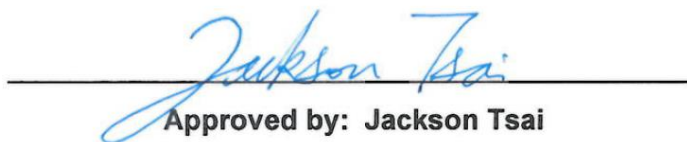


FCC Radio Test Report

FCC ID : 2A8MT-S24POE
Equipment : 24 Port Managed Network Switch with PoE
Brand Name : ALTA LABS [^] ALTA LABS
Model Name : S24-POE
Applicant : SoundVision Technologies, dba Alta Labs
192 N Old Hwy 91, Unit 1 Hurricane, Utah, United States
84737
Manufacturer : SoundVision Technologies, dba Alta Labs
192 N Old Hwy 91, Unit 1 Hurricane, Utah, United States
84737
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 28, 2023, and testing was started from Jun. 28, 2023 and completed on Jul. 13, 2023. 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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TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver4.3
FCC ID: 2A8MT-S24POE

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: Amber Chiu

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	Gain (dBi)
1	LITEON	3010001451GD	Dipole	IPEX-1	1.86

Note 1: The EUT has one antenna.

For Bluetooth function:

For Bluetooth mode (1TX/1RX)

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

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) $\geq 1/T$
BT-LE(1Mbps)	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
BT-LE(2Mbps)	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

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

1.1.5 Table for Multiple Listing

Table for Explanation 2nd Source

Object/part or Description (location)	Location	main source (SKU 1)	2nd source (SKU 2)
LAN transformer	T1, T2, T3, T4	Brand: BOTHHAND Model: GH5610RSM LF	Brand: FPE Model: LY88514DF
LAN transformer	T5, T6	Brand: BOTHHAND Model: GH5210RLF	Brand: FPE Model: LG88508DF

From the above SKU, all of SKUs were verified and Main source (SKU 1) was selected as representative SKU for the test and its data was recorded in this report.

1.2 Testing Applied Standards

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

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

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

- ♦ KDB 558074 D01 v05r02
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Simon Cheng	24.1~24.6°C / 50~53%	12/Jul/2023
RF Conducted	TH01-HY	Wayne Chiu	22.6~23.2°C / 51~56%	10/Jul/2023
☒ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH09-HY	Lego Lin	22.2~25.4°C / 51~54%	28/Jun/2023~13/Jul/2023

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%
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	4
2440MHz	4
2480MHz	4
BT-LE(2Mbps)	-
2402MHz	4
2440MHz	4
2480MHz	4

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

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		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

2.3 Accessories

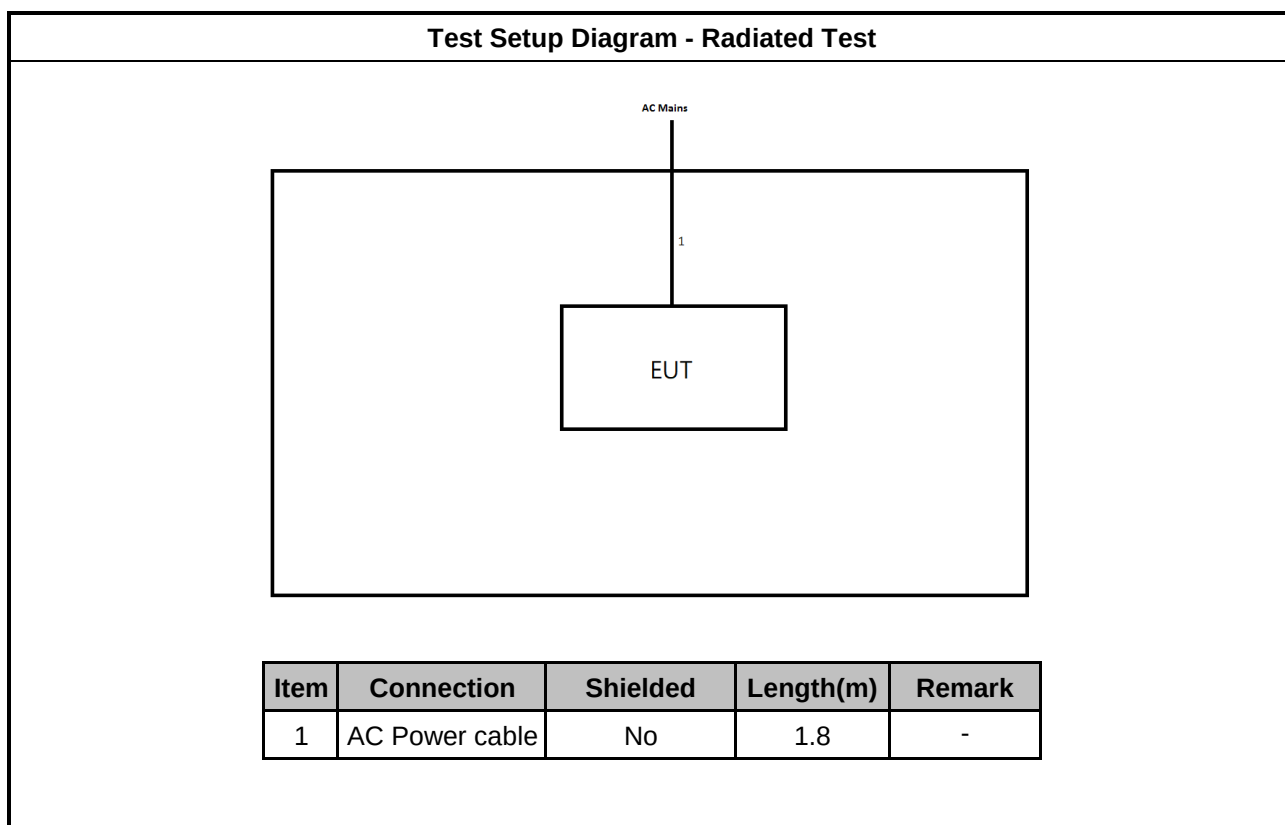
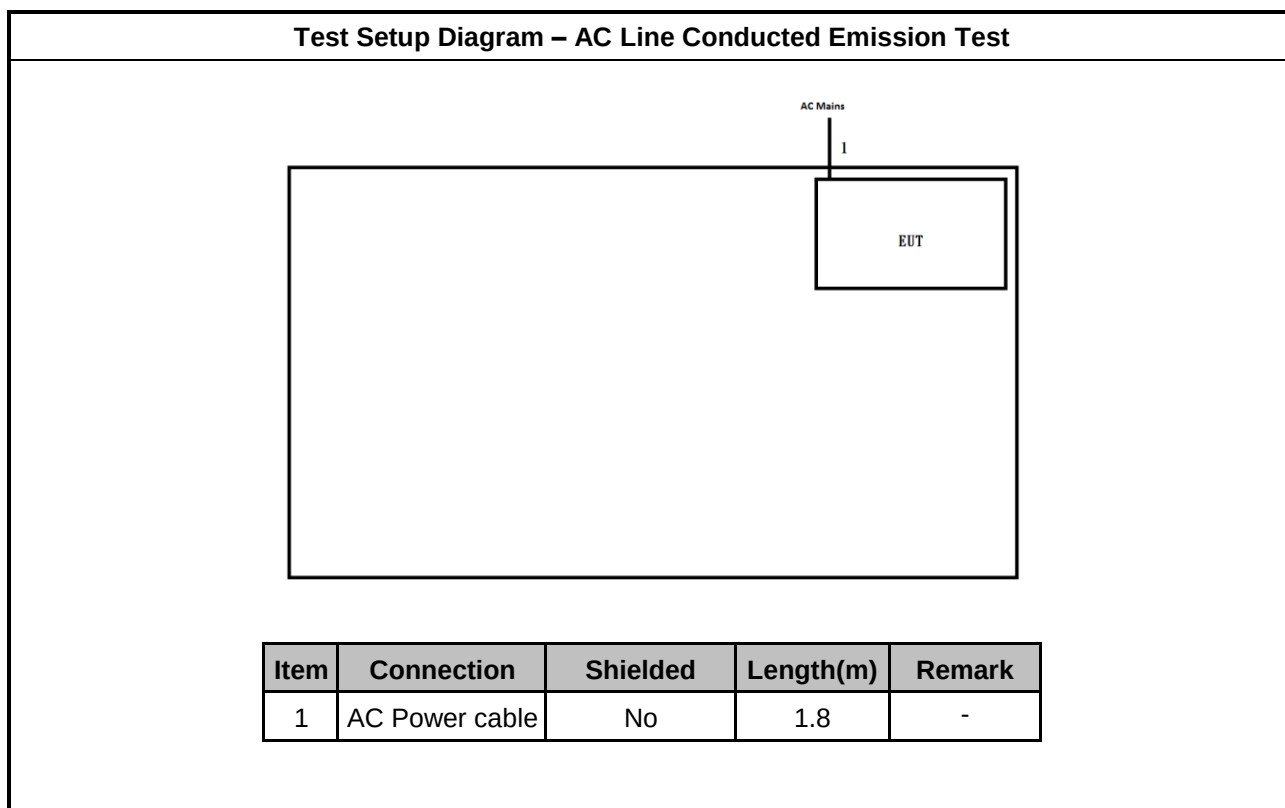
Accessories				
AC Power Cord	Line Length	1.8 meter, non-shielded cable, w/o ferrite core		
Ear Bracket Kit	Brand Name	-	Model Name	-

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



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

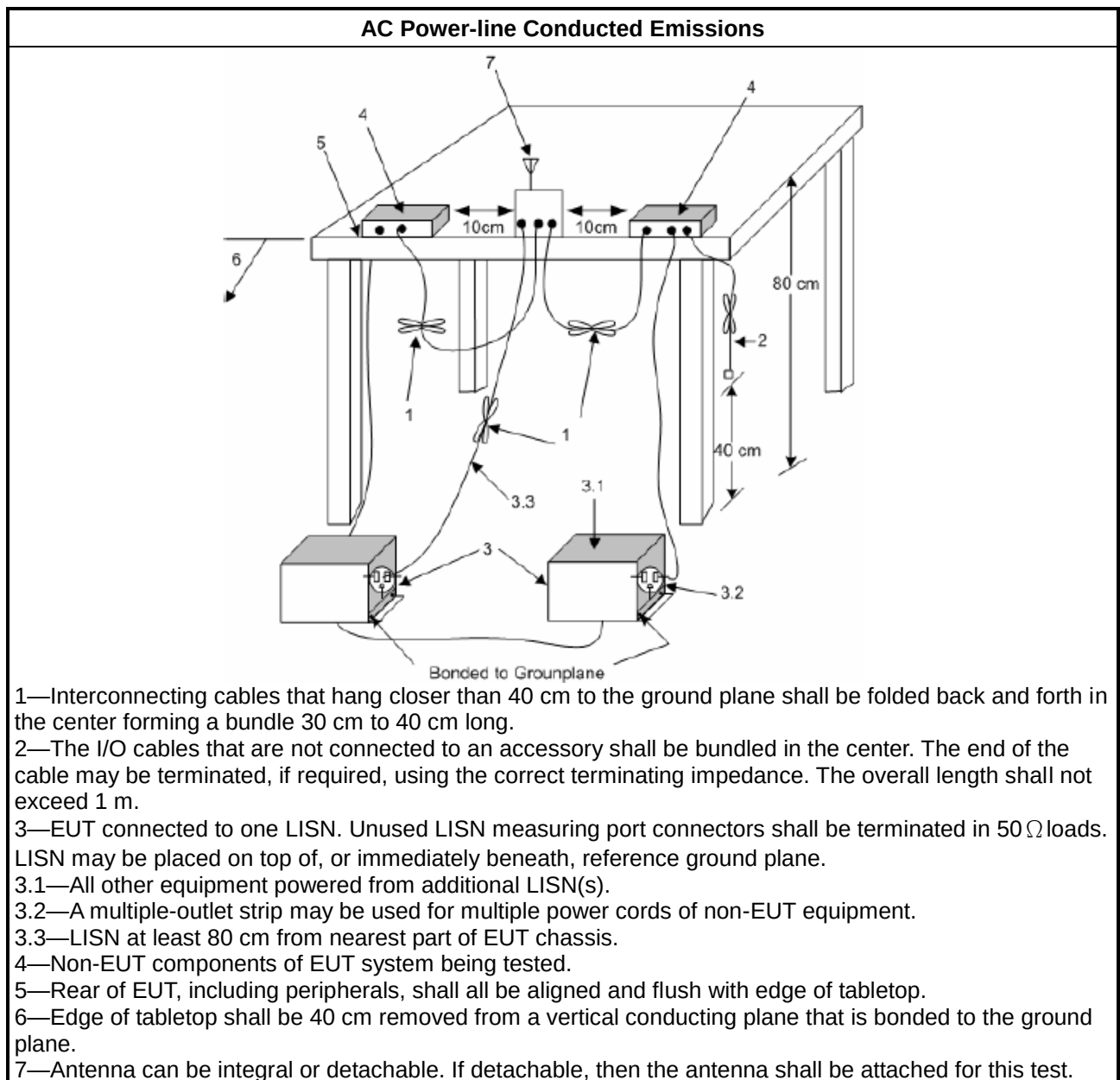
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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



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 $\geq$ 500 kHz.

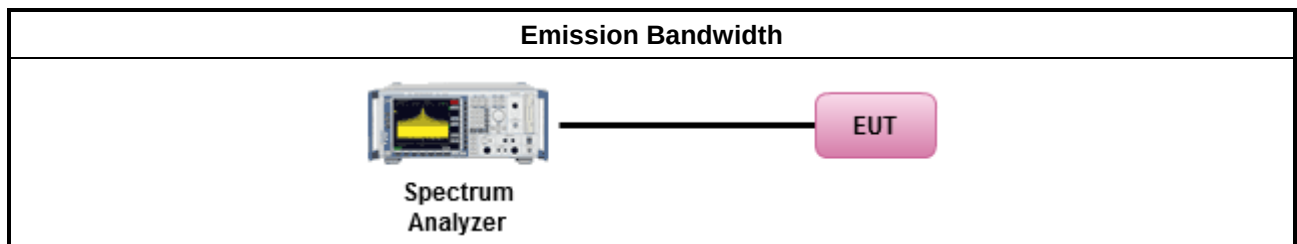
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	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



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

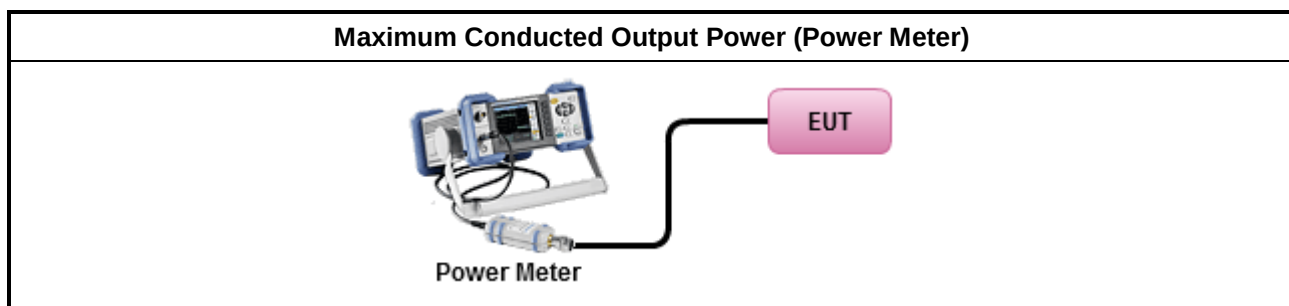
3.3.2 Measuring Instruments

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: $P_{total} = P_1 + P_2 + \dots + P_n$ (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
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

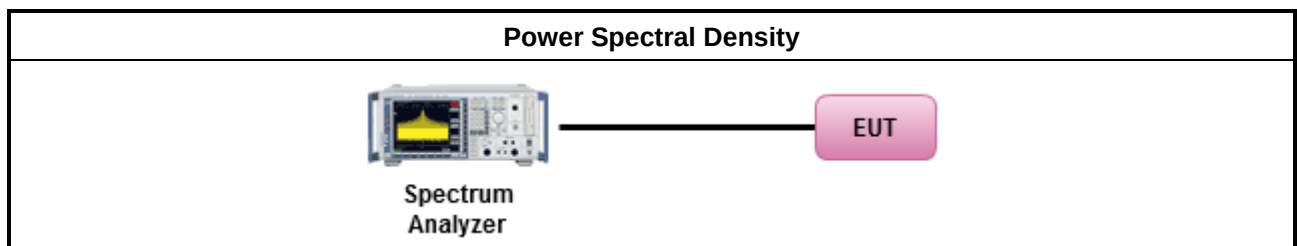
3.4.2 Measuring Instruments

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



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.	

