

FCC PART 18

EMI MEASUREMENT AND TEST REPORT

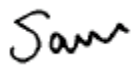
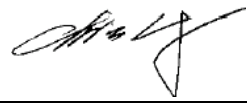
For

Whirlpool Microwave Products Development Ltd

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

FCC ID: PR4MH3185Y

September 14, 2005

This Report Concerns: ☒ Class II permissive change	Equipment Type: Microwave Oven
Test Engineer: Sam Lin 	
Report Number: RSZ05091355	
Test Date: May 26, 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.
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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: MH3185 Series or the "EUT" as referred to in this report is a microwave oven which measures approximately 76.0 cm L x 40.0 cm W x 41.5 cm H, rated input voltage: AC 120 V/60 Hz.

* The test data gathered are from production sample, serial number: 200503, provided by the manufacturer.

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 two is as follows:

Original Filter Model	New Filter Model
ISKRA , KPL3009	DPC , DFCA-2516R

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 2004-6-3.

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	1.2	EUT	AC Power

OPERATING CONDITION/TEST CONFIGURATION

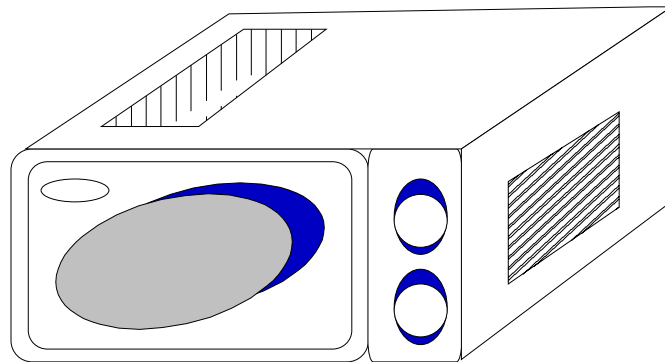
Justification

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.

