





# **FCC TEST REPORT**

Report No: STS1712129E01

Issued for

Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.

No.6, Yong An Road, Beijiao, Shunde, Foshan, China

Product Name:	Microwave Oven
Brand Name:	Midea
Test Model Name:	AM031MA2-PV
Series Model:	XM031MYY-PVH, XM031MYYY-PVH, XM031MYY-PV, XM031MYYY-PV
FCC ID:	VG8XM031MYY-PV4
Test Standard:	FCC Part 18

Any reproduction of this document must be done in full. No single part of this document may be reproduced we permission from STS, All Test Data Presented in this report is only applicable to presented Test sample.

APPROVAL







#### **TEST RESULT CERTIFICATION**

Manufacture's Name ............ Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd. **Product description** Product name ...... Microwave Oven Model Name AM031MA2-PV XM031MYY-PVH, XM031MYYY-PVH, XM031MYY-PV, Series Model XM031MYYY-PV This device described above has been tested by STS, 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 STS, this document may be altered or revised by STS, personal only, and shall be noted in the revision of the document. Date of Test ..... Date of performance of tests ...... Dec 14th. 2017 ~ Dec 24th. 2017 Date of Issue ...... Dec 25th. 2017 Test Result.....Pass **Testing Engineer** (Kyle Rao) Technical Manager (Chopin Xiao)

> 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China Tel: +86-755 3688 6288 Fax: +86-755 3688 6277 Http://www.stsapp.com E-mail: sts@stsapp.com

(Vita Li)

Authorized Signatory:



# **TABLE OF CONTENTS**

1.TEST SUMMARY	5
1.1 TEST FACTORY	5
1.2 MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	7
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	7
2.4 DESCRIPTION OF SUPPORT UNITS	8
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
3. EMC EMISSION TEST	10
3.1 OPERATING FREQUENCY	10
3.2 RADIATION HAZARD TEST	12
3.3 RF OUTPUT POWER MEASUREMENT	13
3.4 CONDUCTED EMISSIONS, 150 KHZ TO 30MHZ	14
3.5 RADIATED EMISSIONS,9 KHZ TO25GHZ	18
APPENDIX 1-PHOTOS OF TEST SETUP	28
APPENDIX 2-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	31



# **Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	Dec 25th. 2017	STS1712129E01	ALL	Initial Issue
Note: Format version of the report -V01				





## **1.TEST SUMMARY**

## **Electromagnetic Interference (EMI)**

EMISSION				
Standard	Item	Class / Severity	Result	
47 CFR PART 18:2016	Conducted Emission (150 kHz to 30 MHz)	18.307(b)	PASS	
	Radiated Emission (9 kHz to 30 MHz)	18.305(b)	PASS	
	Radiated Emission (30 MHz to1 GHz)	18.305(b)	PASS	
	Radiated Emission (1 GHz to 6 GHz)	18.305(b)	PASS	

#### NOTE:

(1) EUT:In this whole report EUT means Equipment Under Test.

#### 1.1 TEST FACTORY

Company Name:	Shenzhen STS Test Services Co., Ltd.	
Address:	1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China	
Telephone:	+86-755 3688 6288	
Fax:	+86-755 3688 6277	
Registration No.:	CNAS Registration No.: L7649; FCC Registration No.: 625569	
	IC Registration No.: 12108A; A2LA Certificate No.: 4338.01;	

## 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 %  $^{\circ}$ 

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	All emissions,radiated(<1G) 30MHz-200MHz	±3.73dB
4	All emissions,radiated(<1G) 200MHz-1000MHz	±3.92dB
5	All emissions,radiated(>1G)	±3.31dB



## 2. GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Microwave Oven			
Trade Name	Midea			
Test Model Name	AM031MA2-PV			
Series Model	XM031MYY-PVH, XM031MYYY-PVH, XM031MYY-PV, XM031MYYY-PV			
Model Difference	XM031MYY-PVH,XM031MYYY-PVH,XM031MYY-PV,XM031 MYYY-PV model designations as follows: X=A or E; First M: Indicate microwave function; 031: "0" indicates the microwave output power is 1000W, "31" indicate cavity capacity is 31 liters; Second M: indicate the design No.; YY/YYY= 0-9 or A-Z, indicate different appearance; -PV: Stand for transduction function; H: with humidity; XM031MYY-PVH is identical to model XM031MYYY-PVH except model number .XM031MYY-PV is identical to model XM031MYYY-PVexcept model number . Model AM031MA2-PV was selected for the final testing. This report can containan additional inverter model MD-INV2000-L4Swhich is exactly identical to original except for model number.			
	The technical specifications of			
	Power Supply  Rated Input Power  (Microwave)	AC 120V, 60Hz 1500W		
Technical Specifications	Rated Output Power (Microwave)	1000W		
	Frequency	2450 MHz(Class B/Group 2)		
	Magnetron Model	2M539H		
	Magnetron Manufacturer WITOL  NOTE: For more detailed information or features please refer to user's manual of EUT.			
DESCRIPTION OF SUPPORT UNITS	The EUT has been tested with water. Load for power output measurement :1000 milliliters of water in the beaker located in the centre of the oven Load for frequency measurement :1000 milliliters of water in the beaker located in the centre of the oven Load for conducted and radiated emission measurement :1000 milliliters of water in the beaker located in the centre of the oven			

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



#### 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.

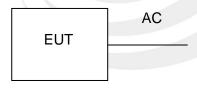
Pretest Mode	Description
Mode 1	Heating Mode

For Conducted Test			
Final Test Mode Description			
Mode 1	Heating Mode		

For Radiated Test			
Final Test Mode Description			
Mode 1	Heating Mode		

NOTE: The test modes were carried out for all operation modes. Only worst case will be show in this report

## 2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED





## 2.4 DESCRIPTION OF SUPPORT UNITS

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
N/A	N/A	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
N/A	N/A	N/A	N/A	N/A

## 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 <code>"Length\_"</code> column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".



