Test Report
Model : YY-A2XX

Tested to EN55022(1995)
Results from Preliminary Scan in 3 meter Chamber

Date: Jan 07, 2004

Tested by CWT

Date:Jan.07, 2004

Approved by YYT WALLACE

Date: Jan.07, 2004

1. Introduction

The purpose of this evaluation is to present the results of the EMC Emissions tests on the Yeong Yang chassis. The testing was carried out by CWT at Advance Data Technology Inc test facilities located at

Advance Data Technology Inc
47, 14th Lin, Chiapao Tsuen,
Linkou
235 Taipei, Taiwan ROC

2. References

Radiated Emissions (as per EN55022:1995)
Power Line Conduction ((as per EN55022:1995)

3. Equipment Under Test (EUT)

3.1. EUT:

Yeong Yang YY-A2XX Personal Computer Chassis

3.2. EUT Configuration

Description	Supplier	Model/Part Number
Chassis	Yeong Yang	YY-A2XX(PANEL:04)
Power Supply	CWT	250MDP12
Processor	Intel	Intel P4 3G, Quantity:1
Chipset	Intel	
Processor Thermal solution	Glacialtech	Igloo 4200, speed 3200RPM
Motherboard	AOPEN	MX4 GER
Memory	Kingston	DDR400 512MB, Quantity: 2
Hard Drive	Seagate	40G , Quantity: 1
CD ROM	CYBER	CD526D, Quantity: 1
Floppy Drive	Mitsumi	D359M3 , Quantity: 1
Graphics Card	None	

3.3. Support Equipment - 3 meter Chamber

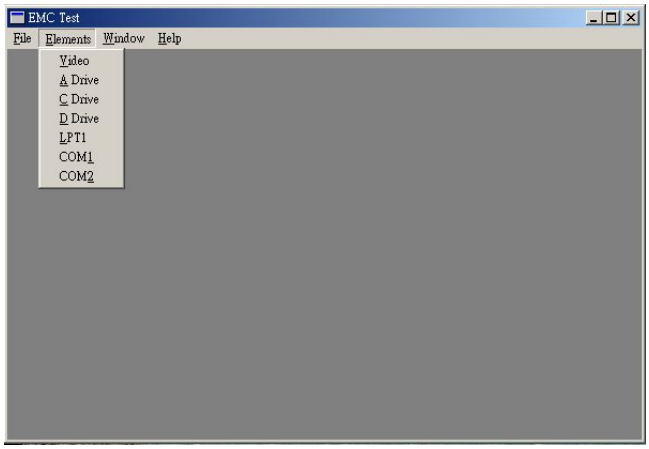
Supplier	Description	Model/Part Number
AST	Keyboard	PS2/SK2000
AST	Keyboard	USB/SK2695
Logitech	Mouse	PS2/MS34
Logitech	Mouse	USB/BJ58
Hitachi	Monitor	CM769ET
HP	Printer	DJ400
ACEEX	Modem	1414
JASS	Speaker	J008

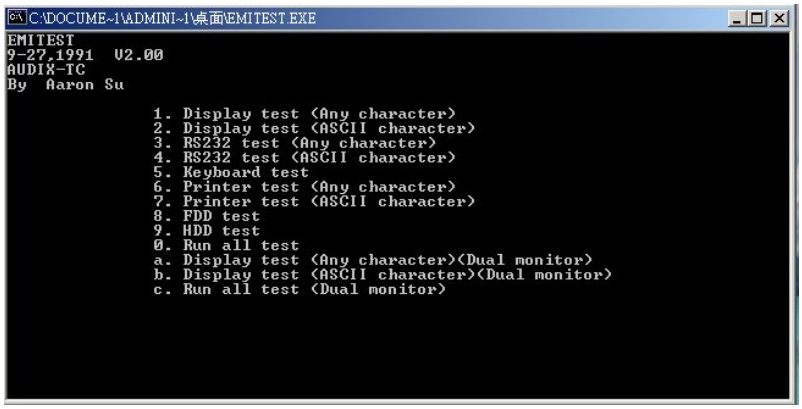
3.4. EUT Comments

EUT tested with, 3.0GHz Intel Pentium 4 Processors with active heat sink and fan. An I/O shield was supplied with motherboard and used in this chassis.

