

REPORT OF MEASUREMENTS (MICROWAVE OVEN TEST DATA)

FCC ID : AEZM902 MODEL : EM-RS2000 DATE : July 2, 2000
 NOMINAL FREQUENCY : 2.450 M Hz. TESTED BY : M. KANESHIRO

M. Kaneshiro

DESCRIPTION : (Unit Dimension : cm)

Cabinet Dimension : 76.0 by 35.7 by 43.2 Door Dimension : 57.7 by 33.3

Oven Cavity Dimension : 48.9 by 34.5 by 25.5 Door Viewing area : 44.0 by 20.8

Feed Type and Location : Waveguide, located top side Stirrer: rotating tray/stirrer
 (incl. Rotating tray)

Door seal Type : Choke Seal Magnetron Type : Toshiba, 2M-253H

Others : 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 (M Hz)</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 (G Hz)</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 13, 1999

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 : AEZM902 MODEL : EM-RS2000 DATE : July 2, 2000
 Nominal Frequency : 2,450 MHz TESTED BY : MIKANESHIRO

DATA SUMMERY (FCC MEASUREMENT PROCEDURE MP-5)

SAFETY CHECK (at 5 cm) Load : 275 ml/center 0.20 mW/sq.cm
 FUNDAMENTAL Load : 1,000 ml/center 2,450 MHz

LIMIT = $25 \times \sqrt{\text{power}/500}$: 35.4 $\mu\text{V}/\text{m}$

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

Calculation : $E_{<300\text{m}>} = K \times 10^{(A+B+O+D+E)/20}$
M. Haneishi

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

Load	Location of Load	Emission Frequency (MHz)	Meter Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Filter Loss (dB)	Calcu. Factor (dB)	The Value of K ($E_{<300\text{m}>} = K \times E_{<3\text{m}>}$)	Max. Field Strength ($\mu\text{V}/\text{m}$ at 300m)	Limit ($\mu\text{V}/\text{m}$ at 300m)
300	Center	4,908	12.0	37.0	1.6	—	5	0.0100	6.0	35.4
300	* Right/Front Corner	4,892	14.0	37.0	1.6	—	5	0.0100	7.6	35.4
700	Center	4,890	11.0	37.0	1.6	—	5	0.0100	5.4	35.4
700	* Right/Front Corner	4,888	10.0	37.0	1.6	—	5	0.0100	4.8	35.4
300	Center	7,376	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
300	* Right/Front Corner	7,347	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
700	Center	7,347	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
700	* Right/Front Corner	7,337	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
700	Center	9,857	14.0	39.8	2.7	—	5	0.0100	11.9	35.4
700	Center	2,200	33.0	20.8	1.1	3	5	0.0056	7.8	35.4
Emission Sideband 2,400 MHz	Center	2,400	18.0	20.8	1.1	3	5	0.0061	1.5	35.4
Emission Sideband 2,500 MHz	Center	2,500	20.0	20.8	1.1	3	5	0.0064	2.0	35.4

Maximum Frequency Variation : 1,000 ml load 2,430 to 2,477 MHz.
 Total Power Input to Oven : 1,500 Watts
 Power Development in dummy load (Thermal Method) : 1,000 Watts (IEC705 Test Procedure)
 Supply Voltage : AC 120 V 60 Hz

1830 MHz - 2745 MHz : $2.6230 \times 10^{(-3)}$ * frequency : GHz) -0.0002
 2745 MHz - 3660 MHz : $2.1858 \times 10^{(-3)}$ * frequency : GHz) +0.0010
 3660 MHz - 4575 MHz : $1.0929 \times 10^{(-3)}$ * frequency : GHz) +0.0050
 4575 MHz and above : 0.0100

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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) 2nd Harmonic with 300 m/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0100 \times 10^{(12.0 + 37 + 1.5 + 5) / 20} \\ &= 6.0 \quad \text{uV/m} \end{aligned}$$

(2) Emission sideband 2.400 MHz, 700 m/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0061 \times 10^{(18.0 + 20.8 + 1.1 + 3 + 5) / 20} \\ &= 1.5 \quad \text{uV/m} \end{aligned}$$

REPORT OF MEASUREMENT (MICROWAVE OVEN TEST DATA)
 - Measurement of Frequency VS Line Voltage Stability -

FCC ID : AEZM902 Model : EM-RS2000 Date : July 2,2000
 Nominal Frequency : 2,450 MHz Tested by : M.KANESHIRO

M. Kaneshiro

Line Voltage Variation [Volt]	Frequency [GHz]	Deviation for ISM Frequency [MHz]	Limit [MHz]
96 (- 20%)	2.479	+29	± 50
120 (± 0%)	2.477	+27	± 50
150 (+ 25%)	2.477	+27	± 50

[Environment]

Temperature : 27.0 °C
 Humidity : 51.0 %

[Sample Calculation]

Frequency : 2.479 GHz

Deviation for ISM Frequencies Calculated as follows,

$$\underline{2.479} - 2.4500 = \underline{0.029} \text{ [GHz]} = \underline{29} \text{ [MHz]}$$

[Summary of Test Results]

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