 1	Pass	QP	192.892k	49.40	63.92	-14.52	Neutral	-
Mode 1	Pass	AV	192.892k	44.75	53.92	-9.17	Neutral	-
Mode 1	Pass	QP	805.349k	35.86	56.00	-20.14	Neutral	-
Mode 1	Pass	AV	805.349k	34.12	46.00	-11.88	Neutral	-
Mode 1	Pass	QP	1.613M	34.76	56.00	-21.24	Neutral	-
Mode 1	Pass	AV	1.613M	32.42	46.00	-13.58	Neutral	-
Mode 1	Pass	QP	2.414M	32.53	56.00	-23.47	Neutral	-
Mode 1	Pass	AV	2.414M	26.88	46.00	-19.12	Neutral	-
Mode 1	Pass	QP	14.265M	23.90	60.00	-36.10	Neutral	-
Mode 1	Pass	AV	14.265M	20.00	50.00	-30.00	Neutral	-
Mode 1	Pass	QP	23.873M	28.28	60.00	-31.72	Neutral	-
Mode 1	Pass	AV	23.873M	18.99	50.00	-31.01	Neutral	-
Mode 2	Pass	QP	166.406k	40.40	65.14	-24.74	Line	-
Mode 2	Pass	AV	166.406k	39.16	55.14	-15.98	Line	-
Mode 2	Pass	QP	192.124k	49.82	63.93	-14.11	Line	-
Mode 2	Pass	AV	192.124k	44.87	53.93	-9.06	Line	-
Mode 2	Pass	QP	805.349k	36.44	56.00	-19.56	Line	-
Mode 2	Pass	AV	805.349k	35.07	46.00	-10.93	Line	-
Mode 2	Pass	QP	1.607M	33.55	56.00	-22.45	Line	-
Mode 2	Pass	AV	1.607M	29.69	46.00	-16.31	Line	-
Mode 2	Pass	QP	2.424M	29.75	56.00	-26.25	Line	-
Mode 2	Pass	AV	2.424M	20.11	46.00	-25.89	Line	-
Mode 2	Pass	QP	20.107M	24.73	60.00	-35.27	Line	-
Mode 2	Pass	AV	20.107M	19.31	50.00	-30.69	Line	-
Mode 2	Pass	QP	192.124k	49.46	63.93	-14.47	Neutral	-
Mode 2	Pass	AV	192.124k	44.78	53.93	-9.15	Neutral	-
Mode 2	Pass	QP	805.349k	36.49	56.00	-19.51	Neutral	-
Mode 2	Pass	AV	805.349k	34.41	46.00	-11.59	Neutral	-
Mode 2	Pass	QP	1.626M	32.56	56.00	-23.44	Neutral	-
Mode 2	Pass	AV	1.626M	20.98	46.00	-25.02	Neutral	-
Mode 2	Pass	QP	2.404M	33.05	56.00	-22.95	Neutral	-
Mode 2	Pass	AV	2.404M	28.99	46.00	-17.01	Neutral	-
Mode 2	Pass	QP	3.205M	25.46	56.00	-30.54	Neutral	-
Mode 2	Pass	AV	3.205M	16.20	46.00	-29.80	Neutral	-
Mode 2	Pass	QP	20.76M	30.97	60.00	-29.03	Neutral	-
Mode 2	Pass	AV	20.76M	28.62	50.00	-21.38	Neutral	-

Conducted Emissions at Powerline_Mode 1



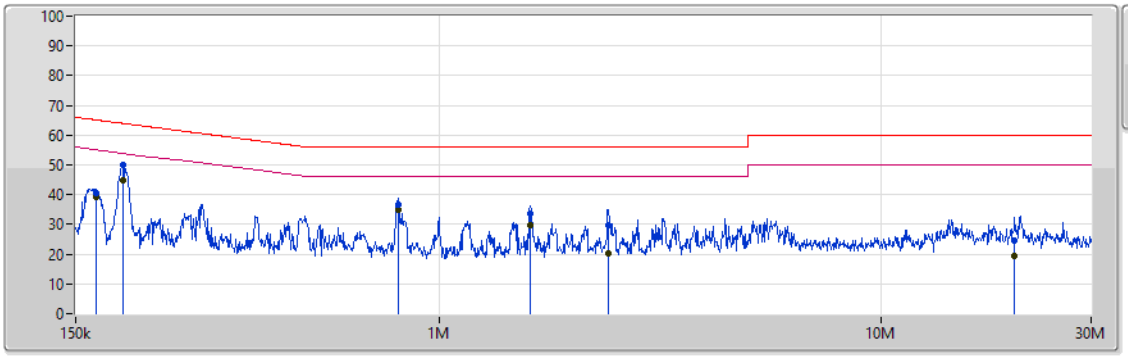
Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	193.664k	49.49	63.88	-14.39	19.63	Line	-	29.86	9.69	0.03	9.91
AV	193.664k	44.53	53.88	-9.35	19.63	Line	-	24.90	9.69	0.03	9.91
QP	490.912k	29.00	56.15	-27.15	19.63	Line	-	9.37	9.68	0.04	9.91
AV	490.912k	24.51	46.15	-21.64	19.63	Line	-	4.88	9.68	0.04	9.91
QP	805.349k	36.36	56.00	-19.64	19.65	Line	-	16.71	9.68	0.05	9.92
AV	805.349k	34.93	46.00	-11.07	19.65	Line	-	15.28	9.68	0.05	9.92
QP	1.613M	33.97	56.00	-22.03	19.68	Line	-	14.29	9.69	0.07	9.92
AV	1.613M	30.55	46.00	-15.45	19.68	Line	-	10.87	9.69	0.07	9.92
QP	2.424M	28.50	56.00	-27.50	19.71	Line	-	8.79	9.70	0.09	9.92
AV	2.424M	18.36	46.00	-27.64	19.71	Line	-	-1.35	9.70	0.09	9.92
QP	20.76M	30.15	60.00	-29.85	20.00	Line	-	10.15	9.79	0.28	9.93
AV	20.76M	27.76	50.00	-22.24	20.00	Line	-	7.76	9.79	0.28	9.93

Conducted Emissions at Powerline_Mode 1



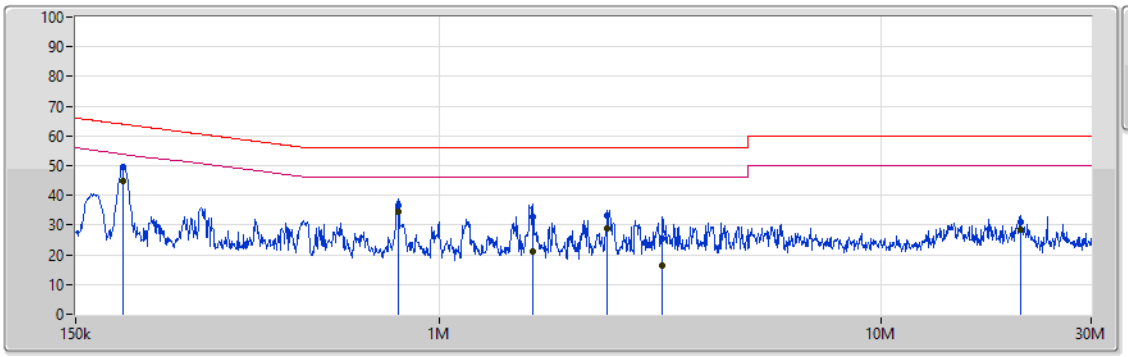
Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	192.892k	49.40	63.92	-14.52	19.66	Neutral	-	29.74	9.72	0.03	9.91
AV	192.892k	44.75	53.92	-9.17	19.66	Neutral	-	25.09	9.72	0.03	9.91
QP	805.349k	35.86	56.00	-20.14	19.70	Neutral	-	16.16	9.73	0.05	9.92
AV	805.349k	34.12	46.00	-11.88	19.70	Neutral	-	14.42	9.73	0.05	9.92
QP	1.613M	34.76	56.00	-21.24	19.73	Neutral	-	15.03	9.74	0.07	9.92
AV	1.613M	32.42	46.00	-13.58	19.73	Neutral	-	12.69	9.74	0.07	9.92
QP	2.414M	32.53	56.00	-23.47	19.76	Neutral	-	12.77	9.75	0.09	9.92
AV	2.414M	26.88	46.00	-19.12	19.76	Neutral	-	7.12	9.75	0.09	9.92
QP	14.265M	23.90	60.00	-36.10	20.10	Neutral	-	3.80	9.94	0.23	9.93
AV	14.265M	20.00	50.00	-30.00	20.10	Neutral	-	-0.10	9.94	0.23	9.93
QP	23.873M	28.28	60.00	-31.72	20.29	Neutral	-	7.99	10.06	0.30	9.93
AV	23.873M	18.99	50.00	-31.01	20.29	Neutral	-	-1.30	10.06	0.30	9.93

Conducted Emissions at Powerline_Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	166.406k	40.40	65.14	-24.74	19.63	Line	-	20.77	9.69	0.03	9.91
AV	166.406k	39.16	55.14	-15.98	19.63	Line	-	19.53	9.69	0.03	9.91
QP	192.124k	49.82	63.93	-14.11	19.63	Line	-	30.19	9.69	0.03	9.91
AV	192.124k	44.87	53.93	-9.06	19.63	Line	-	25.24	9.69	0.03	9.91
QP	805.349k	36.44	56.00	-19.56	19.65	Line	-	16.79	9.68	0.05	9.92
AV	805.349k	35.07	46.00	-10.93	19.65	Line	-	15.42	9.68	0.05	9.92
QP	1.607M	33.55	56.00	-22.45	19.68	Line	-	13.87	9.69	0.07	9.92
AV	1.607M	29.69	46.00	-16.31	19.68	Line	-	10.01	9.69	0.07	9.92
QP	2.424M	29.75	56.00	-26.25	19.71	Line	-	10.04	9.70	0.09	9.92
AV	2.424M	20.11	46.00	-25.89	19.71	Line	-	0.40	9.70	0.09	9.92
QP	20.107M	24.73	60.00	-35.27	19.99	Line	-	4.74	9.79	0.27	9.93
AV	20.107M	19.31	50.00	-30.69	19.99	Line	-	-0.68	9.79	0.27	9.93

Conducted Emissions at Powerline_Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	192.124k	49.46	63.93	-14.47	19.66	Neutral	-	29.80	9.72	0.03	9.91
AV	192.124k	44.78	53.93	-9.15	19.66	Neutral	-	25.12	9.72	0.03	9.91
QP	805.349k	36.49	56.00	-19.51	19.70	Neutral	-	16.79	9.73	0.05	9.92
AV	805.349k	34.41	46.00	-11.59	19.70	Neutral	-	14.71	9.73	0.05	9.92
QP	1.626M	32.56	56.00	-23.44	19.73	Neutral	-	12.83	9.74	0.07	9.92
AV	1.626M	20.98	46.00	-25.02	19.73	Neutral	-	1.25	9.74	0.07	9.92
QP	2.404M	33.05	56.00	-22.95	19.76	Neutral	-	13.29	9.75	0.09	9.92
AV	2.404M	28.99	46.00	-17.01	19.76	Neutral	-	9.23	9.75	0.09	9.92
QP	3.205M	25.46	56.00	-30.54	19.78	Neutral	-	5.68	9.75	0.11	9.92
AV	3.205M	16.20	46.00	-29.80	19.78	Neutral	-	-3.58	9.75	0.11	9.92
QP	20.76M	30.97	60.00	-29.03	20.21	Neutral	-	10.76	10.00	0.28	9.93
AV	20.76M	28.62	50.00	-21.38	20.21	Neutral	-	8.41	10.00	0.28	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-LE(1Mbps)	670k	1.019M	1M02F1D	665k	1.018M
BT-LE(2Mbps)	1.145M	2.001M	2M00F1D	1.143M	1.992M

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

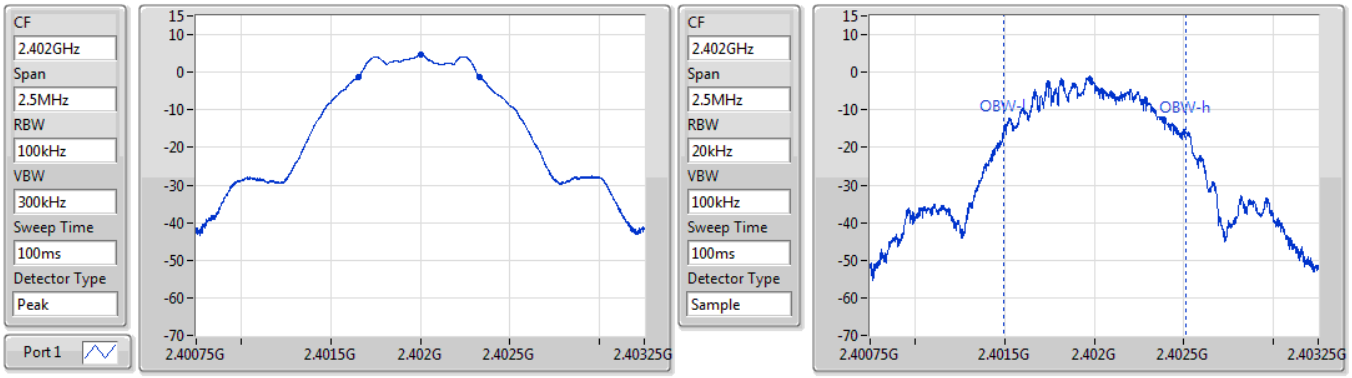
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	670k	1.019M
2440MHz	Pass	500k	670k	1.018M
2480MHz	Pass	500k	665k	1.018M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.145M	1.992M
2440MHz	Pass	500k	1.143M	2.001M
2480MHz	Pass	500k	1.143M	1.999M

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

BT-LE(1Mbps) EBW-DTS

2402MHz

08/07/2022

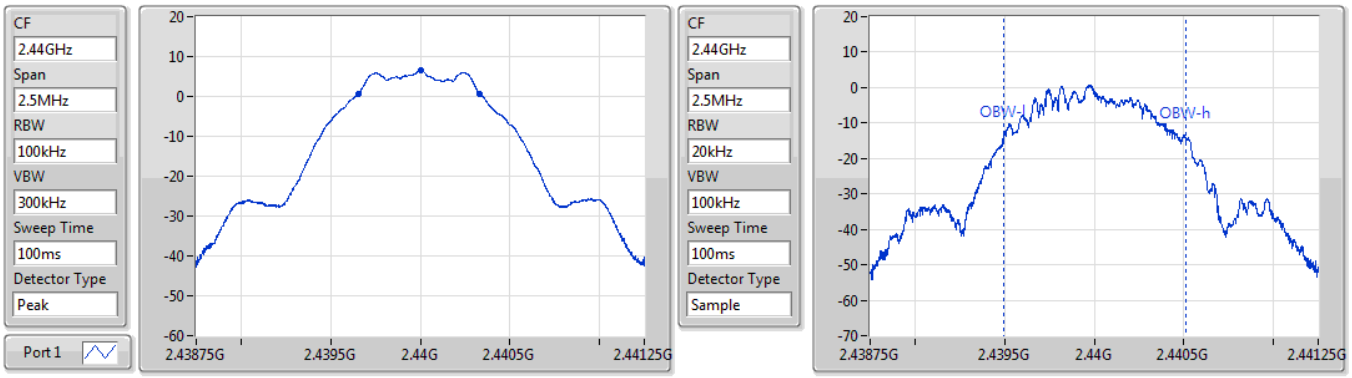


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
670k	2.401659G	2.402329G	1.019M	2.401495G	2.402515G	500k	1

