

REPORT OF MEASUREMENTS (MICROWAVE OVEN TEST DATA)

FCC ID : AEZM902 MODEL : EM-RS2000 DATE : July 2, 2000
 NOMINAL FREQUENCY : 2450 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)

	Frequency Range	Correction Factor
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

Frequency (M Hz)	Cable loss (dB)
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

Frequency Range (G Hz)	Filter loss (dB)
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 : MKANESHIRO

DATA SUMMARY (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.

Mr. Haneschiro
 CALCULATION : $E_{<300m>} = K \cdot 10^{((A+B+O+D+E)/20)}$

LIMIT = $25 \cdot \sqrt{\text{power}/500}$: 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.

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

	Load (ml)	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 ($E_{<300m>} = K \cdot 10^{(3m/20)}$)	Max. Field Strength ($\mu\text{V}/\text{m}$ at 300m)	Limit ($\mu\text{V}/\text{m}$ at 300m)
2nd Harmonic	300	Center	4,908	12.0	37.0	1.6	—	5	0.0100	6.0	35.4
2nd Harmonic	300	* Right/Front Corner	4,892	14.0	37.0	1.6	—	5	0.0100	7.6	35.4
2nd Harmonic	700	Center	4,890	11.0	37.0	1.6	—	5	0.0100	5.4	35.4
2nd Harmonic	700	* Right/Front Corner	4,888	10.0	37.0	1.6	—	5	0.0100	4.8	35.4
3rd Harmonic	300	Center	7,376	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
3rd Harmonic	300	* Right/Front Corner	7,347	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
3rd Harmonic	700	Center	7,347	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
3rd Harmonic	700	* Right/Front Corner	7,337	13.0	39.8	2.2	—	5	0.0100	10.0	35.4
4th Harmonic	700	Center	9,857	14.0	39.8	2.7	—	5	0.0100	11.9	35.4
Spurious	700	Center	2,200	33.0	20.8	1.1	3	5	0.0056	7.8	35.4
Emission Sideband 2,400 MHz	700	Center	2,400	18.0	20.8	1.1	3	5	0.0061	1.5	35.4
Emission Sideband 2,500 MHz	700	Center	2,500	20.0	20.8	1.1	3	5	0.0064	2.0	35.4

Maximum Frequency Variation 1,000 ml load
 Total Power Input to Oven 2,430 to 2,477 M Hz.
 Power Development in dummy load (Thermal Method) 1,500 Watts
 Supply Voltage 1,000 Watts (IEC705 Test Procedure) 4575 MHz and above
 AC 120 V 60 Hz

1830 MHz - 2745 MHz 2.6230 * 10⁻⁽³⁾ * frequency : GHz) -0.0002
 2745 MHz - 3660 MHz 2.1858 * 10⁻⁽³⁾ * frequency : GHz) +0.0010
 3660 MHz - 4575 MHz 1.0929 * 10⁻⁽³⁾ * frequency : GHz) +0.0050
 4575 MHz and above 0.0100

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TESTED BY : M.KANESHIRO
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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

$$\begin{aligned}\text{Field Strength at 300 m} &= 0.0100 \times 10^{(12.0 + 37 + 1.3 + 5) / 20} \\ &= 6.0 \quad \text{uV/m}\end{aligned}$$

(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.