

CE EMC Test Report

(Declaration of Conformity)
For
Electromagnetic compatibility
Of

Product : AR Glasses
Trade Mark : XREAL
Model Number : X1111, X1113

Prepared for

Xreal Inc.
440N. Wolfe Rd. Unit E417 Sunnyvale, CA 94085

Prepared by

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TEST RESULT CERTIFICATION

Applicant's Name: Xreal Inc.
Address: 440N. Wolfe Rd. Unit E417 Sunnyvale, CA 94085
Manufacturer's Name.....: Xreal Inc.
Address: 440N. Wolfe Rd. Unit E417 Sunnyvale, CA 94085
Factory's Name: LUXSHARE ELECTRONIC TECHNOLOGY (KUNSHAN) LTD.
Address: No.158 jinchangroad. jinxi town, kunshan city, jiangsu P.R.China
Product description
Product Name.....: AR Glasses
Model Number: X1111, X1113
Standards: EN 55032:2015+A1:2020
 EN 55035:2017+A11:2020

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Test Sample Number: S241210016002
Date of Test:
Date (s) of performance of tests: 12 Dec. 2024 ~ 27 Dec. 2024
Date of Issue: 16 Oct. 2025
Test Result: **Pass**

Note: All test data of this report are based on the original report test data S24121001601001, dated by 2024-12-27.

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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+A1:2020	Conducted Emission On AC And Telecom Port (150kHz to 30MHz)	-----	N/A	
	Disturbance Voltage at the Antenna Terminals (30MHz To 2150MHz)	-----	N/A	
	Wanted signal and disturbance voltage at the RF output terminals (30MHz To 2150MHz)	-----	N/A	
	Radiated Emission (30MHz to 1000MHz)	Class B	PASS	
	Radiated Emission (Above 1GHz)	Class B	PASS	Note (2)
EMC Immunity				
Section	Test Item	Performance Criteria	Judgment	Remark
EN 55035:2017+A11:2020				
EN 61000-4-2	Electrostatic Discharge	B	PASS	
EN 61000-4-3	RF electromagnetic field	A	PASS	Note (3)
EN 61000-4-4	Fast transients	B	N/A	
EN 61000-4-5	Surges	B	N/A	
EN 61000-4-6	Continuous radio frequency disturbances	A	N/A	
EN 61000-4-8	Power Frequency Magnetic Field	A	PASS	
EN 61000-4-11	Volt. Interruption Volt. Dips	B / C / C	N/A	

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report
- (2) 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 1 GHz, 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 the highest frequency or 6 GHz, whichever is less.
- (3) The test site is located in site B.
- (4) For client's request and manual description, the test will not be executed.

1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd.

Add.(Site A) : Room 501, 5/F. of Building C, Room 112~115, 1/F. of Building C, Room 111~116, 1/F. of Building E, 2/F. of Building E, Fenda High-Tech Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Add.(Site B) : Building 30, Furong Third Road, Furong Industrial Zone, Xinqiao Street, Bao'an District

CNAS-Lab. : The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2018 (identical to ISO/IEC 17025:2017)
 The Certificate Registration Number is L5516

ISED-Registration : The Company Number: 9270A.
 CAB identifier: CN0074.

FCC- Accredited : Test Firm Registration Number: 463705
 Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01
 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.
 This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

1.2 MEASUREMENT UNCERTAINTY

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

Test Item	Measurement Frequency Range	K	U(dB)
Conducted Emission	0.009MHz ~ 0.15MHz	2	3.6
Conducted Emission	0.15MHz ~ 30MHz	2	3.1
Telecom Conducted Emission(Cat 3)	0.15MHz ~ 30MHz	2	3.1
Telecom Conducted Emission(Cat 5)	0.15MHz ~ 30MHz	2	3.6
Telecom Conducted Emission(Cat 6)	0.15MHz ~ 30MHz	2	4.2
Radiated Emission	30MHz ~ 1000MHz	2	5.2
Radiated Emission	1000MHz ~ 18000MHz	2	5.1
Power Clamp	30MHz ~ 300MHz	2	2.2

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	AR Glasses	
Model Number	X1111	
Additional Model Number(s)	X1113	
Model Difference	All models are identical except model's name and appearance color.	
Product Description	The EUT is an AR Glasses.	
	Operating frequency:	1.8 GHz (Declaration by Manufacturer)
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as a Multimedia Device. More details of EUT technical specification, please refer to the User's Manual.	
Power Source	DC Voltage	
Power Rating	DC 5V, 1A	

2.2 DESCRIPTION OF TEST MODES

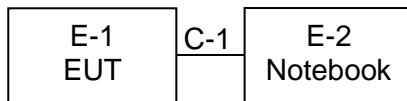
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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

2.3 DESCRIPTION OF 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.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	AR Glasses	XREAL	X1111	N/A	EUT
E-2	Notebook	HUAWEI	KLVD-WFH9	J8GPM21B0 2000149	AE

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	120cm	

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 MEASUREMENT INSTRUMENTS LIST
2.5.1 RADIATED TEST

Item	Name of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	3m Anechoic Chamber	N/A	9*6*6	N/A	Jun. 07, 2024	Jun. 06, 2027	3 years
2	3m Anechoic Chamber	N/A	9*6*6	N/A	Jun. 18, 2024	Jun. 17, 2027	3 years
3	EMI Test Receiver	R&S	ESPI7	101318	Apr. 26, 2024	Apr. 25, 2025	1 year
4	Bilog Antenna	TESEQ	CBL6111D	31216	May 12, 2024	May 11, 2025	1 year
5	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	Apr. 26, 2024	Apr. 25, 2027	3 years
6	Cable	Talent Microwave	A81-NWMS MAM-12M	21120897	Apr. 26, 2024	Apr. 25, 2027	3 years
7	Cable	Talent Microwave	A81-NMNM -10M	24012011	Apr. 26, 2024	Apr. 25, 2027	3 years
8	Cable	Talent Microwave	A81-NMNM -10M	22084896	Apr. 26, 2024	Apr. 25, 2027	3 years
9	Log-Periodic Antenna	SCHWARZECK	VULB 9162	675	May 18, 2024	May 17, 2025	1 year
10	Log-Periodic Antenna	SCHWARZECK	VULB 9162	584	May 25, 2024	May 24, 2025	1 year
11	Log-Periodic Antenna	SCHWARZECK	VULB 9162	586	May 12, 2024	May 11, 2025	1 year
12	Cable	Talent Microwave	A81-NMNM -2M	22084895	Apr. 26, 2024	Apr. 25, 2027	3 years
13	Attenuator	Eastsheep	5W-N-JK-6 G-6DB	N/A	Apr. 25, 2024	Apr. 24, 2025	1 year
14	Attenuator	Eastsheep	5W-N-JK-6 G-6DB	N/A	Apr. 26, 2024	Apr. 25, 2025	1 year
15	Broadband Horn Antenna	EM	EM-AH-101 80	201107140 2	May 12, 2024	May 11, 2027	3 years
16	Broadband Horn Antenna	SCHWARZECK	BBHA 9120 D	2816	May 18, 2024	May 17, 2027	3 years
17	Broadband Horn Antenna	SCHWARZECK	BBHA 9120 D	2817	May 12, 2024	May 11, 2027	3 years
18	Spectrum Analyzer	Keysight	N9020A	MY53280244	Apr. 25, 2024	Apr. 24, 2025	1 year
19	Spectrum Analyzer	Agilent	E4440A	MY41000130	Apr. 26, 2024	Apr. 25, 2025	1 year
20	Pre-Amplifier	EMC	EMC05183 5SE	980246	Apr. 25, 2024	Apr. 24, 2025	1 year
21	PREAMPLIFIER	Agilent	8449B	30008A01520	Apr. 26, 2024	Apr. 25, 2025	1 year
22	Low Noise Amplifier	B&Z	BZ-P540-550 850-452727	16476-11729	Apr. 25, 2024	Apr. 24, 2025	1 year
23	Cable	Keysight	A40-2.92M 2.92M-2M	1808041	Apr. 26, 2024	Apr. 25, 2027	3 years

