FCC RADIO TEST REPORT

FCC ID: 2A323-W57

Sample： wireless charger

Trade Name： N/A

Main Model： W57

Additional Model： W30,W31,W32,W33,W34,W35,W36,W37,W38, W39,W40,W51,W55,W56,W58,W59,W60,W61, W62,W63,W64,W65,W66,W67,W68,W69,W70, W71,W72,W73,W74,W75,W76

Report No.： UNIA22022219ER-61

Prepared for

Shenzhen Meskey Technology Co., Ltd

Room 501, Building 1, No.72,Xikeng Road, Xikeng, Fucheng, Longhua District, Shenzhen, China

Prepared by

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TEST RESULT CERTIFICATION

Applicant .....: Shenzhen Meskey Technology Co., Ltd

Address.....: Room 501, Building 1, No.72,Xikeng Road, Xikeng, Fucheng, Longhua District, Shenzhen, China

Manufacturer .....: Shenzhen Meskey Technology Co., Ltd

Address.....: Room 501, Building 1, No.72,Xikeng Road, Xikeng, Fucheng, Longhua District, Shenzhen, China

Product description

Product .....: wireless charger

Trade Name .....: N/A

Model Name.....: W57,W30,W31,W32,W33,W34,W35,W36,W37,W38,W39,W40, W51,W55,W56,W58,W59,W60,W61,W62,W63,W64,W65,W66, W67,W68,W69,W70,W71,W72,W73,W74,W75,W76

Test Methods .....: FCC Rules and Regulations Part 15 Subpart C Section 15.209
ANSI C63.10: 2013

This device described above has been tested by Shenzhen United Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report. This report shall not be reproduced except in full, without the written approval of UNI, this document may be altered or revised by Shenzhen United Testing Technology Co., Ltd., personnel only, and shall be noted in the revision of the document.

Date of Test .....:

Date (s) of performance of tests .....: Feb. 22, 2022 ~ Apr. 08, 2022

Date of Issue .....: Apr. 22, 2022

Test Result .....: Pass

Prepared by: Jackson Fang

Jackson Fang/Editor

Reviewer: kahn.yang

Kahn yang/Supervisor

Approved & Authorized Signer: liuze

Liuze/Manager

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

ITEM	STANGARD	RESULT
CONDUCTED EMISSION	FCC Part 15.207	COMPLIANT
RADIATED EMISSION	FCC Part 15.209	COMPLIANT
ANTENNA REQUIREMENT	FCC Part 15.203	COMPLIANT

1.2 TEST FACILITY

Test Firm : Shenzhen United Testing Technology Co., Ltd.

Address : 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

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

A2LA Certificate Number: 4747.01
The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

FCC Registration Number: 674885
The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 21947
The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

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	

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product:	wireless charger
Trade Name:	N/A
Main Model:	W57
Additional Model:	W30,W31,W32,W33,W34,W35,W36,W37,W38,W39,W40, W51,W55,W56,W58,W59,W60,W61,W62,W63,W64,W65, W66,W67,W68,W69,W70,W71,W72,W73,W74,W75,W76
Model Difference:	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: W57.
FCC ID:	2A323-W57
Operation Frequency:	125KHz
Number of Channels:	1CH
Modulation Type:	ASK
Antenna Type:	Coil Antenna
Antenna Gain:	0dBi
Battery:	N/A
Adapter:	N/A
Power Source:	DC 5V/9V from adapter with AC 120(240)V/60Hz

2.2 CARRIER FREQUENCY OF CHANNELS

Channel List							
Channel	Frequency (KHz)	Channel	Frequency (KHz)	Channel	Frequency (KHz)	Channel	Frequency (KHz)
01	125						

2.3 TEST MODE

The EUT was programmed to be in transmitting mode.