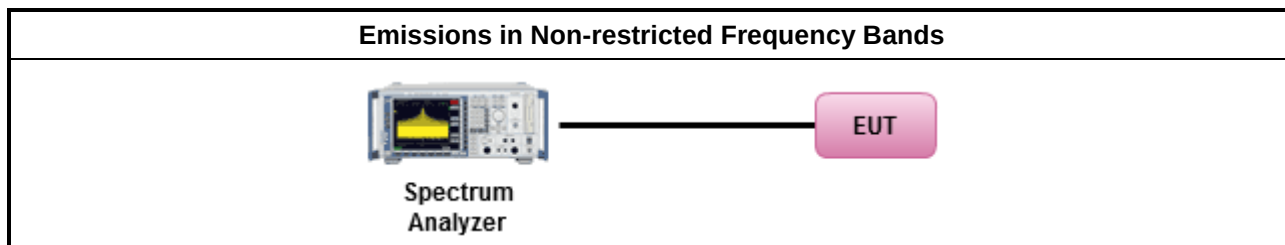
3.5.2 Measuring Instruments

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



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

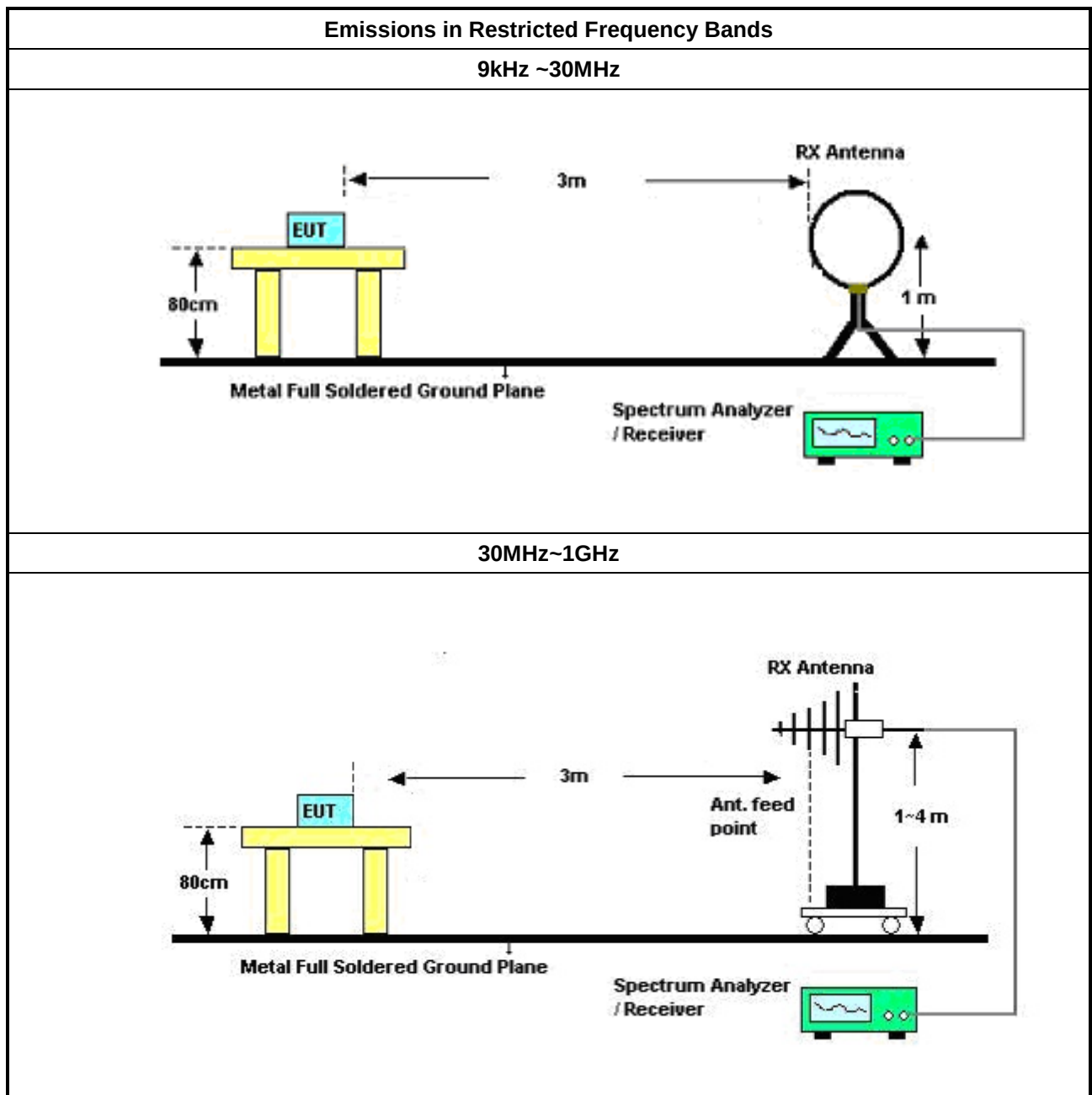
Test Method	
	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted 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 $f \geq 1$ 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.

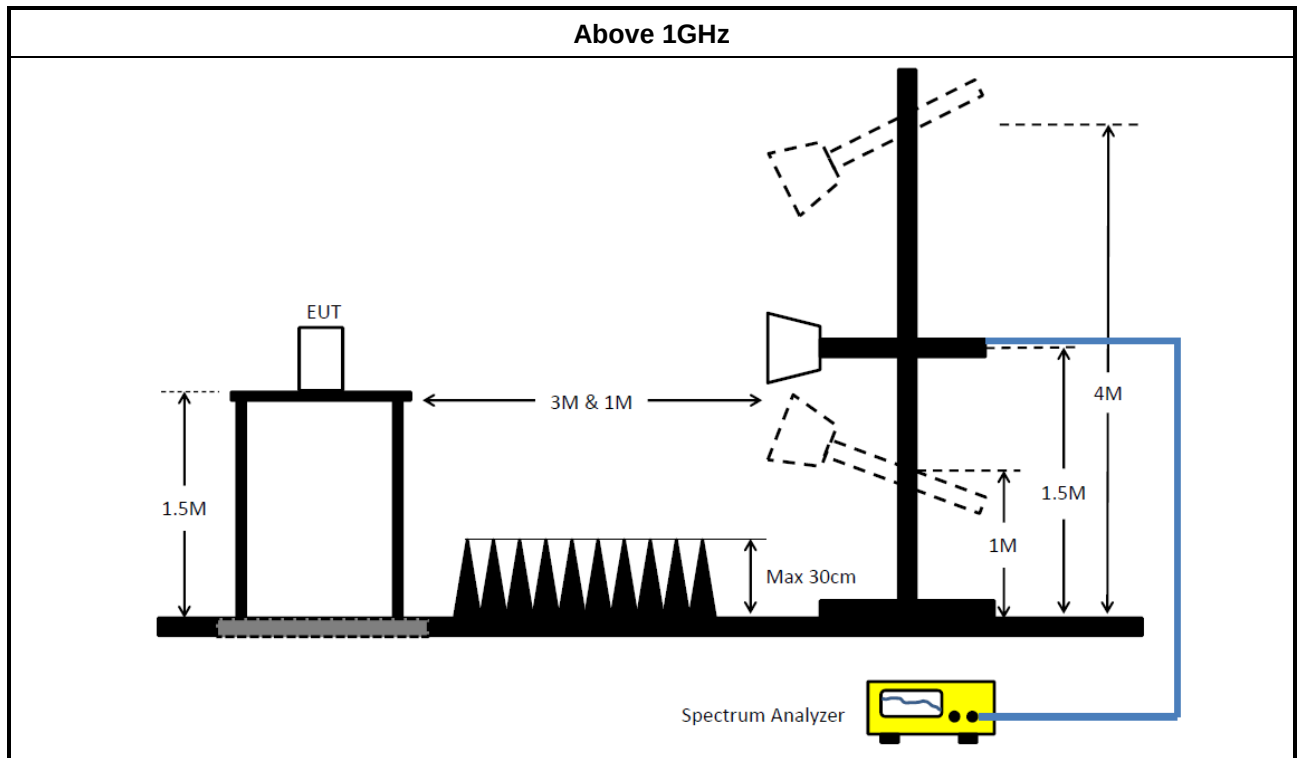
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier 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	ESR	102051	9kHz ~ 3.6GHz	16/May/2023	15/May/2024
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	16/Feb/2023	15/Feb/2024
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	28/Feb/2023	27/Feb/2024
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	25/Oct/2022	24/Oct/2023
Software	Sporton	SENSE-EMI	V5.11.3.0	-	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	10/Apr/2023	09/Apr/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	15/Feb/2023	14/Feb/2024
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	15/Feb/2023	14/Feb/2024
SENSE-15247_FS	Sporton	V5.11.2	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
Site V.S.W.R	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	14/Mar/2023	13/Mar/2024
N.S.A. Measurement	TDK	SAC-3M	03CH09-HY	30 MHz ~ 1 GHz 3m	15/Mar/2023	14/Mar/2024
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	11/Aug/2022	10/Aug/2023
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	22/Jul/2022	21/Jul/2023
Preamplifier	EMCI	EMC9135	980232	9kHz~1GHz	07/Apr/2023	06/Apr/2024
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MT J6102-05	35418 & 3	30MHz~1GHz	28/Aug/2022	27/Aug/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	30/Dec/2022	29/Dec/2023
RF Cable-low	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-01	9kHz~1GHz	21/Feb/2023	20/Feb/2024
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-02	1GHz~40GHz	21/Feb/2023	20/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	16/Mar/2023	15/Mar/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	23/Mar/2023	22/Mar/2024
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	26/May/2023	25/May/2024
SENSE-15247_FS	Sporton	Sporton	V5.10.8.9	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

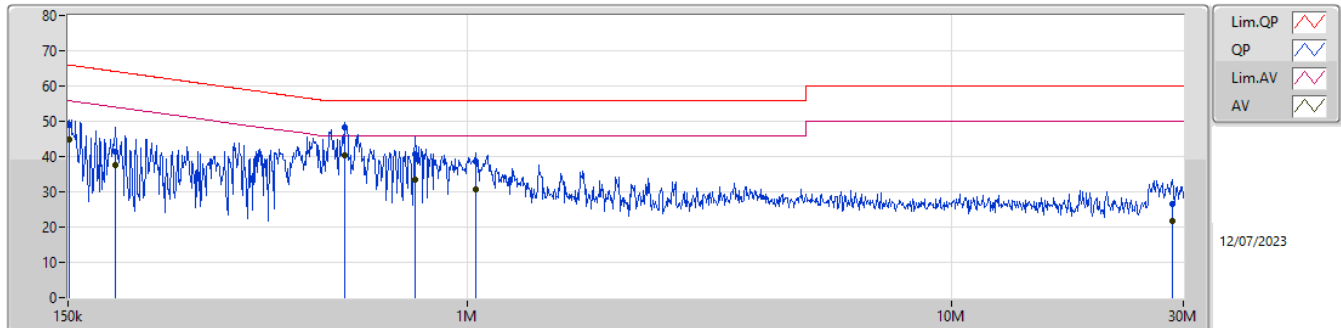
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	560.037k	40.39	46.00	-5.61	Line

Result

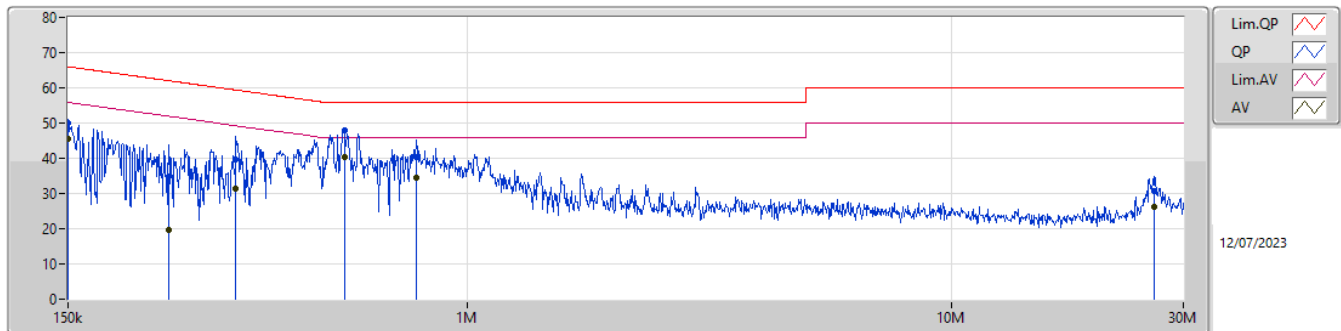
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	48.84	65.96	-17.12	Line
Mode 1	Pass	AV	150.6k	44.91	55.96	-11.05	Line
Mode 1	Pass	QP	188.327k	41.22	64.11	-22.89	Line
Mode 1	Pass	AV	188.327k	37.46	54.11	-16.65	Line
Mode 1	Pass	QP	560.037k	48.38	56.00	-7.62	Line
Mode 1	Pass	AV	560.037k	40.39	46.00	-5.61	Line
Mode 1	Pass	QP	780.036k	40.73	56.00	-15.27	Line
Mode 1	Pass	AV	780.036k	33.58	46.00	-12.42	Line
Mode 1	Pass	QP	1.04M	38.64	56.00	-17.36	Line
Mode 1	Pass	AV	1.04M	30.72	46.00	-15.28	Line
Mode 1	Pass	QP	28.457M	26.44	60.00	-33.56	Line
Mode 1	Pass	AV	28.457M	21.83	50.00	-28.17	Line
Mode 1	Pass	QP	150k	50.02	66.00	-15.98	Neutral
Mode 1	Pass	AV	150k	45.60	56.00	-10.40	Neutral
Mode 1	Pass	QP	242.179k	34.74	62.02	-27.28	Neutral
Mode 1	Pass	AV	242.179k	19.67	52.02	-32.35	Neutral
Mode 1	Pass	QP	333.299k	39.82	59.37	-19.55	Neutral
Mode 1	Pass	AV	333.299k	31.51	49.37	-17.86	Neutral
Mode 1	Pass	QP	557.805k	47.76	56.00	-8.24	Neutral
Mode 1	Pass	AV	557.805k	40.20	46.00	-5.80	Neutral
Mode 1	Pass	QP	783.156k	40.28	56.00	-15.72	Neutral
Mode 1	Pass	AV	783.156k	34.41	46.00	-11.59	Neutral
Mode 1	Pass	QP	26.064M	30.71	60.00	-29.29	Neutral
Mode 1	Pass	AV	26.064M	26.20	50.00	-23.80	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	150.6k	48.84	65.96	-17.12	19.61	Line	-	29.23	9.65	0.03	9.93						
AV	150.6k	44.91	55.96	-11.05	19.61	Line	-	25.30	9.65	0.03	9.93						
QP	188.327k	41.22	64.11	-22.89	19.61	Line	-	21.61	9.65	0.03	9.93						
AV	188.327k	37.46	54.11	-16.65	19.61	Line	-	17.85	9.65	0.03	9.93						
QP	560.037k	48.38	56.00	-7.62	19.63	Line	-	28.75	9.64	0.04	9.95						
AV	560.037k	40.39	46.00	-5.61	19.63	Line	-	20.76	9.64	0.04	9.95						
QP	780.036k	40.73	56.00	-15.27	19.65	Line	-	21.08	9.65	0.05	9.95						
AV	780.036k	33.58	46.00	-12.42	19.65	Line	-	13.93	9.65	0.05	9.95						
QP	1.04M	38.64	56.00	-17.36	19.64	Line	-	19.00	9.65	0.05	9.94						
AV	1.04M	30.72	46.00	-15.28	19.64	Line	-	11.08	9.65	0.05	9.94						
QP	28.457M	26.44	60.00	-33.56	20.09	Line	-	6.35	9.78	0.33	9.98						
AV	28.457M	21.83	50.00	-28.17	20.09	Line	-	1.74	9.78	0.33	9.98						

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	150k	50.02	66.00	-15.98	19.59	Neutral	-	30.43	9.63	0.03	9.93						
AV	150k	45.60	56.00	-10.40	19.59	Neutral	-	26.01	9.63	0.03	9.93						
QP	242.179k	34.74	62.02	-27.28	19.59	Neutral	-	15.15	9.62	0.03	9.94						
AV	242.179k	19.67	52.02	-32.35	19.59	Neutral	-	0.08	9.62	0.03	9.94						
QP	333.299k	39.82	59.37	-19.55	19.62	Neutral	-	20.20	9.63	0.04	9.95						
AV	333.299k	31.51	49.37	-17.86	19.62	Neutral	-	11.89	9.63	0.04	9.95						
QP	557.805k	47.76	56.00	-8.24	19.63	Neutral	-	28.13	9.64	0.04	9.95						
AV	557.805k	40.20	46.00	-5.80	19.63	Neutral	-	20.57	9.64	0.04	9.95						
QP	783.156k	40.28	56.00	-15.72	19.64	Neutral	-	20.64	9.64	0.05	9.95						
AV	783.156k	34.41	46.00	-11.59	19.64	Neutral	-	14.77	9.64	0.05	9.95						
QP	26.064M	30.71	60.00	-29.29	20.33	Neutral	-	10.38	10.04	0.32	9.97						
AV	26.064M	26.20	50.00	-23.80	20.33	Neutral	-	5.87	10.04	0.32	9.97						



