



FCC TEST REPORT

Client Information:

Applicant: Shenzhen Hui Qi Mei Technology Co., Ltd
Applicant add.: 4B, Area A, Zhong tian xin, No.4, Longping West Road, Longcheng Street,
Longgang District, Shenzhen
Brand Name: N/A

Product Information:

Product Name: Portable swing fan
Model No.: HQM-FS03
Derivative model No.: N/A
Test Date: Feb.25,2021 to Mar.04,2021 Issue Date: Mar.04,2021
Test Standard: FCC Part 15, Subpart B: 2016ANSI C63.4:2014
Test Result: PASS

Shenzhen ITC Product Testing Co., Ltd.
Issued by: Add. : Room 204 , No.10, Phase 1, Zone 3, Xinxing Industrial Park,Xinhe
Community, Fuhai Street, Bao'an District, Shenzhen,Guangdong.China

Tested by	Amanda Chen	
Reviewed by	Apple Huang	
Approved by	John Liu	



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Test result presented in this test report is applicable to the tested sample only

Report Revision History			
Report No.	Report Version	Description	Issue Date
21ITC0226057F	NONE	Original	Mar.04,2021

Customer information	
Applicant Name	Shenzhen Hui Qi Mei Technology Co., Ltd
Applicant Address	4B, Area A, Zhong tian xin, No.4, Longping West Road, Longcheng Street, Longgang District, Shenzhen
Manufacturer Name	Shenzhen Hui Qi Mei Technology Co., Ltd
Manufacturer Address	4B, Area A, Zhong tian xin, No.4, Longping West Road, Longcheng Street, Longgang District, Shenzhen

Test site information	
Lab performing tests	Shenzhen iTC Product Testing Co., Ltd.
Lab Address	Room 204 , No.10, Phase 1, Zone 3, Xinxing Industrial Park,Xinhe Community, Fuhai Street, Bao'an District, Shenzhen,Guangdong.China
Telephone:	(86)-0755-33138690
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Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under test	

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1. GENERAL PRODUCT INFORMATION

1.1.Product Function

Refer to Technical Construction Form and User Manual.

1.2.Description of Device (EUT)

Description : Portable swing fan

M/N : HQM-FS03

Power Supply : DC 5V,7W

The basic operation mode is:

Pretest Mode	Description
Mode 1	Working

1.3.Difference between Model Numbers

N/A

2. TEST SITES

2.1. Test Facilities

Name of Lab : Shenzhen iTC Product Testing Co., Ltd.

Site Location : Room 204 , No.10, Phase 1, Zone 3, Xinxing Industrial Park,Xinhe Community, Fuhai Street, Bao'an District, Shenzhen,Guangdong.China

2.2. Test Summary

Test Item	Condition	Standard	Result
Conducted disturbance at mains terminals	150kHz to 30MHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	N/A
Radiated Emission (below 1 GHz)	30MHz to 1GHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	Pass
Radiated Emission (above 1 GHz)	Above 1GHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	N/A
Remark: 1. The symbol "N/A" in above table means <u>Not Applicable</u> . 2.When determining the test results, measurement uncertainty of tests has been considered.			

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber	3.60dB
Uncertainty for Conducted Emission.	2.60dB

2.3.List of Test and Measurement Instruments

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
For conducted emission at the mains terminals and load port test					<input type="checkbox"/>
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	July.11, 2020	July.10,2021
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	July.11, 2020	July.10,2021
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	July.11, 2020	July.10,2021
RF Cable	FUJIKURA	3D-2W	944 Cable	July.11, 2020	July.10,2021
Voltage Probe	CHWARZBECK	A130302	KWE-053	July.11, 2020	July.10,2021
For radiated emission test (Below 1GHz)					<input checked="" type="checkbox"/>
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	July.11, 2020	July.10,2021
Bilog Antenna	ETS-LINDGREN	3142D	00135452	July.11, 2020	July.10,2021
Spectrum Analyzer	Agilent	8593E	3911A0427 1	July.11, 2020	July.10,2021
3m Semi-anechoic Chamber	ETS-LINDGREN	966	170326	July.11, 2020	July.10,2021
Signal Amplifier	SONOMA	310	186956	July.11, 2020	July.10,2021
RF Cable	IMRO	IMRO-400	966 Cable 1#	July.11, 2020	July.10,2021
MULTI-DEVICE Controller	ETS-LINDGREN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A
For radiated emission test (Above 1GHz)					<input type="checkbox"/>
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	July.11, 2020	July.10,2021
Horn Antenna	DAZE	ZN30701	11003	July.11, 2020	July.10,2021
Spectrum Analyzer	Agilent	8593E	3911A0427 1	July.11, 2020	July.10,2021
3m Semi-anechoic Chamber	ETS-LINDGREN	966	170326	July.11, 2020	July.10,2021
Signal Amplifier	ZHINAN	ZN3380C	11001	July.11, 2020	July.10,2021
RF Cable	IMRO	IMRO-400	966 Cable 1#	July.11, 2020	July.10,2021
MULTI-DEVICE Controller	ETS-LINDGREN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A
Note: <input checked="" type="checkbox"/> Used <input type="checkbox"/> Not Used					

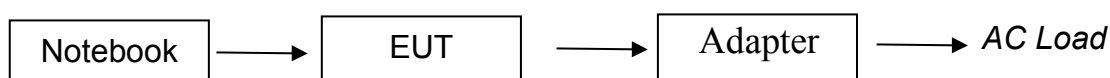
3. TEST SET-UP AND OPERATION MODES

3.1.Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2.Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



(EUT: Car charger)

3.3.Test Operation Mode and Test Software

Refer to Test Setup in clause 4 & 5.

