

EMC Test Report

Applicant's Name: EXPERT IT SRL

Address: Reghin str. MIHAI VITEAZU, 208 MUREȘ, 545300, ROMÂNIA

Manufacturer's Name.....: EXPERT IT SRL

Address.....: Reghin str. MIHAI VITEAZU, 208 MUREȘ, 545300, ROMÂNIA

Product Description.....:

Product Name: Video conference camera

Model Name: QB-V4K8MP, QB-V4K8MP-2, QB-V4K8MP-3, QB-V4K16MP,
QB-V4K16MP-1, QB-V4K16MP-2

Standards: EN 55032:2015+A11:2020
EN 55035:2017+A11:2020

Report Version: B01

This device described above has been tested by Promise, and the test results show that the equipment under test (EUT) is in compliance with the EMC Directive 2014/30/EU, 2014/53/EU requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test.....:

Date (s) of Performance of Tests: Nov. 08, 2024 ~ Nov. 12, 2024

Date of Issue: Nov. 14, 2024

Test Result: **Pass**

Prepared By : Wanna
(Wanna)

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(Chopin Xiao)

Approved by : Kind yang
(Kind yang)



Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Nov. 14, 2024	Valid	Original Report



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1.TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
EN 55032:2015	Conducted Emission on AC and Telecom Port 150kHz to 30MHz	Class B	N/A	
	Radiated Emissions	Class B	PASS	NOTE (1)
EMC Immunity				
Section EN 55035:2017	Test Item	Performance Criteria	Judgment	Remark
EN 61000-4-2:2009	Electrostatic discharges	B	PASS	
EN 61000-4-3:2006+A1: 2008+A2:2010	Continuous RF electromagnetic field disturbances	A	PASS	
EN 61000-4-4:2012	Electrical fast transients/burst	B	N/A	
EN 61000-4-5:2014+A1:2017	Surges	B	N/A	
EN 61000-4-6:2014+AC:2015	Continuous induced RF disturbances	A	N/A	
EN 61000-4-8:2010	Power frequency magnetic field	A	N/A	
EN 61000-4-11:2004+A1:2017	Voltage dips and interruptions	B / C / C	N/A	NOTE (2)

Note: (1) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1GHz, the measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times of the highest frequency or 6 GHz, whichever is less.

(2) Voltage Dip: 100% reduction – Performance Criteria **B**

Voltage Dip: 30% reduction – Performance Criteria **C**

Voltage Interruption: 100% Interruption – Performance Criteria **C**

(3)“N/A”denotes test is not applicable in this Test Report

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Video conference camera
Trade Mark	N/A
Model Name	QB-V4K8MP, QB-V4K8MP-2, QB-V4K8MP-3, QB-V4K16MP, QB-V4K16MP-1, QB-V4K16MP-2
Model Distinction	Only the appearance color difference is different.
Sampling model	QB-V4K8MP
Test Sample Number	PRMS138241107A01
Product Description	The EUT is a Video conference camera More details of EUT technical specification, please refer to the User's Manual.
Power Source	Input: DC 5V 1A
EUT Highest internal frequency:	☒ $F_x \leq 108\text{MHz}$ ☐ $108 < F_x \leq 500\text{MHz}$ ☐ $500\text{MHz} < F_x \leq 1\text{GHz}$ ☐ $F_x > 1\text{GHz}$
Hardware Version Number	N/A
Software Version Number	N/A

2.2 DESCRIPTION OF THE TEST MODES

characteristics generation from EUT, the test system was pre scanned and was tested on the basis of the consideration of the following EUT operation mode or test configuration mode which possibly have an effect on EMI emission level.

Pretest Mode	Description
Mode 1	Working

For Radiated Test	
Final Test Mode	Description
Mode 1	Working

For EMS Test	
Final Test Mode	Description
Mode 1	Working

Note:

1. For radiated emission test, test mode 1 was the worst case and only this mode was presented in this report.

2.3 DESCRIPTION OF THE TEST SETUP



2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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.

Accessories equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Power Cord
N/A	N/A	N/A	N/A	N/A	N/A

Auxiliary equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Power Cord
E-1	Computer	Dell	P108F	P108F001	N/A

Cable Type

Item	Signal Cable Type	Shielded Type	Ferrite Core	Length
N/A	N/A	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.

2.5 LABORATORY INFORMATION

Company Name:	Shenzhen Promise Test Technology Co., Ltd.
Address:	103, Building 1, Yibaolai Industrial City, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	0755-23319501

2.6 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 %**.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U · (dB)	NOTE
Conducted Emission	CISPR 16-4-2	150kHz ~ 30MHz	2.90	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U · (dB)	NOTE
Radiated Emission	CISPR 16-4-2	30MHz ~ 1000MHz	5.19	

2.7 MEASUREMENT INSTRUMENTS LIST

Radiation Emission Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May. 20, 2021	May. 19, 2025
Spectrum Analyzer	Agilent	N9020A	MY54440442	May. 11, 2024	May. 10, 2025
Low-Noise Amplifier	HEWLETT PACKARD	8447D	2727A05439	May. 11, 2024	May. 10, 2025
Low-Noise Amplifier	RegalWay	RW-LAN-0118-45	202209060001	May. 11, 2024	May. 10, 2025
Log-periodic Antenna	SunAR	JB6	A121411	May. 11, 2023	May. 10, 2025
Horn Antenna	SCHWARZBECK	BBHA9120D	02745	May. 11, 2023	May. 10, 2025
EMI Receiver	R&S	ESCI3	100306	May. 11, 2024	May. 10, 2025
966 Cable 1#	CHENGYU	966	003	May. 11, 2024	May. 10, 2025
Test software	FALA	EZ-EMC	FA-03A2 RE+		--

