



FCC Test Report

FCC ID: 2BEXW-AL7009

Applicant: SINOX COMPANY LTD

Address: 3F, No. 2, Lane 93, Chien-1 Rd., Chung-Ho Dist., New Taipei City, 235602, Taiwan

Manufacturer: SINOX COMPANY LTD

Address: 3F, No. 2, Lane 93, Chien-1 Rd., Chung-Ho Dist., New Taipei City, 235602, Taiwan

Product Name: RFID Cabinet Lock

Trade Mark: SINOX

Model Number: AL7009

Date of Receipt: Feb. 04, 2026

Test Date: Feb. 04, 2026 ~ Mar. 10, 2026

Date of Report: Mar. 10, 2026

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China

Applicable Standards: FCC Rules and Regulations Part 15 Subpart C Section 15.225
ANSI C63.10: 2020

Test Result: Pass

Report Number: DLE-260313027R

Prepared by(Engineer): Ken Tan

Reviewer(Supervisor): Jack Bu

Approved(Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



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**** Issued History ****

Revision	Description	Issued Date	Remark
Revision 1.0	Initial Test Report Release	Mar. 10, 2026	



1. Summary

1.1 Test Procedures and Results

Requirement	CFR 47 Section	Result
AC Conduction Emission, 0.15MHz to 30MHz	§15.207	N/A
Radiation Emission	§15.225, §15.205, §15.209, §15.35	PASS
Occupied Bandwidth	§ 15.215	PASS
Antenna Requirement	§ 15.203	PASS
Frequency Stability	§ 15.225	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

1.2 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	All emissions, radiated(<1G)	$\pm 3.65\text{dB}$
2	All emissions, radiated(>1G)	$\pm 4.89\text{dB}$
3	6dB Bandwidth	$\pm 0.2\text{MHz}$
4	Temperature	$\pm 0.5^\circ\text{C}$
5	Humidity	$\pm 2\%$



2. EUT Description

Product Name:	RFID Cabinet Lock
Model Name:	AL7009
Series Model(s):	N/A
Model Difference:	N/A
Antenna Type:	PCB Antenna
Antenna Gain:	0.58dBi
Operation frequency:	13.56MHz
Modulation Type:	ASK
Power Source:	DC 3V From Battery
Power Rating:	DC 3V From Battery
Note: 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. Antenna gain Refer to the antenna specifications. 3. The cable loss data is obtained from the supplier. 4. The test results in the report only apply to the tested sample.	



3. General Information

3.1 Description of Test Setup

Operation of EUT during Radiation testing:



Operation of EUT during RF Conducted testing:



The sample was placed (0.8m below 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.



3.2 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Product Name	Trade Mark	Model Name	Specification	Remark
1	RFID Cabinet Lock	SINOX	AL7009	N/A	EUT

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.



3.3 Equipments List for All Test Items

Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Oct. 25, 2025	Oct. 24, 2026
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Oct. 25, 2025	Oct. 24, 2026
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Oct. 25, 2025	Oct. 24, 2026
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Oct. 25, 2025	Oct. 24, 2026
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Oct. 25, 2025	Oct. 24, 2026
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Oct. 25, 2025	Oct. 24, 2026
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Oct. 25, 2025	Oct. 24, 2026
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Oct. 25, 2025	Oct. 24, 2026
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Oct. 25, 2025	Oct. 24, 2026
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Oct. 25, 2025	Oct. 24, 2026
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Oct. 25, 2025	Oct. 24, 2026
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Oct. 25, 2025	Oct. 24, 2026
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Oct. 25, 2025	Oct. 24, 2026
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Oct. 25, 2025	Oct. 24, 2026
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Oct. 25, 2025	Oct. 24, 2026
16	D.C. Power Supply	LongWei	PS-305D	010964729	Oct. 25, 2025	Oct. 24, 2026

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ EMC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ EMC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	2.0.0.0



4. Test Results and Measurement Data

4.1 Antenna Requirement

Standard requirement:

FCC Part15 C Section 15.203

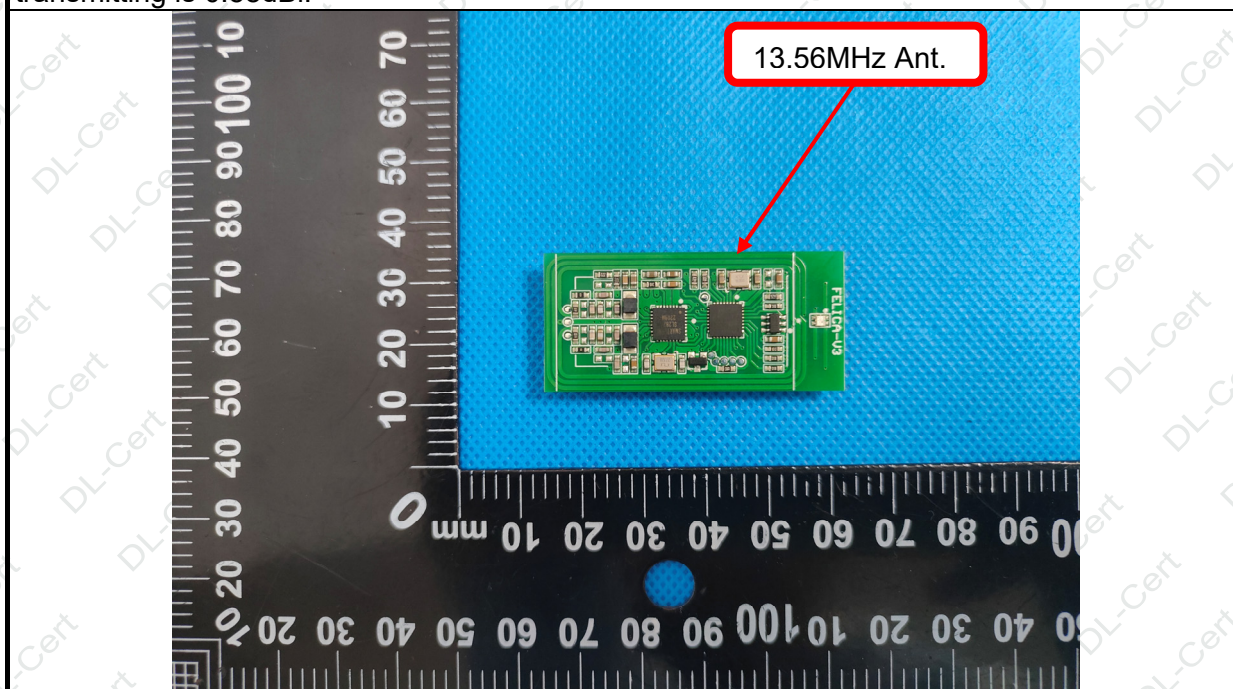
15.203 requirement:

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, 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.

E.U.T Antenna:

PCB Antenna

The antenna used in this product is a PCB Antenna, is a permanently attached antenna on the PCB. It conforms to the standard requirements. The directional gains of antenna used for transmitting is 0.58dBi.





4.2 AC Conducted Emission

4.2.1 Conducted Power Line Emission Limit

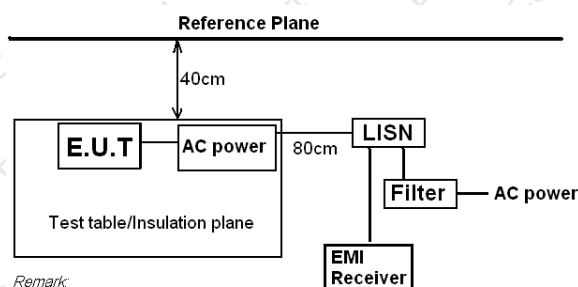
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following.

Frequency (MHz)	Maximum RF Line Voltage (dB μ V)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency.

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

4.2.2 Test Setup



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedance Stabilization Network
Test table height=0.8m

4.2.3 Test Procedure

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.



4.2.4 Test Result

Not applicable.

Note: EUT power supply by DC Power, so this test item not applicable.

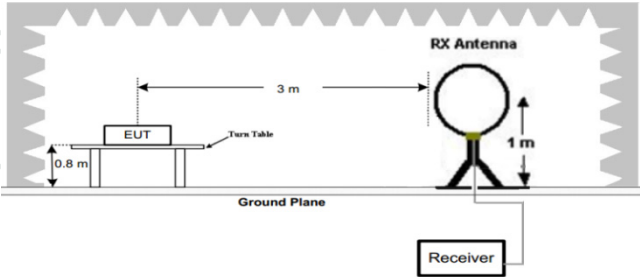
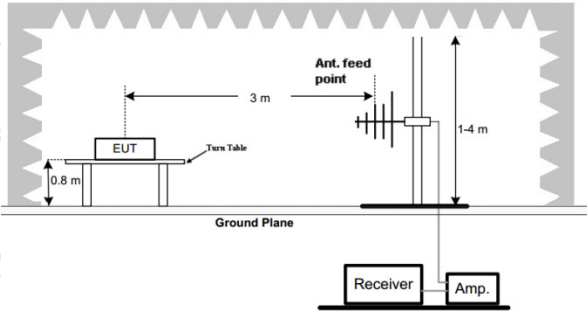


4.3 Radiated Emission Measurement

4.3.1 Test Specification

Test Requirement:	FCC Part15 C Section 15.225(a) and 15.209				
Test Method:	ANSI C63.10: 2020				
Frequency Range:	9 kHz to 1 GHz				
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal & Vertical				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber in below 1GHz. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height 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 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.					



