

EMI Test Report

On Model Name: Microwave oven (OTR)

Model Numbers: EAM044KYY

Brand Name: 

FCC ID: VG8EAM044KYY

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

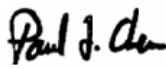
Test Report #: PSZ-0706-0423-FCCID

Prepared by: King Su

Reviewed by: Ivan Wen

QC Manager: Paul Chen

Test Report Released by:



Paul Chen

2007, July 10

Date

List Attached Files

Exhibit Type	File Description	File Name
<i>Test Report</i>	<i>Test Report</i>	VG8EAM044KYY _Test report.pdf
<i>Operation Description</i>	<i>Technical Description</i>	VG8EAM044KYY _operation description.pdf
<i>External Photos</i>	<i>External Photos</i>	VG8EAM044KYY _External Photos
<i>Internal Photos</i>	<i>Internal Photos</i>	VG8EAM044KYY _Internal Photos
<i>Block Diagram</i>	<i>Block Diagram</i>	VG8EAM044KYY _Block Diagram.pdf
<i>Schematics</i>	<i>Circuit Diagram</i>	VG8EAM044KYY _Schematics.pdf
<i>ID Label/Location</i>	<i>Label Artwork and Location</i>	VG8EAM044KYY _Label & Location.pdf
<i>User Manual</i>	<i>User Manual</i>	VG8EAM044KYY _User Manual.pdf
<i>Test setup photos</i>	<i>Test setup photos</i>	VG8EAM044KYY _Test Setup Photos

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 : 86-755-26941599

Fax : 86-755-26941545

FCC Registration Number: 274801

Accreditation Bodies

EMC Compliance Management Group is a fully accredited Test Laboratory for ITE, ISM and Telecommunications Products.



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code # 200068-0.

Table of Contents

GOVERNMENT DISCLAIMER NOTICE	1
REPRODUCTION CLAUSE	1
OPINIONS AND INTERPRETATIONS	1
STATEMENT OF MEASUREMENT UNCERTAINTY	1
ADMINISTRATIVE DATA	2
EUT DESCRIPTION	2
TYPE OF DERIVER	3
TEST SUMMARY	4
LOAD FOR MICROWAVE OVENS	5
EQUIPMENT MODIFICATION	5
EUT SAMPLE PHOTOS FOR MODEL	6
TEST SYSTEM DETAILS	10
CONFIGURATION OF TESTED SYSTEM	11
ATTACHMENT 1 – RADIATION HAZARD TEST	12
ATTACHMENT 2 – INPUT POWER MEASUREMENT	14
ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT	16
ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT	18
ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS	21
ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS	25

Government Disclaimer Notice

When government drawing, specification, or other data are used for any purpose other than in connection with a definitely related government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawing, specifications, or other data, is not to be regarded by implication or otherwise in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell patented invention that may in any way be related thereto. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Reproduction Clause

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from EMC Compliance Management Group, 684 West Maude Avenue Sunnyvale, CA 94085.

Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of EMC Compliance Management Group 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 (OTR)

Model Numbers : EAM044KYY

Model Tested : EAM044K1W

Brand Name : 

Date Tested : 2007, June 28 to July 6

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 EAM044KYY (referred to the EUT in this report) is a Microwave Oven (OTR).

Specifications:

Power Supply	120V AC,60 Hz
Input Power	1550W
Cooking Power:	1000W
Operation Frequency:	2450MHz
Magnetron Manufacturer	TOSHIBA
Magnetron Model Number	2M248J
Outside Dimensions(WxHxD):	29.875x16.4x15.03
Oven Cavity Dimensions(HxWxD):	12.4x9.7x12.9 in.
Oven Capacity:	1.5cu.ft
Net Weight:	Approx. 63.93lbs.

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 2 of 28

Type of Deriver

EAM044KYY model designations:

Y may be 0-9 or A-Z, denotes the appearance of the door frame

Test Summary

The Electromagnetic Compatibility requirements on model tested EAM044K1W 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.

Emission Tests				
Specifications	Description	Test Results	Test Point	Remark
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiation Hazard Measurement	Passed by 0.0017mW/cm ²	EUT	Attachment 1
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Input Power Measurement	Refer to Attachment 2	EUT	Attachment 2
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	RF Output power Measurement	Refer to Attachment 3	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 by 12.50 dB of QP	AC Input Port	Attachment 5
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiated Emission	Passed by 28.29dB of QP Passed by 19.69dB of AVE	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 EMC Compliance Management Group (China) test personnel.

