FCC Radio Test Report

FCC ID	:	**2BAH4WF-3**
Equipment	:	**Silvanet Wildfire Sensor**
Brand Name	:	**DRYAD Dryad DRYAD**
Model Name	:	**WF-3**
Applicant	:	**Dryad Networks GmbH Eisenbahnstr. 37, 16225 Eberswalde, Germany**
Manufacturer	:	**Dryad Networks GmbH Eisenbahnstr. 37, 16225 Eberswalde, Germany**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Dec. 19, 2024, and testing was started from Jan. 08, 2025 and completed on Jan. 21, 2025. 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.)

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR4D1930AF	01	Initial issue of report	Mar. 10, 2025

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
-	15.207	AC Power-line Conducted Emissions	Not Required	Only employ Solar Panel power.
3.1	15.247(a)	20dB Bandwidth	PASS	-
3.1	15.247(a)	Carrier Frequency Separation	PASS	-
3.2	15.247(b)	Maximum Conducted Output Power	PASS	-
3.3	15.247(e)	Power Spectral Density	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Bandedge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

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

Reviewed by: Ryan Hsiao

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	Channel Number
902-928 MHz	LoRa (125kHz)	902.3-914.9	64
902-928 MHz	LoRa (500kHz)	903-914.2	8
902-928 MHz	LoRa (500kHz)	923.3-927.5	8

Band	Mode	BWch (MHz)	Nant
902-928MHz	LoRa (500kHz)	0.5	1TX
902-928MHz	LoRa (500kHz)	0.5	1TX
902-928MHz	LoRa (125kHz)	0.125	1TX

Note:
- 902-928 MHz Band uses as a hybrid system.
- LoRa (125kHz) uses FHSS.
- LoRa (500kHz) uses DTS.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	Dryad	Sensor01Gen-3	Wire Monopole Antenna	N/A	2.6

For LoRa function:
Ant. 1 (port 1) could transmit/receive.

1.1.3 Type of EUT

Operational Condition		
EUT Power Type	From Solar Panel	
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 Test Signal Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
LoRa (500kHz)	0.296	5.29	25m	50
LoRa (125kHz)	0.589	2.3	98.125m	20

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

1.2 Testing Applied Standards

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

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

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

- KDB 558074 D01 v05r02
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua **(TAF:** 3785**)**	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456	**FAX:** 886-3-327-0973		
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
RF Conducted	TH07-HY	Xun Hsieh	23.8~24.2°C / 55~58%	14/Jan/2025~21/Jan/2025
Radiated	03CH02-HY	Daniel Lin	20.5~22.4°C / 50~55%	08/Jan/2025
☐ Wenhua 3rd. **(TAF:** 3785**)**	**ADD:** No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
	Test site Designation No. TW3785 with FCC.			

1.4 Measurement Uncertainty

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

Test Items	**Uncertainty**	**Remark**
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 Condition

RF Conducted	Abbreviation	Remark
TX	Tnom	20°C
-	Vnom	1.5V

2.2 Test Channel Mode

Test Software Version	hercules_3-2-8.exe

Mode	Power Setting
LoRa (500kHz)	-
903MHz	14
909.4MHz	14
914.2MHz	14
LoRa (500kHz)	
923.3MHz	14
927.5MHz	14
LoRa (125kHz)	
902.3MHz	14
908.7MHz	14
914.9MHz	14

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	RF Output Power, 20dB Bandwidth, Carrier Frequency Separation (ChS) Number of Hopping Frequencies (N), Hopping Bandedge Time of Occupancy (Dwell Time) Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
	☒ Non-adaptive frequency hopping systems (Non-AFH) ☒ adaptive frequency hopping systems (AFH)
Non-AFH Mode configuration was found to be the worst case and measured during the test.	

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

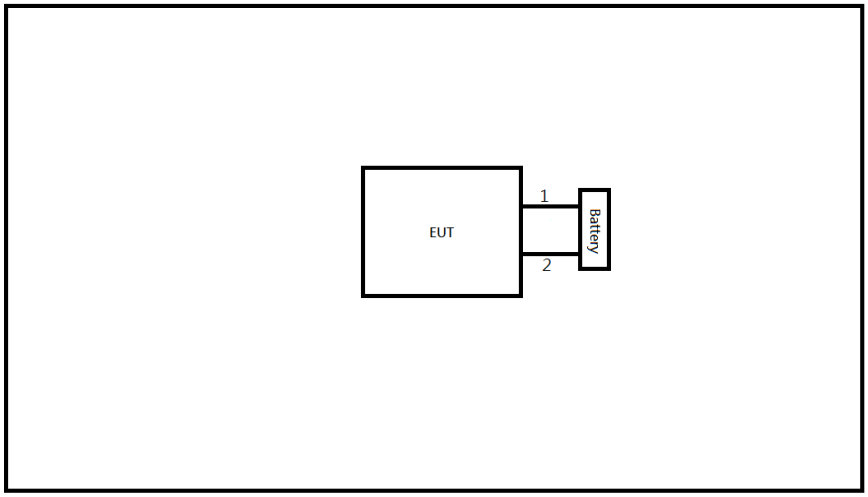
2.4 Support Equipment

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Battery	Panasonic	R6P UM-3N	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Battery	Panasonic	R6P UM-3N	-	-

2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	DC Power cable(-)	No	0.1	-
2	DC Power cable(+)	No	0.1	-

3 Transmitter Test Result

3.1 20dB Bandwidth and Carrier Frequency Separation

3.1.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems
▪ 902-928 MHz Band:
N:Number of Hopping Frequencies; **ChS**: Hopping Channel Separation

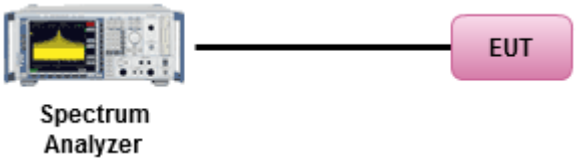
3.1.2 Measuring Instruments

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 6.9.2 for 20 dB bandwidth measurement.
☒ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.1.4 Test Setup

20dB Bandwidth and Carrier Frequency Separation


3.1.5 Test Result of 20dB Bandwidth

Refer as Appendix A

3.1.6 Test Result of Carrier Frequency Separation

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
▪ 902-928 MHz Band:	
	▪ N ≥50 and hybrid system; Power 30dBm; EIRP 36dBm
	▪ 50 >N≥ 25; Power 24dBm; EIRP 30dBm
N:Number of Hopping Frequencies	

3.2.2 Measuring Instruments

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

3.2.3 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 FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Power Spectral Density

3.3.1 Power Spectral Density Limit

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

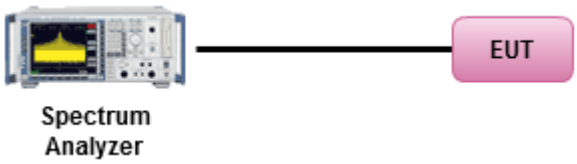
3.3.2 Measuring Instruments

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

3.3.3 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 FCC 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.

3.3.4 Test Setup

Power Spectral Density


3.3.5 Test Result of Power Spectral Density

Refer as Appendix C

3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit
▪ 902-928 MHz Band:
▪ ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz.
▪ ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz.
Note : **1. ChS** : Hopping Channel Separation **2.** There is no minimum number of hopping channels associated with this type of hybrid system.

3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

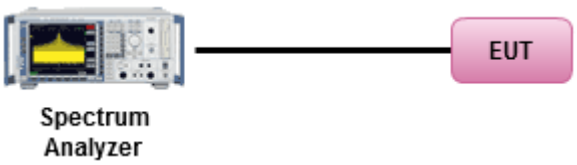
3.4.3 Measuring Instruments

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

3.4.4 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
☒ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

3.4.5 Test Setup

Number of Hopping Frequencies


3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
▪ 902-928 MHz Band:	
	▪ N ≥50; 0.4s in 20s period
	▪ 50 >N≥ 25; 0.4s in 10s period
N:Number of Hopping Frequencies	

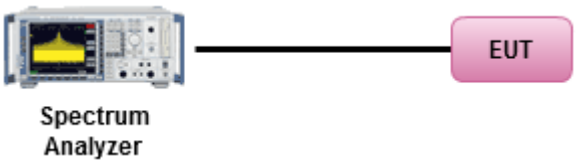
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.

3.5.4 Test Setup

Time of Occupancy (Dwell Time)


3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

3.6 Emissions in Non-restricted Frequency Bands

3.6.1 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.

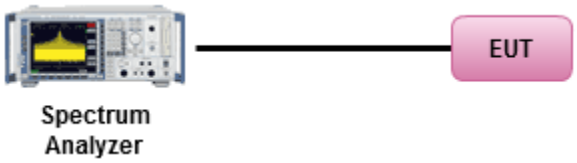
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.

3.6.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

3.7 Emissions in Restricted Frequency Bands

3.7.1 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.

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

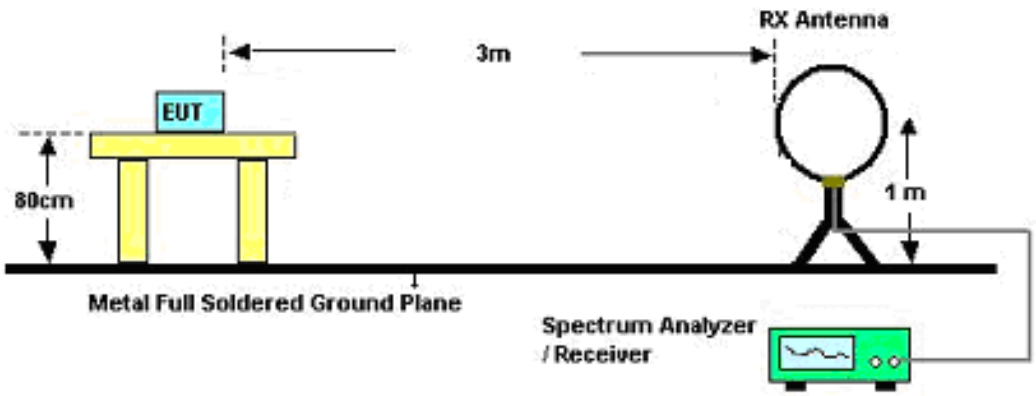
Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.
▪	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.