BT-LE(1Mbps) EBW-DTS

2440MHz

08/07/2022



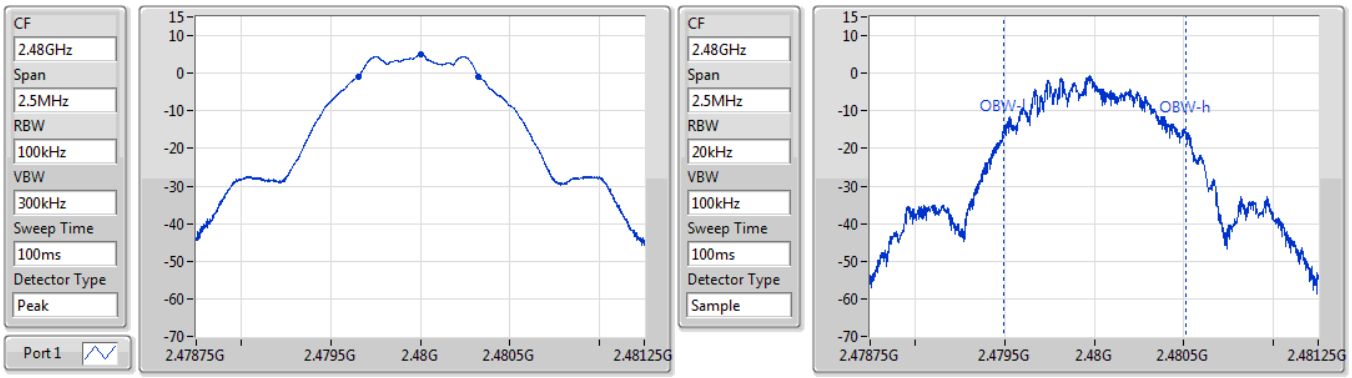
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
670k	2.439659G	2.440329G	1.018M	2.439495G	2.440513G	500k	1

BT-LE(1Mbps)

EBW-DTS

2480MHz

08/07/2022



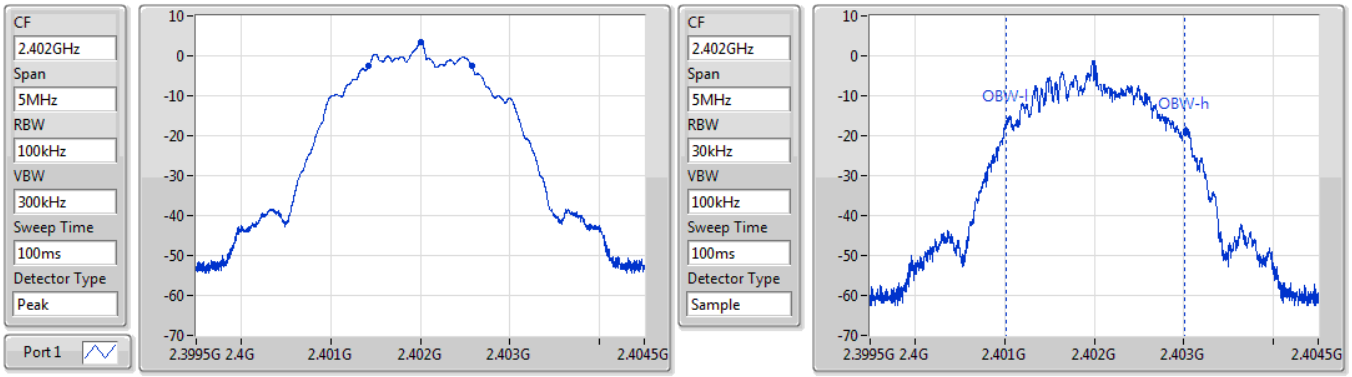
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
665k	2.479659G	2.480324G	1.018M	2.479494G	2.480512G	500k	1

BT-LE(2Mbps)

EBW-DTS

2402MHz

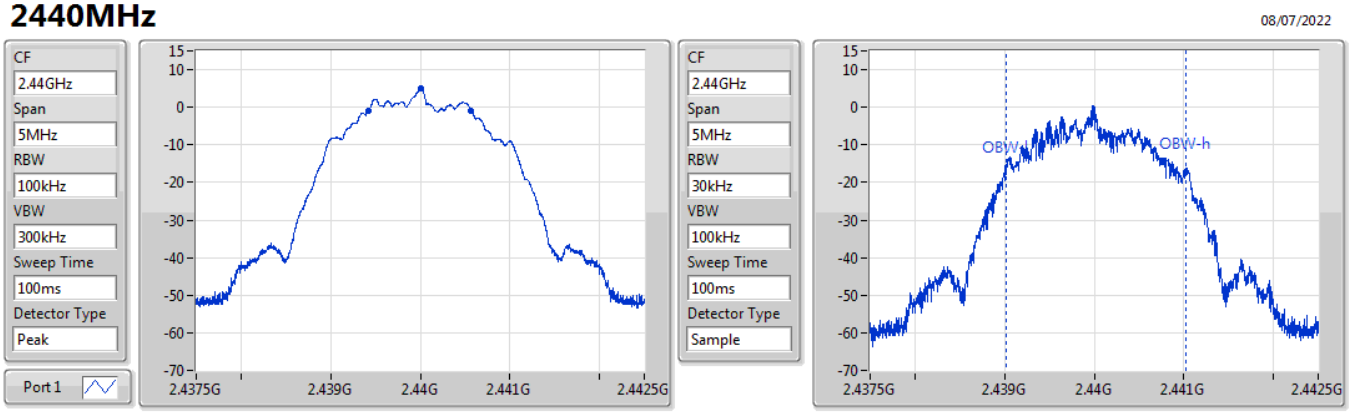
08/07/2022



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.145M	2.401428G	2.402573G	1.992M	2.401018G	2.403009G	500k	1

BT-LE(2Mbps) **EBW-DTS**

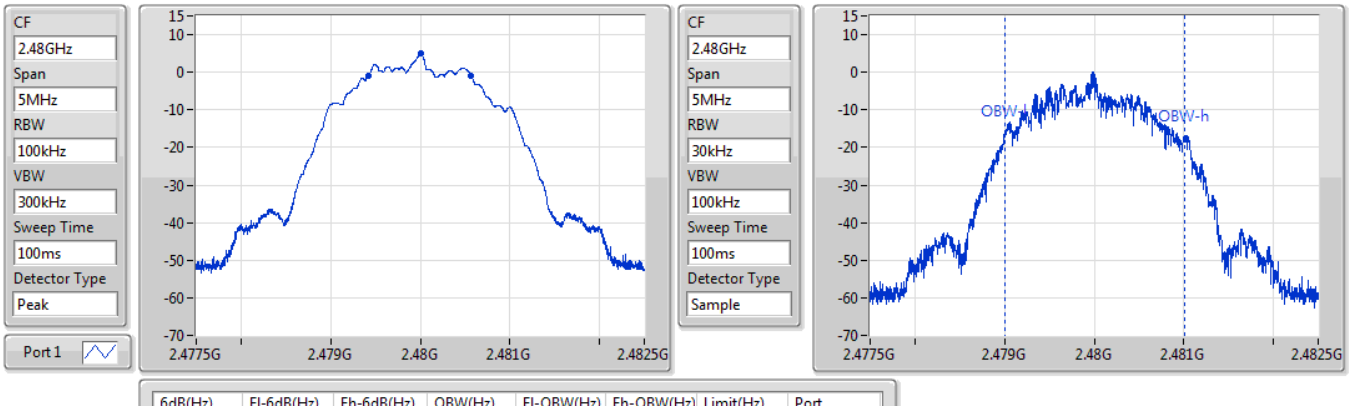
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.143M	2.439428G	2.44057G	2.001M	2.439015G	2.441017G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.143M	2.479425G	2.480568G	1.999M	2.47901G	2.481009G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	5.40	0.00347
BT-LE(2Mbps)	5.37	0.00344

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.91	5.40	30.00
2440MHz	Pass	2.91	5.23	30.00
2480MHz	Pass	2.91	5.32	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.91	5.37	30.00
2440MHz	Pass	2.91	5.24	30.00
2480MHz	Pass	2.91	5.28	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-9.99
BT-LE(2Mbps)	-12.69

RBW = 3kHz;

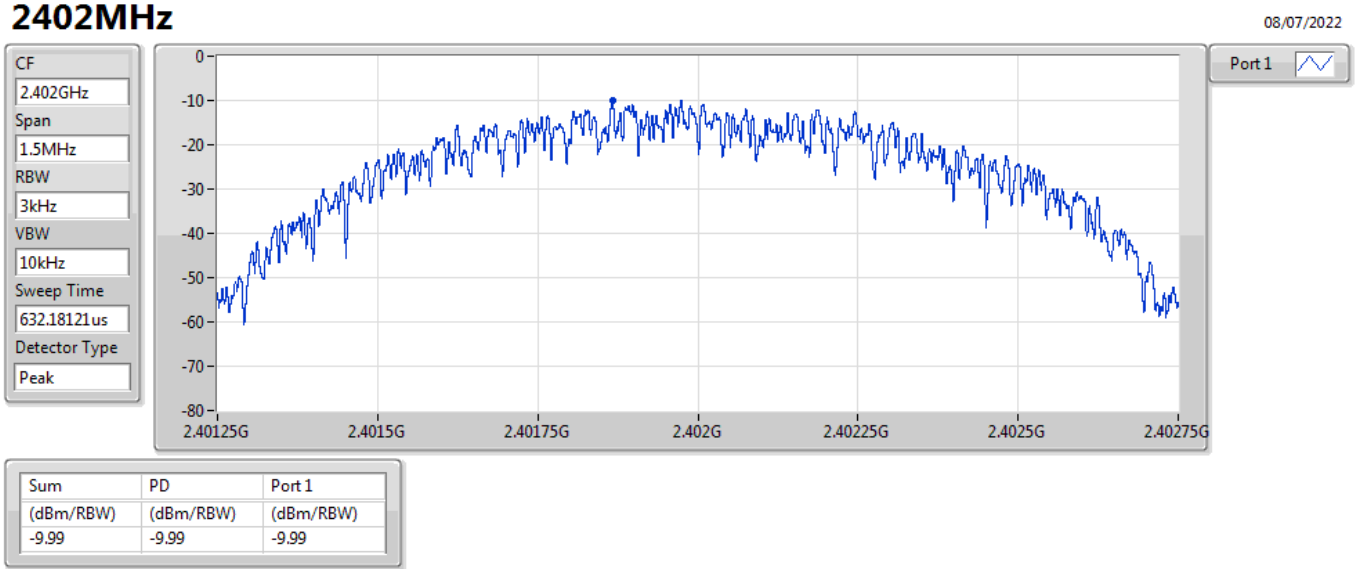
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.91	-9.99	8.00
2440MHz	Pass	2.91	-10.50	8.00
2480MHz	Pass	2.91	-10.90	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.91	-12.90	8.00
2440MHz	Pass	2.91	-12.69	8.00
2480MHz	Pass	2.91	-12.72	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) PSD

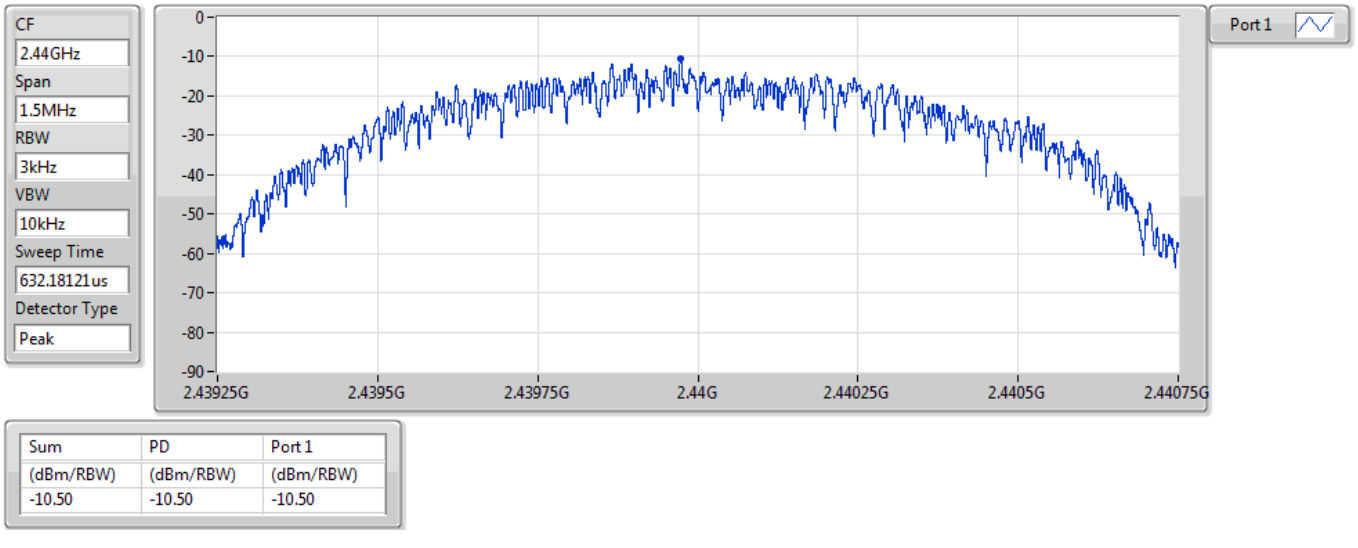
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.99	-9.99	-9.99

BT-LE(1Mbps) PSD

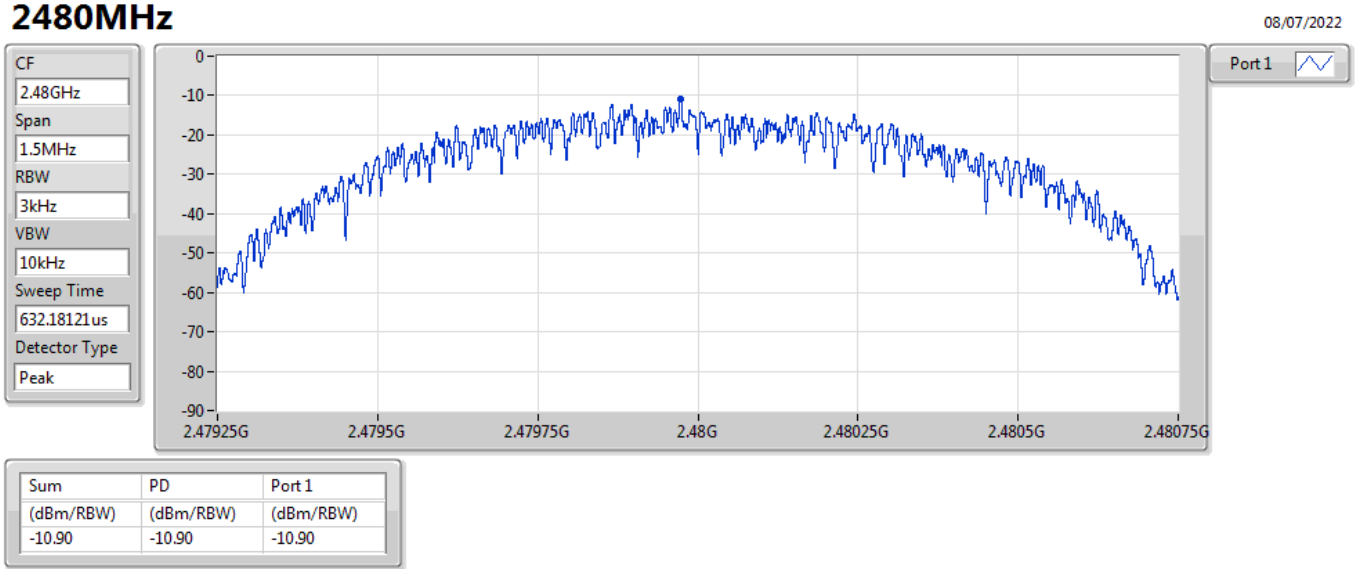
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.50	-10.50	-10.50

BT-LE(1Mbps) PSD

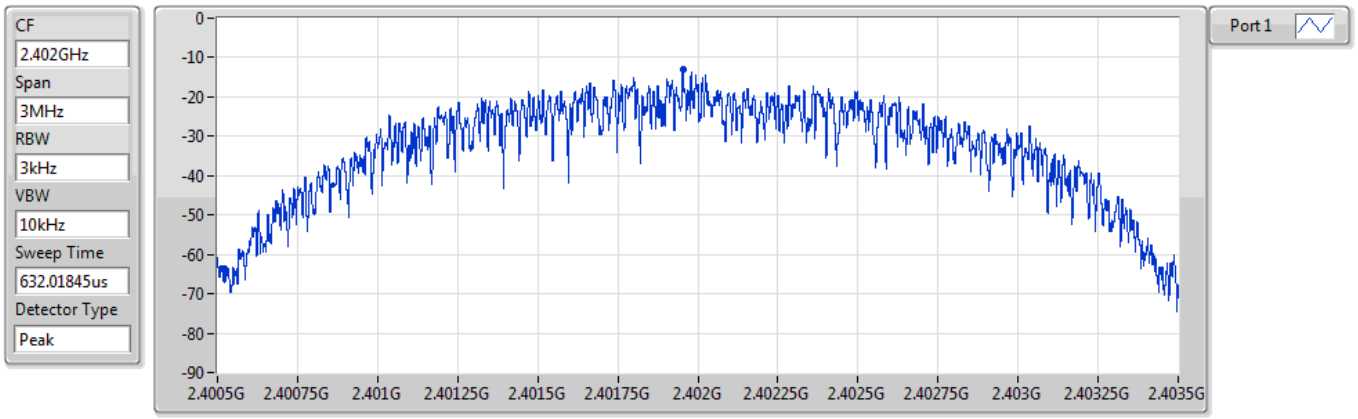
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.90	-10.90	-10.90