Channel List	
Test Channel	Test Frequency (KHz)
01	125

2.4 TEST SETUP

Operation of EUT during testing:

2.5 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	wireless charger	N/A	W57	EUT
E-2	Adapter	XIAOMI	MDY-08-EF	AE

Item	Shielded Type	Ferrite Core	Length	Note

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” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.6 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	2022.09.22
3	AAN	TESEQ	T8-Cat6	38888	2022.09.22
4	Pulse Limiter	CYBRTEK	EM5010	E115010056	2022.05.17
5	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2022.09.22
Radiated Emissions Measurement					
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2022.09.27
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2024.02.26
4	PREAMP	HP	8449B	3008A00160	2022.09.22
5	PREAMP	HP	8447D	2944A07999	2022.05.17
6	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2022.09.22
7	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2022.09.22
8	Signal Generator	Agilent	E4421B	MY4335105	2022.09.22
9	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2022.09.22
10	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2022.09.22
11	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2022.05.17
12	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2022.05.17
13	RF power divider	Anritsu	K241B	992289	2022.09.22
14	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2022.09.22
15	Active Loop Antenna	Com-Power	AL-130R	10160009	2022.07.25
16	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2022.09.22
17	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2022.05.23
18	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2022.09.27
19	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2022.09.22
20	Signal Generator	Agilent	N5183A	MY47420153	2022.09.22
21	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	2022.09.22
22	Power Meter	KEYSIGHT	N1911A	MY50520168	2022.09.22
23	Frequency Meter	VICTOR	VC2000	997406086	2022.09.22
24	DC Power Source	HYELEC	HY5020E	055161818	2022.09.22

3 CONDUCTED EMISSION

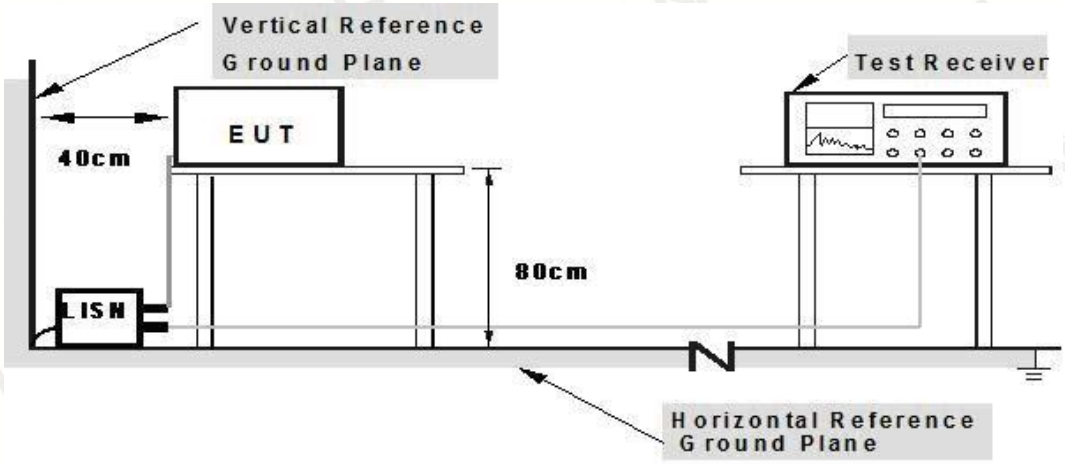
3.1 TEST LIMIT

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.