3.7.4 Measurement Results Calculation

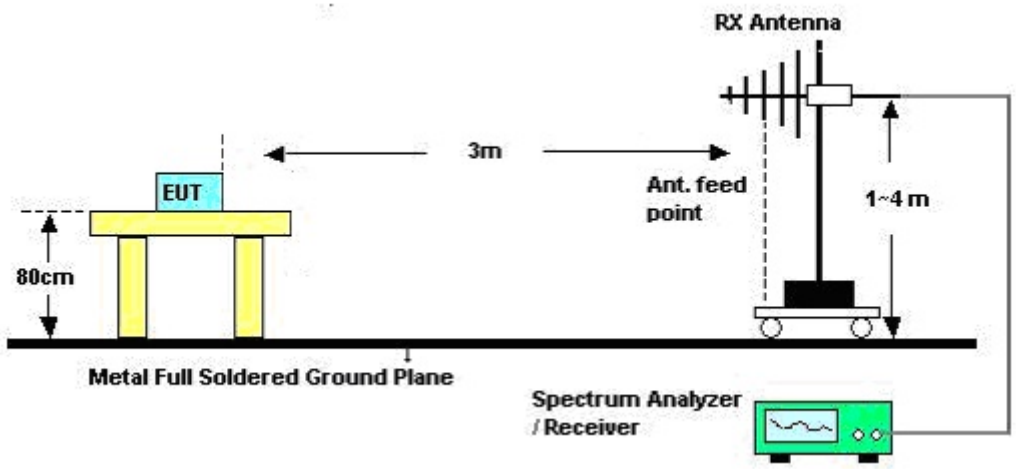
The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

3.7.5 Test Setup

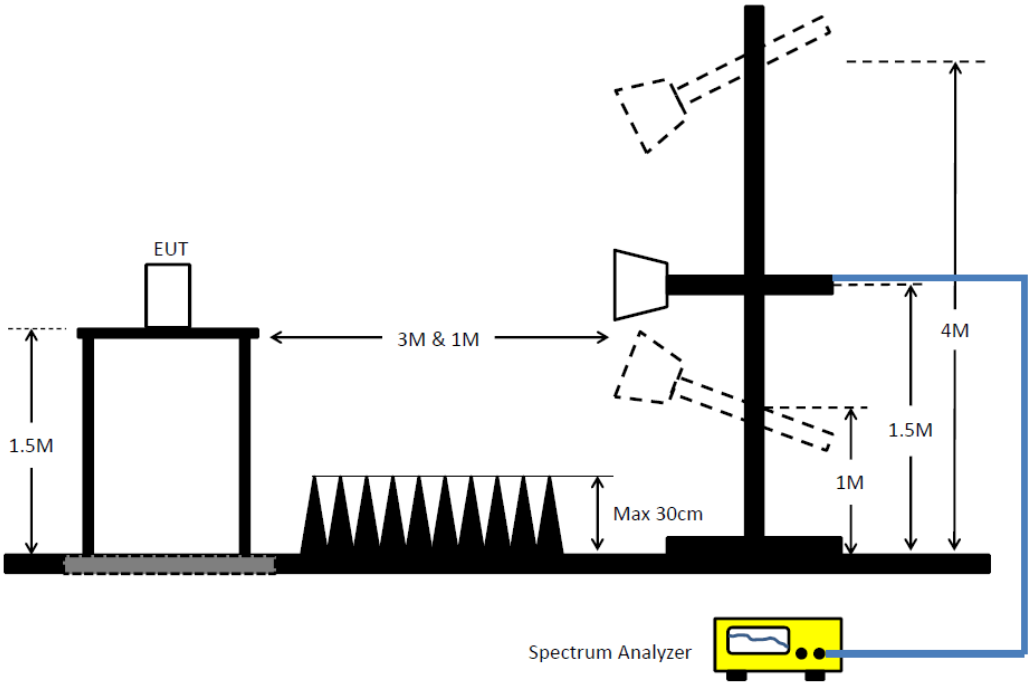
Emissions in Restricted Frequency Bands
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.7.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer/ Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	9kHz~40GHz	02/Feb/2024	01/Feb/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	18/Dec/2024	17/Dec/2025
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	18/Dec/2024	17/Dec/2025
SENSE-15247_FS	Sporton	V5.11.21	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer/ Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
N.S.A. Measurement	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3M	14/Jul/2024	13/Jul/2025
Site V.S.W.R	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3M	14/Jul/2024	13/Jul/2025
EMI Test Receiver	R&S	ESR	102052	9kHz~3.6GHz	03/May/2024	02/May/2025
Signal Analyzer	R&S	FSP 40	100593	9kHz~40GHz	11/Mar/2024	10/Mar/2025
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	26/Aug/2024	25/Aug/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz~18GHz	23/Sep/2024	22/Sep/2025
RF Cable	MVE	400LL+SN 200207	03CH02-cable -02	9kHz~30MHz	26/Nov/2024	25/Nov/2025
RF Cable	MVE	400LL+SN 200207	03CH02-cable -02	30MHz~1GHz	26/Nov/2024	25/Nov/2025
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX 104	03CH02-cable -01	1GHz~40GHz	15/Feb/2024	14/Feb/2025
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	29/Jun/2024	28/Jun/2025
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	01/Oct/2024	30/Sep/2025
SENSE-15247-FS	Sporton	V5.11.18	N/A	N/A	N/A	N/A

Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
902-928MHz	-	-	-	-	-
LoRa (125kHz)	146.85k	128.936k	129KF1D	145.75k	125.187k

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

Result

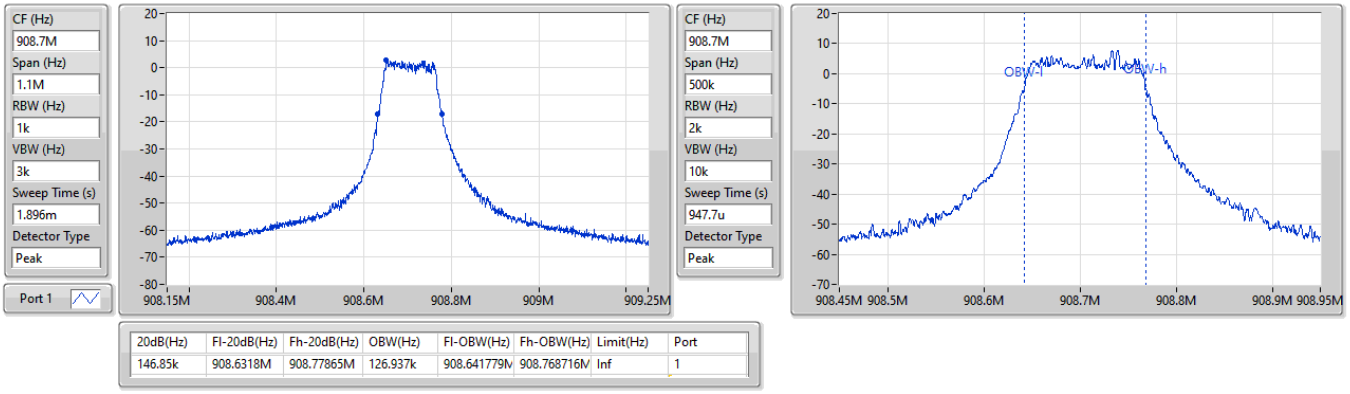
Mode	Result	Limit	Port 1-N dB	Port 1-OBW
		(Hz)	(Hz)	(Hz)
LoRa (125kHz)	-	-	-	-
902.3MHz	Pass	Inf	146.3k	125.187k
908.7MHz	Pass	Inf	146.85k	126.937k
914.9MHz	Pass	Inf	145.75k	128.936k

Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

902-928MHz_LoRa (125kHz) **EBW-FS**

908.7MHz

14/01/2025



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
146.85k	908.6318M	908.77865M	126.937k	908.641779M	908.768716M	Inf	1

Summary

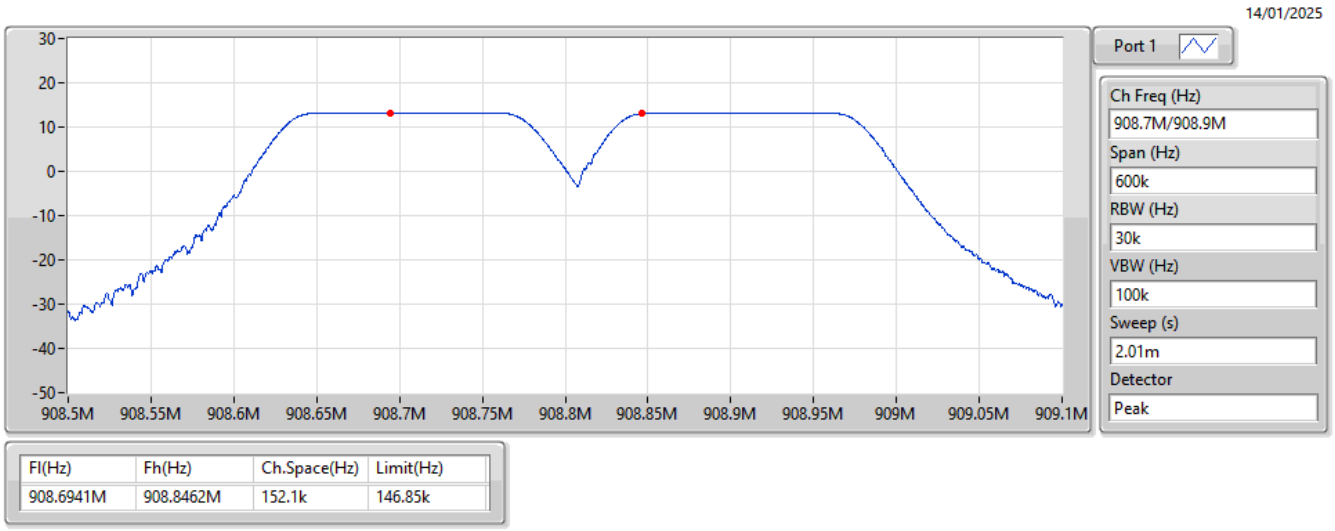
Mode	Max-Space	Min-Space
	(Hz)	(Hz)
902-928MHz	-	-
LoRa (125kHz)	188.7k	152.1k

