FCC Test Report

FCC ID	:	**SUFTRKRF08**
Equipment	:	**2.4G RF MODULE_BL08**
Model No.	:	**TRK-RF-08**
Brand Name	:	**DIGI**
Applicant	:	**DIGI SINGAPORE PTE LTD**
Address	:	**4 Leng Kee Rd, #05-03/04/05&11, SIS Building, Singapore 159088**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Oct. 11, 2024**
Tested Date	:	**Nov. 22 ~ Dec. 05, 2024**

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:	**Approved by:**
Along Chen / Assistant Manager	**Gary Chang / Manager**

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Release Record

Report No.	Version	Description	Issued Date
FR4O1101	Rev. 01	Initial issue	Dec. 11, 2024
FR4O1101	Rev. 02	Corrected data rate to 2Mbps	Jan. 09, 2025

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.417MHz 36.39 (Margin -11.12dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2.4835GHz 53.82 (Margin -0.18dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: 9.74	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	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:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information				
Frequency Range (MHz)	**Modulation**	**Ch. Freq. (MHz)**	**Channel Number**	**Data Rate**
2402-2478	GFSK	2402-2478	0-76 [77]	2Mbps

1.1.2 Antenna Details

Brand	Model	Type	Connector	Gain (dBi)
GA	GA123416BL02	Chip	NA	2.28
GA	GA-E24110-RPW	Wire	RP-SMA Male	2.42
GA	GADGBWF-V01	Wire	RP-SMA Male	2.41

1.1.3 Configuration of Equipment under Test (EUT)

Power Supply Type	DC 5V

1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency band (MHz)				2400~2483.5			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	---	---
18	2420	38	2440	58	2460	---	---
19	2421	39	2441	59	2461	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Terminal, V1.9b 20130820	
Duty Cycle and Duty Factor	Duty Cycle (%)	Duty Factor (dB)
	14.40	8.42

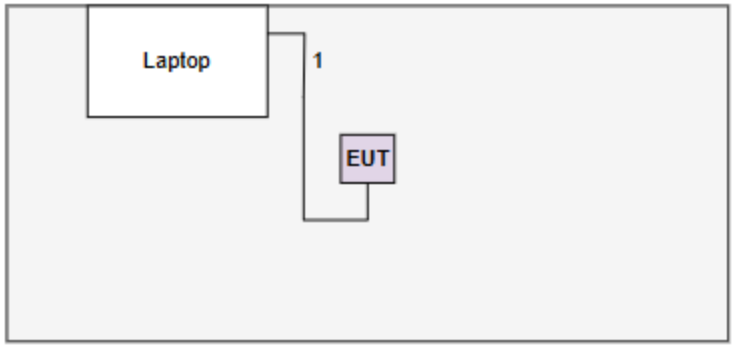
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)		
	2402	2440	2478
GFSK	neg16dbm	neg16dbm	neg16dbm

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Laptop	DELL	Latitude 5440	DoC	---

1.3 Test Setup Chart

Test Setup Diagram	
	
No.	**Signal cable / Length (m)**
1	USB, 2m shielded.

1.3.1 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Dec. 04, 2024				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 23, 2024	Feb. 22, 2025
LISN	R&S	ENV216	101579	May 09, 2024	May 08, 2025
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan. 10, 2024	Jan. 09, 2025
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 07, 2024	Oct. 08, 2025
50 ohm terminal	NA	50	03	Aug. 07, 2024	Aug. 06, 2025
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Nov. 22 ~ Dec. 03, 2024				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 05, 2024	Mar. 04, 2025
Spectrum Analyzer	R&S	FSV40	101498	Nov. 12, 2024	Nov. 11, 2025
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 05, 2024	Nov. 04, 2025
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 09, 2024	Aug. 08, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Aug. 28, 2024	Aug. 27, 2025
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 18, 2024	Nov. 17, 2025
Preamplifier	EMC	EMC02325	980225	Jun. 17, 2024	Jun. 16, 2025
Preamplifier	EMC	EMC118A45SE	980898	Jul. 05, 2024	Jul. 04, 2025
Preamplifier	EMC	EMC184045SE	980903	Jul. 30, 2024	Jul. 29, 2025
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 02, 2024	Oct. 01, 2025
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 02, 2024	Oct. 01, 2025
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 02, 2024	Oct. 01, 2025
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 02, 2024	Oct. 01, 2025
Attenuator	Pasternack	PE7005-10	10-1	Oct. 02, 2024	Oct. 01, 2025
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	Sporton	SENSE-15247_FS	V5.11	NA	NA
Measurement Software	Sporton	SENSE-EMI	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Dec. 05, 2024				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241001	Jan. 05, 2024	Jan. 04, 2025
Power Sensor	Anritsu	MA2411B	1911228	Jan. 05, 2024	Jan. 04, 2025
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
Measurement Software	Sporton	SENSE-15247_FS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.4 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.5 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Unwanted Emission ≤ 1GHz	±3.41 dB
Unwanted Emission > 1GHz	±4.59 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
AC Power Line Conducted Emission	GFSK	2478	2Mbps	1, 2
Unwanted Emissions ≤ 1GHz Unwanted Emissions >1GHz	GFSK	2478	2Mbps	1, 2
Conducted Output Power 6dB bandwidth Power spectral density	GFSK	2402, 2440, 2478	2Mbps	1

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** results were found as the worst case and were shown in this report.
2. 2 types antenna are used for this device, each type is selected to perform radiated and conducted emission test as below test configuration.
   1) Test Configuration 1: Antenna model GA-E24110-RPW
   2) Test Configuration 2: Antenna model GA123416BL02

3 Transmitter Test Results

3.1 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.1.2 Test Procedures

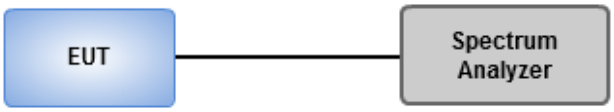
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3 Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	24°C / 62%	**Tested By**	Sean Yu

Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Conducted power shall not exceed 1Watt.

Antenna gain <= 6dBi, no any corresponding reduction is in output power limit.

Antenna gain > 6dBi

Non Fixed, point to point operations.
The conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dB

Fixed, point to point operations
Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point Operations, maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.2.3 Test Setup

3.2.4 Test Results

Ambient Condition	24°C / 62%	**Tested By**	Sean Yu

Refer to Appendix B.

3.3 Power Spectral Density

3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

Peak PSD

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle ≥ 98%

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle < 98%

1 Set the RBW = 3 kHz, VBW = 10 kHz

2 Detector = RMS, Sweep time = auto couple.

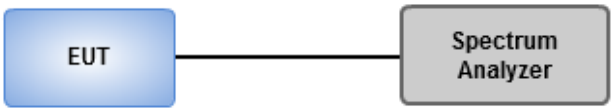
3 Sweep time = auto couple.

4 Employ trace averaging (RMS) mode over a minimum of 100 traces.

5 Use the peak marker function to determine the maximum amplitude level.

6 Add 10 log (1/x), where x is the duty cycle.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24°C / 62%	**Tested By**	Sean Yu

Refer to Appendix C.

3.4 Unwanted Emissions into Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions into Restricted Frequency Bands

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:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.4.2 Test Procedures

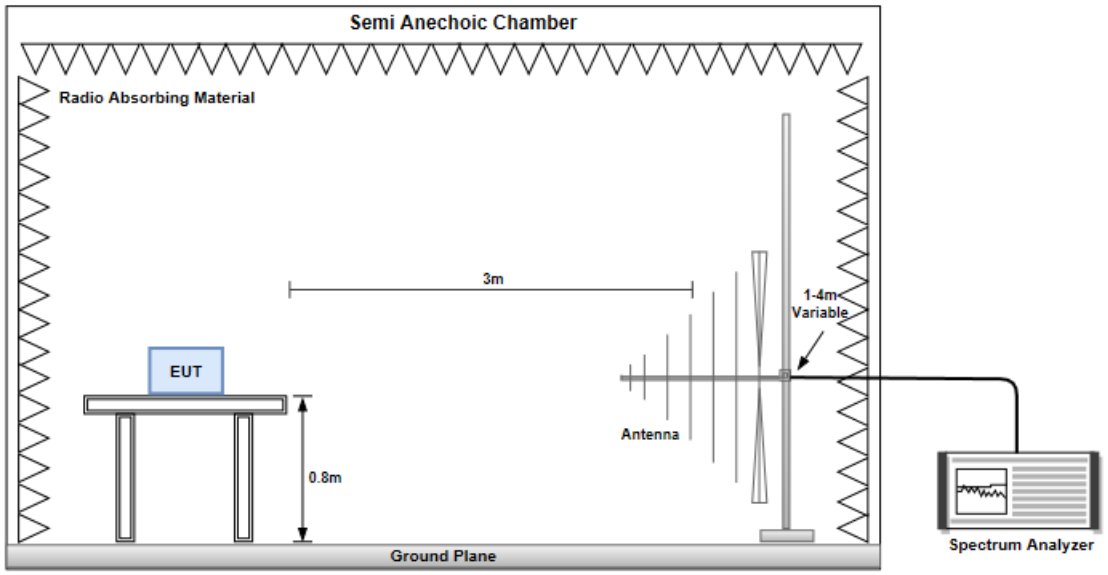
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

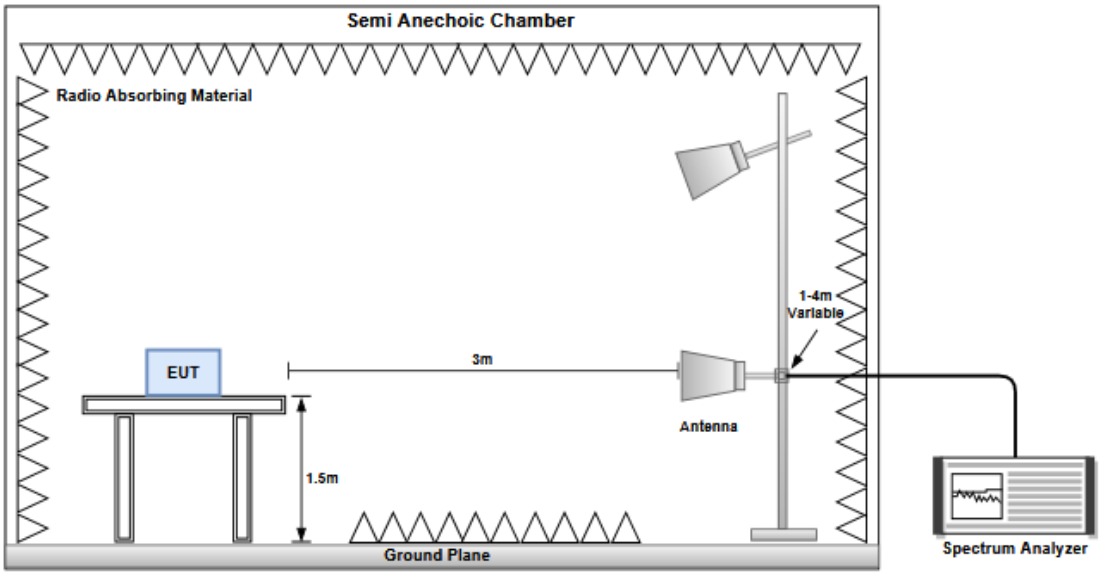
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Ambient Condition	24-25°C / 62-63%	Tested By	Allen Lee

Refer to Appendix D.

3.5 Emissions in Non-Restricted Frequency Bands

3.5.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

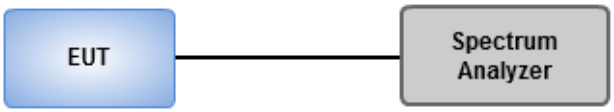
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	24°C / 62%	**Tested By**	Sean Yu

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

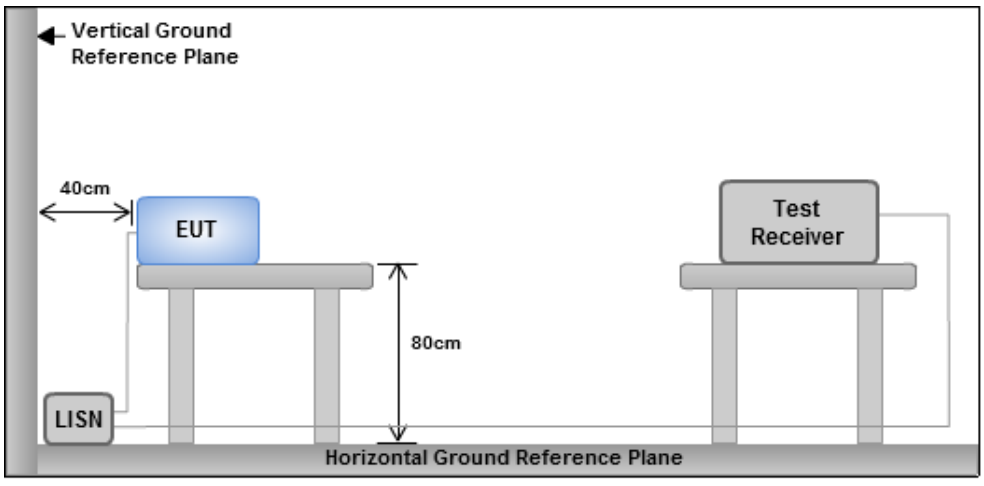
3.6.1 Limit of AC Power Line Conducted Emissions

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.		

