

FCC Radio Test Report

FCC ID : RSE-OWM0131
Equipment : WiFi Extender
Brand Name : technicolor
Model Name : OWM0131TCH
Applicant : Technicolor Delivery Technologies Belgium
Prins Boudewijnlaan 47
Edegem B-2650
Belgium
Manufacturer : Technicolor Delivery Technologies Belgium
Prins Boudewijnlaan 47
Edegem B-2650
Belgium
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 23, 2022, and testing was started from Jul. 15, 2022 and completed on Sep. 08, 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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PHOTOGRAPHS OF EUT V01



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: Ryan Hsiao

Report Producer: Michelle Tsai

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:
<ul style="list-style-type: none"> 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	NA	NA	PCB	I-Pex	2.4GHz
2	NA	NA	PCB	I-Pex	2.4GHz
3	NA	NA	PCB	I-Pex	5GHz
4	NA	NA	PCB	I-Pex	5GHz
5	NA	NA	PCB	I-Pex	5GHz
6	NA	NA	PCB	I-Pex	5GHz
7	NA	NA	PCB	I-Pex	Bluetooth
8	NA	NA	PCB	I-Pex	Zigbee
9	NA	NA	PCB	I-Pex	Z-Wave

Ant.	Port	Gain (dBi)					
		2.4G	U-NII-1	U-NII-3	Bluetooth	Zigbee	Z-Wave
1	1	2.28	-	-	-	-	-
2	2	3.20	-	-	-	-	-
3	1	-	4.09	3.29	-	-	-
4	2	-	2.57	2.70	-	-	-
5	3	-	2.33	2.51	-	-	-
6	4	-	3.75	2.65	-	-	-
7	1	-	-	-	2.9	-	-
8	1	-	-	-	-	4.8	-
9	1	-	-	-	-	-	0.9



Note 1: The EUT has nine antennas.

For 2.4GHz function:

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

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

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

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

For BT function:

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

Ant. 7 can be used as transmitting/receiving antenna.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (4TX/4RX)

Ant. 3 (port 1) ~ Ant. 6 (port 4) could transmit/receive simultaneously.

For Zigbee function:

For Zigbee mode (1TX/1RX)

Ant. 8 (port 1) could transmit/receive.

For Z-Wave function:

For Z-Wave mode (1TX/1RX)

Ant. 9 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter		
Software Version	5.04L.03		
Hardware Version	LAB1		
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/> Point-to-point	
Type of EUT			
<input checked="" type="checkbox"/>	Stand-alone		
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:	...	
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:	...	
<input type="checkbox"/>	Other:		

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)
BT-LE(2Mbps)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

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

1.2 Testing Applied Standards

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

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

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

- ◆ KDB 558074 D01 v05r02
- ◆ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/>	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	22.1~23.6°C / 50~60%	15/Jul/2022
RF Conducted	TH01-HY	Johnny Yu	22.5~25.8°C / 53~56%	05/Sep/2022~08/Sep/2022
Radiated	03CH02-HY	Jack Tang	21.4~22.4°C / 56~63%	02/Sep/2022
<input type="checkbox"/>	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Receiver Radiated Unwanted Emissions	4.8 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	Dos V6.1
-----------------------	----------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	200
2440MHz	200
2480MHz	155
BT-LE(2Mbps)	-
2404MHz	200
2440MHz	200
2478MHz	200

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	Adapter 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	Adapter 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
Test Condition	Radiated measurement
Operating Mode	CTX
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth + Zigbee + Zwave

Refer to Sporton Test Report No.: FA262320 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.

2.3 Accessories

Accessories				
AC Adapter	Brand Name	HONOTO	Model Name	ADS-24FUA-12 12024EPCU
	Power Rating	I/P: 100 - 240Vac, 0.7 A, O/P: 12 Vdc, 2.0A		
	Power Cord	1.15 meter, non-shielded cable, w/o ferrite core		
Stand	Brand Name	NA	Model Name	NA

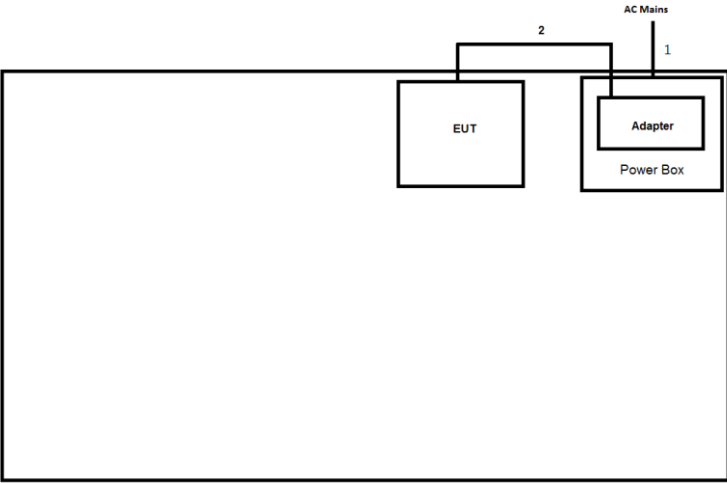
Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

2.5 Test Setup Diagram

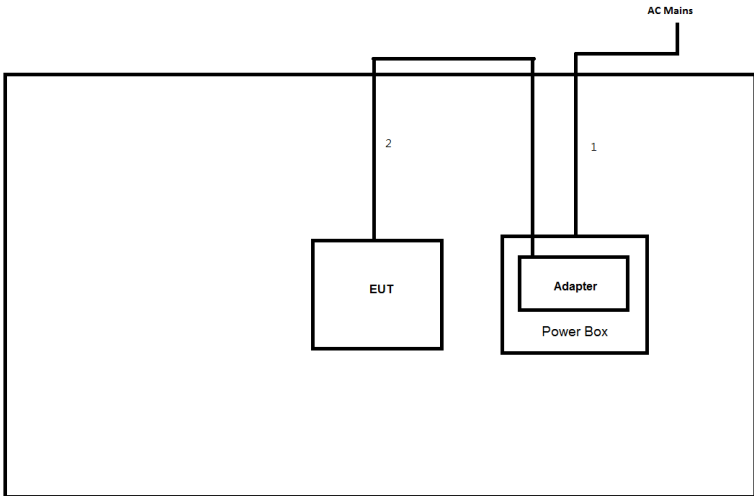
Test Setup Diagram – AC Line Conducted Emission Test



The diagram shows a test setup for AC Line Conducted Emission. A box labeled 'EUT' is connected to a 'Power Box' via a DC Power cable (labeled '2'). The 'Power Box' contains an 'Adapter' and is connected to 'AC Mains' via an AC Power cable (labeled '1').

Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.15	-

Test Setup Diagram - Radiated Test



The diagram shows a test setup for Radiated Test. A box labeled 'EUT' is connected to a 'Power Box' via a DC Power cable (labeled '2'). The 'Power Box' contains an 'Adapter' and is connected to 'AC Mains' via an AC Power cable (labeled '1').

Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.15	-

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

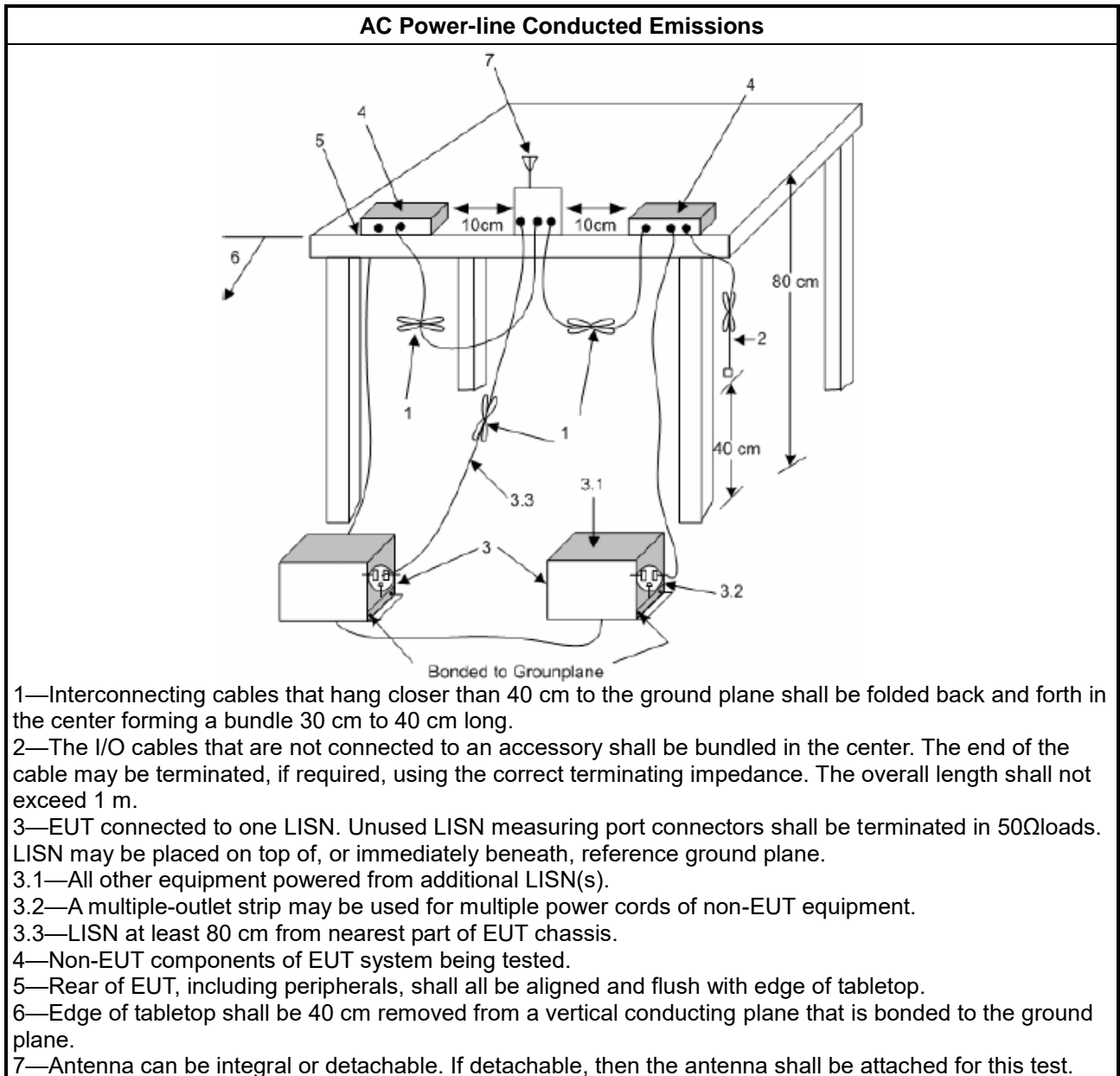
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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



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:
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz.

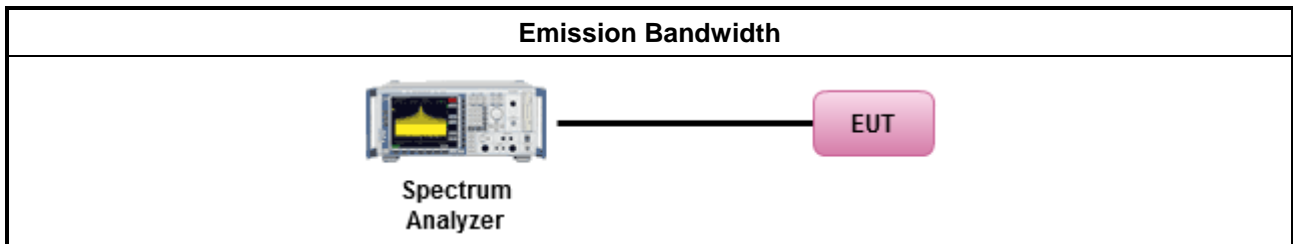
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/> Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/> Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



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	
	<ul style="list-style-type: none"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS):
	<ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - 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:	
	<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS)
	<ul style="list-style-type: none"> - Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
<p>P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

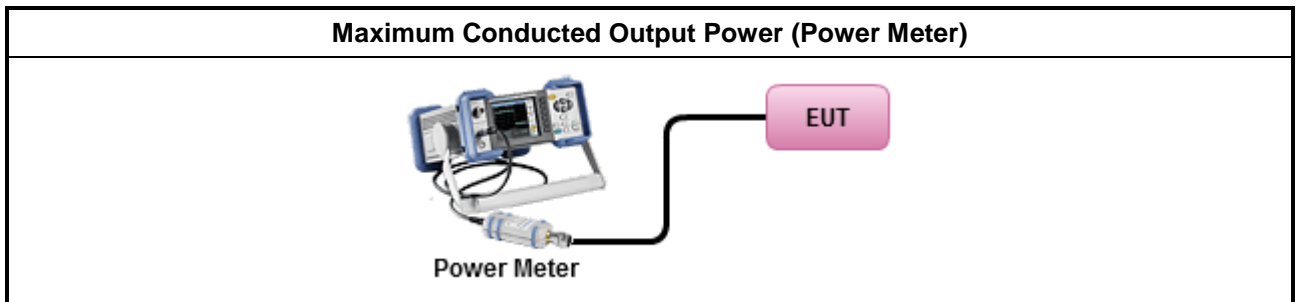
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> ▪ Maximum Average Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ 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. 	
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup



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
<ul style="list-style-type: none"> Power Spectral Density (PSD) ≤ 8 dBm/3kHz

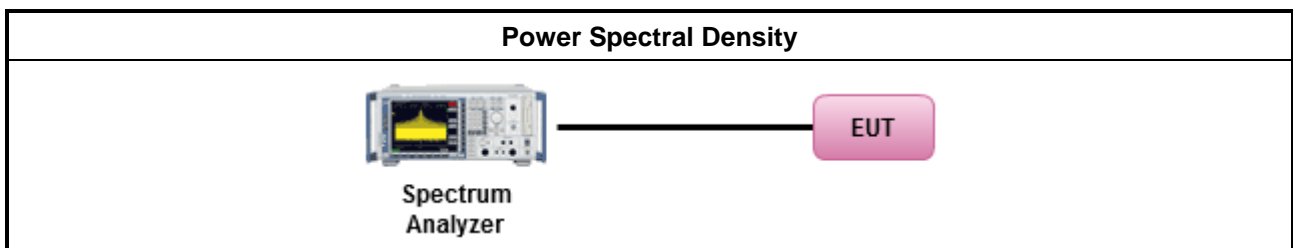
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> 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). 	
<input checked="" type="checkbox"/> Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.	
<ul style="list-style-type: none"> For conducted measurement. <ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: <ul style="list-style-type: none"> 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



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.

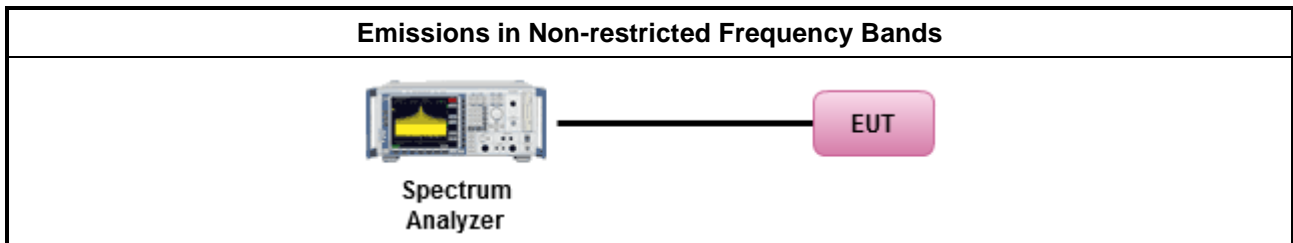
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



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 below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

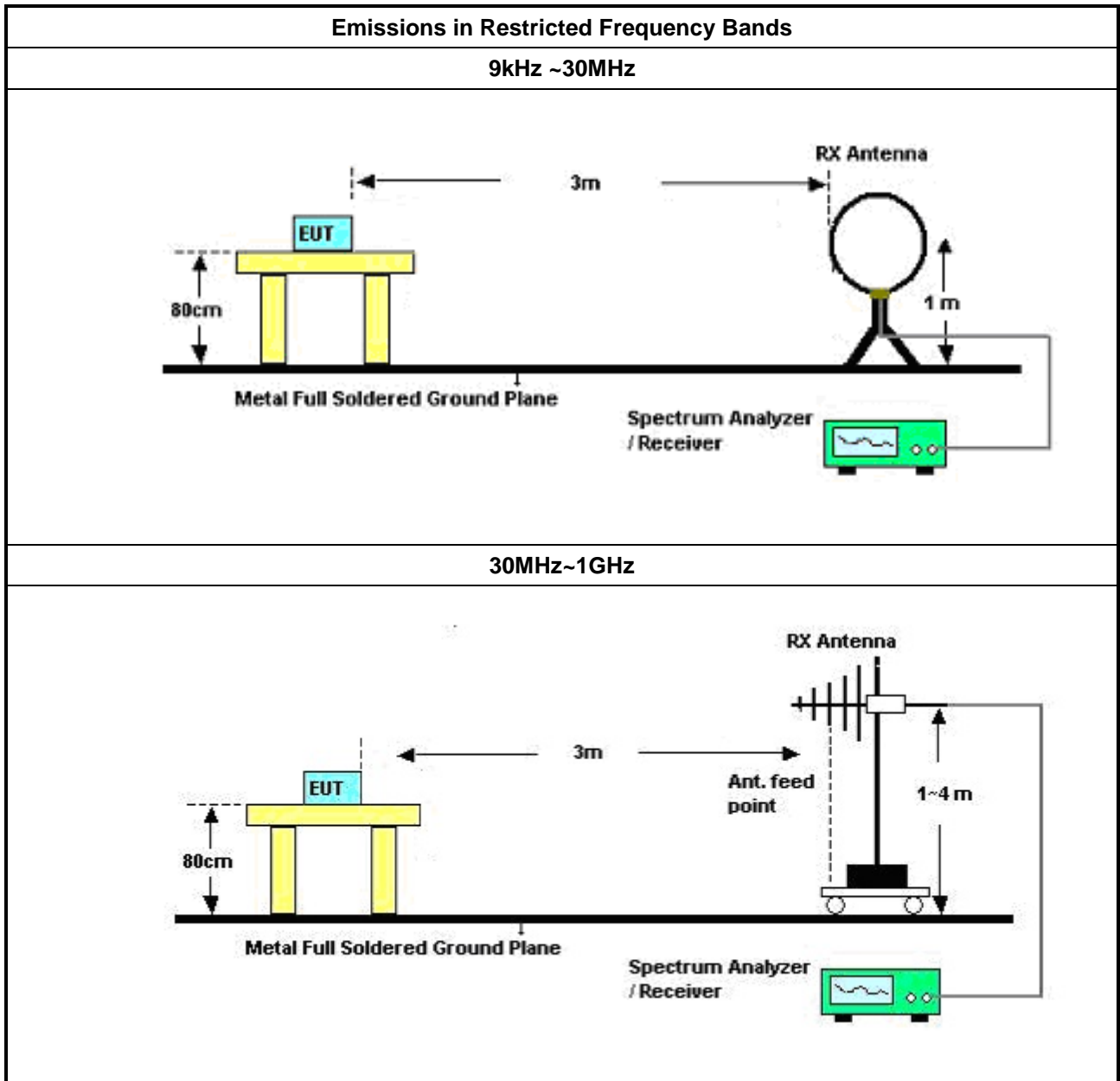
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below:
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
	<ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below:
	<ul style="list-style-type: none"> ▪ 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.
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
	<ul style="list-style-type: none"> ▪ Use the following spectrum analyzer settings:
	<ul style="list-style-type: none"> ▪ Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	<ul style="list-style-type: none"> ▪ Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
	<ul style="list-style-type: none"> ▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
	<ul style="list-style-type: none"> ▪ 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.
	<ul style="list-style-type: none"> ▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

