

6.0 TEST PROCEDURES AND RESULTS

6.1 Safety Check

Test Equipment use : No.17 in the Table 4-1 in this report.

$$\langle 0.5\text{mW/cm}^2$$

6.2 Radiated Field Strength

6.2.1 Test Data

Test Equipment use from No.01 to No.16 in the Table 4-1 in this report.

Test Condition of Instrument

EUT Warm-up Time : 30 minutes

Resolution Bandwidth : 9kHz (4-30MHz)
: 120kHz (30-1000MHz)
: 1MHz (1GHz-25GHz)

Date : July 12 to 13, 2001

Detector Function : Average

Test Mode: Maximum Operation Mode (Section 4.1, OST MP-5).

	Measured Frequency (MHz)	* Factor (dB)	Meter Reading at 3 m (dB $\mu\text{N/m}$)	Emission Level at 3 m (dB $\mu\text{N/m}$)	Emission Level at 3 m ($\mu\text{N/m}$)	Emission Level at 300 m ($\mu\text{N/m}$)	Limits at 300 m ($\mu\text{N/m}$)	Margin for Limits at 300 m ($\mu\text{N/m}$)
Horizontal	2nd Harmonic 4998.00	-7.21	38.90	31.69	38.42	0.38	32.77	32.39
	3rd Harmonic 7358.02	-6.95	38.01	31.06	35.73	0.36	32.77	32.41
	Spurious 8134.07	-6.67	None	None	None	None		
	Emission Side Band 2400.00	-13.18	None	None	None	None		
	2500.00	-13.13	None	None	None	None		
Vertical	2nd Harmonic 4938.00	-7.21	42.80	35.59	60.19	0.60	32.77	32.17
	3rd Harmonic 7358.02	-6.95	38.87	31.92	39.45	0.39	32.77	32.38
	Spurious 8134.07	-6.67	51.53	44.86	174.94	1.75	32.77	31.02
	Emission Side Band 2400.00	-13.18	38.00	24.82	17.41	0.17	32.77	32.60
	2500.00	-13.13	37.60	24.47	16.73	0.17	32.77	32.60

* Factor = Antenna Factor + Cable loss - AMP Gain

Note: In the frequency range of from 9kHz to 1000MHz, emission from the EUT at 3m distance was measured and the level was lower than the floor noise level of 20dB $\mu\text{N/m}$.

In the frequency range of from 4th harmonic to 10th harmonic, emission from the EUT at 3m distance was measured and the level was lower than the floor noise level of 30dB $\mu\text{N/m}$.

6.3 Power output measurements (OST MP-5, 4.3)

Total power input to oven : 3950 W (208 V, 19.9 A)

Power developed in dummy load : 2387 W

6.4 Frequency measurements (OST MP-5, 4.5)

Maximum frequency variation:

Load ----- 2446.2 MHz - 2468.6 MHz (2500 cc ~ 500 cc / Load)

Line Voltage --- 2458.8 MHz - 2464.3 MHz (166 V ~ 260 V / 2500 cc Load)

6.5 Description of calculation

Calculation Formula to get field strength at 300m from the measured at 3m.

Field Strength at 3m (dB μ /m)

$$= \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amprifier Gain}$$

(dB μ V/m) (dB) (dB) (dB)

Field Strength at 300m (dB μ /m)

$$= K \times 10^{\{\text{Field Strength at 3 m (dB } \mu\text{V/m)} + 20\}}$$

K: Conversion Factor for 3 m to 300 m

Example: Sprious Frequency 8134.07 MHz

Meter Reading 51.53 dB μ V/m

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Amp. Gain (dB)	K
8134.07	25.58	3.65	- 35.90	0.01

$$= K \times 10^{\{(51.53 + 25.58 + 3.65 - 35.90) + 20\}}$$

$$= 1.75 \mu\text{V/m}$$