

# EMI Test Report

On Model Name: Microwave oven (Counter-top)

Model Numbers: XM025FYY

Brand Name: 

FCC ID: VG8XM025FYY

Prepared for Midea Microwave and Electrical Appliances

Manufacturing Co.,Ltd

According to

FCC Part 18

Industrial, Scientific and Medical Equipment

FCC/OST MP-5(1986)

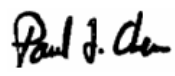
FCC methods of measurements of radio noise emission from industrial,scientific and medical equipment

Test Report#: PSZ-0711-0561-FCCID

Prepared by: Eddy Chen

Reviewed by: Ivan Wen

QC Manager: Paul Chen

Test Report Released by:  2007, Dec 06  
Paul Chen Date

## List Attached Files

<i>Exhibit Type</i>	<i>File Description</i>	<i>File Name</i>
<i>Test Report</i>	<i>Test Report</i>	<i>VG8XM025FYY_Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>VG8XM025FYY_operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>VG8XM025FYY_External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>VG8XM025FYY_Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>VG8XM025FYY_Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>VG8XM025FYY_Schematics.pdf</i>
<i>ID Label/Location</i>	<i>Label and Location</i>	<i>VG8XM025FYY_Label &amp; Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>VG8XM025FYY_User Manual.pdf</i>
<i>Test setup photos</i>	<i>Test setup photos</i>	<i>VG8XM025FYY_Test Setup Photos</i>

## Test Location

*Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.*

*Test Site Location: Shenzhen Academy of Metrology and Quality inspection*

*Longzhu Road, Nanshan District, Shenzhen, Guangdong, China*

*Tel : 86-755-26941617*

*Fax : 86-755-26941615*

*FCC Registration Number: 274801*

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### **Opinions and Interpretations**

*This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Worldwide Certification Solution Inc., Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.*

### **Statement of Measurement Uncertainty**

*The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.*

## Administrative Data

*Test Sample* : Microwave Oven (Counter-top)

*Model Numbers* : XM025FYY

*Model Tested* : EM025FBN

*Brand Name* : 

*Date Tested* : 2007, Dec 03 to 05

*Applicant* : Midea Microwave and Electrical Appliances  
Manufacturing Co.,Ltd  
  
Beijiao., Shunde, Foshan, Guangdong, China.

*Telephone* : 86-0757-23606480

*Fax* : 86-0757-23656995

*Manufacturer* : Midea Microwave and Electrical Appliances  
Manufacturing Co.,Ltd  
  
Beijiao., Shunde, Foshan, Guangdong, China.

## EUT Description

Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd , model tested EM025FBN (referred to the EUT in this report) is a Microwave Oven.

<i>Power Supply</i>	120V AC , 60 Hz
<i>Rated Input Power</i>	1500W
<i>Rated Output Power</i>	1000W
<i>Operation Frequency</i>	2450MHz
<i>Magnetron Manufacturer</i>	TOSHIBA
<i>Magnetron Model Number</i>	2M248J
<i>Outside Dimensions (W×H×D)</i>	20.1X15.6X12.1 inch
<i>Oven Capacity:</i>	1.0 cu.ft
<i>Net Weight</i>	Approx. 39.5 lbs.

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## **Type of Deriver**

*XM025FYY model designations:*

*X= E or A*

*M: only the microwave functions;*

*0: indicate the output power is 1000W;*

*25: indicate cavity capacity is 25 liters;*

*F: indicate the design No.;*

*YY= A-Z or 0-9, indicate different appearance.*

*"E" is electrical control with touch pad; "A" is electrical control with keyboard.*

## Test Summary

The Electromagnetic Compatibility requirements on model tested EM025FBN for this test is stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment Under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

