

EMI TEST REPORT

On Model Name: Microwave Oven	
Model Number: XM134AYY	
Brand Name: Midea	
Prepared for Guangdong Midea Mic Appliances Manufacturing Co., Ltd	rowave and Electrical
FCC ID Number: VG8AM134AYY	
According to FCC Part 18(2012) 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 #: GUA-1304-10976-FCC	
Tested by:	<u>ECMG</u>
Sewen Guo/Engineer Co	ompany Name
Reviewed by: Jawen Yin/Senior Engineer Co	ECMG ompany Name
QC Manager: Swall Zhang/QC Manager Co	ECMG ompany Name
Test Report Released by: Swall Zhang	May 15 th , 2013 Date

Test Location

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

Test Site Location : GD WILOT VACUUM ELECTRONIC EMC

TEST LABORATORY

BeiJiao, ShunDe, FoShan, GuangDong,

528311, China

Tel : (86)-757-26326917

Fax : (86)-757- 22607341

Test Facility

The test facility was recognized, certified, or accredited by the following organizations:

FCC - Registration No.: 910385

GD WILOT VACUUM ELECTRONIC EMC TEST LABORATORY has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC was maintained in our files.

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List Attached Files

Exhibit Type	File Description	File Name
Test Report	Test Report	VG8XM134AYY_Test Report.pdf
Operation Description	Technical Description	VG8XM134AYY_Operation Description.pdf
External Photos	External Photos	VG8XM134AYY _External Photos
Internal Photos	Internal Photos	VG8XM134AYY _Internal Photos
Block Diagram	Block Diagram	VG8XM134AYY_Block Diagram.pdf
Schematics	Circuit Diagram	VG8XM134AYY _Schematics.pdf
ID Label/Location	Label and Location	VG8XM134AYY _Label & Location.pdf
User Manual	User Manual	VG8XM134AYY_User's Manual.pdf
Test set-up photos	Test set-up photos	VG8XM134AYY_Test Set-up Photos

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Electronic Technical Testing Corp (Shenzhen) 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

Model Numbers : XM134AYY

Model Tested : AM134A3M

Brand Name Midea

Receipt Date : May 8th, 2013

Date Tested : May 8th to 15th, 2013

Applicant : Guangdong Midea Microwave and Electrical

Appliances Manufacturing Co.,Ltd

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

Telephone : (86)-757-23306480

Fax : (86)-757-22607341

Manufacturer : Guangdong Midea Microwave and Electrical

Appliances Manufacturing Co.,Ltd

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

Telephone : (86)-757-23306480

Fax : (86)-757-22607341

Factory : Guangdong Midea Microwave and Electrical

Appliances Manufacturing Co.,Ltd

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

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Prepared by ECMG Electronic Technical Testing Corp (Shenzhen).

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Telephone : (86)-757-23306480

Fax : (86)-757-22607341

EUT Description

Guangdong Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd., model tested AM134A3M (referred to as the EUT in this report) is a Microwave Oven.

The technical specifications of EUT are as below:

Power Supply	120V AC/60Hz
Rated Input Power (Microwave)	1500W
Rated Output Power (Microwave)	1100W
Frequency	2450 MHz(Class B/Group 2)
Magnetron Model	2M248J
Magnetron Manufacturer	TOSHIBA

NOTE: For more detailed information or features please refer to user's manual of EUT.

EUT Model Derived

XM134AYY model designations as follow:

X=E or A

M: Indicate Microwave function

134: "1" indicate the microwave output power is 1100W, "34" indicate cavity capacity is 34 liters;

A: indicate the design No.;

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

Note: Pre-scan has been conducted to determine the worst-case model.model AM134A3M was selected for the final testing.

Test Summary

The electromagnetic compatibility requirements on model AM134A3M for this test are 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.