For Electrostatic Discharge/ Electrical Fast Transients/ Voltage Dips and Interruptions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Combined interference generator	Prima	EED2005TG	PR210554993	May. 11, 2024	May. 10, 2025
Capacitive coupling clamp	Prima	EFT-CLAMP	EFT-198	May. 11, 2024	May. 10, 2025
ESD generator	Prima	EED2005TG	PR210554993	May. 11, 2024	May. 10, 2025

Radiated, radio-frequency, electromagnetic field immunity (RS)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Antenna	SKET	STLP 9129_Plus	/	/	/
Signal Generator	Agilent	N5181A	MY50141997	Feb. 01, 2024	Jan. 31, 2025
Amplifier	SKET	HAP_80M01G-250W	202105183	Jun. 27, 2024	Jun. 26, 2025
Amplifier	SKET	HAP_03G06G-80W	202305501	Jun. 27, 2024	Jun. 26, 2025
Field Probe	Narda	EP-601	811ZX01057	Jun. 29, 2024	Jun. 28, 2025
USB Power Sensor	Agilent	U2001A	MY53410013	Feb. 01, 2024	Jan. 31, 2025
USB Power Sensor	Agilent	U2001A	MZ54330012	Feb. 01, 2024	Jan. 31, 2025

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS A EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class A limits dB(μ V)
0.15 -0.5	AMN	Quasi Peak / 9 kHz	79
0.50 - 30			73
0.15 -0.5	AMN	Average / 9 kHz	66
0.50 - 30			60

3.1.2 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS B EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class B limits dB(μ V)
0.15 -0.5	AMN	Quasi Peak / 9 kHz	66 - 56*
0.50 -5			56
5 - 30			60
0.15 -0.5	AMN	Average / 9 kHz	56 - 46*
0.50 -5			46
5 - 30			50

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

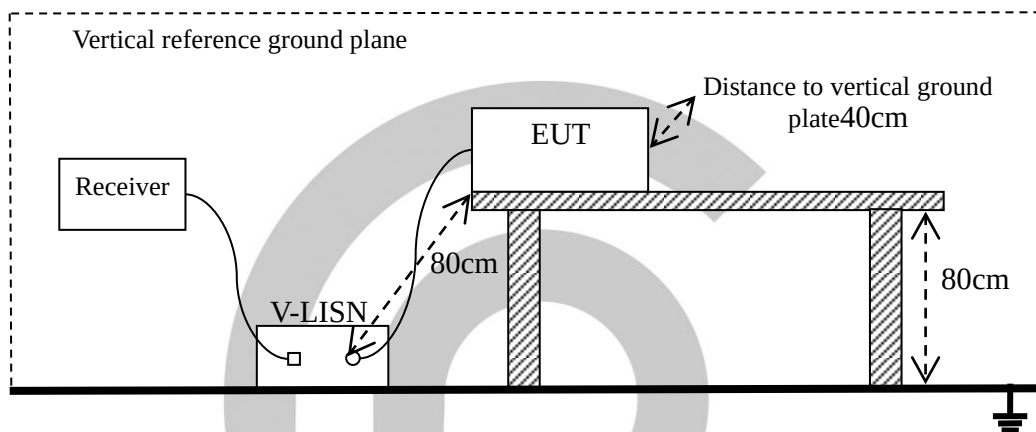
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.3 TEST PROCEDURE

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.4 TEST SETUP



3.1.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.1.6 TEST RESULTS

Temperature:	N/A	Relative Humidity:	N/A
Phase:	N/A	Test Mode:	N/A
Test Voltage:	N/A	Test Date:	N/A

Note: This test isn't applicable because the EUT doesn't have relative function.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF THE RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Distance (m)	Detector type/ bandwidth	Class A	Class B
			dBuV/m	dBuV/m
30 - 230	3	Quasi peak/ 120 kHz	50	40
230 - 1000	3	Quasi peak/ 120 kHz	57	47
1000-3000	3	Peak/1 MHz	76	70
3000-6000	3	Peak/1 MHz	80	74
1000-3000	3	AV/1 MHz	56	50
3000-6000	3	AV/1 MHz	60	54

Notes:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. EUT as the center to the edge of the auxiliary device, the distance from the maximum edge to the center of the antenna is 3 meters.
- c. The height of antenna is varied from 1 meter to 4 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.
- d. 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.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz

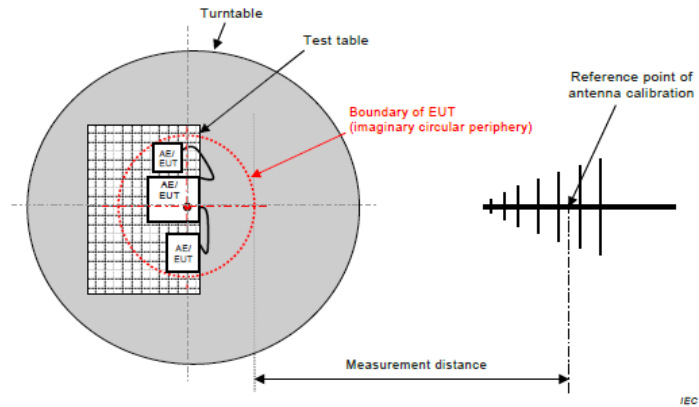


Figure C.1 – Measurement distance

(B) Radiated Emission Test Set-Up Frequency Above 1GHz

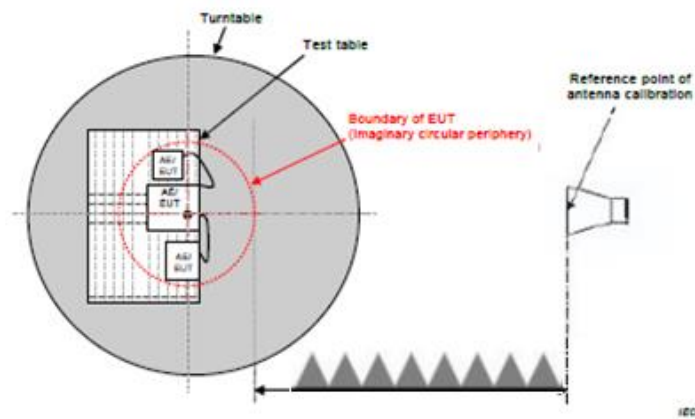


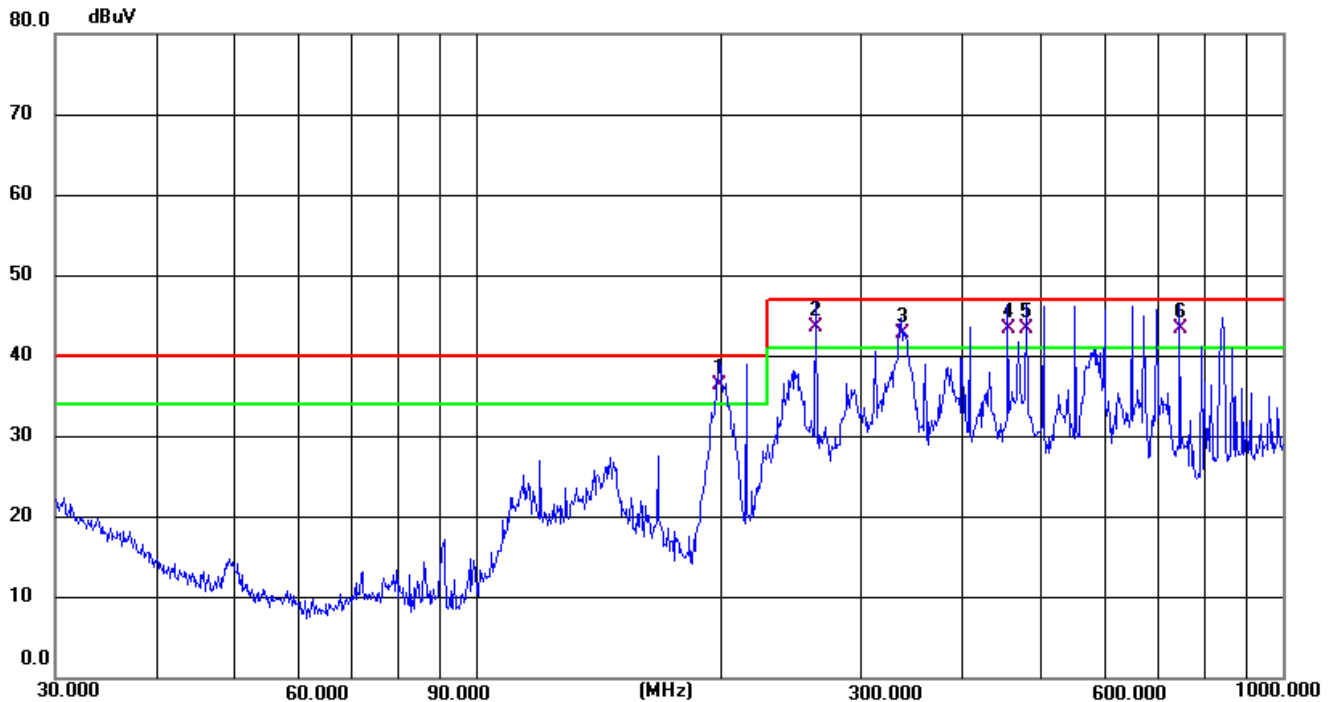
Figure C.1 – Measurement distance

3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.2.6 TEST RESULTS

Temperature:	26.8℃	Relative Humidity:	48.2%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	DC 5V	Test Date:	2024.11.11

