



FCC TEST REPORT

Report No: STS1804230E01

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:	EM925AJW
Series Model:	XM925AYY-P1(P2), XM925AYYY-P1(P2), NS-MW09RD7, XM925AYY, XM925AYYY
FCC ID:	RSF XM925AYY
Test Standard:	FCC Part 18

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Shenzhen STS Test Services Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name: Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.

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

Manufacture's Name: Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.

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

Product description

Product name: Microwave Oven

Model Name: EM925AJW

Series Model: XM925AYY-P1(P2), XM925AYYY-P1(P2),
NS-MW09RD7, XM925AYY, XM925AYYY

Standards: 47 CFR PART 18:2016

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.

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Date of Test

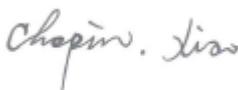
Date of performance of tests April 26th. 2018 ~ May 02th. 2018

Date of Issue May 03th. 2018

Test Result..... **Pass**

Testing Engineer : 

(Kyle Rao)

Technical Manager : 

(Chopin Xiao)

Authorized Signatory : 

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	May 03th. 2018	STS1804230E01	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 to 1 GHz)	18.305(b)	PASS
	Radiated Emission (1 GHz to 25 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 % .

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													
Test Model Name	EM925AJW												
Series Model	XM925AYY-P1(P2), XM925AYY-P1(P2), NS-MW09RD7, XM925AYY, XM925AYY												
Model Difference	XM925AYY-P1(P2), XM925AYY-P1(P2), NS-MW09RD7 , XM925AYY, XM925AYY model designations as follows: X= E or A ; M: Indicate Microwave; 925: "9" indicate the microwave output power is 900W, "25" indicate cavity capacity is 25 liters; A: Indicate the design No.; YY/YYY= 0-9 or A-Z, indicate different appearance; -P1/P2: Painted Steel Cavity Model NS-MW09RD7 is identical to EM925AJW except for model name. Model EM925AJW was chosen for the final testing. Note : There are two Manufacturer's LED lamp (model: ZH187AW and YHW01) which is contained by this report. They are electrical identical except model and Manufacturer.												
Technical Specifications	<p>The technical specifications of EUT are as below:</p> <table border="1"><tr><td>Power Supply</td><td>120V AC/60Hz</td></tr><tr><td>Rated Input Power (Microwave)</td><td>1350W</td></tr><tr><td>Rated Output Power (Microwave)</td><td>900W</td></tr><tr><td>Frequency</td><td>2450 MHz(Class B/Group 2)</td></tr><tr><td>Magnetron Model</td><td>2M219J</td></tr><tr><td>Magnetron Manufacturer</td><td>WITOL</td></tr></table> <p>NOTE: For more detailed information or features please refer to user's manual of EUT.</p>	Power Supply	120V AC/60Hz	Rated Input Power (Microwave)	1350W	Rated Output Power (Microwave)	900W	Frequency	2450 MHz(Class B/Group 2)	Magnetron Model	2M219J	Magnetron Manufacturer	WITOL
Power Supply	120V AC/60Hz												
Rated Input Power (Microwave)	1350W												
Rated Output Power (Microwave)	900W												
Frequency	2450 MHz(Class B/Group 2)												
Magnetron Model	2M219J												
Magnetron Manufacturer	WITOL												
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.

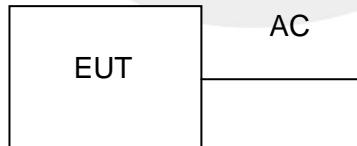
Pretest Mode	Description
Mode 1	Heating Mode

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.
N/A	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length
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 『Length』 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	1343	2017.10.27	2018.10.26
Spectrum Analyzer	Agilent	E4407B	MY50140340	2018.03.08	2019.03.07
Pre-mplifier(1G-18G)	Agilent	8449B	60538	2017.10.28	2018.10.27
Spectrum Analyzer	Agilent	N9020A	MY49100060	2018.03.08	2019.03.07
Pre-mplifier(0.1M-3GHz)	EM	EM330	--	2018.03.11	2019.03.10
Loop Antenna	ZHNAN	ZN3090C	16035	2018.03.11	2019.02.10

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	2018.03.11	2019.03.10

Radiation Hazard and Output Power Test equipment

Test Equipment	Manufacturer	Model	Serial No.	Last Calibration	Calibrated Until
Power Meter	Ainuo	AN8720P	058704074	2018.03.11	2019.03.10
Power Meter	STS S094	PF9901	G100731CJ351244	2018.03.11	2019.03.10
Microwave Measurement system	HOLADAY	HI-1710	98371	2018.03.11	2019.03.10



3. EMC EMISSION TEST

3.1 OPERATING FREQUENCY

Test Requirement: 47 CFR PART 18
Test Method: FCC OST/ MP-5
Test Date: 2018-04-27
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 1 frequency band 2400-2500MHz is allocated for use by ISM equipment. (§18.301)

ISM frequency	Tolerance
6.78 MHz	±15.0 kHz
13.56 MHz	±7.0 kHz
27.12 MHz	±163.0 kHz
40.68 MHz	±20.0 kHz
915 MHz	±13.0 MHz
2,450 MHz	±50.0 MHz
5,800 MHz	±75.0 MHz
24,125 MHz	±125.0 MHz
61.25 GHz	±250.0 MHz
122.50 GHz	±500.0 MHz
245.00 GHz	±1.0 GHz

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)
2408.1	2475.4



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)
2410.8	2474.2





3.2 RADIATION HAZARD TEST

CLIENT:	Guangdong Midea Kitchen Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EM925AJW, XM925AYY-P1(P2), XM925AYYY-P1(P2), NS-MW09RD7, XM925AYY, XM925AYYY	PRODUCT:	Microwave Oven
MODEL TESTED:	EM925AJW	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22.5°C	HUMIDITY:	56.7%
ATM PRESSURE:	101kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	Barry li	DATE OF TEST:	May. 02nd,2018
TEST REFERENCE:	ANSI C63.4-2014, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set-up according to the FCC MP-5 and FCC Part 18 for Radiation Hazard Measurement. The measurement was using a microwave leakage meter to measure the Radiation leakage in the as-received condition with the oven door closed. A 1000ml water load in a beaker was located in the center of the oven and the Microwave Oven was set to maximum power. While the oven operating, the microwavemeter will check the leakage and then record the maximum leakage.		
TESTED RANGE:	N/A		
TEST VOLTAGE:	AC120V/60Hz		
RESULTS:	There was no microwave leakage exceeding a power level of 0.16mW/cm ² observed at any point 5cm or more from the external surface of the oven. A maximum of 1.0 mW/cm ² 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 MODIFICATIONS:	There were no modifications installed by STS Electronic Technical Testing Corp (Shenzhen) test personnel.		
M. UNCERTAINTY:	0.0002 mW/cm ²		



3.3 RF OUTPUT POWER MEASUREMENT

Test Requirement: 47 CFR PART 18

Test Method: FCC OST/ MP-5

Test Date: 2018-04-27

Power Supply: AC120V/60Hz

3.3.1 E.U.T. Operation

Test the EUT in microwave mode with full power.

3.3.2 Measurement Data

Mass of water(g)	Mass of the container(g)	Ambient temperature(°C)	Initial temperature(°C)	Final temperature(°C)	Heating time(S)	Power output(watts)
1000	480	20	23.4	45.8	120	983

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

T_0 is the ambient temperature, in degrees Celsius

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

T_2 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: 2018-04-27
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 (μ V)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50

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

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

3.4.1 TEST PROCEDURE

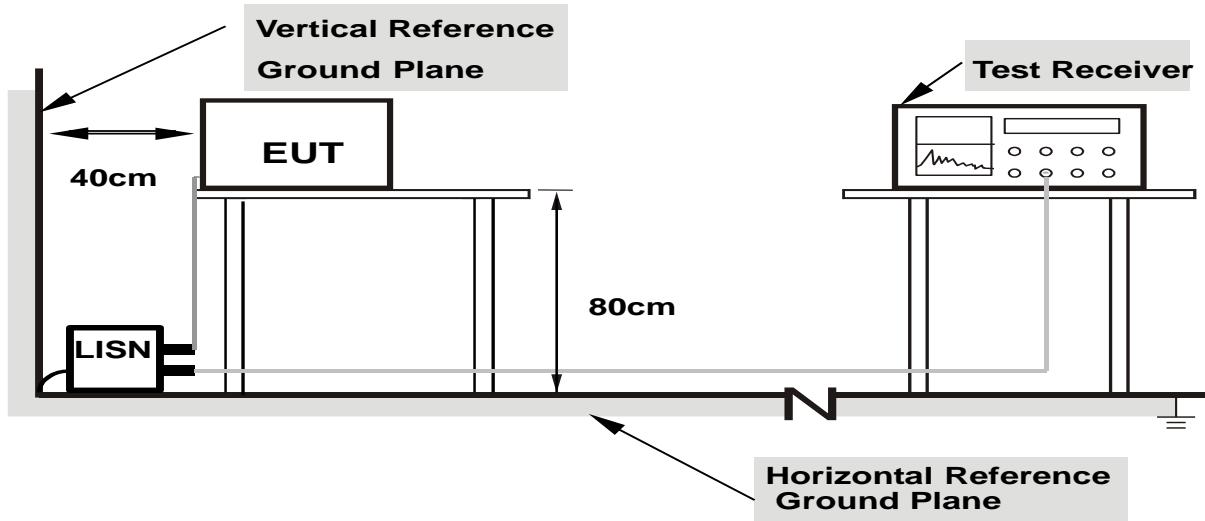
The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support

