RF MEASUREMENT REPORT

FCC ID:	2ALS8-OP0004
Applicant:	Ninebot (Changzhou) Tech Co., Ltd.
Product:	Off-road NFC module
Model No.:	BA.17.00.0496.01
FCC Classification:	Part 15 Low Power Communication Device Transmitter (DXX)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.225)
Result:	Complies
Received Date:	2026-01-28
Test Date:	2026-01-29 ~ 2026-02-03

Reviewed By: Vincent Yu

Approved By: Robin Wu

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
R26S1044019-U201	V01	Initial Report	2026-02-13	Valid

CONTENTS

1. General Information

1.1. Applicant

Ninebot (Changzhou) Tech Co., Ltd.

16F-17F, Block A, Building 3, Changwu Mid Road 18#, Wujin Dist., Changzhou, Jiangsu, China

1.2. Manufacturer

Nine Tech Co., Ltd.

1 Xingben Rd, XinbeiDist, Changzhou, Jiangsu Province, China

1.3. Testing Facility

☒	**Test Site - MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China **Laboratory Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
☐	**Test Site - MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site - MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: 3261	
	FCC: 291082, TW3261	ISED: TW3261

1.4. Product Information

Product Name	Off-road NFC module
Model No.	BA.17.00.0496.01
Serial No.	LZAW526AHA0244
NFC Specification	13.56 MHz
Operating Temp.	-45 ~ 125 °C
Power Voltage	48 V DC
Note: The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	13.56 MHz
Channel Number	1
Type of modulation	ASK

2. Test Configuration

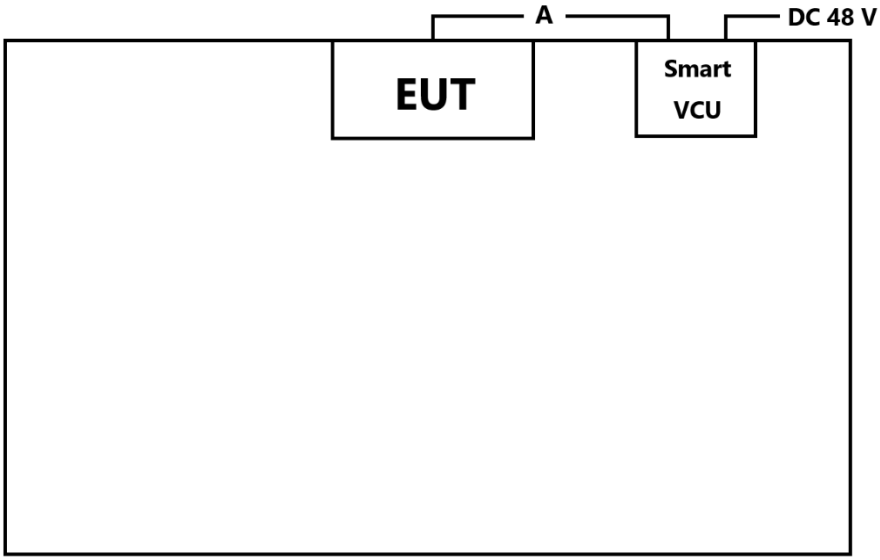
2.1. Test Mode

Test Mode
Mode 1: Transmit by NFC at 13.56 MHz

2.2. Test Configuration and Software

The device was tested per the guidance ANSI C63.10-2020 that was used to reference the appropriate EUT setup for radiated spurious emissions and AC line conducted emission testing.

