

FCC Test Report

On Model Name: Microwave oven

Model Numbers:

WES1132DPBB/WES1132DPWW/JES1139DPBB/
JES1139DPWW/JES1142SPSS/ WES1138SPSS/
P110N30AP-D2/ P110N30AP-N8/ P110N30AP-YJ

Brand Name: Galanz

FCC ID : UHW11030001

Prepared for Guangdong Galanz Enterprises Co., Ltd

According to

FCC Part 18(2007)

Industrial, Scientific and Medical Equipment

FCC/OST MP-5(1986)

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

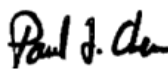
Test Report#: FOS-1001-10348-FCC ID

Prepared by: May Wang

Reviewed by: Jawen Yin

QC Manager: Paul Chen

Test Report Released by:



Paul Chen

January 7, 2010

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>UHW11030001 _Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>UHW11030001_operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>UHW11030001_External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>UHW11030001_Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>UHW11030001_Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>UHW11030001 _Schematics.pdf</i>
<i>ID Label/Location</i>	<i>Label and Location</i>	<i>UHW11030001 _Label & Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>UHW11030001 _User Manual.pdf</i>
<i>Test setup photos</i>	<i>Test setup photos</i>	<i>UHW11030001 _Test Set up Photos</i>

Test Location

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

Test Site Location: Guangdong Galanz Enterprises Co., Ltd.

*25 Ronggui Nan.Rd., Shunde, Foshan,
Guangdong.China*

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FCC Registration Number: 580210

CNAS Registration Number: L2244

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Reproduction Clause

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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*

Model Numbers : *WES1132DPBB/WES1132DPWW/
JES1139DPBB/JES1139DPWW/ JES1142SPSS/
WES1138SPSS/ P110N30AP-D2/ P110N30AP-N8/
P110N30AP-YJ*

Model Tested : *P110N30AP-D2*

Brand Name : *Galanz*

Date Tested : *January 4, 2010*

Applicant : *Guangdong Galanz Enterprises Co., Ltd.*
*25 Ronggui Nan.Rd., Shunde, Foshan,
Guangdong.China*

Telephone : *+86-757-23612785*

Fax : *+86-757-23612537*

EUT Description

Guangdong Galanz Enterprises Co., Ltd.model tested EM720CPZ-PM (referred to the EUT in this report) is a Microwave Oven.

<i>Power Consumption:</i>	<i>120V~60Hz, 1600W (MICROWAVE)</i>
<i>Output:</i>	<i>1100W</i>
<i>Operation Frequency:</i>	<i>2450MHz</i>
<i>Outside Dimensions(HxWxD):</i>	<i>11.8x21.2x15.7 in.</i>
<i>Oven Cavity Dimensions(HxWxD):</i>	<i>9.5x13.9x14.1 in.</i>
<i>Oven Capacity:</i>	<i>1.06 cu.ft</i>
<i>Cooking Uniformity:</i>	<i>Turntable System</i>
<i>Net Weight:</i>	<i>Approx. 35.3lb.</i>
<i>Magnetron Model:</i>	<i>M24FC-610A</i>
<i>Magnetron Manufacturer:</i>	<i>Galanz</i>

More informations please refer to user's manual.

Type of Deriver

The models of WES1132DPBB/WES1132DPWW/JES1139DPBB/JES1139DPWW/JES1142SPSS/WES1138SPSS/P110N30AP-D2/P110N30AP-N8/P110N30AP-YJ only the model name is different, Anything else are the same.

Test Summary

The Electromagnetic Compatibility requirements on model tested P110N30AP-D2 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 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiation Hazard Measurement	Passed	Enclosure	Attachment 1
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	Input Power Measurement	Passed	AC Input Port	Attachment 2
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	RF Output power Measurement	Passed	EUT	Attachment 3
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	Operating Frequency Measurement	Passed	EUT	Attachment 4
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	Conducted Emission	Passed	AC Input Port	Attachment 5
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiated Emission	Passed	Enclosure	Attachment 6

"EUT" means model of "P110N30AP-D2".

