RADIO PERFORMANCE TEST REPORT

Test Report No. : **OT-244-RWD-009**

Reception No. : **2403001056**

Applicant : **NEWTC Co., Ltd.**

Address : **5F, Hyoryeong-ro 15, Seocho-gu, Seoul, South Korea**

Manufacturer : **NEWTC Co., Ltd.**

Address : **5F, Hyoryeong-ro 15, Seocho-gu, Seoul, South Korea**

Type of Equipment : **LoRa communication module**

FCC ID. : **2BFRW-RM-LORA**

Model Name : **RM-LORA**

Multiple Model Name : **N/A**

Serial number : **N/A**

Total page of Report : **23 pages (including this page)**

Date of Incoming : **March 22, 2024**

Date of issue : **April 11, 2024**

SUMMARY

The equipment complies with the regulation; ***FCC PART 15 SUBPART C Section 15.247***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

Tested by	Reviewed by	Approved by
Yun-Bok, Wi / Prj. Engineer	Tae-Ho, Kim / Chief Engineer	Jae-Ho, Lee / Chief Engineer
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

CONTENTS

Page

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

※ Please refer to the Annex section for All test plots

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-244-RWD-009	April 11, 2024	Initial Release	All

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1. VERIFICATION OF COMPLIANCE

Applicant : NEWTC Co., Ltd.

Address : 5F, Hyoryeong-ro 15, Seocho-gu, Seoul, South Korea

Contact Person : LEE MIN YONG / Manager

Telephone No. : +82-2-704-4770

FCC ID : 2BFRW-RM-LORA

Model Name : RM-LORA

Brand Name : N/A

Serial Number : N/A

Date : April 11, 2024

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	LoRa communication module
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247 KDB 558074 D01 15.247 Meas Guidance v05r02
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (a) (2)	Minimum 6 dB Bandwidth	Met the Limit / PASS
15.247 (b) (3)	Maximum Peak Conducted Output Power	Met the Limit / PASS
15.247 (d)	100 kHz Bandwidth Outside the Frequency Band	Met the Limit / PASS
15.247 (e)	Peak Power Spectral Density	Met the Limit / PASS
15.209	Radiated Emission Limits	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247.

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

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3. GENERAL INFORMATION

3.1 Product Description

The NEWTC Co., Ltd., Model RM-LORA (referred to as the EUT in this report) is a LoRa communication module. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	LoRa communication module
Temperature Range	-40 °C ~ 85 °C
OPERATING FREQUENCY	902.8 MHz ~ 927.3 MHz
MODULATION TYPE	GFSK
RF OUTPUT POWER	-8.34 dBm
ANTENNA TYPE	Dipole Antenna
ANTENNA GAIN	1.84 dBi
Rated Supply Voltage	DC 5.0 V
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	32 MHz

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	NEWTC Co., Ltd	N/A	N/A
Module	SEMTECH	SX-1262	N/A

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
RM-LORA	NEWTC Co., Ltd.	LoRa communication module (EUT)	-
PROBOOK	HP	NoteBook	EUT

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5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at 902.8 MHz, 915.3 MHz, and 927.3 MHz to get a maximum emission levels from the EUT. The EUT was moved throughout the XY, XZ, and YZ planes and the worst case is "XY" axis, but the worst data was recorded in this report.

-. Channel List [500 kHz Bandwidth]

Channel	Frequency[MHz]	Channel	Frequency[MHz]	Channel	Frequency[MHz]
1	902.8	18	911.3	35	919.8
2	903.3	19	911.8	36	920.3
3	903.8	20	912.3	37	920.8
4	904.3	21	912.8	38	921.3
5	904.8	22	913.3	39	921.8
6	905.3	23	913.8	40	922.3
7	905.8	24	914.3	41	922.8
8	906.3	25	914.8	42	923.3
9	906.8	26	915.3	43	923.8
10	907.3	27	915.8	44	924.3
11	907.8	28	916.3	45	924.8
12	908.3	29	916.8	46	925.3
13	908.8	30	917.3	47	925.8
14	909.3	31	917.8	48	926.3
15	909.8	32	918.3	49	926.8
16	910.3	33	918.8	50	927.3
17	910.8	34	919.3		

-. Duty Cycle

TEST Mode	On Time (ms)	Total Time (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
LoRa	-	-	100.00	0.00

Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) * 100

Correction Factor : 10 * Log(1 / (Duty Cycle / 100))

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5.4 Configuration of Test System

Line Conducted Test: The EUT was connected to adaptor and the power of adaptor was connected to LISN. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

For intentional device, according to 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.