EUT Sample Photos for model



Front & Top View



Rear View

Test Report #: PSZ-0706-0423-FCC+ID

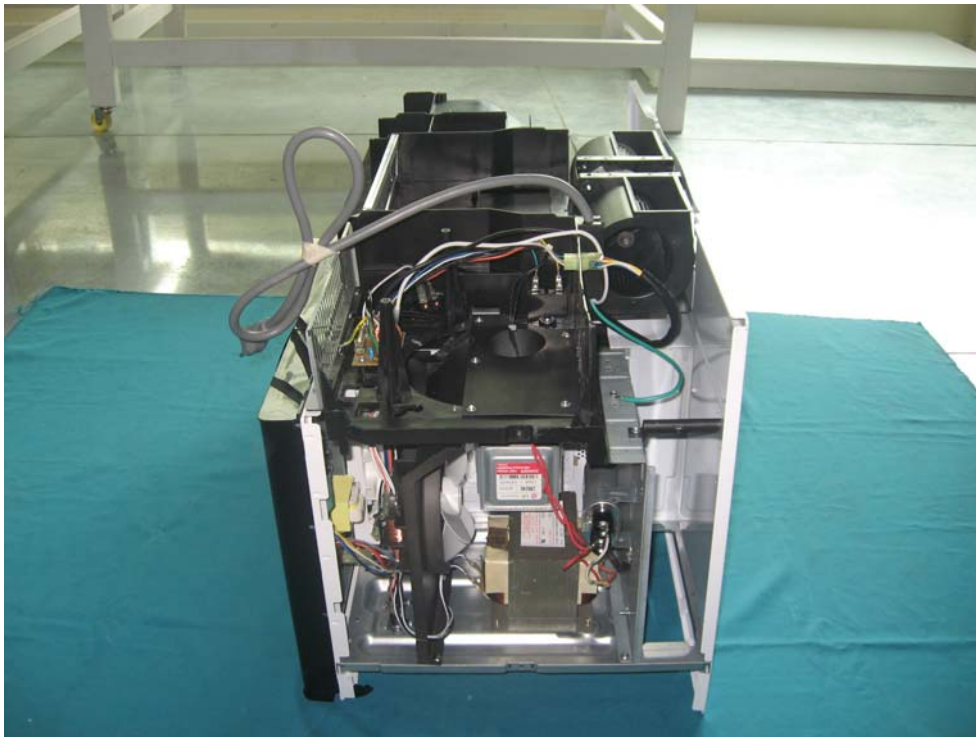
Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by EMC Compliance Management Group