## 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

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.

## Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2017.10.15	2018.10.14
Bilog Antenna	TESEQ	CBL6111D	34678	2017.10.30	2018.10.29
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2017.10.27	2018.10.26
Power Amplifier	Agilent	8449B	60538	2017.10.15	2018.10.14
Spectrum Analyzer	Agilent	E4407B	MY50140340	2017.03.11	2018.03.10
Pre-mplifier(1G-18G)	Agilent	8449B	60538	2017.10.28	2018.10.27
Spectrum Analyzer	Agilent	N9020A	MY49100060	2017.03.11	2018.03.10
Pre-mplifier(0.1M-3GHz)	EM	EM330	60538	2017.03.12	2018.03.11

## Conduction Test equipment

					_
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESPI	102086	2017.10.15	2018.10.14
LISN	R&S	ENV216	101242	2017.10.15	2018.10.14
LISN	EMCO	3810/2NM	23625	2017.10.15	2018.10.14
Absorbing clamp	R&S	MDS-21	100668	2017.10.19	2018.10.18
Power meter	STS S094	PF9901	G100731CJ351244	2017.03.11	2018.03.10

## Radiation Hazard and Output Power Test equipment

Test Equipment	Manufacturer	Model	Serial No.	Last Calibration	Calibrated Until
Power Meter	Ainuo	AN8720P	058704074	2017.03.11	2018.03.10
Power Meter	STS S094	PF9901	G100731CJ351244	2017.03.11	2018.03.10



#### 3. EMC EMISSION TEST

#### 3.1 OPERATING FREQUENCY

Test Requirement: 47 CFR PART 18
Test Method: FCC OST/ MP-5

Test Date: 2017-12-25

Power Supply: AC 120V 60Hz Frequency Range: 2400-2500 MHz

Detector: Peak

Limit:

ISM equipment may be operated on any frequency above 9 kHz.And t frequency band 2400-2500MHz is allocated for use by ISM equipment.

(§18.301)

ISM frequency	Tolerance
6.78 MHz	±15.0 kHz ±7.0 kHz ±163.0 kHz ±20.0 kHz ±13.0 MHz ±50.0 MHz ±75.0 MHz ±125.0 MHz ±250.0 MHz ±250.0 MHz ±250.0 MHz ±10.0 MHz

## 3.1.1 FREQUENCY FOR NOrMAL VOLTAGE

The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1000mL water load was placed in the center of the oven and the oven was operated at maximum output power. The fundamental operating frequency was monitored until the water load was reduced to 20 percent of the original load.

#### MEASUREMENT DATA

START Frequency (MHz)	STOP Frequency (MHz)
2446.384	2496.259



## 3.1.2 FREQUENCY FOR LINE VOLTAGE

The EUT was operated / warmed by at least 10 minutes of use with a 1000 mL water load at room temperature at the beginning of the test. Then the operating frequency was monitored as the input voltage was varied between 80 and 125 percent of the nominal rating.

## **MEASUREMENT DATA**

START Frequency (MHz)	STOP Frequency (MHz)
2412.5	2471.8





## 3.2 RADIATION HAZARD TEST

CLIENT:	Guangdong Midea Kitchen Appliances Manufacturing	TEST STANDERD:	FCC Part 18		
	Co.,Ltd				
MODEL NUMBERS:	AM031MA2-PV	PRODUCT:	Microwave Oven		
MODEL TESTED:	AM031MA2-PV	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	22.5°C	HUMIDITY:	55%		
ATM PRESSURE:	101kPa	GROUNDING:	Through AC Power		
TESTED BY:	Barry li	DATE OF TEST:	Dec 25nd,2017		
TEST REFERENCE:	ANSI C63.4-2014, FCC/OST M	P-5:1986			
TEST PROCEDURE:	The EUT was set-up according Hazard Measurement. The me to measure the Radiation leak door closed. A 1000ml water leaven and the Microwave Over operating, the microwavement maximum leakage.	asurement was using a rage in the as-received cooad in a beaker was locan was set to maximum po	nicrowave leakage meter ondition with the oven ted in the center of the ower. While the oven		
TESTED RANGE:	N/A				
TEST VOLTAGE:	AC120V/60Hz 1500W				
RESULTS:	There was no microwave leakage exceeding a power level of 0.19mW/cm2 observed at any point 5cm or more from the external surface of the oven. A maximum of 1.0 mW/cm2 is allowed in accordance with the applicable FCC standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed. The test results relate only to the equipment under test provided by client.				
CHANGES OR	There were no modifications installed by STS Electronic Technical Testing Corp				
MODIFICATIONS:	(Shenzhen) test personnel.				
M. UNCERTAINTY:	0.0002 mW/cm2				





## 3.3 RF OUTPUT POWER MEASUREMENT

Test Requirement: 47 CFR PART 18
Test Method: FCC OST/ MP-5

Test Date: 2017-12-25

Power Supply: AC120V/60Hz 1500W

## 3.3.1 E.U.T. Operation

Test the EUT in microwave mode with full power.