3.6.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.6.3 Test Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.6.4 Test Results

Refer to Appendix F.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

==END==

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
GFSK	922.5k	2.364M	2M36F1D	832.5k	2.319M

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

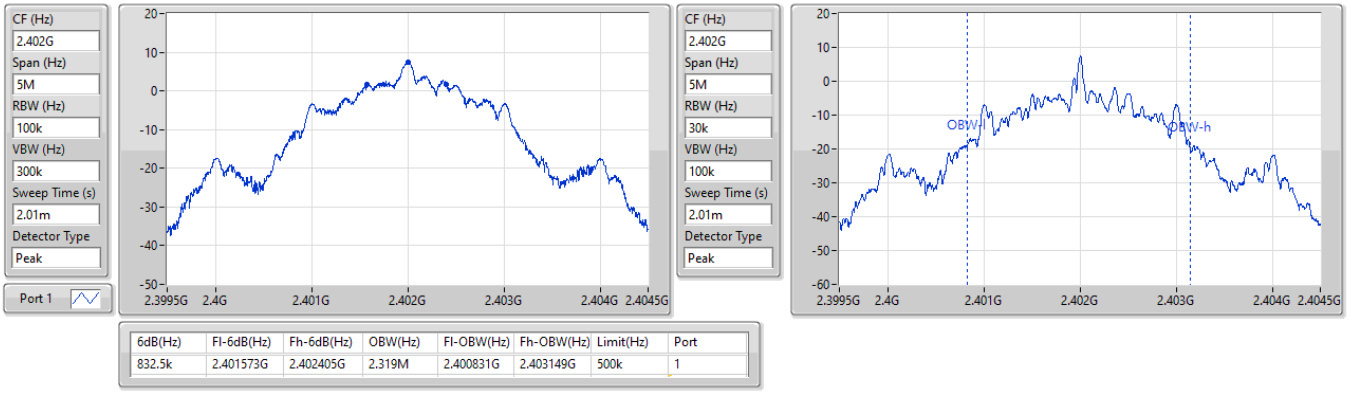
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
GFSK	-	-	-	-
2402MHz	Pass	500k	832.5k	2.319M
2440MHz	Pass	500k	842.5k	2.364M
2478MHz	Pass	500k	922.5k	2.359M

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

2.4-2.4835GHz_GFSK **EBW-DTS**

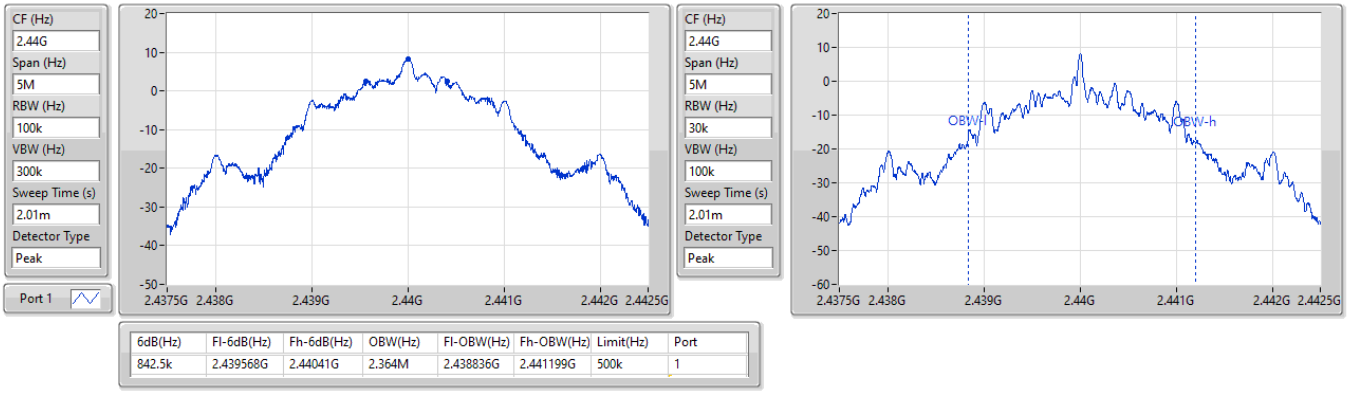
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
832.5k	2.401573G	2.402405G	2.319M	2.400831G	2.403149G	500k	1

2.4-2.4835GHz_GFSK **EBW-DTS**

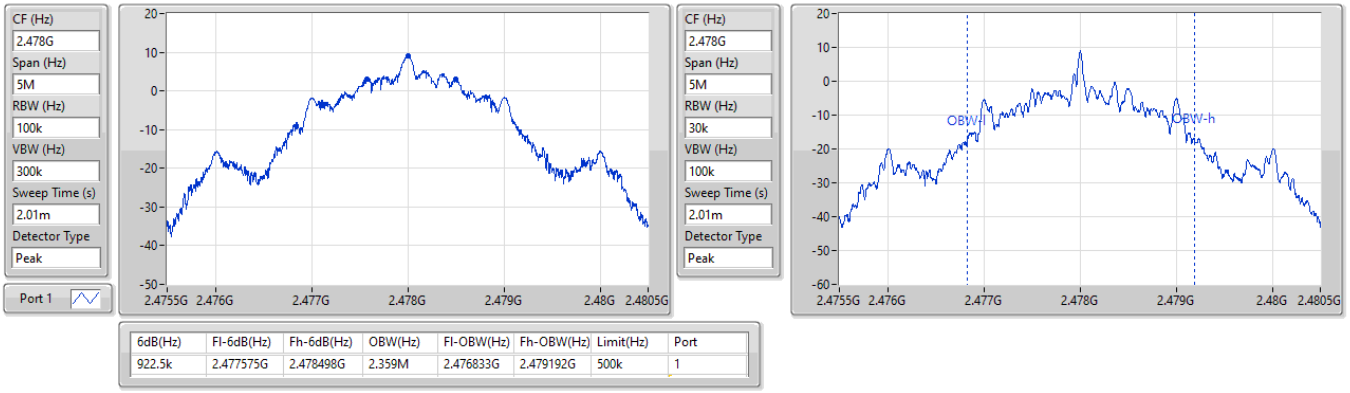
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
842.5k	2.439568G	2.44041G	2.364M	2.438836G	2.441199G	500k	1

2.4-2.4835GHz_GFSK **EBW-DTS**

2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
922.5k	2.477575G	2.478498G	2.359M	2.476833G	2.479192G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
GFSK	9.74	0.00942

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
GFSK	-	-	-	-	-	-
2402MHz	Pass	2.42	8.49	30.00	10.91	36.00
2440MHz	Pass	2.42	9.17	30.00	11.59	36.00
2478MHz	Pass	2.42	9.74	30.00	12.16	36.00

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
GFSK	9.47	0.00885

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
GFSK	-	-	-	-	-	-
2402MHz	Pass	2.42	8.22	-	10.64	-
2440MHz	Pass	2.42	8.92	-	11.34	-
2478MHz	Pass	2.42	9.47	-	11.89	-

Note: Average power is for reference only.

Summary

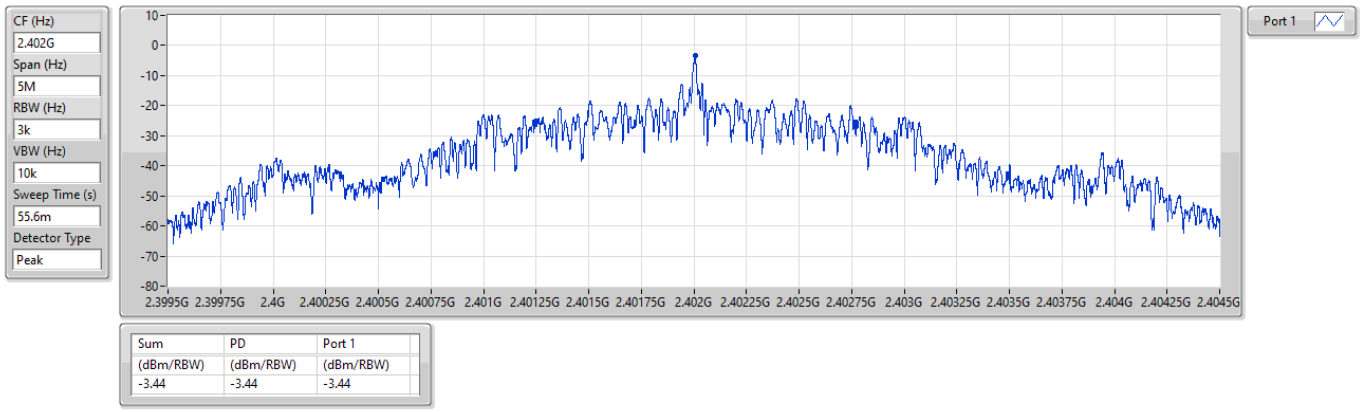
Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
GFSK	-2.12

Result

Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
GFSK	-	-	-	-
2402MHz	Pass	2.42	-3.44	8.00
2440MHz	Pass	2.42	-2.88	8.00
2478MHz	Pass	2.42	-2.12	8.00

2.4-2.4835GHz_GFSK **PSD**

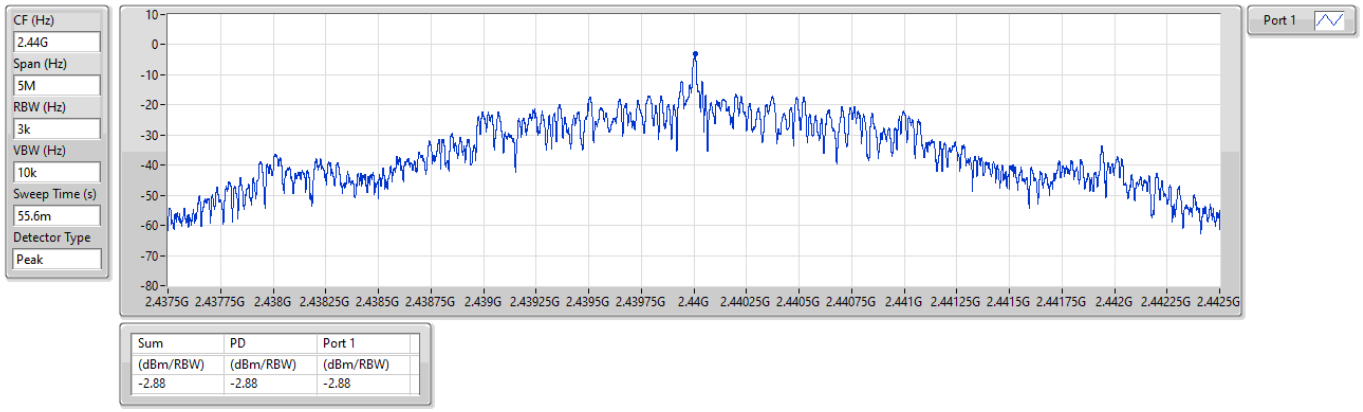
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.44	-3.44	-3.44

2.4-2.4835GHz_GFSK **PSD**

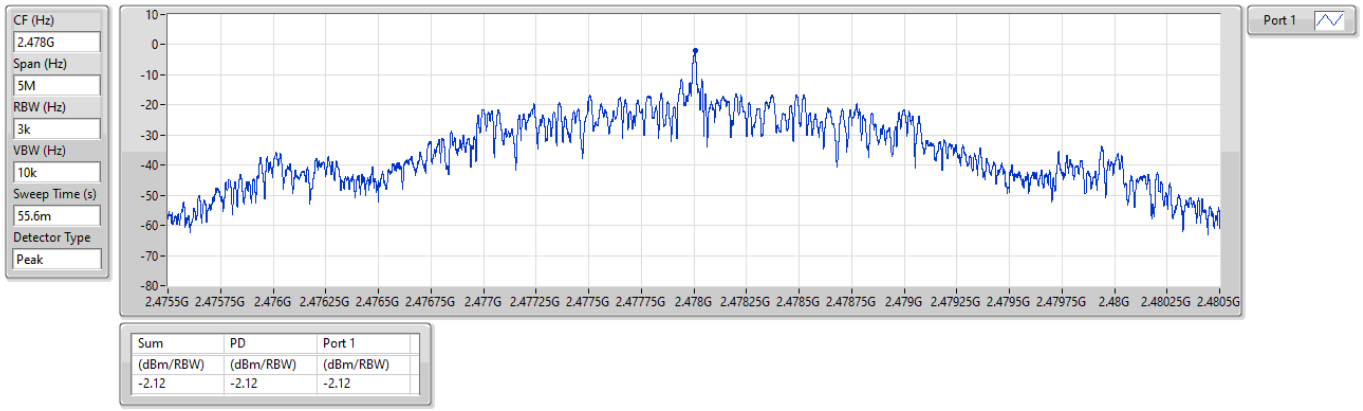
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.88	-2.88	-2.88

