



# FCC PART 18 TEST REPORT

For

# **Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd**

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

FCC ID: VG8XM053KYY

Report Type: Product Type: Original Report Microwave Oven **Report Number:** RSZ191022551-00 **Report Date:** 2019-11-19 Joson Xiao Joson Xiao **Reviewed By:** EMC Engineer Prepared By: Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

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### **GENERAL INFORMATION**

#### **Product Description for Equipment under Test (EUT)**

| Product                     | Microwave Oven                        |
|-----------------------------|---------------------------------------|
| Tested Model                | TM053K6AL                             |
| Multiple Model              | XM053KYY, XM053KYYY                   |
| Voltage Range               | AC 120V/60Hz                          |
| Highest operating frequency | 2450 MHz                              |
| Microwave output power      | 1000 W                                |
| Input power                 | 1500 W                                |
| Date of Test                | 2019-10-30 to 2019-11-18              |
| Sample serial number        | 191022551 (Assigned by Shenzhen BACL) |
| Received date               | 2019-10-22                            |
| Sample/EUT Status           | Good condition                        |

Notes: This series products model: XM053KYY, XM053KYYY and TM053K6AL are identical schematics, Model TM053K6AL was selected for fully testing, the detailed information can be referred to the declaration which was stated and guaranteed by the applicant.

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#### **Objective**

This report is prepared on behalf of *Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd* in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

#### Related Submittal(s)/Grant(s)

No related submittal(s).

#### **Test Methodology**

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurements were performed at Bay Area Compliance Laboratory Corporation. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

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### **Measurement Uncertainty**

| Parameter           |            | uncertainty |
|---------------------|------------|-------------|
| Conducted Emissions |            | ±1.95dB     |
| Radiated            | Below 1GHz | ±4.75dB     |
| Emissions           | Above 1GHz | ±4.88dB     |

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Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

#### **Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

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# OPERATING CONDITION/TEST CONFIGURATION

#### **Justification**

The EUT was operated at maximum (continuous) RF output power. The loads consisted of water in a glass beaker in the amounts specified in the test procedure.

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#### **EUT Exercise Software**

No exercise software was used.

# **Special Accessories**

No special accessory was used.

# **Equipment Modifications**

No modifications were made to the EUT tested.

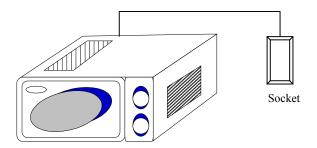
# **Support Equipment List and Details**

| Manufacturer | Description  | Model   | Serial Number |
|--------------|--------------|---------|---------------|
| BULL         | Socket       | GN-606D | N/A           |
| N/A          | Glass beaker | N/A     | N/A           |

# **External Cable List and Details**

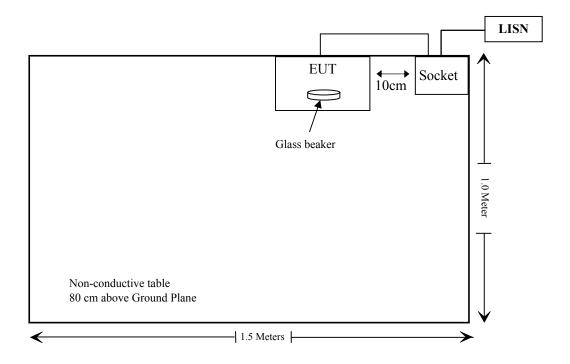
| Cable Description                   | Length (m) | From/Port | То     |
|-------------------------------------|------------|-----------|--------|
| Un-shielding Un-detachable AC Cable | 0.8        | Socket    | EUT    |
| Un-shielding Un-detachable AC Cable | 1.0        | LISN      | Socket |

# **Configuration of Test Setup**



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# **Block Diagram of Test Setup**



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# SUMMARY OF TEST RESULT

| FCC Rules                   | Description of Test          | Results    |
|-----------------------------|------------------------------|------------|
| §18.307                     | AC Line Conducted Emissions  | Compliance |
| FCC/OST MP-5<br>FCC §18.301 | Radiation Hazard Measurement | Compliance |
| §18.305                     | Field Strength               | Compliance |