Test Setup:	For radiated emissions 
	30MHz to 1GHz 
Test Mode:	Transmitting Mode
Test Results:	PASS

4.3.2 Limit

- (a)The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

**4.3.3 Frequencies in restricted band are complied to limit on Paragraph 15.209**

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)	Field strength (microvolts/meter)
0.009-0.490	300	20log 2400/F (kHz)	2400/F (kHz)
0.490-1.705	30	20log 24000/F (kHz)	24000/F (kHz)
1.705-30	30	20log 30	30
30-88	3	40.0	100**
88-216	3	43.5	150**
216-960	3	46.0	200**
Above 960	3	54.0	500

NOTE:

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., S 15.231 and 15.241.

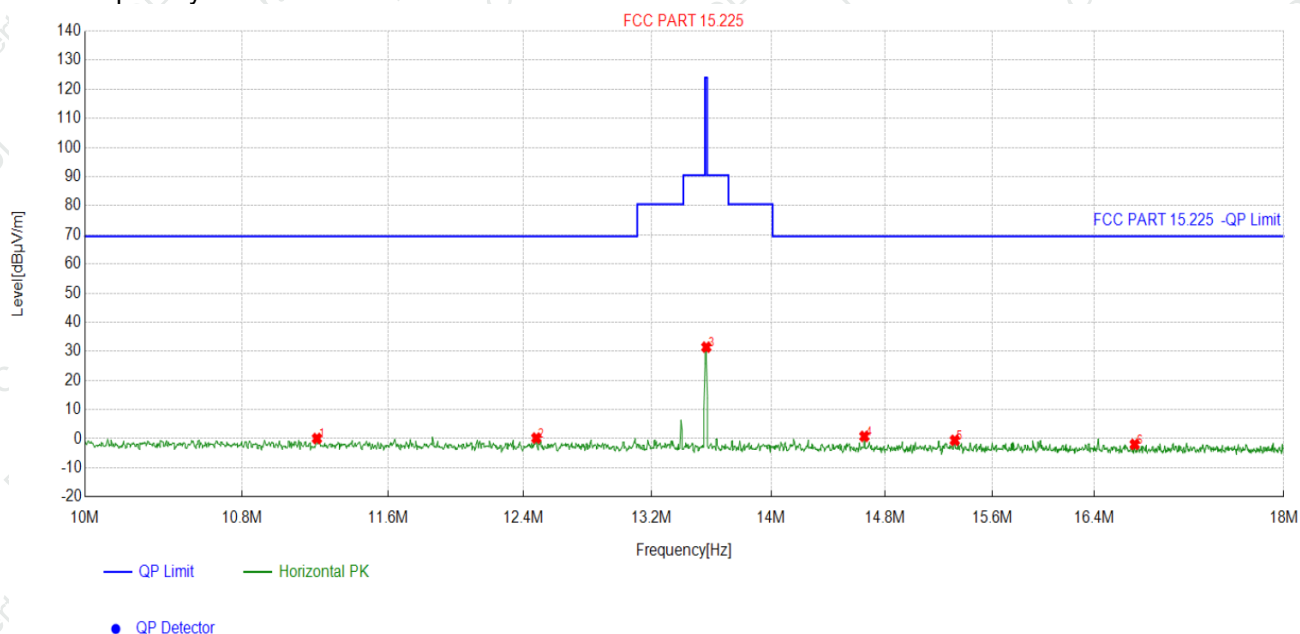


4.3.4 Test Data

PASS

Field Strength of Fundamental

Antenna polarity: Horizontal

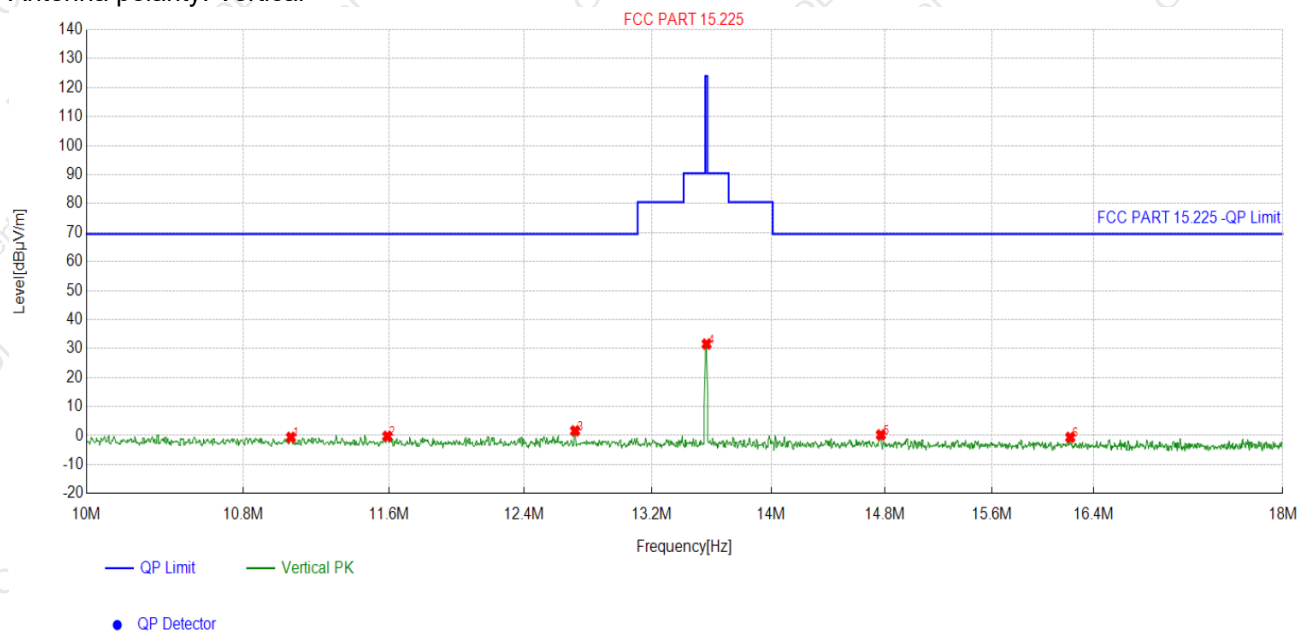


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	11.205	-11.61	11.69	0.08	69.54	69.46	100	297	Horizontal