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

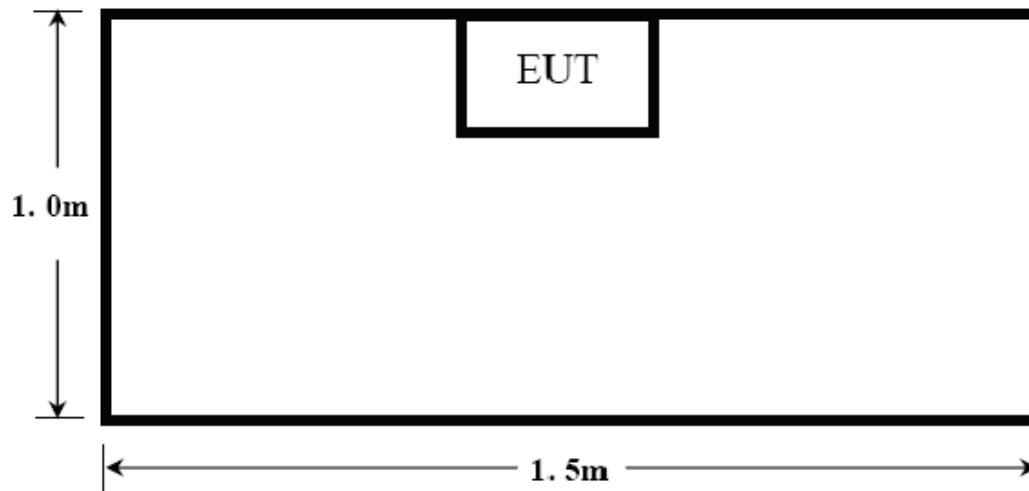
Any modifications installed previous to testing by Midea Microwave and Electrical Appliances Manufacturing Co.,Ltd will be incorporated in each production model sold or leased in United States.

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

Test System Details

EUT					
Model Numbers:	WES1132DPBB/WES1132DPWW/JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS/P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ				
Model Tested:	P110N30AP-D2				
Description:	Microwave Oven				
Manufacturer:	Guangdong Galanz Enterprises Co., Ltd.				
Support Equipment					
N/A					
Cable Description					
Description	From	To	Length (Meters)	Shielded (Y/N)	Ferrite (Y/N)
Power Cable	EUT	Plug	1.05	N	N

Configuration of Tested System



ATTACHMENT 1 - RADIATION HAZARD TEST

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 03, 2010
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.</p> <p>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 0.29 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 ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	0.0001 mW/cm ²		

Test Equipments List:

Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
Field Monitor	ETS	AR FM5004	A0304252	2009-01-21	2010-01-20
Electric Field probe	ETS	AR FP6001	A0304302	2009-01-21	2010-01-20

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: May Wang
ENGINEER

REVIEWED BY: Jameson
SENIOR ENGINEER

Radiation Hazard Test Set-up :



ATTACHMENT 2 – INPUT POWER MEASUREMENT

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 03, 2010
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 ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY :	± 5W		

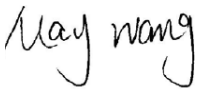
Test Data:


<i>Input Voltage (Vac/Hz)</i>	<i>Input Current (amps)</i>	<i>Measured Input Power (watts)</i>	<i>Rated Input Power (watts)</i>
120/60	13.20	1584	1600

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>Power frequency test system</i>	<i>Ainuo</i>	<i>AN8716PX</i>	<i>058704273</i>	<i>2009-07-06</i>	<i>2010-07-06</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: 
ENGINEER

REVIEWED BY: 
SENIOR ENGINEER

Input Power Test Set-Up :



ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 03, 2010
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.</p> <p>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 = 1001 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 ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	± 0.3°C		

Test Data:

Quality of Water (ml)	Starting Temperature (°C)	Final Temperature (°C)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	18.2	46.8	120	1001

