

**NOTES FOR THE RADIATION MEASUREMENT**

(1) Test site facility:

Open field test site located at Taipo (Hong Kong) with a metal ground plane in compliance with the requirements of ANSI C63.4:1992.

(2) Test Equipment:

HP 8572A EMI receiver was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100KHz or 1MHz depending on the type of signal. A biconical log-Periodic antenna and horn antenna was used for frequency range from 100MHz to 18GHz.

(3) Test Set-Up:

The EUT and support equipment are placed in accordance with ANSI C63.4.

(4) Measuring Procedure:

An initial pre-scan measurement was performed in a semi-anechoic chamber using a 25dB gain pre-amplifier. The receive antenna in the chamber was 1.5m above the groundplane and 3m from the sample. The sample was placed 0.8m above the groundplane. Measurements in both horizontal and vertical polarities were performed. All emissions recorded during the prescan were subsequently re-measured on the open field test site (described in 1 above) using the following procedure: The ambient noise scanning was made before powering on the EUT and support equipment to identify the emissions from the environment. During the test, each emission was maximized by: having the EUT continuously working, arranging, rotating turntable and manipulating interconnecting cables, rotating turntable and varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The frequency range tested is from 100MHz to 18GHz and the worst-case emissions are shown in Test Results.

(5) Measuring Uncertainty:

The calculated uncertainty for measurement performed at 3M test distance are:-  
30MHz to 300MHz =  $\pm 3.7$ dB, 300MHz to 1000MHz =  $+3.0$ dB/ $-2.7$ dB.

(6) Address of test site facility:

The Hong Kong Standards & Testing Centre Ltd.  
10 Dai Wang Street, Taipo Industrial Estate, Taipo, N.T., Hong Kong

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**TEST EQUIPMENT AUDIT**

**Radiated Emission**

<b>EQP NO.</b>	<b>DESCRIPTION</b>	<b>MANUFACTURER</b>	<b>MODEL NO.</b>	<b>SERIAL NO.</b>	<b>LAST CAL.</b>
EM007	SPECTRUM ANALYZER	HEWLETT PACKARD	HP85660B	3144A21192	18/07/00
EM020	HORN ANTENNA	EMCO	3110B	1830	09/08/00
EM008	SPECTRUM ANALYZER DISPLAY	HEWLETT PACKARD	HP85662A	3144A20514	18/07/00
EM009	QUASI PEAK ADAPTOR	HEWLETT PACKARD	HP85650A	3303A01702	18/07/00
EM010	RF PRESELECTOR	HEWLETT PACKARD	HP85685A	3221A01410	18/07/00
EM011	ATTENUATOR/SWITCH	HEWLETT PACKARD	HP11713A	2508A10595	18/07/00
EM012	PRE-AMPLIFIER	HEWLETT PACKARD	HP8449B	3008A00262	18/07/00
EM013	CONTROLLER (COMPUTER), COLOR MONITOR, KEYBOARD & MOUSE FLOPPY DRIVE	HEWLETT PACKARD HEWLETT PACKARD HEWLETT PACKARD	HP9000 HP A1097C HP9133L	6226A60314 3151J39517 2623A02468	CM
EM131	PORTABLE SPECTRUM ANALYSER	HEWLETT PACKARD	8595EM	3710A00155	10/07/00
EM017	ANTENNA	ARA INC.	LPB-2513/A	1069	17/02/00
EM020	HORN ANTENNA	EMCO	3115	4032	09/08/00
EM072	SIGNAL GENERATOR	HEWLETT PACKARD	8640B	1948A11892	30/03/98
EM083	HKSTC OPEN AREA TEST SITE	HKSTC	N/A	N/A	15/02/01
EM145	EMI TEST RECEIVER	R & S	ESCS 30	830245/021	31/05/00

**Remarks:-**

CM Corrective Maintenance  
N/A Not Applicable or Not Available  
TBD To Be Determined

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### Photos of test setup

Input & output Power Measurement, Measurement of Output Frequency and Output Frequency Stability



Radiated Emission



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**Photos of the test sample**