Connection Diagram



Cable Type		Cable Description	Length
A	Wire Harness	Non-Shielded	0.7 m

2.3. Applied Standards

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

- FCC Part 15.225
- ANSI C63.10-2020
- ANSI C63.10-2020/Cor1-2023
- ANSI C63.10a-2024

2.4. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~ 75 %RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of this device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2026-12-15	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2026-10-16	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2026-07-03	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2026-12-03	SIP-AC3
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2026-09-28	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07075	1 year	2026-11-18	SIP-AC3/TR1
RF Cable	UCwave	UCE500	MRTSUE07410	1 year	2026-09-14	SIP-TR1
Thermohygrometer	testo	608-H1	MRTSUE11022	1 year	2026-10-16	SIP-TR1
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2027-01-17	SIP-TR1

Software	Version	Function
e3	230711	RE
Controller_MF 7802BS	1.02	RE Antenna & Turntable

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9 kHz ~ 150 kHz: 3.59 dB 150 kHz ~ 30 MHz: 3.20 dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9 kHz ~ 30 MHz: 2.56 dB Coplanar: 9 kHz ~ 30 MHz: 2.55 dB Horizontal: 30 MHz ~ 200 MHz: 3.48 dB 200 MHz ~ 1 GHz: 4.17 dB Vertical: 30 MHz ~ 200 MHz: 4.09 dB 200 MHz ~ 1 GHz: 5.30 dB

6. Test Result

6.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Verdict
15.225 (a), (b), (c)	In-Band Emission	Radiated	Pass
15.225 (d)	Out-Band Emission		Pass
15.215 (c)	20 dB Bandwidth		Pass
15.225 (e)	Frequency Tolerance		Pass
15.207	AC Conducted Emissions 150 kHz-30 MHz	Line Conducted	N/A

Note: “N/A” means that the test item is not applicable, and the detailed information refers to relevant section.

6.2. In-band Emission Measurement

6.2.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.225		
Frequency (MHz)	Distance (m)	Level (μV/m)
13.553 ~ 13.567	30	15848
13.410 ~ 13.553, 13.567 ~ 13.710	30	334
13.110 ~ 13.410, 13.710 ~ 14.010	30	106
Note 1: The lower limit shall apply at the transition frequency. Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. Note 3: E field strength (dBμV/m) = 20log E field strength (μV/m)		

6.2.2. Test Procedure

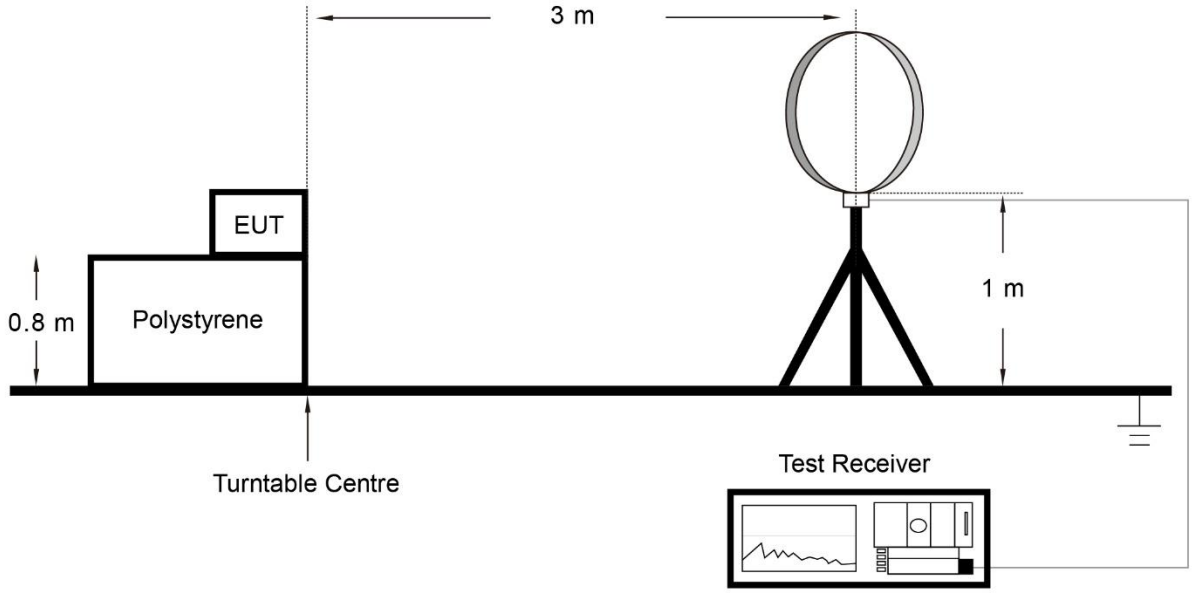
ANSI C63.10 - 2020 - Section 6.4

6.2.3. Test Setting

1. RBW = 9 kHz or 10 kHz
2. VBW = 3 × RBW
3. Detector = Peak
4. Trace mode = Max hold
5. Sweep = Auto couple
6. Allow the trace to stabilize