Page 6 of 28



Door opened View



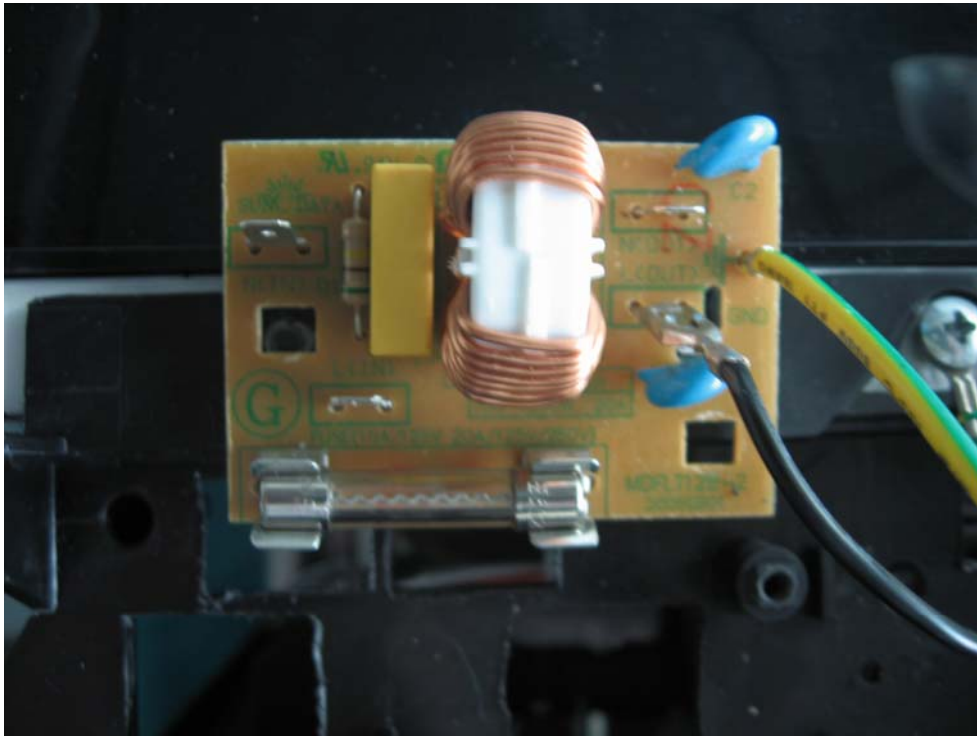
Uncovered View

Test Report #: PSZ-0706-0423-FCC+ID

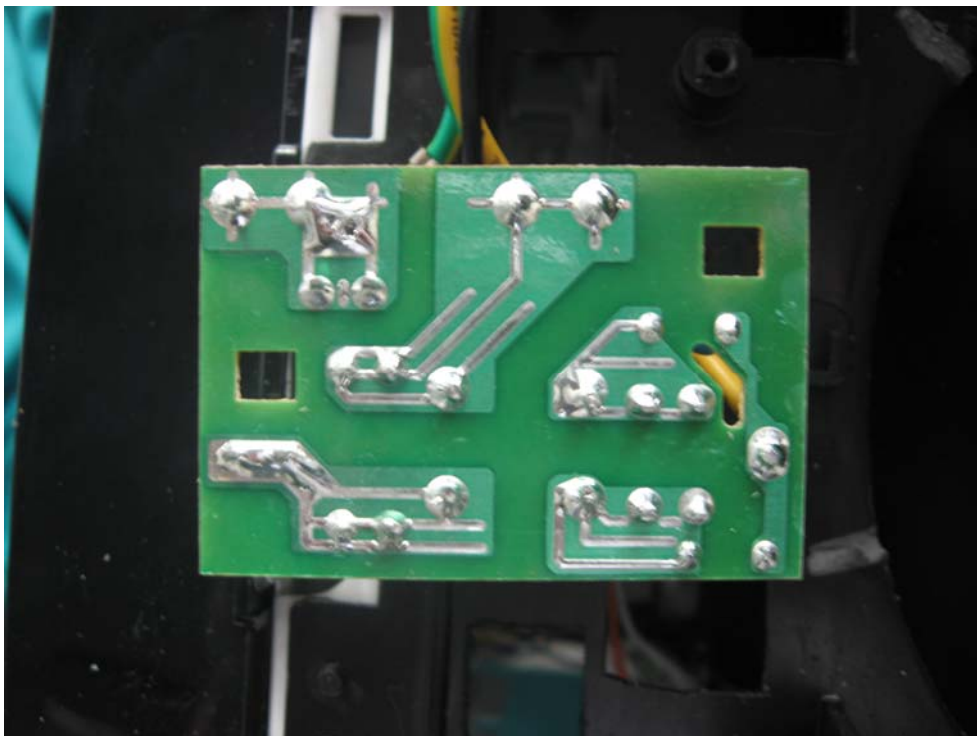
Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by EMC Compliance Management Group