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# TEST EQUIPMENT LIST

| Manufacturer             | Description                 | Model                     | Serial<br>Number           | Calibration<br>Date | Calibration<br>Due Date |  |
|--------------------------|-----------------------------|---------------------------|----------------------------|---------------------|-------------------------|--|
| CONDUCTED EMISSIONS      |                             |                           |                            |                     |                         |  |
| Rohde & Schwarz          | EMI Test Receiver           | ESCI                      | 101120                     | 2019-07-09          | 2020-07-08              |  |
| Rohde & Schwarz          | LISN                        | ENV216                    | 3560.6650.12-<br>101613-Yb | 2019-01-25          | 2020-01-25              |  |
| Rohde & Schwarz          | Transient Limiter           | ESH3Z2                    | DE25985                    | 2019-03-02          | 2020-03-01              |  |
| Rohde & Schwarz          | CE Test software            | EMC 32                    | V8.53.0                    | NCR                 | NCR                     |  |
| Unknown                  | Conducted Emission<br>Cable | 78652                     | UF A210B-1-<br>0720-504504 | 2018-11-12          | 2019-11-12              |  |
|                          | RADIATIO                    | N HAZARD MEAS             | SUREMENT                   |                     |                         |  |
| Rohde & Schwarz          | Spectrum Analyzer           | FSV40-N                   | 102259                     | 2019-07-22          | 2020-07-21              |  |
| GW Instek                | Power Meter                 | GPM 8212                  | CL110034                   | 2019-04-09          | 2020-04-09              |  |
| GW Instek                | AC Power Meter              | GPM 8212                  | CL110045                   | 2019-05-03          | 2020-05-03              |  |
| MC                       | Thermometer                 | Unknown                   | Unknown                    | 2019-11-01          | 2020-11-01              |  |
| A.H.System               | Horn Antenna                | 3115                      | 9903-5766                  | NCR                 | NCR                     |  |
| ETS                      | Microwave Survery<br>Meter  | 1501                      | Unknown                    | NCR                 | NCR                     |  |
| CAMRY                    | Electronic Weighed          | EK3820                    | Unknown                    | 2018-11-03          | 2019-11-02              |  |
| Ducommun<br>technologies | RF Cable                    | UFA210A-1-<br>4724-30050U | MFR64369<br>223410-001     | 2018-11-12          | 2019-11-12              |  |
| Ducommun<br>Technologies | RF Cable                    | 104PEA                    | 218124002                  | 2018-11-12          | 2019-11-12              |  |

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| Manufacturer                  | Description        | Model                     | Serial<br>Number       | Calibration<br>Date | Calibration<br>Due Date |  |
|-------------------------------|--------------------|---------------------------|------------------------|---------------------|-------------------------|--|
| RADIATED EMISSIONS            |                    |                           |                        |                     |                         |  |
| Sonoma Instrument             | Amplifier          | 310N                      | 186238                 | 2018-11-12          | 2019-11-12              |  |
| Rohde & Schwarz               | EMI Test Receiver  | ESR3                      | 102455                 | 2019-07-09          | 2020-07-08              |  |
| Sunol Sciences                | Broadband Antenna  | JB1                       | A040904-1              | 2017-12-22          | 2020-12-21              |  |
| Sunol Sciences                | Horn Antenna       | DRH-118                   | A052604                | 2017-12-22          | 2020-12-21              |  |
| Rohde & Schwarz               | Spectrum Analyzer  | FSV40-N                   | 102259                 | 2019-07-22          | 2020-07-21              |  |
| COM-POWER                     | Pre-amplifier      | PA-122                    | 181919                 | 2019-11-12          | 2020-11-12              |  |
| TDK                           | Chamber            | Chamber A                 | 2#                     | 2018-09-20          | 2021-09-19              |  |
| TDK                           | Chamber            | Chamber B                 | 1#                     | 2018-09-20          | 2021-09-19              |  |
| R&S                           | Auto test Software | EMC32                     | V9.10                  | NCR                 | NCR                     |  |
| Agilent                       | Spectrum Analyzer  | 8564E                     | 3943A01781             | 2019-03-02          | 2020-03-01              |  |
| the electro-<br>Mechanics Co. | Horn Antenna       | 3116                      | 9510-2270              | 2018-10-14          | 2021-10-14              |  |
| Heatsink Required             | Amplifier          | QLW-18405536-<br>J0       | 15964001002            | 2019-11-12          | 2020-11-12              |  |
| IW MICROWAve.E                | RF Cable           | 2PS-1401-2760-<br>2ps     | SN 03                  | 2019-11-12          | 2020-11-12              |  |
| Ducommun technologies         | RF Cable           | UFA210A-1-<br>4724-30050U | MFR64369<br>223410-001 | 2019-11-12          | 2020-11-12              |  |
| Ducommun<br>Technologies      | RF Cable           | 104PEA                    | 218124002              | 2019-11-12          | 2020-11-12              |  |