3.4.Special Accessories and Auxiliary Equipment

None.

3.5.Countermeasures to Achieve EMC Compliance

None.

4. TEST RESULTS

4.1. Conducted Emission at the Mains Terminals Test

Result : N/A
Test Site : 944 Shielded Room
Limits : FCC Part 15B

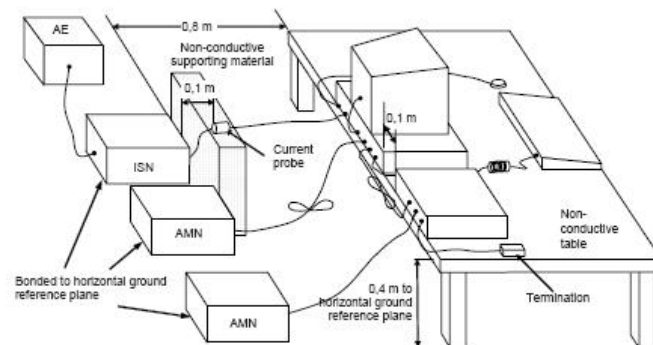
Frequency range MHz	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.
 2.The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.

Test

- 1.The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 1 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.
- 2.The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.
- 3.The bandwidth of the test receiver was set at 9 kHz.
- 4.The worst test data was reported on the following page.

Test Set-up



4.2.Radiated Emission Test (below 1 GHz)

Result : **PASS**
Test Site : 966 Chamber
Limits : FCC Part 15B

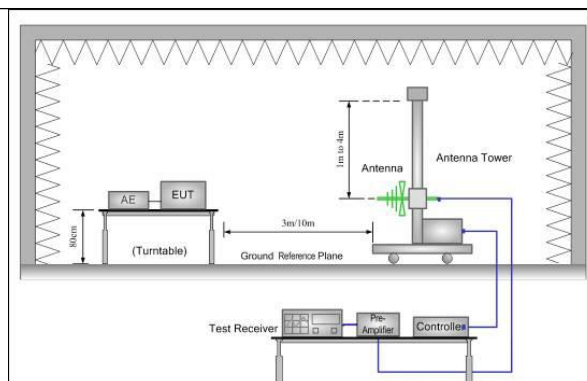
Frequency range MHz	Quasi-peak limits 3m dB(μ V/m)
30-88	40
88-216	43.5
216-960	46
960-1000	54

Note: 1.The lower limit shall apply at the transition frequency.
2.Additional provisions may be required for cases where interference occurs.

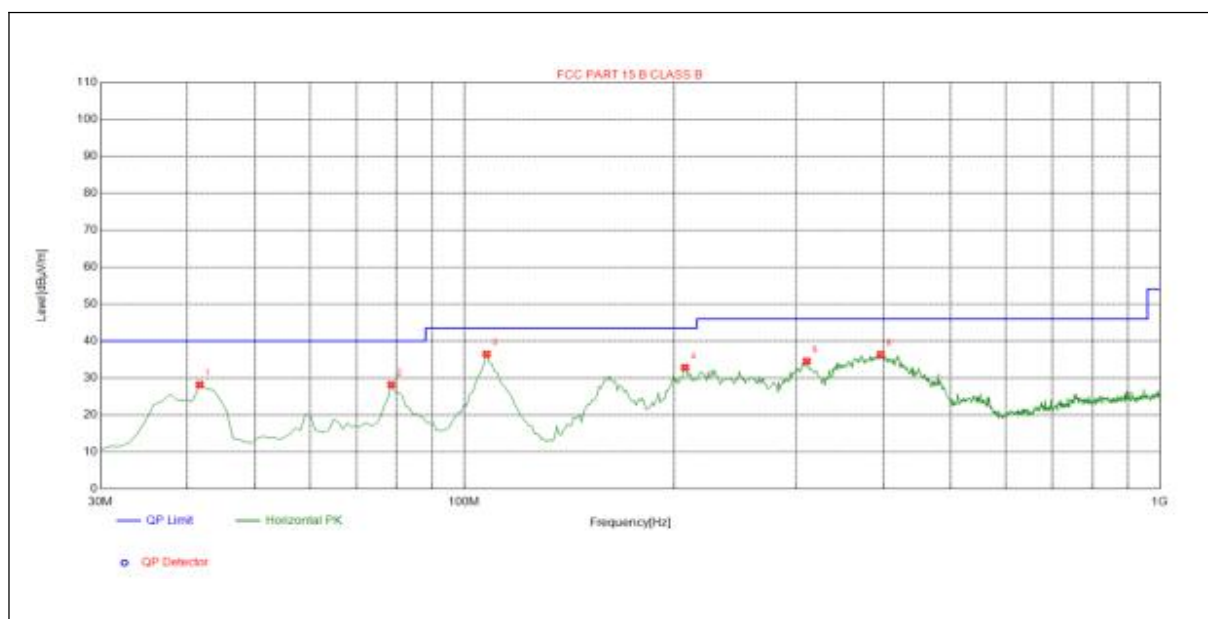
Conditional testing procedure

- 1.The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.
- 2.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.
- 2.The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.
- 3.The bandwidth setting on the test receiver was 120 kHz.
- 4.The worst test data was reported on the following page.
- 5.Emission Level = Antenna Factor + Cable Loss + Meter Reading - Preamp Factor.