6.2.4. Test Setup

9 kHz ~ 30 MHz Test Setup:



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Out-band Emission Measurement

6.3.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (μV/m)
0.009 ~ 0.490	300	2400/F (kHz)
0.490 ~ 1.705	30	24000/F (kHz)
1.705 ~ 30	30	30
30 ~ 88	3	100
88 ~ 216	3	150
Note 1: The lower limit shall apply at the transition frequency. Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. Note 3: E field strength (dBμV/m) = 20log E field strength (μV/m)		

6.3.2. Test Procedure

ANSI C63.10 - 2020 - Section 6.3 (General Requirements)

ANSI C63.10 - 2020 - Section 6.4 (Standard test method below 30 MHz)

ANSI C63.10 - 2020 - Section 6.5 (Standard test method above 30 MHz to 1 GHz)

6.3.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz

Peak Measurement

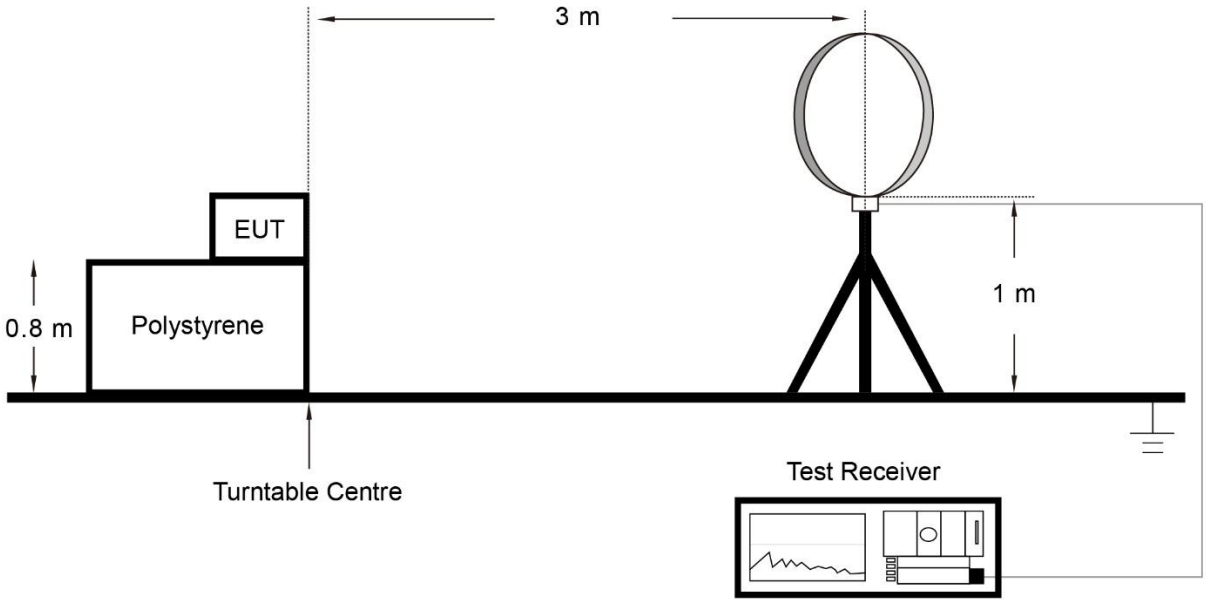
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