2.5.2 ESD

Item	Name of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	ESD Generator	EVERFINE	EMS61000-2A	P615727TA 1421113	May 27, 2024	May 26, 2025	1 year
2	Electrostatic Discharge Generator	Lioncel	ESD-203B	ESD203B0 150402	Jun. 03, 2024	Jun. 02, 2025	1 year

2.5.3 RS

Item	Name of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	RF Test System Controller	AR	SC1000	0350156	Apr. 26, 2024	Apr. 25, 2027	3 years
2	3m Anechoic Chamber	N/A	7*5*4	N/A	Jul. 03, 2024	Jul. 02, 2027	3 years
3	Broadband Amplifier	AR	60S1G6	0350414	Apr. 26, 2024	Apr. 25, 2025	1 year
4	Bilog Antenna	ETS	3142E	00214344	Jun. 01, 2024	May 30, 2027	3 years
5	Power Amplifier	rflight	NTWPA-00 810200	17063153	Apr. 26, 2024	Apr. 25, 2025	1 year
6	PSG Analog Signal Generator	Agilent	E8257D	MY5111011 2	May 30, 2024	May 29, 2025	1 year
7	ESG Vector Signal Generator	Agilent	E4438C	MY450933 47	Apr. 26, 2024	Apr. 25, 2025	1 year

2.5.4 PFMF

Item	Name of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Magnetic Field Generator	EVERFINE	EMS61000- 8K	1007001	Apr. 26, 2024	Apr. 25, 2025	1 year
2	Magnetic Field Coil	EVERFINE	N/A	N/A	Feb. 01, 2024	Jan. 31, 2025	1 year

2.6 MEASUREMENT SOFTWARE

RADIATED TEST		
Software name	Manufacturer	Version number
EZ-EMC_RE	Farad	EMEC-3A1+
RF ELECTROMAGNETIC FIELD TEST		
Software name	Manufacturer	Version number
RadiMation	Raditeq	2023.1.3

3. EMC EMISSION TEST

3.1 RADIATED EMISSION MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

Table A.2 – Requirements for radiated emissions at frequencies up to 1 GHz for Class A equipment

Table clause	Frequency range MHz	Measurement		Class A limits dB(μ V/m)	
		Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)	
A2.1	30 – 230	10	Quasi Peak / 120 kHz	40	
	230 – 1 000			47	
A2.2	30 – 230	3		50	
	230 – 1 000			57	

Apply only A2.1 or A2.2 across the entire frequency range.

Table A.4 – Requirements for radiated emissions at frequencies up to 1 GHz for Class B equipment

Table clause	Frequency range MHz	Measurement		Class B limits dB(μ V/m)	
		Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)	
A4.1	30 – 230	10	Quasi Peak / 120 kHz	30	
	230 – 1 000			37	
A4.2	30 – 230	3		40	
	230 – 1 000			47	

Apply only table clause A4.1 or A4.2 across the entire frequency range.

Table A.6 – Requirements for radiated emissions from FM receivers

Table clause	Frequency range MHz	Measurement		Class B limit dB(μ V/m)		
		Distance m	Detector type/ bandwidth	Fundamental	Harmonics	
				OATS/SAC (see Table A.1)	OATS/SAC (see Table A.1)	
A6.1	30 – 230	10	Quasi peak/ 120 kHz	50	42	
	230 – 300				42	
	300 – 1 000				46	
A6.2	30 – 230	3		Quasi peak/ 120 kHz	60	52
	230 – 300					52
	300 – 1 000					56

Apply only A.6.1 or A.6.2 across the entire frequency range.

These relaxed limits apply only to emissions at the fundamental and harmonic frequencies of the local oscillator. Signals at all other frequencies shall be compliant with the limits given in Table A.4.

3.1.2 LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Table A.3 – Requirements for radiated emissions at frequencies above 1 GHz for class A equipment

Replace the existing table by the following new table:

Table clause	Frequency range MHz	Measurement			Class A limits dB(μV/m)
		Facility (see table A.1)	Distance m	Detector type / bandwidth	
A3.1	1 000 to 6 000	FSOATS	3	Average / 1 MHz	60
A3.2	1 000 to 6 000			Peak / 1 MHz	80

Apply A3.1 and A3.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.

Table A.5 – Requirements for radiated emissions at frequencies above 1 GHz for class B equipment

Replace the existing table by the following new table:

Table clause	Frequency range MHz	Measurement			Class B limits dB(μV/m)
		Facility (see table A.1)	Distance m	Detector type / bandwidth	
A5.1	1 000 to 6 000	FSOATS	3	Average / 1 MHz	54
A5.2	1 000 to 6 000			Peak / 1 MHz	74

Apply A5.1 and A5.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.

These requirements are not applicable to the local oscillator and harmonics frequencies of equipment covered by Table A.7.

Note:

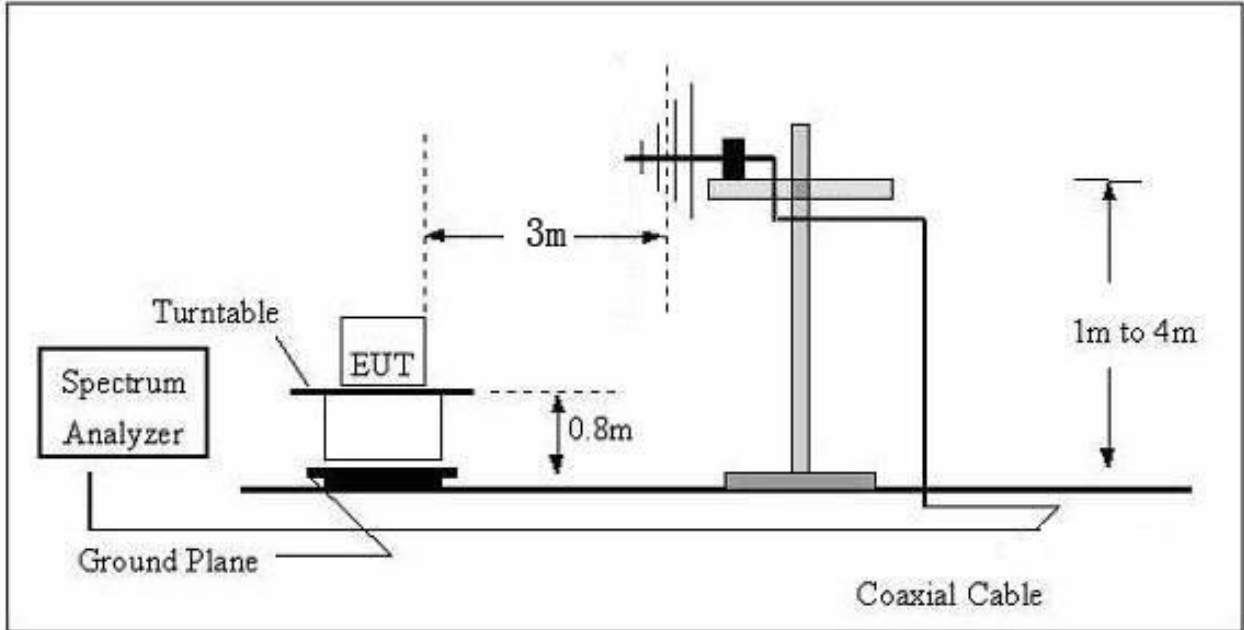
- (1) The limit for radiated test was performed according to as following: CISPR 32.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBμV/m)=20log Emission level (μV/m).