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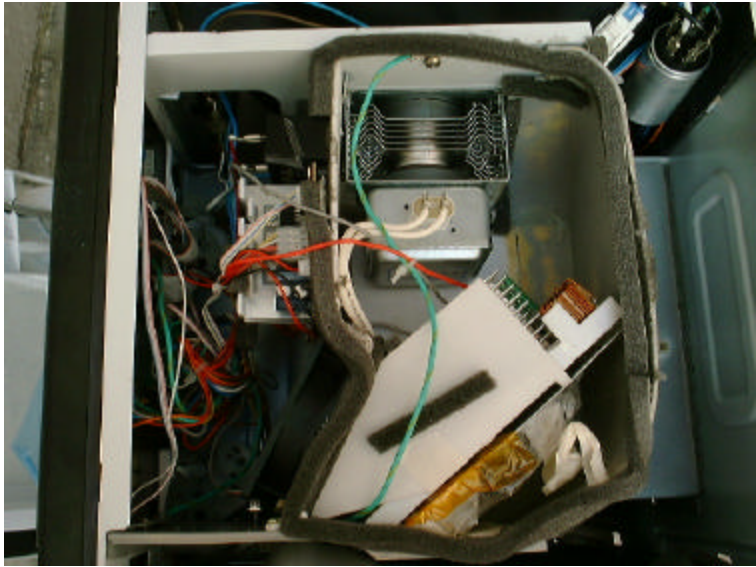
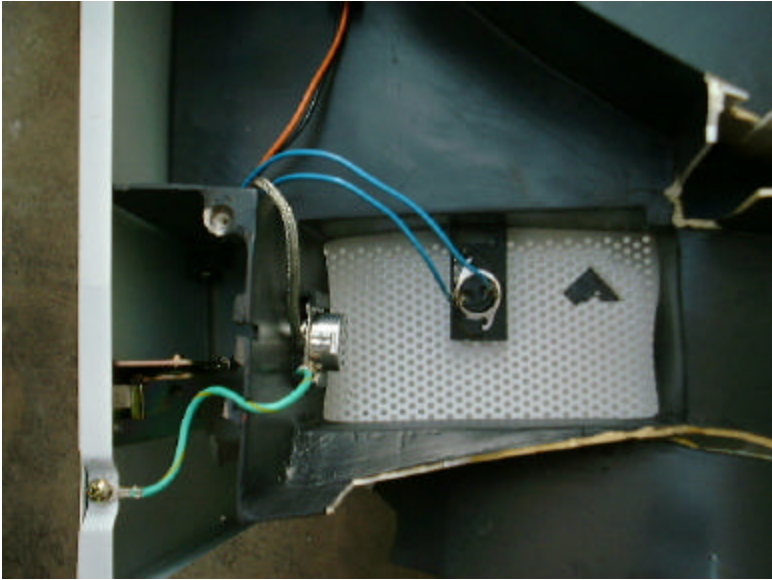
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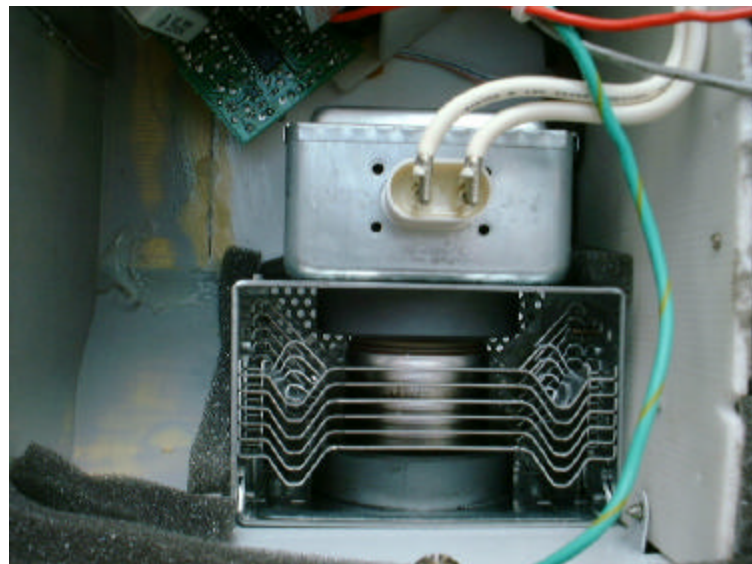




