



# FCC RF Test Report

APPLICANT : Ring LLC  
EQUIPMENT : Smart Controller  
BRAND NAME : ring  
MODEL NAME : 7AFYA8  
FCC ID : 2AEUP-7AFYA8  
STANDARD : FCC Part 15 Subpart C §15.247  
CLASSIFICATION : (DSS) Spread Spectrum Transmitter  
TEST DATE(S) : Nov. 01, 2025 ~ Dec. 09, 2025

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in 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. (ShenZhen), the test report shall not be reproduced except in full.

*Fly Liang*

Approved by: Fly Liang



**Sporton International Inc. (ShenZhen)**

**1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055**

**People's Republic of China**



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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION                                                                                                                                                                                                                                      | ISSUED DATE   |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| FR5N0308C  | Rev. 01 | Initial issue of report                                                                                                                                                                                                                          | Nov. 28, 2025 |
| FR5N0308C  | Rev. 02 | <p>1. Added note for F1 on Page 24,25</p> <p>2. Added Middle channel test data for RSE below 1GHz test and removed test data for Radiated Band Edges</p> <p>This report is an updated version, replacing the report issued on Nov. 28, 2025.</p> | Dec. 12, 2025 |
|            |         |                                                                                                                                                                                                                                                  |               |
|            |         |                                                                                                                                                                                                                                                  |               |
|            |         |                                                                                                                                                                                                                                                  |               |
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|            |         |                                                                                                                                                                                                                                                  |               |
|            |         |                                                                                                                                                                                                                                                  |               |
|            |         |                                                                                                                                                                                                                                                  |               |
|            |         |                                                                                                                                                                                                                                                  |               |

## SUMMARY OF TEST RESULT

| Report Section | FCC Rule           | Description                 | Limit                 | Result         | Remark                                    |
|----------------|--------------------|-----------------------------|-----------------------|----------------|-------------------------------------------|
| 3.1            | 15.247(a)(1)(i)    | Number of Channels          | 15.247(a)(1)(i)       | Pass           | -                                         |
| 3.2            | 15.247(a)(1)       | Hopping Channel Separation  | 20dB Bandwidth        | Pass           | -                                         |
| 0              | 15.247(a)(1)(i)    | Dwell Time of Each Channel  | $\leq 0.4\text{sec}$  | Pass           | -                                         |
| 3.4            | 15.247(a)(1)(i)    | 20dB Bandwidth              | $\leq 500\text{kHz}$  | Pass           | -                                         |
| 3.4            | -                  | 99% Bandwidth               | -                     | Report Only    | -                                         |
| 3.5            | 15.247(b)(2)       | Peak Output Power           | $\leq 1\text{W}$      | Pass           | -                                         |
| 3.6            | 15.247(d)          | Conducted Band Edges        | $\leq 20\text{dBc}$   | Pass           | -                                         |
| 3.7            | 15.247(d)          | Conducted Spurious Emission | $\leq 20\text{dBc}$   | Pass           | -                                         |
| 3.8            | 15.247(d)          | Radiated Spurious Emission  | 15.209(a) & 15.247(d) | Pass           | Under limit<br>7.08 dB at<br>2782.800 MHz |
| -              | 15.207             | AC Conducted Emission       | 15.207(a)             | Not Applicable | 1                                         |
| 3.10           | 15.203 & 15.247(b) | Antenna Requirement         | N/A                   | Pass           | -                                         |

**Remark1:** Powered by a button battery only.

**Conformity Assessment Condition:**

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



# 1 General Description

## 1.1 Applicant

Ring LLC

12515 Cerise Ave, Hawthorne, CA 90250, USA

## 1.2 Product Feature of Equipment Under Test

| Product Feature |                     |
|-----------------|---------------------|
| Equipment       | Smart Controller    |
| Brand Name      | ring                |
| Model Name      | 7AFYA8              |
| FCC ID          | 2AEUP-7AFYA8        |
| SN Code         | N/A                 |
| EUT Stage       | Identical Prototype |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.3 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------|
| Tx/Rx Frequency Range                   | 902 MHz ~ 928 MHz                                                                      |
| Number of Channels                      | 128                                                                                    |
| Bandwidth / Spreading Factor            | 125kHz / 7, 8, 9                                                                       |
| Maximum Output Power to Antenna         | SF7 : 11.75 dBm (0.0150 W)<br>SF8 : 11.70 dBm (0.0148 W)<br>SF9 : 11.72 dBm (0.0149 W) |
| 99% Occupied Bandwidth                  | SF7 : 0.128MHz                                                                         |
| Antenna Type / Gain                     | Metal Monopole Antenna with gain -3.51 dBi                                             |
| Type of Modulation                      | LoRa-FHSS                                                                              |

**Note:** For SF7/8/9 mode, the whole testing has assessed SF7 mode by referring to the higher conducted power.

## 1.4 Modification of EUT

No modifications are made to the EUT during all test items.



## 1.5 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

|                           |                                                                                                                                                                                                                 |                            |                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International Inc. (Shenzhen)                                                                                                                                                                           |                            |                                       |
| <b>Test Site Location</b> | 101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China<br>TEL: +86-755-86066985 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                                                         | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | TH01-SZ<br>03CH03-SZ                                                                                                                                                                                            | CN1256                     | 421272                                |

## 1.6 Test Software

| Item | Site      | Manufacturer | Name | Version     |
|------|-----------|--------------|------|-------------|
| 1.   | 03CH03-SZ | AUDIX        | E3   | 6.2009-8-24 |

## 1.7 Applicable Standards

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

- ♦ 47 CFR Part 15 Subpart C §15.247
- ♦ FCC KDB 558074 D01 15.247 Meas Guidance v05r02
- ♦ ANSI C63.10-2020

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



## 2 Test Configuration of Equipment Under Test

### 2.1 Carrier Frequency Channel

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|----------------|---------|-------------|---------|-------------|---------|-------------|
| 902-928 MHz    | 1       | 902.2       | 44      | 910.8       | 87      | 919.4       |
|                | 2       | 902.4       | 45      | 911         | 88      | 919.6       |
|                | 3       | 902.6       | 46      | 911.2       | 89      | 919.8       |
|                | 4       | 902.8       | 47      | 911.4       | 90      | 920         |
|                | 5       | 903         | 48      | 911.6       | 91      | 920.2       |
|                | 6       | 903.2       | 49      | 911.8       | 92      | 920.4       |
|                | 7       | 903.4       | 50      | 912         | 93      | 920.6       |
|                | 8       | 903.6       | 51      | 912.2       | 94      | 920.8       |
|                | 9       | 903.8       | 52      | 912.4       | 95      | 921         |
|                | 10      | 904         | 53      | 912.6       | 96      | 921.2       |
|                | 11      | 904.2       | 54      | 912.8       | 97      | 921.4       |
|                | 12      | 904.4       | 55      | 913         | 98      | 921.6       |
|                | 13      | 904.6       | 56      | 913.2       | 99      | 921.8       |
|                | 14      | 904.8       | 57      | 913.4       | 100     | 922         |
|                | 15      | 905         | 58      | 913.6       | 101     | 922.2       |
|                | 16      | 905.2       | 59      | 913.8       | 102     | 922.4       |
|                | 17      | 905.4       | 60      | 914         | 103     | 922.6       |
|                | 18      | 905.6       | 61      | 914.2       | 104     | 922.8       |
|                | 19      | 905.8       | 62      | 914.4       | 105     | 923         |
|                | 20      | 906         | 63      | 914.6       | 106     | 923.2       |
|                | 21      | 906.2       | 64      | 914.8       | 107     | 923.4       |
|                | 22      | 906.4       | 65      | 915         | 108     | 923.6       |
|                | 23      | 906.6       | 66      | 915.2       | 109     | 923.8       |
|                | 24      | 906.8       | 67      | 915.4       | 110     | 924         |
|                | 25      | 907         | 68      | 915.6       | 111     | 924.2       |
|                | 26      | 907.2       | 69      | 915.8       | 112     | 924.4       |
|                | 27      | 907.4       | 70      | 916         | 113     | 924.6       |
|                | 28      | 907.6       | 71      | 916.2       | 114     | 924.8       |
|                | 29      | 907.8       | 72      | 916.4       | 115     | 925         |
|                | 30      | 908         | 73      | 916.6       | 116     | 925.2       |
|                | 31      | 908.2       | 74      | 916.8       | 117     | 925.4       |
|                | 32      | 908.4       | 75      | 917         | 118     | 925.6       |
|                | 33      | 908.6       | 76      | 917.2       | 119     | 925.8       |
|                | 34      | 908.8       | 77      | 917.4       | 120     | 926         |
|                | 35      | 909         | 78      | 917.6       | 121     | 926.2       |
|                | 36      | 909.2       | 79      | 917.8       | 122     | 926.4       |
|                | 37      | 909.4       | 80      | 918         | 123     | 926.6       |
|                | 38      | 909.6       | 81      | 918.2       | 124     | 926.8       |
|                | 39      | 909.8       | 82      | 918.4       | 125     | 927         |
|                | 40      | 910         | 83      | 918.6       | 126     | 927.2       |
|                | 41      | 910.2       | 84      | 918.8       | 127     | 927.4       |
|                | 42      | 910.4       | 85      | 919         | 128     | 927.6       |
|                | 43      | 910.6       | 86      | 919.2       |         |             |

Note: The above EUT's information was declared by manufacturer.

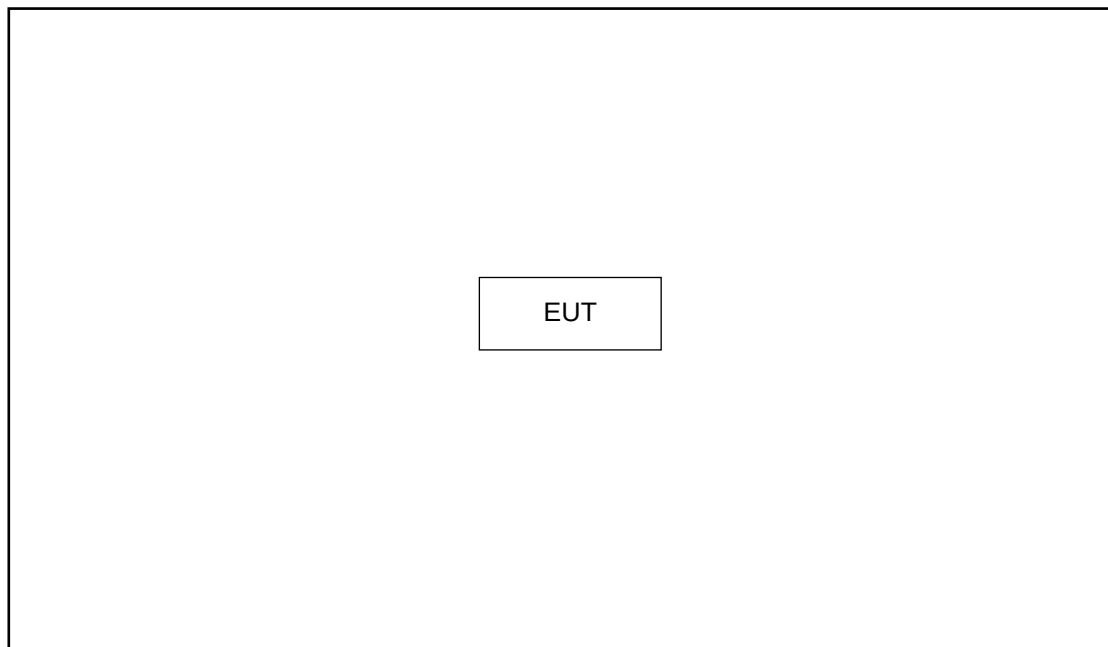
## 2.2 Test Mode

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

The following summary table is showing all test modes to demonstrate in compliance with the standard.

| Summary table of Test Cases |                               |
|-----------------------------|-------------------------------|
| Test Item                   | Modulation / Spreading Factor |
|                             | LoRa FHSS / SF7               |
| Conducted Test Cases        | Mode 1: CH1_902.2 MHz         |
|                             | Mode 2: CH65_915 MHz          |
|                             | Mode 3: CH128_927.6 MHz       |
| Radiated Test Cases         | Mode 1: CH1_902.2 MHz         |
|                             | Mode 2: CH65_915 MHz          |
|                             | Mode 3: CH128_927.6 MHz       |

## 2.3 Connection Diagram of Test System





## 2.4 EUT Operation Test Setup

For LoRa FHSS function, the engineering test program was provided and enabled to make EUT continuous transmit.

## 2.5 Measurement Results Explanation Example

### **For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 0.3 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 0.3 + 10 = 10.3 \text{ (dB)}\end{aligned}$$

### 3 Test Result

#### 3.1 Number of Channel Measurement

##### 3.1.1 Limits of Number of Hopping Frequency

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period

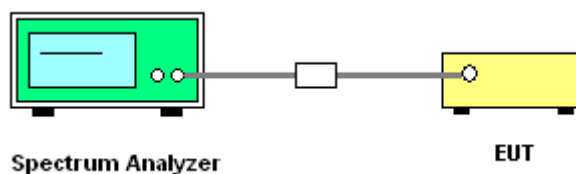
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedure

1. The testing follows ANSI C63.10-2020 clause 7.8.3.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings: Span = the frequency band of operation; RBW = 50kHz; VBW = 100KHz; Sweep = auto; Detector function = peak; Trace = max hold.
6. The number of hopping frequency used is defined as the number of total channel.
7. Record the measurement data derived from spectrum analyzer.