Test Equipments List :

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Data Acquisition	TES	TES-1310	021108782	2009-04-04	2010-04-04

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: May Wang
ENGINEER

REVIEWED BY: Jameson
SENIOR ENGINEER

RF Output Power Test Set-Up :



ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 04, 2010
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. 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. 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:	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 Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	Freq. ±10kHz		

Variation in Operating Frequency with Time:

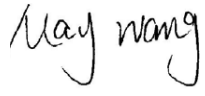
<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2414.00	2480.22


Variation in Operating Frequency with Line Voltage:

<i>Minimum Frequency (MHz)</i>	<i>Maximum Frequency (MHz)</i>
2414.24	2477.80
<i>Note: Line voltage varied from 96Vac to 150Vac.</i>	

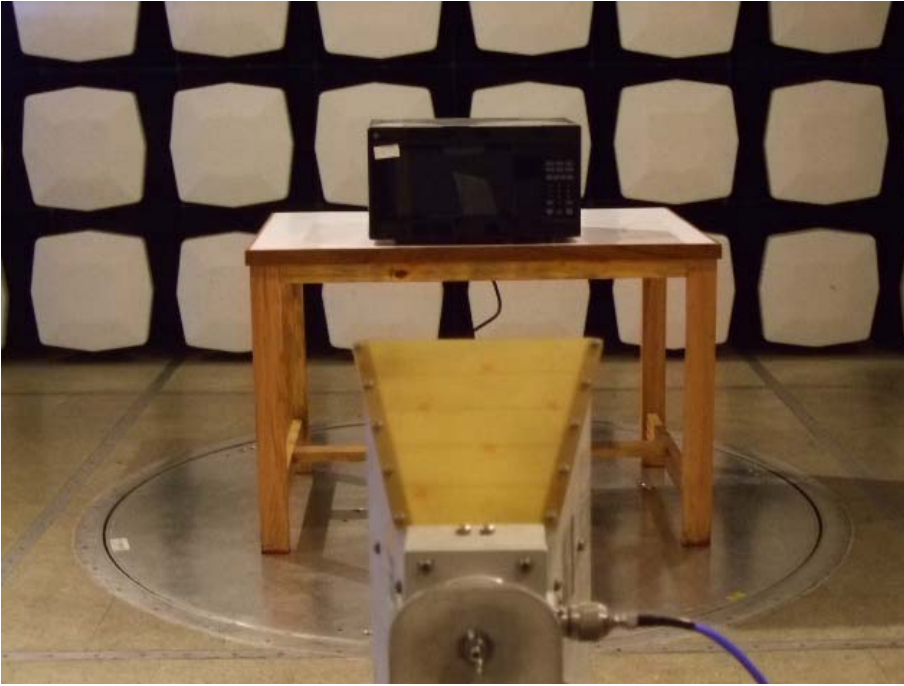
Test Equipments List :

<i>Test Equipment</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial No.</i>	<i>Last Cal.</i>	<i>Cal. Due</i>
<i>Horn Antenna</i>	<i>ETS</i>	<i>3115</i>	<i>6587</i>	<i>2008-08-02</i>	<i>2010-08-02</i>
<i>Spectrum Analyzer</i>	<i>R&S</i>	<i>FSP30</i>	<i>100755</i>	<i>2009-11-30</i>	<i>2010-11-30</i>
<i>3m Anechoic chamber</i>	<i>ETS</i>	<i>N/A</i>	<i>N/A</i>	<i>2009-05-23</i>	<i>2011-05-23</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: 
ENGINEER