Test Set-up



EUT :	NPortable swing fan	Model Name. :	HQM-FS03
Temperature :	24.4 °C	Relative Humidity :	53%
Pressure :	1004 hPa	Polarization :	Horizontal
Test Voltage :	DC 5.0V	Test Mode :	Working



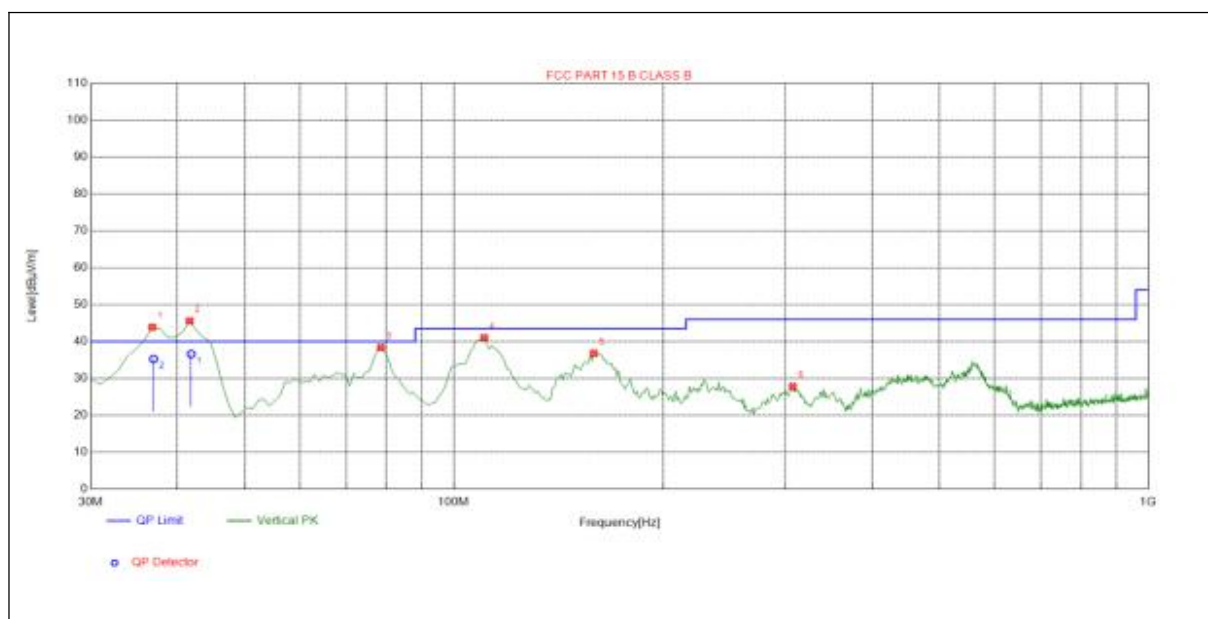
Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor)–Limit

Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	41.6517	-14.25	42.43	28.18	40.00	11.82	100	0	Horizontal
2	78.5485	-19.21	47.38	28.17	40.00	11.83	100	24	Horizontal
3	107.6777	-15.42	51.86	36.44	43.50	7.06	100	214	Horizontal
4	207.6877	-14.86	47.66	32.80	43.50	10.70	100	272	Horizontal
5	310.6106	-12.58	47.12	34.54	46.00	11.46	100	282	Horizontal
6	397.0270	-10.48	46.84	36.36	46.00	9.64	100	256	Horizontal

EUT :	NPortable swing fan	Model Name. :	HQM-FS03
Temperature :	24.4 °C	Relative Humidity :	53%
Pressure :	1004 hPa	Polarization :	Vertical
Test Voltage :	DC 5.0V	Test Mode :	Working



Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit

Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.7968	-15.57	59.43	43.86	40.00	-3.86	100	271	Vertical
2	41.6517	-14.25	59.81	45.56	40.00	-5.56	100	188	Vertical
3	78.5485	-19.21	57.59	38.38	40.00	1.62	100	207	Vertical
4	110.5906	-15.53	56.52	40.99	43.50	2.51	100	11	Vertical
5	159.1391	-18.28	55.08	36.80	43.50	6.70	100	223	Vertical
6	307.6977	-12.64	40.41	27.77	46.00	18.23	100	30	Vertical

Final Data List

Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	41.8530	-14.22	50.81	36.59	40.00	3.41	170	196.7	Vertical
2	36.9597	-15.51	50.75	35.24	40.00	4.76	170	1.2	Vertical

4.3.Radiated Emission Test (above 1 GHz)

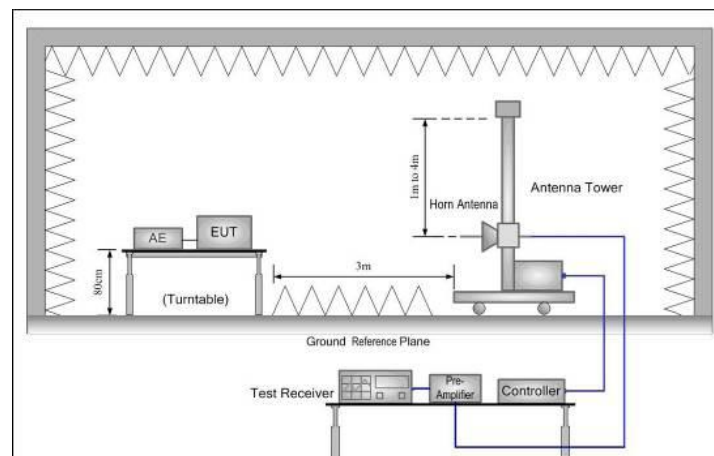
Result : N/A
Test Site : 966 Chamber
Limits : FCC Part 15B

Frequency range GHz	Average limit dB(μ V/m)	Peak limit dB(μ V/m)
1-3	50	70
3-6	54	74
Note: The lower limit applies at the transition frequency		

Conditional testing procedure

- 1.The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.
 - 2.The EUT was tested in the 3m Chamber Site. It was pre-scanned with a Peak detector from the spectrum.
 - 3.The bandwidth setting on the test receiver was 1 MHz.
 - 4.The worst test data was reported on the following page.
 5. Emission Level = Antenna Factor + Cable Loss + Meter Reading - Preamp Factor.
- ☐ 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.
☐ the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
☐ 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 40 GHz, whichever is lower.