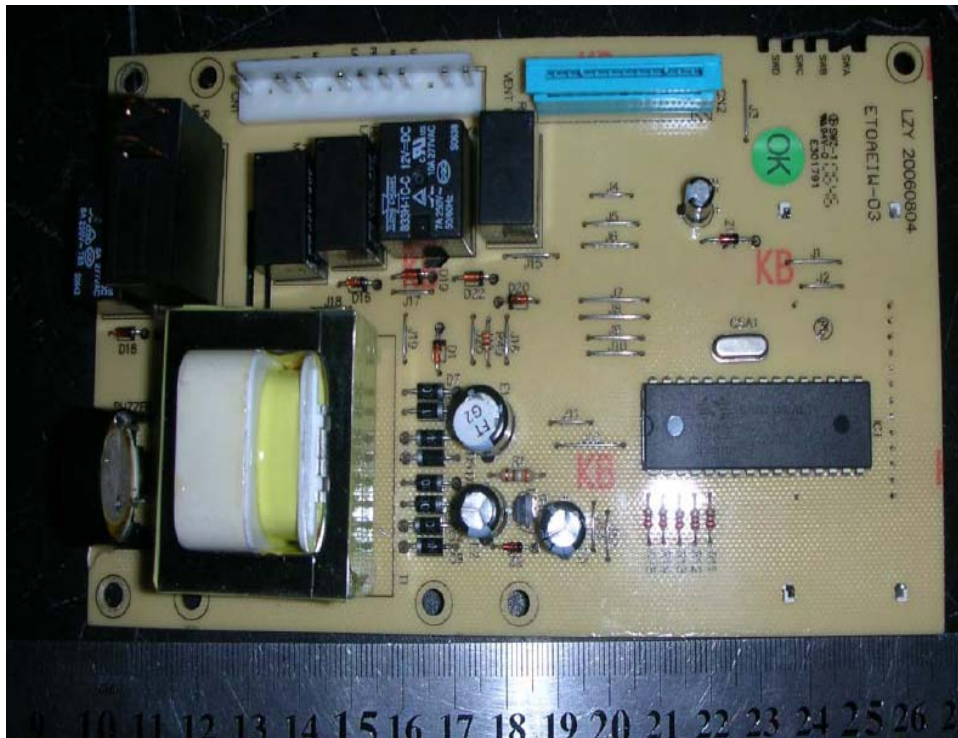
Page 7 of 28



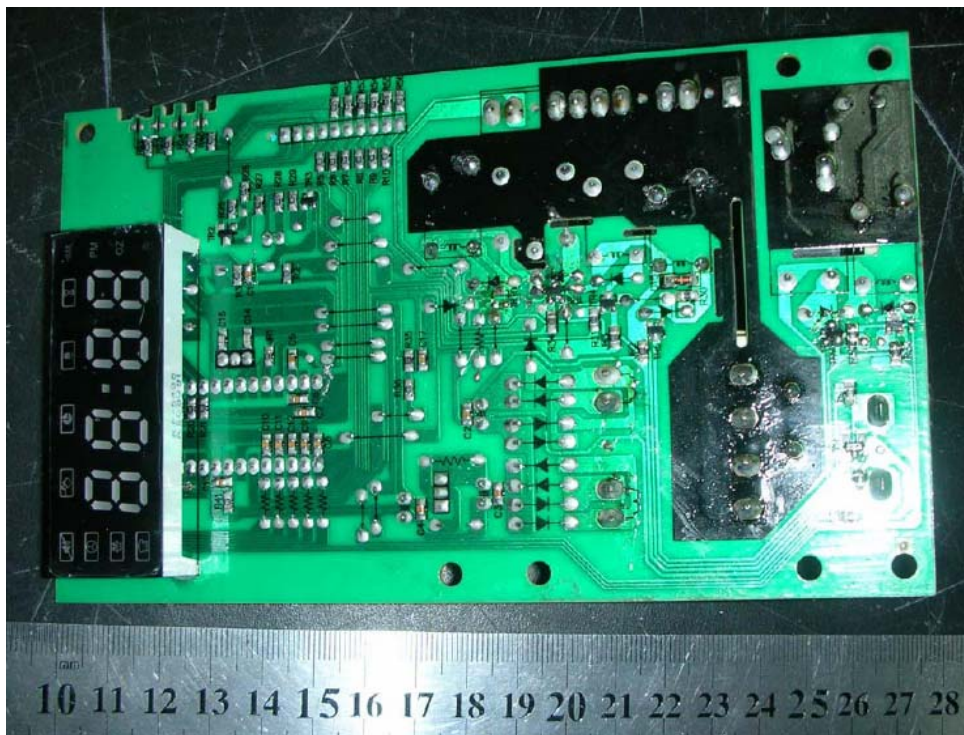
AC power filter board #1



AC power filter board #2



Main board #1



Main board #2

Test Report #: PSZ-0706-0423-FCC+ID

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

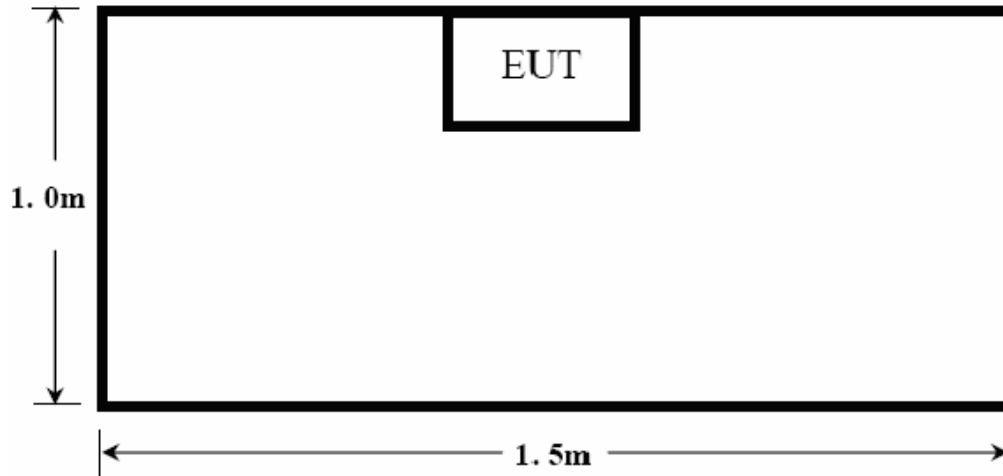
Prepared by EMC Compliance Management Group

Page 9 of 28

Test System Details

EUT					
Model Numbers:	EAM044KYY				
Model Tested:	EAM044K1W				
Description:	Microwave Oven (OTR)				
Manufacturer:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd				
Support Equipment					
N/A					
Cable Description					
Description	From	To	Length (Meters)	Shielded (Y/N)	Ferrite (Y/N)
Power Cable	EUT	Plug	1.20	N	N

Configuration of Tested System



ATTACHMENT 1 – RADIATION HAZARD TEST

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007, July 3
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	<p>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.</p>		
TESTED RANGE:	N/A		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	<p>There was no microwave leakage exceeding a power level of 0.0017 mW/cm² observed at any point 5cm or more from the external surface of the oven.</p> <p>A maximum of 1.0mW/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.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
Changes or Modifications:	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY:	0.0001 mW/cm ²		

Test equipments list:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Field Monitor	R&S	AR FM5004	A0304252	25/05/2007	24/05/2008
Electric FieldProber	R&S	AR FP6001	A0304302	15/03/2007	14/03/2008

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).

Radiation Hazard Test Set-up :



SIGNED BY: King Su
ENGINEER

REVIEWED BY: Juan Wen
SENIOR ENGINEER

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 13 of 28

ATTACHMENT 2 – INPUT POWER MEASUREMENT

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007,June 29
TEST REFERENCE:	ANSI C63.4: 2003, 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 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		
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 EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY :	± 5W		

