

FCC PART 18
EMI MEASUREMENT AND TEST REPORT


For

Whirlpool Microwave Products Development Ltd

16/F, Paliburg Plaza, 68 Ye Wo Street, Causeway Bay, Hong Kong

FCC ID: PR4MH1170Y

December 7, 2005

This Report Concerns: <input checked="" type="checkbox"/> Class II permissive change	Equipment Type: Microwave Oven
Test Engineer: Sam Lin	
Report Number: RSZ05112551	
Test Date: November 25, 2005	
Reviewed By: Chris Zeng 	
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Note: The test report is specially limited to the above company and this particular sample only.
It may not be duplicated without prior written consent of Bay Area Compliance Lab Corp.
(ShenZhen). This report **must not** be used by the client to claim product certification, approval,
or endorsement by NVLAP, NIST or any agency of the US Government.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Whirlpool Microwave Products Development Ltd*'s model: IMH16 or the "EUT" as referred to in this report is a Microwave Oven which measures approximately 76.0cmL x 73.5cmW x 40.5cmH, rated input voltage: AC 120 V/60 Hz.

* *The test data gathered are from production sample, serial number: 0511126, provided by the manufacturer, we receive the EUT on 2005-11-25.*

Objective

The following test report is prepared on behalf of *Whirlpool Microwave Products Development Ltd* in accordance with Part 2, Subpart J, and Part 18, Subparts A, B and C of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

This is the C2PC application of the device. The difference between the original device and the current one is as follows:

	Original Filter	New Filter
Manufacture:	DPC	ISKRA
Type:	DFCA-2516R	KPL 3009

For the changes made to the device, conducted emission testing was performed.

Related Submittal(s)/Grant(s)

This is a C2PC application. The original application was granted on 2005-12-2.

Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurement was performed at Bay Area Compliance Laboratory Corporation. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Lab Corp. (ShenZhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China.

Test site at Bay Area Compliance Lab Corp. (ShenZhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Lab Corp. (ShenZhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at <http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm>

External Cable List and Details

Cable Description	Length (M)	From/Port	To
Unshielded Undetachable AC Power Cable	1.0	EUT	AC Power

OPERATING CONDITION/TEST CONFIGURATION

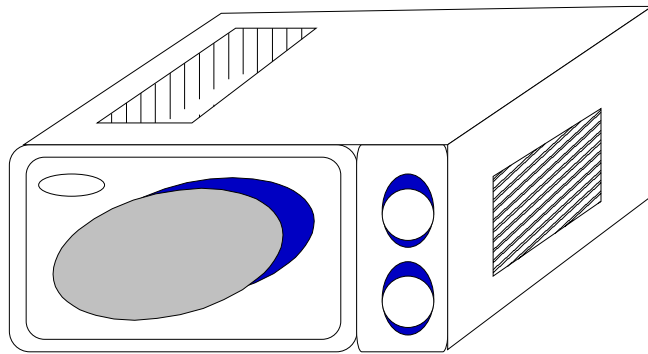
Justification

The EUT was provided for tests as a stand-alone device. It was prepared for testing in accordance with the manufacturer's instructions. The EUT was operated at maximum (continuous) RF output power. The loads consisted of water in a glass beaker in the amounts specified in the test procedure.

