



EMI Test Report

On Model Name : Microwave oven
Model Numbers : P70D20X-Z
Brand Names : Galanz
FCC ID : UHW7020001

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-0604-5298-FCC

Prepared by: Ravin Su

Reviewed by: Ivan Wen

QC Manager: Paul Chen

Test Report Released by:



Paul Chen

2007, Jan 28

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>UHW7020001</i> <i>_Test report.pdf</i> |
| <i>Operation Description</i> | <i>Technical Description</i> | <i>UHW7020001</i> <i>_operationdescription.pdf</i> |
| <i>External Photos</i> | <i>External Photos</i> | <i>UHW7020001</i> <i>_External Photos</i> |
| <i>Internal Photos</i> | <i>Internal Photos</i> | <i>UHW7020001</i> <i>_Internal Photos</i> |
| <i>Block Diagram</i> | <i>Block Diagram</i> | <i>UHW7020001</i> <i>_Block Diagram.pdf</i> |
| <i>Schematics</i> | <i>Circuit Diagram</i> | <i>UHW7020001</i> <i>_Schematics.pdf</i> |
| <i>ID Label/Location</i> | <i>Label Artwork and Location</i> | <i>UHW7020001</i> <i>_Label & Location.pdf</i> |
| <i>User Manual</i> | <i>User Manual</i> | <i>UHW7020001</i> <i>_User Manual.pdf</i> |
| <i>Test setup photos</i> | <i>Test setup photos</i> | <i>UHW7020001</i> <i>_Test Setup Photos</i> |

Test Location

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

Test Site Location: *Electronic Testing Building Shahe Road, Xili, Nanshan District Shenzhen 518055, P.R. China.*

Tel: 86-755-26703698
Fax: 86-755-26627238

Registration Number: 261302

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 : P70D20X-Z

Model Tested : P70D20AL-D4

Brand Name : Galanz

Date Tested : 2007, Jan 27th

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. models tested P70D20AL-D4 (referred to the EUT in this report) is a Microwave Oven.

Specifications:

| | |
|------------------------------------|---------------------------------|
| <i>Model Number:</i> | P70D20AL-D4 |
| <i>Power Consumption:</i> | 120V~60Hz, 1200W |
| <i>Output:</i> | 700W |
| <i>Operation Frequency:</i> | 2450MHz |
| <i>Magnetron manufacturer</i> | Galanz |
| <i>Magnetron Mode</i> | M24FA-410A |
| <i>Outside Dimensions (HxWxD):</i> | 9 5/8×17 13/16×13 11/16 inches. |
| <i>Outside Dimensions (HxWxD):</i> | 8 11/16×12 3/8×12 3/8 inches. |
| <i>Oven Capacity:</i> | 0.7 cu.ft. |
| <i>Cooking Uniformity:</i> | Turntable System (Φ9 5/8") |
| <i>Net Weight:</i> | Approx.23.8lbs. |

Type of Deriver

P70D20X-Z model designations:

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

"A, E" denote the electric model, other are mechanical models;

"J, L, P" just denote the different open mode for the door;

"J and L" are pull-out type doors. For "J" denotes the door release button is located on the bottom of the door, while "L" denotes the door handle is on the side of the door;

"P" denotes the push-down type door.

Z" may be D1, D2, D3, D4, D5, D6, D8, DA, DB, DG, DI, FY1, T1, T5, TL1, T6, T8, M1, A3 that denotes the different appearance.

Test Summary

The Electromagnetic Compatibility requirements on model tested P70D20AL-D4 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 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003 | Radiation Hazard Measurement | Passed by 0.14mW/cm ² | 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 10.09dB of QP Passed by 28.49dB of AVE | AC Input Port | Attachment 5 |
| FCC Part 18:2004 FCC/OST MP-5:1986 ANSI C63.4: 2003 | Radiated Emission | Passed by 15.2dB 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 P70D20AL-D4