BT-LE(2Mbps) PSD

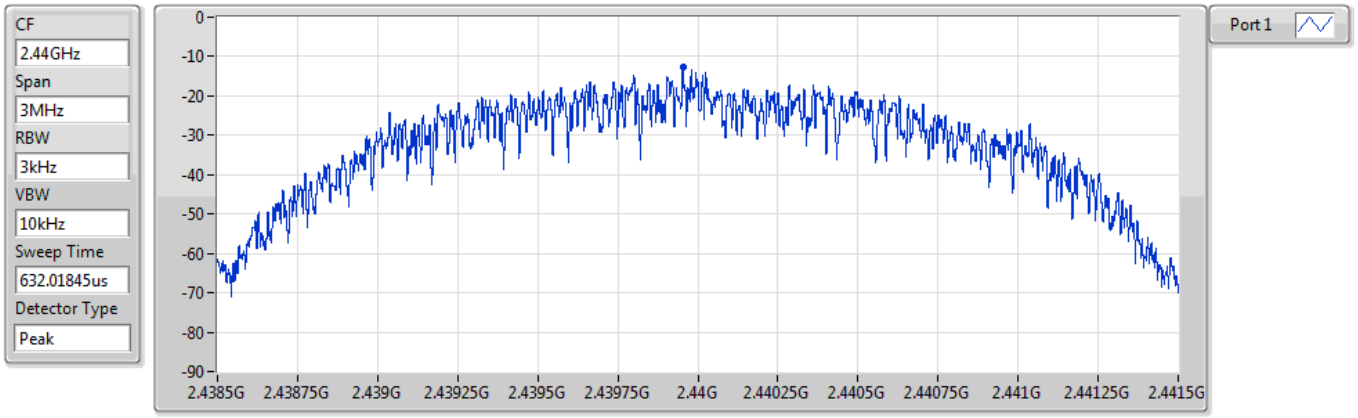
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.90	-12.90	-12.90

BT-LE(2Mbps) PSD

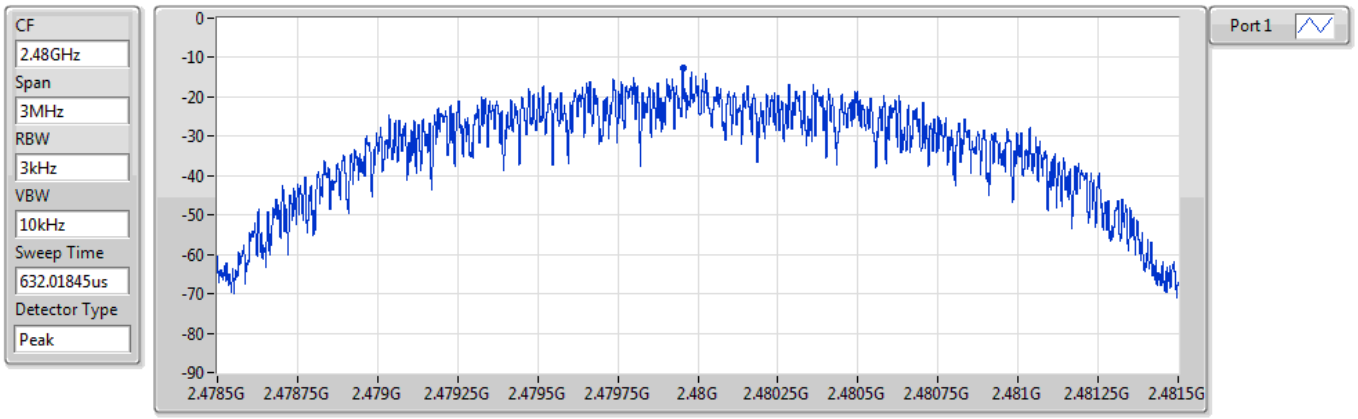
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.69	-12.69	-12.69

BT-LE(2Mbps) PSD

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.72	-12.72	-12.72

Summary

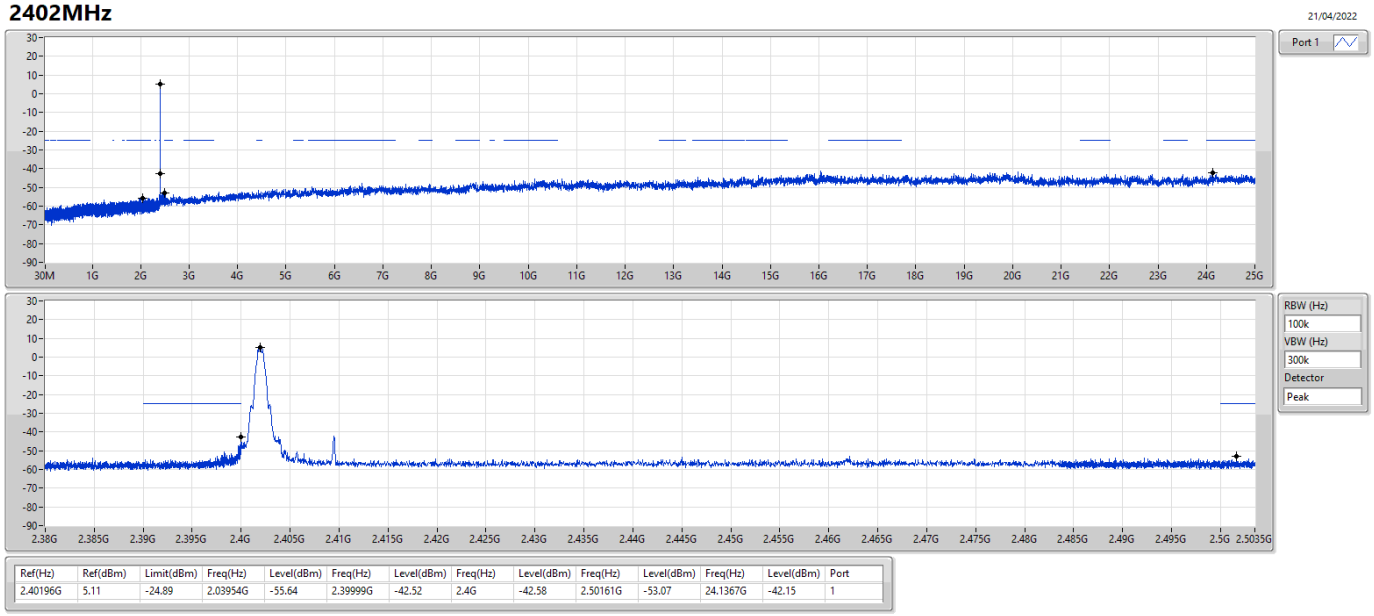
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40196G	5.11	-24.89	2.03954G	-55.64	2.39999G	-42.52	2.4G	-42.58	2.50161G	-53.07	24.1367G	-42.15	1
BT-LE(2Mbps)	Pass	2.40196G	4.91	-25.09	2.13795G	-54.86	2.4G	-27.10	2.4G	-29.50	2.50257G	-53.39	24.22387G	-41.82	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)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	5.11	-24.89	2.03954G	-55.64	2.39999G	-42.52	2.4G	-42.58	2.50161G	-53.07	24.1367G	-42.15	1
2440MHz	Pass	2.40196G	5.11	-24.89	2.12297G	-55.81	2.39321G	-54.38	2.4G	-57.51	2.5018G	-54.57	24.207G	-42.19	1
2480MHz	Pass	2.40196G	5.11	-24.89	2.1027G	-55.12	2.3905G	-54.11	2.4G	-57.71	2.50214G	-53.73	24.5107G	-42.02	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	4.91	-25.09	2.13795G	-54.86	2.4G	-27.10	2.4G	-29.50	2.50257G	-53.39	24.22387G	-41.82	1
2440MHz	Pass	2.40196G	4.91	-25.09	1.89003G	-55.49	2.39278G	-55.34	2.4G	-57.85	2.50169G	-54.79	24.42072G	-41.70	1
2480MHz	Pass	2.40196G	4.91	-25.09	2.16028G	-55.56	2.39999G	-53.72	2.4G	-57.93	2.50182G	-54.24	16.87876G	-42.57	1

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

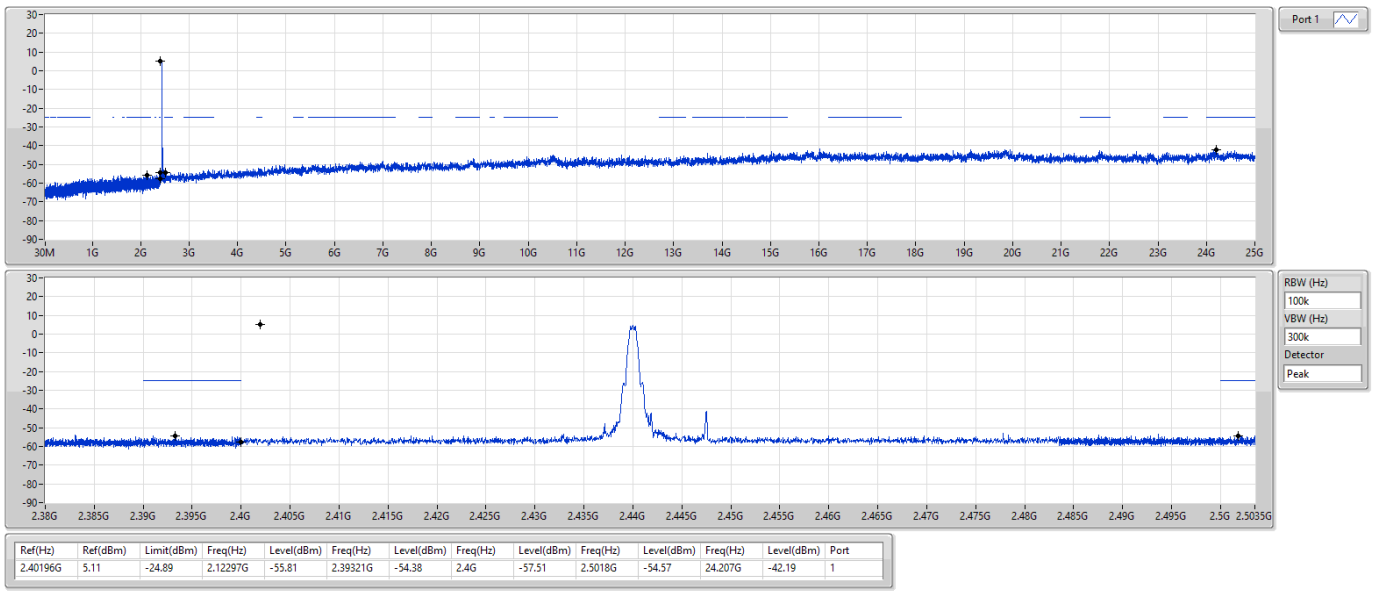
2402MHz



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
2.40196G	5.11	-24.89	2.03954G	-55.64	2.39999G	-42.52	2.4G	-42.58	2.50161G	-53.07	24.1367G	-42.15	1

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

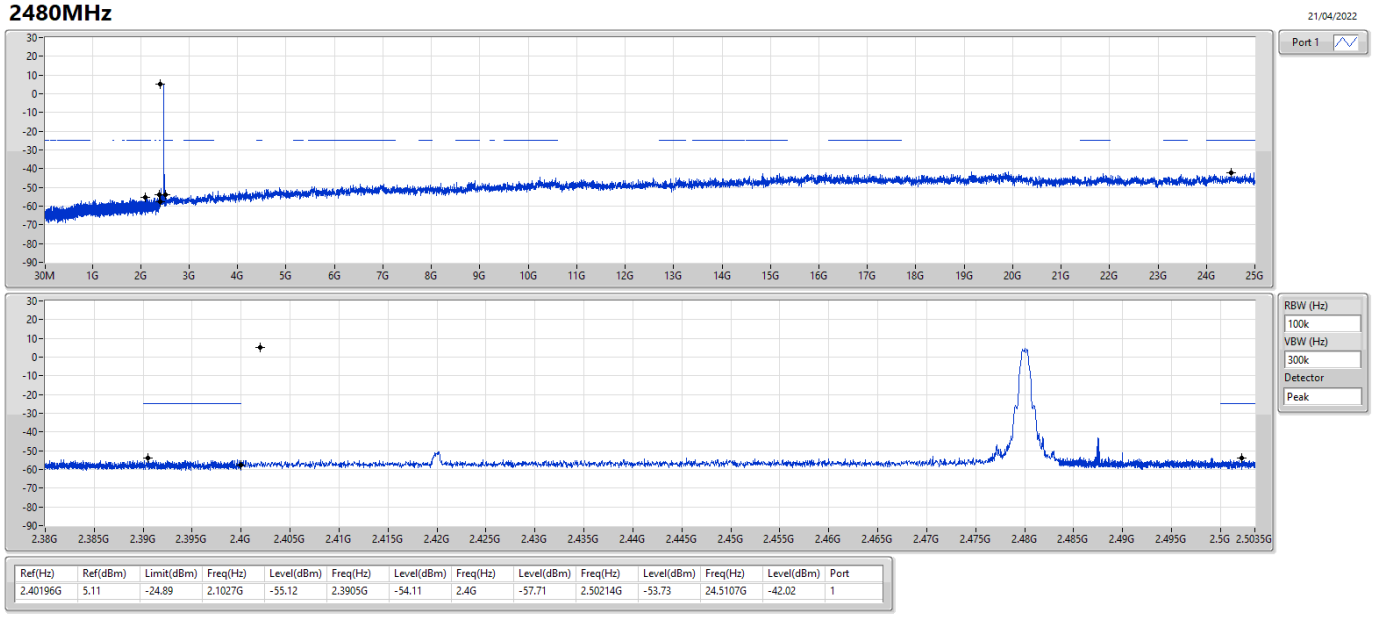
2440MHz



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
2.40196G	5.11	-24.89	2.12297G	-55.81	2.39321G	-54.38	2.4G	-57.51	2.5018G	-54.57	24.207G	-42.19	1

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

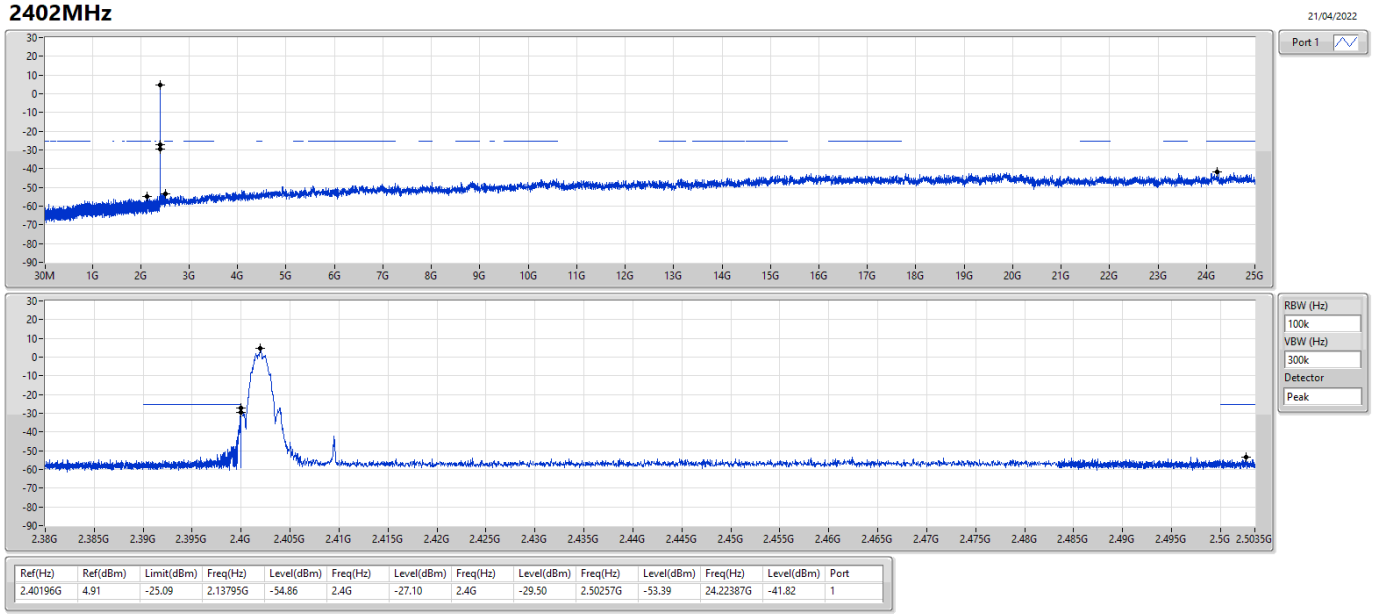
2480MHz



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
2.40196G	5.11	-24.89	2.1027G	-55.12	2.3905G	-54.11	2.4G	-57.71	2.50214G	-53.73	24.5107G	-42.02	1