2.4-2.4835GHz_GFSK **PSD**

2478MHz



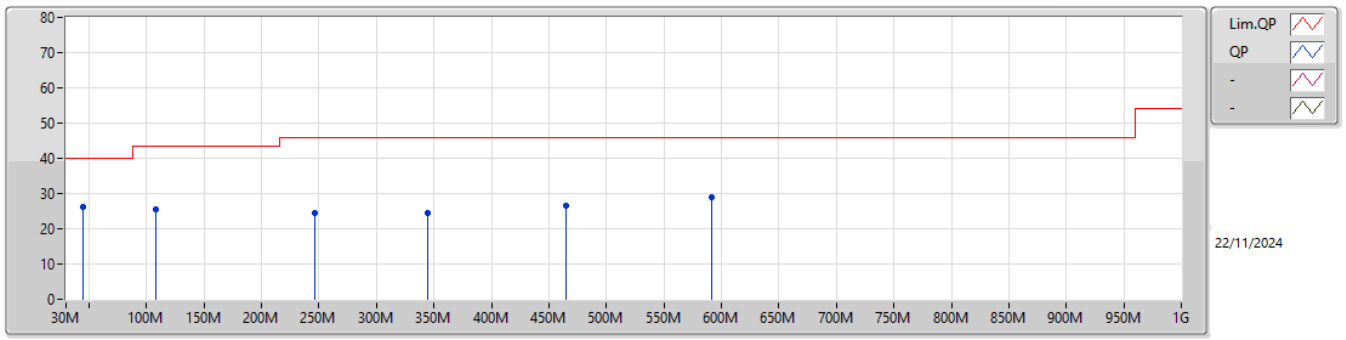
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.12	-2.12	-2.12

Test Configuration 1: Antenna model GA-E24110-RPW

Summary

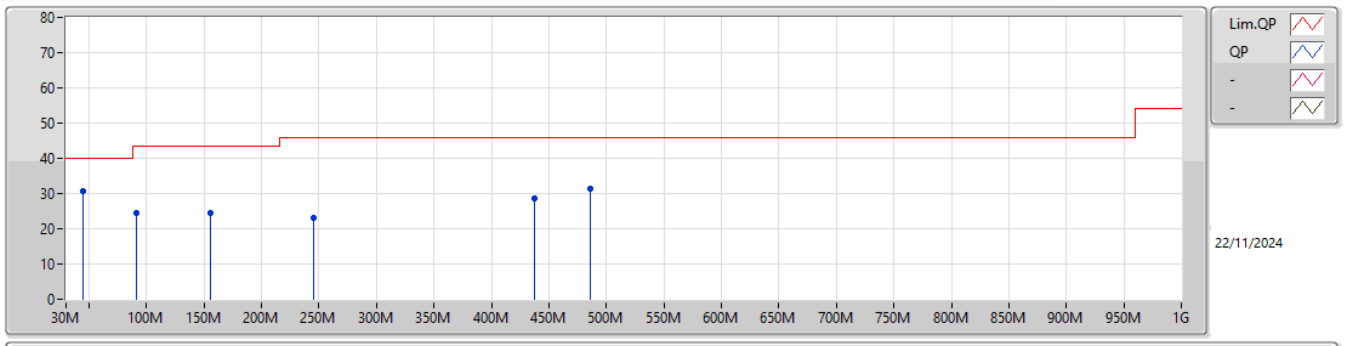
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	44.7M	30.60	40.00	-9.40	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	44.7M	26.10	40.00	-13.90	-8.60	3	Horizontal	-	-	-	34.70	18.91	0.61	28.12
PK	108M	25.68	43.50	-17.82	-12.08	3	Horizontal	-	-	-	37.76	15.10	1.05	28.23
PK	246.4M	24.62	46.00	-21.38	-9.87	3	Horizontal	-	-	-	34.49	16.83	1.56	28.26
PK	344.1M	24.53	46.00	-21.47	-7.00	3	Horizontal	-	-	-	31.53	19.38	1.82	28.20
PK	464.9M	26.60	46.00	-19.40	-3.89	3	Horizontal	-	-	-	30.49	22.30	2.00	28.19
PK	591.3M	29.11	46.00	-16.89	-1.29	3	Horizontal	-	-	-	30.40	24.53	2.36	28.18

Mode 1



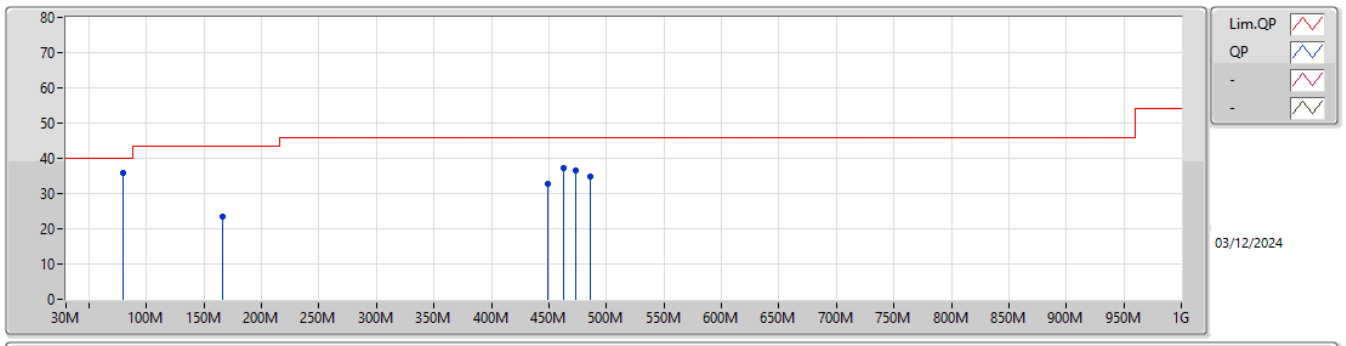
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	44.7M	30.60	40.00	-9.40	-8.60	3	Vertical	-	-	-	39.20	18.91	0.61	28.12
PK	91.1M	24.62	43.50	-18.88	-14.44	3	Vertical	-	-	-	39.06	12.80	0.97	28.21
PK	155.7M	24.50	43.50	-19.00	-8.60	3	Vertical	-	-	-	33.10	18.43	1.23	28.26
PK	245.6M	23.14	46.00	-22.86	-9.89	3	Vertical	-	-	-	33.03	16.81	1.56	28.26
PK	437.8M	28.74	46.00	-17.26	-4.46	3	Vertical	-	-	-	33.20	21.76	1.96	28.18
PK	486.5M	31.35	46.00	-14.65	-3.62	3	Vertical	-	-	-	34.97	22.56	2.02	28.20

Test Configuration 2: Antenna model GA123416BL02

Summary

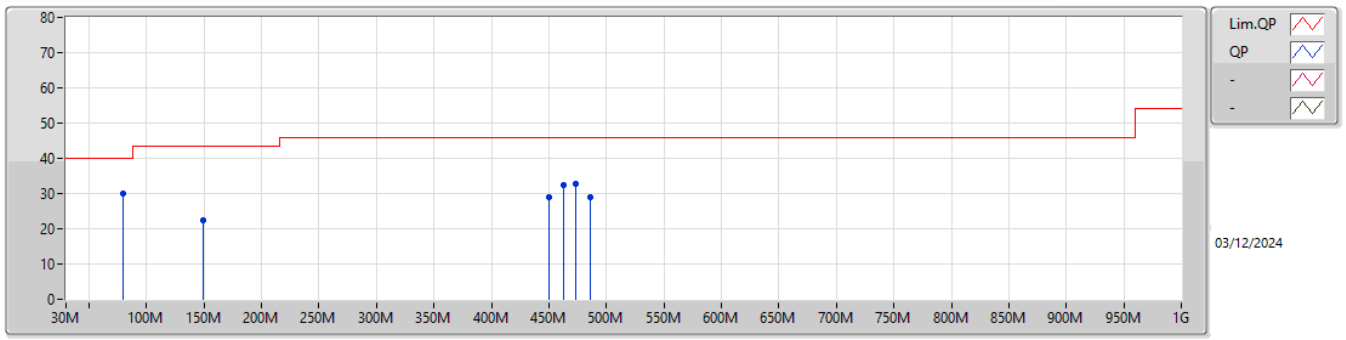
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	79.8M	35.76	40.00	-4.24	Horizontal

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	79.8M	35.76	40.00	-4.24	-13.42	3	Horizontal	-	-	-	49.18	13.84	0.93	28.19
PK	165.9M	23.34	43.50	-20.16	-8.88	3	Horizontal	-	-	-	32.22	18.10	1.28	28.26
PK	449.5M	32.73	46.00	-13.27	-4.12	3	Horizontal	-	-	-	36.85	22.08	1.98	28.18
PK	462.5M	37.31	46.00	-8.69	-3.94	3	Horizontal	-	-	-	41.25	22.25	2.00	28.19
PK	473.4M	36.57	46.00	-9.43	-3.81	3	Horizontal	-	-	-	40.38	22.37	2.01	28.19
PK	486.4M	34.99	46.00	-11.01	-3.62	3	Horizontal	-	-	-	38.61	22.56	2.02	28.20

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	79.8M	29.86	40.00	-10.14	-13.42	3	Vertical	-	-	-	43.28	13.84	0.93	28.19
PK	149.5M	22.36	43.50	-21.14	-8.74	3	Vertical	-	-	-	31.10	18.30	1.21	28.25
PK	450.5M	28.90	46.00	-17.10	-4.11	3	Vertical	-	-	-	33.01	22.10	1.98	28.19
PK	462.5M	32.26	46.00	-13.74	-3.94	3	Vertical	-	-	-	36.20	22.25	2.00	28.19
PK	473.6M	32.75	46.00	-13.25	-3.81	3	Vertical	-	-	-	36.56	22.37	2.01	28.19
PK	485.5M	29.13	46.00	-16.87	-3.66	3	Vertical	-	-	-	32.79	22.52	2.02	28.20

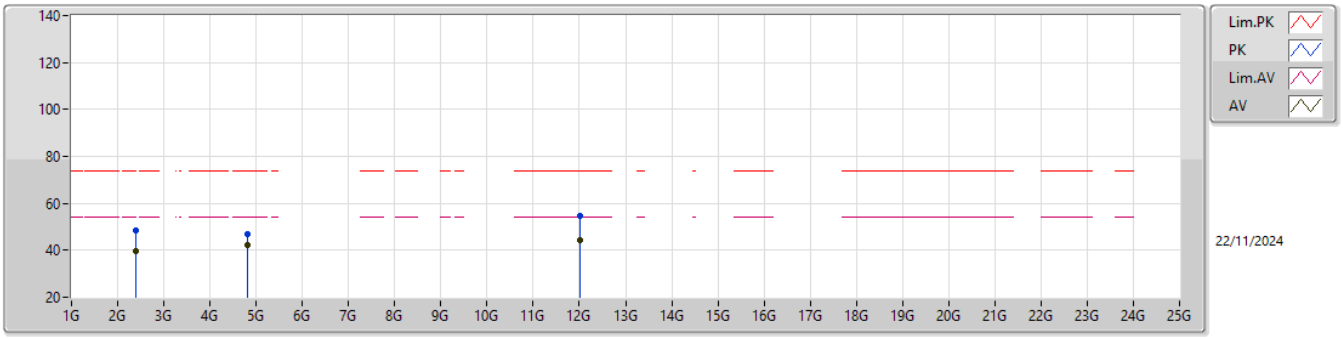
Test Configuration 1: Antenna model GA-E24110-RPW

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	-	-	-	-	-	-	-	-	-	-	-
GFSK	Pass	AV	2.4835G	53.58	54.00	-0.42	3	Vertical	349	2.26	-

2.4-2.4835GHz_GFSK

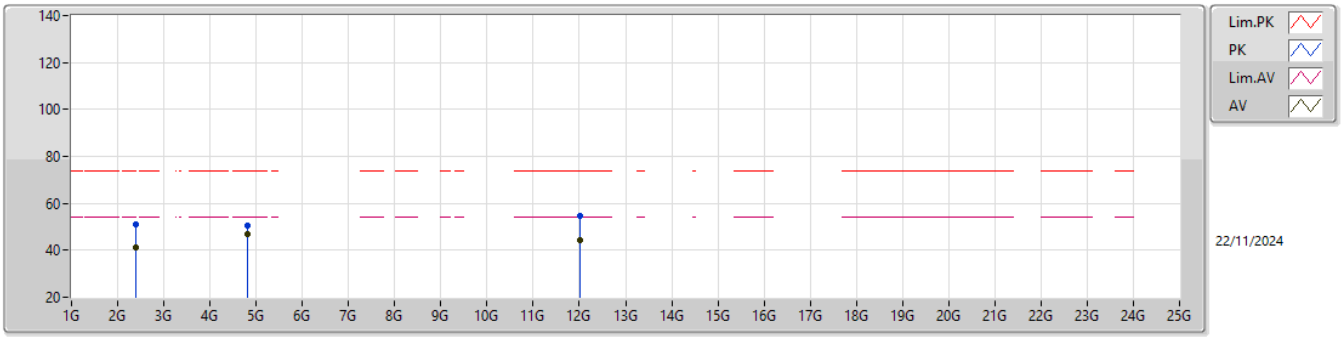
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	39.84	54.00	-14.16	44.37	3	Horizontal	229	1.81	-	27.66	4.70	36.89
PK	2.39G	48.52	74.00	-25.48	53.05	3	Horizontal	229	1.81	-	27.66	4.70	36.89
AV	4.804G	42.32	54.00	-11.68	42.96	3	Horizontal	209	1.00	-	31.20	6.68	38.52
PK	4.804G	46.97	74.00	-27.03	47.61	3	Horizontal	209	1.00	-	31.20	6.68	38.52
AV	12.01G	44.40	54.00	-9.60	38.04	3	Horizontal	231	1.00	-	39.03	10.23	42.90
PK	12.01G	54.82	74.00	-19.18	48.46	3	Horizontal	231	1.00	-	39.03	10.23	42.90