Result

Mode	Result	Fl	Fh	Ch.Space	Limit
		(Hz)	(Hz)	(Hz)	(Hz)
LoRa (125kHz)	-	-	-	-	-
902.3MHz	Pass	902.2581M	902.4468M	188.7k	146.3k
908.7MHz	Pass	908.6941M	908.8462M	152.1k	146.85k
914.9MHz	Pass	914.6776M	914.854M	176.4k	145.75k

902-928MHz_LoRa (125kHz) **Channel Separation-FS**

908.7M/908.9MHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
908.6941M	908.8462M	152.1k	146.85k

Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
902-928MHz	-	-	-	-	-
LoRa (500kHz)	621.25k	510.37k	510KF1D	621.25k	504.748k
902-928MHz	-	-	-	-	-
LoRa (500kHz)	621.875k	520.99k	521KF1D	621.25k	517.866k

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

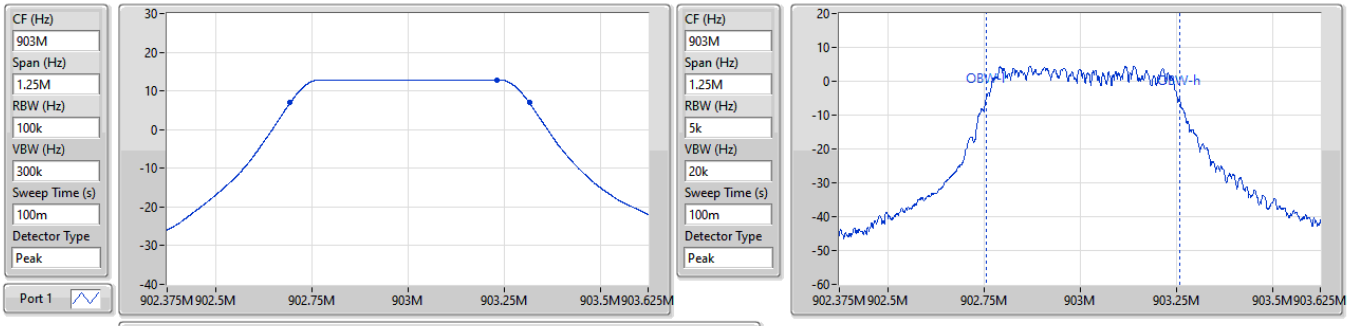
Mode	Result	Limit	Port 1-N dB	Port 1-OBW
		(Hz)	(Hz)	(Hz)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	500k	621.25k	504.748k
909.4MHz	Pass	500k	621.25k	510.37k
914.2MHz	Pass	500k	621.25k	509.745k
LoRa (500kHz)				
923.3MHz	Pass	500k	621.25k	520.99k
927.5MHz	Pass	500k	621.875k	517.866k

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

902-928MHz_LoRa (500kHz) **EBW-DTS**

903MHz

14/01/2025

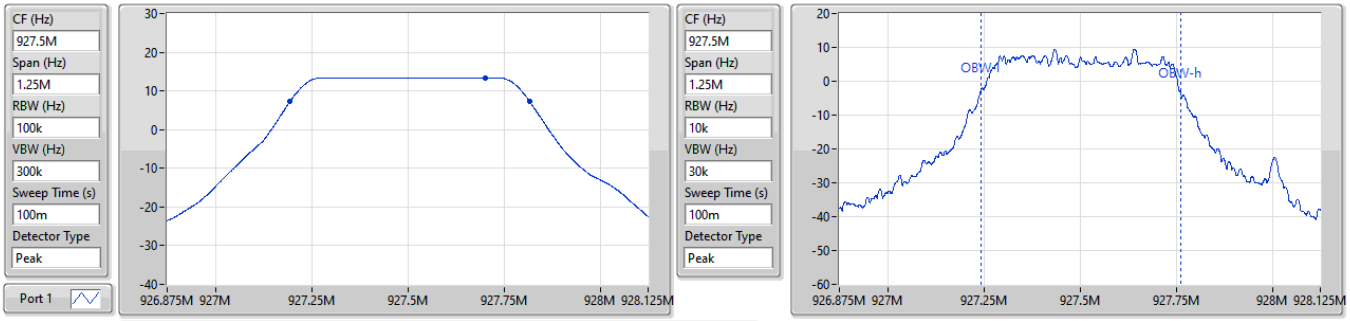


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
621.25k	902.695M	903.31625M	504.748k	902.755747M	903.260495M	500k	1

902-928MHz_LoRa (500kHz) **EBW-DTS**

927.5MHz

14/01/2025



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
621.875k	927.195M	927.816875M	517.866k	927.244503M	927.762369M	500k	1

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
902-928MHz	-	-
LoRa (125kHz)	13.40	0.02188

Result

Mode	Result	DG	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)
LoRa (125kHz)	-	-	-	-
902.3MHz	Pass	2.60	13.16	30.00
908.7MHz	Pass	2.60	13.29	30.00
914.9MHz	Pass	2.60	13.40	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
902-928MHz	-	-
LoRa (125kHz)	13.34	0.02158

Result

Mode	Result	DG	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)
LoRa (125kHz)	-	-	-	-
902.3MHz	Pass	2.60	13.10	30.00
908.7MHz	Pass	2.60	13.23	30.00
914.9MHz	Pass	2.60	13.34	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
902-928MHz	-	-
LoRa (500kHz)	13.39	0.02183
902-928MHz	-	-
LoRa (500kHz)	13.58	0.02280

Result

Mode	Result	DG	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	2.60	13.20	30.00
909.4MHz	Pass	2.60	13.31	30.00
914.2MHz	Pass	2.60	13.39	30.00
LoRa (500kHz)				
923.3MHz	Pass	2.60	13.52	30.00
927.5MHz	Pass	2.60	13.58	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
902-928MHz	-	-
LoRa (500kHz)	13.31	0.02143
902-928MHz	-	-
LoRa (500kHz)	13.46	0.02218

Result

Mode	Result	DG	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	2.60	13.10	30.00
909.4MHz	Pass	2.60	13.24	30.00
914.2MHz	Pass	2.60	13.31	30.00
LoRa (500kHz)				
923.3MHz	Pass	2.60	13.46	30.00
927.5MHz	Pass	2.60	13.45	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	PD
	(dBm/RBW)
902-928MHz	-
LoRa (500kHz)	0.40
902-928MHz	-
LoRa (500kHz)	0.83

RBW = 3kHz;

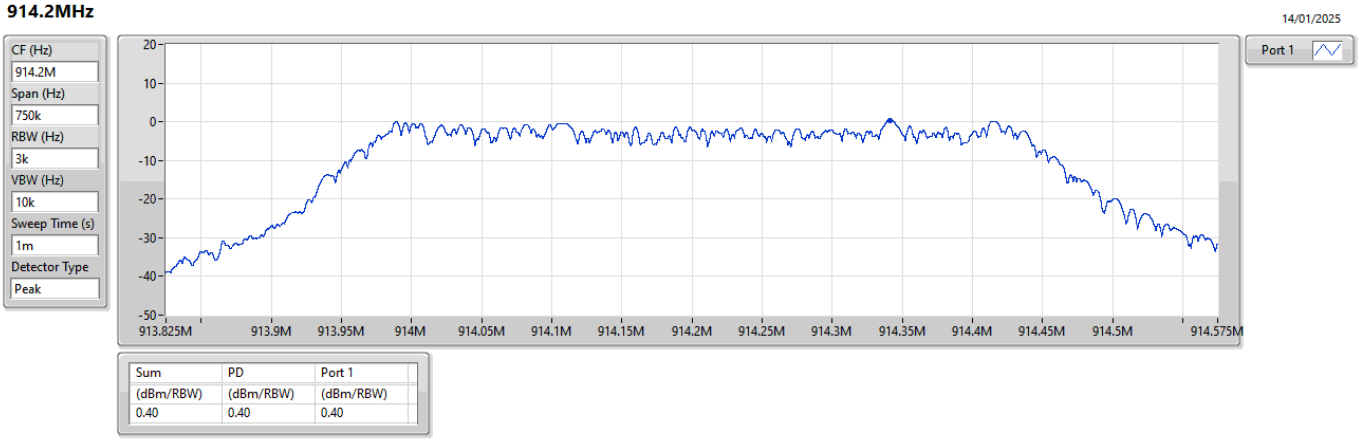
Result

Mode	Result	DG	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	2.60	-0.05	8.00
909.4MHz	Pass	2.60	0.28	8.00
914.2MHz	Pass	2.60	0.40	8.00
LoRa (500kHz)				
923.3MHz	Pass	2.60	0.51	8.00
927.5MHz	Pass	2.60	0.83	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;
Inf = There's no restriction for the limit.