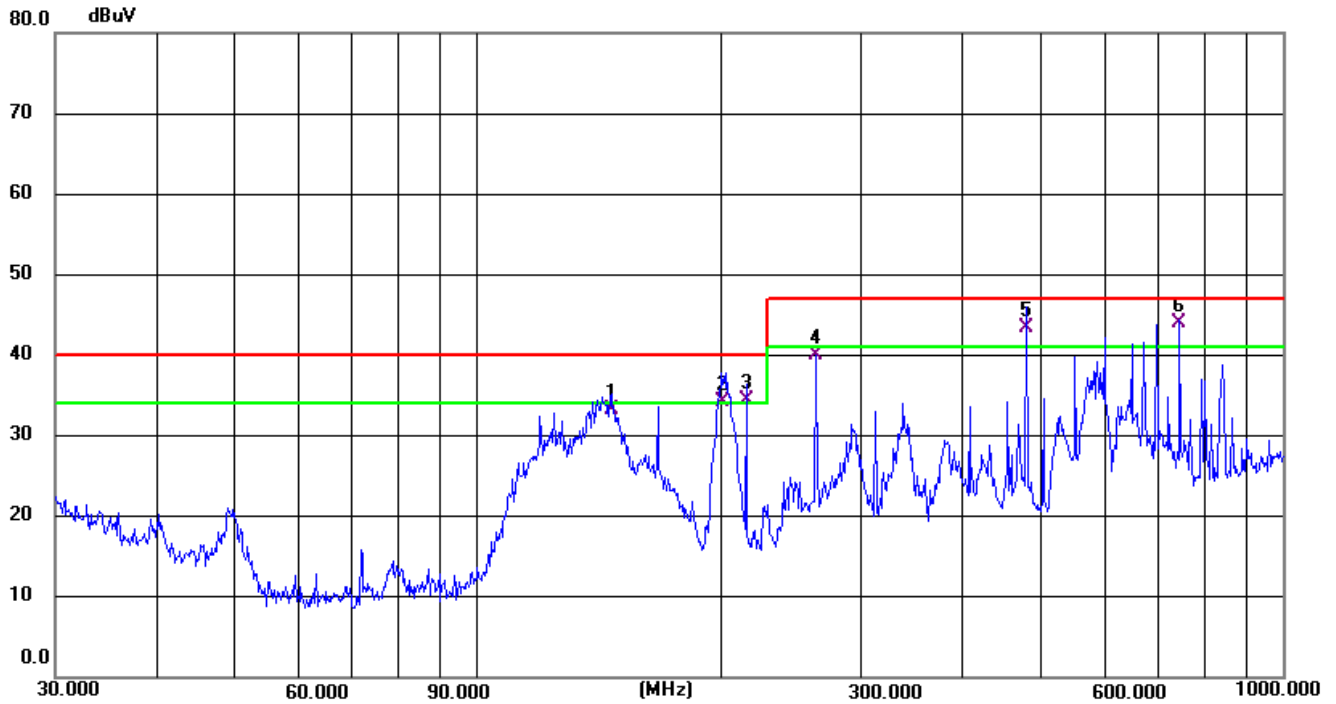


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	199.9855	48.46	-12.07	36.39	40.00	-3.61	QP
2	263.8190	55.62	-11.93	43.69	47.00	-3.31	QP
3	336.0351	53.47	-10.66	42.81	47.00	-4.19	QP
4	455.9058	51.74	-8.29	43.45	47.00	-3.55	QP
5	480.5276	51.36	-7.88	43.48	47.00	-3.52	QP
6	744.8660	47.69	-4.29	43.40	47.00	-3.60	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = Cable Loss + Antenna Factor - Amplifier Gain

Temperature:	26.8°C	Relative Humidity:	48.2%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	DC 5V	Test Date:	2024.11.11

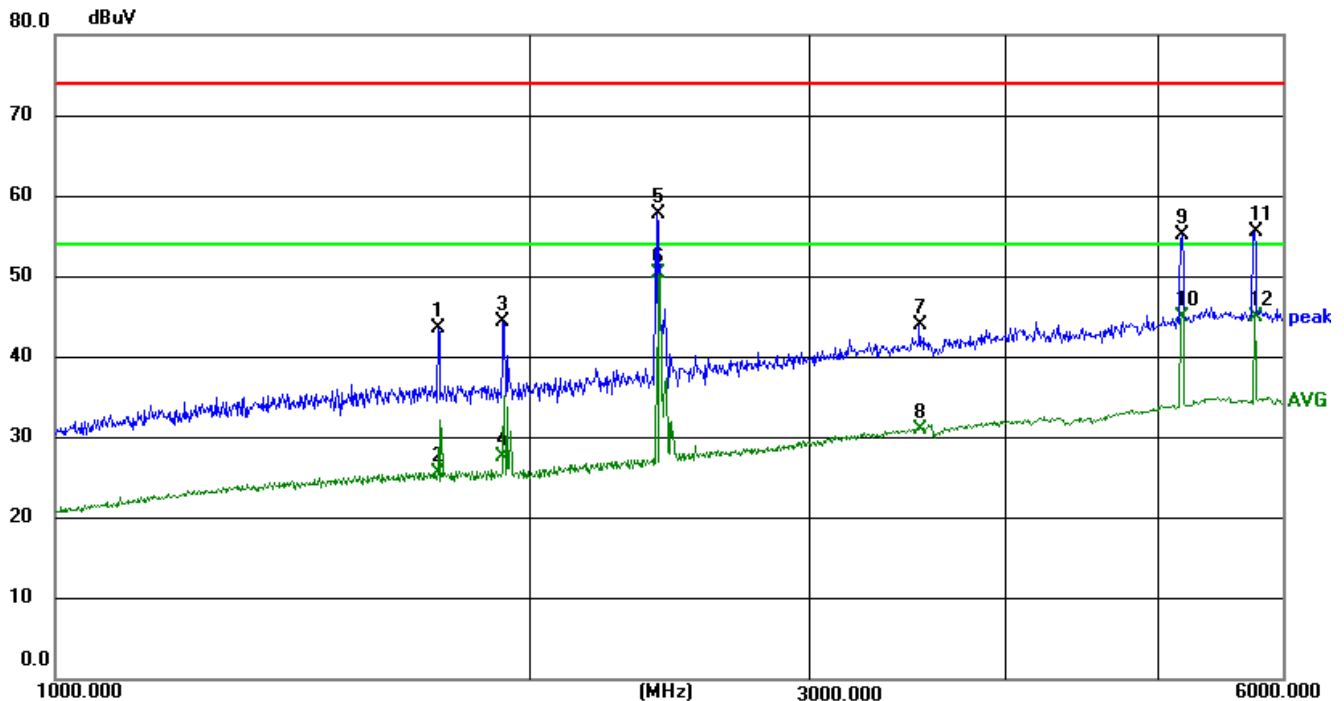


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	146.8877	46.68	-13.46	33.22	40.00	-6.78	QP
2	201.4780	46.77	-12.60	34.17	40.00	-5.83	QP
3	216.0240	48.97	-14.63	34.34	40.00	-5.66	QP
4	263.8190	51.99	-11.93	40.06	47.00	-6.94	QP
5	480.0026	51.27	-7.89	43.38	47.00	-3.62	QP
6	744.0061	48.31	-4.31	44.00	47.00	-3.00	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = Cable Loss + Antenna Factor - Amplifier Gain

