

REPORT OF MEASUREMENTS (MICROWAVE OVEN TEST DATA)

FCC ID : AEZM315 MODEL : EM-V5405SWX DATE : March 15, 2000
 NOMINAL FREQUENCY : 2,450 MHz TESTED BY : H.HAYASHI
H. Hayashi

DESCRIPTION : (Unit Dimension : cm)

Cabinet Dimension : 55.0 by 45.6 by 31.7 Door Dimension : 43.9 by 27.9

Oven Cavity Dimension : 37.6 by 42.2 by 24.2 Door Viewing area : 33.1 by 17.9

Feed Type and Location : Waveguide, located right side Stirrer : Rotating tray

(incl. Rotating tray)

Door seal Type : Choke Seal Magnetron Type : Sanyo, 2M-219H

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 GHz	21.5 - 22 dB
AILTECH 91889-2	2.0 - 3.6 GHz	20.5 - 21 dB
AILTECH 94613-1	3.6 - 7.6 GHz	37 dB
AILTECH 91891-2	7.3 - 10.0 GHz	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 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)

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DATA SUMMERY (FCC MEASUREMENT PROCEDURE MP-5)

SAFETY CHECK (at 5 cm) Load : 275 ml/center 0.18 mW/sq.cm
 FUNDAMENTAL Load : 1,000 ml/center 2,450 MHz
 CALCULATION : $E < 300m > = K * 10^{(A+B+C-D+E)/20}$
 LIMIT = $25 * \sqrt{(power/500)}$: 38.7 $\mu V/m$

* 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 (dBuV)	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	4,056	10.0	37.0	1.6	—	5	0.0094	4.5	38.7
300	* Right/Front Corner	4,242	10.0	37.0	1.6	—	5	0.0096	4.6	38.7
700	Center	4,248	12.0	37.0	1.6	—	5	0.0096	5.8	38.7
700	* Right/Front Corner	4,080	9.0	37.0	1.6	—	5	0.0095	4.0	38.7
300	Center	7,358	24.0	39.8	2.2	—	5	0.0100	35.5	38.7
300	* Right/Front Corner	7,377	22.0	39.8	2.2	—	5	0.0100	28.2	38.7
700	Center	7,398	18.0	39.8	2.2	—	5	0.0100	17.8	38.7
700	* Right/Front Corner	7,383	18.0	39.8	2.2	—	5	0.0100	17.8	38.7
700	Center	9,852	12.0	39.8	2.7	—	5	0.0100	9.4	38.7
700	Center	2,520	33.0	20.8	1.1	3	5	0.0064	9.0	38.7
Emission Sideband 2,400 MHz	Center	2,400	20.0	20.8	1.1	3	5	0.0061	1.9	38.7
Emission Sideband 2,500 MHz	Center	2,500	20.0	20.8	1.1	3	5	0.0064	2.0	38.7

Maximum Frequency Variation 1,000 ml load 2,462 to 2,465 MHz
 Total Power Input to Oven 1,650 Watts
 Power Development in dummy load (Thermal Method) 1,200 Watts (IEC705 Test Procedure)
 Supply Voltage 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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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 mI/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0094 \times 10^{(10.0 + 37 + 1.5 + 5) / 20} \\ &= 4.5 \text{ uV/m} \end{aligned}$$

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

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0061 \times 10^{(20.0 + 20.8 + 1.1 + 3 + 5) / 20} \\ &= 1.9 \text{ uV/m} \end{aligned}$$

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

FCC ID : AEZM315 Model : EM-V5405SWX Date : March 15, 2000

Nominal Frequency : 2.450 MHz

Tested by : H.HAYASHI

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Line Voltage Variation [Volt]	Frequency [GHz]	Deviation for ISM Frequency [MHz]	Limit [MHz]
96 (- 20%)	2.463	+13	± 50
120 (± 0%)	2.465	+15	± 50
150 (+ 25%)	2.464	+14	± 50

[Environment]

Temperature : 21.2 °C

Humidity : 57.0 %

[Sample Calculation]

Frequency : 2.465 GHz

Deviation for ISM Frequencies Calculated as follows,

$$\underline{2.4650} - 2.4500 = \underline{+0.0150} \text{ [GHz]} = \underline{+15.0} \text{ [MHz]}$$

[Summary of Test Results]

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