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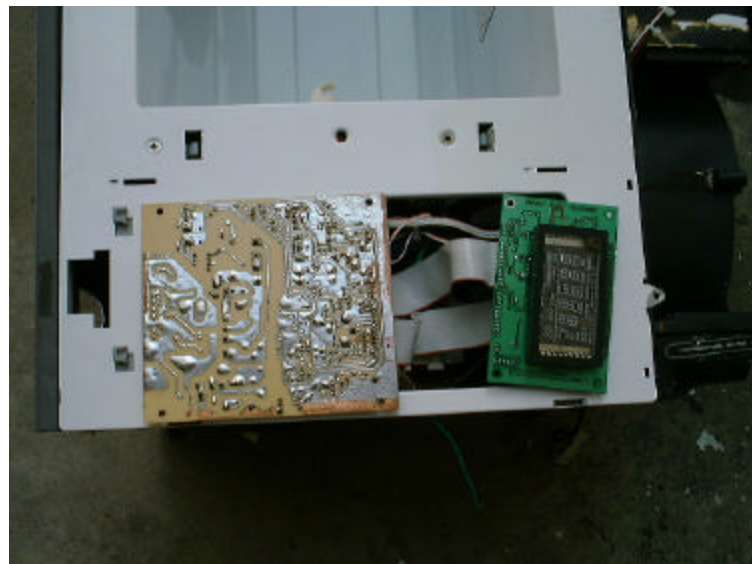
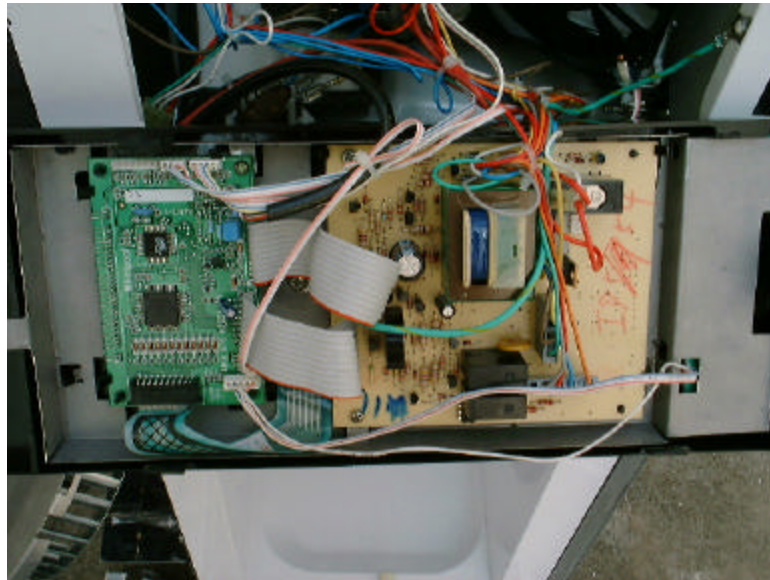
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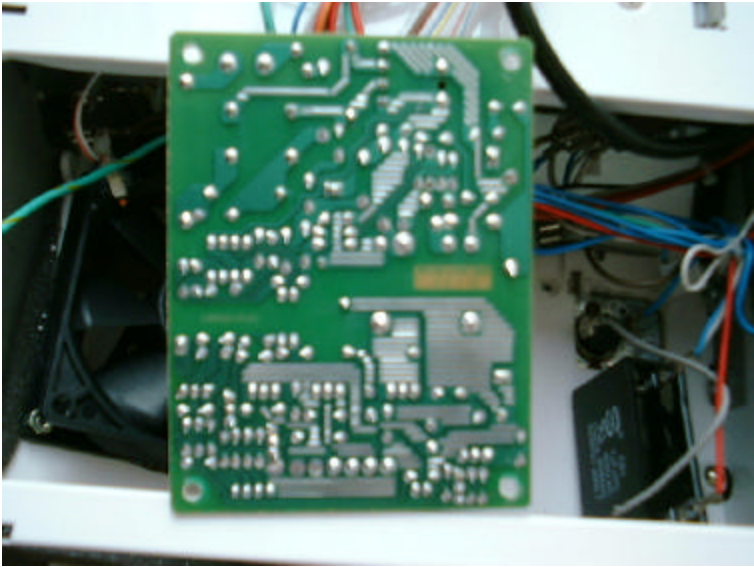
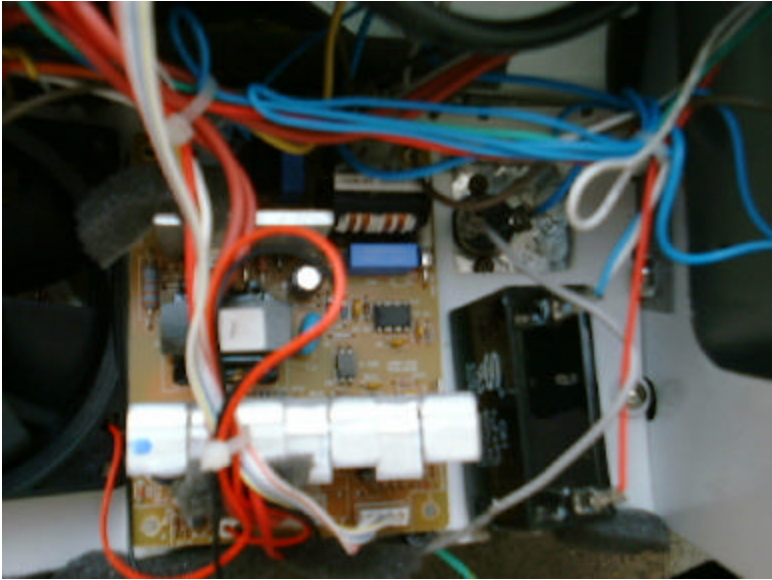


