

## EMI Test Report

On Model Name : Microwave oven

Model Numbers : P70B17X-Z

Brand Name : Galanz

FCC ID : UHW7017001

Prepared for Guangdong Galanz Enterprises 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

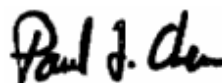
Test Report #: GUA-0701-5982-FCC

Prepared by: Ravin Su

Reviewed by: Ivan Wen

QC Manager: Paul Chen

Test Report Released by:



Paul Chen

2007, January 12<sup>th</sup>

Date

### **List Attached Files**

<b>Exhibit Type</b>	<b>File Description</b>	<b>File Name</b>
<i>Test Report</i>	<i>Test Report</i>	<i>UHW7017001 _Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>UHW7017001 _operationdescription.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>UHW7017001 _External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>UHW7017001 _Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>UHW7017001 _Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>UHW7017001 _Schematics.pdf</i>
<i>ID Label/Location</i>	<i>Label Artwork and Location</i>	<i>UHW7017001 _Label &amp; Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>UHW7017001 _User Manual.pdf</i>
<i>Test setup photos</i>	<i>Test setup photos</i>	<i>UHW7017001 _Test Setup Photos</i>

### **Test Location**

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

**Test Site Location:** Guangdong Galanz Enterprises Co., Ltd  
25 South Ronggui Rd., Shunde, Foshan,  
Guangdong, China.  
**Tel:** 86-757-23612785  
**Fax:** 86-757-23612537

**Registration Number:** 580210

### **Accreditation Bodies**

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



*In compliance with the site registration requirements of Section 2.948 of the FCC Rules to perform EMI measurements for the general public. FCC Registration #: 894293.*



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

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### **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

*Model Numbers* : P70B17X-Z

*Model Tested* : P70B17AL-D4

*Brand Name* : Galanz

*Date Tested* : 2006, December 27<sup>th</sup>

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

*Telephone* : 86-757-23612785

*Fax* : 86-757-23612537

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

### **EUT Description**

Guangdong Galanz Enterprises Co., Ltd. model tested P70B17AL-D4 (referred to the EUT in this report) is a Microwave Oven.

#### **Specifications:**

<i>Model Number:</i>	P70B17AL-D4
<i>Power Consumption:</i>	120V~60Hz, 1050W(Microwave)
<i>Output Power</i>	700W
<i>Operation Frequency</i>	2450MHz
<i>Magnetron Manufacturer</i>	Galanz
<i>Magnetron Model Number</i>	M24FA-410A
<i>Outside Dimensions (H×W×D)</i>	9 5/8×17 13/16×12 13/16 in.
<i>Outside Dimensions (H×W×D):</i>	8 11/16×12 3/8×11 in.
<i>Oven Capacity</i>	0.6 cu.ft.
<i>Cooking Uniformity</i>	Turntable System {Φ9 5/8"}
<i>Net Weight</i>	Approx.23.1 lbs.

### **Type of Deriver**

*P70B17X-Z model designations:*

*X may be J, AJ, L, AL, EL, P, AP, and EP.*

*Z may be D2, D3, D4, D5, D6, D7, D8, T1, T5, T6, T8, TL1, M1, FY1, DF, DI, DG, DB and KE2.*

*P: Only the Microwave functions.*

*70: denote the output power is 700W.*

*17: denote different capacity in 17 liters*

*J, AJ, L, AL, EL, P, AP, and EP: J, L, and P: J and L is pull-out type door, P: denote the push-down type door. When there is no letter before "J, L, P" denote mechanical control model, when there is "A" or "E" denote the electrical control model.*

*D2, D3, D4, D5, D6, D7, D8, T1, T5, T6, T8, TL1, M1, FY1, DF, DI, DG, DB and KE2: Denote the appearance change.*

## Test Summary

The Electromagnetic Compatibility requirements on model tested P70B17AL-D4 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 0.00384mW/cm <sup>2</sup>	EUT	Attachment 1
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Input Power Measurement	Refer to Attachment2	EUT	Attachment 2
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	RF Output power Measurement	Refer to Attachment3	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 16.9dB of QP Passed by 29.8dB of AVE	AC Input Port	Attachment 5
FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003	Radiated Emission	Passed by 23.61dB 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 1000watts. 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 Guangdong Galanz Enterprises 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 P70B17AL-D4***



