

EMI TEST REPORT

On Model Name: Microwave Oven
Model Number: XM242AYY-P
Brand Name: Aidea
Prepared for Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd
FCC ID Number: VG8XM242AYY

According to FCC Part 18(2010)
Industrial, Scientific and Medical Equipment FCC/OST MP-5(1986)

Test Report #: GUA-1204-10815-FCC

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

Test Report Released by: Swall Zhang May 21st, 2012

Swall Zhang Date

Test Location

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

Test Site Location : GD WITOL 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 WITOL 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.

Table of Contents

GOVERNMENT DISCLAIMER NOTICE	2
REPRODUCTION CLAUSE	2
OPINIONS AND INTERPRETATIONS	2
STATEMENT OF MEASUREMENT UNCERTAINTY	2
ADMINISTRATIVE DATA	3
EUT DESCRIPTION	4
EUT MODEL DERIVED	4
TEST SUMMARY	5
LOAD FOR MICROWAVE OVEN	6
EUT EXERCISE SOFTWARE	7
EQUIPMENT MODIFICATION	7
EUT SAMPLE PHOTOS FOR MODEL EM242AYY-P	8
TEST SYSTEM DETAILS	14
CONFIGURATION OF TESTED SYSTEM	15
ATTACHMENT 1 -RADIATION HAZARD TEST	16
ATTACHMENT 2 - INPUT POWER MEASUREMENT	18
ATTACHMENT 3 - RF OUTPUT POWER MEASUREMENT	21
ATTACHMENT 4 - OPERATING FREQUENCY MEASUREMENT	24
ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS	27
ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS	33

List Attached Files

Exhibit Type	File Description	File Name
Test Report	Test Report	VG8XM242AYY _Test Report.pdf
Operation Description	Technical Description	VG8XM242AYY _Operation Description.pdf
External Photos	External Photos	VG8XM242AYY _External Photos.pdf
Internal Photos	Internal Photos	VG8XM242AYY _Internal Photos.pdf
Block Diagram	Block Diagram	VG8XM242AYY _Block Diagram.pdf
Schematics	Circuit Diagram	VG8XM242AYY _Schematics.pdf
ID Label/Location	Label and Location	VG8XM242AYY _Label & Location.pdf
User Manual	User Manual	VG8XM242AYY _User's Manual.pdf
Test set-up photos	Test set-up photos	VG8XM242AYY _Test Set-up Photos.pdf

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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 : XM242AYY-P

Model Tested : EM242AYY-P

Brand Name : Midea

Receipt Date : May 14th, 2012

Date Tested : May 15th, 2012 to May 18th, 2012

Applicant : Guangdong Midea Microwave and Electrical

Appliances Manufacturing Co.,Ltd

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

Telephone : (86)-757-23606480

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)-757-23606480

Fax : (86)-757-22607341

Factory : Guangdong Midea Microwave and Electrical

Appliances Manufacturing Co.,Ltd

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

Telephone : (86)-757-23606480

Fax : (86)-757-22607341

EUT Description

Guangdong Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd. model tested EM242AYY-P (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)	1600W
Rated Output Power (Microwave)	1200W
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

XM242AYY-P model designations as follow:

X=E or A;

M: indicate microwave function;

242: "2" indicate the microwave output power is 1200W, "42" indicate cavity capacity is 42 liters;

A: indicate the design No.;

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

P: indicated the painted cavity

Model of EM242AYY-P was chosen for the final testing.

Note: There are two mother boards for model MD1001LSB and MD1001LB which are included in this report, Pre-scan has been performed at between this two mother boards, MD1001LSB was selected for the final testing.

Test Summary

The electromagnetic compatibility requirements on model EM242AYY-P 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 18:2010 FCC/OST MP-5:1986 ANSI C63.4-2009	Radiation Hazard Measurement	Passed	Enclosure	Attachment 1
FCC Part 18:2010 FCC/OST MP-5:1986 ANSI C63.4-2009	Input Power Measurement	Passed	AC Input Port	Attachment 2
FCC Part 18:2010 FCC/OST MP-5:1986 ANSI C63.4-2009	RF Output power Measurement	Passed	EUT	Attachment 3
FCC Part 18:2010 FCC/OST MP-5:1986 ANSI C63.4-2009	Operating Frequency Measurement	Passed	EUT	Attachment 4
FCC Part 18:2010 FCC/OST MP-5:1986 ANSI C63.4-2009	Conducted Emission	Passed	AC Input Port	Attachment 5
FCC Part 18:2010 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 1200 watts, the following load water quantity shall apply:

- -Load for power output measurement: 1200 milliliters of water in the beaker located in the center of the oven.
- -Load for frequency measurement: 1200 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 840 and the other of 360 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: 840 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 EM242AYY-P



EUT Front View

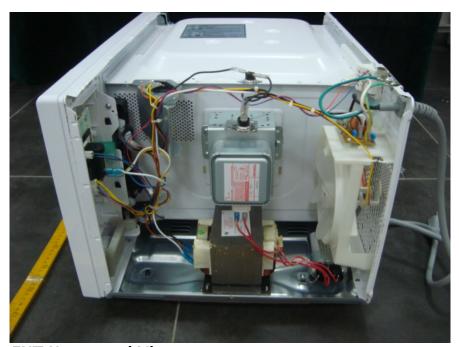


EUT Back View

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Door Opend View

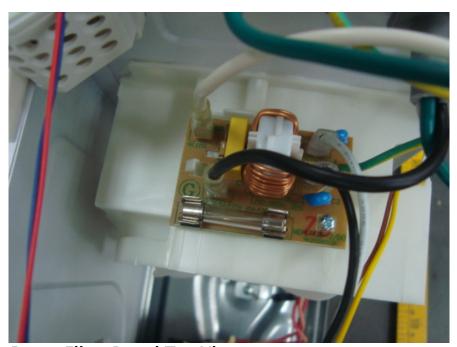


EUT Uncovered View

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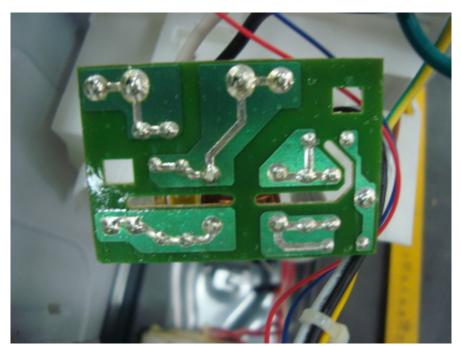


Magnetron Front View

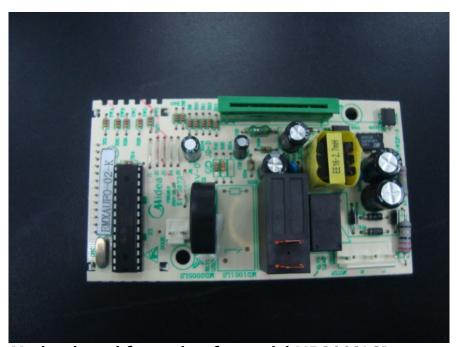


Power Filter Board Top View

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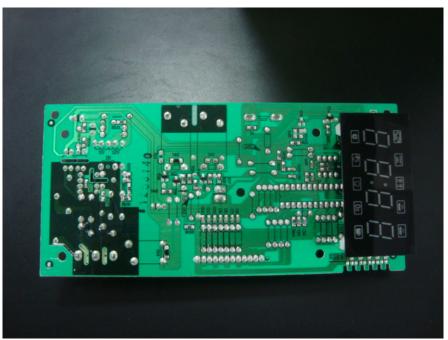


Power Filter Board Bottom View

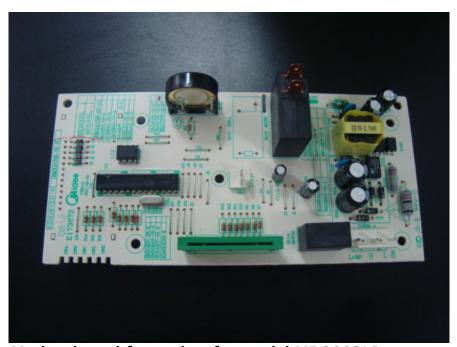


Mother board front view for model:MD1001LSB

FCC Test Report #: GUA-1204-10815-FCC
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Prepared by ECMG Electronic Technical Testing Corp (Shenzhen). Page 11 of 36

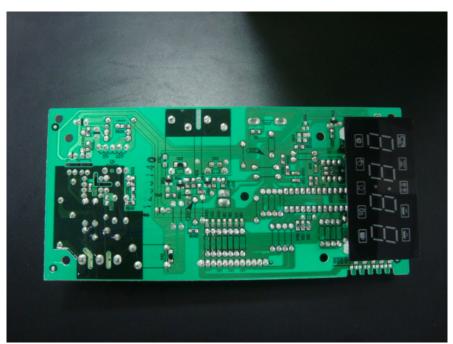


Mother board rear view for model:MD1001LSB



Mother board front view for model:MD1001LB

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Mother board rear view for model:MD1001LB

