

# RF TEST REPORT

**Report No.:** 20250517G11227X-W2

**Product Name:** LoRa Modules

**Model No.:** M320(H)

**FCC ID:** 2BM2KM320

**Applicant:** Shenzhen Navynav Technology Co., Ltd

**Address:** Room 502, Han's Laser Technology Centre Shennan Ave No.9988, Nuan'an District, Shenzhen, Guangdong Province, China

**Dates of Testing:** 05/17/2025 - 06/23/2025

**Issued by:** CCIC Southern Testing Co., Ltd.

**Lab Location:** Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China

Query E-Mail: manager@ccic-set.com

Feedback E-Mail: integrity@ccic-set.com

Report Query Tel: 86-0755-26627338

Feedback Tel: 86-0755-86185963

This test report consists of 60 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CCIC-SET. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CCIC-SET within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.

## Test Report

**Product** .....: LoRa Modules

**Trade Name** .....: Navynav

**Applicant** .....: Shenzhen Navynav Technology Co., Ltd

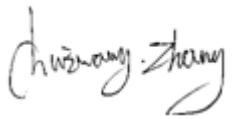
**Applicant Address** .....: Room 502, Han's Laser Technology Centre Shennan Ave  
No.9988, Nv anshan District,Shenzhen, Guangdong  
Province, China

**Manufacturer** .....: Shenzhen Navynav Technology Co., Ltd

**Manufacturer Address** .....: Room 502, Han's Laser Technology Centre Shennan Ave  
No.9988, Nv anshan District,Shenzhen, Guangdong  
Province, China

**Test Standards** .....: 47 CFR Part 15 Subpart C 15.247  
ANSI C63.10-2020

**Test Result** .....: Pass

**Tested by** .....:  2025.06.23

Chuiwang Zhang, Test Engineer

**Reviewed by** .....:  2025.06.23

Sun Jiaohui, Senior Engineer

**Approved by** .....:  2025.06.23

Chris You, Manager

## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION.....</b>	<b>5</b>
1.1. EUT Description .....	5
1.2. Test Standards and Results .....	6
1.3. Carrier Frequency and channel List .....	7
1.4. Test environment and mode .....	8
1.5. Table for Supporting Units.....	8
1.6. EUT Operation Test Setup .....	8
1.7. Laboratory Facilities and Accreditation Certificate .....	9
<b>2. TEST REQUIREMENT .....</b>	<b>10</b>
2.1. Antenna requirement .....	10
2.2. Number of Hopping Frequency .....	11
2.3. Maximum Conducted Output Power .....	13
2.4. 20dB Emission Bandwidth.....	15
2.5. Carried Frequency Separation.....	17
2.6. Dwell time.....	19
2.7. Conducted Spurious Emissions.....	21
2.8. Conducted Band Edge.....	23
2.9. Radiated Band Edges and Spurious Emission .....	25
2.10. AC Power Line Conducted Emission.....	37
<b>3. LIST OF MEASURING EQUIPMENT .....</b>	<b>41</b>
<b>4. UNCERTAINTY OF EVALUATION.....</b>	<b>42</b>
<b>APPENDIX A .....</b>	<b>43</b>

Change History		
Issue	Date	Reason for change
1.0	2025.06.23	First edition

## 1. General Information

### 1.1. EUT Description

Product Name	LoRa Modules
Frequency Range	LoRaWAN: 902MHz~928MHz
Channel Number	902.3~914.9MHz: 64 915.2~927.8MHz: 64
Data Rate	SF12, SF11, SF10, SF9, SF8, SF7, SF6, SF5
Modulation Type	LoRa
Antenna Type	External Antenna
Antenna Gain	External Antenna: 1.87dBi
Power supply	DC 3.3V

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

## 1.2. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC certification standards:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Radio Frequency Devices
2	ANSI C63.10-2020	American National Standard for Testing Unlicensed Wireless Devices
3	KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for Compliance Measurement on Digital Transmission Systems, Frequency Hopping Spread Spectrum Systems, and Hybrid System Devices Operating under Section 15.247 of the FCC Rules

Test detailed items/section required by FCC rules and results are as below:

No.	Section in CFR 47	Description	Result
1	15.203 15.247(b)(4)	Antenna Requirement	PASS
2	15.247 (a)(1)(i)	Number of Hopping Frequency	PASS
3	15.247 (b)(2)	Peak Output Power	PASS
4	15.247 (a)(1)(i)	20dB Emission Bandwidth	PASS
5	15.247 (a)(1)	Carrier Frequency Separation	PASS
6	15.247 (a)(1)(i)	Time of Occupancy (Dwell time)	PASS
7	15.247(d)	Conducted Band Edge and Spurious Emission	PASS
8	15.207	AC Power Line Conducted Emission	PASS
9	15.205 15.209 15.247(d)	Radiated Band Edges and Spurious Emission	PASS

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10-2020.

Note 2: These RF tests were performed according to the method of measurements prescribed in KDB 558074 D01 15.247 Meas Guidance v05r02.

### 1.3. Carrier Frequency and channel List

LoRaWAN_902.3~914.9MHz					
Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
<b>0</b>	<b>902.3</b>	29	908.1	46	911.5
1	902.5	30	908.3	47	911.7
2	902.7	31	908.5	48	911.9
3	902.9	<b>32</b>	<b>908.7</b>	49	912.1
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
15	905.3	42	910.7	60	914.3
16	905.5	43	910.9	61	914.5
17	905.7	44	911.1	62	914.7
18	905.9	45	911.3	<b>63</b>	<b>914.9</b>

Note 1:  $F(\text{MHz}) = 902.3 + 0.2*n$  ( $0 \leq n \leq 63$ ).

Note 2: Channel 0, 32 and 63 selected for LoRaWAN as Lowest, Middle and Highest channel.

LoRaWAN_915.2~927.8MHz					
Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
<b>0</b>	<b>915.2</b>	29	921.0	46	924.4
1	915.4	30	921.2	47	924.6
2	915.6	31	921.4	48	924.8
3	915.8	<b>32</b>	<b>921.6</b>	49	925.0
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
15	918.2	42	923.6	60	927.2
16	918.4	43	923.8	61	927.4
17	918.6	44	924.0	62	927.6
18	918.8	45	924.2	<b>63</b>	<b>927.8</b>

Note 1:  $F(\text{MHz}) = 915.2 + 0.2*n$  ( $0 \leq n \leq 63$ ).

Note 2: Channel 0, 32 and 63 selected for LoRaWAN as Lowest, Middle and Highest channel.

#### 1.4. Test environment and mode

During the measurement, the environmental conditions were within the listed ranges:

<b>Operating Environment</b>	
Temperature	15°C - 35°C
Humidity	30% -60%
Atmospheric Pressure	86kPa-106kPa
<b>Test mode:</b>	
Non-hopping mode:	Keep the EUT in continuous transmitting mode with worst case data rate.
Hopping mode:	Keep the EUT in hopping mode.

#### 1.5. Table for Supporting Units

No.	Equipment	Brand Name	Model Name	Manufacturer	Serial No.	Note
1	Laptop	HP	TPN-Q221	HP	5CD14347QB	FCC DOC

#### 1.6. EUT Operation Test Setup

For RF test items, an engineering test program was provided and enable to make EUT transmitting.

## 1.7. Laboratory Facilities and Accreditation Certificate

### CCIC-SET Lab 1

Address: Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China

### **FCC-Registration No.: CN1283**

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

### **ISED Registration: 11185A, CAB number: CN0064**

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

### **A2LA Code: 5721.01**

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

### **CNAS L1659**

CCIC Southern Testing Co., Ltd. CCIC is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

### CCIC-SET Lab 4

Address: No.125, Hongmei Section, Wangsha Road, Hongmei Town, Dongguan City, Guangdong Province, China

### **CNAS L1659**

CCIC Southern Testing Co., Ltd. CCIC is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

## 2. Test Requirement

### 2.1. Antenna requirement

#### 2.1.1. Applicable Standard

**And according to FCC 47 CFR Section 15.203:** An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. 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 provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§ 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

**And according to FCC 47 CFR Section 15.247(b)(4):** The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 2.1.2. Antenna Information

**Antenna Category:** External Antenna.

1. External antennas are installed by professionals, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded

#### Antenna General Information:

No.	EUT	Operating frequency range	Ant. Type	Ant. Gain
1	LoRa Modules	902-928MHz	External Antenna	1.87dBi

#### 2.1.3. Result: Comply

Please refer to the EUT photos.

## 2.2. Number of Hopping Frequency

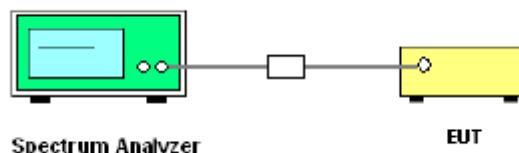
### 2.2.1. Limit of Number of Hopping Frequency

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; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

### 2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.2.3. Test Setup



### 2.2.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 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: Set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, Whichever is smaller / VBW  $\geq$  RBW / Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow the trace to stabilize.
6. The number of hopping frequency used is defined as the number of total channel.
7. Record the measurement results in the test report.

### 2.2.5. Test Results of Number of Hopping Frequency

Please refer to Appendix A for detail.

## 2.3. Maximum Conducted Output Power

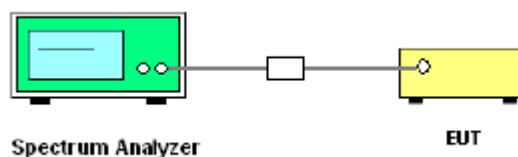
### 2.3.1. Limit of Maximum Conducted Output Power

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.

### 2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.3.3. Test Setup



### 2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.5.
2. The RF output of EUT was connected to Spectrum analyzer by RF cable and attenuator. The pathloss 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:

Set span to be Approximately five times the 20 dB bandwidth, centered on a hopping channel / RBW > 20 dB bandwidth of the emission being measured /  $VBW \geq RBW$  / Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow trace to stabilize / Use the marker-to-peak function to set the marker to the peak of the emission.

5. Record the measurement results in the test report.

### 2.3.5. Test Result of Maximum Conducted Output Power

Please refer to Appendix A for detail.

## 2.4. 20dB Emission Bandwidth

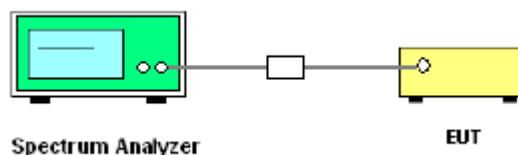
### 2.4.1. Definition

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; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

### 2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.4.3. Test Setup



### 2.4.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.6 or 6.9.2.
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. Use the spectrum analyzer “Channel Bandwidth” function to easurement the 20dB EBW.
5. For 20dB EBW Use the following spectrum analyzer settings:

Using the X dB bandwidth mode of the instrument's automatic bandwidth measurement function, X is set to 20 dB / The spectrum analyzer center frequency is set to the EUT channel center frequency / Set span to be approximately 2 to 5 times the EBW / RBW  $\geq$  1% to 5% of the EBW / VBW shall be approximately three times RBW / Sweep: Auto / Detector mode: Peak / Trace mode: Max hold.

6. Record the measurement results in the test report.

#### 2.4.5. Test Results of 20dB Emission Bandwidth

Please refer to Appendix A for detail.

## 2.5. Carried Frequency Separation

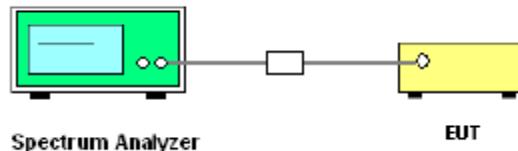
### 2.5.1. Limit of Carried Frequency Separation

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

### 2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.5.3. Test Setup



### 2.5.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 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: Start with the RBW set to approximately 30% of the channel spacing /  $VBW \geq RBW$  /

Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow the trace to stabilize /

Use the marker-delta function to determine the separation between the peaks of the adjacent channels.
6. Record the measurement results in the test report.

### 2.5.5. Test Results of Carried Frequency Separation

Please refer to Appendix A for detail.

## 2.6. Dwell time

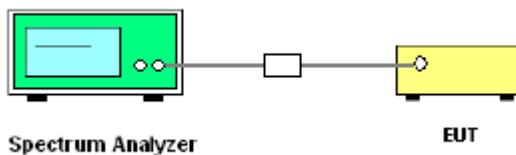
### 2.6.1. Limit of Dwell Time

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; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz

### 2.6.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.6.3. Test Setup



### 2.6.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 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 shall be  $\leq$  channel spacing and where possible RBW should be set  $>> 1 / T$ , where T is the expected dwell time per channel /

VBW  $\geq$  RBW / Sweep: As necessary to capture the entire dwell time per hopping channel /  
Detector function: Peak / Trace: Max hold.