Antenna Construction:

The antenna of the EUT is a Dipole Antenna on the main Board in the EUT, so that it cannot be replaced by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

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7. MIMIMUM 6 dB BANDWIDTH

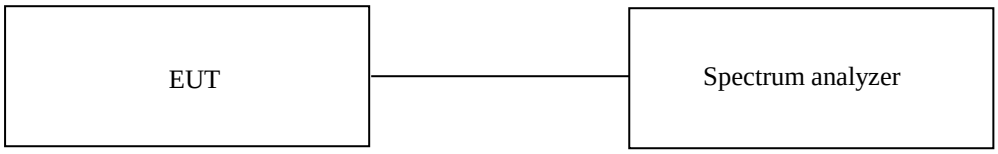
7.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



7.3 Test Date

April 01, 2024 ~ April 05, 2024

7.4 Test data

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (kHz)	LIMIT (kHz)	Margin (kHz)
Low	902.80	619.40	500.00	119.40
Middle	915.30	629.40	500.00	129.40
High	927.30	619.40	500.00	119.40

Remark. Margin = Measured Value - Limit

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8. MAXIMUM PEAK OUTPUT POWER

8.1 Operating environment

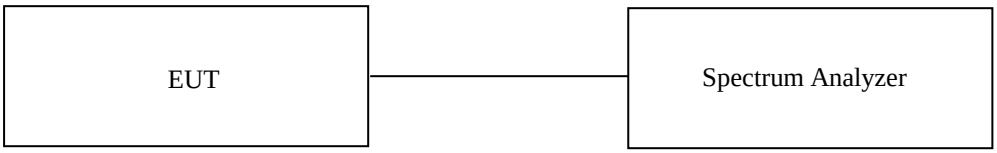
Temperature : 23 °C

Relative humidity : 45 % R.H.

8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth.



8.3 Test Date

April 01, 2024 ~ April 05, 2024

8.4 Test data

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	902.80	-8.34	30.00	38.34
Middle	915.30	-8.65	30.00	38.65
High	927.30	-8.89	30.00	38.89

Remark. Margin = Limit – Measured Value

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9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

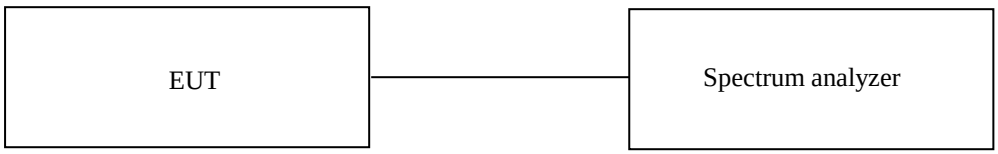
9.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

9.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz and video bandwidth is set to 300 kHz, and peak detection was used.



9.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m semi anechoic chamber. The EUT was placed on turntable approximately 1.5 m above the ground plane.

The frequency spectrum from 30 MHz to 10 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

9.4 Test Date

April 01, 2024 ~ April 05, 2024

9.5 Test data for conducted emission

For Test data for conducted emission, Please refer to the Annex

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9.6 Test data for radiated emission

9.6.1 Spurious & Harmonic Radiated Emission

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 10 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 100 %

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
1 805.60	63.57	Peak	H	25.23	4.50	42.04	-	51.26	74.00	22.74
1 805.60	61.29	Average	H	25.23	4.50	42.04	-	48.98	54.00	5.02
1 805.60	61.10	Peak	V	25.23	4.50	42.04	-	48.79	74.00	25.21
1 805.60	57.66	Average	V	25.23	4.50	42.04	-	45.35	54.00	8.65
Test Data for Middle Channel										
1 830.60	65.21	Peak	H	25.38	4.50	42.12	-	52.97	74.00	21.03
1 830.60	63.13	Average	H	25.38	4.50	42.12	-	50.89	54.00	3.11
1 830.60	62.96	Peak	V	25.39	4.50	42.12	-	50.73	74.00	23.27
1 830.60	60.38	Average	V	25.39	4.50	42.12	-	48.15	54.00	5.85
Test Data for High Channel										
1 854.60	62.27	Peak	H	25.50	4.57	42.21	-	50.13	74.00	23.87
1 854.60	59.65	Average	H	25.50	4.57	42.21	-	47.51	54.00	6.49
1 854.60	59.89	Peak	V	25.50	4.57	42.21	-	47.75	74.00	26.25
1 854.60	56.43	Average	V	25.50	4.57	42.21	-	44.29	54.00	9.71