##### 3.1.4 Test Setup



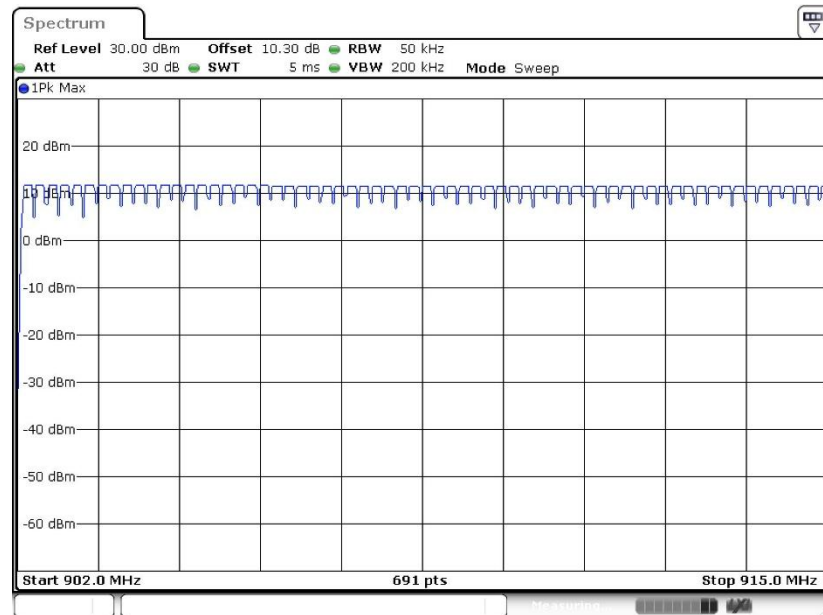
##### 3.1.5 Test Result of Number of Hopping Frequency

Please refer to Appendix A.

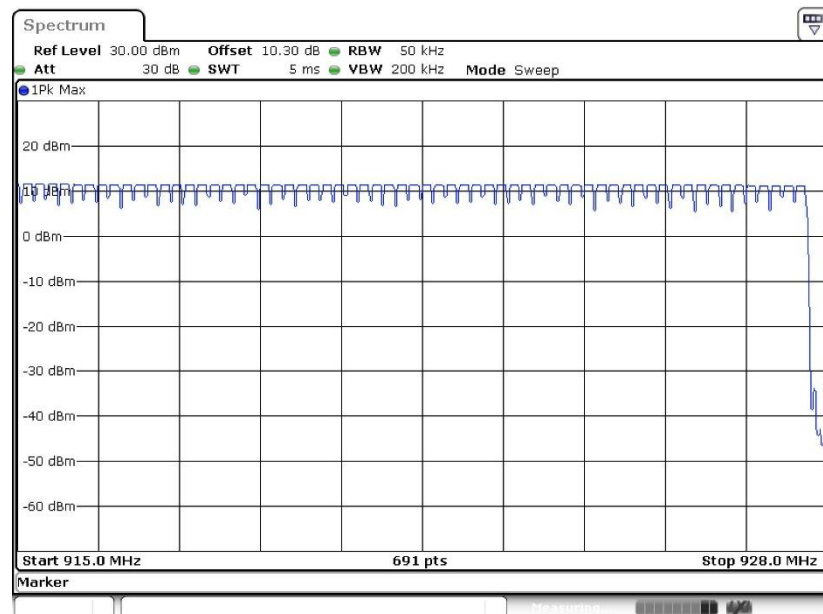


SF7:

Number of Hopping Channel Plot on Channel 1 - 128



Date: 2.NOV.2025 14:01:10



Date: 2.NOV.2025 14:02:25

## 3.2 Hopping Channel Separation Measurement

### 3.2.1 Limit of Hopping Channel Separation

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

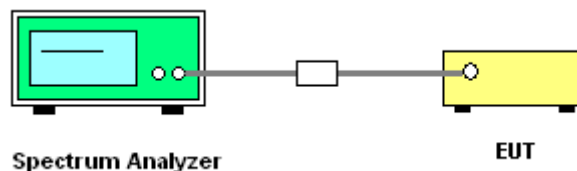
### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.2.3 Test Procedures

1. The testing follows ANSI C63.10-2020 clause 7.8.2.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings:  
Span = wide enough to capture the peaks of two adjacent channels;  
RBW = 50kHz; VBW = 100KHz; Sweep = auto; Detector function = peak; Trace = max hold.
6. Measure and record the results in the test report.

### 3.2.4 Test Setup



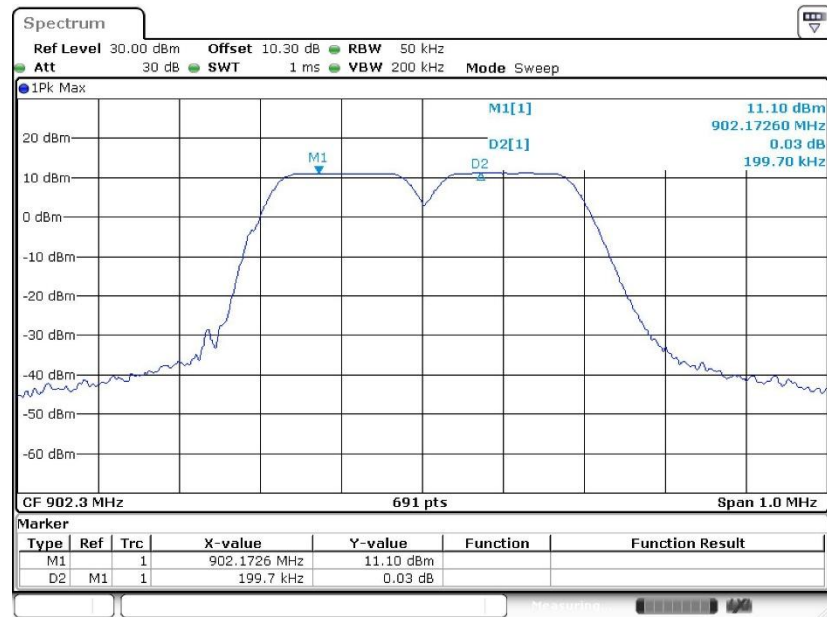
### 3.2.5 Test Result of Hopping Channel Separation

Please refer to Appendix A.



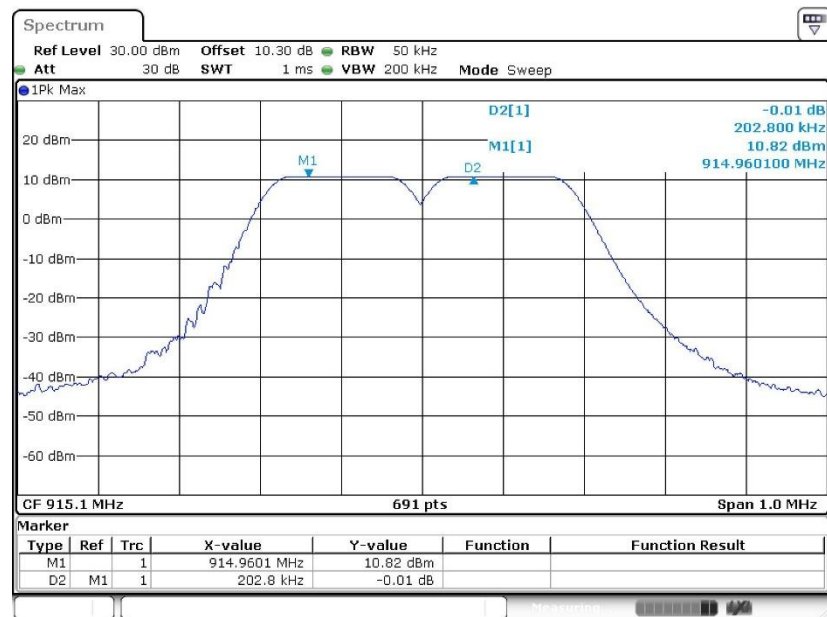
SF7:

## Channel Separation Plot on Channel 1 - 2



Date: 3.NOV.2025 17:26:25

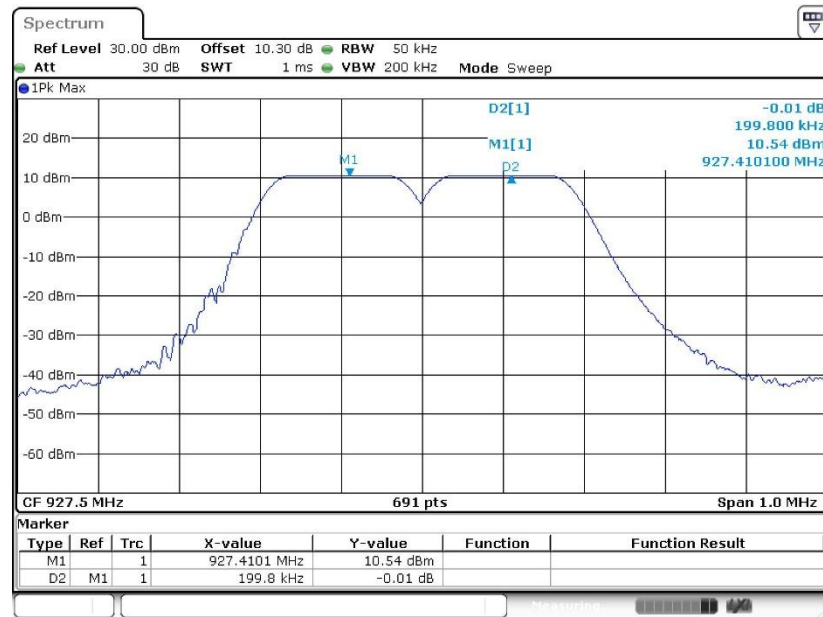
## Channel Separation Plot on Channel 65 - 66



Date: 1.NOV.2025 19:47:38



Channel Separation Plot on Channel 127 - 128



Date: 1.NOV.2025 19:56:58

### 3.3 Dwell Time Measurement

#### 3.3.1 Limit of Dwell Time

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period.

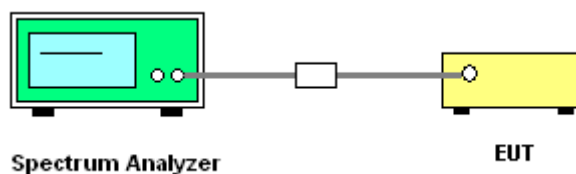
#### 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

1. The testing follows ANSI C63.10-2020 clause 7.8.4.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel; RBW = 100 KHz; VBW = 300KHz; Sweep = as necessary to capture the entire dwell time per hopping channel; Detector function = peak; Trace = max hold.
6. Measure and record the results in the test report.

#### 3.3.4 Test Setup



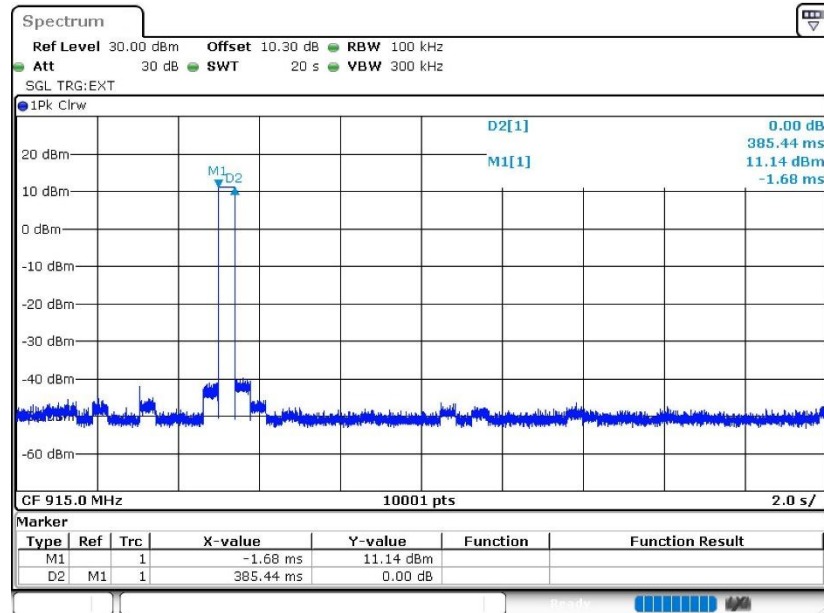


### 3.3.5 Test Result of Dwell Time

Please refer to Appendix A.

SF7:

DT on-time and Hops over 20 sec period



**Remark:**

Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time  
= 1 (hop) x 385.44 (ms)  
= 0.385 (sec)

### 3.4 20dB and 99% Bandwidth Measurement

#### 3.4.1 Limit of 20dB and 99% Bandwidth

The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

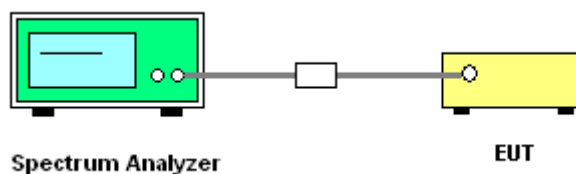
#### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.4.3 Test Procedures

1. The testing follows ANSI C63.10-2020 clause 6.9.2 and 6.9.3.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings for 20dB Bandwidth measurement.  
Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hopping channel;  
The RBW is set to 1% to 5% of the 99% OBW, the VBW is set to 3 times the RBW;  
Sweep = auto; Detector function = peak; Trace = max hold.
5. Use the following spectrum analyzer settings for 99 % Bandwidth measurement.  
The RBW is set to 1% to 5% of the 99% OBW, the VBW is set to 3 times the RBW;  
Sweep = auto; Detector function = peak; Trace = max hold.
6. Measure and record the results in the test report.