3.1.3 TEST PROCEDURE

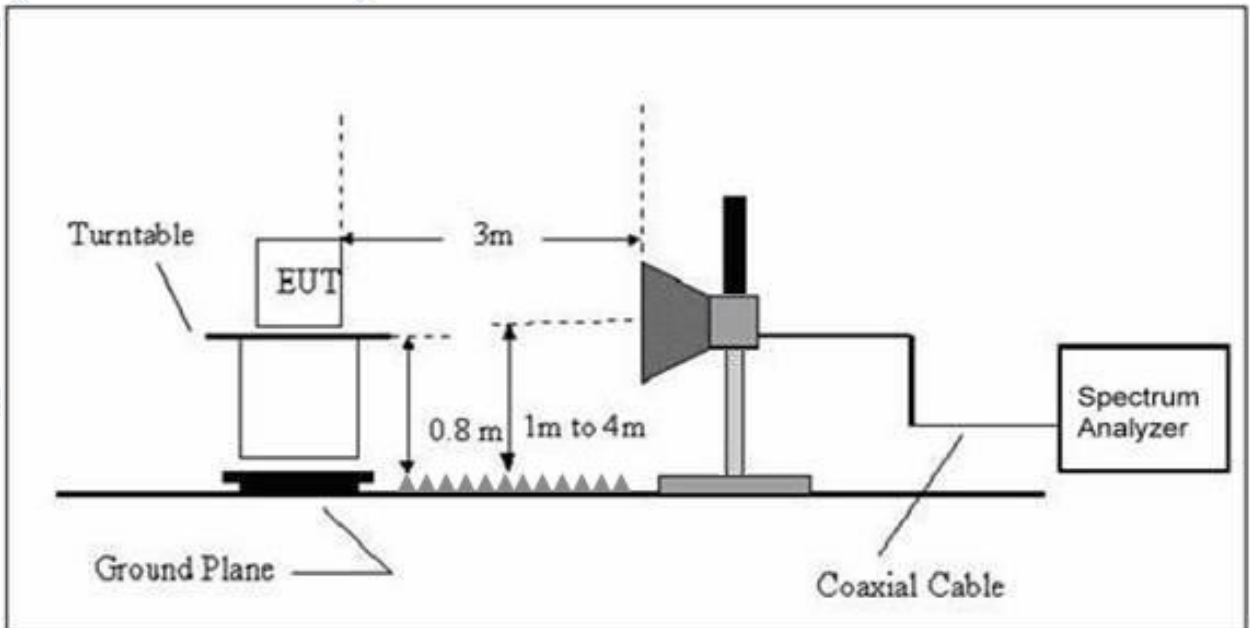
- a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item -EUT Test Photos.

