

6.0 TEST PROCEDURES AND RESULTS

6.1 Safety Check

Test Equipment : use No.13 from Table 4-1 of this report.

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

6.2 Radiated Field Strength

6.2.1 Test Data

Test Equipment : use No.01 to No.12 from Table 4-1 of this report.

Test Condition of Instrument

EUT Warm-up Time : 30 minutes

Resolution Bandwidth 9kHz (4-30MHz)

Date : October 31, 2001

120kHz (30-1000MHz)

1MHz (1GHz-25GHz)

Detector Function

Average

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

	Measured Frequency (MHz)	Factor (dB)	Meter Reading at 3 m (dBuV/m)	Emission Level at 3 m (dBuV/m)	Emission Level at 3 m (uV/m)	Emission Level at 300 m (uV/m)	Limits at 300 m (uV/m)	Margin for Limits at 300 m (uV/m)
Horizontal	2nd Harmonic 4943.00	** 11.43	34.32	45.75	193.93	1.94	18.88	16.94
	3rd Harmonic 7381.50	** 15.00	32.80	47.80	245.60	2.46	18.88	16.42
	4th Harmonic 9870.55	** 15.98	34.52	50.50	335.04	3.35	18.88	15.53
	5th Harmonic 12348.82	** 19.07	30.19	49.26	290.40	2.90	18.88	15.98
	6th Harmonic 14808.70	** 19.07	30.95	50.02	316.96	3.17	18.88	15.71
	Emission Side Band 2400.00 2500.00	* 31.68 31.67	19.21 15.76	50.89 47.43	350.35 235.28	3.50 2.35	18.88 18.88	15.38 16.53

* Factor = Antenna Factor + Cable loss

** Factor = Antenna Factor + Cable loss + Attenuator — AMP Gain

6.2.2 Test Data

Test Equipment : use No.01 to No.12 from Table 4-1 of this report.

Test Condition of Instrument

EUT Warm-up Time : 30 minutes

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

Date : October 31, 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 (dBuV/m)	Emission Level at 3 m (dBuV/m)	Emission Level at 3 m (uV/m)	Emission Level at 300 m (uV/m)	Limits at 300 m (uV/m)	Margin for Limits at 300 m (uV/m)
Vertical	2nd Harmonic 4943.00	** 11.43	35.29	46.72	216.85	2.17	18.88	16.71
	3rd Harmonic 7381.50	** 15.00	32.27	47.27	231.06	2.31	18.88	16.57
	4th Harmonic 9870.55	** 15.98	31.26	47.24	230.19	2.30	18.88	16.58
	5th Harmonic 12348.82	** 19.07	30.00	49.07	284.12	2.84	18.88	16.04
	6th Harmonic 14808.70	** 19.07	30.95	49.81	309.39	3.09	18.88	15.79
	Emission Side Band 2400.00	* 31.68	17.96	49.64	303.55	3.04	18.88	15.84
	2500.00	31.67	16.04	47.71	242.99	2.43	18.88	16.45

* Factor = Antenna Factor + Cable loss

** Factor = Antenna Factor + Cable loss + Attenuator — 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 less than the floor noise level of 30dBuV/m.

In the frequency range of from 7th harmonic to 10th harmonic, emission from the EUT at 3m distance was measured and the level was less than the floor noise level of 20dBuV/m.

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

Total power input to oven : 1200 W(120 V, 10.8 A)

Power developed in dummy load : 792 W

6.4 Frequency measurements (OST MP-5, 4.5)

Maximum frequency variation:

Load ----- 2462.0 MHz – 2466.6 MHz (1000 cc ~ 200 cc / Load)

Line Voltage --- 2458.6 MHz – 2455.4 MHz (96 V ~ 150 V / 1000 cc Load)

6.5 Description of calculations

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

Field Strength at 3m (dB μ V/m)

= Meter Reading + Antenna Factor + Cable Loss
(dB μ V/m) (dB) (dB)

Field Strength at 300m (μ V/m)

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

K: Conversion Factor for 3 m to 300 m

Example: Spurious Frequency 2400.00 MHz

Meter Reading 19.21 dB μ V/m

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)	K
2400.00	29.95	1.73	0.01

$$= K \times 10^{\{ (19.21 + 29.95 + 1.73) \div 20 \}}$$

$$= 3.50 \mu\text{V/m}$$