Emission Tests							
Specifications	Description	Test Results	Test Point	Remark			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	Radiation Hazard Measurement	Passed	Enclosure	Attachment 1			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	Input Power Measurement	Passed	AC Input Port	Attachment 2			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	RF Output power Measurement	Passed	EUT	Attachment 3			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	Operating Frequency Measurement	Passed	EUT	Attachment 4			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	Conducted Emission	Passed	AC Input Port	Attachment 5			
FCC Part 18:2012 FCC/OST MP-5:1986 ANSI C63.4-2009	Radiated Emission	Passed	Enclosure	Attachment 6			

Load for Microwave Oven

For all measurements the energy developed by the oven was absorbed by a dummy load consisting of a quantity of tag 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.

Note: Since rated output power of the EUT is 1100 watts, the following load water quantity shall apply:

- -Load for power output measurement: 1100 milliliters of water in the beaker located in the center of the oven.
- -Load for frequency measurement: 1100 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 770 and the other of 330 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: 770 milliliters of water, with the beaker located in the center of the oven.

EUT Exercise Software

No test sofware support this test.

Equipment Modification

Any modifications installed previous to testing by Guangdong 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 Electronic Technical Testing Corp (Shenzhen) test personnel.

EUT Sample Photos for Model AM134A3M



EUT Front View



EUT Back View

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Door Opend View



Uncovered View #1



Uncovered View #2

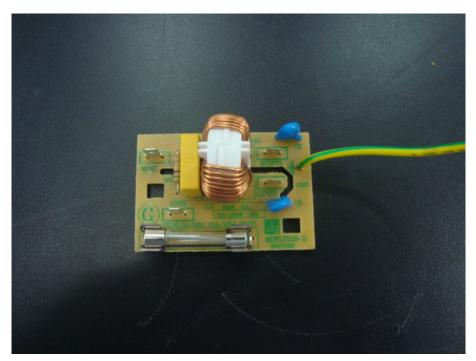


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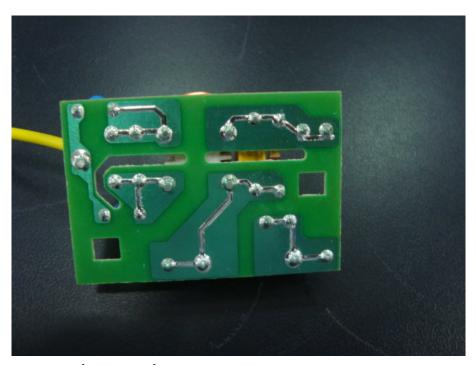
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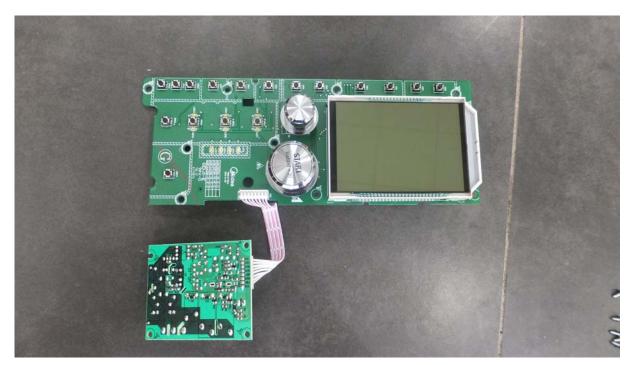
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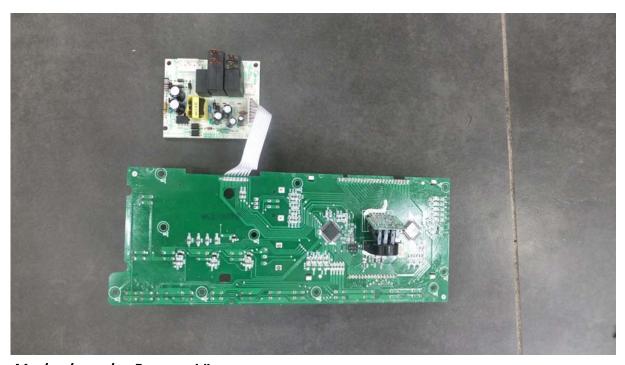
Power Filter Board Top View