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

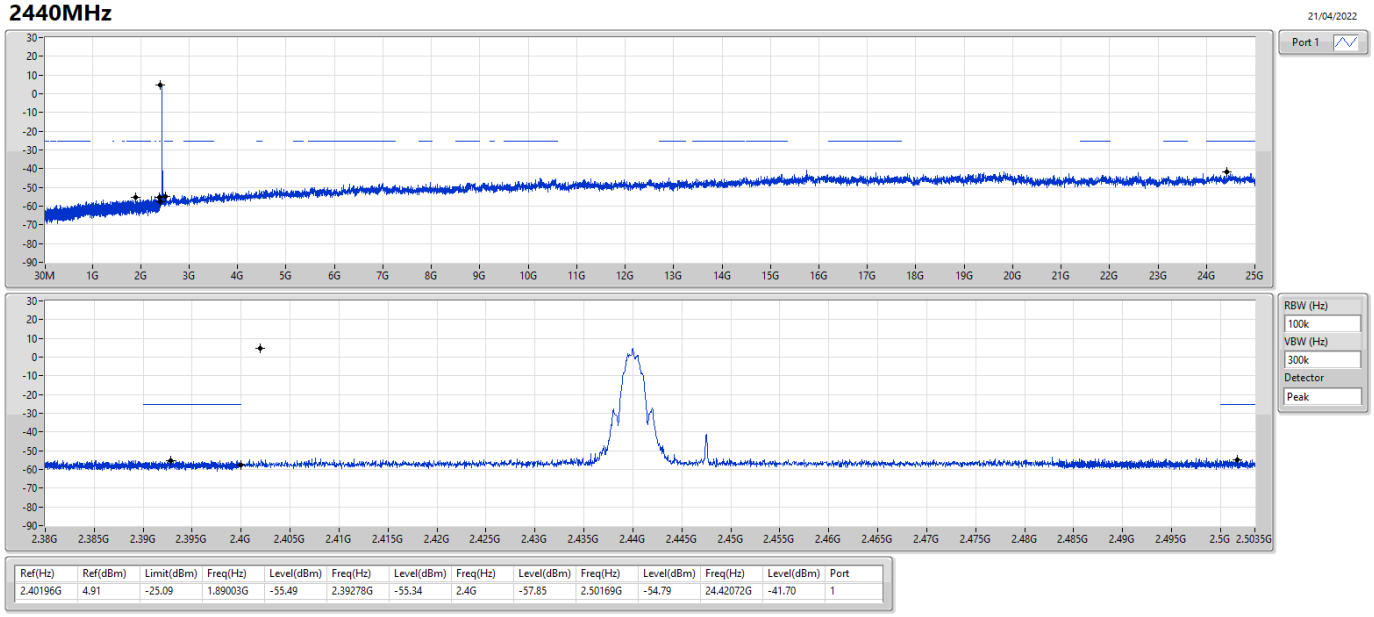
2402MHz



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
2.40196G	4.91	-25.09	2.13795G	-54.86	2.4G	-27.10	2.4G	-29.50	2.50257G	-53.39	24.22387G	-41.82	1

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

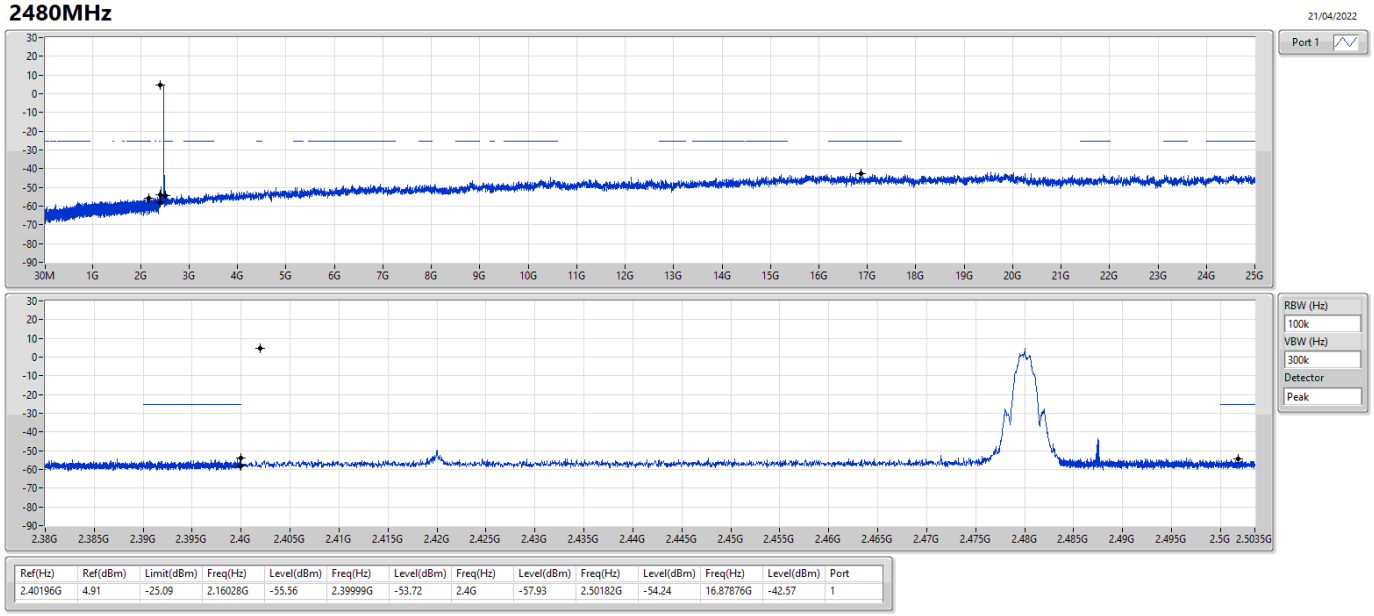
2440MHz



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
2.40196G	4.91	-25.09	1.89003G	-55.49	2.39278G	-55.34	2.4G	-57.85	2.50169G	-54.79	24.42072G	-41.70	1

BT-LE(2Mbps) **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
2.40196G	4.91	-25.09	2.16028G	-55.56	2.39999G	-53.72	2.4G	-57.93	2.50182G	-54.24	16.87876G	-42.57	1

Summary

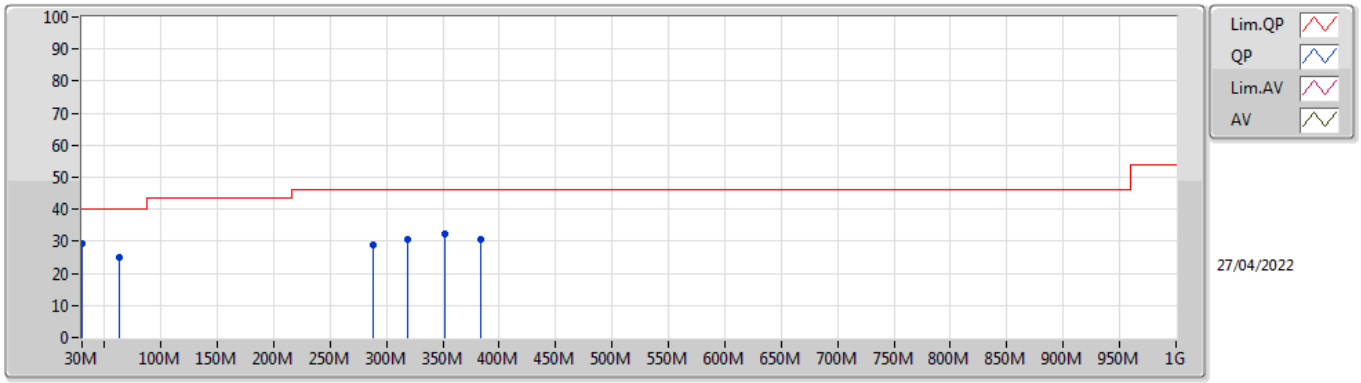
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	288.02M	37.42	46.00	-8.58	3	Horizontal	360	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	29.39	40.00	-10.61	3	Vertical	0	1.00	-
2440MHz	Pass	PK	62.98M	24.86	40.00	-15.14	3	Vertical	0	1.00	-
2440MHz	Pass	PK	288.02M	28.71	46.00	-17.29	3	Vertical	0	1.00	-
2440MHz	Pass	PK	319.06M	30.79	46.00	-15.21	3	Vertical	0	1.00	-
2440MHz	Pass	PK	352.04M	32.46	46.00	-13.54	3	Vertical	0	1.00	-
2440MHz	Pass	PK	383.08M	30.42	46.00	-15.58	3	Vertical	0	1.00	-
2440MHz	Pass	PK	127M	23.60	43.50	-19.90	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	224M	31.30	46.00	-14.70	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	288.02M	37.42	46.00	-8.58	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	319.06M	34.07	46.00	-11.93	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	400.54M	31.11	46.00	-14.89	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	511.12M	28.33	46.00	-17.67	3	Horizontal	360	1.00	-

BT-LE(2Mbps)

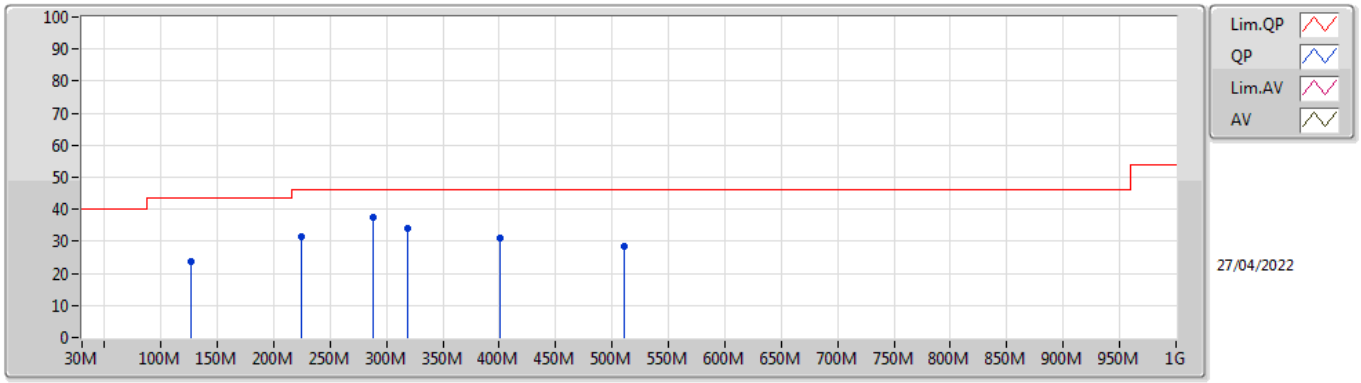
2440MHz_Switching Power Supply



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	29.39	40.00	-10.61	-2.94	3	Vertical	0	1.00	-	32.33	23.76	0.88	27.58
PK	62.98M	24.86	40.00	-15.14	-14.62	3	Vertical	0	1.00	-	39.48	11.57	1.29	27.48
PK	288.02M	28.71	46.00	-17.29	-5.79	3	Vertical	0	1.00	-	34.50	17.99	2.85	26.63
PK	319.06M	30.79	46.00	-15.21	-4.96	3	Vertical	0	1.00	-	35.75	18.75	3.00	26.71
PK	352.04M	32.46	46.00	-13.54	-4.15	3	Vertical	0	1.00	-	36.61	19.57	3.15	26.87
PK	383.08M	30.42	46.00	-15.58	-3.55	3	Vertical	0	1.00	-	33.97	20.23	3.30	27.08

BT-LE(2Mbps)

2440MHz_Switching 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	127M	23.60	43.50	-19.90	-8.27	3	Horizontal	360	1.00	-	31.87	17.13	1.85	27.25
PK	224M	31.30	46.00	-14.70	-9.74	3	Horizontal	360	1.00	-	41.04	14.57	2.48	26.79
PK	288.02M	37.42	46.00	-8.58	-5.79	3	Horizontal	360	1.00	-	43.21	17.99	2.85	26.63
PK	319.06M	34.07	46.00	-11.93	-4.96	3	Horizontal	360	1.00	-	39.03	18.75	3.00	26.71
PK	400.54M	31.11	46.00	-14.89	-2.79	3	Horizontal	360	1.00	-	33.90	21.02	3.38	27.19
PK	511.12M	28.33	46.00	-17.67	-1.17	3	Horizontal	360	1.00	-	29.50	22.80	3.85	27.82

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)	Pass	AV	2.4835G	50.21	54.00	-3.79	3	Horizontal	351	1.41	-
BT-LE(2Mbps)	Pass	AV	2.4876G	50.84	54.00	-3.16	3	Horizontal	354	1.50	-