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)	743.75k	1.073M	1M07F1D	725k	1.057M
BT-LE(2Mbps)	1.298M	2.106M	2M11F1D	1.228M	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

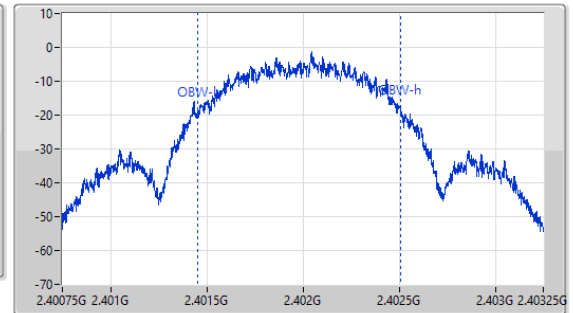
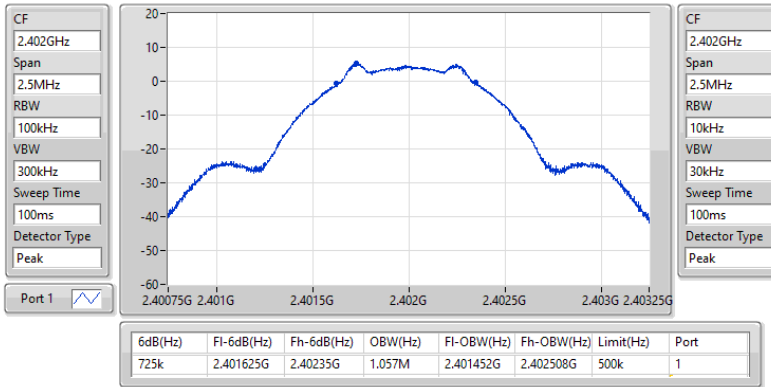
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	725k	1.057M
2440MHz	Pass	500k	743.75k	1.073M
2480MHz	Pass	500k	725k	1.064M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.228M	2.106M
2440MHz	Pass	500k	1.298M	2.101M
2480MHz	Pass	500k	1.23M	2.106M

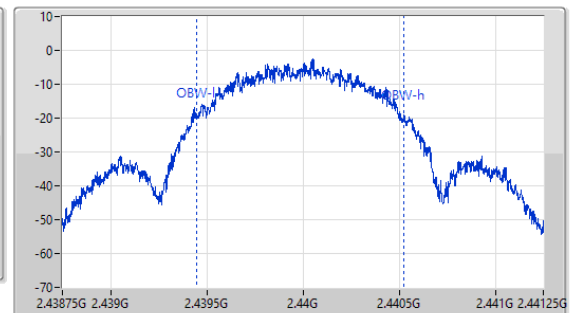
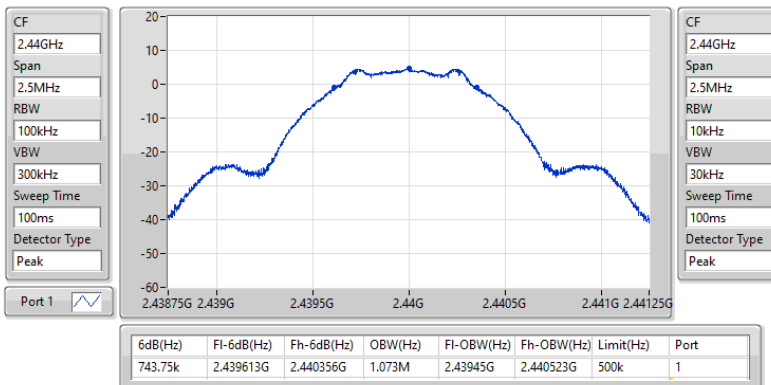
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2402MHz

10/07/2023


2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2440MHz

10/07/2023

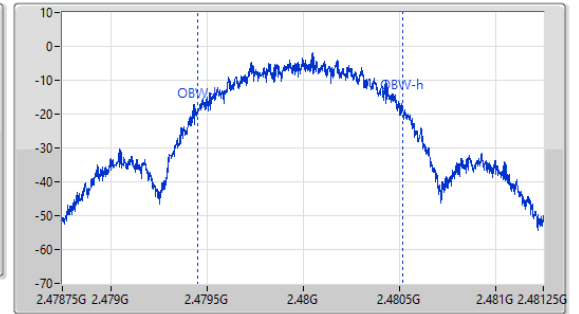
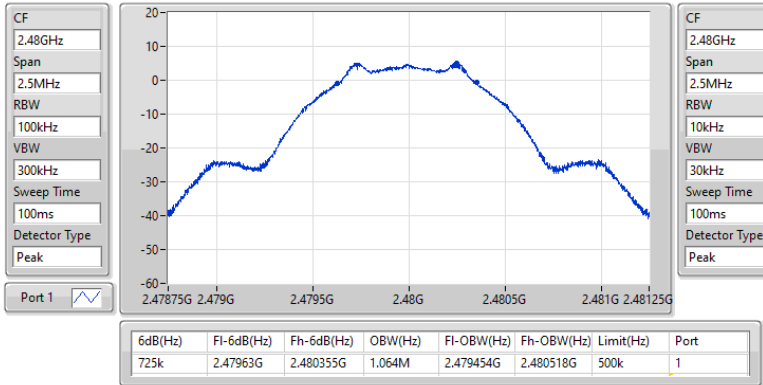


2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2480MHz

10/07/2023

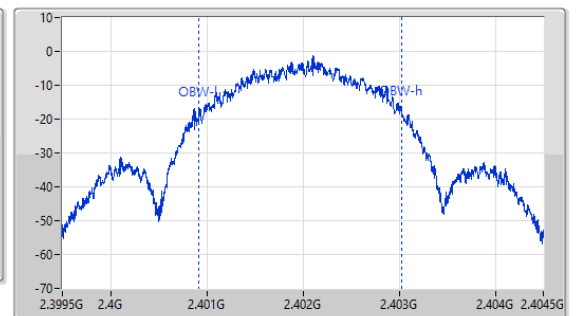
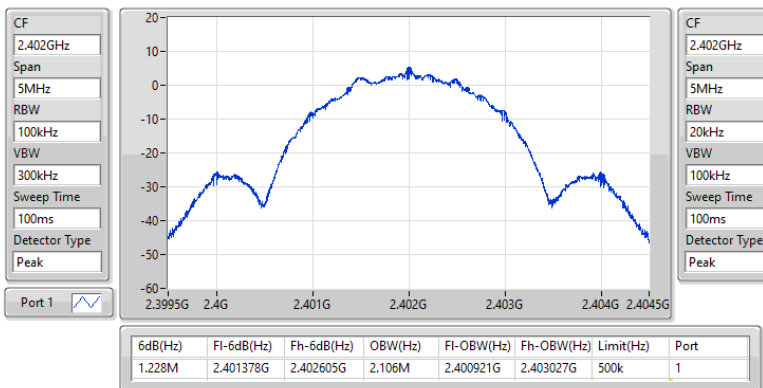


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

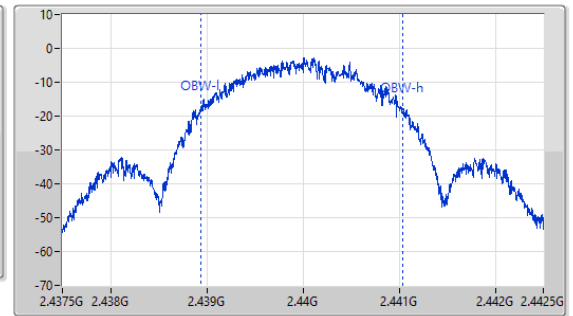
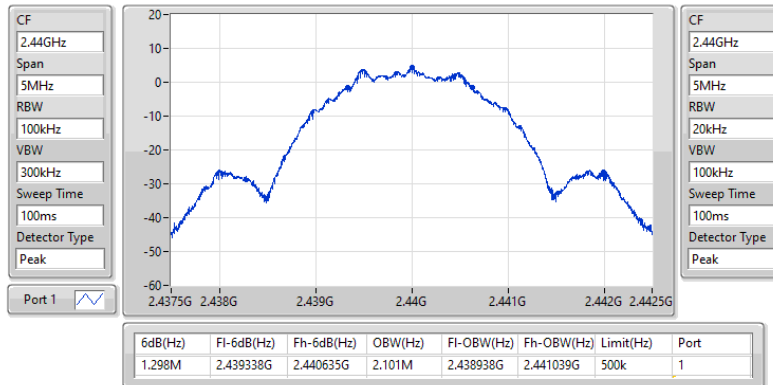
2402MHz

10/07/2023

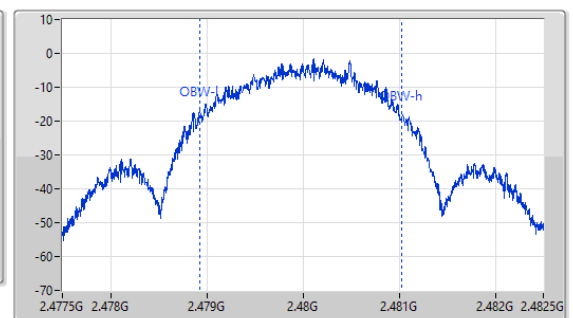
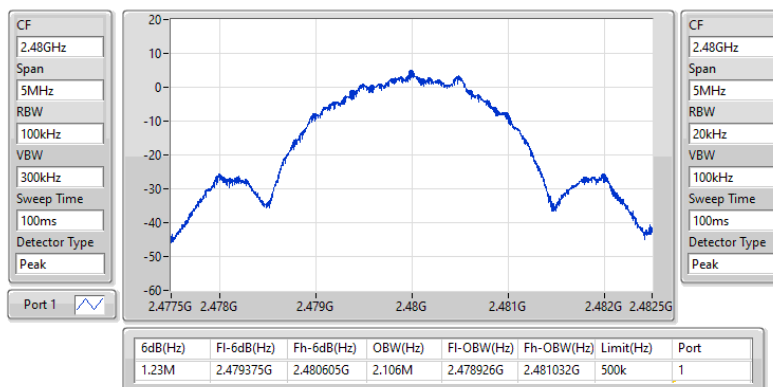


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2440MHz

10/07/2023


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2480MHz

10/07/2023





Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	5.56	0.00360
BT-LE(2Mbps)	5.57	0.00361



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	1.86	5.56	30.00
2440MHz	Pass	1.86	5.48	30.00
2480MHz	Pass	1.86	5.41	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	1.86	5.57	30.00
2440MHz	Pass	1.86	5.52	30.00
2480MHz	Pass	1.86	5.44	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-8.31
BT-LE(2Mbps)	-9.90

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	1.86	-8.53	8.00
2440MHz	Pass	1.86	-8.48	8.00
2480MHz	Pass	1.86	-8.31	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	1.86	-10.40	8.00
2440MHz	Pass	1.86	-9.90	8.00
2480MHz	Pass	1.86	-10.37	8.00

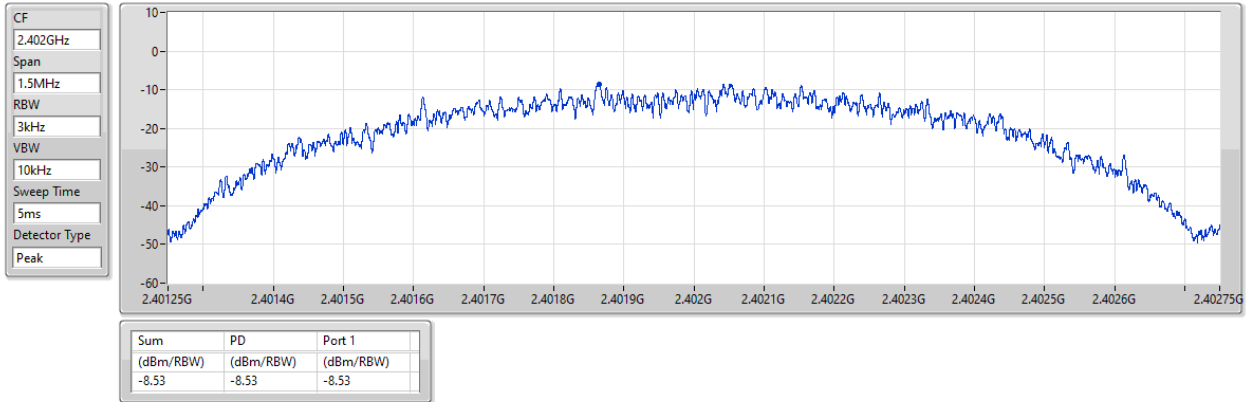
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2402MHz