#### 3.3.2 Measurement Data

Mass	Mass of	Ambient	Initial	Final	Heatin	Power
of	the	temperature(	temperature(	temperature(	g	output(watt
water(	container(	℃)	℃)	℃)	time(S	s)
g)	g)				)	
1000	480	23.5	19	37.5	120	697.9

#### Formula:

$$P = \frac{4.2 \times m_w(T_2 - T_1) + 0.9 \times m_c(T_2 - T_0)}{t}$$

#### **NOTE:**

P is the microwave power output, in watts  $m_w$  is the mass of the water, in grams  $m_c$  is the mass of the container, in grams

To is the ambient temperature, in degrees Celsius

 $T_1$  is the initial temperature of the water, in degrees Celsius

T2 is the final temperature of the water, in degrees Celsius

t is the heating time, in seconds, excluding the magnetron filament heating-up time.



## 3.4 CONDUCTED EMISSIONS, 150 KHZ TO 30MHZ

Test Requirement: 47 CFR PART 18
Test Method: FCC OST/ MP-5

Test Date: 2017-12-25

Power Supply: AC 120V 60Hz

Frequency Range: 150 kHz to 30 MHz

Detector: Peak for pre-scan, Quasi-Peak and Average for the final result.

(9kHz Resolution Bandwidth for 150 kHz to 30 MHz)

Limit:

Frequency range MHz	AC mains terminals dB (μV)		
1711 12	Quasi-peak	Average	
0.15 to 0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>	
0.5 to 5	56	46	
5 to 30	60	50	

Note1: The limit decreases linearly with the logarithm of the frequency in therange 0.05 MHz to 0.5

MHz.

Note2: The lower limit is applicable at the transition frequency.

## 3.4.1 TEST PROCEDURE

The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support

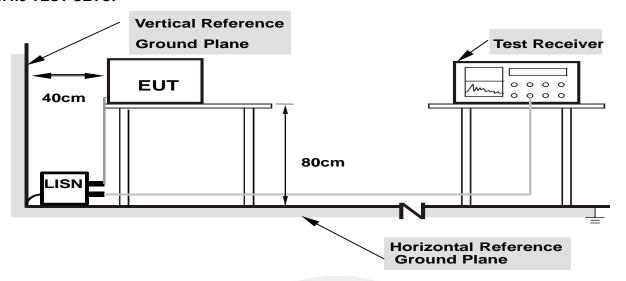
- equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
  - I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the
- c. cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 3.4.2 DEVIATION FROM TEST STANDARD

No deviation



#### 3.4.3 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

#### 3.4.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



## 3.4.5 TEST RESULTS

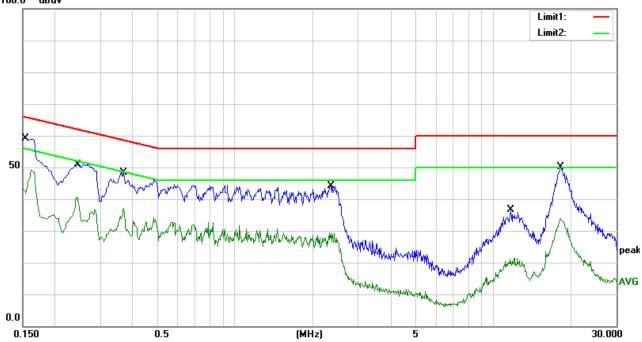
Temperature:	23.5 ℃	Relative Humidity:	59%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	49.43	9.79	59.22	65.78	-6.56	QP
2	0.1540	32.93	9.79	42.72	55.78	-13.06	AVG
3	0.2460	41.01	9.99	51.00	61.89	-10.89	QP
4	0.2460	29.99	9.99	39.98	51.89	-11.91	AVG
5	0.3700	38.30	10.09	48.39	58.50	-10.11	QP
6	0.3700	27.13	10.09	37.22	48.50	-11.28	AVG
7	2.3540	34.40	9.80	44.20	56.00	-11.80	QP
8	2.3540	19.32	9.80	29.12	46.00	-16.88	AVG
9	11.6980	26.38	10.22	36.60	60.00	-23.40	QP
10	11.6980	9.58	10.22	19.80	50.00	-30.20	AVG
11	18.3180	39.72	10.39	50.11	60.00	-9.89	QP
12	18.3180	23.04	10.39	33.43	50.00	-16.57	AVG