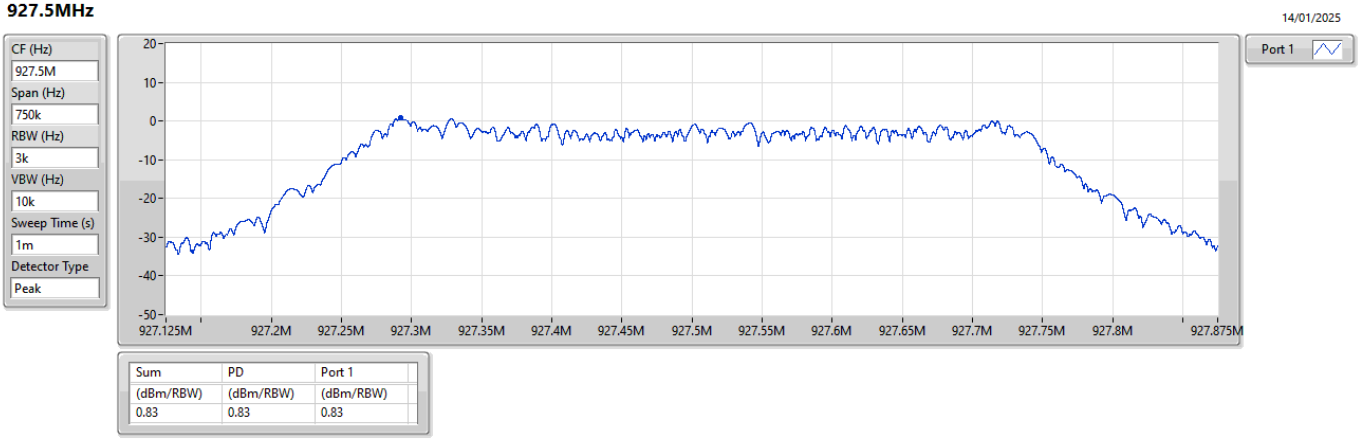
902-928MHz_LoRa (500kHz) **PSD**

914.2MHz



902-928MHz_LoRa (500kHz) **PSD**

927.5MHz



Summary

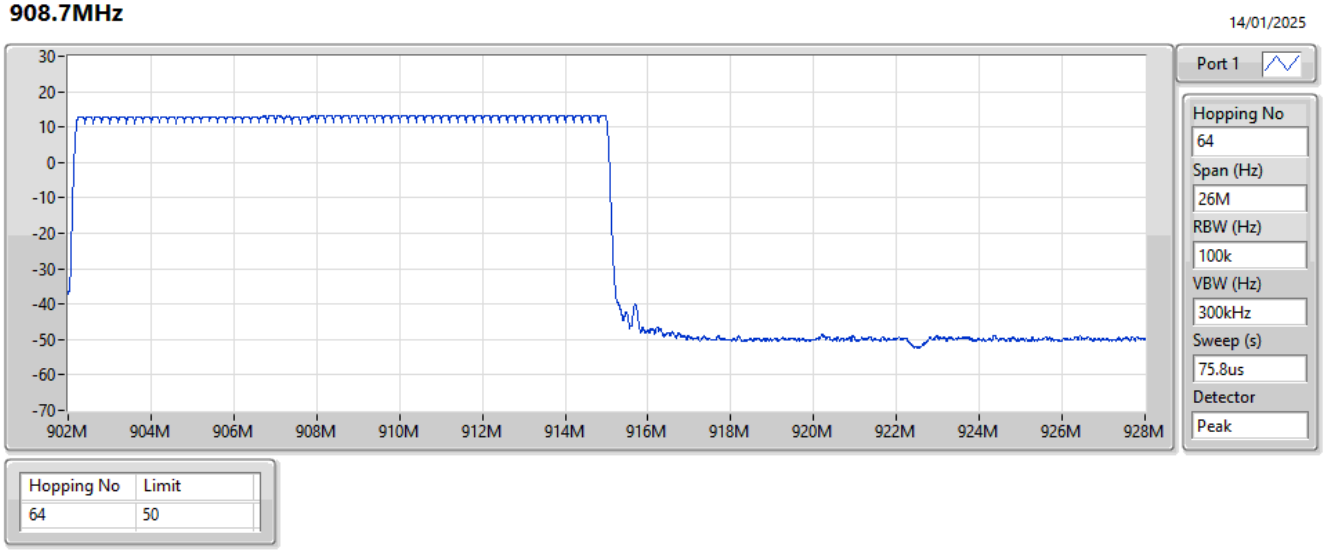
Mode	Max-Hop No
902-928MHz	-
LoRa (125kHz)	64

Result

Mode	Result	Hopping No	Limit
LoRa (125kHz)	-	-	-
908.7MHz	Pass	64	50

902-928MHz_LoRa (125kHz) **Hopping-FS**

908.7MHz

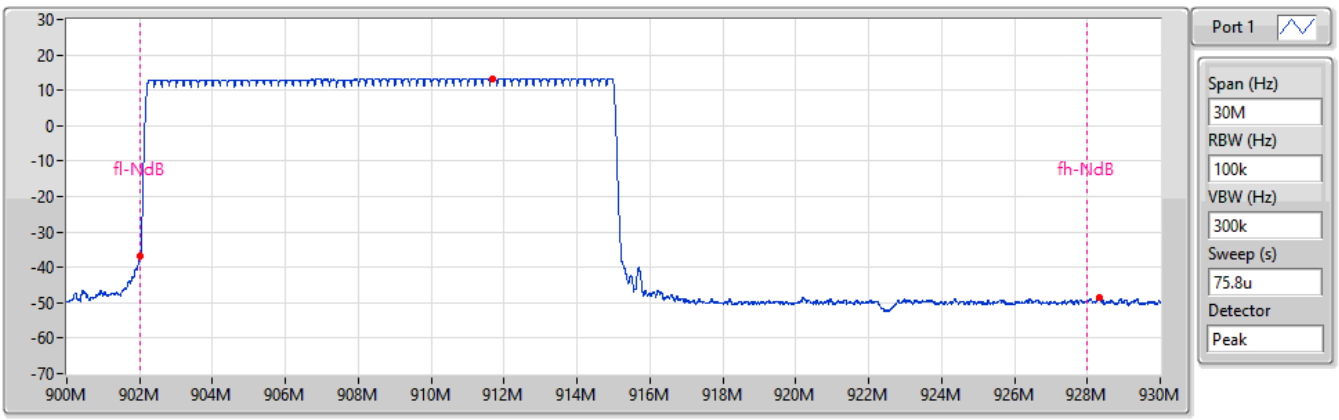


Hopping No	Limit
64	50

902-928MHz_LoRa (125kHz)

908.7MHz

Hopping Ch Bandedge (Non-restricted Band)



Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-6.83	911.67375M	13.17	901.99875M	-36.81	928.32M	-48.69

Summary

Mode	Dwell
902-928MHz	**(s)**
LoRa (125kHz)	390.45m

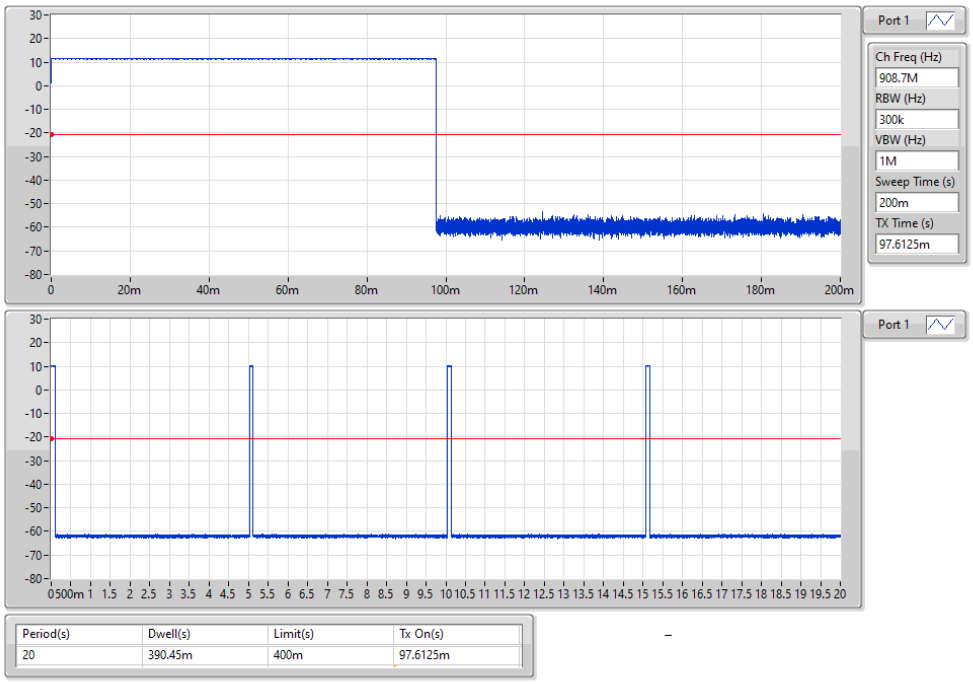
Result

Mode	Result	Period	Dwell	Limit	Tx On
		(s)	(s)	(s)	(s)
LoRa (125kHz)	-	-	-	-	-
908.7MHz	Pass	20	390.45m	400m	97.6125m

902-928MHz_LoRa (125kHz) **Dwell-FS**

908.7MHz

21/01/2025



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
20	390.45m	400m	97.6125m

Summary

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
902-928MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LoRa (125kHz)	Pass	902.31M	12.84	-7.16	845.79M	-55.52	902M	-38.15	902M	-30.05	934.36M	-54.01	6.95513G	-46.27	1

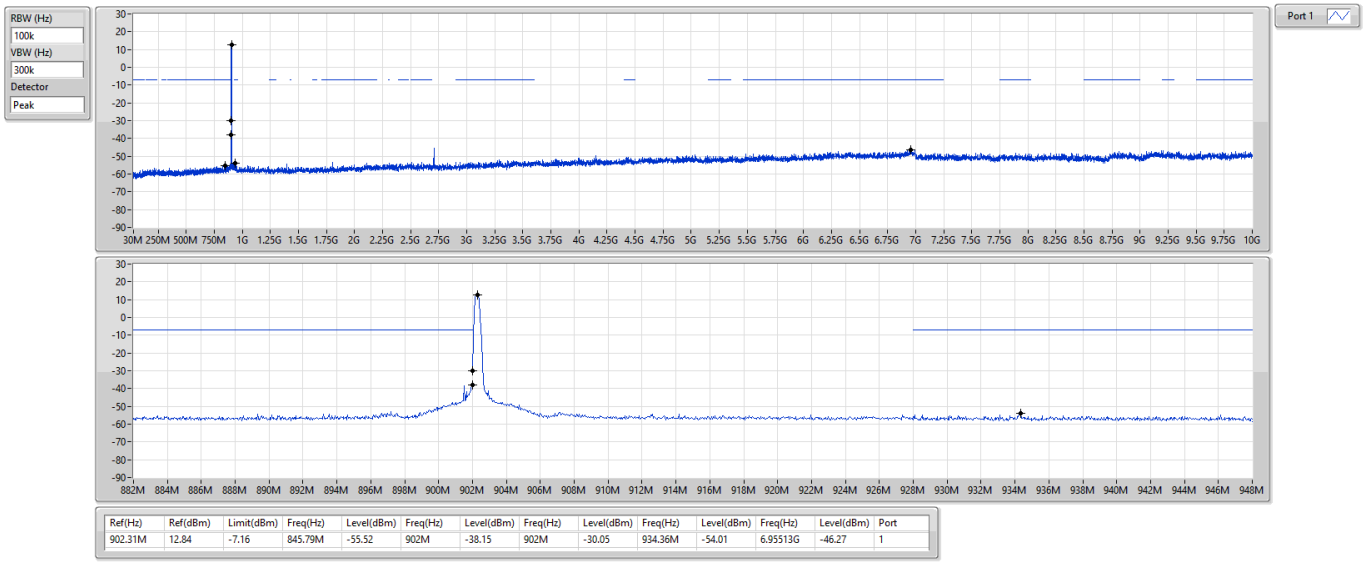
Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
LoRa (125kHz)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
902.3MHz	Pass	902.31M	12.84	-7.16	845.79M	-55.52	902M	-38.15	902M	-30.05	934.36M	-54.01	6.95513G	-46.27	1
908.7MHz	Pass	908.66M	12.96	-7.04	734.18M	-55.20	901.84M	-53.77	928M	-56.78	940.72M	-54.17	6.96758G	-45.46	1
914.9MHz	Pass	914.9M	13.09	-6.91	824.06M	-55.85	882.84M	-53.24	928M	-56.16	946.88M	-54.53	6.57042G	-46.43	1