6. Record the measurement results in the test report.

### 2.6.5. Test Results of Dwell Time

Please refer to Appendix A for detail.

## 2.7. Conducted Spurious Emissions

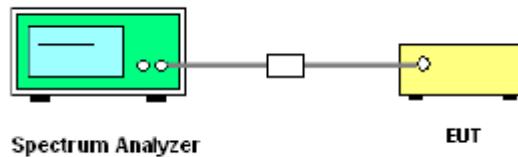
### 2.7.1. Limit of Conducted Spurious Emissions

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that.

### 2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.7.3. Test Setup



### 2.7.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.7.1.
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:  
Set the frequency range to 30MHz~10GHz / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum amplitude level.
5. Record the measurement results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 2.7.5. Test Results of Conducted Spurious Emissions

Please refer to Appendix A for detail.

## 2.8. Conducted Band Edge

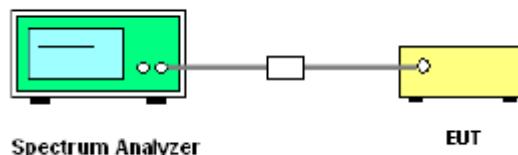
### 2.8.1. Limit of Conducted Band Edge

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that.

### 2.8.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.8.3. Test Setup



#### 2.8.1. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.7.2.
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. Use the following spectrum analyzer settings:  
Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum power level.
5. Enable hopping function of the EUT and then repeat step 3 and 4.
6. Record the measurement results in the test report.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 2.8.2. Test Results of Conducted Band Edge

Please refer to Appendix A for detail.

## 2.9. Radiated Band Edges and Spurious Emission

### 2.9.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level. If the transmitter uses an RMS average conducted power limit, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

§15.209(a) Radiated emission limits:

Frequency (MHz)	Field Strength ( $\mu$ V/m)	Measurement Distance (m)
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

Restricted bands of operation refer to §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41	/	/	/

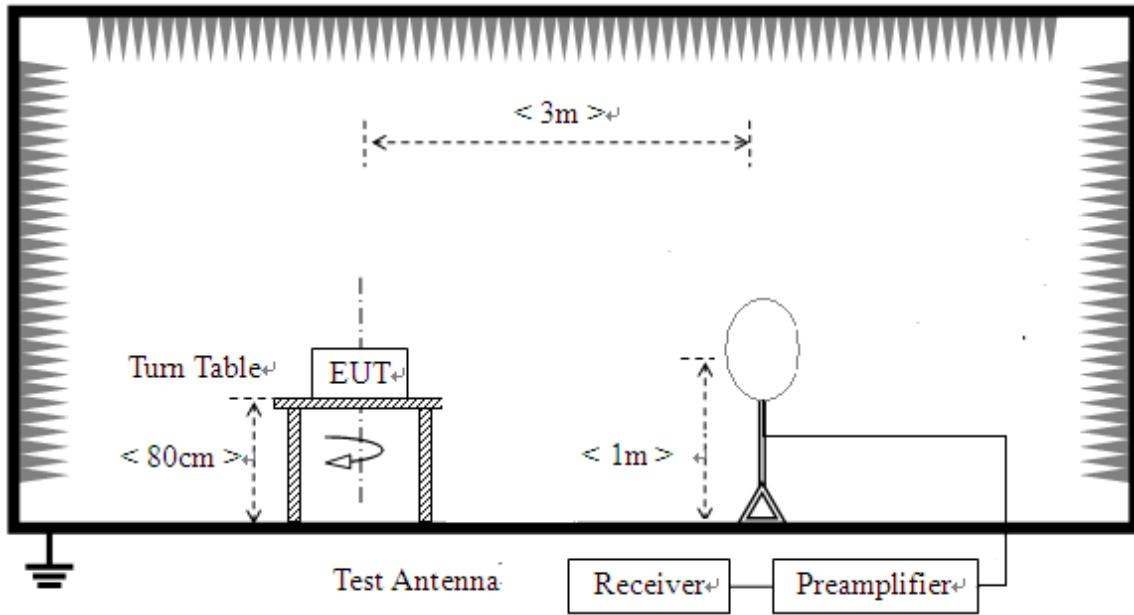
Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.  
<sup>2</sup>Above 38.6.

## 2.9.2. Measuring Instruments

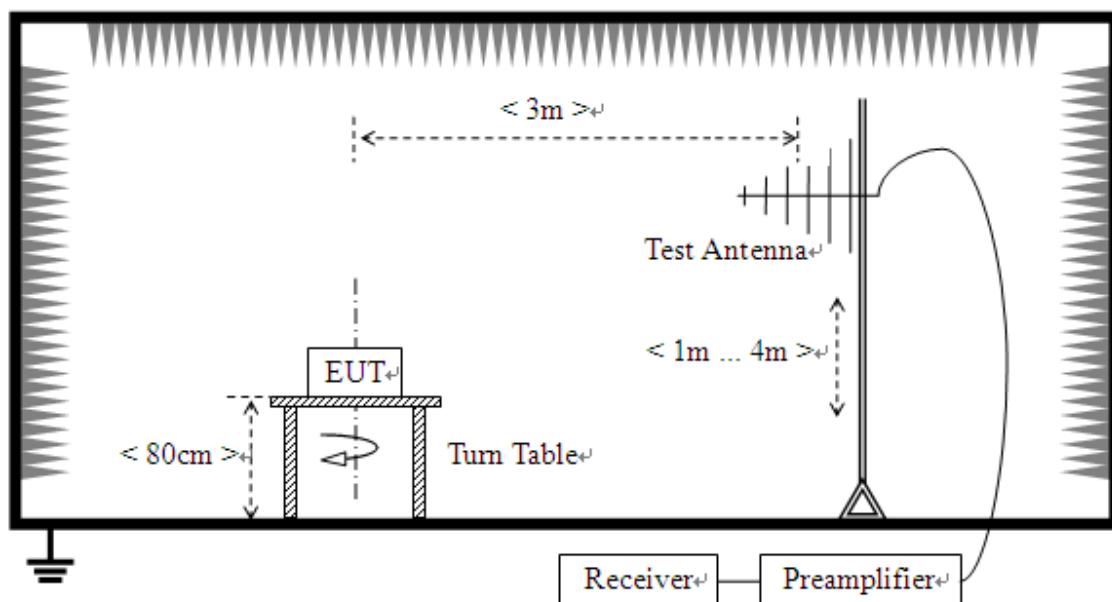
The measuring equipment is listed in the section 3 of this test report.

## 2.9.3. Test Setup

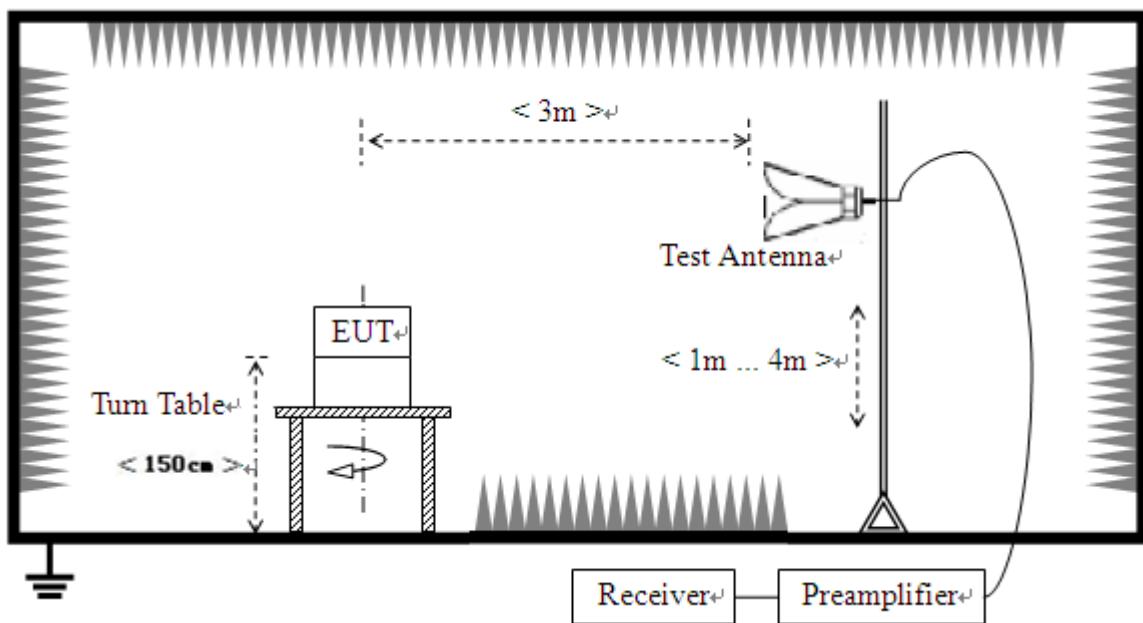
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to 1GHz



### For radiated emissions above 1GHz



#### 2.9.4. Test Procedure

1. The EUT was placed on the top of a rotating table 0.8m for below 1GHz and 1.5m for above 1GHz above the ground at a 3 meters semi-anechoic chamber.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then

reported in a data sheet.

7. For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$ (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

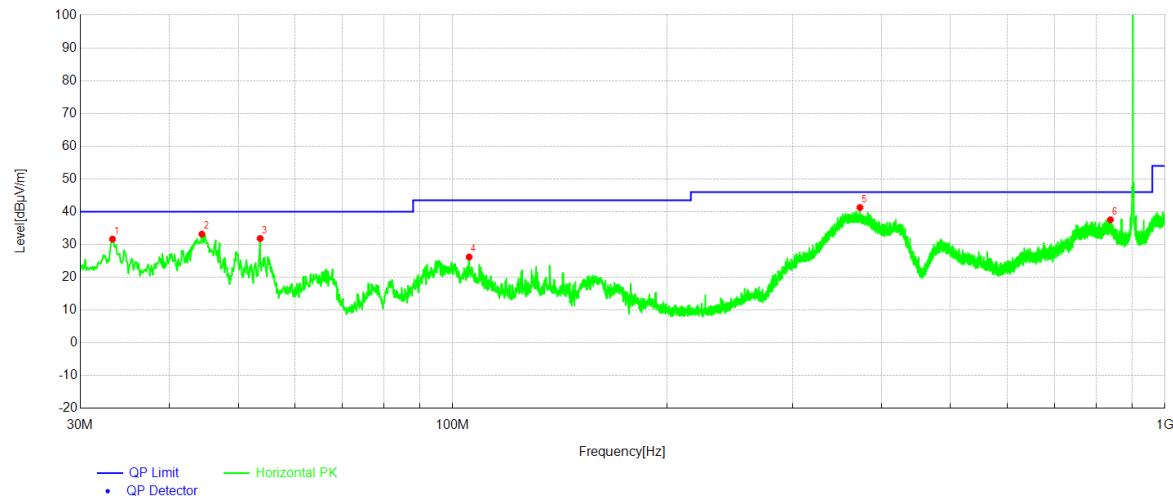
### **2.9.5. Test Results of Radiated Band Edge and Spurious Emission**

Note 1: For 9 kHz to 30MHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note 2: For 30MHz to 1GHz, All of the EUT Configure mode were tested and found 902.3MHz channel is the worst mode, the worst case is recorded in this report.

Note 3: For 1GHz to 10GHz, All of the EUT Configure mode were tested and found 902.3MHz channel is the worst mode, the worst case is recorded in this report.