3.1.4 TEST SETUP

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



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

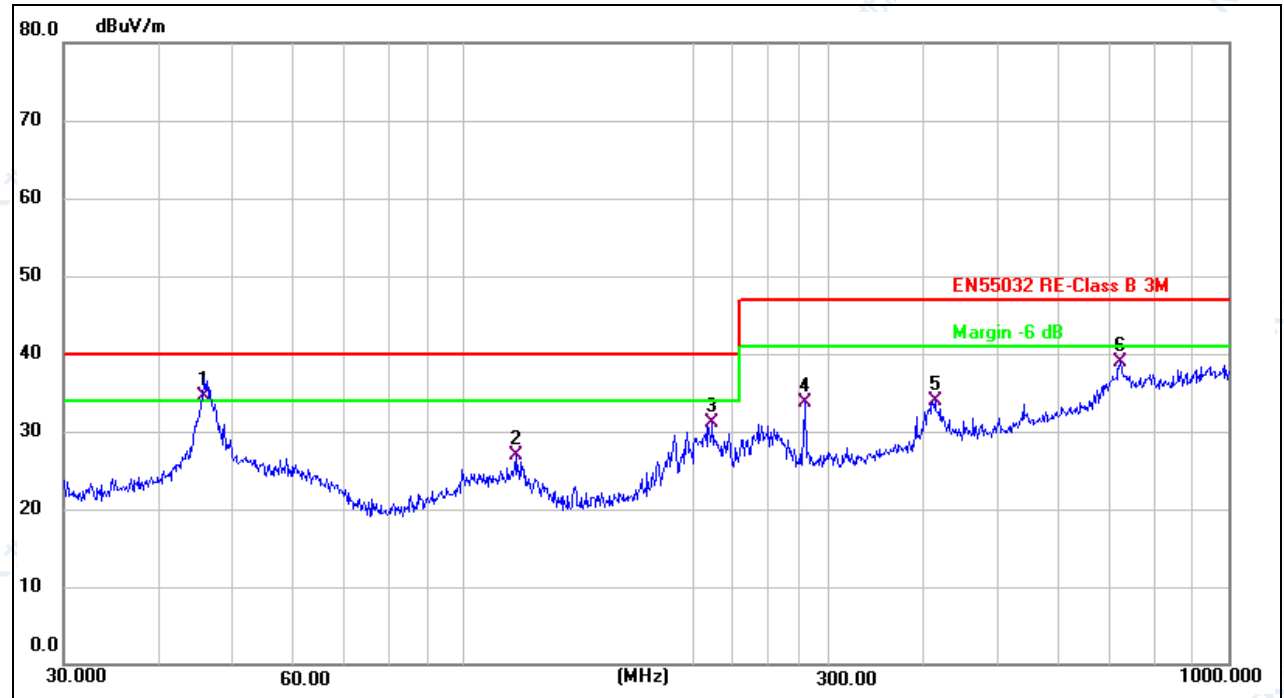


3.1.5 EUT OPERATING CONDITIONS

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

3.1.6 TEST RESULTS (30-1000MHz)

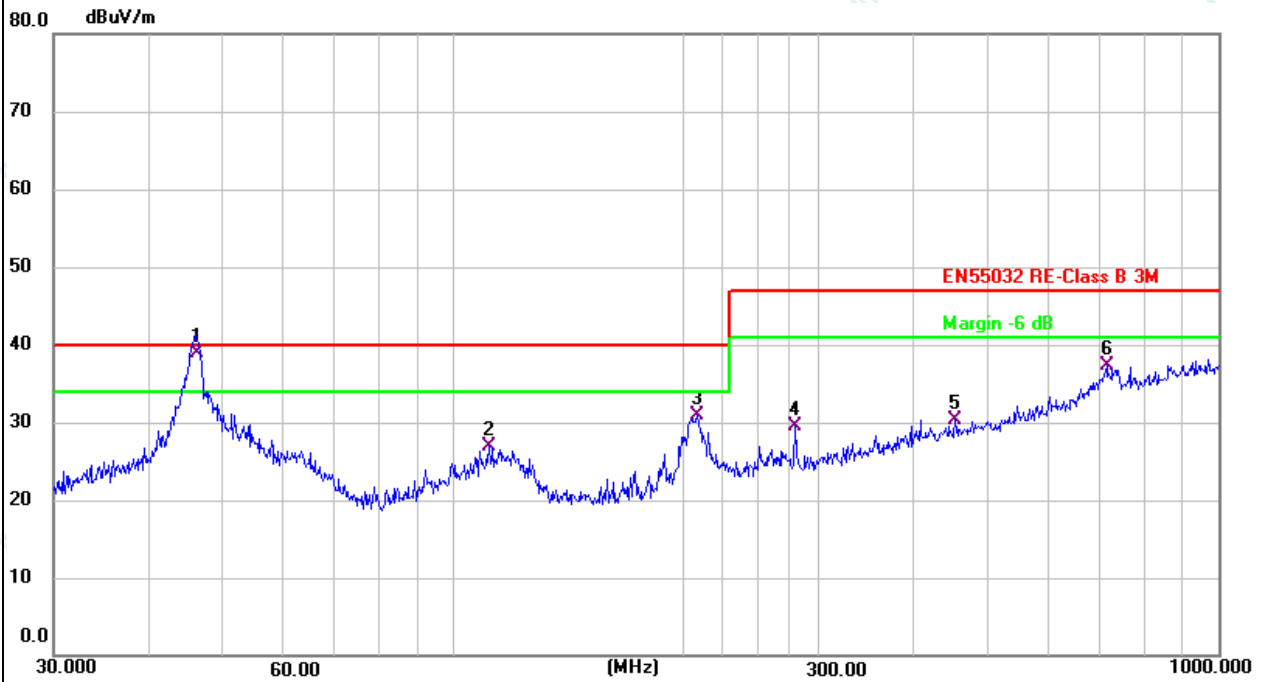
EUT:	AR Glasses	Model Name:	X1111
Temperature:	25.1°C	Relative Humidity:	55%RH
Pressure:	1010hPa	Test Date:	2024-12-23
Test Mode:	Working	Polarization:	Horizontal
Test Power:	DC 5V powered by Notebook		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	45.7410	14.87	19.61	34.48	40.00	-5.52	QP			P	
2	116.9494	10.38	16.55	26.93	40.00	-13.07	QP			P	
3	211.5264	12.83	18.24	31.07	40.00	-8.93	QP			P	
4	280.0237	13.80	20.00	33.80	47.00	-13.20	QP			P	
5	413.2706	10.74	23.17	33.91	47.00	-13.09	QP			P	
6	721.7258	9.98	28.85	38.83	47.00	-8.17	QP			P	

Remark:
Factor = Antenna Factor + Cable Loss.

EUT:	AR Glasses	Model Name:	X1111
Temperature:	25.1°C	Relative Humidity:	55%RH
Pressure:	1010hPa	Test Date:	2024-12-23
Test Mode:	Working	Polarization:	Vertical
Test Power:	DC 5V powered by Notebook		



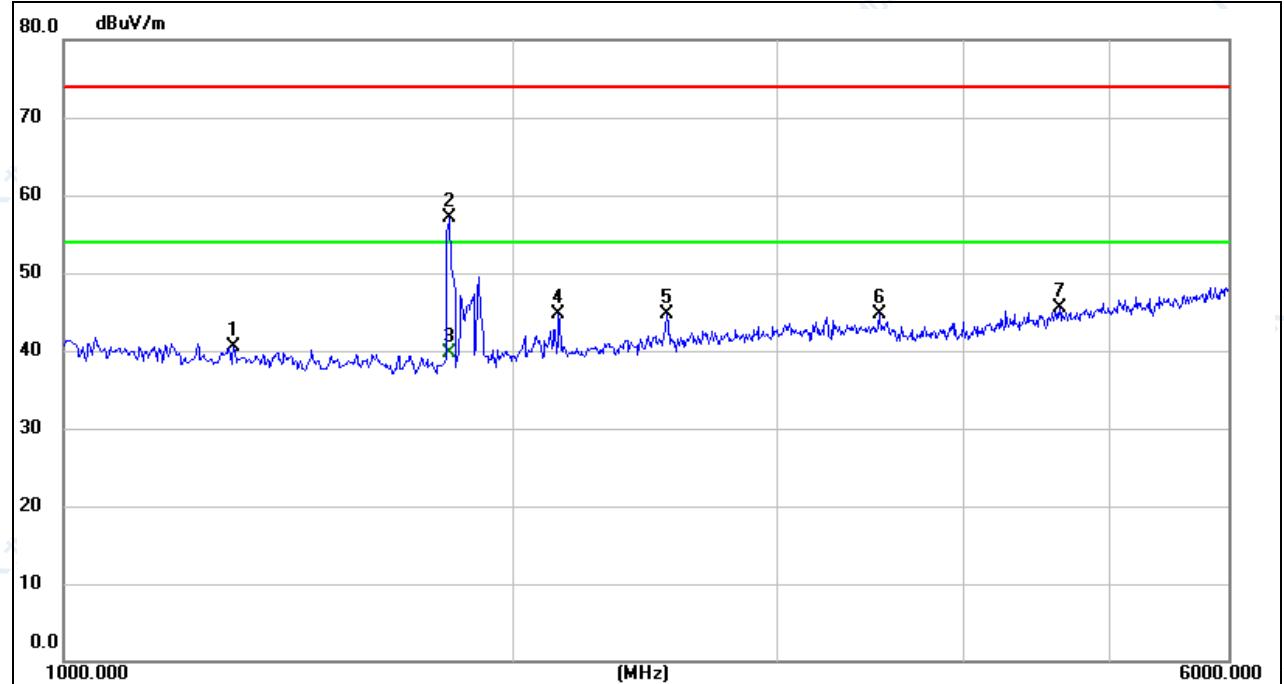
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	46.2014	19.18	19.66	38.84	40.00	-1.16	QP			P	
2	111.3468	9.17	17.64	26.81	40.00	-13.19	QP			P	
3	207.8501	12.80	18.19	30.99	40.00	-9.01	QP			P	
4	280.0237	9.55	20.00	29.55	47.00	-17.45	QP			P	
5	452.7197	6.53	23.84	30.37	47.00	-16.63	QP			P	
6	714.1734	8.63	28.72	37.35	47.00	-9.65	QP			P	

Remark:

Factor = Antenna Factor + Cable Loss.

3.1.7 TEST RESULTS (Above 1000MHz)

EUT:	AR Glasses	Model Name:	X1111
Temperature:	25.3°C	Relative Humidity:	53%RH
Pressure:	1010hPa	Test Date:	2024-12-14
Test Mode:	Working	Polarization:	Horizontal
Test Power:	DC 5V powered by Notebook		