Temperature:	26°C	Relative Humidity:	54%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 230V/50Hz	Test Date:	2024.11.11

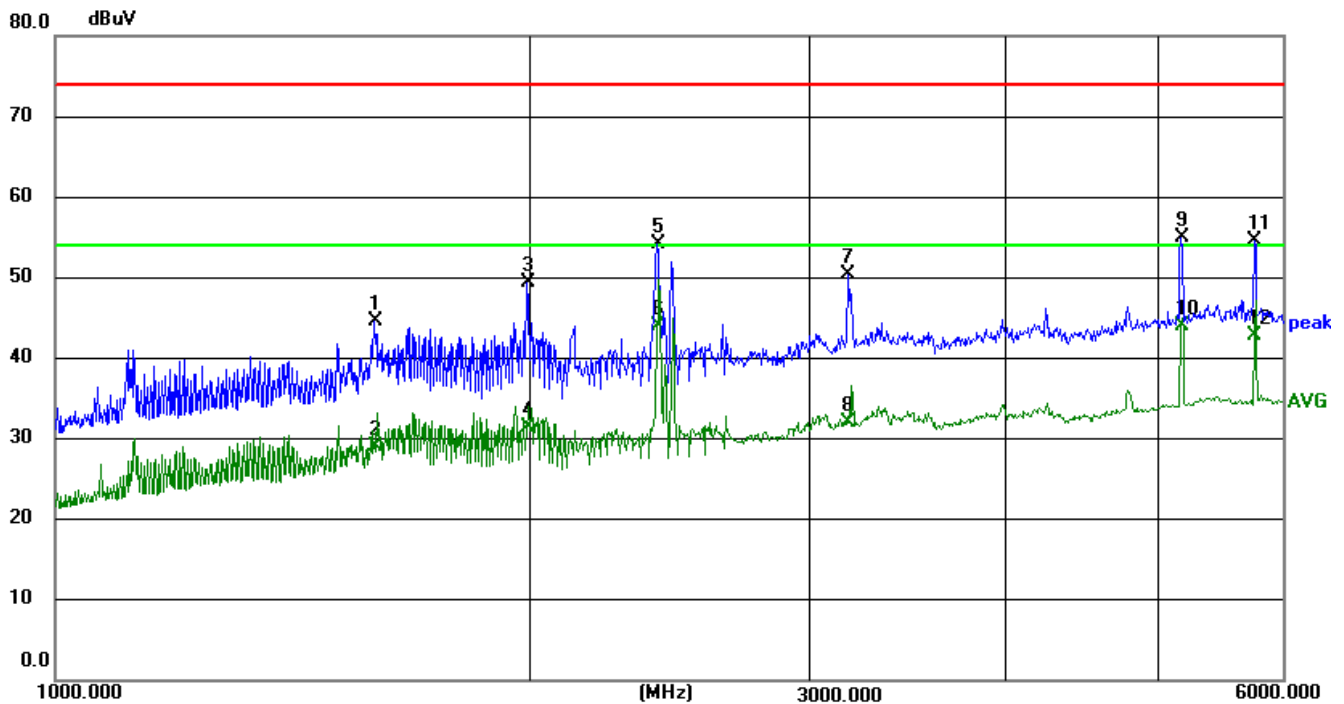


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	1748.973	60.36	-16.75	43.61	74.00	-30.39	peak
2	1748.973	42.41	-16.75	25.66	54.00	-28.34	AVG
3	1923.203	60.68	-16.38	44.30	74.00	-29.70	peak
4	1923.203	44.08	-16.38	27.70	54.00	-26.30	AVG
5	2405.992	71.88	-14.04	57.84	74.00	-16.16	peak
6	2405.992	64.49	-14.04	50.45	54.00	-3.55	AVG
7	3530.356	54.00	-10.03	43.97	74.00	-30.03	peak
8	3530.356	41.04	-10.03	31.01	54.00	-22.99	AVG
9	5180.156	60.94	-5.76	55.18	74.00	-18.82	peak
10	5180.156	50.73	-5.76	44.97	54.00	-9.03	AVG
11	5757.763	60.16	-4.64	55.52	74.00	-18.48	peak
12	5757.763	49.69	-4.64	45.05	54.00	-8.95	AVG

Remark:

1. All readings are Quasi-Peak
2. Margin = Level (Level=Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	54%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 230V/50Hz	Test Date:	2024.11.11



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	1593.380	61.61	-17.08	44.53	74.00	-29.47	peak
2	1593.380	46.12	-17.08	29.04	54.00	-24.96	AVG
3	1989.803	65.70	-16.24	49.46	74.00	-24.54	peak
4	1989.803	47.60	-16.24	31.36	54.00	-22.64	AVG
5	2405.992	68.17	-14.04	54.13	74.00	-19.87	peak
6	2405.992	57.95	-14.04	43.91	54.00	-10.09	AVG
7	3181.894	61.50	-11.20	50.30	74.00	-23.70	peak
8	3181.894	43.16	-11.20	31.96	54.00	-22.04	AVG
9	5170.883	60.81	-5.80	55.01	74.00	-18.99	peak
10	5170.883	49.83	-5.80	44.03	54.00	-9.97	AVG
11	5765.000	59.16	-4.64	54.52	74.00	-19.48	peak
12	5765.000	47.50	-4.64	42.86	54.00	-11.14	AVG

Remark:

1. All readings are Quasi-Peak
2. Margin = Level (Level=Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain



4. EMC IMMUNITY TEST

4.1 STANDARD COMPLIANCE/SERVIRITY LEVEL/CRITERIA

Tests Standard No.	TEST SPECIFICATION	Test Mode Test Ports	Perform. Criteria
1. ESD IEC/EN 61000-4-2	8kV air discharge 4kV contact discharge	Direct Mode	B
	4kV HCP discharge 4kV VCP discharge	Indirect Mode	B
2. RS IEC/EN 61000-4-3	80 MHz - 1000 MHz, 1800MHz, 2600MHz, 3500MHz, 50 00MHz, 1000Hz, 80%, AM modulated	Enclosure	A



4.2 GENERAL PERFORMANCE CRITERIA

According to **EN 55035** standard, the general performance criteria as following:

Criterion A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criterion B	During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test. After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criterion C	Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

4.2.1 GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

4.3 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD)

4.3.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance:	B
Discharge Voltage:	Air Discharge : 2kV/4kV/8kV (Direct) Contact Discharge : 2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total 20 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

4.3.2 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manners:

- a. Electrostatic discharges were applied only to those points and surfaces of the EUT that are accessible to users during normal operation
The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.

The time interval between two successive single discharges was at least 1 second.

The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the EUT.

Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.

Air discharges were applied with the round discharge tip of the discharge electrode approaching the EUT as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator was removed from the EUT and re-triggered for a new single discharge. The test was repeated until all discharges were complete.

Vertical Coupling Plane (VCP):

The coupling plane of dimensions 0.5m x 0.5m, is placed parallel to and positioned at a distance 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

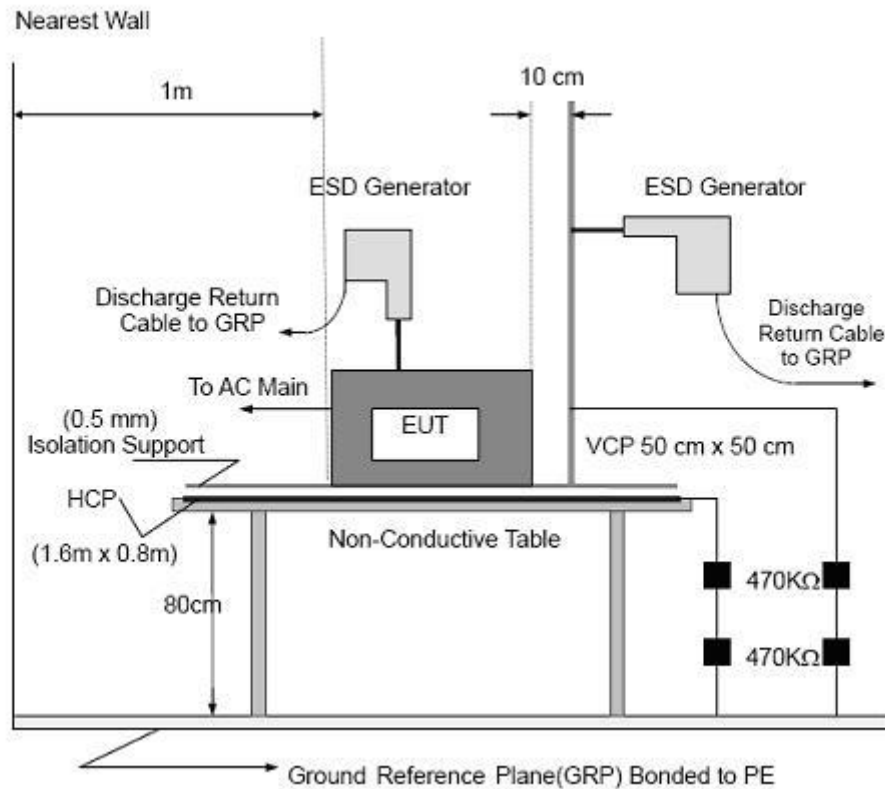
Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

- b. Air discharges at insulation surfaces of the EUT.

It was at least ten single discharges with positive and negative at the same selected point.

4.3.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940kΩ total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 0.8-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1meter thickness. The GRP was consisted of a sheet of aluminum that is at least 0.25mm thick, and extended at least 0.5 meters from the EUT on all sides.

4.3.4 TEST RESULTS

Temperature:	26.7℃	Relative Humidity:	54%
Pressure:	1025hPa	Test Voltage:	DC 5V
Test Mode:	Mode 1	Test Date:	2024.11.12

Discharge Level	Polarity	Test Points	Contact Discharge	Air Discharge	Criterion	Test Result
4	+/-	VCP/HCP	NOTE	N/A	A	PASS
2,4,8	+/-	Red Dot	N/A	NOTE	B	PASS

Note: The EUT function was correct during the test
Red Dot —Air Discharged
Green Dot —Contact Discharged