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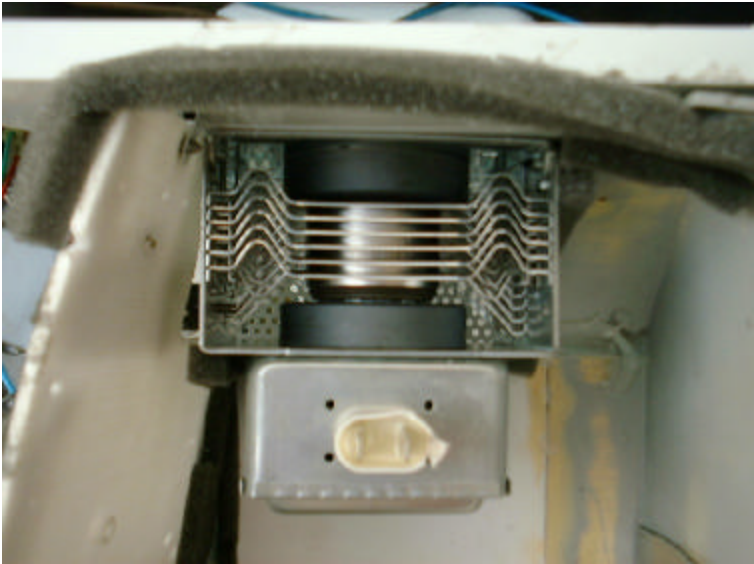
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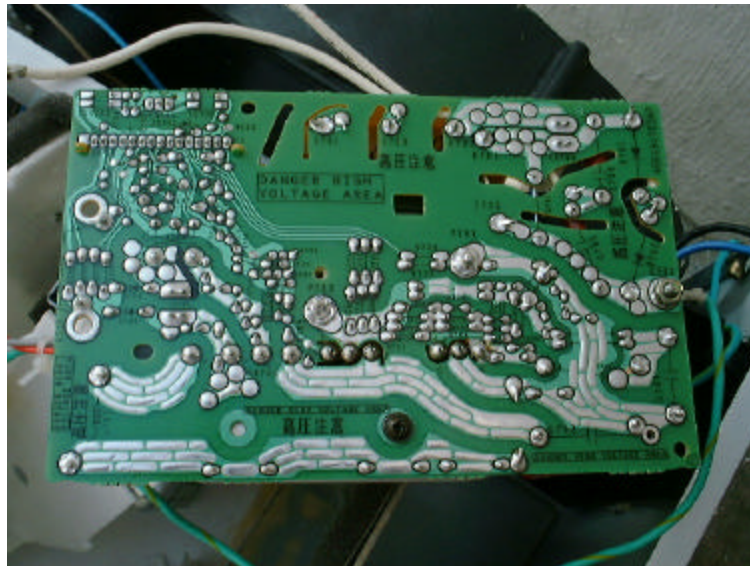
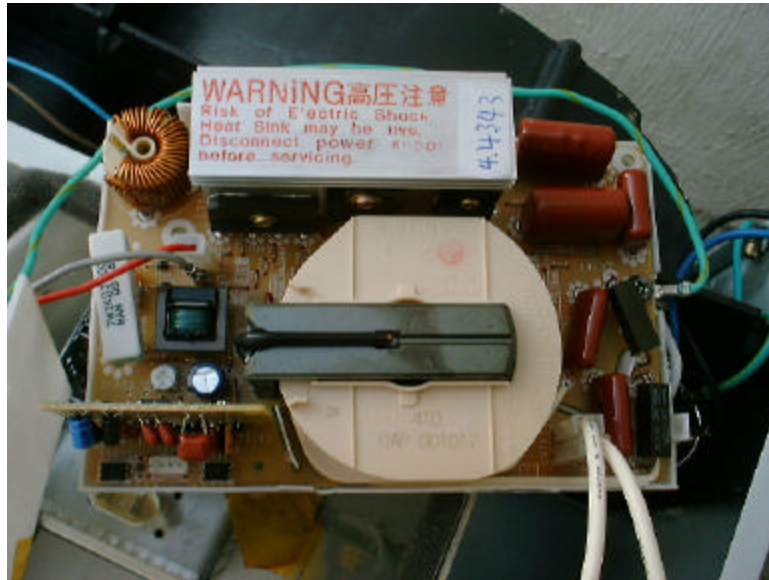