Test Set-up



5. PHOTOGRAPHS OF THE EUT

TEST PHOTO



EUT Photo 1



EUT Photo 2



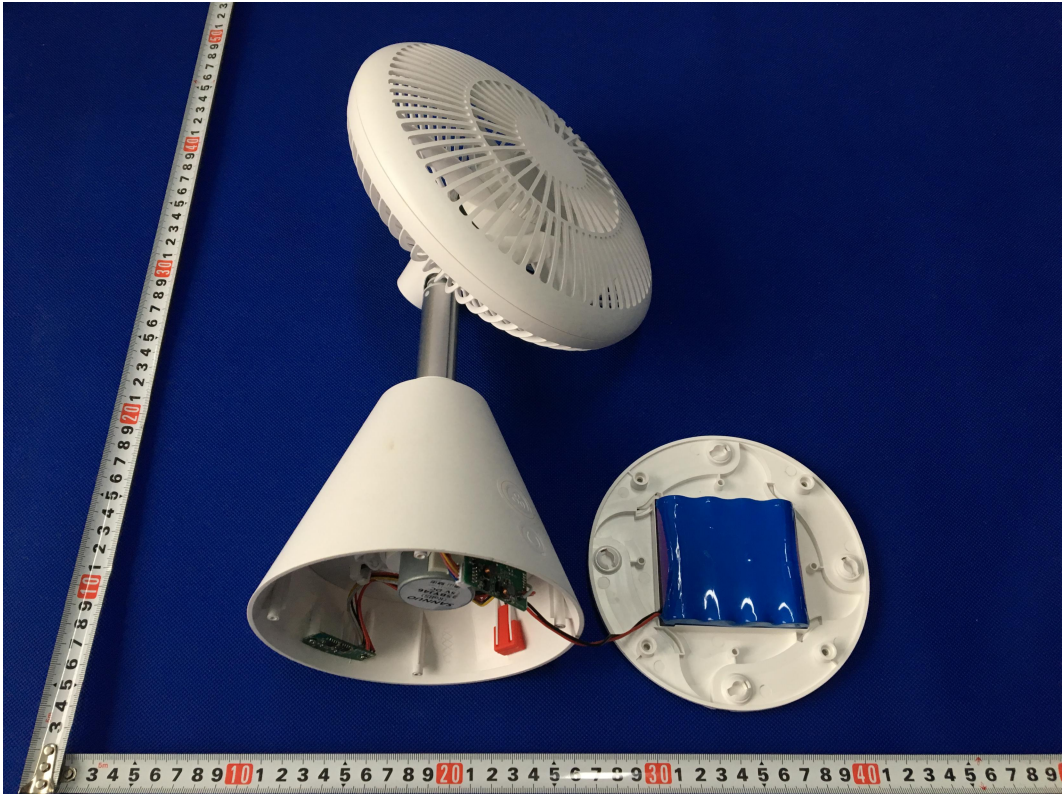
EUT Photo 3