<b>Emission Tests</b>				
<b>Specifications</b>	<b>Description</b>	<b>Test Results</b>	<b>Test Point</b>	<b>Remark</b>
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiation Hazard Measurement	Passed	Enclosure	Attachment 1
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Input Power Measurement	Passed	AC Input Port	Attachment 2
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	RF Output power Measurement	Passed	EUT	Attachment 3
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Operating Frequency Measurement	Passed	EUT	Attachment 4
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Conducted Emission	Passed	AC Input Port	Attachment 5
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiated Emission	Passed	Enclosure	Attachment 6

### **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 1000watts or less power output, the beaker contained quantities of water as listed in the following subparagraphs. For ovens rated at more than 1000watts output, each quantity was increased by 50% for each 500watts or fraction thereof in excess of 1000 watts. Additional beakers were used if necessary.*

*--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.*

*--Load for all other measurements: 700 milliliters of water, with the beaker located in the center of the oven.*

### **Equipment Modification**

*Any modifications installed previous to testing by Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd will be incorporated in each production model sold or leased in United States.*

*There were no modifications installed by ECMG Worldwide Certification Solution Inc., test personnel.*



**EUT Sample Photos for model**



*Front & Top View*



*Rear View*

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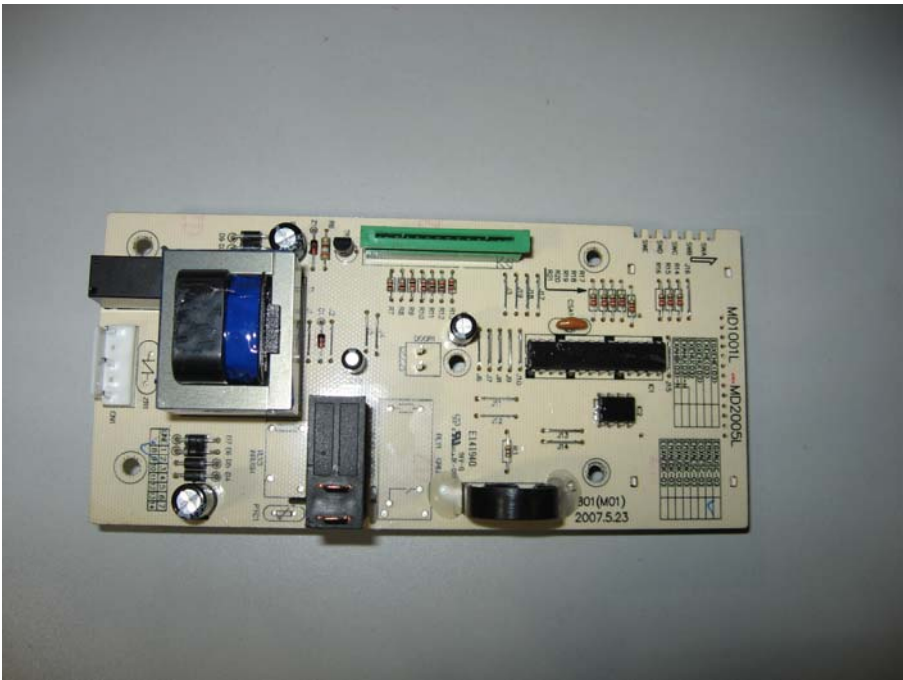
Prepared by ECMG Worldwide Certification Solution Inc.