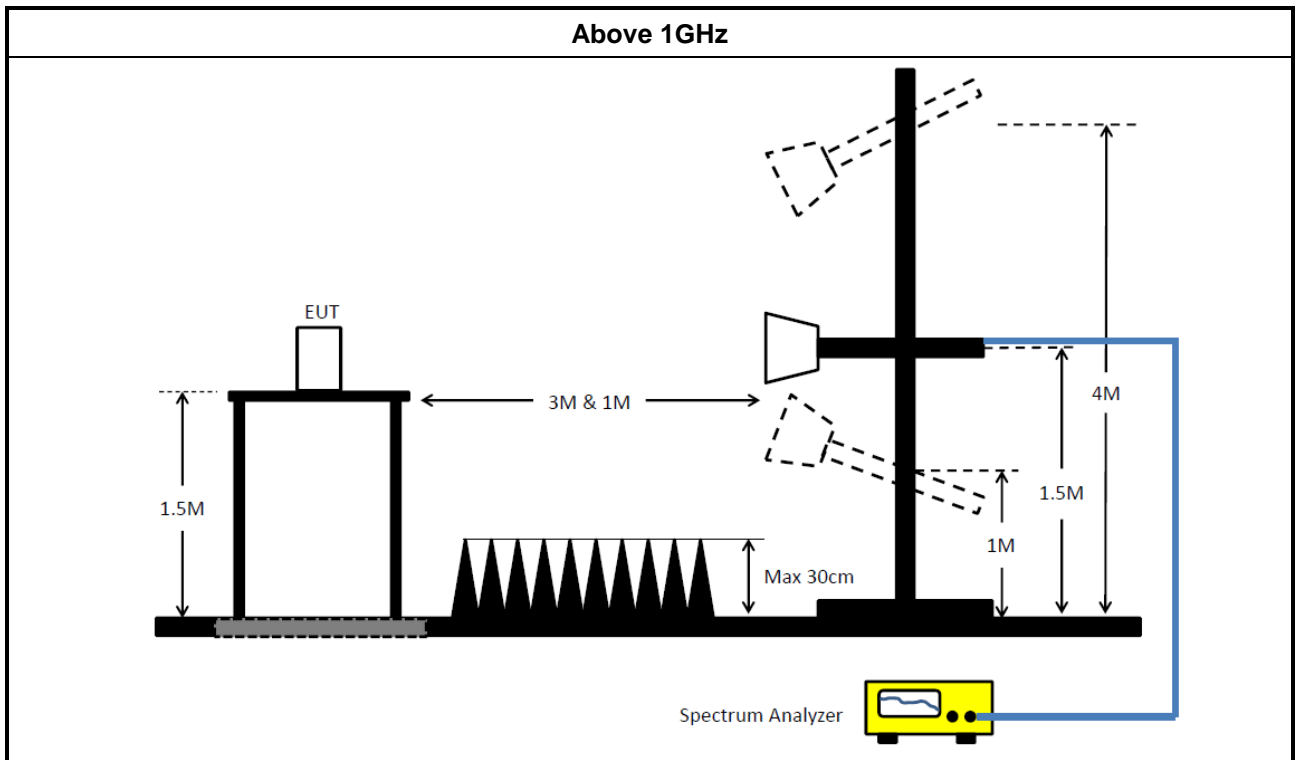
3.6.4 Measurement Results Calculation

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





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	V5.1014	-	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	V5.10.7.16	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	03CH02-HY	30MHz~1GHz 3m	31/Jul/2022	30/Jul/2023
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	30/Jul/2022	29/Jul/2023
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	08/Apr/2022	07/Apr/2023
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	28/Jun/2022	27/Jun/2023
Microwave Preamp	Agilent	8449B	3008A02373	1GHz~26.5GHz	03/Nov/2021	02/Nov/2022
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	14/Sep/2021	13/Sep/2022
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	04/Sep/2021	03/Sep/2022
RF Cable	MVE	400LL	MVE-1-0802	9kHz~30MHz	04/May/2022	03/May/2023
RF Cable	MVE	400LL	MVE-1-0802	30MHz~1GHz	04/May/2022	03/May/2023
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	01/Apr/2022	31/Mar/2023
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	18/Mar/2022	17/Mar/2023
Microwave Premp	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	13/May/2022	12/May/2023
SENSE-15247_FS	Sporton	V5.10.7.14	N/A	N/A	N/A	N/A



Instrument for Radiated Test (Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	30/Jul/2022	29/Jul/2023
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	08/Apr/2022	07/Apr/2023
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	03/Nov/2021	02/Nov/2022
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	14/Sep/2021	13/Sep/2022
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	01/Apr/2022	31/Mar/2023
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	18/Mar/2022	17/Mar/2023
Microwave Prempplier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	08/Mar/2022	07/Mar/2023
SENSE-EMI	Sporton	V5.10.8	N/A	N/A	N/A	N/A



Summary

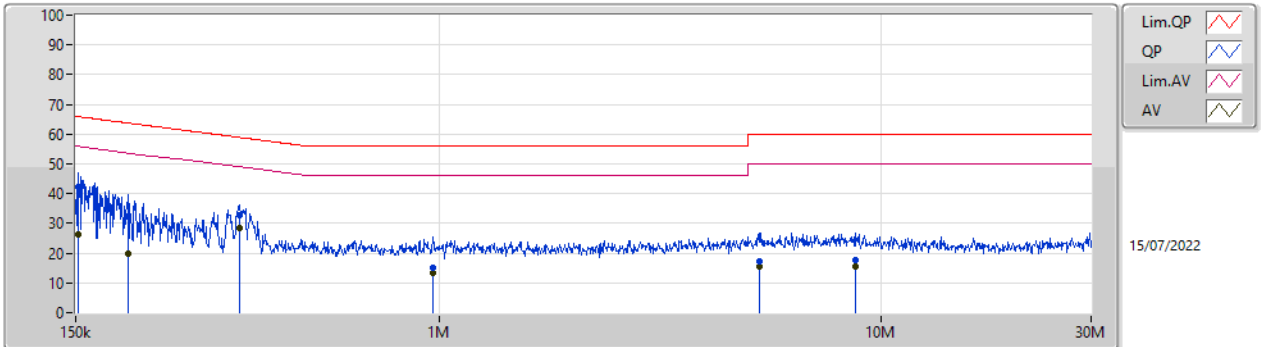
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	352.457k	28.49	48.91	-20.42	Line



Mode Configure

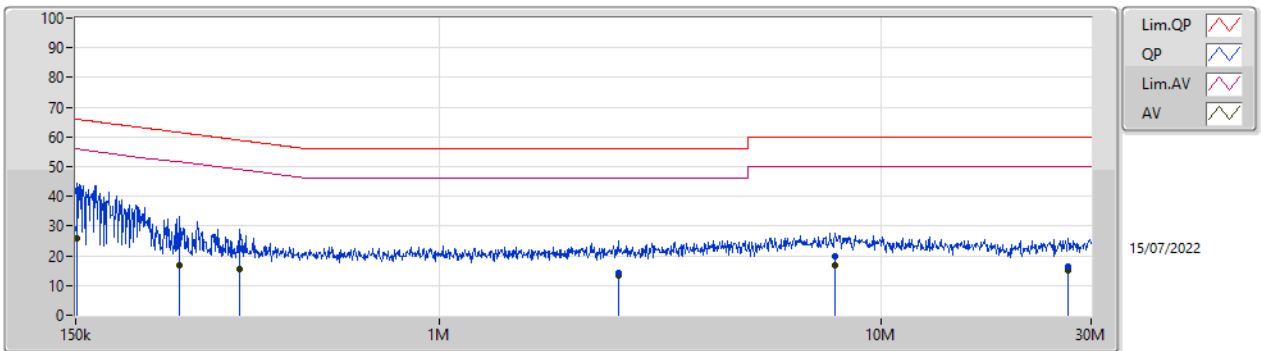
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	151.807k	42.41	65.90	-23.49	Line	-
Mode 1	Pass	AV	151.807k	26.21	55.90	-29.69	Line	-
Mode 1	Pass	QP	196.781k	32.52	63.74	-31.22	Line	-
Mode 1	Pass	AV	196.781k	19.84	53.74	-33.90	Line	-
Mode 1	Pass	QP	352.457k	32.76	58.91	-26.15	Line	-
Mode 1	Pass	AV	352.457k	28.49	48.91	-20.42	Line	-
Mode 1	Pass	QP	967.688k	15.27	56.00	-40.73	Line	-
Mode 1	Pass	AV	967.688k	13.39	46.00	-32.61	Line	-
Mode 1	Pass	QP	5.3M	17.32	60.00	-42.68	Line	-
Mode 1	Pass	AV	5.3M	15.44	50.00	-34.56	Line	-
Mode 1	Pass	QP	8.765M	17.48	60.00	-42.52	Line	-
Mode 1	Pass	AV	8.765M	15.66	50.00	-34.34	Line	-
Mode 1	Pass	QP	151.202k	41.68	65.92	-24.24	Neutral	-
Mode 1	Pass	AV	151.202k	25.92	55.92	-30.00	Neutral	-
Mode 1	Pass	QP	257.124k	26.07	61.53	-35.46	Neutral	-
Mode 1	Pass	AV	257.124k	16.61	51.53	-34.92	Neutral	-
Mode 1	Pass	QP	352.457k	22.45	58.91	-36.46	Neutral	-
Mode 1	Pass	AV	352.457k	15.61	48.91	-33.30	Neutral	-
Mode 1	Pass	QP	2.543M	14.39	56.00	-41.61	Neutral	-
Mode 1	Pass	AV	2.543M	13.29	46.00	-32.71	Neutral	-
Mode 1	Pass	QP	7.901M	19.95	60.00	-40.05	Neutral	-
Mode 1	Pass	AV	7.901M	17.00	50.00	-33.00	Neutral	-
Mode 1	Pass	QP	26.59M	16.38	60.00	-43.62	Neutral	-
Mode 1	Pass	AV	26.59M	15.20	50.00	-34.80	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	151.807k	42.41	65.90	-23.49	19.63	Line	-	22.78	9.69	0.03	9.91
AV	151.807k	26.21	55.90	-29.69	19.63	Line	-	6.58	9.69	0.03	9.91
QP	196.781k	32.52	63.74	-31.22	19.63	Line	-	12.89	9.69	0.03	9.91
AV	196.781k	19.84	53.74	-33.90	19.63	Line	-	0.21	9.69	0.03	9.91
QP	352.457k	32.76	58.91	-26.15	19.63	Line	-	13.13	9.68	0.04	9.91
AV	352.457k	28.49	48.91	-20.42	19.63	Line	-	8.86	9.68	0.04	9.91
QP	967.688k	15.27	56.00	-40.73	19.65	Line	-	-4.38	9.68	0.05	9.92
AV	967.688k	13.39	46.00	-32.61	19.65	Line	-	-6.26	9.68	0.05	9.92
QP	5.3M	17.32	60.00	-42.68	19.81	Line	-	-2.49	9.74	0.15	9.92
AV	5.3M	15.44	50.00	-34.56	19.81	Line	-	-4.37	9.74	0.15	9.92
QP	8.765M	17.48	60.00	-42.52	19.90	Line	-	-2.42	9.80	0.17	9.93
AV	8.765M	15.66	50.00	-34.34	19.90	Line	-	-4.24	9.80	0.17	9.93

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	151.202k	41.68	65.92	-24.24	19.67	Neutral	-	22.01	9.73	0.03	9.91
AV	151.202k	25.92	55.92	-30.00	19.67	Neutral	-	6.25	9.73	0.03	9.91
QP	257.124k	26.07	61.53	-35.46	19.66	Neutral	-	6.41	9.72	0.03	9.91
AV	257.124k	16.61	51.53	-34.92	19.66	Neutral	-	-3.05	9.72	0.03	9.91
QP	352.457k	22.45	58.91	-36.46	19.67	Neutral	-	2.78	9.72	0.04	9.91
AV	352.457k	15.61	48.91	-33.30	19.67	Neutral	-	-4.06	9.72	0.04	9.91
QP	2.543M	14.39	56.00	-41.61	19.77	Neutral	-	-5.38	9.75	0.10	9.92
AV	2.543M	13.29	46.00	-32.71	19.77	Neutral	-	-6.48	9.75	0.10	9.92
QP	7.901M	19.95	60.00	-40.05	19.96	Neutral	-	-0.01	9.86	0.17	9.93
AV	7.901M	17.00	50.00	-33.00	19.96	Neutral	-	-2.96	9.86	0.17	9.93
QP	26.59M	16.38	60.00	-43.62	20.35	Neutral	-	-3.97	10.10	0.32	9.93
AV	26.59M	15.20	50.00	-34.80	20.35	Neutral	-	-5.15	10.10	0.32	9.93



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	696.25k	1.042M	1M04F1D	687.5k	1.039M
BT-LE(2Mbps)	1.345M	2.121M	2M12F1D	1.343M	2.101M

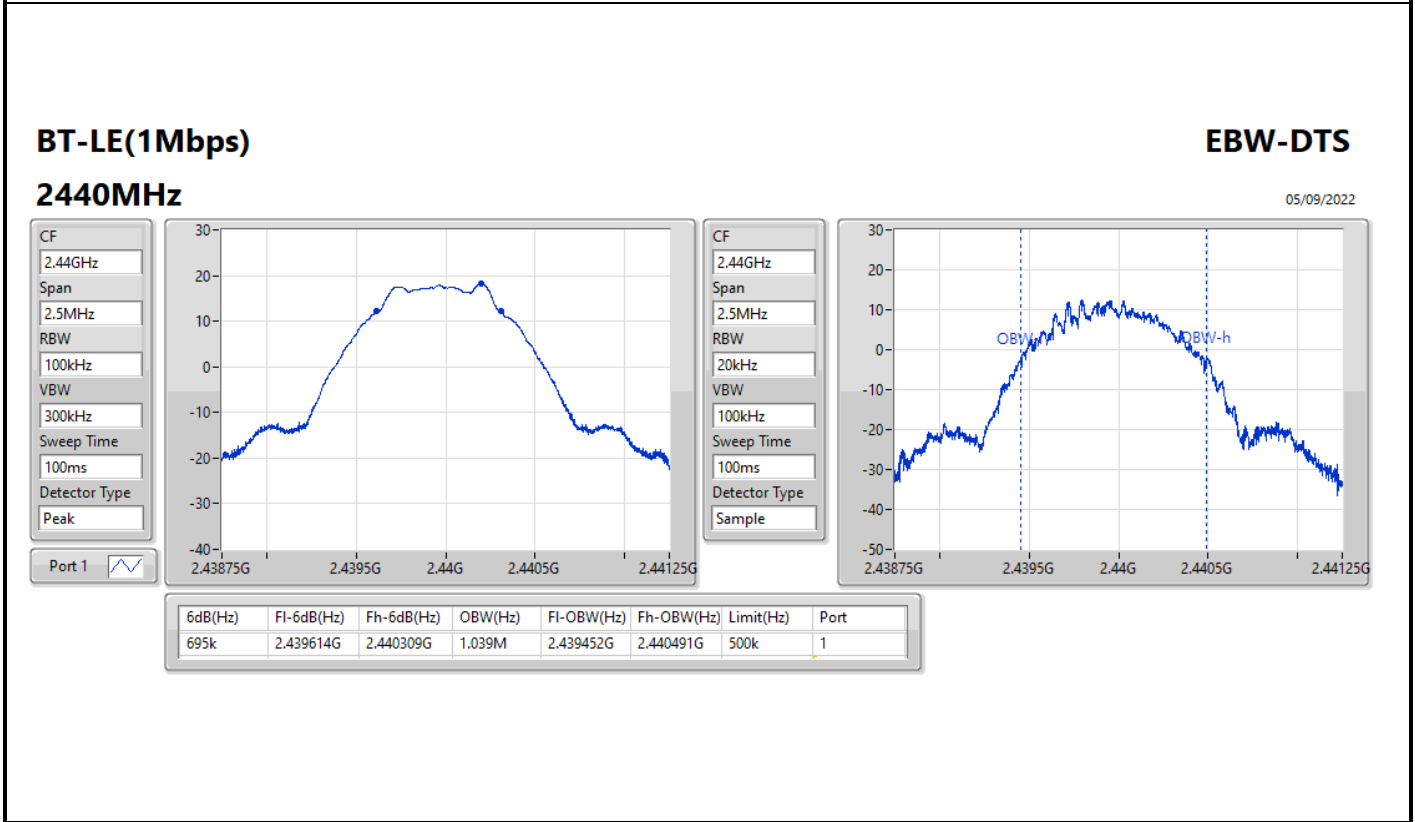
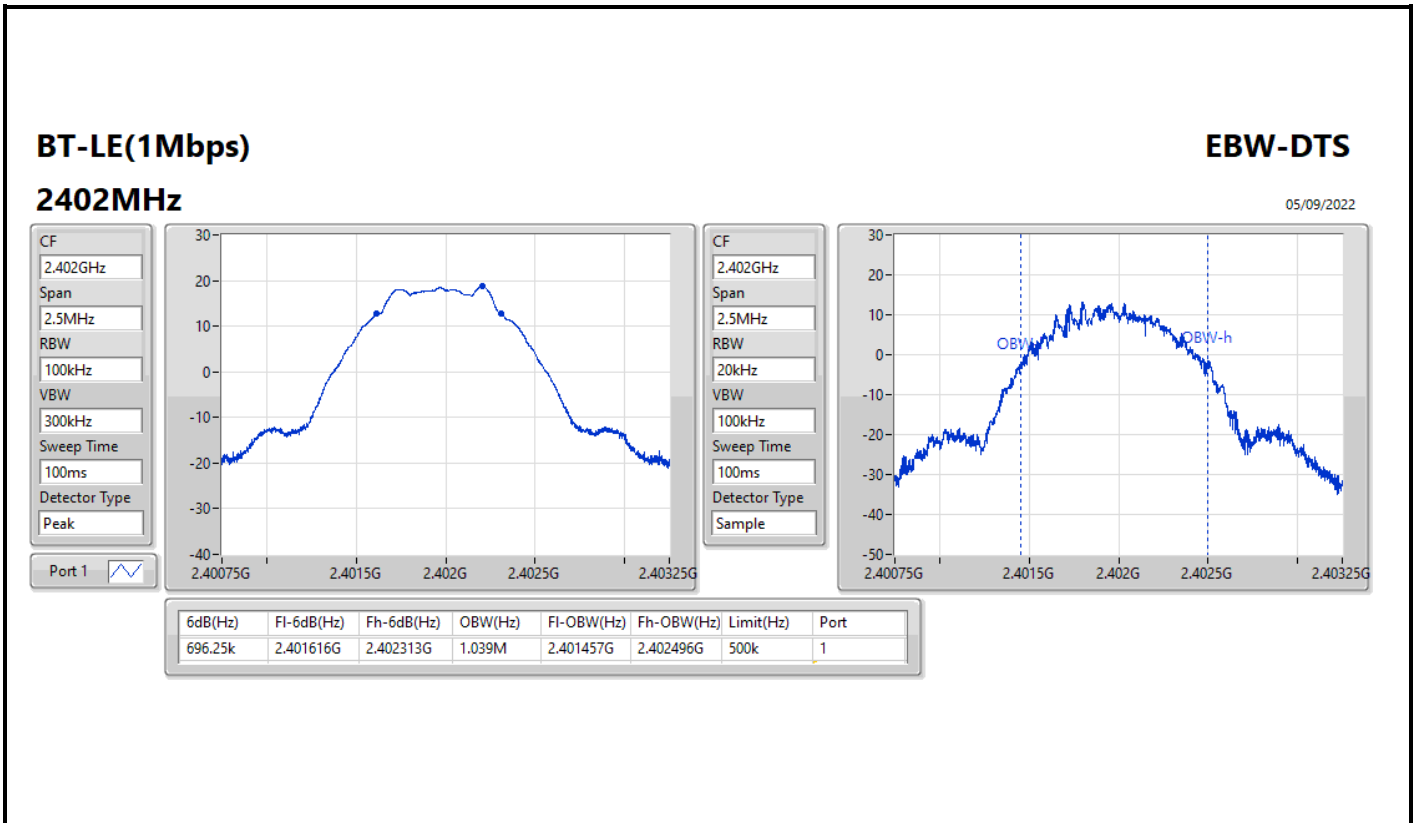
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	696.25k	1.039M
2440MHz	Pass	500k	695k	1.039M
2480MHz	Pass	500k	687.5k	1.042M
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.345M	2.101M
2440MHz	Pass	500k	1.343M	2.106M
2478MHz	Pass	500k	1.345M	2.121M

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

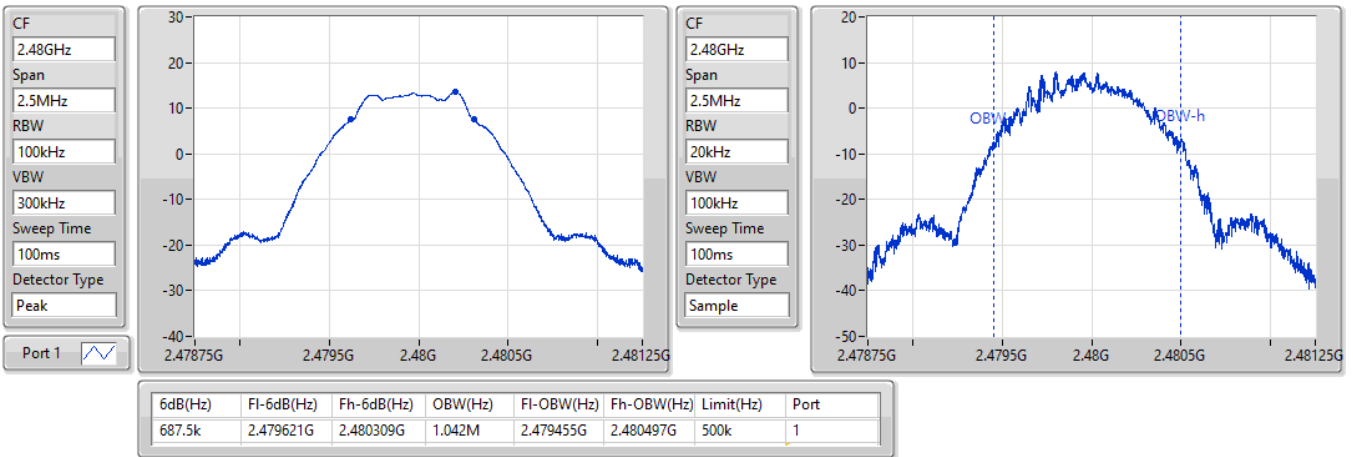


BT-LE(1Mbps)