Front & Top View



Rear View



Door opened View

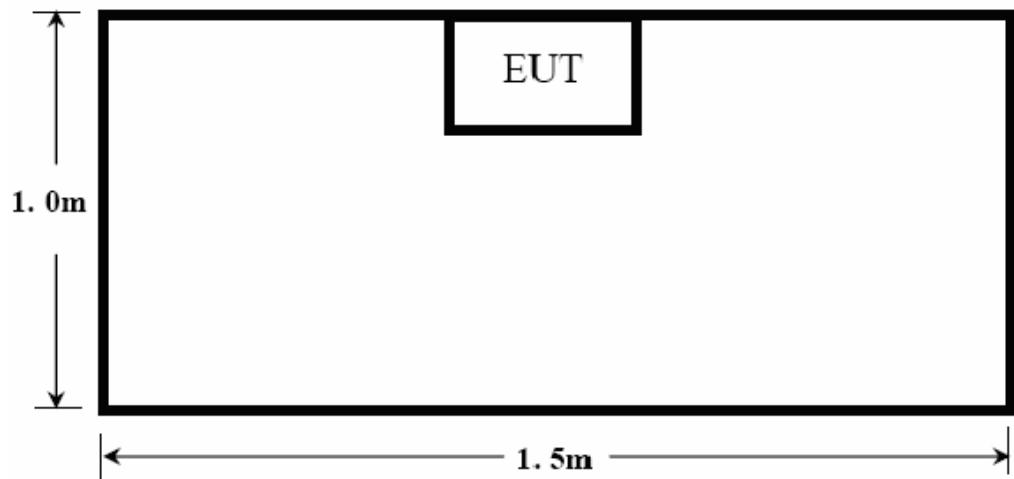


Bottom View

Test System Details

| EUT | | | | | | | | | | |
|--------------------------|---|-----------|------------------------|-----------------------|----------------------|--|--|--|--|--|
| Model Numbers: | P70D20X-Z | | | | | | | | | |
| Model Tested: | P70D20AL-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 | 1.10 | N | N | | | | | |

Configuration of Tested System



ATTACHMENT 1 – RADIATION HAZARD TEST

| | | | |
|----------------------------------|--|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDERD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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 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. | | |
| TESTED RANGE: | N/A | | |
| TEST VOLTAGE: | 120VAC / 60Hz | | |
| RESULTS: | <p>There was no microwave leakage exceeding a power level of 0.14mW/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 equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|----------------------|---------------------|------------|-----------|----------|
| Field Monitor | AR / FM5004 | A0304252 | 05/26/05 | 05/25/07 |
| Electric Field Probe | AR / FP6001 | A0304302 | 03/16/05 | 03/15/07 |

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: Jean Wen
ENGINEER

REVIEWED BY: Hang Zhou
SENIOR ENGINEER

EUT Model: P70D20AL-D4



Radiation Hazard Test Set-up

ATTACHMENT 2 – INPUT POWER MEASUREMENT

| | | | |
|----------------------------------|--|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDERD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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 Result:

| Input Voltage (Vac/Hz) | Input Current (amps) | Measured Input Power (watts) | Rated Input Power (watts) |
|---------------------------|-------------------------|---------------------------------|------------------------------|
| 120V/60Hz | 10.54 | 1152 | 1200 |

Test equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|--------------------------------|---------------------|------------|-----------|----------|
| Power Frequency Test System | QINGZHI / 8715B | 870203197 | 04/22/05 | 04/21/07 |

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: Jiam Wen
ENGINEER

REVIEWED BY: Hang Zhang
SENIOR ENGINEER

EUT Model: P70D20AL-D4



Input Power Test Set-Up

ATTACHMENT 3 - RF OUTPUT POWER MEASUREMENT

| | | | |
|----------------------------------|--|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDERD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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 = $(4.2 \text{ joules/calorie})(\text{volume in milliliters})(\text{temperature rise}) / (\text{time in seconds})$</p> <p>RF Output Power = $4.2 \text{ joules/calorie} \times 1000 \times (\text{Final Temp} - \text{Initial Temp}) / 120$</p> | | |
| TESTED RANGE: | N/A | | |
| TEST VOLTAGE: | 120VAC / 60Hz | | |
| RESULTS: | <p>RF Output Power = 672watts</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 Result:

| Quality of Water (ml) | Starting Temperature (°C) | Final Temperature (°C) | Elapsed Time (Seconds) | RF Output Power (watts) |
|-----------------------|---------------------------|------------------------|------------------------|-------------------------|
| 1000 | 23.1 | 42.3 | 120 | 672 |