Test Data:

<i>Input Voltage (Vac/Hz)</i>	<i>Input Current (amps)</i>	<i>Measured Input Power (watts)</i>	<i>Rated Input Power (watts)</i>
120	13.10	1507	1550

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>
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).

Input Power Test Set-Up :

SIGNED BY: King Su
ENGINEER

REVIEWED BY: Juan Wen
SENIOR ENGINEER

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 15 of 28

ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007,June 29
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	<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> $= (4.2\text{joules/calorie})(\text{volume in milliliters})(\text{temperature rise}) / (\text{time in seconds})$ $= 4.2 \text{ joules/calorie} \times 1000 \times (\text{Final Temp} - \text{Initial Temp}) / 120$		
TESTED RANGE:	N/A		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	<p>RF Output Power = 798 watts</p> <p>The test results relate only to the equipment under test provided by client.</p>		
Changes or Modifications:	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY:	$\pm 0.3^{\circ}\text{C}$		

Test Data:

Quality of Water (ml)	Starting Temperature (°C)	Final Temperature (°C)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	25.60	48.40	120	798

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).

RF Output Power Test Set-Up :

SIGNED BY:

ENGINEER

REVIEWED BY:

SENIOR ENGINEER

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 17 of 28

ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007,July 6
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	<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 from 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>		
TESTED RANGE:	2450 ± 50MHz		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	<p>Please refer to following pages for details of the variation in operating frequency with time & line voltage measurement.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
Changes or Modifications:	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY:	Freq. ±10kHz		

Variation in Operating Frequency with Time:

<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2456.6	2462.8

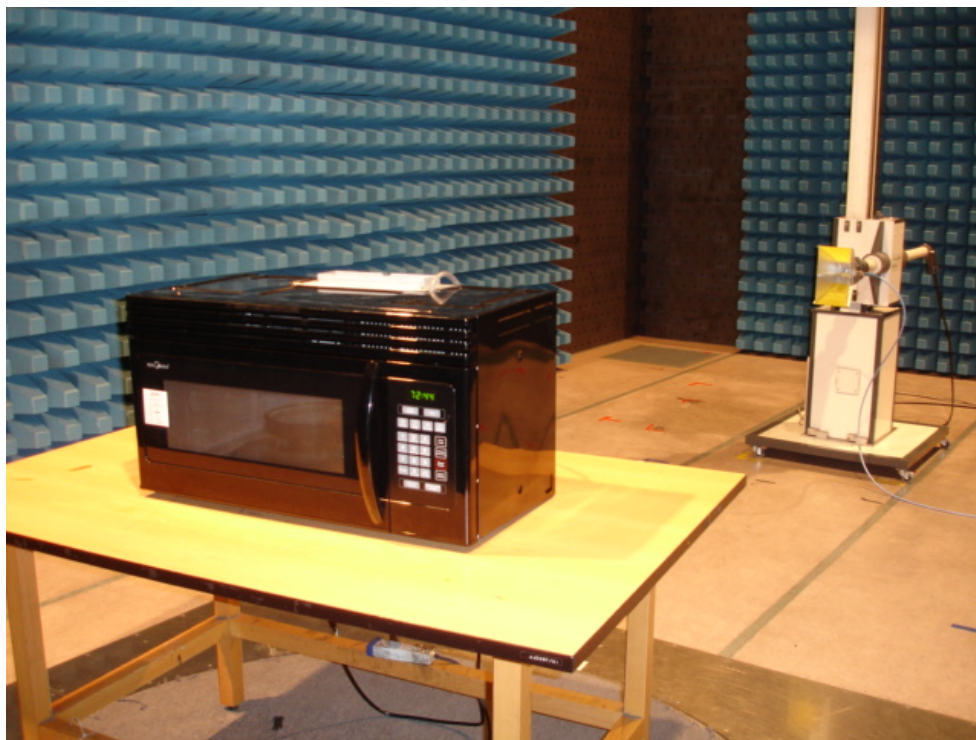
Variation in Operating Frequency with Line Voltage:

<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2456.6	2466.3
<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&S</i>	<i>HF906</i>	<i>SB3434</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>EMI Receiver</i>	<i>R&S</i>	<i>ES126</i>	<i>SB3440</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>					

Operating Frequency Test Set-up :



SIGNED BY: King Su
ENGINEER

REVIEWED BY: Juan Wen
SENIOR ENGINE R

Test Report #: PSZ-0706-0423-FCC+ID

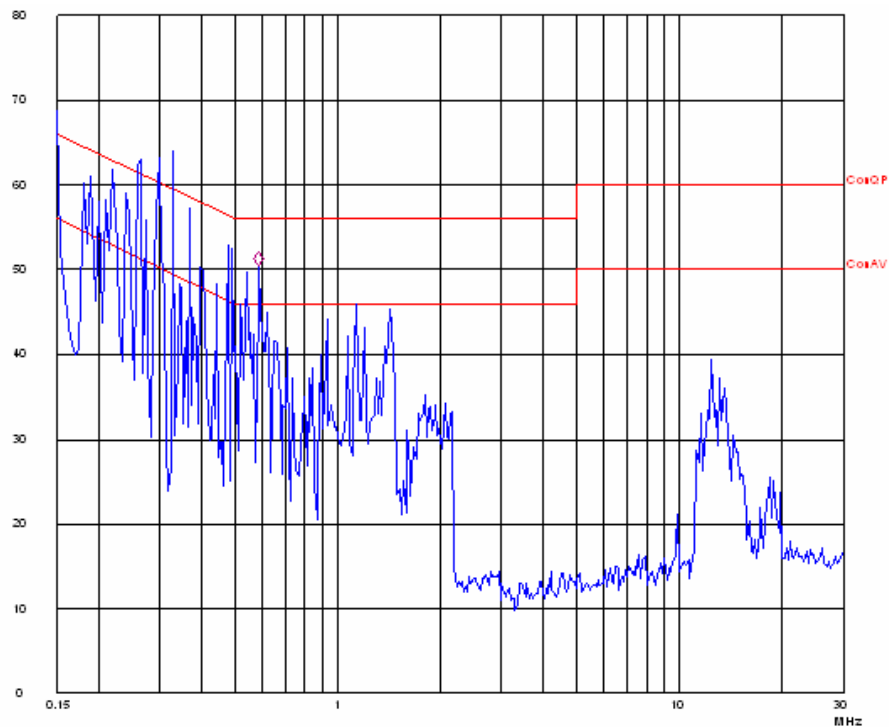
Prepared for Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd

Prepared by EMC Compliance Management Group

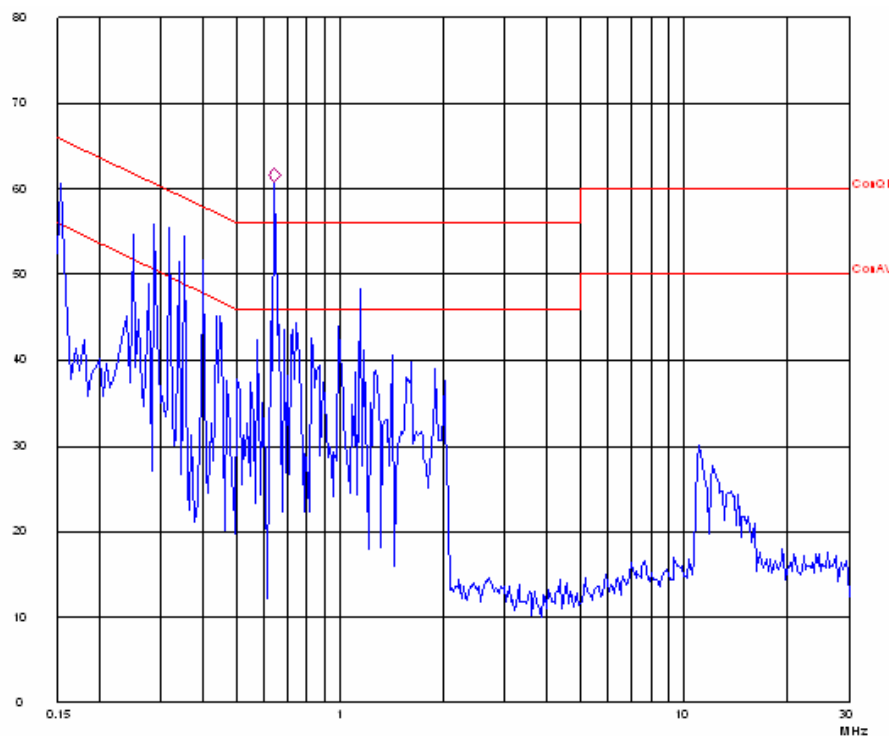
Page 20 of 28

ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007,July 6
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	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.		
TESTED RANGE:	150kHz to 30MHz		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions on line L by 12.50 dB of Quasi-Peak detector. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY:	±2.5 dB		



Line L Conducted Emission Graph



Line N Conducted Emission Graph

Test data:

<i>Line L/N</i>	<i>Frequency (MHz)</i>	<i>Corrected QP Level (dBuV)</i>	<i>Limits QP (dBuV)</i>	<i>Margin QP (dB)</i>	<i>Corrected AVE Level (dBuV)</i>	<i>Limits AVE (dBuV)</i>	<i>Margin AV (dB)</i>
L	0.1500	53.50	66.00	-12.50	28.40	56.00	-27.60
L	0.3300	40.80	59.40	-18.60	20.80	49.40	-28.60
L	0.5900	39.40	56.00	-16.60	17.90	46.00	-28.10
N	0.1550	47.10	65.70	-18.60	21.80	55.70	-33.90
N	0.2900	40.10	60.50	-20.40	14.80	50.50	-35.70
N	0.6450	34.60	56.00	-21.40	15.70	46.00	-30.30

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

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>EMI Receiver</i>	<i>R&S</i>	<i>ESCS30</i>	<i>SB2603</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>AMN</i>	<i>R&S</i>	<i>ESH2-Z5</i>	<i>SB3321</i>	<i>01/25/2007</i>	<i>01/24/2008</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).