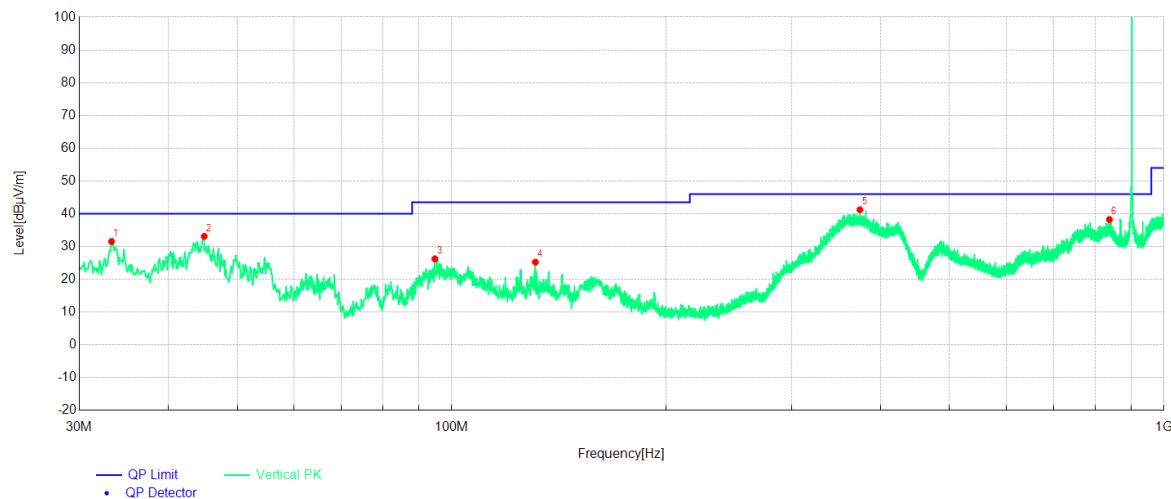
Note 4: Antenna height and turntable angle are the worst positions, the worst case is recorded in this report.

**For 30MHz to 1000MHz**


NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Height [cm]	Angle [°]	Polarity
1	33.30	31.65	19.99	40.00	8.35	100	220	Horizontal
2	44.45	33.18	14.41	40.00	6.82	100	200	Horizontal
3	53.67	31.85	10.10	40.00	8.15	100	270	Horizontal
4	105.47	26.20	10.79	43.50	17.30	100	260	Horizontal
5	373.03	41.30	16.03	46.00	4.70	100	170	Horizontal
6	838.28	37.56	25.97	46.00	8.44	100	320	Horizontal

**Test Result: Pass**
**Remark:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.



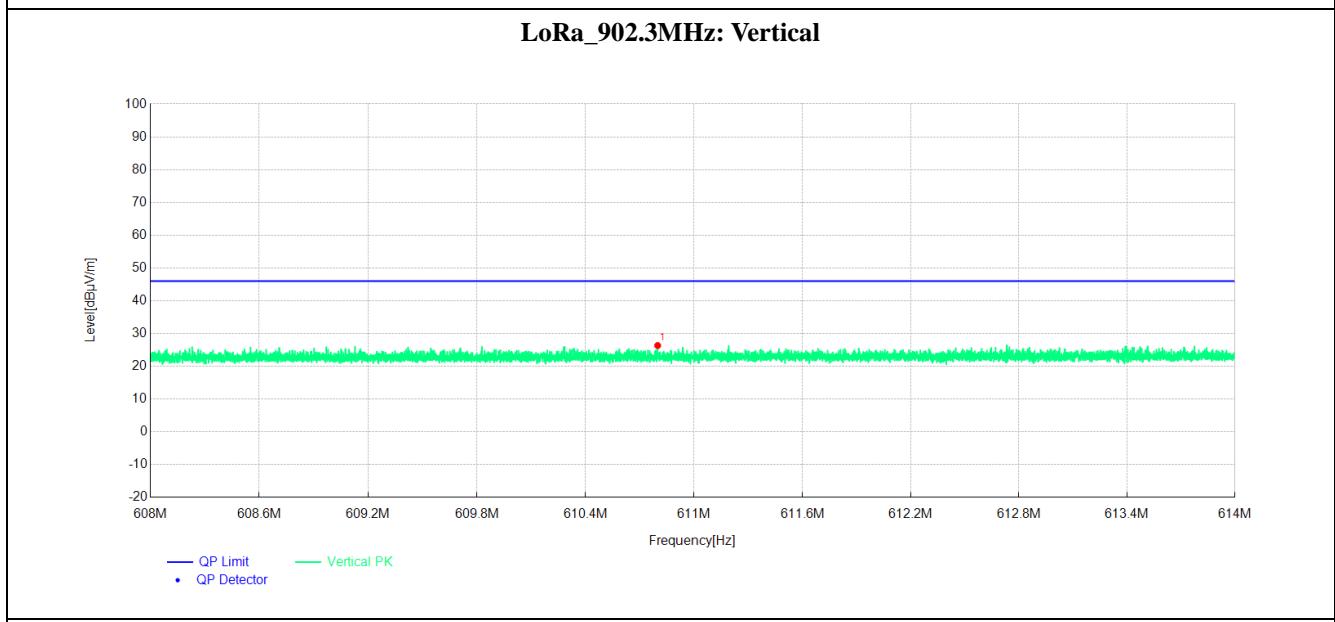
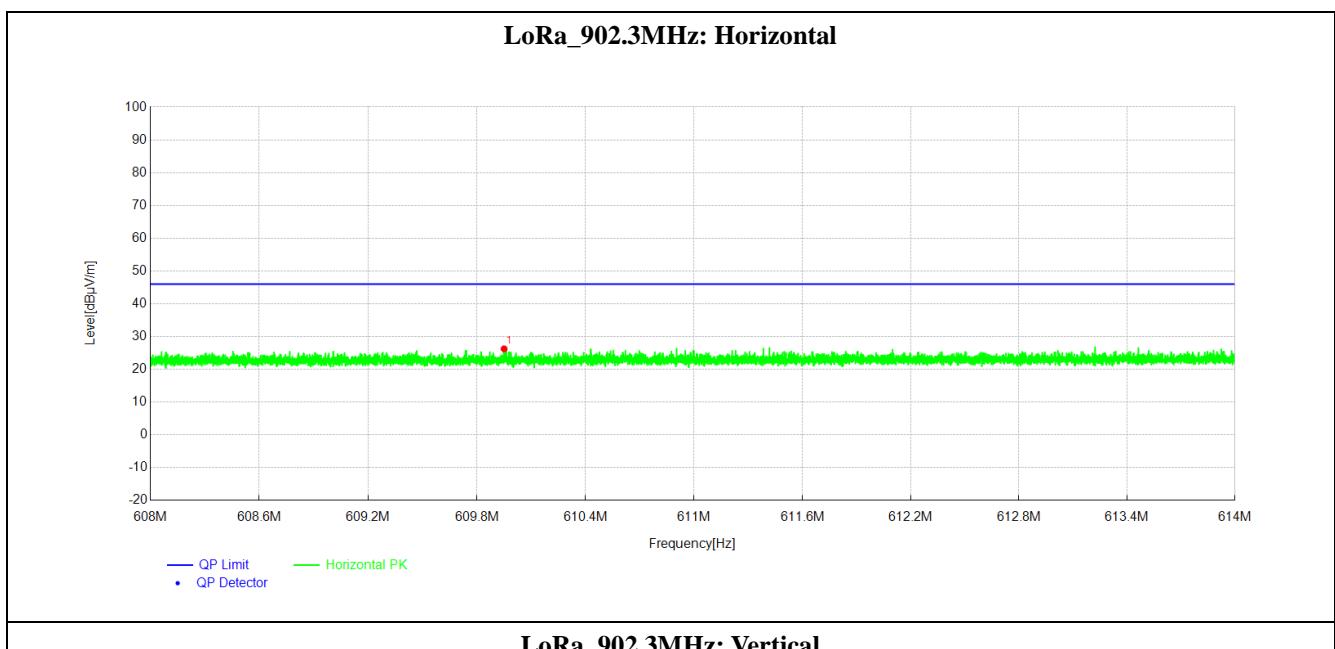
NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Height [cm]	Angle [°]	Polarity
1	33.30	31.56	19.99	40.00	8.44	100	130	Vertical
2	44.94	33.12	14.21	40.00	6.88	100	320	Vertical
3	94.71	26.25	10.29	43.50	17.25	100	180	Vertical
4	131.08	25.24	10.55	43.50	18.26	100	280	Vertical
5	374.19	41.23	16.04	46.00	4.77	100	250	Vertical
6	838.28	38.25	25.97	46.00	7.75	100	30	Vertical

### Test Result: Pass

#### Remark:

1. Emission Level(dB $\mu$ V/m) = Raw Value(dB $\mu$ V) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

### Restricted-band band-edge: 608MHz~614MHz



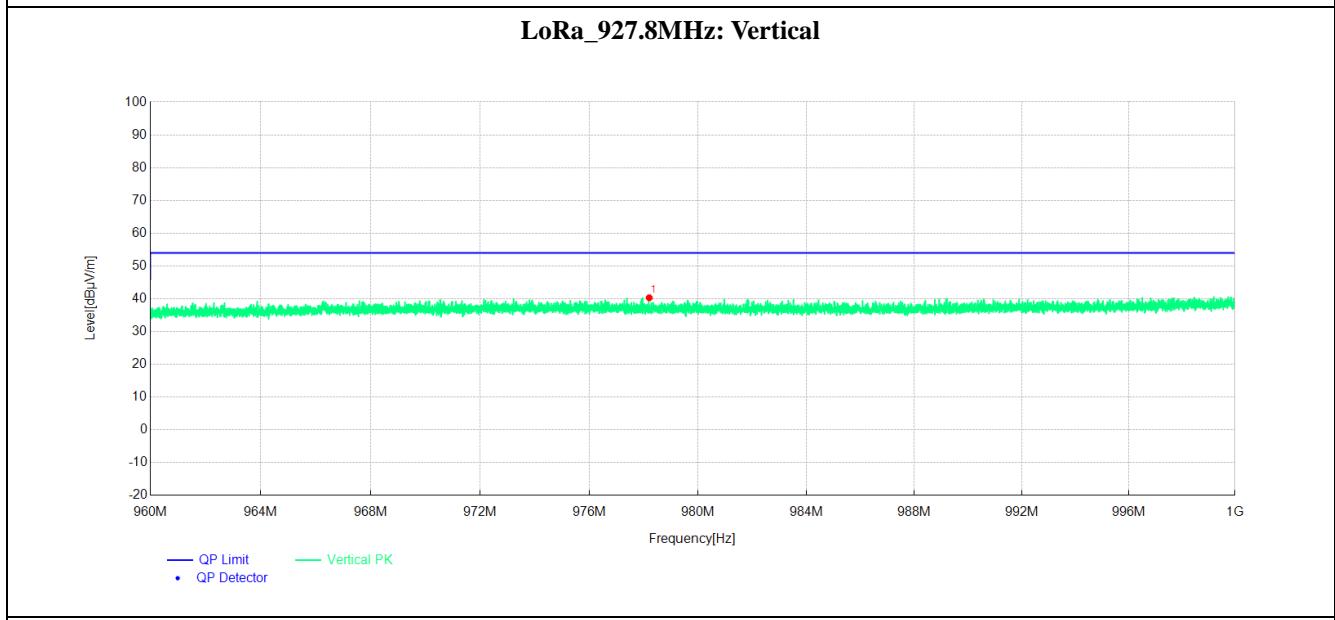
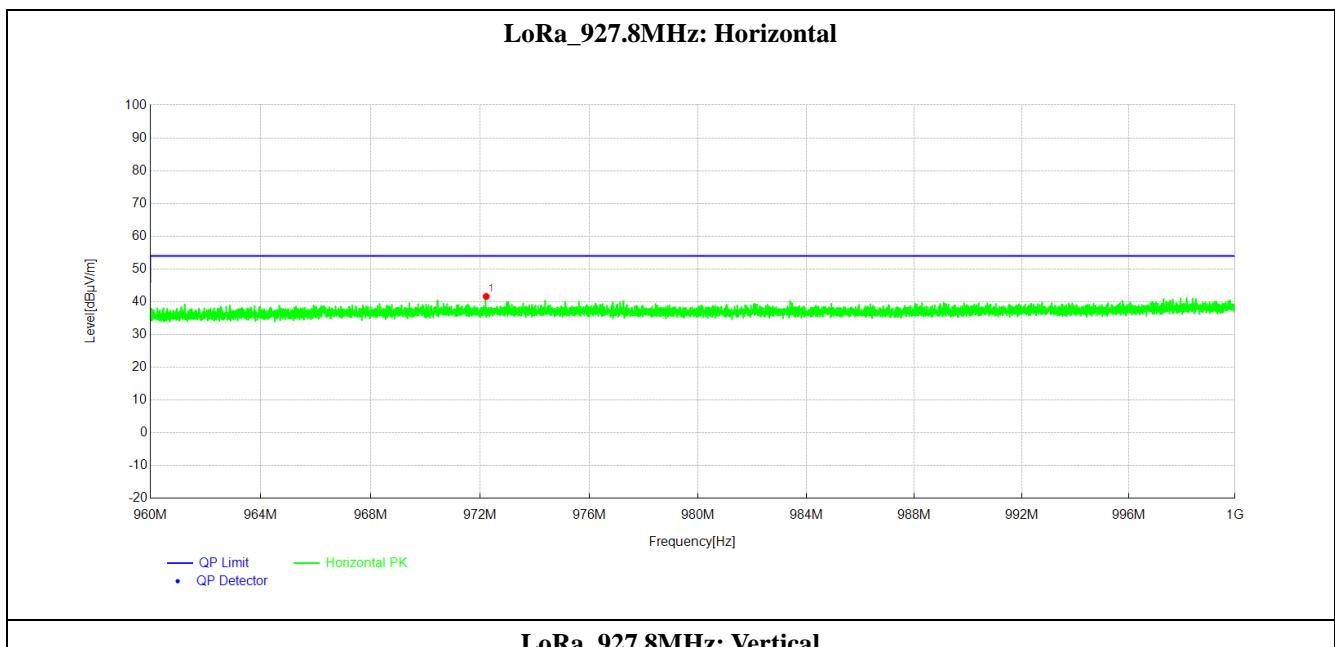
NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Height [cm]	Angle [°]	Polarity
1	609.95	26.26	20.67	46.00	19.74	100	220	Horizontal
2	610.80	26.34	20.66	46.00	19.66	150	230	Vertical