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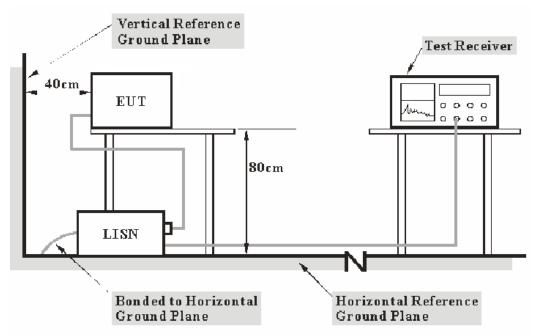
<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

# **CONDUCTED EMISSIONS**

# **Applicable Standard**

FCC §18.307

# **EUT Setup**



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Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The socket was connected to a 120 VAC/ 60Hz power source.

# **EMI Test Receiver Setup**

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz  |

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# **Test Procedure**

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

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All final data was recorded in the Quasi-peak and average detection mode.

# **Test Results Summary**

According to the EUT complied with the FCC PART 18,

#### **Test Data**

#### **Environmental Conditions**

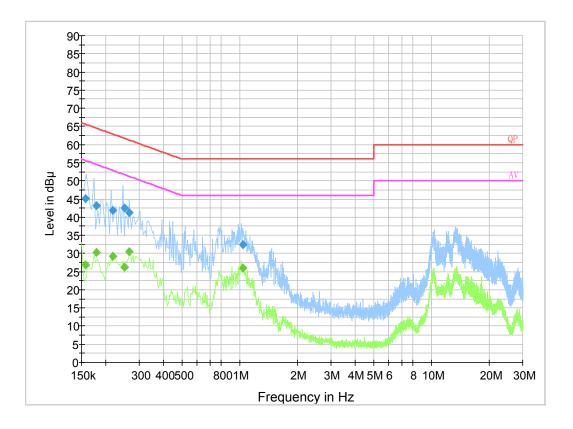
| Temperature:       | 25 ℃      |
|--------------------|-----------|
| Relative Humidity: | 50 %      |
| ATM Pressure:      | 101.0 kPa |

The testing was performed by Kiki Geng on 2019-10-30.

