

FCC Test Report

**Test Report
On Behalf of
Qualvision Technology Co., Ltd.
For
QV-ODS946SX
Model No.: QV-ODS946SX
FCC ID: 2AW8U-QV-ODS946SX**

Prepared For: Qualvision Technology Co., Ltd.
4F-5F, Bldg B, No.37, ZhenXing Road, LiYuHe Industrial Park, LouCun,
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Date of Test: Apr. 24, 2026 ~ May 14, 2026

Date of Report: May 14, 2026

Report Number: HK2604240458-E

Test Result Certification

Applicant's Name.....: Qualvision Technology Co., Ltd.
Address: 4F-5F, Bldg B, No.37, ZhenXing Road, LiYuHe Industrial Park,
LouCun, GongMing, ShenZhen 518107, China
Manufacturer's Name: Qualvision Technology Co., Ltd.
Address: 4F-5F, Bldg B, No.37, ZhenXing Road, LiYuHe Industrial Park,
LouCun, GongMing, ShenZhen 518107, China
Product Description
Trade Mark: N/A
Product Name.....: QV-ODS946SX
Model and/or Type Reference : QV-ODS946SX
Standards: FCC Rules and Regulations Part 15 Subpart C Section 15.225
ANSI C63.10: 2020

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Date of Test.....:
Date (s) of Performance of Tests: **Apr. 24, 2026 ~ May 14, 2026**
Date of Issue.....: **May 14, 2026**
Test Result.....: **Pass**

Testing Engineer

Len Liao

Len Liao

Technical Manager

Sliver Wan

Sliver Wan

Authorized Signatory

Jason Zhou

Jason Zhou



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**** Issued History ****

Revision	Description	Issued Date	Remark
Revision 1.0	Initial Test Report Release	May 14, 2026	Jason Zhou



1. Summary

1.1 Test Procedures and Results

Requirement	CFR 47 Section	Result
AC Conduction Emission, 0.15MHz to 30MHz	§15.207	PASS
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 Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

1.3 Measurement Uncertainty

No.	Item	MU
1	Conducted Emission 0.15~30MHz	±2.71dB
2	All Emissions, Radiated(<1G)	±3.90dB
3	All Emissions, Radiated(>1G)	±4.28dB
6	Occupied Bandwidth	±1.5%
7	Temperature	±0.1°C
8	Humidity	±1.0%

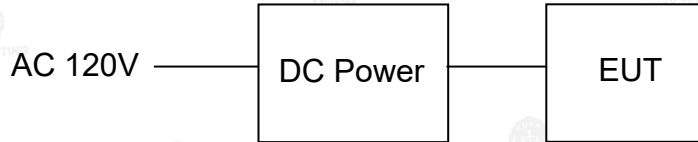
2. EUT Description

Equipment:	QV-ODS946SX
Model Name:	QV-ODS946SX
Series Model(s):	N/A
Model Difference:	N/A
Antenna Type:	PCB antenna
Antenna Gain:	0dBi
Operation frequency:	13.56MHz
Modulation Type:	ASK
Power Source:	System BUS power 32V Or 12V DC power supply Or POE 48V
Power Rating:	System BUS power 32V Or 12V DC power supply Or POE 48V
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.	

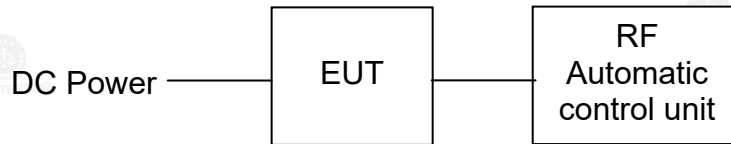
3. General Information

3.1 Description of Test Setup

Operation of EUT during AC Conducted and 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 report only reflects the worst emission test results. 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	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	QV-ODS946SX	N/A	QV-ODS946SX	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.

