FCC TEST REPORT

FCC ID: 2AO5O-63526

Sample : IVMC-SM280DL-BLK

Trade Name : N/A

Main Model : 63526

Additional Model : N/A

Report No. : 23042304ER-61

Prepared for

ShenZhen JianYuanDa Mirror Technology Co., Ltd

Room 1501, Tower C, Zhuoyue Baozhong Times Square, Qianhai, Bao'an District, Shen Zhen,510101, China

Prepared by

Global United Technology Services Co. Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

TEST RESULTCERTIFICATION

Applicant	:	ShenZhen JianYuanDa Mirror Technology Co., Ltd
Address	:	Room 1501, Tower C, Zhuoyue Baozhong Times Square, Qianhai, Bao'an District, Shen Zhen,510101, China
Manufacturer	:	Zhong Shan DaPai Mirror Co.,Ltd
Address	:	Zunbao Industrial B Gate, Zheng 'an Road, Long Ping Industrial Zone, Shalang Town, Zhongshan City

Product description

Product	:	IVMC-SM280DL-BLK
Trade Name	:	N/A
Model Name	:	63526
Standards	:	FCC Part 15 Subpart B ANSI C63.4:2014

Date of Test

Date (s) of performance of tests	:	Apr. 24, 2023 ~ Jul. 19, 2023
Date of Issue	:	Jul. 20, 2023
Test Result	:	Pass

Prepared By:		***Date:***	*2023-7-20*
	Project Engineer		
Check By:		***Date:***	*2023-7-20*
	Reviewer		

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

Standard	Test Item	Class	Result
FCC Part 15 Subpart B ANSI C63.4:2014	Conducted Emission	Class B	PASS
	Radiated Emission	Class B	PASS

Note: (1) “N/A” denotes test is not applicable in this test report.
(2) For client’s request and manual description, the test will not be executed.
(3) “--” means “no” in this test report.

1.2 TEST LOCATION

Test Firm : Global United Technology Services Co. Ltd.

Address : No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC—Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co. Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission.

The acceptance letter from the FCC is maintained in files.

● **IC —Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co. Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

● **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co. Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± 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%.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
UNI	ANSI	9kHz ~ 150kHz	2.96	--
		150kHz ~ 30MHz	2.44	--

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
UNI	ANSI	9kHz ~ 30MHz	2.50	--
		30MHz ~ 1000MHz	4.80	--
		1000MHz ~ 6000MHz	4.13	--

1.4 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35 °C
Relative Humidity:	30~60 %
Air Pressure:	950~1050hPa

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

The following information of EUT submitted and identified by applicant:

Product:	IVMC-SM280DL-BLK
Trade Name:	N/A
Main Model:	63526
Additional Model:	N/A
Model Difference:	N/A
FCC ID:	2AO5O-63526
Operation Frequency:	110-205KHz(Only RX)
Number of Channels:	1CH
Modulation Type:	ASK
Antenna Type:	Coil Antenna
Antenna Gain:	0dBi
Battery:	DC 3.7V, 750mAh
Adapter:	N/A
Power Source:	DC 5V from adapter or DC 3.7V from Li-battery

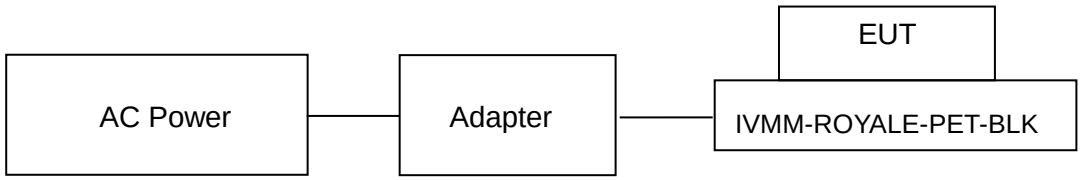
2.2 DESCRIPTION OF TEST MODES

No.	Test mode description	Worst
1	Wireless Charging+Working mode	V
2	USB Charging+Working mode	--
2	Working mode	--

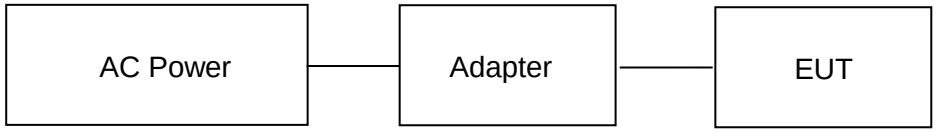
Note:
1. V means worst mode.
2. All modes have been tested and only the worst mode test data recorded in the test report.

2.3 DESCRIPTION OF TEST SETUP

Wireless Charging+Working mode



USB Charging+Working mode



Working mode

Note: The EUT tested system was configured as upper figure,unless otherwise a special operating condition is specified in the following during the testing.