902-928MHz_LoRa (125kHz) CSENdB-FS

902.3MHz

14/01/2025



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
902.31M	12.84	-7.16	845.79M	-55.52	902M	-38.15	902M	-30.05	934.36M	-54.01	6.95513G	-46.27	1

Summary

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
902-928MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LoRa (500kHz)	Pass	902.99M	12.88	-7.12	797.23M	-55.32	901.04M	-34.40	902M	-35.06	935.12M	-53.37	8.77119G	-46.07	1
902-928MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LoRa (500kHz)	Pass	927.38M	13.33	-6.67	828.75M	-56.00	895.56M	-53.88	928M	-9.53	928M	-14.07	9.97171G	-46.15	1

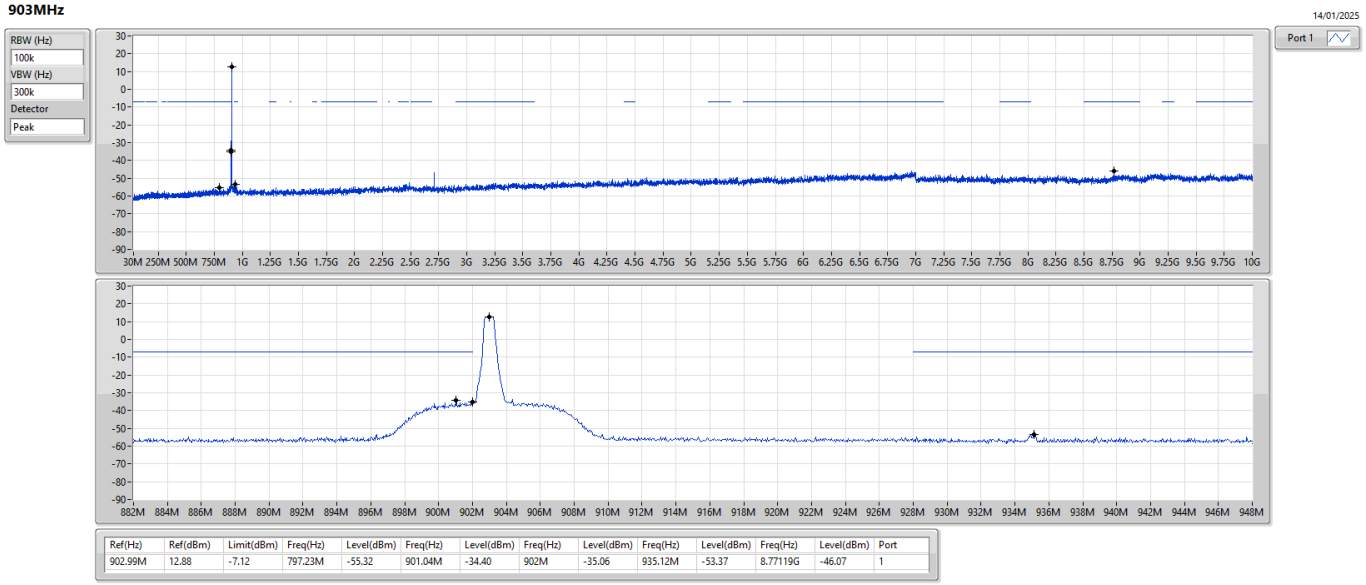
Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
903MHz	Pass	902.99M	12.88	-7.12	797.23M	-55.32	901.04M	-34.40	902M	-35.06	935.12M	-53.37	8.77119G	-46.07	1
909.4MHz	Pass	909.23M	13.03	-6.97	826.19M	-55.10	901.2M	-54.17	902M	-55.68	941.32M	-53.90	9.2419G	-46.25	1
914.2MHz	Pass	913.96M	13.13	-6.87	868.37M	-55.66	882.04M	-53.83	928M	-55.93	946.2M	-52.97	6.94495G	-46.44	1
LoRa (500kHz)															
923.3MHz	Pass	923.37M	13.28	-6.72	835.99M	-55.60	891.2M	-53.74	928M	-43.98	928.16M	-43.49	6.96532G	-46.26	1
927.5MHz	Pass	927.38M	13.33	-6.67	828.75M	-56.00	895.56M	-53.88	928M	-9.53	928M	-14.07	9.97171G	-46.15	1

902-928MHz_LoRa (500kHz)

CSENdB-DTS

903MHz

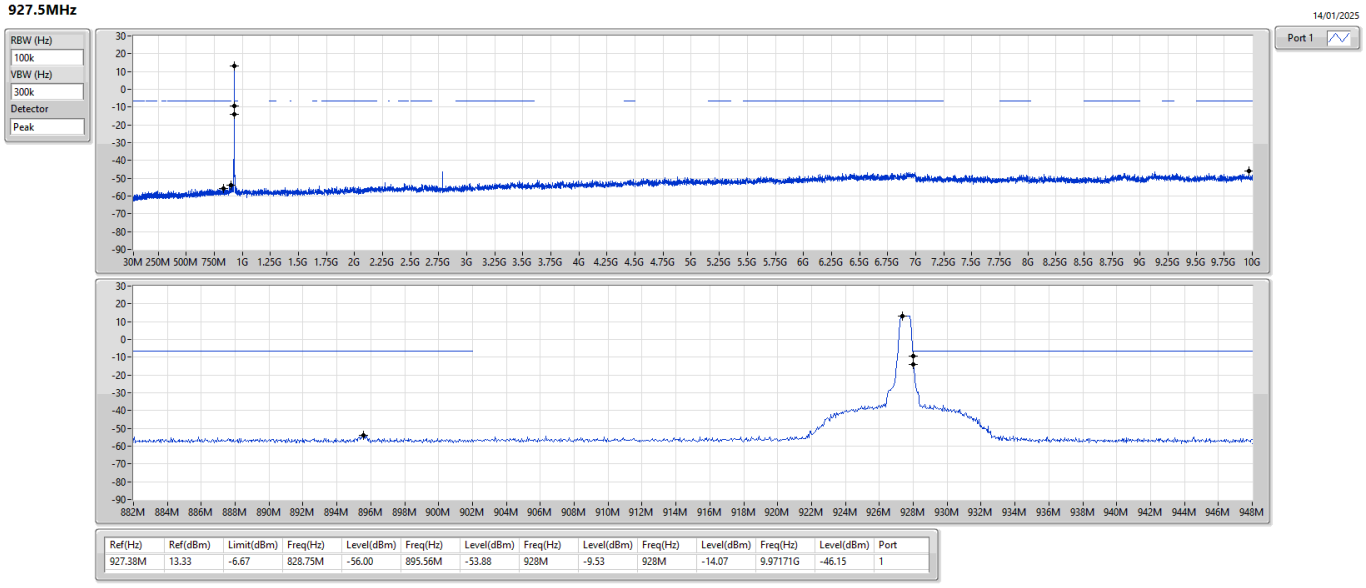


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
902.99M	12.88	-7.12	797.23M	-55.32	901.04M	-34.40	902M	-35.06	935.12M	-53.37	8.77119G	-46.07	1

902-928MHz_LoRa (500kHz)

CSENdB-DTS

927.5MHz



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
927.38M	13.33	-6.67	828.75M	-56.00	895.56M	-53.88	928M	-9.53	928M	-14.07	9.97171G	-46.15	1

Summary

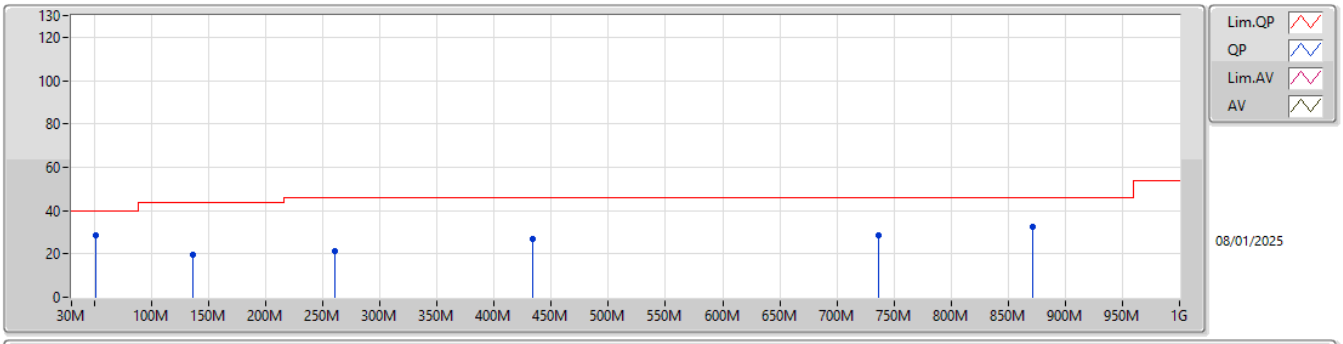
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
902-928MHz	-	-	-	-	-	-	-	-	-	-
LoRa (125kHz)	Pass	PK	870.02M	41.78	46.00	-4.22	3	Horizontal	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
LoRa (125kHz)	-	-	-	-	-	-	-	-	-	-
902.3MHz	Pass	PK	51.34M	28.47	40.00	-11.53	3	Vertical	360	1.00
902.3MHz	Pass	PK	136.7M	19.57	43.50	-23.93	3	Vertical	360	1.00
902.3MHz	Pass	PK	260.86M	21.02	46.00	-24.98	3	Vertical	360	1.00
902.3MHz	Pass	PK	433.52M	27.16	46.00	-18.84	3	Vertical	360	1.00
902.3MHz	Pass	PK	736.16M	28.39	46.00	-17.61	3	Vertical	360	1.00
902.3MHz	Pass	PK	871.96M	32.34	46.00	-13.66	3	Vertical	360	1.00
902.3MHz	Pass	PK	30M	24.48	40.00	-15.52	3	Horizontal	0	1.00
902.3MHz	Pass	PK	115.36M	19.34	43.50	-24.16	3	Horizontal	0	1.00
902.3MHz	Pass	PK	270.56M	29.85	46.00	-16.15	3	Horizontal	0	1.00
902.3MHz	Pass	PK	427.7M	35.37	46.00	-10.63	3	Horizontal	0	1.00
902.3MHz	Pass	PK	790.48M	39.73	46.00	-6.27	3	Horizontal	0	1.00
902.3MHz	Pass	PK	870.02M	41.78	46.00	-4.22	3	Horizontal	0	1.00