*Bottom View*



*Uncovered View*



Main board #1

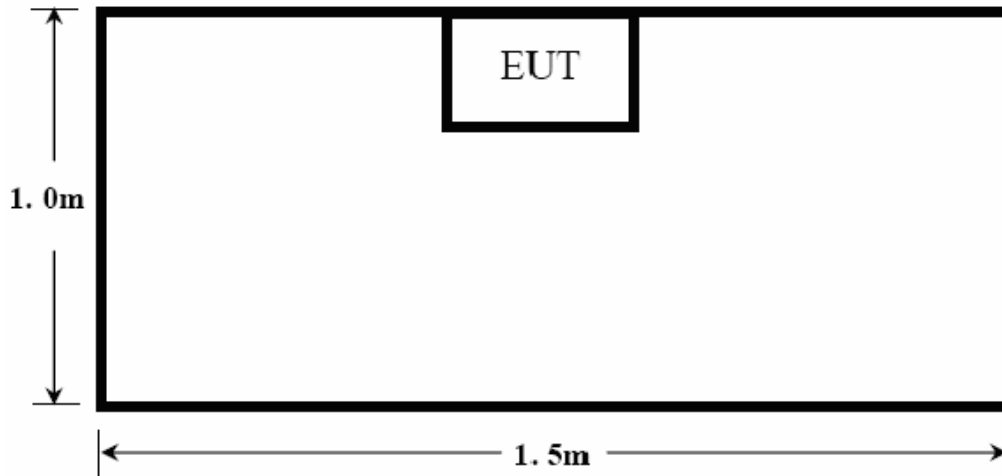


Main board #2

## Test System Details

<b>EUT</b>					
<b>Model Numbers:</b>	XM025FYY				
<b>Model Tested:</b>	EM025FBN				
<b>Description:</b>	Microwave Oven (Counter-top)				
<b>Manufacturer:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd				
<b>Support Equipment</b>					
N/A					
<b>Cable Description</b>					
<b>Description</b>	<b>From</b>	<b>To</b>	<b>Length (Meters)</b>	<b>Shielded (Y/N)</b>	<b>Ferrite (Y/N)</b>
Power Cable	EUT	Plug	1.20	N	N

## Configuration of Tested System



## ATTACHMENT 1 – RADIATION HAZARD TEST

<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FYY	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007, Dec 03
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	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 microwave meter will check the leakage and then record the maximum leakage.		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>There was no microwave leakage exceeding a power level of 0.22 mW/cm<sup>2</sup> observed at any point 5cm or more from the external surface of the oven.</p> <p>A maximum of 1.0mW/cm<sup>2</sup> 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.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY:</b>	0.0001 mW/cm <sup>2</sup>		

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**Test equipments list:**

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Microwave test instrument	Holiday	HI-1501	100075	01/25/2007	01/24/2008

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

SIGNED BY: *Zdoly*  
ENGINEER

REVIEWED BY: *Juan Wen*  
SENIOR ENGINEER

**Radiation Hazard Test Set-up :**



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## ATTACHMENT 2 – INPUT POWER MEASUREMENT

<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FY Y	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007,Dec 03
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Input power Measurement. The input power and current was measured using a power analyzer. 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 is operating, use a voltmeter and an ampmeter to test the AC input voltage and current		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS :</b>	Based on the measured input power, the EUT was found to be operating within the intended specifications.  The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY :</b>	± 5W		

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**Test Data:**

<b>Input Voltage (Vac/Hz)</b>	<b>Input Current (amps)</b>	<b>Measured Input Power (watts)</b>	<b>Rated Input Power (watts)</b>
120/60	12.93	1490	1500

**Test equipments list :**

<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Last Cal.</b>	<b>Cal. Due</b>
Power frequency test system	Ainuo	AN8716PX	058704273	06/12/2007	06/12/2008

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

SIGNED BY: *E. Doly*  
ENGINEER

REVIEWED BY: *Juan Wen*  
SENIOR ENGINEER

**Input Power Test Set-Up :**



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### ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT

<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FYY	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007, Dec 03
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the FCC MP-5 and FCC Part 18C for RF output power Measurement. The Caloric Method was used to determine maximum RF output power. The initial temperature of the water load was measured. A 1000ml water load in a beaker was located in the center of the oven. The oven was operated at maximum output power for 120 seconds, the temperature of the water was re-measured.</p> <p>RF Output Power</p> $= (4.2\text{joules/calorie})(\text{volume in milliliters})(\text{temperature rise}) / (\text{time in seconds})$ $= 4.2 \text{ joules/calorie} \times 1000 \times (\text{Final Temp} - \text{Initial Temp}) / 120$		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>RF Output Power = 710.5 watts</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY:</b>	± 0.3°C		