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EUT operation mode: Cooking

# **AC 120V/60Hz, Line**

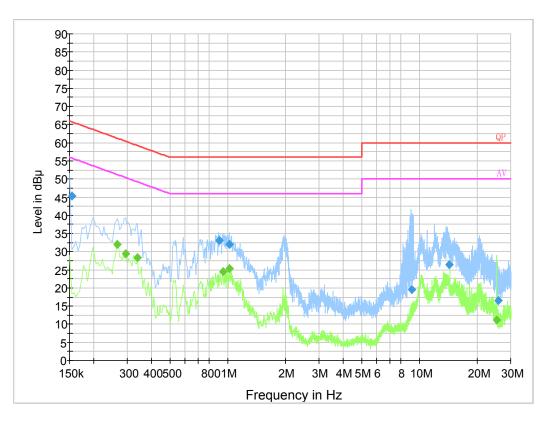


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| Frequency<br>(MHz) | Corrected<br>Amplitude<br>(dBµV) | Corrected<br>Factor<br>(dB) | Limit<br>(dBµV) | Margin<br>(dB) | Remark<br>(PK/QP/Ave.) |
|--------------------|----------------------------------|-----------------------------|-----------------|----------------|------------------------|
| 0.157500           | 45.1                             | 19.8                        | 65.6            | 20.5           | QP                     |
| 0.178500           | 43.3                             | 19.9                        | 64.6            | 21.3           | QP                     |
| 0.218501           | 41.9                             | 19.8                        | 62.9            | 21.0           | QP                     |
| 0.250501           | 42.5                             | 19.8                        | 61.7            | 19.2           | QP                     |
| 0.265500           | 41.2                             | 19.8                        | 61.3            | 20.1           | QP                     |
| 1.037330           | 32.5                             | 19.9                        | 56.0            | 23.5           | QP                     |
| 0.157500           | 26.8                             | 19.8                        | 55.6            | 28.8           | Ave.                   |
| 0.178500           | 30.4                             | 19.9                        | 54.6            | 24.2           | Ave.                   |
| 0.218501           | 29.2                             | 19.8                        | 52.9            | 23.7           | Ave.                   |
| 0.250501           | 26.2                             | 19.8                        | 51.7            | 25.5           | Ave.                   |
| 0.265500           | 30.5                             | 19.8                        | 51.3            | 20.8           | Ave.                   |
| 1.037330           | 26.0                             | 19.9                        | 46.0            | 20.0           | Ave.                   |

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# AC 120V/60Hz, Neutral



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| Frequency<br>(MHz) | Corrected<br>Amplitude<br>(dBµV) | Corrected<br>Factor<br>(dB) | Limit<br>(dBµV) | Margin<br>(dB) | Remark<br>(PK/QP/Ave.) |
|--------------------|----------------------------------|-----------------------------|-----------------|----------------|------------------------|
| 0.154500           | 45.2                             | 19.8                        | 65.8            | 20.6           | QP                     |
| 0.908530           | 33.1                             | 19.7                        | 56.0            | 22.9           | QP                     |
| 1.022670           | 32.0                             | 19.8                        | 56.0            | 24.0           | QP                     |
| 9.161290           | 19.6                             | 19.9                        | 60.0            | 40.4           | QP                     |
| 14.354030          | 26.5                             | 19.9                        | 60.0            | 33.5           | QP                     |
| 25.769030          | 16.5                             | 20.2                        | 60.0            | 43.5           | QP                     |
| 0.266000           | 32.1                             | 19.7                        | 51.2            | 19.1           | Ave.                   |
| 0.294000           | 29.5                             | 19.7                        | 50.4            | 20.9           | Ave.                   |
| 0.338000           | 28.3                             | 19.8                        | 49.3            | 21.0           | Ave.                   |
| 0.946000           | 24.5                             | 19.8                        | 46.0            | 21.5           | Ave.                   |
| 1.022000           | 25.4                             | 19.8                        | 46.0            | 20.6           | Ave.                   |
| 25.398000          | 11.2                             | 20.2                        | 50.0            | 38.8           | Ave.                   |

#### Note:

- Corrected Amplitude = Reading + Correction Factor
   Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation
- 3) Margin = Limit Corrected Amplitude

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# RADIATION HAZARD MEASUREMENT

#### **Applicable Standard**

FCC §18.301 & FCC/OST MP-5

#### **Environmental Conditions**

| Temperature:       | 25 ℃      |
|--------------------|-----------|
| Relative Humidity: | 56 %      |
| ATM Pressure:      | 101.0 kPa |

The testing was performed by Alan He on 2019-11-02.

#### **Radiation Hazard Measurement**

Radiation leakage was measured in the as-received condition with the oven door closed using a microwave leakage meter.

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A 275 mL water load was placed in the center of the oven and the oven was operated at maximum output power.

There was no microwave leakage exceeding a power level of  $0.1 \text{mW/cm}^2$  observed at any point 5 cm or more from the external surface of the oven.