902-928MHz_LoRa (125kHz)

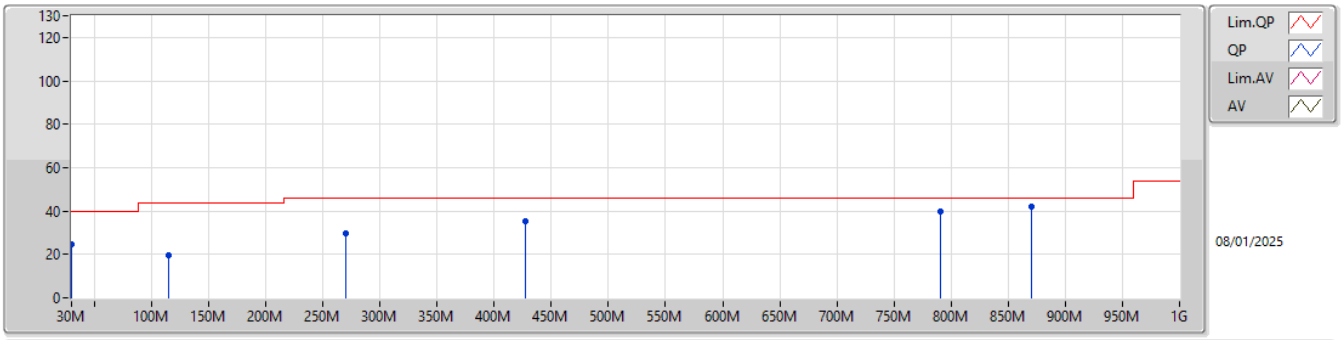
902.3MHz_Battery



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)
PK	51.34M	28.47	40.00	-11.53	-12.24	3	Vertical	360	1.00	40.71	12.37	1.42	26.03
PK	136.7M	19.57	43.50	-23.93	-8.98	3	Vertical	360	1.00	28.55	16.24	2.34	27.56
PK	260.86M	21.02	46.00	-24.98	-5.39	3	Vertical	360	1.00	26.41	18.36	3.30	27.05
PK	433.52M	27.16	46.00	-18.84	-2.44	3	Vertical	360	1.00	29.60	21.22	4.30	27.96
PK	736.16M	28.39	46.00	-17.61	1.78	3	Vertical	360	1.00	26.61	24.10	5.77	28.09
PK	871.96M	32.34	46.00	-13.66	3.58	3	Vertical	360	1.00	28.76	24.89	6.30	27.61

902-928MHz_LoRa (125kHz)

902.3MHz_Battery



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)
PK	30M	24.48	40.00	-15.52	-3.12	3	Horizontal	0	1.00	27.60	23.18	1.09	27.39
PK	115.36M	19.34	43.50	-24.16	-8.70	3	Horizontal	0	1.00	28.04	16.76	2.15	27.61
PK	270.56M	29.85	46.00	-16.15	-6.20	3	Horizontal	0	1.00	36.05	17.48	3.36	27.04
PK	427.7M	35.37	46.00	-10.63	-2.46	3	Horizontal	0	1.00	37.83	21.20	4.27	27.93
PK	790.48M	39.73	46.00	-6.27	2.41	3	Horizontal	0	1.00	37.32	24.33	6.02	27.94
PK	870.02M	41.78	46.00	-4.22	3.55	3	Horizontal	0	1.00	38.23	24.88	6.29	27.62

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
902-928MHz	-	-	-	-	-	-	-	-	-	-
LoRa (125kHz)	Pass	AV	2.72612G	49.62	54.00	-4.38	3	Horizontal	234	1.14
LoRa (500kHz)	Pass	AV	2.78251G	45.91	54.00	-8.09	3	Horizontal	233	1.13
LoRa (500kHz)	Pass	AV	2.72829G	46.17	54.00	-7.83	3	Horizontal	236	1.12

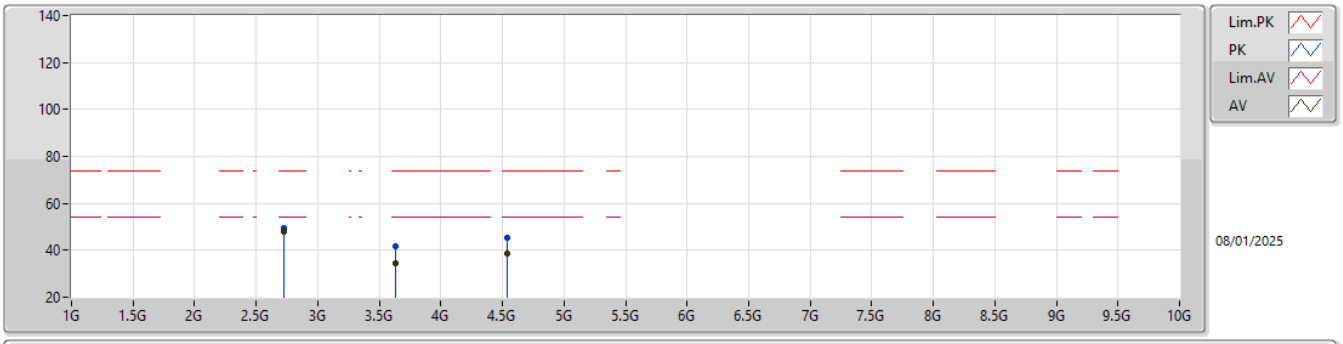
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
LoRa (125kHz)	-	-	-	-	-	-	-	-	-	-
902.3MHz	Pass	AV	2.7069G	45.70	54.00	-8.30	3	Vertical	117	2.57
902.3MHz	Pass	AV	3.60921G	35.77	54.00	-18.23	3	Vertical	335	1.24
902.3MHz	Pass	AV	4.5115G	39.70	54.00	-14.30	3	Vertical	187	1.00
902.3MHz	Pass	PK	2.7069G	48.00	74.00	-26.00	3	Vertical	117	2.57
902.3MHz	Pass	PK	3.6091G	42.29	74.00	-31.71	3	Vertical	335	1.24
902.3MHz	Pass	PK	4.51158G	45.25	74.00	-28.75	3	Vertical	187	1.00
902.3MHz	Pass	AV	2.70691G	48.85	54.00	-5.15	3	Horizontal	232	1.00
902.3MHz	Pass	AV	3.61052G	25.44	54.00	-28.56	3	Horizontal	208	1.50
902.3MHz	Pass	AV	4.51096G	26.88	54.00	-27.12	3	Horizontal	16	1.50
902.3MHz	Pass	PK	2.70694G	50.67	74.00	-23.33	3	Horizontal	232	1.00
902.3MHz	Pass	PK	3.60772G	38.68	74.00	-35.32	3	Horizontal	208	1.50
902.3MHz	Pass	PK	4.51285G	40.03	74.00	-33.97	3	Horizontal	16	1.50
908.7MHz	Pass	AV	2.7261G	47.70	54.00	-6.30	3	Vertical	183	1.04
908.7MHz	Pass	AV	3.63479G	34.45	54.00	-19.55	3	Vertical	180	1.05
908.7MHz	Pass	AV	4.54352G	38.73	54.00	-15.27	3	Vertical	76	1.08
908.7MHz	Pass	PK	2.7259G	49.65	74.00	-24.35	3	Vertical	183	1.04
908.7MHz	Pass	PK	3.63505G	41.95	74.00	-32.05	3	Vertical	180	1.05
908.7MHz	Pass	PK	4.54342G	45.09	74.00	-28.91	3	Vertical	76	1.08
908.7MHz	Pass	AV	2.72612G	49.62	54.00	-4.38	3	Horizontal	234	1.14
908.7MHz	Pass	AV	3.63481G	34.47	54.00	-19.53	3	Horizontal	214	1.26
908.7MHz	Pass	AV	4.54352G	39.50	54.00	-14.50	3	Horizontal	220	1.22
908.7MHz	Pass	PK	2.72597G	51.34	74.00	-22.66	3	Horizontal	234	1.14
908.7MHz	Pass	PK	3.6346G	41.80	74.00	-32.20	3	Horizontal	214	1.26
908.7MHz	Pass	PK	4.54379G	45.70	74.00	-28.30	3	Horizontal	220	1.22
914.9MHz	Pass	AV	2.74471G	46.25	54.00	-7.75	3	Vertical	133	1.05
914.9MHz	Pass	AV	3.6596G	34.28	54.00	-19.72	3	Vertical	165	1.22
914.9MHz	Pass	AV	4.57454G	38.30	54.00	-15.70	3	Vertical	168	2.91
914.9MHz	Pass	PK	2.7446G	48.60	74.00	-25.40	3	Vertical	133	1.05
914.9MHz	Pass	PK	3.6599G	42.02	74.00	-31.98	3	Vertical	165	1.22
914.9MHz	Pass	PK	4.57428G	44.45	74.00	-29.55	3	Vertical	168	2.91
914.9MHz	Pass	AV	2.7447G	48.74	54.00	-5.26	3	Horizontal	235	1.13
914.9MHz	Pass	AV	3.65961G	34.72	54.00	-19.28	3	Horizontal	272	1.00
914.9MHz	Pass	AV	4.57452G	40.37	54.00	-13.63	3	Horizontal	268	1.00
914.9MHz	Pass	PK	2.74475G	50.76	74.00	-23.24	3	Horizontal	235	1.13
914.9MHz	Pass	PK	3.65982G	42.58	74.00	-31.42	3	Horizontal	272	1.00
914.9MHz	Pass	PK	4.57418G	46.07	74.00	-27.93	3	Horizontal	268	1.00
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-
903MHz	Pass	AV	2.70893G	42.49	54.00	-11.51	3	Vertical	132	1.49
903MHz	Pass	AV	3.61188G	32.22	54.00	-21.78	3	Vertical	332	1.07
903MHz	Pass	AV	4.5148G	33.56	54.00	-20.44	3	Vertical	172	1.08
903MHz	Pass	PK	2.70938G	48.06	74.00	-25.94	3	Vertical	132	1.49
903MHz	Pass	PK	3.61248G	42.79	74.00	-31.21	3	Vertical	332	1.07
903MHz	Pass	PK	4.51486G	44.52	74.00	-29.48	3	Vertical	172	1.08
903MHz	Pass	AV	2.70905G	45.81	54.00	-8.19	3	Horizontal	237	1.14
903MHz	Pass	AV	3.61201G	31.33	54.00	-22.67	3	Horizontal	212	1.11
903MHz	Pass	AV	4.51464G	33.46	54.00	-20.54	3	Horizontal	222	1.34
903MHz	Pass	PK	2.70907G	50.87	74.00	-23.13	3	Horizontal	237	1.14
903MHz	Pass	PK	3.61164G	41.99	74.00	-32.01	3	Horizontal	212	1.11
903MHz	Pass	PK	4.51484G	44.38	74.00	-29.62	3	Horizontal	222	1.34
909.4MHz	Pass	AV	2.72819G	43.27	54.00	-10.73	3	Vertical	257	1.05
909.4MHz	Pass	AV	3.63757G	31.34	54.00	-22.66	3	Vertical	332	1.05
909.4MHz	Pass	AV	4.54673G	33.61	54.00	-20.39	3	Vertical	173	1.06
909.4MHz	Pass	PK	2.72886G	48.95	74.00	-25.05	3	Vertical	257	1.05
909.4MHz	Pass	PK	3.63803G	41.95	74.00	-32.05	3	Vertical	332	1.05
909.4MHz	Pass	PK	4.54781G	44.65	74.00	-29.35	3	Vertical	173	1.06
909.4MHz	Pass	AV	2.72829G	46.17	54.00	-7.83	3	Horizontal	236	1.12
909.4MHz	Pass	AV	3.63759G	31.18	54.00	-22.82	3	Horizontal	210	1.00
909.4MHz	Pass	AV	4.54668G	35.14	54.00	-18.86	3	Horizontal	266	1.06
909.4MHz	Pass	PK	2.72882G	51.26	74.00	-22.74	3	Horizontal	236	1.12
909.4MHz	Pass	PK	3.6377G	41.78	74.00	-32.22	3	Horizontal	210	1.00