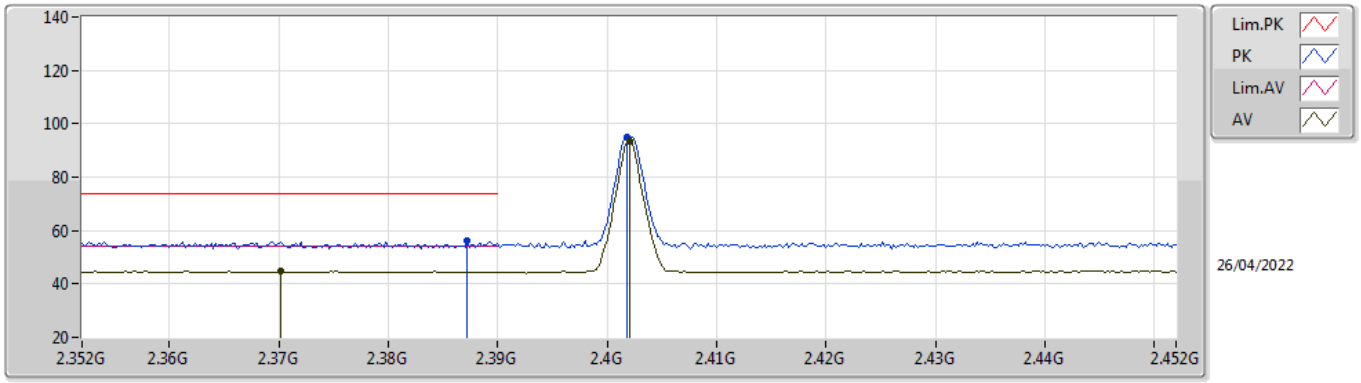
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3702G	44.85	54.00	-9.15	3	Vertical	282	1.05	-
2402MHz	Pass	AV	2.402G	93.44	Inf	-Inf	3	Vertical	282	1.05	-
2402MHz	Pass	PK	2.3872G	56.04	74.00	-17.96	3	Vertical	282	1.05	-
2402MHz	Pass	PK	2.4018G	94.94	Inf	-Inf	3	Vertical	282	1.05	-
2402MHz	Pass	AV	2.3556G	44.77	54.00	-9.23	3	Horizontal	353	1.48	-
2402MHz	Pass	AV	2.402G	102.09	Inf	-Inf	3	Horizontal	353	1.48	-
2402MHz	Pass	PK	2.3644G	56.15	74.00	-17.85	3	Horizontal	353	1.48	-
2402MHz	Pass	PK	2.4018G	103.54	Inf	-Inf	3	Horizontal	353	1.48	-
2402MHz	Pass	AV	4.80229G	32.51	54.00	-21.49	3	Vertical	331	2.34	-
2402MHz	Pass	PK	4.80286G	43.36	74.00	-30.64	3	Vertical	331	2.34	-
2402MHz	Pass	AV	4.8026G	32.43	54.00	-21.57	3	Horizontal	301	1.00	-
2402MHz	Pass	PK	4.80265G	43.55	74.00	-30.45	3	Horizontal	301	1.00	-
2440MHz	Pass	AV	2.3464G	44.83	54.00	-9.17	3	Vertical	273	1.44	-
2440MHz	Pass	AV	2.44G	92.32	Inf	-Inf	3	Vertical	273	1.44	-
2440MHz	Pass	AV	2.4968G	45.51	54.00	-8.49	3	Vertical	273	1.44	-
2440MHz	Pass	PK	2.3852G	56.34	74.00	-17.66	3	Vertical	273	1.44	-
2440MHz	Pass	PK	2.4396G	93.80	Inf	-Inf	3	Vertical	273	1.44	-
2440MHz	Pass	PK	2.4992G	55.77	74.00	-18.23	3	Vertical	273	1.44	-
2440MHz	Pass	AV	2.3408G	44.82	54.00	-9.18	3	Horizontal	356	1.50	-
2440MHz	Pass	AV	2.44G	99.92	Inf	-Inf	3	Horizontal	356	1.50	-
2440MHz	Pass	AV	2.4928G	45.39	54.00	-8.61	3	Horizontal	356	1.50	-
2440MHz	Pass	PK	2.3676G	56.35	74.00	-17.65	3	Horizontal	356	1.50	-
2440MHz	Pass	PK	2.4396G	101.32	Inf	-Inf	3	Horizontal	356	1.50	-
2440MHz	Pass	PK	2.4964G	56.00	74.00	-18.00	3	Horizontal	356	1.50	-
2440MHz	Pass	AV	4.88229G	32.53	54.00	-21.47	3	Vertical	54	1.60	-
2440MHz	Pass	PK	4.88129G	43.88	74.00	-30.12	3	Vertical	54	1.60	-
2440MHz	Pass	AV	4.87934G	32.43	54.00	-21.57	3	Horizontal	228	1.30	-
2440MHz	Pass	PK	4.87874G	43.56	74.00	-30.44	3	Horizontal	228	1.30	-
2480MHz	Pass	AV	2.48G	94.29	Inf	-Inf	3	Vertical	271	1.26	-
2480MHz	Pass	AV	2.4835G	45.79	54.00	-8.21	3	Vertical	271	1.26	-
2480MHz	Pass	PK	2.4802G	95.72	Inf	-Inf	3	Vertical	271	1.26	-
2480MHz	Pass	PK	2.4968G	56.68	74.00	-17.32	3	Vertical	271	1.26	-
2480MHz	Pass	AV	2.48G	102.73	Inf	-Inf	3	Horizontal	351	1.41	-
2480MHz	Pass	AV	2.4835G	50.21	54.00	-3.79	3	Horizontal	351	1.41	-
2480MHz	Pass	PK	2.4802G	104.27	Inf	-Inf	3	Horizontal	351	1.41	-
2480MHz	Pass	PK	2.4874G	58.36	74.00	-15.64	3	Horizontal	351	1.41	-
2480MHz	Pass	AV	4.95943G	33.13	54.00	-20.87	3	Vertical	153	2.62	-
2480MHz	Pass	PK	4.96181G	44.29	74.00	-29.71	3	Vertical	153	2.62	-
2480MHz	Pass	AV	4.9591G	33.13	54.00	-20.87	3	Horizontal	209	1.40	-
2480MHz	Pass	PK	4.95757G	44.17	74.00	-29.83	3	Horizontal	209	1.40	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3662G	48.85	54.00	-5.15	3	Vertical	277	1.07	-
2402MHz	Pass	AV	2.402G	92.76	Inf	-Inf	3	Vertical	277	1.07	-
2402MHz	Pass	PK	2.3656G	58.03	74.00	-15.97	3	Vertical	277	1.07	-
2402MHz	Pass	PK	2.4016G	94.88	Inf	-Inf	3	Vertical	277	1.07	-
2402MHz	Pass	AV	2.3894G	48.76	54.00	-5.24	3	Horizontal	355	1.48	-
2402MHz	Pass	AV	2.402G	101.23	Inf	-Inf	3	Horizontal	355	1.48	-
2402MHz	Pass	PK	2.38G	58.40	74.00	-15.60	3	Horizontal	355	1.48	-
2402MHz	Pass	PK	2.4016G	103.27	Inf	-Inf	3	Horizontal	355	1.48	-
2402MHz	Pass	AV	4.88185G	33.96	54.00	-20.04	3	Vertical	177	2.49	-
2402MHz	Pass	PK	4.8822G	43.99	74.00	-30.01	3	Vertical	177	2.49	-
2402MHz	Pass	AV	4.88215G	34.23	54.00	-19.77	3	Horizontal	354	1.28	-
2402MHz	Pass	PK	4.88188G	43.34	74.00	-30.66	3	Horizontal	354	1.28	-
2440MHz	Pass	AV	2.3824G	48.89	54.00	-5.11	3	Vertical	276	1.10	-
2440MHz	Pass	AV	2.44G	91.32	Inf	-Inf	3	Vertical	276	1.10	-
2440MHz	Pass	AV	2.4952G	50.15	54.00	-3.85	3	Vertical	276	1.10	-
2440MHz	Pass	PK	2.3784G	58.52	74.00	-15.48	3	Vertical	276	1.10	-
2440MHz	Pass	PK	2.4396G	93.54	Inf	-Inf	3	Vertical	276	1.10	-
2440MHz	Pass	PK	2.4876G	59.12	74.00	-14.88	3	Vertical	276	1.10	-
2440MHz	Pass	AV	2.38G	49.26	54.00	-4.74	3	Horizontal	351	1.38	-

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	99.84	Inf	-Inf	3	Horizontal	351	1.38	-
2440MHz	Pass	AV	2.4952G	49.97	54.00	-4.03	3	Horizontal	351	1.38	-
2440MHz	Pass	PK	2.3896G	58.33	74.00	-15.67	3	Horizontal	351	1.38	-
2440MHz	Pass	PK	2.4396G	102.01	Inf	-Inf	3	Horizontal	351	1.38	-
2440MHz	Pass	PK	2.5G	59.18	74.00	-14.82	3	Horizontal	351	1.38	-
2440MHz	Pass	AV	4.88137G	34.29	54.00	-19.71	3	Vertical	18	1.50	-
2440MHz	Pass	PK	4.88017G	43.96	74.00	-30.04	3	Vertical	18	1.50	-
2440MHz	Pass	AV	4.88172G	34.29	54.00	-19.71	3	Horizontal	203	1.37	-
2440MHz	Pass	PK	4.87823G	43.50	74.00	-30.50	3	Horizontal	203	1.37	-
2480MHz	Pass	AV	2.48G	93.05	Inf	-Inf	3	Vertical	272	1.09	-
2480MHz	Pass	AV	2.4986G	49.78	54.00	-4.22	3	Vertical	272	1.09	-
2480MHz	Pass	PK	2.4804G	95.13	Inf	-Inf	3	Vertical	272	1.09	-
2480MHz	Pass	PK	2.4866G	58.92	74.00	-15.08	3	Vertical	272	1.09	-
2480MHz	Pass	AV	2.48G	101.47	Inf	-Inf	3	Horizontal	354	1.50	-
2480MHz	Pass	AV	2.4876G	50.84	54.00	-3.16	3	Horizontal	354	1.50	-
2480MHz	Pass	PK	2.4804G	103.61	Inf	-Inf	3	Horizontal	354	1.50	-
2480MHz	Pass	PK	2.486G	59.37	74.00	-14.63	3	Horizontal	354	1.50	-
2480MHz	Pass	AV	4.96061G	35.21	54.00	-18.79	3	Vertical	112	1.50	-
2480MHz	Pass	PK	4.96185G	44.47	74.00	-29.53	3	Vertical	112	1.50	-
2480MHz	Pass	AV	4.9586G	35.01	54.00	-18.99	3	Horizontal	136	2.13	-
2480MHz	Pass	PK	4.95987G	45.20	74.00	-28.80	3	Horizontal	136	2.13	-

BT-LE(1Mbps)

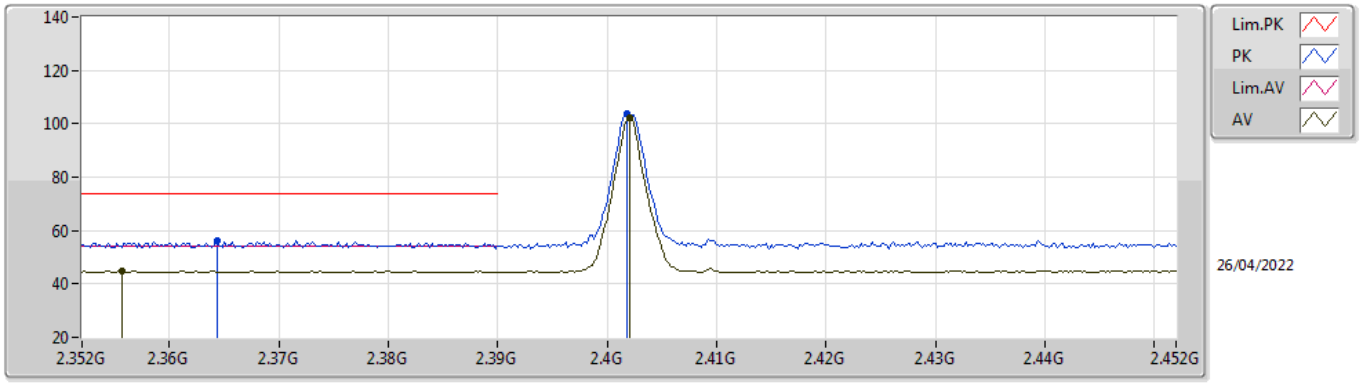
2402MHz_TX



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	2.3702G	44.85	54.00	-9.15	31.69	3	Vertical	282	1.05	-	13.16	27.34	4.35	-
AV	2.402G	93.44	Inf	-Inf	31.79	3	Vertical	282	1.05	-	61.65	27.41	4.38	-
PK	2.3872G	56.04	74.00	-17.96	31.74	3	Vertical	282	1.05	-	24.30	27.37	4.37	-
PK	2.4018G	94.94	Inf	-Inf	31.79	3	Vertical	282	1.05	-	63.15	27.41	4.38	-

BT-LE(1Mbps)

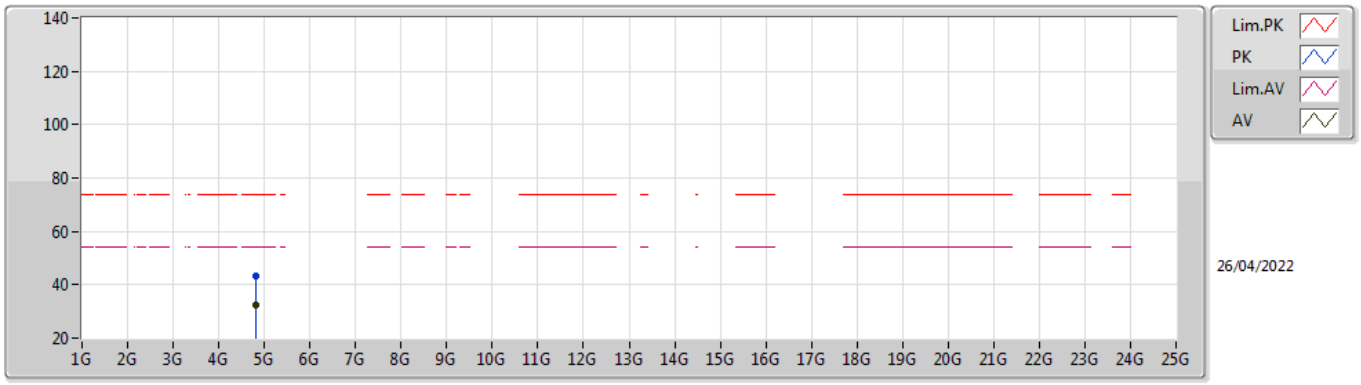
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3556G	44.77	54.00	-9.23	31.64	3	Horizontal	353	1.48	-	13.13	27.31	4.33	-
AV	2.402G	102.09	Inf	-Inf	31.79	3	Horizontal	353	1.48	-	70.30	27.41	4.38	-
PK	2.3644G	56.15	74.00	-17.85	31.67	3	Horizontal	353	1.48	-	24.48	27.33	4.34	-
PK	2.4018G	103.54	Inf	-Inf	31.79	3	Horizontal	353	1.48	-	71.75	27.41	4.38	-

BT-LE(1Mbps)

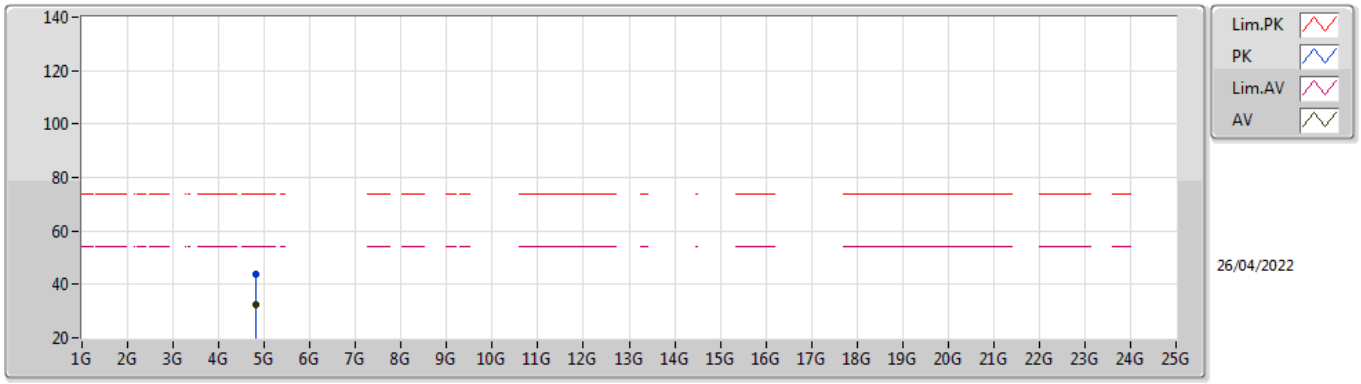
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80229G	32.51	54.00	-21.49	4.32	3	Vertical	331	2.34	-	28.19	32.51	6.26	34.45
PK	4.80286G	43.36	74.00	-30.64	4.32	3	Vertical	331	2.34	-	39.04	32.51	6.26	34.45

BT-LE(1Mbps)

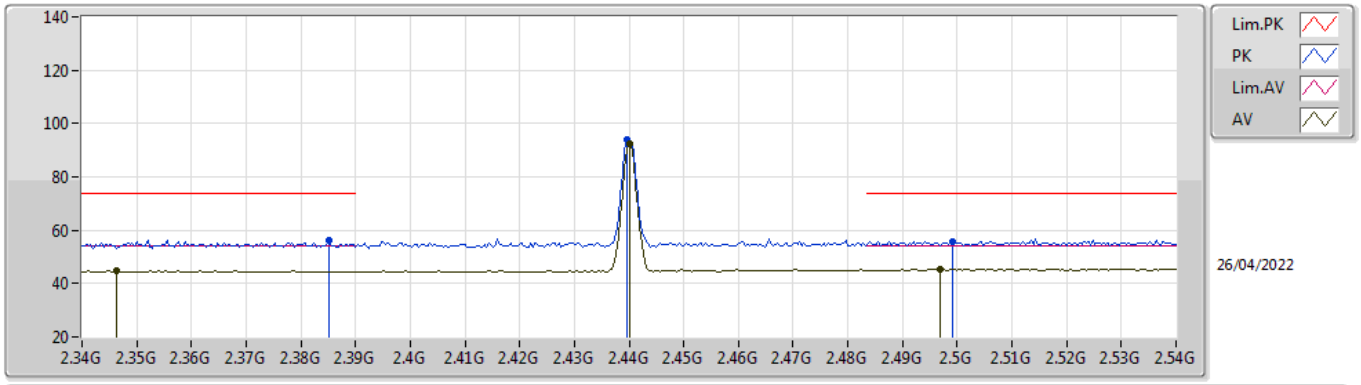
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.8026G	32.43	54.00	-21.57	4.32	3	Horizontal	301	1.00	-	28.11	32.51	6.26	34.45
PK	4.80265G	43.55	74.00	-30.45	4.32	3	Horizontal	301	1.00	-	39.23	32.51	6.26	34.45