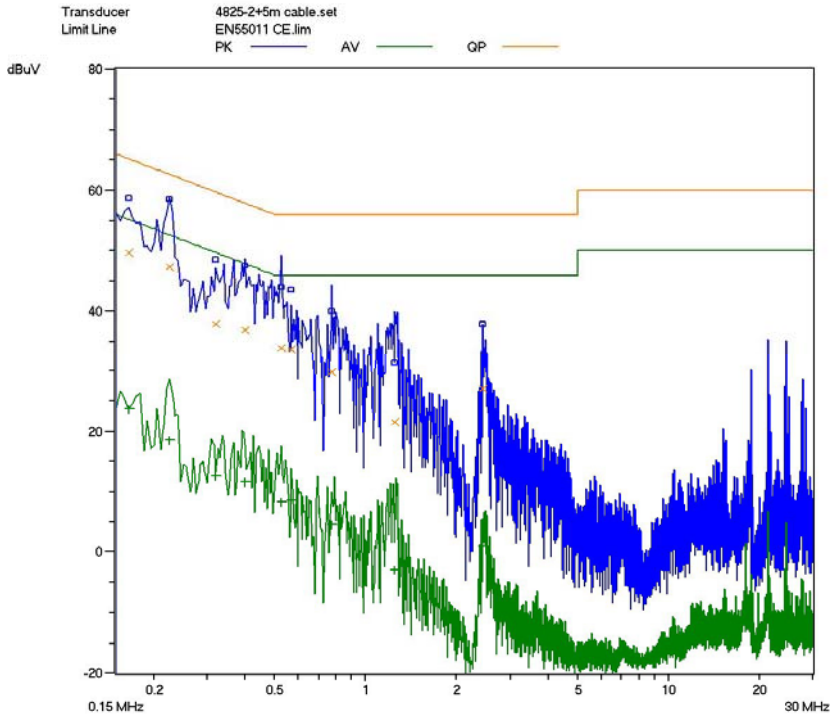
REVIEWED BY: 
SENIOR ENGINEER

Operating Frequency Test Set-up :

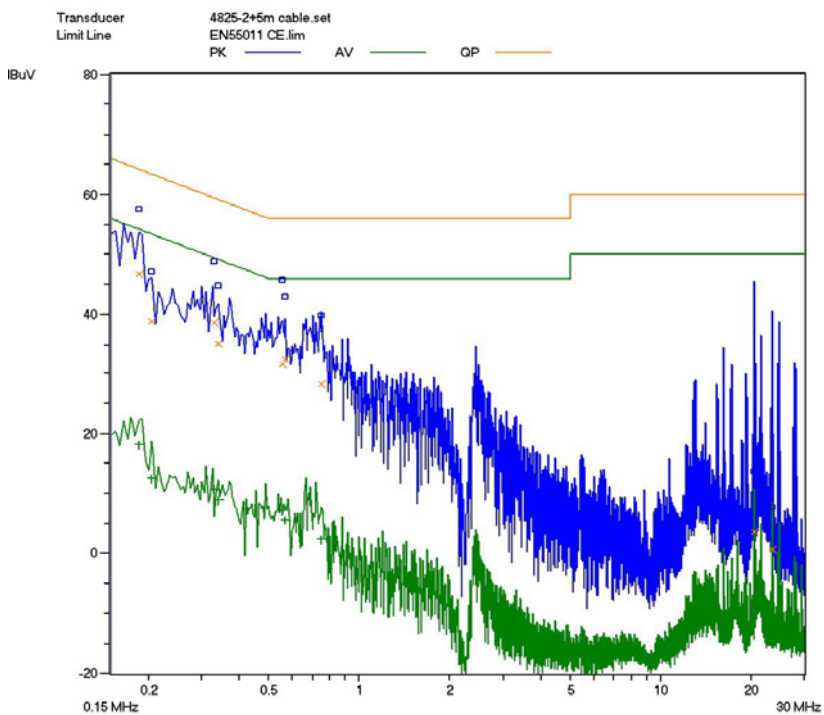


ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 04, 2010
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	<p>The EUT was set up according to the guideline of ANSI C63.4: 2003 & FCC MP-5 for conducted emissions.</p> <p>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.</p>		
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 Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	±2.5 dB		