- a. 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.
- c. 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.
- 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 cm 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

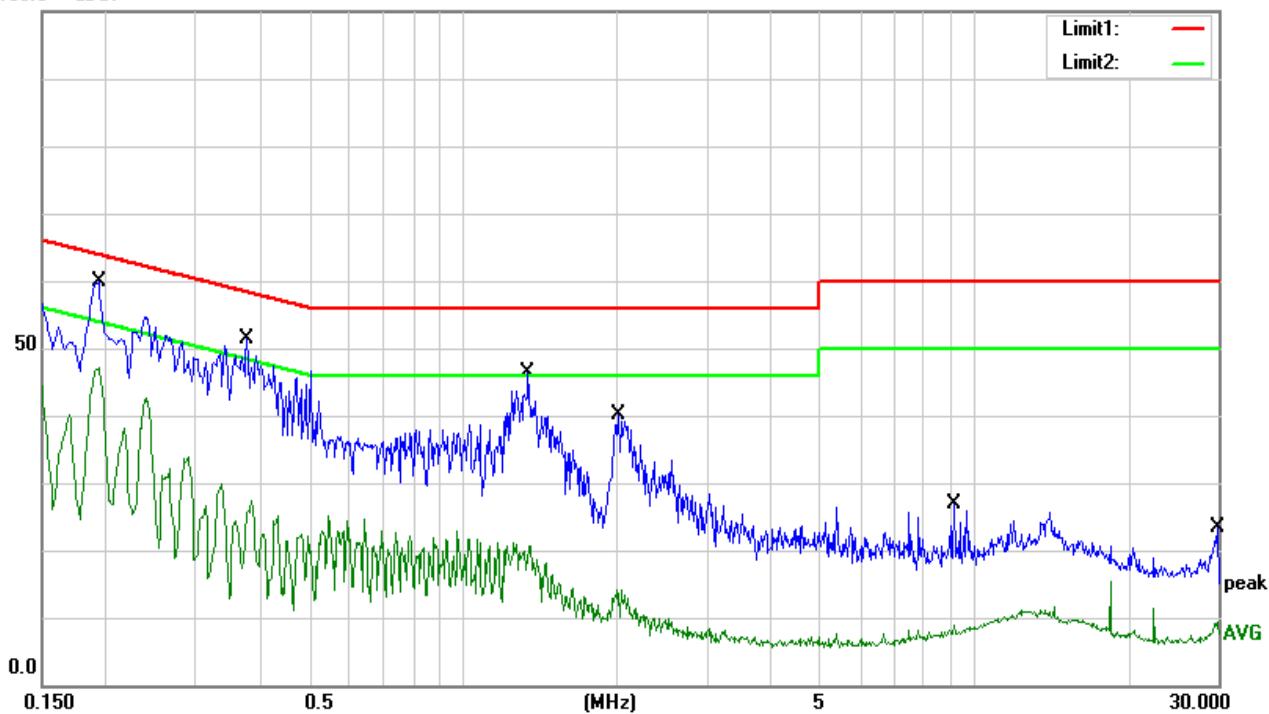
Temperature:	23.5 °C	Relative Humidity:	59%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1940	50.03	9.78	59.81	63.86	-4.05	QP
2	0.1940	35.48	9.78	45.26	53.86	-8.60	AVG
3	0.3780	40.96	10.08	51.04	58.32	-7.28	QP
4	0.3780	15.82	10.08	25.90	48.32	-22.42	AVG
5	1.3380	36.47	9.79	46.26	56.00	-9.74	QP
6	1.3380	10.72	9.79	20.51	46.00	-25.49	AVG
7	2.0220	30.40	9.79	40.19	56.00	-15.81	QP
8	2.0220	3.96	9.79	13.75	46.00	-32.25	AVG
9	9.1540	16.66	10.11	26.77	60.00	-33.23	QP
10	9.1540	-1.35	10.11	8.76	50.00	-41.24	AVG
11	29.9620	13.13	10.29	23.42	60.00	-36.58	QP
12	29.9620	-3.04	10.29	7.25	50.00	-42.75	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

100.0 dBuV





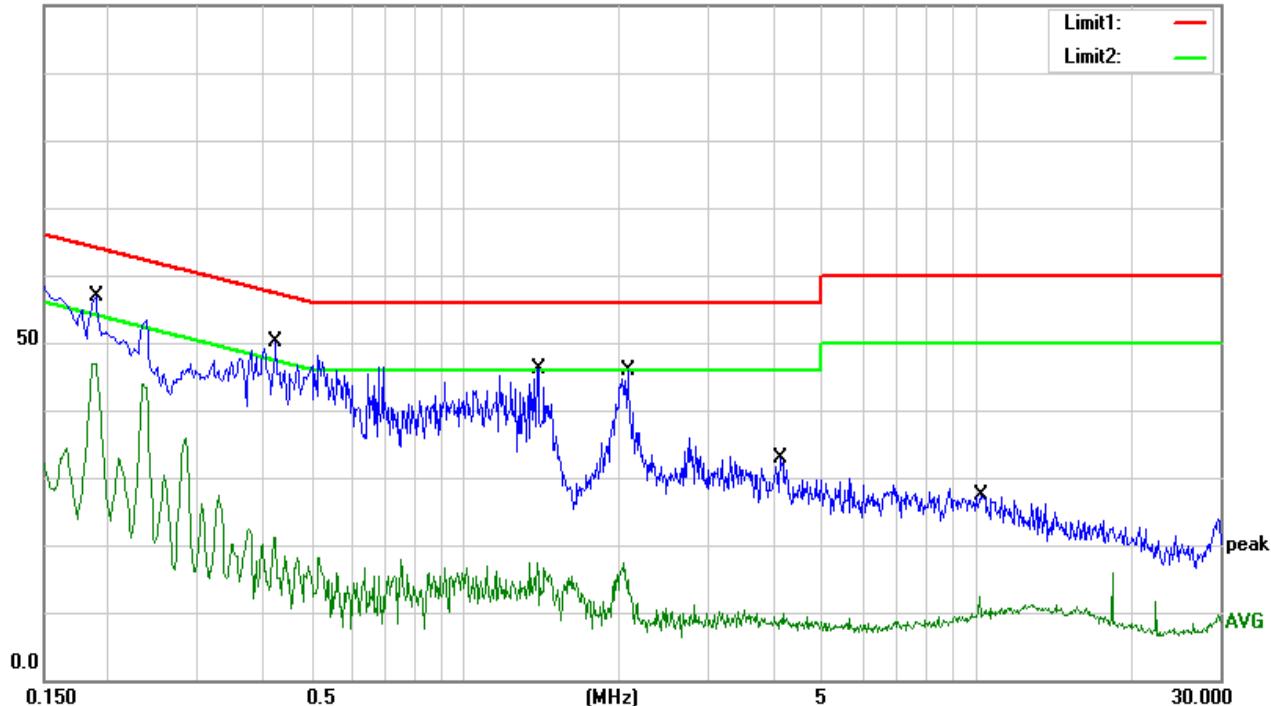
Temperature:	23.5°C	Relative Humidity:	59%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1900	47.15	9.78	56.93	64.04	-7.11	QP
2	0.1900	34.12	9.78	43.90	54.04	-10.14	AVG
3	0.4260	39.81	10.03	49.84	57.33	-7.49	QP
4	0.4260	5.00	10.03	15.03	47.33	-32.30	AVG
5	1.3940	36.38	9.79	46.17	56.00	-9.83	QP
6	1.3940	1.25	9.79	11.04	46.00	-34.96	AVG
7	2.0820	36.17	9.79	45.96	56.00	-10.04	QP
8	2.0820	3.10	9.79	12.89	46.00	-33.11	AVG
9	4.1420	22.92	9.84	32.76	56.00	-23.24	QP
10	4.1420	-0.94	9.84	8.90	46.00	-37.10	AVG
11	10.1980	17.12	10.21	27.33	60.00	-32.67	QP
12	10.1980	-0.63	10.21	9.58	50.00	-40.42	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

100.0 dBuV





3.5 RADIATED EMISSIONS, 9 KHZ TO 25GHZ

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	$25 * \text{SQRT}(\text{power}/500)$

Power = 550.2W according to clause 7.2.2

Limit = $20 \lg(25 * \text{SQRT}(\text{power}/500)) + 20 \lg(300/3)$ @ 3m distance.