Quasi-Peak Measurement

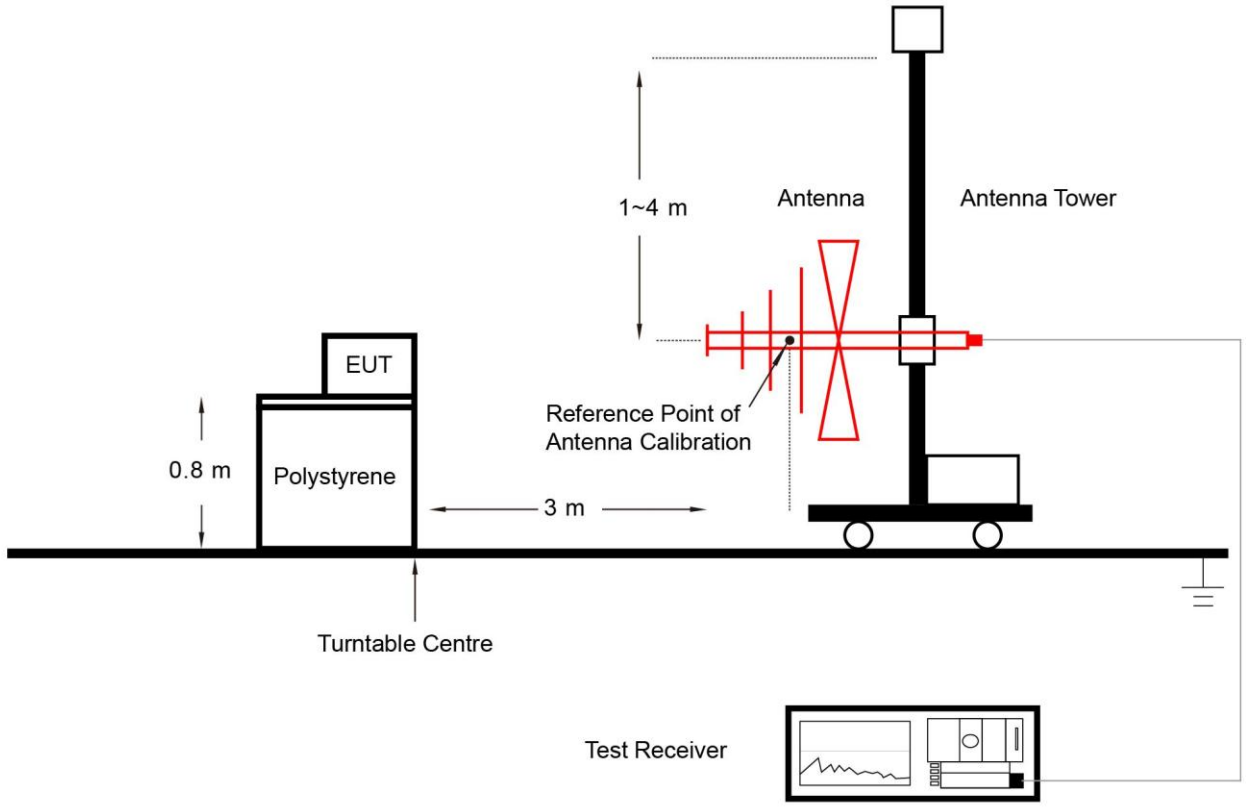
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1 MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

6.3.4. Test Setup

9 kHz ~ 30 MHz Test Setup:



Above 30 MHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Occupied Bandwidth Measurement

6.4.1. Test Limit

The occupied bandwidth is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequency.