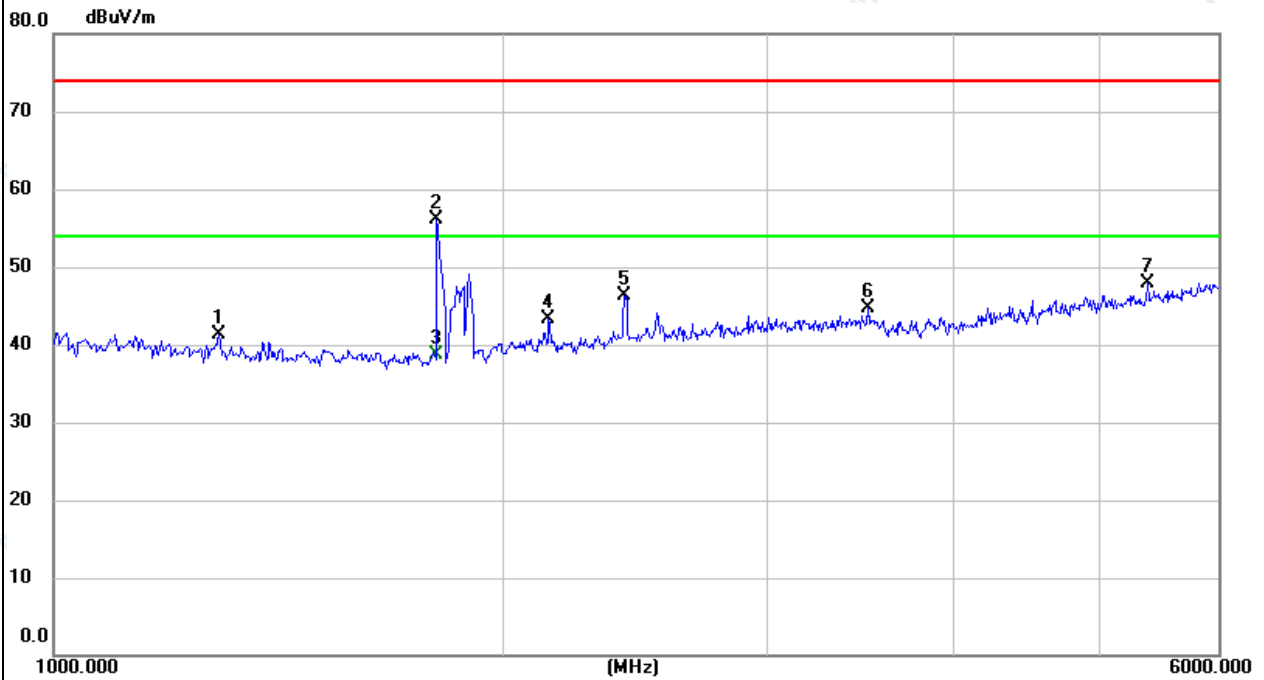


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1300.000	48.52	-8.04	40.48	74.00	-33.52	peak			P	
2	1810.000	64.86	-7.81	57.05	74.00	-16.95	peak			P	
3 *	1810.000	47.44	-7.81	39.63	54.00	-14.37	AVG			P	
4	2145.000	50.48	-5.84	44.64	74.00	-29.36	peak			P	
5	2530.000	49.45	-4.73	44.72	74.00	-29.28	peak			P	
6	3510.000	47.06	-2.26	44.80	74.00	-29.20	peak			P	
7	4630.000	44.64	0.81	45.45	74.00	-28.55	peak			P	

Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

EUT:	AR Glasses	Model Name:	X1111
Temperature:	25.3°C	Relative Humidity:	53%RH
Pressure:	1010hPa	Test Date:	2024-12-14
Test Mode:	Working	Polarization:	Vertical
Test Power:	DC 5V powered by Notebook		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1290.000	49.34	-8.00	41.34	74.00	-32.66	peak			P	
2	1805.000	64.02	-7.84	56.18	74.00	-17.82	peak			P	
3 *	1805.000	46.62	-7.84	38.78	54.00	-15.22	AVG			P	
4	2145.000	49.21	-5.84	43.37	74.00	-30.63	peak			P	
5	2410.000	51.35	-5.01	46.34	74.00	-27.66	peak			P	
6	3505.000	47.08	-2.28	44.80	74.00	-29.20	peak			P	
7	5385.000	45.54	2.38	47.92	74.00	-26.08	peak			P	

Remark:
Factor = Antenna Factor + Cable Loss - Pre-amplifier.

4. EMC IMMUNITY TEST

4.1 STANDARD COMPLIANCE/SEVERITY 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 to 1000 MHz; 1800 MHz; 2600 MHz; 3500 MHz; 5000 MHz; 1 kHz, 80%, AM modulated	Enclosure	A
3. Power Frequency Magnetic Field IEC/EN 61000-4-8	50 Hz	Enclosure	A

4.2 GENERAL PERFORMANCE CRITERIA

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

Criterion A	<p>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.</p> <p>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.</p>
Criterion B	<p>After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.</p> <p>The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.</p>
Criterion C	<p>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.</p> <p>Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.</p>

4.3 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 follows during the testing.

4.4 ESD TESTING

4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330ohm / 150pF
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. 20 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

4.4.2 TEST PROCEDURE

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

a. Indirect application of the discharge:

Vertical Coupling Plane (VCP):

At least 10 single discharges (in the most sensitive polarity) shall be applied to the centre of one vertical edge of the coupling plane. The coupling plane, of dimensions 0,5 m × 0,5 m, is placed parallel to, and positioned at a distance of 0,1 m from, the EUT.

Discharges shall be applied to the coupling plane, with sufficient different positions such that the four faces of the EUT are completely illuminated. One VCP position is considered to illuminate 0,5 m × 0,5 m area of the EUT surface.

Horizontal Coupling Plane (HCP):

Discharge to the HCP shall be made horizontally to the edge of the HCP.

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the centre point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

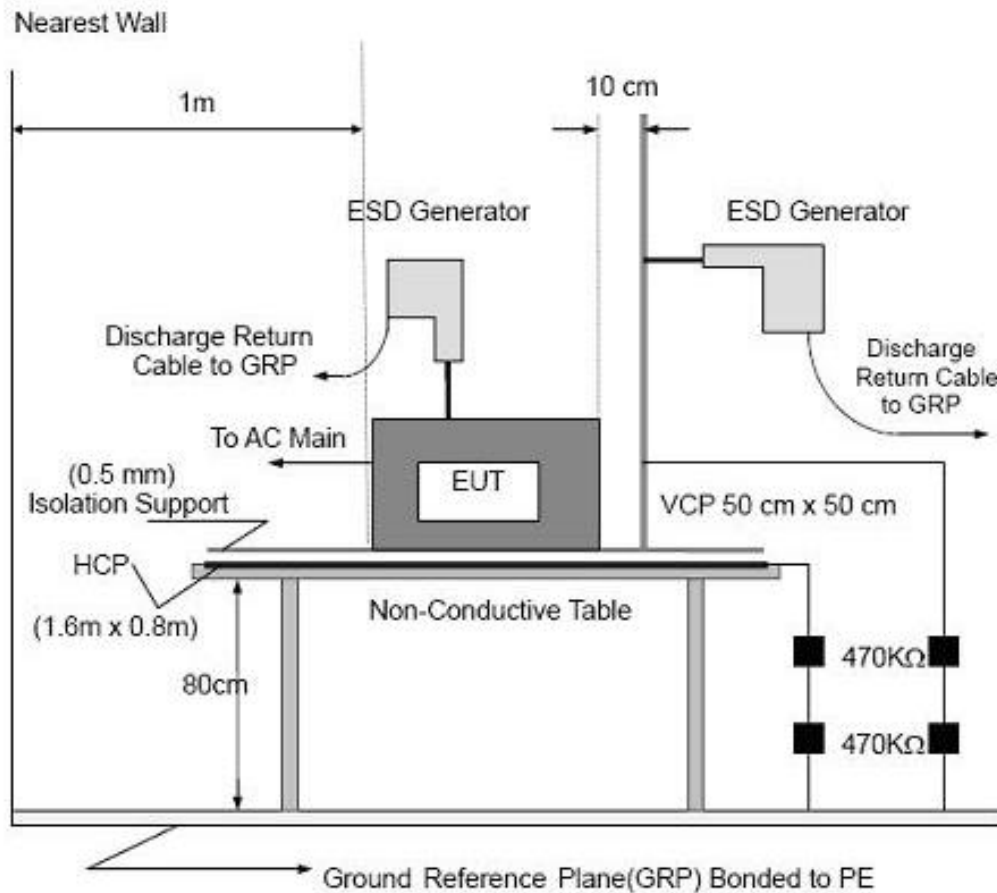
The discharge electrode shall be in contact with the edge of the HCP before the discharge switch is operated

b. Direct application of discharges to the EUT

The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.