2.4-2.4835GHz_GFSK

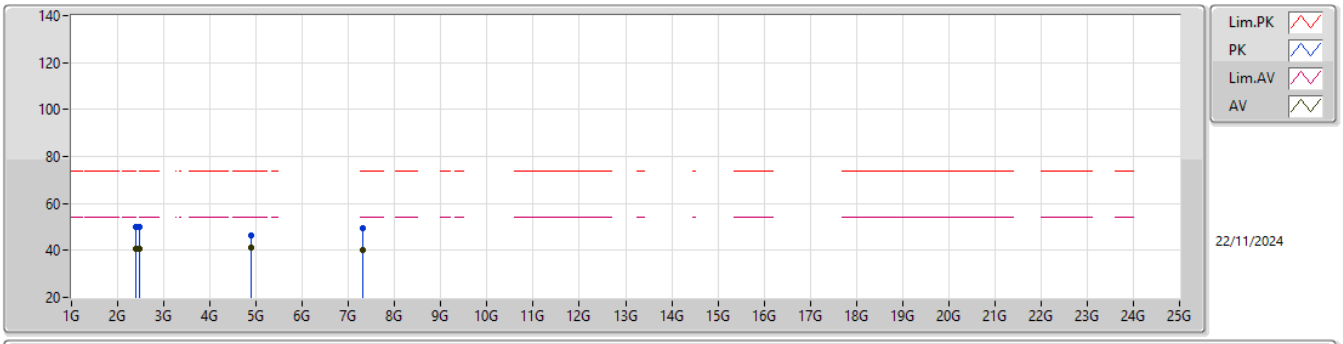
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	41.14	54.00	-12.86	45.67	3	Vertical	342	2.04	-	27.66	4.70	36.89
PK	2.39G	50.83	74.00	-23.17	55.36	3	Vertical	342	2.04	-	27.66	4.70	36.89
AV	4.804G	46.77	54.00	-7.23	47.41	3	Vertical	123	1.00	-	31.20	6.68	38.52
PK	4.804G	50.44	74.00	-23.56	51.08	3	Vertical	123	1.00	-	31.20	6.68	38.52
AV	12.01G	44.33	54.00	-9.67	37.97	3	Vertical	158	1.00	-	39.03	10.23	42.90
PK	12.01G	54.67	74.00	-19.33	48.31	3	Vertical	158	1.00	-	39.03	10.23	42.90

2.4-2.4835GHz_GFSK

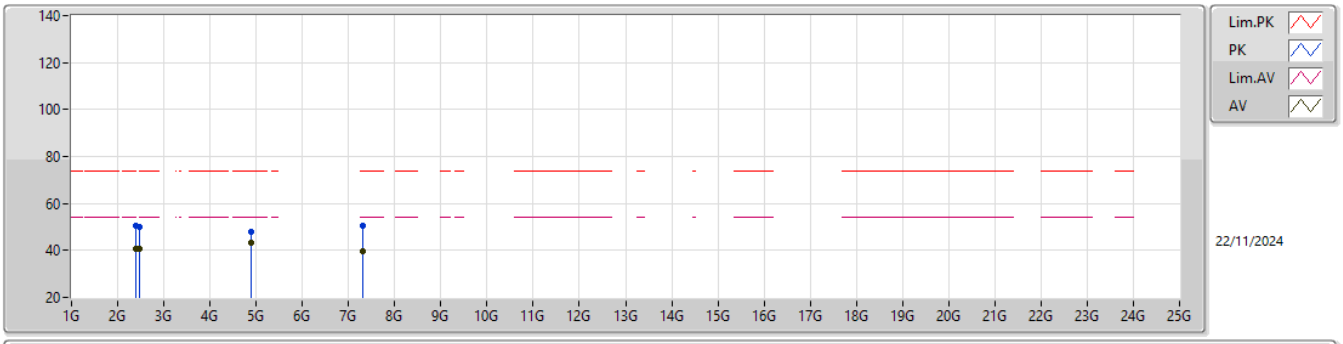
2440MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	40.67	54.00	-13.33	45.20	3	Horizontal	250	1.45	-	27.66	4.70	36.89
PK	2.39G	50.17	74.00	-23.83	54.70	3	Horizontal	250	1.45	-	27.66	4.70	36.89
AV	2.4835G	40.59	54.00	-13.41	45.23	3	Horizontal	250	1.45	-	27.53	4.81	36.98
PK	2.4835G	50.22	74.00	-23.78	54.86	3	Horizontal	250	1.45	-	27.53	4.81	36.98
AV	4.88G	41.04	54.00	-12.96	41.64	3	Horizontal	201	1.00	-	31.20	6.77	38.57
PK	4.88G	46.18	74.00	-27.82	46.78	3	Horizontal	201	1.00	-	31.20	6.77	38.57
AV	7.32G	39.98	54.00	-14.02	34.58	3	Horizontal	321	2.31	-	36.16	8.63	39.39
PK	7.32G	49.60	74.00	-24.40	44.20	3	Horizontal	321	2.31	-	36.16	8.63	39.39

2.4-2.4835GHz_GFSK

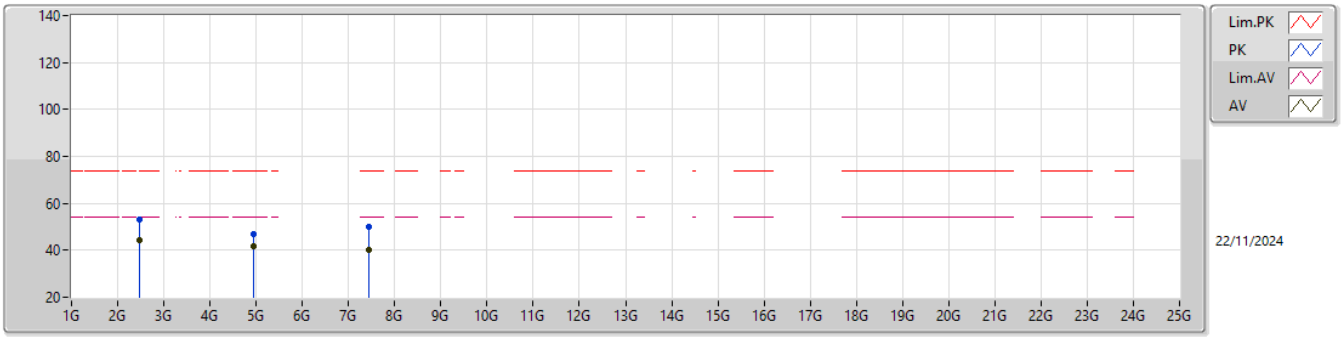
2440MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	40.84	54.00	-13.16	45.37	3	Vertical	199	2.32	-	27.66	4.70	36.89
PK	2.39G	50.39	74.00	-23.61	54.92	3	Vertical	199	2.32	-	27.66	4.70	36.89
AV	2.4835G	40.57	54.00	-13.43	45.21	3	Vertical	199	2.32	-	27.53	4.81	36.98
PK	2.4835G	50.19	74.00	-23.81	54.83	3	Vertical	199	2.32	-	27.53	4.81	36.98
AV	4.88G	43.13	54.00	-10.87	43.73	3	Vertical	190	1.00	-	31.20	6.77	38.57
PK	4.88G	47.95	74.00	-26.05	48.55	3	Vertical	190	1.00	-	31.20	6.77	38.57
AV	7.32G	39.55	54.00	-14.45	34.15	3	Vertical	154	1.00	-	36.16	8.63	39.39
PK	7.32G	50.34	74.00	-23.66	44.94	3	Vertical	154	1.00	-	36.16	8.63	39.39

2.4-2.4835GHz_GFSK

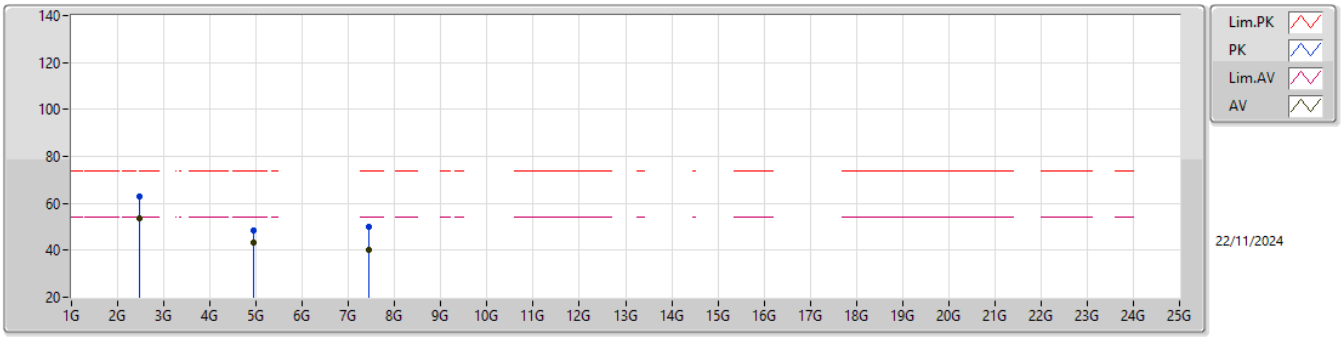
2478MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.4835G	44.08	54.00	-9.92	48.72	3	Horizontal	245	1.00	-	27.53	4.81	36.98
PK	2.4835G	53.05	74.00	-20.95	57.69	3	Horizontal	245	1.00	-	27.53	4.81	36.98
AV	4.956G	41.69	54.00	-12.31	42.23	3	Horizontal	219	1.00	-	31.22	6.86	38.62
PK	4.956G	47.01	74.00	-26.99	47.55	3	Horizontal	219	1.00	-	31.22	6.86	38.62
AV	7.434G	40.04	54.00	-13.96	34.75	3	Horizontal	317	1.00	-	36.17	8.66	39.54
PK	7.434G	49.87	74.00	-24.13	44.58	3	Horizontal	317	1.00	-	36.17	8.66	39.54

2.4-2.4835GHz_GFSK

2478MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.4835G	53.58	54.00	-0.42	58.22	3	Vertical	349	2.26	-	27.53	4.81	36.98
PK	2.4835G	63.04	74.00	-10.96	67.68	3	Vertical	349	2.26	-	27.53	4.81	36.98
AV	4.956G	43.52	54.00	-10.48	44.06	3	Vertical	187	1.00	-	31.22	6.86	38.62
PK	4.956G	48.60	74.00	-25.40	49.14	3	Vertical	187	1.00	-	31.22	6.86	38.62
AV	7.434G	40.24	54.00	-13.76	34.95	3	Vertical	161	1.00	-	36.17	8.66	39.54
PK	7.434G	50.00	74.00	-24.00	44.71	3	Vertical	161	1.00	-	36.17	8.66	39.54

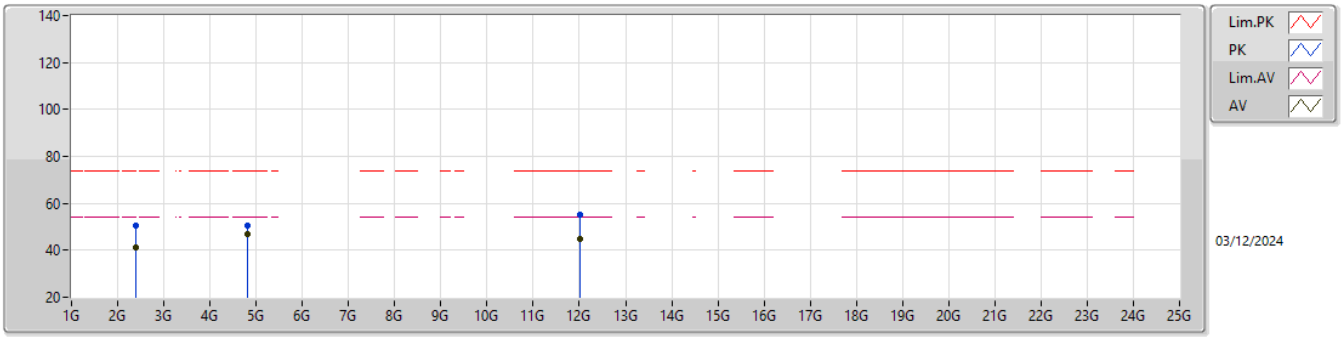
Test Configuration 2: Antenna model GA123416BL02

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	-	-	-	-	-	-	-	-	-	-	-
GFSK	Pass	AV	2.4835G	53.82	54.00	-0.18	3	Horizontal	312	1.36	-