3.2 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.3 TEST PROCEDURE

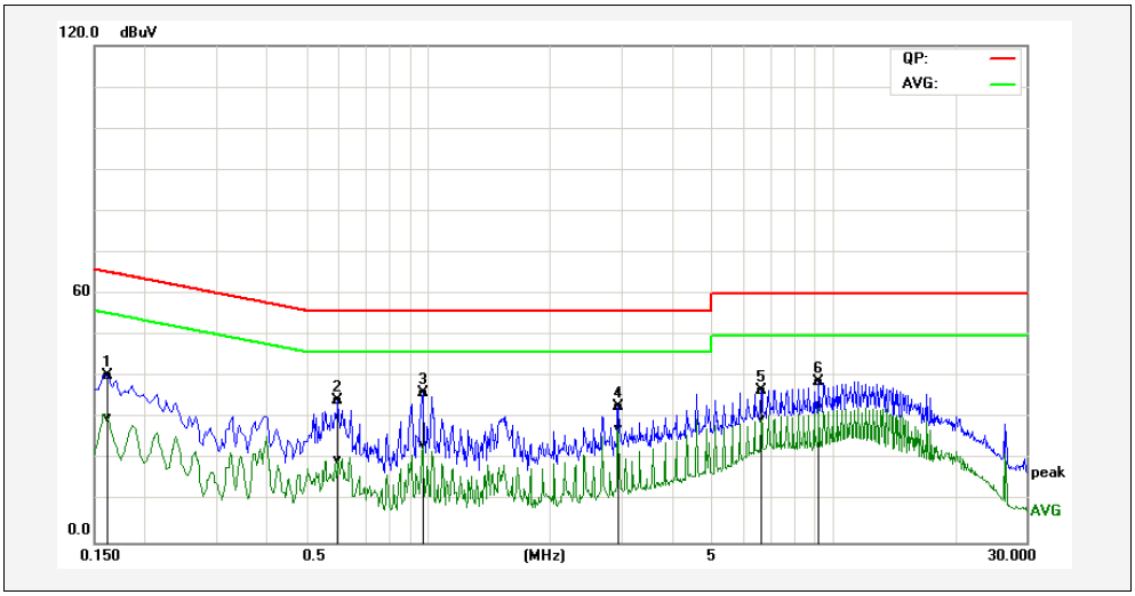
1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is placed on a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2. Support equipment, if needed, was placed as per ANSI C63.10.
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.

3.4 TEST RESULT

PASS

Remark: EUT was tested at AC 120V and 240V, only the worst result of AC 120V was reported.

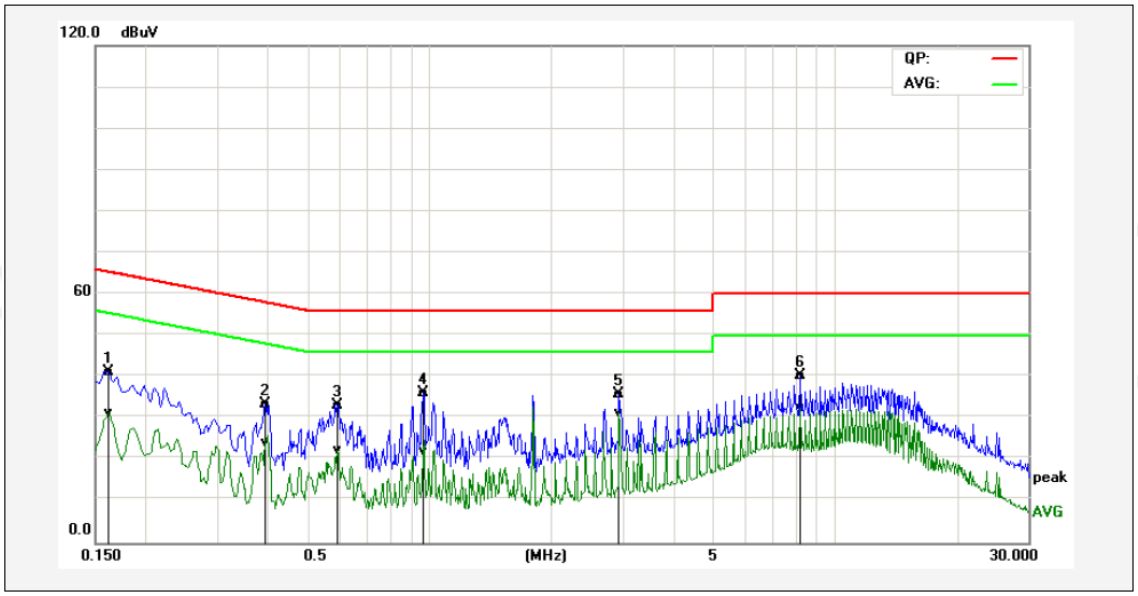
Temperature:	24℃	Relative Humidity:	48%
Test Date:	Feb. 24, 2022	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Line
Test Mode:	Transmitting mode		