Power Filter Board Bottom View



Motherboard - Top View



Motherboard -Bottom View

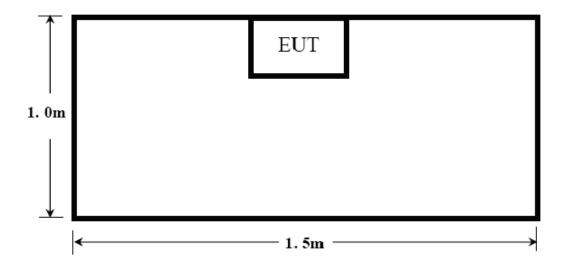
Test System Details

EUT							
XI	M134A	YY					
A	M134A	1 <i>3M</i>					
M	icrowa	ve Oven					
A	C 1201	//60Hz					
Manufacturer: Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd							
		Suppoi	rt Equipment				
	Mode.	l Number	Serial Num	ber	Ma	nufacturer	
•			N/A				
		Cable	Description				
Description From To Length Shielded Ferrite (Meters) (Y/N) (Y/N)							
EU	T	Plug	1.2 N N				
	AI M AG GG M	AM134A Microwa AC 120V Guangdo Manufac	Manufacturing Co., Support Model Number Cable From To	XM134AYY AM134A3M Microwave Oven AC 120V/60Hz Guangdong Midea Microwave and Manufacturing Co., Ltd Support Equipment Model Number Serial Num N/A Cable Description From To Length (Meters)	XM134AYY AM134A3M Microwave Oven AC 120V/60Hz Guangdong Midea Microwave and Electrical Manufacturing Co., Ltd Support Equipment Model Number Serial Number N/A Cable Description From To Length (Meters) (Y, Meters)	XM134AYY AM134A3M Microwave Oven AC 120V/60Hz Guangdong Midea Microwave and Electrical Applian Manufacturing Co., Ltd Support Equipment Model Number Serial Number Manufacturing N/A Cable Description From To Length (Meters) Shielded (Y/N)	

Note:

The EUT has been tested as an independent unit together with other necessary accessories or support units. The above support units or accessories were used to form a representative test configuration during the test tests.

Configuration of Tested System



ATTACHMENT 1 -RADIATION HAZARD TEST

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd	TEST STANDERD:	FCC Part 18		
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven		
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	22°C	HUMIDITY:	51%		
ATM PRESSURE:	103kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	DATE OF TEST:	May 08 th ,2013		
TEST REFERENCE:	ANSI C63.4-2009, 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 770ml 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:	AC 120V/60Hz				
RESULTS:	There was no microwave leakage exceeding a power level of 0.09 mW/cm² observed at any point 5cm or more from the external surface of the oven. A maximum of 1.0 mW/cm² is allowed in accordance with the applicable FCC standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed. The test results relate only to the equipment under test provided by client.				
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.				
M. UNCERTAINTY:	0.0001mW/cm ²				

Test Equipment List:

Test Equipment	Model No.	Manufacturer	Serial No.	Last Cal.	Cal. Interval
Microwave Measurement	HOLADAY	HI-1710A	00122261	2012.10.23	2013.10.23

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).

TESTED	BY:	Severano	ECMG
		ENGINEER	COMPANY NAME

REVIEWED BY: ECMG
SENIOR ENGINEER COMPANY NAME



Radiation Hazard Test Set-up

ATTACHMENT 2 - INPUT POWER MEASUREMENT

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd.	TEST STANDERD:	FCC Part 18		
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven		
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	21℃	HUMIDITY:	69%		
ATM PRESSURE:	103.1kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	DATE OF TEST:	May 08 th ,2013		
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST MP-5:1986				
TEST PROCEDURE:	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 770ml 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.				
TESTED RANGE:	N/A				
TEST VOLTAGE:	120VAC / 60Hz				
RESULTS:	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.				
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.				
M. UNCERTAINTY:	± 5W				

Test Data:

Input Voltage (Vac/Hz)	Input Current (amps)	Measured Input Power(watts)	Rated Input Power(watts)
120.7	12.90	1488	1500

Test Equipments List:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Power Meter	Ainuo	AN8726C	058704200	2013.03.14	2014.03.14

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).