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss - Amp Gain + Duty Factor

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10. PEAK POWER SPECTRAL DENSITY

10.1 Operating environment

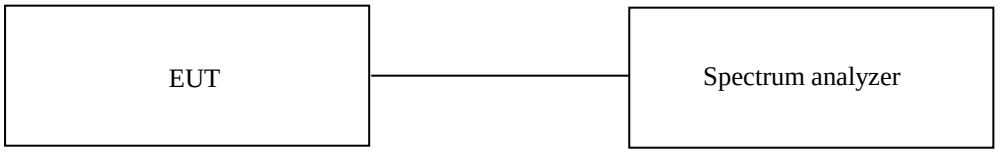
Temperature : 23 °C

Relative humidity : 45 % R.H.

10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 3 kHz ≤ RBW ≤ 100 kHz , the video bandwidth is set to 3 times the resolution bandwidth.



10.3 Test Date

April 01, 2024 ~ April 05, 2024

10.4 Test data for

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm / 3 kHz)	MARGIN (dB)
Low	902.80	-25.76	8.00	33.76
Middle	915.30	-26.30	8.00	34.30
High	927.30	-26.09	8.00	34.09

Remark. Margin = Limit – Measured Value

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11. RADIATED EMISSION TEST

11.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

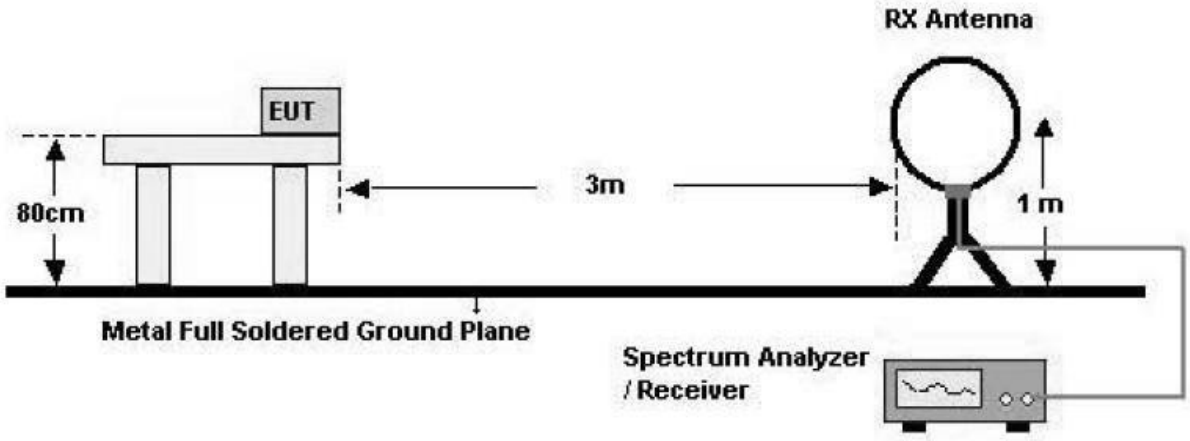
11.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