3.5.2 TEST PROCEDURE

The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz.

- a. 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

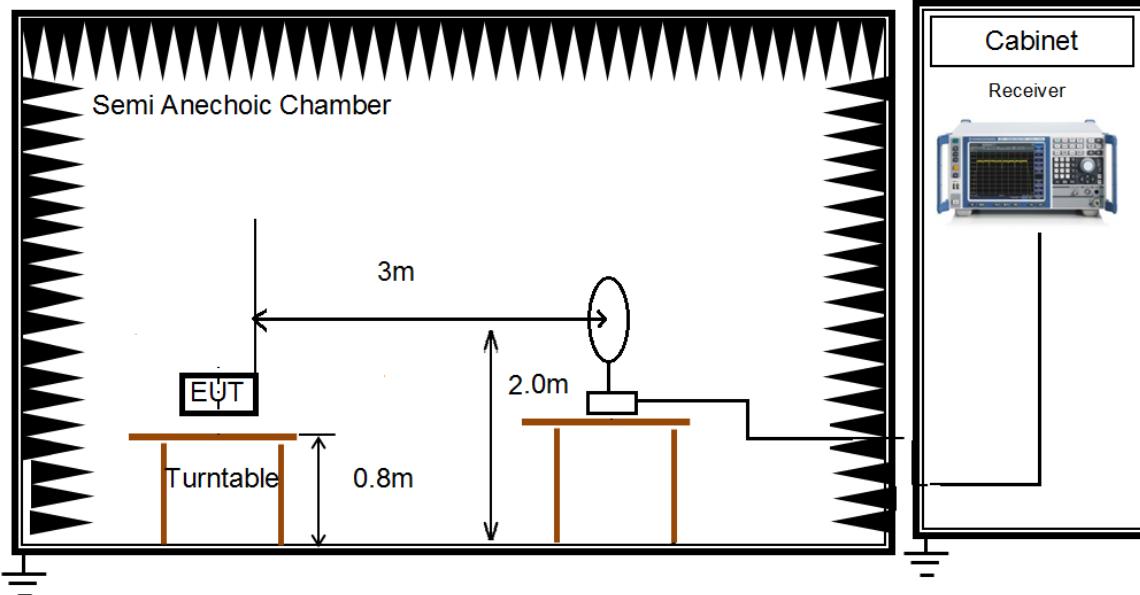
- e. EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

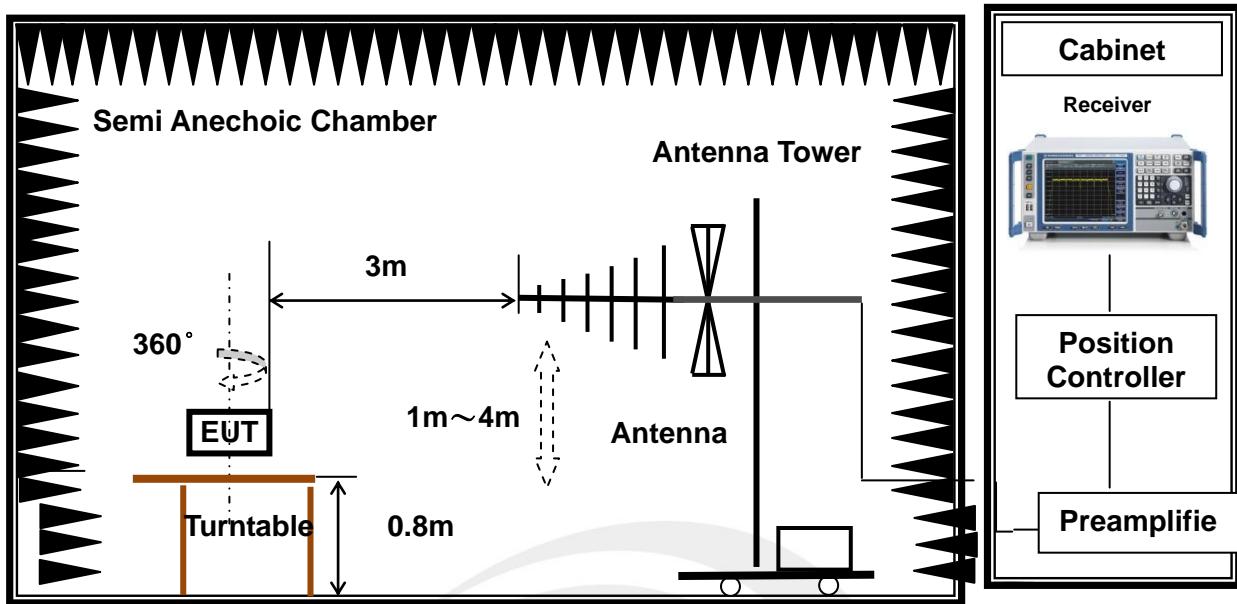
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.5.3 TEST SETUP

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



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

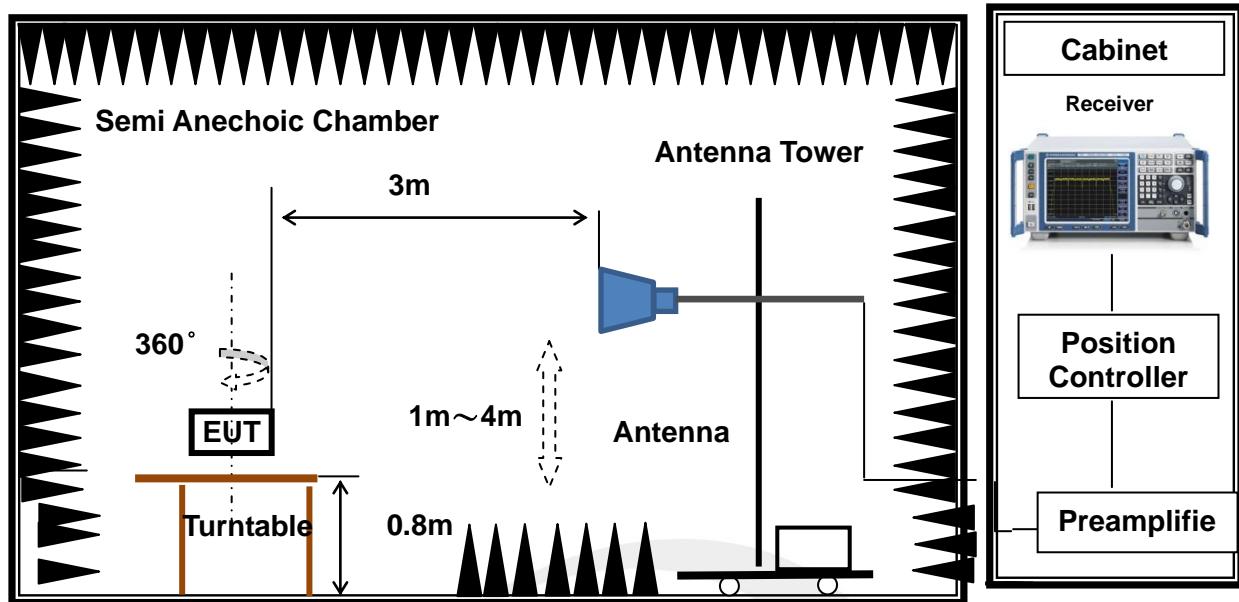


1. The radiated emissions test was conducted in a semi-anechoic chamber.
2. Biconical and log periodic antenna was used for the frequency range from 30MHz to 1GHz
3. The EUT was connected to nominal power supply through a mains power outlet which was bonded to the ground reference plane; The mains cables 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 and vertical 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