TESTED BY	· Senerano	ECMG
	ENGINEER	COMPANY NAME
	V mate a	
REVIEWED E	BY: SENIOR ENCINEER	<u>ECMG</u>
	SENIOR ENGINEER	COMPANY NAME



Input Power Test Set-Up

ATTACHMENT 3 - RF OUTPUT POWER MEASUREMENT

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd.	TEST STANDERD:	FCC Part 18			
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven			
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office			
TEMPERATURE:	22℃	HUMIDITY:	60%RH			
ATM PRESSURE:	103kPa	GROUNDING:	Through AC Power Cord			
TESTED BY:	Sewen Guo	DATE OF TEST:	May 08 th ,2013			
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST MI	P-5:1986				
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18 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 1100ml 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. RF Output Power = (4.2joules/calorie)(volume in milliliters)(temperature rise) / (time in seconds) = 4.2 joules/calorie × 1100 × (Final Temp – Initial Temp) / 120					
TESTED RANGE:	N/A					
TEST VOLTAGE:	120VAC / 60Hz					
RESULTS:	RF Output Power =943.25 watts. The test results relate only to the equipment under test provided by client.					
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.					
M. UNCERTAINTY:	± 0.3℃		± 0.3℃			

Test Result:

Quality of Water(ml)	Starting Temperature (°C)	Final Temperature (℃)	Elapsed Time (Seconds)	RF Output Power(watts)
1100	20.0	44.4	1205	939.4

Test Equipments list:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Digit Thermometer	Fluke Corporation	Fluke 51 II	87500204	2013.04.08	2014.04.07
Stopwatch	CASIO	HS-3	312Q01	2012.05.23	2013.05.22

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).

TESTED BY	Severano	ECMG
	ENGINEER	COMPANY NAME
REVIEWED B	y. Jamenym	ECMC
KEVIEWED B	1: <u> </u>	<u>ECMG</u>
	SENIOR ENGINEER	COMPANY NAME



RF Output Power Test Set-Up

ATTACHMENT 4 - OPERATING FREQUENCY MEASUREMENT

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd.	TEST STANDERD:	FCC Part 18		
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven		
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	22℃	HUMIDITY:	60%RH		
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	DATE OF TEST:	May 08 th ,2013		
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST MP-	5:1986			
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Operating Frequency Measurement. 1) The variation of frequency with time. The operating frequency was measured us ing a spectrum analyzer. Starting with the EUT at room temperature, a 1100ml wa ter 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. 2) The variation of frequency with Line Voltage. The operating frequency was measured using a spectrum analyzer. The EUT was operated/warmed by at least 10 minutes of use with a 1100ml 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.				
TESTED RANGE:	2450 ± 50MHz				
TEST VOLTAGE:	120VAC / 60Hz				
RESULTS:	Please refer to following pages for details of the variation in operating frequency with time & line voltage measurement. The test results relate only to the equipment under test provided by client.				
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.				
M. UNCERTAINTY:	Freq. ±10kHz				

Variation in Operating Frequency with Time:

Minimum Frequency (MHz)	Maximum Frequency (MHz)		
2454.2	2456.8		

Variation in Operating Frequency with Line Voltage:

Minimum Frequency (MHz)	Maximum Frequency (MHz)		
2453.2	2457.4		
Note: Line voltage varied from 96Vac to 150Vac.			

Test Equipments List:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI test receiver	R&S	ESIB-26	100174	11/18/2012	11/17/2013
Horn Antenna	R&S	HF906	100311	11/20/2012	11/21/2013

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).