BT-LE(1Mbps)

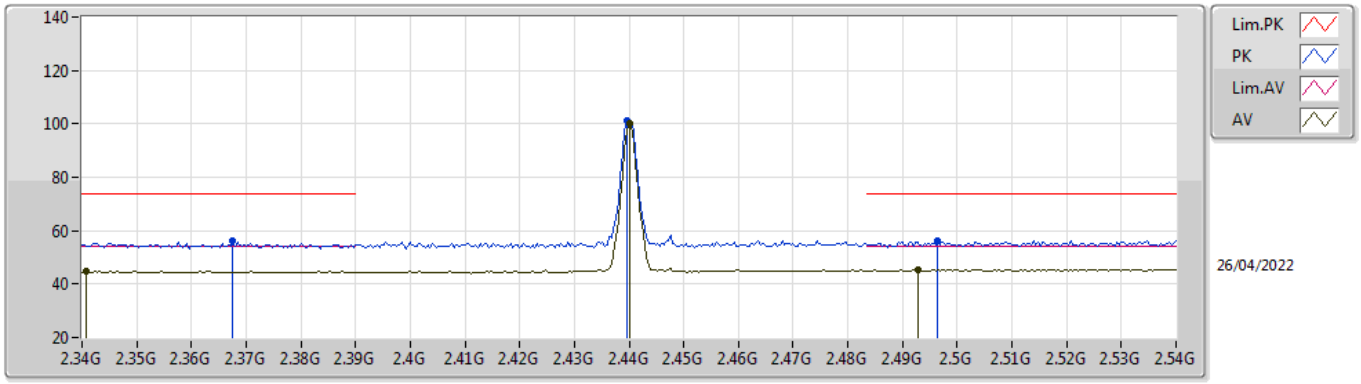
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3464G	44.83	54.00	-9.17	31.61	3	Vertical	273	1.44	-	13.22	27.29	4.32	-
AV	2.44G	92.32	Inf	-Inf	32.00	3	Vertical	273	1.44	-	60.32	27.56	4.44	-
AV	2.4968G	45.51	54.00	-8.49	32.40	3	Vertical	273	1.44	-	13.11	27.88	4.52	-
PK	2.3852G	56.34	74.00	-17.66	31.73	3	Vertical	273	1.44	-	24.61	27.37	4.36	-
PK	2.4396G	93.80	Inf	-Inf	32.00	3	Vertical	273	1.44	-	61.80	27.56	4.44	-
PK	2.4992G	55.77	74.00	-18.23	32.42	3	Vertical	273	1.44	-	23.35	27.90	4.52	-

BT-LE(1Mbps)

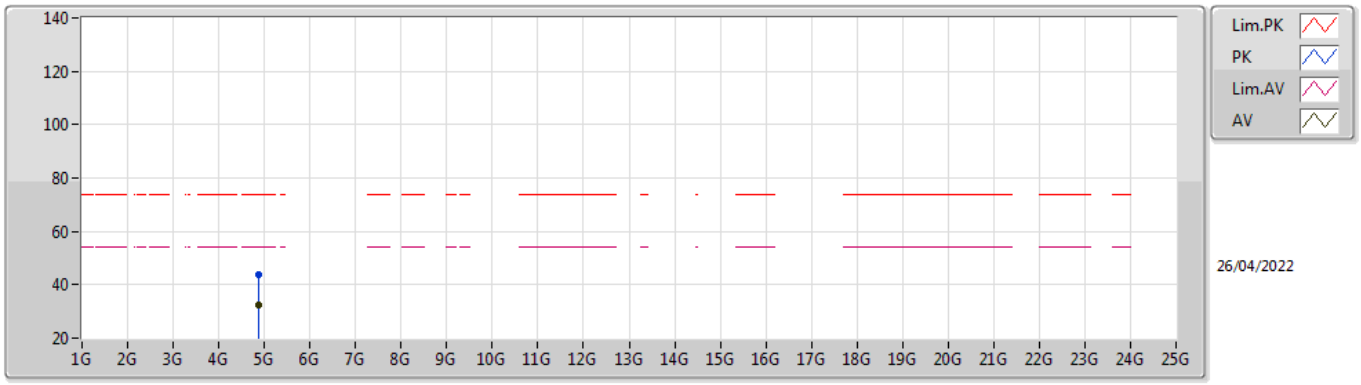
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3408G	44.82	54.00	-9.18	31.58	3	Horizontal	356	1.50	-	13.24	27.26	4.32	-
AV	2.44G	99.92	Inf	-Inf	32.00	3	Horizontal	356	1.50	-	67.92	27.56	4.44	-
AV	2.4928G	45.39	54.00	-8.61	32.37	3	Horizontal	356	1.50	-	13.02	27.86	4.51	-
PK	2.3676G	56.35	74.00	-17.65	31.69	3	Horizontal	356	1.50	-	24.66	27.34	4.35	-
PK	2.4396G	101.32	Inf	-Inf	32.00	3	Horizontal	356	1.50	-	69.32	27.56	4.44	-
PK	2.4964G	56.00	74.00	-18.00	32.40	3	Horizontal	356	1.50	-	23.60	27.88	4.52	-

BT-LE(1Mbps)

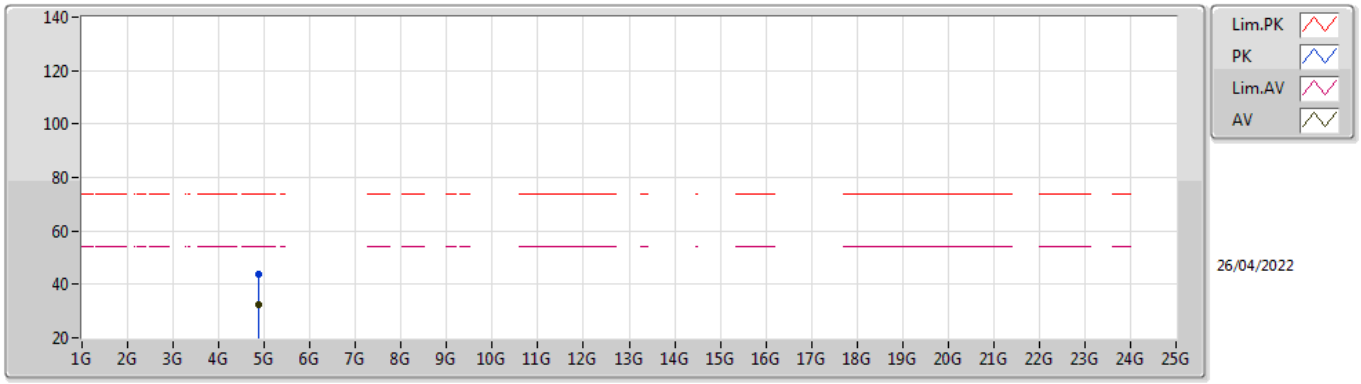
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88229G	32.53	54.00	-21.47	4.63	3	Vertical	54	1.60	-	27.90	32.76	6.31	34.44
PK	4.88129G	43.88	74.00	-30.12	4.63	3	Vertical	54	1.60	-	39.25	32.76	6.31	34.44

BT-LE(1Mbps)

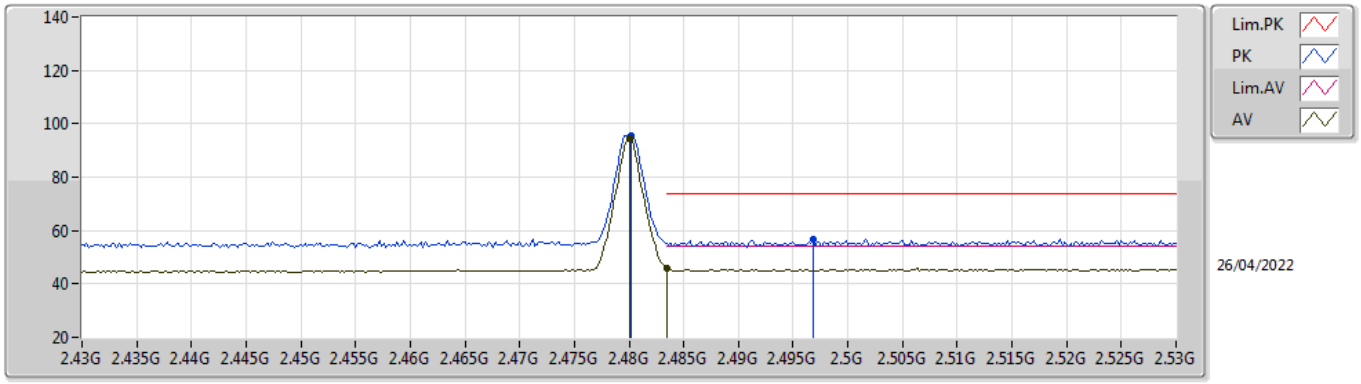
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87934G	32.43	54.00	-21.57	4.63	3	Horizontal	228	1.30	-	27.80	32.76	6.31	34.44
PK	4.87874G	43.56	74.00	-30.44	4.63	3	Horizontal	228	1.30	-	38.93	32.76	6.31	34.44

BT-LE(1Mbps)

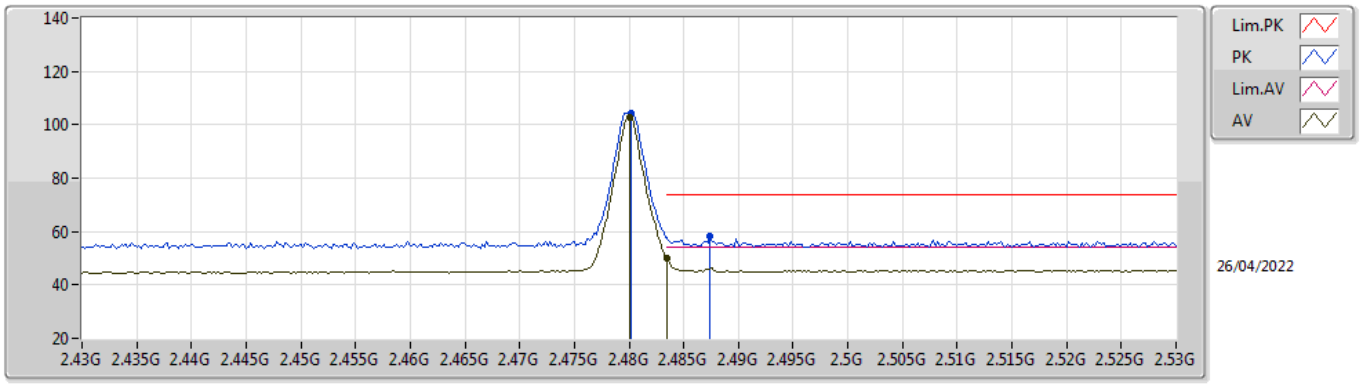
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	94.29	Inf	-Inf	32.28	3	Vertical	271	1.26	-	62.01	27.78	4.50	-
AV	2.4835G	45.79	54.00	-8.21	32.30	3	Vertical	271	1.26	-	13.49	27.80	4.50	-
PK	2.4802G	95.72	Inf	-Inf	32.28	3	Vertical	271	1.26	-	63.44	27.78	4.50	-
PK	2.4968G	56.68	74.00	-17.32	32.40	3	Vertical	271	1.26	-	24.28	27.88	4.52	-

BT-LE(1Mbps)

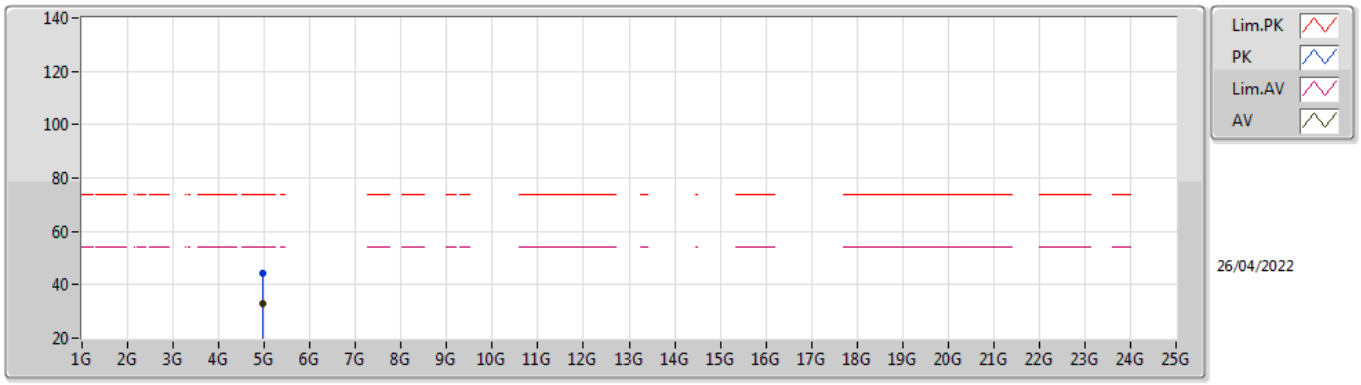
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	102.73	Inf	-Inf	32.28	3	Horizontal	351	1.41	-	70.45	27.78	4.50	-
AV	2.4835G	50.21	54.00	-3.79	32.30	3	Horizontal	351	1.41	-	17.91	27.80	4.50	-
PK	2.4802G	104.27	Inf	-Inf	32.28	3	Horizontal	351	1.41	-	71.99	27.78	4.50	-
PK	2.4874G	58.36	74.00	-15.64	32.33	3	Horizontal	351	1.41	-	26.03	27.82	4.51	-

BT-LE(1Mbps)

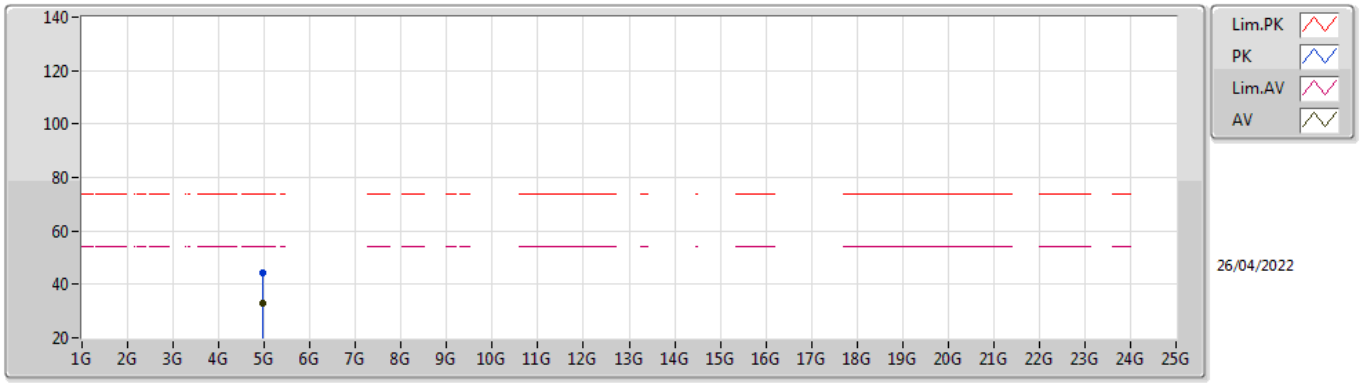
2480MHz_TX



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	4.95943G	33.13	54.00	-20.87	5.07	3	Vertical	153	2.62	-	28.06	33.14	6.36	34.43
PK	4.96181G	44.29	74.00	-29.71	5.08	3	Vertical	153	2.62	-	39.21	33.15	6.36	34.43

BT-LE(1Mbps)