#### Remark:

1. All readings are Quasi-Peak and Average values.

<sup>2.</sup> Margin = Result (Result = Reading + Factor )-Limit



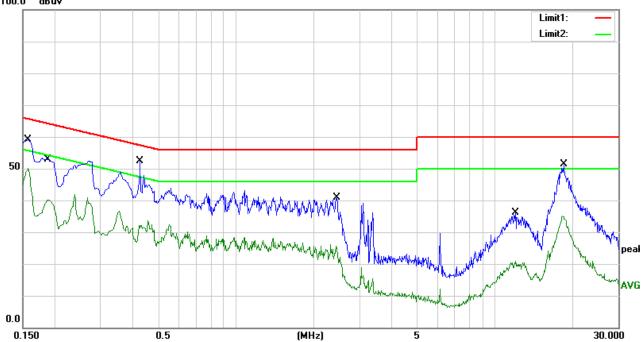
Page 17 of 40 Report No.: STS1712129E01

Temperature:	23.5℃	Relative Humidity:	59%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	49.39	9.77	59.16	65.57	-6.41	QP
2	0.1580	39.96	9.77	49.73	55.57	-5.84	AVG
3	0.1904	42.74	9.85	52.59	64.02	-11.43	QP
4	0.1904	29.86	9.85	39.71	54.02	-14.31	AVG
5	0.4260	42.29	10.04	52.33	57.33	-5.00	QP
6	0.4260	22.15	10.04	32.19	47.33	-15.14	AVG
7	2.4540	31.02	9.89	40.91	56.00	-15.09	QP
8	2.4540	10.44	9.89	20.33	46.00	-25.67	AVG
9	12.0460	26.21	9.99	36.20	60.00	-23.80	QP
10	12.0460	10.85	9.99	20.84	50.00	-29.16	AVG
11	18.4340	40.95	10.35	51.30	60.00	-8.70	QP
12	18.4340	23.58	10.35	33.93	50.00	-16.07	AVG

#### Remark:

- 1. All readings are Quasi-Peak and Average values.
- 2. Margin = Result (Result = Reading + Factor )—Limit 100.0 dBuV





## 3.5 RADIATED EMISSIONS,9 KHZ TO25GHZ

#### 3.5.1 Radiated Emission Limits

- (a) ISM equipment operation on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.
- (b) The field strength levels of emissions which lie outside the bands specified in §18.301,unless otherwise indicated, shall not exceed the following:

RF Power generated by equipment(watts)	Field strength Limit(uV/m) @300m
Below 500	25
500 or more	25*SQRT(power/500)

Power =697.9W according to cluse7.2.2 Limit=20lg(25\*SQRT(power/500))+20lg(300/3) @ 3m distance.





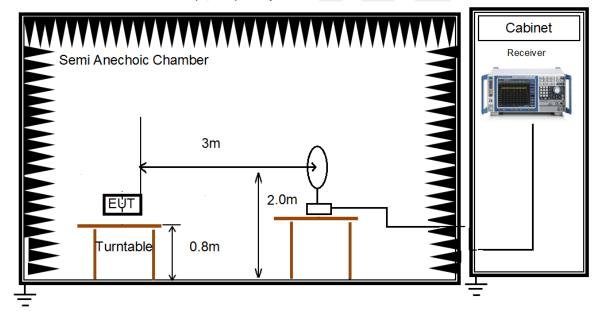
#### 3.5.2 TEST PROCEDURE

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

Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

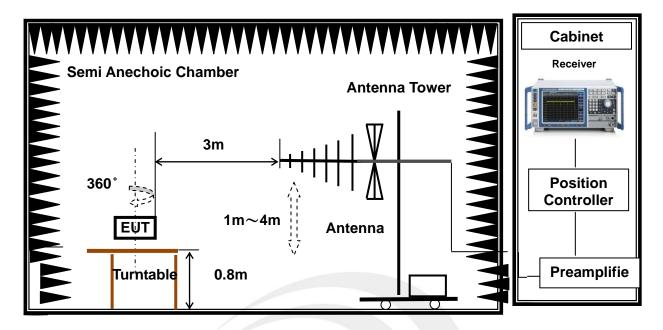
#### 3.5.3 TEST SETUP

(A) Radiated Emission Test-Up Frequency 9KHz~30MHz





(B) Radiated Emission Test-Up Frequency 30 MHz to 1 GHz



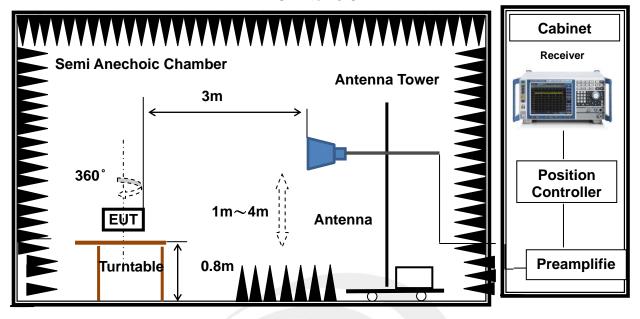
- 1. The radiated emissions test was conducted in a semi-anechoic chamber.
- 2. Biconical and log periodic antenna was used for the frequency range from 30MHz to 1GHz
- 3. The EUT was connected to nominal power supply through a mains power outlet which was bonded to the ground reference plane; The mains cables were draped to the ground reference plane. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 4. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT.

The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal andvertical antenna polarization.



Above 1 GHz:

#### 1 GHz to 18 GHz



- 1. The radiated emissions test was conducted in a fully-anechoic chamber.
- 2. Horn antenna was used for the frequency above 1GHz
- 3. The EUT was connected to nominal power supply through a mains power outlet which was bonded to the ground reference plane; The mains cables were draped to the ground reference plane. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 4. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emission spectrum plots of the EUT.

The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.