EBW-DTS

2480MHz

05/09/2022

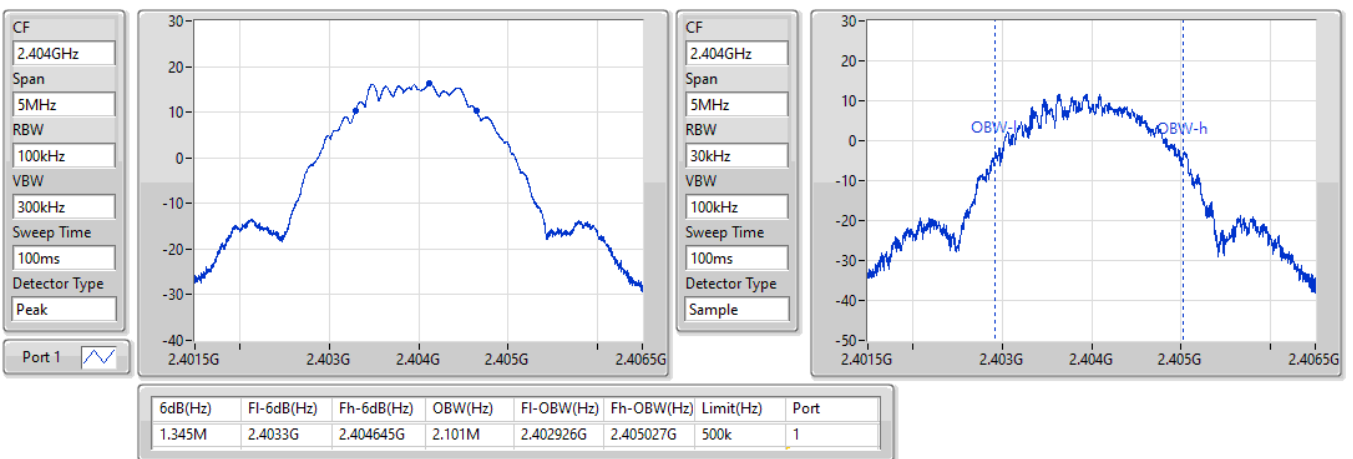


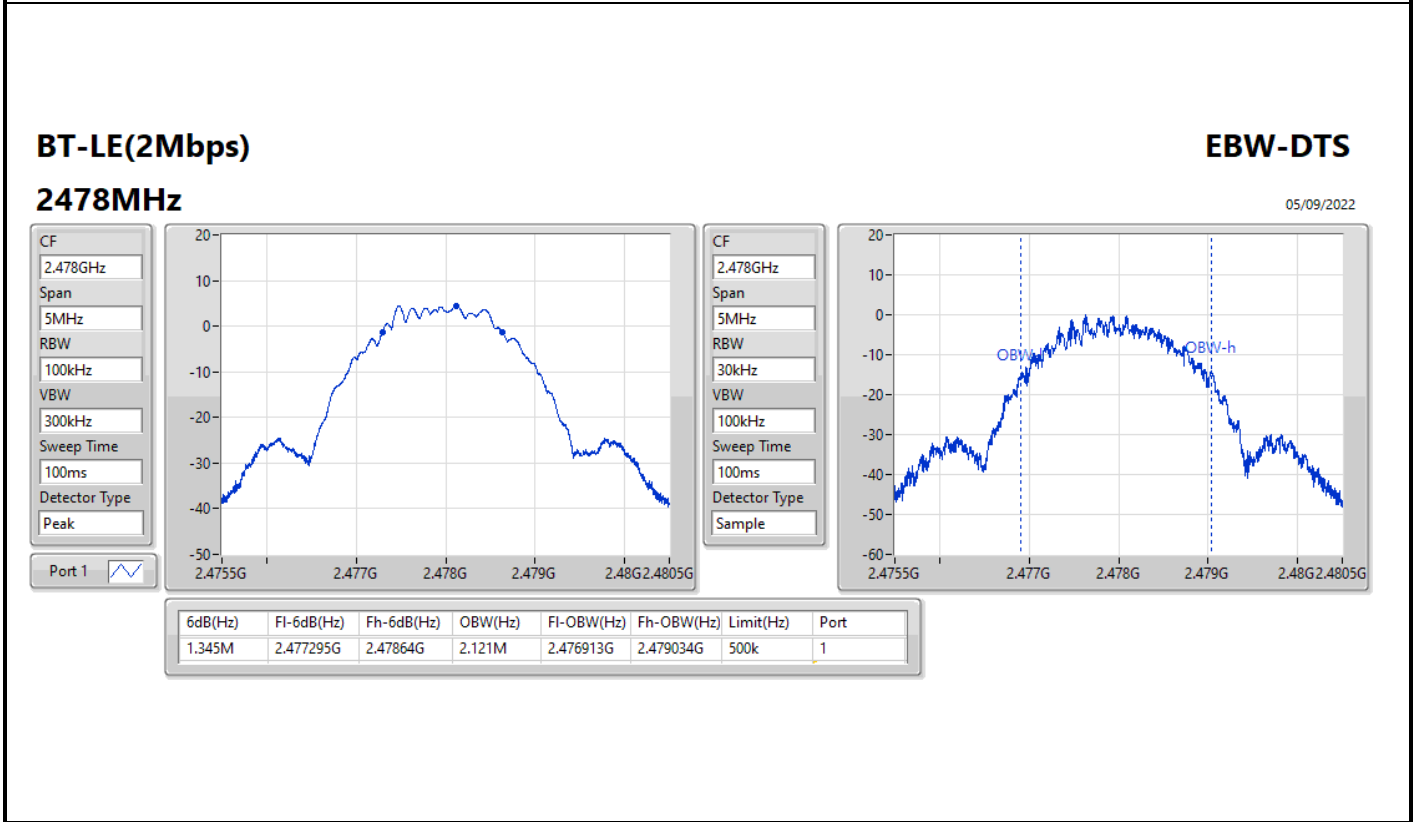
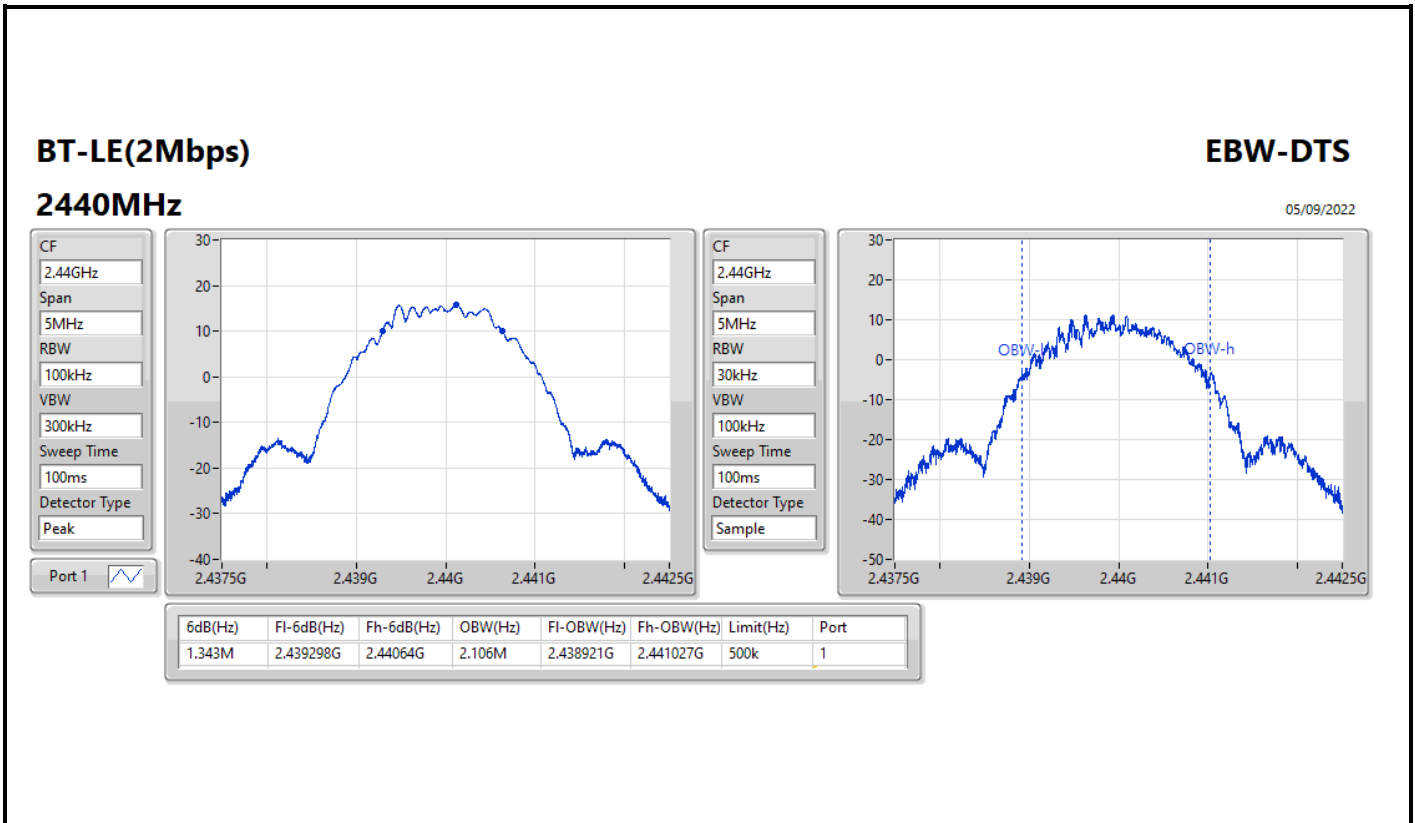
BT-LE(2Mbps)

EBW-DTS

2404MHz

05/09/2022







Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	19.12	0.08166
BT-LE(2Mbps)	19.02	0.07980



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.90	19.12	30.00
2440MHz	Pass	2.90	18.62	30.00
2480MHz	Pass	2.90	14.03	30.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	2.90	19.02	30.00
2440MHz	Pass	2.90	18.61	30.00
2478MHz	Pass	2.90	7.35	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	1.07
BT-LE(2Mbps)	1.22

RBW = 3kHz;



Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.90	1.07	8.00
2440MHz	Pass	2.90	0.58	8.00
2480MHz	Pass	2.90	-4.02	8.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	2.90	1.22	8.00
2440MHz	Pass	2.90	0.78	8.00
2478MHz	Pass	2.90	-10.45	8.00

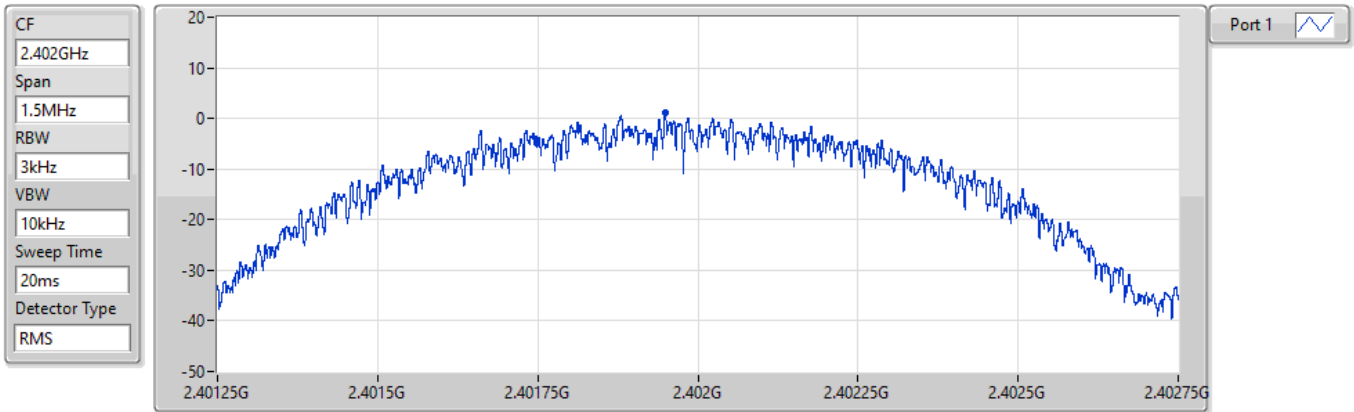
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

BT-LE(1Mbps)

PSD

2402MHz

05/09/2022



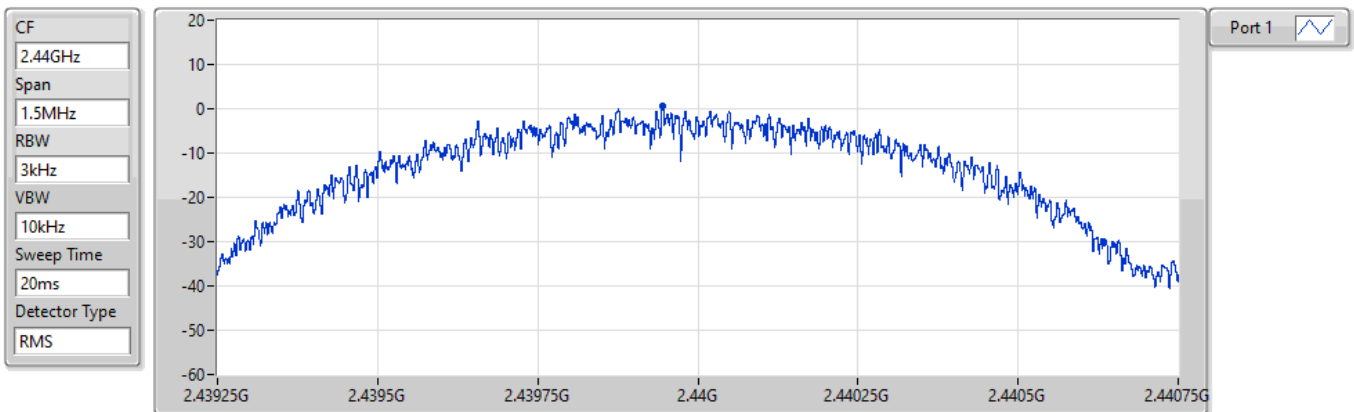
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.07	1.07	1.07

BT-LE(1Mbps)

PSD

2440MHz

05/09/2022



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.58	0.58	0.58

BT-LE(1Mbps)

PSD

2480MHz

05/09/2022

CF
2.48GHz

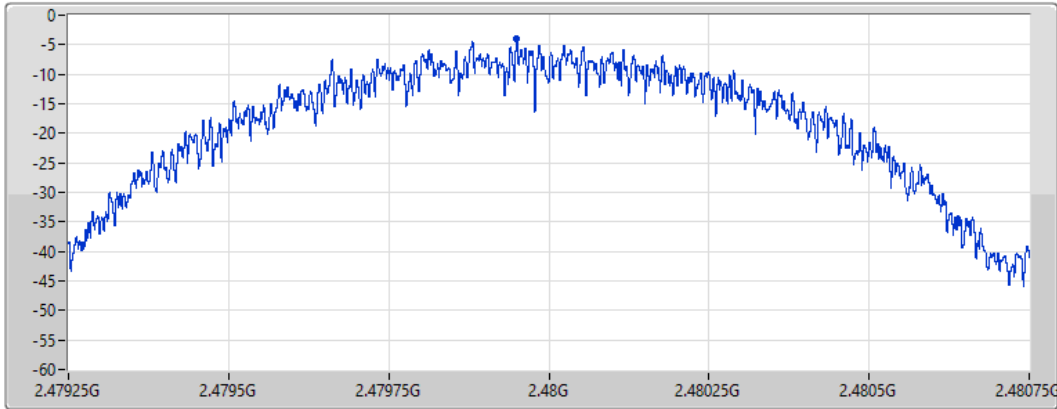
Span
1.5MHz


RBW
3kHz

VBW
10kHz

Sweep Time
20ms

Detector Type
RMS



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.02	-4.02	-4.02

BT-LE(2Mbps)

PSD

2404MHz

05/09/2022

CF
2.404GHz

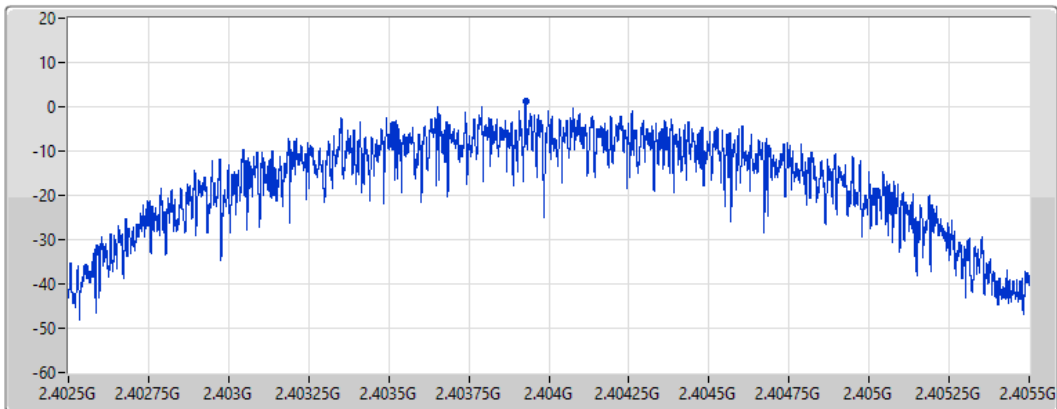
Span
3MHz


RBW
3kHz

VBW
10kHz

Sweep Time
20ms

Detector Type
RMS



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.22	1.22	1.22

BT-LE(2Mbps)

PSD

2440MHz

05/09/2022

CF
2.44GHz

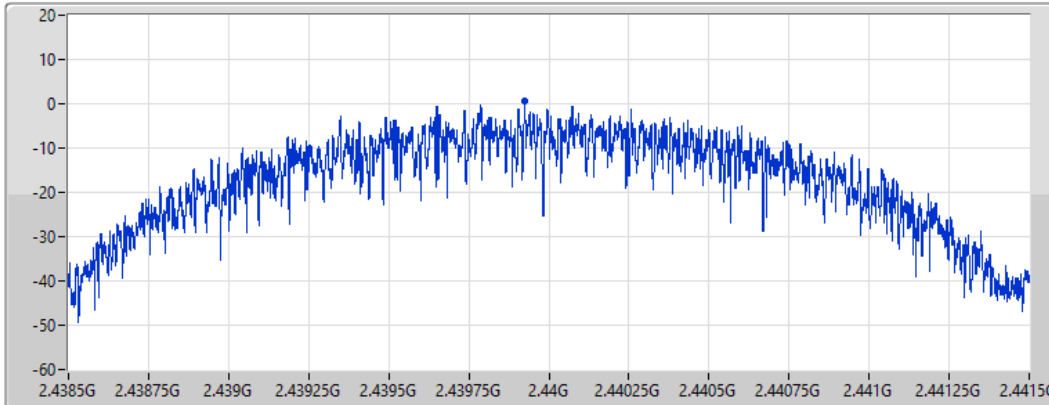
Span
3MHz


RBW
3kHz

VBW
10kHz

Sweep Time
20ms

Detector Type
RMS



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.78	0.78	0.78

BT-LE(2Mbps)