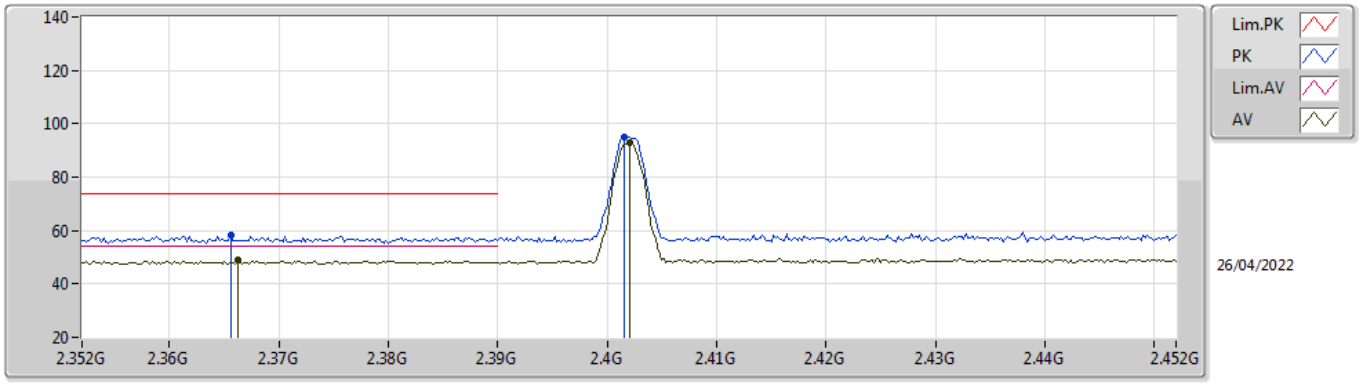
2480MHz_TX



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	4.9591G	33.13	54.00	-20.87	5.07	3	Horizontal	209	1.40	-	28.06	33.14	6.36	34.43
PK	4.95757G	44.17	74.00	-29.83	5.05	3	Horizontal	209	1.40	-	39.12	33.13	6.35	34.43

BT-LE(2Mbps)

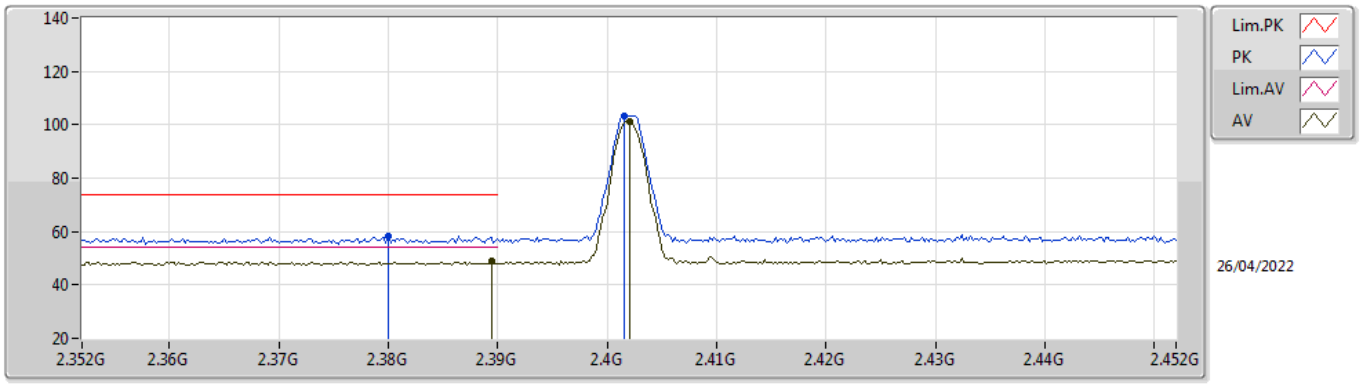
2402MHz_TX



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	2.3662G	48.85	54.00	-5.15	31.67	3	Vertical	277	1.07	-	17.18	27.33	4.34	-
AV	2.402G	92.76	Inf	-Inf	31.79	3	Vertical	277	1.07	-	60.97	27.41	4.38	-
PK	2.3656G	58.03	74.00	-15.97	31.67	3	Vertical	277	1.07	-	26.36	27.33	4.34	-
PK	2.4016G	94.88	Inf	-Inf	31.79	3	Vertical	277	1.07	-	63.09	27.41	4.38	-

BT-LE(2Mbps)

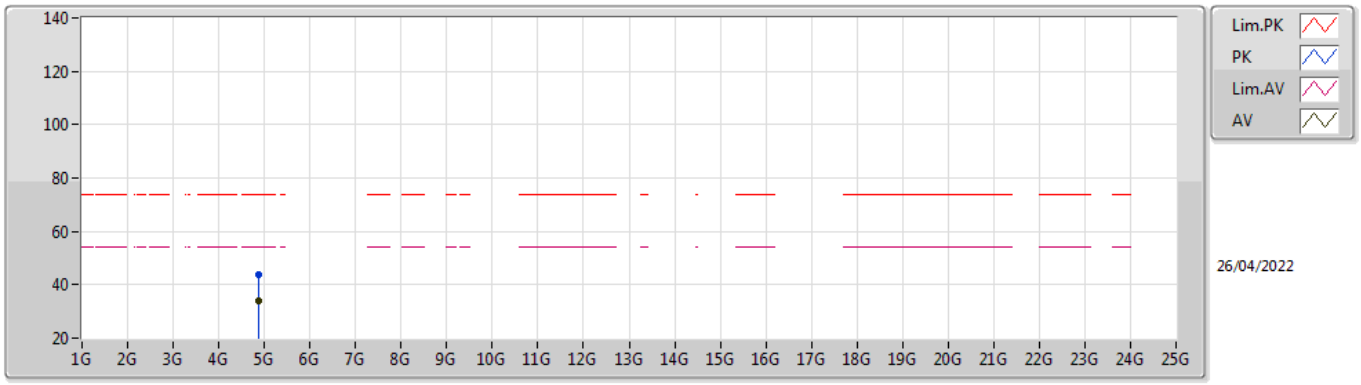
2402MHz_TX



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	2.3894G	48.76	54.00	-5.24	31.75	3	Horizontal	355	1.48	-	17.01	27.38	4.37	-
AV	2.402G	101.23	Inf	-Inf	31.79	3	Horizontal	355	1.48	-	69.44	27.41	4.38	-
PK	2.38G	58.40	74.00	-15.60	31.72	3	Horizontal	355	1.48	-	26.68	27.36	4.36	-
PK	2.4016G	103.27	Inf	-Inf	31.79	3	Horizontal	355	1.48	-	71.48	27.41	4.38	-

BT-LE(2Mbps)

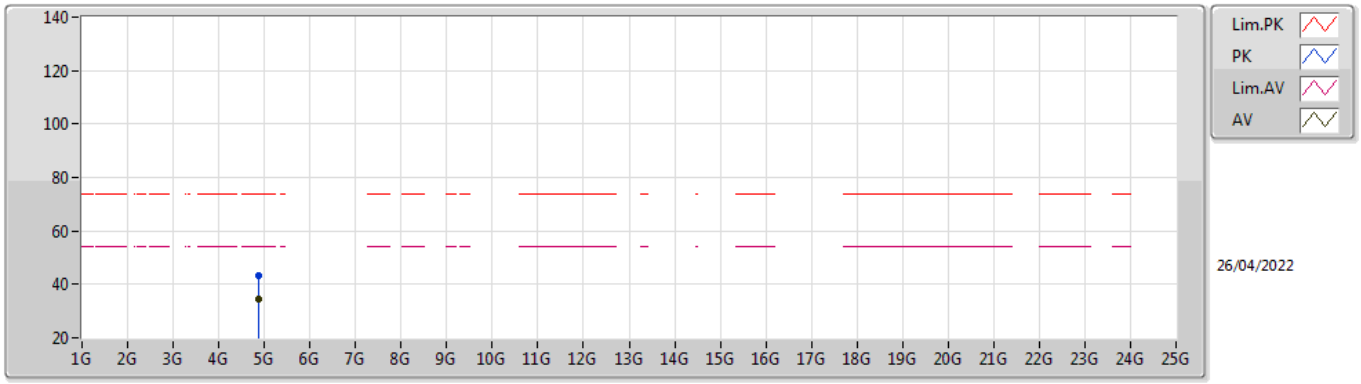
2402MHz_TX



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	4.88185G	33.96	54.00	-20.04	4.63	3	Vertical	177	2.49	-	29.33	32.76	6.31	34.44
PK	4.8822G	43.99	74.00	-30.01	4.63	3	Vertical	177	2.49	-	39.36	32.76	6.31	34.44

BT-LE(2Mbps)

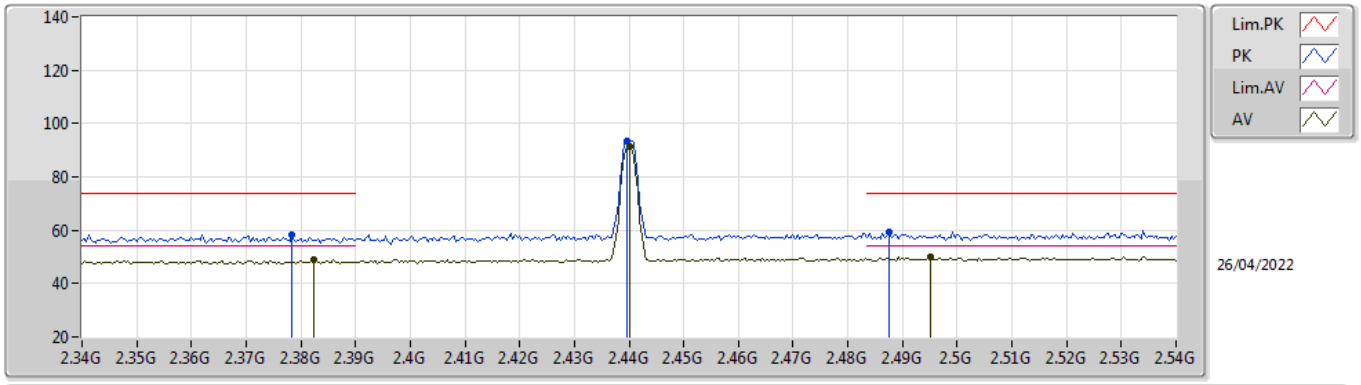
2402MHz_TX



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	4.88215G	34.23	54.00	-19.77	4.63	3	Horizontal	354	1.28	-	29.60	32.76	6.31	34.44
PK	4.88188G	43.34	74.00	-30.66	4.63	3	Horizontal	354	1.28	-	38.71	32.76	6.31	34.44

BT-LE(2Mbps)

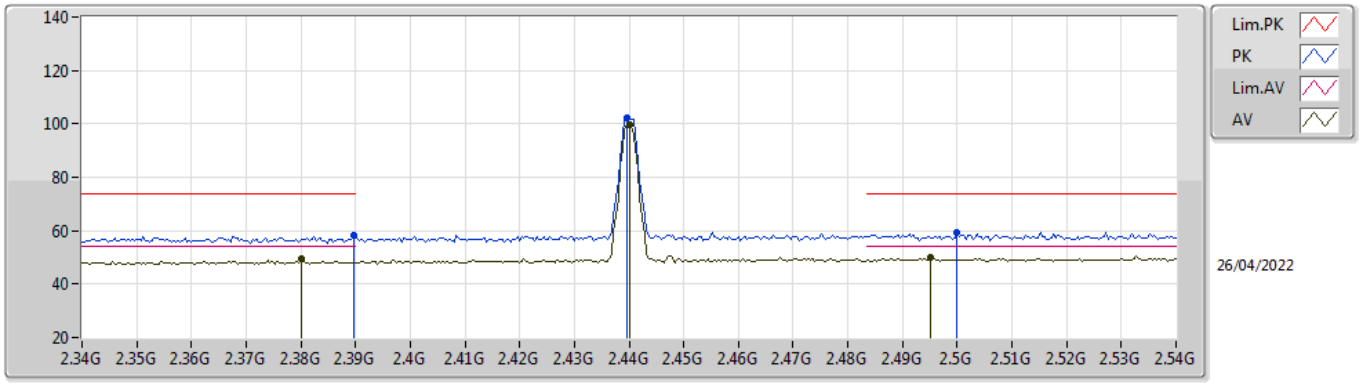
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3824G	48.89	54.00	-5.11	31.72	3	Vertical	276	1.10	-	17.17	27.36	4.36	-
AV	2.44G	91.32	Inf	-Inf	32.00	3	Vertical	276	1.10	-	59.32	27.56	4.44	-
AV	2.4952G	50.15	54.00	-3.85	32.39	3	Vertical	276	1.10	-	17.76	27.87	4.52	-
PK	2.3784G	58.52	74.00	-15.48	31.72	3	Vertical	276	1.10	-	26.80	27.36	4.36	-
PK	2.4396G	93.54	Inf	-Inf	32.00	3	Vertical	276	1.10	-	61.54	27.56	4.44	-
PK	2.4876G	59.12	74.00	-14.88	32.34	3	Vertical	276	1.10	-	26.78	27.83	4.51	-

BT-LE(2Mbps)

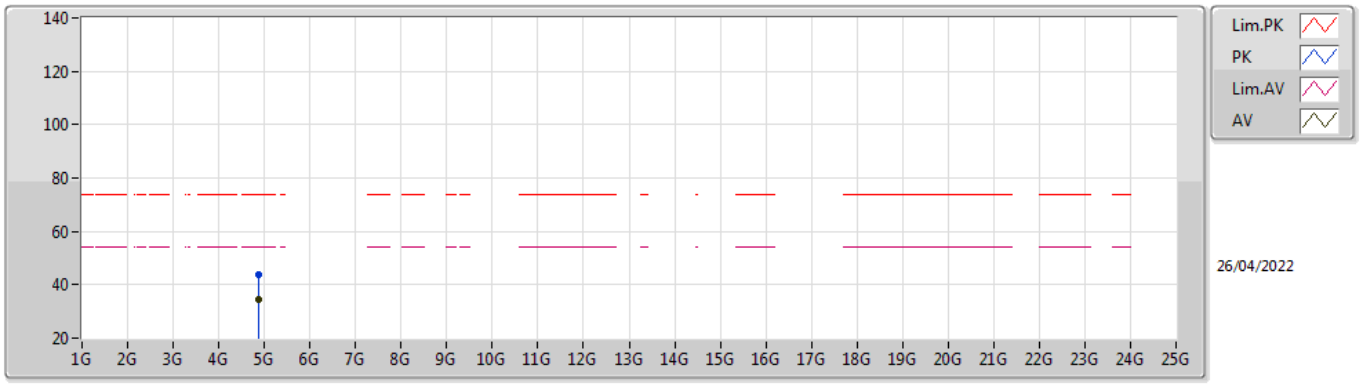
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.38G	49.26	54.00	-4.74	31.72	3	Horizontal	351	1.38	-	17.54	27.36	4.36	-
AV	2.44G	99.84	Inf	-Inf	32.00	3	Horizontal	351	1.38	-	67.84	27.56	4.44	-
AV	2.4952G	49.97	54.00	-4.03	32.39	3	Horizontal	351	1.38	-	17.58	27.87	4.52	-
PK	2.3896G	58.33	74.00	-15.67	31.75	3	Horizontal	351	1.38	-	26.58	27.38	4.37	-
PK	2.4396G	102.01	Inf	-Inf	32.00	3	Horizontal	351	1.38	-	70.01	27.56	4.44	-
PK	2.5G	59.18	74.00	-14.82	32.43	3	Horizontal	351	1.38	-	26.75	27.90	4.53	-

BT-LE(2Mbps)