A maximum of 1.0 mW/cm<sup>2</sup> is allowed in accordance with the applicable Federal Standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed.

#### **Input Power**

Input power and current was measured using a power analyzer. A 1000 mL water load was placed in the center of the oven and the oven was operated at maximum output power. A 1000mL water load was chosen for its compatibility with the procedure commonly used by manufacturers to determine their input ratings.

| Input Voltage<br>(V <sub>AC</sub> /Hz) | Input Current<br>(Amps) | Measured Input Power (Watts) | Rated Input Power (Watts) |
|----------------------------------------|-------------------------|------------------------------|---------------------------|
| 118.2                                  | 12.0                    | 1418.4                       | 1500                      |

Based on the measured input power, the EUT was found to be operating within the intended specifications.

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#### **Load for Microwave Ovens**

For all measurements, the energy developed by the oven was absorbed by a dummy load consisting of a quantity of tap water in a beaker. If the oven was provided with a shelf or other utensil support, this support was in its initial normal position. For ovens rated at 1000 watts or less power output, the beaker contained quantities of water as listed in the following subparagraphs. For ovens rated at more than 1000 watts output, each quantity was increased by 50% for each 500watts or fraction thereof in excess of 1000 watts. Additional beakers were used if necessary.

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- Load for power output measurement: 1000 milliliters of water in the beaker located in the center of the oven.
- Load for frequency measurement: 1000 milliliters of water in the beaker located in the center of the oven.
- Load for measurement of radiation on second and third harmonic: Two loads, one of 700 and the other of 300 milliliters, of water are used. Each load is tested both with the beaker located in the center of the oven and with it in the right front corner.

#### **RF Output Power Measurement**

A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3 mm, an external diameter of approximately 190 mm and a height of approximately 90 mm. The mass of the container is determined.

At the start of the test, the oven and the empty container are at ambient temperature. Water having an initial temperature of  $10 \,^{\circ}\text{C} \pm 1 \,^{\circ}\text{C}$  is used for the test. The water temperature is measured immediately before it is poured into the container.

A quantity of  $1000 \text{ g} \pm 5 \text{ g}$  of water is added to the container and its actual mass obtained. The container is then immediately placed in the centre of the oven shelf, which is in its lowest normal position. The oven is operated and the time for the water temperature to attain  $20 \,^{\circ}\text{C} \pm 2 \,^{\circ}\text{C}$  is measured. The oven is then switched off and the final water temperature is measured within  $60 \, \text{s}$ .

| m <sub>w</sub> (g) | m <sub>c</sub> (g) | T <sub>0</sub><br>(°C) | T <sub>1</sub> (°C) | T <sub>2</sub><br>(°C) | t<br>(s) |
|--------------------|--------------------|------------------------|---------------------|------------------------|----------|
| 1000               | 377.0              | 27.0                   | 9.4                 | 19.6                   | 45       |

RF Output Power =  $(4.187 \times 1000 \times (19.6 - 9.4) + 0.55 \times 377.0 \times (19.6 - 27)) / 45 = 914.96$  Watts

- P is the microwave power output, in watts;
- m<sub>w</sub> is the mass of the water, in grams;
- m<sub>c</sub> 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<sub>2</sub> is the final temperature of the water, in degrees Celsius;
- is the heating time, in seconds, excluding the magnetron filament heating-up time.

 $\square$  The measurement output power was found to be less than 500 watts. Therefore, in accordance with Section 18.305 of Subpart-C, the measured out-of-band emissions were compared to the limit of  $25\mu V/meter$  at a 300-meter measurement distance.

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☑ The measured output power was found to exceed 500 watts. Therefore, in accordance with Section 18.305 of Subpart-C, the measured out-of-band emissions were compared with the limit calculated as following:

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LFS = 25\*SQRT (Power Output/500)

LFS = 25\*SQRT (914.96/500)

LFS = 33.82

Where: LFS is the maximum allowable field strength for out-of-band emissions in  $\mu V/meter$  at a 300-meter measurement distance. Power Output is the measured output power in watts.

| LFS<br>μV/m@300m | dBμV/m@300m | dBμV/m@3m |
|------------------|-------------|-----------|
| 33.82            | 30.58       | 70.58     |

Note: Limit  $(dB\mu V/m@3m) = Limit (dB\mu V/m@300m) + 40(dB)$ 

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### **Operating Frequency Measurement**

#### Variation in Operating Frequency with Time

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.