3.5. Software

The program used to exercise the EUT was the EMC test software EMCTEST.exe and EMITEST.exe which was running under Microsoft Windows XP. Video resolution was set at 800x600.*The EMC test software version is designed to exercise the various EUT components in a manner similar to typical use*





4. Test Result (Radiated Emissions)

4.1. Test Setup

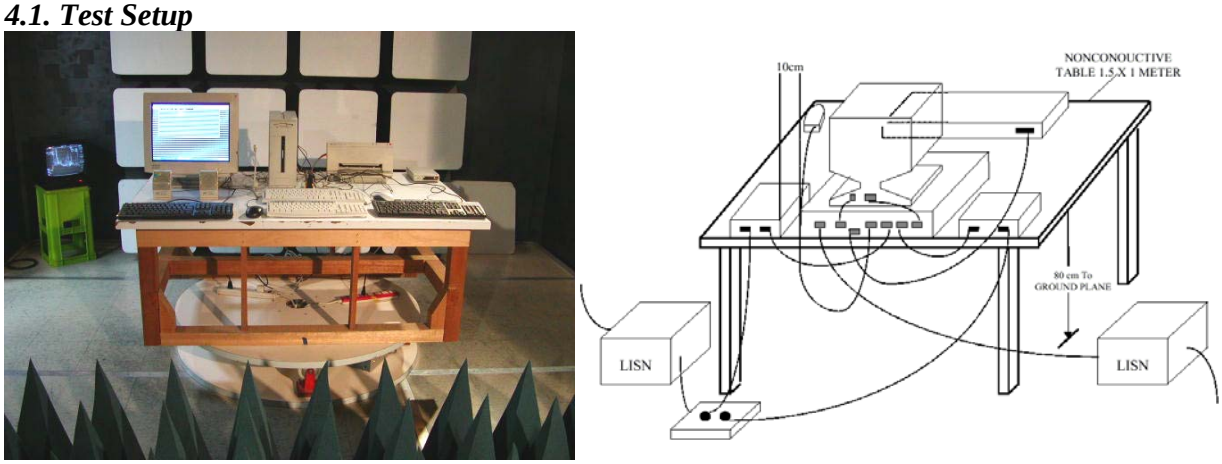


Figure 4.1.1. Generic Test set up for the Yeong Yang YY-A2XX Personal Computer chassis

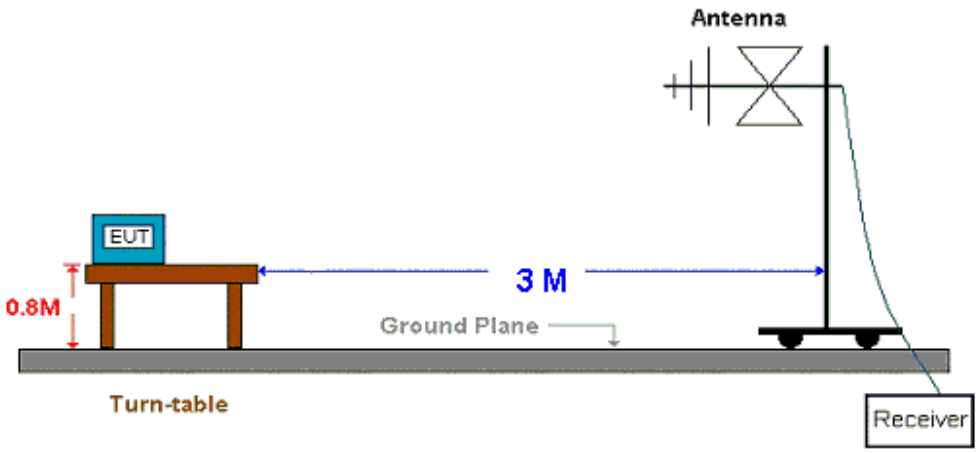


Figure 4.1.2. Generic Test set up at 3-Meter Chamber

Environmental Status
22.5 degree C Temperature, 62%Humidity and 1010mB Barometric Pressure