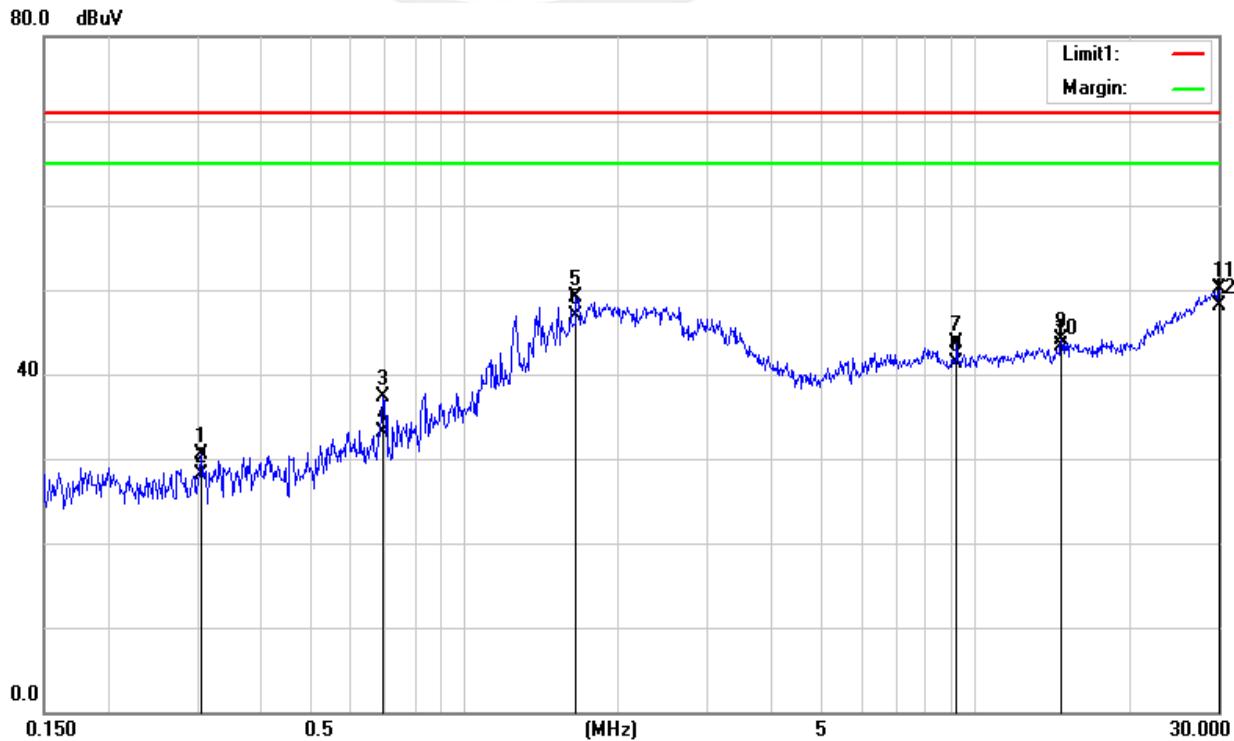
Between 0.15MHz-30MHz

Temperature:	24.6 °C	Relative Humidity:	58%
Phase:	X	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.3050	-24.60	55.14	30.54	70.90	-40.36	QP
2	0.3050	-27.07	55.14	28.07	70.90	-42.83	AVG
3	0.6935	-7.06	44.46	37.40	70.90	-33.5	QP
4	0.6935	-11.43	44.46	33.03	70.90	-37.87	AVG
5	1.6532	13.49	35.56	49.05	70.90	-21.85	QP
6	1.6532	11.32	35.56	46.88	70.90	-24.02	AVG
7	9.2041	26.19	17.43	43.62	70.90	-27.28	QP
8	9.2041	23.90	17.43	41.33	70.90	-29.57	AVG
9	14.7497	34.49	9.59	44.08	70.90	-26.82	QP
10	14.7497	33.72	9.59	43.31	70.90	-27.59	AVG
11	30.0000	35.15	14.94	50.09	70.90	-20.81	QP
12	30.0000	33.18	14.94	48.12	70.90	-22.78	AVG

Remark:

1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor+Amplifier Gain





Between 30MHz-1GHz

Temperature:	24.6 °C	Relative Humidity:	58%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	68.6310	44.60	-24.14	20.46	70.90	-50.44	QP
2	68.6310	43.61	-24.14	19.47	70.90	-51.43	AVG
3	144.3348	37.52	-17.72	19.80	70.90	-51.10	QP
4	144.3348	34.38	-17.72	16.66	70.90	-54.24	AVG
5	244.2321	55.71	-17.15	38.56	70.90	-32.34	QP
6	244.2321	52.98	-17.15	35.83	70.90	-35.07	AVG
7	519.0650	33.49	-8.85	24.64	70.90	-46.26	QP
8	519.0650	33.22	-8.85	24.37	70.90	-46.53	AVG
9	737.0714	34.82	-3.69	31.13	70.90	-39.77	QP
10	737.0714	33.11	-3.69	29.42	70.90	-41.48	AVG
11	900.1474	35.02	-2.26	32.76	70.90	-38.14	QP
12	900.1474	33.43	-2.26	31.17	70.90	-39.73	AVG

Remark:

1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

80.0 dBuV





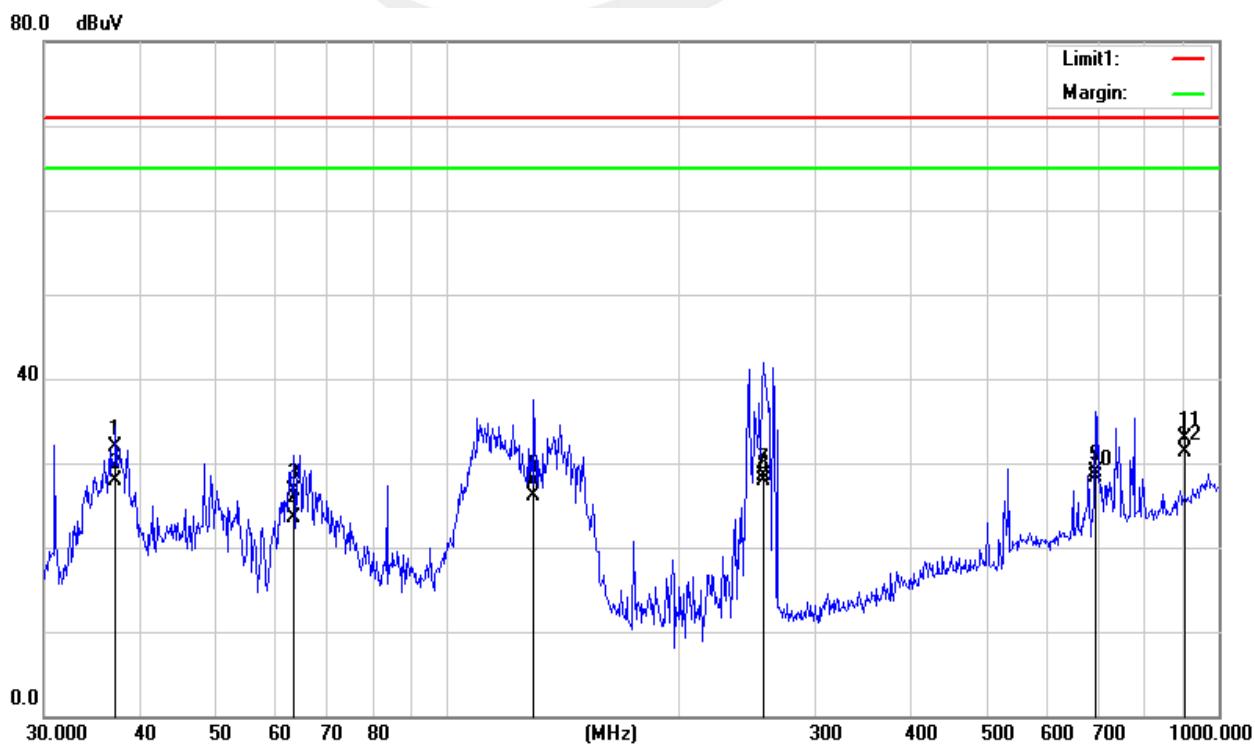
Between 30MHz-1GHz

Temperature:	24.6 °C	Relative Humidity:	58%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	37.1550	46.79	-14.86	31.93	70.90	-38.97	QP
2	37.1550	42.81	-14.86	27.95	70.90	-42.95	AVG
3	63.3132	50.95	-24.26	26.69	70.90	-44.21	QP
4	63.3132	47.68	-24.26	23.42	70.90	-47.48	AVG
5	129.4677	45.21	-17.56	27.65	70.90	-43.25	QP
6	129.4677	43.70	-17.56	26.14	70.90	-44.76	AVG
7	257.4221	43.88	-15.38	28.50	70.90	-42.40	QP
8	257.4221	43.22	-15.38	27.84	70.90	-43.06	AVG
9	691.9867	34.35	-5.51	28.84	70.90	-42.06	QP
10	691.9867	33.75	-5.51	28.24	70.90	-42.66	AVG
11	900.1474	35.20	-2.26	32.94	70.90	-37.96	QP
12	900.1474	33.55	-2.26	31.29	70.90	-39.61	AVG

Remark:

1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain





Between 1GHz-25GHz

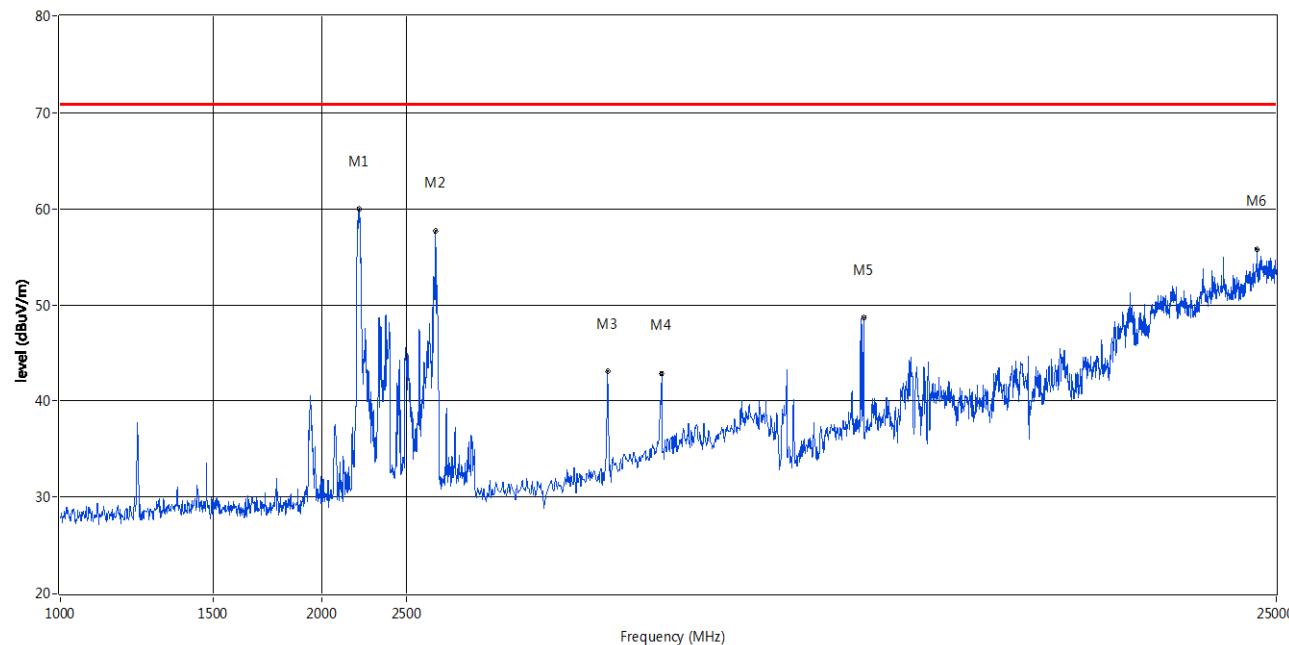
Temperature:	25 °C	Relative Humidity:	65%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Results (dBuV/m)	Correct Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detect or	ANT	Verdict
1	2204.795	59.95	-16.77	70.90	10.95	Peak	Horizontal	Pass
2	2204.795	58.24	-16.77	70.90	12.66	AV	Horizontal	Pass
3	2700.300	57.70	-14.53	70.90	13.2	Peak	Horizontal	Pass
4	2700.300	55.55	-14.53	70.90	15.35	AV	Horizontal	Pass
5	4258.741	43.10	-10.04	70.90	27.8	Peak	Horizontal	Pass
6	4258.741	41.69	-10.04	70.90	29.21	AV	Horizontal	Pass
7	4918.082	42.88	-7.75	70.90	28.02	Peak	Horizontal	Pass
8	4918.082	39.56	-7.75	70.90	31.34	AV	Horizontal	Pass
9	8394.605	48.63	-6.12	70.90	22.27	Peak	Horizontal	Pass
10	8394.605	55.50	-6.12	70.90	15.4	AV	Horizontal	Pass
11	23765.235	55.78	6.60	70.90	15.12	Peak	Horizontal	Pass
12	23765.235	53.80	6.60	70.90	17.1	AV	Horizontal	Pass

Remark:

1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor+Amplifier Gain

RE_EN Test Case_FCC 18 1GHz-25GHz





Between 1GHz-25GHz

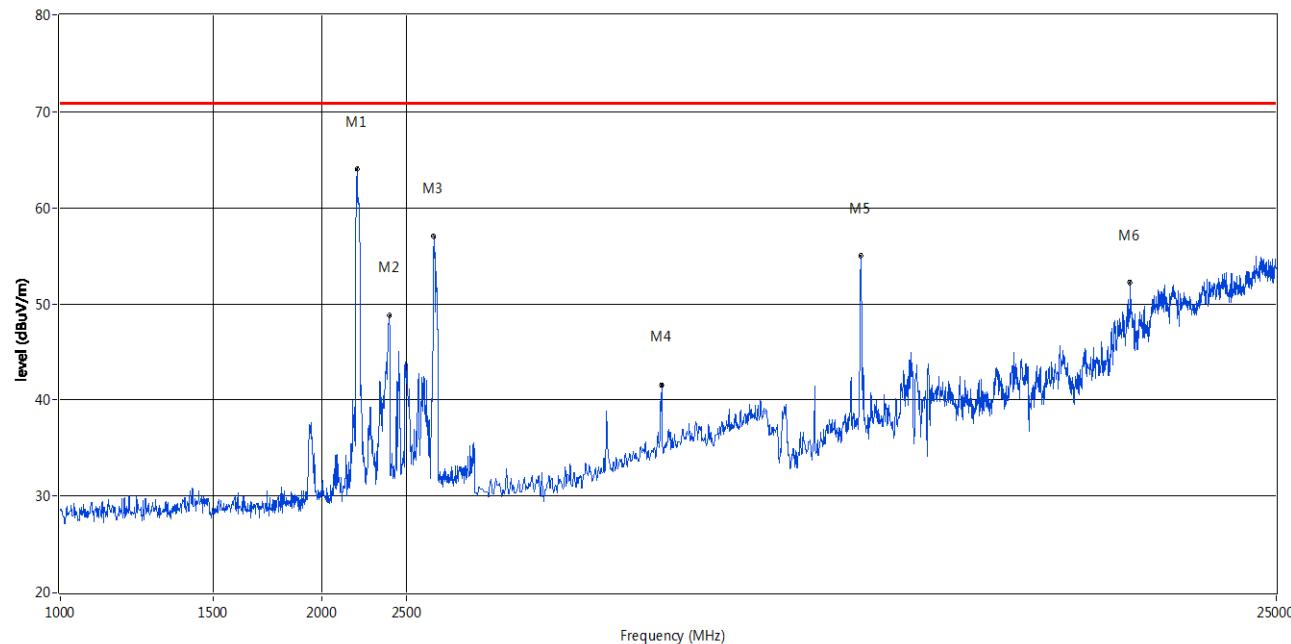
Temperature:	25 °C	Relative Humidity:	65%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz		

No.	Frequency (MHz)	Results (dBuV/m)	Correct Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detect or	ANT	Verdict
1	2194.805	63.96	-16.94	70.90	6.94	Peak	Vertical	Pass
2	2194.805	61.70	-16.94	70.90	9.20	AV	Vertical	Pass
3	2390.609	48.76	-14.15	70.90	22.14	Peak	Vertical	Pass
4	2390.609	45.69	-14.15	70.90	25.21	AV	Vertical	Pass
5	2690.310	57.08	-14.39	70.90	13.82	Peak	Vertical	Pass
6	2690.310	54.10	-14.39	70.90	16.80	AV	Vertical	Pass
7	4918.082	41.62	-7.75	70.90	29.28	Peak	Vertical	Pass
8	4918.082	37.40	-7.75	70.90	33.50	AV	Vertical	Pass
9	8324.675	54.97	-5.75	70.90	15.93	Peak	Vertical	Pass
10	8324.675	51.67	-5.75	70.90	19.23	AV	Vertical	Pass
11	16980.020	52.20	7.09	70.90	18.70	Peak	Vertical	Pass
12	16980.020	48.68	7.09	70.90	22.22	AV	Vertical	Pass

Remark:

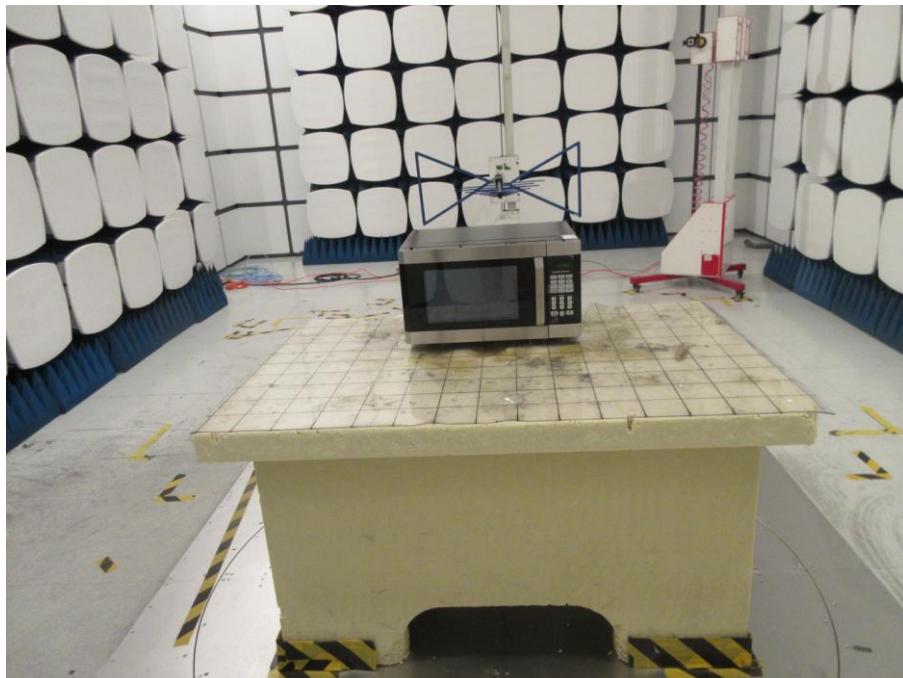
1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

RF_EN Test Case_FCC 18 1GHz-25GHz



APPENDIX 1-PHOTOS OF TEST SETUP

Radiated Measurement Photos





Conducted Measurement Photos





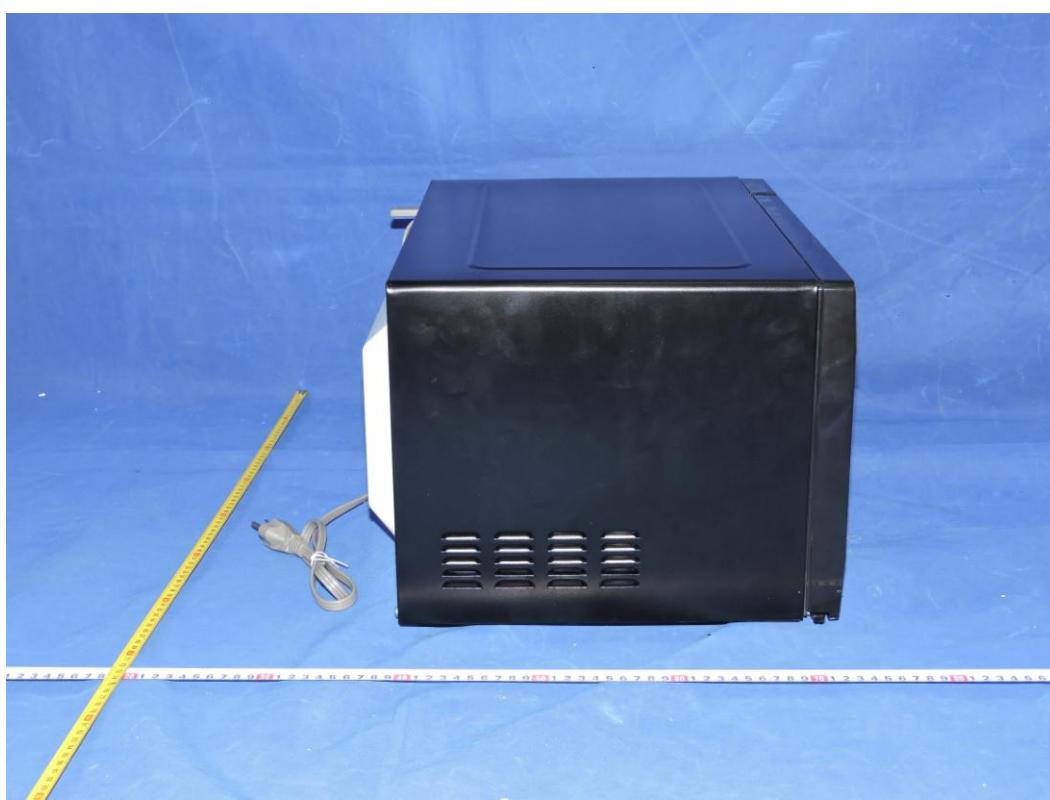
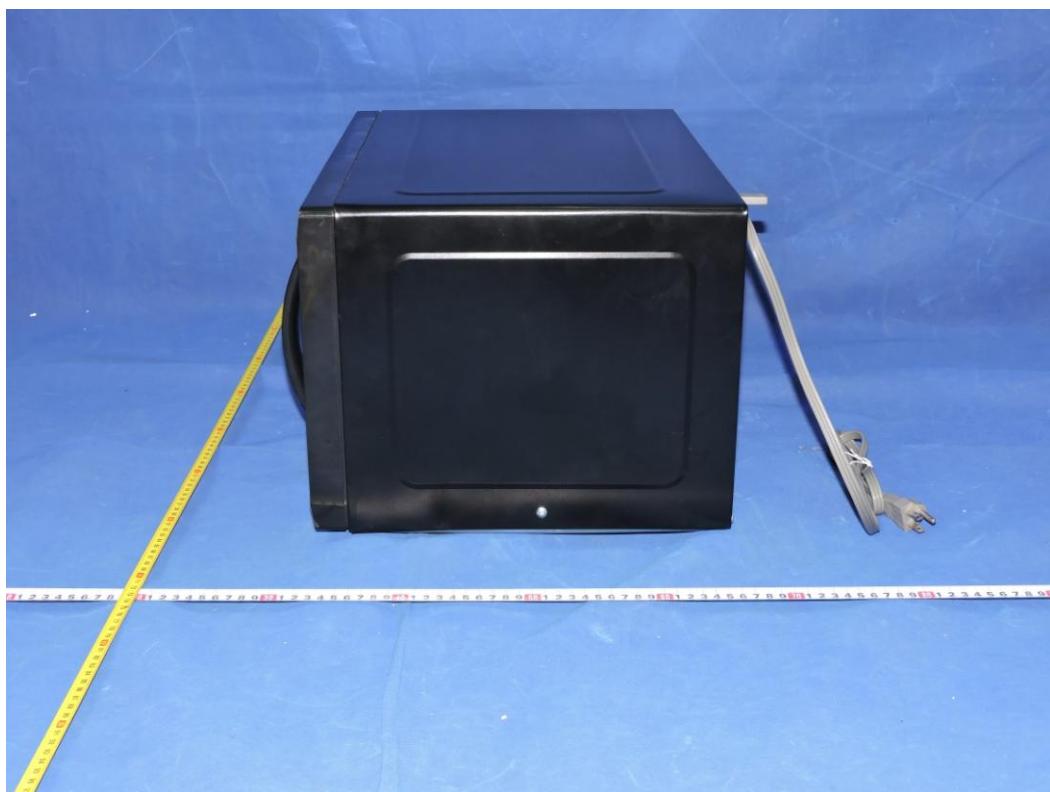
Power meter



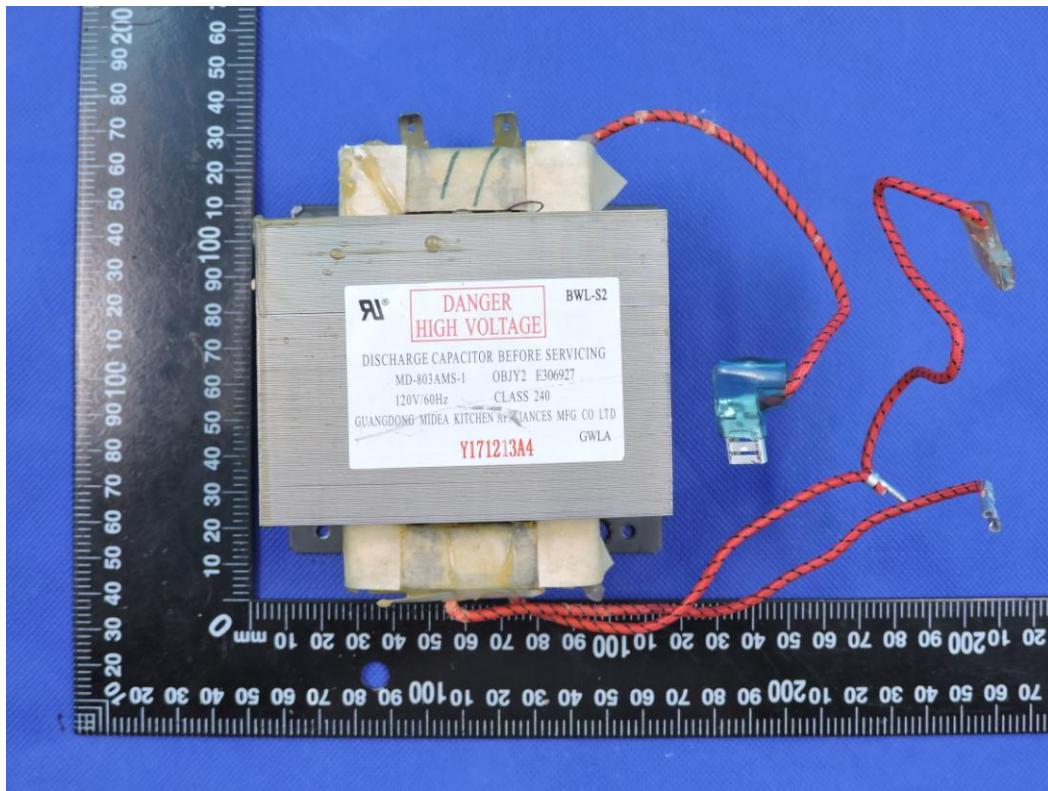
APPENDIX 2-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