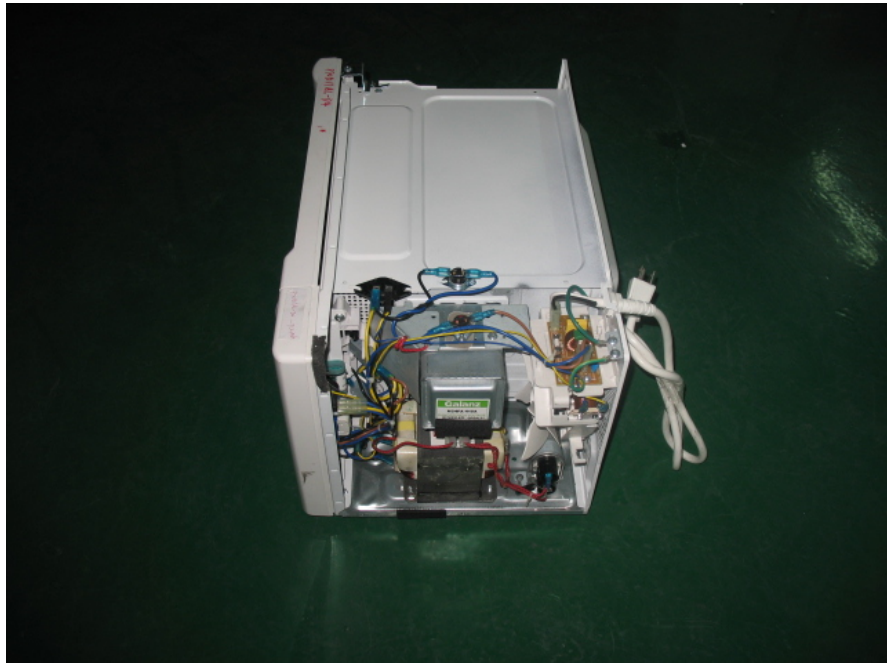
***Front & Top View***



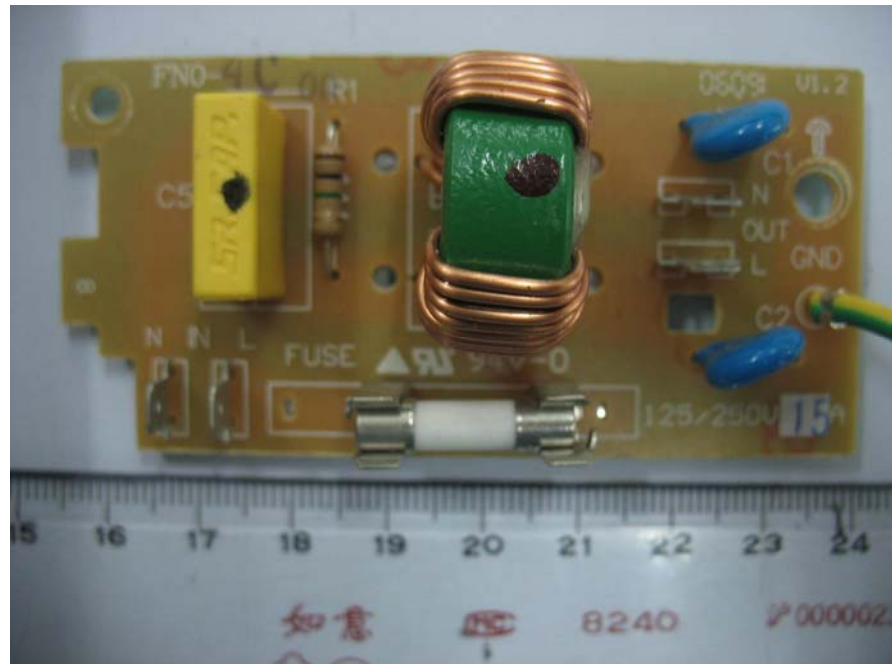
***Rear View***



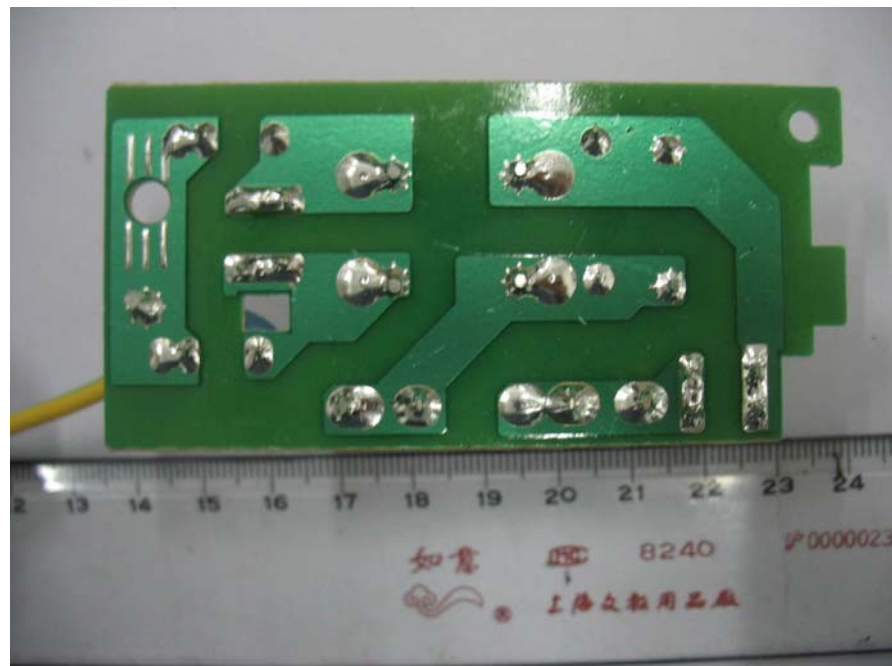
*Door opened View*



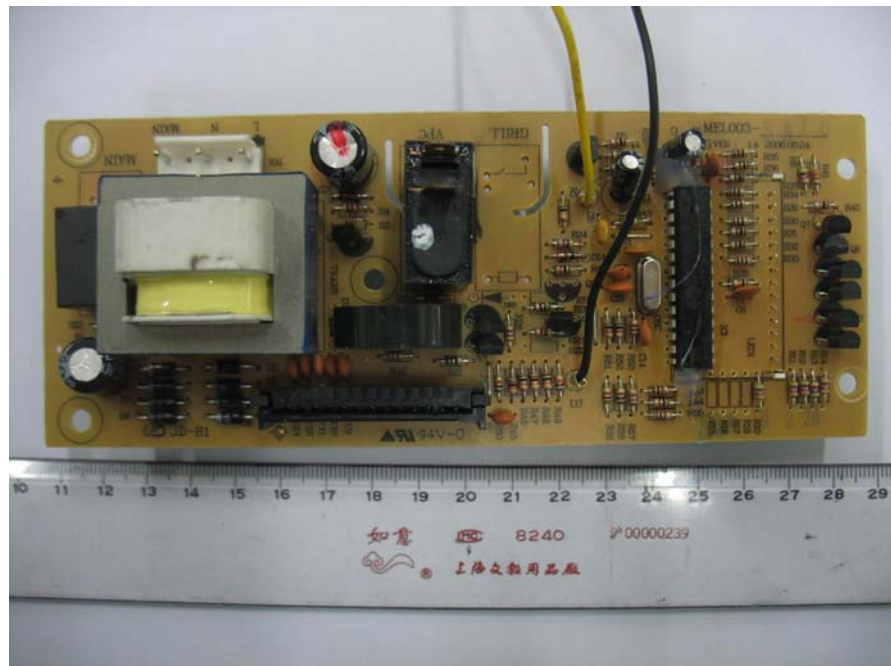
*Uncovered View*



*Filter View*



*Filter Reversed View*



**PCB View**

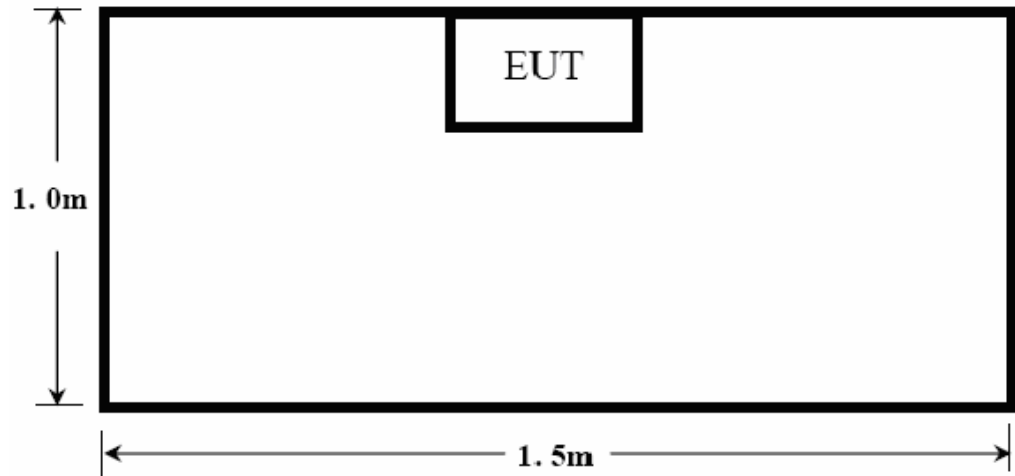


**PCB Reversed View**

### Test System Details

EUT					
Model Numbers:	P70B17X-Z				
Model Tested:	P70B17AL-D4				
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	1.20	N	N

### ***Configuration of Tested System***



**ATTACHMENT 1 – RADIATION HAZARD TEST**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the FCC MP-5 and FCC Part 18 for 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>		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>There was no microwave leakage exceeding a power level of 0.00384 mW/cm<sup>2</sup> observed at any point 5cm or more from the external surface of the oven.