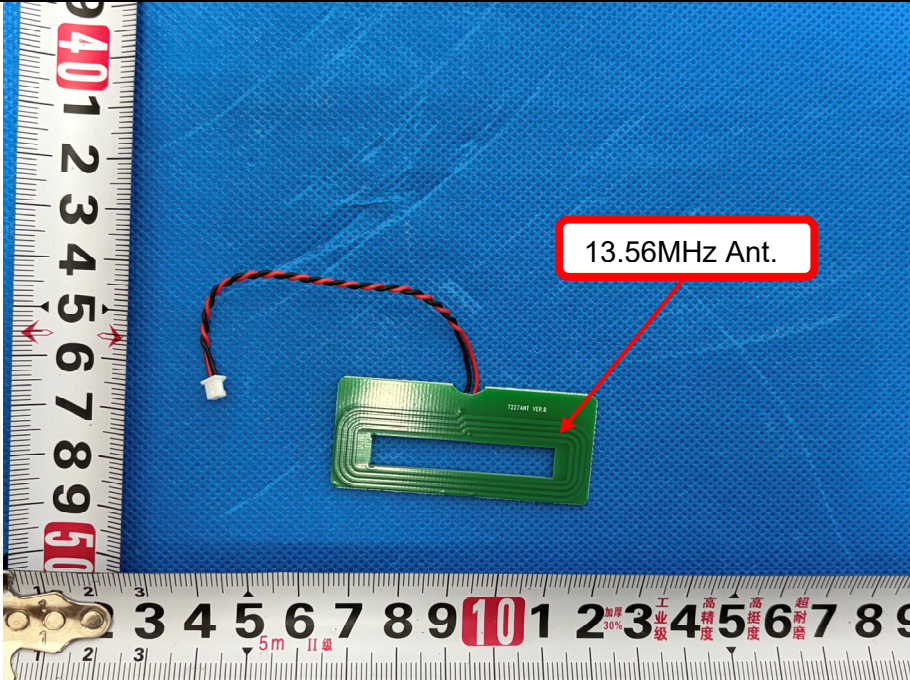


3.3 Equipments List for All Test Items

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 06, 2026	1 Year
2.	L.I.S.N.	R&S	ENV216	HKE-002	Feb. 11, 2026	1 Year
3.	L.I.S.N.	R&S	ENV216	HKE-059	Feb. 04, 2026	1 Year
4.	EMI Test Receiver	R&S	ESR-7	HKE-005	Feb. 06, 2026	1 Year
5.	Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	Feb. 06, 2026	1 Year
6.	Spectrum analyzer	R&S	FSV3044	HKE-126	Feb. 06, 2026	1 Year
7.	Preamplifier	Schwarzbeck	EMC051845SE	HKE-006	Feb. 04, 2026	1 Year
8.	Preamplifier	Agilent	83051A	HKE-016	Feb. 04, 2026	1 Year
9.	Preamplifier	A.H. Systems	SAS-574	HKE-182	Feb. 04, 2026	1 Year
10.	6dB Attenuator	Pasternack	6db	HKE-152	Feb. 06, 2026	1 Year
11.	EMI Test Receiver	R&S	ESR-7	HKE-010	Feb. 06, 2026	1 Year
12.	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	Feb. 06, 2026	2 Year
13.	Loop Antenna	COM-POWER	AL-130R	HKE-014	Feb. 06, 2026	2 Year
14.	Horn Antenna	Schwarzbeck	9120D	HKE-013	Feb. 06, 2026	2 Year
15.	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
16.	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
17.	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 04, 2026	1 Year
18.	RF Automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 06, 2026	1 Year

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 0dBi.	
	

4.2 AC Conducted Emission

4.2.1 AC Conducted Power Line Emission Limit

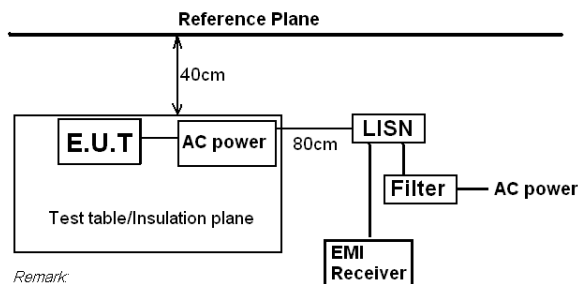
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following.

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	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