Test equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|---|---------------------|------------|-----------|----------|
| Data Acquisition | Agilent 34970A | MY44003367 | 03/17/05 | 03/16/07 |
| 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: Jean Wen
ENGINEER

REVIEWED BY: Hang Zhao
SENIOR ENGINEER

EUT Model: P70D20AL-D4



RF Output Power Test Set-Up

ATTACHMENT 4 - OPERATING FREQUENCY MEASUREMENT

| | | | |
|----------------------------------|--|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDERD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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 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. 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 | | |

Test result for Variation in Operating Frequency with Time:

| Minimum Frequency (MHz) | Maximum Frequency (MHz) |
|-------------------------|-------------------------|
| 2451.002 | 2451.804 |

Test result for Variation in Operating Frequency with Line Voltage:

| Minimum Frequency (MHz) | Maximum Frequency (MHz) |
|-------------------------|-------------------------|
| 2451.002 | 2451.804 |

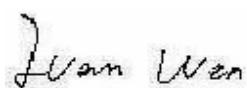
Note: Line voltage varied from 96Vac to 150Vac.

Test equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|-------------------------|---------------------|------------|-----------|----------|
| Vltra Broadband Antenna | R&S / HL562 | A0304224 | 06/05/05 | 06/04/07 |
| Horn Antenna | R&S / HF906 | A0304225 | 06/05/05 | 06/04/07 |
| EMI Receiver | R&S / ESIB26 | A0304218 | 06/10/05 | 06/09/07 |
| 5M Anechoic chamber | Albutross | A0304210 | 04/18/05 | 04/17/07 |

