



Report No.: FCC2001052 File reference No.: 2020-01-08

Applicant: King of Fans, Inc.

Product: 44" Midili

Model No: 44-MDL

Trademark: Hampton Bay

Test Standards: FCC Part 15 Subpart B

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4&FCC Part 15 regulations for

the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: January 08, 2020

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

## SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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## **Special Statement:**

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 meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

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

## **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

## FCC-Registration No.: 744189

The 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 our files. Registration No.: 744189.

## Industry Canada (IC) —Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

## **A2LA (Certification Number:5013.01)**

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

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# Test Report Conclusion

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#### 1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road

West, Tong Le Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

1.2 Applicant Details

Applicant: King of Fans, Inc.

Address: 1951 N.W. 22nd Street, Fort Lauderdale, FL33311, USA

Telephone: 954-484-7500 Fax: 954-784-7602

1.3 Description of EUT

Product: 44" Midili

Manufacturer: Chienluen Industries (zhongshan) Ltd..

Address: Da Che Industrial Area, Nanlang Town, Zhongshan, Guangdong China 528451

Trademark: Hampton Bay Model Number: 44-MDL

Rating: Input 120V, 60Hz, w/o light 0.5A, w/o light 60W

Rx Frequency: 303.9MHz

1.4 Submitted Sample: 1 Samples

1.5 Test Duration: 2020-01-08 to 2020-01-08

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB Radiated Emissions above 1GHz Uncertainty =6.0dB

1.7 Test Engineer

The sample tested by

Terry Tang

Print Name: Terry Tang

The report refers only to the sample tested and does not apply to the bulk.

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## 2.0 List of Measurement Equipment

### 2.1 Conducted Emission Test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESH3	860905/006	RS	2019.06.21	1Year
Spectrum Analyzer	ESA-L1500A	US37451154	НР	2019.06.21	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2019.06.21	1Year
LISN	ESH3-Z5	100294	RS	2019.06.21	1Year
LISN	ESH3-Z5	100253	RS	2019.06.21	1Year
LISN	NNB42	00012	SCHAFFNER	2019.01.08	1Year

## 2.2 Radiated electromagnetic disturbance test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESPI 3	100379	RS	2019.06.21	1Year
Amplifier	BBV9743	#218	Schwarzbeck	2019.06.21	1Year
Amplifier	8449B	3008A00160	HP	2019.06.21	1Year
Bilog Antenna	VULB9163	1139	Schwarzbeck	2018.07.04	3Year
Horn Antenna	BBHA 9120D	9120D-631	RS	2018.07.09	3Year
Spectrum	E4407B	MY50441392	Agilent	2019.03.27	1Year

## 2.3 Auxiliary Equipment

Name	Model No.	Serial No.	Manufacturer	Date	Cycle
				Calibration	Calibration

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## 3.0 Technical Details

3.1 Investigations Requested
Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

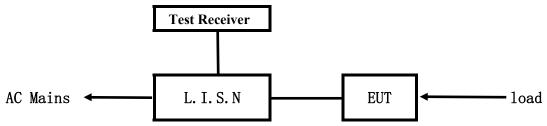
FCC Part 15 Subpart B

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### 4.0 Conducted Power line Test

### 4.1 Schematics of the test



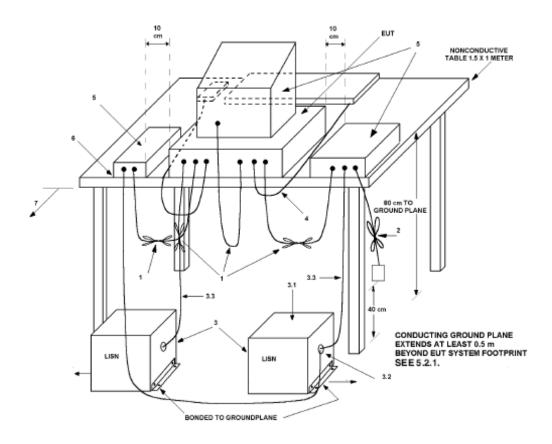
**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2014. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup



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### 4.3 Power line conducted Emission Limit