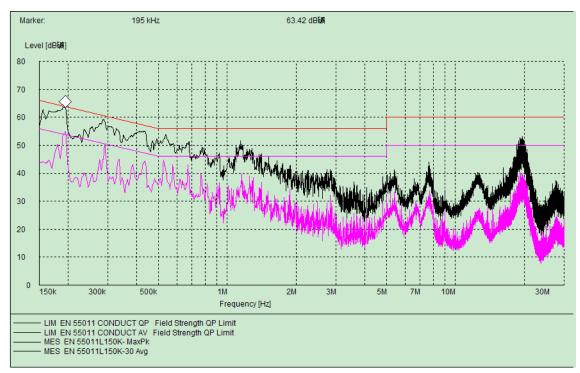
TESTED BY:	Somerano	ECMG		
	ENGINEER	COMPANY NAME		
	Y: SENIOD ENGINEED			
REVIEWED B	Y:	ECMG		
	SENIOR ENGINEER	COMPANY NAME		



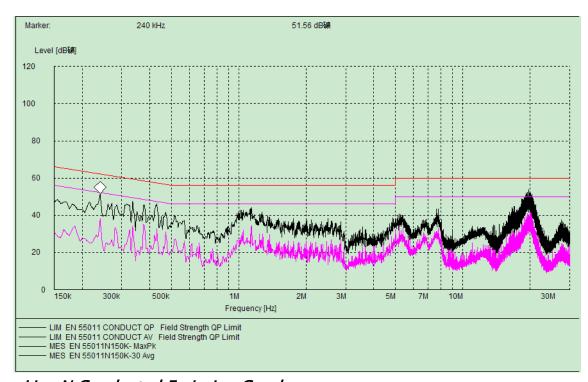
Operating Frequency Test Set-up

ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd.	TEST STANDERD:	FCC Part 18		
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven		
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	22 ℃	HUMIDITY:	64%RH		
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	May 8 th ,2013			
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST MP-5:1986				
TEST PROCEDURE:	The EUT was set up according to the guideline of ANSI C63.4-2009 & 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 quasipeaked and averaged. The frequency range investigated was from 150kHz to 30MHz.				
TESTED RANGE:	150kHz to 30MHz				
TEST VOLTAGE:	120VAC / 60H				
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions. The test results relate only to the equipment under test provided by client.				
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.				
M. UNCERTAINTY:	±2.5 dB				



Line L Conducted Emission Graph



Line N Conducted Emission Graph

Test Data:

Lines (L/N)	Frequency (MHz)	Corrected QP Level (dBuV)	Limits QP (dBuV)	Margin QP (dB)	Frequency (MHz)	Corrected AV Level (dBuV)	Limits AV (dBuV)	Margin QP (dB)
L	0.195	43.2	62.7	-19.5	0.195	21.6	52.7	-31.1
L	0.345	43.4	59.1	-15.7	0.345	19.1	49.1	-30
L	0.580	37.9	57.4	-19.5	0.580	20.4	47.4	-27
N	0.240	41.6	61.4	-19.8	0.240	22.2	51.4	-29.2
N	0.355	39.6	58.9	-19.3	0.355	19.4	48.9	-29.5
N	0.520	36.7	57.8	-21.1	0.520	17.4	47.8	-30.4

Note

- 1) All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not use.
- 2) "QP" means "Quasi-Peak" values, "AV" means "Average" values.
- 3) The other reading are too low against official limits that are not be recorded.

Test Equipments List:

Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
EMI test receiver	R&S	ESIB-26	100174	11/19/2012	11/18/2013
LISN	R&S	ESH2-Z5	100091	11/19/2012	11/18/2013
Transient Limiter	Agilent	11947A	3107A03648	11/19/2012	11/18/2013
Shielding Room	TDK	8m×4m×3m	N/A	04/17/2013	04/16/2014

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).