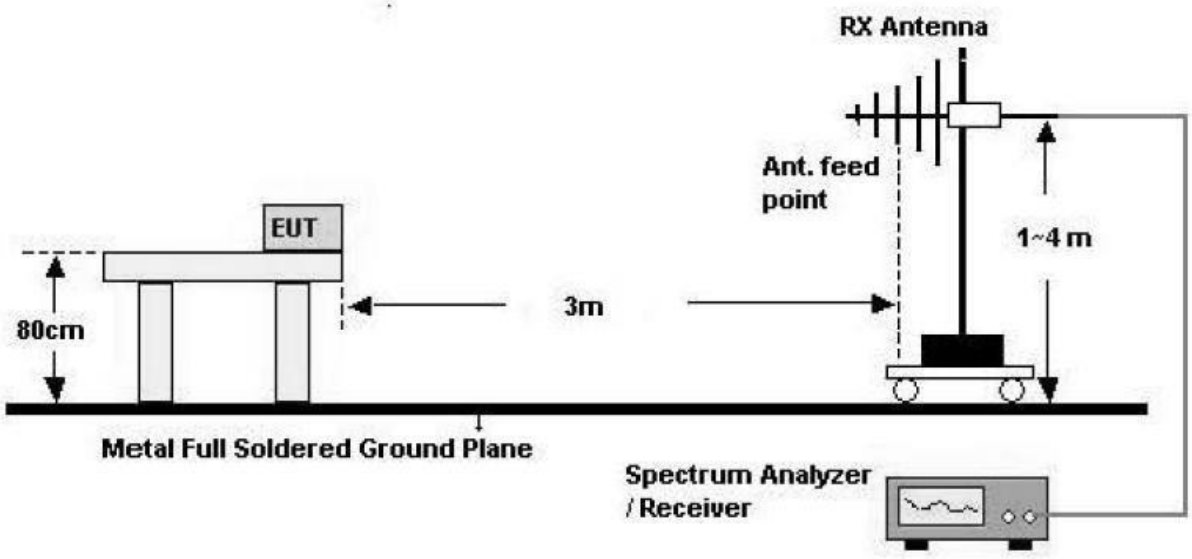
The frequency spectrum from 30 MHz to 10 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