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	Mfr/Brand	Model/Type No.	Note
E-1	IVMC-SM280DL-BLK	N/A	63526	EUT
E-2	Adapter	Xiaomi	--	AE
E-3	IVMM-ROYALE-PET-BLK	N/A	63533	AE

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.
3. IVMM-ROYALE-PET-BLK is Wireless charger with FCC ID: 2AO5O-63533.

2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
Conduction Emissions Measurement					
1	Conducted Emission Test Software	EZ-EMC	Ver.CCS-3A1-CE	N/A	N/A
2	AMN	Schwarzbeck	NNLK8121	8121370	2023.09.22
3	AAN	TESEQ	T8-Cat6	38888	2023.09.22
4	Pulse Limiter	CYBRTEK	EM5010	E115010056	2024.05.30
5	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2023.09.22
Radiated Emissions Measurement					
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2023.09.22
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2024.02.26
4	PREAMP	HP	8449B	3008A00160	2023.09.22
5	PREAMP	HP	8447D	2944A07999	2024.05.30
6	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2023.09.22
7	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2023.09.22
8	Signal Generator	Agilent	E4421B	MY4335105	2023.09.22
9	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2023.09.22
10	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2023.09.22
11	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2024.05.30
12	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2024.05.30
13	RF power divider	Anritsu	K241B	992289	2023.09.22
14	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2023.09.22
15	Active Loop Antenna	Com-Power	AL-130R	10160009	2024.05.30
16	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2023.09.22
17	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2024.05.30
18	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2023.09.22
19	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2023.09.22
20	Signal Generator	Agilent	N5183A	MY47420153	2023.09.22
21	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	2023.09.22
22	Power Meter	KEYSIGHT	N1911A	MY50520168	2023.09.22
23	Frequency Meter	VICTOR	VC2000	997406086	2023.09.22
24	DC Power Source	HYELEC	HY5020E	055161818	2023.09.22

3 CONDUCTED EMISSIONS MEASUREMENT

3.1 TEST LIMIT

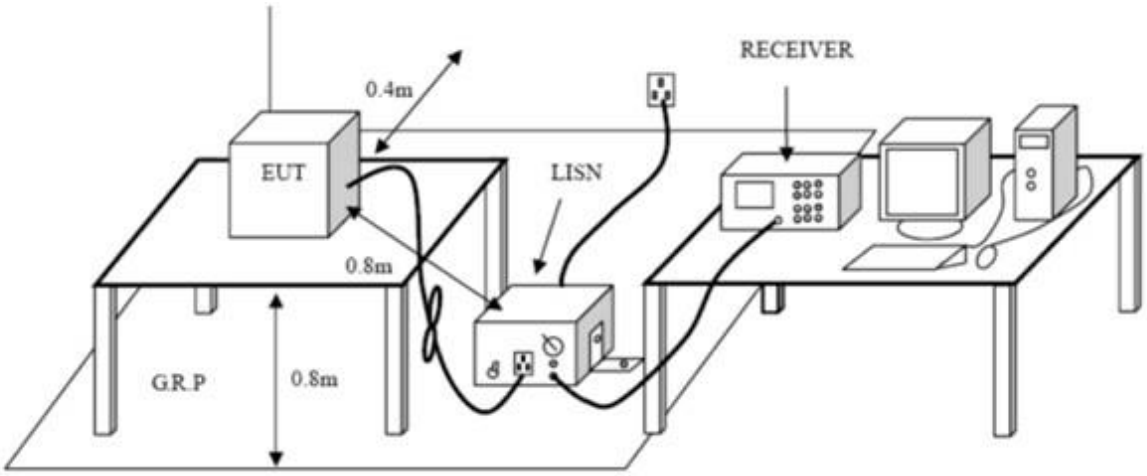
Frequency (MHz)	Maximum RF Line Voltage(dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15~0.50	79	66	66~56*	56~46*
0.50~5.00	73	60	56	46
5.00~30.0	73	60	60	50