4.2. Test Facilities - Conducted power line test/Radiated Emissions Test

Description	**Supplier**	**Model/Date of Cal.**
EMI Receiver	ROHDE & SCHWARZ	ESHS30 / Mar 2000
LISN	SCHWARZ BECK	NNLK 8121/Mar 2000
LISN	ROHDE & SCHWARZ	ESH3-Z5/Mar 2000
ESXS-K1	ROHDE & SCHWARZ	1082.9678.02 840.913/246
Cables	10Khz~30Mhz	No.10/Jul 2000
Antenna	ROHDE & SCHWARZ	HZ-12 842899/08 30~300Mhz / Jul 2000
Antenna	ROHDE & SCHWARZ	HZ-13 842007/0004 300~1000Mhz / Jul 2000

4.3. Test Procedure - EUT is tested in 3 meter Anechoic Chamber as outlined below

4.3.1. Conductive power line test

4.3.1.1.. The EUT was placed 0.4 meter from the conducting wall of shielding room and 0.8 meters above the ground plane
4.3.1.2. The frequency range from 0.15Mhz to 30Mhz ware investigated
4.3.1.3. The LISN used was 50Ohm / 50 uHenry as specified by EN55022
4.3.1.4. All the support peripherals are connect to the other LISN.
4.3.1.5. Cables and peripherals ware moved to find the maximum emission levels for each frequency.

4.3.2. Radiated Emission Test

4.3.2.1. The EUT was placed on a table. The top of the table was 0.8 meters above the ground plane and 3 meters from the antenna. The antenna was positioned 1.5 meters up from the ground plane.
4.3.2.2. The frequency range from 30MHz to 1000MHz, the measurement were made at 3 meters, with a Bi-log antenna.

4.4. Test spec

4.4.1. Limit of conducted power line emission class B

Frequency Range	Quasi Peak	Average
0.15~0.5Mhz	66-56 dBuV	56-46 dBuV
0.5~5Mhz	56dBuV	46dBuV
5~30Mhz	60dBuV	50dBuV

4.4.2. Limit of Radiated emission class B

Frequency Range	Measurement Distance	Limit (cBuV/m)
30~230Mhz	10 (M)	30
230~1000Mhz	10 (M)	37

4.5. Test Results

Preliminary Scan result in 3 meter Chamber, see attachments.

4.6. Summary :

Please refer to the figures attached.

1. PC Only : *PASS*

No frequency were determined to be over the limited.

2. CONDUTION: *PASS*

No frequency were determined to be over the limited.