10/07/2023

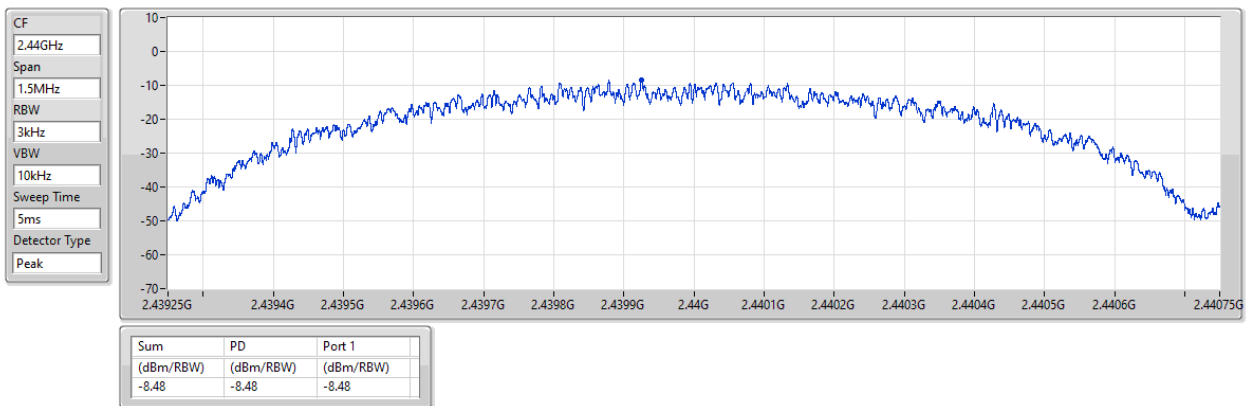


2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2440MHz

10/07/2023

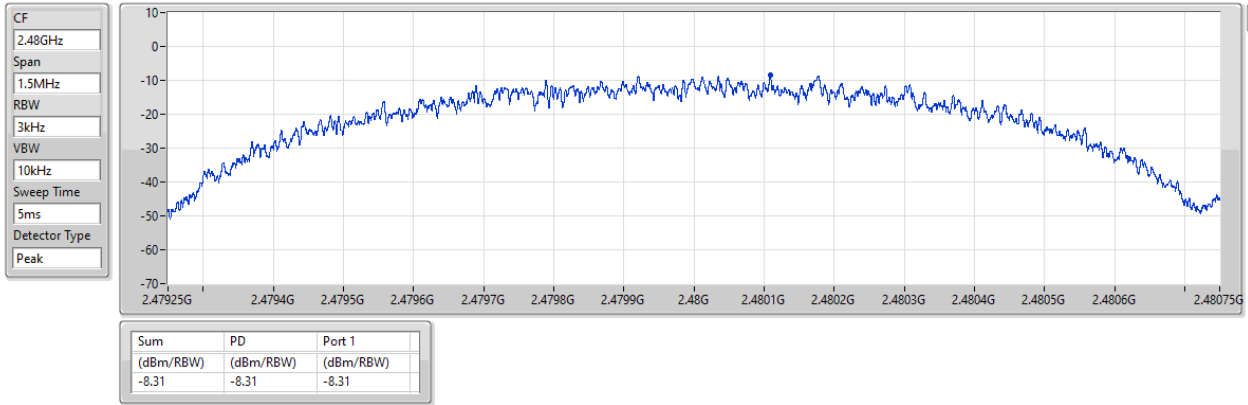


2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2480MHz

10/07/2023

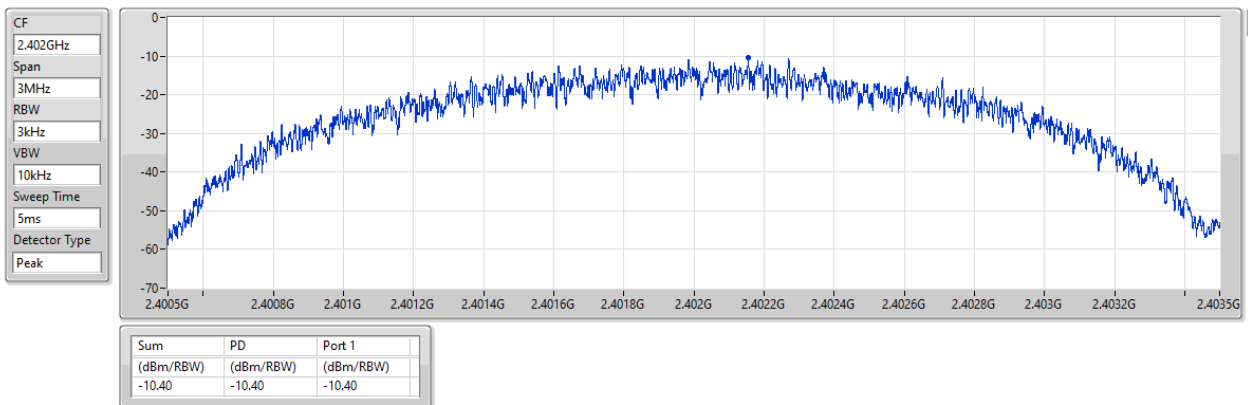


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

10/07/2023



2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2440MHz

10/07/2023

CF
2.44GHz

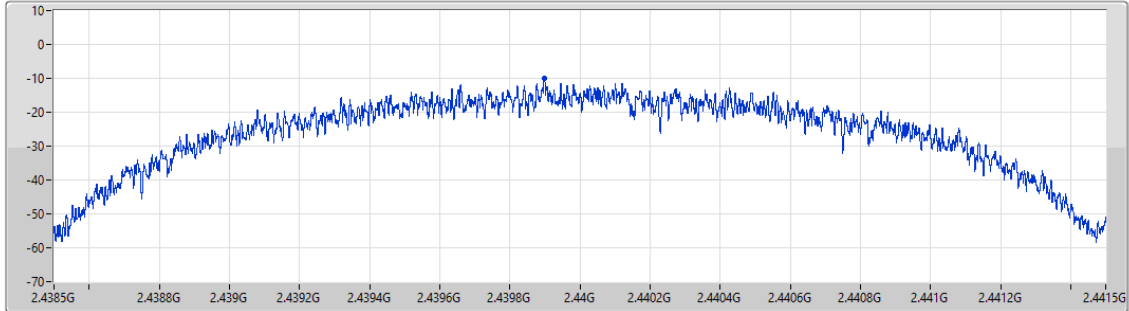
Span
3MHz

RBW
3kHz

VBW
10kHz

Sweep Time
5ms

Detector Type
Peak



Port 1

Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-9.90	-9.90	-9.90

2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2480MHz

10/07/2023

CF
2.48GHz

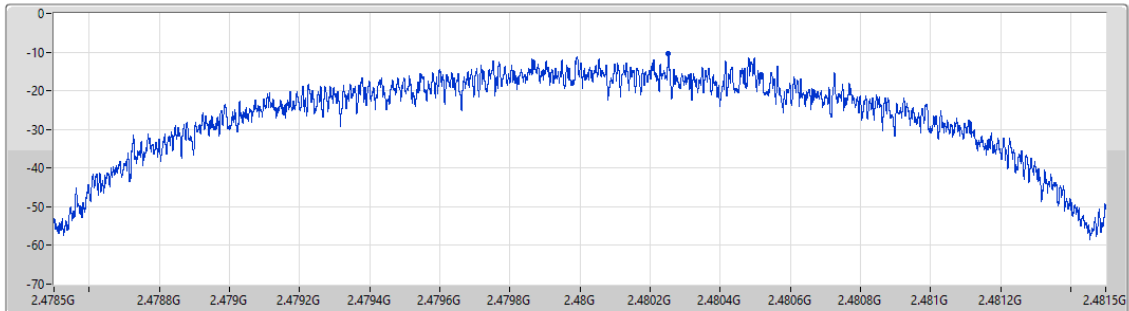
Span
3MHz

RBW
3kHz

VBW
10kHz

Sweep Time
5ms

Detector Type
Peak



Port 1

Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-10.37	-10.37	-10.37

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	5.25	-24.75	2.3048G	-53.50	2.39204G	-45.89	2.4G	-54.34	2.5021G	-52.23	24.4404G	-39.85	1
BT-LE(2Mbps)	Pass	2.402G	4.20	-25.80	2.14618G	-52.91	2.4G	-26.45	2.4G	-26.13	2.50198G	-51.10	24.53882G	-39.40	1

Result

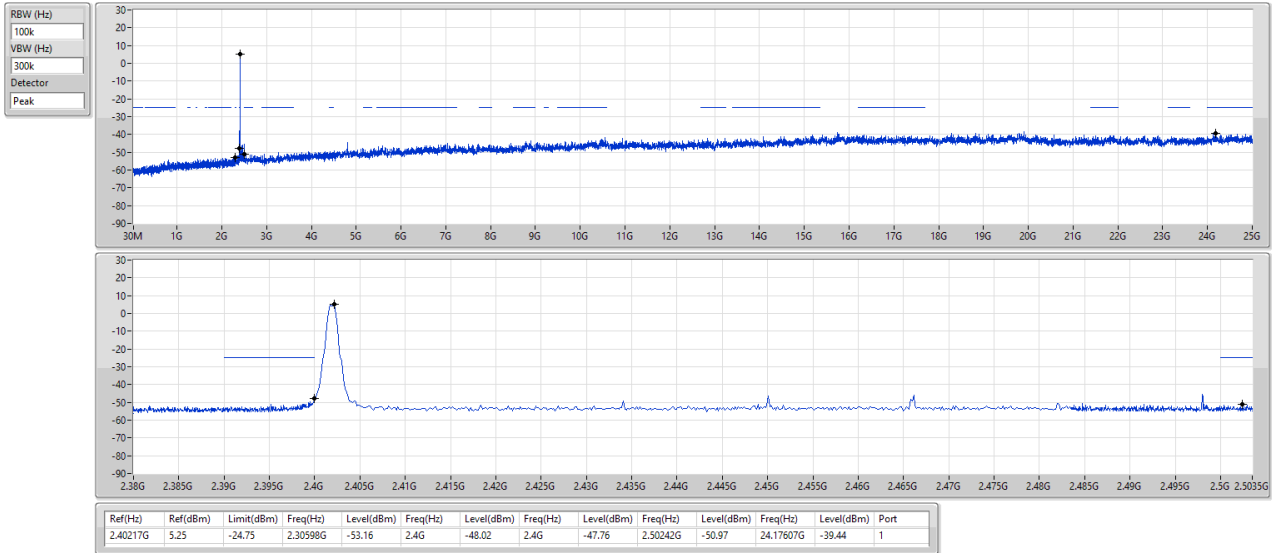
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	5.25	-24.75	2.30598G	-53.16	2.4G	-48.02	2.4G	-47.76	2.50242G	-50.97	24.17607G	-39.44	1
2440MHz	Pass	2.40217G	5.25	-24.75	2.3048G	-53.50	2.39204G	-45.89	2.4G	-54.34	2.5021G	-52.23	24.4404G	-39.85	1
2480MHz	Pass	2.40217G	5.25	-24.75	2.10975G	-53.62	2.4G	-46.70	2.4G	-48.10	2.5001G	-52.16	24.83971G	-38.69	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	4.20	-25.80	2.14618G	-52.91	2.4G	-26.45	2.4G	-26.13	2.50198G	-51.10	24.53882G	-39.40	1
2440MHz	Pass	2.402G	4.20	-25.80	2.30128G	-52.23	2.39204G	-44.96	2.4G	-53.32	2.50334G	-51.32	16.59475G	-39.80	1
2480MHz	Pass	2.402G	4.20	-25.80	1.7925G	-52.65	2.4G	-47.10	2.4G	-46.99	2.50074G	-50.89	23.14685G	-39.92	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2402MHz

10/07/2023

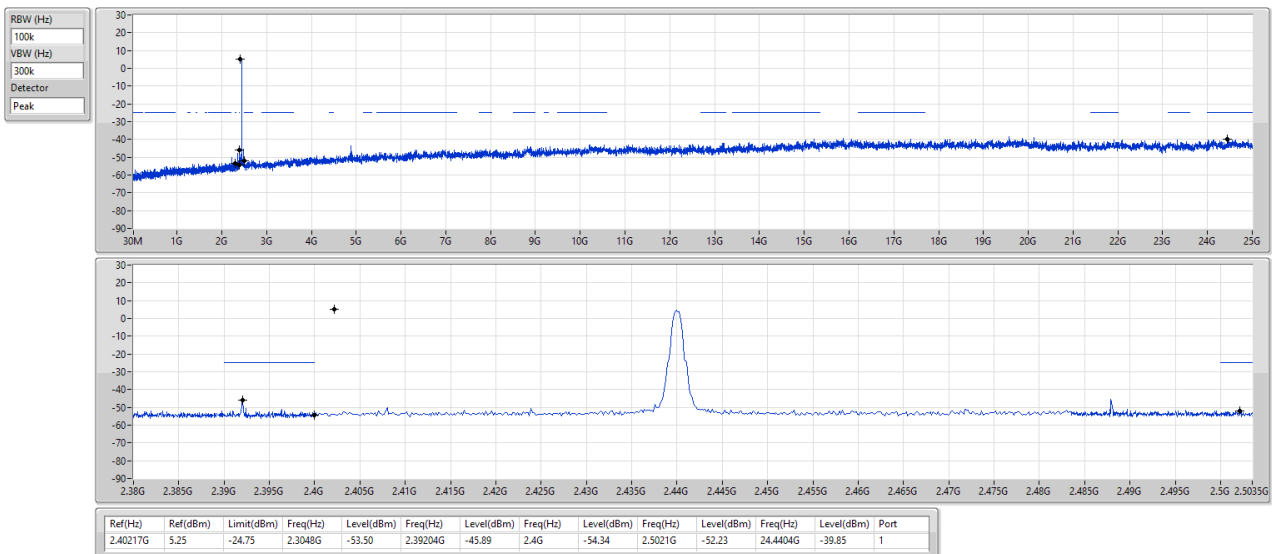


2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2440MHz

10/07/2023



2.4-2.4835GHz_BT-LE(1Mbps)

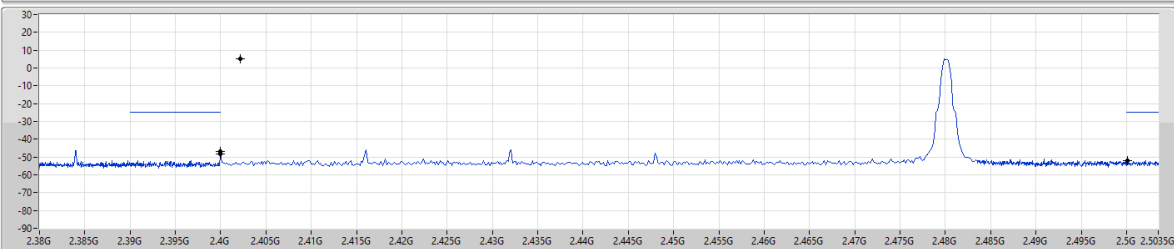
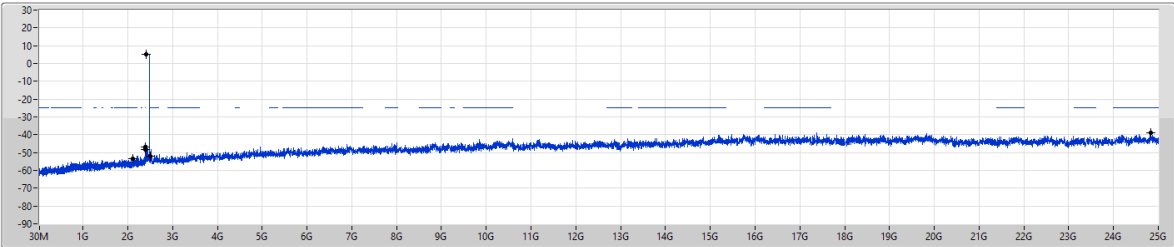
CSEndB-DTS

2480MHz

10/07/2023

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	5.25	-24.75	2.10975G	-53.62	2.4G	-46.70	2.4G	-48.10	2.5001G	-52.16	2.483971G	-38.69	1

2.4-2.4835GHz_BT-LE(2Mbps)

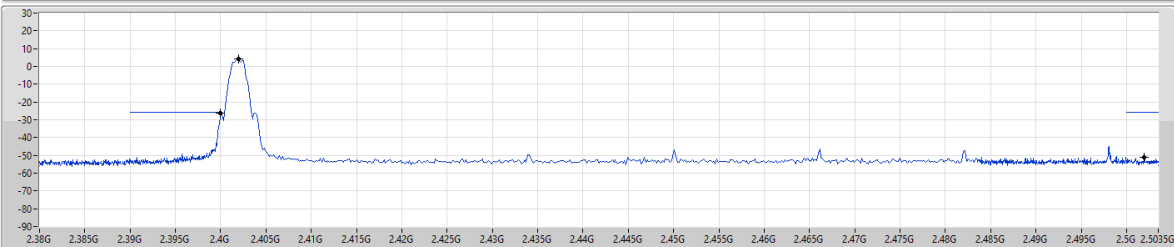
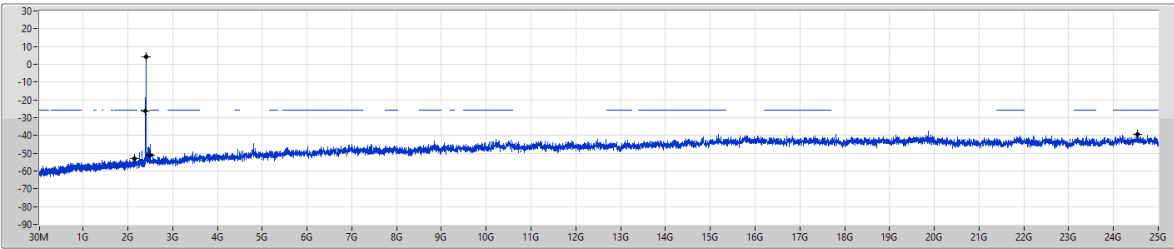
CSEndB-DTS

2402MHz

10/07/2023

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



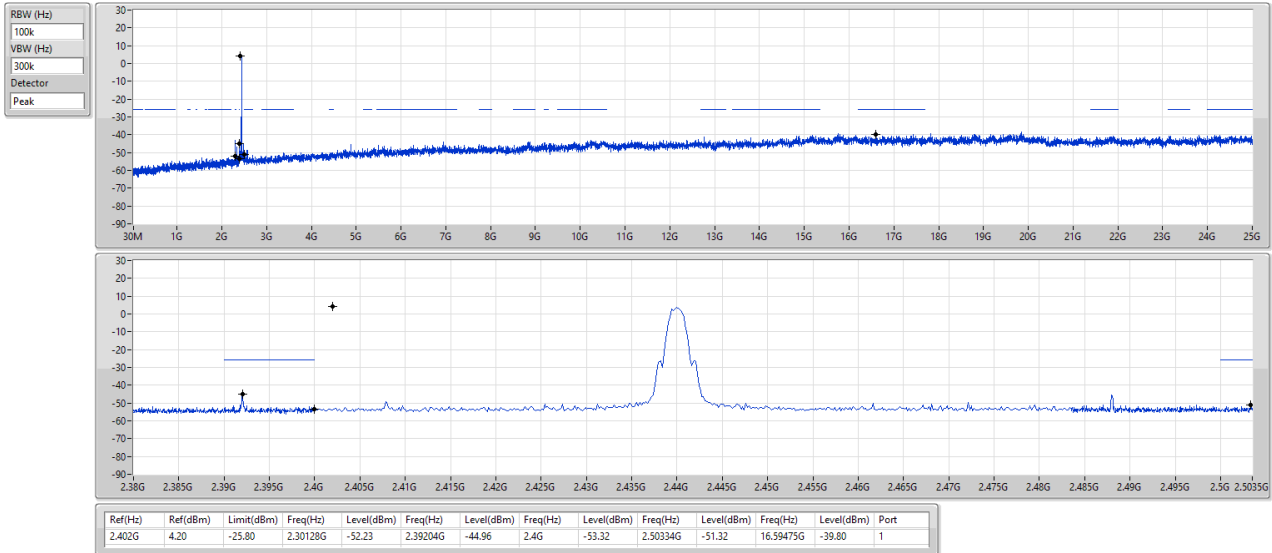
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	4.20	-25.80	2.14618G	-52.91	2.4G	-26.45	2.4G	-26.13	2.50198G	-51.10	2.453882G	-39.40	1