</p> <p>A maximum of 1.0mW/cm<sup>2</sup> is allowed in accordance with the applicable FCC standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
<b>M. UNCERTAINTY:</b>	0.0001 mW/cm <sup>2</sup>		

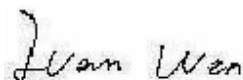


***Test equipments list :***

<b><i>Test Equipment</i></b>	<b><i>Manufacturer</i></b>	<b><i>Model</i></b>	<b><i>Serial No.</i></b>	<b><i>Last Cal.</i></b>	<b><i>Cal. Due</i></b>
<i>Field Monitor</i>	<i>AR FM5004</i>	<i>A0304252</i>	<i>A0304252</i>	<i>25/05/06</i>	<i>24/05/07</i>
<i>Electric FieldProber</i>	<i>AR FP6001</i>	<i>A0304302</i>	<i>A0304302</i>	<i>15/03/06</i>	<i>14/03/07</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**

***EUT Model: P70B17AL-D4***



***Radiation Hazard Test Set-up***

**ATTACHMENT 2 – INPUT POWER MEASUREMENT**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Input power Measurement. The input power and current was measured using a power analyzer. A 1000ml water load in a beaker was located in the center of the oven and the Microwave oven was set to maximum power. While the oven is operating, use a voltmeter and an ampmeter to test the AC input voltage and current.		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	Based on the measured input power, the EUT was found to be operating within the intended specifications.  The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
<b>M. UNCERTAINTY:</b>	± 5W		

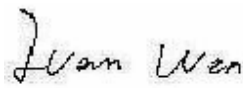
**Test Data:**

<i>Input Voltage (Vac/Hz)</i>	<i>Input Current (amps)</i>	<i>Measured Input Power (watts)</i>	<i>Rated Input Power (watts)</i>
120V/60Hz	9.089	1038	1050