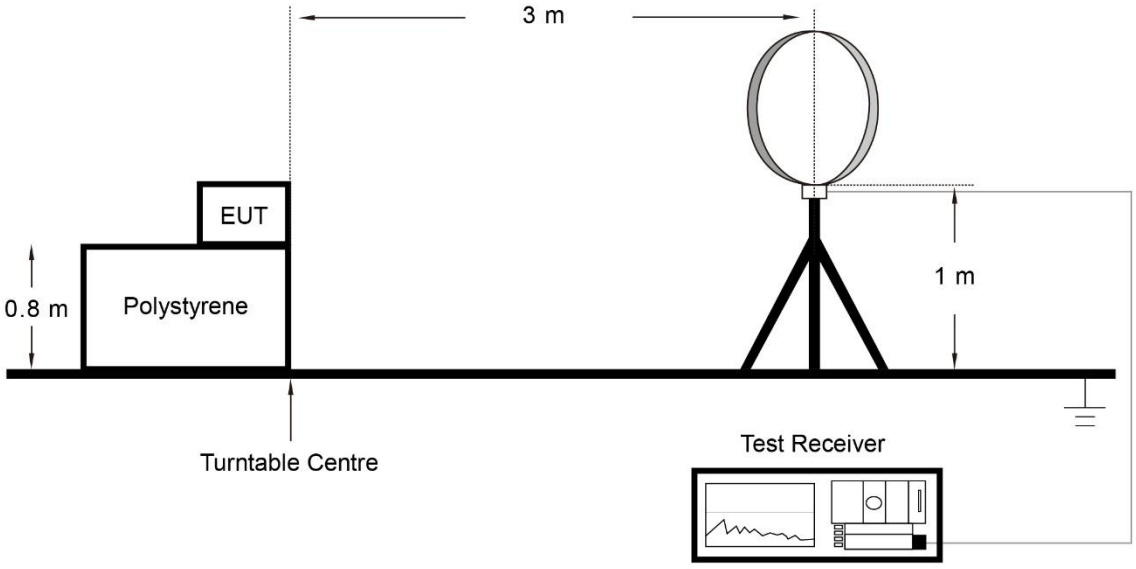
6.4.2. Test Procedure

ANSI C63.10-2020 - Section 6.9.2

6.4.3. Test Setting

1. Set RBW ≥ 1% to 5% of the 20 dB bandwidth
2. VBW = approximately three times RBW
3. Span = approximately 2 to 5 times the 20 dB bandwidth
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.3.

6.5. Frequency Tolerence Measurement

6.5.1. Test Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

6.5.2. Test Procedure

ANSI C63.10-2020 - Section 6.8

6.5.3. Test Setting

Frequency Stability Under Temperature Variations:

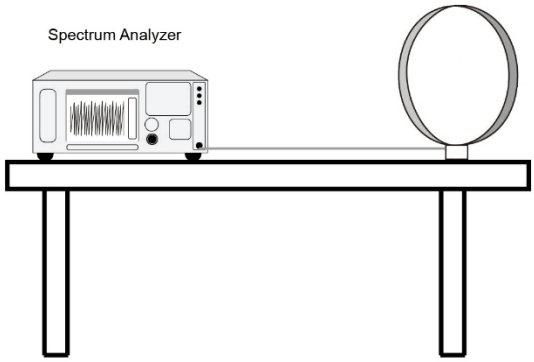
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20 °C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10 °C decreased per stage until the lowest temperature reached.

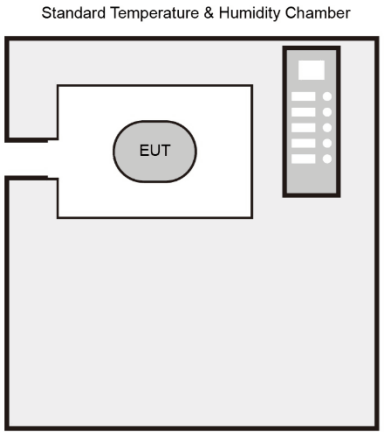
Frequency Stability Under Voltage Variations:

Set chamber temperature to 20 °C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change. For hand-carried battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