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**Test Data:**

Quality of Water (ml)	Starting Temperature (°C)	Final Temperature (°C)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	24.6	44.9	120	710.5

**Test equipments list :**

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Data Acquisition	TES	TES-1310	020907011	12/03/2007	11/03/2008

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

SIGNED BY: *E. Adly*  
ENGINEER

REVIEWED BY: *Joan Wan*  
SENIOR ENGINEER

**RF Output Power Test Set-Up :**



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## ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT

<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FYY	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007, Dec 05
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the FCC MP-5 and FCC Part 18 for Operating Frequency Measurement.</p> <p>1) The variation of frequency with time.</p> <p>The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1000ml water load in a beaker was located in the center of the oven. Set a spectrum analyzer with antenna at 3 meters distance form 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.</p> <p>2) The variation of frequency with Line Voltage.</p> <p>The operating frequency was measured using a spectrum analyzer. The EUT was operated/warmed by at least 10 minutes of use with a 1000ml 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.</p>		
<b>TESTED RANGE:</b>	2450 ± 50MHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>Please refer to following pages for details of the variation in operating frequency with time &amp; line voltage measurement.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY:</b>	Freq. ±10kHz		

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**Variation in Operating Frequency with Time:**

<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2458.2	2458.1

**Variation in Operating Frequency with Line Voltage:**

<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2457.2	2460.5
<i>Note: Line voltage varied from 96Vac to 150Vac.</i>	

**Test equipments list :**

<i>Test Equipment</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial No.</i>	<i>Last Cal.</i>	<i>Cal. Due</i>
<i>Bilog Antenna</i>	<i>Chase</i>	<i>CBL6112B</i>	<i>SB3440</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>Horn Antenna</i>	<i>R&amp;S</i>	<i>HF906</i>	<i>SB3434</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>EMI Receiver</i>	<i>R&amp;S</i>	<i>ES126</i>	<i>SB3436</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>3M Anechoic chamber</i>	<i>Albatross</i>	<i>9x6x6</i>	<i>SB3450</i>	<i>03/27/2007</i>	<i>03/27/2008</i>
<i>Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).</i>					