The Photo for Discharge Points of EUT



4.4 RADIATED, RADIO-FREQUENCY, ELECTROMAGNETIC FIELD IMMUNITY TEST(RS)

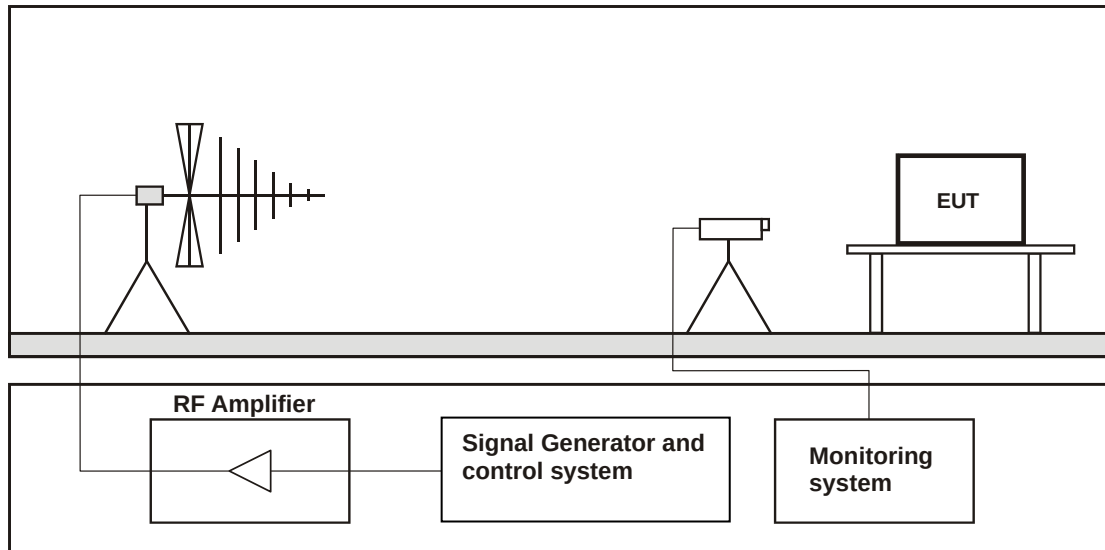
4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A
Test Frequency Range:	80 MHz-1000 MHz,
Additional Comprehensive Functional Test Frequencies:	80 MHz; 120 MHz; 160 MHz; 230 MHz; 434 MHz; 460 MHz; 600 MHz; 863 MHz and 900 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	1.5×10^{-3} decade/s

4.4.2 TEST PROCEDURE

- a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.
- b. The frequency range is swept from 80 MHz; 120 MHz; 160 MHz; 230 MHz; 434 MHz; 460 MHz; 600 MHz; 863 MHz and 900 MHz, with the signal 80% amplitude modulated with a 1kHz sine-wave. The rate of sweep did not exceed 1.5×10^{-3} decade/s, where the frequency range is swept incrementally, the step size was 1% of preceding frequency value.
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

4.4.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

4.4.4 TEST RESULTS

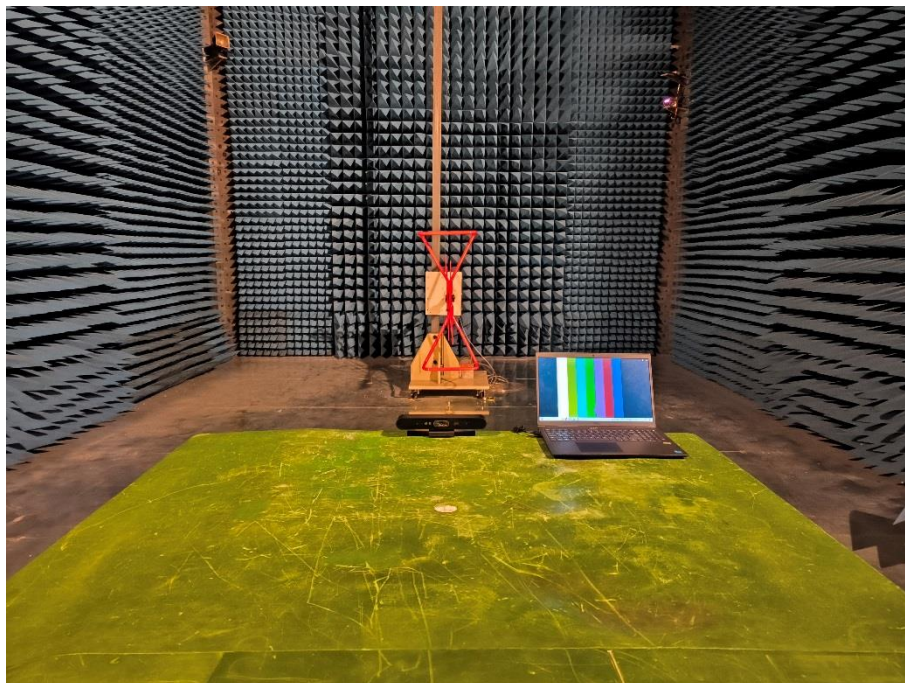
Temperature:	26.4℃	Relative Humidity:	54%
Test Voltage:	DC 5V	Test Date:	2024.11.12
Test Mode:	Mode 1		

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Perform. Criteria	Results	Judgment
80MHz - 1000MHz	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			
1800MHz	H / V	3 V/m (rms) AM Modulated1000Hz , 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			
2600MHz	H / V	3 V/m (rms) AM Modulated1000Hz , 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			
3500MHz	H / V	3 V/m (rms) AM Modulated1000Hz , 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			
5000MHz	H / V	3 V/m (rms) AM Modulated1000Hz , 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			