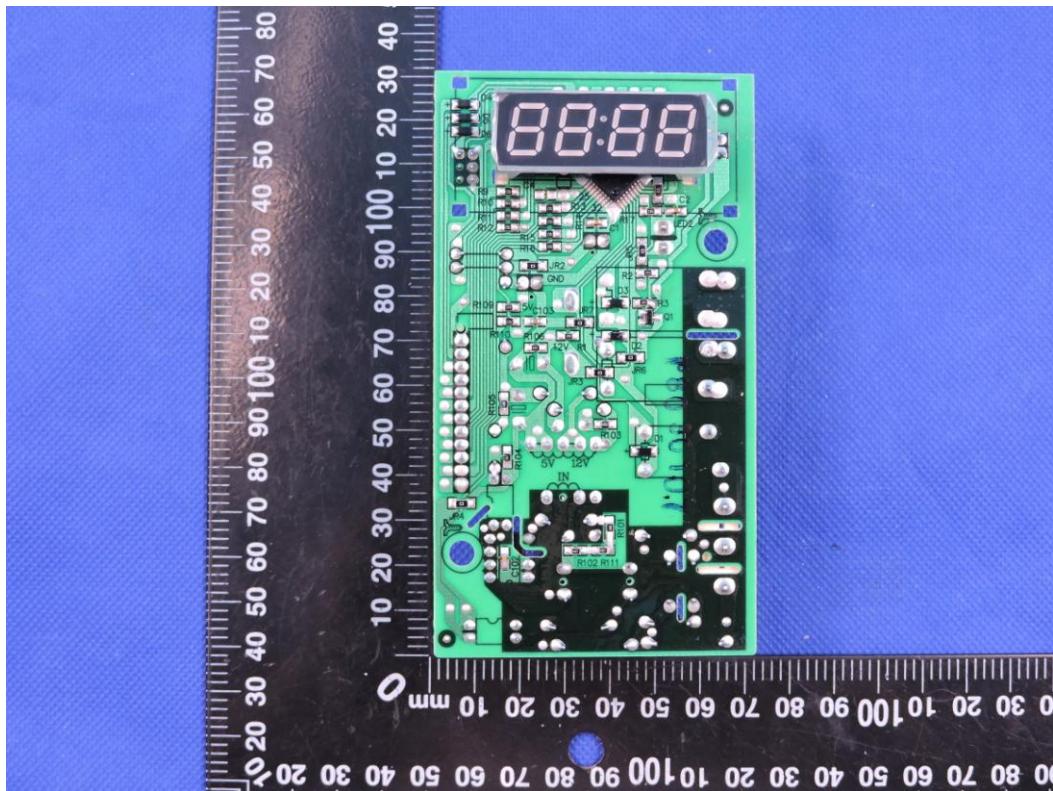
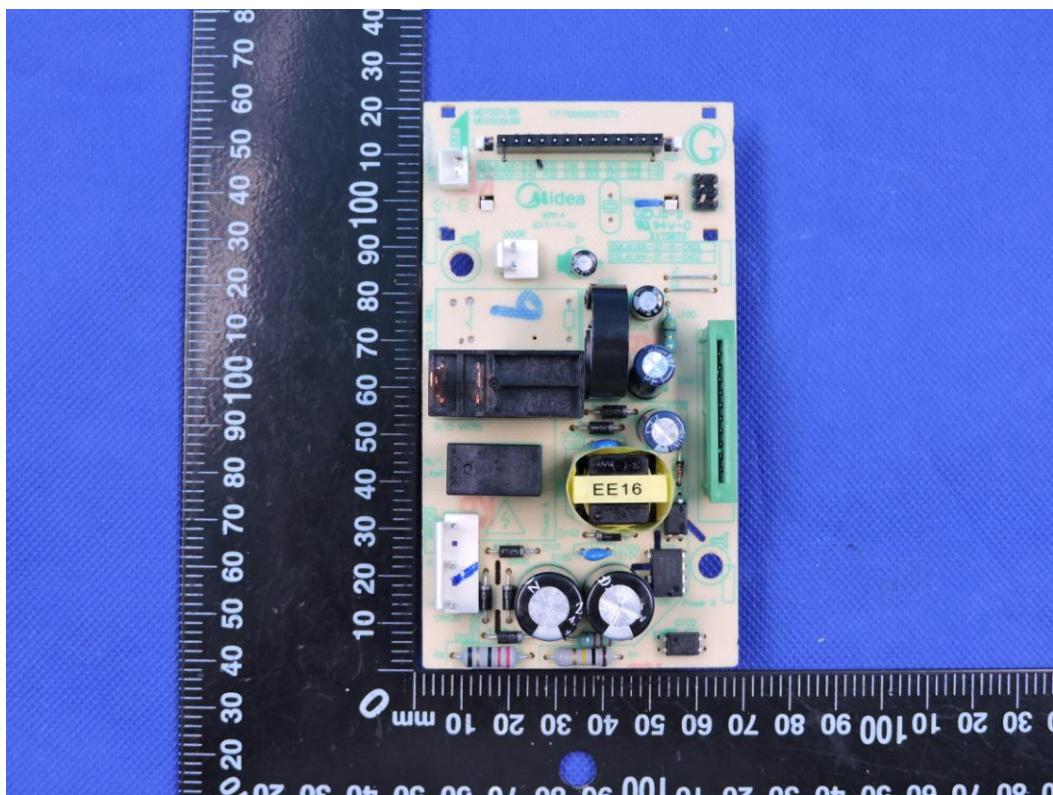


