TEST REPORT

No.: HM104422

APPLICANT: (Code: WHS001)

Whirlpool Microwave Products Development Limited
16th Floor, Paliburg Plaza, 68 Yee Woo Street,
Causeway Bay, Hong Kong.

DATE OF SAMPLES RECEIVED: 2001-03-26

SUBMITTED SAMPLE (S): 1 sample

DATE OF TESTING: 2001-05-17 to 2000-05-19

DESCRIPTION OF SAMPLE (S):

A sample of product said to be:

Product:	Microwave Hood Combination
Manufacturer:	Shunde Whirlpool Electrical Appliances Co., Ltd.
Model Number:	GH8185XKx
Brand Name:	Whirlpool
Rating:	120Va.c. 60Hz 1500W 15A
Origin:	CHINA
Additional Model Number/Brand Name:	6165 series/Kenmore, 6168 series/Kenmore

INVESTIGATIONS REQUESTED: Perform relevant tests for F.C.C. part 18 certification.

REMARK: Please see report no.: HM104422A for measurement of performed in accordance with F.C.C. part 15.

RESULTS: Please see attached sheet(s).

CONCLUSION:

From the measurement data obtained, the tested sample was considered to have COMPLIED with the requirement for the relevant clauses of Part 18 of the Federal Communications Commission Rules for Microwave Oven.

TEST EQUIPMENT AUDIT: Please see Appendix B.

Testing Engineer	Verify by	Patrick Wong for Managing Director

TEST REPORT

T E S T S U M M A R Y

TEST CONDITION	TEST REQUIREMENT	TEST METHOD	STSTUS
Radiated Emission, 100MHz to 18GHz	FCC Part 18 Subpart C	FCC / OST MP-5	Pass
Input Power Measurement	FCC Part 18 Subpart C	FCC / OST MP-5	Pass
Output Power Measurement	FCC Part 18 Subpart C	FCC / OST MP-5	Pass
Measurement of Output Frequency	FCC Part 18 Subpart C	FCC / OST MP-5	Pass
Output Frequency Stability	FCC Part 18 Subpart C	FCC / OST MP-5	Pass

(1) Radiated Emissions (100MHz to 18GHz)

TEST REFERENCE : FCC Rules Part 18 Subpart C
TEST METHOD : FCC / OST MP-5
TEST CONDITION : On mode (max. power)
TEST DATE : 2001-05-19

Test method:
Measurement were in accordance with F.C.C. part 18 requirement and F.C.C. / OST MP-5.

Emission Frequency (MHz)	Meter reading (Including antenna factor) dBµV/m	Polarization (H/V)	Field Strength (at 3m) µV/m	FCC Limit µV/m
211.5	33.6	H	47.9	5396
258.8	38.4	H	83.2	5396
274.9	39.4	H	93.3	5396
299.3	39.4	H	93.3	5396
315.1	39.0	H	89.1	5396
4938	28.6	H	26.9	5396
7387	33.0	H	44.7	5396
9886	31.7	H	38.5	5396
12371	31.9	H	39.4	5396
14744	36.2	H	64.6	5396
17230	36.0	H	63.1	5396
* 247.817	48.7	V	272.3	5396
315.4	33.9	V	49.5	5396
347.4	30.2	V	32.4	5396
4920	34.8	V	55.0	5396
7413	52.6	V	426.6	5396
9894	38.2	V	81.3	5396
12357	39.8	V	97.7	5396
14758	43.0	V	141.3	5396
17321	46.2	V	204.2	5396

========== SUMMARY ==========

All data is within limits

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Horn Antenna and Broad-band Antennas were used and both polarizations of emissions were measured.

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Quasi-peak measurements were performed if the maximised measurements were less than 6dB below the quasi-peak limit line.

Quasi-peak measurements are denoted by * in the table above

(2) Input Power Measurement

TEST REFERENCE	:	FCC Rules Part 18 Subpart C
TEST METHOD		FCC / OST MP-5
TEST CONDITION	:	On mode (max. power)
TEST DATE	:	2001-05-17

Test Method:
Input power was measured using a Wattmeter. A 1000ml water load was located at the center of the oven. The oven was operated at full output power.

Results:

Input Measurement			**Manufacturer's Rating**	
Voltage (Vac)	**Current (A)**	**Input Power (W)**	**Current (A)**	**Input Power (W)**
120	13.880	1586	15.0	1500

(3) Output Power Measurement

TEST REFERENCE	:	FCC Rules Part 18 Subpart C
TEST METHOD	:	FCC / OST MP-5
TEST CONDITION	:	On mode (max. power)
TEST DATE	:	2001-05-19

Test Method:

The output power was measured by the calorimetric method; using 1000ml load and evaluate the power output from the observed temperature rise of the load over a period of time.

The test method was based on clause 8 of IEC 705, Edition 3, Household Microwave Ovens – Methods for Measuring Performance.

Results:

Initial Temp (^{o}C)	Final Temp (^{o}C)	Observed Period (s)	Output Power (W)
10.0	22.3	50.0	1030.0

Remark:

$$\textbf{Power (W)} = \frac{4.187(joules/cal)xVolume(ml)x\Delta T}{50}$$

$$\textbf{Power (W)} = \frac{4.187x1000x12.3}{50} = \textbf{1030.0(W)}$$

(4) Measurement of Output Frequency

TEST REFERENCE	:	FCC Rules Part 18 Subpart C
TEST METHOD	:	FCC / OST MP-5
TEST CONDITION	:	On mode (max. power)
TEST DATE	:	2001-05-19

Test method:

The fundamental frequency was measured using a spectrum analyzer with precision frequency reference, with 1000ml load at the center of the oven.

Results:

Measured Frequency (MHz)	Manufacturer's Rated Frequency (MHz)
2460	2450

Remark:

Please see appendix D for graphical data.

(5) Output Frequency Stability

TEST REFERENCE : FCC Rules Part 18 Subpart C
TEST METHOD : FCC / OST MP-5
TEST CONDITION : On mode (max. power)
TEST DATE : 2001-05-19

Frequency variation with time:

Test method:
A spectrum analyzer was used to measure the frequency variation with time, with a 1000ml load located at the center of the oven with maximum power. The test was performed until the volume was reduced by evaporation to approximately 20% of the original quantity.
During the test, the spectrum analyzer trace was put on maximum hold in order to obtain a bandwidth plot showing the sideband edges.
Measurements were performed with the antenna in both horizontal and vertical polarities.

Results:

Load		**Maximum sideband edge (GHz)**		**Minimum sideband edge (GHz)**	
Initial Volume (ml)	Final Volume (ml)	Measured	Limit	Measured	Limit
1000	200	2.463	2.500	2.454	2.400

Remark:
Please see appendix D for graphical data.

Frequency variation with line voltage:

Test Method:
A spectrum analyzer was used to measure the frequency variation for line voltage variation from 80% to 125% of normal voltage, with a 1000ml load located at the center of the oven with maximum power.
During the test, the spectrum analyzer trace was put on, maximum hold in order to obtain a bandwidth plot showing the sideband edges.
Measurements were performed with the antenna in both horizontal and vertical polarities.

Results:

Voltage	**Maximum sideband edge**		**Voltage**	**Minimum sideband edge**	
	Measured	Limit		Measured	Limit
(Vac)	(GHz)	(GHz)	(Vac)	(GHz)	(GHz)
150	2.476	2.500	150	2.442	2.400

Remark:
Please see appendix D for graphical data.

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