6.5.4. Test Setup





6.5.5. Test Result

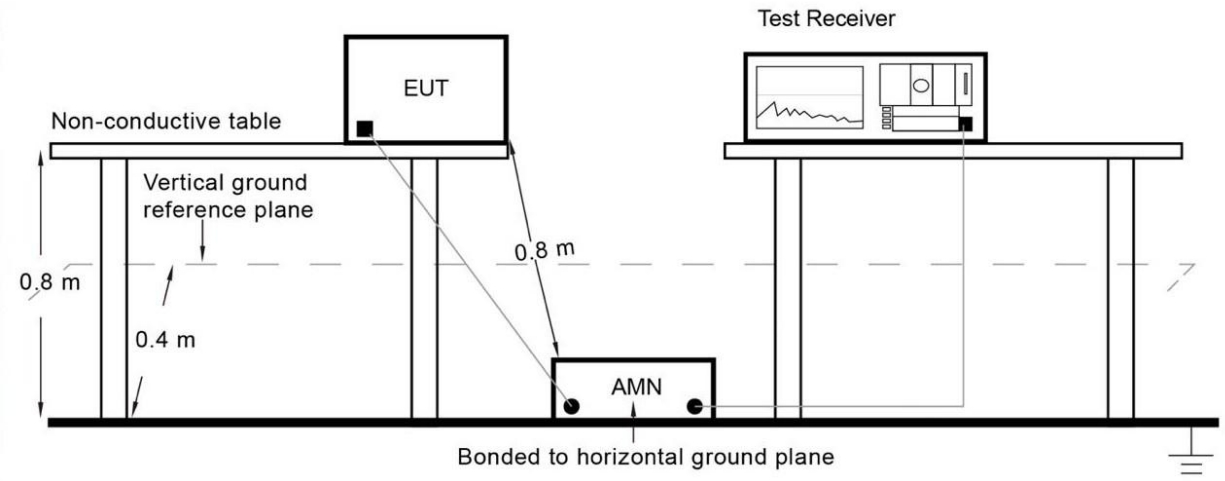
Refer to Appendix A.4.

6.6. AC Conducted Emissions Measurement

6.6.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 ~ 0.50	66 ~ 56	56 ~ 46
0.50 ~ 5.0	56	46
5.0 ~ 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

6.6.2. Test Setup



6.6.3. Test Result

This device is powered by battery, so this test item is not applicable.

Appendix A - Test Result

A.1 In-band Emission Test Result

Test Site	SIP-AC3	Test Date	2026-01-29
Test Engineer	Yuuki Qiu	Test Mode	Mode 1

Frequency (MHz)	Reading Level (dBµV)	Factor (dB/m)	Measure Level@3 m (dBµV/m)	Measure Level@30 m (dBµV/m)	Limit (dBµV/m)	Margin [dB]	Detector	Polarization
13.110	13.36	19.63	32.99	-7.01	40.50	-47.51	Peak	Coaxial
13.410	12.14	19.71	31.85	-8.15	40.50	-48.65	Peak	Coaxial
13.553	35.37	19.72	55.09	15.09	50.50	-35.41	Peak	Coaxial
13.560	48.32	19.72	68.04	28.04	84.00	-55.96	Peak	Coaxial
13.567	33.22	19.72	52.94	12.94	50.50	-37.56	Peak	Coaxial
13.710	14.10	19.73	33.83	-6.17	40.50	-46.67	Peak	Coaxial
14.010	12.83	19.75	32.58	-7.42	40.50	-47.92	Peak	Coaxial
13.110	13.74	19.63	33.37	-6.63	40.50	-47.13	Peak	Coplanar
13.410	14.04	19.71	33.75	-6.25	40.50	-46.75	Peak	Coplanar
13.553	31.33	19.72	51.05	11.05	50.50	-39.45	Peak	Coplanar
13.560	44.56	19.72	64.28	24.28	84.00	-59.72	Peak	Coplanar
13.567	29.27	19.72	48.99	8.99	50.50	-41.51	Peak	Coplanar
13.710	12.92	19.73	32.65	-7.35	40.50	-47.85	Peak	Coplanar
14.010	13.77	19.75	33.52	-6.48	40.50	-46.98	Peak	Coplanar

Notes:

1. All measurements were performed using a loop antenna. The antenna was positioned in two orthogonal (coaxial and coplanar) and the position with the highest emission level was recorded.
2. Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m)
   Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)
3. Measurements were tested at 3 m and the data was extrapolated to the specified measurement distance of 30 m using the square of an inverse linear extrapolation factor (40 dB/decade) as specified in §15.31 (f)(2).
   Extrapolation Factor = 40 × log (30/3) = 40 dB.