Line L Conducted Emission Graph



Line N Conducted Emission Graph

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	0.1642	52.5	65.2	-12.7	25.6	58.0	-32.4
L	0.2254	46.9	62.6	-15.7	19.5	54.6	-35.1
L	0.5230	39.7	56.0	-16.3	12.7	46.0	-33.3
N	0.1644	48.3	65.2	-16.9	22.4	58.0	-35.6
N	0.1844	50.5	64.3	-13.8	20.6	56.8	-36.2
N	0.3298	40.2	59.5	-19.3	11.8	50.5	-38.7

Note:

- 1) All readings are using a bandwidth of 9 kHz, with a 600 ms sweep time.
- 2) The other emission levels are too low against official limit that are not be recorded.

Test Equipments List:

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI Receiver	SCHAFFNER	SMR4503	44	2009-07-08	2010-07-08
LISN	ETS	4825/2	1161	2009-07-08	2010-07-08
Shielding Room	ETS	N/A	N/A	2009-05-23	2010-05-23

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).

SIGNED BY: May Wang
ENGINEER

REVIEWED BY: Janeyan
SENIOR ENGINEER

Conducted Emission Test Set-up :



ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

CLIENT:	Guangdong Galanz Enterprises Co., Ltd.	TEST STANDERD:	FCC Part 18
MODEL NUMBERS:	WES1132DPBB/WES1132DPWW/ JES1139DPBB/JES1139DPWW/ JES1142SPSS/WES1138SPSS /P110N30AP-D2/P110N30AP-N8/ P110N30AP-YJ	PRODUCT:	Microwave Oven
MODEL TESTED:	P110N30AP-D2	EUT DESIGNATION:	Home or Office
TEMPERATURE:	22°C	HUMIDITY:	60%RH
ATM PRESSURE:	101.1kPa	GROUNDING:	Through AC Power Cord
TESTED BY:	May Wang	DATE OF TEST:	Jan 04, 2010
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		

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RESULTS:	The EUT meets 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 Worldwide Certification Solution Inc., (China) 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 [dBuV/m]	Factor (dB)	Field Strength dB(μV/m)	Delta, QP [dB]	3 Meters Limits [dBμV/m]
33.0100	H	25.30	17.19	42.49	-28.48	70.97
630.0100	H	18.60	19.66	38.26	-32.71	70.97
87.6100	H	22.30	6.17	28.47	-42.5	70.97
57.1020	V	29.60	8.91	38.51	-32.46	70.97
623.3760	V	20.10	19.66	39.76	-31.21	70.97
953.3760	V	22.70	23.80	46.5	-24.47	70.97
<p>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.</p>						
1GHz - 25GHz						
Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dBμV/m]	Factor (dB)	Field Strength dB(μV/m)	Delta, AV [dB]	3 Meters Limits [dBμV/m]
4.9440	V	50.05	3.27	53.32	-17.65	70.97
7.3600	V	50.95	6.68	57.63	-13.34	70.97
8.1400	V	51.54	8.24	59.78	-11.19	70.97
4.9440	H	57.40	3.27	60.67	-10.3	70.97
7.3528	H	59.23	6.68	65.91	-5.06	70.97
8.1740	H	55.30	8.24	63.54	-7.43	70.97
<p>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.</p>						

Test Equipments List:

Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
Broadband Antenna	ETS	3142C	00042672	2008-09-26	2010-09-26
Horn Antenna	ETS	3115	6587	2008-08-02	2010-08-02
Band-pass Filter	Micro-Tronic	BRM50702	S/N-030	2009-11-30	2010-11-30
EMI Receiver	SCHAFFNER	SMR4503	44	2009-07-08	2010-07-08
Spectrum Analyzer	R&S	FSP30	100755	2009-11-30	2010-11-30
3m Anechoic chamber	ETS	N/A	N/A	2009-05-23	2011-05-23

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).

SIGNED BY: May Wang
ENGINEER

REVIEWED BY: Jameson
SENIOR ENGINEER

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



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