For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

4.4.3 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, and 2.5 meters square connected to the protective grounding system. 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 940k 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 1-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 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

4.4.4 TEST RESULTS

EUT:	AR Glasses	Model Name:	X1111
Temperature:	24.5°C	Relative Humidity:	42%RH
Pressure:	1010hPa	Test Date:	2024-12-16
Test Mode:	Working		
Test Power:	DC 5V powered by Notebook		

Mode	Contact Discharge (Indirect)						Criterion	Result	
Test Level(kV)	Test Point	2		4		6			
Test Location			+	-	+	-	+	-	
HCP / VCP	Front	P	P	P	P			B	Complies
	Rear	P	P	P	P				
	Left	P	P	P	P				
	Right	P	P	P	P				

Mode	Air Discharge								Contact Discharge								Criterion	Result
Test Level(kV)	2		4		8		15		2		4		6		8			
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
Gap	P	P	P	P	P	P											B	Complies
Button	P	P	P	P	P	P												
Type-C port	P	P	P	P	P	P												
Metal									P	P	P	P						

Note:

- (1) +/- denotes the Positive/Negative polarity of the output voltage.
- (2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- (3) Criteria A: Normal performance within limits specified by the manufacturer, requestor or purchaser.
- (4) Criteria B: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.
- (5) Criteria C: Temporary loss of function or degradation of performance, the correction of which requires operator intervention.
- (6) Criteria D: Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data.

4.5 RS TESTING

4.5.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A
Frequency Range:	80 MHz to 1000 MHz 1800 MHz 2600 MHz 3500 MHz 5000 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:	3 seconds

4.5.2 TEST PROCEDURE

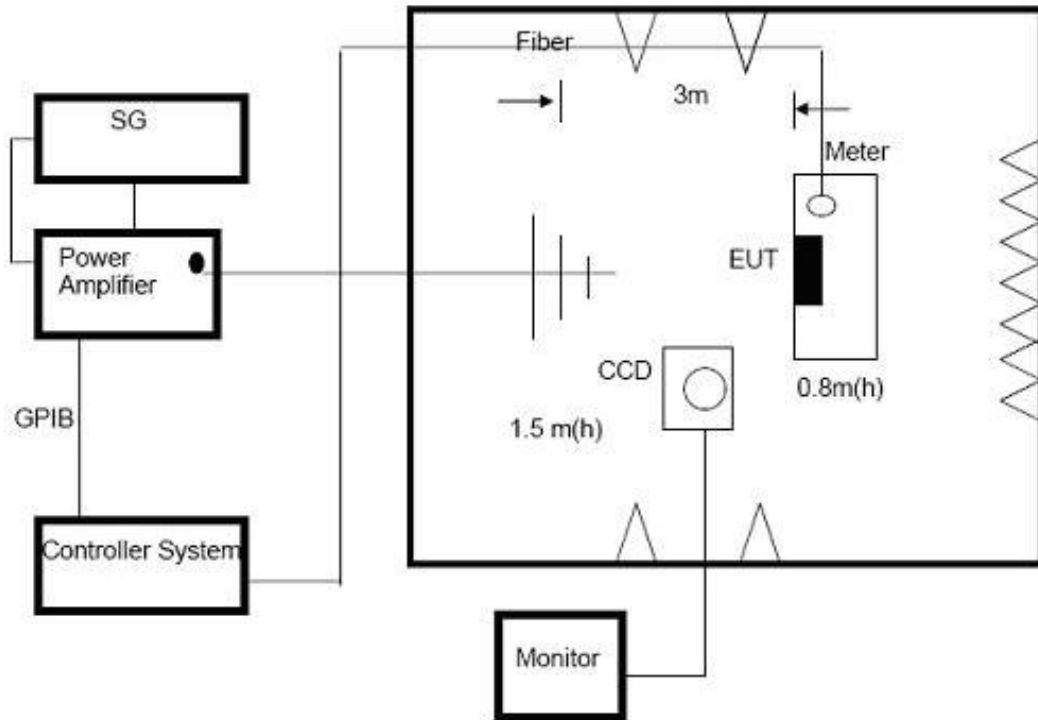
The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- a. The frequency range is swept from 80 MHz to 1000 MHz, 1800 MHz, 2600 MHz, 3500 MHz, 5000 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 fundamental.
- b. Sweep Frequency 900 MHz, with the Duty Cycle: 1/8 and Modulation: Pulse 217 Hz (if applicable)
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- d. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

4.5.3 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.

4.5.4 TEST RESULTS

EUT:	AR Glasses	Model Name:	X1111
Temperature:	24.9°C	Relative Humidity:	49%RH
Pressure:	1010hPa	Test Date:	2024-12-19
Test Mode:	Working		
Test Power:	DC 5V powered by Notebook		

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Criterion	Result
80 - 1000	H / V	3 V/m (r.m.s) AM Modulated 1000Hz, 80%	Front	A	Complies
1800			Rear		
2600			Left		
3500			Right		
5000					

Note:

- (1) Criteria A: There was no change operated with initial operating during the test.
- (2) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- (3) Criteria C: The system shut down during the test.

4.6 POWER FREQUENCY MAGNETIC FIELD TESTING

4.6.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-8
Required Performance:	A
Frequency Range:	50Hz
Field Strength:	1 A/m
Observation Time:	5 minutes
Inductance Coil:	Rectangular type, 1mx1m

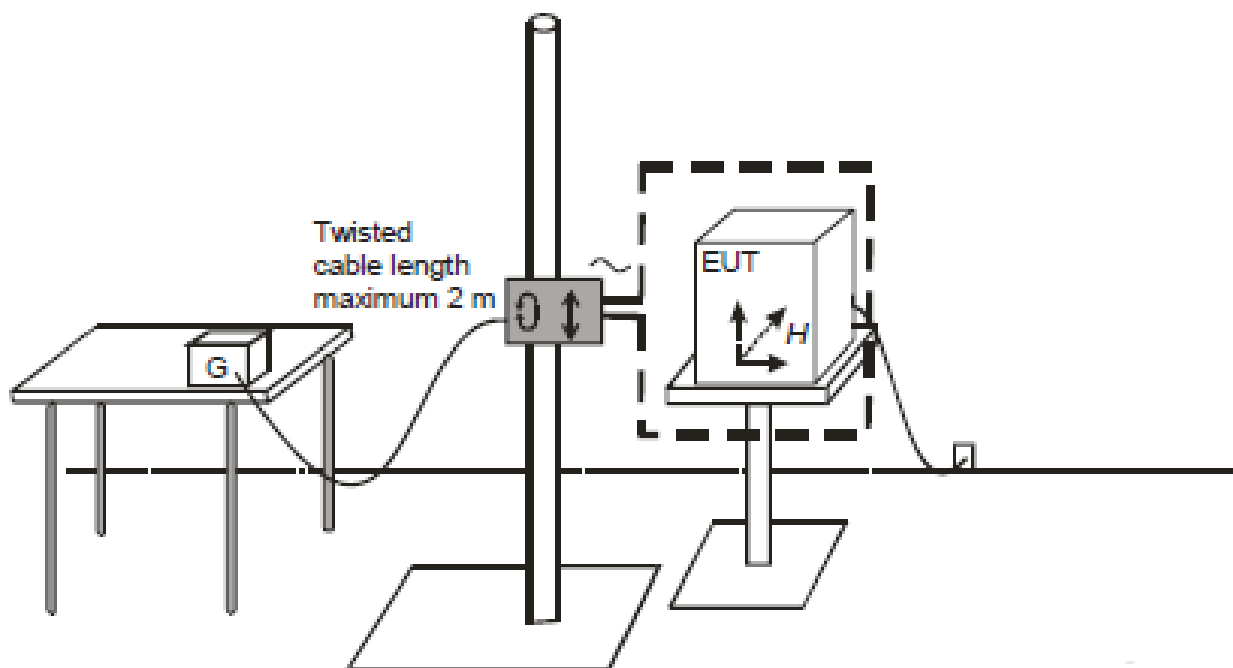
4.6.2 TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min.