2	12.477	-11.70	11.91	0.21	69.54	69.33	100	68	Horizontal
3	13.562	-11.76	43.19	31.43	124.00	92.57	100	101	Horizontal
4	14.654	-11.85	12.64	0.79	69.54	68.75	100	341	Horizontal
5	15.319	-11.89	11.33	-0.56	69.54	70.10	100	45	Horizontal
6	16.731	-11.99	10.03	-1.96	69.54	71.50	100	286	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level



Antenna polarity: Vertical

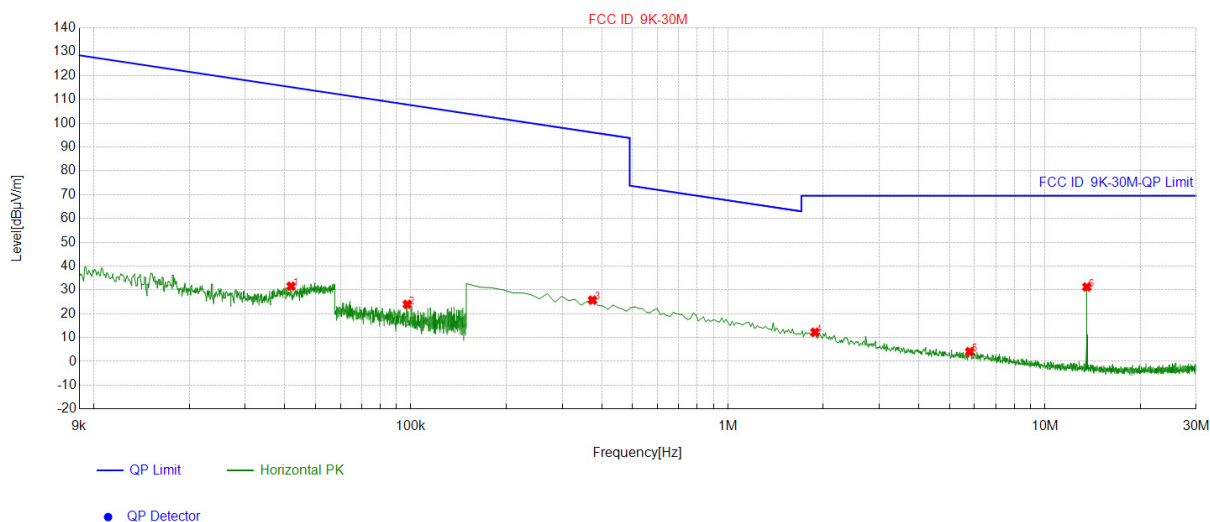


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBuV/m]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	11.057	-11.59	10.98	-0.61	69.54	70.15	100	351	Vertical
2	11.593	-11.62	11.36	-0.26	69.54	69.80	100	76	Vertical
3	12.713	-11.71	13.33	1.62	69.54	67.92	100	80	Vertical
4	13.562	-11.76	43.34	31.58	124.00	92.42	100	282	Vertical
5	14.774	-11.85	12.08	0.23	69.54	69.31	100	175	Vertical
6	16.215	-11.96	11.33	-0.63	69.54	70.17	100	102	Vertical