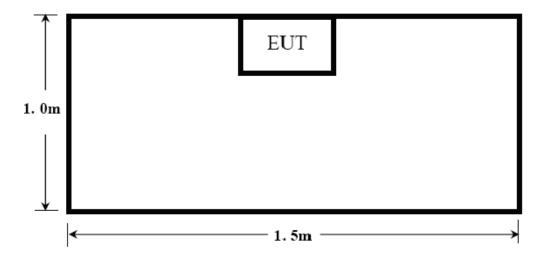
Test System Details

		EUT			
XM242A	AYY-P				
EM242A	YY-P				
Microwa	ive Oven				
AC 120	V/60Hz				
Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd					
•	Suppoi	rt Equipment			
Description Model Number Serial Number Manufacturer					
		N/A			
	Cable	Description			
From	То	Length (Meters)			Ferrite (Y/N)
EUT	Plug	1.2	ı	V	N
	EM242A Microwa AC 120 Guangd Manufa Mode	Manufacturing Co., Support Model Number Cable From To	XM242AYY-P EM242AYY-P Microwave Oven AC 120V/60Hz Guangdong Midea Microwave and Editor Manufacturing Co., Ltd Support Equipment Model Number Serial Num N/A Cable Description From To Length (Meters)	XM242AYY-P EM242AYY-P 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) SMICROWAVE Length (Meters)	XM242AYY-P EM242AYY-P Microwave Oven AC 120V/60Hz Guangdong Midea Microwave and Electrical Appliance Manufacturing Co., Ltd Support Equipment Model Number Serial Number Ma 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:	XM242AYY-P	PRODUCT:	Microwave Oven
MODEL TESTED:	EM242AYY-P	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	53%
ATM PRESSURE:	103kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	Sewen Guo	DATE OF TEST:	May 15 th , 2012
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 840ml 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 0.08mW/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:	0.08 mW/cm ²		

Test Equipment List:

Test Equipment	Model No.	Manufacturer	Serial No.	Last Cal.	Cal. Interval
Microwave Measurement	HOLADAY	HI-1710A	00122261	2011.08.20	2012.08.21

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: Severising 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:	XM242AYY-P	PRODUCT:	Microwave Oven	
MODEL TESTED:	EM242AYY-P	EUT DESIGNATION:	Home or Office	
TEMPERATURE:	21℃	HUMIDITY:	59%	
ATM PRESSURE:	103.1kPa	GROUNDING:	Through AC Power Cord	
TESTED BY:	Sewen Guo	DATE OF TEST:	May 15 th , 2012	
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 840ml 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	Input Current	Measured Input	Rated Input
(Vac/Hz)	(amps)	Power(watts)	Power(watts)
120.3	13.98	1638	

Test Equipments List:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Power Meter	Ainuo	AN8726C	058704195	10/10/2011	10/11/2012

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
	SENIOR ENGINEER	
REVIEWED BY	. 0	ECMG
	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:	XM242AYY-P	PRODUCT:	Microwave Oven		
MODEL TESTED:	EM242AYY-P	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 15 th , 2012		
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 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 1200ml 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 n = 4.2 joules/calorie × 1200 × (Fi		,		
TESTED RANGE:	N/A				
TEST VOLTAGE:	120VAC / 60Hz				
RESULTS:	RF Output Power =1041.6 watts. The test results relate only to the equipment under test provided by client.				
CHANGES OR MODIFICATIONS:	There were no modifications ins (Shenzhen) test personnel.	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.			
M. UNCERTAINTY:	± 0.3℃				

Test Result:

Quality of	Starting	Final Temperature (${\mathcal C}$)	Elapsed Time	RF Output	
Water(ml)	Temperature (${\mathcal C}$)		(Seconds)	Power(watts)	
1200	20.4	45.2	1205	1041.6	

Test Equipments list:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Digit Thermometer	Fluke Corporation	Fluke 51 II	87500204	5/14/2011	5/15/2012
Stopwatch	CASIO	HS-3	005Q08R	5/14/2011	5/15/2012

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
	sy: Janenym	
REVIEWED I	BY:	ECMG
	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:	XM242AYY-P	PRODUCT:	Microwave Oven		
MODEL TESTED:	EM242AYY-P	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	21℃	HUMIDITY:	61%RH		
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	DATE OF TEST:	May 16 th , 2012		
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 using a spectrum analyzer. Starting with the EUT at room temperature, a 1200ml 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. 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 1200ml 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)
2445	2448.6

Variation in Operating Frequency with Line Voltage:

Minimum Frequency (MHz)	Maximum Frequency (MHz)
2449.8	2452.2
Note: Line voltage varied from 96Vac to 150Vac.	