## 3.5.4 TEST RESULTS

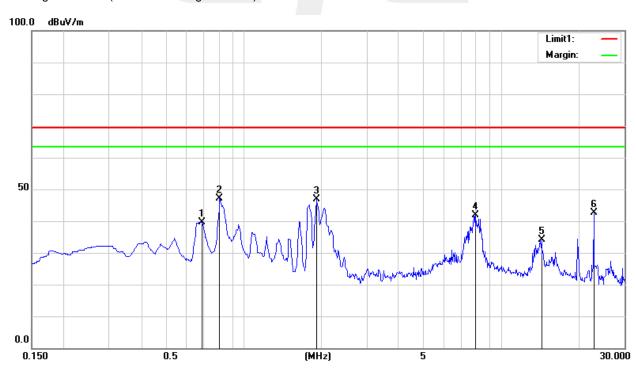
## Between 0.15MHz-30MHz

Temperature:	26 ℃	Relative Humidity:	60%
Phase:	x	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.6873	-10.82	50.52	39.70	69.41	-29.71	QP
2	0.8064	-2.20	49.24	47.04	69.41	-22.37	QP
3	1.9111	3.60	43.37	46.97	69.41	-22.44	QP
4	7.9706	6.85	34.92	41.77	69.41	-27.64	QP
5	14.3285	-0.14	34.23	34.09	69.41	-35.32	QP
6	22.7760	8.70	34.03	42.73	69.41	-26.68	QP

#### Remark:

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





## Between 0.15MHz-30MHz

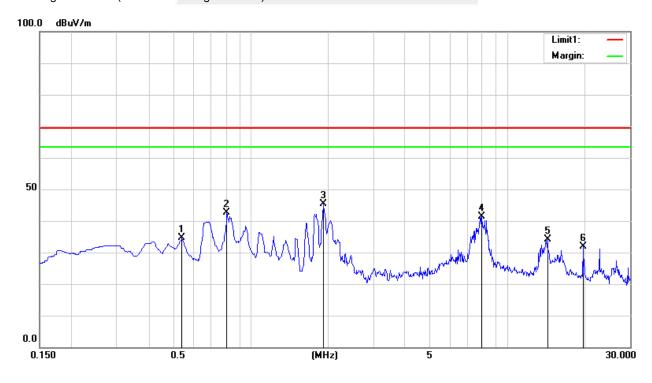
Temperature:	26 ℃	Relative Humidity:	60%
Phase:	Y	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.5381	-17.58	52.13	34.55	69.41	-34.86	QP
2	0.8064	-6.70	49.24	42.54	69.41	-26.87	QP
3	1.9111	2.10	43.37	45.47	69.41	-23.94	QP
4	7.9706	6.35	34.92	41.27	69.41	-28.14	QP
5	14.3285	-0.14	34.23	34.09	69.41	-35.32	QP
6	19.6720	-2.43	34.27	31.84	69.41	-37.57	QP

#### Remark:

1. All readings are Quasi-Peak.

<sup>2.</sup> Margin = Result (Result = Reading + Factor )-Limit





## Between 30MHz-1GHz

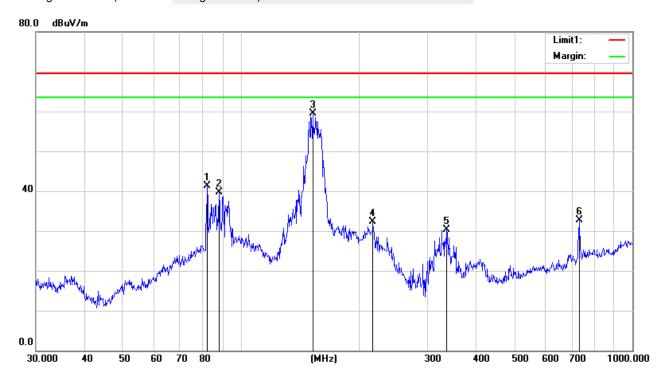
Temperature:	<b>24.6</b> ℃	Relative Humidity:	58%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	82.0706	63.52	-22.17	41.35	69.41	-28.06	QP
2	88.0330	60.31	-20.69	39.62	69.41	-29.79	QP
3	152.6641	77.70	-18.11	59.59	69.41	-9.82	QP
4	217.5443	51.61	-19.27	32.34	69.41	-37.07	QP
5	336.0352	44.31	-14.05	30.26	69.41	-39.15	QP
6	731.9203	36.69	-3.97	32.72	69.41	-36.69	QP

#### Remark:

1. All readings are Quasi-Peak.

<sup>2.</sup> Margin = Result (Result = Reading + Factor )—Limit





## Between 30MHz-1GHz

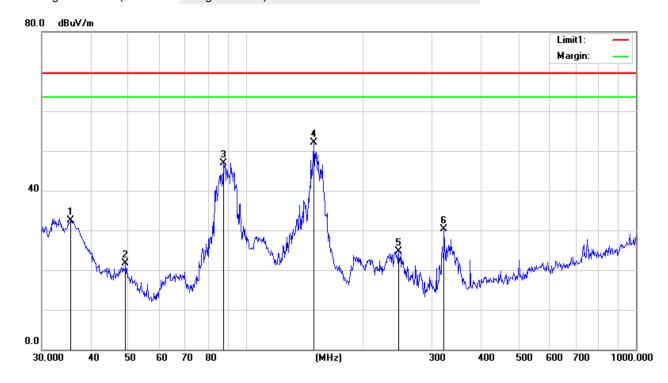
Temperature:	<b>24.6</b> ℃	Relative Humidity:	58%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	35.6240	46.61	-14.07	32.54	69.41	-36.87	QP
2	49.1865	42.69	-21.06	21.63	69.41	-47.78	QP
3	87.7248	67.76	-20.77	46.99	69.41	-22.42	QP
4	149.4857	69.99	-17.94	52.05	69.41	-17.36	QP
5	245.9510	41.52	-16.91	24.61	69.41	-44.80	QP
6	322.1886	44.54	-14.15	30.39	69.41	-39.02	QP