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level



For 9KHz - 30MHz



Suspected List

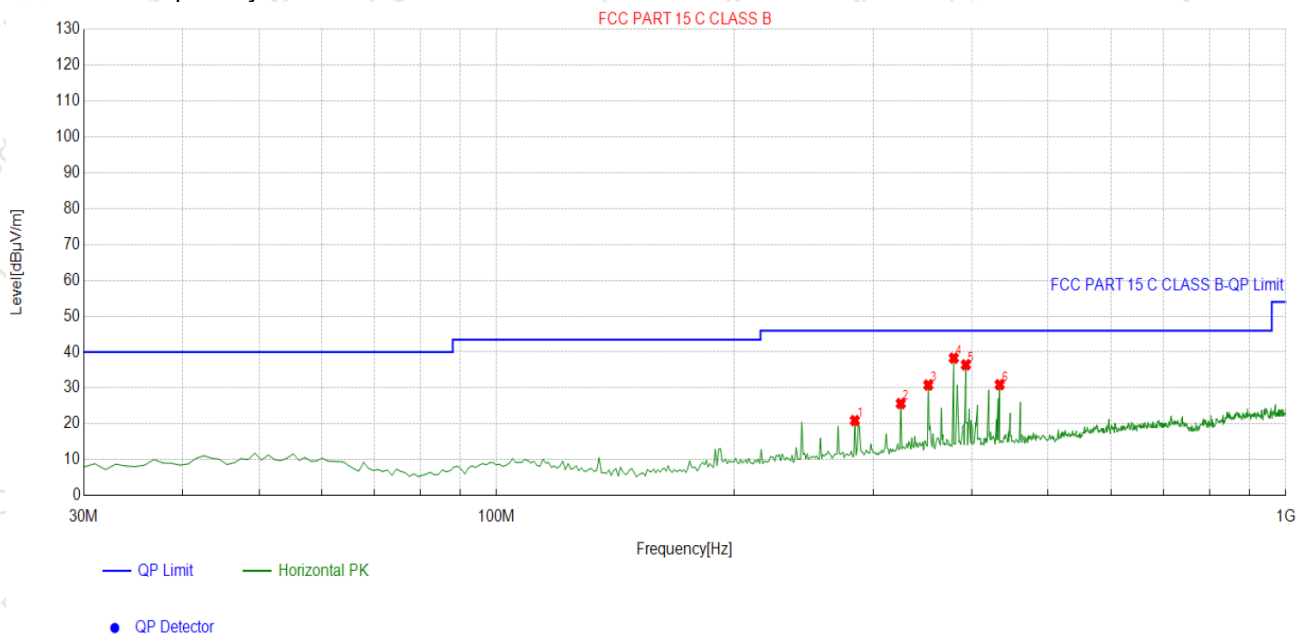
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]
1	0.0419	-10.27	41.84	31.57	115.15	83.58
2	0.0974	-10.37	34.33	23.96	107.83	83.87
3	0.3740	-11.10	36.83	25.73	96.15	70.42
4	1.8822	-10.35	22.60	12.25	69.50	57.25
5	5.7945	-10.67	14.78	4.11	69.50	65.39
6	13.5594	-11.76	42.99	31.23	69.50	38.27

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

**About 30MHz-1GHz**

All the test modes completed for test. Only the worst result was reported as below:

Antenna polarity: Horizontal

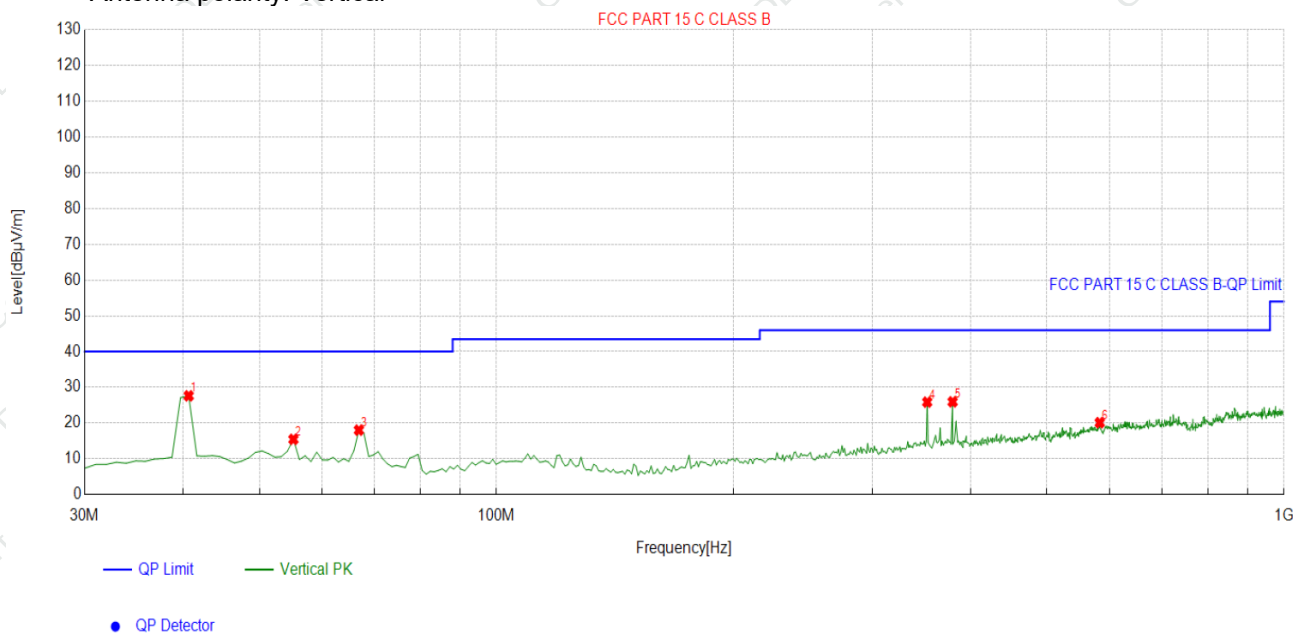


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	284.3944	-12.50	33.43	20.93	46.00	25.07	100	17	Horizontal
2	325.1752	-11.00	36.67	25.67	46.00	20.33	100	347	Horizontal
3	352.3624	-10.13	40.97	30.84	46.00	15.16	100	347	Horizontal
4	379.5496	-9.37	47.71	38.34	46.00	7.66	100	347	Horizontal
5	393.1431	-9.30	45.77	36.47	46.00	9.53	100	347	Horizontal
6	433.9239	-8.98	39.92	30.94	46.00	15.06	100	347	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level



Antenna polarity: Vertical



Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.6807	-13.83	41.47	27.64	40.00	12.36	100	303	Vertical
2	55.2452	-14.00	29.48	15.48	40.00	24.52	100	189	Vertical
3	66.8969	-16.17	34.22	18.05	40.00	21.95	100	303	Vertical
4	352.3624	-10.13	36.01	25.88	46.00	20.12	100	255	Vertical
5	379.5496	-9.37	35.33	25.96	46.00	20.04	100	255	Vertical
6	583.4535	-5.58	25.71	20.13	46.00	25.87	100	115	Vertical

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

Harmonics and Spurious Emissions

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBμV/m)	Limit@3m (dBμV/m)
--	--	--
--	--	--
--	--	--
--	--	--

Note: 1. Emission Level=Reading+ Cable loss+ Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement.



4.4 Occupied Bandwidth

4.4.1 Test Specification

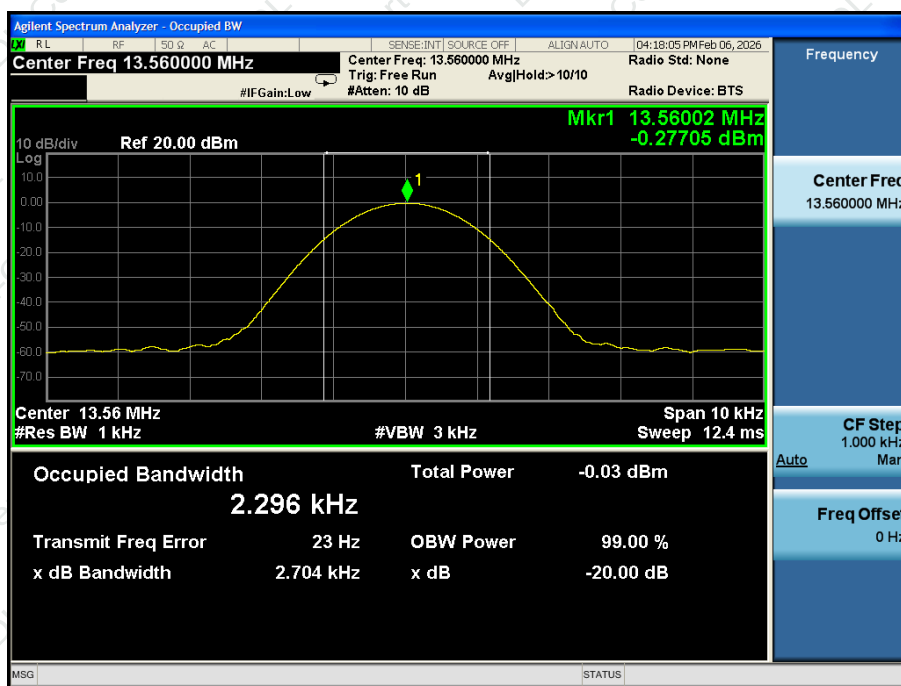
Test Requirement:	FCC Part15 C Section 15.215(c)
Test Method:	ANSI C63.10: 2020
Limit:	N/A
	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; RBW $\geq$ 1% of the 20 dB bandwidth; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold. 4. Measure and record the results in the test report.
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting Mode
Test Results:	PASS