The other condition as following manner:

- The equipment cabinets shall be connected to the safety earth directly on the GRP via the earth terminal of the EUT.
- The cables supplied or recommended by the equipment manufacturer shall be used. 1 meter of all cables used shall be exposed to the magnetic field.

4.6.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The equipment shall be subjected to the test magnetic field by using the induction coil of standard dimension (1 m x 1 m). The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

FLOOR-STANDING EQUIPMENT

The equipment shall be subjected to the test magnetic field by using induction coils of suitable dimensions. The test shall be repeated by moving and shifting the induction coils, in order to test the whole volume of the EUT for each orthogonal direction. The test shall be repeated with the coil shifted to different positions along the side of the EUT, in steps corresponding to 50 % of the shortest side of the coil. The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

4.6.4 TEST RESULTS

EUT:	AR Glasses	Model Name:	X1111
Temperature:	23.5°C	Relative Humidity:	40%RH
Pressure:	1010hPa	Test Date:	2024-12-16
Test Mode:	Working		
Test Power:	DC 5V powered by Notebook		

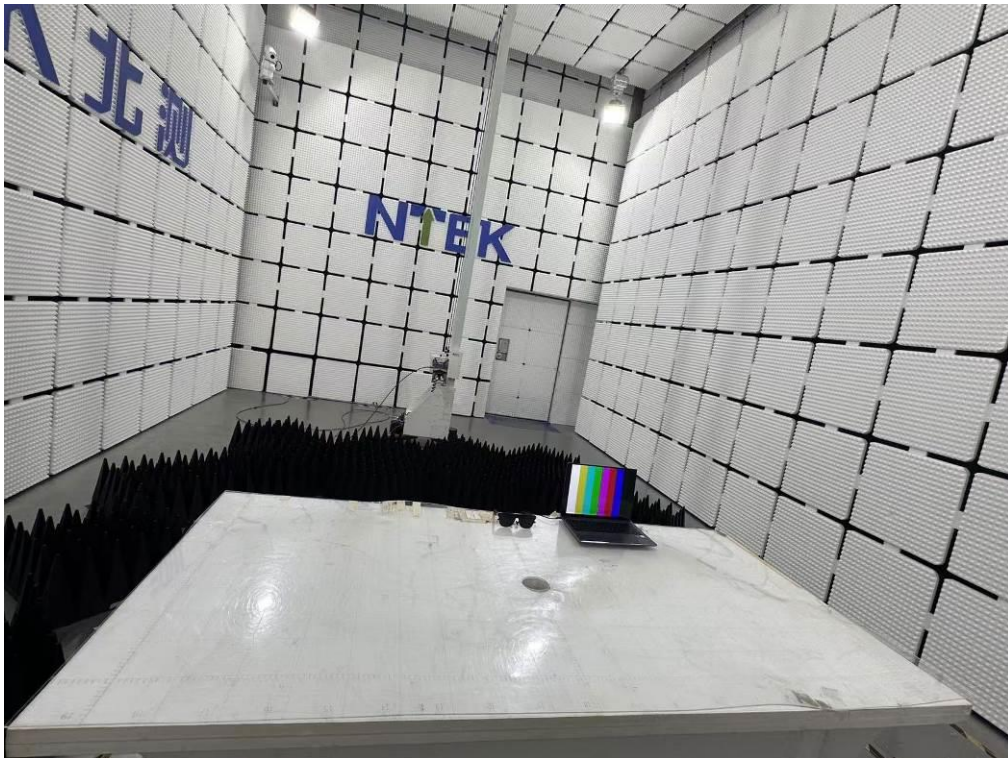
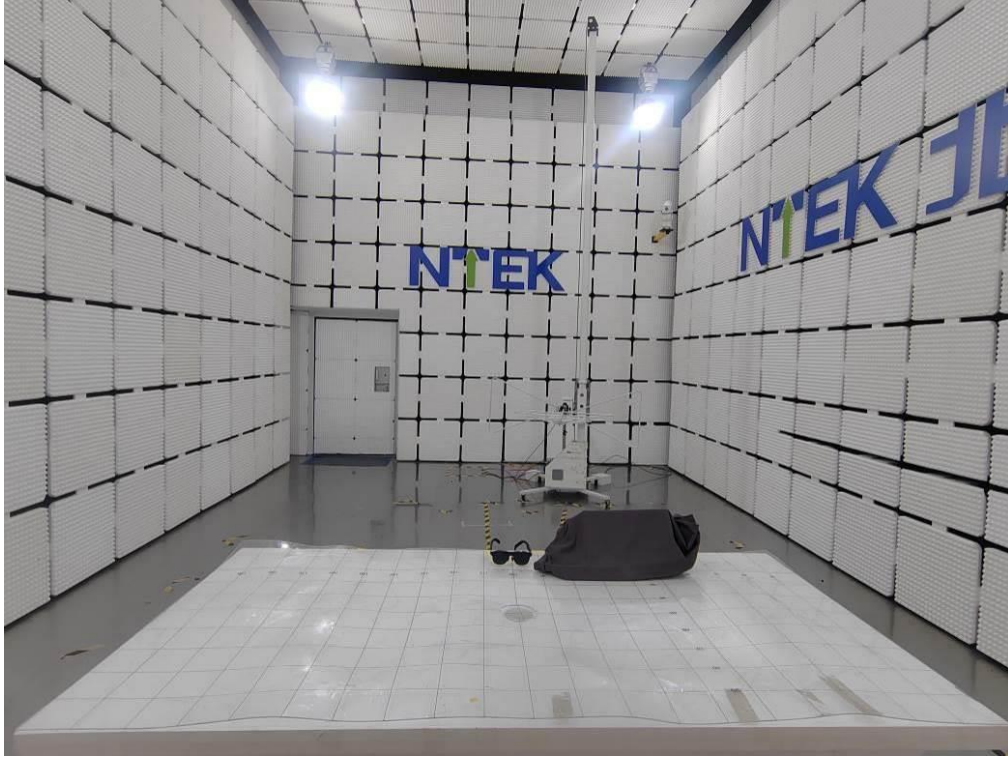
Test Mode	Test Level	Antenna aspect	Duration(s)	Criterion	Result
Enclosure	1 A/m	X	300 s	A	Complies
Enclosure	1 A/m	Y	300 s	A	Complies
Enclosure	1 A/m	Z	300 s	A	Complies

Note:

- (1) Criteria A: There was no change operated with initial operating during the test.
- (2) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- (3) Criteria C: The system shut down during the test.