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	0.1620	30.32	19.98	10.13	40.45	30.11	65.36	55.36	-24.91	-25.25	Pass
2P	0.5980	24.26	9.93	10.08	34.34	20.01	56.00	46.00	-21.66	-25.99	Pass
3P	0.9700	26.03	13.53	10.12	36.15	23.65	56.00	46.00	-19.85	-22.35	Pass
4P	2.9500	22.54	17.32	10.17	32.71	27.49	56.00	46.00	-23.29	-18.51	Pass
5P	6.6620	26.61	19.52	10.19	36.80	29.71	60.00	50.00	-23.20	-20.29	Pass
6*	9.2060	28.79	22.47	10.15	38.94	32.62	60.00	50.00	-21.06	-17.38	Pass

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

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Feb. 24, 2022	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Neutral
Test Mode:	Transmitting mode		



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	0.1620	31.18	21.18	10.13	41.31	31.31	65.36	55.36	-24.05	-24.05	Pass
2P	0.3940	23.35	13.90	10.11	33.46	24.01	57.98	47.98	-24.52	-23.97	Pass
3P	0.5940	23.21	12.22	10.08	33.29	22.30	56.00	46.00	-22.71	-23.70	Pass
4P	0.9660	26.16	11.94	10.12	36.28	22.06	56.00	46.00	-19.72	-23.94	Pass
5*	2.9460	25.71	21.31	10.17	35.88	31.48	56.00	46.00	-20.12	-14.52	Pass
6P	8.2100	30.24	22.45	10.18	40.42	32.63	60.00	50.00	-19.58	-17.37	Pass

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

4 RADIATED EMISSION

4.1 TEST LIMIT

CFR 47 Part 15, section 15.205
Only spurious emissions are permitted in any of the frequency bands listed the tables in these sections:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

CFR 47 Part 15, section 15.209
The emissions from an intentional radiator shall not exceed the limits in the tables in these sections using an average detector:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100**	3
88–216	150**	3
216–960	200**	3
Above 960	500	3

Limit calculation and transfer to 3m distance as showed in the following table:

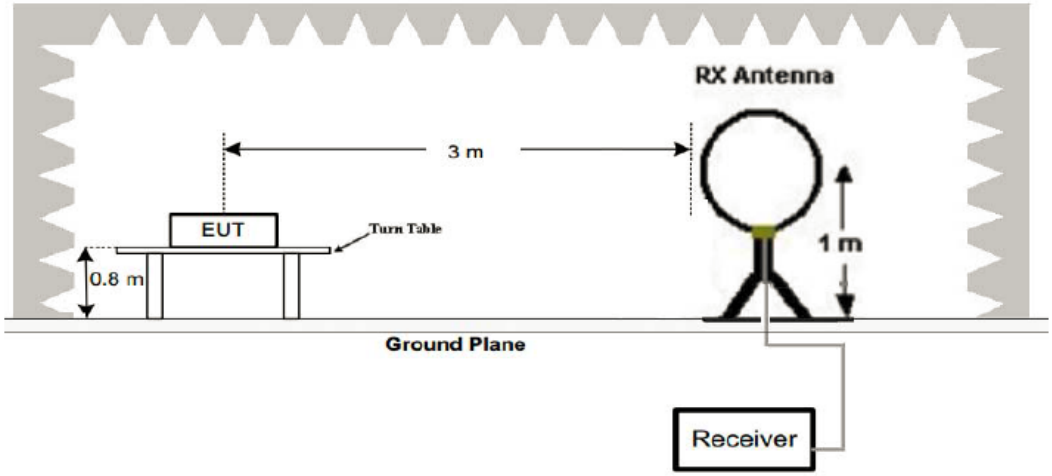
Frequency (MHz)	Limit (dBuV/m)	Distance (m)
0.009-0.490	20log(2400/F(KHz))+40log(300/3)	3
0.490-1.705	20log(24000/F(KHz))+40log(30/3)	3
1.705-30.0	69.5	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

CFR 47 Part 15, section 15.35
When average radiated emission measurements are specified, the limit on the peak level of the radio Frequency emission is 20dB above the maximum permitted average emission limit.