PSD

2478MHz

05/09/2022

CF
2.478GHz

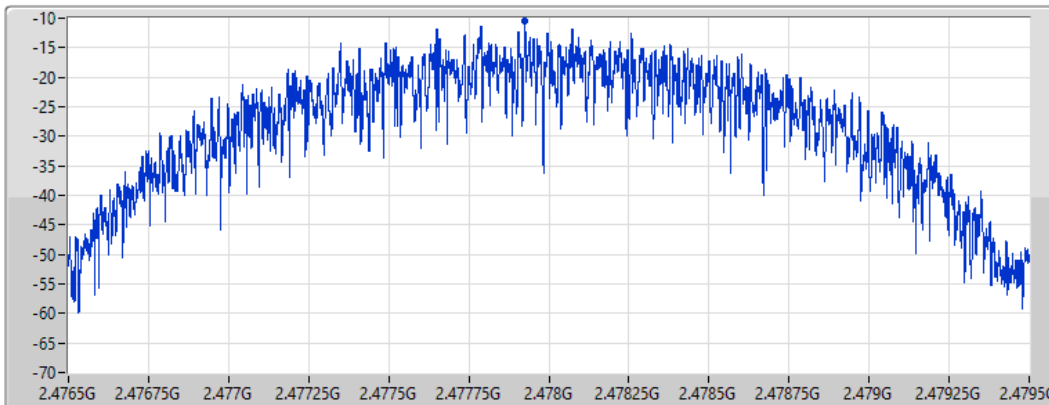
Span
3MHz


RBW
3kHz

VBW
10kHz

Sweep Time
20ms

Detector Type
RMS



Port 1 

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.45	-10.45	-10.45

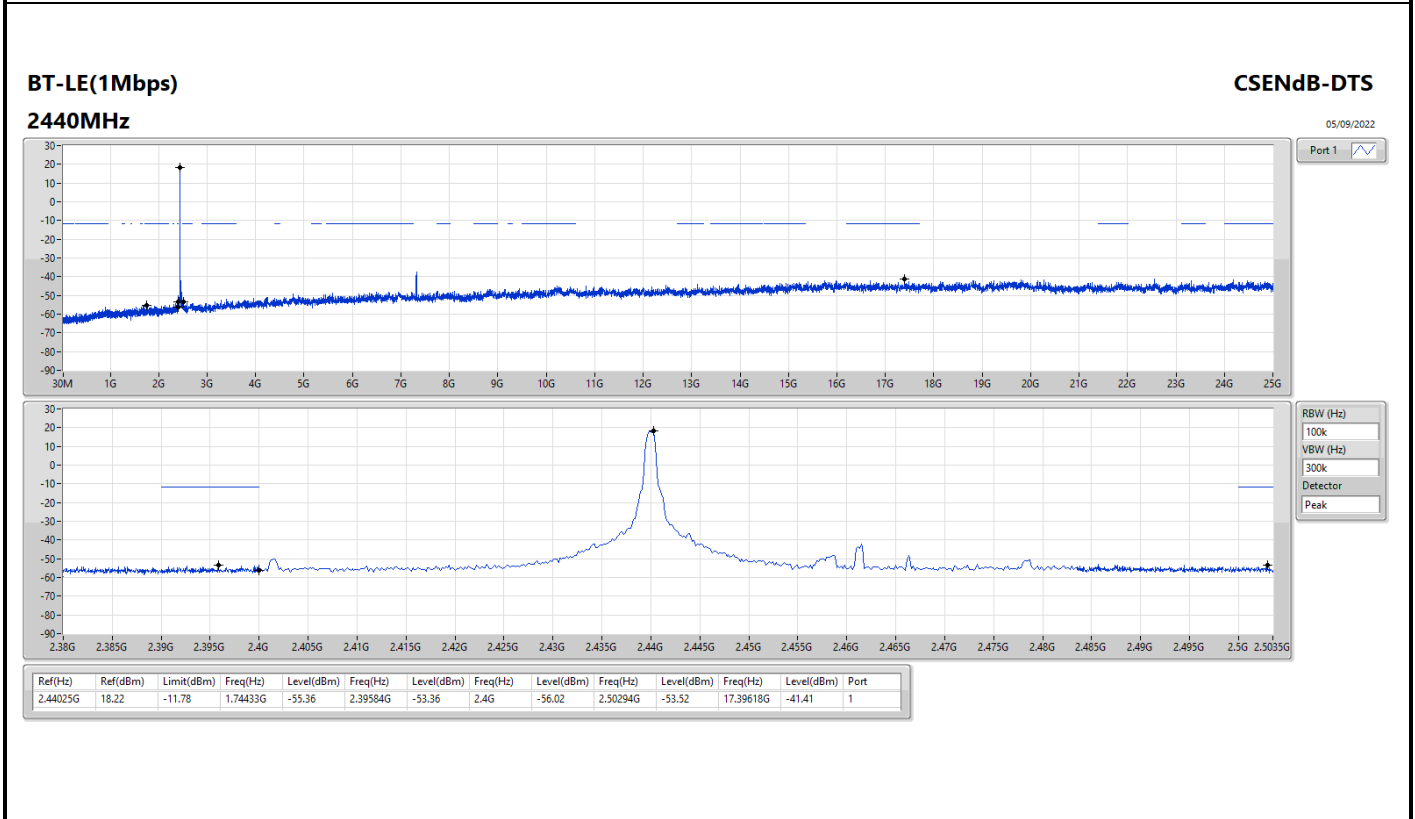
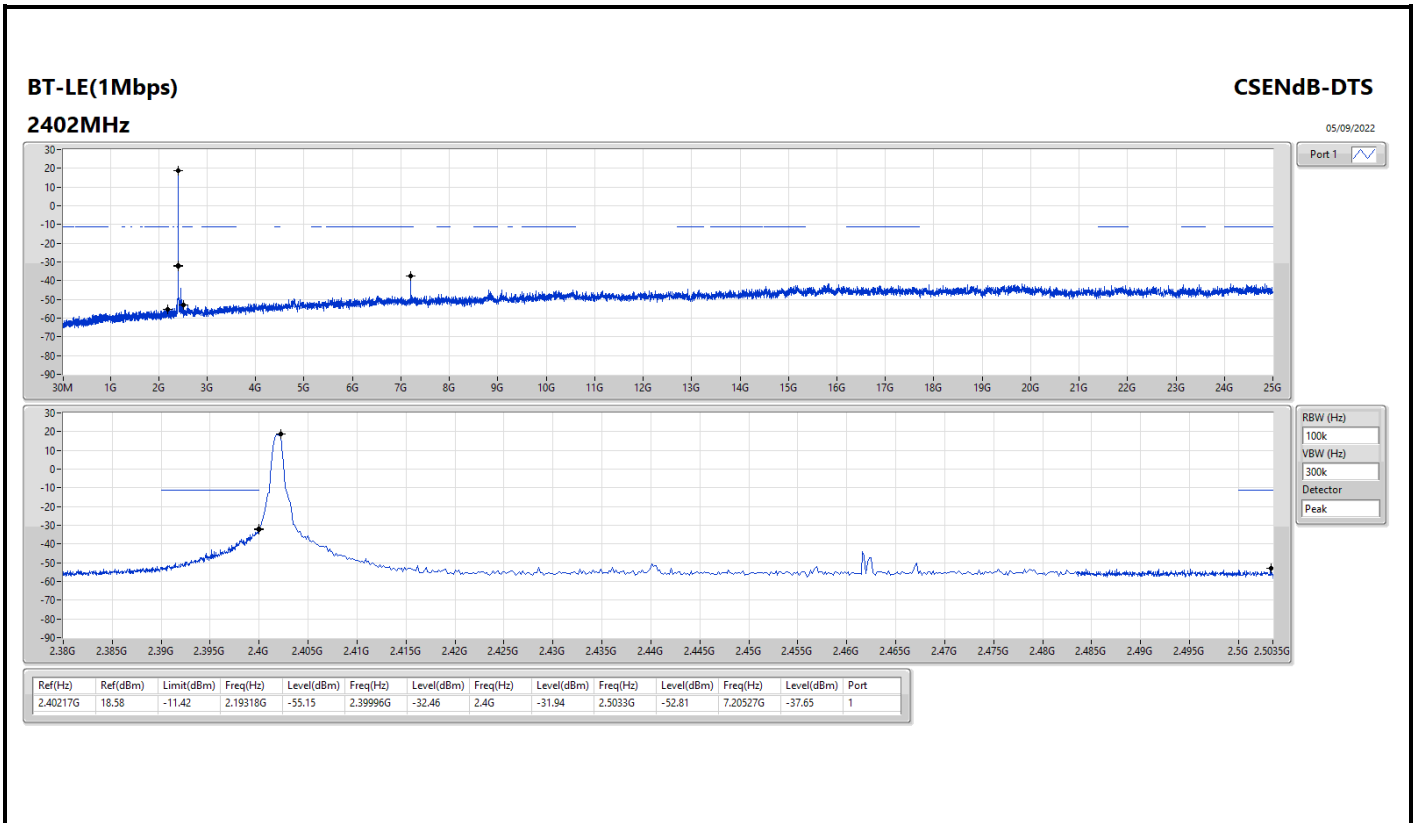


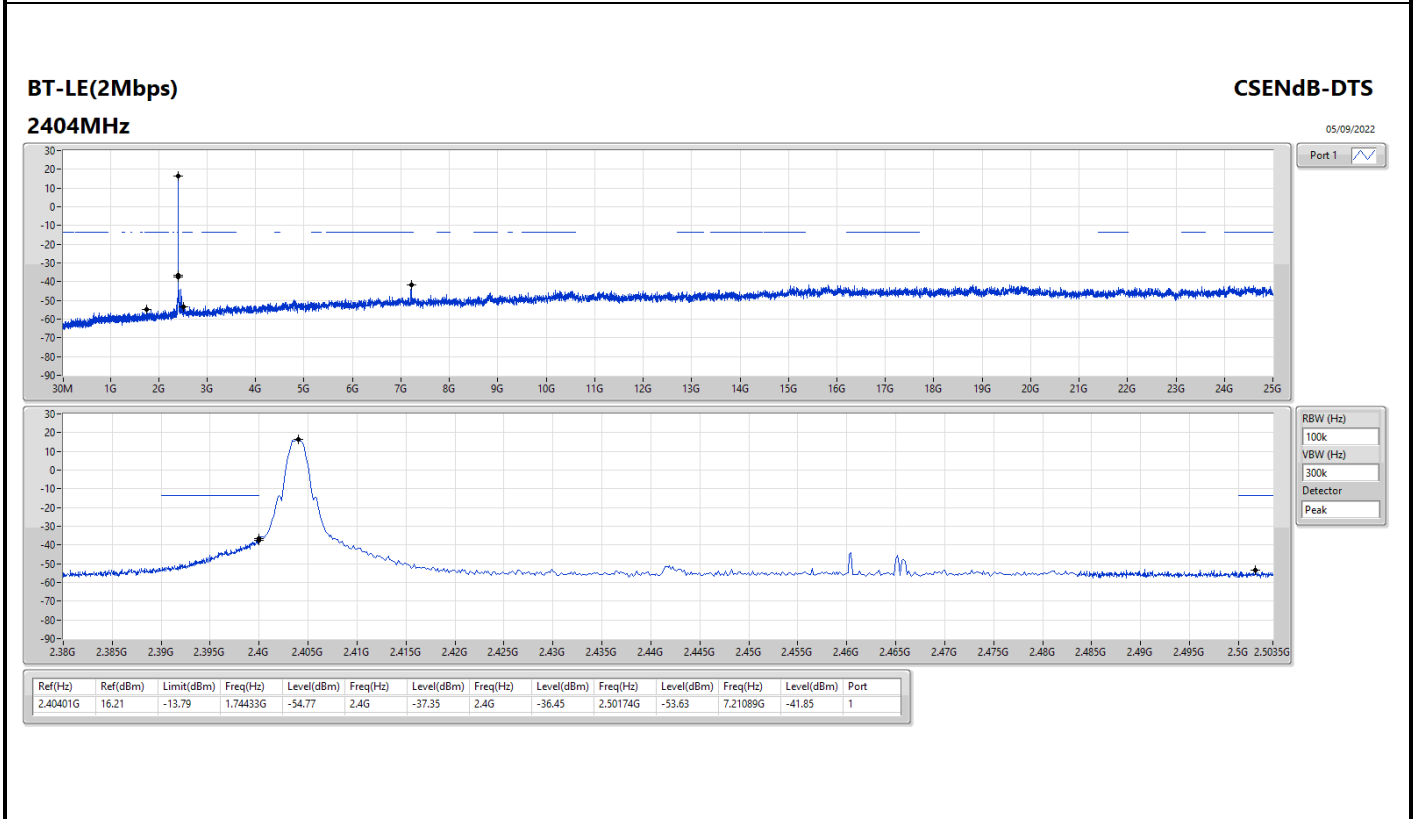
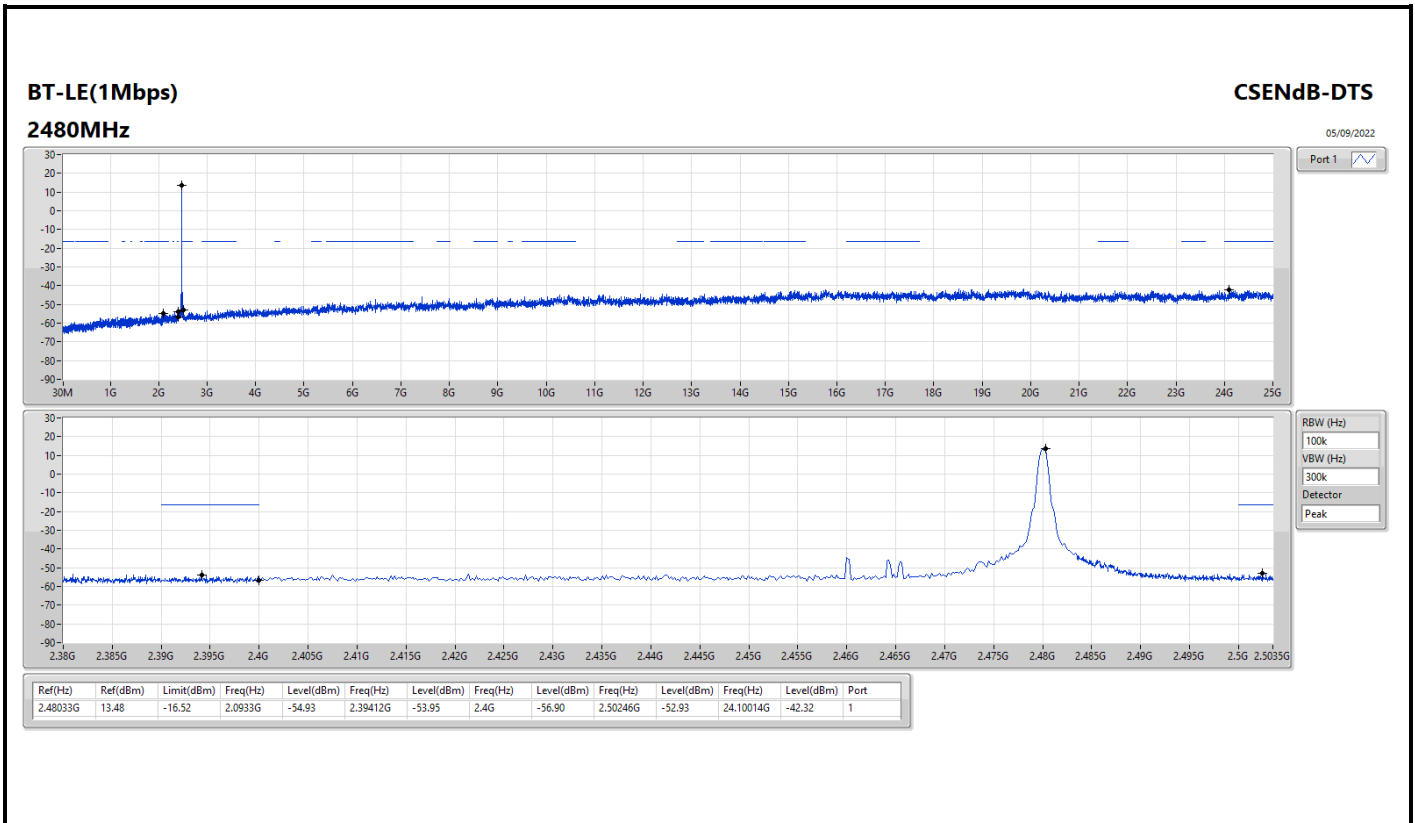
Summary

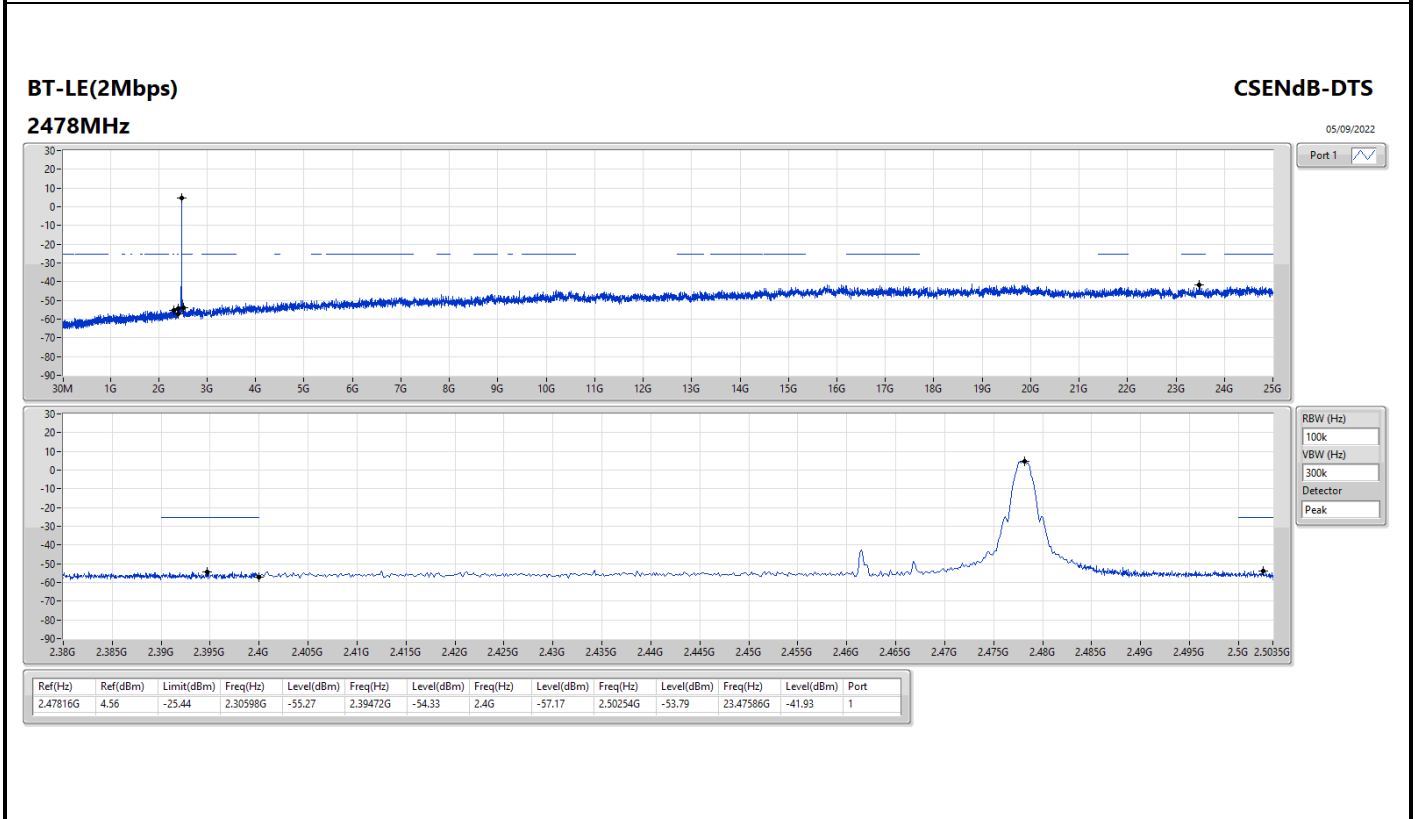
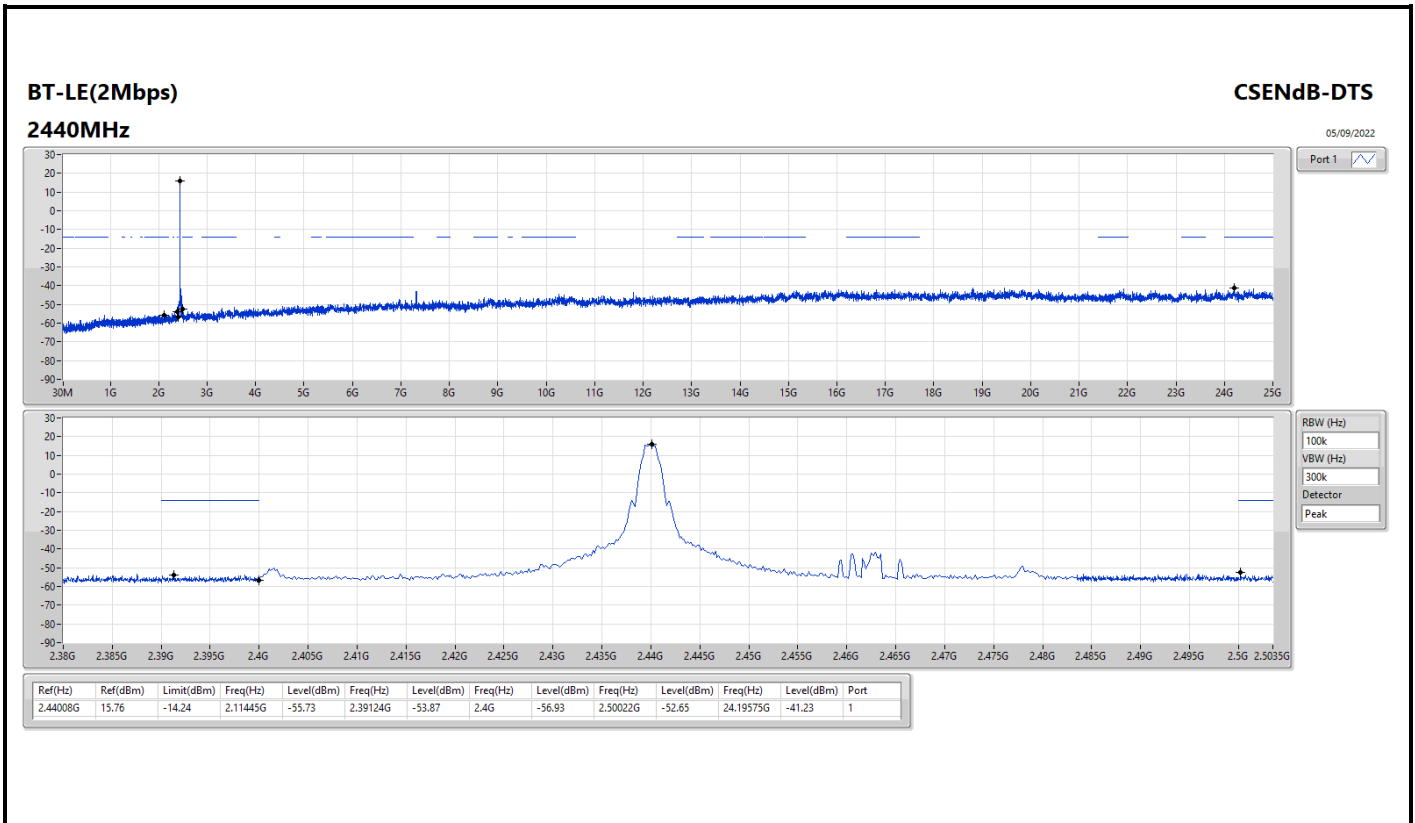
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40217G	18.58	-11.42	2.19318G	-55.15	2.39996G	-32.46	2.4G	-31.94	2.5033G	-52.81	7.20527G	-37.65	1
BT-LE(2Mbps)	Pass	2.40401G	16.21	-13.79	1.74433G	-54.77	2.4G	-37.35	2.4G	-36.45	2.50174G	-53.63	7.21089G	-41.85	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	2.40217G	18.58	-11.42	2.19318G	-55.15	2.39996G	-32.46	2.4G	-31.94	2.5033G	-52.81	7.20527G	-37.65	1
2440MHz	Pass	2.44025G	18.22	-11.78	1.74433G	-55.36	2.39584G	-53.36	2.4G	-56.02	2.50294G	-53.52	17.39618G	-41.41	1
2480MHz	Pass	2.48033G	13.48	-16.52	2.0933G	-54.93	2.39412G	-53.95	2.4G	-56.90	2.50246G	-52.93	24.10014G	-42.32	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	2.40401G	16.21	-13.79	1.74433G	-54.77	2.4G	-37.35	2.4G	-36.45	2.50174G	-53.63	7.21089G	-41.85	1
2440MHz	Pass	2.44008G	15.76	-14.24	2.11445G	-55.73	2.39124G	-53.87	2.4G	-56.93	2.50022G	-52.65	24.19575G	-41.23	1
2478MHz	Pass	2.47816G	4.56	-25.44	2.30598G	-55.27	2.39472G	-54.33	2.4G	-57.17	2.50254G	-53.79	23.47586G	-41.93	1