### Test Result: Pass

#### Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

### Restricted-band band-edge: 960MHz~1000MHz



NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Height [cm]	Angle [°]	Polarity
1	972.21	41.62	26.58	54.00	12.38	100	20	Horizontal
2	978.20	40.30	26.55	54.00	13.70	100	180	Vertical

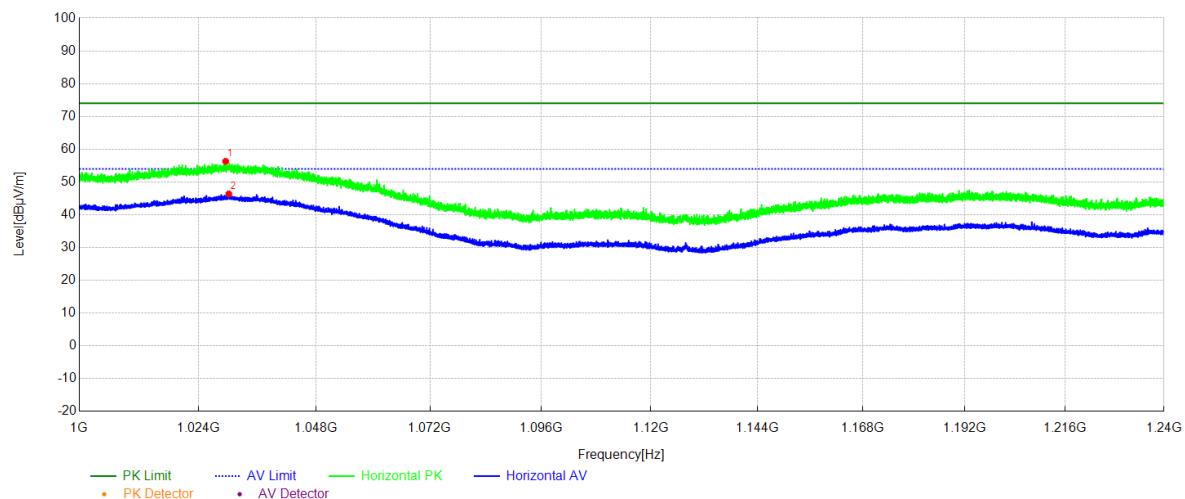
### Test Result: Pass

#### Remark:

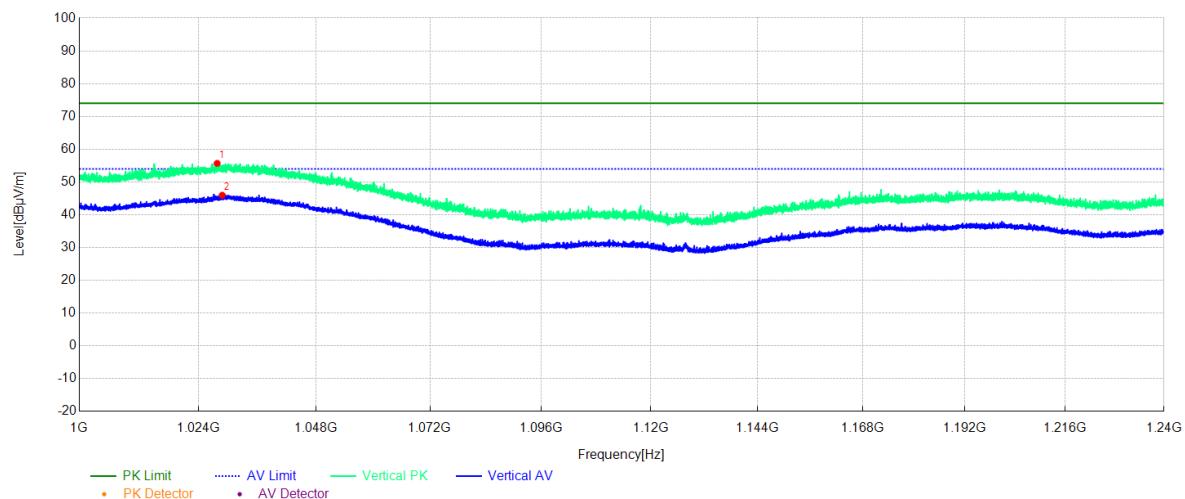
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

### Restricted-band band-edge: 1000MHz~1240MHz

#### LoRa\_927.8MHz: Horizontal



#### LoRa\_927.8MHz: Vertical

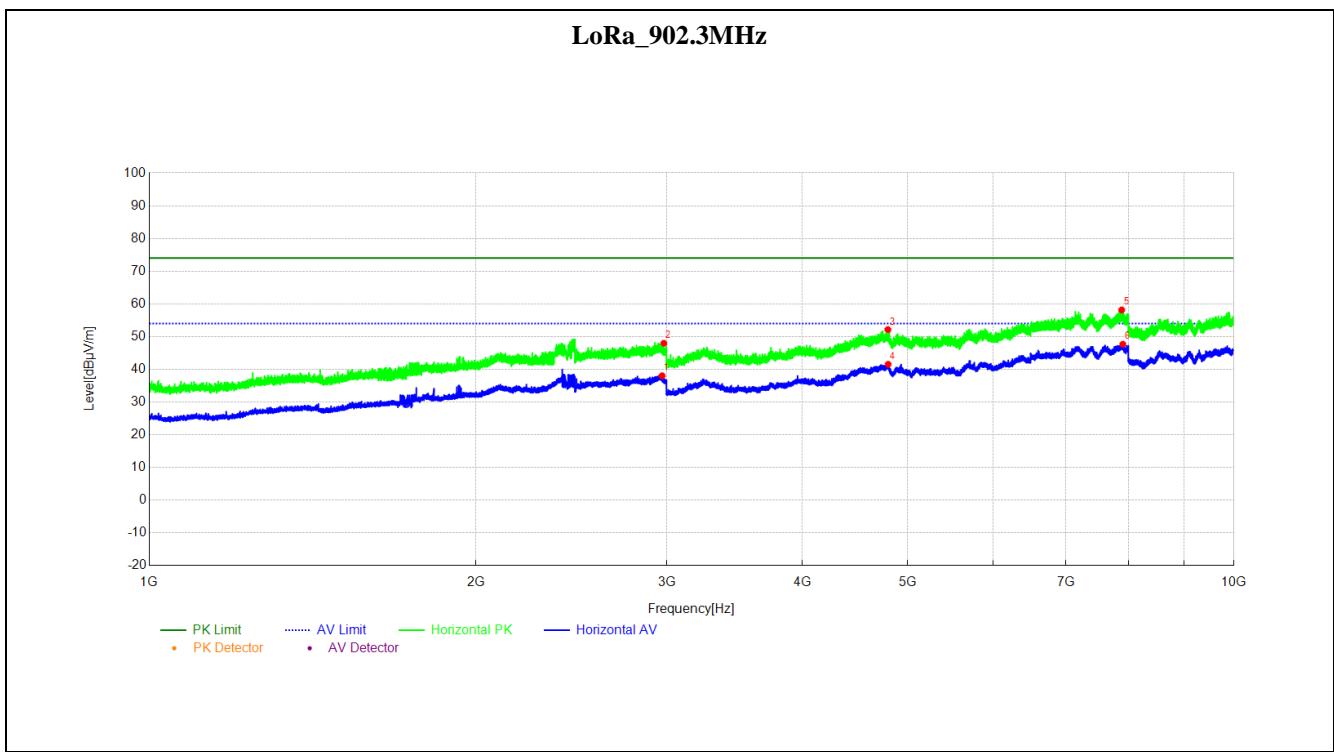


NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1029.45	56.29	-13.00	74.00	17.71	PK	150	150	Horizontal
2	1030.10	46.36	-13.02	54.00	7.64	AV	150	270	Horizontal
3	1027.72	55.68	-12.94	74.00	18.32	PK	150	340	Vertical
4	1028.75	45.96	-12.98	54.00	8.04	AV	150	250	Vertical

#### Test Result: Pass

##### Remark:

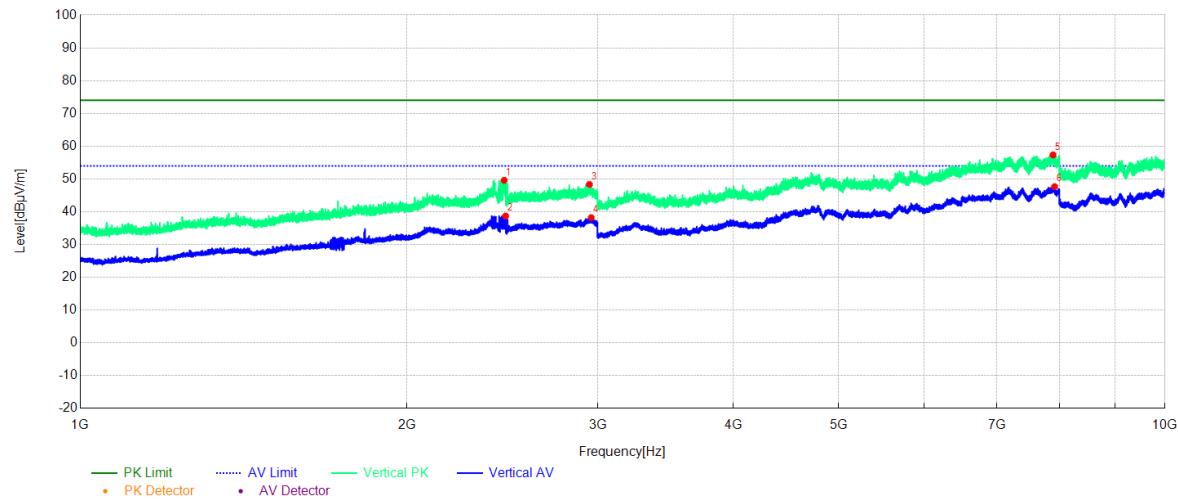
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

**For 1GHz to 10GHz:**


NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Trace	Height [cm]	Angle [°]	Polarity
1	2970.2	38.02	-2.31	54.00	15.98	AV	150	130	Horizontal
2	2981.0	47.96	-2.43	74.00	26.04	PK	150	30	Horizontal
3	4796.3	52.13	2.75	74.00	21.87	PK	150	80	Horizontal
4	4799.1	41.53	2.75	54.00	12.47	AV	150	80	Horizontal
5	7878.7	58.14	8.35	74.00	15.86	PK	150	180	Horizontal
6	7897.6	47.66	8.52	54.00	6.34	AV	150	90	Horizontal

**Test Result: Pass**
**Remark:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

**LoRa\_902.3MHz**


NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB $\mu$ V/m]	Trace	Height [cm]	Angle [°]	Polarity
1	2459.5	49.59	-4.25	74.00	24.41	PK	150	140	Vertical
2	2466.7	38.69	-4.25	54.00	15.31	AV	150	320	Vertical
3	2946.9	48.33	-2.15	74.00	25.67	PK	150	190	Vertical
4	2958.4	38.21	-2.19	54.00	15.79	AV	150	260	Vertical
5	7884.7	57.34	8.40	74.00	16.66	PK	150	280	Vertical
6	7911.34	47.66	8.29	54.00	6.34	AV	150	160	Vertical