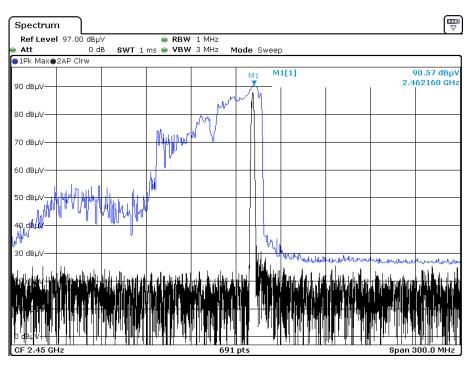
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The results of this test are as follows:

| Frequency at Start time | Frequency at End time |  |  |  |  |
|-------------------------|-----------------------|--|--|--|--|
| (MHz)                   | (MHz)                 |  |  |  |  |
| 2462.16                 | 2462.59               |  |  |  |  |

Refer to data pages for details of the variation in operating frequency with time measurement.

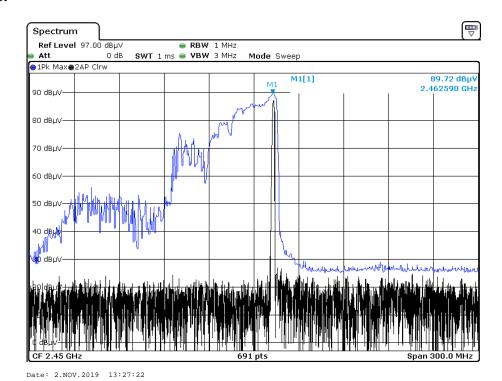
#### **Start time:**



Date: 2.NOV.2019 13:15:51

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#### **End time:**



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# Variation in Operating Frequency with 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.

The results of this test are as follows:

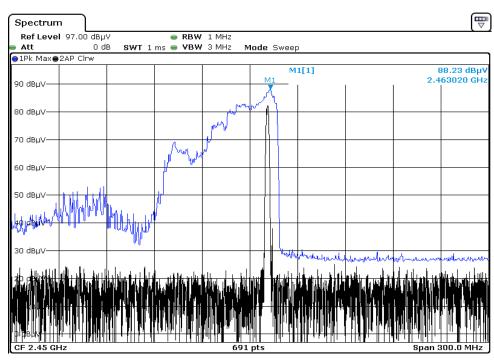
Line voltage varied from 96  $V_{AC}$  to 150  $V_{AC}$ .

| (Low voltage) Frequency | (High voltage) Frequency |  |  |  |
|-------------------------|--------------------------|--|--|--|
| (MHz)                   | (MHz)                    |  |  |  |
| 2463.02                 | 2462.59                  |  |  |  |

Please refer to following pages for details of the variation in operating frequency with line voltage measurement.

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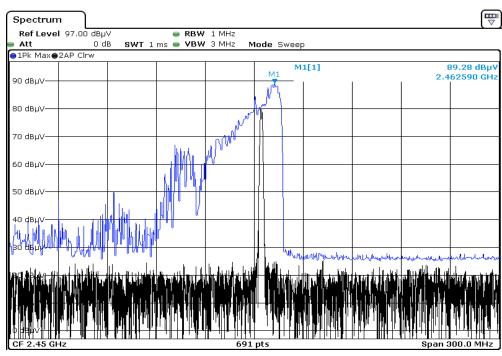
# Low Voltage:



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#### Date: 2.NOV.2019 13:39:28