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

3.2 TEST SETUP



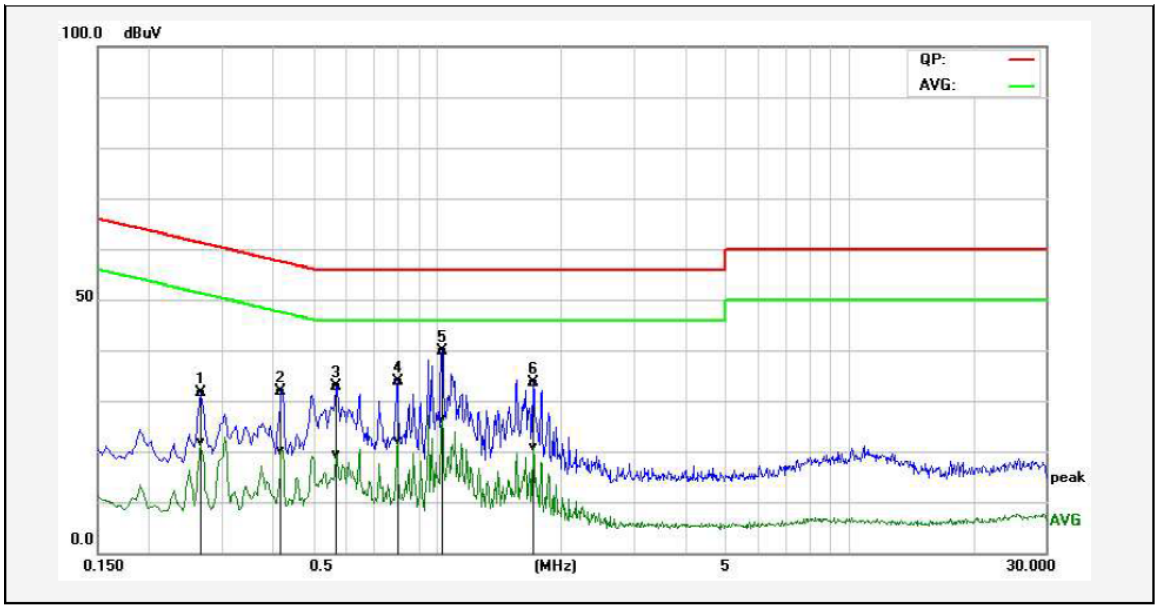
3.3 TEST PROCEDURE

1.The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
2.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.
3.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.
4.For the actual test configuration, please refer to the related Item EUT Test Photos.

3.4 TEST RESULT

PASS

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Jul. 19, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Line
Test Mode:	Mode 1		

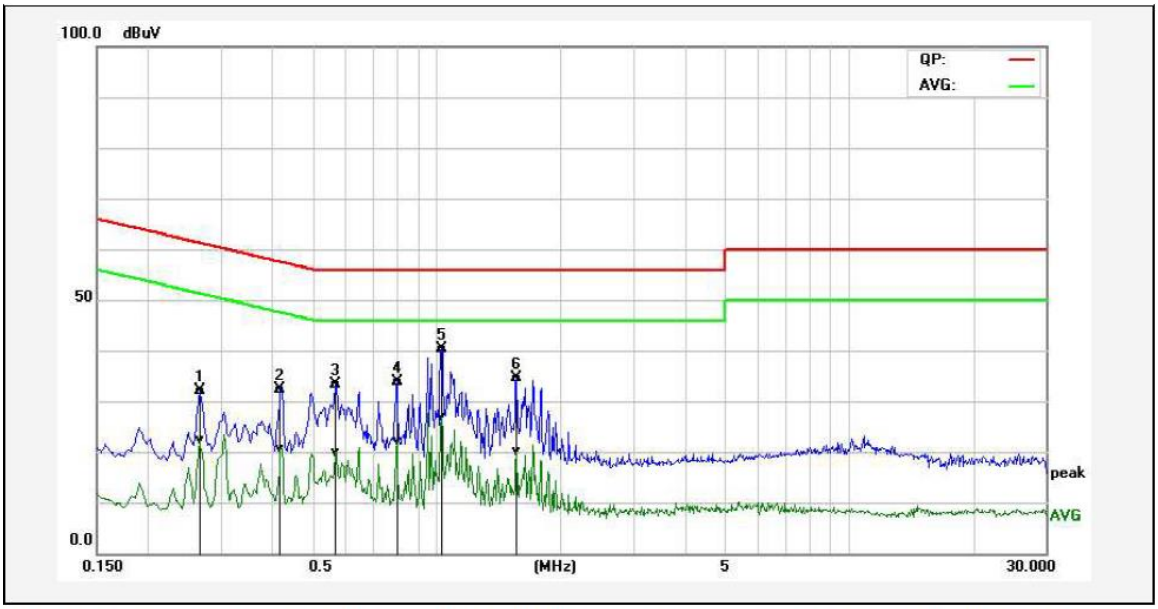


No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1P	0.2660	21.57	11.78	10.11	31.68	21.89	61.24	51.24	-29.56	-29.35	Pass
2P	0.4180	21.66	10.06	10.11	31.77	20.17	57.49	47.49	-25.72	-27.32	Pass
3P	0.5700	22.85	9.21	10.10	32.95	19.31	56.00	46.00	-23.05	-26.69	Pass
4P	0.8020	23.87	12.03	10.11	33.98	22.14	56.00	46.00	-22.02	-23.86	Pass
5*	1.0300	29.78	16.32	10.12	39.90	26.44	56.00	46.00	-16.10	-19.56	Pass
6P	1.7140	23.42	10.81	10.11	33.53	20.92	56.00	46.00	-22.47	-25.08	Pass

Remark: 1.Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

2.All test modes had been pre-tested. The mode 1 is the worst case and recorded in the report.