Summary

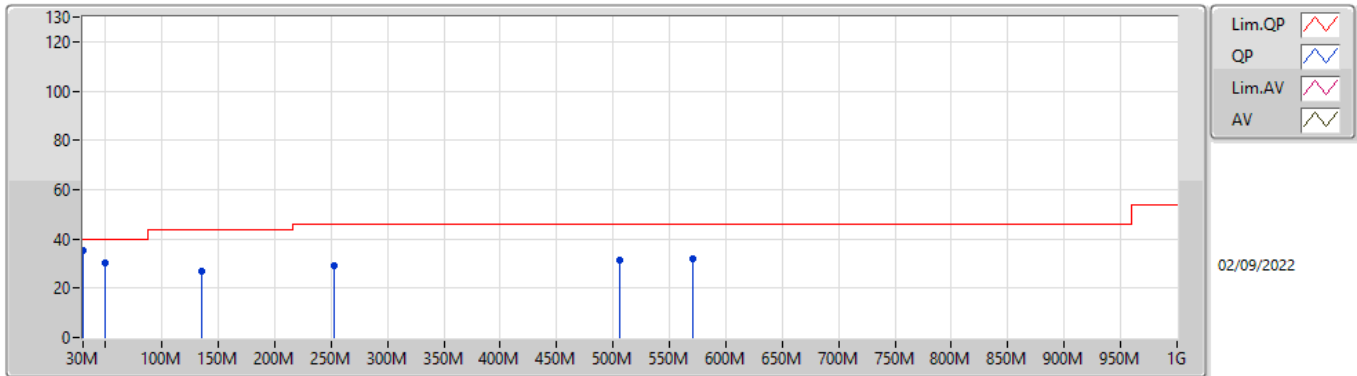
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	30M	35.37	40.00	-4.63	3	Vertical	0	1.00	-



Result

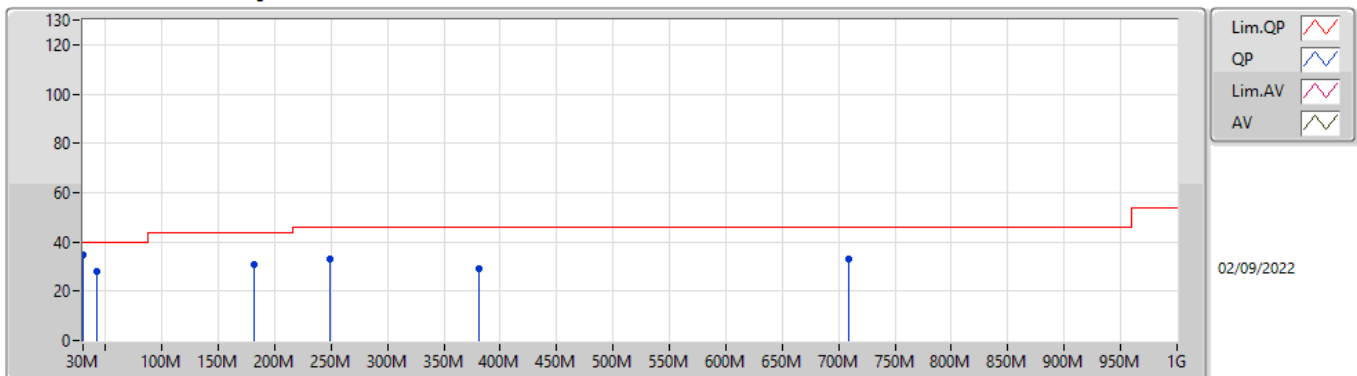
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	35.37	40.00	-4.63	3	Vertical	0	1.00	-
2440MHz	Pass	PK	49.4M	30.47	40.00	-9.53	3	Vertical	0	1.00	-
2440MHz	Pass	PK	134.76M	26.99	43.50	-16.51	3	Vertical	0	1.00	-
2440MHz	Pass	PK	253.1M	29.23	46.00	-16.77	3	Vertical	0	1.00	-
2440MHz	Pass	PK	505.3M	31.19	46.00	-14.81	3	Vertical	0	1.00	-
2440MHz	Pass	PK	571.26M	31.66	46.00	-14.34	3	Vertical	0	1.00	-
2440MHz	Pass	PK	30M	34.64	40.00	-5.36	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	41.64M	28.00	40.00	-12.00	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	181.32M	30.79	43.50	-12.71	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	249.22M	33.25	46.00	-12.75	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	381.14M	29.23	46.00	-16.77	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	709M	32.96	46.00	-13.04	3	Horizontal	360	1.00	-

BT-LE(2Mbps)
2440MHz_Adapter



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	35.37	40.00	-4.63	-2.68	3	Vertical	0	1.00	-	38.05	23.26	1.02	26.96
PK	49.4M	30.47	40.00	-9.53	-12.90	3	Vertical	0	1.00	-	43.37	13.45	1.04	27.39
PK	134.76M	26.99	43.50	-16.51	-9.29	3	Vertical	0	1.00	-	36.28	16.80	1.64	27.73
PK	253.1M	29.23	46.00	-16.77	-6.95	3	Vertical	0	1.00	-	36.18	17.93	2.28	27.16
PK	505.3M	31.19	46.00	-14.81	-2.33	3	Vertical	0	1.00	-	33.52	22.72	3.32	28.37
PK	571.26M	31.66	46.00	-14.34	-1.15	3	Vertical	0	1.00	-	32.81	23.91	3.49	28.55

BT-LE(2Mbps)
2440MHz_Adapter



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	34.64	40.00	-5.36	-2.68	3	Horizontal	360	1.00	-	37.32	23.26	1.02	26.96
PK	41.64M	28.00	40.00	-12.00	-9.09	3	Horizontal	360	1.00	-	37.09	16.80	1.03	26.92
PK	181.32M	30.79	43.50	-12.71	-11.11	3	Horizontal	360	1.00	-	41.90	14.45	1.93	27.49
PK	249.22M	33.25	46.00	-12.75	-7.43	3	Horizontal	360	1.00	-	40.68	17.47	2.26	27.16
PK	381.14M	29.23	46.00	-16.77	-4.72	3	Horizontal	360	1.00	-	33.95	20.17	2.82	27.71
PK	709M	32.96	46.00	-13.04	-0.25	3	Horizontal	360	1.00	-	33.21	24.23	3.84	28.32



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	53.87	54.00	-0.13	3	Vertical	41	1.26	-
BT-LE(2Mbps)	Pass	AV	7.32096G	51.18	54.00	-2.82	3	Vertical	88	1.86	-



Result

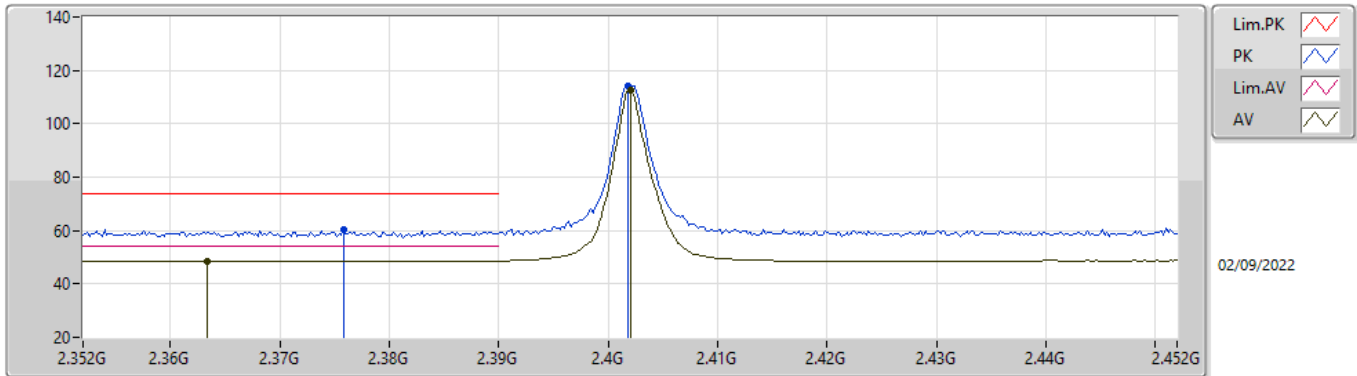
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3634G	48.70	54.00	-5.30	3	Vertical	36	1.35	-
2402MHz	Pass	AV	2.402G	112.69	Inf	-Inf	3	Vertical	36	1.35	-
2402MHz	Pass	PK	2.3758G	60.45	74.00	-13.55	3	Vertical	36	1.35	-
2402MHz	Pass	PK	2.4018G	114.14	Inf	-Inf	3	Vertical	36	1.35	-
2402MHz	Pass	AV	2.39G	48.48	54.00	-5.52	3	Horizontal	332	1.16	-
2402MHz	Pass	AV	2.402G	109.10	Inf	-Inf	3	Horizontal	332	1.16	-
2402MHz	Pass	PK	2.3782G	60.60	74.00	-13.40	3	Horizontal	332	1.16	-
2402MHz	Pass	PK	2.4018G	110.55	Inf	-Inf	3	Horizontal	332	1.16	-
2402MHz	Pass	AV	4.80396G	42.77	54.00	-11.23	3	Vertical	354	1.55	-
2402MHz	Pass	PK	4.80346G	51.06	74.00	-22.94	3	Vertical	354	1.55	-
2402MHz	Pass	AV	4.80396G	35.40	54.00	-18.60	3	Horizontal	139	1.77	-
2402MHz	Pass	PK	4.8034G	46.37	74.00	-27.63	3	Horizontal	139	1.77	-
2440MHz	Pass	AV	2.3892G	48.36	54.00	-5.64	3	Vertical	21	1.14	-
2440MHz	Pass	AV	2.44G	108.36	Inf	-Inf	3	Vertical	21	1.14	-
2440MHz	Pass	AV	2.498G	48.97	54.00	-5.03	3	Vertical	21	1.14	-
2440MHz	Pass	PK	2.3612G	59.20	74.00	-14.80	3	Vertical	21	1.14	-
2440MHz	Pass	PK	2.44G	109.78	Inf	-Inf	3	Vertical	21	1.14	-
2440MHz	Pass	PK	2.49G	60.07	74.00	-13.93	3	Vertical	21	1.14	-
2440MHz	Pass	AV	2.3808G	48.35	54.00	-5.65	3	Horizontal	243	1.00	-
2440MHz	Pass	AV	2.44G	107.06	Inf	-Inf	3	Horizontal	243	1.00	-
2440MHz	Pass	AV	2.4992G	48.99	54.00	-5.01	3	Horizontal	243	1.00	-
2440MHz	Pass	PK	2.3712G	58.77	74.00	-15.23	3	Horizontal	243	1.00	-
2440MHz	Pass	PK	2.4396G	108.54	Inf	-Inf	3	Horizontal	243	1.00	-
2440MHz	Pass	PK	2.4912G	59.56	74.00	-14.44	3	Horizontal	243	1.00	-
2440MHz	Pass	AV	4.87988G	38.53	54.00	-15.47	3	Vertical	358	1.05	-
2440MHz	Pass	AV	7.32004G	52.62	54.00	-1.38	3	Vertical	85	1.86	-
2440MHz	Pass	PK	4.88032G	49.23	74.00	-24.77	3	Vertical	358	1.05	-
2440MHz	Pass	PK	7.32056G	62.67	74.00	-11.33	3	Vertical	85	1.86	-
2440MHz	Pass	AV	4.88006G	34.14	54.00	-19.86	3	Horizontal	340	1.08	-
2440MHz	Pass	AV	7.32036G	50.61	54.00	-3.39	3	Horizontal	47	1.88	-
2440MHz	Pass	PK	4.8795G	46.87	74.00	-27.13	3	Horizontal	340	1.08	-
2440MHz	Pass	PK	7.32062G	60.82	74.00	-13.18	3	Horizontal	47	1.88	-
2480MHz	Pass	AV	2.48G	102.47	Inf	-Inf	3	Vertical	41	1.26	-
2480MHz	Pass	AV	2.4835G	53.87	54.00	-0.13	3	Vertical	41	1.26	-
2480MHz	Pass	PK	2.4802G	103.99	Inf	-Inf	3	Vertical	41	1.26	-
2480MHz	Pass	PK	2.4835G	62.03	74.00	-11.97	3	Vertical	41	1.26	-
2480MHz	Pass	AV	2.48G	101.12	Inf	-Inf	3	Horizontal	235	1.19	-
2480MHz	Pass	AV	2.4835G	52.93	54.00	-1.07	3	Horizontal	235	1.19	-
2480MHz	Pass	PK	2.4802G	102.59	Inf	-Inf	3	Horizontal	235	1.19	-
2480MHz	Pass	PK	2.4835G	60.93	74.00	-13.07	3	Horizontal	235	1.19	-
2480MHz	Pass	AV	4.95986G	40.85	54.00	-13.15	3	Vertical	334	2.17	-
2480MHz	Pass	AV	7.44036G	45.93	54.00	-8.07	3	Vertical	93	1.90	-
2480MHz	Pass	PK	4.95944G	50.33	74.00	-23.67	3	Vertical	334	2.17	-
2480MHz	Pass	PK	7.44056G	57.02	74.00	-16.98	3	Vertical	93	1.90	-
2480MHz	Pass	AV	4.96004G	36.06	54.00	-17.94	3	Horizontal	299	1.00	-
2480MHz	Pass	AV	7.44044G	43.16	54.00	-10.84	3	Horizontal	42	1.90	-
2480MHz	Pass	PK	4.95958G	47.85	74.00	-26.15	3	Horizontal	299	1.00	-
2480MHz	Pass	PK	7.4407G	54.36	74.00	-19.64	3	Horizontal	42	1.90	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	AV	2.3654G	48.88	54.00	-5.12	3	Vertical	37	1.36	-
2404MHz	Pass	AV	2.404G	110.78	Inf	-Inf	3	Vertical	37	1.36	-
2404MHz	Pass	PK	2.366G	59.50	74.00	-14.50	3	Vertical	37	1.36	-
2404MHz	Pass	PK	2.4036G	114.09	Inf	-Inf	3	Vertical	37	1.36	-
2404MHz	Pass	AV	2.3882G	48.43	54.00	-5.57	3	Horizontal	330	1.16	-
2404MHz	Pass	AV	2.404G	106.84	Inf	-Inf	3	Horizontal	330	1.16	-
2404MHz	Pass	PK	2.3792G	59.92	74.00	-14.08	3	Horizontal	330	1.16	-
2404MHz	Pass	PK	2.4036G	110.17	Inf	-Inf	3	Horizontal	330	1.16	-
2404MHz	Pass	AV	4.80886G	39.44	54.00	-14.56	3	Vertical	-0	1.23	-
2404MHz	Pass	PK	4.8089G	50.75	74.00	-23.25	3	Vertical	-0	1.23	-
2404MHz	Pass	AV	4.80698G	33.67	54.00	-20.33	3	Horizontal	139	1.78	-



Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2404MHz	Pass	PK	4.807G	46.66	74.00	-27.34	3	Horizontal	139	1.78	-
2440MHz	Pass	AV	2.3628G	48.37	54.00	-5.63	3	Vertical	38	1.06	-
2440MHz	Pass	AV	2.44G	110.26	Inf	-Inf	3	Vertical	38	1.06	-
2440MHz	Pass	AV	2.5G	49.00	54.00	-5.00	3	Vertical	38	1.06	-
2440MHz	Pass	PK	2.3756G	59.89	74.00	-14.11	3	Vertical	38	1.06	-
2440MHz	Pass	PK	2.4396G	113.52	Inf	-Inf	3	Vertical	38	1.06	-
2440MHz	Pass	PK	2.4912G	59.93	74.00	-14.07	3	Vertical	38	1.06	-
2440MHz	Pass	AV	2.3868G	48.36	54.00	-5.64	3	Horizontal	240	1.17	-
2440MHz	Pass	AV	2.44G	106.23	Inf	-Inf	3	Horizontal	240	1.17	-
2440MHz	Pass	AV	2.4996G	48.99	54.00	-5.01	3	Horizontal	240	1.17	-
2440MHz	Pass	PK	2.3892G	59.62	74.00	-14.38	3	Horizontal	240	1.17	-
2440MHz	Pass	PK	2.4396G	109.64	Inf	-Inf	3	Horizontal	240	1.17	-
2440MHz	Pass	PK	2.4835G	60.01	74.00	-13.99	3	Horizontal	240	1.17	-
2440MHz	Pass	AV	4.87892G	33.00	54.00	-21.00	3	Vertical	0	1.50	-
2440MHz	Pass	AV	7.32096G	51.18	54.00	-2.82	3	Vertical	88	1.86	-
2440MHz	Pass	PK	4.88098G	45.70	74.00	-28.30	3	Vertical	0	1.50	-
2440MHz	Pass	PK	7.32136G	60.87	74.00	-13.13	3	Vertical	88	1.86	-
2440MHz	Pass	AV	4.879G	32.77	54.00	-21.23	3	Horizontal	336	1.08	-
2440MHz	Pass	AV	7.32098G	49.70	54.00	-4.30	3	Horizontal	42	1.86	-
2440MHz	Pass	PK	4.88026G	45.69	74.00	-28.31	3	Horizontal	336	1.08	-
2440MHz	Pass	PK	7.32128G	59.59	74.00	-14.41	3	Horizontal	42	1.86	-
2478MHz	Pass	AV	2.478G	96.33	Inf	-Inf	3	Vertical	23	1.38	-
2478MHz	Pass	AV	2.4835G	49.21	54.00	-4.79	3	Vertical	23	1.38	-
2478MHz	Pass	PK	2.4776G	99.74	Inf	-Inf	3	Vertical	23	1.38	-
2478MHz	Pass	PK	2.4944G	59.65	74.00	-14.35	3	Vertical	23	1.38	-
2478MHz	Pass	AV	2.478G	93.24	Inf	-Inf	3	Horizontal	236	1.16	-
2478MHz	Pass	AV	2.4835G	49.05	54.00	-4.95	3	Horizontal	236	1.16	-
2478MHz	Pass	PK	2.4776G	96.54	Inf	-Inf	3	Horizontal	236	1.16	-
2478MHz	Pass	PK	2.4952G	60.17	74.00	-13.83	3	Horizontal	236	1.16	-
2478MHz	Pass	AV	4.95684G	34.97	54.00	-19.03	3	Vertical	330	2.04	-
2478MHz	Pass	AV	7.43268G	40.91	54.00	-13.09	3	Vertical	81	1.91	-
2478MHz	Pass	PK	4.9569G	48.01	74.00	-25.99	3	Vertical	330	2.04	-
2478MHz	Pass	PK	7.43228G	54.04	74.00	-19.96	3	Vertical	81	1.91	-
2478MHz	Pass	AV	4.95496G	33.32	54.00	-20.68	3	Horizontal	34	2.19	-
2478MHz	Pass	AV	7.43268G	39.20	54.00	-14.80	3	Horizontal	46	1.74	-
2478MHz	Pass	PK	4.95674G	47.05	74.00	-26.95	3	Horizontal	34	2.19	-
2478MHz	Pass	PK	7.43578G	51.77	74.00	-22.23	3	Horizontal	46	1.74	-

BT-LE(1Mbps)

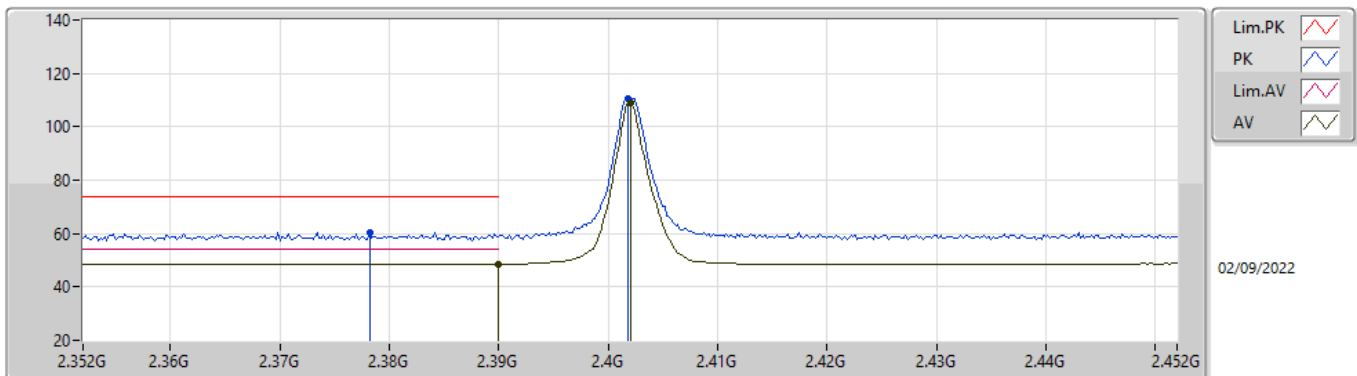
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3634G	48.70	54.00	-5.30	35.49	3	Vertical	36	1.35	-	13.21	27.23	8.26	-
AV	2.402G	112.69	Inf	-Inf	35.60	3	Vertical	36	1.35	-	77.09	27.31	8.29	-
PK	2.3758G	60.45	74.00	-13.55	35.52	3	Vertical	36	1.35	-	24.93	27.25	8.27	-
PK	2.4018G	114.14	Inf	-Inf	35.60	3	Vertical	36	1.35	-	78.54	27.31	8.29	-