5. EUT TEST PHOTO

Radiated Measurement Photo



ATTACHMENT PHOTOGRAPHS OF EUT

Photo 1



Photo 2



Photo 3

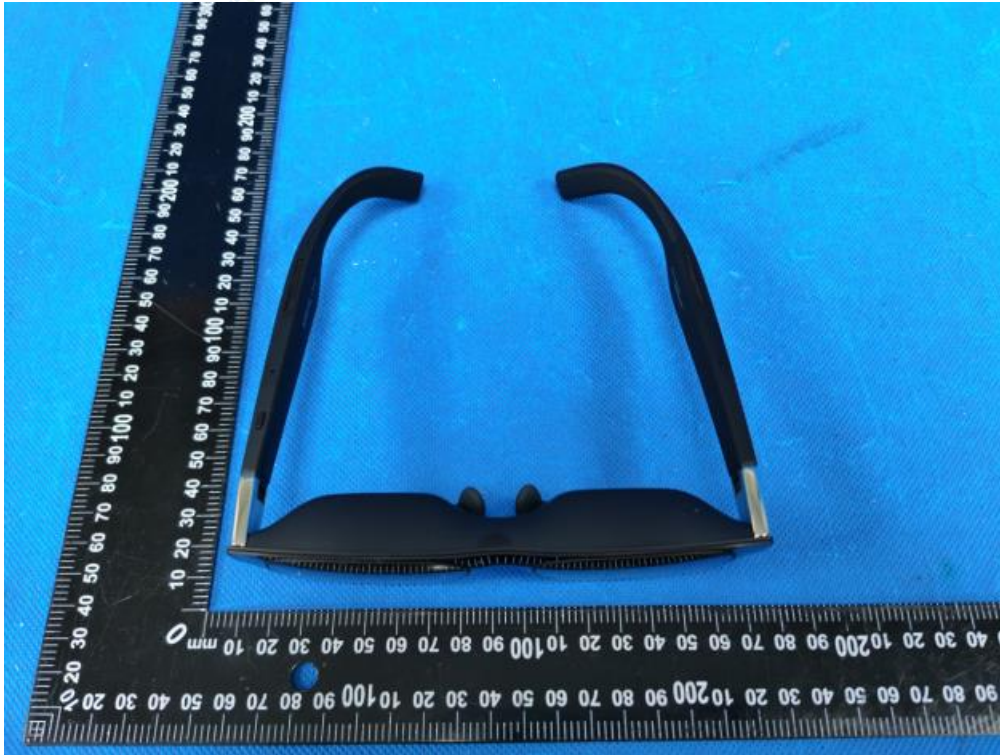


Photo 4



Photo 5



Photo 6

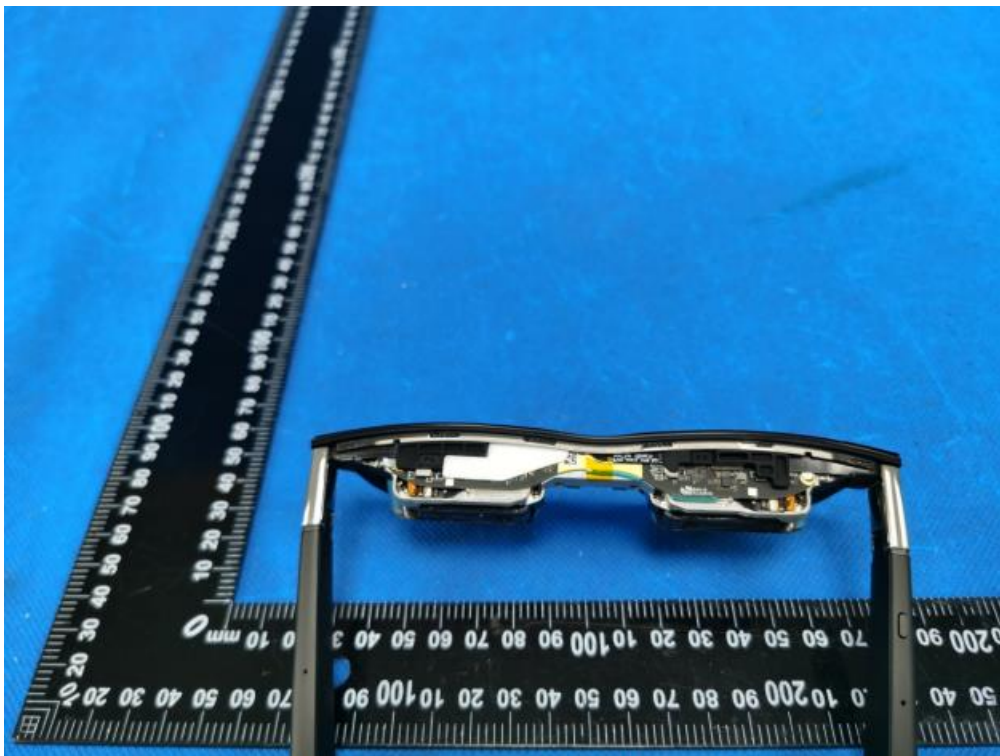


Photo 7



Photo 8

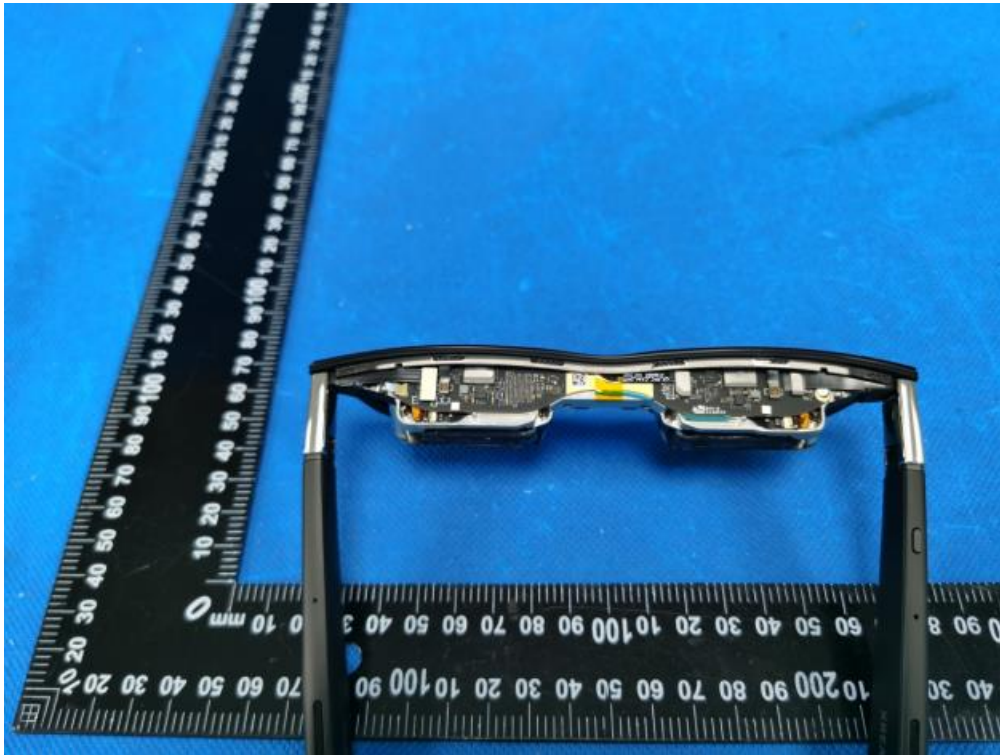


Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15 (New)(2025-10)



Photo 16



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