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

REVIEWED BY: _____



SENIOR ENGINEER

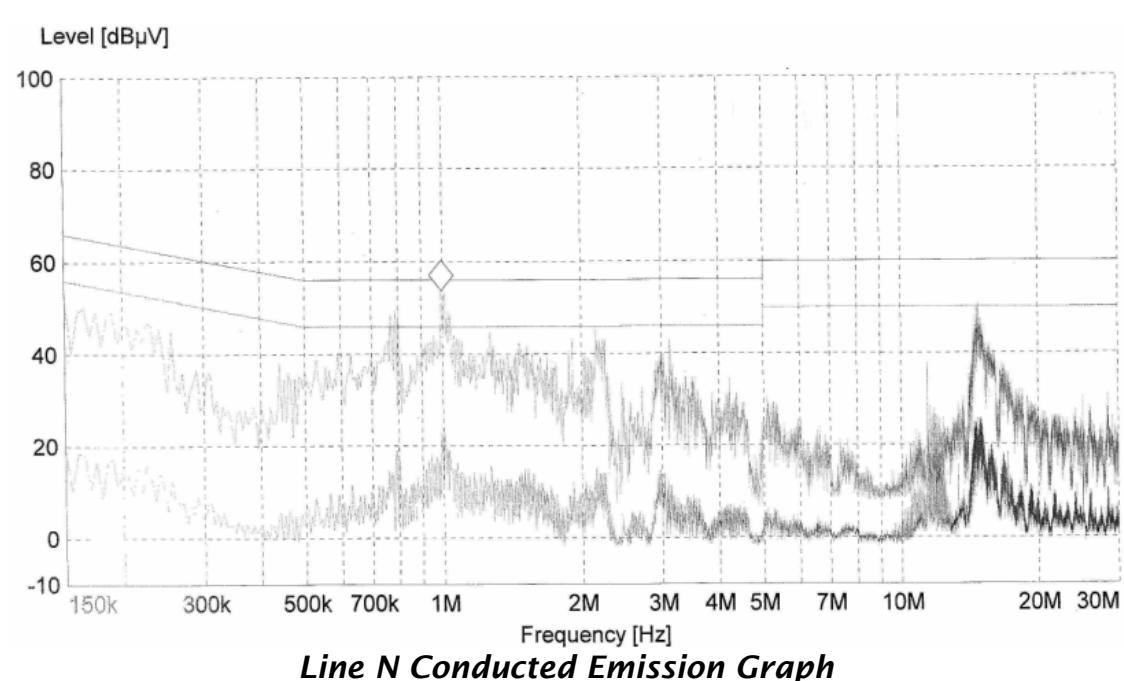
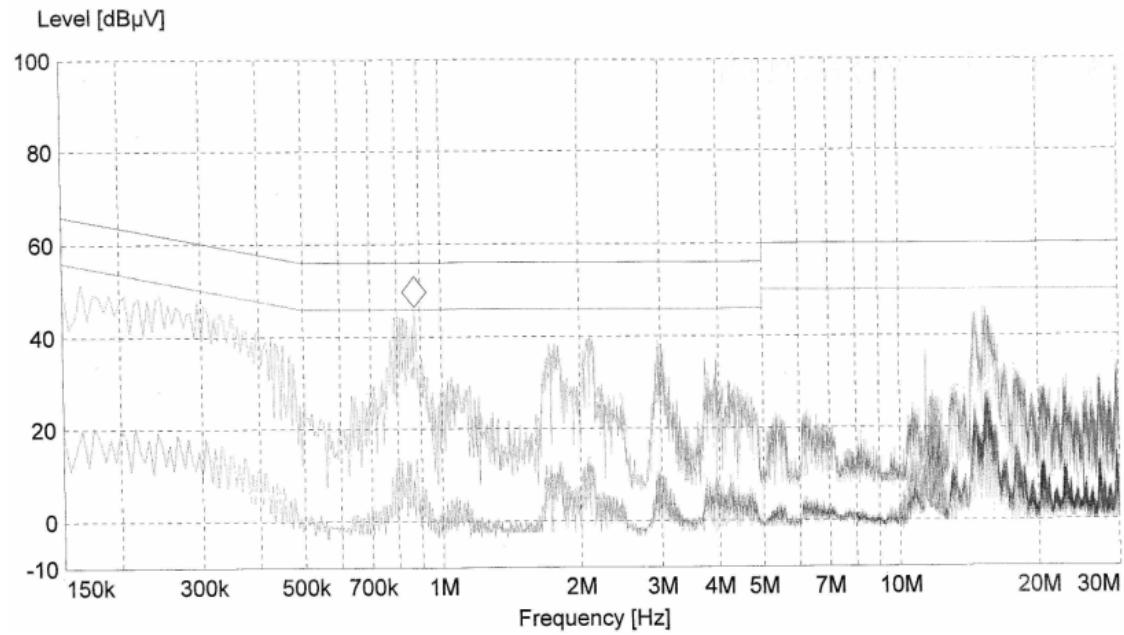
EUT Model: P70D20AL-D4



Operating Frequency Test Set-up

ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

| | | | |
|----------------------------------|---|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDERD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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 N by 10.09 dB of Quasi-Peak detector and by 28.49 dB of Average detector at 995KHz. 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 | Frequency [KHz] | Corrected QP Reading [dB μ V] | Delta QP [dB] | Limit [dB μ V/m] | Corrected AVE Reading [dB μ V] | Delta AVE [dB] | Limit [dB μ V/m] |
|------|-----------------|-----------------------------------|---------------|----------------------|------------------------------------|----------------|----------------------|
| L | 295.00 | 42.16 | -19.7 | 61.86 | 16.17 | -35.69 | 51.86 |
| L | 875.00 | 43.91 | -12.09 | 56.00 | 15.56 | -30.44 | 46.00 |
| L | 15455.00 | 36.57 | -23.43 | 60.00 | 18.99 | -31.01 | 50.00 |
| N | 800.00 | 38.83 | -17.17 | 56.00 | 9.15 | -36.85 | 46.00 |
| N | 995.00 | 45.91 | -10.09 | 56.00 | 17.51 | -28.49 | 46.00 |
| N | 14750.00 | 41.49 | -18.51 | 60.00 | 20.41 | -39.59 | 60.00 |