Test Equipments List:

Test Equipment	Manufacturer	cturer Model Serial No.		Last Cal.	Cal. Due
EMI test receiver	R&S	ESIB-26	100174	11/18/2011	11/17/2012
Horn Antenna	R&S	HF906	100311	11/20/2011	11/21/2012

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: Sovertino	ECMG
	ENGINEER	COMPANY NAME
	ED BY: SENIOR ENGINEER	
REVIEWE	ED BY:	ECMG
	SENIOR ENGINEER	COMPANY NAME

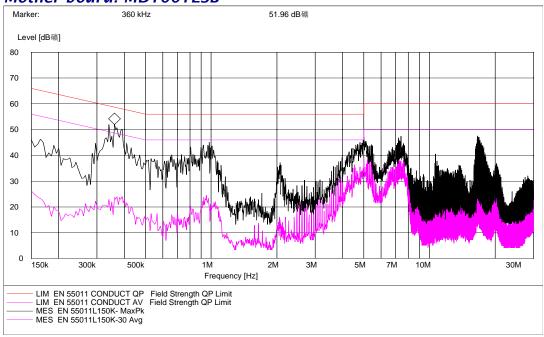


Operating Frequency Test Set-up

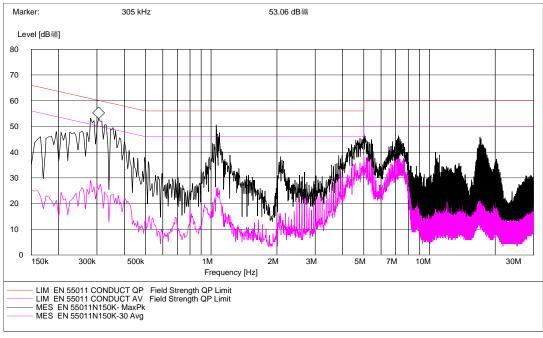
ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co Ltd.	TEST STANDERD:	FCC Part 18		
MODEL NUMBERS:	XM142AYY-P	PRODUCT:	Microwave Oven		
MODEL TESTED:	EM242AYY-P	EUT DESIGNATION:	Home or Office		
TEMPERATURE:	22℃	HUMIDITY:	59%RH		
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord		
TESTED BY:	Sewen Guo	DATE OF TEST:	May 18 th , 2012		
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST MP-	5:1986			
TEST PROCEDURE:	The EUT was set up according to for conducted emissions. The me EMI receiver peak scan was made highest significant peaks were the peaked and averaged. The free 30MHz.	asurement was using a de at the frequency me nen marked, and these	A AMN on each line and an easurement range. The six e signals were then quasi-		
TESTED RANGE:	150kHz to 30MHz				
TEST VOLTAGE:	120VAC / 60Hz				
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				