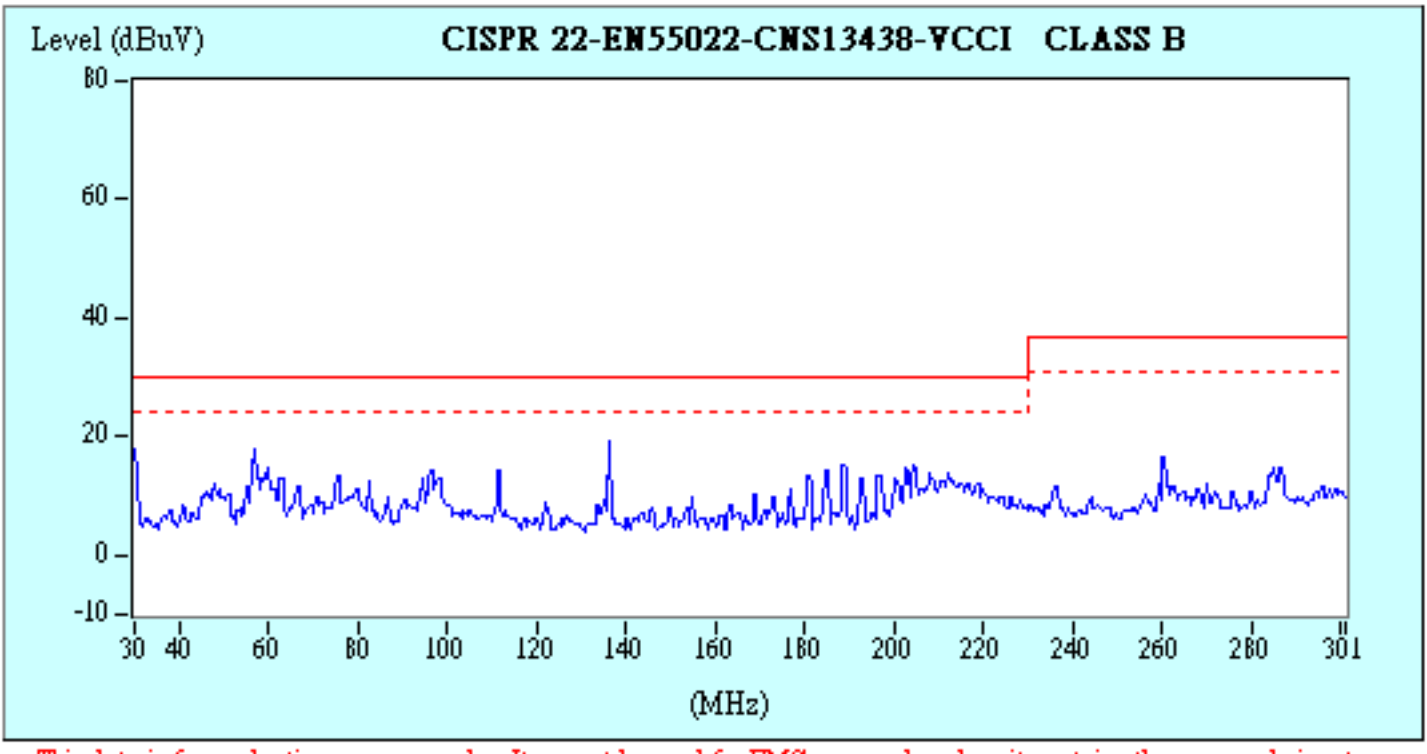
Advance Data Technology Corporation 誠信科技股份有限公司

Linkou EMC Lab: 47-14th Ln, Chiapao Tsuen, Linkou, Taipei, Taiwan, R.O.C. Tel:(02) 2605-2180 Fax:(02) 2605-2943
Hsinchu EMC Lab: 81-1 Lutiaokeng, 9th Ln, Wuling Tsuen, Chunghu, Hsinchu, Taiwan, R.O.C .Tel:(03) 593-5343 Fax:(03) 593-5342

Brand / Model : A2XX PC WITH MONITOR/KEYBOARD/MOUSE/CWT250MDP12 SAMPLE1
Remark : INPUT AC230V LOAD=CPU=INTEL P4 3G , HDD: SEAGATE 40G , POWER:CWT250MDP12 SAMPLE1 , RAM:KINGSTON DDR400 512MB*2 , M/B AOPEN MX4 GER
Tested by : JONE

Location: CHAMBER ROOM 3 Date: 2003/12/31 Time: 下午 02:38 Approved by:

Temperature (C): 21.0 Humidity (%): 60 Polarity: **Horizontal**



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature.
If you have any questions regarding the test data, you can write your comments to service@mail.adt.com.tw

No.	Freq.	Emission	Limit	Margin	No.	Freq.	Emission	Limit	Margin
	MHz	dBuV	dBuV	dB		MHz	dBuV	dBuV	dB