A.2 Out-Band Emission Test Result

Test Site	SIP-AC3	Test Date	2026-01-29
Test Engineer	Yuuki Qiu	Test Mode	Mode 1

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level@3 m (dBμV/m)	Measure Level@300 m (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Frequency Range: 9 kHz ~ 490 kHz								
0.013	47.24	20.20	67.44	-12.56	45.33	-57.89	Peak	Coaxial
0.021	42.46	19.72	62.18	-17.82	41.16	-58.98	Peak	Coaxial
0.033	32.88	19.64	52.52	-27.48	37.23	-64.71	Peak	Coaxial
0.060	28.95	19.44	48.39	-31.61	32.04	-63.65	Peak	Coaxial
0.099	31.12	19.39	50.51	-29.49	27.69	-57.18	Peak	Coaxial
0.127	33.41	19.40	52.81	-27.19	25.53	-52.72	Peak	Coaxial
0.150	43.17	19.40	62.57	-17.43	24.08	-41.51	Peak	Coaxial
0.356	32.67	19.31	51.98	-28.02	16.58	-44.60	Peak	Coaxial
0.013	44.44	20.20	64.64	-15.36	45.33	-60.69	Peak	Coplanar
0.021	41.94	19.72	61.66	-18.34	41.16	-59.50	Peak	Coplanar
0.033	30.27	19.64	49.91	-30.09	37.23	-67.32	Peak	Coplanar
0.040	29.54	19.63	49.17	-30.83	35.56	-66.39	Peak	Coplanar
0.064	27.13	19.42	46.55	-33.45	31.48	-64.93	Peak	Coplanar
0.123	30.58	19.40	49.98	-30.02	25.81	-55.83	Peak	Coplanar
0.150	40.72	19.40	60.12	-19.88	24.08	-43.96	Peak	Coplanar
0.428	30.81	19.31	50.12	-29.88	14.98	-44.86	Peak	Coplanar

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level@3 m (dBμV/m)	Measure Level@30 m (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Frequency Range: 490 kHz ~ 30 MHz								
0.729	25.44	19.32	44.76	4.76	30.35	-25.59	Peak	Coaxial
2.040	19.57	19.41	38.98	-1.02	29.54	-30.56	Peak	Coaxial
6.230	19.17	19.54	38.71	-1.29	29.54	-30.83	Peak	Coaxial
21.887	17.25	20.01	37.26	-2.74	29.54	-32.28	Peak	Coaxial
0.565	25.91	19.31	45.22	5.22	32.56	-27.34	Peak	Coplanar
1.096	20.04	19.32	39.36	-0.64	26.81	-27.45	Peak	Coplanar
2.911	19.36	19.44	38.80	-1.20	29.54	-30.74	Peak	Coplanar
25.743	20.46	20.13	40.59	0.59	29.54	-28.95	Peak	Coplanar

Notes:

1. Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)
   Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)
2. Measurements were tested at 3 m and the data was extrapolated to the specified measurement distance of 30 m or 300 m using the square of an inverse linear extrapolation factor (40 dB/decade) as specified in §15.31 (f)(2). Extrapolation Factor = 40 × log (300/3) = 80 dB for range 0.009 ~ 0.490 MHz,
   Extrapolation Factor = 40 × log (30/3) = 40 dB for range 0.490 ~ 30 MHz
3. Below 30 MHz measurement was performed using a loop antenna. The antenna was positioned in two orthogonal (Coaxial and Coplanar) and the position with the highest emission level was recorded.