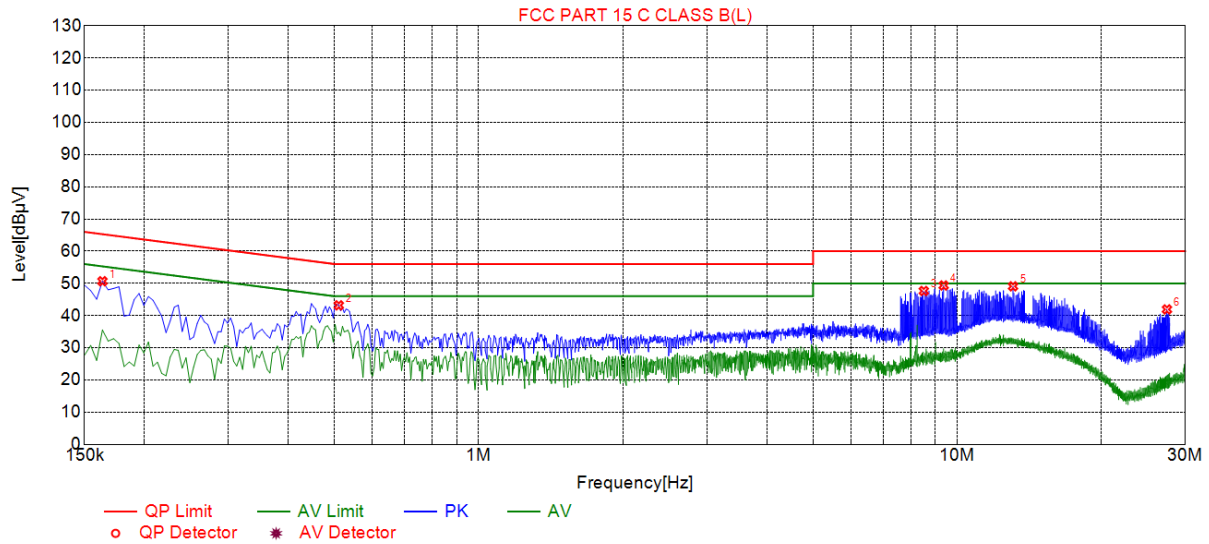
4.2.3 Test Procedure

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

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

Test Specification: Line



Suspected List

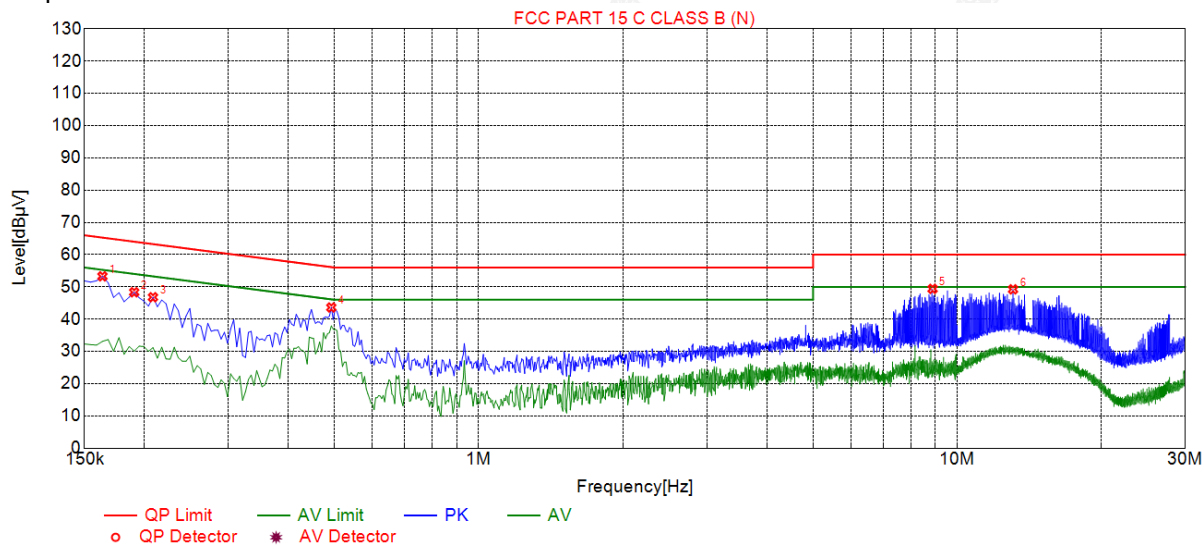
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1635	50.67	19.82	65.28	14.61	30.85	PK	L
2	0.5100	43.18	19.86	56.00	12.82	31.45	PK	L
3	8.5200	47.64	20.78	60.00	12.36	26.86	PK	L
4	9.3750	49.35	21.04	60.00	10.65	28.31	PK	L
5	13.0920	49.08	21.74	60.00	10.92	27.34	PK	L
6	27.4650	41.92	24.87	60.00	18.08	17.05	PK	L

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

Test Specification: Neutral



Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1635	53.28	19.90	65.28	12.00	33.38	PK	N
2	0.1905	48.34	19.79	64.01	15.67	28.55	PK	N
3	0.2085	46.80	19.76	63.26	16.46	27.04	PK	N
4	0.4920	43.62	19.94	56.13	12.51	23.68	PK	N
5	8.8890	49.39	20.91	60.00	10.61	28.48	PK	N
6	13.0920	49.24	21.60	60.00	10.76	27.64	PK	N