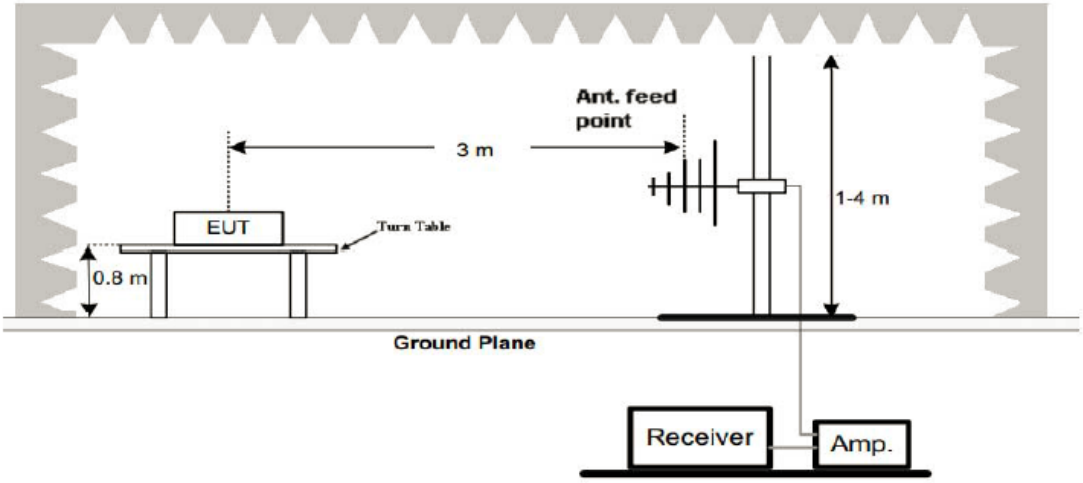
Transmitter Spurious Emissions 9KHz-30MHz			
	9-150KHz	150-490KHz	490KHz-30MHz
Resolution Bandwidth	200Hz	9KHz	9KHz
Video Bandwidth	2KHz	100KHz	100KHz
Detector	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto

4.2 TEST SETUP

1. Radiated Emission Test-Up Frequency Below 30MHz



2. Radiated Emission Test-Up Frequency 30MHz~1GHz



4.3 TEST PROCEDURE

1. Measurement distance is 3m.
2. For the measurement range up to 30MHz in the following plots the field strength result from 3m.
3. Distance measurement are extrapolated to 300m and 30m distance respectively, by 40dB/decade. According to part 15.31(f)(2), per antenna factor scaling.
4. Measurements below 1000MHz are performed with a peak detector and compared to average limits. Measurements with an average detector are not required.

Note:
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 TEST RESULT

PASS

For 9KHz-30MHz Test Results:

Frequency (MHz)	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
0.125	PK	70.05	15.48	85.53	105.67	-20.14
0.806	PK	38.12	15.98	54.10	69.48	-15.38
1.797	PK	27.08	16.2	43.28	69.5	-26.22
2.582	PK	34.05	15.2	49.25	69.5	-20.25
4.226	PK	31.72	15.68	47.40	69.5	-22.10
8.850	PK	32.04	15.6	47.64	69.5	-21.86

For 30MHz-1GHz Test Results:

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Feb. 24, 2022	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Horizontal
Test Mode:	Transmitting mode		