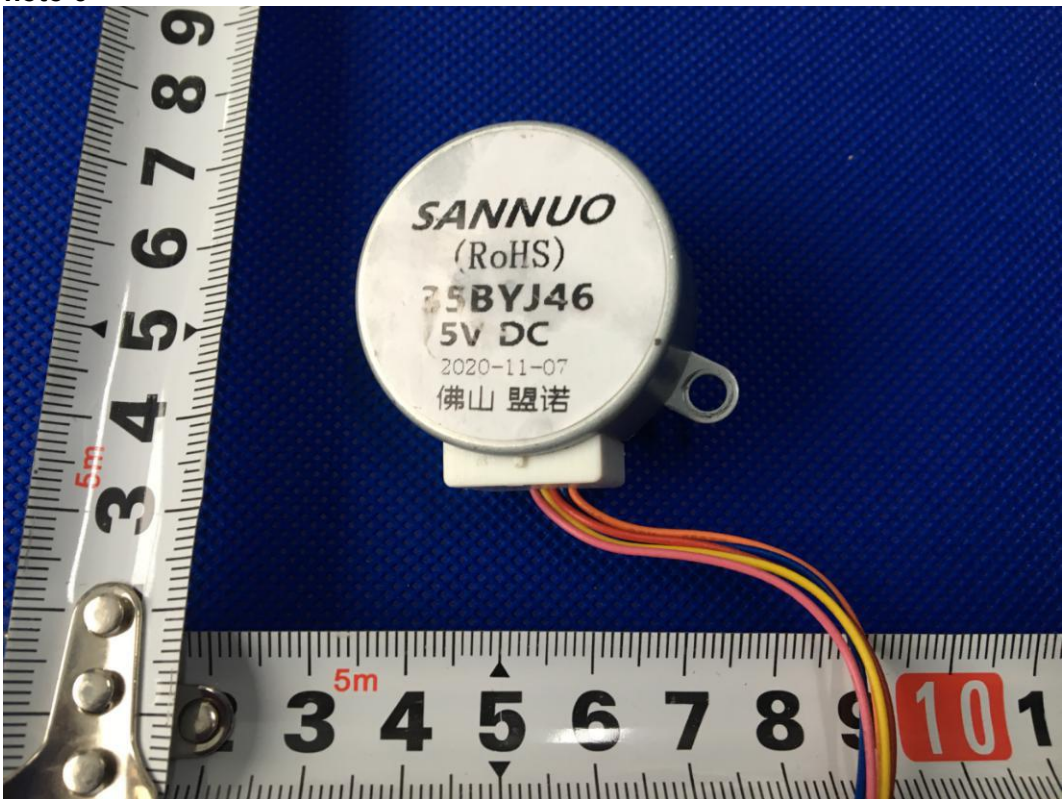
EUT Photo 4



EUT Photo 5



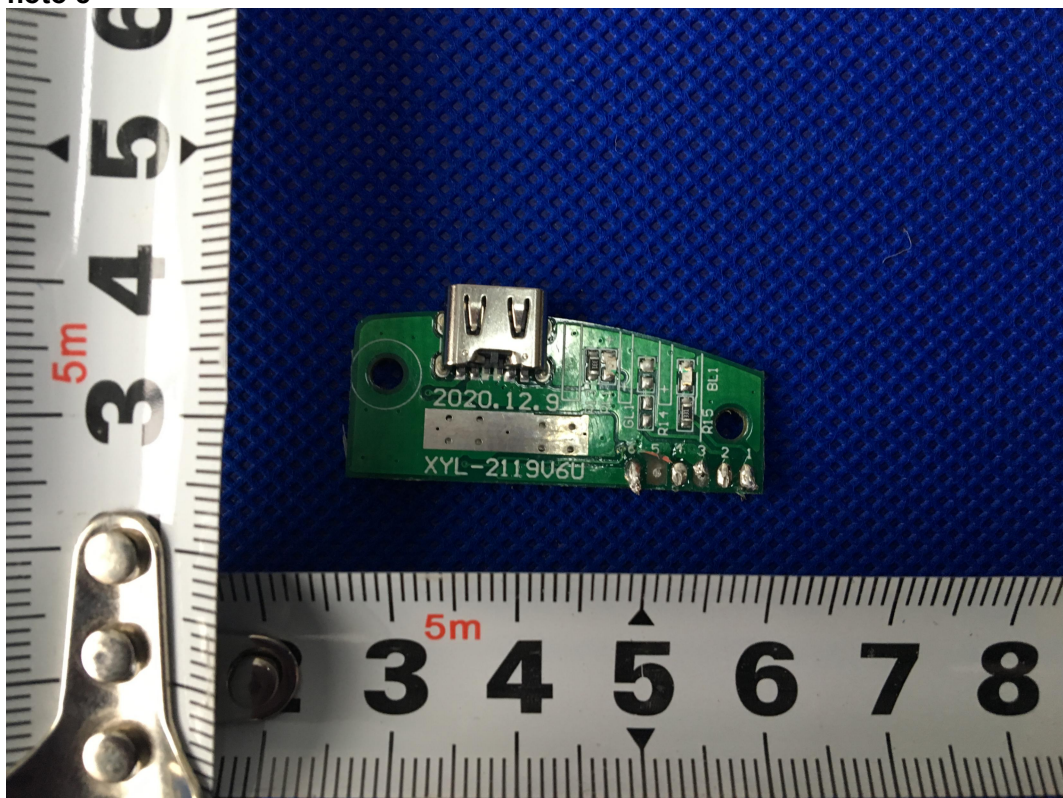
EUT Photo 6