#### 3.4.4 Test Setup



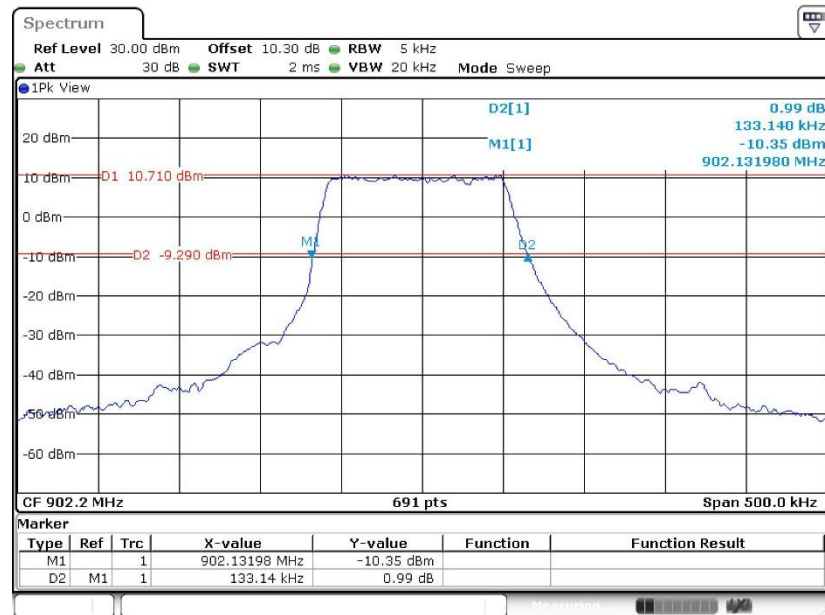
#### 3.4.5 Test Result of 20dB Bandwidth

Please refer to Appendix A.

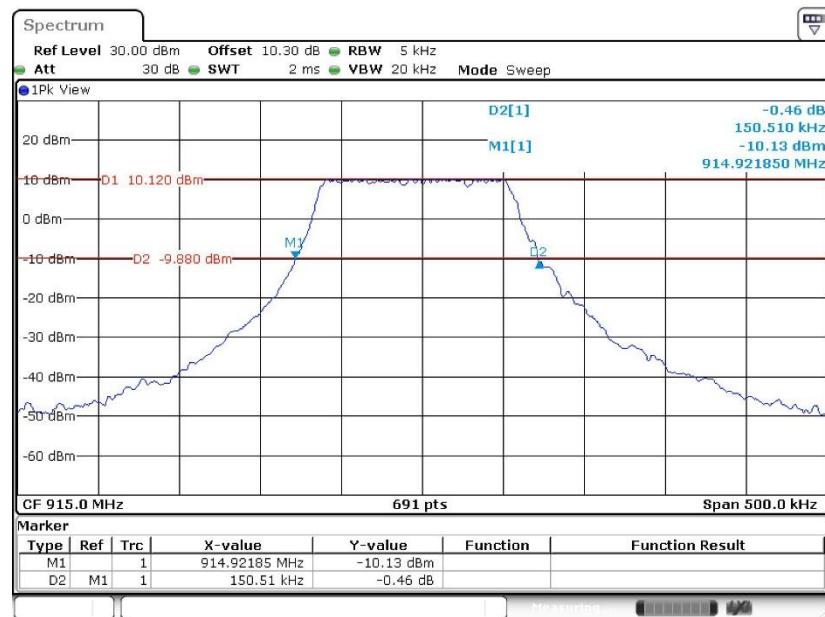


SF7:

## 20 dB Bandwidth Plot on Channel 1

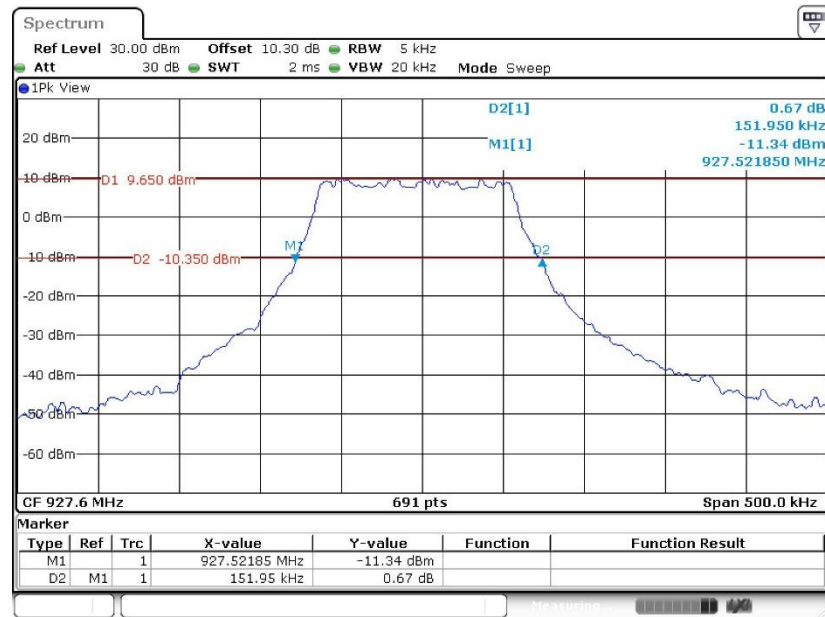


## 20 dB Bandwidth Plot on Channel 65





20 dB Bandwidth Plot on Channel 128



Date: 2 NOV. 2025 17:05:44



### 3.4.6 Test Result of 99% Occupied Bandwidth

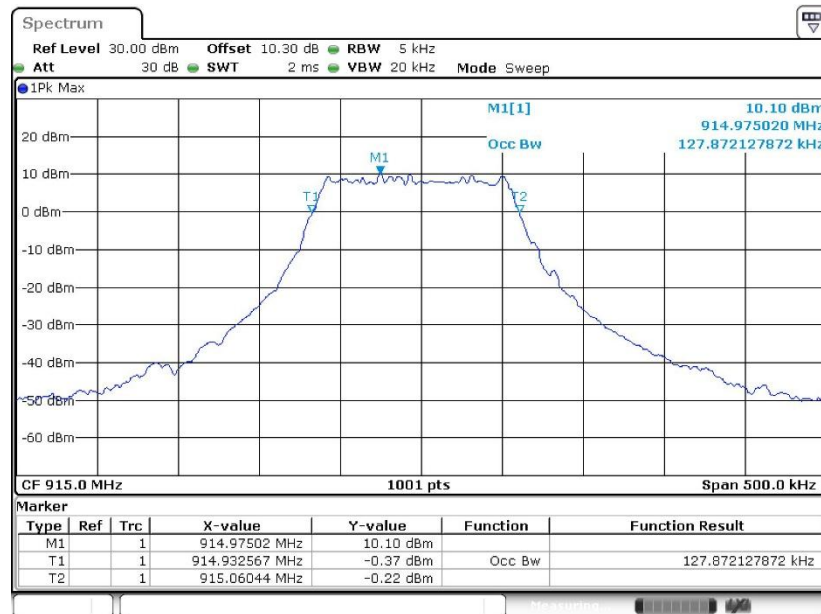
Please refer to Appendix A.

SF7:

#### 99% Occupied Bandwidth Plot on Channel 1

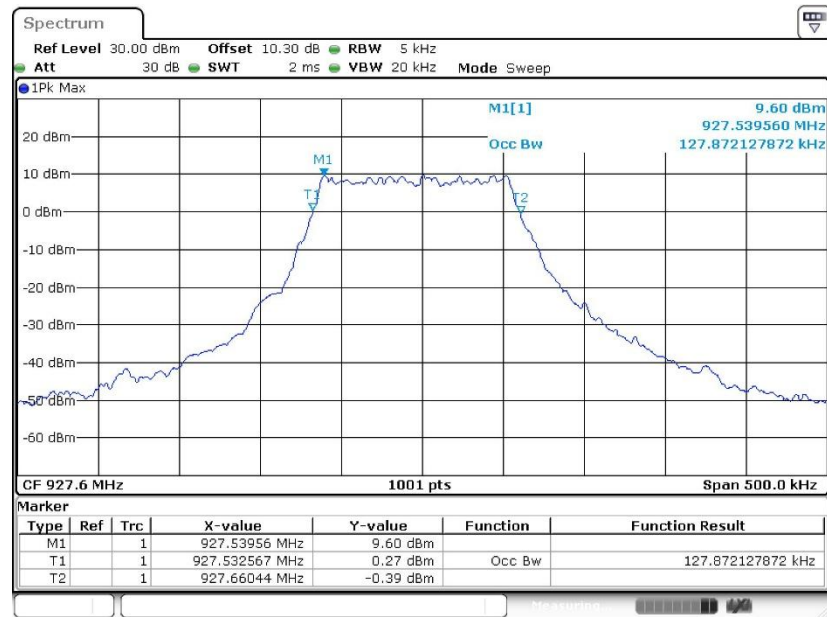


#### 99% Occupied Bandwidth Plot on Channel 65





99% Occupied Bandwidth Plot on Channel 128



Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

## 3.5 Output Power Measurement

### 3.5.1 Limit of Output Power

The maximum peak conducted output power of the intentional radiator shall not exceed the following:  
For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

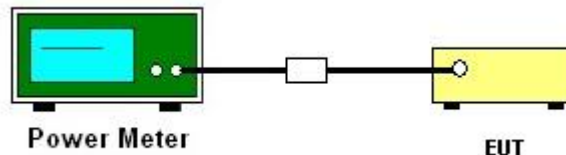
### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.5.3 Test Procedures

1. The testing follows ANSI C63.10-2020 clause 7.8.5.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power with cable loss and record the results in the test report.
5. Measure and record the results in the test report.

### 3.5.4 Test Setup



### 3.5.5 Test Result of Peak Output Power

Please refer to Appendix A.

## 3.6 Conducted Band Edges Measurement

### 3.6.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

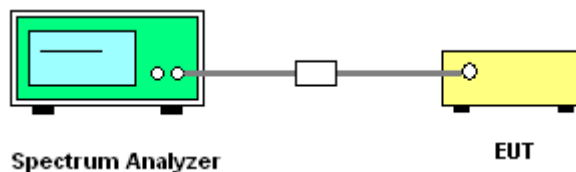
### 3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.6.3 Test Procedures

1. The testing follows ANSI C63.10-2020 clause 7.8.7.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100kHz, VBW = 300kHz. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used.
4. Enable hopping function of the EUT and then repeat step 2. and 3.
5. Measure and record the results in the test report.

### 3.6.4 Test Setup

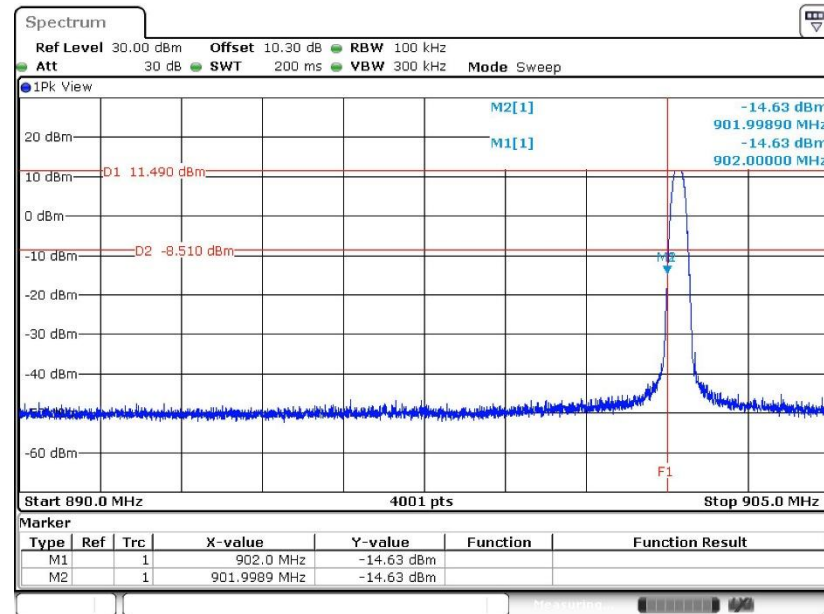




### 3.6.5 Test Result of Conducted Band Edges

SF7:

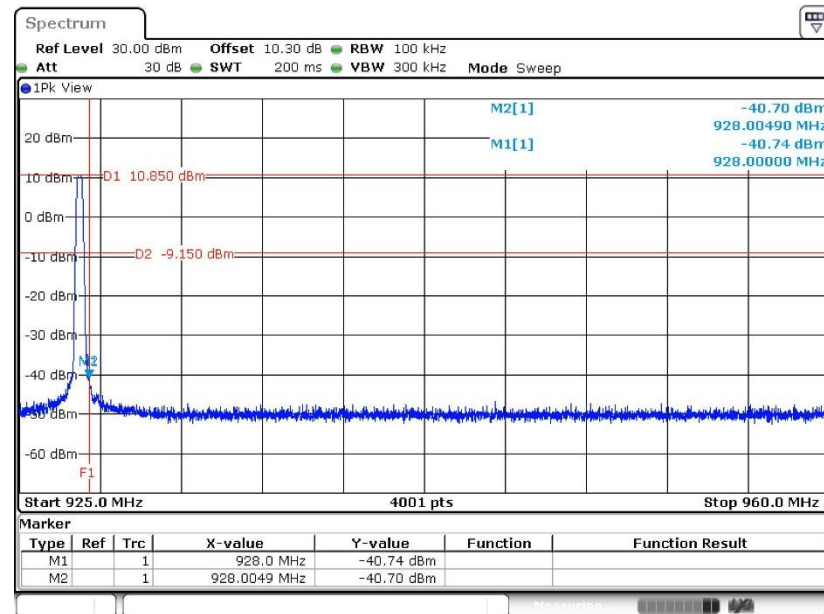
#### Low Band Edge Plot on Channel 1



Date: 9.DEC.2025 11:39:55

Note: F1=M1=902MHz

#### High Band Edge Plot on Channel 128



Date: 9.DEC.2025 11:42:45

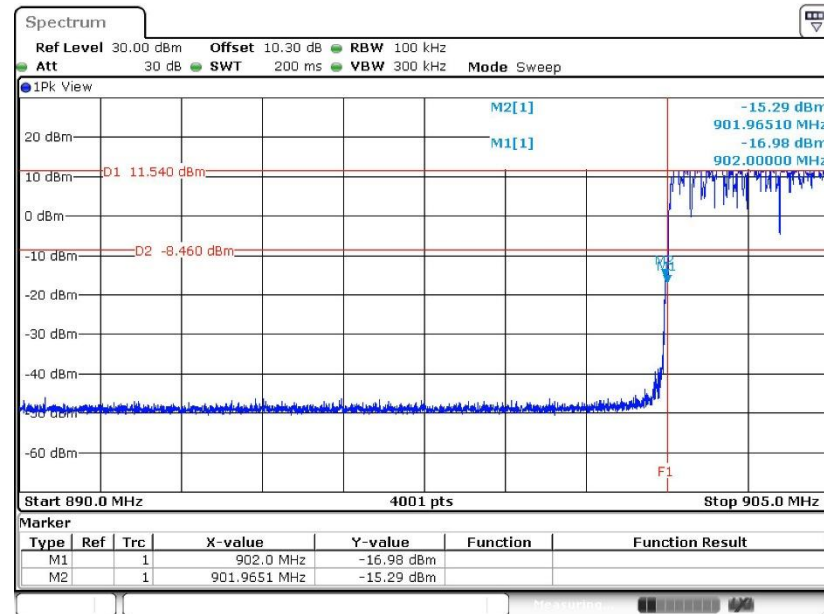
Note: F1=M1=928MHz



### 3.6.6 Test Result of Conducted Hopping Mode Band Edges

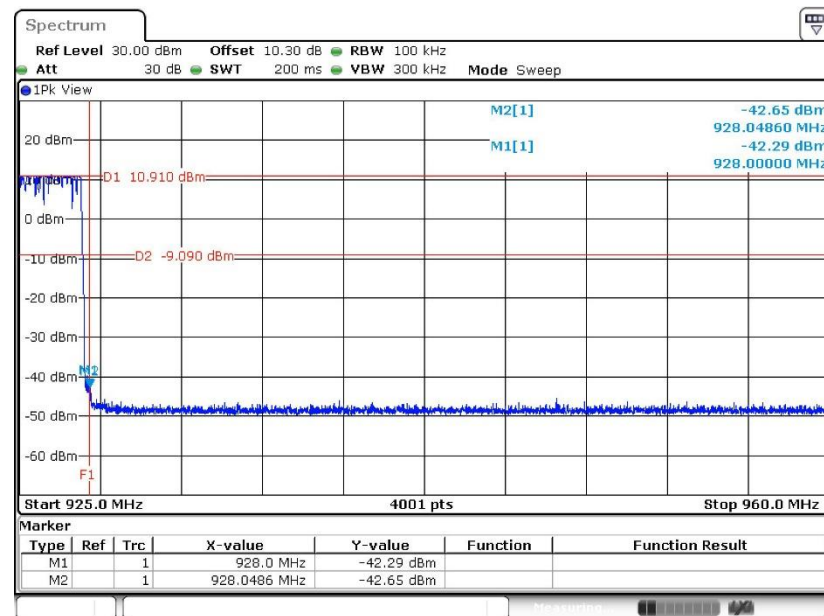
SF7:

#### Hopping Mode Low Band Edge Plot



Note: F1=M1=902MHz

#### Hopping Mode High Band Edge Plot



Note: F1=M1=928MHz

## 3.7 Conducted Spurious Emission Measurement

### 3.7.1 Limit of Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

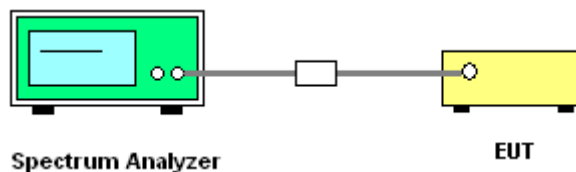
### 3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.7.3 Test Procedure

1. The testing follows ANSI C63.10-2020 clause 7.8.7.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.7.4 Test Setup

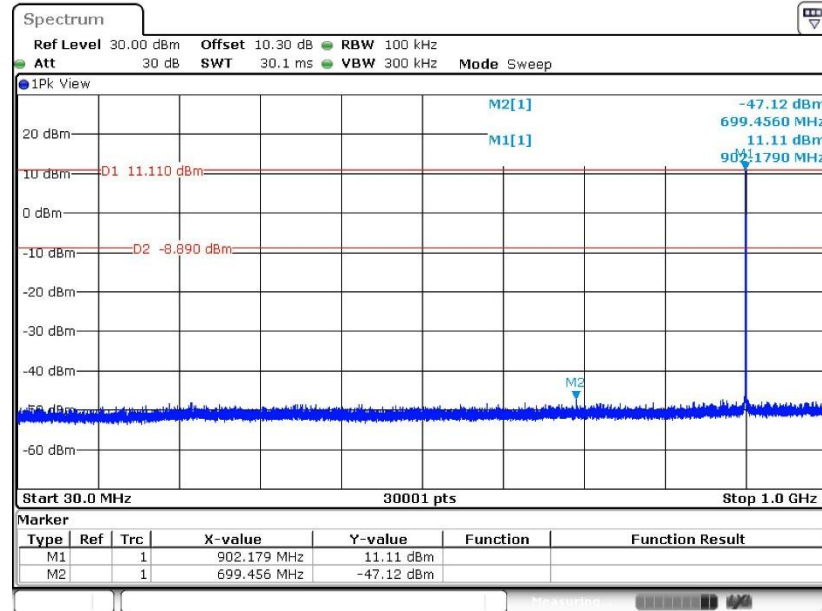




## 3.7.5 Test Result of Conducted Spurious Emission

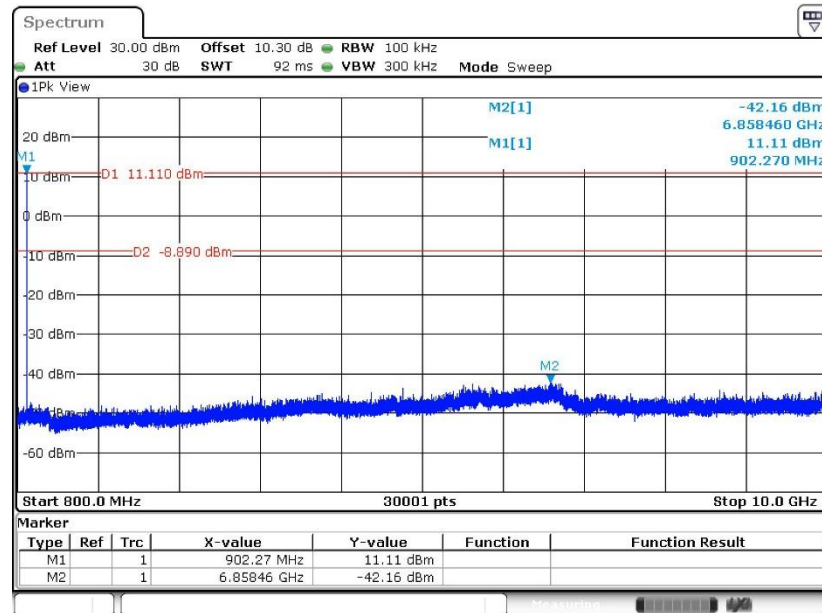
SF7:

CSE Plot on Ch 1



Date: 2.NOV.2025 15:43:09

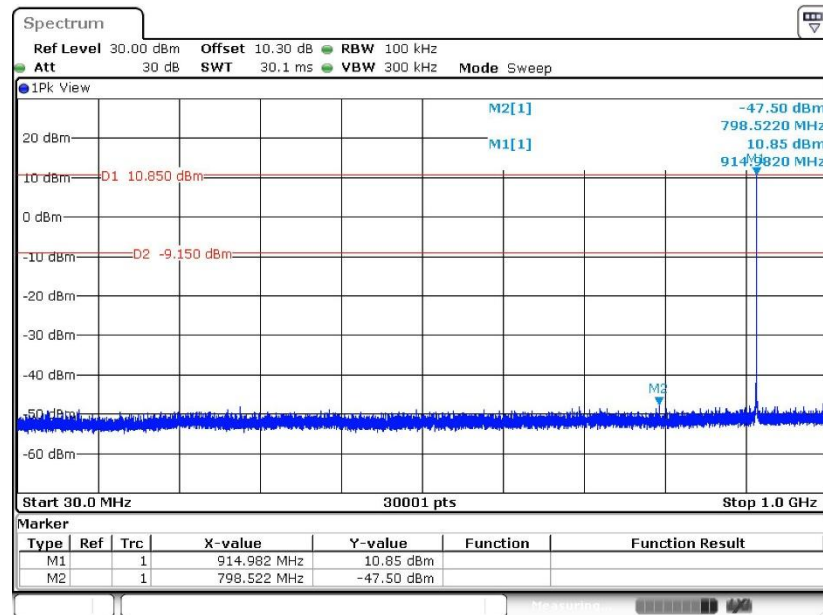
CSE Plot on Ch 1



Date: 2.NOV.2025 15:50:09

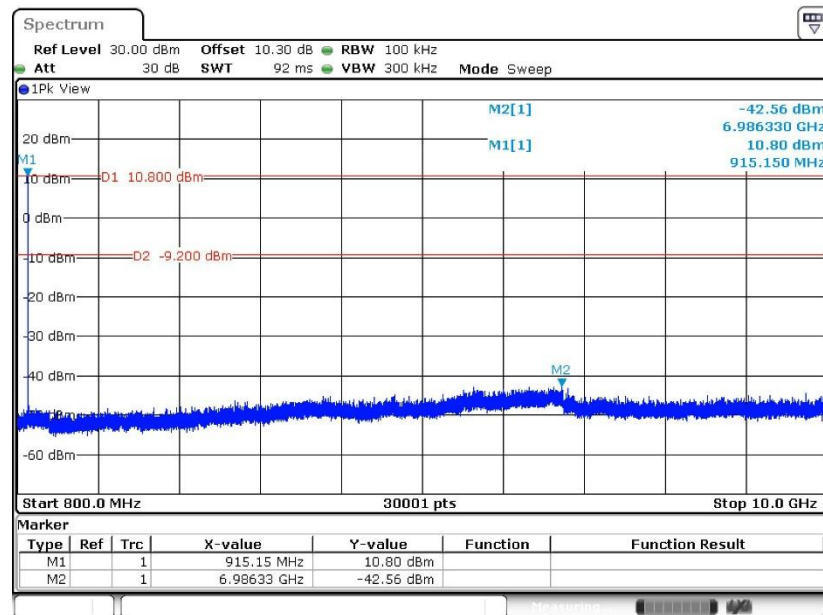


## CSE Plot on Ch 65



Date: 2.NOV.2025 15:57:23

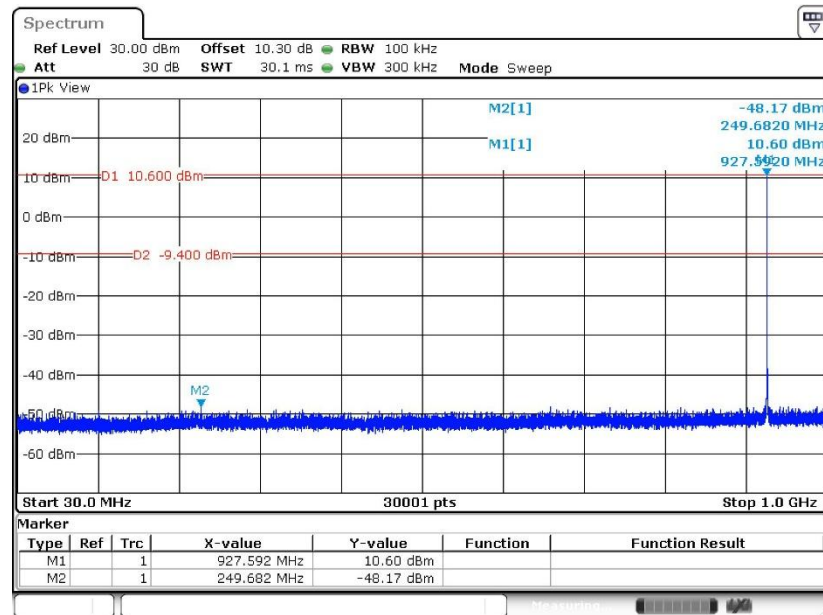
## CSE Plot on Ch 65



Date: 2.NOV.2025 15:59:08

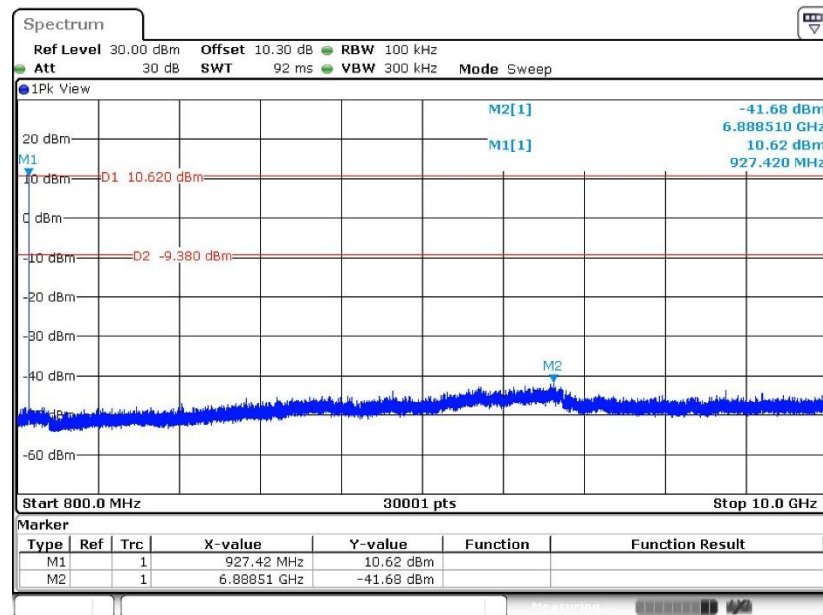


## CSE Plot on Ch 128



Date: 2.NOV.2025 16:02:57

## CSE Plot on Ch 128



Date: 2.NOV.2025 16:01:40

## 3.8 Radiated Spurious Emission Measurement

### 3.8.1 Limit of Radiated Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 0.009 – 0.490      | 2400/F(kHz)                          | 300                              |
| 0.490 – 1.705      | 24000/F(kHz)                         | 30                               |
| 1.705 – 30.0       | 30                                   | 30                               |
| 30 – 88            | 100                                  | 3                                |
| 88 – 216           | 150                                  | 3                                |
| 216 - 960          | 200                                  | 3                                |
| Above 960          | 500                                  | 3                                |

### 3.8.2 Measuring Instruments

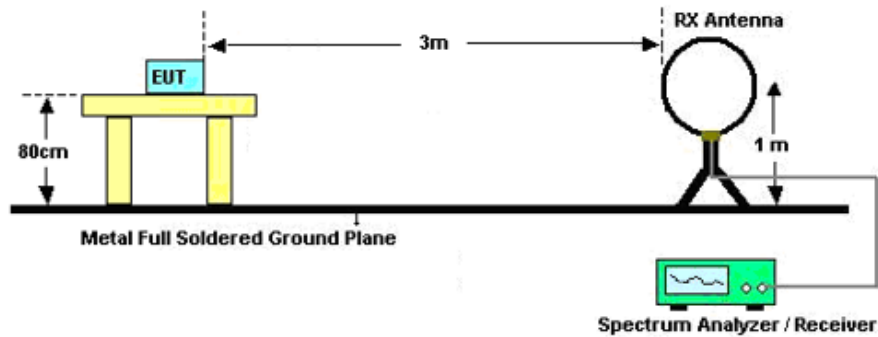
The measuring equipment is listed in the section 4 of this test report.