D:\ADT-Radiated 5.14\Logs\2004_01_16.dat

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Brand / Model : A2XX PC WITH MONITOR/KEYBOARD/MOUSE/CWT250MDP12 SAMPLE1
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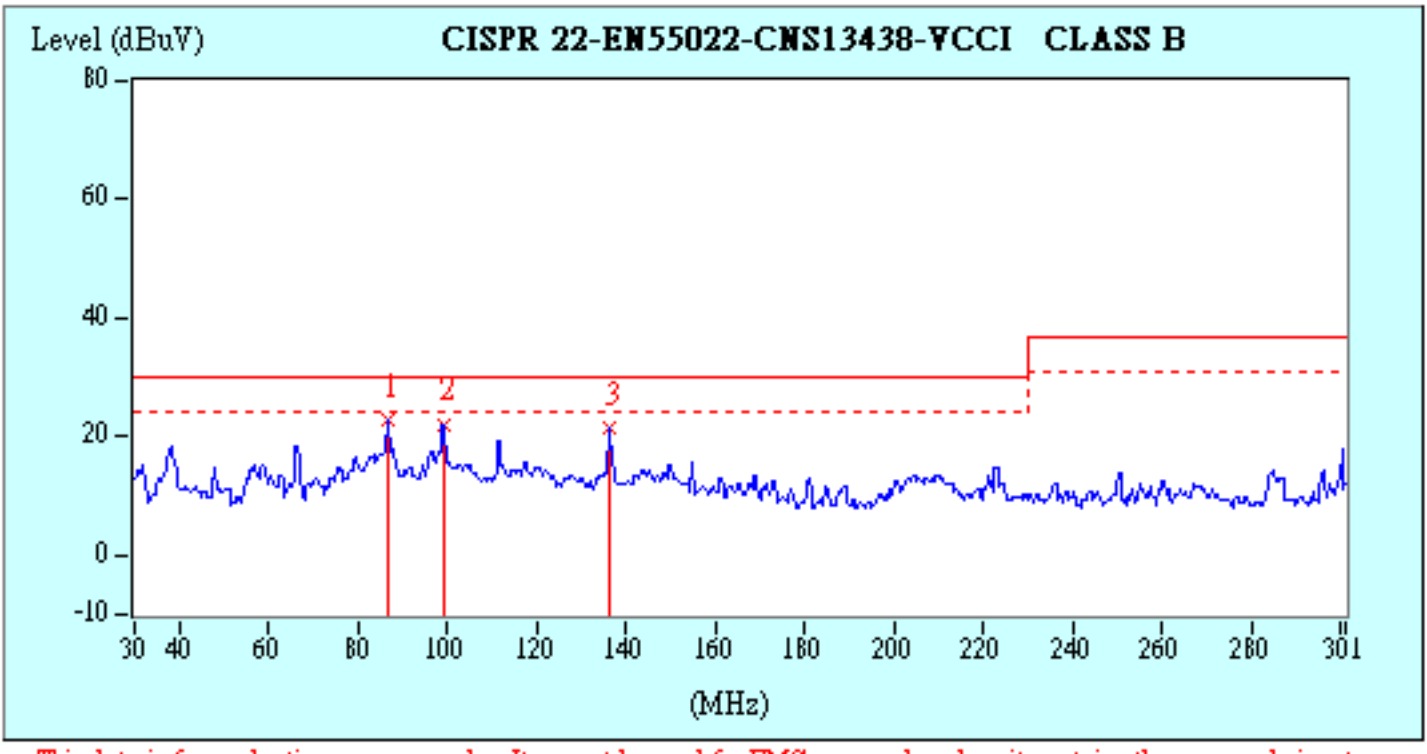
Tested by : JONE

Location: CHAMBER ROOM 3 Date: 2003/12/31 Time: 下午 02:36 Approved by:

Temperature (C): 21.0 Humidity (%): 60 Polarity: **Vertical**



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If you have any questions regarding the test data, you can write your comments to service@mail.adt.com.tw

	No.	Freq. MHz	Emission dBuV	Limit dBuV	Margin dB	No.	Freq. MHz	Emission dBuV	Limit dBuV	Margin dB
*	1	86.52	22.9	30.0	-7.1					
	2	99.30	22.1	30.0	-7.9					
	3	136.08	21.3	30.0	-8.7					