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Jul. 19, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Neutral
Test Mode:	Mode 1		



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1P	0.2660	22.07	12.28	10.11	32.18	22.39	61.24	51.24	-29.06	-28.85	Pass
2P	0.4180	22.16	10.56	10.11	32.27	20.67	57.49	47.49	-25.22	-26.82	Pass
3P	0.5700	23.35	9.71	10.10	33.45	19.81	56.00	46.00	-22.55	-26.19	Pass
4P	0.8020	23.87	12.03	10.11	33.98	22.14	56.00	46.00	-22.02	-23.86	Pass
5*	1.0300	30.28	16.82	10.12	40.40	26.94	56.00	46.00	-15.60	-19.06	Pass
6P	1.5620	24.53	10.03	10.12	34.65	20.15	56.00	46.00	-21.35	-25.85	Pass

Remark: 1.Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

2.All test modes had been pre-tested. The mode 1 is the worst case and recorded in the report.

4 RADIATED EMISSION MEASUREMENT

4.1TEST LIMIT

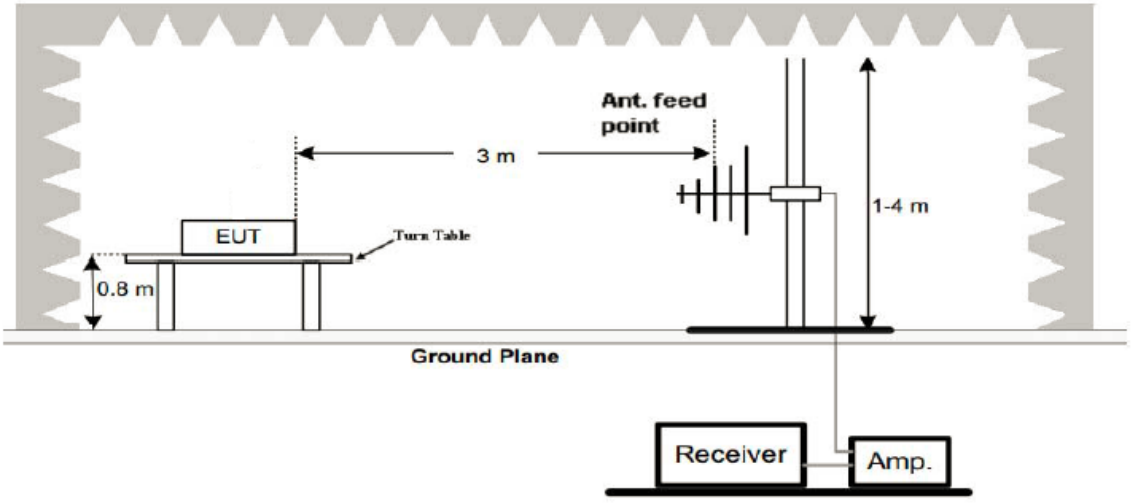
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength ofradiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the followingvalues：

Frequency (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30-88	39.0	40.0
88-216	43.5	43.5
216-960	46.5	46.0
Above 960	49.5	54.0

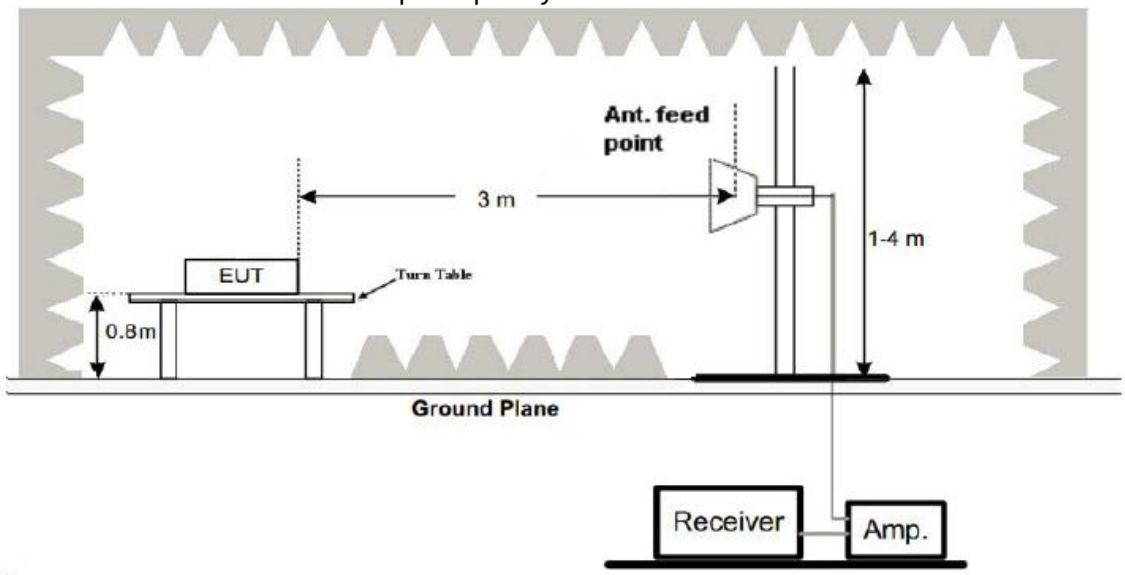
Notes:
1. The limit for radiated test was performed according to as following:FCC PART 15B /ICES-003.
2. The tighter limit applies at the band edges.
3. Emission level (dBuV/m)=20log Emission level (uV/m).