No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	39.8541	46.36	-14.92	31.44	40.00	-8.56	60	100	peak
2!	48.6720	55.68	-19.71	35.97	40.00	-4.03	70	100	peak
3	86.8067	53.71	-20.76	32.95	40.00	-7.05	100	100	peak
4*	200.6880	57.54	-16.44	41.10	43.50	-2.40	120	100	QP
5	343.1800	51.99	-14.19	37.80	46.00	-8.20	150	100	peak
6!	407.5144	55.36	-12.91	42.45	46.00	-3.55	180	100	peak

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

Temperature:	24℃	Relative Humidity:	48%
Test Date:	Feb. 24, 2022	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Vertical
Test Mode:	Transmitting mode		

No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	37.5478	43.36	-12.99	30.37	40.00	-9.63	70	100	peak
2*	51.1208	57.96	-20.46	37.50	40.00	-2.50	80	100	QP
3!	82.3590	57.02	-20.79	36.23	40.00	-3.77	120	100	peak
4	197.2000	54.09	-16.76	37.33	43.50	-6.17	150	100	peak
5	350.4768	53.29	-13.95	39.34	46.00	-6.66	180	100	peak
6	440.1963	48.52	-12.27	36.25	46.00	-9.75	200	100	peak

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

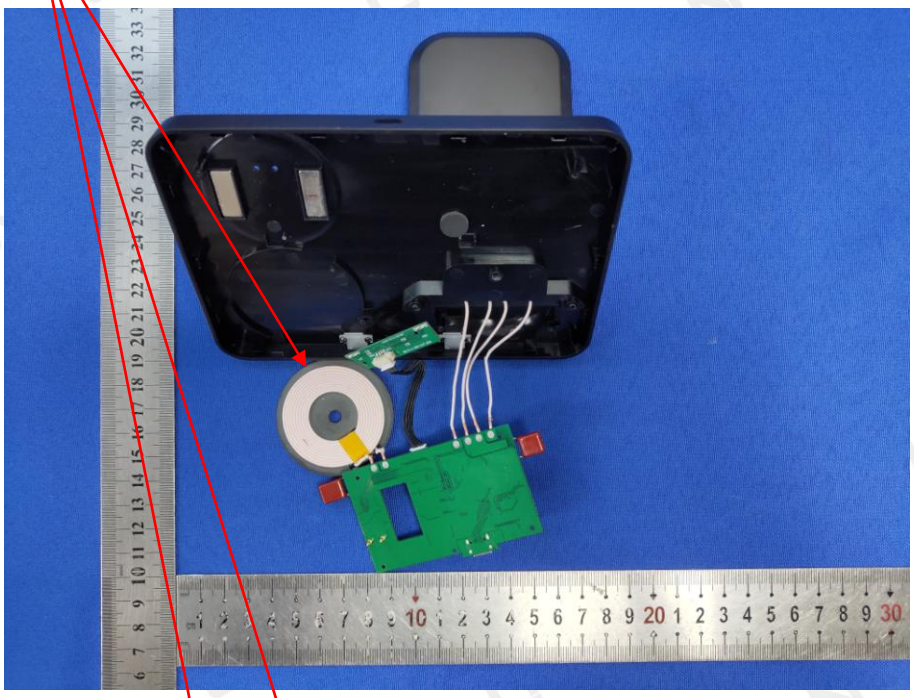
Remark：
1. * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
2. The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