Engage av (MHz)	Class A Li	mits dB(μV)	Class B Limits dB(μV)			
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level		
$0.15 \sim 0.50$	79.00	66.00	66.00~56.00*	56.00~46.00*		
$0.50 \sim 5.00$	76.00	60.00	56.00	46.00		
$5.00 \sim 30.00$	73.00	60.00	60.00	50.00		

Notes:

- 1. \*decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

### 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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## A: Conducted Emission on Live Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

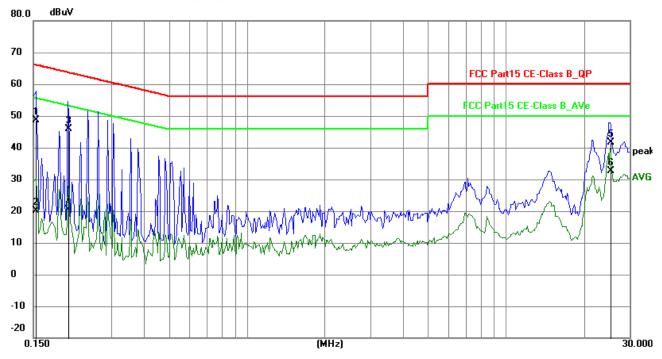
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Receiving Mode** 

**Equipment Level: Class B** 

**Results: PASS** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1539	38.92	9.78	48.70	65.79	-17.09	QP	Р
2	0.1539	10.47	9.78	20.25	55.79	-35.54	AVG	Р
3	0.2046	36.25	9.75	46.00	63.42	-17.42	QP	Р
4	0.2046	10.60	9.75	20.35	53.42	-33.07	AVG	Р
5	25.2924	30.56	11.01	41.57	60.00	-18.43	QP	Р
6	25.2924	21.74	11.01	32.75	50.00	-17.25	AVG	Р

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## B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

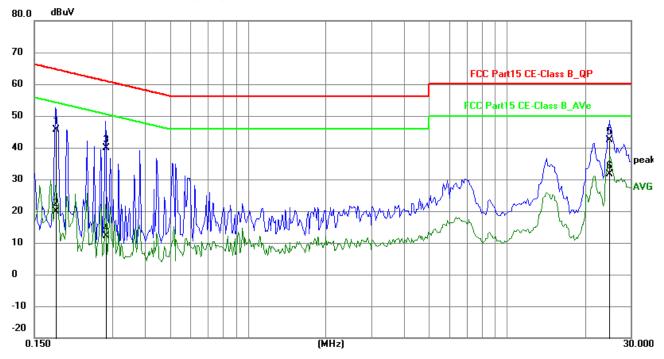
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Receiving Mode** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1812	35.84	9.76	45.60	64.43	-18.83	QP	Р
2	0.1812	10.14	9.76	19.90	54.43	-34.53	AVG	Р
3	0.2826	30.19	9.76	39.95	60.74	-20.79	QP	Р
4	0.2826	2.34	9.76	12.10	50.74	-38.64	AVG	Р
5	24.7932	31.33	10.98	42.31	60.00	-17.69	QP	Р
6	24.7932	20.61	10.98	31.59	50.00	-18.41	AVG	Р

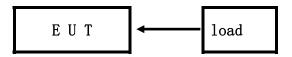
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#### 5.0 Radiated Disturbance Test

#### 5.1 Schematics of the test

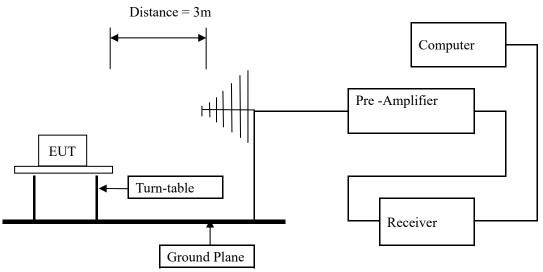


#### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2014; The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK

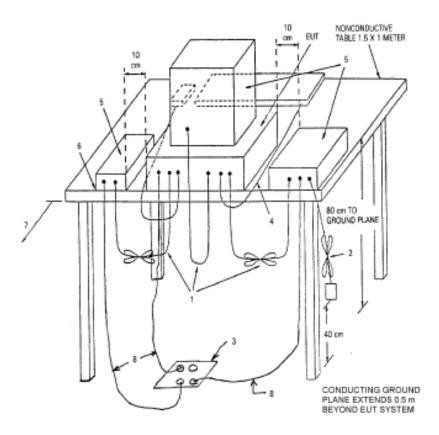
Actual Working Voltage and Frequency: 120V~, 60Hz

## **Block diagram of Test setup**



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#### 5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: The lower limit shall apply at the transition frequencies

### 5.4 Test result

The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK. Measurements were made at 3 meters.

