

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)

	Frequency Range	Correction Factor
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

Frequency (MHz)	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 (GHz)	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)

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 Nominal Frequency : 2,450 MHz TESTED BY : H.HAYASHI

DATA SUMMARY (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 $\mu V/m$

* 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 (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 ($\mu V/m$ at 300m)	Limit ($\mu V/m$ 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 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

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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

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

(2) Emission sideband 2,400 M Hz., 700 m/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, 2000Nominal Frequency : 2,450 MHzTested by : H.HAYASHI*H. Hayashi*

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

[Environment]

Temperature : 20.8 °CHumidity : 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.