4.4.2 Test Data

Test Channel (MHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
13.56	2.704	N/A	PASS

Test plots as follows:





4.5 Frequency Stability

4.5.1 Test Specification

Test Requirement:	FCC Part15 C Section 15.225
Test Method:	ANSI C63.10: 2020
Limit:	+/-0.01%
	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a spectrum analyzer. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to - 20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting Mode
Test Results:	PASS



4.5.2 Test Data

PASS

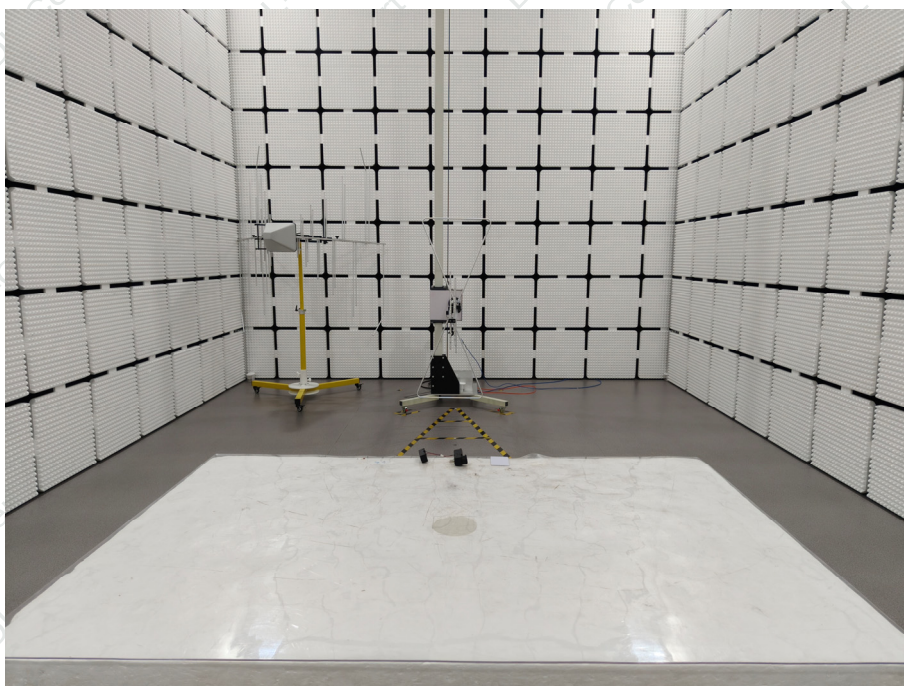
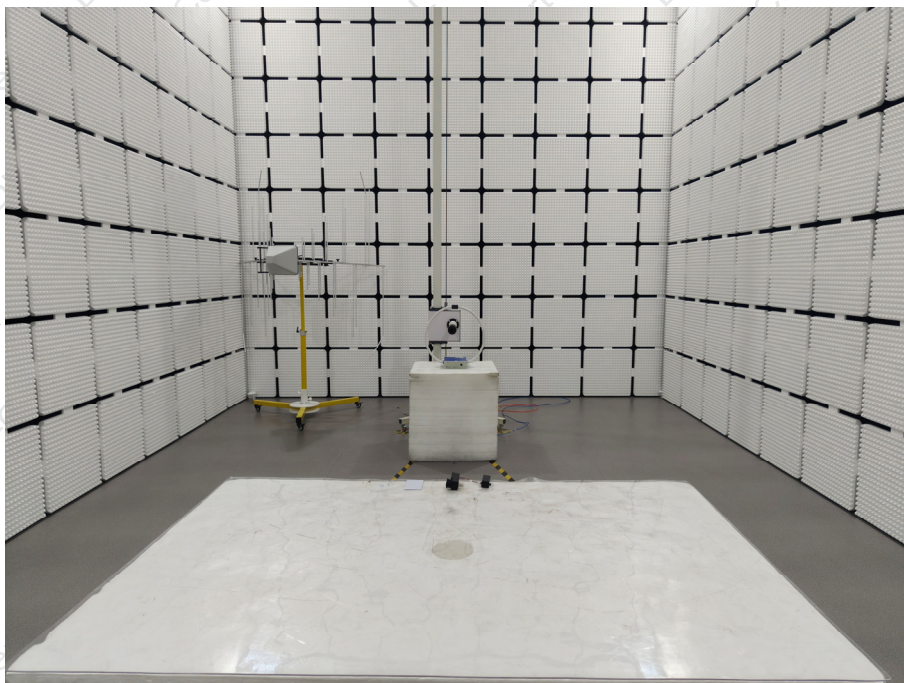
Note: this EUT was tested for all models and the worst case model data was reported.