D:\ADT-Radiated 5.14\Logs\2004_01_16.dat

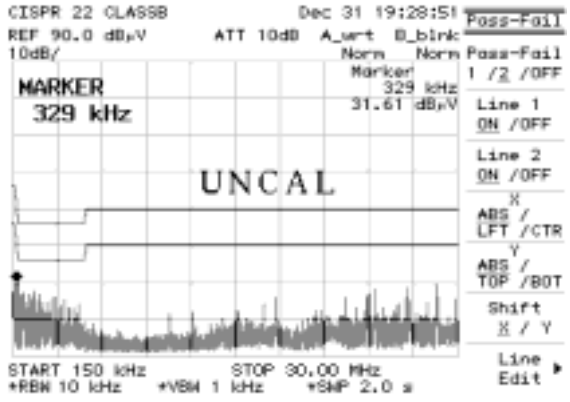
驗 證 報 告

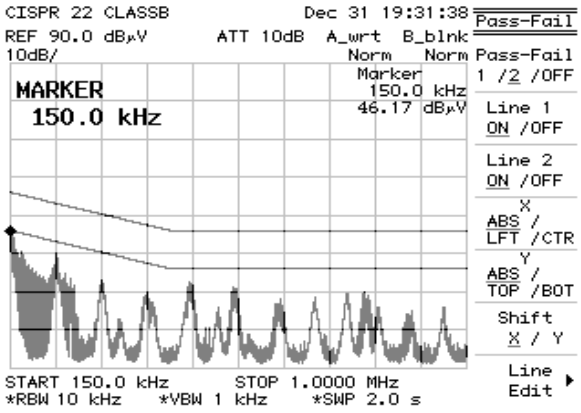
測試項目	EMI CONDUCTION TEST MODEL: CWT-250MDP12(PFC)		
測試規格	EN55022(CLSPR 22) 56~46db(0.15MHz~0.5MHz) 46db(0.5MHz~5MHz) 50db(5MHz~30MHz) QP	使用設備	SPECTRUM ANALYZER:ADVANTEST R3131A 負載:電阻負載 S/N # I 09291714 SAMPLE 1
測試條件	*1.AC INPUT:* 230V/60Hz *2.DC OUTPUT :* SYSTEM LOAD	環境溫度	室溫

測試結果:

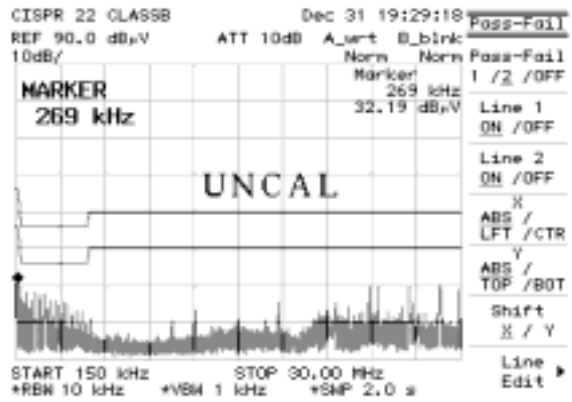
A.EN55022(CLSPR 22)(Vin:230Vac)