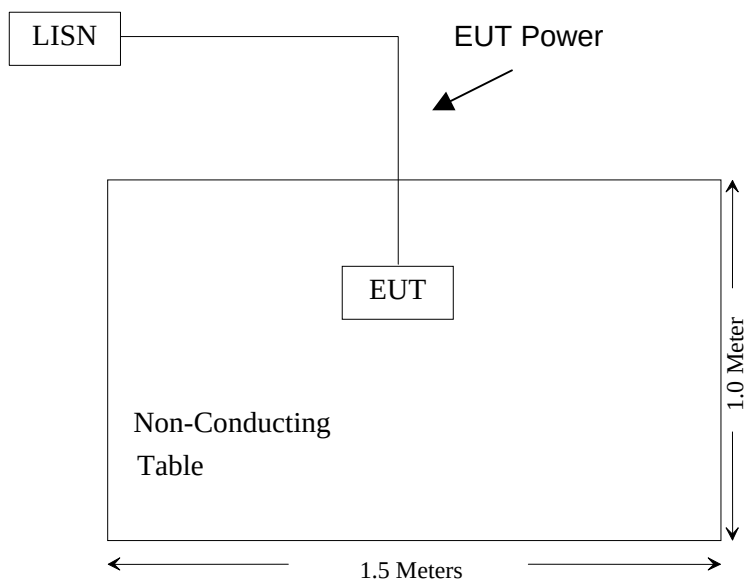
Equipment Modifications

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

Configuration of Test Setup



Block Diagram of Test Setup



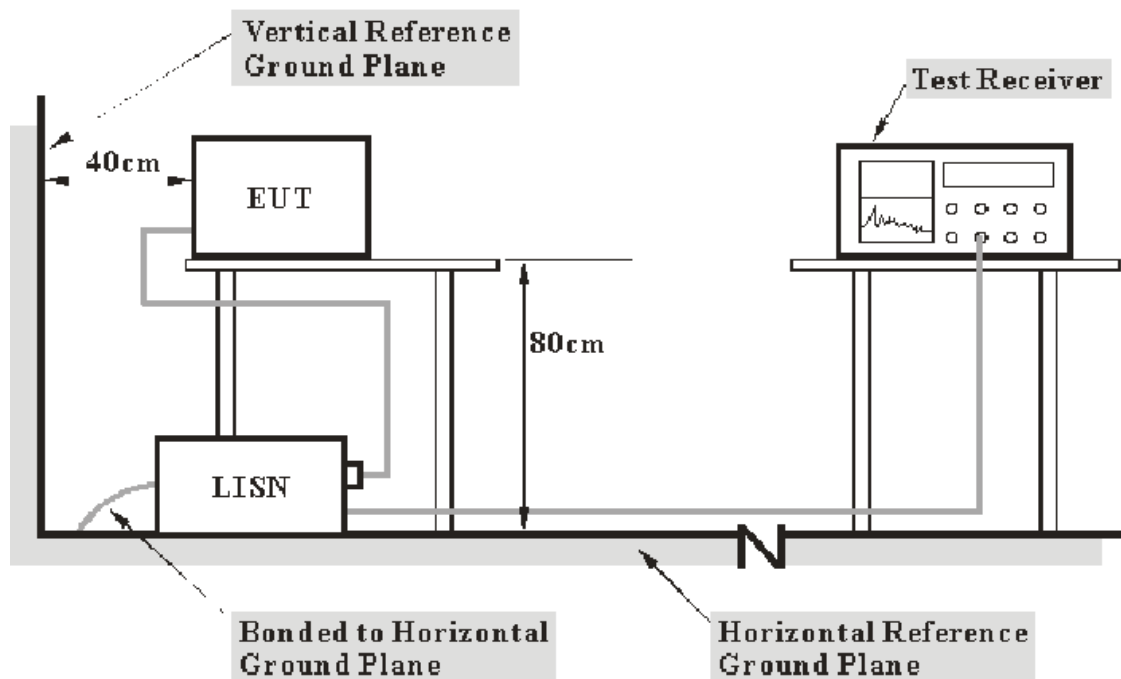
CONDUCTED EMISSION

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:

-10.79 dB at 0.154 MHz in the **Line** conductor mode.

Test Data**Environmental Conditions**

Temperature:	27°C
Relative Humidity:	54%
ATM Pressure:	1009mbar

Testing was performed by Sam Lin on 2005-5-26.

Test Mode: Max Power

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV	Phase Line/Neutral	Limit dBμV	Margin dB
0.154	55.0	QP	Line	65.78	-10.79
0.190	51.9	QP	Neutral	64.04	-12.14
10.732	42.7	QP	Line	60.00	-17.31
10.848	40.7	QP	Neutral	60.00	-19.26
10.732	30.7	AV	Line	50.00	-19.30
0.362	38.7	QP	Neutral	58.68	-19.95
12.908	39.7	QP	Neutral	60.00	-20.28
10.848	29.7	AV	Neutral	50.00	-20.33
16.040	39.1	QP	Line	60.00	-20.89
0.602	34.2	QP	Line	56.00	-21.81
12.908	28.1	AV	Neutral	50.00	-21.87
0.590	32.4	QP	Neutral	56.00	-23.56
16.040	26.0	AV	Line	50.00	-24.01
0.590	20.5	AV	Neutral	46.00	-25.49
0.602	19.4	AV	Line	46.00	-26.65
8.464	21.6	AV	Neutral	50.00	-28.38
8.552	20.8	AV	Line	50.00	-29.18
8.464	30.7	QP	Neutral	60.00	-29.31
0.362	19.2	AV	Neutral	48.68	-29.53
0.154	25.6	AV	Line	55.78	-30.22
8.552	29.4	QP	Line	60.00	-30.65
7.460	19.0	AV	Line	50.00	-31.00
7.460	27.6	QP	Line	60.00	-32.36
0.190	20.6	AV	Neutral	54.04	-33.45

Plot(s) of Test Data

Plot(s) of test data is presented hereinafter as reference.