Remark: Margin = Limit – Level

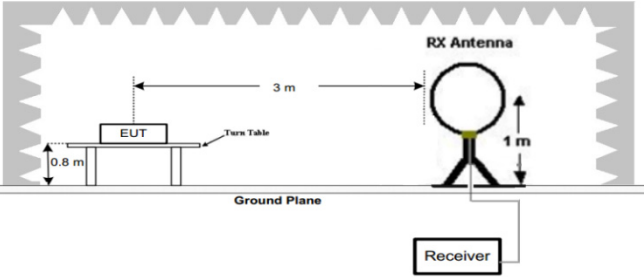
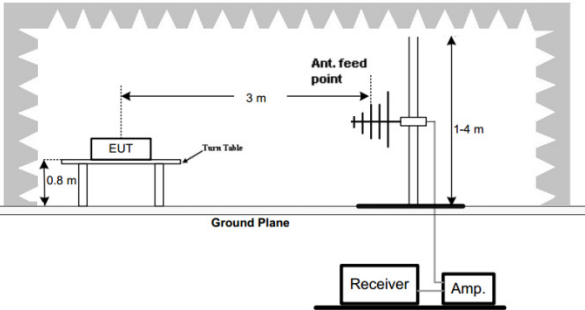
Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

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

- The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- 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.
- 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.
- 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:

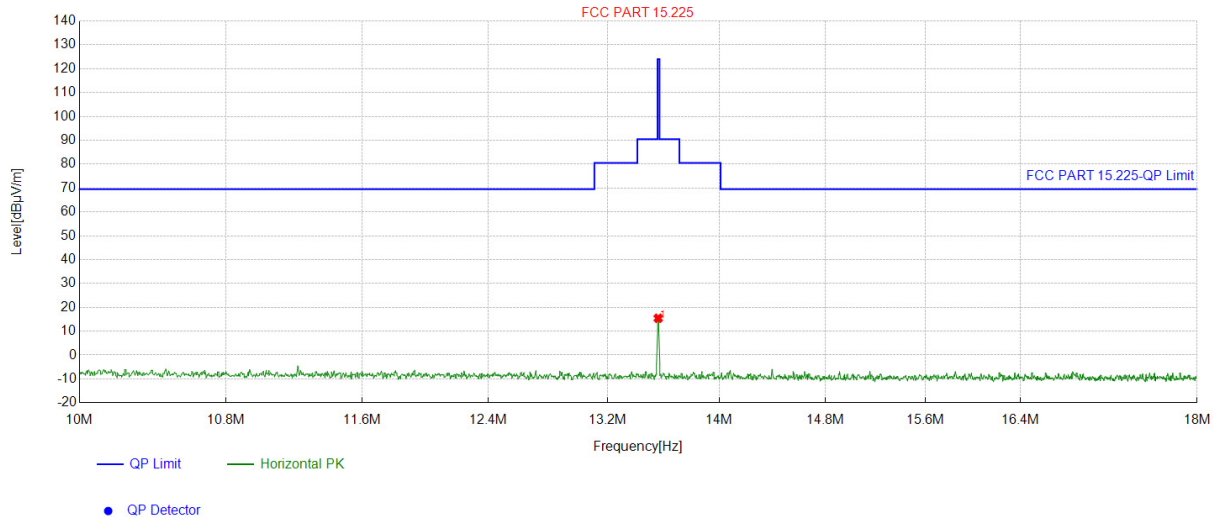
**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this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

4.3.4 Test Data

PASS

Field Strength of Fundamental

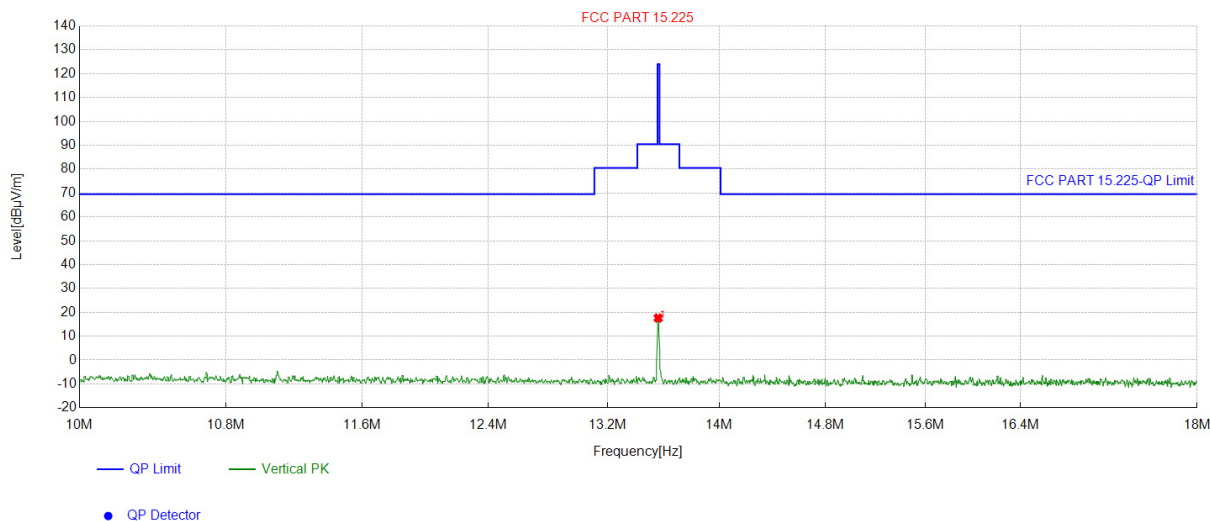
Antenna polarity: Horizontal



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.558	-18.11	33.54	15.43	124.00	108.57	100	358	Horizontal