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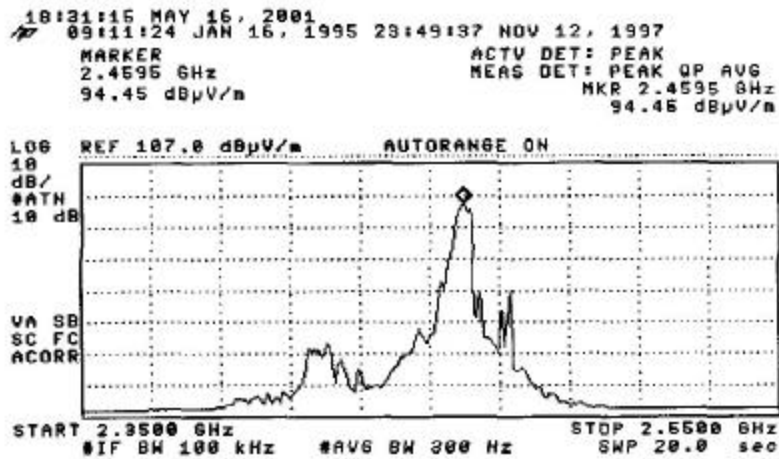
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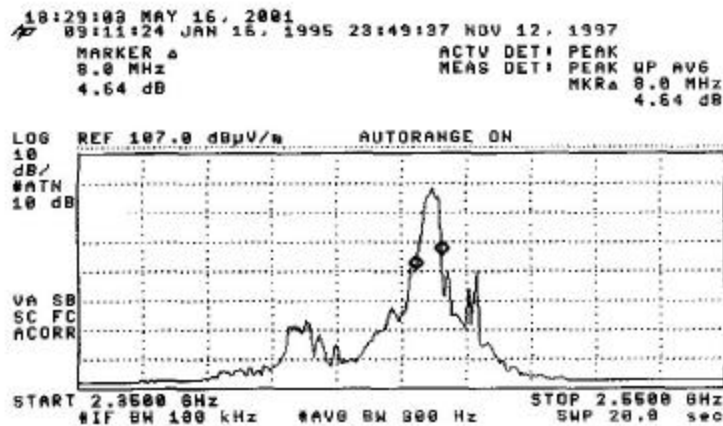
## APPENDIX D

### Measurement of Output Frequency



### Output Frequency Stability Test

#### Frequency variation with time



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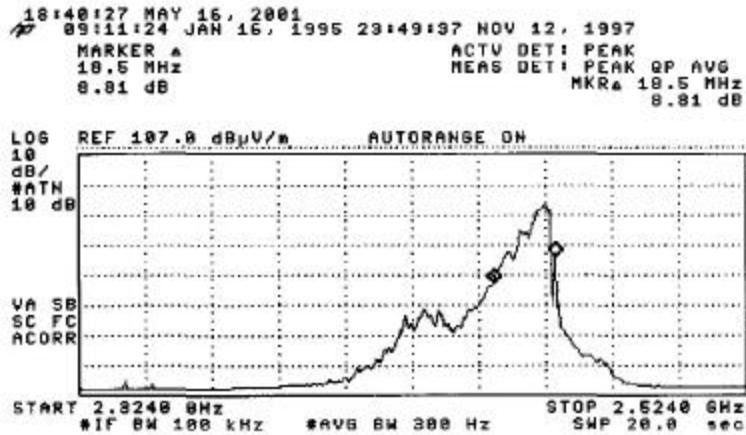
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### Frequency variation with voltage

(96V)



(150V)