**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	07/12/06	06/12/07

*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**

***EUT Model: P70B17AL-D4***



***Input Power Test Set-Up***

**ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the FCC MP-5 and FCC Part 18C for RF output power Measurement. The Caloric Method was used to determine maximum RF output power. The initial temperature of the water load was measured. A 1000ml water load in a beaker was located in the center of the oven. The oven was operated at maximum output power for 120 seconds, the temperature of the water was re-measured.</p> <p><math>RF\ Output\ Power = (4.2joules/calorie)(volume\ in\ milliliters)(temperature\ rise) / (time\ in\ seconds)</math></p> <p><math>RF\ Output\ Power = 4.2\ joules/calorie \times 1000 \times (Final\ Temp - Initial\ Temp) / 120</math></p>		
<b>TESTED RANGE:</b>	N/A		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>RF Output Power = 483watts</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
<b>M. UNCERTAINTY:</b>	± 0.3 °C		

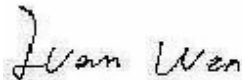
**Test Data:**

<b>Quality of Water (ml)</b>	<b>Starting Temperature ( °C)</b>	<b>Final Temperature ( °C)</b>	<b>Elapsed Time (Seconds)</b>	<b>RF Output Power (watts)</b>
120V/60Hz	19.3	36.0	120	584.5

**Test equipments list :**

<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Last Cal.</b>	<b>Cal. Due</b>
Data Acquisition	TES	TES-1310	020907011	12/03/06	11/03/07

*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**

***EUT Model: P70B17AL-D4***



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



**ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the FCC MP-5 and FCC Part 18 for Operating Frequency Measurement.</p> <p><b>1) The variation of frequency with time.</b></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><b>2) The variation of frequency with Line Voltage.</b></p> <p>The operating frequency was measured using a spectrum analyzer. The EUT was operated/warmed by at least 10 minutes of use with a 1000ml water load at room temperature at the beginning of the test. Then the operating frequency was monitored as the input voltage was varied between 80 and 125 percent of the nominal rating.</p>		
<b>TESTED RANGE:</b>	2450 ± 50MHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	<p>Please refer to following pages for details of the variation in operating frequency with time &amp; line voltage measurement.</p> <p>The test results relate only to the equipment under test provided by client.</p>		
<b>Changes or Modifications:</b>	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
<b>M. UNCERTAINTY:</b>	Freq. ±10kHz		

**Variation in Operating Frequency with Time:**

Minimum Frequency (MHz)	Maximum Frequency (MHz)
2464.8	2466.2

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

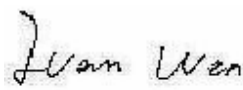
Minimum Frequency (MHz)	Maximum Frequency (MHz)
2461.6	2466.2

Note: Line voltage varied from 96Vac to 150Vac.