2.4-2.4835GHz_GFSK

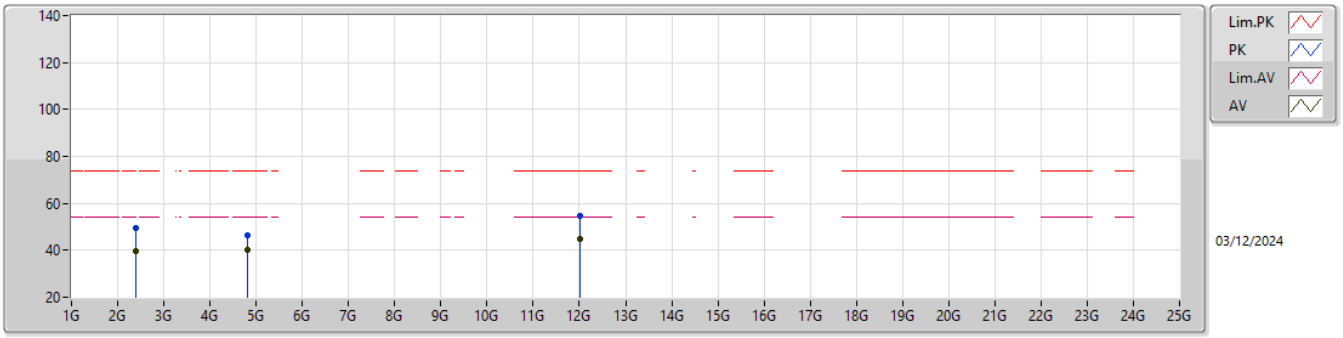
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	41.01	54.00	-12.99	45.54	3	Horizontal	313	1.00	-	27.66	4.70	36.89
PK	2.39G	50.34	74.00	-23.66	54.87	3	Horizontal	313	1.00	-	27.66	4.70	36.89
AV	4.804G	46.95	54.00	-7.05	47.59	3	Horizontal	52	1.00	-	31.20	6.68	38.52
PK	4.804G	50.35	74.00	-23.65	50.99	3	Horizontal	52	1.00	-	31.20	6.68	38.52
AV	12.01G	45.04	54.00	-8.96	38.68	3	Horizontal	77	1.00	-	39.03	10.23	42.90
PK	12.01G	55.09	74.00	-18.91	48.73	3	Horizontal	77	1.00	-	39.03	10.23	42.90

2.4-2.4835GHz_GFSK

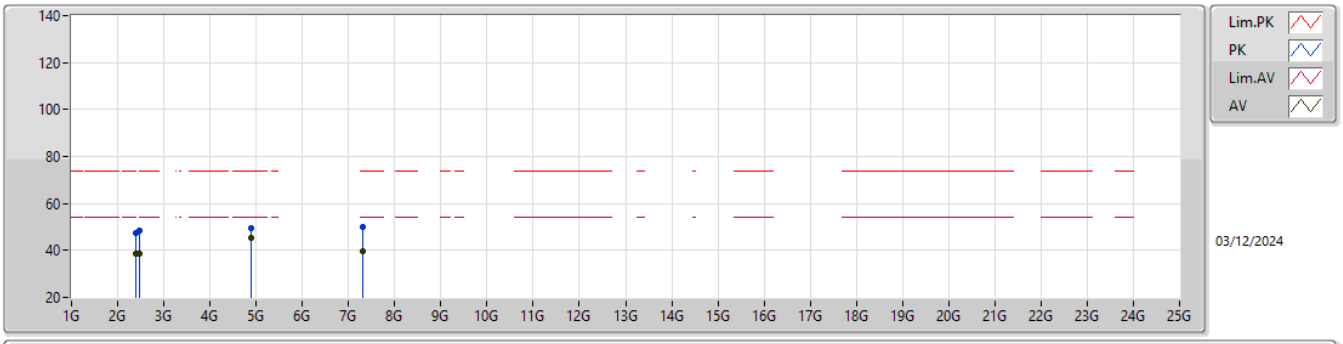
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	39.51	54.00	-14.49	44.04	3	Vertical	288	3.23	-	27.66	4.70	36.89
PK	2.39G	49.66	74.00	-24.34	54.19	3	Vertical	288	3.23	-	27.66	4.70	36.89
AV	4.804G	40.34	54.00	-13.66	40.98	3	Vertical	313	1.00	-	31.20	6.68	38.52
PK	4.804G	46.29	74.00	-27.71	46.93	3	Vertical	313	1.00	-	31.20	6.68	38.52
AV	12.01G	44.61	54.00	-9.39	38.25	3	Vertical	1	1.00	-	39.03	10.23	42.90
PK	12.01G	54.53	74.00	-19.47	48.17	3	Vertical	1	1.00	-	39.03	10.23	42.90

2.4-2.4835GHz_GFSK

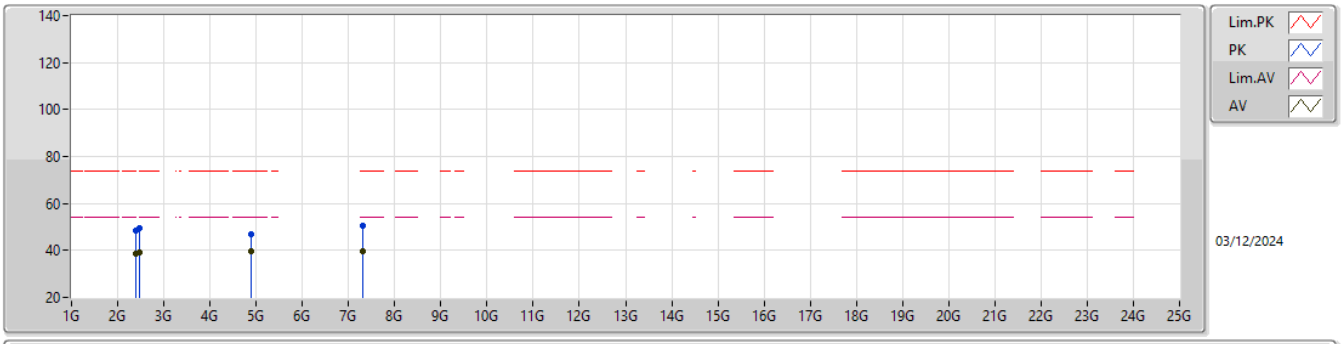
2440MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	38.37	54.00	-15.63	42.90	3	Horizontal	319	1.00	-	27.66	4.70	36.89
PK	2.39G	47.59	74.00	-26.41	52.12	3	Horizontal	319	1.00	-	27.66	4.70	36.89
AV	2.4835G	38.80	54.00	-15.20	43.44	3	Horizontal	319	1.00	-	27.53	4.81	36.98
PK	2.4835G	48.62	74.00	-25.38	53.26	3	Horizontal	319	1.00	-	27.53	4.81	36.98
AV	4.88G	45.29	54.00	-8.71	45.89	3	Horizontal	47	1.00	-	31.20	6.77	38.57
PK	4.88G	49.24	74.00	-24.76	49.84	3	Horizontal	47	1.00	-	31.20	6.77	38.57
AV	7.32G	39.53	54.00	-14.47	34.13	3	Horizontal	35	1.00	-	36.16	8.63	39.39
PK	7.32G	50.22	74.00	-23.78	44.82	3	Horizontal	35	1.00	-	36.16	8.63	39.39

2.4-2.4835GHz_GFSK

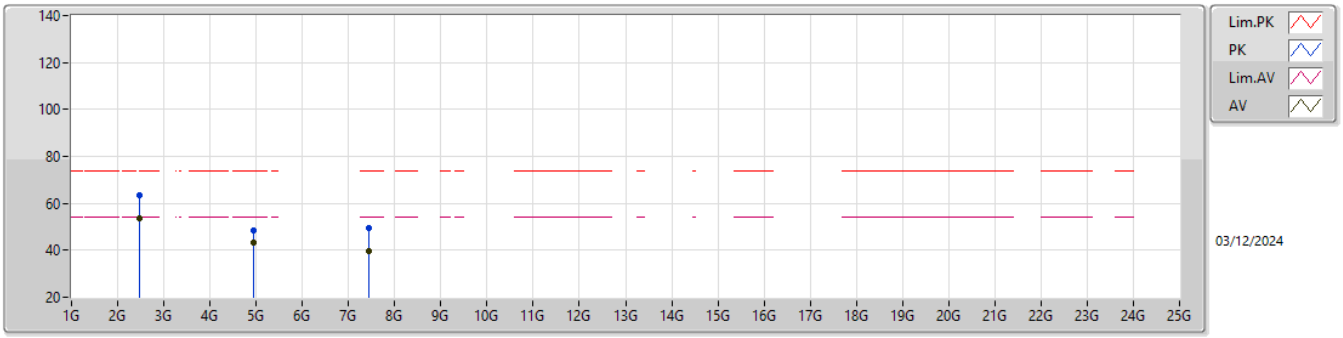
2440MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.39G	38.60	54.00	-15.40	43.13	3	Vertical	289	3.23	-	27.66	4.70	36.89
PK	2.39G	48.59	74.00	-25.41	53.12	3	Vertical	289	3.23	-	27.66	4.70	36.89
AV	2.4835G	38.96	54.00	-15.04	43.60	3	Vertical	289	3.23	-	27.53	4.81	36.98
PK	2.4835G	49.64	74.00	-24.36	54.28	3	Vertical	289	3.23	-	27.53	4.81	36.98
AV	4.88G	39.89	54.00	-14.11	40.49	3	Vertical	13	1.00	-	31.20	6.77	38.57
PK	4.88G	47.15	74.00	-26.85	47.75	3	Vertical	13	1.00	-	31.20	6.77	38.57
AV	7.32G	39.71	54.00	-14.29	34.31	3	Vertical	8	1.00	-	36.16	8.63	39.39
PK	7.32G	50.38	74.00	-23.62	44.98	3	Vertical	8	1.00	-	36.16	8.63	39.39

2.4-2.4835GHz_GFSK

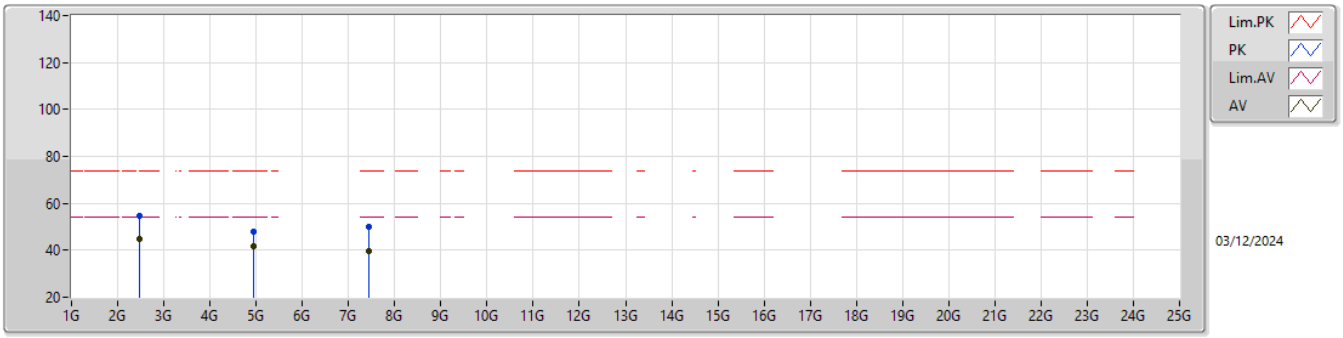
2478MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.4835G	53.82	54.00	-0.18	58.46	3	Horizontal	312	1.36	-	27.53	4.81	36.98
PK	2.4835G	63.42	74.00	-10.58	68.06	3	Horizontal	312	1.36	-	27.53	4.81	36.98
AV	4.956G	43.22	54.00	-10.78	43.76	3	Horizontal	53	1.00	-	31.22	6.86	38.62
PK	4.956G	48.21	74.00	-25.79	48.75	3	Horizontal	53	1.00	-	31.22	6.86	38.62
AV	7.434G	39.68	54.00	-14.32	34.39	3	Horizontal	38	1.00	-	36.17	8.66	39.54
PK	7.434G	49.73	74.00	-24.27	44.44	3	Horizontal	38	1.00	-	36.17	8.66	39.54