SIGNED BY: *Eddy*  
ENGINEER

REVIEWED BY: *Juan Wen*  
SENIOR ENGINEER

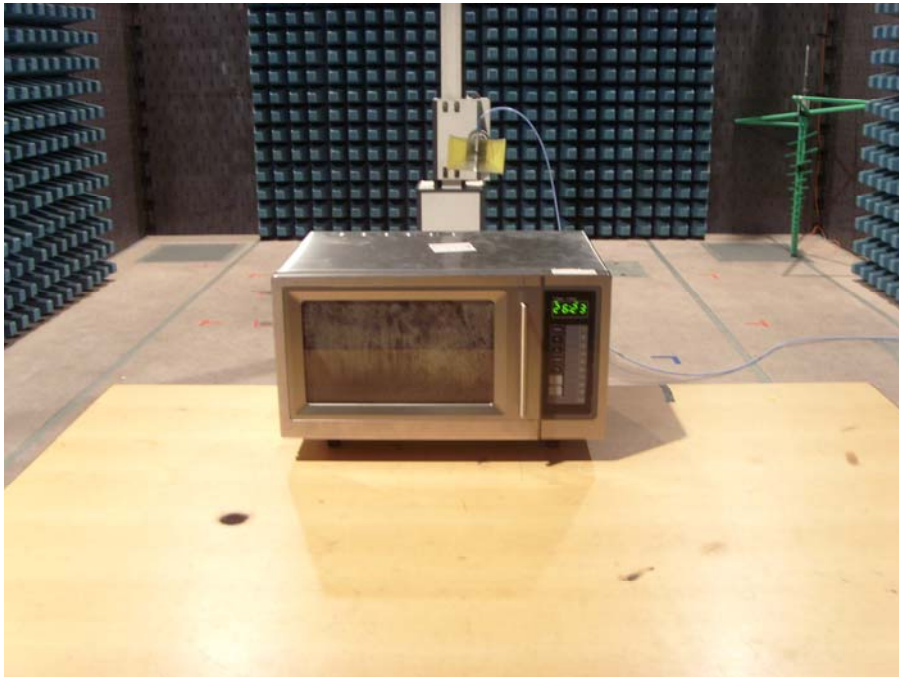
Test Report #: PSZ-0711-0561-FCCID

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***Operating Frequency Test Set-up :***



**ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS**

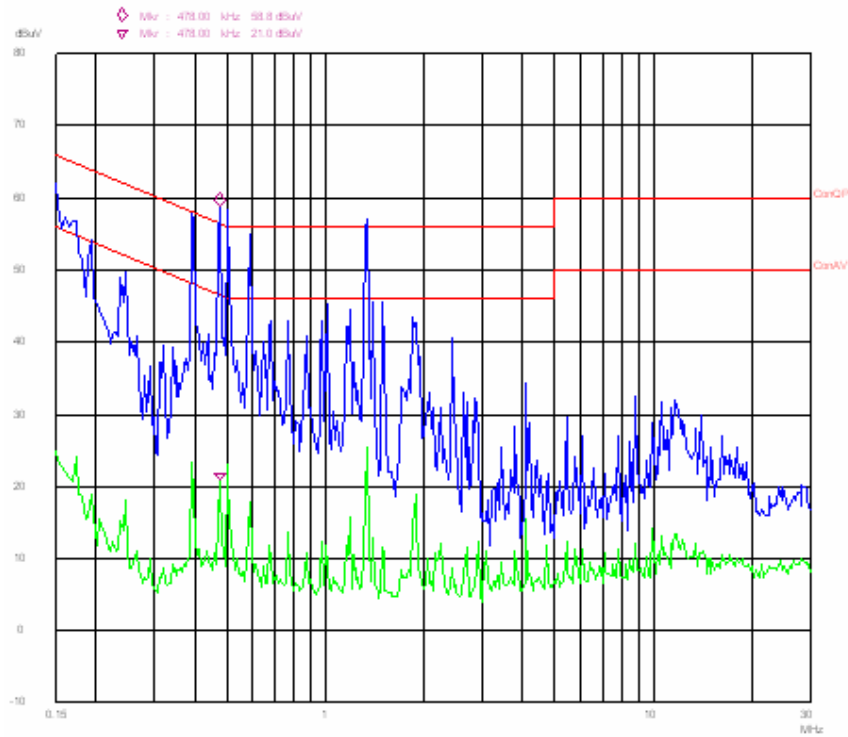
<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FYY	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007, Dec 05
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	The EUT was set up according to the guideline of ANSI C63.4: 2003 & FCC MP-5 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150kHz to 30MHz.		
<b>TESTED RANGE:</b>	150kHz to 30MHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	The EUT meets the requirements of test reference for Conducted Emissions on line L by 2.34 dB of Quasi-Peak detector.  The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY:</b>	±2.5 dB		