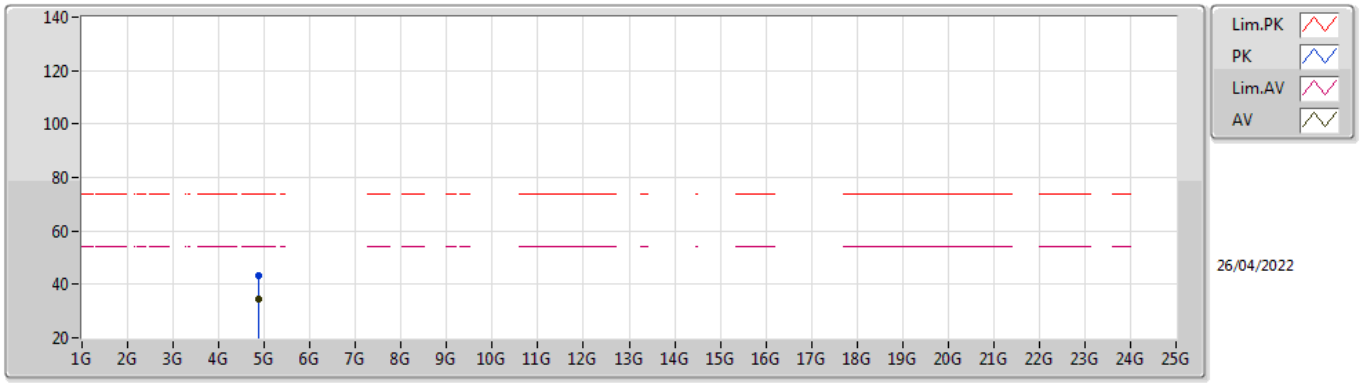
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88137G	34.29	54.00	-19.71	4.63	3	Vertical	18	1.50	-	29.66	32.76	6.31	34.44
PK	4.88017G	43.96	74.00	-30.04	4.63	3	Vertical	18	1.50	-	39.33	32.76	6.31	34.44

BT-LE(2Mbps)

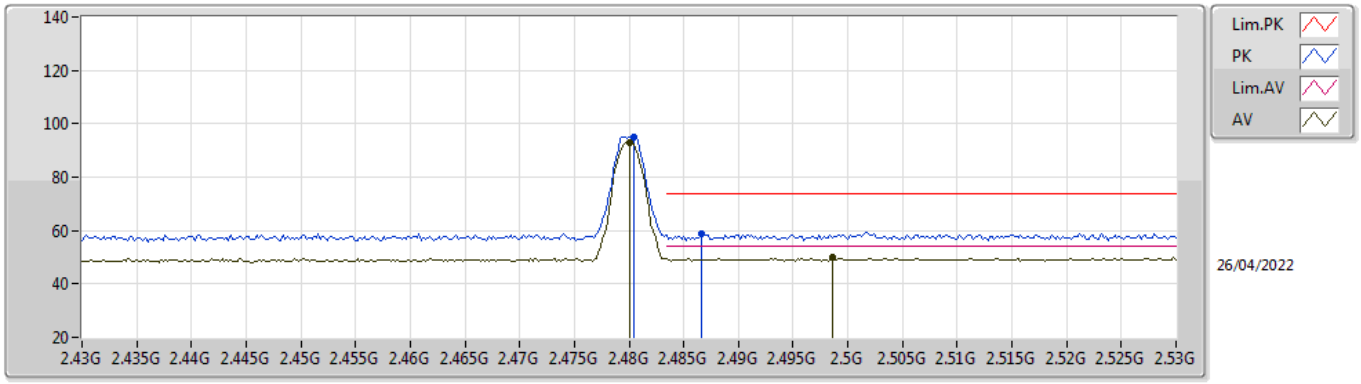
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88172G	34.29	54.00	-19.71	4.63	3	Horizontal	203	1.37	-	29.66	32.76	6.31	34.44
PK	4.87823G	43.50	74.00	-30.50	4.63	3	Horizontal	203	1.37	-	38.87	32.76	6.31	34.44

BT-LE(2Mbps)

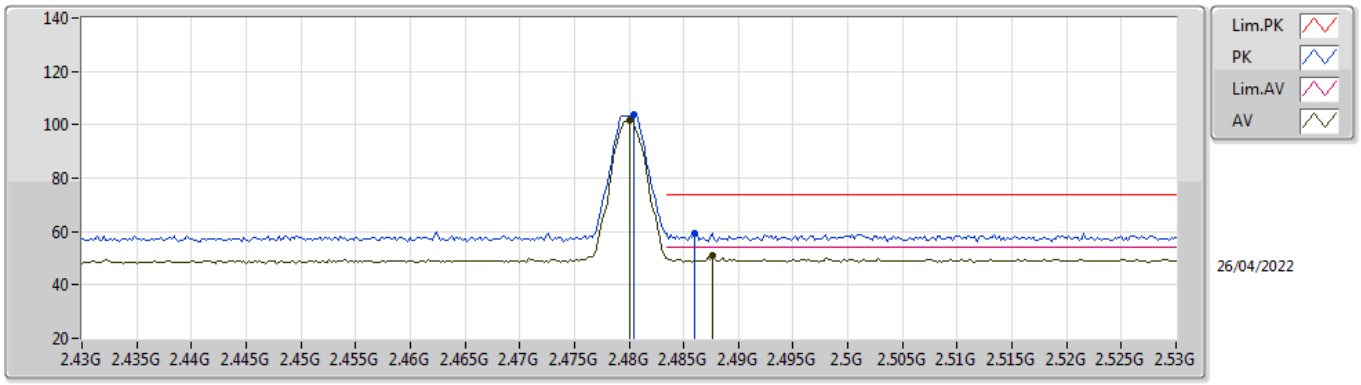
2480MHz_TX



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	93.05	Inf	-Inf	32.28	3	Vertical	272	1.09	-	60.77	27.78	4.50	-
AV	2.4986G	49.78	54.00	-4.22	32.41	3	Vertical	272	1.09	-	17.37	27.89	4.52	-
PK	2.4804G	95.13	Inf	-Inf	32.28	3	Vertical	272	1.09	-	62.85	27.78	4.50	-
PK	2.4866G	58.92	74.00	-15.08	32.33	3	Vertical	272	1.09	-	26.59	27.82	4.51	-

BT-LE(2Mbps)

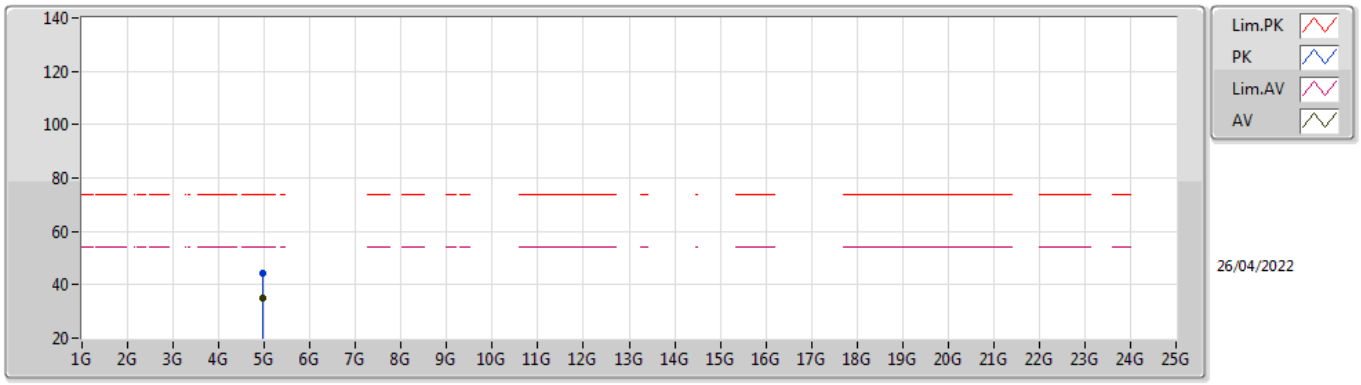
2480MHz_TX



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	101.47	Inf	-Inf	32.28	3	Horizontal	354	1.50	-	69.19	27.78	4.50	-
AV	2.4876G	50.84	54.00	-3.16	32.34	3	Horizontal	354	1.50	-	18.50	27.83	4.51	-
PK	2.4804G	103.61	Inf	-Inf	32.28	3	Horizontal	354	1.50	-	71.33	27.78	4.50	-
PK	2.486G	59.37	74.00	-14.63	32.32	3	Horizontal	354	1.50	-	27.05	27.82	4.50	-

BT-LE(2Mbps)

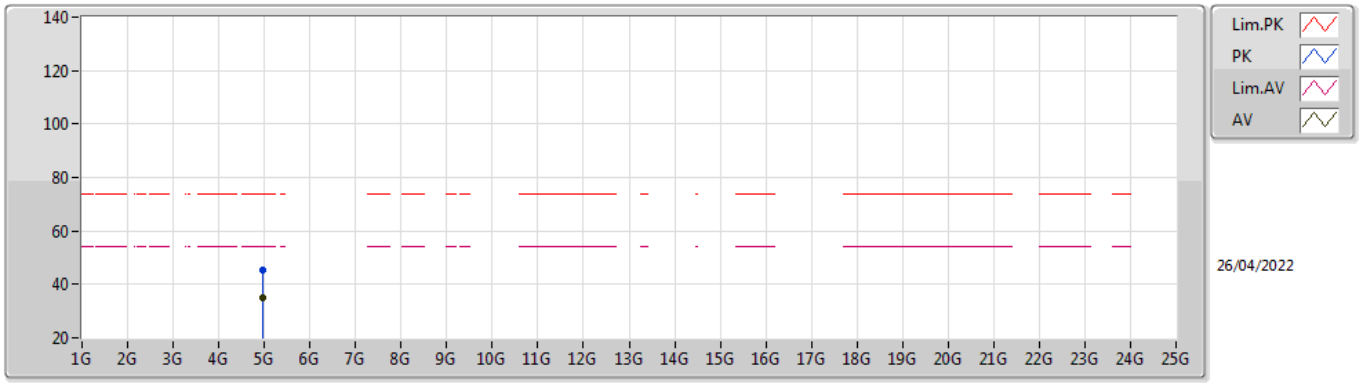
2480MHz_TX



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	4.96061G	35.21	54.00	-18.79	5.07	3	Vertical	112	1.50	-	30.14	33.14	6.36	34.43
PK	4.96185G	44.47	74.00	-29.53	5.08	3	Vertical	112	1.50	-	39.39	33.15	6.36	34.43

BT-LE(2Mbps)

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	4.9586G	35.01	54.00	-18.99	5.06	3	Horizontal	136	2.13	-	29.95	33.13	6.36	34.43
PK	4.95987G	45.20	74.00	-28.80	5.07	3	Horizontal	136	2.13	-	40.13	33.14	6.36	34.43

Summary

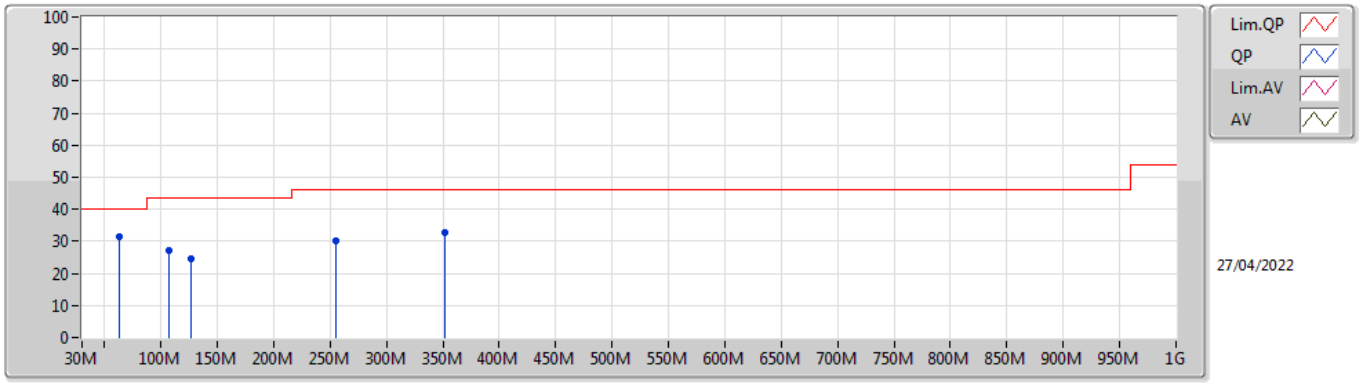
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	62.98M	31.55	40.00	-8.45	3	Vertical	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	62.98M	31.55	40.00	-8.45	3	Vertical	0	1.00	-
2440MHz	Pass	PK	107.6M	27.37	43.50	-16.13	3	Vertical	0	1.00	-
2440MHz	Pass	PK	127M	24.40	43.50	-19.10	3	Vertical	0	1.00	-
2440MHz	Pass	PK	255.04M	29.98	46.00	-16.02	3	Vertical	0	1.00	-
2440MHz	Pass	PK	352.04M	32.55	46.00	-13.45	3	Vertical	0	1.00	-
2440MHz	Pass	PK	352.04M	32.55	46.00	-13.45	3	Vertical	0	1.00	-
2440MHz	Pass	PK	62.98M	30.68	40.00	-9.32	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	247.28M	32.24	46.00	-13.76	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	319.06M	36.58	46.00	-9.42	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	400.54M	30.36	46.00	-15.64	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	511.12M	30.07	46.00	-15.93	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	641.1M	29.69	46.00	-16.31	3	Horizontal	360	1.00	-

BT-LE(2Mbps)

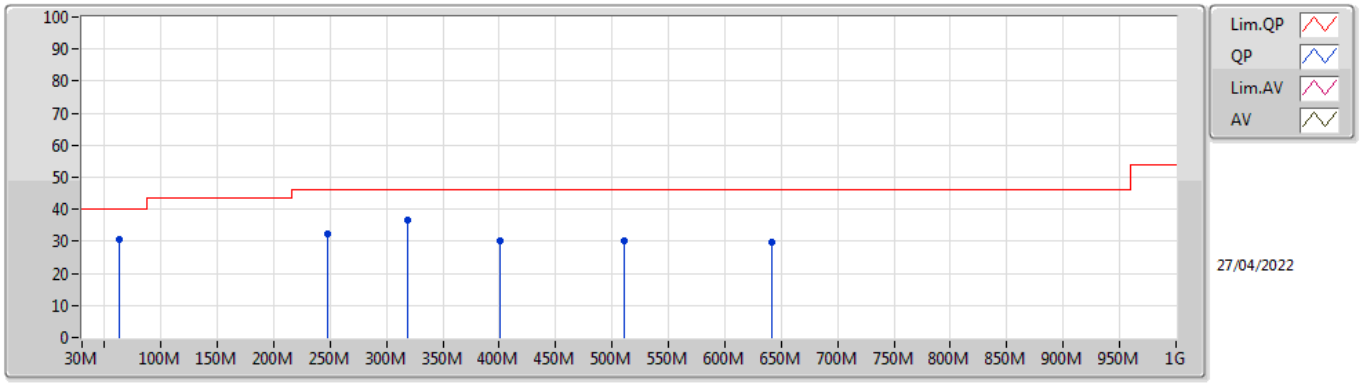
2440MHz_Switching Power Supply



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	62.98M	31.55	40.00	-8.45	-14.62	3	Vertical	0	1.00	-	46.17	11.57	1.29	27.48
PK	107.6M	27.37	43.50	-16.13	-8.79	3	Vertical	0	1.00	-	36.16	16.83	1.70	27.32
PK	127M	24.40	43.50	-19.10	-8.27	3	Vertical	0	1.00	-	32.67	17.13	1.85	27.25
PK	255.04M	29.98	46.00	-16.02	-5.89	3	Vertical	0	1.00	-	35.87	18.12	2.66	26.67
PK	352.04M	32.55	46.00	-13.45	-4.15	3	Vertical	0	1.00	-	36.70	19.57	3.15	26.87
PK	352.04M	32.55	46.00	-13.45	-4.15	3	Vertical	0	1.00	-	36.70	19.57	3.15	26.87

BT-LE(2Mbps)

2440MHz_Switching 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	62.98M	30.68	40.00	-9.32	-14.62	3	Horizontal	360	1.00	-	45.30	11.57	1.29	27.48
PK	247.28M	32.24	46.00	-13.76	-6.87	3	Horizontal	360	1.00	-	39.11	17.21	2.61	26.69
PK	319.06M	36.58	46.00	-9.42	-4.96	3	Horizontal	360	1.00	-	41.54	18.75	3.00	26.71
PK	400.54M	30.36	46.00	-15.64	-2.79	3	Horizontal	360	1.00	-	33.15	21.02	3.38	27.19
PK	511.12M	30.07	46.00	-15.93	-1.17	3	Horizontal	360	1.00	-	31.24	22.80	3.85	27.82
PK	641.1M	29.69	46.00	-16.31	0.39	3	Horizontal	360	1.00	-	29.30	24.05	4.36	28.02