### 3.8.3 Test Procedures

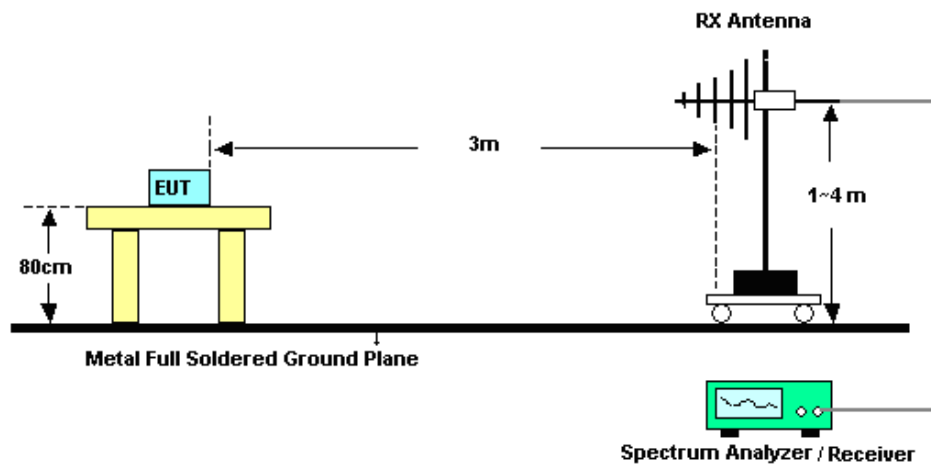
1. The testing follows ANSI C63.10-2020 clause 6.3, 6.5 and 6.6
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1 \text{ GHz}$ , RBW=1MHz for  $f > 1\text{GHz}$  ; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
  - (3) For average measurement: use duty cycle correction factor method.  
Duty cycle = On time/100 milliseconds  
 $\text{On time} = N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n$   
Where  $N_1$  is number of type 1 pulses,  $L_1$  is length of type 1 pulses, etc.  
Average Emission Level = Peak Emission Level +  $20 * \log(\text{Duty cycle})$
7. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
8. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
9. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.8.4 Test Setup

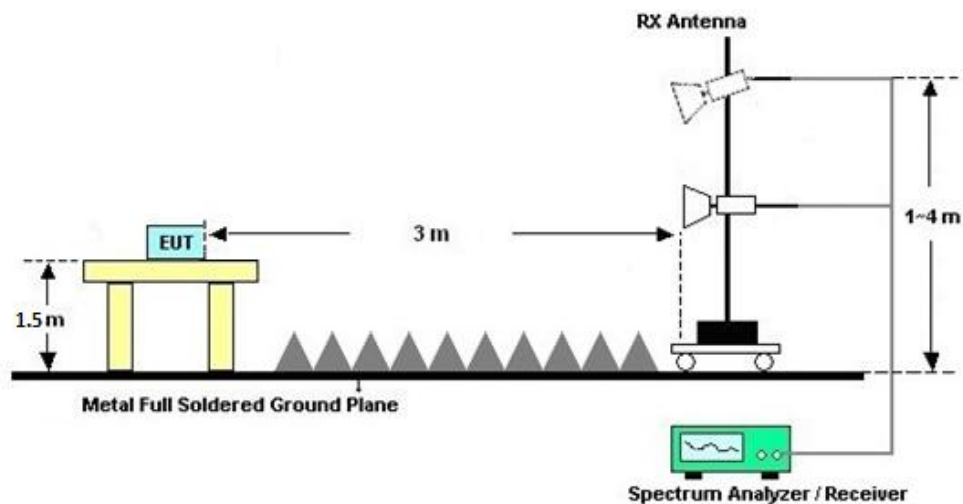
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.8.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

**3.8.6 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)**

Please refer to Appendix B&C.

**3.8.7 Duty cycle**

Please refer to Appendix D



## **3.9 Antenna Requirements**

### **3.9.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

### **3.9.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.9.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



## 4 List of Measuring Equipment

| Instrument                 | Manufacturer   | Model No.                | Serial No.   | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                |
|----------------------------|----------------|--------------------------|--------------|-----------------|------------------|---------------------------------|---------------|-----------------------|
| Spectrum Analyzer          | R&S            | FSV40                    | 101078       | 10Hz~40GHz      | Apr. 02, 2025    | Nov. 01, 2025~<br>Dec. 09, 2025 | Apr. 01, 2026 | Conducted (TH01-SZ)   |
| Pulse Power Sensor         | Anritsu        | MA2411B                  | 1339473      | 30MHz~40GHz     | Dec. 25, 2024    | Nov. 01, 2025~<br>Dec. 09, 2025 | Dec. 24, 2025 | Conducted (TH01-SZ)   |
| Power Meter                | Anritsu        | ML2495A                  | 1218010      | 50MHz Bandwidth | Oct. 13, 2025    | Nov. 01, 2025~<br>Dec. 09, 2025 | Oct. 12, 2026 | Conducted (TH01-SZ)   |
| Attenuator                 | Woken Tech     | WK0602-10                | 4            | 10dB            | Jan. 13, 2025    | Nov. 01, 2025~<br>Dec. 09, 2025 | Jan. 12, 2026 | Conducted (TH01-SZ)   |
| EMI Test Receiver&SA       | KEYSIGHT       | N9038A                   | MY54450083   | 20Hz~8.4GHz     | Apr. 02, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Apr. 01, 2026 | Radiation (03CH03-SZ) |
| EXA Signal Analyzer        | KEYSIGHT       | N9010B                   | MY59071191   | 10KHz~44GHz     | Apr. 02, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Apr. 01, 2026 | Radiation (03CH03-SZ) |
| Loop Antenna               | R&S            | HFH2-Z2E                 | 101141       | 9kHz~30MHz      | Dec. 28, 2024    | Nov. 01, 2025~<br>Dec. 03, 2025 | Dec. 27, 2025 | Radiation (03CH03-SZ) |
| Bilog Antenna              | TeseQ          | CBL6112D                 | 35408        | 30MHz~2GHz      | Aug. 19, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Aug. 18, 2026 | Radiation (03CH03-SZ) |
| Double Ridge Guide Antenna | ETS-Lindgren   | Burgeon-3117             | 00240107     | 1GHz~18GHz      | Jul. 13, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Jul. 12, 2026 | Radiation (03CH03-SZ) |
| HF Amplifier               | MITEQ          | TTA1840-35-HG            | 1871923      | 18GHz~40GHz     | Jul. 03, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Jul. 02, 2026 | Radiation (03CH03-SZ) |
| SHF-EHF Horn               | com-power      | AH-840                   | 101071       | 18GHz~40GHz     | Apr. 03, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Apr. 02, 2027 | Radiation (03CH03-SZ) |
| Amplifier                  | EM Electronics | EM330                    | 060756       | 0.01Hz~3000MHz  | Apr. 02, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Apr. 01, 2026 | Radiation (03CH03-SZ) |
| HF Amplifier               | MITEQ          | AMF-7D-00101800-30-10P-R | 1943528      | 1GHz~18GHz      | Oct. 13, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Oct. 12, 2026 | Radiation (03CH03-SZ) |
| HF Amplifier               | Keysight       | 83017A                   | MY53270357   | 500MHz~26.5GHz  | Apr. 02, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Apr. 01, 2026 | Radiation (03CH03-SZ) |
| AC Power Source            | Chroma         | 61601                    | 616010002729 | N/A             | Oct. 17, 2025    | Nov. 01, 2025~<br>Dec. 03, 2025 | Oct. 16, 2026 | Radiation (03CH03-SZ) |
| Turn Table                 | EM             | EM1000                   | N/A          | 0~360 degree    | NCR              | Nov. 01, 2025~<br>Dec. 03, 2025 | NCR           | Radiation (03CH03-SZ) |
| Antenna Mast               | EM             | EM1000                   | N/A          | 1 m~4 m         | NCR              | Nov. 01, 2025~<br>Dec. 03, 2025 | NCR           | Radiation (03CH03-SZ) |

NCR: No Calibration Required.

## 5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

### Uncertainty of Conducted Measurement

| Test Item                              | Uncertainty     |
|----------------------------------------|-----------------|
| Conducted Spurious Emission & Bandedge | $\pm 1.34$ dB   |
| Occupied Channel Bandwidth             | $\pm 0.012$ MHz |
| Conducted Power                        | $\pm 1.34$ dB   |
| Conducted Power Spectral Density       | $\pm 1.32$ dB   |
| Frequency                              | $\pm 1.3$ Hz    |

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.0dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.9dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.0dB |
|-------------------------------------------------------------------------|-------|

----- THE END -----



## **Appendix A. Conducted Test Results**

**LoRa-FHSS-Spreading Factor 7**

|                |                     |                    |       |    |
|----------------|---------------------|--------------------|-------|----|
| Test Engineer: | Liu Qiu Qiu         | Temperature:       | 20~26 | °C |
| Test Date:     | 2025/11/1~2025/11/4 | Relative Humidity: | 40~51 | %  |

**TEST RESULTS DATA**  
**20dB and 99% Occupied Bandwidth**

| Mod.           | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 20db BW (MHz) | 20db BW Limit (MHz) | Pass/Fail |
|----------------|-----------|-----|-----|-------------|---------------------|---------------|---------------------|-----------|
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 1   | 902.2       | 0.117               | 0.133         | 0.500               | Pass      |
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 65  | 915         | 0.128               | 0.151         | 0.500               | Pass      |
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 128 | 927.6       | 0.128               | 0.152         | 0.500               | Pass      |

**Hopping Channel Separation Measurement**

| Mod.           | Data Rate | NTX | CH. | Freq. (MHz) | Hopping Channel Separation Measurement (MHz) | Hopping Channel Separation Measurement Limit (MHz) | Pass/Fail |
|----------------|-----------|-----|-----|-------------|----------------------------------------------|----------------------------------------------------|-----------|
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 1   | 902.2       | 0.200                                        | 0.1331                                             | Pass      |
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 65  | 915         | 0.203                                        | 0.1505                                             | Pass      |
| Lora(FHSS)-SF7 | 125Kbps   | 1   | 128 | 927.6       | 0.200                                        | 0.1520                                             | Pass      |

**TEST RESULTS DATA**  
**Dwell Time**

| Mod.           | Hopping Channel Number Rate | Hops Over Occupancy Time(hops) | Package Transfer Time (msec) | Dwell Time (sec) | Limits (sec) | Pass/Fail |
|----------------|-----------------------------|--------------------------------|------------------------------|------------------|--------------|-----------|
| Lora(FHSS)-SF7 | 128                         | 1                              | 385.44                       | 0.385            | 0.4          | Pass      |

**TEST RESULTS DATA**  
**Peak Power Table**

| mode           | Freq. (MHz) | NTX | Peak Power (dBm) | Power Setting | Power Limit (dBm) | DG (dBi) | EIRP Power (dBm) | EIRP Power Limit (dBm) | Test Result |
|----------------|-------------|-----|------------------|---------------|-------------------|----------|------------------|------------------------|-------------|
| Lora(FHSS)-SF7 | 902.2       | 1   | 11.75            | 14.00         | 30.00             | -3.51    | 8.24             | 36                     | Pass        |
|                | 915         | 1   | 11.46            | 14.00         | 30.00             | -3.51    | 7.95             | 36                     | Pass        |
|                | 927.6       | 1   | 11.27            | 14.00         | 30.00             | -3.51    | 7.76             | 36                     | Pass        |

**TEST RESULTS DATA**  
**Number of Hopping Frequency**

| Number of Hopping (Channel) | Limits (Channel) | Pass/Fail |
|-----------------------------|------------------|-----------|
| 128                         | > 50             | Pass      |