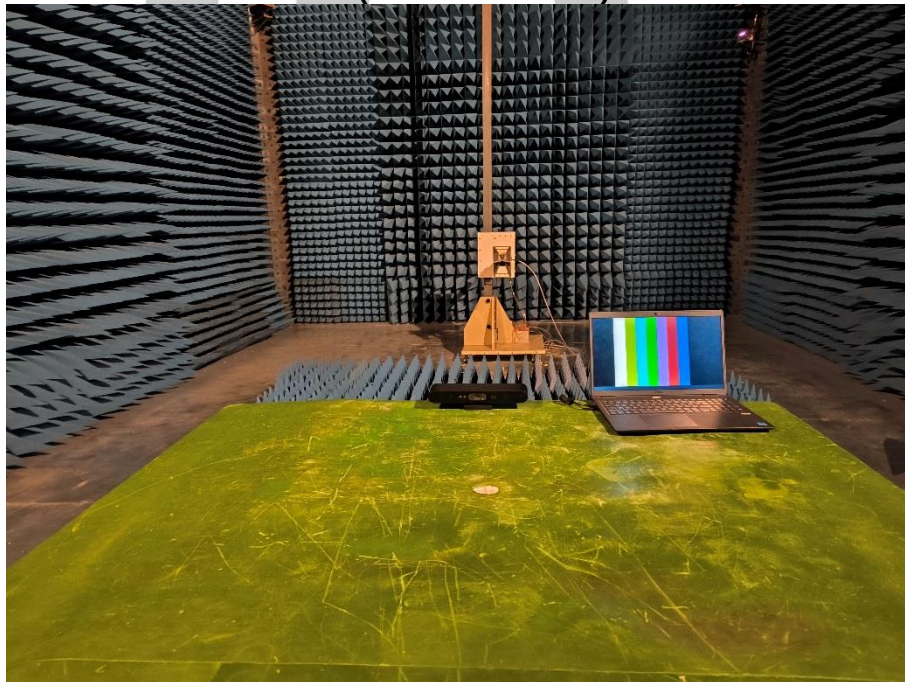
Note: N/A - denotes test is not applicable in this test report.

APPENDIX 1-TEST SETUP

RE (30 - 1000 MHz)



RE (1000 - 6000 MHz)



ESD



APPENDIX 2-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7

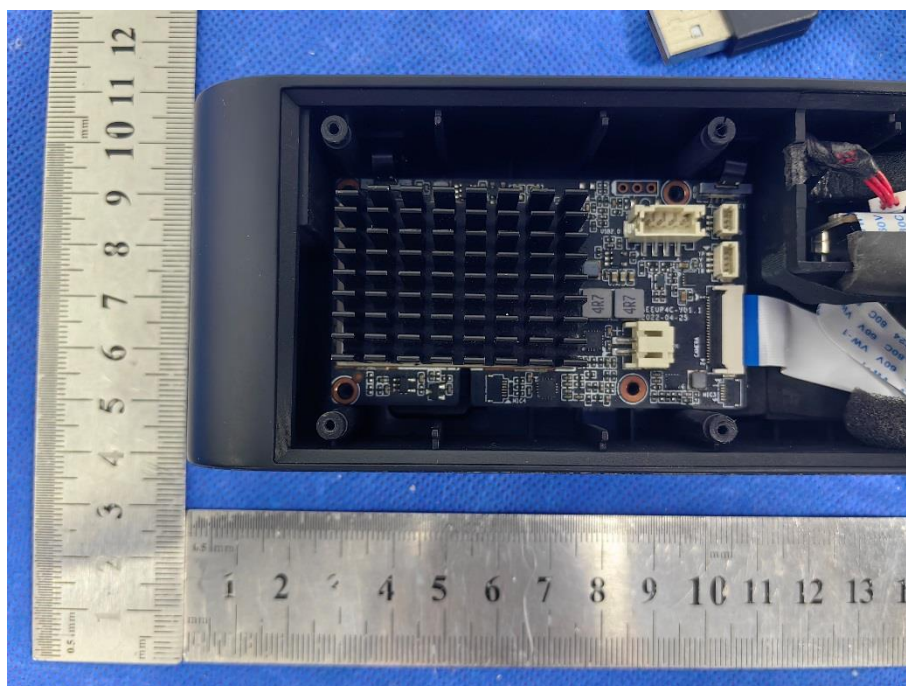
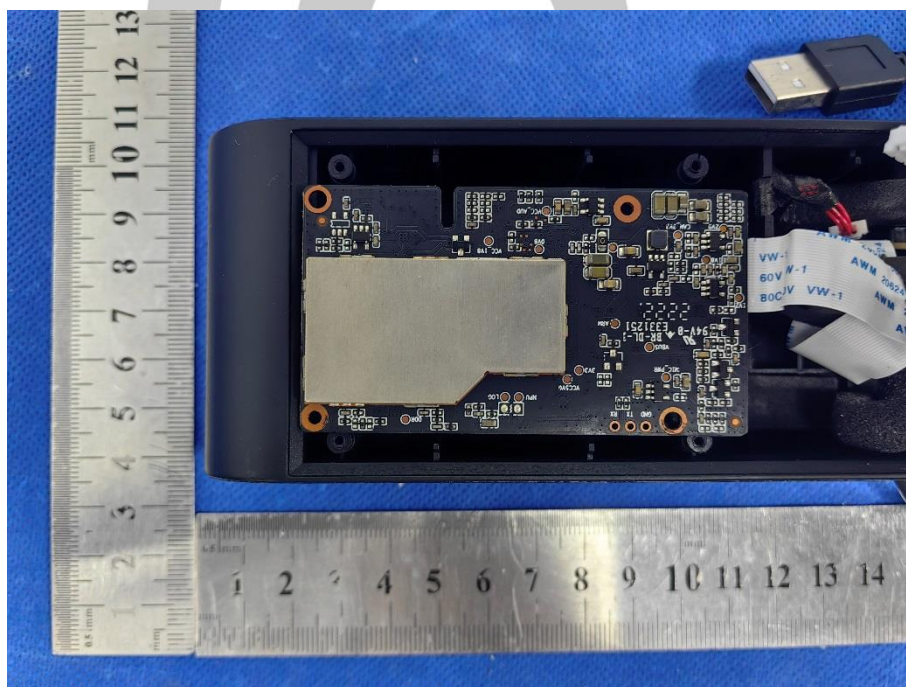


Photo 8



*****END OF THE REPORT*****