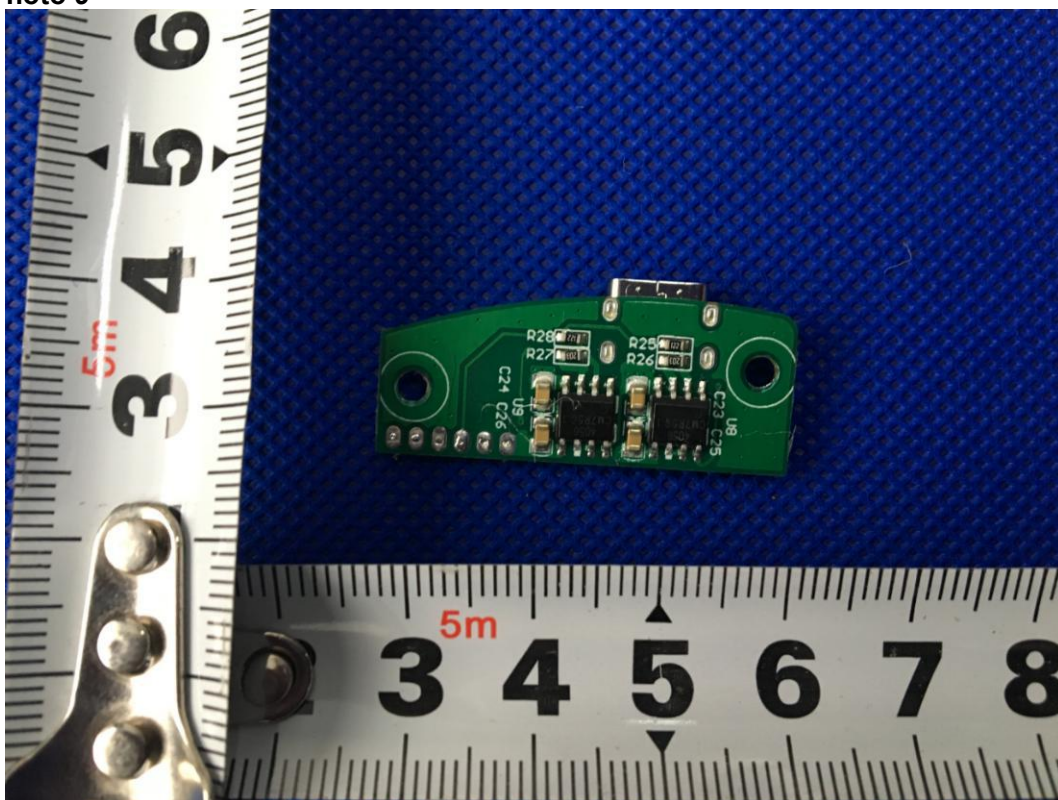
EUT Photo 7



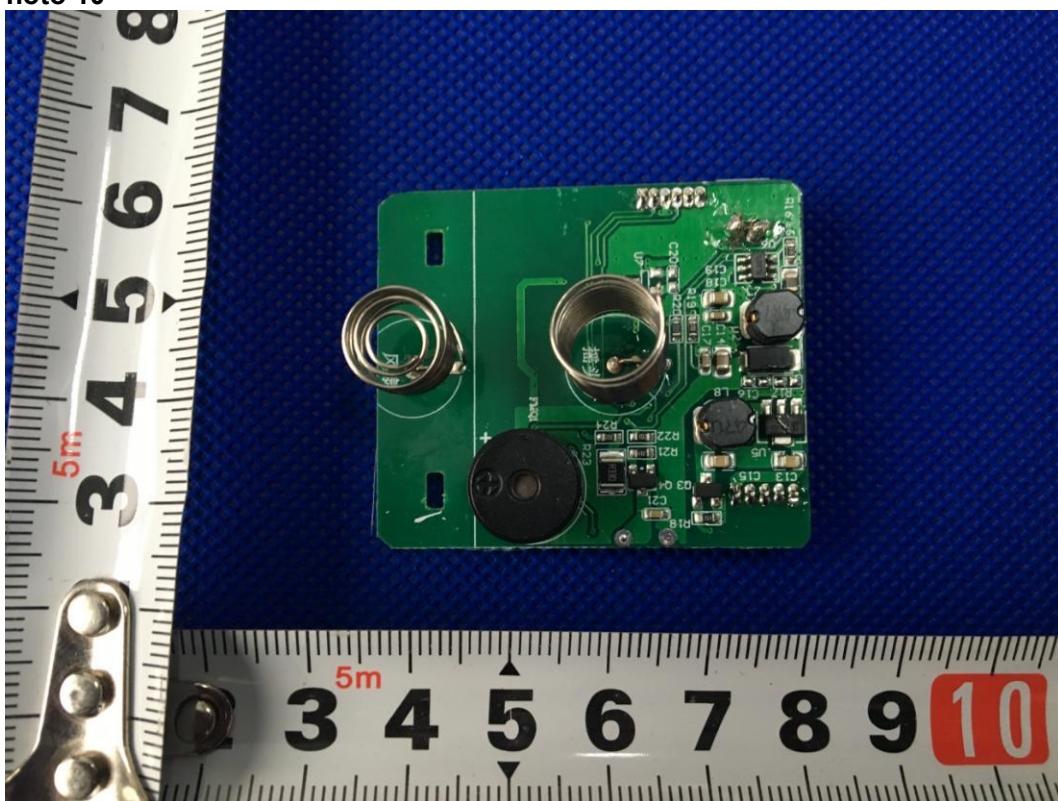
EUT Photo 8



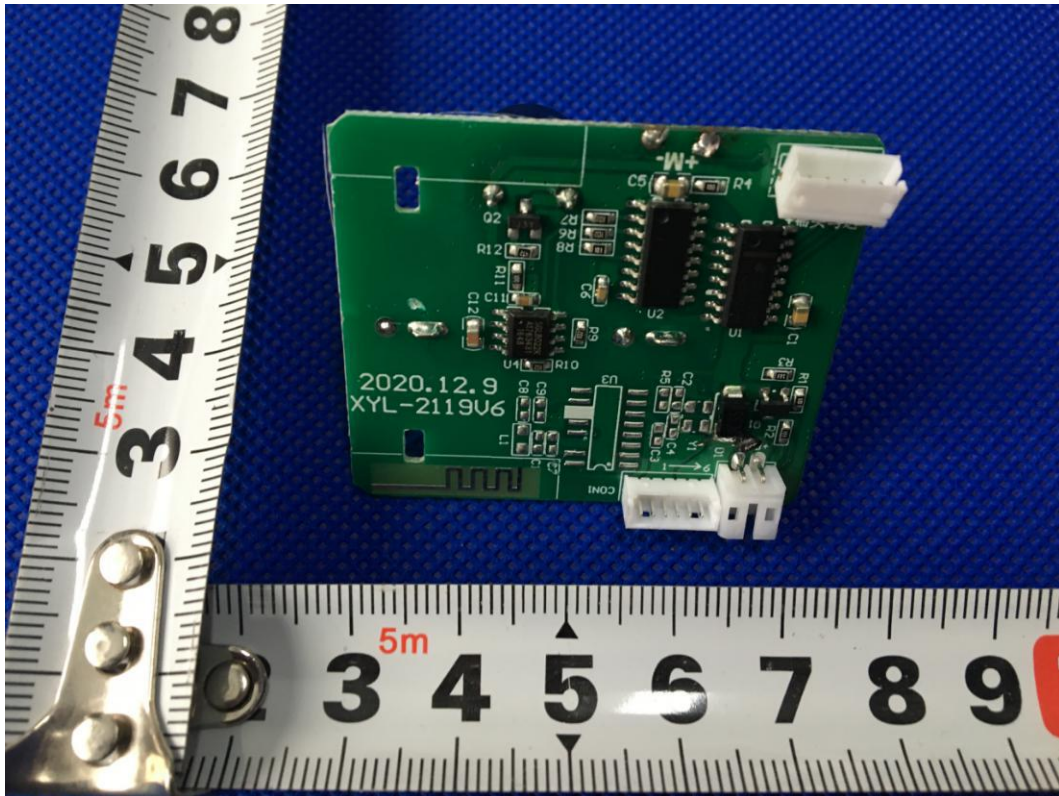