4.2 TEST SETUP

1. Radiated Emission Test Set-Up Frequency Below 1000MHz



2. Radiated Emission Test Set-Up Frequency Above 1000MHz



4.3 TEST PROCEDURE

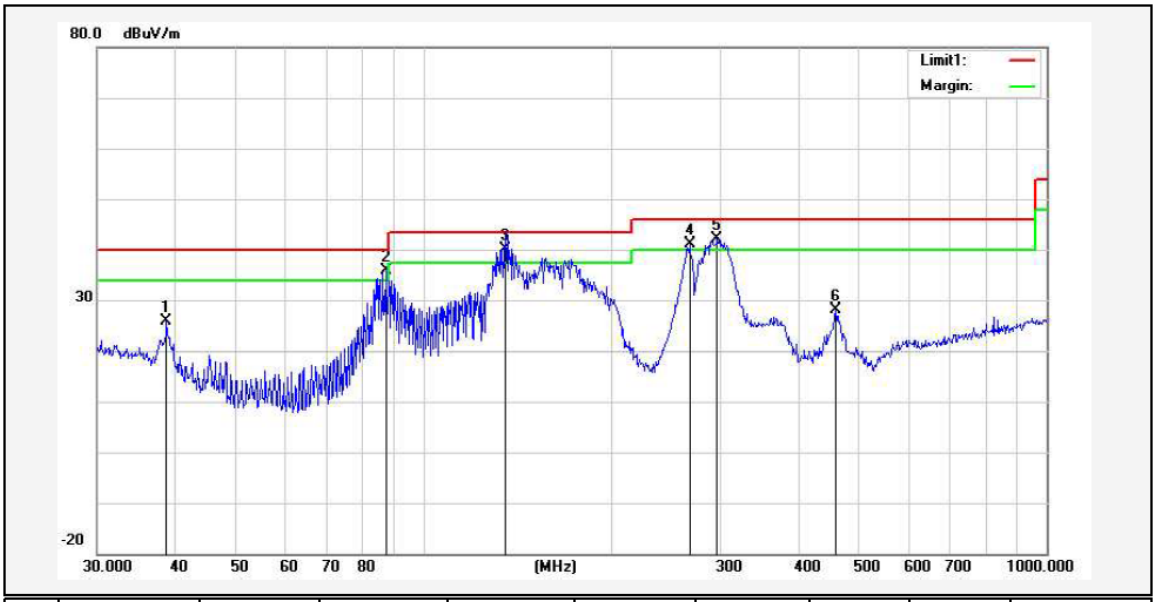
1. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
2. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
3. 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.
4. 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.
5. 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.
6. For the actual test configuration, please refer to the related Item EUT Test Photos.

4.4 TEST RESULT

PASS

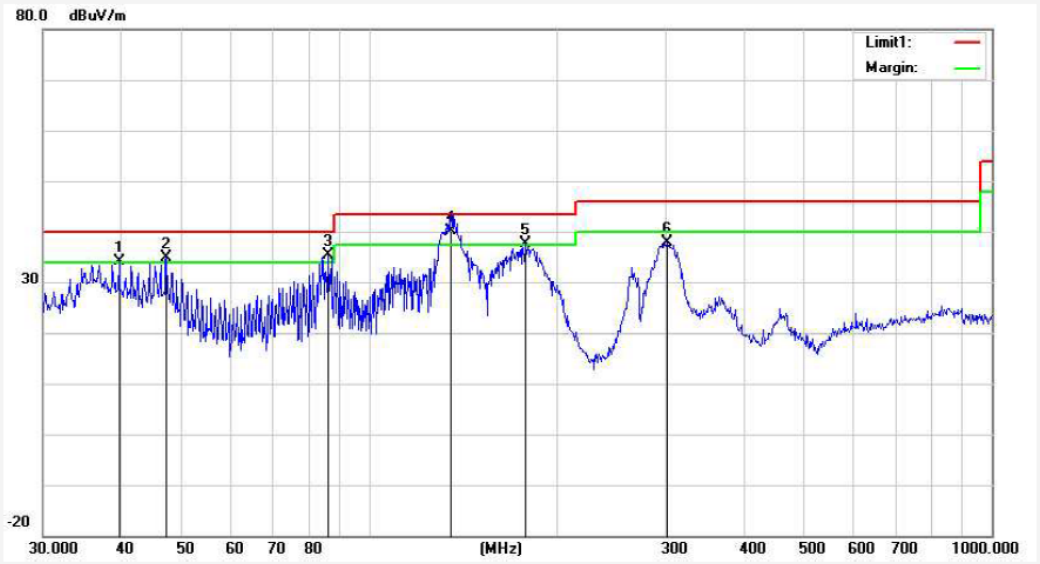
Below 1000MHz Test Results:

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Jul. 19, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Horizontal
Test Mode:	Mode 1		



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	38.7518	39.78	-14.00	25.78	40.00	-14.22			peak
2!	87.1117	56.59	-20.77	35.82	40.00	-4.18			peak
3*	135.5062	56.24	-16.02	40.22	43.50	-3.28			QP
4!	267.5455	56.28	-15.26	41.02	46.00	-4.98			peak
5!	296.1836	56.83	-14.71	42.12	46.00	-3.88			peak
6	459.1143	39.72	-11.64	28.08	46.00	-17.92			peak

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Jul. 19, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Vertical
Test Mode:	Mode 1		



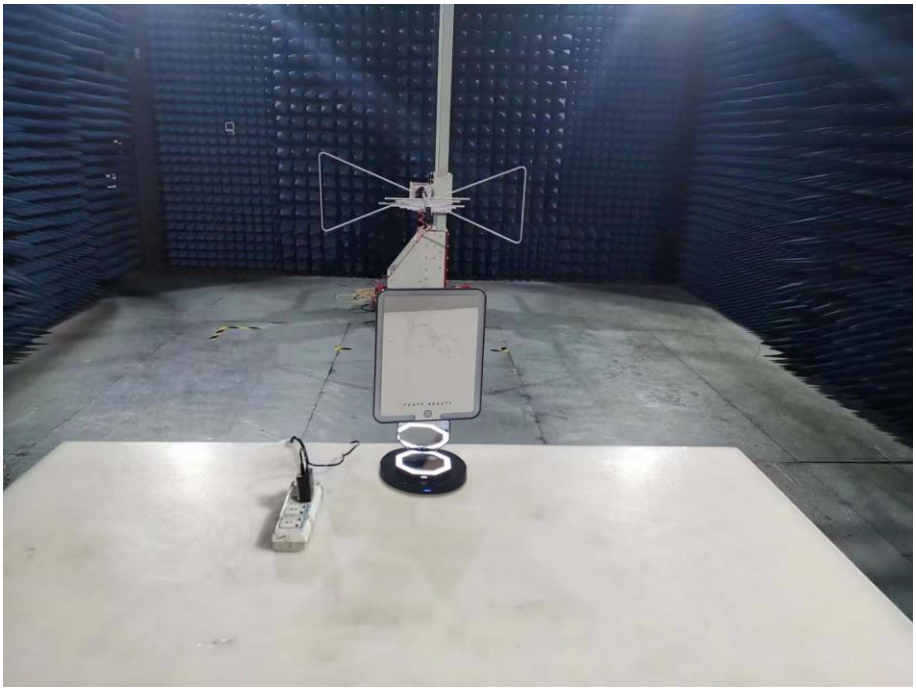
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1!	39.7146	48.84	-14.80	34.04	40.00	-5.96			peak
2!	47.3255	54.10	-19.12	34.98	40.00	-5.02			peak
3!	86.2001	56.12	-20.77	35.35	40.00	-4.65			peak
4*	135.5062	56.13	-16.02	40.11	43.50	-3.39			QP
5!	178.7583	55.35	-17.62	37.73	43.50	-5.77			peak
6	301.4224	52.52	-14.71	37.81	46.00	-8.19			peak

Remark: 1. Result = Reading Level + Factor, Margin = Result – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier
2. All test modes had been pre-tested. The mode 1 is the worst case and recorded in the report.