TESTED	BY: Severano	ECMG		
	ENGINEER	COMPANY NAME		
	1's suite of			
REVIEWEI	DBY:	ECMG		
	SENIOR ENGINEER	COMPANY NAME		



Conducted Emission Test Set-up

ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

	Cuanadana Mida-			
CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd.	TEST STANDERD:	FCC Part 18	
MODEL NUMBERS:	XM134AYY	PRODUCT:	Microwave Oven	
MODEL TESTED:	AM134A3M	EUT DESIGNATION:	Home or Office	
TEMPERATURE:	22℃	HUMIDITY:	63%RH	
ATM PRESSURE:	103.0kPa	GROUNDING:	Through AC Power Cord	
TESTED BY:	Sewen Guo	DATE OF TEST:	May 8 th ,2013	
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST N	1P-5:1986		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4-2009& 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. 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 Quasipeak detection mode from 30 MHz to 1GHz and average detector mode above 1GHz. 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: FS= RA + AF + CF - AG Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain			
TESTED RANGE:	30MHz to 24.5GHz			
TEST VOLTAGE:	120VAC / 60Hz			
RESULTS:	The EUT meet the requirements of test reference for radiated emissions. The test results relate only to the equipment under test provided by client.			
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.			
M. UNCERTAINTY:	± 3.2 dB			

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=20log

[25*SQRT(Power/500)]dBuV/m

Test Data:

30MHz - 1GHz							
Frequency [MHz]	Antenna Polarization [V/H]	Corrected Reading [dBµV/m]	Factor (dB)	Field Strength [dBµV/m]	Delta, QP [dB]	3 Meters Limits [dB _i 2V/m]	
168.016	Н	14.5	11.2	25.7	-45.0	70.7	
426.553	Н	14.7	16.8	31.5	-39.2	70.7	
961.122	Н	5.6	28.0	33.6	-37.1	70.7	
43.607	V	15.0	10.7	25.7	-45.0	70.7	
449.880	V	16.6	16.2	32.8	-37.9	70.7	
961.122	V	8.7	28.0	36.7	-34.0	70.7	

Note: 1) All readings are quasi-peak unless stated otherwise, using a bandwidth of 120kHz, with a 60s sweep time. A video filter was not used. 2) Field Strength = Read Level + Factor, Factor = Antenna Factor + Cable Loss - Preamp Factor.

1GHz - 25GHz

Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dBµV/m]	Factor (dB)	Field Strength [dBµV/m]	Delta, AV [dB]	3 Meters Limits [dB ₁ V/m]
4.9238	Н	20.1	18.7	38.8	-31.9	70.7
7.3587	Н	12.7	21.6	34.3	-36.4	70.7
8.6210	Н	20.5	22.5	43.0	-27.7	70.7
4.9238	V	11.7	18.7	30.4	-40.3	70.7
6.9379	V	19.1	21.4	40.5	-30.2	70.7
7.3587		12.7	21.6	34.3	-36.4	70.7

Note: 1) All readings are average unless stated otherwise, using a bandwidth of 1MHz, with a 60s sweep time. A video filter was not used. 2) Field Strength = Read Level + Factor, Factor = Antenna Factor + Cable Loss - Preamp Factor.

Test Equipments List:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI test receiver	R&S	ESIB-26	100174	11/19/2012	11/18/2013
Horn Antenna	R&S	HF906	100311	11/19/2012	11/18/2013
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130144	11/19/2012	11/18/2013
Loop Antenna	ETS	ETS-6152	24934	11/19/2012	11/18/2013
Anechoic Chamber	TDK	9m×6 m×5.7m	N/A	04/17/2013	04/16/2014

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).

TESTED	BY:	Somerano	ECMG
	_	ENGINEER	COMPANY NAME
		Jamenym	
REVIEWE	ED BY:	0	<u>ECMG</u>
		SENIOR ENGINEER	COMPANY NAME



Radiated Emission Test Set-up (30 -1,000MHz)



Radiated Emission Test Set-up (1-25GHz)