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

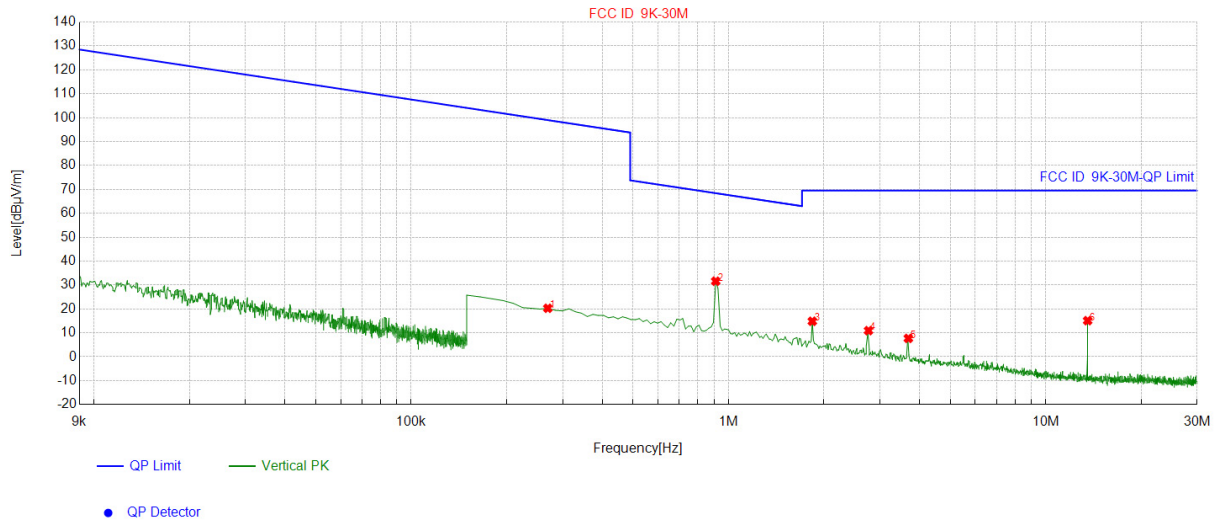
Antenna polarity: Vertical



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.558	-18.11	35.73	17.62	124.00	106.38	100	316	Vertical

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

For 9KHz - 30MHz



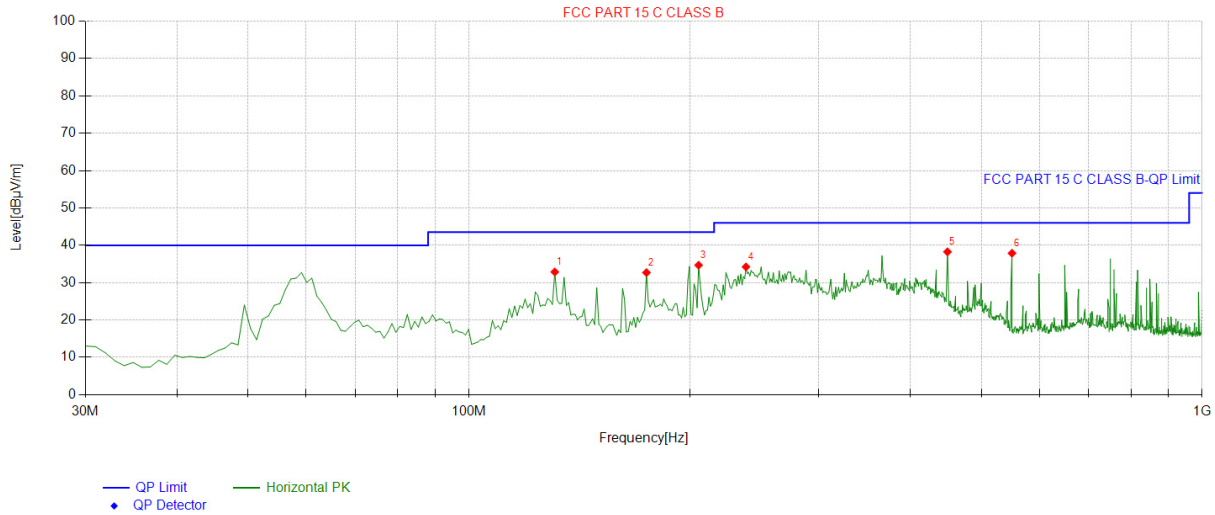
Suspected List						
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]
1	0.269	-17.94	38.22	20.28	98.99	78.71
2	0.912	-17.05	48.66	31.61	68.42	36.81
3	1.837	-16.55	31.39	14.84	69.50	54.66
4	2.763	-16.79	27.72	10.93	69.50	58.57
5	3.689	-16.88	24.57	7.69	69.50	61.81
6	13.559	-18.11	33.21	15.10	69.50	54.40