**Test Result: Pass**
**Remark:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

## 2.10. AC Power Line Conducted Emission

### 2.10.1. Limit of AC Power Line Conducted Emission

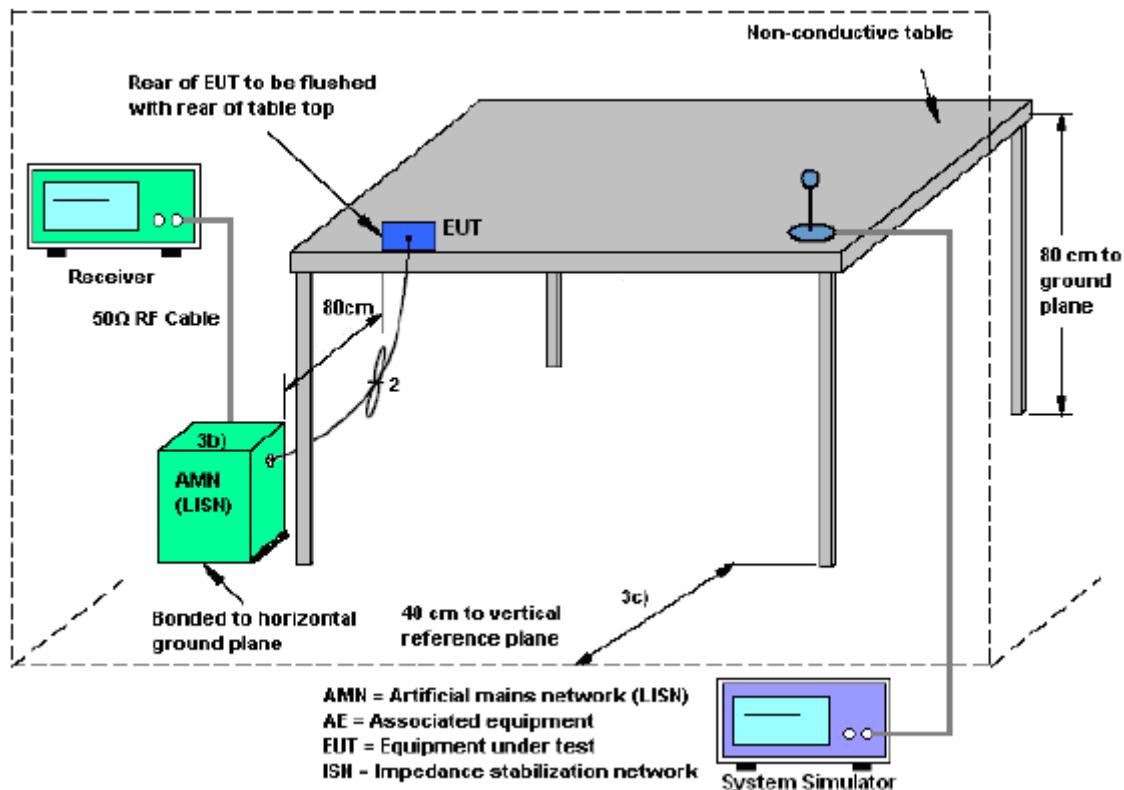
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

### 2.10.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.10.3. Test Setup



#### 2.10.4. Test Procedures

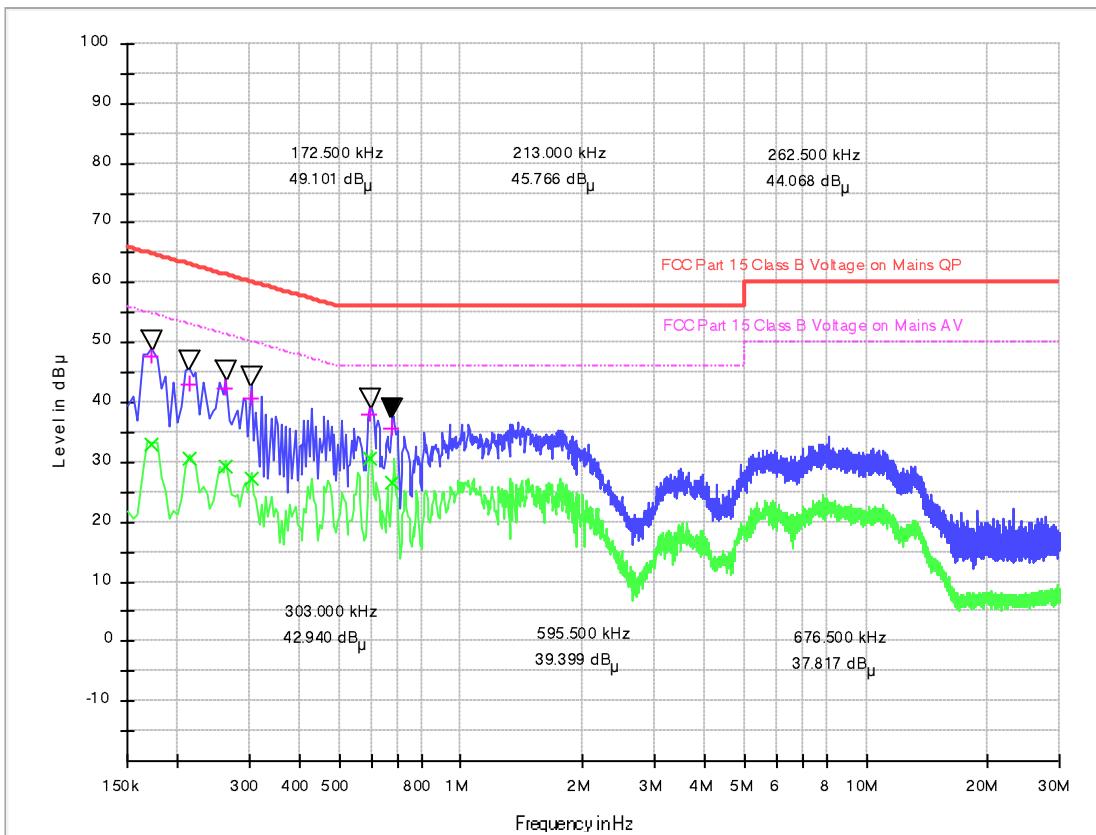
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 micrometry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

#### 2.10.5. Test Results of AC Power Line Conducted Emission

The EUT configuration of the emission tests is LoRa Link + PC.

All of the EUT Configure mode were tested and found 902.3MHz channel is the worst mode, the worst case is recorded in this report.

Test site:	Shield ROOM 2	Environment:	Temp: 23°C; Humi:53%;101kPa
Operator:	Cai Fujie	Test Date:	2025.06.23
Test Mode:	LoRa - TX	Test Part:	L Line

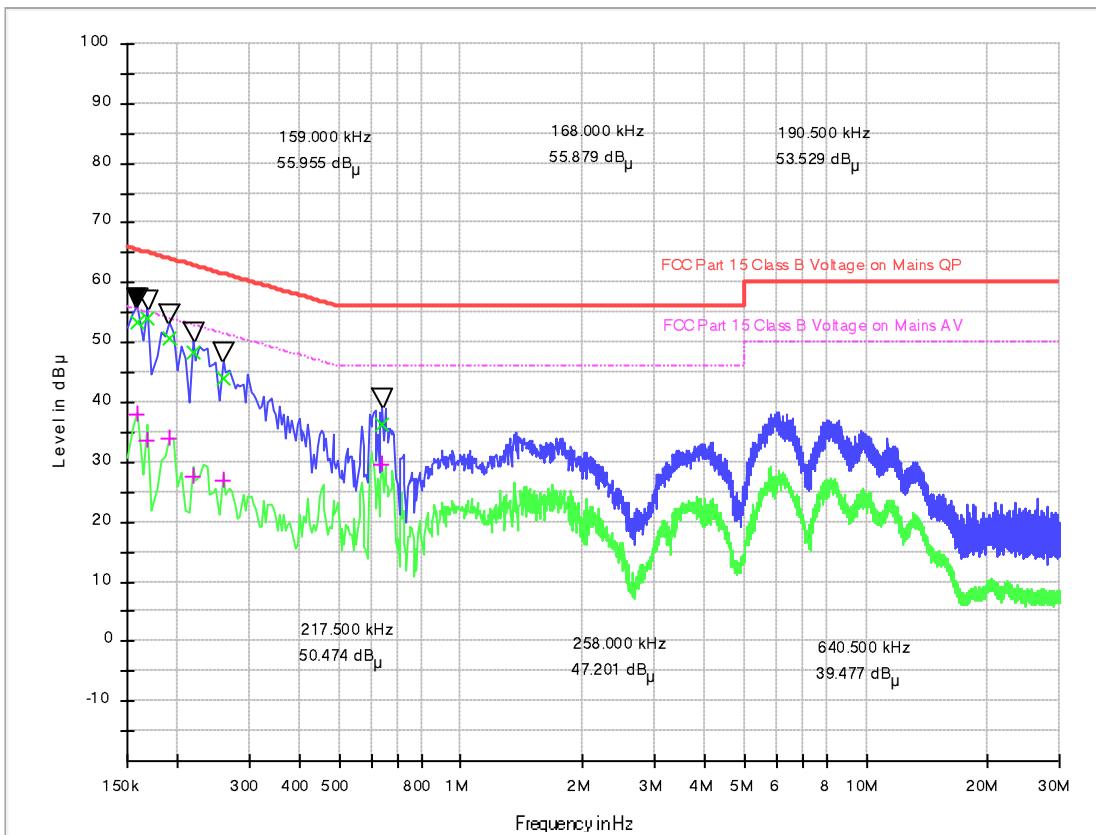


Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Corr.Factor (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AV (dB)	Limit - AV (dBμV)
0.172500	47.64	33.04	10.3	17.20	64.84	21.80	54.84
0.213000	43.05	30.56	10.6	20.04	63.09	22.53	53.09
0.262500	42.48	29.27	10.6	18.87	61.35	22.08	51.35
0.303000	40.58	27.21	10.2	19.58	60.16	22.95	50.16
0.595500	37.84	30.51	10.7	18.16	56.00	15.49	46.00
0.676500	35.61	26.43	10.2	20.39	56.00	19.57	46.00

**Test Result : Pass**

Note: Final Level = Receiver Read level + Correction factor.

Test site:	Shield ROOM 2	Environment:	Temp: 23°C; Humi:53%;101kPa
Operator:	Cai Fujie	Test Date:	2025.06.23
Test Mode:	LoRa - TX	Test Part:	L Line



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Corr.Factor (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AV (dB)	Limit - AV (dBμV)
0.159000	53.53	37.88	10.7	11.99	65.52	17.64	55.52
0.168000	53.95	33.79	10.7	11.11	65.06	21.27	55.06
0.190500	50.87	33.96	10.8	13.14	64.01	20.05	54.01
0.217500	48.40	27.72	10.9	14.51	62.91	25.19	52.91
0.258000	44.04	26.78	10.9	17.46	61.50	24.72	51.50
0.640500	36.29	29.54	10.6	19.71	56.00	16.46	46.00

**Test Result : Pass**

Note: Final Level = Receiver Read level + Correction factor.