#### Remark:

1. All readings are Quasi-Peak .

2. Margin = Result (Result = Reading + Factor )—Limit





## Between 1GHz-25GHz

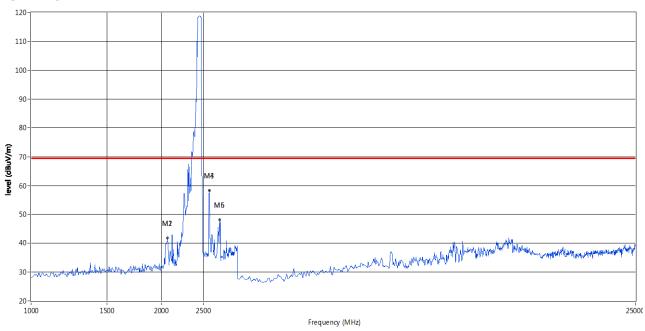
Temperature:	25 ℃	Relative Humidity:	65%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

N 0	Frequency (MHz)	Result s (dBuV/ m)	Factor (dB)	Limit (dBuV/ m)	Margin (dB)	Detect or	Table (o)	Heig ht (cm)	ANT	Verdic t
1	2067.332	-11.86	-17.14		11.86	AV	165.80	118	Horizontal	Pass
2	2067.332	22.76	-17.14	69.4	46.64	Peak	165.80	118	Horizontal	Pass
3	2725.686	-17.84	-14.44		17.84	AV	55.30	178	Horizontal	Pass
4	2725.686	25.16	-14.44	69.4	44.24	Peak	55.30	178	Horizontal	Pass
5	2581.047	-7.54	-13.24		7.54	AV	300.10	148	Horizontal	Pass
6	2581.047	26.06	-13.24	69.4	43.34	Peak	300.10	148	Horizontal	Pass

#### Remark:

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







## Between 1GHz-25GHz

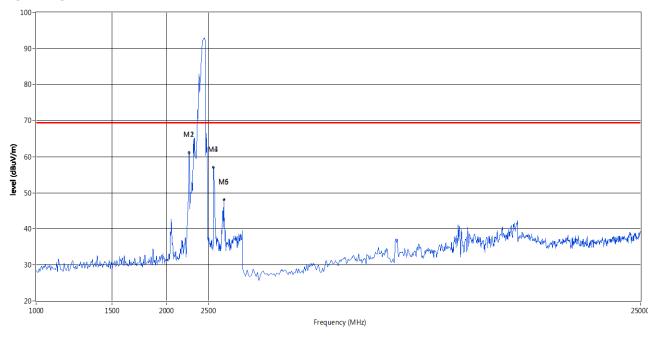
Temperature:	<b>25</b> ℃	Relative Humidity:	65%	
Phase:	Vertical	Test Mode:	Mode 1	
Test Voltage:	AC 120V/60Hz			

N 0	Frequenc y (MHz)	Result s (dBuV/ m)	Factor (dB)	Limit (dBuV/ m)	Margin (dB)	Detect or	Table (o)	Height (cm)	ANT	Verdic t
1	2256.858	-18.40	-16.70		18.40	AV	123.80	186	Vertical	Pass
2	2256.858	21.50	-16.70	69.4	47.90	Peak	123.80	186	Vertical	Pass
3	2571.072	-11.10	-13.30		11.10	AV	252.50	164	Vertical	Pass
4	2571.072	25.40	-13.30	69.4	44.00	Peak	252.50	164	Vertical	Pass
5	2715.711	-4.75	-14.55		4.75	AV	44.00	118	Vertical	Pass
6	2715.711	25.05	-14.55	69.4	44.35	Peak	44.00	118	Vertical	Pass