Mother board: MD1001LSB

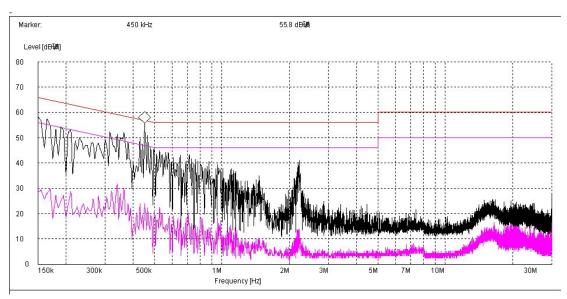


Line L Conducted Emission Graph

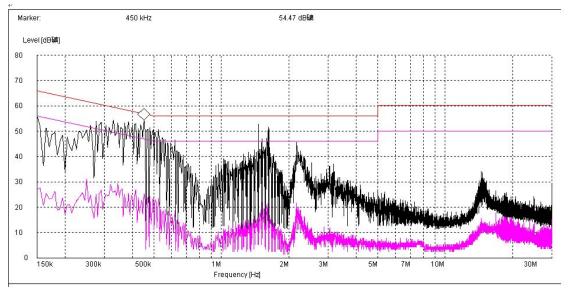


Line N Conducted Emission Graph

Mother board: MD1001LB



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)
			Λ	1D1001	LSB			
L	0.360	41.3	<i>58.7</i>	-17.4	0.360	19.1	48.7	-29.6
L	0.340	41.8	59.2	-17.4	0.340	16.9	49.2	-32.3
L	0.390	40.4	58.1	-17.7	0.390	18.0	48.1	-30.1
N	0.305	43.4	60.1	-16.7	0.305	20.6	50.1	-29.5
N	0.280	41.5	60.8	-19.3	0.280	22.6	50.8	-28.2
N	0.355	38.6	58.8	-20.2	0.355	16.4	48.8	-32.4

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.

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)
			ı	MD1001	LB			
L	0.450	43.2	56.9	-13.7	0.450	16.7	46.9	-30.2
L	0.165	51.4	65.2	-13.8	0.165	25.1	55.2	-30.1
L	0.315	42.9	59.8	-16.9	0.315	20.3	49.8	-29.5
N	0.450	42.9	56.9	-14	0.450	17.7	46.9	-29.2
N	0.330	44.9	59.5	-14.6	0.330	23.4	49.5	-26.1
N	0.275	42.1	61	-18.9	0.275	21.0	51	-30

Note:

- 4) All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not use.
- 5) "QP" means "Quasi-Peak" values, "AV" means "Average" values.
- 6) 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	11/19/2011	11/18/2012
LISN	R&S	ESH2-Z5	100091	11/19/2011	11/18/2012
Transient Limiter	Agilent	11947A	3107A03648	11/19/2011	11/18/2012
Shielding Room	TDK	8m×4m×3m	N/A	04/17/2012	04/16/2013

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:	Severano	ECMG
	ENGINEER	COMPANY NAME
	Janerrym	
REVIEWED BY	0	ECMG
	SENIOR ENGINEER	COMPANY NAME

Conducted Emission Test Set-up:



ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

CLIENT:	Guangdong Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd. TEST STANDERD:		FCC Part 18	
MODEL NUMBERS:	XM242AYY-P	PRODUCT:	Microwave Oven	
MODEL TESTED:	EM242AYY-P	EUT DESIGNATION:	Home or Office	
TEMPERATURE:	22℃	HUMIDITY:	62%RH	
ATM PRESSURE:	103.0kPa	GROUNDING:	Through AC Power Cord	
TESTED BY:	Sewen Guo	DATE OF TEST:	May 18, 2012	
TEST REFERENCE:	ANSI C63.4-2009, FCC/OST	MP-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/mFor 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 [dBµV/m]
243.828	V	12.5	9.5	22.0	-49.1	71.1
140.802	V	10.9	8.9	19.8	-51.3	71.1
90.261	V	8.3	9.2	17.5	-53.6	71.1
267.154	Н	11.7	8.9	20.6	-50.5	71.1
372.124	Н	13.6	7.4	21.0	-50.1	71.1
418.778	Н	15.2	6.9	22.1	-49.0	71.1

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.

1*GHz* - 25*GHz*

Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dBµV/m]	Factor (dB)	Field Strength [dBµV/m]	Delta, AV [dB]	3 Meters Limits [dBµV/m]
8.772	V	36.0	11.0	47.0	-24.1	71.1
4.323	V	35.4	0.8	36.2	-34.9	71.1
7.118	V	35.7	3.9	39.6	-31.5	71.1
8.561	Н	35.5	12.1	47.6	-23.5	71.1
4.894	Н	34.2	16.9	51.1	-20	71.1
7.329	Н	35.6	<i>5.7</i>	41.3	-29.8	71.1

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	11/19/2011	11/18/2012
Horn Antenna	R&S	HF906	100311	11/21/2011	11/20/2012
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130144	11/21/2011	11/20/2012
Loop Antenna	ETS	ETS-6152	24934	11/21/2011	11/20/2012
Anechoic Chamber	TDK	9m×6 m×5.7m	N/A	04/17/2012	04/16/2013

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: Severano	ЕСМС
ENGINEER	COMPANY NAME
REVIEWED BY: Jamenym	
REVIEWED BY:	<u>ECMG</u>
SENIOR ENGINEER	COMPANY NAME

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



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



FCC Test Report #: GUA-1204-10815-FCC Prepared for Guangdong Midea Microwave and Electrical Appliances Manufacturing Co., Ltd Prepared by ECMG Electronic Technical Testing Corp (Shenzhen). Page 36 of 36