2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2440MHz

10/07/2023

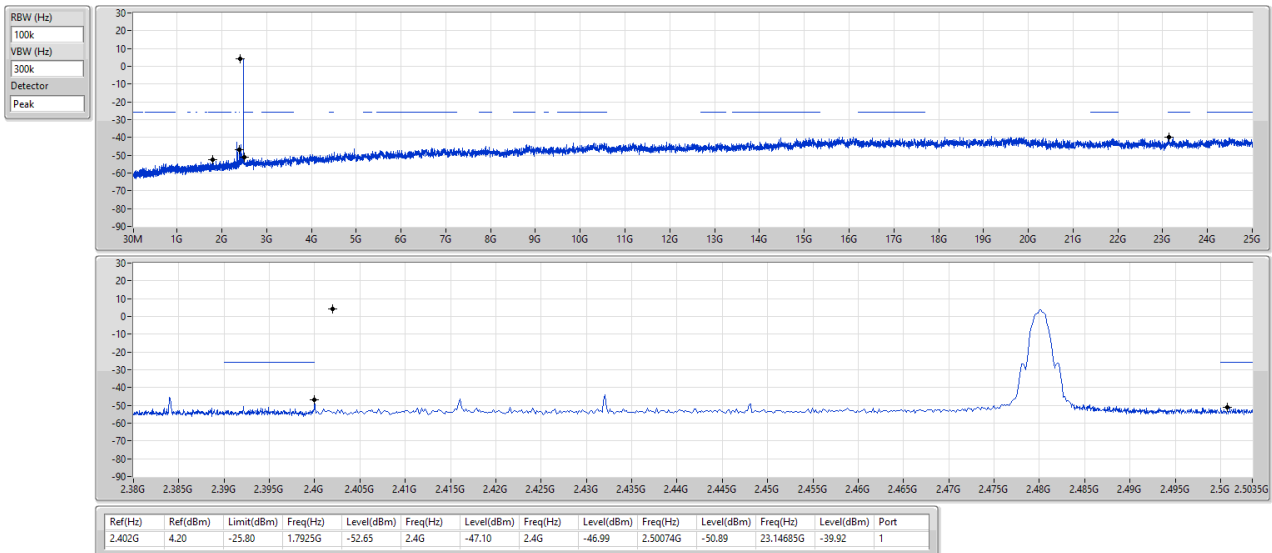


2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2480MHz

10/07/2023





Summary

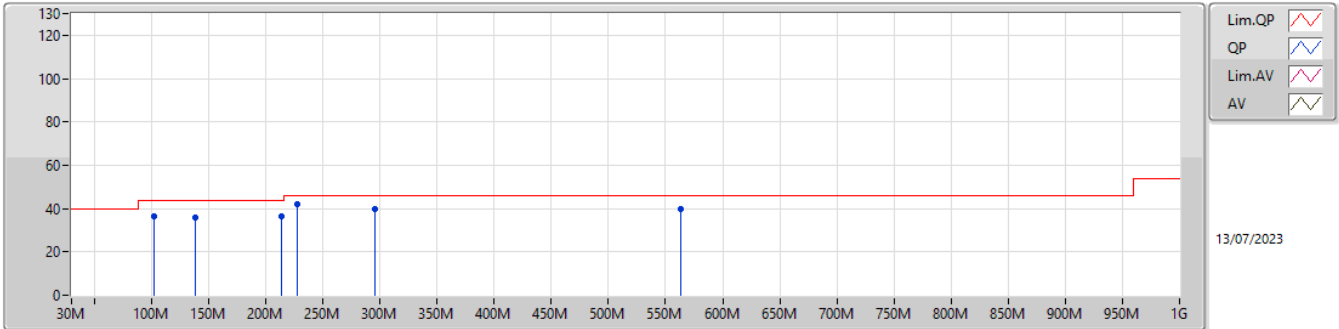
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	227.88M	42.24	46.00	-3.76	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	PK	101.78M	36.45	43.50	-7.05	3	Vertical	360	1.00
2402MHz	Pass	PK	138.64M	36.06	43.50	-7.44	3	Vertical	360	1.00
2402MHz	Pass	PK	227.88M	42.24	46.00	-3.76	3	Vertical	360	1.00
2402MHz	Pass	QP	214.3M	36.67	43.50	-6.83	3	Vertical	200	1.01
2402MHz	Pass	QP	295.78M	39.56	46.00	-6.44	3	Vertical	190	1.15
2402MHz	Pass	QP	563.5M	40.06	46.00	-5.94	3	Vertical	229	1.28
2402MHz	Pass	PK	64.92M	33.45	40.00	-6.55	3	Horizontal	0	1.00
2402MHz	Pass	PK	136.7M	37.94	43.50	-5.56	3	Horizontal	0	1.00
2402MHz	Pass	PK	225.94M	40.94	46.00	-5.06	3	Horizontal	0	1.00
2402MHz	Pass	PK	332.64M	37.18	46.00	-8.82	3	Horizontal	0	1.00
2402MHz	Pass	PK	943.74M	31.49	46.00	-14.51	3	Horizontal	0	1.00
2402MHz	Pass	QP	297.72M	39.85	46.00	-6.15	3	Horizontal	331	1.13

2.4-2.4835GHz_BT-LE(2Mbps)

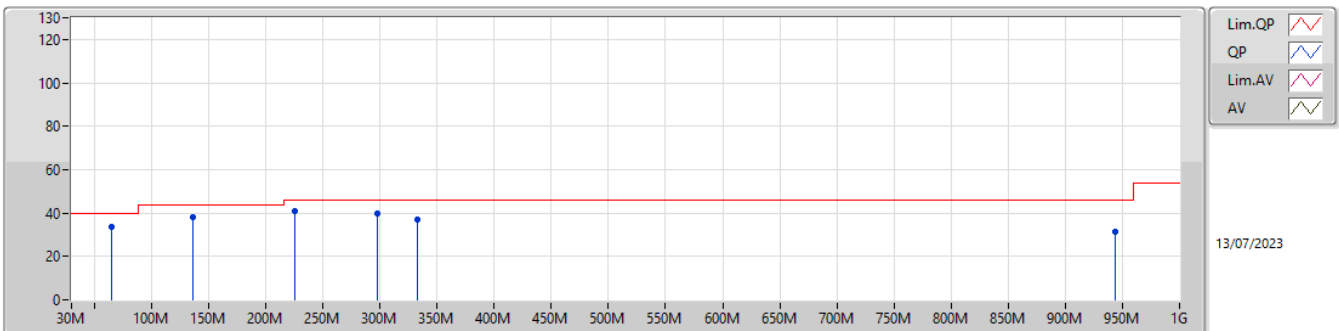
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	101.78M	36.45	43.50	-7.05	-20.03	3	Vertical	360	1.00	56.48	15.43	1.12	36.58
PK	138.64M	36.06	43.50	-7.44	-18.43	3	Vertical	360	1.00	54.49	16.64	1.30	36.37
PK	227.88M	42.24	46.00	-3.76	-19.54	3	Vertical	360	1.00	61.78	15.04	1.74	36.32
QP	214.3M	36.67	43.50	-6.83	-20.54	3	Vertical	200	1.01	57.21	14.04	1.68	36.26
QP	295.78M	39.56	46.00	-6.44	-16.02	3	Vertical	190	1.15	55.58	18.33	2.03	36.38
QP	563.5M	40.06	46.00	-5.94	-8.89	3	Vertical	229	1.28	48.95	25.24	2.94	37.07

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	64.92M	33.45	40.00	-6.55	-24.88	3	Horizontal	0	1.00	58.33	11.18	0.86	36.92
PK	136.7M	37.94	43.50	-5.56	-18.36	3	Horizontal	0	1.00	56.30	16.74	1.29	36.39
PK	225.94M	40.94	46.00	-5.06	-19.78	3	Horizontal	0	1.00	60.72	14.80	1.73	36.31
PK	332.64M	37.18	46.00	-8.82	-15.30	3	Horizontal	0	1.00	52.48	18.98	2.17	36.45
PK	943.74M	31.49	46.00	-14.51	-3.85	3	Horizontal	0	1.00	35.34	29.66	3.90	37.41
QP	297.72M	39.85	46.00	-6.15	-16.00	3	Horizontal	331	1.13	55.85	18.34	2.04	36.38



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	4.88004G	51.25	54.00	-2.75	3	Vertical	32	1.12
BT-LE(2Mbps)	Pass	AV	2.4835G	51.31	54.00	-2.69	3	Vertical	10	1.40

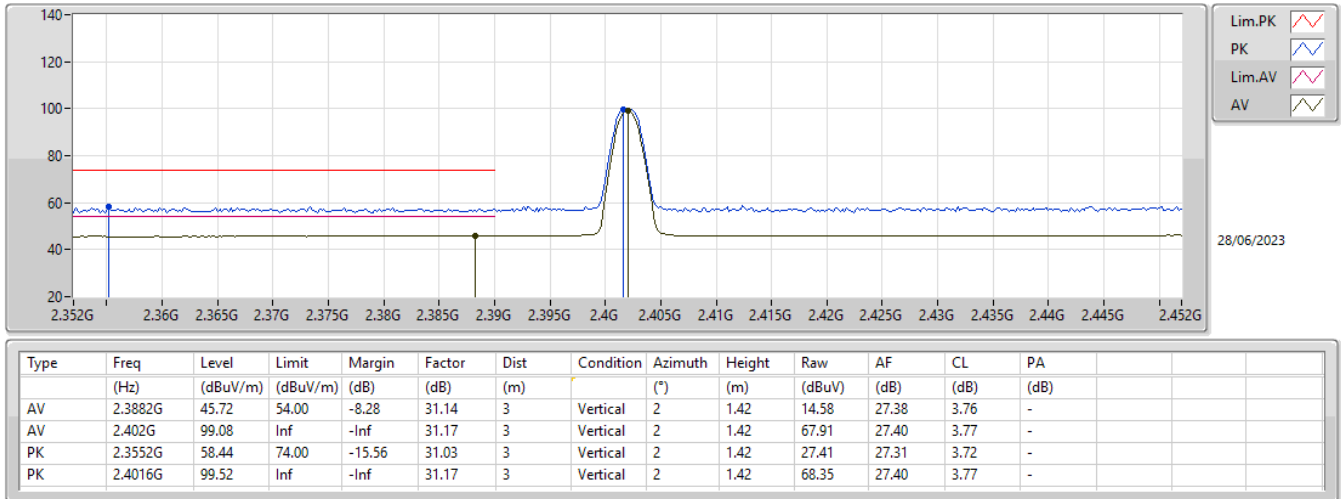
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3882G	45.72	54.00	-8.28	3	Vertical	2	1.42
2402MHz	Pass	AV	2.402G	99.08	Inf	-Inf	3	Vertical	2	1.42
2402MHz	Pass	PK	2.3552G	58.44	74.00	-15.56	3	Vertical	2	1.42
2402MHz	Pass	PK	2.4016G	99.52	Inf	-Inf	3	Vertical	2	1.42
2402MHz	Pass	AV	2.3894G	45.91	54.00	-8.09	3	Horizontal	107	2.56
2402MHz	Pass	AV	2.402G	83.35	Inf	-Inf	3	Horizontal	107	2.56
2402MHz	Pass	PK	2.376G	58.42	74.00	-15.58	3	Horizontal	107	2.56
2402MHz	Pass	PK	2.4018G	84.17	Inf	-Inf	3	Horizontal	107	2.56
2402MHz	Pass	AV	4.80393G	49.15	54.00	-4.85	3	Vertical	8	1.02
2402MHz	Pass	PK	4.80344G	55.32	74.00	-18.68	3	Vertical	8	1.02
2402MHz	Pass	AV	4.80403G	48.79	54.00	-5.21	3	Horizontal	55	2.61
2402MHz	Pass	PK	4.80358G	54.84	74.00	-19.16	3	Horizontal	55	2.61
2440MHz	Pass	AV	2.376G	46.29	54.00	-7.71	3	Vertical	360	1.55
2440MHz	Pass	AV	2.44G	100.25	Inf	-Inf	3	Vertical	360	1.55
2440MHz	Pass	AV	2.5G	46.81	54.00	-7.19	3	Vertical	360	1.55
2440MHz	Pass	PK	2.3696G	58.52	74.00	-15.48	3	Vertical	360	1.55
2440MHz	Pass	PK	2.4404G	100.72	Inf	-Inf	3	Vertical	360	1.55
2440MHz	Pass	PK	2.4972G	58.78	74.00	-15.22	3	Vertical	360	1.55
2440MHz	Pass	AV	2.3636G	45.85	54.00	-8.15	3	Horizontal	85	3.00
2440MHz	Pass	AV	2.44G	87.02	Inf	-Inf	3	Horizontal	85	3.00
2440MHz	Pass	AV	2.498G	46.77	54.00	-7.23	3	Horizontal	85	3.00
2440MHz	Pass	PK	2.3532G	58.07	74.00	-15.93	3	Horizontal	85	3.00
2440MHz	Pass	PK	2.4396G	87.61	Inf	-Inf	3	Horizontal	85	3.00
2440MHz	Pass	PK	2.4852G	59.50	74.00	-14.50	3	Horizontal	85	3.00
2440MHz	Pass	AV	4.88004G	51.25	54.00	-2.75	3	Vertical	32	1.12
2440MHz	Pass	AV	7.32037G	48.39	54.00	-5.61	3	Vertical	4	1.01
2440MHz	Pass	PK	4.87955G	55.83	74.00	-18.17	3	Vertical	32	1.12
2440MHz	Pass	PK	7.31908G	56.96	74.00	-17.04	3	Vertical	4	1.01
2440MHz	Pass	AV	4.88005G	50.87	54.00	-3.13	3	Horizontal	55	1.06
2440MHz	Pass	AV	7.32035G	44.79	54.00	-9.21	3	Horizontal	77	2.08
2440MHz	Pass	PK	4.88053G	56.00	74.00	-18.00	3	Horizontal	55	1.06
2440MHz	Pass	PK	7.32078G	54.87	74.00	-19.13	3	Horizontal	77	2.08
2480MHz	Pass	AV	2.48G	97.89	Inf	-Inf	3	Vertical	4	1.28
2480MHz	Pass	AV	2.4835G	47.09	54.00	-6.91	3	Vertical	4	1.28
2480MHz	Pass	PK	2.4802G	98.44	Inf	-Inf	3	Vertical	4	1.28
2480MHz	Pass	PK	2.4954G	58.98	74.00	-15.02	3	Vertical	4	1.28
2480MHz	Pass	AV	2.48G	84.09	Inf	-Inf	3	Horizontal	223	1.09
2480MHz	Pass	AV	2.5G	46.60	54.00	-7.40	3	Horizontal	223	1.09
2480MHz	Pass	PK	2.4802G	84.86	Inf	-Inf	3	Horizontal	223	1.09
2480MHz	Pass	PK	2.4896G	59.28	74.00	-14.72	3	Horizontal	223	1.09
2480MHz	Pass	AV	4.95996G	45.98	54.00	-8.02	3	Vertical	12	1.57
2480MHz	Pass	AV	7.44038G	42.57	54.00	-11.43	3	Vertical	3	1.04
2480MHz	Pass	PK	4.96059G	52.72	74.00	-21.28	3	Vertical	12	1.57
2480MHz	Pass	PK	7.4407G	53.75	74.00	-20.25	3	Vertical	3	1.04
2480MHz	Pass	AV	4.96003G	44.92	54.00	-9.08	3	Horizontal	31	2.97
2480MHz	Pass	AV	7.44047G	40.64	54.00	-13.36	3	Horizontal	59	1.04
2480MHz	Pass	PK	4.95954G	52.31	74.00	-21.69	3	Horizontal	31	2.97
2480MHz	Pass	PK	7.43924G	52.91	74.00	-21.09	3	Horizontal	59	1.04
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.39G	45.97	54.00	-8.03	3	Vertical	2	1.40
2402MHz	Pass	AV	2.402G	99.38	Inf	-Inf	3	Vertical	2	1.40
2402MHz	Pass	PK	2.3674G	58.67	74.00	-15.33	3	Vertical	2	1.40
2402MHz	Pass	PK	2.4026G	100.77	Inf	-Inf	3	Vertical	2	1.40
2402MHz	Pass	AV	2.3894G	45.88	54.00	-8.12	3	Horizontal	360	1.05
2402MHz	Pass	AV	2.402G	87.34	Inf	-Inf	3	Horizontal	360	1.05
2402MHz	Pass	PK	2.352G	58.19	74.00	-15.81	3	Horizontal	360	1.05
2402MHz	Pass	PK	2.4026G	88.90	Inf	-Inf	3	Horizontal	360	1.05
2402MHz	Pass	AV	4.8034G	45.53	54.00	-8.47	3	Vertical	10	1.01
2402MHz	Pass	PK	4.80287G	54.36	74.00	-19.64	3	Vertical	10	1.01
2402MHz	Pass	AV	4.80336G	46.11	54.00	-7.89	3	Horizontal	23	2.62