Voltage (Vdc)	Temperature (°C)	Frequency (MHz)	Deviation (%)	Limit (%)
3.0	-20	13.560076	0.00056%	+/-0.01%
3.0	-10	13.560323	0.00238%	
3.0	0	13.560395	0.00291%	
3.0	10	13.560078	0.00058%	
3.0	20	13.560053	0.00039%	
3.0	30	13.55966	-0.00251%	
3.0	40	13.559958	-0.00031%	
3.0	50	13.559847	-0.00113%	
2.55	-20	13.560162	0.00119%	
2.55	-10	13.560018	0.00013%	
2.55	0	13.559939	-0.00045%	
2.55	10	13.56058	0.00428%	
2.55	20	13.55971	-0.00214%	
2.55	30	13.559842	-0.00117%	
2.55	40	13.55969	-0.00229%	
2.55	50	13.560237	0.00175%	
3.45	-20	13.560025	0.00018%	
3.45	-10	13.559847	-0.00113%	
3.45	0	13.56053	0.00391%	
3.45	10	13.559842	-0.00117%	
3.45	20	13.559983	-0.00013%	
3.45	30	13.559895	-0.00077%	
3.45	40	13.55970373	-0.00218%	
3.45	50	13.559961	-0.00029%	



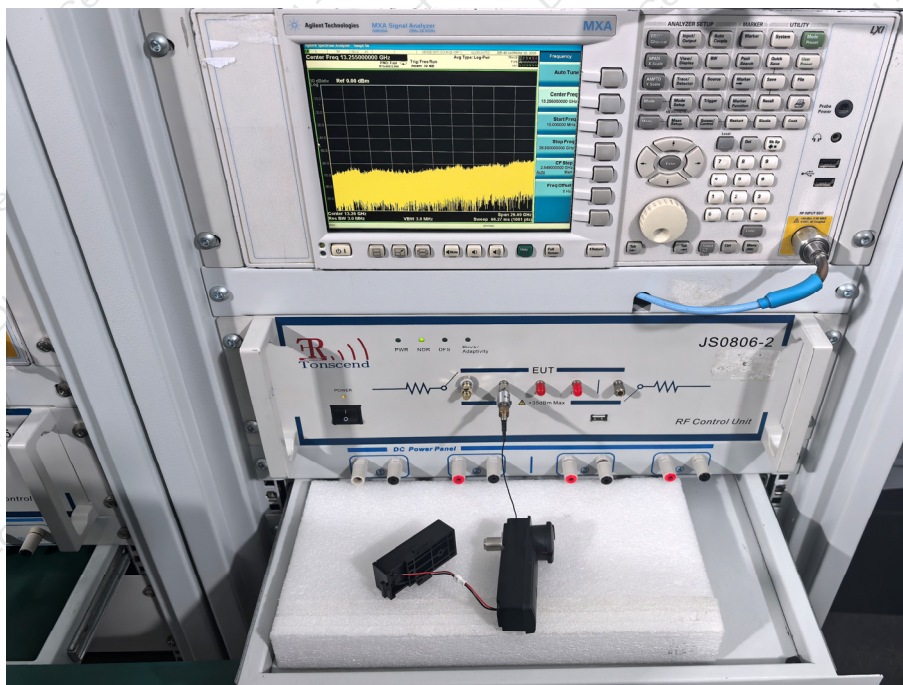
5. Test Setup Photos of the EUT

Radiated Emission





RF Conducted Emission





6. Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos.

-----End of test report-----