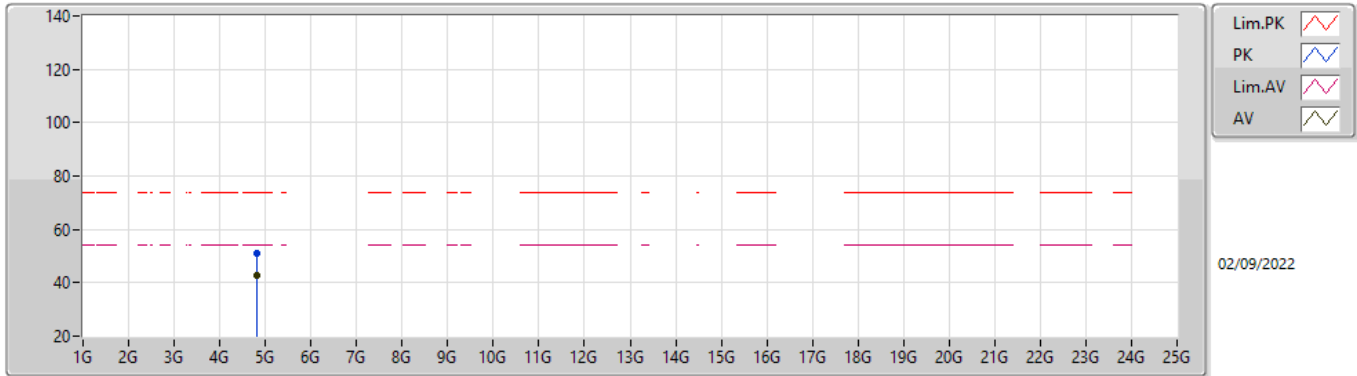
BT-LE(1Mbps)

2402MHz_TX



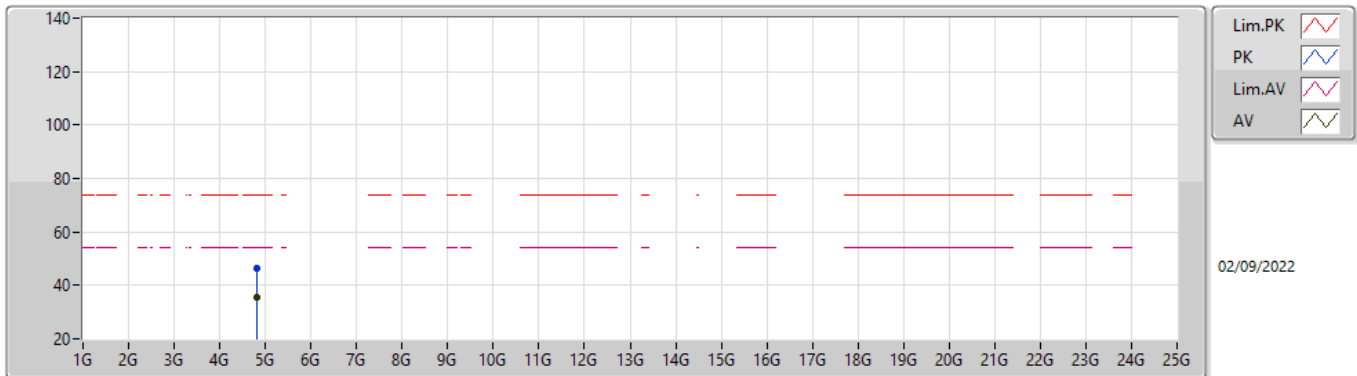
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.39G	48.48	54.00	-5.52	35.56	3	Horizontal	332	1.16	-	12.92	27.28	8.28	-
AV	2.402G	109.10	Inf	-Inf	35.60	3	Horizontal	332	1.16	-	73.50	27.31	8.29	-
PK	2.3782G	60.60	74.00	-13.40	35.53	3	Horizontal	332	1.16	-	25.07	27.26	8.27	-
PK	2.4018G	110.55	Inf	-Inf	35.60	3	Horizontal	332	1.16	-	74.95	27.31	8.29	-

BT-LE(1Mbps)
2402MHz_TX



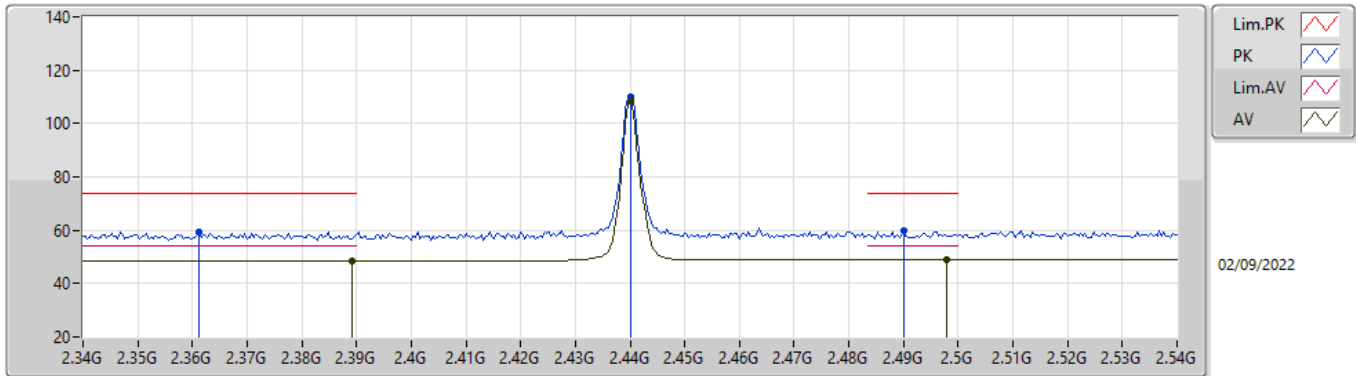
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80396G	42.77	54.00	-11.23	7.99	3	Vertical	354	1.55	-	34.78	32.51	9.67	34.19
PK	4.80346G	51.06	74.00	-22.94	7.99	3	Vertical	354	1.55	-	43.07	32.51	9.67	34.19

BT-LE(1Mbps)
2402MHz_TX



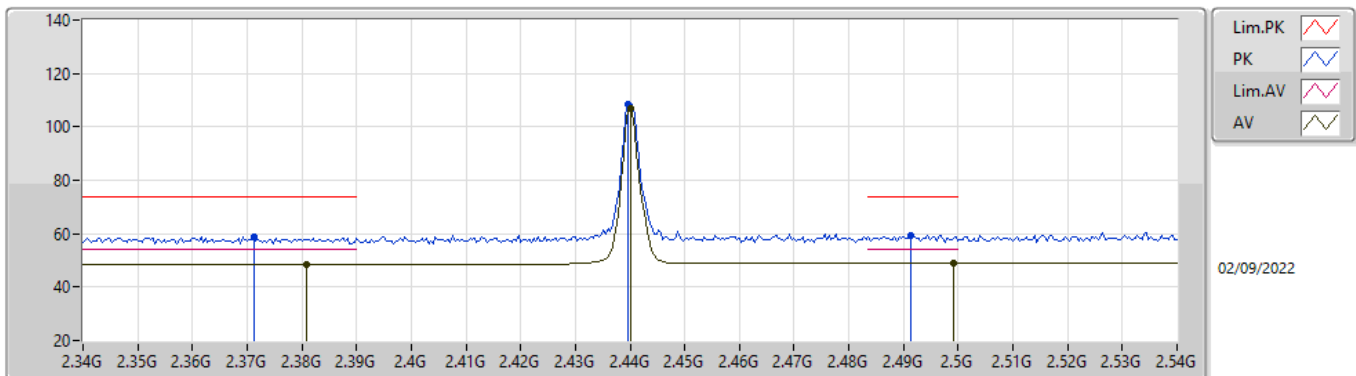
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80396G	35.40	54.00	-18.60	7.99	3	Horizontal	139	1.77	-	27.41	32.51	9.67	34.19
PK	4.8034G	46.37	74.00	-27.63	7.99	3	Horizontal	139	1.77	-	38.38	32.51	9.67	34.19

BT-LE(1Mbps)
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3892G	48.36	54.00	-5.64	35.56	3	Vertical	21	1.14	-	12.80	27.28	8.28	-
AV	2.44G	108.36	Inf	-Inf	35.78	3	Vertical	21	1.14	-	72.58	27.46	8.32	-
AV	2.498G	48.97	54.00	-5.03	36.14	3	Vertical	21	1.14	-	12.83	27.79	8.35	-
PK	2.3612G	59.20	74.00	-14.80	35.48	3	Vertical	21	1.14	-	23.72	27.22	8.26	-
PK	2.44G	109.78	Inf	-Inf	35.78	3	Vertical	21	1.14	-	74.00	27.46	8.32	-
PK	2.49G	60.07	74.00	-13.93	36.09	3	Vertical	21	1.14	-	23.98	27.74	8.35	-

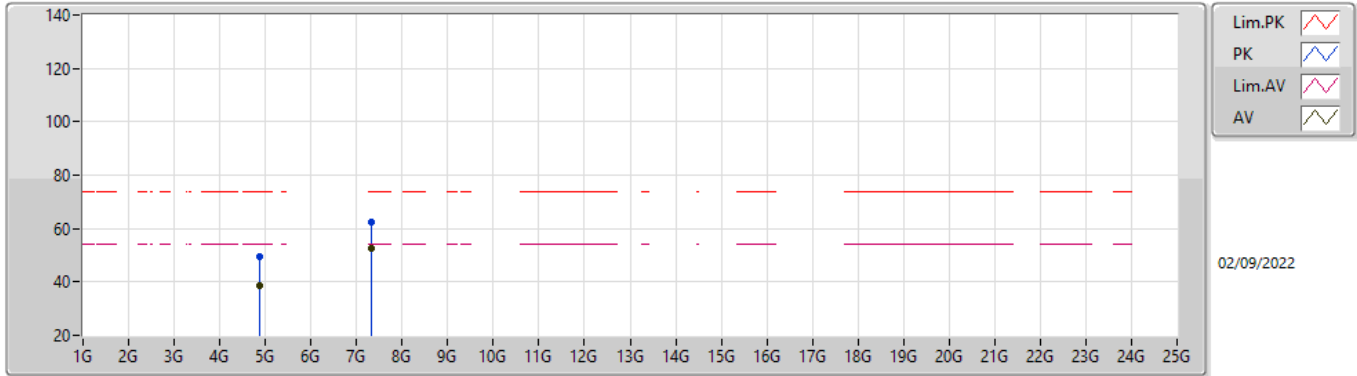
BT-LE(1Mbps)
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3808G	48.35	54.00	-5.65	35.54	3	Horizontal	243	1.00	-	12.81	27.26	8.28	-
AV	2.44G	107.06	Inf	-Inf	35.78	3	Horizontal	243	1.00	-	71.28	27.46	8.32	-
AV	2.4992G	48.99	54.00	-5.01	36.15	3	Horizontal	243	1.00	-	12.84	27.80	8.35	-
PK	2.3712G	58.77	74.00	-15.23	35.51	3	Horizontal	243	1.00	-	23.26	27.24	8.27	-
PK	2.4396G	108.54	Inf	-Inf	35.78	3	Horizontal	243	1.00	-	72.76	27.46	8.32	-
PK	2.4912G	59.56	74.00	-14.44	36.10	3	Horizontal	243	1.00	-	23.46	27.75	8.35	-

BT-LE(1Mbps)

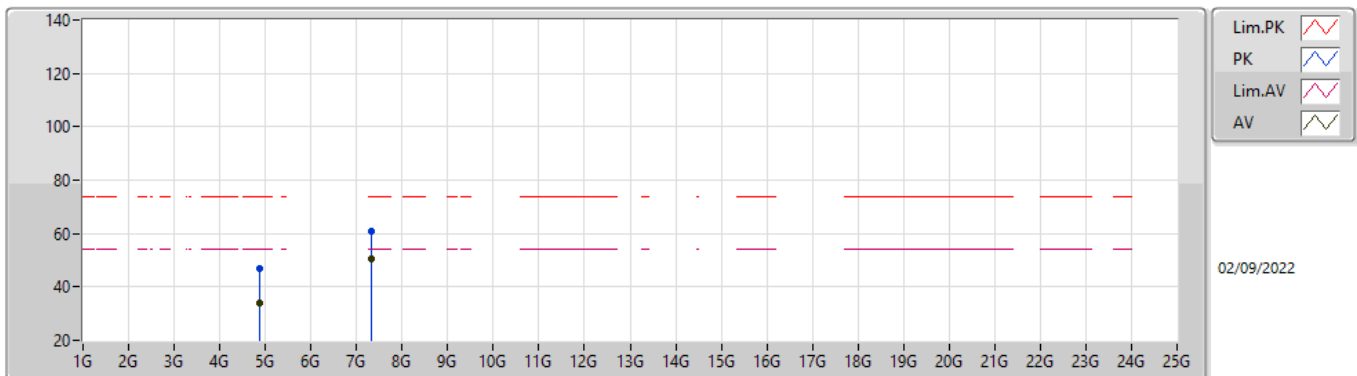
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87988G	38.53	54.00	-15.47	8.20	3	Vertical	358	1.05	-	30.33	32.66	9.70	34.16
AV	7.32004G	52.62	54.00	-1.38	13.46	3	Vertical	85	1.86	-	39.16	36.64	11.32	34.50
PK	4.88032G	49.23	74.00	-24.77	8.20	3	Vertical	358	1.05	-	41.03	32.66	9.70	34.16
PK	7.32056G	62.67	74.00	-11.33	13.46	3	Vertical	85	1.86	-	49.21	36.64	11.32	34.50

BT-LE(1Mbps)

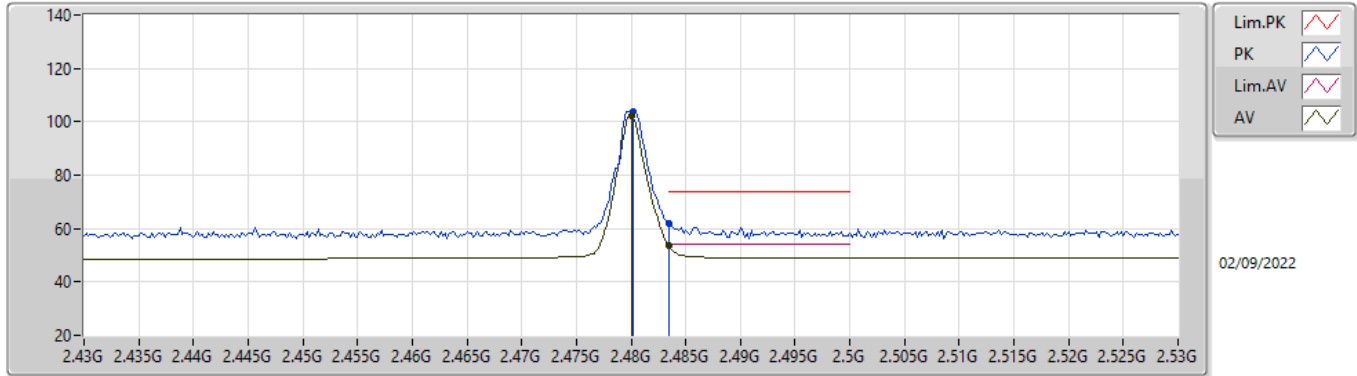
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88006G	34.14	54.00	-19.86	8.20	3	Horizontal	340	1.08	-	25.94	32.66	9.70	34.16
AV	7.32036G	50.61	54.00	-3.39	13.46	3	Horizontal	47	1.88	-	37.15	36.64	11.32	34.50
PK	4.8795G	46.87	74.00	-27.13	8.20	3	Horizontal	340	1.08	-	38.67	32.66	9.70	34.16
PK	7.32062G	60.82	74.00	-13.18	13.46	3	Horizontal	47	1.88	-	47.36	36.64	11.32	34.50

BT-LE(1Mbps)

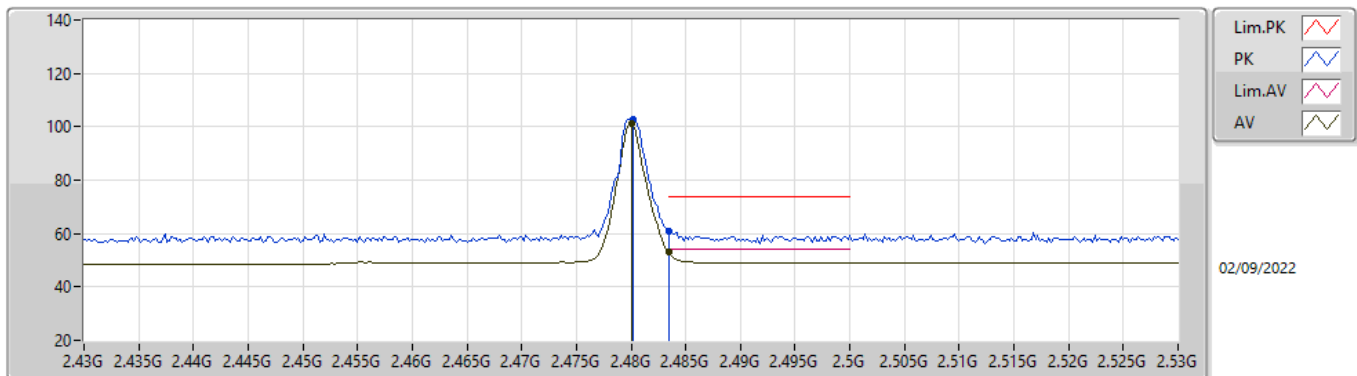
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	102.47	Inf	-Inf	36.02	3	Vertical	41	1.26	-	66.45	27.68	8.34	-
AV	2.4835G	53.87	54.00	-0.13	36.04	3	Vertical	41	1.26	-	17.83	27.70	8.34	-
PK	2.4802G	103.99	Inf	-Inf	36.02	3	Vertical	41	1.26	-	67.97	27.68	8.34	-
PK	2.4835G	62.03	74.00	-11.97	36.04	3	Vertical	41	1.26	-	25.99	27.70	8.34	-

BT-LE(1Mbps)

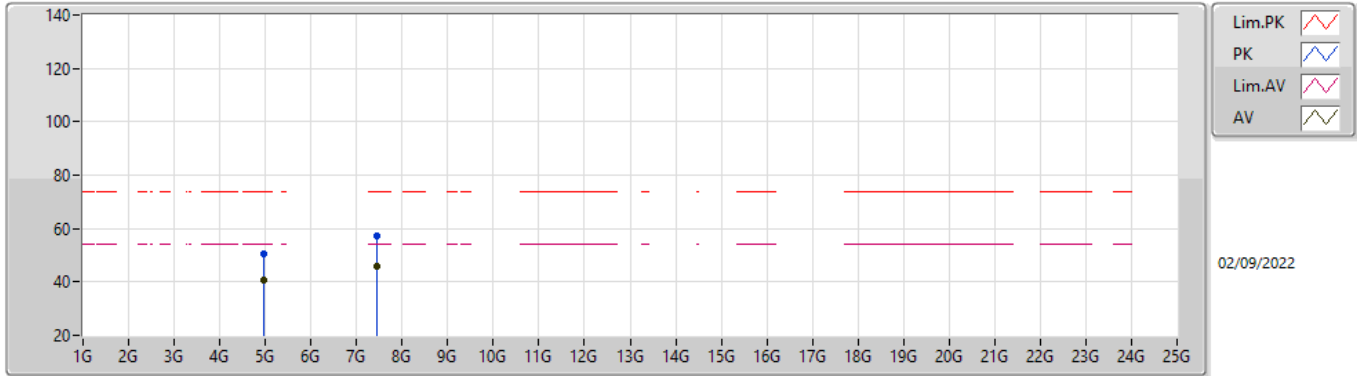
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	101.12	Inf	-Inf	36.02	3	Horizontal	235	1.19	-	65.10	27.68	8.34	-
AV	2.4835G	52.93	54.00	-1.07	36.04	3	Horizontal	235	1.19	-	16.89	27.70	8.34	-
PK	2.4802G	102.59	Inf	-Inf	36.02	3	Horizontal	235	1.19	-	66.57	27.68	8.34	-
PK	2.4835G	60.93	74.00	-13.07	36.04	3	Horizontal	235	1.19	-	24.89	27.70	8.34	-

BT-LE(1Mbps)

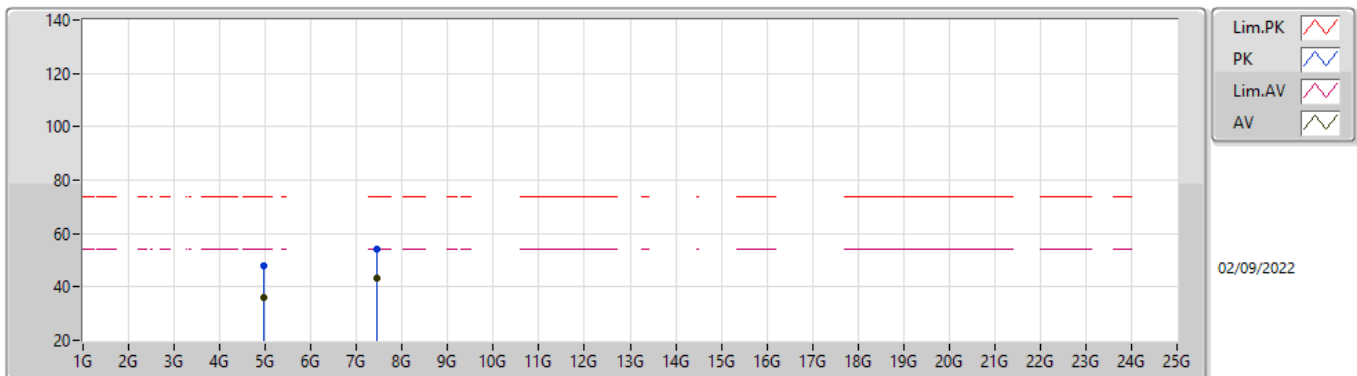
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95986G	40.85	54.00	-13.15	8.55	3	Vertical	334	2.17	-	32.30	32.94	9.73	34.12
AV	7.44036G	45.93	54.00	-8.07	13.05	3	Vertical	93	1.90	-	32.88	36.24	11.30	34.49
PK	4.95944G	50.33	74.00	-23.67	8.55	3	Vertical	334	2.17	-	41.78	32.94	9.73	34.12
PK	7.44056G	57.02	74.00	-16.98	13.05	3	Vertical	93	1.90	-	43.97	36.24	11.30	34.49