EUT Photo 9



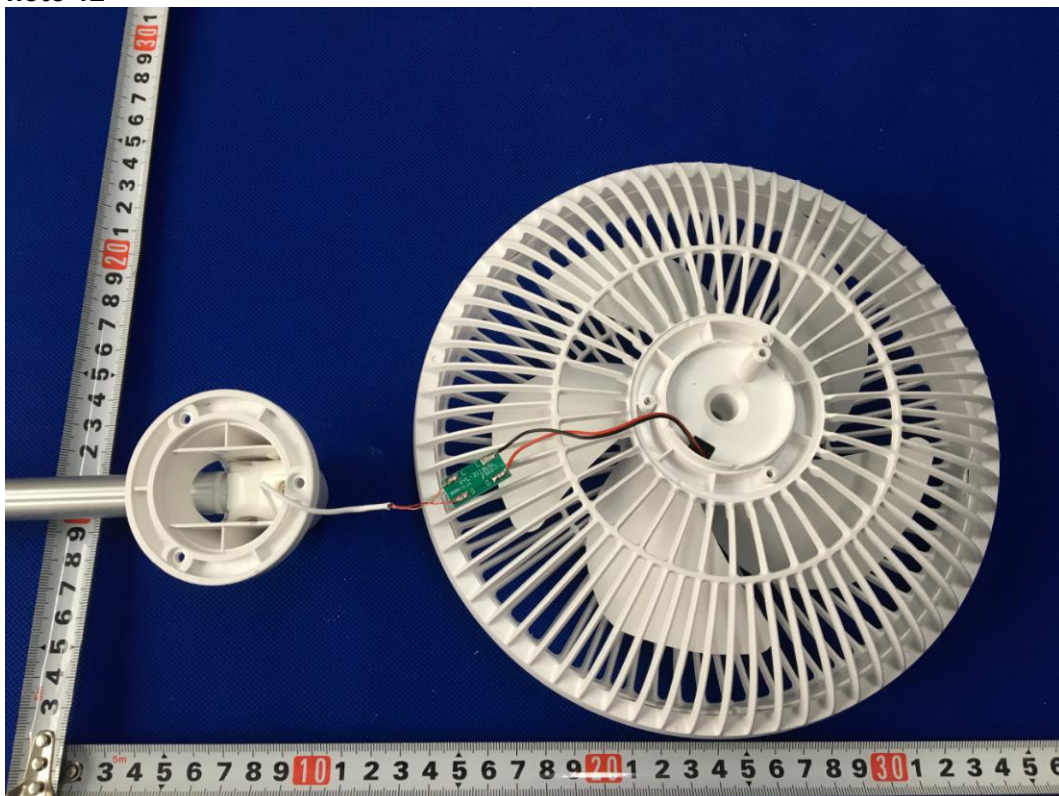
EUT Photo 10



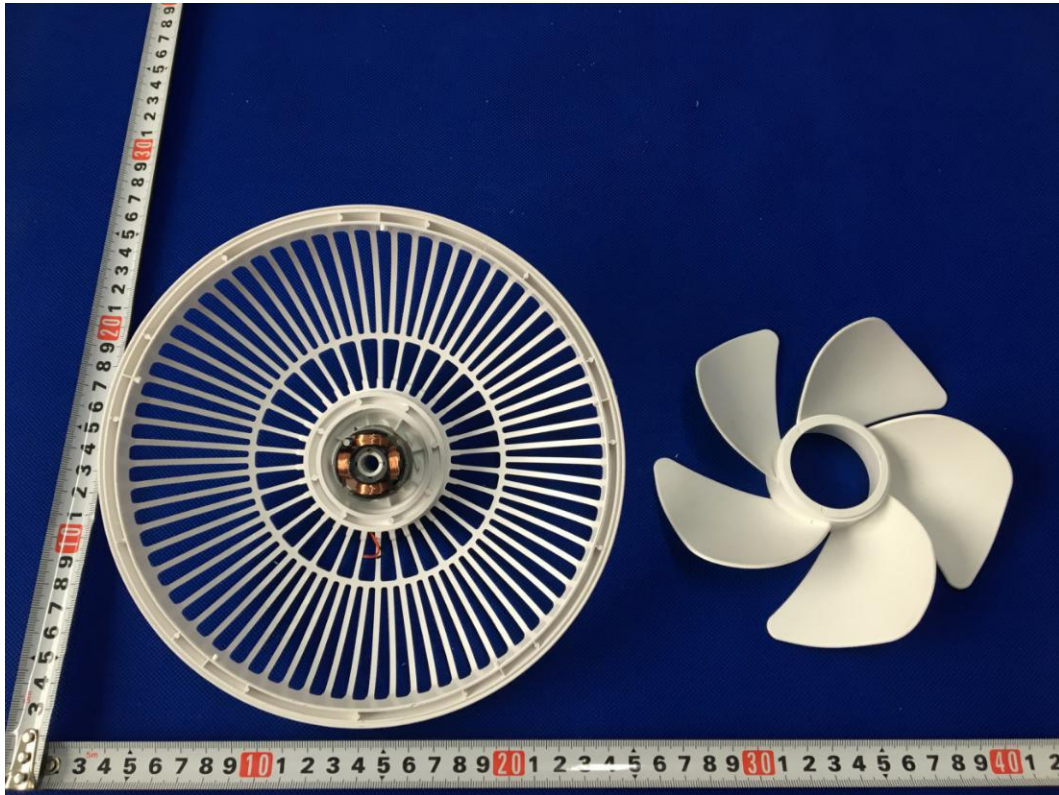
EUT Photo 11