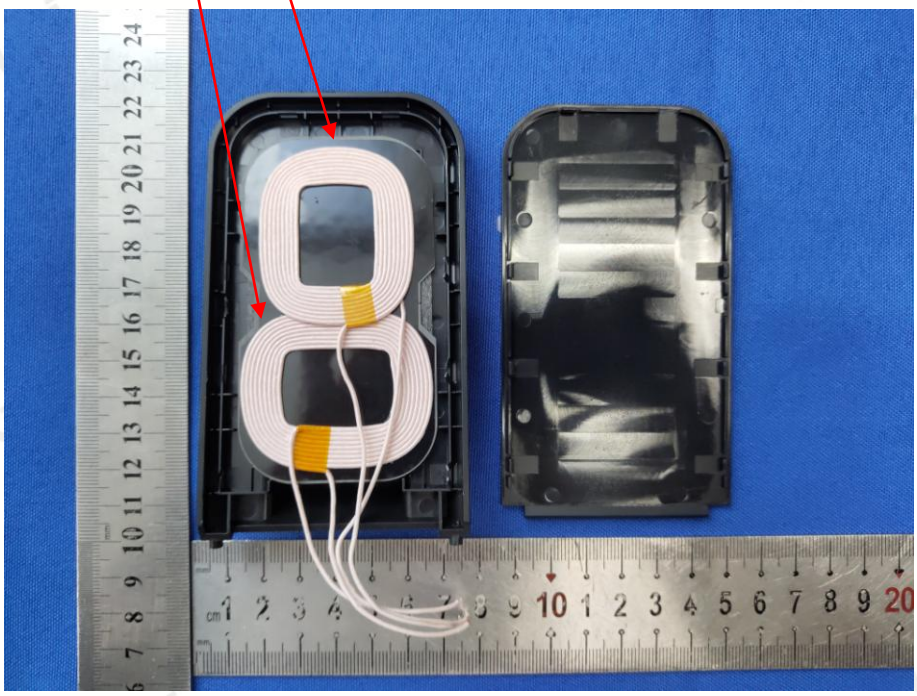
5 ANTENNA REQUIREMENT

Standard Applicable:
For intentional device, according to FCC 47 CFR Section 15.203, 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.

Antenna Connected Construction:
The antenna used in this product is Coil Antenna, The directional gains of antenna used for transmitting is 0dBi.

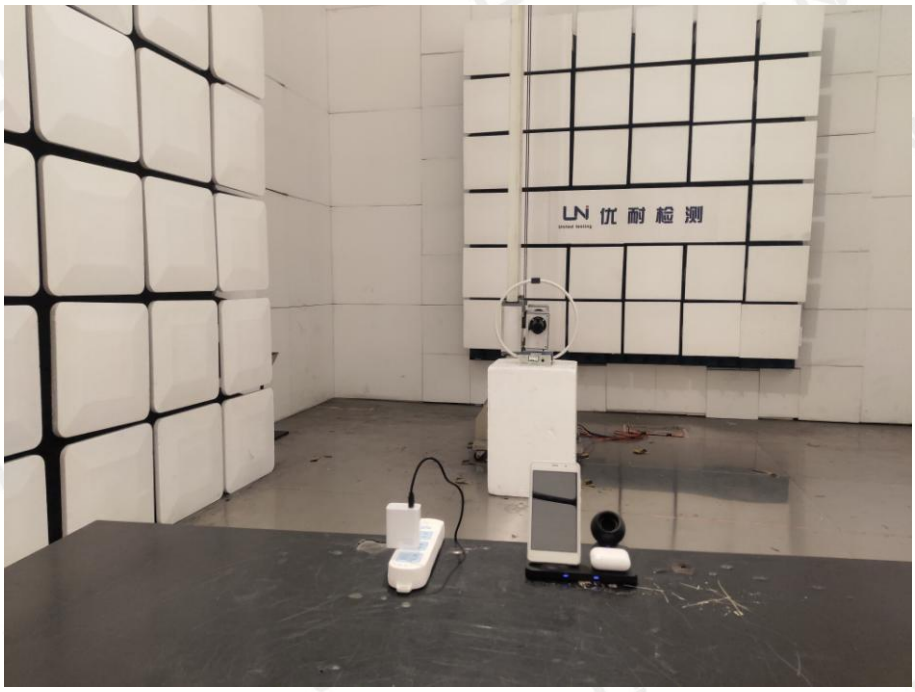
ANTENNA:

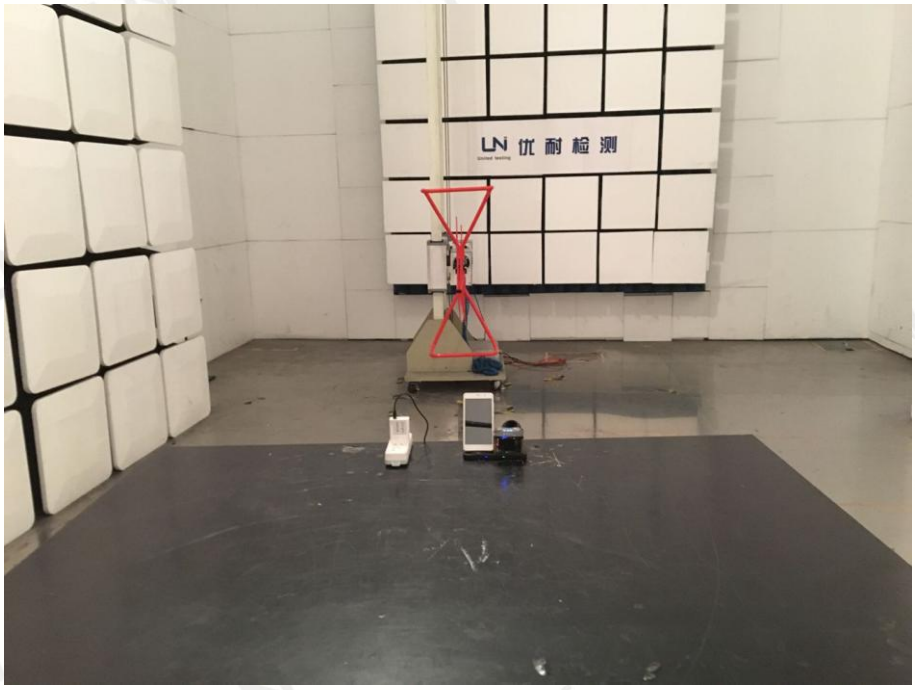




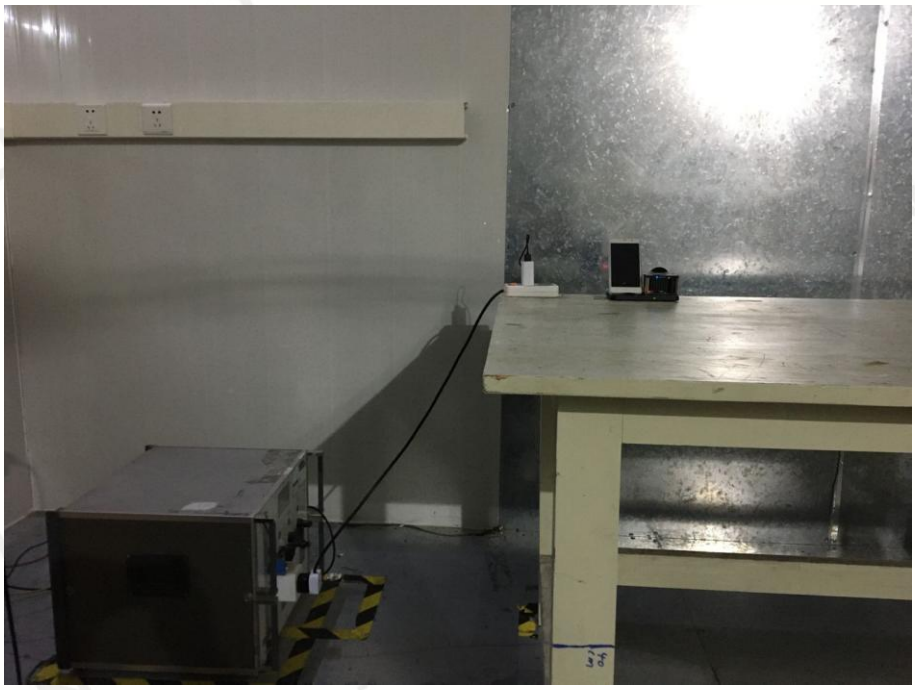
6 PHOTO OF TEST

6.1 RADIATED EMISSION





6.2 CONDUCTED EMISSION



End of Report