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
909.4MHz	Pass	PK	4.54753G	45.91	74.00	-28.09	3	Horizontal	266	1.06
914.2MHz	Pass	AV	2.74262G	43.83	54.00	-10.17	3	Vertical	248	1.00
914.2MHz	Pass	AV	3.65684G	31.13	54.00	-22.87	3	Vertical	332	1.00
914.2MHz	Pass	AV	4.57076G	33.33	54.00	-20.67	3	Vertical	174	1.23
914.2MHz	Pass	PK	2.74216G	49.22	74.00	-24.78	3	Vertical	248	1.00
914.2MHz	Pass	PK	3.65737G	41.57	74.00	-32.43	3	Vertical	332	1.00
914.2MHz	Pass	PK	4.57154G	44.39	74.00	-29.61	3	Vertical	174	1.23
914.2MHz	Pass	AV	2.74258G	40.05	54.00	-13.95	3	Horizontal	41	2.71
914.2MHz	Pass	AV	3.65664G	31.04	54.00	-22.96	3	Horizontal	214	1.06
914.2MHz	Pass	AV	4.57086G	34.97	54.00	-19.03	3	Horizontal	268	1.02
914.2MHz	Pass	PK	2.7427G	46.46	74.00	-27.54	3	Horizontal	41	2.71
914.2MHz	Pass	PK	3.65667G	42.01	74.00	-31.99	3	Horizontal	214	1.06
914.2MHz	Pass	PK	4.57004G	45.81	74.00	-28.19	3	Horizontal	268	1.02
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-
923.3MHz	Pass	AV	2.76997G	42.75	54.00	-11.25	3	Vertical	267	1.14
923.3MHz	Pass	AV	3.69313G	30.69	54.00	-23.31	3	Vertical	333	2.77
923.3MHz	Pass	AV	4.61614G	33.88	54.00	-20.12	3	Vertical	170	2.87
923.3MHz	Pass	PK	2.77038G	48.48	74.00	-25.52	3	Vertical	267	1.14
923.3MHz	Pass	PK	3.69381G	41.48	74.00	-32.52	3	Vertical	333	2.77
923.3MHz	Pass	PK	4.61553G	44.87	74.00	-29.13	3	Vertical	170	2.87
923.3MHz	Pass	AV	2.76997G	45.47	54.00	-8.53	3	Horizontal	231	1.11
923.3MHz	Pass	AV	3.69314G	31.10	54.00	-22.90	3	Horizontal	216	1.00
923.3MHz	Pass	AV	4.61676G	34.88	54.00	-19.12	3	Horizontal	266	1.04
923.3MHz	Pass	PK	2.7696G	50.68	74.00	-23.32	3	Horizontal	231	1.11
923.3MHz	Pass	PK	3.69226G	42.04	74.00	-31.96	3	Horizontal	216	1.00
923.3MHz	Pass	PK	4.6155G	45.61	74.00	-28.39	3	Horizontal	266	1.04
927.5MHz	Pass	AV	2.78258G	42.02	54.00	-11.98	3	Vertical	208	1.00
927.5MHz	Pass	AV	3.70977G	30.59	54.00	-23.41	3	Vertical	342	1.00
927.5MHz	Pass	AV	4.63695G	34.22	54.00	-19.78	3	Vertical	175	1.06
927.5MHz	Pass	PK	2.78305G	47.93	74.00	-26.07	3	Vertical	208	1.00
927.5MHz	Pass	PK	3.70933G	41.89	74.00	-32.11	3	Vertical	342	1.00
927.5MHz	Pass	PK	4.63809G	44.93	74.00	-29.07	3	Vertical	175	1.06
927.5MHz	Pass	AV	2.78251G	45.91	54.00	-8.09	3	Horizontal	233	1.13
927.5MHz	Pass	AV	3.71001G	31.09	54.00	-22.91	3	Horizontal	218	1.00
927.5MHz	Pass	AV	4.6373G	34.64	54.00	-19.36	3	Horizontal	227	1.00
927.5MHz	Pass	PK	2.78275G	50.84	74.00	-23.16	3	Horizontal	233	1.13
927.5MHz	Pass	PK	3.70964G	41.88	74.00	-32.12	3	Horizontal	218	1.00
927.5MHz	Pass	PK	4.63842G	45.56	74.00	-28.44	3	Horizontal	227	1.00

902-928MHz_LoRa (125kHz)

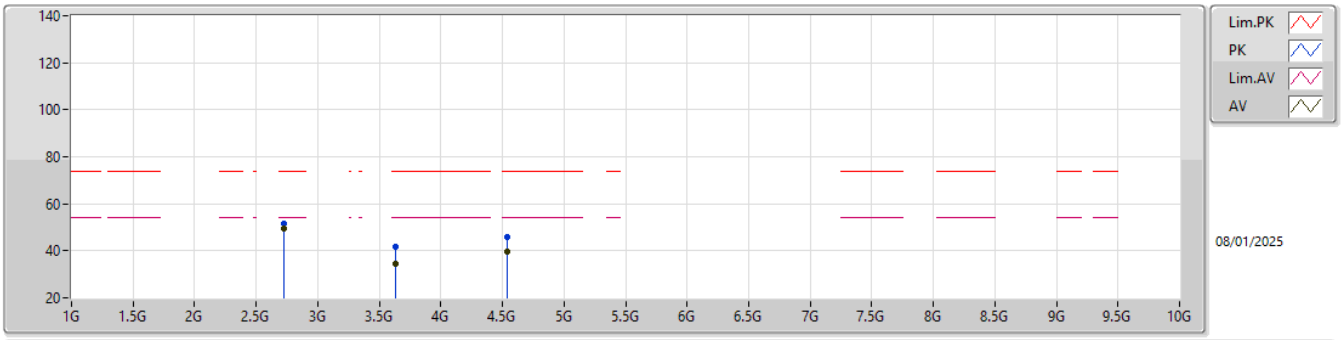
908.7MHz_TX



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	2.7261G	47.70	54.00	-6.30	-1.93	3	Vertical	183	1.04	49.63	28.34	4.90	35.17
AV	3.63479G	34.45	54.00	-19.55	0.12	3	Vertical	180	1.05	34.33	29.57	5.74	35.19
AV	4.54352G	38.73	54.00	-15.27	2.89	3	Vertical	76	1.08	35.84	31.59	6.34	35.04
PK	2.7259G	49.65	74.00	-24.35	-1.93	3	Vertical	183	1.04	51.58	28.34	4.90	35.17
PK	3.63505G	41.95	74.00	-32.05	0.12	3	Vertical	180	1.05	41.83	29.57	5.74	35.19
PK	4.54342G	45.09	74.00	-28.91	2.89	3	Vertical	76	1.08	42.20	31.59	6.34	35.04

902-928MHz_LoRa (125kHz)