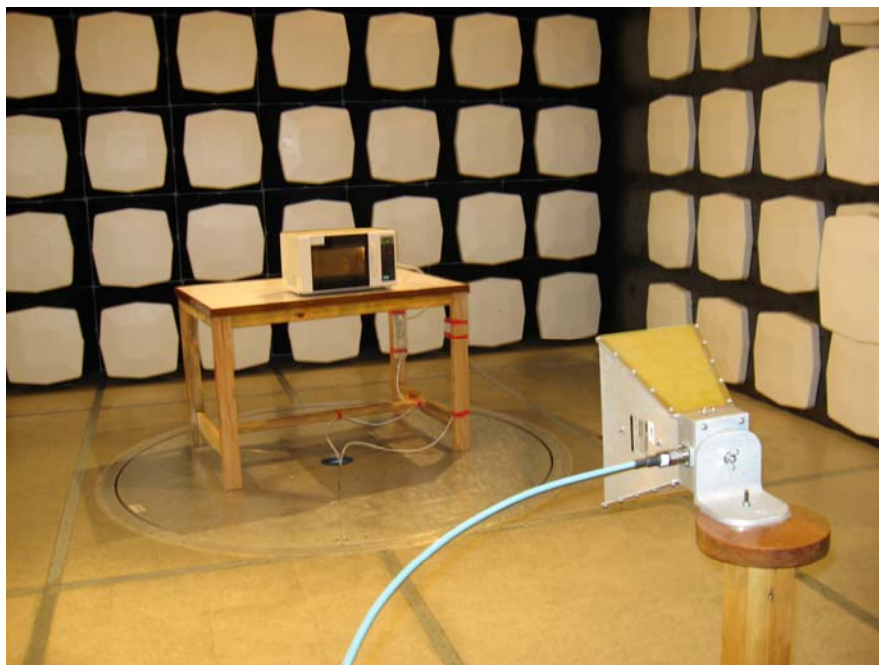
**Test equipments list :**

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Ultra Broadband Antenna	ETS	3142C	00042672	04/12/06	03/12/07
Horn Antenna	ETS	3115	6587	04/07/06	03/07/07
EMI Receiver	R&S	FSP30	100755	04/12/06	03/12/07
5M Anechoic chamber	ETS	3m	N/A	19/03/05	18/03/07

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

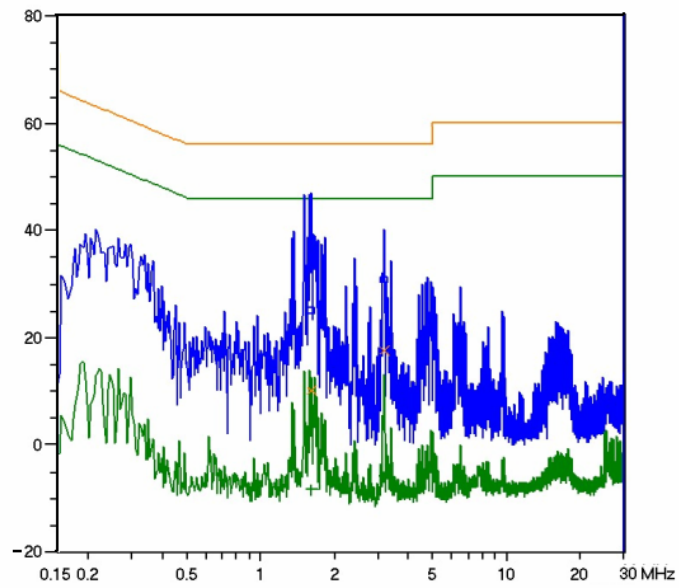
***EUT Model: P70B17AL-D4***



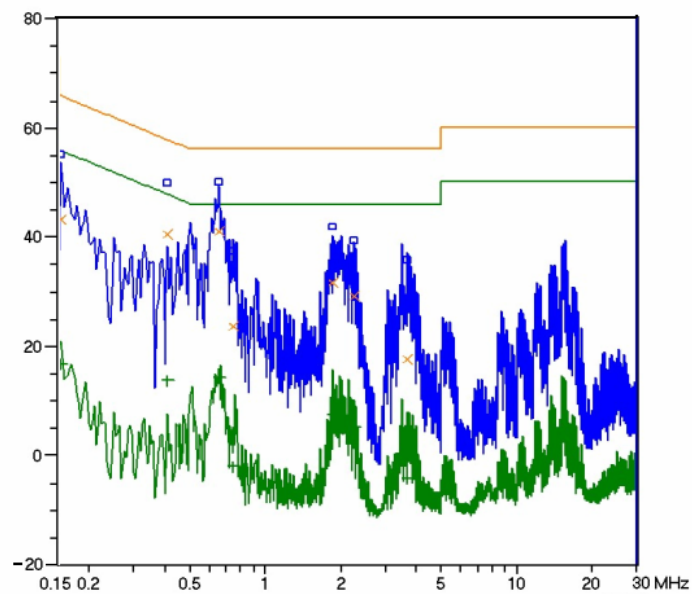
***Operating Frequency Test Set-up***

**ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	The EUT was set up according to the guideline of ANSI C63.4: 2003 & FCC MP-5 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150kHz to 30MHz.		
<b>TESTED RANGE:</b>	150kHz to 30MHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		
<b>RESULTS:</b>	The EUT meets the requirements of test reference for Conducted Emissions on line N by 16.9 dB of Quasi-Peak detector and by 29.8 dB of Average detector.  The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by EMC Compliance Management Group (China) test personnel.		
<b>M. UNCERTAINTY:</b>	±2.5 dB		