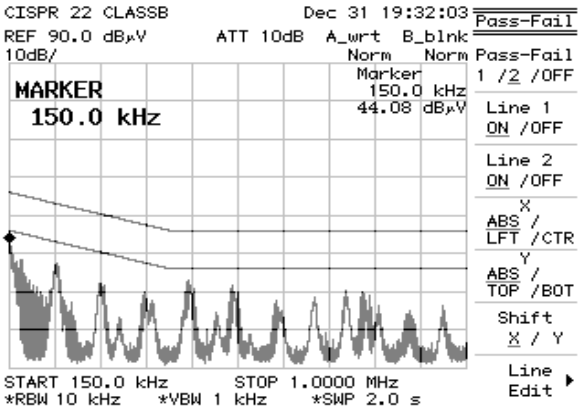
LISN RF OUTPUT:LIVE





LISN RF OUTPUT:NEUTRAL





判定	PASS

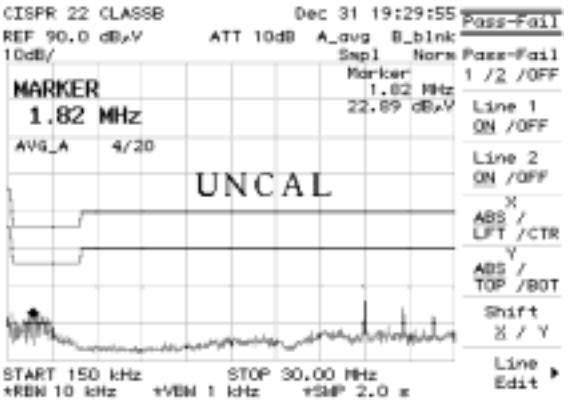
驗 證 報 告

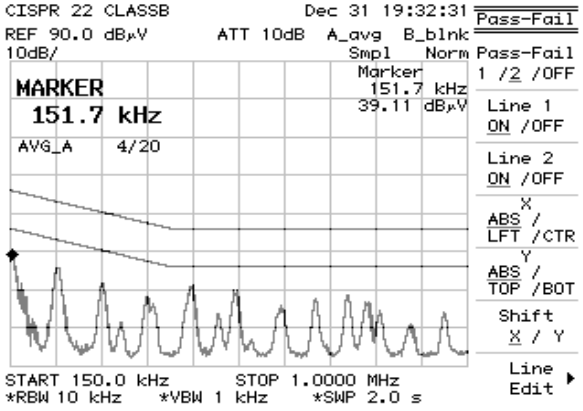
測試項目	EMI CONDUCTION TEST MODEL: CWT-250MDP12(PFC)		
測試 規格	EN55022(CLSPR 22) 46~36db(0.15MHz~0.5MHz) 36db(0.5MHz~5MHz) 40db(5MHz~30MHz) AV	使用 設備	SPECTRUM ANALYZER:ADVANTEST R3131A 負載:電阻負載 S/N # I 09291714 SAMPLE 1
測試條件	*1.AC INPUT:* 230V/60Hz *2.DC OUTPUT :* SYSTEM LOAD	環境溫度	室溫

測試結果:

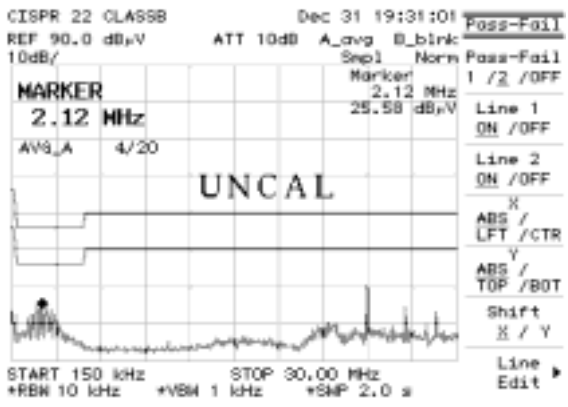
A.EN55022(CLSPR 22)(Vin:230Vac)

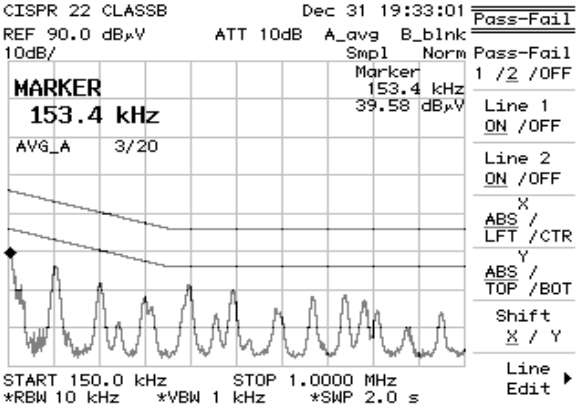
LISN RF OUTPUT:LIVE





LISN RF OUTPUT:NEUTRAL





判定	PASS