LoRa-FHSS-Spreading Factor 8

|                |                     |                    |       |    |
|----------------|---------------------|--------------------|-------|----|
| Test Engineer: | Liu Qiu Qiu         | Temperature:       | 20~26 | °C |
| Test Date:     | 2025/11/1~2025/11/4 | Relative Humidity: | 40~51 | %  |

| TEST RESULTS DATA |                |     |                     |                  |                      |             |                        |                                 |                |
|-------------------|----------------|-----|---------------------|------------------|----------------------|-------------|------------------------|---------------------------------|----------------|
| Peak Power Table  |                |     |                     |                  |                      |             |                        |                                 |                |
| mode              | Freq.<br>(MHz) | NTX | Peak Power<br>(dBm) | Power<br>Setting | Power Limit<br>(dBm) | DG<br>(dBi) | EIRP<br>Power<br>(dBm) | EIRP<br>Power<br>Limit<br>(dBm) | Test<br>Result |
| Lora(FHSS)-SF8    | 902.2          | 1   | 11.70               | 14.00            | 30.00                | -3.51       | 8.19                   | 36                              | Pass           |
|                   | 915            | 1   | 11.39               | 14.00            | 30.00                | -3.51       | 7.88                   | 36                              | Pass           |
|                   | 927.6          | 1   | 11.12               | 14.00            | 30.00                | -3.51       | 7.61                   | 36                              | Pass           |

LoRa-FHSS-Spreading Factor 9

|                |                     |                    |       |    |
|----------------|---------------------|--------------------|-------|----|
| Test Engineer: | Liu Qiu Qiu         | Temperature:       | 20~26 | °C |
| Test Date:     | 2025/11/1~2025/11/4 | Relative Humidity: | 40~51 | %  |

| TEST RESULTS DATA |                |     |                     |                  |                      |             |                        |                                 |                |
|-------------------|----------------|-----|---------------------|------------------|----------------------|-------------|------------------------|---------------------------------|----------------|
| Peak Power Table  |                |     |                     |                  |                      |             |                        |                                 |                |
| mode              | Freq.<br>(MHz) | NTX | Peak Power<br>(dBm) | Power<br>Setting | Power Limit<br>(dBm) | DG<br>(dBi) | EIRP<br>Power<br>(dBm) | EIRP<br>Power<br>Limit<br>(dBm) | Test<br>Result |
| Lora(FHSS)-SF9    | 902.2          | 1   | 11.72               | 14.00            | 30.00                | -3.51       | 8.21                   | 36                              | Pass           |
|                   | 915            | 1   | 11.41               | 14.00            | 30.00                | -3.51       | 7.90                   | 36                              | Pass           |
|                   | 927.6          | 1   | 11.16               | 14.00            | 30.00                | -3.51       | 7.65                   | 36                              | Pass           |



## Appendix B. Radiated Spurious Emission

Iora FHSS SF=7(Harmonic @ 3m)

|          | Note                                                                                        | Frequency | Level      | Margin | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|----------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
|          |                                                                                             |           |            |        | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
|          |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 902.2MHz |                                                                                             | 2706.6    | 44.53      | -29.47 | 74         | 61.46    | 32.3     | 8.61   | 57.84  | 100    | 136     | P       | H       |
|          |                                                                                             | 2706.6    | 44.53      | -9.47  | 54         | 61.46    | 32.3     | 8.61   | 57.84  | 100    | 136     | A       | H       |
|          |                                                                                             | 3608.8    | 42.48      | -31.52 | 74         | 57.91    | 32.9     | 9.67   | 58     | -      | -       | P       | H       |
|          |                                                                                             | 2706.6    | 46.59      | -27.41 | 74         | 63.52    | 32.3     | 8.61   | 57.84  | 126    | 263     | P       | V       |
|          |                                                                                             | 2706.6    | 46.59      | -7.41  | 54         | 63.52    | 32.3     | 8.61   | 57.84  | 126    | 263     | A       | V       |
|          |                                                                                             | 3608.8    | 44.09      | -29.91 | 74         | 59.52    | 32.9     | 9.67   | 58     | -      | -       | P       | V       |
| 915.0MHz |                                                                                             | 2745      | 45.33      | -28.67 | 74         | 62.31    | 32.25    | 8.62   | 57.85  | 100    | 16      | P       | H       |
|          |                                                                                             | 2745      | 45.33      | -8.67  | 54         | 62.31    | 32.25    | 8.62   | 57.85  | 100    | 16      | A       | H       |
|          |                                                                                             | 3660      | 42.49      | -31.51 | 74         | 57.85    | 33       | 9.64   | 58     | -      | -       | P       | H       |
|          |                                                                                             | 2745      | 46.44      | -27.56 | 74         | 63.42    | 32.25    | 8.62   | 57.85  | 144    | 176     | P       | V       |
|          |                                                                                             | 2745      | 46.44      | -7.56  | 54         | 63.42    | 32.25    | 8.62   | 57.85  | 144    | 176     | A       | V       |
|          |                                                                                             | 3660      | 42.89      | -31.11 | 74         | 58.25    | 33       | 9.64   | 58     | -      | -       | P       | V       |
| 927.6MHz |                                                                                             | 2782.8    | 46.41      | -27.59 | 74         | 63.42    | 32.22    | 8.63   | 57.86  | 100    | 214     | P       | H       |
|          |                                                                                             | 2782.8    | 46.41      | -7.59  | 54         | 63.42    | 32.22    | 8.63   | 57.86  | 100    | 214     | A       | H       |
|          |                                                                                             | 3710.4    | 43.32      | -30.68 | 74         | 58.61    | 33.1     | 9.61   | 58     | -      | -       | P       | H       |
|          |                                                                                             | 2782.8    | 46.92      | -27.08 | 74         | 63.93    | 32.22    | 8.63   | 57.86  | 139    | 244     | P       | V       |
|          |                                                                                             | 2782.8    | 46.92      | -7.08  | 54         | 63.93    | 32.22    | 8.63   | 57.86  | 139    | 244     | A       | V       |
|          |                                                                                             | 3710.4    | 42.48      | -31.52 | 74         | 57.77    | 33.1     | 9.61   | 58     | -      | -       | P       | V       |
| Remark   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## &lt; 30M-1G&gt;

## lor a FHSS SF=7(LF @ 3m)

|          | Note                                                                                        | Frequency | Level      | Margin | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|----------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
|          |                                                                                             |           |            |        | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
|          |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 902.2MHz |                                                                                             | 132.82    | 21.34      | -22.16 | 43.5       | 36.21    | 17.8     | 2.23   | 34.9   | -      | -       | P       | H       |
|          |                                                                                             | 275.41    | 23.84      | -22.16 | 46         | 36.86    | 18.62    | 3.11   | 34.75  | -      | -       | P       | H       |
|          |                                                                                             | 902.03    | 103.86     | ---    | ---        | 104.3    | 29.14    | 4.42   | 34     | -      | -       | P       | H       |
|          |                                                                                             | 130.88    | 22.35      | -21.15 | 43.5       | 37.39    | 17.64    | 2.22   | 34.9   | -      | -       | P       | V       |
|          |                                                                                             | 282.2     | 22.93      | -23.07 | 46         | 35.67    | 18.86    | 3.14   | 34.74  | -      | -       | P       | V       |
|          |                                                                                             | 902.03    | 92.56      | ---    | ---        | 93       | 29.14    | 4.42   | 34     | -      | -       | P       | V       |
| 915MHz   |                                                                                             | 129.91    | 21.67      | -21.83 | 43.5       | 36.69    | 17.67    | 2.21   | 34.9   | -      | -       | P       | H       |
|          |                                                                                             | 285.11    | 23.5       | -22.5  | 46         | 36.18    | 18.9     | 3.15   | 34.73  | -      | -       | P       | H       |
|          |                                                                                             | 915       | 103.4      | ---    | ---        | 103.61   | 29.34    | 4.45   | 34     | -      | -       | P       | H       |
|          |                                                                                             | 131.85    | 22.6       | -20.9  | 43.5       | 37.49    | 17.79    | 2.22   | 34.9   | -      | -       | P       | V       |
|          |                                                                                             | 282.2     | 23.35      | -22.65 | 46         | 36.15    | 18.8     | 3.14   | 34.74  | -      | -       | P       | V       |
|          |                                                                                             | 915       | 92.8       | ---    | ---        | 93.01    | 29.34    | 4.45   | 34     | -      | -       | P       | V       |
| 927.6MHz |                                                                                             | 135.73    | 21.98      | -21.52 | 43.5       | 36.59    | 18.04    | 2.25   | 34.9   | -      | -       | P       | H       |
|          |                                                                                             | 274.44    | 23.86      | -22.14 | 46         | 36.91    | 18.59    | 3.11   | 34.75  | -      | -       | P       | H       |
|          |                                                                                             | 927.6     | 103.56     | ---    | ---        | 103.35   | 29.74    | 4.47   | 34     | -      | -       | P       | H       |
|          |                                                                                             | 939.86    | 41.79      | -41.77 | 83.56      | 41.25    | 30.05    | 4.49   | 34     |        |         | P       | H       |
|          |                                                                                             | 135.73    | 22.08      | -21.42 | 43.5       | 36.69    | 18.04    | 2.25   | 34.9   | -      | -       | P       | V       |
|          |                                                                                             | 284.14    | 23.22      | -22.78 | 46         | 35.87    | 18.93    | 3.15   | 34.73  | -      | -       | P       | V       |
|          |                                                                                             | 927.6     | 92.48      | ---    | ---        | 92.27    | 29.74    | 4.47   | 34     | -      | -       | P       | V       |
| Remark   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## Appendix C. Radiated Spurious Emission Plots

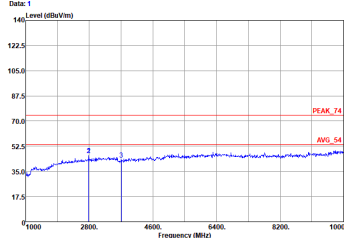
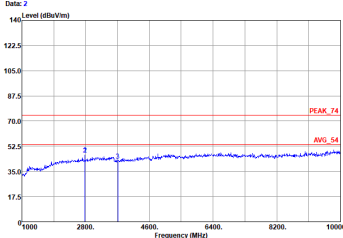
## LoRa 125KHz FHSS SF=7 (Harmonic @ 3m)

| LoRa | 902.2~927.6 Harmonic @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |              |              |             |        |          |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|-------------|--------|----------|-------|-------------|--------------|---------|-------|--------|------|-------|------|--------------|-------------|--|--|-----|--------|----|--------|------|----|----|-----|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|---|---------|-------|-------|-------|-------|-------|------|-------|-----|-----|---------|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|------|-------|-------------|--------------|-------|-------|--------|------|-------|------|--------------|-------------|--|--|-----|--------|----|--------|------|----|----|-----|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|---|---------|-------|-------|-------|-------|-------|------|-------|-----|-----|---------|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|
| ANT  | LoRa 125KHz FHSS SF=7 CH01 902.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |              |              |             |        |          |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |              |              |             |        | Vertical |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| Peak | <p>Data: 1</p> <table><tr><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th></tr><tr><td>1</td><td>2786.68</td><td>44.53</td><td>-29.47</td><td>74.00</td><td>61.46</td><td>32.30</td><td>8.61</td><td>57.84</td><td>100</td><td>136</td><td>Peak</td></tr><tr><td>2</td><td>2786.68</td><td>44.53</td><td>-9.47</td><td>54.00</td><td>61.46</td><td>32.30</td><td>8.61</td><td>57.84</td><td>100</td><td>136</td><td>Average</td></tr><tr><td>3</td><td>3688.80</td><td>42.48</td><td>-31.52</td><td>74.00</td><td>57.91</td><td>32.90</td><td>9.67</td><td>58.00</td><td>---</td><td>---</td><td>Peak</td></tr></table> |             |              |              |             |        | Over     | Limit | ReadAntenna | Cable Preamp | A/Pos   | T/Pos | Remark | Freq | Level | Line | Level Factor | Loss Factor |  |  | MHz | dBuV/m | dB | dBuV/m | dB/m | dB | cm | deg | 1 | 2786.68 | 44.53 | -29.47 | 74.00 | 61.46 | 32.30 | 8.61 | 57.84 | 100 | 136 | Peak | 2 | 2786.68 | 44.53 | -9.47 | 54.00 | 61.46 | 32.30 | 8.61 | 57.84 | 100 | 136 | Average | 3 | 3688.80 | 42.48 | -31.52 | 74.00 | 57.91 | 32.90 | 9.67 | 58.00 | --- | --- | Peak | <p>Data: 2</p> <table><tr><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th></tr><tr><td>1</td><td>2786.68</td><td>46.59</td><td>-27.41</td><td>74.00</td><td>63.52</td><td>32.30</td><td>8.61</td><td>57.84</td><td>126</td><td>263</td><td>Peak</td></tr><tr><td>2</td><td>2786.68</td><td>46.59</td><td>-7.41</td><td>54.00</td><td>63.52</td><td>32.30</td><td>8.61</td><td>57.84</td><td>126</td><td>263</td><td>Average</td></tr><tr><td>3</td><td>3688.80</td><td>44.09</td><td>-29.91</td><td>74.00</td><td>59.52</td><td>32.90</td><td>9.67</td><td>58.00</td><td>---</td><td>---</td><td>Peak</td></tr></table> |  |  |  |  |  | Over | Limit | ReadAntenna | Cable Preamp | A/Pos | T/Pos | Remark | Freq | Level | Line | Level Factor | Loss Factor |  |  | MHz | dBuV/m | dB | dBuV/m | dB/m | dB | cm | deg | 1 | 2786.68 | 46.59 | -27.41 | 74.00 | 63.52 | 32.30 | 8.61 | 57.84 | 126 | 263 | Peak | 2 | 2786.68 | 46.59 | -7.41 | 54.00 | 63.52 | 32.30 | 8.61 | 57.84 | 126 | 263 | Average | 3 | 3688.80 | 44.09 | -29.91 | 74.00 | 59.52 | 32.90 | 9.67 | 58.00 | --- | --- | Peak |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limit       | ReadAntenna  | Cable Preamp | A/Pos       | T/Pos  | Remark   |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Level       | Line         | Level Factor | Loss Factor |        |          |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | dBuV/m      | dB           | dBuV/m       | dB/m        | dB     | cm       | deg   |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 1    | 2786.68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 44.53       | -29.47       | 74.00        | 61.46       | 32.30  | 8.61     | 57.84 | 100         | 136          | Peak    |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 2    | 2786.68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 44.53       | -9.47        | 54.00        | 61.46       | 32.30  | 8.61     | 57.84 | 100         | 136          | Average |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 3    | 3688.80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 42.48       | -31.52       | 74.00        | 57.91       | 32.90  | 9.67     | 58.00 | ---         | ---          | Peak    |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| Over | Limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ReadAntenna | Cable Preamp | A/Pos        | T/Pos       | Remark |          |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| Freq | Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Line        | Level Factor | Loss Factor  |             |        |          |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| MHz  | dBuV/m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | dB          | dBuV/m       | dB/m         | dB          | cm     | deg      |       |             |              |         |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 1    | 2786.68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 46.59       | -27.41       | 74.00        | 63.52       | 32.30  | 8.61     | 57.84 | 126         | 263          | Peak    |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 2    | 2786.68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 46.59       | -7.41        | 54.00        | 63.52       | 32.30  | 8.61     | 57.84 | 126         | 263          | Average |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 3    | 3688.80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 44.09       | -29.91       | 74.00        | 59.52       | 32.90  | 9.67     | 58.00 | ---         | ---          | Peak    |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |      |       |             |              |       |       |        |      |       |      |              |             |  |  |     |        |    |        |      |    |    |     |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |



| LoRa | 902.2~927.6 Harmonic @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |        |             |              |              |             |          |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------|--------------|--------------|-------------|----------|--------|-------|-------------|--------------|-------|-------|--------|--|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|----|----|----|-----|--|---|---------|-------|--------|-------|-------|-------|------|-------|-----|----|------|---|---------|-------|-------|-------|-------|-------|------|-------|-----|----|---------|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|------|-------|-------------|--------------|-------|-------|--------|--|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|----|----|----|-----|--|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|---|---------|-------|-------|-------|-------|-------|------|-------|-----|-----|---------|---|---------|-------|--------|-------|-------|-------|------|-------|-----|-----|------|
| ANT  | LoRa 125KHz FHSS SF=7 CH65 915                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |             |              |              |             |          |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |             |              |              |             | Vertical |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| Peak | <div><div>Date: 1</div><div><div>Level (dBuV/m)</div><div><div><div>140</div><div>122.5</div><div>105.0</div><div>87.5</div><div>70.0</div><div>52.5</div><div>35.0</div><div>17.5</div></div><div><div>0</div><div>1000</div><div>2000</div><div>4000</div><div>6000</div><div>8000</div><div>10000</div></div></div><div>Frequency (MHz)</div><div><div>PEAK_74</div><div>AVG_54</div><div>2</div></div></div></div> <table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>2745.00</td><td>45.33</td><td>-28.67</td><td>74.00</td><td>62.31</td><td>32.25</td><td>8.62</td><td>57.85</td><td>100</td><td>16</td><td>Peak</td></tr><tr><td>2</td><td>2745.00</td><td>45.33</td><td>-8.67</td><td>54.00</td><td>62.31</td><td>32.25</td><td>8.62</td><td>57.85</td><td>100</td><td>16</td><td>Average</td></tr><tr><td>3</td><td>3600.00</td><td>42.49</td><td>-31.51</td><td>74.00</td><td>57.85</td><td>33.00</td><td>9.64</td><td>58.00</td><td>---</td><td>---</td><td>Peak</td></tr></table> |        |             |              |              |             |          | Over   | Limit | ReadAntenna | Cable Preamp | A/Pos | T/Pos | Remark |  | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg |  | 1 | 2745.00 | 45.33 | -28.67 | 74.00 | 62.31 | 32.25 | 8.62 | 57.85 | 100 | 16 | Peak | 2 | 2745.00 | 45.33 | -8.67 | 54.00 | 62.31 | 32.25 | 8.62 | 57.85 | 100 | 16 | Average | 3 | 3600.00 | 42.49 | -31.51 | 74.00 | 57.85 | 33.00 | 9.64 | 58.00 | --- | --- | Peak | <div><div>Date: 2</div><div><div>Level (dBuV/m)</div><div><div><div>140</div><div>122.5</div><div>105.0</div><div>87.5</div><div>70.0</div><div>52.5</div><div>35.0</div><div>17.5</div></div><div><div>0</div><div>1000</div><div>2000</div><div>4000</div><div>6000</div><div>8000</div><div>10000</div></div></div><div>Frequency (MHz)</div><div><div>PEAK_74</div><div>AVG_54</div><div>2</div></div></div></div> <table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>2745.00</td><td>46.44</td><td>-27.56</td><td>74.00</td><td>63.42</td><td>32.25</td><td>8.62</td><td>57.85</td><td>144</td><td>176</td><td>Peak</td></tr><tr><td>2</td><td>2745.00</td><td>46.44</td><td>-7.56</td><td>54.00</td><td>63.42</td><td>32.25</td><td>8.62</td><td>57.85</td><td>144</td><td>176</td><td>Average</td></tr><tr><td>3</td><td>3600.00</td><td>42.89</td><td>-31.11</td><td>74.00</td><td>58.25</td><td>33.00</td><td>9.64</td><td>58.00</td><td>---</td><td>---</td><td>Peak</td></tr></table> |  |  |  |  |  |  | Over | Limit | ReadAntenna | Cable Preamp | A/Pos | T/Pos | Remark |  | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg |  | 1 | 2745.00 | 46.44 | -27.56 | 74.00 | 63.42 | 32.25 | 8.62 | 57.85 | 144 | 176 | Peak | 2 | 2745.00 | 46.44 | -7.56 | 54.00 | 63.42 | 32.25 | 8.62 | 57.85 | 144 | 176 | Average | 3 | 3600.00 | 42.89 | -31.11 | 74.00 | 58.25 | 33.00 | 9.64 | 58.00 | --- | --- | Peak |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Over   | Limit       | ReadAntenna  | Cable Preamp | A/Pos       | T/Pos    | Remark |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Freq   | Level       | Line         | Level Factor | Loss Factor |          |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MHz    | dBuV/m      | dB           | dBuV/m       | dBuV        | dB/m     | dB     | dB    | cm          | deg          |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 1    | 2745.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 45.33  | -28.67      | 74.00        | 62.31        | 32.25       | 8.62     | 57.85  | 100   | 16          | Peak         |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 2    | 2745.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 45.33  | -8.67       | 54.00        | 62.31        | 32.25       | 8.62     | 57.85  | 100   | 16          | Average      |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 3    | 3600.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 42.49  | -31.51      | 74.00        | 57.85        | 33.00       | 9.64     | 58.00  | ---   | ---         | Peak         |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Limit  | ReadAntenna | Cable Preamp | A/Pos        | T/Pos       | Remark   |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Level  | Line        | Level Factor | Loss Factor  |             |          |        |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | dBuV/m | dB          | dBuV/m       | dBuV         | dB/m        | dB       | dB     | cm    | deg         |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 1    | 2745.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 46.44  | -27.56      | 74.00        | 63.42        | 32.25       | 8.62     | 57.85  | 144   | 176         | Peak         |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 2    | 2745.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 46.44  | -7.56       | 54.00        | 63.42        | 32.25       | 8.62     | 57.85  | 144   | 176         | Average      |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |
| 3    | 3600.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 42.89  | -31.11      | 74.00        | 58.25        | 33.00       | 9.64     | 58.00  | ---   | ---         | Peak         |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |    |      |   |         |       |       |       |       |       |      |       |     |    |         |   |         |       |        |       |       |       |      |       |     |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |    |     |  |   |         |       |        |       |       |       |      |       |     |     |      |   |         |       |       |       |       |       |      |       |     |     |         |   |         |       |        |       |       |       |      |       |     |     |      |



| LoRa | 902.2~927.6 Harmonic @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |             |              |             |              |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|--------------|-------------|--------------|----------------------------|-------|--------|--|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|--|---|---------|-------|--------|-------|-------|-------|-------------------------|---|---------|-------|-------|-------|-------|-------|----------------------------|---|---------|-------|--------|-------|-------|-------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|-------|-------------|--------------|-------|-------|--------|--|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|--|---|---------|-------|--------|-------|-------|-------|-------------------------|---|---------|-------|-------|-------|-------|-------|----------------------------|---|---------|-------|--------|-------|-------|-------|-------------------------|
| ANT  | LoRa 125KHz FHSS SF=7 CH128 927.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |             |              |             |              |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Vertical |             |              |             |              |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| Peak | <div><p>Date: 1</p><table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th></th></tr><tr><td>1</td><td>2782.88</td><td>46.41</td><td>-27.59</td><td>74.00</td><td>63.42</td><td>32.22</td><td>8.63 57.86 100 214 Peak</td></tr><tr><td>2</td><td>2782.88</td><td>46.41</td><td>-7.59</td><td>54.00</td><td>63.42</td><td>32.22</td><td>8.63 57.86 100 214 Average</td></tr><tr><td>3</td><td>3710.40</td><td>43.32</td><td>-30.68</td><td>74.00</td><td>58.61</td><td>33.10</td><td>9.61 58.00 --- --- Peak</td></tr></table></div> |          | Over        | Limit        | ReadAntenna | Cable Preamp | A/Pos                      | T/Pos | Remark |  | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m |  | 1 | 2782.88 | 46.41 | -27.59 | 74.00 | 63.42 | 32.22 | 8.63 57.86 100 214 Peak | 2 | 2782.88 | 46.41 | -7.59 | 54.00 | 63.42 | 32.22 | 8.63 57.86 100 214 Average | 3 | 3710.40 | 43.32 | -30.68 | 74.00 | 58.61 | 33.10 | 9.61 58.00 --- --- Peak | <div><p>Date: 2</p><table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th></th></tr><tr><td>1</td><td>2782.88</td><td>46.92</td><td>-27.08</td><td>74.00</td><td>63.93</td><td>32.22</td><td>8.63 57.86 139 244 Peak</td></tr><tr><td>2</td><td>2782.88</td><td>46.92</td><td>-7.08</td><td>54.00</td><td>63.93</td><td>32.22</td><td>8.63 57.86 139 244 Average</td></tr><tr><td>3</td><td>3710.40</td><td>42.48</td><td>-31.52</td><td>74.00</td><td>57.77</td><td>33.10</td><td>9.61 58.00 --- --- Peak</td></tr></table></div> |  | Over | Limit | ReadAntenna | Cable Preamp | A/Pos | T/Pos | Remark |  | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m |  | 1 | 2782.88 | 46.92 | -27.08 | 74.00 | 63.93 | 32.22 | 8.63 57.86 139 244 Peak | 2 | 2782.88 | 46.92 | -7.08 | 54.00 | 63.93 | 32.22 | 8.63 57.86 139 244 Average | 3 | 3710.40 | 42.48 | -31.52 | 74.00 | 57.77 | 33.10 | 9.61 58.00 --- --- Peak |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Limit    | ReadAntenna | Cable Preamp | A/Pos       | T/Pos        | Remark                     |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Level    | Line        | Level Factor | Loss Factor |              |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | dBuV/m   | dB          | dBuV/m       | dBuV        | dB/m         |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 1    | 2782.88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 46.41    | -27.59      | 74.00        | 63.42       | 32.22        | 8.63 57.86 100 214 Peak    |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 2    | 2782.88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 46.41    | -7.59       | 54.00        | 63.42       | 32.22        | 8.63 57.86 100 214 Average |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 3    | 3710.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 43.32    | -30.68      | 74.00        | 58.61       | 33.10        | 9.61 58.00 --- --- Peak    |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Limit    | ReadAntenna | Cable Preamp | A/Pos       | T/Pos        | Remark                     |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Level    | Line        | Level Factor | Loss Factor |              |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | dBuV/m   | dB          | dBuV/m       | dBuV        | dB/m         |                            |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 1    | 2782.88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 46.92    | -27.08      | 74.00        | 63.93       | 32.22        | 8.63 57.86 139 244 Peak    |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 2    | 2782.88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 46.92    | -7.08       | 54.00        | 63.93       | 32.22        | 8.63 57.86 139 244 Average |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |
| 3    | 3710.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 42.48    | -31.52      | 74.00        | 57.77       | 33.10        | 9.61 58.00 --- --- Peak    |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |  |   |         |       |        |       |       |       |                         |   |         |       |       |       |       |       |                            |   |         |       |        |       |       |       |                         |