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2402MHz	Pass	PK	4.80281G	54.81	74.00	-19.19	3	Horizontal	23	2.62
2440MHz	Pass	AV	2.376G	45.84	54.00	-8.16	3	Vertical	2	1.50
2440MHz	Pass	AV	2.44G	97.97	Inf	-Inf	3	Vertical	2	1.50
2440MHz	Pass	AV	2.4996G	46.63	54.00	-7.37	3	Vertical	2	1.50
2440MHz	Pass	PK	2.3728G	57.99	74.00	-16.01	3	Vertical	2	1.50
2440MHz	Pass	PK	2.4404G	99.51	Inf	-Inf	3	Vertical	2	1.50
2440MHz	Pass	PK	2.4848G	58.55	74.00	-15.45	3	Vertical	2	1.50
2440MHz	Pass	AV	2.3868G	45.69	54.00	-8.31	3	Horizontal	5	1.24
2440MHz	Pass	AV	2.44G	86.41	Inf	-Inf	3	Horizontal	5	1.24
2440MHz	Pass	AV	2.5G	46.62	54.00	-7.38	3	Horizontal	5	1.24
2440MHz	Pass	PK	2.3892G	58.21	74.00	-15.79	3	Horizontal	5	1.24
2440MHz	Pass	PK	2.4404G	88.00	Inf	-Inf	3	Horizontal	5	1.24
2440MHz	Pass	PK	2.4944G	58.64	74.00	-15.36	3	Horizontal	5	1.24
2440MHz	Pass	AV	4.87946G	48.56	54.00	-5.44	3	Vertical	33	1.08
2440MHz	Pass	AV	7.31871G	47.82	54.00	-6.18	3	Vertical	18	1.03
2440MHz	Pass	PK	4.88096G	56.16	74.00	-17.84	3	Vertical	33	1.08
2440MHz	Pass	PK	7.31848G	57.24	74.00	-16.76	3	Vertical	18	1.03
2440MHz	Pass	AV	4.87944G	47.87	54.00	-6.13	3	Horizontal	29	2.52
2440MHz	Pass	AV	7.31866G	45.71	54.00	-8.29	3	Horizontal	56	2.82
2440MHz	Pass	PK	4.88106G	55.76	74.00	-18.24	3	Horizontal	29	2.52
2440MHz	Pass	PK	7.31832G	55.88	74.00	-18.12	3	Horizontal	56	2.82
2480MHz	Pass	AV	2.48G	98.45	Inf	-Inf	3	Vertical	10	1.40
2480MHz	Pass	AV	2.4835G	51.31	54.00	-2.69	3	Vertical	10	1.40
2480MHz	Pass	PK	2.4806G	99.96	Inf	-Inf	3	Vertical	10	1.40
2480MHz	Pass	PK	2.4846G	59.77	74.00	-14.23	3	Vertical	10	1.40
2480MHz	Pass	AV	2.48G	84.99	Inf	-Inf	3	Horizontal	46	1.50
2480MHz	Pass	AV	2.4835G	46.89	54.00	-7.11	3	Horizontal	46	1.50
2480MHz	Pass	PK	2.4796G	86.66	Inf	-Inf	3	Horizontal	46	1.50
2480MHz	Pass	PK	2.5G	58.89	74.00	-15.11	3	Horizontal	46	1.50
2480MHz	Pass	AV	4.96054G	43.04	54.00	-10.96	3	Vertical	15	1.28
2480MHz	Pass	AV	7.43864G	42.05	54.00	-11.95	3	Vertical	15	1.05
2480MHz	Pass	PK	4.96071G	52.83	74.00	-21.17	3	Vertical	15	1.28
2480MHz	Pass	PK	7.43879G	53.82	74.00	-20.18	3	Vertical	15	1.05
2480MHz	Pass	AV	4.95941G	42.30	54.00	-11.70	3	Horizontal	34	3.00
2480MHz	Pass	AV	7.43869G	40.25	54.00	-13.75	3	Horizontal	61	1.08
2480MHz	Pass	PK	4.95886G	52.53	74.00	-21.47	3	Horizontal	34	3.00
2480MHz	Pass	PK	7.44091G	52.42	74.00	-21.58	3	Horizontal	61	1.08

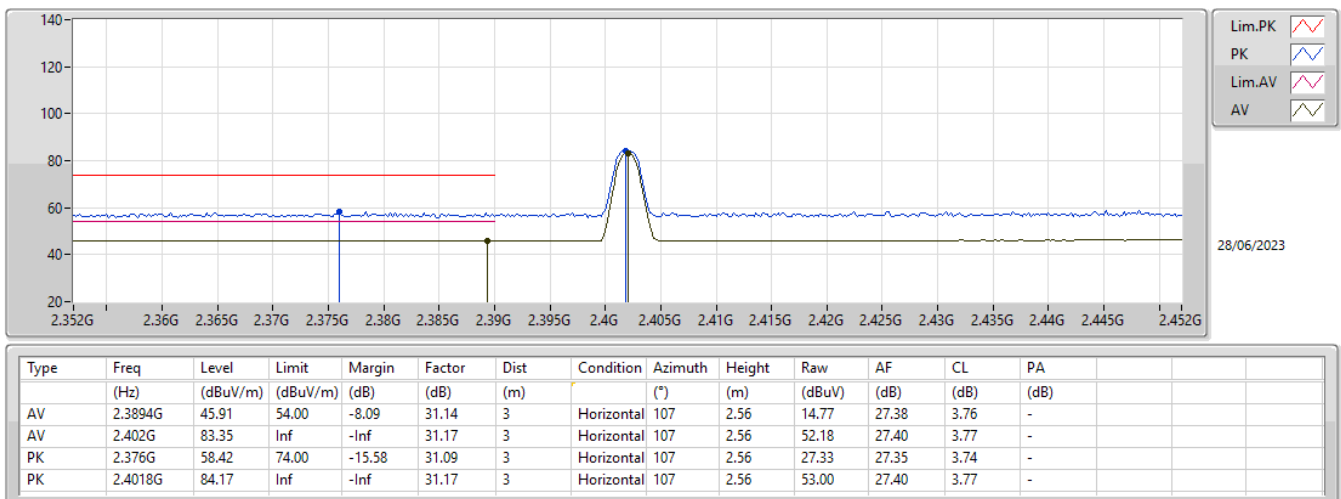
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2402MHz_TX



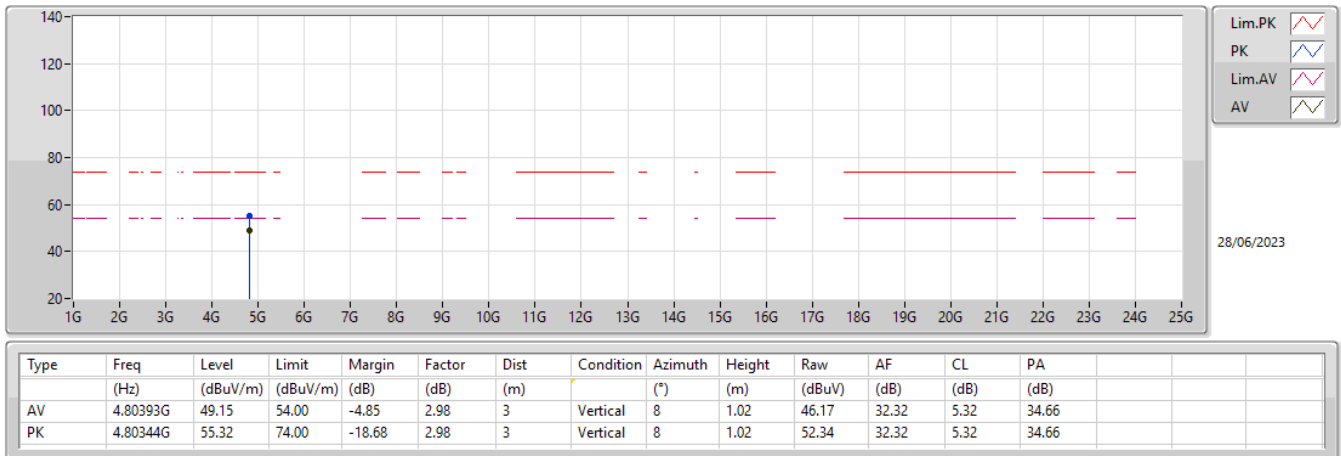
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2402MHz_TX



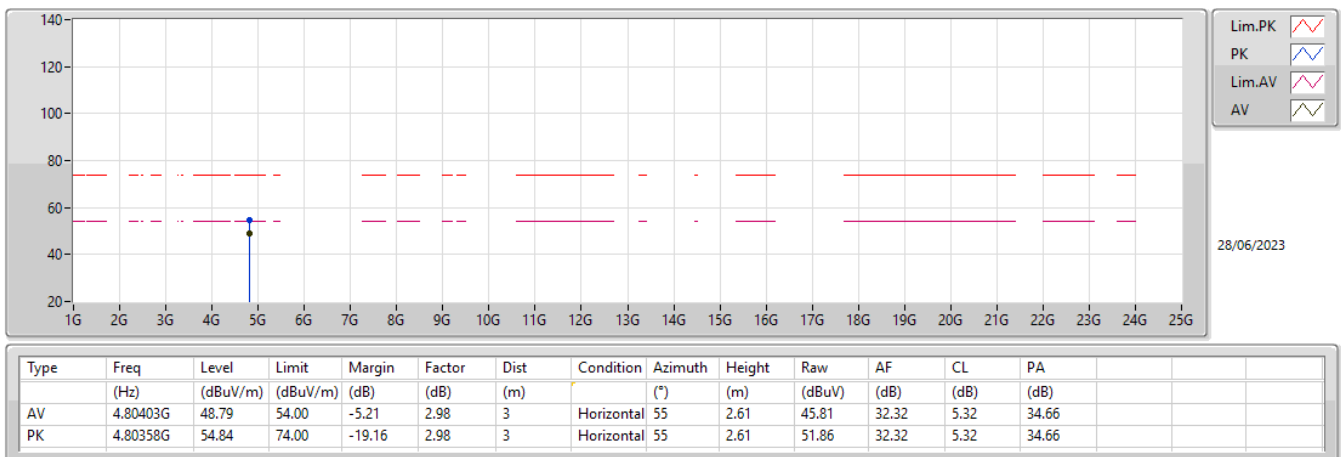
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2402MHz_TX



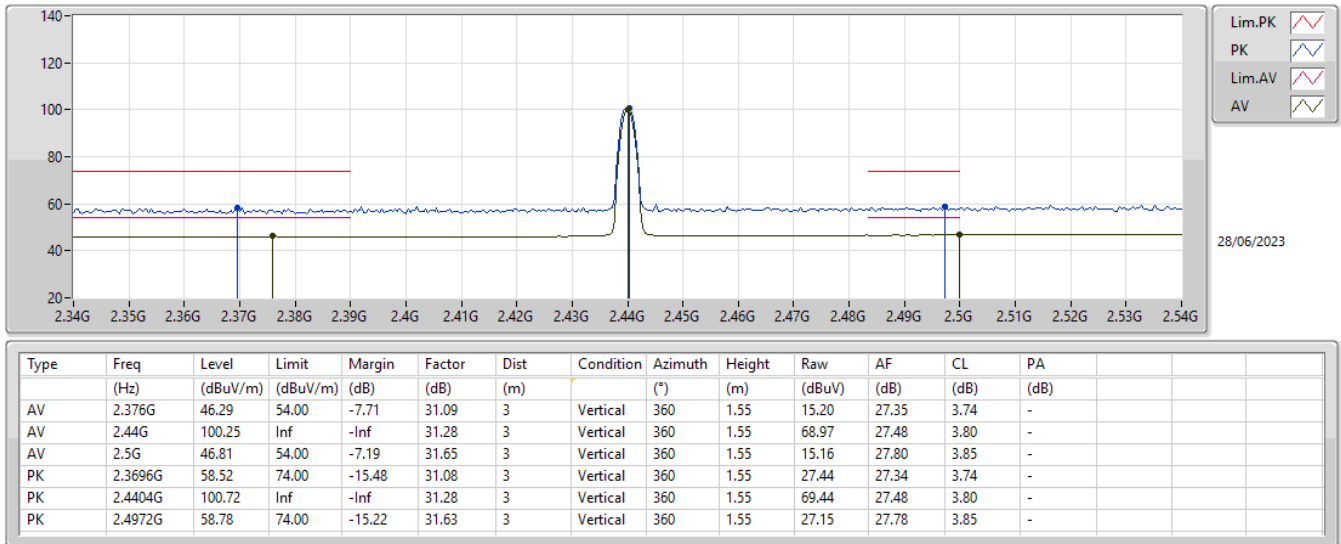
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2402MHz_TX



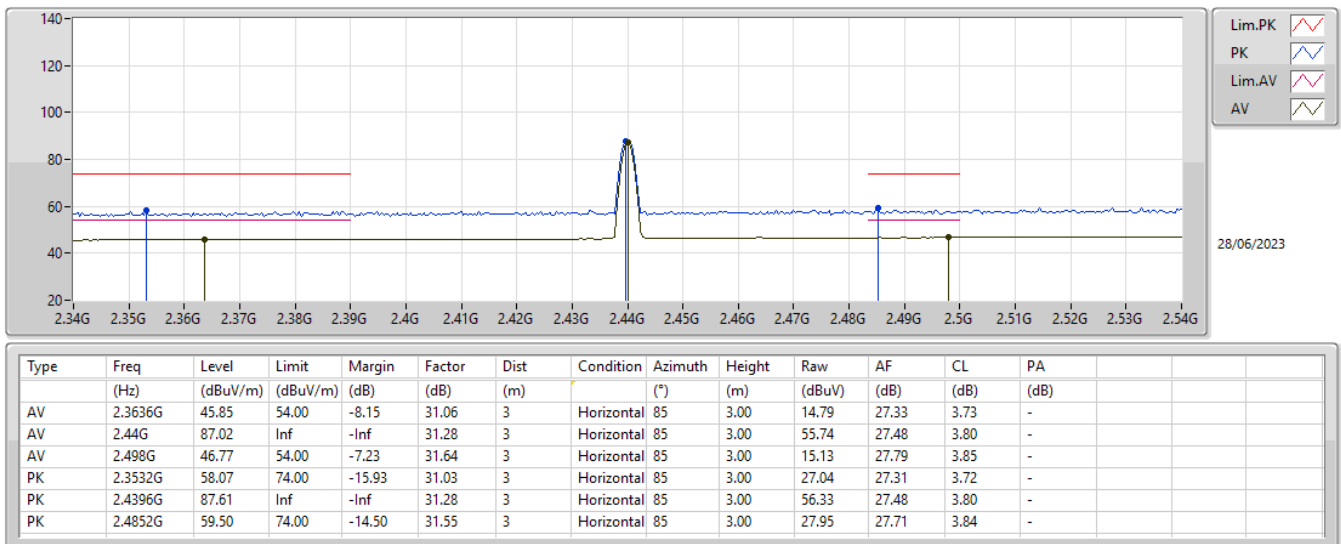
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2440MHz_TX



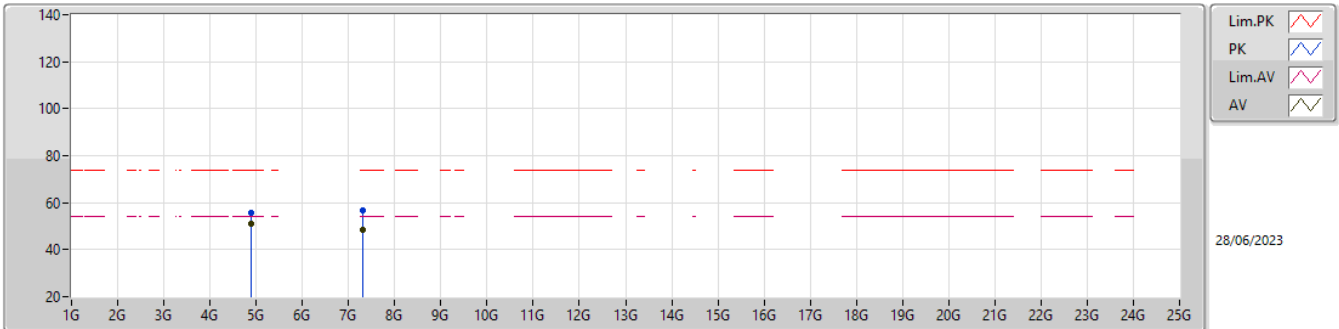
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2440MHz_TX