2.4-2.4835GHz_GFSK

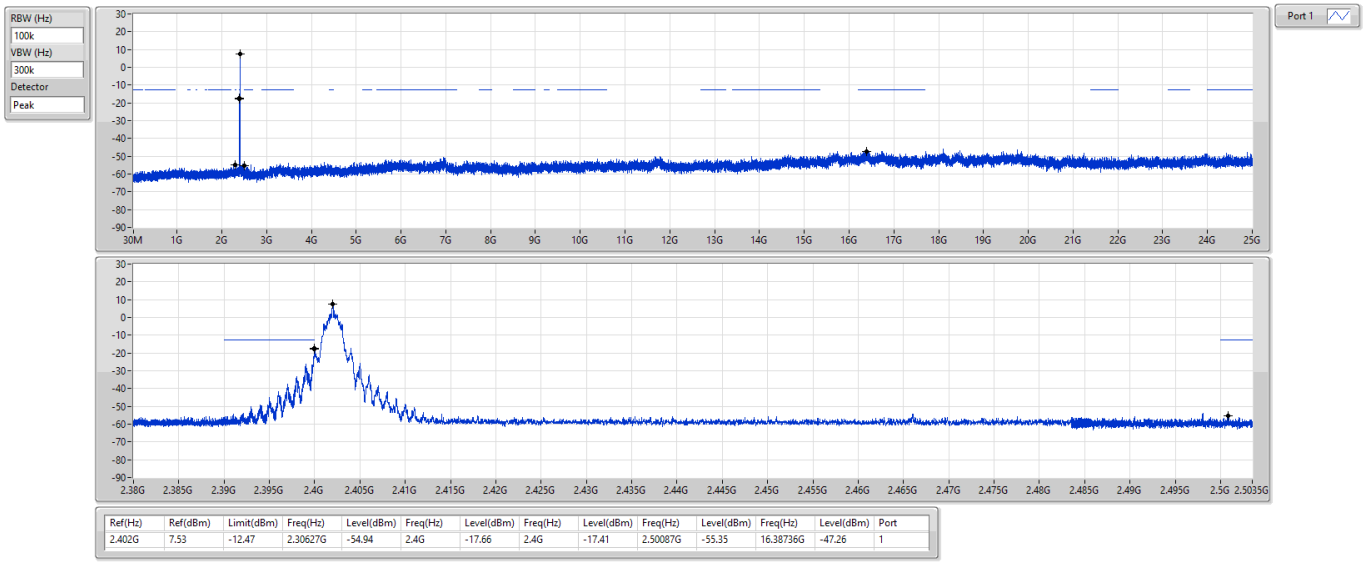
2478MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)
AV	2.4835G	45.02	54.00	-8.98	49.66	3	Vertical	303	1.13	-	27.53	4.81	36.98
PK	2.4835G	54.73	74.00	-19.27	59.37	3	Vertical	303	1.13	-	27.53	4.81	36.98
AV	4.956G	41.56	54.00	-12.44	42.10	3	Vertical	9	1.00	-	31.22	6.86	38.62
PK	4.956G	47.84	74.00	-26.16	48.38	3	Vertical	9	1.00	-	31.22	6.86	38.62
AV	7.434G	39.58	54.00	-14.42	34.29	3	Vertical	85	1.00	-	36.17	8.66	39.54
PK	7.434G	49.92	74.00	-24.08	44.63	3	Vertical	85	1.00	-	36.17	8.66	39.54

2.4-2.4835GHz_GFSK **CSENdB-DTS**

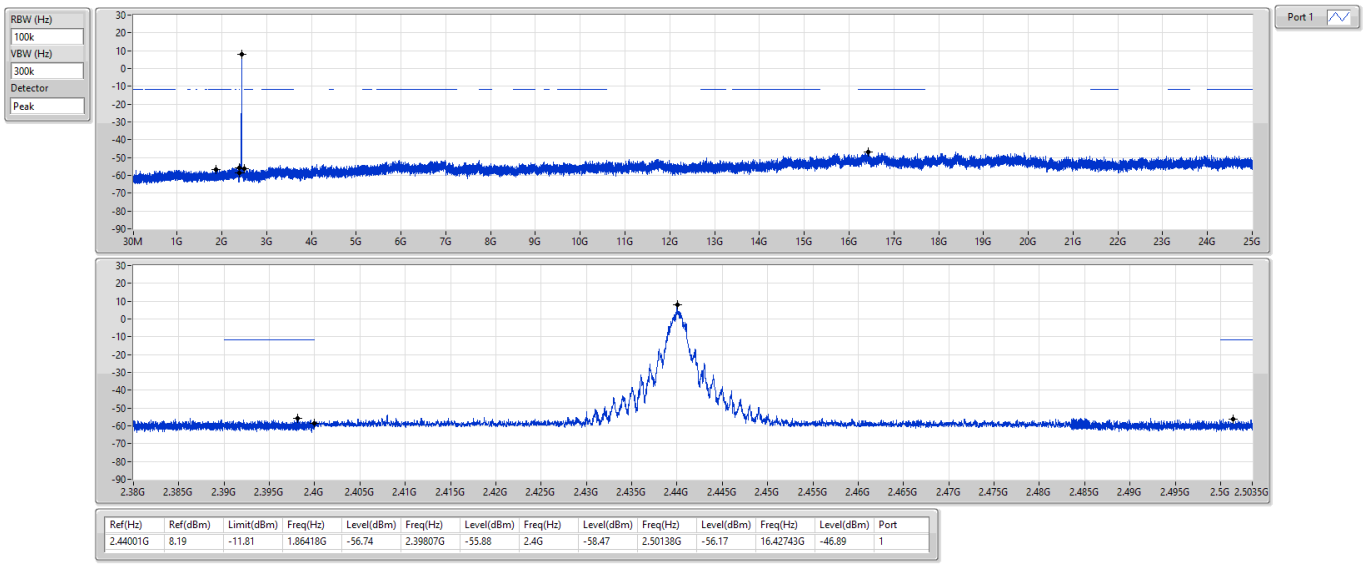
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	7.53	-12.47	2.30627G	-54.94	2.4G	-17.66	2.4G	-17.41	2.50087G	-55.35	16.38736G	-47.26	1

2.4-2.4835GHz_GFSK **CSENdB-DTS**

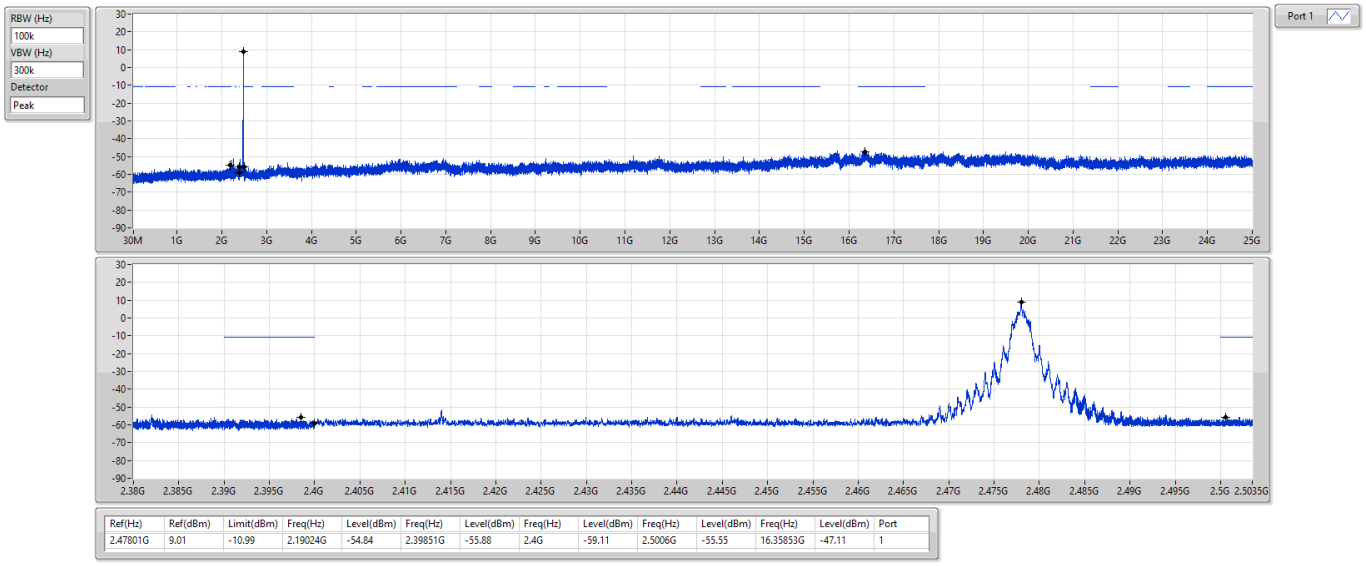
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44001G	8.19	-11.81	1.86418G	-56.74	2.39807G	-55.88	2.4G	-58.47	2.50138G	-56.17	16.42743G	-46.89	1

2.4-2.4835GHz_GFSK **CSENdB-DTS**

2478MHz

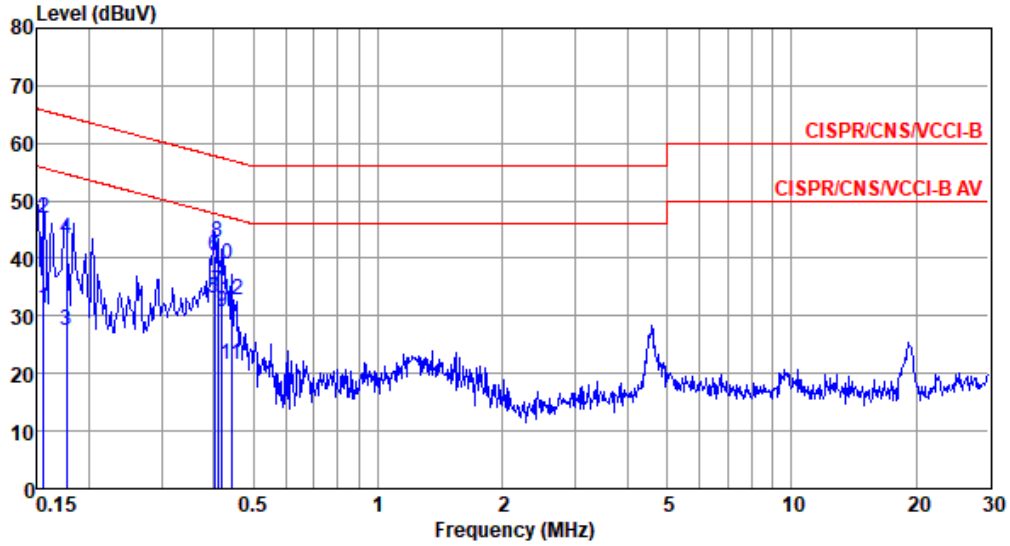


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47801G	9.01	-10.99	2.19024G	-54.84	2.39851G	-55.88	2.4G	-59.11	2.5006G	-55.55	16.35853G	-47.11	1

Test Configuration 1: Antenna model GA-E24110-RPW

Modulation Mode	GFSK	Test Freq. (MHz)	2478
Power Phase	Line		

Test by : Akun Chung Temperature: 22℃ Humidity: 63%

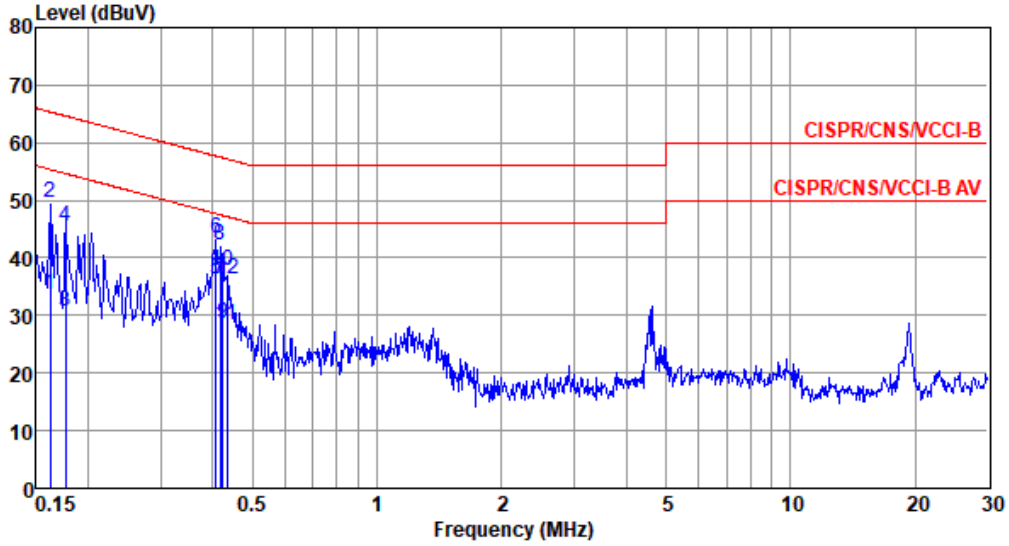


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.156	31.17	55.69	-24.52	21.44	9.65	0.08	0.00	Average
2	0.156	46.98	65.69	-18.71	37.25	9.65	0.08	0.00	QP
3	0.177	27.37	54.64	-27.27	17.64	9.65	0.08	0.00	Average
4	0.177	43.27	64.64	-21.37	33.54	9.65	0.08	0.00	QP
5	0.402	32.94	47.81	-14.87	23.21	9.64	0.09	0.00	Average
6	0.402	40.34	57.81	-17.47	30.61	9.64	0.09	0.00	QP
7*	0.410	34.27	47.64	-13.37	24.54	9.64	0.09	0.00	Average
8	0.410	42.93	57.64	-14.71	33.20	9.64	0.09	0.00	QP
9	0.419	30.77	47.46	-16.69	21.04	9.64	0.09	0.00	Average
10	0.419	38.97	57.46	-18.49	29.24	9.64	0.09	0.00	QP
11	0.442	21.51	47.02	-25.51	11.78	9.64	0.09	0.00	Average
12	0.442	32.85	57.02	-24.17	23.12	9.64	0.09	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation Mode	GFSK	**Test Freq. (MHz)**	2478
Power Phase	Neutral		