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Test result

### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition:** Receiving Mode

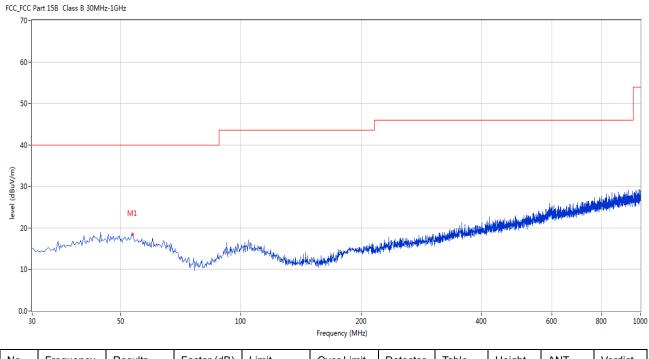
Equipment Level: Class B Results: Pass Report No: FCC2001052 Page 14 of 31

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Test Figure:

Н



No.	Frequency	Results	Factor (dB)	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)		(dBuV/m)	(dB)		(o)	(cm)		
1	53.517	18.52	-11.52	40.0	-21.48	Peak	360.00	100	Н	Pass

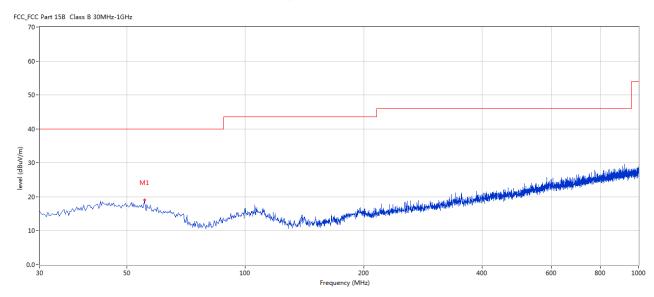
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## Test Figure:

V



No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m	Limit			(cm)		
				)	(dB)					
1	55.456	20.03	-11.89	40.0	-19.97	Peak	97.00	100	V	Pass

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## Radiated Disturbance (1000MHz----5000MHz)

**EUT Operating Environment** 

Temperature: 25°C Humidity: 75%RH Atmospheric Pressure: 101 kPa

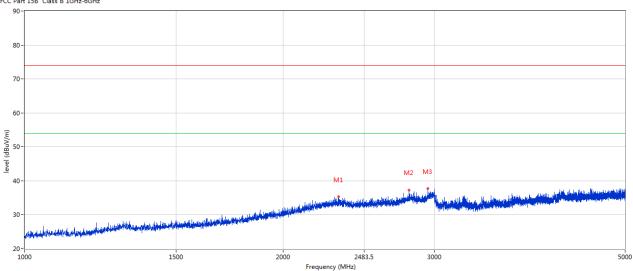
**EUT set Condition: Receiving Mode** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual

FCC Part 15B Class B 1GHz-6GHz



No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit			(cm)		
					(dB)					
1	2319.170	35.30	-3.26	74.0	-38.70	Peak	297.00	100	Н	Pass
2	2803.049	37.33	-2.70	74.0	-36.67	Peak	360.00	100	Н	Pass
3	2946.013	37.68	-2.66	74.0	-36.32	Peak	360.00	100	Н	Pass

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## Radiated Disturbance (1000MHz----5000MHz)

**EUT Operating Environment** 

Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 kPa

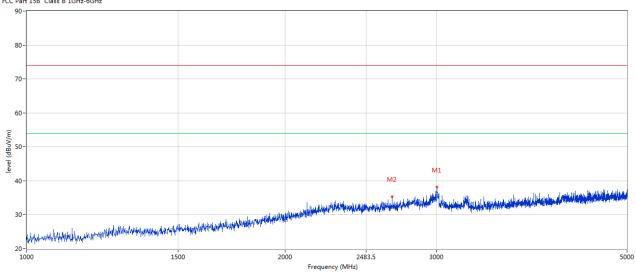
**EUT set Condition: Receiving Mode** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual

FCC Part 15B Class B 1GHz-6GHz



No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit			(cm)		
					(dB)					
1	3003.249	38.14	-2.63	74.0	-35.86	Peak	27.00	100	V	Pass
2	2663.334	35.39	-3.09	74.0	-38.61	Peak	0.00	100	V	Pass

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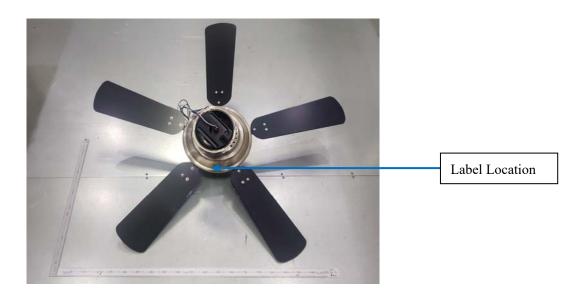


#### 6.0 FCC Label

#### FCC ID: RGB-44MDLC2-

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.



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7.0 Photo of testing

7.1 Conducted test View--



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#### 7.2 Radiated emission test view--



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## Photo for the EUT





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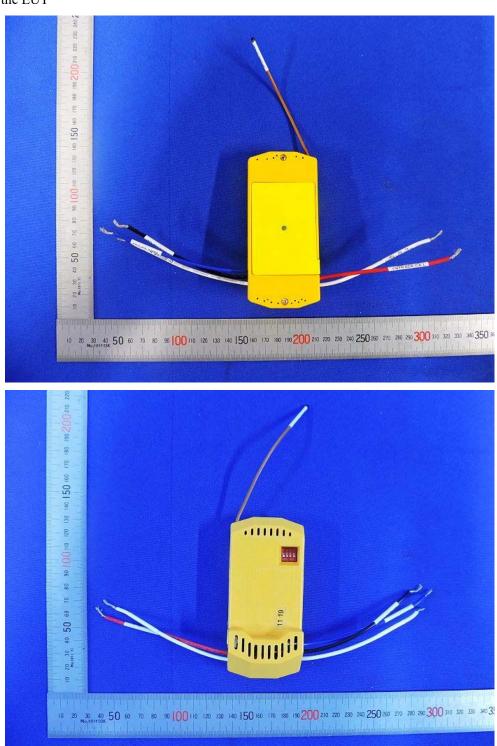
### Photo for the EUT



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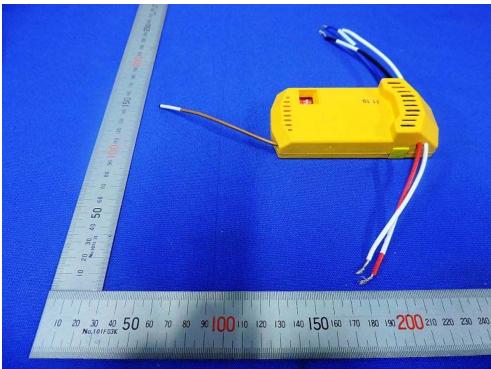
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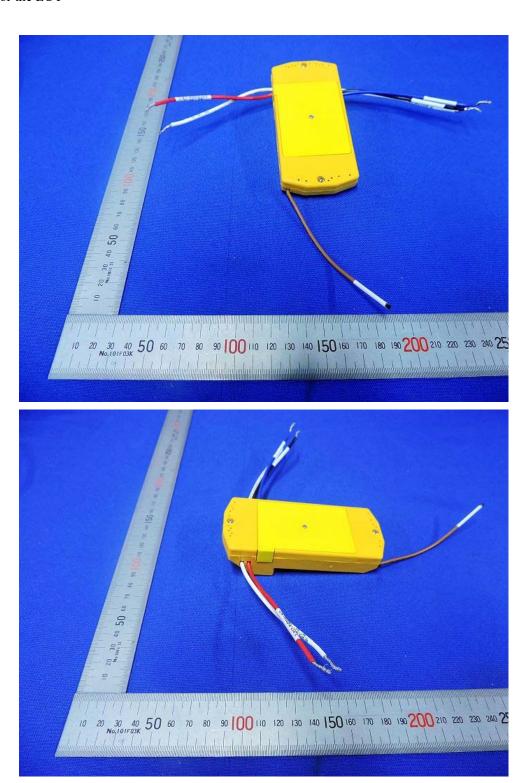