Test Report #: PSZ-0711-0561-FCCID

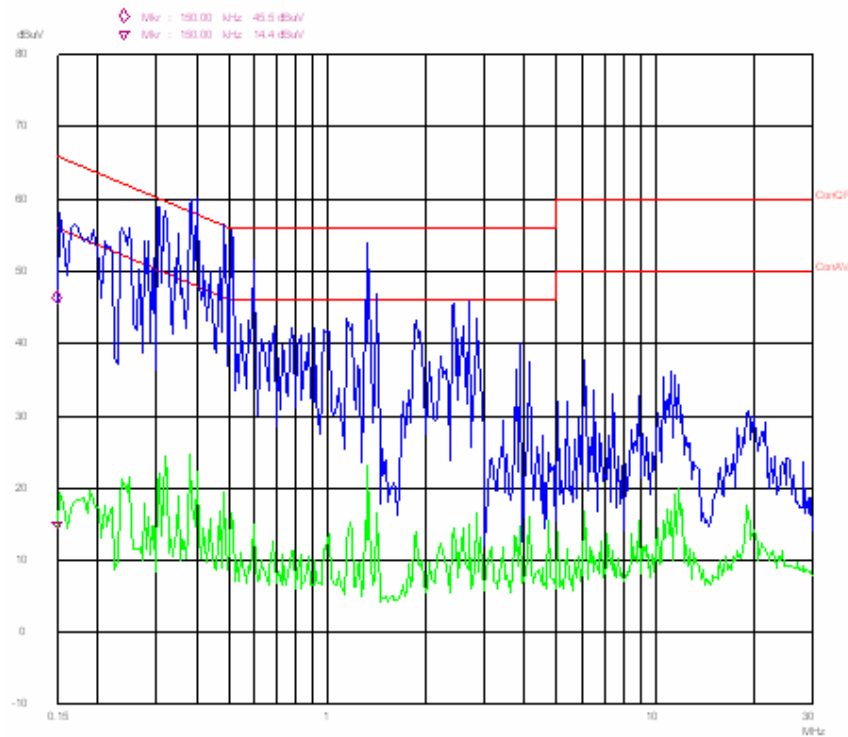
Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by ECMG Worldwide Certification Solution Inc.

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*Line L Conducted Emission Graph*



*Line N Conducted Emission Graph*

Test Report #: PSZ-0711-0561-FCCID

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**Test data:**


Line L/N	Frequency (MHz)	Corrected QP Level (dBuV)	Limits QP (dBuV)	Margin QP (dB)	Corrected AVE Level (dBuV)	Limits AVE (dBuV)	Margin AV (dB)
L	0.478	52.68	56.37	-3.69	22.15	46.37	-24.22
L	0.512	53.12	56.00	-2.88	23.44	46.00	-22.56
L	1.428	53.66	56.00	-2.34	25.74	46.00	-20.26
N	0.376	53.54	58.36	-4.82	24.65	48.36	-23.71
N	0.408	52.62	57.69	-5.07	21.91	47.69	-25.78
N	0.485	50.48	56.25	-5.77	19.23	46.25	-27.02

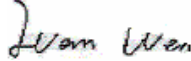
Note: All readings are using a bandwidth of 9 kHz, with a 30 ms sweep time.

**Test equipments list:**

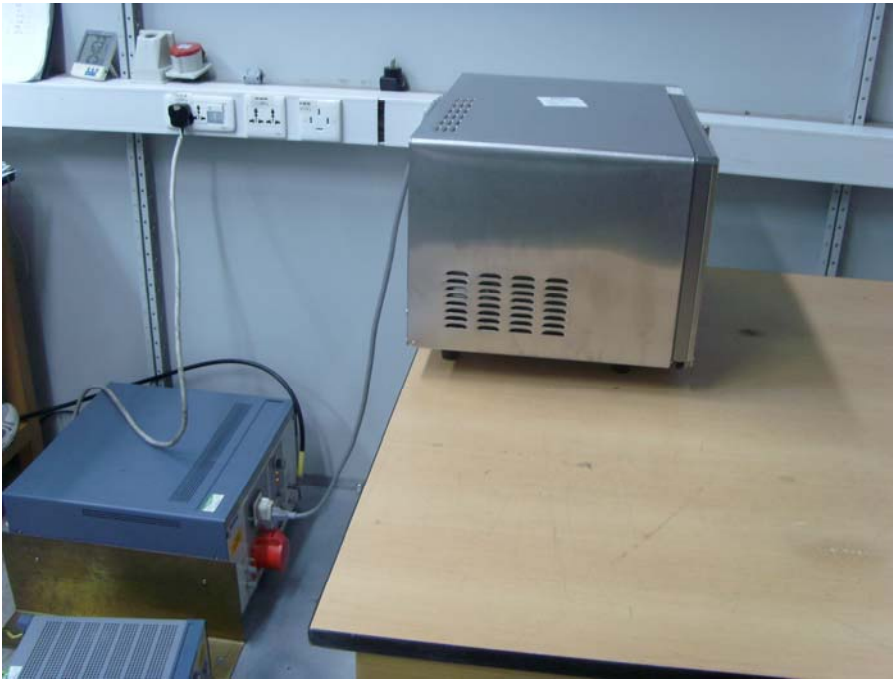
Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI Receiver	R&S	ESCS30	SB2603	01/25/2007	01/24/2008
AMN	R&S	ESH2-Z5	SB3321	01/25/2007	01/24/2008