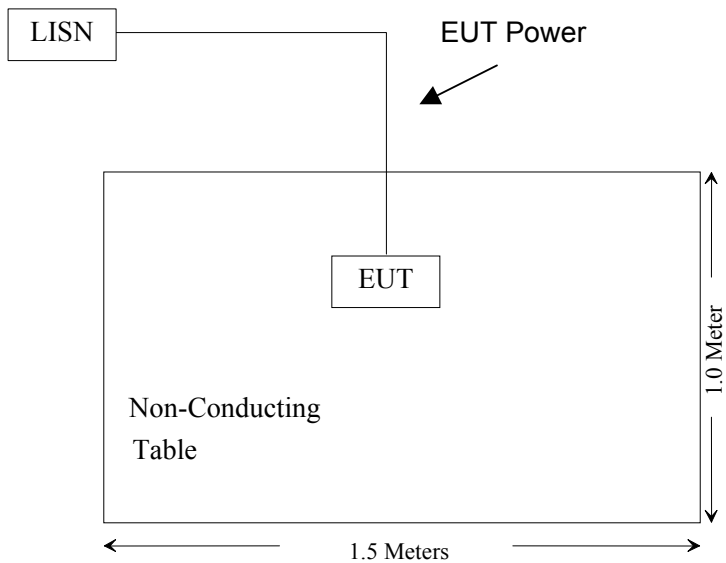
Equipment Modifications

Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



Block Diagram of Test Setup



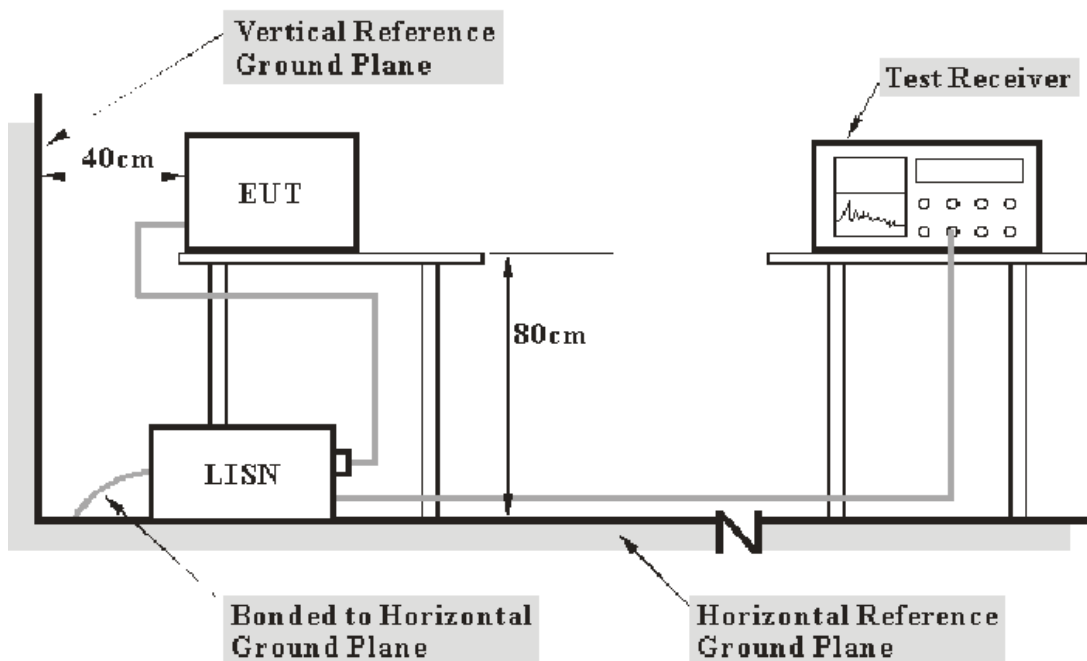
CONDUCTED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Lab Corp. (ShenZhen) is ± 2.4 dB.

EUT Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The EUT was connected to a 120 VAC/ 60Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>IF B/W</i>
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2005-1-26	2006-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2005-2-28	2006-2-28

* Com-Power's LISN were used as the supporting equipment.

* **Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the EUT power cord was connected to the outlet of the LISN.

Maximizing procedure were performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC PART 18, with the worst margin reading of:

-2.60 dB at 0.730 MHz in the **Neutral** conductor mode.

Test Data**Environmental Conditions**

Temperature:	25°C
Relative Humidity:	56%
ATM Pressure:	1002mbar

The testing was performed by Sam Lin on 2005-11-25.

Test Mode: Max Power

Frequency MHz	LINE CONDUCTED EMISSIONS			FCC PART 18	
	Amplitude dB μ V	Detector QP/AV	Phase Line/Neutral	Limit dB μ V	Margin dB
0.730	53.40	QP	Neutral	56.00	-2.60
0.970	53.10	QP	Neutral	56.00	-2.90
0.585	52.80	QP	Neutral	56.00	-3.20
0.745	52.60	QP	Line	56.00	-3.40
0.975	48.90	QP	Line	56.00	-7.10
2.915	45.70	QP	Line	56.00	-10.30
2.855	45.30	QP	Neutral	56.00	-10.70
10.755	38.40	AV	Line	50.00	-11.60
10.755	48.20	QP	Line	60.00	-11.80
17.160	48.00	QP	Line	60.00	-12.00
17.160	38.00	AV	Line	50.00	-12.00
1.485	41.50	QP	Line	56.00	-14.50
11.515	33.50	AV	Neutral	50.00	-16.50
11.515	43.20	QP	Neutral	60.00	-16.80
0.970	27.80	AV	Neutral	46.00	-18.20
0.585	27.00	AV	Neutral	46.00	-19.00
0.745	26.80	AV	Line	46.00	-19.20
27.980	40.10	QP	Neutral	60.00	-19.90
0.730	24.80	AV	Neutral	46.00	-21.20
0.975	23.10	AV	Line	46.00	-22.90
2.915	22.70	AV	Line	46.00	-23.30
2.855	21.90	AV	Neutral	46.00	-24.10
1.485	20.00	AV	Line	46.00	-26.00
27.980	15.60	AV	Neutral	50.00	-34.40

Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

Conducted Disturbance Test FCC Part 18

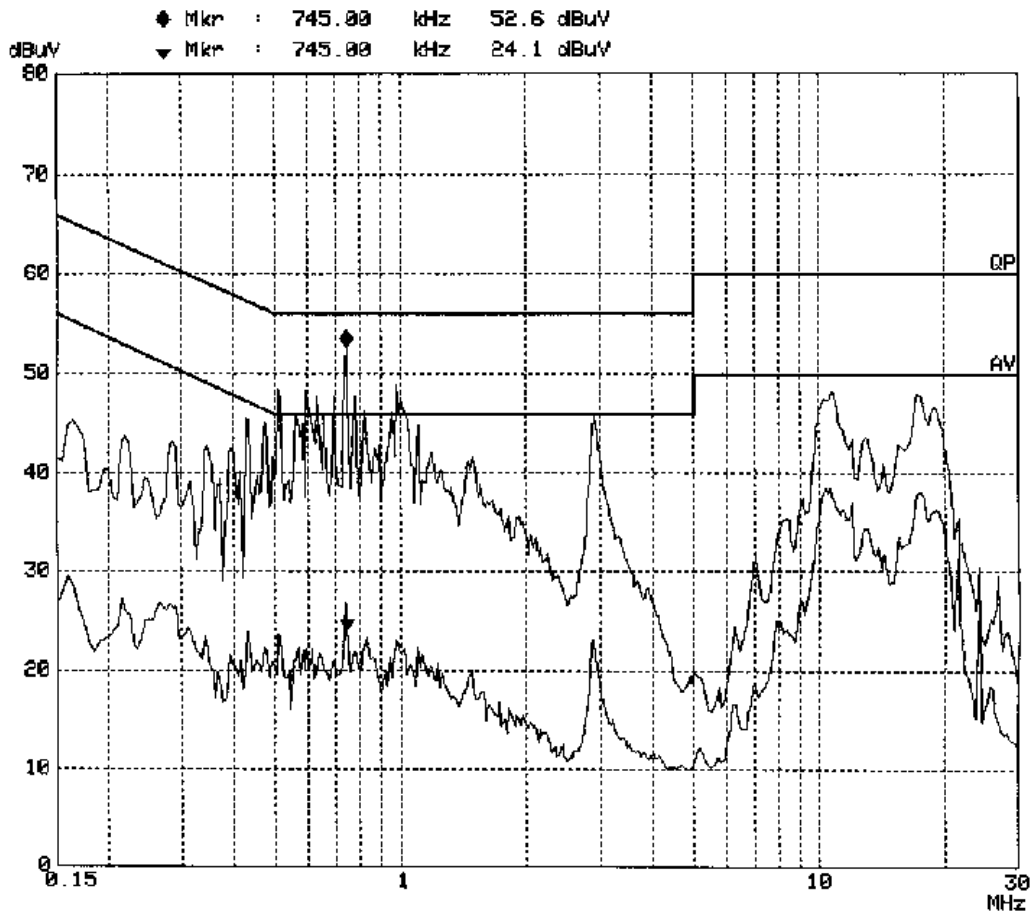
EUT: Microwave Oven M/N:IMH16
 Manuf: Whirlpool
 Op Cond: Max Power
 Operator: Sam
 Test Spec: AC 120V/60Hz L
 Comment: Temp:25
 Humi:56%
 Date: 25. Nov 05 14:59

Scan Settings (1 Range)

Frequencies			Receiver Settings			
Start	Stop	Step	IF BW	Detector	M-Time	Atten Preamp
150k	30M	5k	9k	QP+AV	20ms	AUTO LN OFF

Transducer No.	Start	Stop	Name
1	9k	30M	FACTOR

Final Measurement: x QP / + AV
 Meas Time: 1 s
 Subranges: 25
 Acc Margin: 6dB



Conducted Disturbance Test FCC Part 18

EUT: Microwave Oven M/N:IMH16
 Manuf: whirlpool
 Op Cond: Max power
 Operator: Sam
 Test Spec: AC 120V/60Hz N
 Comment: Temp:25
 Humi:56%
 Date: 25. Nov 05 17:42

Scan Settings (1 Range)

Frequencies			Receiver Settings			
Start	Stop	Step	IF BW	Detector	M-Time	Atten Preamp
150k	30M	5k	9k	QP+AV	20ms AUTO	LN OFF

Transducer No.	Start	Stop	Name
1	9k	30M	FACTOR

Final Measurement: x QP / + AV
 Meas Time: 1 s
 Subranges: 25
 Acc Margin: 6dB