### 3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2023.08.01	2026.07.31
2	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2024.12.26	2025.12.25
3	Loop Antenna	SCHWARZBECK	FMZB 1519-60 C	A240204134	2023.12.13	2026.12.12
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2026.06.07
5	EMI Horn Ant. (1-18G)	ETC	MCTD-1209	A150402241	2023.05.16	2026.05.15
6	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2026.05.31
7	Amplifier 30M~1GHz	TESEQ	CBA1G-600B	A190503534	2024.09.05	2025.09.04
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2024.12.26	2025.12.25
9	Spectrum Analyzer	KEYSIGHT	N9020A	A240604409	2024.08.22	2025.08.21
10	Test Receiver	R&S	ESIB7	A0501375	2025.01.13	2026.01.12
11	Broadband Ant.	ETC	MCTD 2786	A150402240	2023.05.22	2026.05.21
12	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2024.02.27	2027.02.26
13	Test Receiver	KEYSIGHT	N9038A	A141202036	2024.06.05 2025.06.04	2025.06.04 2026.06.03
14	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2025.04.14	2026.04.13
15	Cable(9kHz~30MHz)	/	/	C230800587	2023.08.21	2026.08.20
16	Cable(30MHz~18GHz)	/	XSMJA750-SMNM( RA)-12M	C230800588	2023.08.21	2026.08.20
17	Cable(18GHz~40GHz)	/	SUCOFLEX102	C230800590	2023.08.21	2026.08.20

#### 4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020. 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 AC Power Line Conducted Emission Measurement (150kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	2.8dB
---	-------

Uncertainty of Radiated Emission Measurement (9kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	3.5dB
---	-------

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	3.91dB
---	--------

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

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	4.5dB
---	-------

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

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	4.9dB
---	-------

Uncertainty of RF Conducted Measurement (9kHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2U <sub>c</sub> (y))	1.3dB
---	-------

## Appendix A

### Duty Cycle

#### Test Result and Data

902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	ON Time[ms]	Period[ms]	Duty Cycle[%]	DC Factor
LORA_FHSS	Ant1	902.3	318.00	372.00	85.48	0.68
LORA_FHSS	Ant1	908.7	318.00	371.00	85.71	0.67
LORA_FHSS	Ant1	914.9	317.00	370.00	85.68	0.67

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	ON Time[ms]	Period[ms]	Duty Cycle[%]	DC Factor
LORA_FHSS	Ant1	915.2	317.00	371.00	85.44	0.68
LORA_FHSS	Ant1	921.6	317.00	372.00	85.22	0.69
LORA_FHSS	Ant1	927.8	318.00	371.00	85.71	0.67



## Test Graphs



## Maximum Conducted Output Power

### Test Result and Data

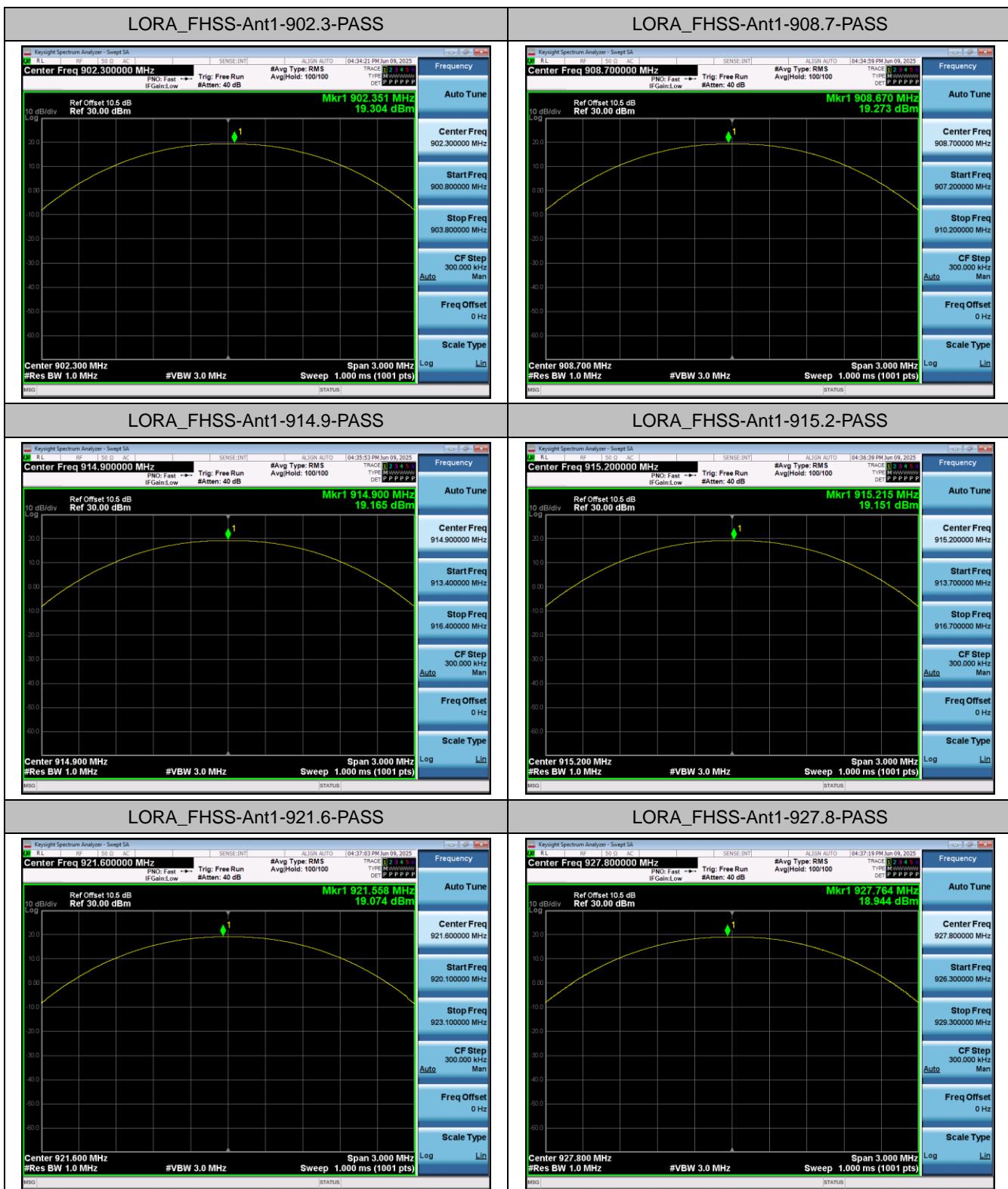
902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	Peak Output Power[dBm]	Limit [dBm]	Verdict
LORA_FHSS	Ant1	902.3	19.30	≤20.97	PASS
LORA_FHSS	Ant1	908.7	19.27	≤20.97	PASS
LORA_FHSS	Ant1	914.9	19.17	≤20.97	PASS

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	Peak Output Power[dBm]	Limit [dBm]	Verdict
LORA_FHSS	Ant1	915.2	19.15	≤20.97	PASS
LORA_FHSS	Ant1	921.6	19.07	≤20.97	PASS
LORA_FHSS	Ant1	927.8	18.94	≤20.97	PASS

## Test Graphs



## 20dB Emission Bandwidth

### Test Result and Data

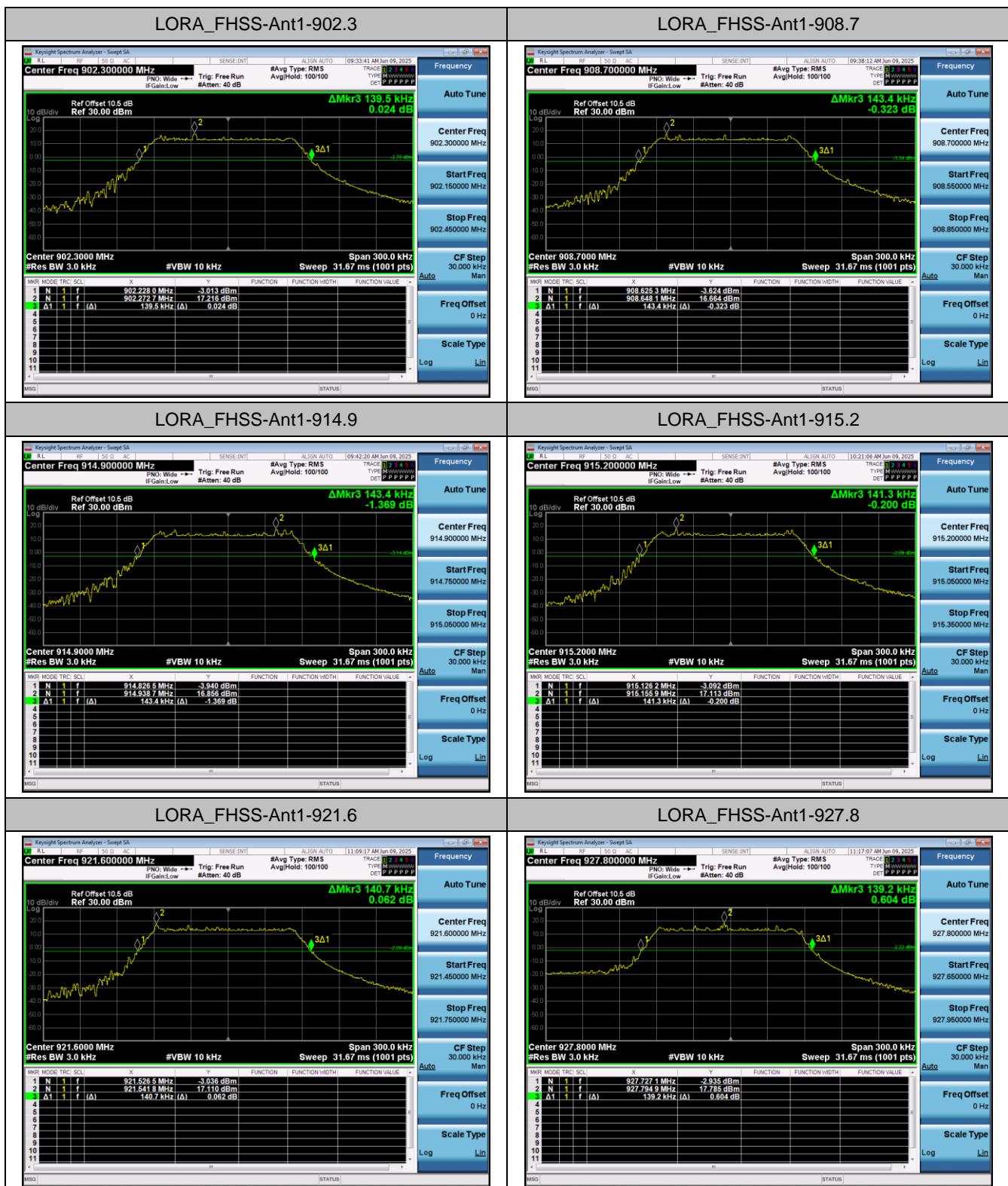
902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	20 EBW [MHz]	Limit[MHz]	Verdict
LORA_FHSS	Ant1	902.3	0.140	---	---
LORA_FHSS	Ant1	908.7	0.143	---	---
LORA_FHSS	Ant1	914.9	0.143	---	---

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	20 EBW [MHz]	Limit[MHz]	Verdict
LORA_FHSS	Ant1	915.2	0.141	---	---
LORA_FHSS	Ant1	921.6	0.141	---	---
LORA_FHSS	Ant1	927.8	0.139	---	---

## Test Graphs



## Carrier frequency separation

### Test Result and Data

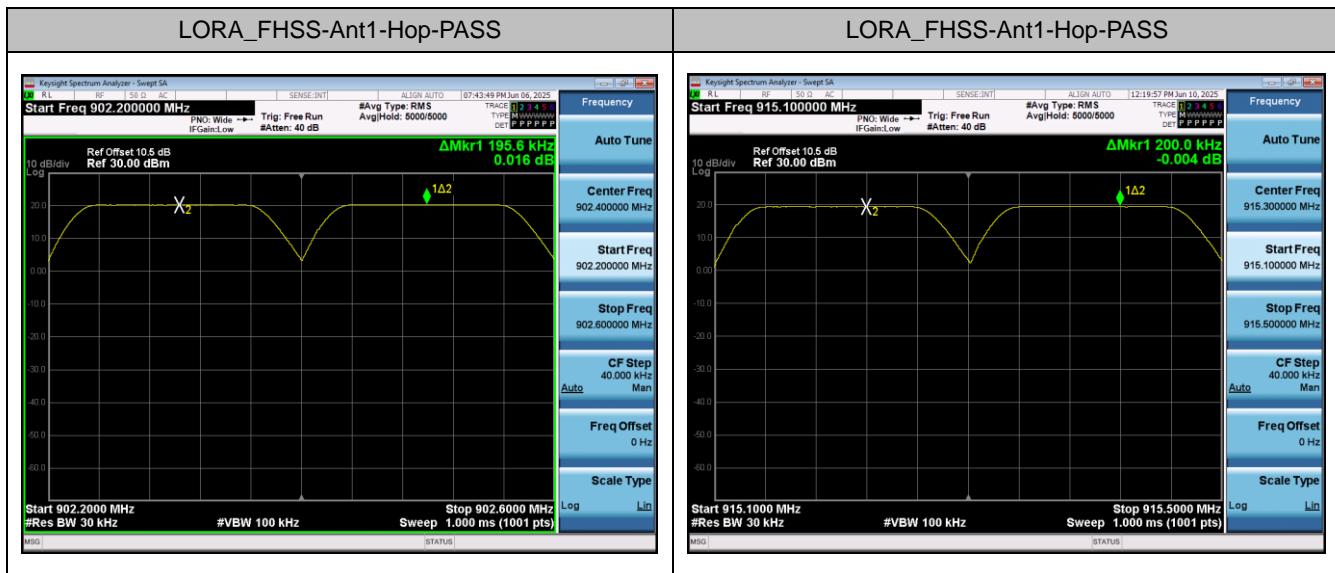
902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	Result[kHz]	Limit[kHz]	Verdict
LORA_FHSS	Ant1	Hop	195.6	≥140	PASS

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	Result[kHz]	Limit[kHz]	Verdict
LORA_FHSS	Ant1	Hop	200.0	≥141	PASS