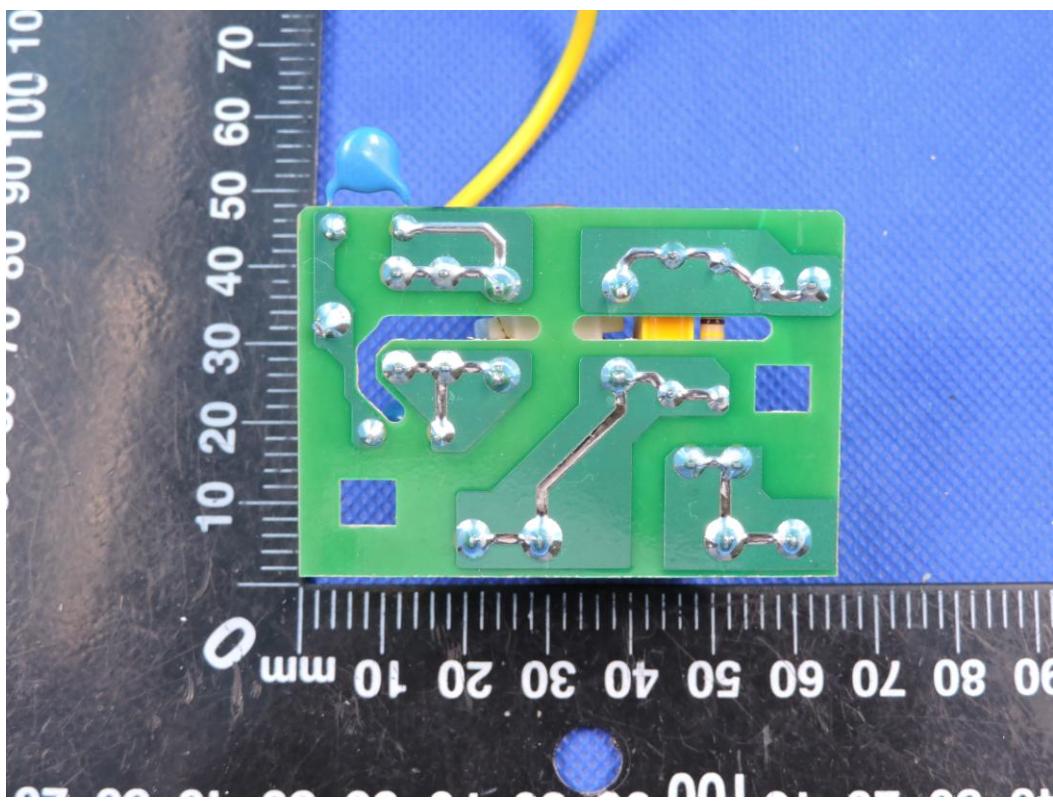
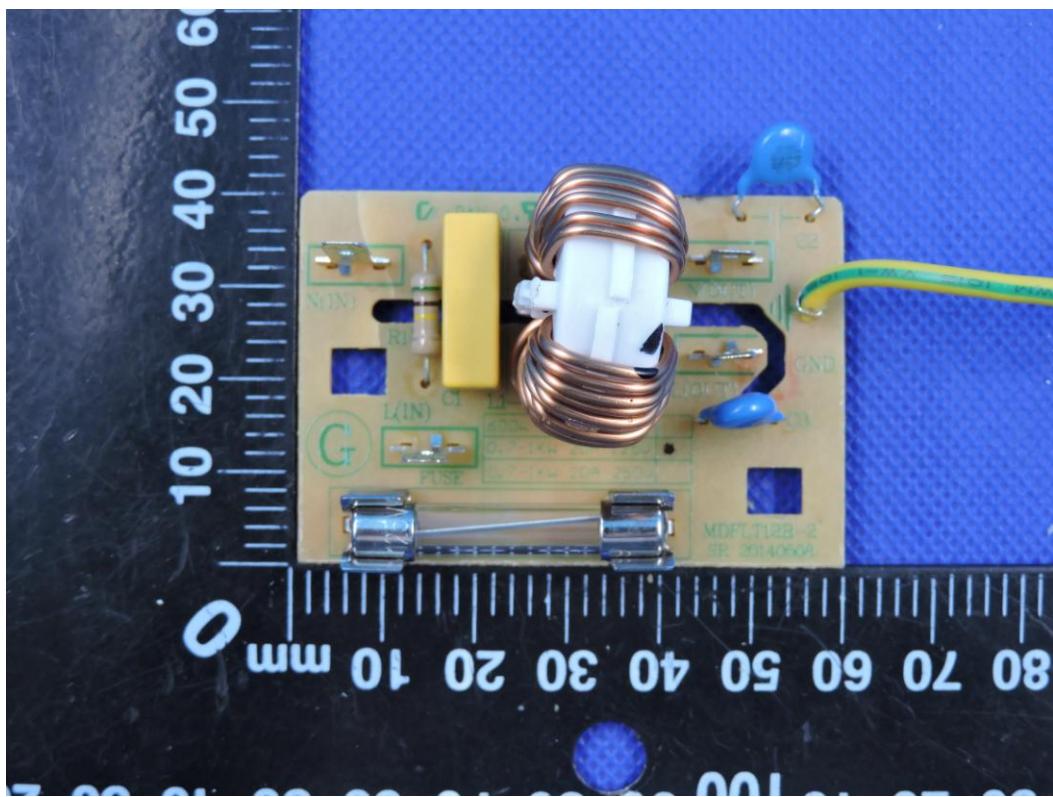














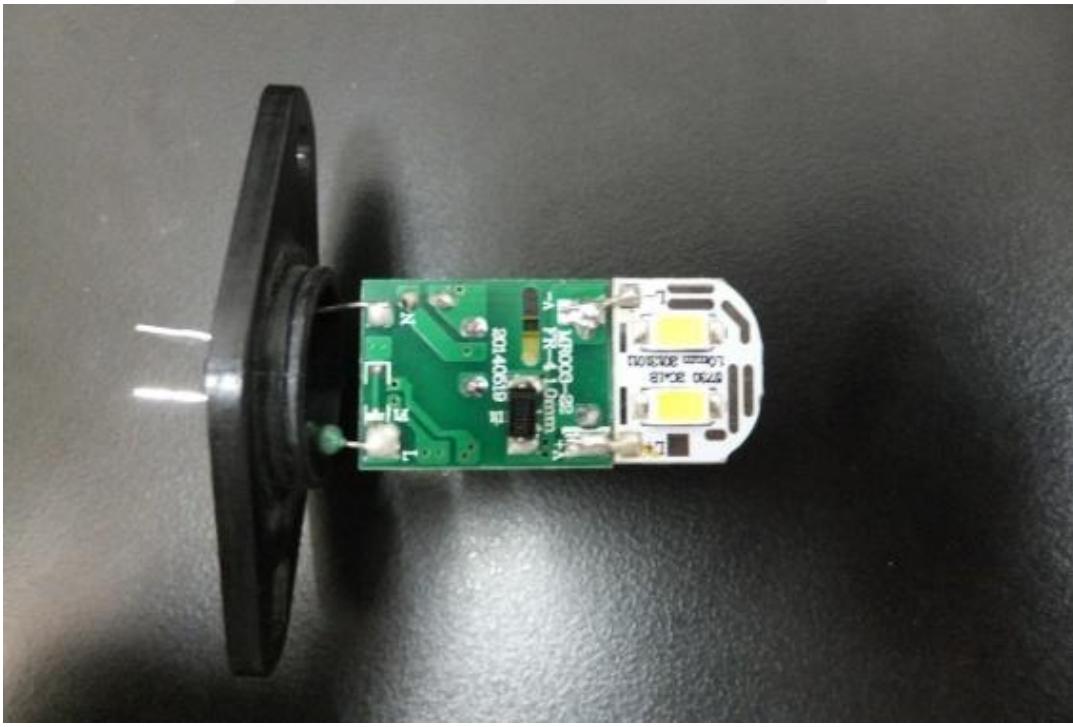
LED Lamp 1: Exterior View



LED Lamp 1: Inside View



LED Lamp 1: PCB board- Top View



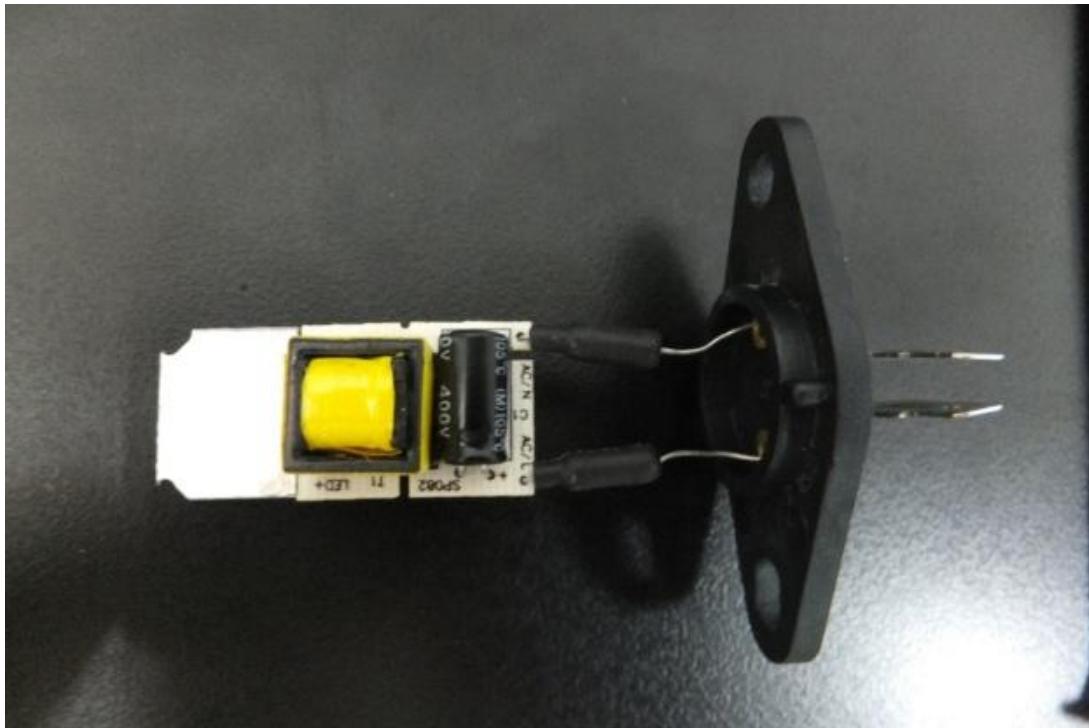
LED Lamp 1: PCB board-Bottom View



LED Lamp 2(YHW01): Exterior View



LED Lamp 2: Inside View



LED Lamp 2: PCB board- Top View



LED Lamp 2: PCB board- Bottom View

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