

## REPORT OF MEASUREMENTS (MICROWAVE OVEN TEST DATA)

FCC ID : AEZM110 MODEL : EM-F1010MW DATE : March 22, 2001NOMINAL FREQUENCY : 2.450 MHz TESTED BY : ILIJAYASIII*H. Vayachir*

DESCRIPTION : (Unit Dimension : cm)

Cabinet Dimension : 46.1 by 35.1 by 25.0 Door Dimension : 35.3 by 22.5Oven Cavity Dimension : 29.7 by 31.1 by 18.2 Door Viewing area : 24.7 by 13.4Feed Type and Location : Waveguide, located right side Stirrer : Rotating tray

(incl. Rotating tray)

Door seal Type : Choke Seal Magnetron Type : Toshiba 2M232JOthers : N/A

## TEST EQUIPMENT USED :

## 1. Antenna (Horn Antenna)

	<u>Frequency Range</u>	<u>Correction Factor</u>
AILTECH 91888-2	1.0 - 2.0 G Hz	21.5 - 22 dB
AILTECH 91889-2	2.0 - 3.6 G Hz	20.5 - 21 dB
AILTECH 94613-1	3.6 - 7.6 G Hz	37 dB
AILTECH 91891-2	7.3 - 10.0 G Hz	39.8 dB

Other Correction Factor

## (a) Cable loss

<u>Frequency (MHz)</u>	<u>Cable loss (dB)</u>
2.400	1.1
2.500	1.1
4.900	1.6
7.350	2.2
9.800	2.7

## (b) Loss of Band Rejection Filter

<u>Frequency Range (GHz)</u>	<u>Filter loss (dB)</u>
2.0 - 3.6	3.0

## 2. Field Strength Meter

AILTECH NM-67 (SER 0241-03088)

Last calibrated date : December 04, 2000

Setting : Bandwidth ----- 1 MHz

Function ----- Field Intensity (average value detector)

## 3. When measuring sidebands close to the fundamental, band reject filter Model 6N45-2450/60 (SER FK837-1) was employed.

REPORT OF MEASUREMENT (MICROWAVE OVEN TEST DATA SHEET B)

FCC ID : AEZM110 MODEL : EM-F1010MW DATE : March 22, 2001  
 Nominal Frequency : 2,450 MHz TESTED BY : H.HAYASHI

DATA SUMMERY (FCC MEASUREMENT PROCEDURE MP-5)

CALCULATION :  $E < 300m > = K * 10^{(A+B+C+D+E)/20}$

SAFETY CHECK (at 5 cm) Load : 275 ml/center  
 FUNDAMENTAL Load : 1,000 ml/center

0.05 mW/sq.cm  
2,450 MHz

LIMIT =  $25 * \sqrt{(power/500)}$  : 27.4  $\mu V/m$

\* Note : Location of load for the oven provided with the rotating tray is :  
 Contiguous with the shelf circumference.

RADIATION FIELD STRENGTH ( $\mu V/m$  at 300 m)

Load	Location of Load	Emission Frequency (MHz)	Meter Reading (dB $\mu V$ )	Antenna Factor (dB)	Cable Loss (dB)	Filter Loss (dB)	Calcu. Factor (dB)	The Value of K ( $E < 300m > = K * E < 3m >$ )	Max. Field Strength ( $\mu V/m$ at 300m)	Limit ( $\mu V/m$ at 300m)
300	Center	4,890	10.0	37.0	1.6	—	5	0.0100	4.8	27.4
300	* Right/Front Corner	4,871	10.0	37.0	1.6	—	5	0.0100	4.8	27.4
700	Center	4,909	9.0	37.0	1.6	—	5	0.0100	4.3	27.4
700	* Right/Front Corner	4,883	10.0	37.0	1.6	—	5	0.0100	4.8	27.4
300	Center	7,972	13.0	39.8	2.2	—	5	0.0100	10.0	27.4
300	* Right/Front Corner	7,314	21.0	39.8	2.2	—	5	0.0100	25.1	27.4
700	Center	7,347	14.0	39.8	2.2	—	5	0.0100	11.2	27.4
700	* Right/Front Corner	7,305	21.0	39.8	2.2	—	5	0.0100	25.1	27.4
700	Center	9,812	16.0	39.8	2.7	—	5	0.0100	15.0	27.4
700	Center	2,390	26.0	20.8	1.1	3	5	0.0061	3.8	27.4
Emission Sideband 2,400 MHz	Center	2,400	26.0	20.8	1.1	3	5	0.0061	3.8	27.4
Emission Sideband 2,500 MHz	Center	2,500	14.5	20.8	1.1	3	5	0.0064	1.1	27.4

Maximum Frequency Variation 1,000 ml load 2,438 to 2,446 MHz  
 Total Power Input to Oven 920 Watts  
 Power Development in dummy load (Thermal Method) 600 Watts (IEC705 Test Procedure) 1830 MHz - 2745 MHz 2.6230 \* 10<sup>(-3)</sup> \* frequency : GHz) -0.0002  
 Supply Voltage AC 120 V 60 Hz 2745 MHz - 3660 MHz 2.1858 \* 10<sup>(-3)</sup> \* frequency : GHz) +0.0010  
 3660 MHz - 4575 MHz 1.0929 \* 10<sup>(-3)</sup> \* frequency : GHz) +0.0050  
 4575 MHz and above 0.0100

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 TESTED BY : ILLIAYASHI  
*H. Hayashi*

Note : In order to convert the measured field strength at 3meters to the field at 300 meters, comply with FCC/OST MP-5 Appendix C "4.6.1 Computations to determine compliance". A calculation factor of 5 dB, this figure is fixed by SANYO, is introduced bfor adjusting a tolerance in measurement.

A calculation factor of 5 dB should be added to "METER READING" as shown in SAMPLE CALCULATION below.

#### SAMPLE CALUCULATION

(1) 2<sup>nd</sup> Harmonic with 300 ml/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0100 \times 10^{(10.0 + 37 + 1.5 + 5)} \div 20 \\ &= 4.8 \quad \text{uV/m} \end{aligned}$$

(2) Emission sideband 2,400 M Hz., 700 ml/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0061 \times 10^{(28.0 + 20.8 + 1.1 + 3 + 5)} \div 20 \\ &= 3.8 \quad \text{uV/m} \end{aligned}$$

**REPORT OF MEASUREMENT (MICROWAVE OVEN TEST DATA)**

- Measurement of Frequency VS Line Voltage Stability -

FCC ID : AEZM110 Model : EM-F1010MW Date : March 22, 2001Nominal Frequency : 2,450 MHzTested by : H.HAYASHI*H. Hayashi*

Line Voltage Variation [Volt]	Frequency [GHz]	Deviation for ISM Frequency [MHz]	Limit [MHz]
96 (- 20%)	2.436	-14	± 50
120 (± 0%)	2.438	-12	± 50
150 (+ 25%)	2.444	-6	± 50

**[ Environment ]**Temperature : 23.5 °CHumidity : 59.0 %**[ Sample Calculation ]**Frequency : 2.436 GHz

Deviation for ISM Frequencies Calculated as follows,

$$\underline{2.436} - 2.450 = \underline{-0.014} \text{ [GHz]} = \underline{-14} \text{ [MHz]}$$

**[ Summary of Test Results ]**

Above data shows that the test device do / do not complies with the requirements.