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

Test equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|----------------|---------------------|------------|-----------|----------|
| EMI Receiver | R&S / ESIB26 | A0304218 | 06/10/04 | 06/09/06 |
| LISN | R&S / ESH2-Z5 | A0304221 | 06/10/04 | 06/09/06 |

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: Jean Wen
ENGINEER

REVIEWED BY: Hangzhou
SENIOR ENGINEER

EUT Model: P70D20AL-D4



Conducted Emission Test Set-up

ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

| | | | |
|----------------------------------|--|-------------------------|-----------------------|
| CLIENT: | Guangdong Galanz Enterprises Co., Ltd. | TEST STANDARD: | FCC Part 18 |
| MODEL NUMBERS: | P70D20X-Z | PRODUCT: | Microwave Oven |
| MODEL TESTED: | P70D20AL-D4 | EUT DESIGNATION: | Home or Office |
| TEMPERATURE: | 22°C | HUMIDITY: | 55%RH |
| ATM PRESSURE: | 101 kPa | GROUNDING: | Through AC Power Cord |
| TESTED BY: | Ivan Wen | DATE OF TEST: | 2007, Jan 27 |
| 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: | <p>The EUT meets the requirements of test reference for Radiated Emissions on Vertical polarization by 15.2 dB of Average detector at 4913.6 MHz.</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: | ± 3.2 dB | | |

| 30MHz – 1GHz | | | | |
|---------------------|----------------------------|---|----------------|---------------------------------------|
| Frequency [MHz] | Antenna Polarization [V/H] | Corrected Reading [dB ₁ V/m] | Delta, QP [dB] | 3 Meters Limits [dB ₁ V/m] |
| 102.20 | H | 30.43 | -38.81 | 69.24 |
| 144.12 | H | 40.19 | -29.05 | 69.24 |
| 165.76 | H | 37.01 | -32.23 | 69.24 |
| 108.00 | V | 38.44 | -30.80 | 69.24 |
| 157.48 | V | 30.12 | -39.12 | 69.24 |
| 165.36 | V | 38.01 | -31.23 | 69.24 |

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 – 24.5GHz | | | | |
|-----------------------|----------------------------|---|-----------------|---------------------------------------|
| Frequency [MHz] | Antenna Polarization [V/H] | Corrected Reading [dB ₁ V/m] | Delta, AVE [dB] | 3 Meters Limits [dB ₁ V/m] |
| 4902.00 | H | 50.83 | -18.41 | 69.24 |
| 6731.60 | H | 53.15 | -16.09 | 69.24 |
| 7361.60 | H | 52.86 | -16.38 | 69.24 |
| 4913.60 | V | 54.04 | -15.20 | 69.24 |
| 7326.40 | V | 51.41 | -17.83 | 69.24 |
| 9851.60 | V | 45.78 | -23.46 | 69.24 |

Comments: None

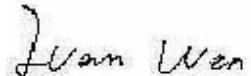
Note: All readings are average unless stated otherwise, using a bandwidth of 1MHz, with a 30 ms sweep time. A video filter was not used.

Test equipment list :

| Test Equipment | Manufacturer/ Model | Serial No. | Last Cal. | Cal. Due |
|-------------------------|---------------------|------------|-----------|----------|
| Vltra Broadband Antenna | RS HL562 | A0304224 | 06/05/05 | 06/04/07 |
| Horn Antenna | RS HF906 | A0304225 | 06/05/05 | 06/04/07 |
| EMI Receiver | RS ESIB26 | A0304218 | 06/10/05 | 06/09/07 |
| 5M Anechoic chamber | Albutross | A0304210 | 04/18/05 | 04/17/07 |

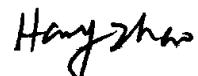
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

SIGNED BY:



ENGINEER

REVIEWED BY:



SENIOR ENGINEER

EUT Model: P70D20AL-D4



Radiated Emission Test Set-up