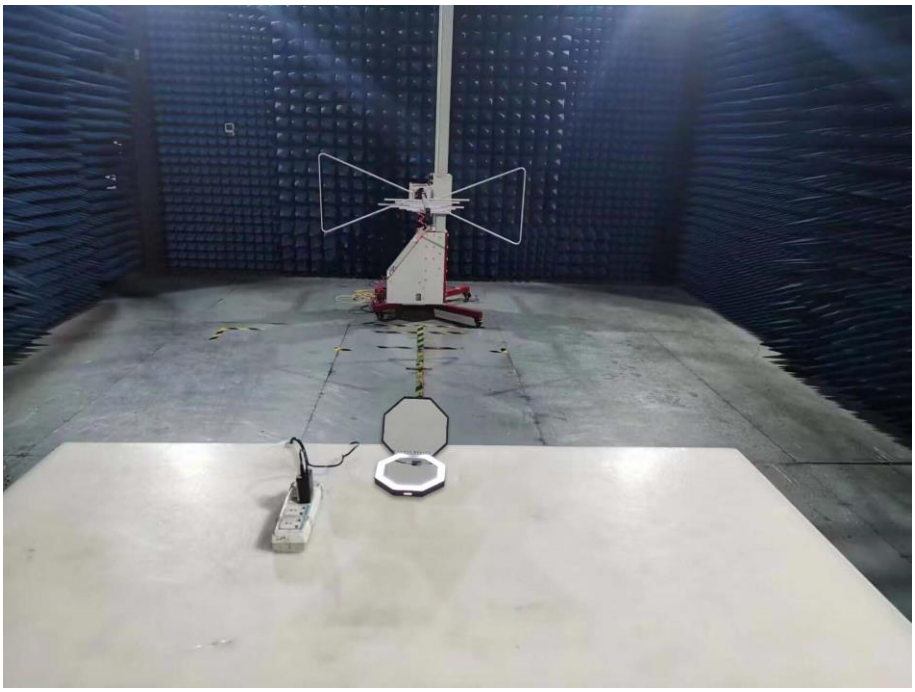
5 PHOTO OF TEST

5.1 RADIATED EMISSION

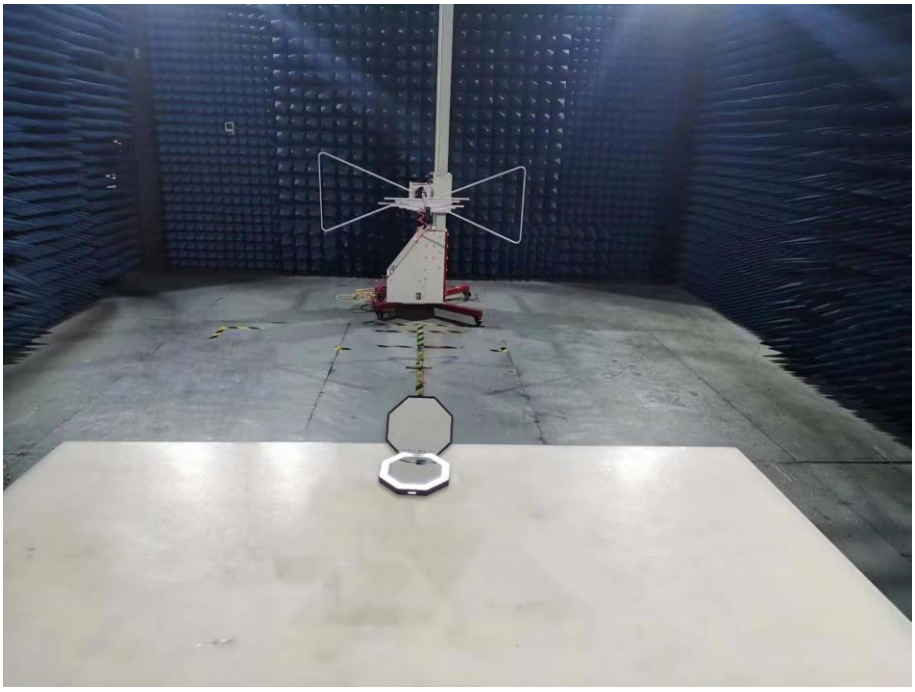
Mode1:



Mode2:

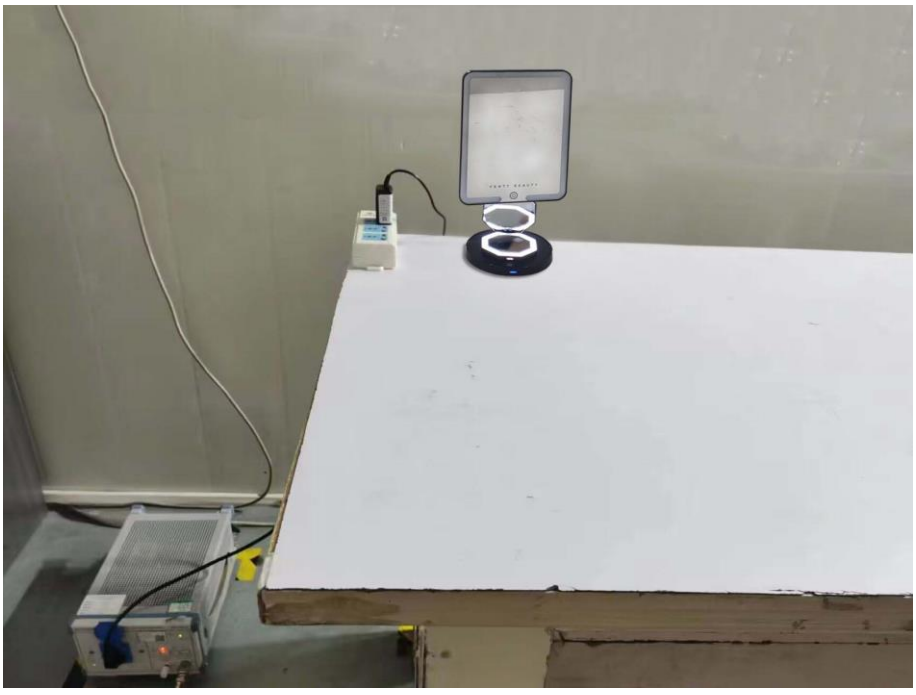


Mode3:

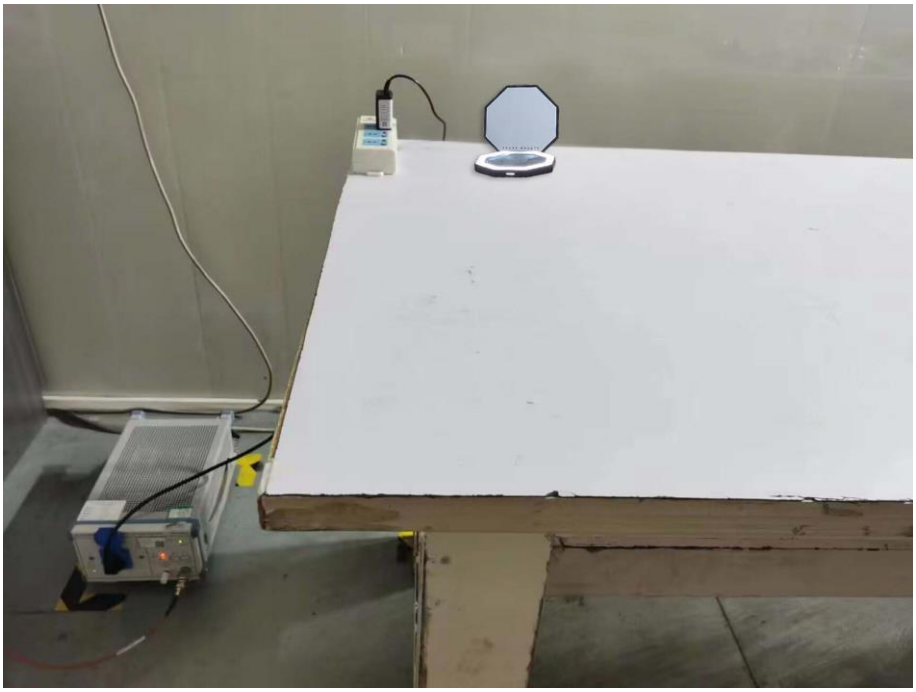


5.2 CONDUCTED EMISSION

Mode1:



Mode2:



End of Report

Statement

1.This report must have the signature of the authorized signatory and the special seal of the report, otherwise it will be considered invalid.If there is no anti-counterfeiting electronic seal of the laboratory in the report in PDF format or it is displayed as "×", the report is invalid.

2.This report shall not be modified, added or deleted without authorization.

3.The results of this report are only valid for the EUT provided by Applicant to our laboratory for inspection (That is,EUT received by our laboratory.Without special explanation, it refers to the samples presented in the report " PHOTO OF EUT ").

4.If there is any objection to the test data and conclusions of this report, please submit it in writing within 10 working days after the date of issuance of the report.

5.Without the written consent of the laboratory, this report shall not be copied (except for full copy), nor shall it be used as publicity materials or advertising.

6.The cover of the report is for decoration only, not included in the body of the report.

7.The paper report issued by our laboratory has the same effect as the electronic report. In case of any difference between the two, the electronic report shall prevail.

8.The Chinese and English reports issued by our laboratory have the same effect. In case of any difference in understanding, the Chinese version shall prevail.

9.Please provide the complete report documents issued by our laboratory when inquiring the report.

10.For cases where compliance is determined based on test values, when relevant specifications, standards, documents, and customers have no relevant requirements and no other special instructions, the test report issued by this laboratory is carried out in full value and adopts ILAC-G8:09 /2019 "Simple Acceptance Rule" for judgment.

11.In the People's Republic of China, when there is no CMA Accredited Symbol in this report, the report is only for scientific research, teaching or internal quality control activities.