2.4-2.4835GHz_BT-LE(1Mbps)

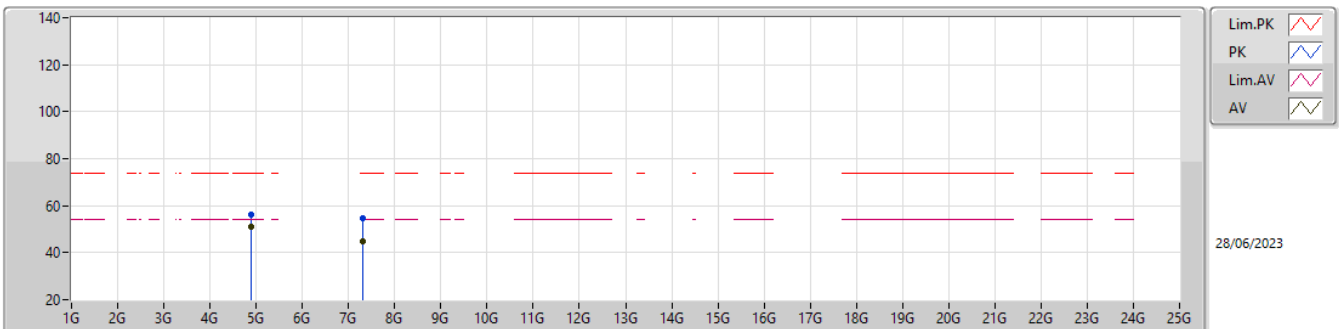
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Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88004G	51.25	54.00	-2.75	3.33	3	Vertical	32	1.12	47.92	32.60	5.38	34.65
AV	7.32037G	48.39	54.00	-5.61	8.52	3	Vertical	4	1.01	39.87	36.66	6.64	34.78
PK	4.87955G	55.83	74.00	-18.17	3.33	3	Vertical	32	1.12	52.50	32.60	5.38	34.65
PK	7.31908G	56.96	74.00	-17.04	8.52	3	Vertical	4	1.01	48.44	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(1Mbps)

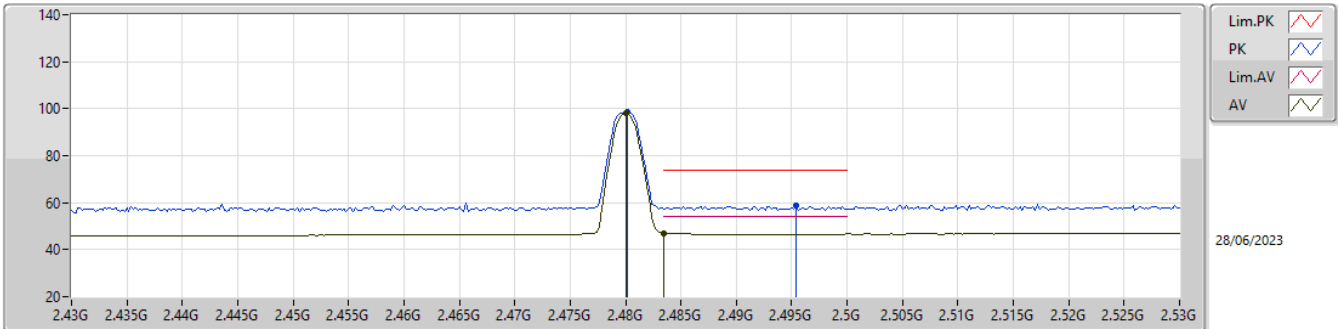
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88005G	50.87	54.00	-3.13	3.33	3	Horizontal	55	1.06	47.54	32.60	5.38	34.65
AV	7.32035G	44.79	54.00	-9.21	8.52	3	Horizontal	77	2.08	36.27	36.66	6.64	34.78
PK	4.88053G	56.00	74.00	-18.00	3.33	3	Horizontal	55	1.06	52.67	32.60	5.38	34.65
PK	7.32078G	54.87	74.00	-19.13	8.52	3	Horizontal	77	2.08	46.35	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(1Mbps)

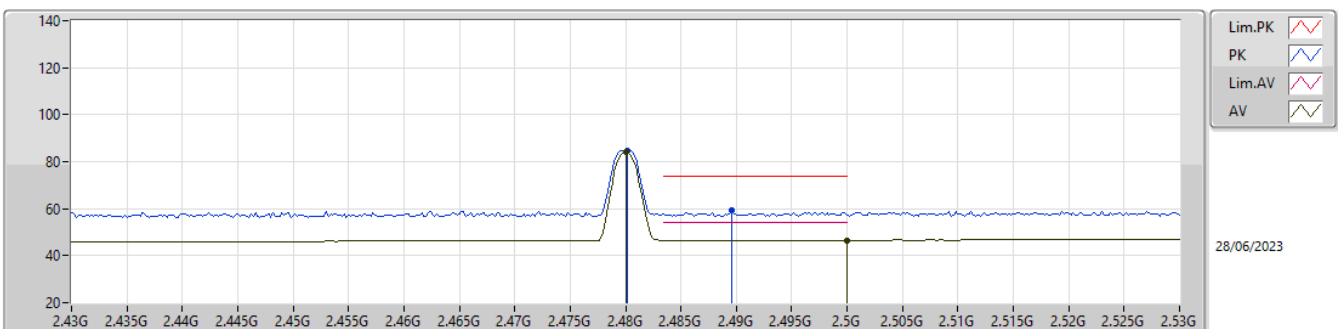
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	97.89	Inf	-Inf	31.52	3	Vertical	4	1.28	66.37	27.68	3.84	-
AV	2.4835G	47.09	54.00	-6.91	31.54	3	Vertical	4	1.28	15.55	27.70	3.84	-
PK	2.4802G	98.44	Inf	-Inf	31.52	3	Vertical	4	1.28	66.92	27.68	3.84	-
PK	2.4954G	58.98	74.00	-15.02	31.62	3	Vertical	4	1.28	27.36	27.77	3.85	-

2.4-2.4835GHz_BT-LE(1Mbps)

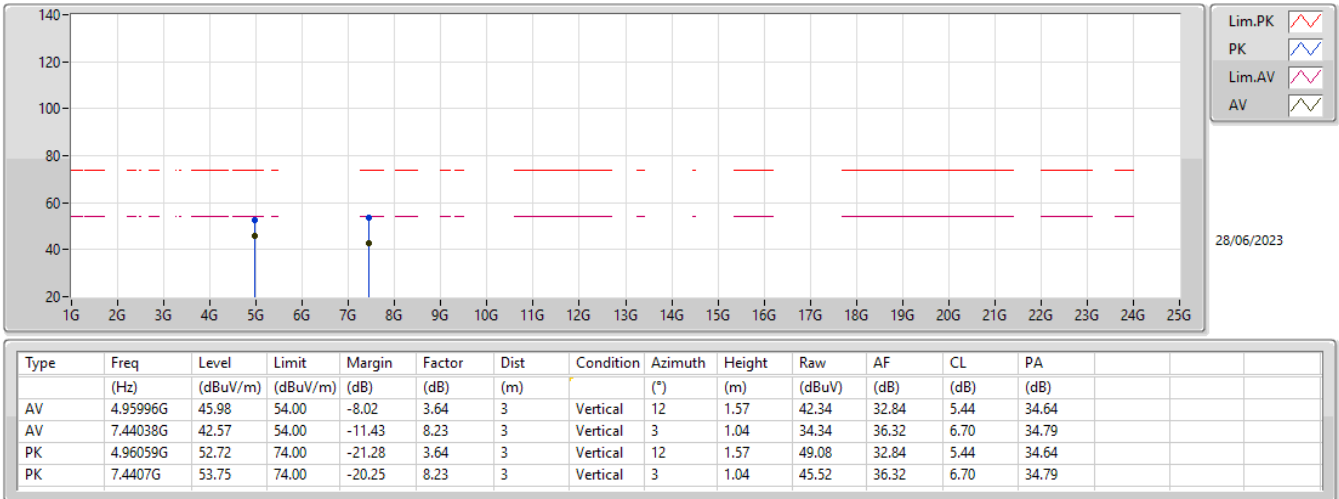
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	84.09	Inf	-Inf	31.52	3	Horizontal	223	1.09	52.57	27.68	3.84	-
AV	2.5G	46.60	54.00	-7.40	31.65	3	Horizontal	223	1.09	14.95	27.80	3.85	-
PK	2.4802G	84.86	Inf	-Inf	31.52	3	Horizontal	223	1.09	53.34	27.68	3.84	-
PK	2.4896G	59.28	74.00	-14.72	31.59	3	Horizontal	223	1.09	27.69	27.74	3.85	-

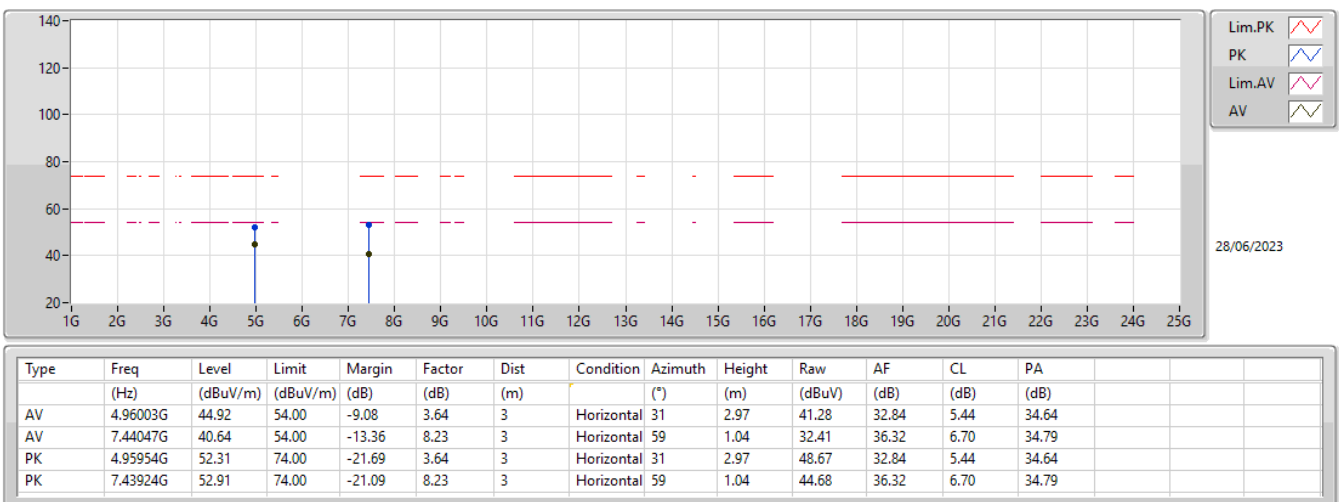
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



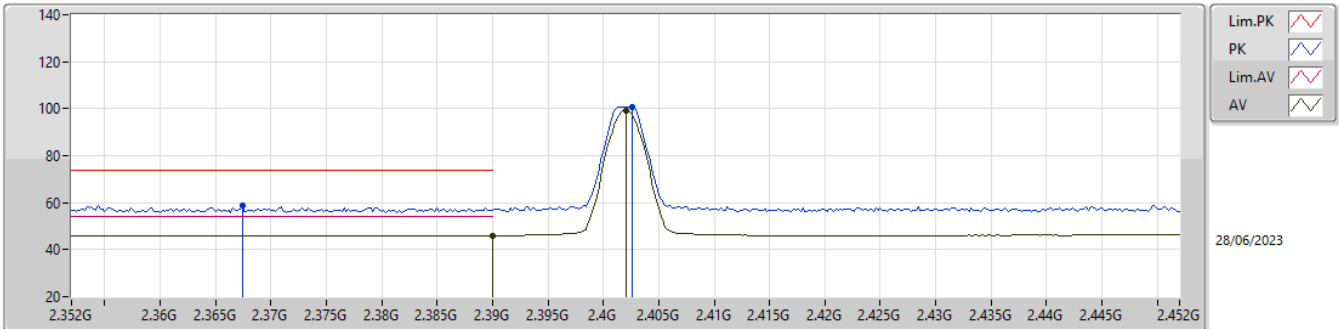
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

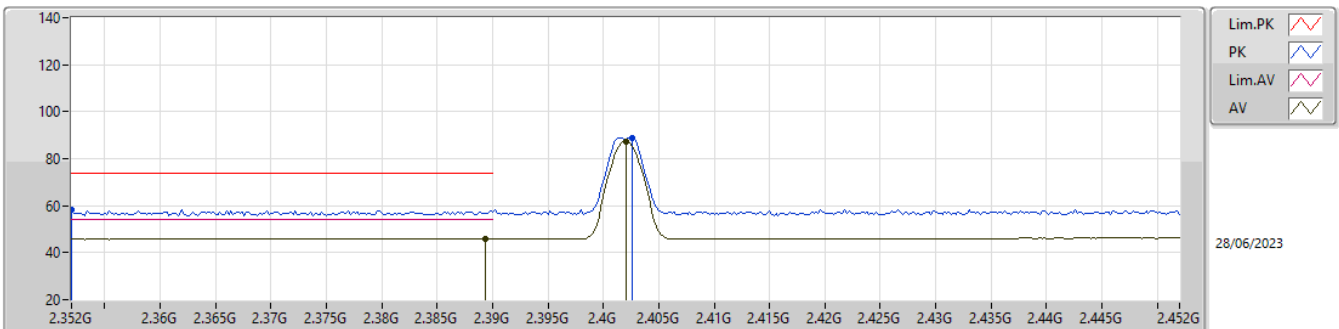
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.39G	45.97	54.00	-8.03	31.14	3	Vertical	2	1.40	14.83	27.38	3.76	-
AV	2.402G	99.38	Inf	-Inf	31.17	3	Vertical	2	1.40	68.21	27.40	3.77	-
PK	2.3674G	58.67	74.00	-15.33	31.07	3	Vertical	2	1.40	27.60	27.33	3.74	-
PK	2.4026G	100.77	Inf	-Inf	31.18	3	Vertical	2	1.40	69.59	27.41	3.77	-

2.4-2.4835GHz_BT-LE(2Mbps)

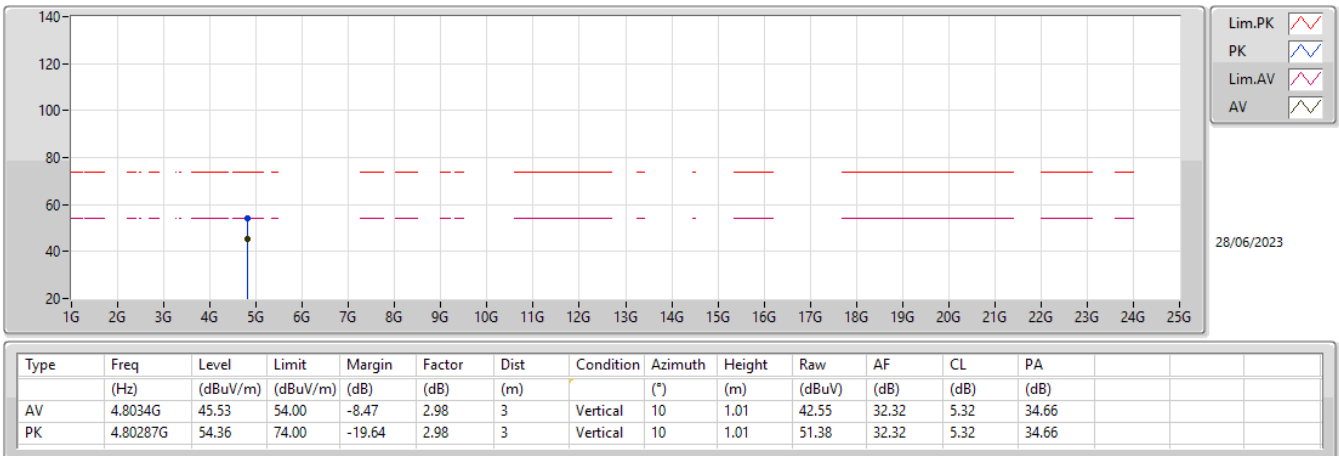
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3894G	45.88	54.00	-8.12	31.14	3	Horizontal	360	1.05	14.74	27.38	3.76	-
AV	2.402G	87.34	Inf	-Inf	31.17	3	Horizontal	360	1.05	56.17	27.40	3.77	-
PK	2.352G	58.19	74.00	-15.81	31.02	3	Horizontal	360	1.05	27.17	27.30	3.72	-
PK	2.4026G	88.90	Inf	-Inf	31.18	3	Horizontal	360	1.05	57.72	27.41	3.77	-