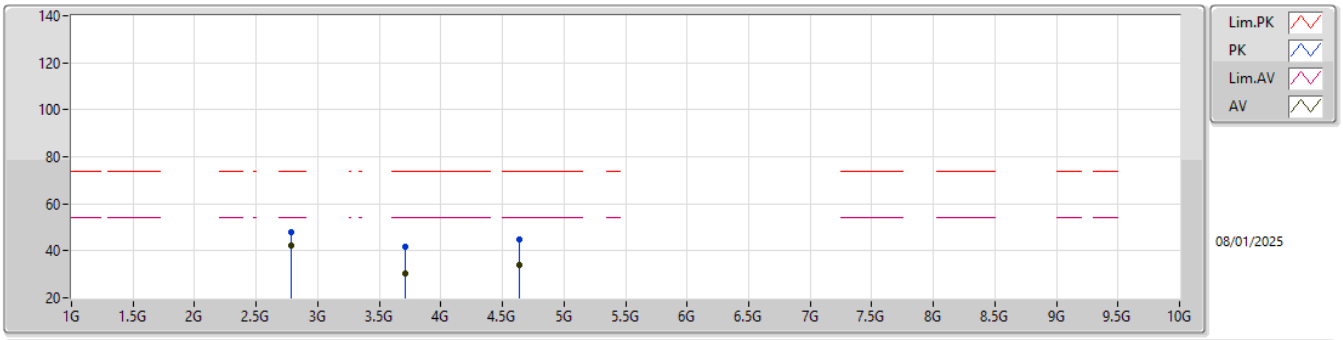
908.7MHz_TX



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	2.72612G	49.62	54.00	-4.38	-1.93	3	Horizontal	234	1.14	51.55	28.34	4.90	35.17
AV	3.63481G	34.47	54.00	-19.53	0.12	3	Horizontal	214	1.26	34.35	29.57	5.74	35.19
AV	4.54352G	39.50	54.00	-14.50	2.89	3	Horizontal	220	1.22	36.61	31.59	6.34	35.04
PK	2.72597G	51.34	74.00	-22.66	-1.93	3	Horizontal	234	1.14	53.27	28.34	4.90	35.17
PK	3.6346G	41.80	74.00	-32.20	0.12	3	Horizontal	214	1.26	41.68	29.57	5.74	35.19
PK	4.54379G	45.70	74.00	-28.30	2.89	3	Horizontal	220	1.22	42.81	31.59	6.34	35.04

902-928MHz_LoRa (500kHz)

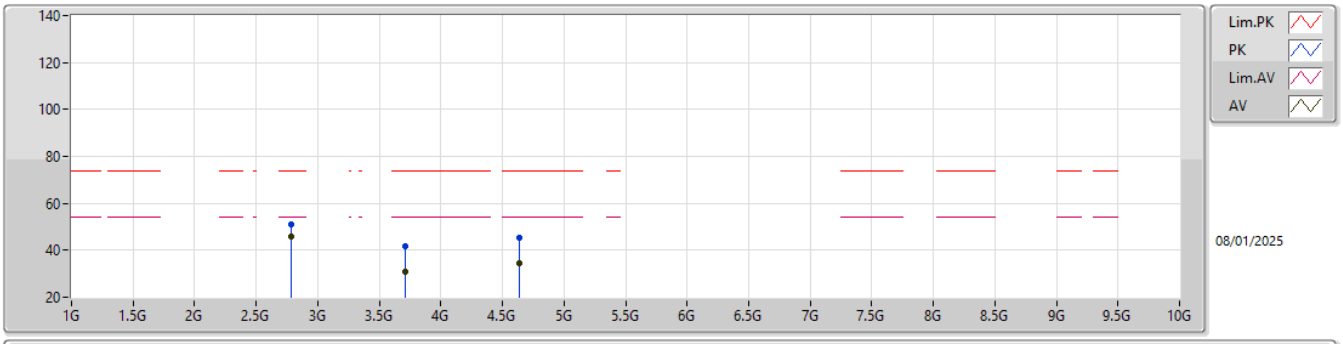
927.5MHz_TX



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	2.78258G	42.02	54.00	-11.98	-1.82	3	Vertical	208	1.00	43.84	28.40	4.96	35.18
AV	3.70977G	30.59	54.00	-23.41	0.50	3	Vertical	342	1.00	30.09	29.86	5.80	35.16
AV	4.63695G	34.22	54.00	-19.78	3.02	3	Vertical	175	1.06	31.20	31.67	6.40	35.05
PK	2.78305G	47.93	74.00	-26.07	-1.82	3	Vertical	208	1.00	49.75	28.40	4.96	35.18
PK	3.70933G	41.89	74.00	-32.11	0.50	3	Vertical	342	1.00	41.39	29.86	5.80	35.16
PK	4.63809G	44.93	74.00	-29.07	3.03	3	Vertical	175	1.06	41.90	31.68	6.40	35.05

902-928MHz_LoRa (500kHz)

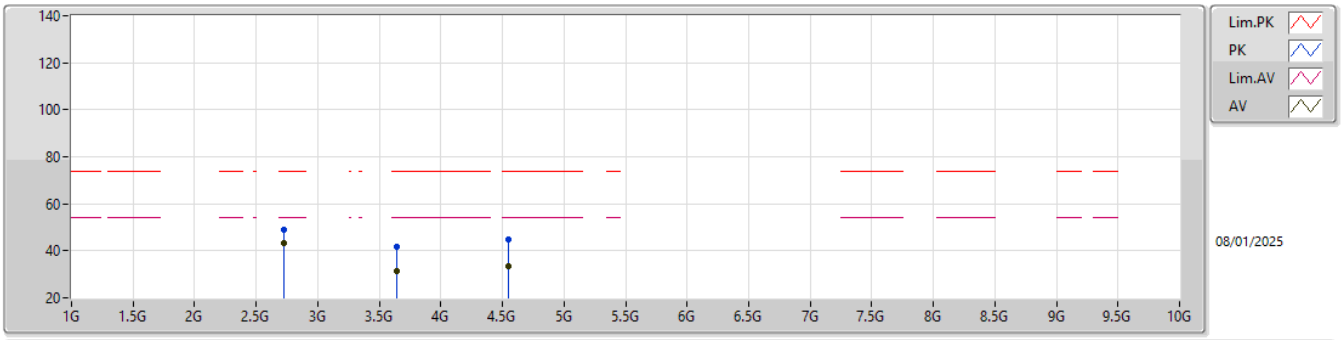
927.5MHz_TX



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	2.78251G	45.91	54.00	-8.09	-1.82	3	Horizontal	233	1.13	47.73	28.40	4.96	35.18
AV	3.71001G	31.09	54.00	-22.91	0.50	3	Horizontal	218	1.00	30.59	29.86	5.80	35.16
AV	4.6373G	34.64	54.00	-19.36	3.02	3	Horizontal	227	1.00	31.62	31.67	6.40	35.05
PK	2.78275G	50.84	74.00	-23.16	-1.82	3	Horizontal	233	1.13	52.66	28.40	4.96	35.18
PK	3.70964G	41.88	74.00	-32.12	0.50	3	Horizontal	218	1.00	41.38	29.86	5.80	35.16
PK	4.63842G	45.56	74.00	-28.44	3.03	3	Horizontal	227	1.00	42.53	31.68	6.40	35.05

902-928MHz_LoRa (500kHz)

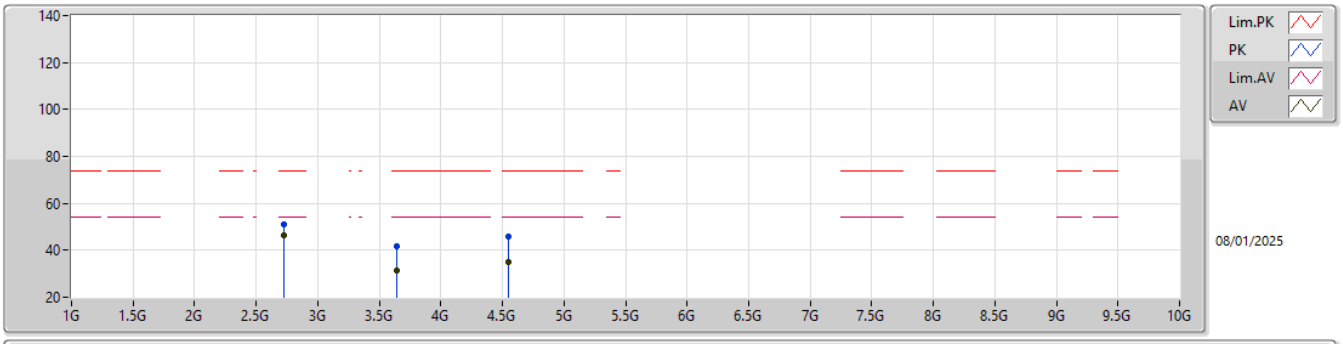
909.4MHz_TX



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	2.72819G	43.27	54.00	-10.73	-1.95	3	Vertical	257	1.05	45.22	28.32	4.90	35.17
AV	3.63757G	31.34	54.00	-22.66	0.14	3	Vertical	332	1.05	31.20	29.58	5.75	35.19
AV	4.54673G	33.61	54.00	-20.39	2.90	3	Vertical	173	1.06	30.71	31.59	6.35	35.04
PK	2.72886G	48.95	74.00	-25.05	-1.95	3	Vertical	257	1.05	50.90	28.31	4.91	35.17
PK	3.63803G	41.95	74.00	-32.05	0.14	3	Vertical	332	1.05	41.81	29.58	5.75	35.19
PK	4.54781G	44.65	74.00	-29.35	2.91	3	Vertical	173	1.06	41.74	31.60	6.35	35.04

902-928MHz_LoRa (500kHz)

909.4MHz_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	2.72829G	46.17	54.00	-7.83	-1.95	3	Horizontal	236	1.12	48.12	28.32	4.90	35.17
AV	3.63759G	31.18	54.00	-22.82	0.14	3	Horizontal	210	1.00	31.04	29.58	5.75	35.19
AV	4.54668G	35.14	54.00	-18.86	2.90	3	Horizontal	266	1.06	32.24	31.59	6.35	35.04
PK	2.72882G	51.26	74.00	-22.74	-1.95	3	Horizontal	236	1.12	53.21	28.31	4.91	35.17
PK	3.6377G	41.78	74.00	-32.22	0.14	3	Horizontal	210	1.00	41.64	29.58	5.75	35.19
PK	4.54753G	45.91	74.00	-28.09	2.91	3	Horizontal	266	1.06	43.00	31.60	6.35	35.04