

REPORT OF MEASUREMENTS (MICROWAVE OVEN TEST DATA)

FCC ID : AEZM220 MODEL : EM-V3405SW DATE : March 18, 2000
 NOMINAL FREQUENCY : 2.450 MHz TESTED BY : H.HAYASHI

H. Hayashi

DESCRIPTION : (Unit Dimension : cm)

Cabinet Dimension : 52.5 by 43.0 by 28.9 Door Dimension : 41.4 by 25.1

Oven Cavity Dimension : 35.1 by 38.9 by 21.3 Door Viewing area : 30.5 by 14.9

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 0.16 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 uV/m

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

RADIATION FIELD STRENGTH (uV/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*E<3m>)	Max. Field Strength (uV/m at 300m)	Limit (uV/m at 300m)
2nd Harmonic	300	Center	4,904	27.0	37.0	1.6	—	5	0.0100	33.9	38.7
2nd Harmonic	300	* Right/Front Corner	4,905	25.0	37.0	1.6	—	5	0.0100	26.9	38.7
2nd Harmonic	700	Center	4,913	22.0	37.0	1.6	—	5	0.0100	19.1	38.7
2nd Harmonic	700	* Right/Front Corner	4,912	18.0	37.0	1.6	—	5	0.0100	12.0	38.7
3rd Harmonic	300	Center	7,362	19.0	39.8	2.2	—	5	0.0100	20.0	38.7
3rd Harmonic	300	* Right/Front Corner	7,359	24.0	39.8	2.2	—	5	0.0100	35.5	38.7
3rd Harmonic	700	Center	7,382	17.0	39.8	2.2	—	5	0.0100	15.8	38.7
3rd Harmonic	700	* Right/Front Corner	7,387	17.0	39.8	2.2	—	5	0.0100	15.8	38.7
4th Harmonic	700	Center	8,700	13.0	39.8	2.7	—	5	0.0100	10.6	38.7
Spurious	700	Center	2,514	27.0	20.8	1.1	3	5	0.0064	4.5	38.7
Emission Sideband 2,400 MHz	700	Center	2,400	17.0	20.8	1.1	3	5	0.0061	1.3	38.7
Emission Sideband 2,500 MHz	700	Center	2,500	15.0	20.8	1.1	3	5	0.0064	1.1	38.7

Maximum Frequency Variation : 1,000 ml load 2,447 to 2,449 M Hz.
 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 ml/Center load

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0100 \times 10^{(27.0 + 37 + 1.6 + 5) \div 20} \\ &= 33.9 \text{ uV/m} \end{aligned}$$

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

$$\begin{aligned} \text{Field Strength at 300 m} &= 0.0061 \times 10^{(17.0 + 20.8 + 1.1 + 3 + 5) \div 20} \\ &= 1.3 \text{ uV/m} \end{aligned}$$

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

FCC ID : AEZM220 Model : EM-V3405SW Date : March 18, 2000

Nominal Frequency : 2,450 MHz

Tested by : H.HAYASHI

H. Hayashi

Line Voltage Variation [Volt]	Frequency [GHz]	Deviation for ISM Frequency [MHz]	Limit [MHz]
96 (- 20%)	2.449	-1	± 50
120 (± 0%)	2.447	-3	± 50
150 (+ 25%)	2.448	-2	± 50

[Environment]

Temperature : 20.8 °C

Humidity : 58.0 %

[Sample Calculation]

Frequency : 2.447 GHz

Deviation for ISM Frequencies Calculated as follows,

$$\underline{2.4470} - 2.4500 = \underline{-0.0030} \text{ [GHz]} = \underline{-3.0} \text{ [MHz]}$$

[Summary of Test Results]

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