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

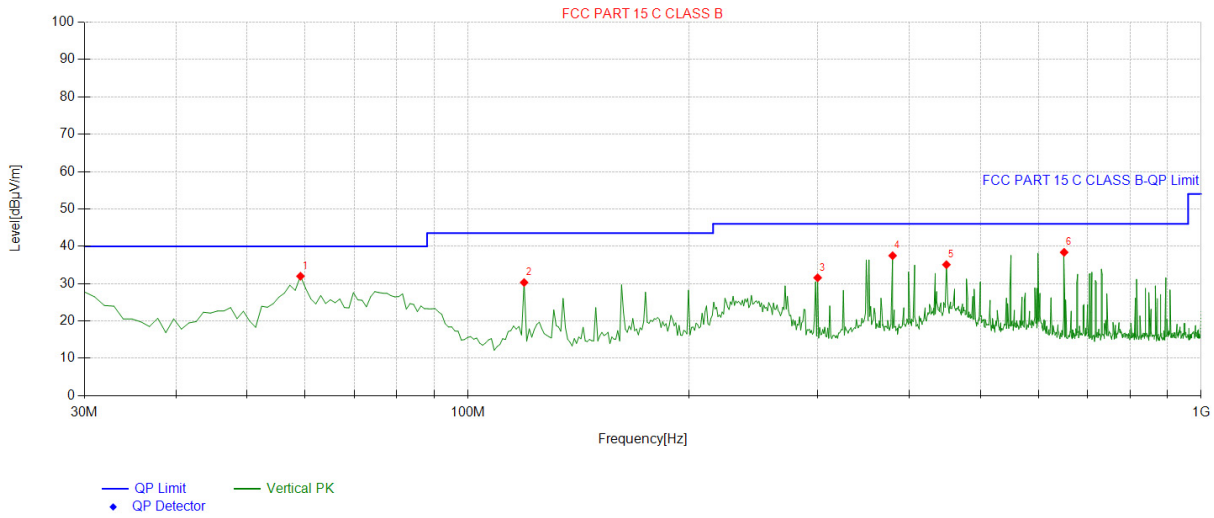


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	130.98098	-20.30	53.16	32.86	43.50	10.64	100	118	Horizontal
2	174.67467	-20.59	53.27	32.68	43.50	10.82	100	143	Horizontal
3	205.74574	-22.40	57.07	34.67	43.50	8.83	100	210	Horizontal
4	238.75875	-21.05	55.27	34.22	46.00	11.78	100	236	Horizontal
5	449.45945	-17.56	55.81	38.25	46.00	7.75	100	233	Horizontal
6	550.44044	-16.45	54.33	37.88	46.00	8.12	100	95	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	59.129129	-19.12	51.11	31.99	40.00	8.01	100	85	Vertical
2	119.32932	-20.64	50.95	30.31	43.50	13.19	100	89	Vertical
3	299.92993	-19.92	51.50	31.58	46.00	14.42	100	24	Vertical
4	379.54955	-18.72	56.21	37.49	46.00	8.51	100	314	Vertical
5	449.45945	-17.56	52.64	35.08	46.00	10.92	100	94	Vertical
6	650.45045	-14.85	53.24	38.39	46.00	7.61	100	130	Vertical