- Test Configuration

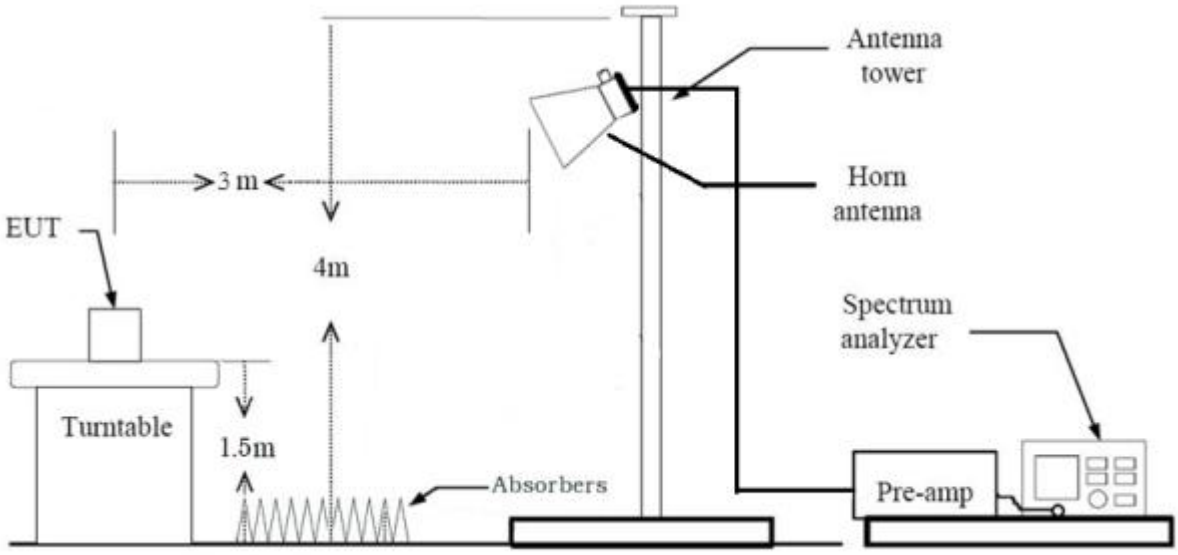
1. Below 30 MHz



2. 30 MHz - 1 GHz



3. Above 1 GHz



11.3 Test Date

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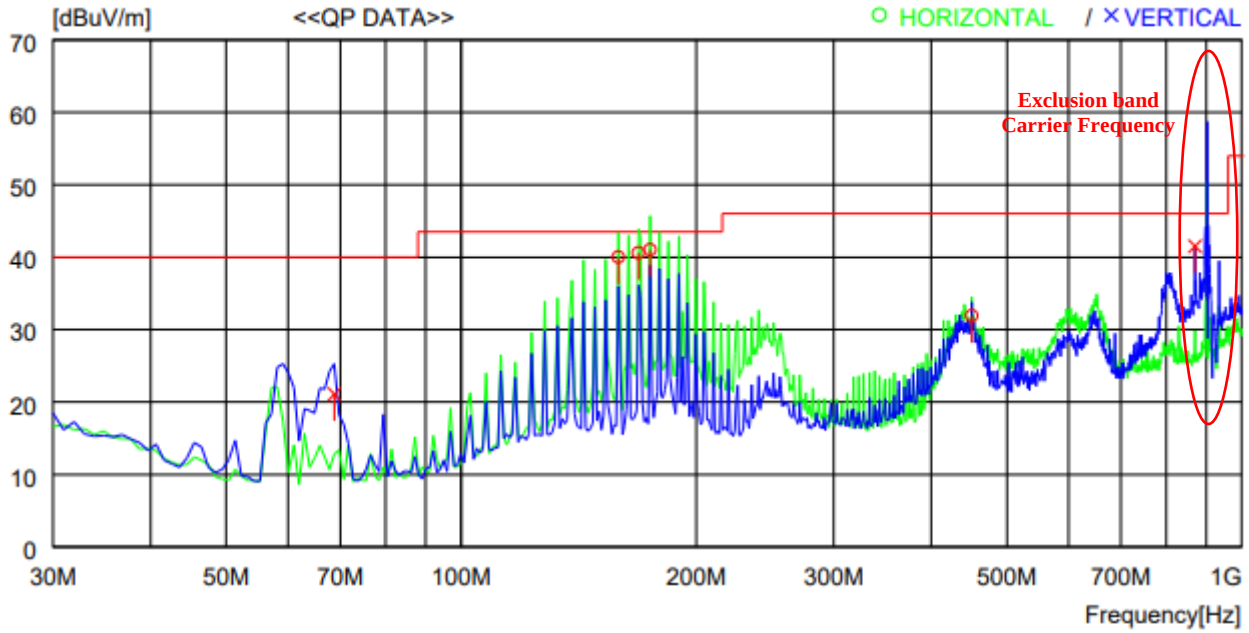
11.4 Test data for 30 MHz ~ 1 000 MHz

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : LoRa communication module

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	159.010	52.4	18.0	1.7	32.1	40.0	43.5	3.5	300	0
2	168.710	53.6	17.4	1.7	32.1	40.6	43.5	2.9	200	291
3	174.530	54.4	17.0	1.7	32.1	41.0	43.5	2.5	200	291
4	450.981	39.4	22.0	2.7	32.2	31.9	46.0	14.1	100	108
----- Vertical ------										
5	68.800	39.2	12.9	1.1	32.1	21.1	40.0	18.9	100	359
6	870.980	42.2	27.6	3.8	32.1	41.5	46.0	4.5	100	59

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11.5 Test data for Below 30 MHz

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

11.6 Test data for above 1 GHz

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode

1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 10 GHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

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12. CONDUCTED EMISSION TEST

12.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

12.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μH + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