#### Remark:

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

RE\_EN Test Case\_FCC 18 1GHz-25GHz

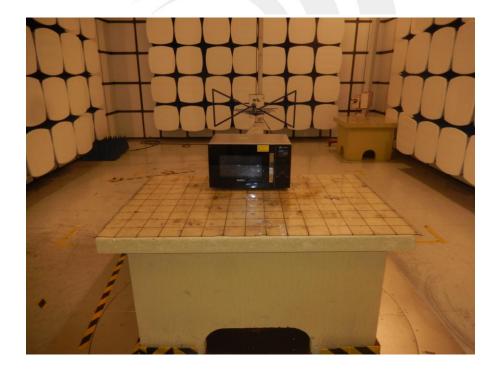




# **APPENDIX 1-PHOTOS OF TEST SETUP**

Radiated Measurement Photos









Page 29 of 40

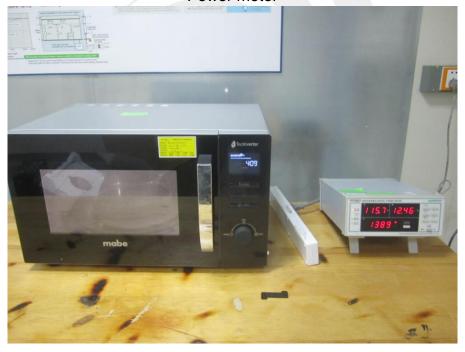
**Conducted Measurement Photos** 







Power meter





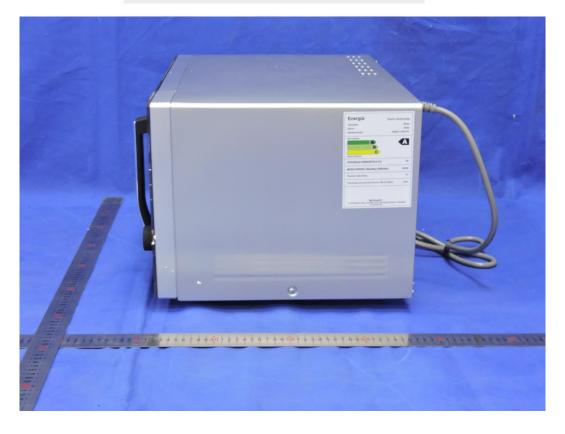
# APPENDIX 2-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS











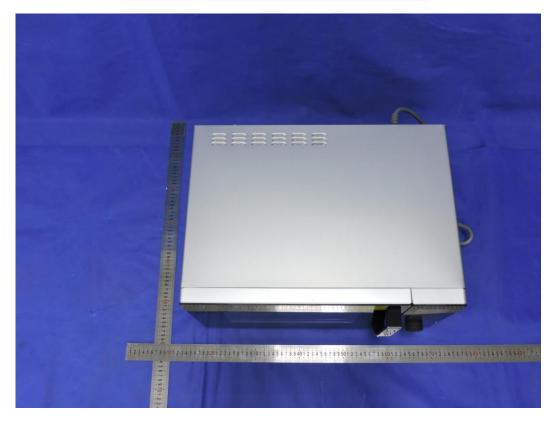




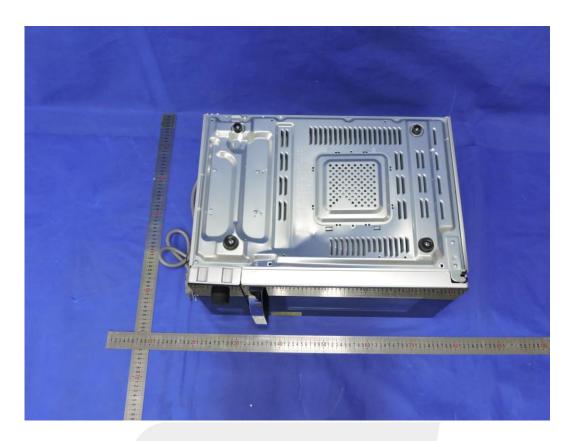


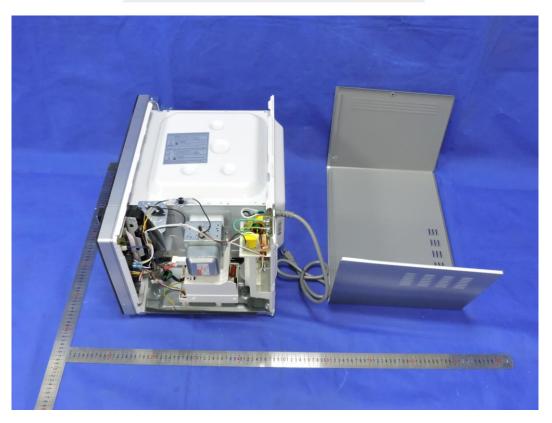




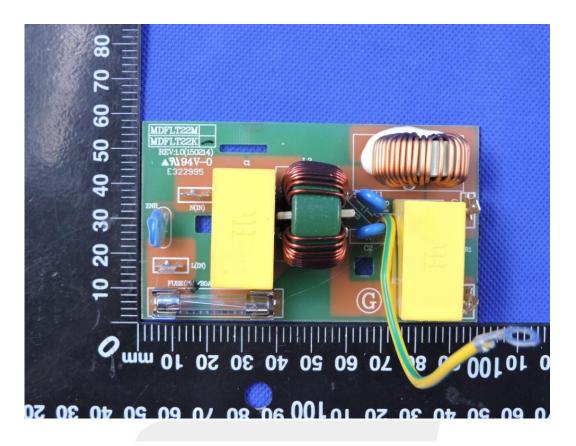


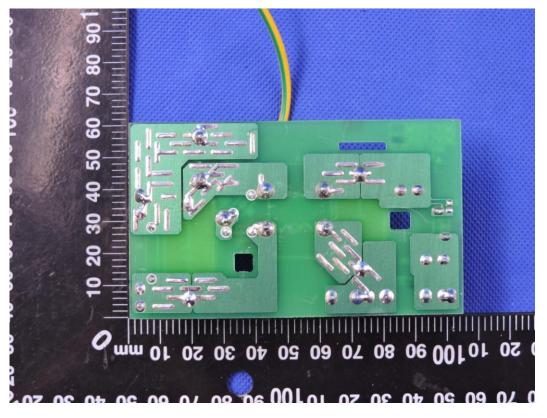




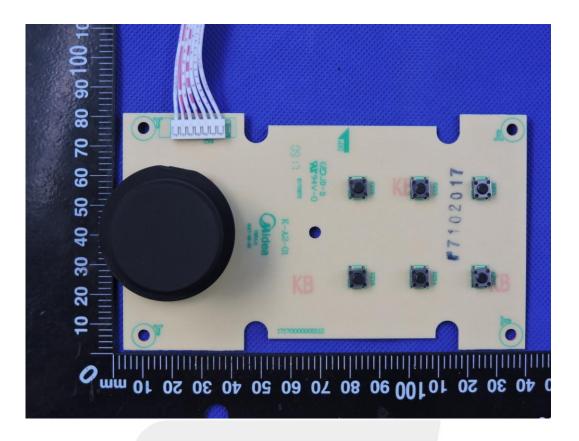


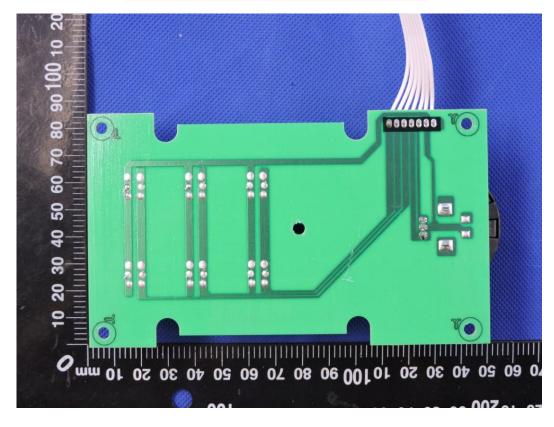




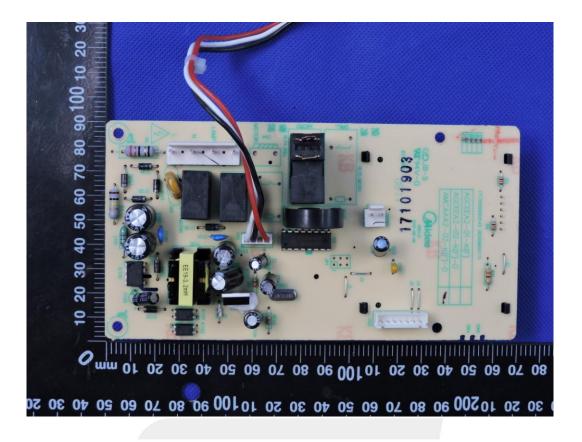


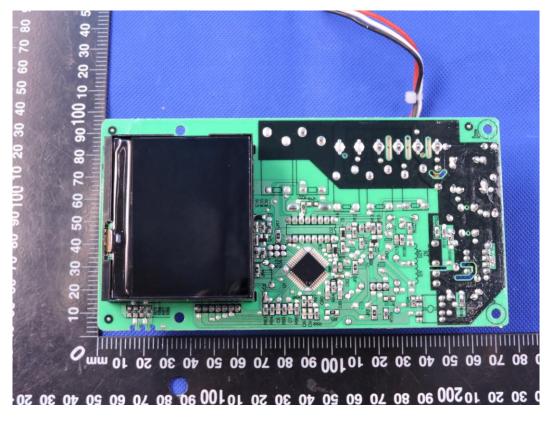




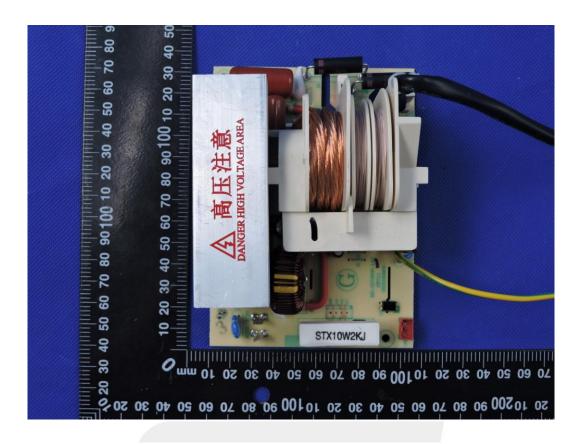


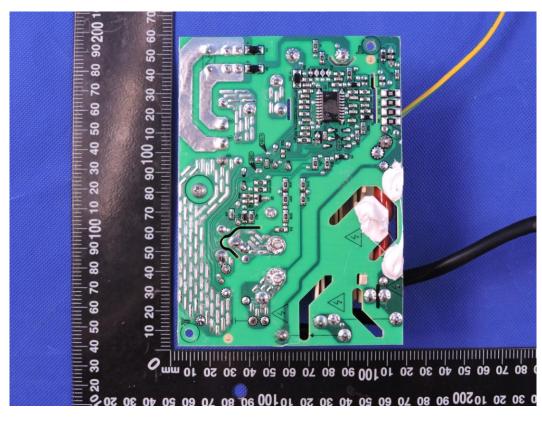
















\* \* \* \* \* END OF THE REPORT \* \* \* \* \*