BT-LE(1Mbps)

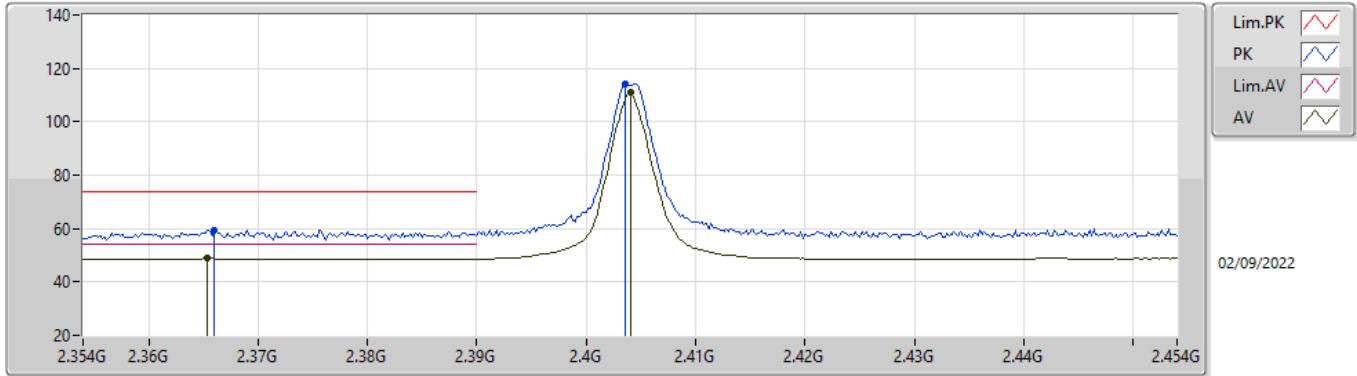
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96004G	36.06	54.00	-17.94	8.55	3	Horizontal	299	1.00	-	27.51	32.94	9.73	34.12
AV	7.44044G	43.16	54.00	-10.84	13.05	3	Horizontal	42	1.90	-	30.11	36.24	11.30	34.49
PK	4.95958G	47.85	74.00	-26.15	8.55	3	Horizontal	299	1.00	-	39.30	32.94	9.73	34.12
PK	7.4407G	54.36	74.00	-19.64	13.05	3	Horizontal	42	1.90	-	41.31	36.24	11.30	34.49

BT-LE(2Mbps)

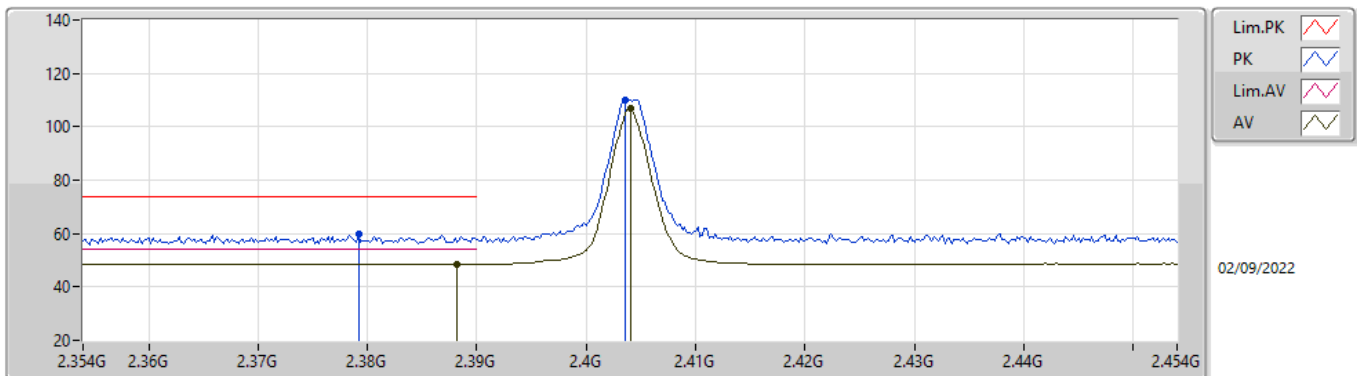
2404MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3654G	48.88	54.00	-5.12	35.49	3	Vertical	37	1.36	-	13.39	27.23	8.26	-
AV	2.404G	110.78	Inf	-Inf	35.61	3	Vertical	37	1.36	-	75.17	27.32	8.29	-
PK	2.366G	59.50	74.00	-14.50	35.49	3	Vertical	37	1.36	-	24.01	27.23	8.26	-
PK	2.4036G	114.09	Inf	-Inf	35.60	3	Vertical	37	1.36	-	78.49	27.31	8.29	-

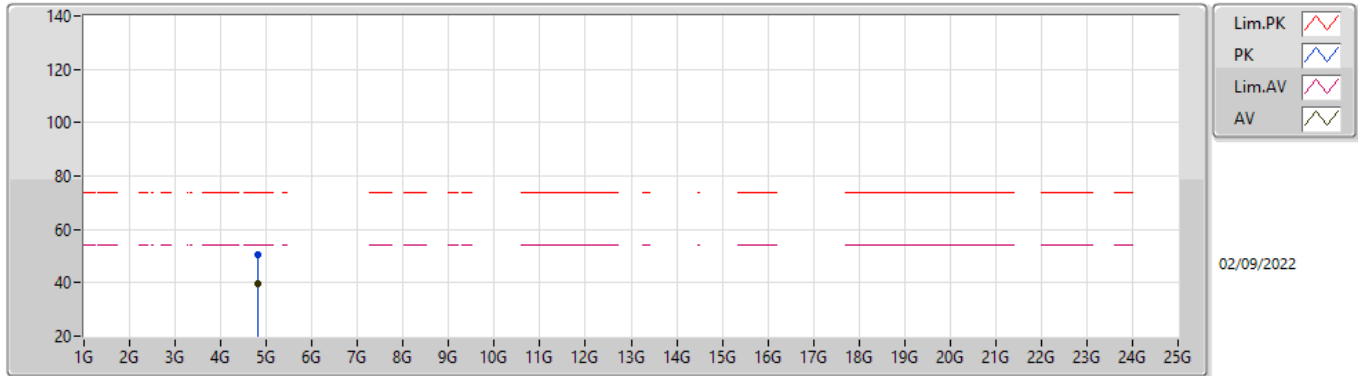
BT-LE(2Mbps)

2404MHz_TX



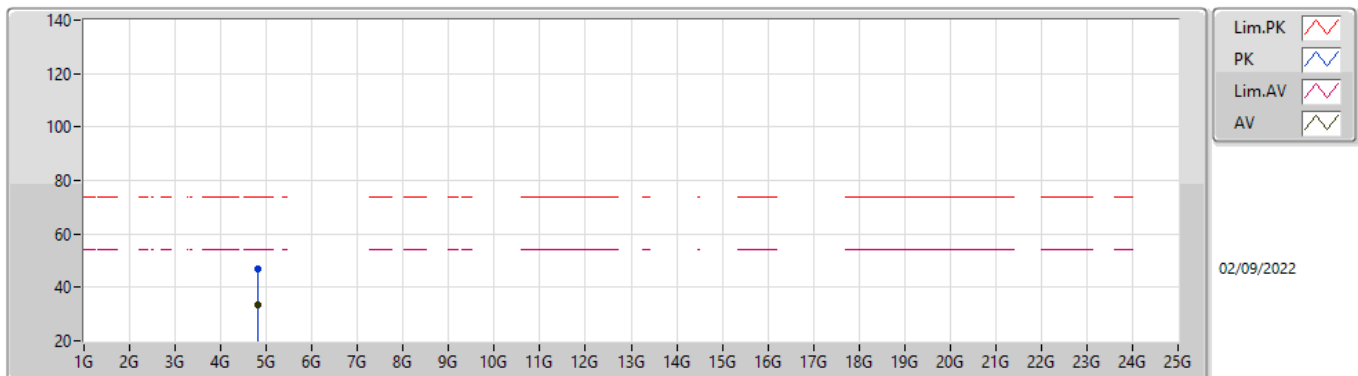
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3882G	48.43	54.00	-5.57	35.56	3	Horizontal	330	1.16	-	12.87	27.28	8.28	-
AV	2.404G	106.84	Inf	-Inf	35.61	3	Horizontal	330	1.16	-	71.23	27.32	8.29	-
PK	2.3792G	59.92	74.00	-14.08	35.53	3	Horizontal	330	1.16	-	24.39	27.26	8.27	-
PK	2.4036G	110.17	Inf	-Inf	35.60	3	Horizontal	330	1.16	-	74.57	27.31	8.29	-

BT-LE(2Mbps)
2404MHz_TX



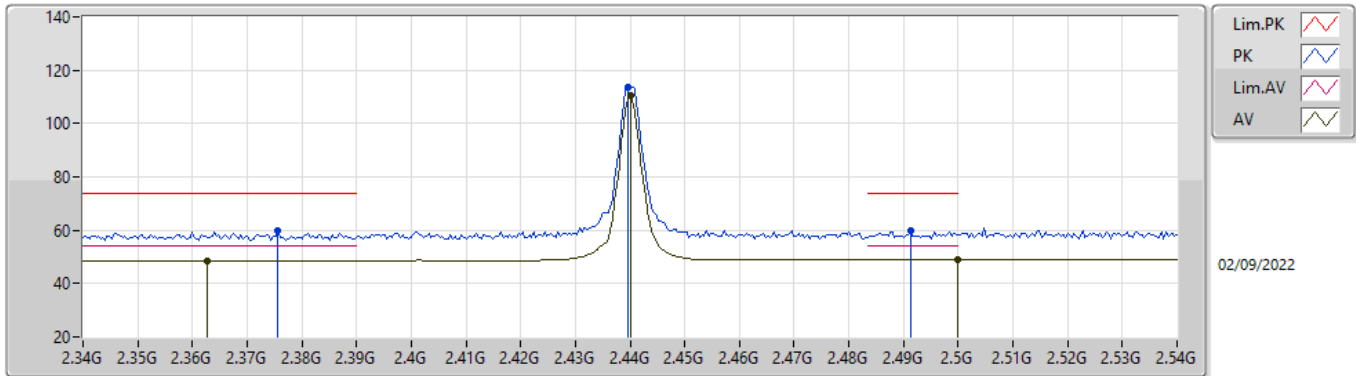
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80886G	39.44	54.00	-14.56	8.00	3	Vertical	-0	1.23	-	31.44	32.52	9.67	34.19
PK	4.8089G	50.75	74.00	-23.25	8.00	3	Vertical	-0	1.23	-	42.75	32.52	9.67	34.19

BT-LE(2Mbps)
2404MHz_TX



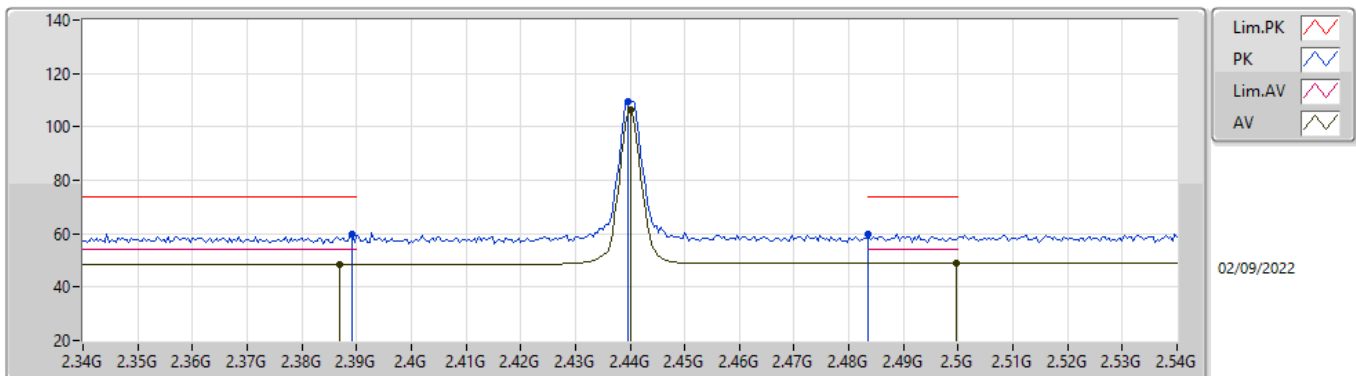
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80698G	33.67	54.00	-20.33	7.99	3	Horizontal	139	1.78	-	25.68	32.51	9.67	34.19
PK	4.807G	46.66	74.00	-27.34	7.99	3	Horizontal	139	1.78	-	38.67	32.51	9.67	34.19

BT-LE(2Mbps)
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3628G	48.37	54.00	-5.63	35.49	3	Vertical	38	1.06	-	12.88	27.23	8.26	-
AV	2.44G	110.26	Inf	-Inf	35.78	3	Vertical	38	1.06	-	74.48	27.46	8.32	-
AV	2.5G	49.00	54.00	-5.00	36.16	3	Vertical	38	1.06	-	12.84	27.80	8.36	-
PK	2.3756G	59.89	74.00	-14.11	35.52	3	Vertical	38	1.06	-	24.37	27.25	8.27	-
PK	2.4396G	113.52	Inf	-Inf	35.78	3	Vertical	38	1.06	-	77.74	27.46	8.32	-
PK	2.4912G	59.93	74.00	-14.07	36.10	3	Vertical	38	1.06	-	23.83	27.75	8.35	-

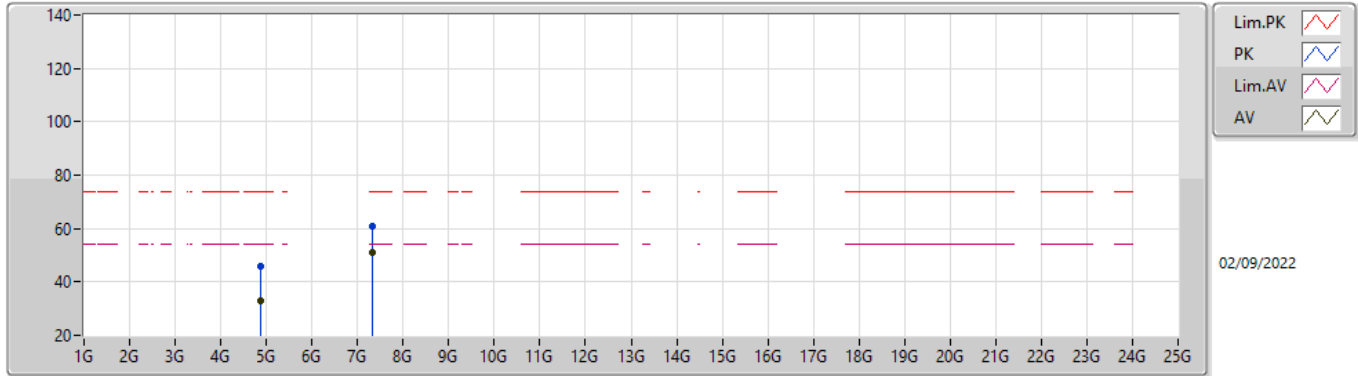
BT-LE(2Mbps)
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3868G	48.36	54.00	-5.64	35.55	3	Horizontal	240	1.17	-	12.81	27.27	8.28	-
AV	2.44G	106.23	Inf	-Inf	35.78	3	Horizontal	240	1.17	-	70.45	27.46	8.32	-
AV	2.4996G	48.99	54.00	-5.01	36.15	3	Horizontal	240	1.17	-	12.84	27.80	8.35	-
PK	2.3892G	59.62	74.00	-14.38	35.56	3	Horizontal	240	1.17	-	24.06	27.28	8.28	-
PK	2.4396G	109.64	Inf	-Inf	35.78	3	Horizontal	240	1.17	-	73.86	27.46	8.32	-
PK	2.4835G	60.01	74.00	-13.99	36.04	3	Horizontal	240	1.17	-	23.97	27.70	8.34	-

BT-LE(2Mbps)

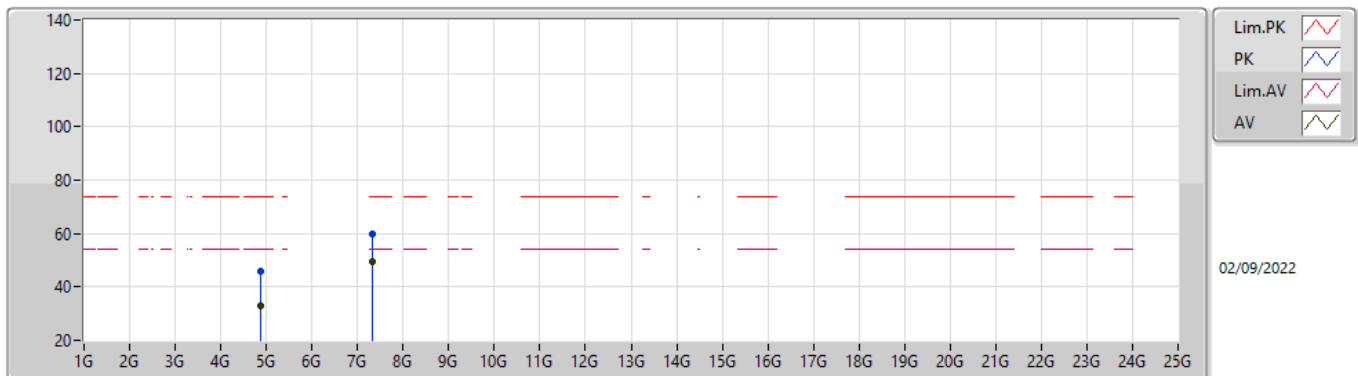
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87892G	33.00	54.00	-21.00	8.20	3	Vertical	0	1.50	-	24.80	32.66	9.70	34.16
AV	7.32096G	51.18	54.00	-2.82	13.46	3	Vertical	88	1.86	-	37.72	36.64	11.32	34.50
PK	4.88098G	45.70	74.00	-28.30	8.20	3	Vertical	0	1.50	-	37.50	32.66	9.70	34.16
PK	7.32136G	60.87	74.00	-13.13	13.46	3	Vertical	88	1.86	-	47.41	36.64	11.32	34.50

BT-LE(2Mbps)

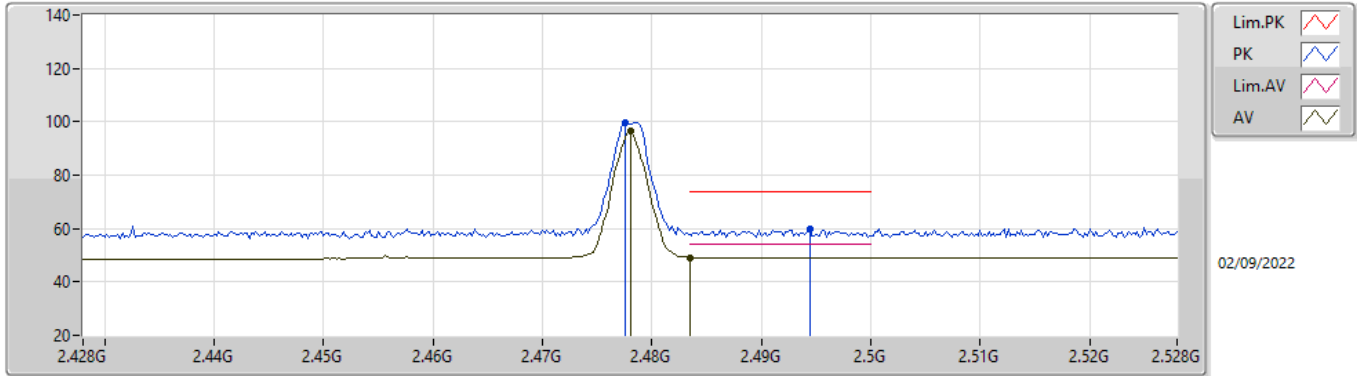
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.879G	32.77	54.00	-21.23	8.20	3	Horizontal	336	1.08	-	24.57	32.66	9.70	34.16
AV	7.32098G	49.70	54.00	-4.30	13.46	3	Horizontal	42	1.86	-	36.24	36.64	11.32	34.50
PK	4.88026G	45.69	74.00	-28.31	8.20	3	Horizontal	336	1.08	-	37.49	32.66	9.70	34.16
PK	7.32128G	59.59	74.00	-14.41	13.46	3	Horizontal	42	1.86	-	46.13	36.64	11.32	34.50

BT-LE(2Mbps)