Test by : Akun Chung Temperature: 22°C Humidity: 63%



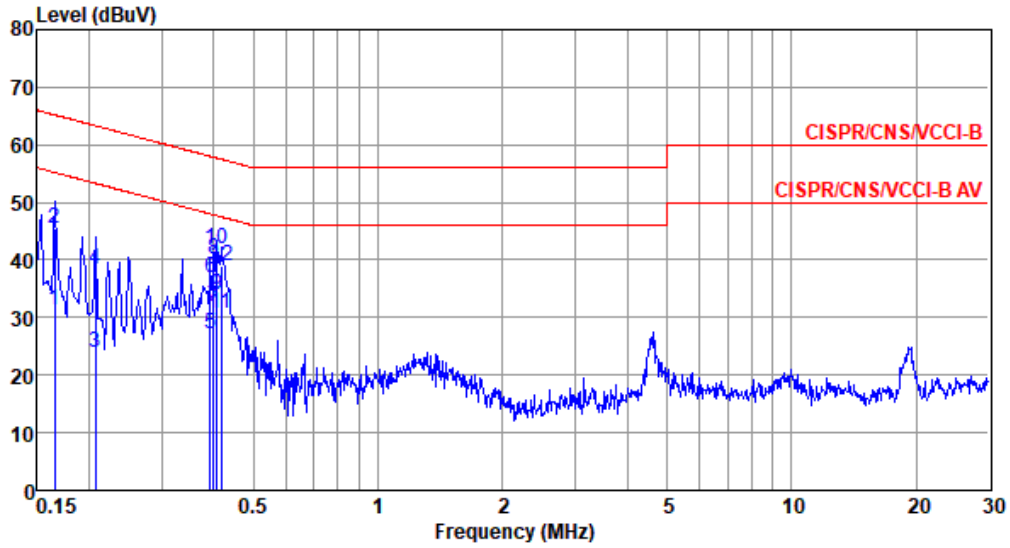
	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.162	33.79	55.34	-21.55	24.05	9.66	0.08	0.00	Average
2	0.162	49.74	65.34	-15.60	40.00	9.66	0.08	0.00	QP
3	0.177	30.67	54.64	-23.97	20.94	9.65	0.08	0.00	Average
4	0.177	45.34	64.64	-19.30	35.61	9.65	0.08	0.00	QP
5	0.408	36.16	47.68	-11.52	26.43	9.64	0.09	0.00	Average
6	0.408	43.26	57.68	-14.42	33.53	9.64	0.09	0.00	QP
7*	0.417	36.39	47.51	-11.12	26.66	9.64	0.09	0.00	Average
8	0.417	42.16	57.51	-15.35	32.43	9.64	0.09	0.00	QP
9	0.424	28.77	47.37	-18.60	19.04	9.64	0.09	0.00	Average
10	0.424	37.90	57.37	-19.47	28.17	9.64	0.09	0.00	QP
11	0.433	28.24	47.20	-18.96	18.51	9.64	0.09	0.00	Average
12	0.433	36.39	57.20	-20.81	26.66	9.64	0.09	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Test Configuration 2: Antenna model GA123416BL02

Modulation Mode	GFSK	Test Freq. (MHz)	2478
Power Phase	Line		

Test by : Akun Chung Temperature: 22°C Humidity: 63%

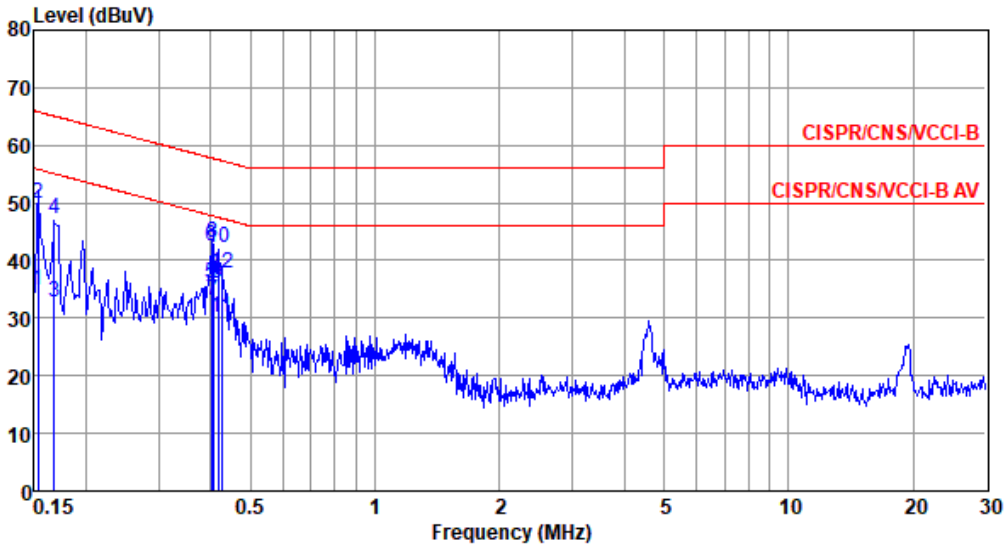


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.165	31.32	55.21	-23.89	21.59	9.65	0.08	0.00	Average
2	0.165	45.50	65.21	-19.71	35.77	9.65	0.08	0.00	QP
3	0.207	24.00	53.32	-29.32	14.27	9.65	0.08	0.00	Average
4	0.207	38.28	63.32	-25.04	28.55	9.65	0.08	0.00	QP
5	0.393	27.23	47.99	-20.76	17.50	9.64	0.09	0.00	Average
6	0.393	36.98	57.99	-21.01	27.25	9.64	0.09	0.00	QP
7	0.400	31.94	47.86	-15.92	22.21	9.64	0.09	0.00	Average
8	0.400	40.27	57.86	-17.59	30.54	9.64	0.09	0.00	QP
9*	0.408	34.08	47.68	-13.60	24.35	9.64	0.09	0.00	Average
10	0.408	41.97	57.68	-15.71	32.24	9.64	0.09	0.00	QP
11	0.417	30.74	47.51	-16.77	21.01	9.64	0.09	0.00	Average
12	0.417	39.00	57.51	-18.51	29.27	9.64	0.09	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation Mode	GFSK	**Test Freq. (MHz)**	2478
Power Phase	Neutral		

Test by : Akun Chung Temperature: 22°C Humidity: 63%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.153	34.81	55.82	-21.01	25.07	9.66	0.08	0.00	Average
2	0.153	49.88	65.82	-15.94	40.14	9.66	0.08	0.00	QP
3	0.168	32.64	55.08	-22.44	22.90	9.66	0.08	0.00	Average
4	0.168	47.31	65.08	-17.77	37.57	9.66	0.08	0.00	QP
5	0.402	36.02	47.81	-11.79	26.29	9.64	0.09	0.00	Average
6	0.402	42.37	57.81	-15.44	32.64	9.64	0.09	0.00	QP
7	0.406	33.21	47.73	-14.52	23.48	9.64	0.09	0.00	Average
8	0.406	43.21	57.73	-14.52	33.48	9.64	0.09	0.00	QP
9*	0.417	36.11	47.51	-11.40	26.38	9.64	0.09	0.00	Average
10	0.417	42.22	57.51	-15.29	32.49	9.64	0.09	0.00	QP
11	0.426	30.08	47.33	-17.25	20.35	9.64	0.09	0.00	Average
12	0.426	37.81	57.33	-19.52	28.08	9.64	0.09	0.00	QP

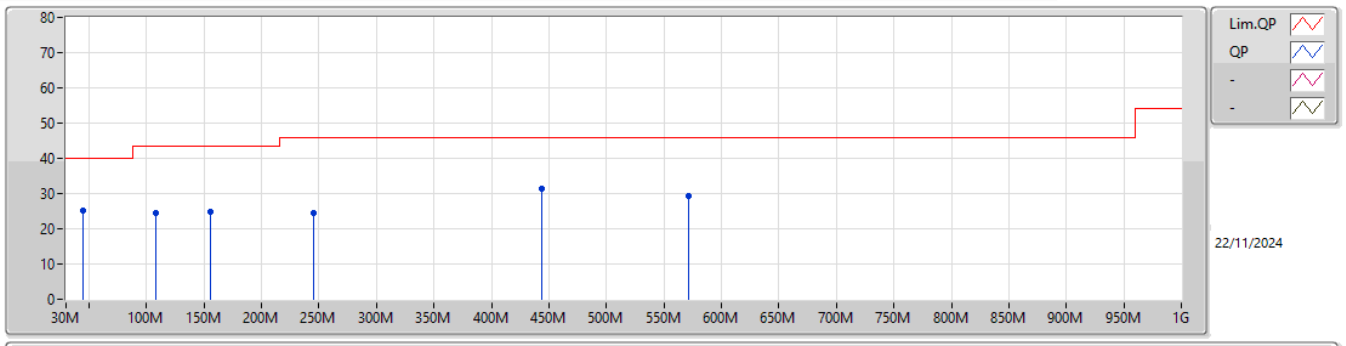
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Test Configuration 1: Antenna model GA-E24110-RPW

Summary

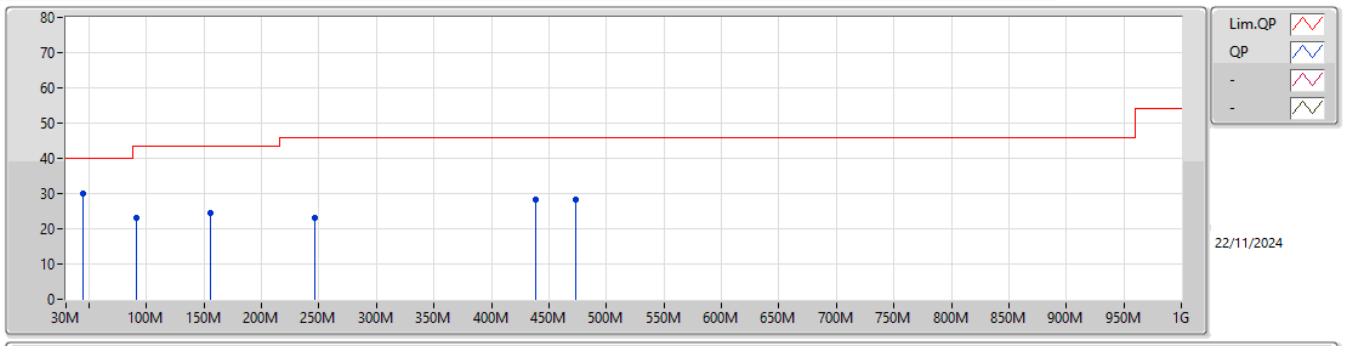
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	44.7M	30.11	40.00	-9.89	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	44.7M	25.05	40.00	-14.95	-8.60	3	Horizontal	-	-	-	33.65	18.91	0.61	28.12
PK	107.8M	24.51	43.50	-18.99	-12.10	3	Horizontal	-	-	-	36.61	15.08	1.05	28.23
PK	155.9M	24.71	43.50	-18.79	-8.62	3	Horizontal	-	-	-	33.33	18.41	1.23	28.26
PK	245.4M	24.60	46.00	-21.40	-9.89	3	Horizontal	-	-	-	34.49	16.81	1.56	28.26
PK	443.7M	31.22	46.00	-14.78	-4.34	3	Horizontal	-	-	-	35.56	21.87	1.97	28.18
PK	571M	29.35	46.00	-16.65	-1.77	3	Horizontal	-	-	-	31.12	24.12	2.30	28.19

Mode 1



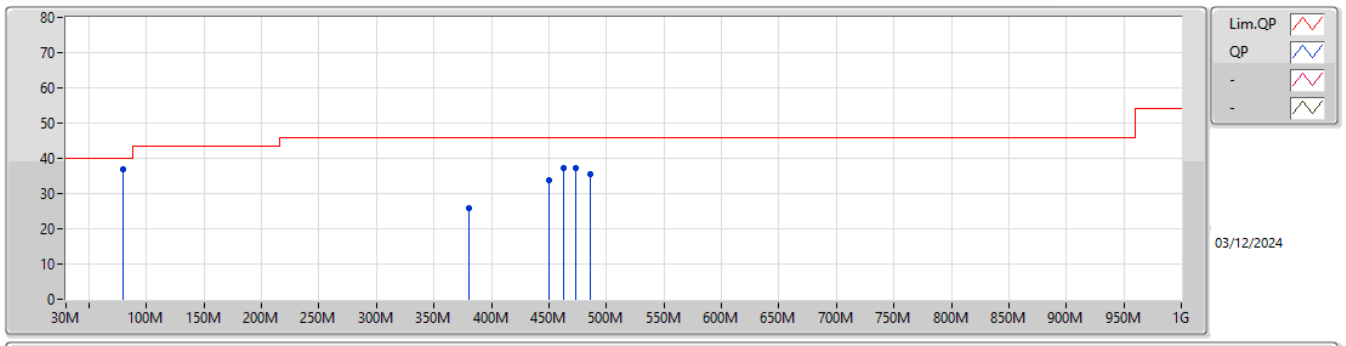
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)		
PK	44.7M	30.11	40.00	-9.89	-8.60	3	Vertical	-	-	-	38.71	18.91	0.61	28.12		
PK	91M	23.08	43.50	-20.42	-14.44	3	Vertical	-	-	-	37.52	12.80	0.97	28.21		
PK	155.8M	24.47	43.50	-19.03	-8.61	3	Vertical	-	-	-	33.08	18.42	1.23	28.26		
PK	246.2M	23.17	46.00	-22.83	-9.88	3	Vertical	-	-	-	33.05	16.82	1.56	28.26		
PK	438.1M	28.14	46.00	-17.86	-4.46	3	Vertical	-	-	-	32.60	21.76	1.96	28.18		
PK	473.8M	28.36	46.00	-17.64	-3.80	3	Vertical	-	-	-	32.16	22.38	2.01	28.19		