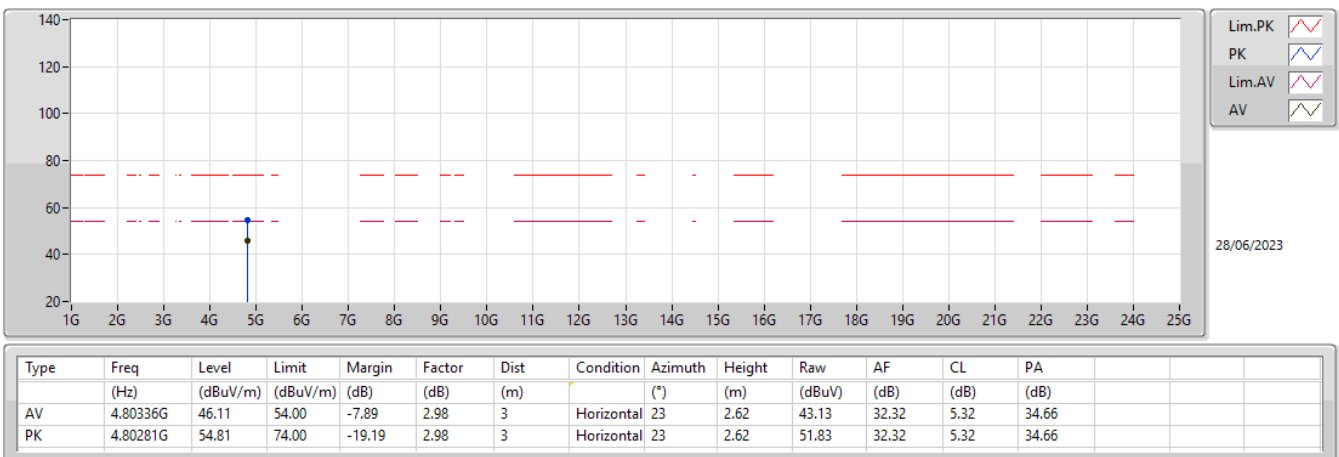
2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX



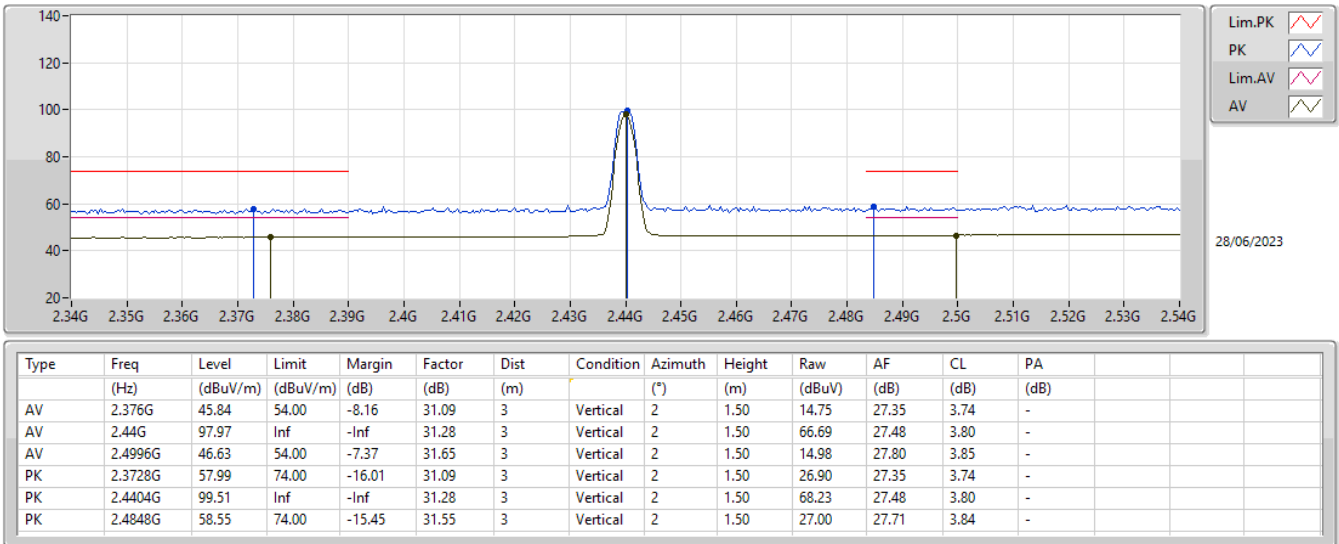
2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX



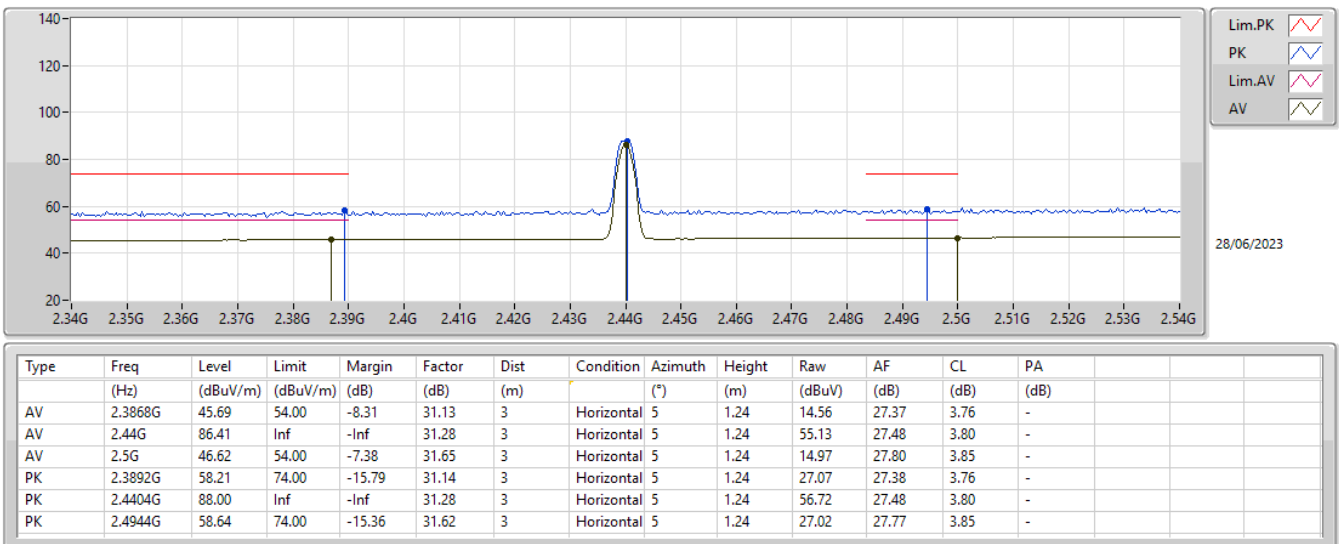
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



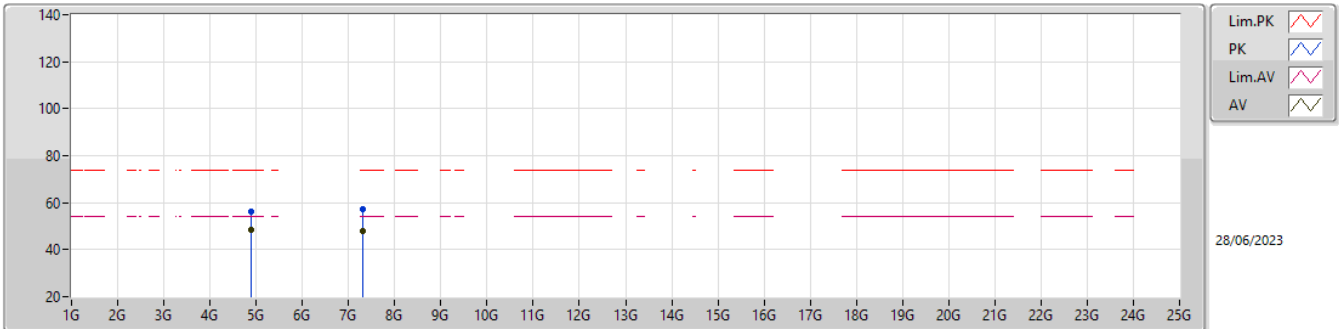
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

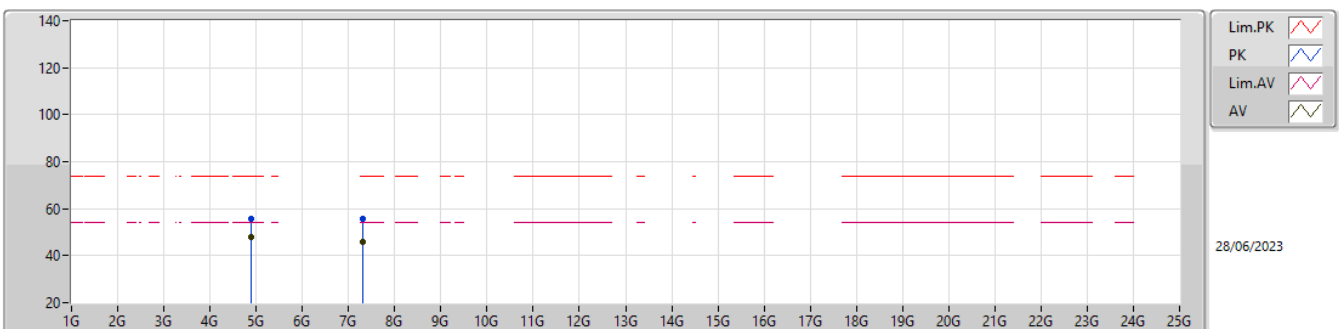
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87946G	48.56	54.00	-5.44	3.33	3	Vertical	33	1.08	45.23	32.60	5.38	34.65
AV	7.31871G	47.82	54.00	-6.18	8.52	3	Vertical	18	1.03	39.30	36.66	6.64	34.78
PK	4.88096G	56.16	74.00	-17.84	3.33	3	Vertical	33	1.08	52.83	32.60	5.38	34.65
PK	7.31848G	57.24	74.00	-16.76	8.52	3	Vertical	18	1.03	48.72	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(2Mbps)

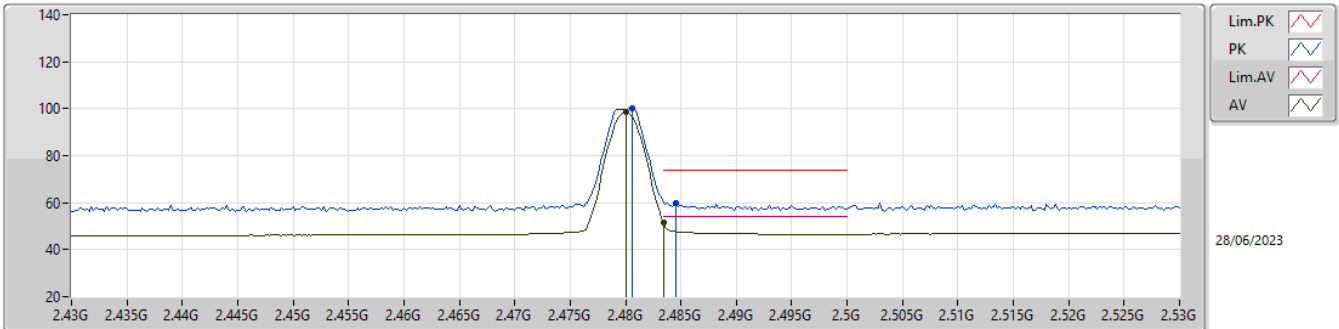
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87944G	47.87	54.00	-6.13	3.33	3	Horizontal	29	2.52	44.54	32.60	5.38	34.65
AV	7.31866G	45.71	54.00	-8.29	8.52	3	Horizontal	56	2.82	37.19	36.66	6.64	34.78
PK	4.88106G	55.76	74.00	-18.24	3.33	3	Horizontal	29	2.52	52.43	32.60	5.38	34.65
PK	7.31832G	55.88	74.00	-18.12	8.52	3	Horizontal	56	2.82	47.36	36.66	6.64	34.78

2.4-2.4835GHz_BT-LE(2Mbps)

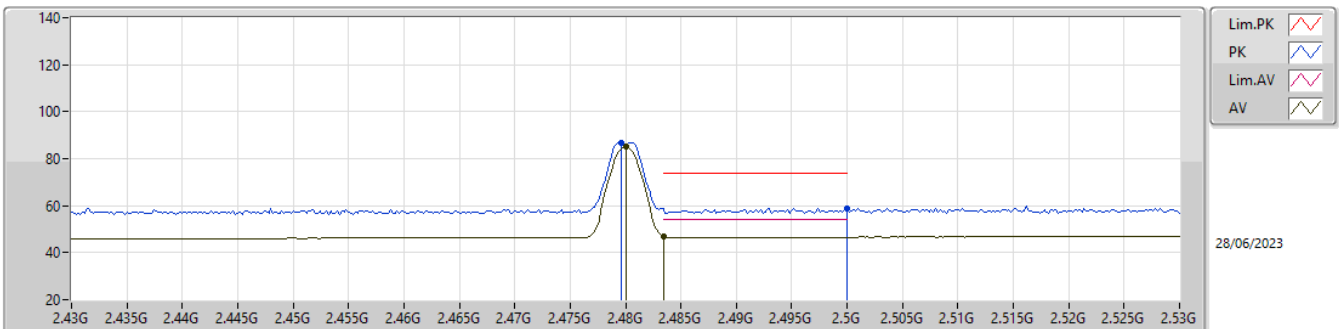
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	98.45	Inf	-Inf	31.52	3	Vertical	10	1.40	66.93	27.68	3.84	-
AV	2.4835G	51.31	54.00	-2.69	31.54	3	Vertical	10	1.40	19.77	27.70	3.84	-
PK	2.4806G	99.96	Inf	-Inf	31.52	3	Vertical	10	1.40	68.44	27.68	3.84	-
PK	2.4846G	59.77	74.00	-14.23	31.55	3	Vertical	10	1.40	28.22	27.71	3.84	-

2.4-2.4835GHz_BT-LE(2Mbps)

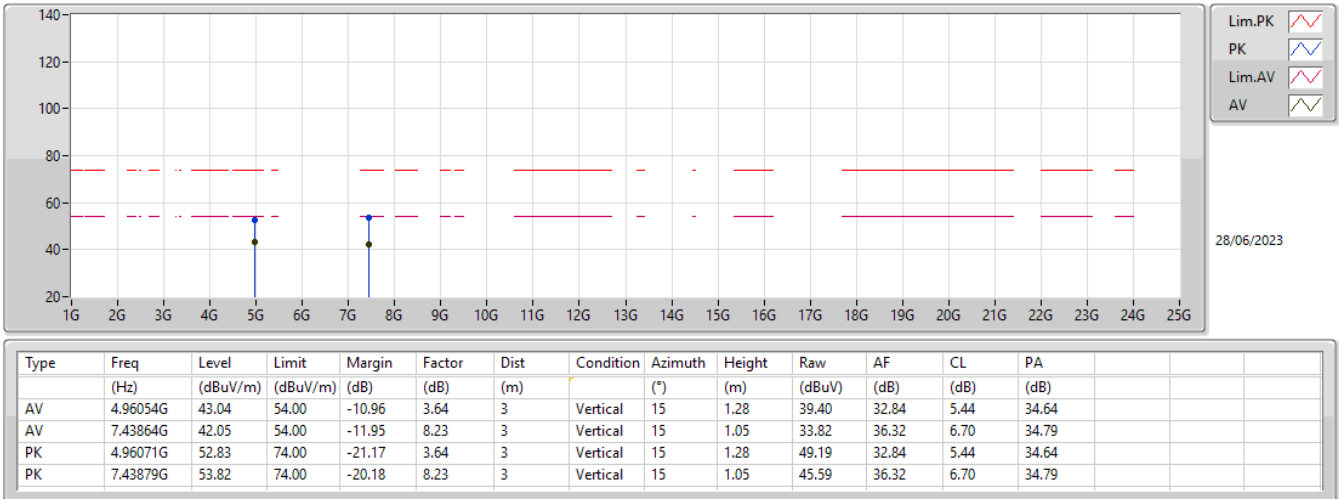
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	84.99	Inf	-Inf	31.52	3	Horizontal	46	1.50	53.47	27.68	3.84	-
AV	2.4835G	46.89	54.00	-7.11	31.54	3	Horizontal	46	1.50	15.35	27.70	3.84	-
PK	2.4796G	86.66	Inf	-Inf	31.52	3	Horizontal	46	1.50	55.14	27.68	3.84	-
PK	2.5G	58.89	74.00	-15.11	31.65	3	Horizontal	46	1.50	27.24	27.80	3.85	-

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