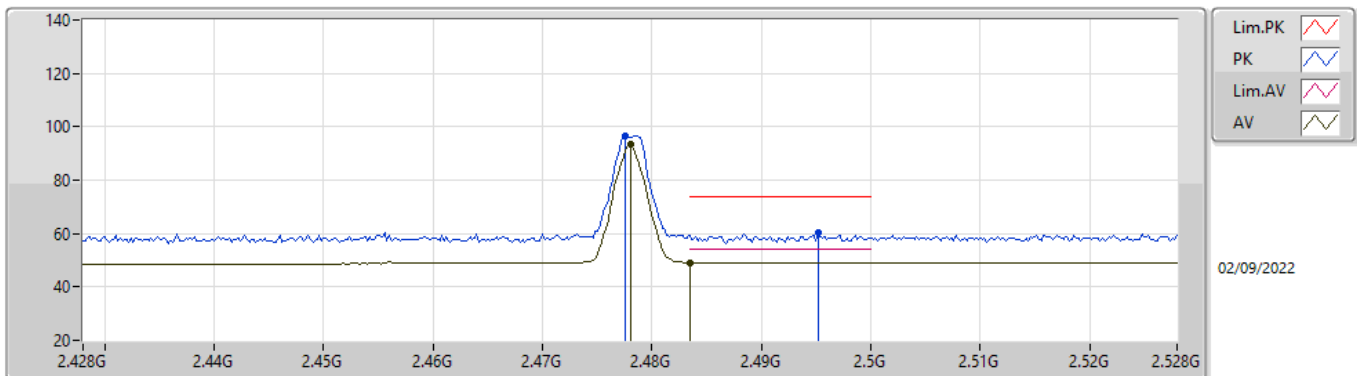
2478MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.478G	96.33	Inf	-Inf	36.01	3	Vertical	23	1.38	-	60.32	27.67	8.34	-
AV	2.4835G	49.21	54.00	-4.79	36.04	3	Vertical	23	1.38	-	13.17	27.70	8.34	-
PK	2.4776G	99.74	Inf	-Inf	36.01	3	Vertical	23	1.38	-	63.73	27.67	8.34	-
PK	2.4944G	59.65	74.00	-14.35	36.12	3	Vertical	23	1.38	-	23.53	27.77	8.35	-

BT-LE(2Mbps)

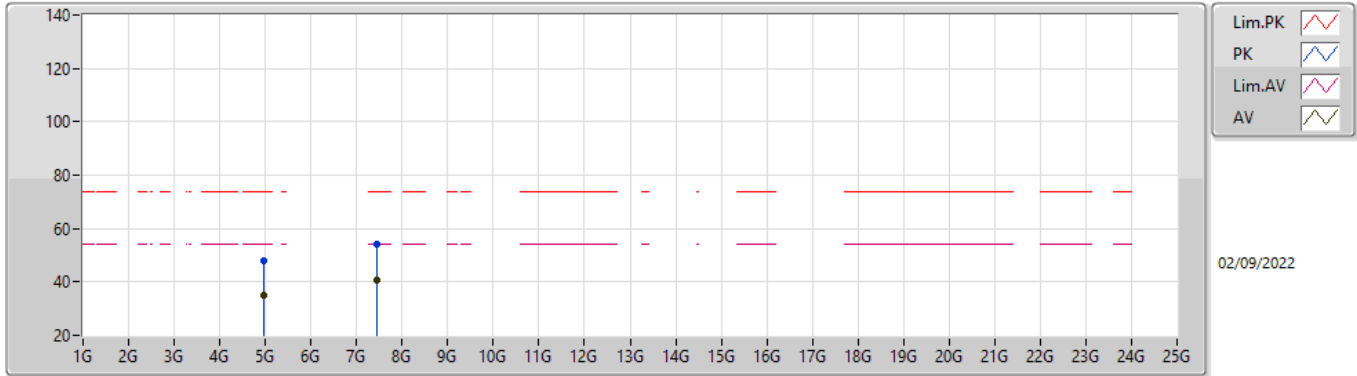
2478MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.478G	93.24	Inf	-Inf	36.01	3	Horizontal	236	1.16	-	57.23	27.67	8.34	-
AV	2.4835G	49.05	54.00	-4.95	36.04	3	Horizontal	236	1.16	-	13.01	27.70	8.34	-
PK	2.4776G	96.54	Inf	-Inf	36.01	3	Horizontal	236	1.16	-	60.53	27.67	8.34	-
PK	2.4952G	60.17	74.00	-13.83	36.12	3	Horizontal	236	1.16	-	24.05	27.77	8.35	-

BT-LE(2Mbps)

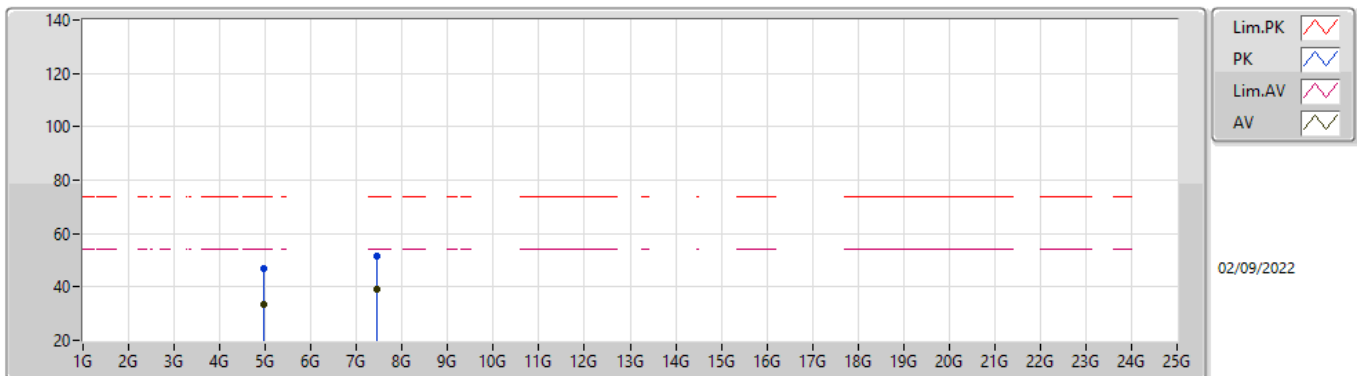
2478MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95684G	34.97	54.00	-19.03	8.54	3	Vertical	330	2.04	-	26.43	32.93	9.73	34.12
AV	7.43268G	40.91	54.00	-13.09	13.09	3	Vertical	81	1.91	-	27.82	36.27	11.31	34.49
PK	4.9569G	48.01	74.00	-25.99	8.54	3	Vertical	330	2.04	-	39.47	32.93	9.73	34.12
PK	7.43228G	54.04	74.00	-19.96	13.09	3	Vertical	81	1.91	-	40.95	36.27	11.31	34.49

BT-LE(2Mbps)

2478MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95496G	33.32	54.00	-20.68	8.53	3	Horizontal	34	2.19	-	24.79	32.92	9.73	34.12
AV	7.43268G	39.20	54.00	-14.80	13.09	3	Horizontal	46	1.74	-	26.11	36.27	11.31	34.49
PK	4.95674G	47.05	74.00	-26.95	8.54	3	Horizontal	34	2.19	-	38.51	32.93	9.73	34.12
PK	7.43578G	51.77	74.00	-22.23	13.07	3	Horizontal	46	1.74	-	38.70	36.26	11.30	34.49



Summary

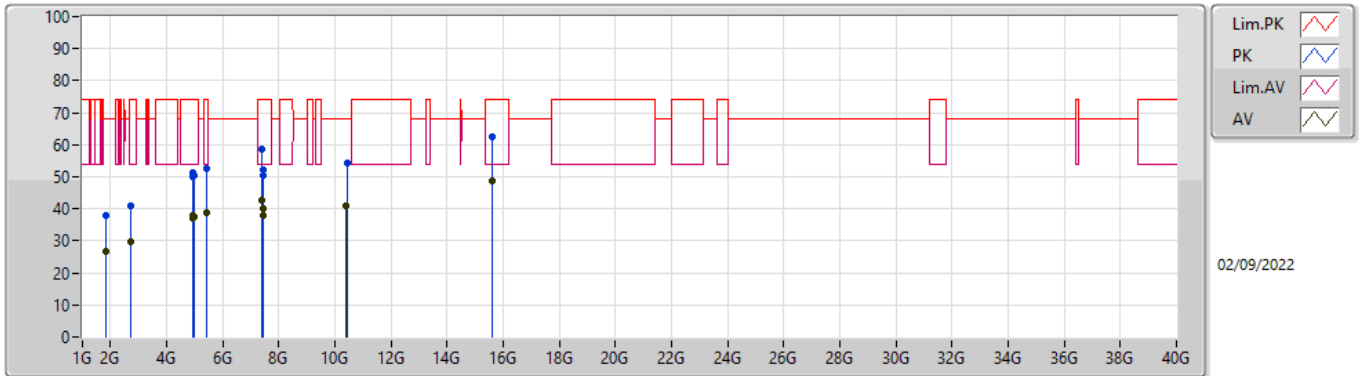
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	15.63169G	49.01	54.00	-4.99	Horizontal



Result

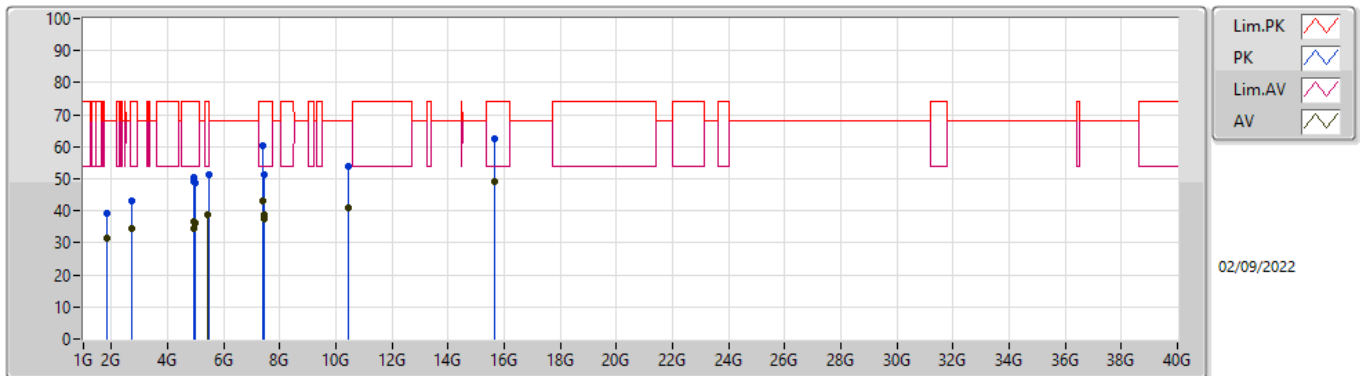
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	1.81675G	26.60	68.20	-41.60	3	Vertical	22	2.90	-
Mode 1	Pass	AV	2.72511G	29.53	54.00	-24.47	3	Vertical	350	1.68	-
Mode 1	Pass	AV	4.92393G	37.07	54.00	-16.93	3	Vertical	135	1.96	-
Mode 1	Pass	AV	4.9497G	37.98	54.00	-16.02	3	Vertical	115	1.80	-
Mode 1	Pass	AV	4.96071G	37.63	54.00	-16.37	3	Vertical	105	1.74	-
Mode 1	Pass	AV	5.44804G	38.86	54.00	-15.14	3	Vertical	106	1.73	-
Mode 1	Pass	AV	7.38449G	42.73	54.00	-11.27	3	Vertical	140	1.72	-
Mode 1	Pass	AV	7.42458G	37.72	54.00	-16.28	3	Vertical	270	1.00	-
Mode 1	Pass	AV	7.43874G	39.97	54.00	-14.03	3	Vertical	77	1.89	-
Mode 1	Pass	AV	10.41248G	40.98	68.20	-27.22	3	Vertical	242	1.02	-
Mode 1	Pass	AV	15.63077G	48.86	54.00	-5.14	3	Vertical	189	1.95	-
Mode 1	Pass	PK	1.8169G	38.05	68.20	-30.15	3	Vertical	22	2.90	-
Mode 1	Pass	PK	2.72506G	40.83	74.00	-33.17	3	Vertical	350	1.68	-
Mode 1	Pass	PK	4.92398G	50.12	74.00	-23.88	3	Vertical	135	1.96	-
Mode 1	Pass	PK	4.9498G	51.45	74.00	-22.55	3	Vertical	115	1.80	-
Mode 1	Pass	PK	4.96154G	50.62	74.00	-23.38	3	Vertical	105	1.74	-
Mode 1	Pass	PK	5.45004G	52.46	74.00	-21.54	3	Vertical	106	1.73	-
Mode 1	Pass	PK	7.38217G	58.66	74.00	-15.34	3	Vertical	140	1.72	-
Mode 1	Pass	PK	7.42528G	50.64	74.00	-23.36	3	Vertical	270	1.00	-
Mode 1	Pass	PK	7.4399G	52.23	74.00	-21.77	3	Vertical	77	1.89	-
Mode 1	Pass	PK	10.42254G	54.18	68.20	-14.02	3	Vertical	242	1.02	-
Mode 1	Pass	PK	15.62245G	62.58	74.00	-11.42	3	Vertical	189	1.95	-
Mode 1	Pass	AV	1.8167G	31.52	68.20	-36.68	3	Horizontal	293	1.58	-
Mode 1	Pass	AV	2.72514G	34.51	54.00	-19.49	3	Horizontal	300	1.06	-
Mode 1	Pass	AV	4.92399G	34.52	54.00	-19.48	3	Horizontal	319	1.48	-
Mode 1	Pass	AV	4.94911G	36.45	54.00	-17.55	3	Horizontal	142	1.74	-
Mode 1	Pass	AV	4.96047G	36.21	54.00	-17.79	3	Horizontal	151	1.50	-
Mode 1	Pass	AV	5.45032G	38.59	54.00	-15.41	3	Horizontal	328	1.77	-
Mode 1	Pass	AV	7.38647G	43.25	54.00	-10.75	3	Horizontal	353	1.67	-
Mode 1	Pass	AV	7.42219G	37.57	54.00	-16.43	3	Horizontal	40	1.95	-
Mode 1	Pass	AV	7.44129G	38.86	54.00	-15.14	3	Horizontal	35	1.50	-
Mode 1	Pass	AV	10.42264G	40.95	68.20	-27.25	3	Horizontal	190	1.91	-
Mode 1	Pass	AV	15.63169G	49.01	54.00	-4.99	3	Horizontal	46	1.50	-
Mode 1	Pass	PK	1.81678G	39.08	68.20	-29.12	3	Horizontal	293	1.58	-
Mode 1	Pass	PK	2.725G	42.94	74.00	-31.06	3	Horizontal	300	1.06	-
Mode 1	Pass	PK	4.92366G	49.20	74.00	-24.80	3	Horizontal	319	1.48	-
Mode 1	Pass	PK	4.94983G	50.26	74.00	-23.74	3	Horizontal	142	1.74	-
Mode 1	Pass	PK	4.95968G	48.68	74.00	-25.32	3	Horizontal	151	1.50	-
Mode 1	Pass	PK	5.45121G	51.49	74.00	-22.51	3	Horizontal	328	1.77	-
Mode 1	Pass	PK	7.39152G	60.30	74.00	-13.70	3	Horizontal	353	1.67	-
Mode 1	Pass	PK	7.42868G	51.21	74.00	-22.79	3	Horizontal	40	1.95	-
Mode 1	Pass	PK	7.44145G	51.34	74.00	-22.66	3	Horizontal	35	1.50	-
Mode 1	Pass	PK	10.4251G	54.04	68.20	-14.16	3	Horizontal	190	1.91	-
Mode 1	Pass	PK	15.63348G	62.31	74.00	-11.69	3	Horizontal	46	1.50	-

Radiated Emissions above 1GHz_Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	1.81675G	26.60	68.20	-41.60	-1.75	3	Vertical	22	2.90	-	28.35	24.87	7.54	34.16
AV	2.72511G	29.53	54.00	-24.47	2.44	3	Vertical	350	1.68	-	27.09	28.30	8.49	34.35
AV	4.92393G	37.07	54.00	-16.93	8.38	3	Vertical	135	1.96	-	28.69	32.80	9.72	34.14
AV	4.9497G	37.98	54.00	-16.02	8.51	3	Vertical	115	1.80	-	29.47	32.90	9.73	34.12
AV	4.96071G	37.63	54.00	-16.37	8.55	3	Vertical	105	1.74	-	29.08	32.94	9.73	34.12
AV	5.44804G	38.86	54.00	-15.14	8.74	3	Vertical	106	1.73	-	30.12	32.90	10.02	34.18
AV	7.38449G	42.73	54.00	-11.27	13.34	3	Vertical	140	1.72	-	29.39	36.49	11.34	34.49
AV	7.42458G	37.72	54.00	-16.28	13.13	3	Vertical	270	1.00	-	24.59	36.30	11.32	34.49
AV	7.43874G	39.97	54.00	-14.03	13.06	3	Vertical	77	1.89	-	26.91	36.25	11.30	34.49
AV	10.41248G	40.98	68.20	-27.22	16.83	3	Vertical	242	1.02	-	24.15	38.69	12.69	34.55
AV	15.63077G	48.86	54.00	-5.14	19.82	3	Vertical	189	1.95	-	29.04	38.55	15.75	34.48
PK	1.8169G	38.05	68.20	-30.15	-1.75	3	Vertical	22	2.90	-	39.80	24.87	7.54	34.16
PK	2.72506G	40.83	74.00	-33.17	2.44	3	Vertical	350	1.68	-	38.39	28.30	8.49	34.35
PK	4.92398G	50.12	74.00	-23.88	8.38	3	Vertical	135	1.96	-	41.74	32.80	9.72	34.14
PK	4.9498G	51.45	74.00	-22.55	8.51	3	Vertical	115	1.80	-	42.94	32.90	9.73	34.12
PK	4.96154G	50.62	74.00	-23.38	8.56	3	Vertical	105	1.74	-	42.06	32.95	9.73	34.12
PK	5.45004G	52.46	74.00	-21.54	8.74	3	Vertical	106	1.73	-	43.72	32.90	10.02	34.18
PK	7.38217G	58.66	74.00	-15.34	13.36	3	Vertical	140	1.72	-	45.30	36.51	11.34	34.49
PK	7.42528G	50.64	74.00	-23.36	13.12	3	Vertical	270	1.00	-	37.52	36.30	11.31	34.49
PK	7.4399G	52.23	74.00	-21.77	13.05	3	Vertical	77	1.89	-	39.18	36.24	11.30	34.49
PK	10.42254G	54.18	68.20	-14.02	16.82	3	Vertical	242	1.02	-	37.36	38.68	12.69	34.55
PK	15.62245G	62.58	74.00	-11.42	19.85	3	Vertical	189	1.95	-	42.73	38.59	15.74	34.48

Radiated Emissions above 1GHz_Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
AV	1.8167G	31.52	68.20	-36.68	-1.75	3	Horizontal	293	1.58	-	33.27	24.87	7.54	34.16
AV	2.72514G	34.51	54.00	-19.49	2.44	3	Horizontal	300	1.06	-	32.07	28.30	8.49	34.35
AV	4.92399G	34.52	54.00	-19.48	8.38	3	Horizontal	319	1.48	-	26.14	32.80	9.72	34.14
AV	4.94911G	36.45	54.00	-17.55	8.51	3	Horizontal	142	1.74	-	27.94	32.90	9.73	34.12
AV	4.96047G	36.21	54.00	-17.79	8.55	3	Horizontal	151	1.50	-	27.66	32.94	9.73	34.12
AV	5.45032G	38.59	54.00	-15.41	8.74	3	Horizontal	328	1.77	-	29.85	32.90	10.02	34.18
AV	7.38647G	43.25	54.00	-10.75	13.33	3	Horizontal	353	1.67	-	29.92	36.48	11.34	34.49
AV	7.42219G	37.57	54.00	-16.43	13.14	3	Horizontal	40	1.95	-	24.43	36.31	11.32	34.49
AV	7.44129G	38.86	54.00	-15.14	13.04	3	Horizontal	35	1.50	-	25.82	36.23	11.30	34.49
AV	10.42264G	40.95	68.20	-27.25	16.82	3	Horizontal	190	1.91	-	24.13	38.68	12.69	34.55
AV	15.63169G	49.01	54.00	-4.99	19.81	3	Horizontal	46	1.50	-	29.20	38.54	15.75	34.48
PK	1.81678G	39.08	68.20	-29.12	-1.75	3	Horizontal	293	1.58	-	40.83	24.87	7.54	34.16
PK	2.725G	42.94	74.00	-31.06	2.44	3	Horizontal	300	1.06	-	40.50	28.30	8.49	34.35
PK	4.92366G	49.20	74.00	-24.80	8.37	3	Horizontal	319	1.48	-	40.83	32.79	9.72	34.14
PK	4.94983G	50.26	74.00	-23.74	8.51	3	Horizontal	142	1.74	-	41.75	32.90	9.73	34.12
PK	4.95968G	48.68	74.00	-25.32	8.55	3	Horizontal	151	1.50	-	40.13	32.94	9.73	34.12
PK	5.45121G	51.49	74.00	-22.51	8.74	3	Horizontal	328	1.77	-	42.75	32.90	10.02	34.18
PK	7.39152G	60.30	74.00	-13.70	13.30	3	Horizontal	353	1.67	-	47.00	36.45	11.34	34.49
PK	7.42868G	51.21	74.00	-22.79	13.11	3	Horizontal	40	1.95	-	38.10	36.29	11.31	34.49
PK	7.44145G	51.34	74.00	-22.66	13.04	3	Horizontal	35	1.50	-	38.30	36.23	11.30	34.49
PK	10.4251G	54.04	68.20	-14.16	16.83	3	Horizontal	190	1.91	-	37.21	38.67	12.70	34.54
PK	15.63348G	62.31	74.00	-11.69	19.80	3	Horizontal	46	1.50	-	42.51	38.53	15.75	34.48