Test Configuration 2: Antenna model GA123416BL02

Summary

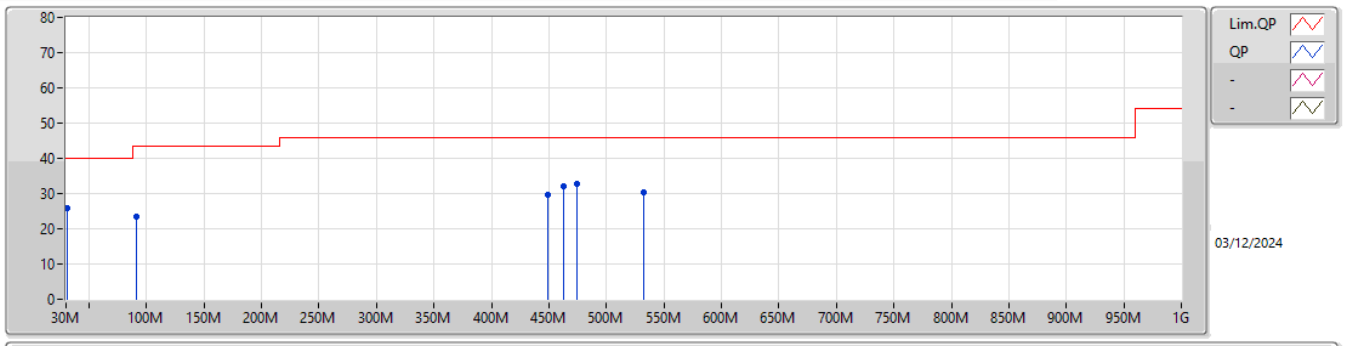
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	79.8M	36.87	40.00	-3.13	Horizontal

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	79.8M	36.87	40.00	-3.13	-13.42	3	Horizontal	-	-	-	50.29	13.84	0.93	28.19
PK	380.6M	25.81	46.00	-20.19	-5.81	3	Horizontal	-	-	-	31.62	20.50	1.87	28.18
PK	450.4M	33.94	46.00	-12.06	-4.11	3	Horizontal	-	-	-	38.05	22.10	1.98	28.19
PK	462.5M	37.16	46.00	-8.84	-3.94	3	Horizontal	-	-	-	41.10	22.25	2.00	28.19
PK	473.6M	37.38	46.00	-8.62	-3.81	3	Horizontal	-	-	-	41.19	22.37	2.01	28.19
PK	485.5M	35.60	46.00	-10.40	-3.66	3	Horizontal	-	-	-	39.26	22.52	2.02	28.20

Mode 1



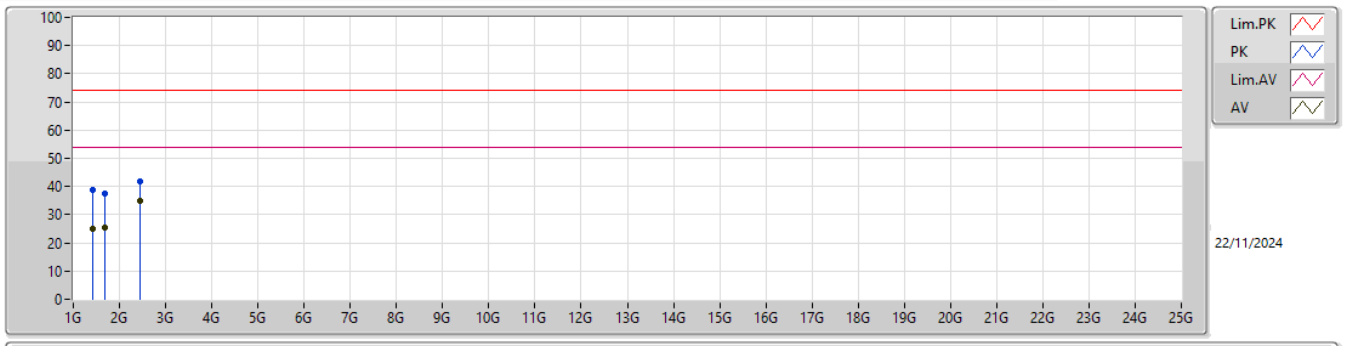
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.3M	26.00	40.00	-14.00	-9.78	3	Vertical	-	-	-	35.78	17.76	0.54	28.08
PK	91.1M	23.36	43.50	-20.14	-14.44	3	Vertical	-	-	-	37.80	12.80	0.97	28.21
PK	449.5M	29.67	46.00	-16.33	-4.12	3	Vertical	-	-	-	33.79	22.08	1.98	28.18
PK	462.5M	32.01	46.00	-13.99	-3.94	3	Vertical	-	-	-	35.95	22.25	2.00	28.19
PK	474.5M	32.93	46.00	-13.07	-3.79	3	Vertical	-	-	-	36.72	22.39	2.01	28.19
PK	532.9M	30.34	46.00	-15.66	-2.76	3	Vertical	-	-	-	33.10	23.26	2.17	28.19

Test Configuration 1: Antenna model GA-E24110-RPW

Summary

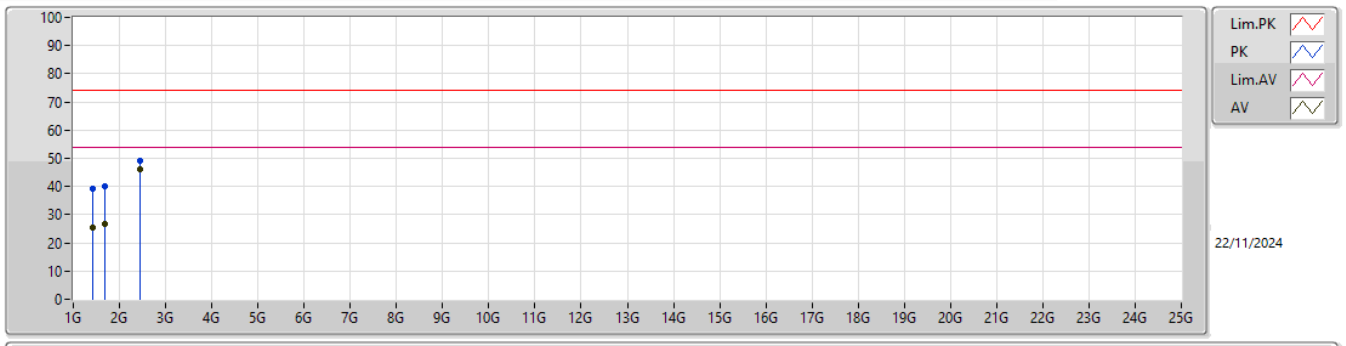
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	2.44G	46.17	54.00	-7.83	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
AV	1.409G	25.14	54.00	-28.86	-6.21	3	Horizontal	84	1.00	-	31.35	26.23	3.51	35.95
PK	1.409G	38.87	74.00	-35.13	-6.21	3	Horizontal	84	1.00	-	45.08	26.23	3.51	35.95
AV	1.675G	25.29	54.00	-28.71	-7.13	3	Horizontal	213	1.00	-	32.42	25.20	3.84	36.17
PK	1.675G	37.45	74.00	-36.55	-7.13	3	Horizontal	213	1.00	-	44.58	25.20	3.84	36.17
AV	2.44G	35.02	54.00	-18.98	-4.58	3	Horizontal	243	1.00	-	39.60	27.60	4.76	36.94
PK	2.44G	41.95	74.00	-32.05	-4.58	3	Horizontal	243	1.00	-	46.53	27.60	4.76	36.94

Mode 1



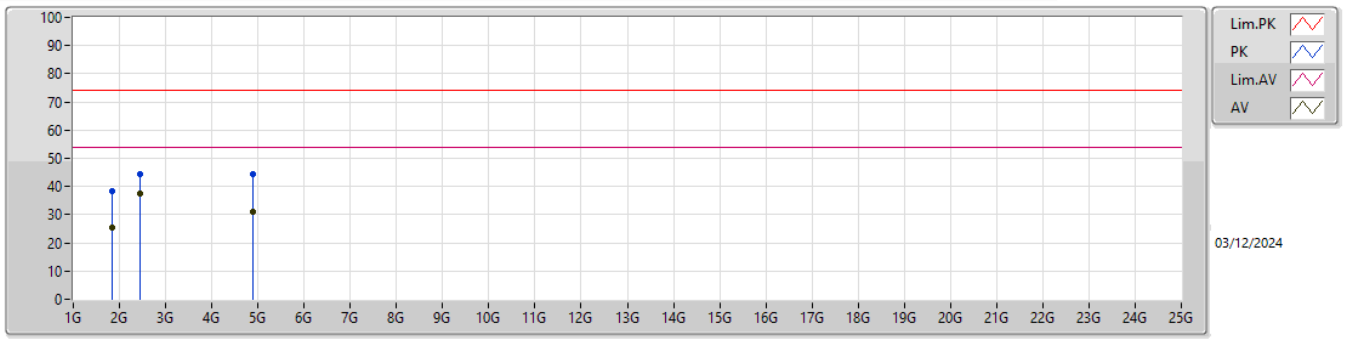
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
AV	1.409G	25.28	54.00	-28.72	-6.21	3	Vertical	118	1.00	-	31.49	26.23	3.51	35.95
PK	1.409G	39.02	74.00	-34.98	-6.21	3	Vertical	118	1.00	-	45.23	26.23	3.51	35.95
AV	1.675G	26.80	54.00	-27.20	-7.13	3	Vertical	47	1.00	-	33.93	25.20	3.84	36.17
PK	1.675G	40.14	74.00	-33.86	-7.13	3	Vertical	47	1.00	-	47.27	25.20	3.84	36.17
AV	2.44G	46.17	54.00	-7.83	-4.58	3	Vertical	199	2.85	-	50.75	27.60	4.76	36.94
PK	2.44G	49.02	74.00	-24.98	-4.58	3	Vertical	199	2.85	-	53.60	27.60	4.76	36.94

Test Configuration 2: Antenna model GA123416BL02

Summary

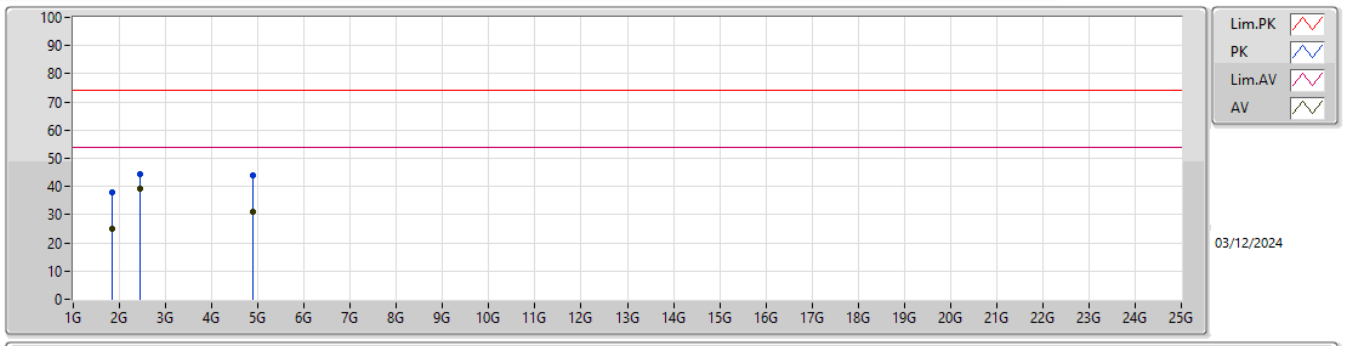
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	2.44G	39.42	54.00	-14.58	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
AV	1.854G	25.25	54.00	-28.75	-6.49	3	Horizontal	111	1.00	-	31.74	25.80	4.07	36.36
PK	1.854G	38.47	74.00	-35.53	-6.49	3	Horizontal	111	1.00	-	44.96	25.80	4.07	36.36
AV	2.44G	37.69	54.00	-16.31	-4.58	3	Horizontal	306	1.00	-	42.27	27.60	4.76	36.94
PK	2.44G	44.52	74.00	-29.48	-4.58	3	Horizontal	306	1.00	-	49.10	27.60	4.76	36.94
AV	4.88G	31.06	54.00	-22.94	-0.60	3	Horizontal	77	1.00	-	31.66	31.20	6.77	38.57
PK	4.88G	44.22	74.00	-29.78	-0.60	3	Horizontal	77	1.00	-	44.82	31.20	6.77	38.57

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
AV	1.854G	24.85	54.00	-29.15	-6.49	3	Vertical	85	1.00	-	31.34	25.80	4.07	36.36
PK	1.854G	37.73	74.00	-36.27	-6.49	3	Vertical	85	1.00	-	44.22	25.80	4.07	36.36
AV	2.44G	39.42	54.00	-14.58	-4.58	3	Vertical	304	2.50	-	44.00	27.60	4.76	36.94
PK	2.44G	44.27	74.00	-29.73	-4.58	3	Vertical	304	2.50	-	48.85	27.60	4.76	36.94
AV	4.88G	30.98	54.00	-23.02	-0.60	3	Vertical	159	1.00	-	31.58	31.20	6.77	38.57
PK	4.88G	44.12	74.00	-29.88	-0.60	3	Vertical	159	1.00	-	44.72	31.20	6.77	38.57