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

4.4 Occupied Bandwidth

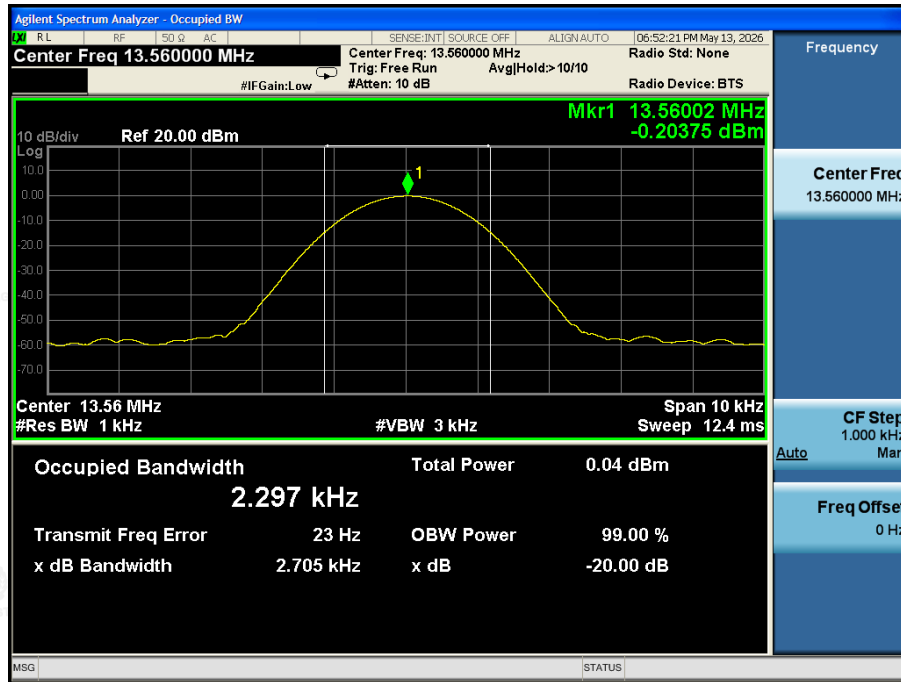
4.4.1 Test Specification

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	2.705	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:	 The diagram illustrates the test setup. On the left is a green rectangular box labeled 'Spectrum Analyzer'. A horizontal line connects it to a yellow rectangular box on the right labeled 'EUT'.
Test Mode:	Transmitting Mode
Test Results:	PASS

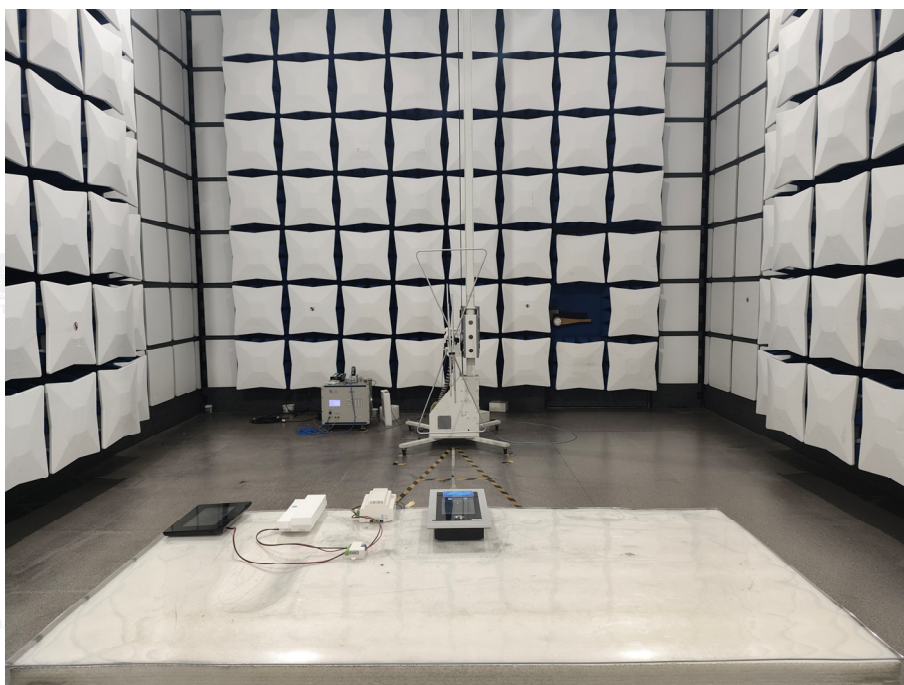
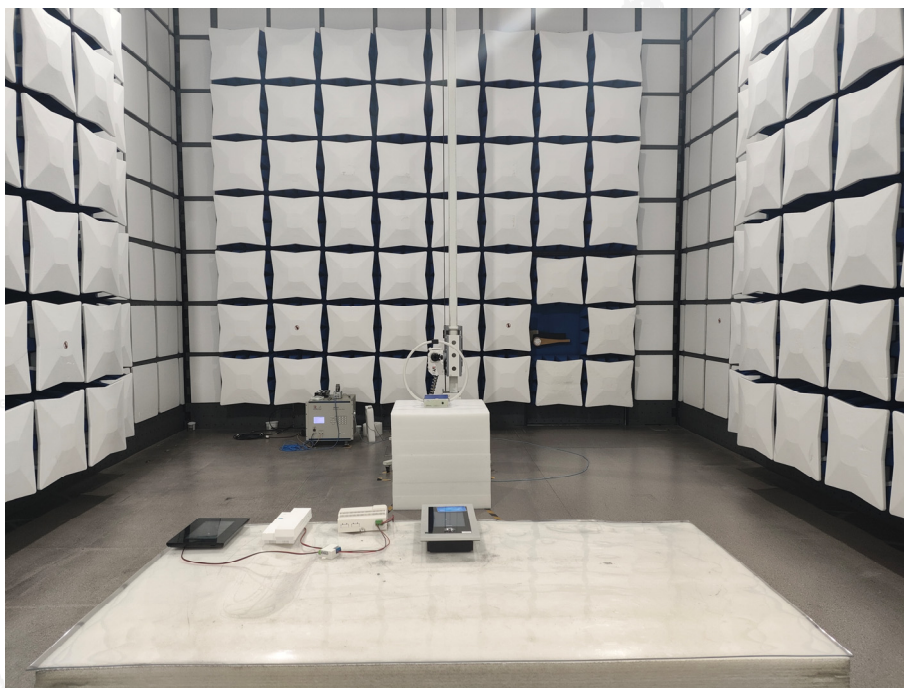
4.5.2 Test Data