# **High Voltage:**



Date: 2.NOV.2019 13:50:58

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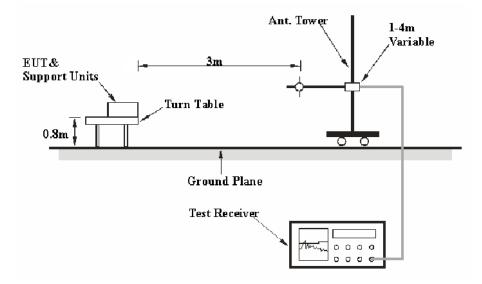
# **RADIATED EMISSIONS**

# **Applicable Standard**

FCC §18.305 and FCC §18.309

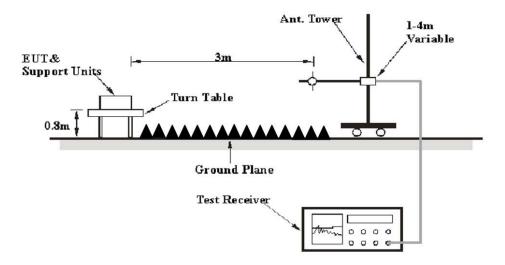
# **EUT Setup**

#### **Below 1GHz:**



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#### Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC MP - 5. The specification used was the FCC part 18 limits.

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The socket was connected to 120 VAC/60 Hz power source.

#### **EMI Test Receiver Setup and Spectrum Analyzer Setup**

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver and Spectrum Analyzer were set with the following configurations:

| Frequency Range  | RBW Video B/W |         | IF B/W | Measurement |
|------------------|---------------|---------|--------|-------------|
| 30MHz – 1000 MHz | 100 kHz       | 300 kHz | 120kHz | QP          |
| Above 1 CHz      | 1MHz          | 3 MHz   | /      | PK.         |
| Above 1 GHz      | 1MHz          | 10 Hz   | /      | Ave.        |

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#### **Test Procedure**

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was in the normal (naïve) operating mode during the final qualification test to represent the worst results.

#### **Corrected Amplitude & Margin Calculation**

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit - Corrected Amplitude

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# **Test Results Summary**

According to the data in the following table, the EUT complied with the FCC Part 18,

# **Test Data and Plots**

#### **Environmental Conditions**

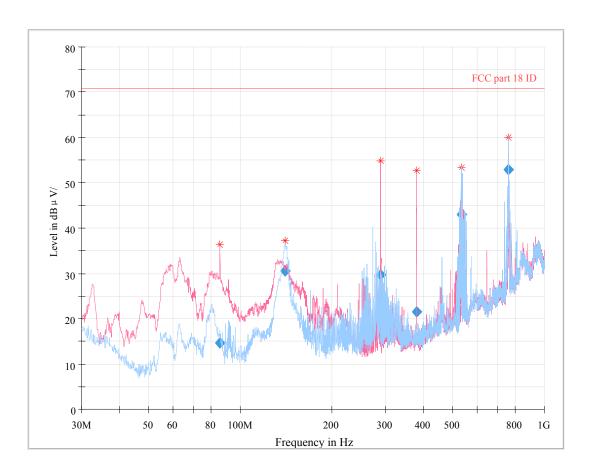
| Temperature:       | 23~25 °C        |
|--------------------|-----------------|
| Relative Humidity: | 50~54 %         |
| ATM Pressure:      | 100.8~101.0 kPa |

The testing was performed by Steve Lan on 2019-10-30 for below 1 G and Curry Xiang on 2019-11-18 for above 1 G.

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**30 MHz – 1 GHz: (***Cooking***)** 



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| Frequency (MHz) | Corrected<br>Amplitude<br>(dBµV/m) | PK/QP | Antenna<br>height<br>(cm) | Antenna<br>Polarity | Turntable position (degree) | Correction<br>Factor<br>(dB/m) | Limit<br>(dBµV/m) | Margin<br>(dB) |
|-----------------|------------------------------------|-------|---------------------------|---------------------|-----------------------------|--------------------------------|-------------------|----------------|
| 85.831125       | 14.70                              | QP    | 385.0                     | V                   | 188.0                       | -19.4                          | 70.58             | 55.88          |
| 140.532375      | 30.61                              | QP    | 326.0                     | Н                   | 0.0                         | -14.2                          | 70.58             | 39.97          |
| 289.831000      | 29.71                              | QP    | 315.0                     | V                   | 254.0                       | -11.3                          | 70.58             | 40.87          |
| 380.549375      | 21.49                              | QP    | 264.0                     | V                   | 175.0                       | -10.5                          | 70.58             | 49.09          |
| 535.047125      | 42.96                              | QP    | 189.0                     | Н                   | 279.0                       | -6.0                           | 70.58             | 27.62          |
| 763.090625      | 52.97                              | QP    | 285.0                     | Н                   | 57.0                        | 0.2                            | 70.58             | 17.61          |