## Test Graphs



## Time of occupancy

### Test Result and Data

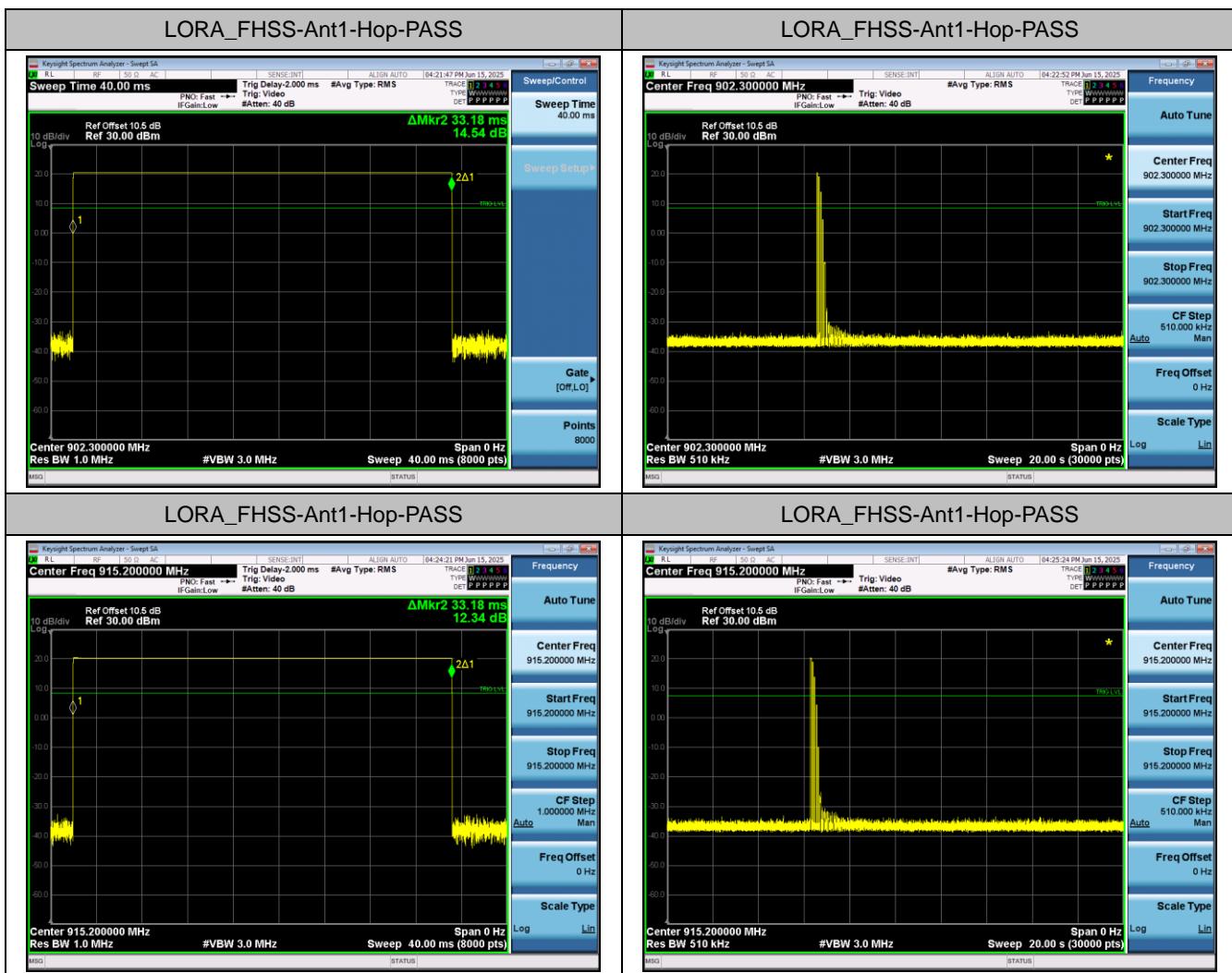
902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	BurstWidth[ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
LORA_FHSS	Ant1	Hop	33.180	1	0.03318	≤0.4	PASS

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	BurstWidth[ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
LORA_FHSS	Ant1	Hop	33.180	1	0.03318	≤0.4	PASS

## Test Graphs



## Number of hopping channels

### Test Result and Data

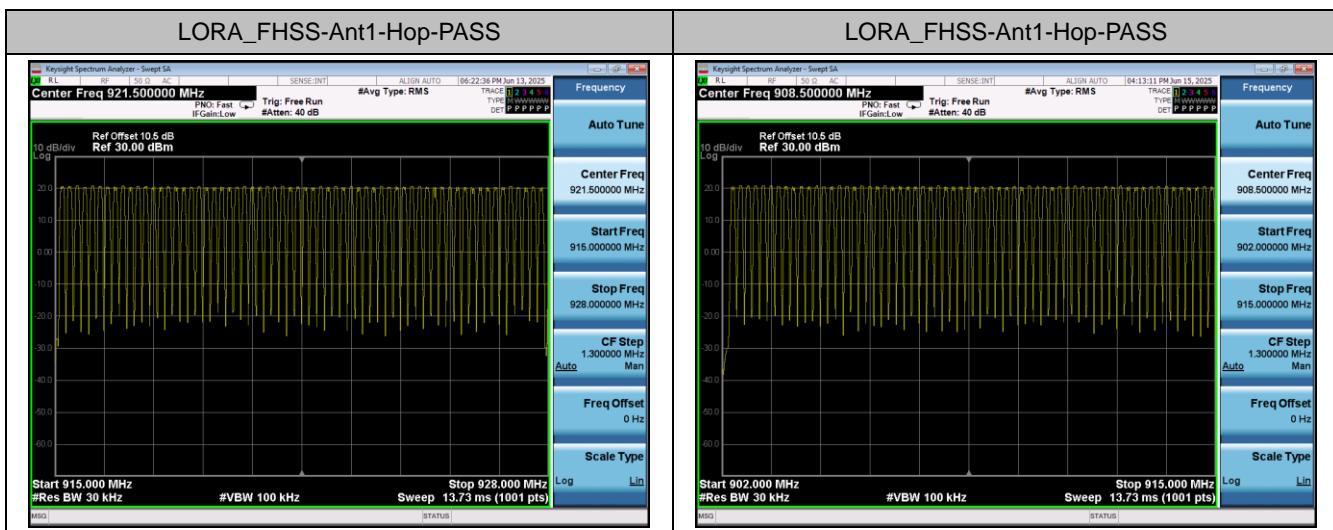
902.3~914.9MHz:

Test Mode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
LORA_FHSS	Ant1	Hop	64	≥50	PASS

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
LORA_FHSS	Ant1	Hop	64	≥50	PASS

## Test Graphs



## Conducted Band Edges

### Test Result and Data

902.3~914.9MHz:

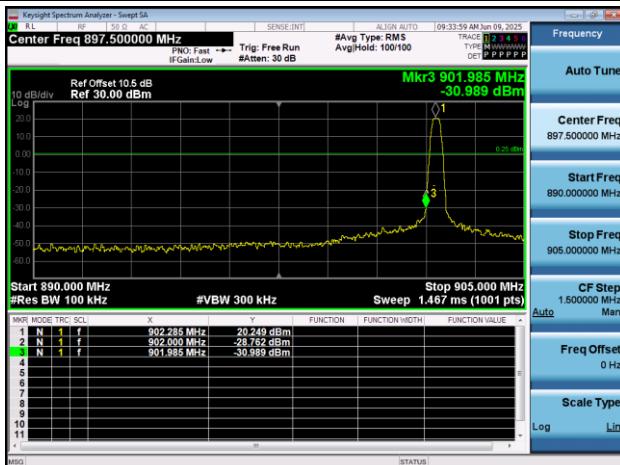
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
LORA_FHSS	Ant1	Low	902.3	20.25	-30.99	≤0.25	PASS
LORA_FHSS	Ant1	High	914.9	20.16	-51.05	≤0.16	PASS
LORA_FHSS	Ant1	Low	Hop_902.3	20.25	-34.79	≤0.25	PASS
LORA_FHSS	Ant1	High	Hop_914.9	20.38	-49.68	≤0.38	PASS

915.2~927.8MHz:

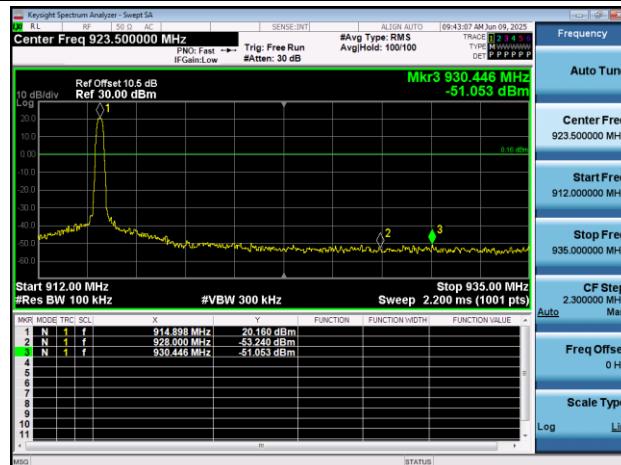
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
LORA_FHSS	Ant1	Low	915.2	20.80	-50.74	≤0.19	PASS
LORA_FHSS	Ant1	High	927.8	20.04	-2.18	≤0.04	PASS
LORA_FHSS	Ant1	Low	Hop_915.2	20.28	-49.52	≤0.28	PASS
LORA_FHSS	Ant1	High	Hop_927.8	20.06	-6.98	≤0.06	PASS