Conducted Emission Test Set-up :



SIGNED BY: King Su
ENGINEER

REVIEWED BY: Juan Wen
SENIOR ENGINE R

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 24 of 28

ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

CLIENT:	Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	EAM044KYY	PRODUCT:	Microwave Oven (OTR)
MODEL TESTED:	EAM044K1W	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22 °C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	King Su	DATE OF TEST:	2007,July 6
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	<p>The EUT was set up according to the guidelines of ANSI C63.4: 2003 & 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>		
TESTED RANGE:	30MHz to 24.5GHz		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	The EUT meets the requirements of test reference for Radiated Emissions on Horizontal polarization by 14.96 dB of Average detector at 17.2309 GHz. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
M. UNCERTAINTY:	± 3.2 dB		

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 25 of 28

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 = $20\log[25 \cdot \sqrt{\text{Power}/500}]$ dBuV/m

Test Data :

30MHz – 1GHz				
Frequency [MHz]	Antenna Polarization [V/H]	Corrected Reading [dB μ V/m]	Delta, QP [dB]	3 Meters Limits [dB μ V/m]
35.110	H	41.70	-28.29	69.99
51.5600	H	37.40	-32.59	69.99
111.8110	H	35.60	-34.39	69.99
35.3910	V	39.60	-30.39	69.99
70.5730	V	37.10	-32.89	69.99
107.2340	V	44.40	-25.59	69.99
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.				
1GHz – 25GHz				
Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dB μ V/m]	Delta, AV [dB]	3 Meters Limits [dB μ V/m]
4.8938	H	38.60	-31.39	69.99
9.8412	H	49.50	-20.49	69.99
17.2485	H	48.75	-21.24	69.99
4.8807	V	38.90	-31.09	69.99
12.2865	V	43.10	-26.89	69.99
17.2160	V	50.30	-19.69	69.99
Comments: None				
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-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

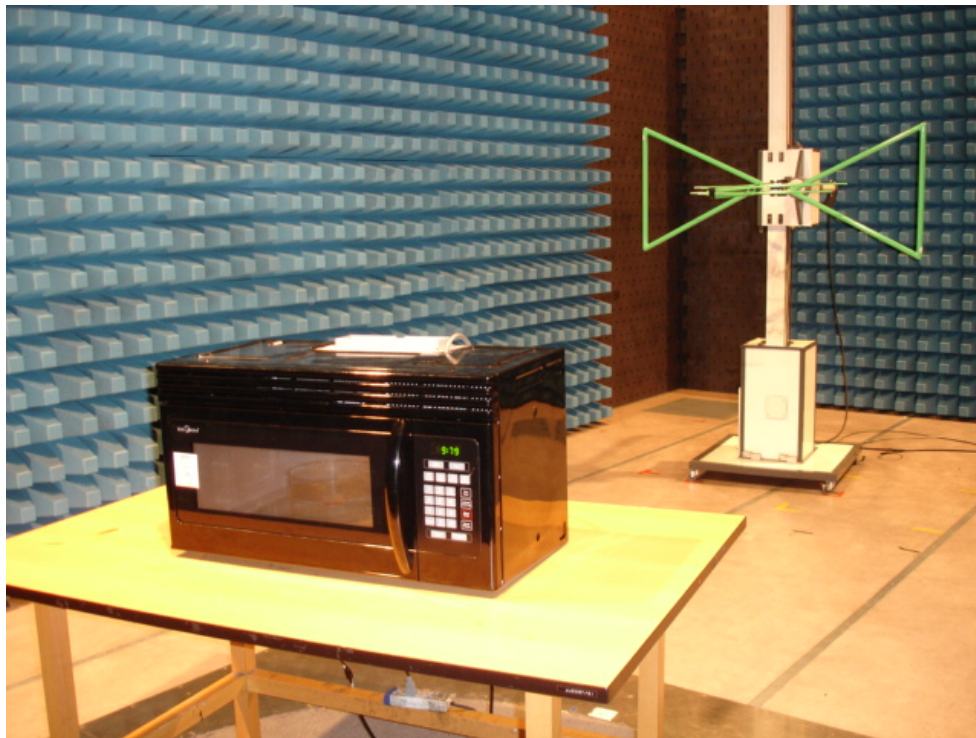
Page 26 of 28

Test equipments list:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
<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&S</i>	<i>HF906</i>	<i>SB3434</i>	<i>01/25/2007</i>	<i>01/24/2008</i>
<i>EMI Receiver</i>	<i>R&S</i>	<i>ES126</i>	<i>SB3440</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).

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



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



SIGNED BY: King Su
ENGINEER

REVIEWED BY: Juan Wen
SENIOR ENGINE R

Test Report #: PSZ-0706-0423-FCC+ID

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

Prepared by EMC Compliance Management Group

Page 28 of 28