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# 1 -25 GHz:

For Band edge and spurious emissions:

|                    | Mea            | surement   |                     |                | itenna  | Corrected | Corrected          | FCC P             | art 18         |
|--------------------|----------------|------------|---------------------|----------------|---------|-----------|--------------------|-------------------|----------------|
| Frequency<br>(MHz) | Reading (dBµV) | PK/QP/Ave. | Turntable<br>Degree | e Height Polar |         | Factor    | Amplitude (dBµV/m) | Limit<br>(dBµV/m) | Margin<br>(dB) |
|                    |                |            | 700m                | L water        | in cent | er        |                    |                   | _              |
| 2374.80            | 14.38          | Ave.       | 191                 | 1.2            | Н       | 31.87     | 46.25              | 70.58             | 24.33          |
| 2597.60            | 13.97          | Ave.       | 240                 | 2.4            | Н       | 32.46     | 46.43              | 70.58             | 24.15          |
| 2203.88            | 31.81          | Ave.       | 54                  | 2.3            | Н       | -0.56     | 31.25              | 70.58             | 39.33          |
| 4926.70            | 40.29          | Ave.       | 358                 | 1.1            | Н       | 5.46      | 45.75              | 70.58             | 24.83          |

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For Second and Third Harmonics:

|                    | Mea            | surement   |                     |            | itenna           | Corrected     | Corrected          | FCC P             | art 18         |
|--------------------|----------------|------------|---------------------|------------|------------------|---------------|--------------------|-------------------|----------------|
| Frequency<br>(MHz) | Reading (dBµV) | PK/QP/Ave. | Turntable<br>Degree | Height (m) | Polar<br>(H / V) | Factor (dB/m) | Amplitude (dBµV/m) | Limit<br>(dBµV/m) | Margin<br>(dB) |
|                    |                |            | 700m                | L water    | r in cent        | er            |                    |                   |                |
| 4926.70            | 40.29          | Ave.       | 358                 | 1.1        | Н                | 5.46          | 45.75              | 70.58             | 24.83          |
| 4926.70            | 38.92          | Ave.       | 201                 | 2.2        | V                | 6.43          | 45.35              | 70.58             | 25.23          |
| 7398.20            | 35.53          | Ave.       | 261                 | 1.8        | Н                | 12.31         | 47.84              | 70.58             | 22.74          |
| 7398.20            | 34.33          | Ave.       | 173                 | 1.3        | V                | 12.31         | 46.64              | 70.58             | 23.94          |
|                    |                |            | 300m                | ıL wate    | r in cent        | ter           |                    |                   |                |
| 4908.53            | 39.54          | Ave.       | 84                  | 1.6        | Н                | 6.43          | 45.97              | 70.58             | 24.61          |
| 4908.53            | 37.28          | Ave.       | 71                  | 1.5        | V                | 6.43          | 43.71              | 70.58             | 26.87          |
| 7384.60            | 35.27          | Ave.       | 337                 | 1.9        | Н                | 12.21         | 47.48              | 70.58             | 23.10          |
| 7384.60            | 33.95          | Ave.       | 174                 | 1.9        | V                | 12.21         | 46.16              | 70.58             | 24.42          |

# **Note:**

- Corrected Amplitude = Meter Reading + Correction Factor
   Correction Factor = Antenna Factor + Cable Loss Amplifier Gain
- 3) Margin = Limit Corrected Amplitude
- 4) The data below 20dB to the limit was not recorded.

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

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