12.3 Test date

April 01, 2024 ~ April 05, 2024

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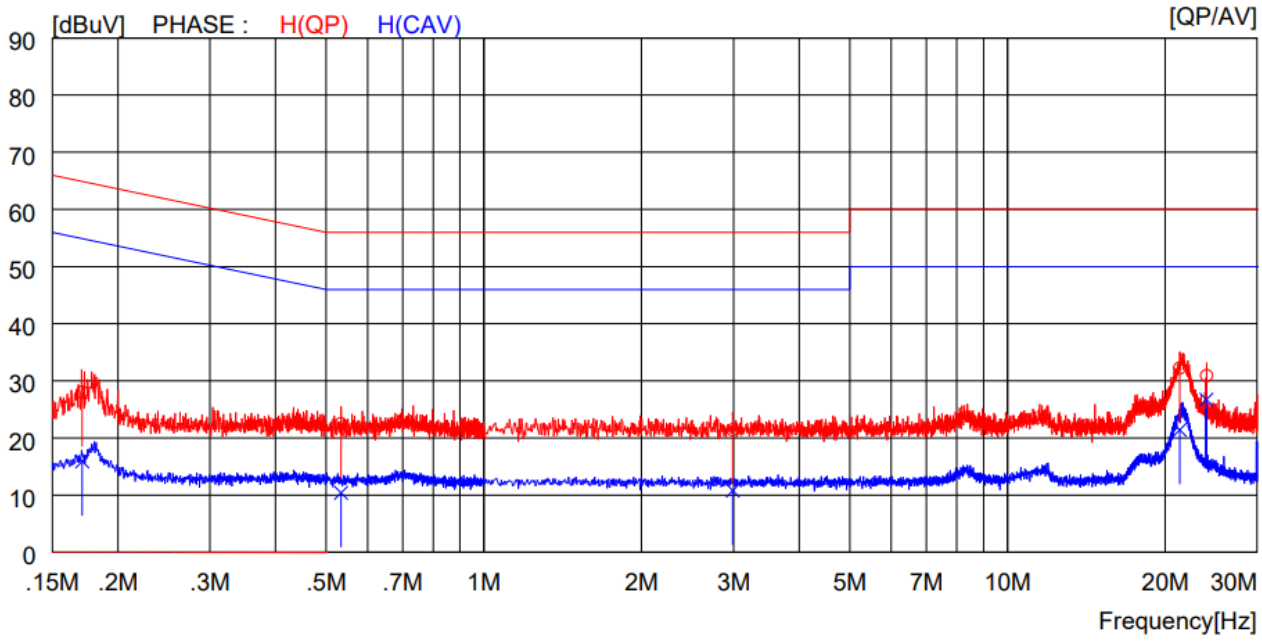
12.4 Test data