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 (%)
12.0	-20	13.560191	0.00141%	+/-0.01%
12.0	-10	13.560214	0.00158%	
12.0	0	13.560179	0.00132%	
12.0	10	13.560224	0.00165%	
12.0	20	13.560323	0.00238%	
12.0	30	13.560232	0.00171%	
12.0	40	13.559935	-0.00048%	
12.0	50	13.559721	-0.00206%	
10.2	-20	13.560164	0.00121%	
10.2	-10	13.560122	0.00090%	
10.2	0	13.559801	-0.00147%	
10.2	10	13.56033	0.00243%	
10.2	20	13.55981	-0.00140%	
10.2	30	13.559712	-0.00212%	
10.2	40	13.558822	-0.00869%	
10.2	50	13.560332	0.00245%	
13.8	-20	13.560115	0.00085%	
13.8	-10	13.559733	-0.00197%	
13.8	0	13.56124	0.00914%	
13.8	10	13.559932	-0.00050%	
13.8	20	13.559859	-0.00104%	
13.8	30	13.559823	-0.00131%	
13.8	40	13.5597024	-0.00219%	
13.8	50	13.559975	-0.00018%	

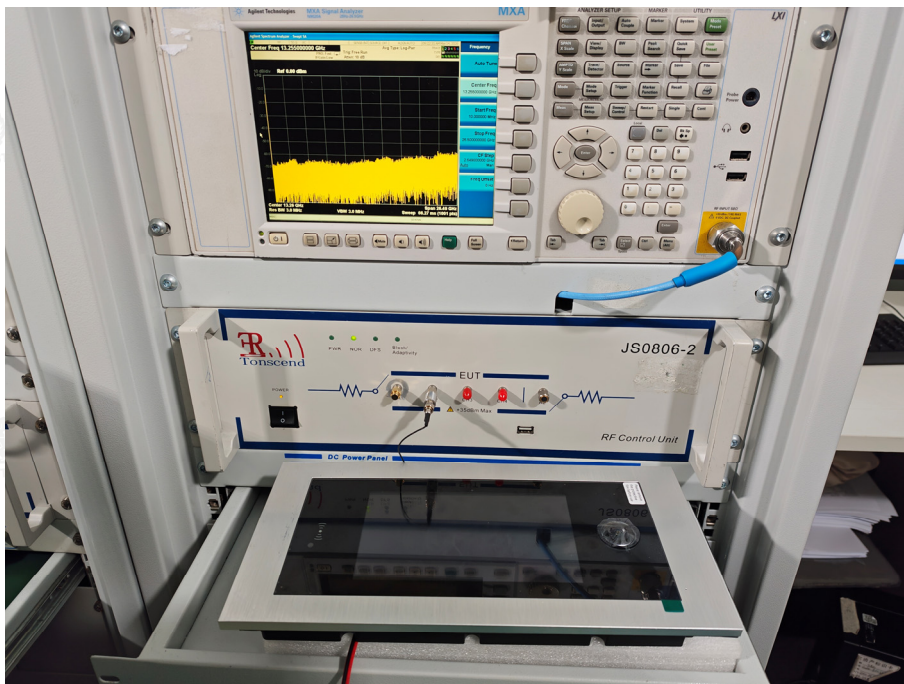
5. Test Setup Photos of the EUT Radiated Emission



AC Conducted 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-----