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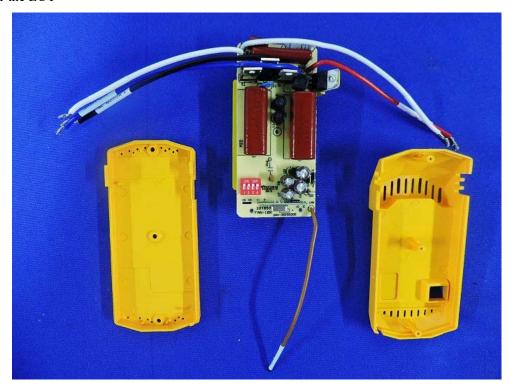
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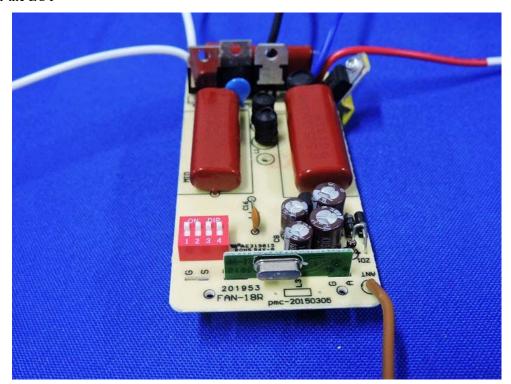
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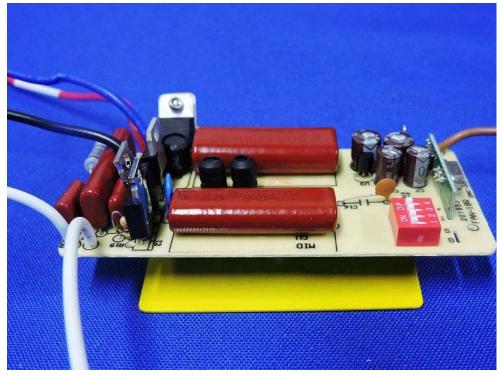
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## Photo for the EUT





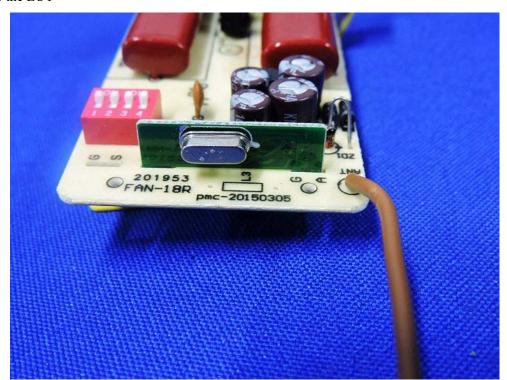
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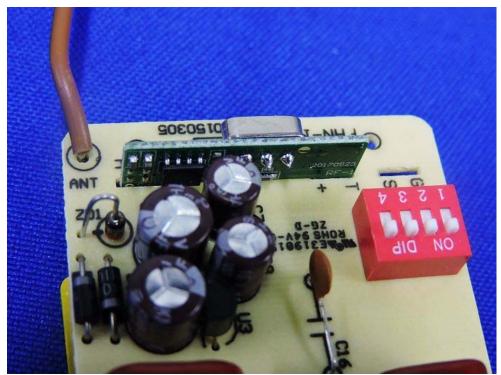
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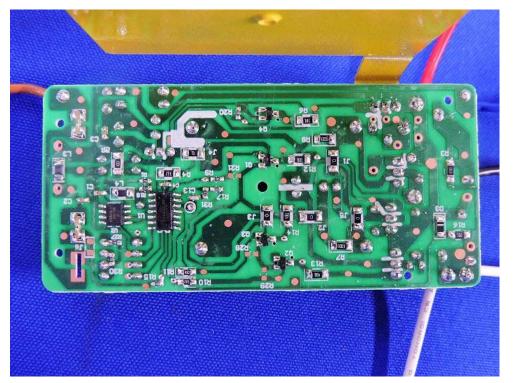
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-End of the report-