***Line L Conducted Emission Graph***



***Line N Conducted Emission Graph***

**Test Data:**

Line	Frequency [KHz]	Corrected QP Reading [dB $\mu$ V]	Delta QP [dB]	Limit [dB $\mu$ V/m]	Corrected AVE Reading [dB $\mu$ V]	Delta AVE [dB]	Limit [dB $\mu$ V/m]
L	1.4994	19.70	-36.3	56.00	7.80	-38.2	46.00
L	1.5866	16.30	-39.9	56.00	14.10	-31.9	46.00
L	3.1624	13.60	-42.4	56.00	14.50	-31.5	46.00
N	0.1538	48.90	-16.9	65.80	23.90	-31.9	55.80
N	0.4026	38.80	-19.0	57.80	7.60	-40.2	47.80
N	0.6454	34.80	21.2	56.00	16.20	-29.8	46.00

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

**Test equipments list :**

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI Receiver	SCHAFFNE	SMR4503	44	04/07/06	03/07/07
LISN	AGILENT	482512	1161	04/07/06	03/07/07

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:

*Juan Wen*

ENGINEER

***EUT Model: P70B17AL-D4***



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

**ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS**

<b>CLIENT:</b>	Guangdong Galanz Enterprises Co., Ltd.	<b>TEST STANDERD:</b>	FCC Part 18
<b>MODEL NUMBERS:</b>	P70B17X-Z	<b>PRODUCT:</b>	Microwave Oven
<b>MODEL TESTED:</b>	P70B17AL-D4	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	22 °C	<b>HUMIDITY:</b>	56%RH
<b>ATM PRESSURE:</b>	101 kPa	<b>GROUNDING:</b>	Through AC Power Cord
<b>TESTED BY:</b>	Ivan Wen	<b>DATE OF TEST:</b>	2006, December 27 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4: 2003, FCC/OST MP-5:1986		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the guidelines of ANSI C63.4: 2003 &amp; FCC MP-5 for radiated emissions. Microwave oven was placed on a 1m *1.5m nonconductive table. The top of the table is 1.0 m above the ground. The table is placed on a flush mounted metal turntable.</p> <p>An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber. Signal discrimination was then performed and the significant peaks marked. All data was recorded in Quasi-peak detection mode from 30 MHz to 1GHz and average detector mode above 1GHz.</p> <p>The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows:</p> <p><math>FS = RA + AF + CF - AG</math></p> <p>Where: FS = Field Strength</p> <p>RA = Receiver Amplitude</p> <p>AF = Antenna Factor</p> <p>CF = Cable Attenuation Factor</p> <p>AG = Amplifier Gain</p>		
<b>TESTED RANGE:</b>	30MHz to 24.5GHz		
<b>TEST VOLTAGE:</b>	120VAC / 60Hz		

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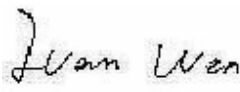
<b>RESULTS:</b>	<p><i>The EUT meets the requirements of test reference for Radiated Emissions on Vertical polarization by 23.61 dB of Average detector at 7.3964 GHz.</i></p> <p><i>The test results relate only to the equipment under test provided by client.</i></p>
<b>CHANGES OR MODIFICATIONS:</b>	<i>There were no modifications installed by EMC Compliance Management Group (China) test personnel.</i>
<b>M. UNCERTAINTY:</b>	$\pm 3.2$ dB