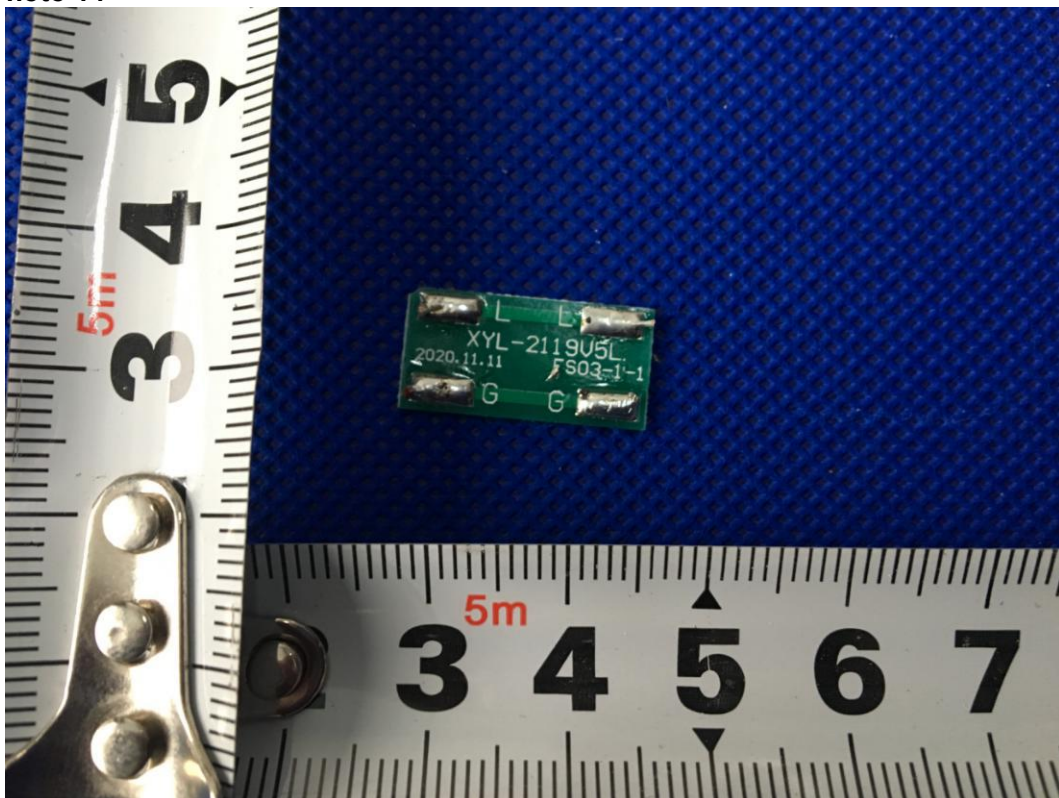
EUT Photo 12



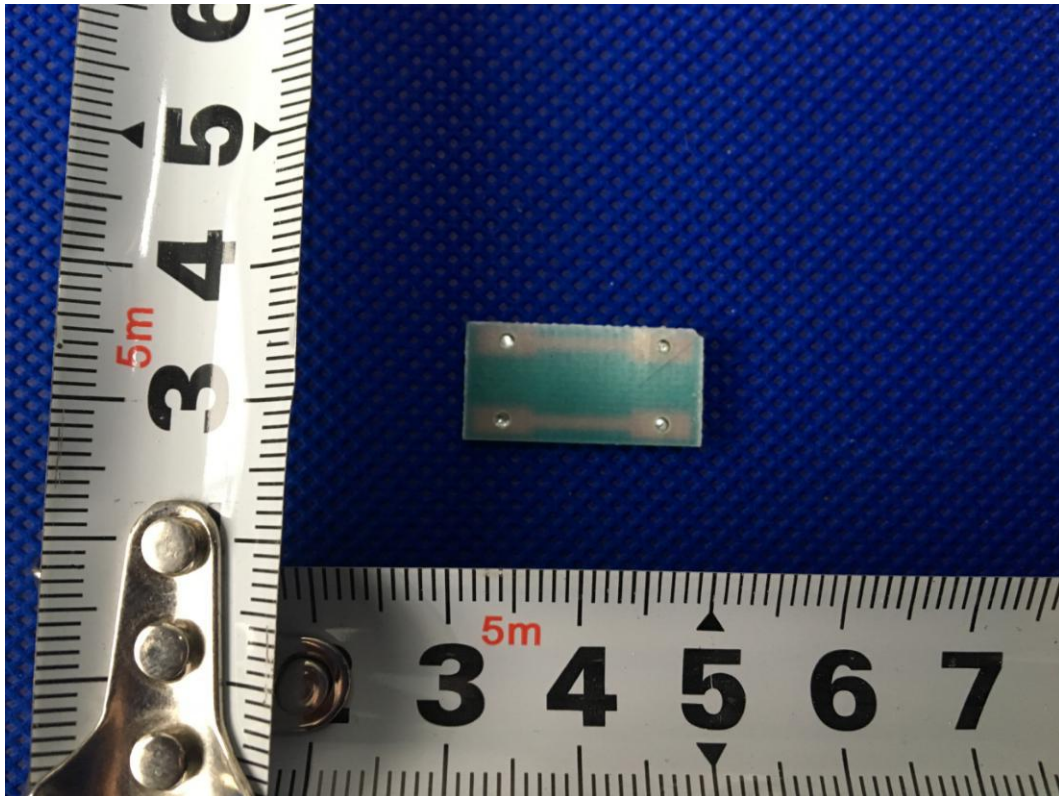
EUT Photo 13



EUT Photo 14



EUT Photo 15



End of the Report