## &lt;30M-1G&gt;

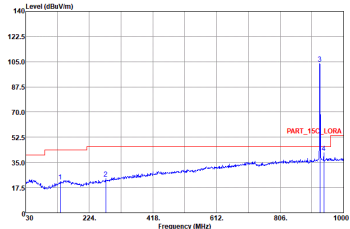
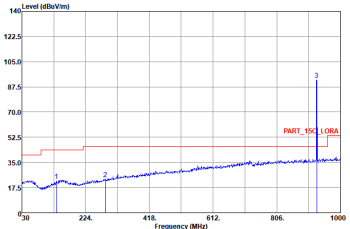
## LoRa 125KHz FHSS SF=7 (LF @ 3m)

| LoRa | 902.2~927.6 LF @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |        |        |             |       |             |       |        |        |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|--------|-------------|-------|-------------|-------|--------|--------|-------|--------|--|-----|--------|----|--------|--------|----|----|----|-----|--|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|--------|-----|-----|--------|-------|------|-------|-----|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|-------|------|-------|-------------|-------|--------|-------|-------|--------|--|-----|--------|----|--------|--------|----|----|----|-----|--|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|-----|-----|-------|-------|------|-------|-----|------|
| ANT  | LoRa 125KHz FHSS SF=7 CH01 902.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |        |        |             |       |             |       |        |        |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Vertical |        |        |             |       |             |       |        |        |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| Peak | <div><p>Data: 1</p><table><tr><th></th><th>Freq</th><th>Level</th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>132.82</td><td>21.34</td><td>-22.16</td><td>43.50</td><td>36.21</td><td>17.00</td><td>2.23</td><td>34.00</td><td>---</td><td>Peak</td></tr><tr><td>2</td><td>275.41</td><td>23.84</td><td>-22.16</td><td>46.00</td><td>36.86</td><td>18.62</td><td>3.11</td><td>34.75</td><td>---</td><td>Peak</td></tr><tr><td>3</td><td>902.03</td><td>103.86</td><td>---</td><td>---</td><td>104.30</td><td>29.14</td><td>4.42</td><td>34.00</td><td>---</td><td>Peak</td></tr></table></div> |          | Freq   | Level  | Over        | Limit | ReadAntenna | Cable | Preamp | A/Pos  | T/Pos | Remark |  | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | dB | cm | deg |  | 1 | 132.82 | 21.34 | -22.16 | 43.50 | 36.21 | 17.00 | 2.23 | 34.00 | --- | Peak | 2 | 275.41 | 23.84 | -22.16 | 46.00 | 36.86 | 18.62 | 3.11 | 34.75 | --- | Peak | 3 | 902.03 | 103.86 | --- | --- | 104.30 | 29.14 | 4.42 | 34.00 | --- | Peak | <div><p>Data: 2</p><table><tr><th></th><th>Freq</th><th>Level</th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>130.88</td><td>22.35</td><td>-21.15</td><td>43.50</td><td>37.39</td><td>17.64</td><td>2.22</td><td>34.00</td><td>---</td><td>Peak</td></tr><tr><td>2</td><td>282.20</td><td>22.93</td><td>-23.07</td><td>46.00</td><td>35.67</td><td>18.86</td><td>3.14</td><td>34.74</td><td>---</td><td>Peak</td></tr><tr><td>3</td><td>902.03</td><td>92.56</td><td>---</td><td>---</td><td>93.00</td><td>29.14</td><td>4.42</td><td>34.00</td><td>---</td><td>Peak</td></tr></table></div> |  | Freq | Level | Over | Limit | ReadAntenna | Cable | Preamp | A/Pos | T/Pos | Remark |  | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | dB | cm | deg |  | 1 | 130.88 | 22.35 | -21.15 | 43.50 | 37.39 | 17.64 | 2.22 | 34.00 | --- | Peak | 2 | 282.20 | 22.93 | -23.07 | 46.00 | 35.67 | 18.86 | 3.14 | 34.74 | --- | Peak | 3 | 902.03 | 92.56 | --- | --- | 93.00 | 29.14 | 4.42 | 34.00 | --- | Peak |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level    | Over   | Limit  | ReadAntenna | Cable | Preamp      | A/Pos | T/Pos  | Remark |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | dBuV/m   | dB     | dBuV/m | dBuV/m      | dB    | dB          | cm    | deg    |        |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 1    | 132.82                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 21.34    | -22.16 | 43.50  | 36.21       | 17.00 | 2.23        | 34.00 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 2    | 275.41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 23.84    | -22.16 | 46.00  | 36.86       | 18.62 | 3.11        | 34.75 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 3    | 902.03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 103.86   | ---    | ---    | 104.30      | 29.14 | 4.42        | 34.00 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level    | Over   | Limit  | ReadAntenna | Cable | Preamp      | A/Pos | T/Pos  | Remark |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | dBuV/m   | dB     | dBuV/m | dBuV/m      | dB    | dB          | cm    | deg    |        |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 1    | 130.88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22.35    | -21.15 | 43.50  | 37.39       | 17.64 | 2.22        | 34.00 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 2    | 282.20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22.93    | -23.07 | 46.00  | 35.67       | 18.86 | 3.14        | 34.74 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 3    | 902.03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 92.56    | ---    | ---    | 93.00       | 29.14 | 4.42        | 34.00 | ---    | Peak   |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |      |       |      |       |             |       |        |       |       |        |  |     |        |    |        |        |    |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |



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|------|------------------------------------|--|--|--|--|--|--|--|--|--|--|
| LoRa | LF @ 3m                            |  |  |  |  |  |  |  |  |  |  |
| ANT  | LoRa 125KHz FHSS SF=7 CH65 915 MHz |  |  |  |  |  |  |  |  |  |  |
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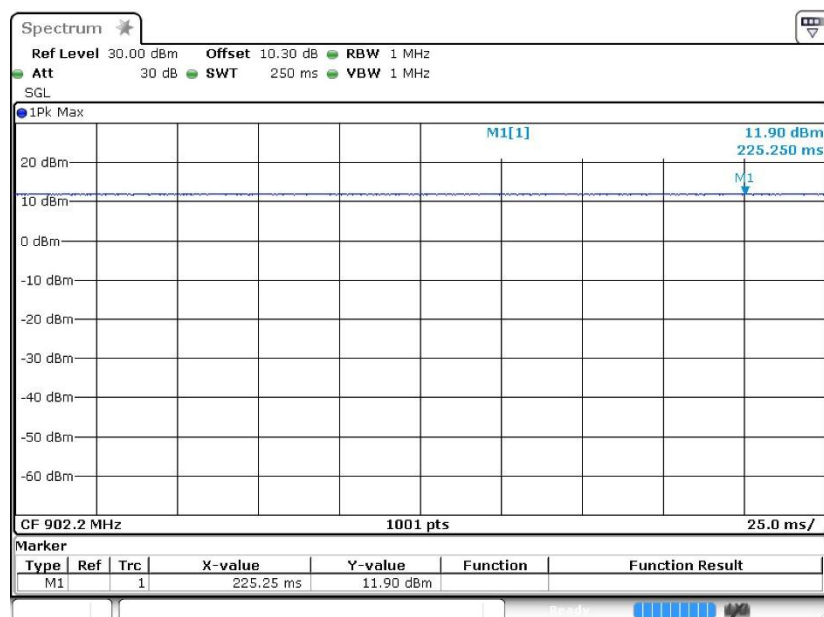


| LoRa | 902.2~927.6 LF @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |             |              |             |              |        |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|--------------|-------------|--------------|--------|-------|--------|------|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|----|----|-----|--|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|--------|-----|-----|--------|-------|------|-------|-----|------|---|--------|-------|-----|-----|-------|-------|------|-------|-----|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|-------|-------------|--------------|-------|-------|--------|--|------|-------|------|--------------|-------------|--|--|--|-----|--------|----|--------|------|------|----|----|-----|--|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|--------|-------|-------|-------|------|-------|-----|------|---|--------|-------|-----|-----|-------|-------|------|-------|-----|------|
| ANT  | LoRa 125KHz FHSS SF=7 CH128 927.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |             |              |             |              |        |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Vertical |             |              |             |              |        |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| Peak | <div><p>Date: 1</p><table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>135.73</td><td>21.98</td><td>-21.52</td><td>43.58</td><td>36.59</td><td>18.84</td><td>2.25</td><td>34.90</td><td>---</td><td>Peak</td></tr><tr><td>2</td><td>274.44</td><td>23.86</td><td>-22.14</td><td>46.00</td><td>36.91</td><td>18.59</td><td>3.11</td><td>34.75</td><td>---</td><td>Peak</td></tr><tr><td>3</td><td>927.60</td><td>103.56</td><td>---</td><td>---</td><td>103.35</td><td>29.74</td><td>4.47</td><td>34.80</td><td>---</td><td>Peak</td></tr><tr><td>4</td><td>939.86</td><td>41.79</td><td>---</td><td>---</td><td>41.25</td><td>30.85</td><td>4.49</td><td>34.80</td><td>---</td><td>Peak</td></tr></table></div> |          | Over        | Limit        | ReadAntenna | Cable Preamp | A/Pos  | T/Pos | Remark |      | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | cm | deg |  | 1 | 135.73 | 21.98 | -21.52 | 43.58 | 36.59 | 18.84 | 2.25 | 34.90 | --- | Peak | 2 | 274.44 | 23.86 | -22.14 | 46.00 | 36.91 | 18.59 | 3.11 | 34.75 | --- | Peak | 3 | 927.60 | 103.56 | --- | --- | 103.35 | 29.74 | 4.47 | 34.80 | --- | Peak | 4 | 939.86 | 41.79 | --- | --- | 41.25 | 30.85 | 4.49 | 34.80 | --- | Peak | <div><p>Date: 2</p><table><tr><th></th><th>Over</th><th>Limit</th><th>ReadAntenna</th><th>Cable Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th></tr><tr><th></th><th>Freq</th><th>Level</th><th>Line</th><th>Level Factor</th><th>Loss Factor</th><th></th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>135.73</td><td>22.88</td><td>-21.42</td><td>43.58</td><td>36.69</td><td>18.84</td><td>2.25</td><td>34.90</td><td>---</td><td>Peak</td></tr><tr><td>2</td><td>284.14</td><td>23.22</td><td>-22.78</td><td>46.00</td><td>35.87</td><td>18.93</td><td>3.15</td><td>34.73</td><td>---</td><td>Peak</td></tr><tr><td>3</td><td>927.60</td><td>92.48</td><td>---</td><td>---</td><td>92.27</td><td>29.74</td><td>4.47</td><td>34.80</td><td>---</td><td>Peak</td></tr></table></div> |  | Over | Limit | ReadAntenna | Cable Preamp | A/Pos | T/Pos | Remark |  | Freq | Level | Line | Level Factor | Loss Factor |  |  |  | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | cm | deg |  | 1 | 135.73 | 22.88 | -21.42 | 43.58 | 36.69 | 18.84 | 2.25 | 34.90 | --- | Peak | 2 | 284.14 | 23.22 | -22.78 | 46.00 | 35.87 | 18.93 | 3.15 | 34.73 | --- | Peak | 3 | 927.60 | 92.48 | --- | --- | 92.27 | 29.74 | 4.47 | 34.80 | --- | Peak |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Limit    | ReadAntenna | Cable Preamp | A/Pos       | T/Pos        | Remark |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level    | Line        | Level Factor | Loss Factor |              |        |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | dBuV/m   | dB          | dBuV/m       | dBuV        | dB/m         | dB     | cm    | deg    |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 1    | 135.73                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 21.98    | -21.52      | 43.58        | 36.59       | 18.84        | 2.25   | 34.90 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 2    | 274.44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 23.86    | -22.14      | 46.00        | 36.91       | 18.59        | 3.11   | 34.75 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 3    | 927.60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 103.56   | ---         | ---          | 103.35      | 29.74        | 4.47   | 34.80 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 4    | 939.86                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 41.79    | ---         | ---          | 41.25       | 30.85        | 4.49   | 34.80 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Limit    | ReadAntenna | Cable Preamp | A/Pos       | T/Pos        | Remark |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | Freq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level    | Line        | Level Factor | Loss Factor |              |        |       |        |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
|      | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | dBuV/m   | dB          | dBuV/m       | dBuV        | dB/m         | dB     | cm    | deg    |      |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 1    | 135.73                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 22.88    | -21.42      | 43.58        | 36.69       | 18.84        | 2.25   | 34.90 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 2    | 284.14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 23.22    | -22.78      | 46.00        | 35.87       | 18.93        | 3.15   | 34.73 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |
| 3    | 927.60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 92.48    | ---         | ---          | 92.27       | 29.74        | 4.47   | 34.80 | ---    | Peak |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |        |     |     |        |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |      |       |             |              |       |       |        |  |      |       |      |              |             |  |  |  |     |        |    |        |      |      |    |    |     |  |   |        |       |        |       |       |       |      |       |     |      |   |        |       |        |       |       |       |      |       |     |      |   |        |       |     |     |       |       |      |       |     |      |

## Appendix D. Duty Cycle Plots

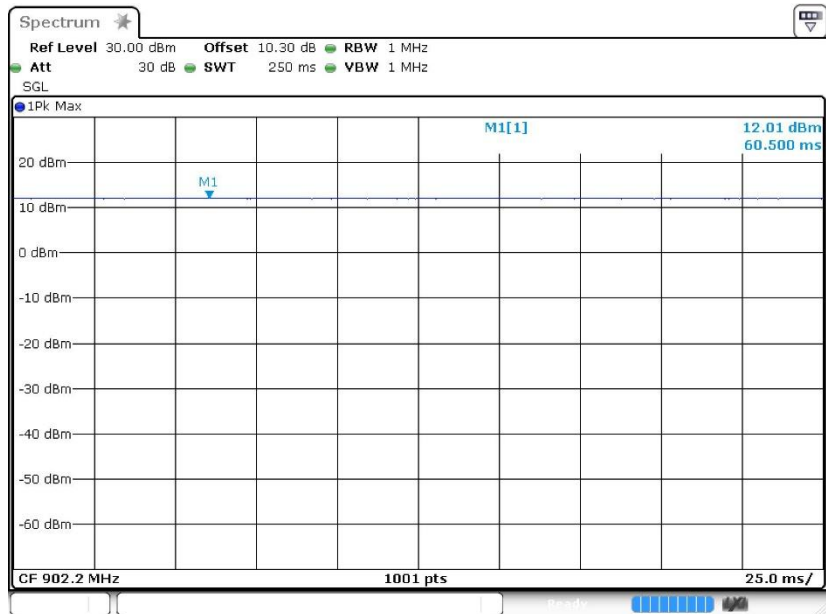
| Band          | Duty Cycle(%) | DCCF (dB) |
|---------------|---------------|-----------|
| LoRa(FHSS)SF7 | 100           | 0         |
| LoRa(FHSS)SF8 | 100           | 0         |
| LoRa(FHSS)SF9 | 100           | 0         |

### LoRa(FHSS)SF 7





### LoRa(FHSS)SF8



### LoRa(FHSS)SF9