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

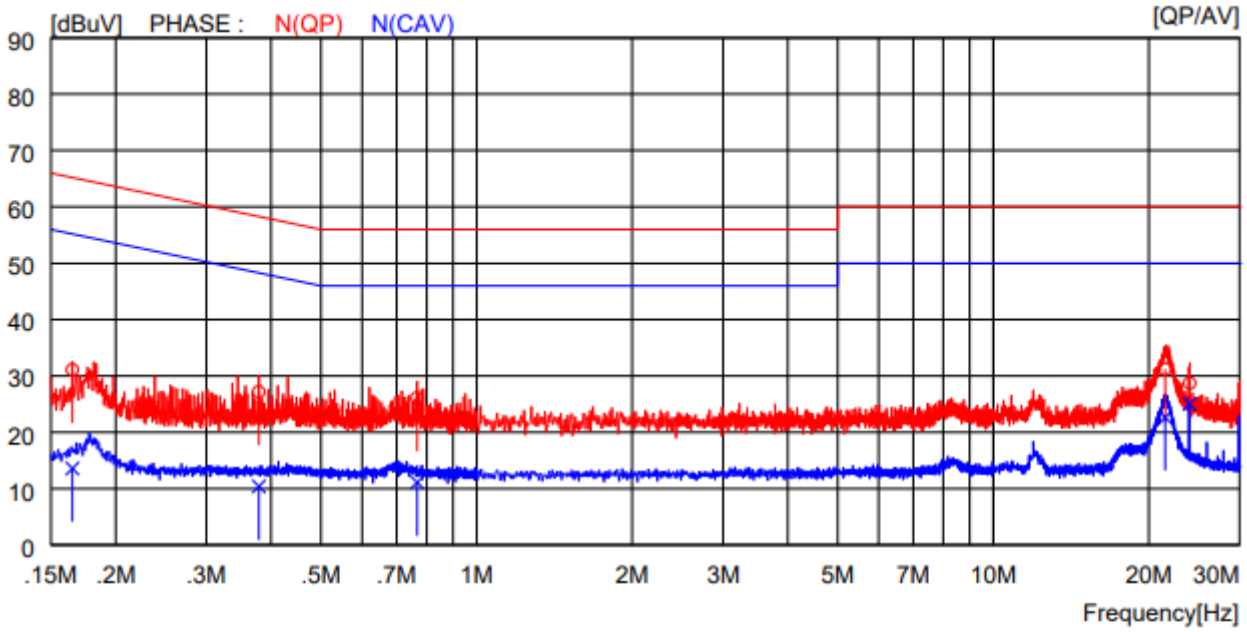
-. Tested Line : HOT LINE



NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17100	17.9	----	10.1	28.0	----	64.9	----	36.9	----	H(QP)
2	0.53400	12.4	----	10.1	22.5	----	56.0	----	33.5	----	H(QP)
3	2.98800	11.2	----	10.2	21.4	----	56.0	----	34.6	----	H(QP)
4	21.33000	21.5	----	10.7	32.2	----	60.0	----	27.8	----	H(QP)
5	24.00000	20.1	----	10.8	30.9	----	60.0	----	29.1	----	H(QP)
6	0.17100	----	5.8	10.1	----	15.9	----	54.9	----	39.0	H(CAV)
7	0.53400	----	0.3	10.1	----	10.4	----	46.0	----	35.6	H(CAV)
8	2.98800	----	0.6	10.2	----	10.8	----	46.0	----	35.2	H(CAV)
9	21.33000	----	10.7	10.7	----	21.4	----	50.0	----	28.6	H(CAV)
10	24.00000	----	15.9	10.8	----	26.7	----	50.0	----	23.3	H(CAV)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16500	21.0	----	10.1	31.1	----	65.2	----	34.1	----	N(QP)
2	0.37900	17.1	----	10.1	27.2	----	58.3	----	31.1	----	N(QP)
3	0.76700	16.0	----	10.1	26.1	----	56.0	----	29.9	----	N(QP)
4	21.52000	20.5	----	10.7	31.2	----	60.0	----	28.8	----	N(QP)
5	24.00000	17.9	----	10.8	28.7	----	60.0	----	31.3	----	N(QP)
6	0.16500	----	3.5	10.1	----	13.6	----	55.2	----	41.6	N(CAV)
7	0.37900	----	0.3	10.1	----	10.4	----	48.3	----	37.9	N(CAV)
8	0.76700	----	1.0	10.1	----	11.1	----	46.0	----	34.9	N(CAV)
9	21.52000	----	12.0	10.7	----	22.7	----	50.0	----	27.3	N(CAV)
10	24.00000	----	14.2	10.8	----	25.0	----	50.0	----	25.0	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

13. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV 40-N	Rohde & Schwarz	Signal Analyzer	101651	Jan. 15, 2024 (1Y)
SMB100A	Rohde & Schwarz	Signal Generator	177648	Jan. 17, 2024 (1Y)
ESU	Rohde & Schwarz	TEST RECEIVER	100261	Mar. 05, 2024 (1Y)
ESCI	Rohde & Schwarz	TEST RECEIVER	101012	Sep. 26, 2023 (1Y)
IPS-12B05D	INTERACT	DC Power Supply	00551103	Jan. 15, 2024 (1Y)
E3632A	Agilent	DC Power Supply	MY50370016	Jan. 15, 2024 (1Y)
WRCT 890/960-5/40-8SSK	Wainwright Instruments GmbH	Tunable Band Reject Filter	7	Jul. 11, 2023 (1Y)
HPF 1.5GHz	Rohde & Schwarz	High Pass Filter (1-1.5 GHz)	N/A	Jan. 15, 2024 (1Y)
HPF 3GHz	Rohde & Schwarz	High Pass Filter (1-3 GHz)	N/A	Jan. 15, 2024 (1Y)
310N	Sonoma Instrument	Amplifier	392756	Oct. 16, 2023 (1Y)
SCU18	Rohde & Schwarz	Pre-Amplifer	102266	Jul. 11, 2023 (1Y)
10 dB Attenuator	Rohde & Schwarz	10 dB Attenuator	14100882-4	July. 11, 2023 (1Y)
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 20, 2024 (2Y)
HLP-2008	TDK	Hybrid Antenna	131313	Apr. 05, 2023 (2Y)
BBHA9120D	Schwarzbeck	Horn Antenna	9120D-1349	Jul. 04, 2023 (1Y)
V - LISN (4*32/50A)	Schwarzbeck	NSLK8128	8128216	Mar. 12, 2024 (1Y)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100655	Mar. 12, 2024 (1Y)
DT2000-2t	Innco System	Turn Table	N/A	N/A
CO3000	Innco System	Controller	1026/40960617/P	N/A
MA-4640-XPET	Innco System	Antenna Master	MA4640/652/43100318/P	N/A

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