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

SIGNED BY:   
ENGINEER

REVIEWED BY:   
SENIOR ENGINEER

***Conducted Emission Test Set-up :***



*Test Report #: PSZ-0711-0561-FCCID*

*Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd*

*Prepared by ECMG Worldwide Certification Solution Inc.*

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## ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

<b>CLIENT:</b>	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	XM025FYY	<b>PRODUCT:</b>	Microwave Oven (Counter-top)
<b>MODEL TESTED:</b>	EM025FBN	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22°C	<b>HUMIDITY:</b>	60%RH
<b>ATM PRESSURE:</b>	101.1kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Eddy Chen	<b>DATE OF TEST:</b>	2007, Dec 5
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the guidelines of ANSI C63.4: 2003 &amp; FCC MP-5 for radiated emissions. Microwave oven was placed on a 1m *1.5m nonconductive table. The top of the table is 1.0 m above the ground. The table is placed on a flush mounted metal turntable.</p> <p>An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber. Signal discrimination was then performed and the significant peaks marked. All data was recorded in Quasi-peak detection mode from 30 MHz to 1GHz and average detector mode above 1GHz.</p> <p>The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows:</p> <p>FS= RA + AF + CF - AG</p> <p>Where: FS = Field Strength</p> <p>RA = Receiver Amplitude</p> <p>AF = Antenna Factor</p> <p>CF = Cable Attenuation Factor</p> <p>AG = Amplifier Gain</p>		
<b>TESTED RANGE:</b>	30MHz to 24.5GHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	The EUT meets the requirements of test reference for Radiated Emissions on Vertical polarization by 14.14 dB of Average detector at 9.2865 GHz. The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
<b>M. UNCERTAINTY:</b>	± 3.2 dB		

Test Report #: PSZ-0711-0561-FCCID

Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by ECMG Worldwide Certification Solution Inc.

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**Field strength limits for out-of-band emissions :**

For RF output power <500W, Limit at 300m = 27.96dBuV/m

For RF output power >500W, Limit at 300m =  $20\log[25*\text{SQRT}(\text{Power}/500)]\text{dBuV/m}$

**Test Data :**

<b>30MHz - 1GHz</b>				
Frequency [MHz]	Antenna Polarization [V/H]	Corrected Reading [dB $\mu$ V/m]	Delta, QP [dB]	3 Meters Limits [dB $\mu$ V/m]
97.218	H	28.36	-41.12	69.48
272.986	H	32.84	-36.64	69.48
256.886	H	27.88	-41.60	69.48
53.691	V	25.65	-43.83	69.48
257.126	V	29.82	-39.66	69.48
651.462	V	36.53	-32.95	69.48
Note: All readings are quasi-peak unless stated otherwise, using a bandwidth of 120kHz, with a 30 ms sweep time. A video filter was not used.				
<b>1GHz - 25GHz</b>				
Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dB $\mu$ V/m]	Delta, AV [dB]	3 Meters Limits [dB $\mu$ V/m]
4.905	H	55.28	-14.20	69.48
7.3650	H	52.32	-17.16	69.48
17.2631	H	55.14	-14.34	69.48
4.907	V	53.62	-15.86	69.48
7.3729	V	52.05	-17.43	69.48
14.6858	V	55.34	-14.14	69.48
Note: All readings are average unless stated otherwise, using a bandwidth of 1MHz, with a 30 ms sweep time. A video filter was not used.				