**Test Data :**

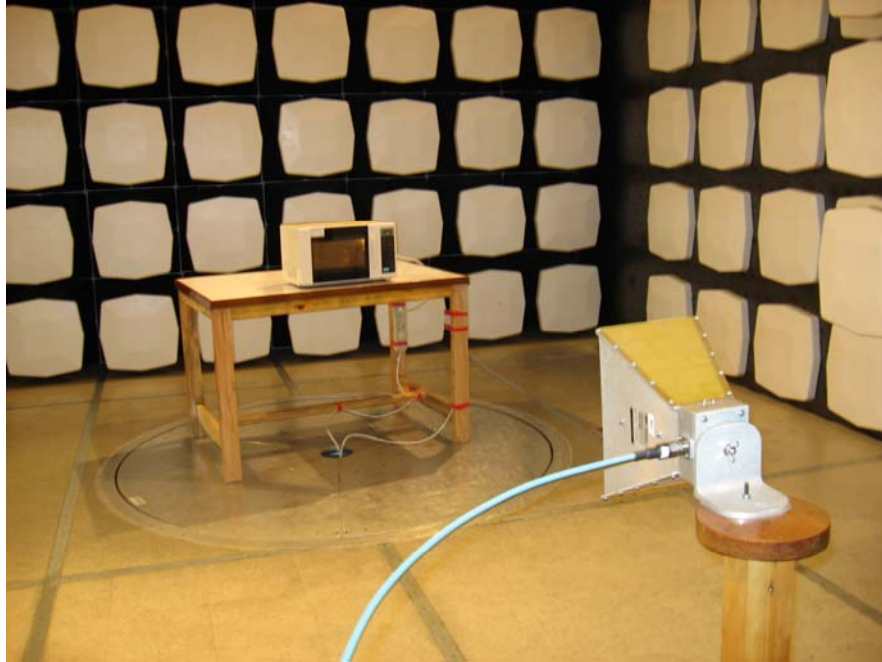
<b>30MHz – 1GHz</b>				
<b>Frequency [MHz]</b>	<b>Antenna Polarization [V/H]</b>	<b>Corrected Reading [dB<math>\mu</math>V/m]</b>	<b>Delta, QP [dB]</b>	<b>3 Meters Limits [dB<math>\mu</math>V/m]</b>
77.200	H	11.80	-56.84	68.64
139.468	H	15.70	-52.94	68.64
590.866	H	13.70	-54.94	68.64
348.400	V	8.40	-60.24	68.64
475.600	V	16.40	-52.24	68.64
722.200	V	16.80	-51.84	68.64
<i>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.</i>				
<b>1GHz – 24.5GHz</b>				
<b>Frequency [GHz]</b>	<b>Antenna Polarization [V/H]</b>	<b>Corrected Reading [dB<math>\mu</math>V/m]</b>	<b>Delta, AVE [dB]</b>	<b>3 Meters Limits [dB<math>\mu</math>V/m]</b>
4.9260	H	43.76	-24.88	68.64
7.3940	H	41.52	-27.12	68.64
9.8410	H	44.63	-24.01	68.64
4.9285	V	44.14	-24.50	68.64
7.3964	V	45.03	-23.61	68.64
9.8514	V	43.40	-25.24	68.64
<i>Comments: None</i>				
<i>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.</i>				

**Test equipments list :**

<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Last Cal.</b>	<b>Cal. Due</b>
<i>Ultra Broadband Antenna</i>	<i>ETS</i>	<i>3142C</i>	<i>00042672</i>	<i>20/07/06</i>	<i>19/07/07</i>
<i>Horn Antenna</i>	<i>ETS</i>	<i>3115</i>	<i>6587</i>	<i>04/07/06</i>	<i>03/07/07</i>
<i>Band-pass Filter</i>	<i>Micro-Tronics</i>	<i>BRM50702</i>	<i>SIN-030</i>	<i>04/07/06</i>	<i>03/07/07</i>
<i>EMI Receiver 1</i>	<i>SCHAFFNE</i>	<i>SMR4503</i>	<i>44</i>	<i>04/07/06</i>	<i>03/07/07</i>
<i>Semi-anechoic chamber</i>	<i>ETS</i>	<i>3m</i>	<i>N/A</i>	<i>19/03/05</i>	<i>18/03/07</i>
<i>EMI Receiver 2</i>	<i>R&amp;S</i>	<i>FSP30</i>	<i>100755</i>	<i>04/12/06</i>	<i>03/12/07</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**

***EUT Model: P70B17AL-D4***



***Radiated Emission Test Set-up (1~18GHz)***



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