## Test Graphs

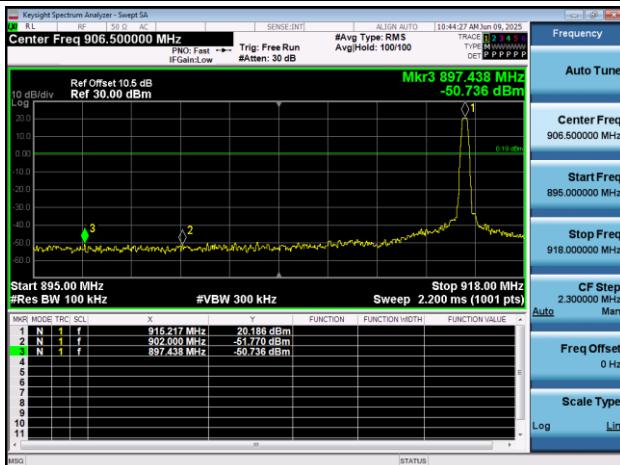
### LORA\_FHSS-Ant1-902.3-PASS



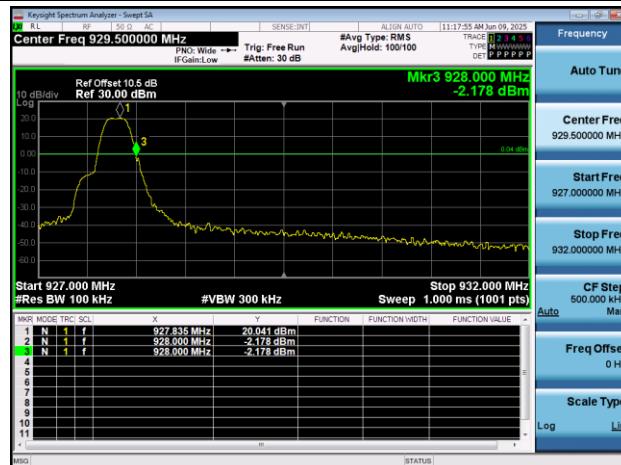
### LORA\_FHSS-Ant1-914.9-PASS

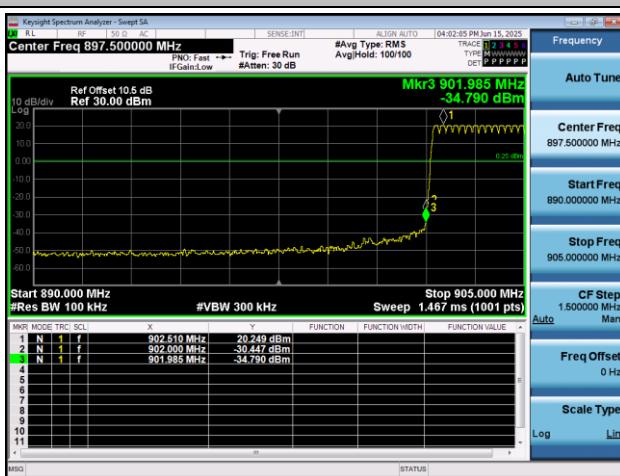
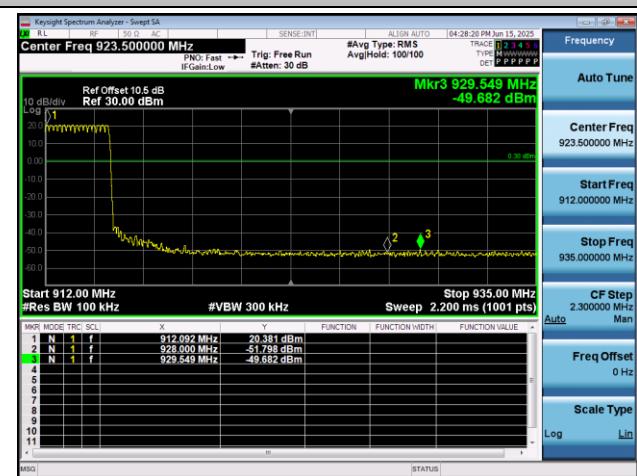
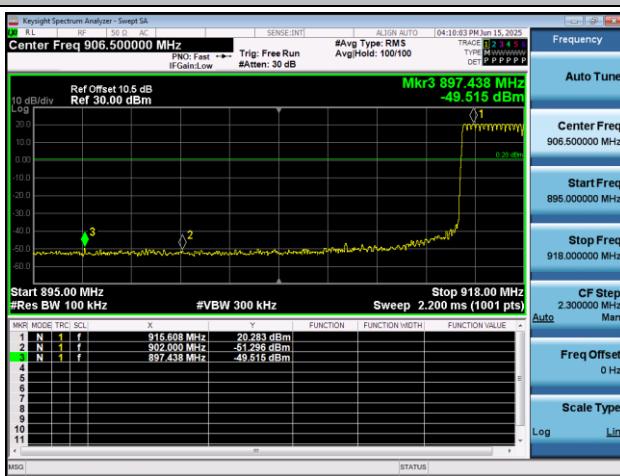
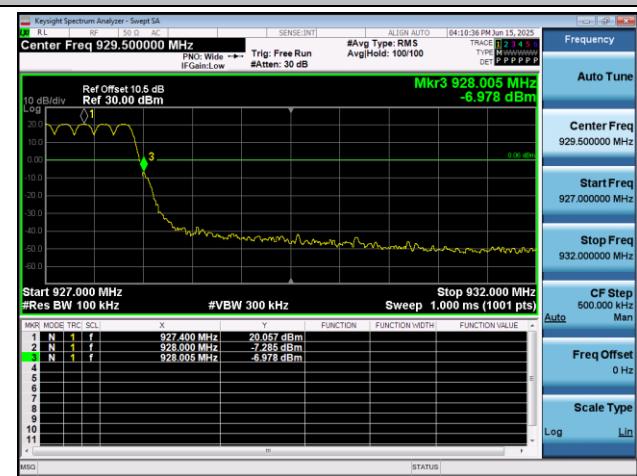


### LORA\_FHSS-Ant1-915.2-PASS



### LORA\_FHSS-Ant1-927.8-PASS



**LORA\_FHSS-Ant1-Hop-902.3-PASS**

**LORA\_FHSS-Ant1-Hop-914.9-PASS**

**LORA\_FHSS-Ant1-Hop-915.2-PASS**

**LORA\_FHSS-Ant1-Hop-927.8-PASS**


## Conducted Spurious Emissions

### Test Result and Data

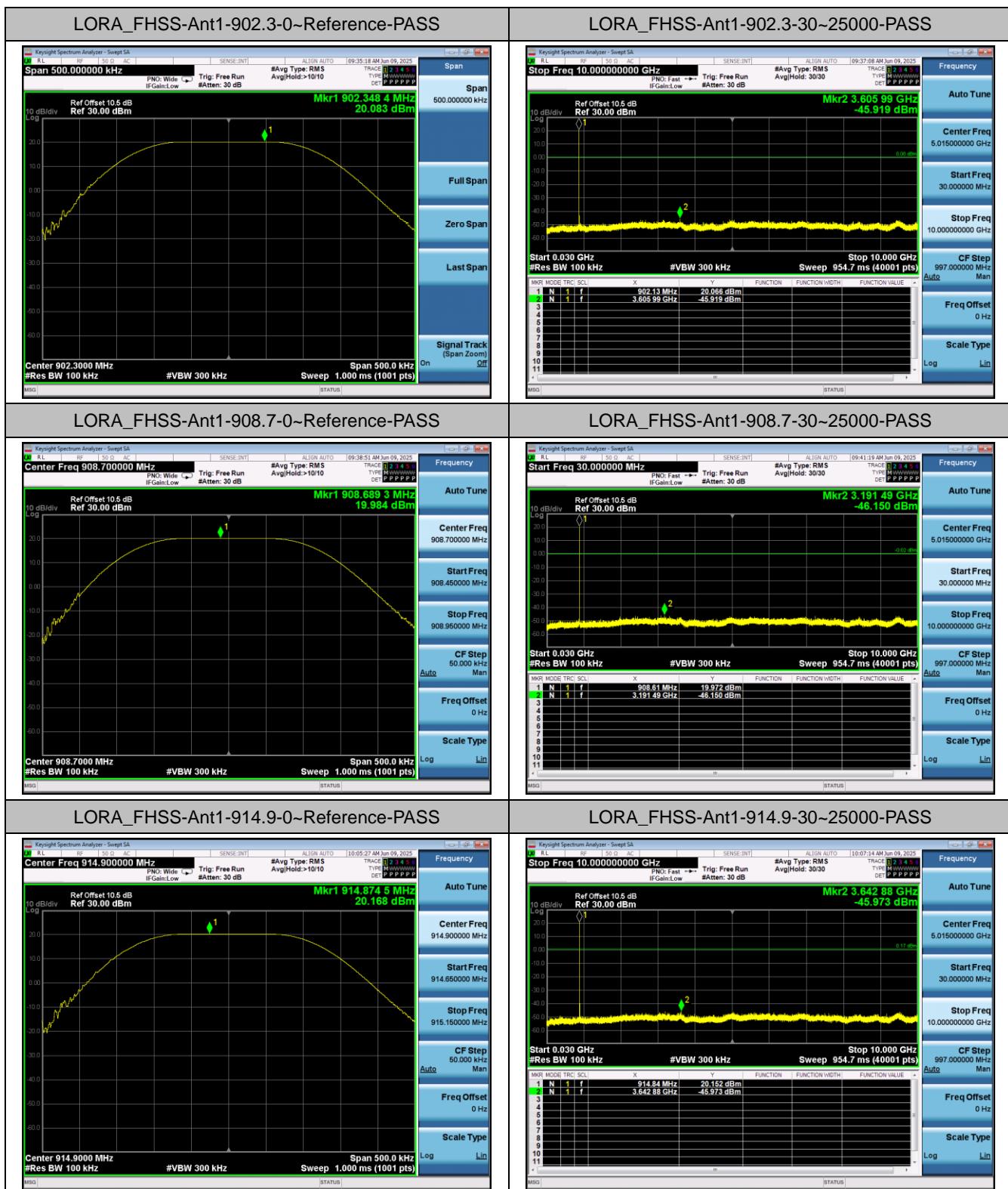
902.3~914.9MHz:

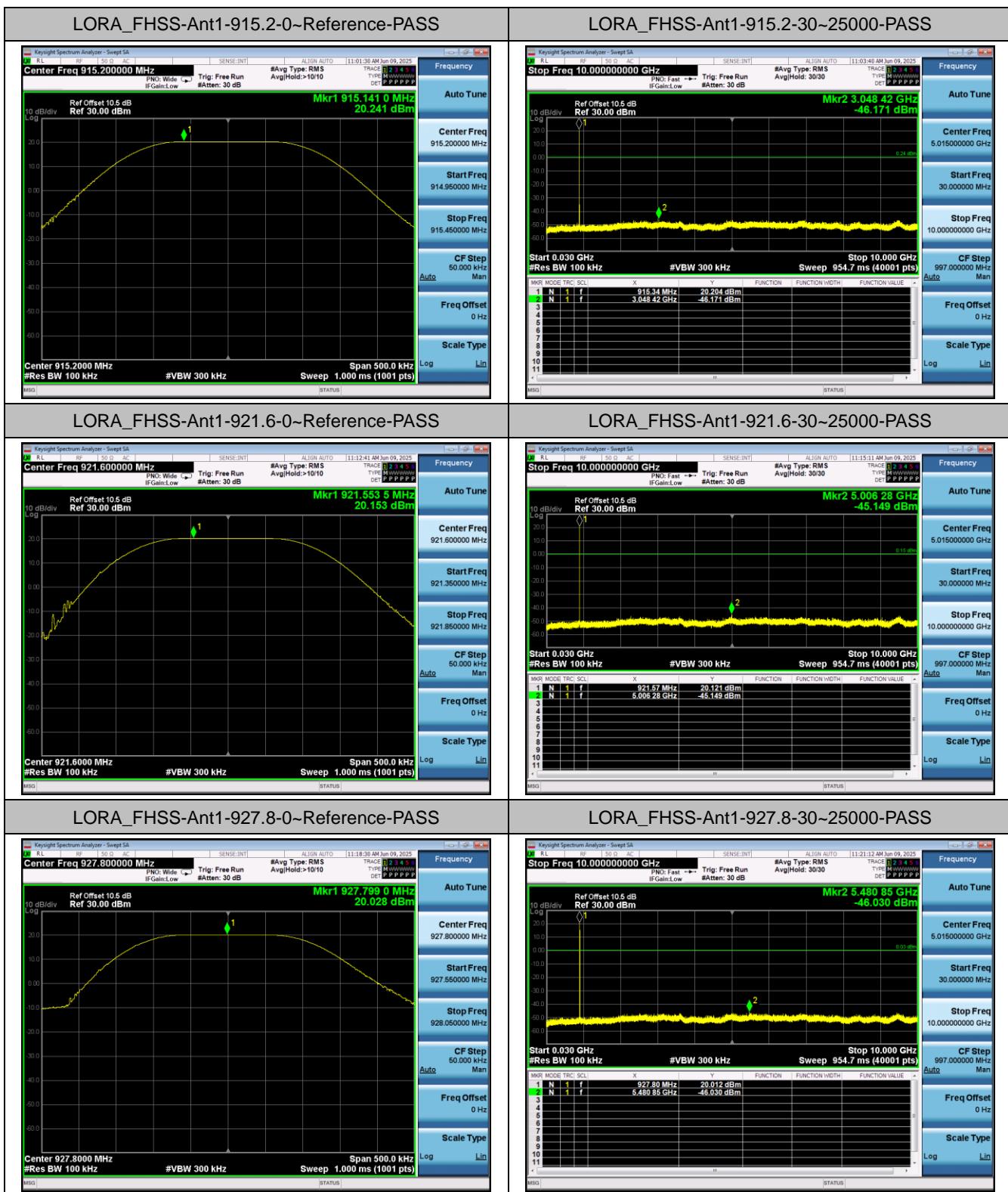
Test Mode	Antenna	Frequency[MHz]	FreqRange[Mhz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
LORA_FHSS	Ant1	902.3	0~Reference	20.07	20.07	---	PASS
LORA_FHSS	Ant1	902.3	30~25000	20.07	-45.92	$\leq 0.07$	PASS
LORA_FHSS	Ant1	908.7	0~Reference	19.96	19.96	---	PASS
LORA_FHSS	Ant1	908.7	30~25000	19.96	-46.15	$\leq -0.04$	PASS
LORA_FHSS	Ant1	914.9	0~Reference	20.13	20.13	---	PASS
LORA_FHSS	Ant1	914.9	30~25000	20.13	-45.97	$\leq 0.13$	PASS

915.2~927.8MHz:

Test Mode	Antenna	Frequency[MHz]	FreqRange[Mhz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
LORA_FHSS	Ant1	915.2	0~Reference	20.16	20.16	---	PASS
LORA_FHSS	Ant1	915.2	30~25000	20.16	-46.17	$\leq 0.16$	PASS
LORA_FHSS	Ant1	921.6	0~Reference	20.10	20.10	---	PASS
LORA_FHSS	Ant1	921.6	30~25000	20.10	-45.15	$\leq 0.1$	PASS
LORA_FHSS	Ant1	927.8	0~Reference	19.99	19.99	---	PASS
LORA_FHSS	Ant1	927.8	30~25000	19.99	-46.03	$\leq -0.01$	PASS

## Test Graphs





\*\*END OF REPORT\*\*