Test Report #: PSZ-0711-0561-FCCID

Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by ECMG Worldwide Certification Solution Inc.

**Test equipments list:**

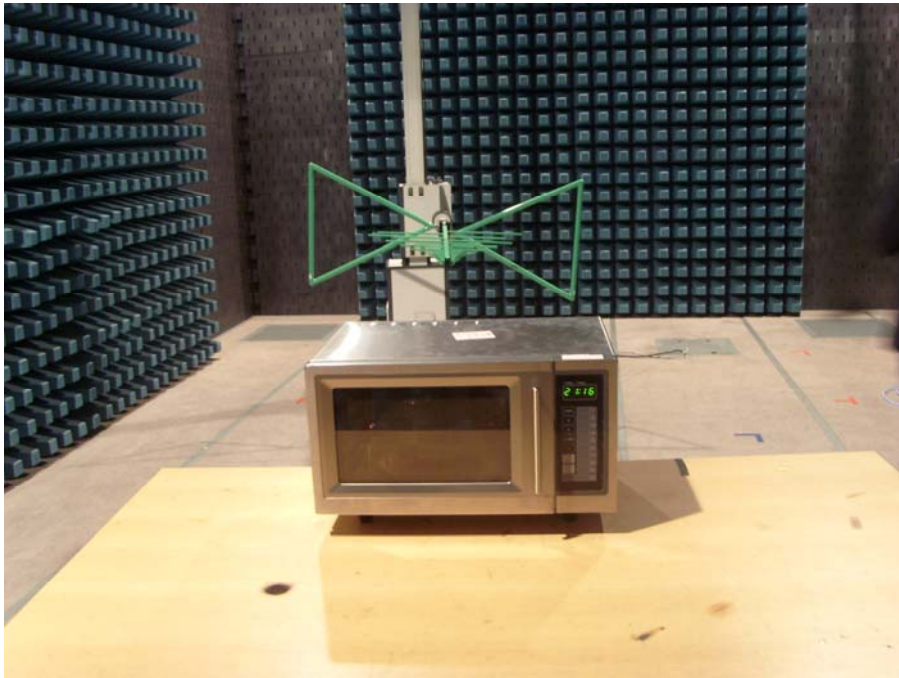
<i>Test Equipment</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial No.</i>	<i>Last Cal.</i>	<i>Cal. Due</i>
<i>Bilog Antenna</i>	<i>Chase</i>	<i>CBL6112B</i>	<i>SB3440</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>Horn Antenna</i>	<i>R&amp;S</i>	<i>HF906</i>	<i>SB3434</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>EMI Receiver</i>	<i>R&amp;S</i>	<i>ES126</i>	<i>SB3436</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>Band-pass Filter</i>	<i>Micro-Tronics</i>	<i>BRM50702</i>	<i>SIN-030</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>3M Anechoic chamber</i>	<i>Albatross</i>	<i>9x6x6</i>	<i>SB3450</i>	<i>03/27/2007</i>	<i>03/26/2008</i>

*Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).*

SIGNED BY: *Eddy*  
ENGINEER

REVIEWED BY: *Juan Wan*  
SENIOR ENGINEER

**Radiated Emission Test Set-up (30~1000MHz) :**



**Radiated Emission Test Set-up (1~25GHz) :**