Out-Band Emission Above 30 MHz							
Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
217.011	22.70	15.08	37.78	46.00	-8.22	QP	Horizontal
244.061	21.40	16.66	38.06	46.00	-7.94	QP	Horizontal
271.229	22.60	17.76	40.36	46.00	-5.64	QP	Horizontal
298.373	25.20	18.69	43.89	46.00	-2.11	QP	Horizontal
420.433	11.50	21.50	33.00	46.00	-13.00	QP	Horizontal
678.055	7.00	26.95	33.95	46.00	-12.05	QP	Horizontal
40.673	14.50	17.84	32.34	40.00	-7.66	QP	Vertical
54.223	16.80	18.16	34.96	40.00	-5.04	QP	Vertical
110.840	20.70	15.27	35.97	43.50	-7.53	QP	Vertical
189.872	21.70	15.43	37.13	43.50	-6.37	QP	Vertical
271.229	14.00	17.76	31.76	46.00	-14.24	QP	Vertical
678.055	5.20	26.95	32.15	46.00	-13.85	QP	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

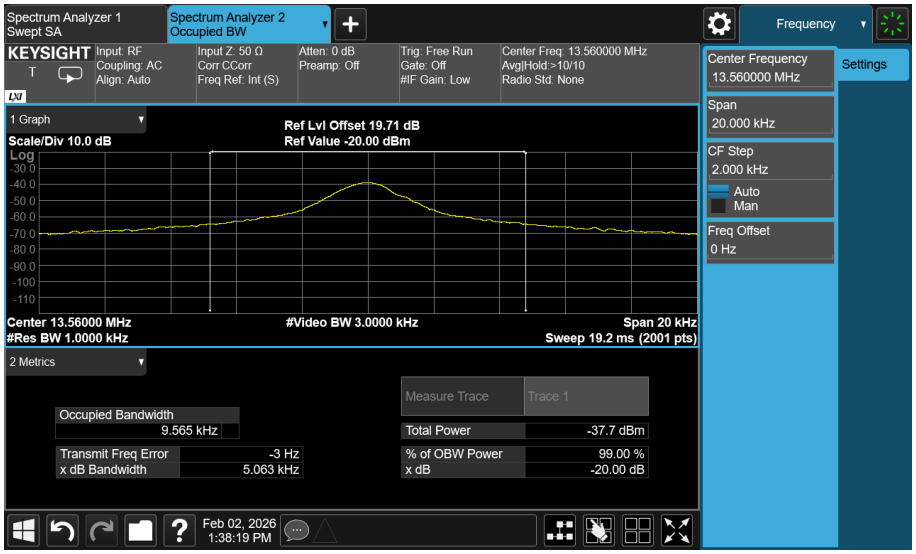
Note 2: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

A.3 Occupied Bandwidth Test Result

Test Site	SIP-AC3	Test Date	2026-02-02
Test Engineer	Yuuki Qiu	Test Mode	Mode 1

Frequency (MHz)	20 dB Occupied Bandwidth (kHz)
13.56	5.063

20 dB Occupied Bandwidth



Note: Because the measured signal is CW adjusting the RBW per ANSI C63.10-2020 would not be practical since measured bandwidth will always follow the RBW.

A.4 Frequency Tolerance Test Result

Test Site	SIP-TR1	Test Date	2026-02-03
Test Engineer	Alan Yu	Test Mode	Mode 1

Reference Voltage: 48 V						
Deviation Limit: +/- 0.01% = +/- 1356 Hz						
Voltage (%)	Power Battery	Temp (°C)	Frequency Deviation (Hz)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	48 V	-20	0.819	7.761	7.703	28.121
		-10	-0.340	-0.605	-0.504	-0.808
		0	-593.769	3.179	3.705	3.707
		+10	17.415	16.725	24.576	16.336
		+20	21.402	23.694	25.629	28.188
		+30	33.780	27.653	34.339	34.199
		+40	-280.746	27.528	28.229	25.350
		+50	31.260	-207.974	-3.416	-5.015
85%	40.8 V	+20	16.149	23.947	24.640	24.620
115%	55.2 V	+20	-132.381	25.934	27.693	28.345
Test Result			Pass	Pass	Pass	Pass

Appendix B - Test Setup Photograph

Refer to “R26S1044019-UT” file.

Appendix C - EUT Photograph

Refer to “R26S1044019-UE” file.

The End