

APPLICATION FOR CERTIFICATION
(Class II Permissive Change)
On Behalf of
Philips Electronics Industries (Taiwan) Ltd.
LCD TV

Model No. : 15MF605T/37

Brand : Philips Magnavox

FCC ID: A3KM135

Prepared for : Philips Electronics Industries (Taiwan) Ltd.
5, Tze Chiang 1 Rd, Chungli Ind. Park,
Chungli, Taoyuan Hsien, Taiwan, R.O.C.

Prepared By : AUDIX Corporation
Technical Division EMC Department
No. 53-11, Tin-Fu Tsun, Lin-Kou,
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File Number : EM950052
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Date of Test : Feb. 07, 2006
Date of Report : Feb. 08, 2006

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TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Philips Electronics Industries (Taiwan) Ltd.
 Manufacturer : Philips Electronics Industries (Taiwan) Ltd.
 Factory : Philips Consumer Electronics Co., of Suzhou Ltd.
 EUT Description : LCD TV
 FCC ID : A3KM135
 (A) MODEL NO. : 15MF605T/37
 (B) SERIAL NO. : TY0406008
 (C) BRAND NAME : Philips Magnavox
 (D) POWER SUPPLY : 16VDC —, 2.5A
 (E) TEST VOLTAGE : AC 120V/60Hz (Via Power Adapter)

Measurement Standards and Methods Used :

FCC CFR 47 Part 15 Subpart B/ Sep. 2005
 ANSI C63.4-2003

The device described above was tested by AUDIX CORPORATION to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 Subpart B with the provisions of section §15.107 (a) and § 15.109 (g) Class B limits both conducted and radiated emission.

The measurement results are contained in this test report and AUDIX CORPORATION is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Corporation.

Date of Test : Feb. 07, 2006

Prepared by : Julie Hsu Feb. 08. 2006
 (Julie Hsu/Assistant Administrator)

Test Engineer : Tony Lee Feb. 08. 2006
 (Tony Lee/Section Manager)

Approve & Authorized Signer : Leon Liu Feb. 8 2006
 (Leon Liu/Senior Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	LCD TV (The TV Tuner & AV Functions & HD Functions are not available in this test report)
Model Number	:	15MF605T/37
Serial Number	:	TY0406008
FCC ID.	:	A3KM135
Brand	:	Philips Magnavox
Applicant	:	Philips Electronics Industries (Taiwan) Ltd. 5, Tze Chiang 1 Rd, Chungli Ind. Park, Chungli, Taoyuan Hsien, Taiwan, R.O.C.
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd. 5, Tze Chiang 1 Rd, Chungli Ind. Park, Chungli, Taoyuan Hsien, Taiwan, R.O.C.
Factory	:	Philips Consumer Electronics Co., of Suzhou Ltd. No. 161, Zhujiang Road, New District, Suzhou 215011, PROC
LCD Panel	:	AUO, Type No. T150XG01
Scanning Frequency	:	Horizontal: 30-50kHz Vertical: 56-63Hz
Max Resolution	:	1024*768 / 60Hz, 48.4kHz
D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite Cores
Audio Cable	:	Non-Shielded, Detachable, 1.5m Bonded a ferrite Core

Power Adapter : Delta, EADP-45AB B
 AC Input: 100-240V~, 1.5A, 50-60Hz
 DC Output: 16V, 2.82A
 Cable: Non-Shielded, Undetachable, 1.8m
 Bonded a ferrite core

Power Cord : Non-Shielded, Detachable, 1.8m

Data of Receipt of Sample : Jan. 12, 2006

Date of Test : Feb. 07, 2006

Remark :

This EUT is a modified version of original FCC ID A3KM135, the differences are as follows:

- (1) PCB Relayout.
- (2) Added a new Power Adapter (Delta, M/N EADP-45AB B)

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Name : Dell Dim 4600PC
 Model Number : DMC
 Serial Number : 5dyw913
 FCC ID. : by FCC DoC
 BSMI ID : R33002
 Manufacturer : DELL
 VGA Card : Nvidia FX5200
 Power Cord : Non-shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number : SK-8110
 Serial Number : N/A
 BSMI ID : 3912A105
 FCC ID : by DoC
 Manufacturer : DELL
 Data Cable : Non-Shielded, Undetachable, 2m

1.2.3. PS2 MOUSE

Model Number	:	M-S69
Serial Number	:	N/A
BSMI ID	:	3892D101
FCC ID	:	by DoC
Manufacturer	:	COMPAQ
Data Cable	:	Non-Shielded, Undetachable, 1.8m

1.2.4. PRINTER

Model Number	:	KX-P2135
Serial Number	:	8DMCNC02144
BSMI ID	:	3872A371
FCC ID	:	ACJ5Z6KX-P2135
Brand	:	Panasonic
Manufacturer	:	Matsushita
Data Cable	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Undetachable, 1.8m

1.2.5. MODEM

Model Number	:	DM-1414
Serial Number	:	980034384
FCC ID	:	IFAXDM1414
Manufacturer	:	Accex
Data Cable	:	Shielded, Detachable, 1.2m
Power Adapter	:	Amigo, M/N AM-91000A Non-Shielded, Undetachable, 1.8m

1.2.6. MICROPHONE

Model Number	:	HD-303
Serial Number	:	N/A
Manufacturer	:	Multimedia Microphone System
Data Cable	:	Non-Shielded, Undetachable, 2.2m

1.2.7. WALKMAN

Model Number	:	RQ-P35LT-K
Serial Number	:	HA08717
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m

1.2.8. MICRO VAULT (USB Storage Media)

Model Number	:	USM128U2
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	D33021
Manufacturer	:	SONY
Data Cable	:	Shielded, Detachable, 1.8m

1.2.9. EARPHONE (Link to EUT)

Model Number : N/A
 Manufacturer : Panasonic
 Earphone Cable : Non-Shielded, Undetachable, 1.1m

1.2.10. COLOUR TV PATTERN GENERATOR (Link to EUT)

Model Number : PM5415TX+Y/C
 Type Number : LO732610
 Manufacturer : FLUKE
 Coaxial Cable : Shielded, Detachable, 2m
 Power Cord : Non-Shielded, Detachable, 1.8m

1.3. Description of Test Facility

Name of Firm : **Audix Corporation**
 Technical Division EMC Department
 No. 53-11, Tin-Fu Tsun, Lin-Kou,
 Taipei County, Taiwan, R.O.C.

Test Facility & Location : **No. 4 Shielded Room**
 No. 67-4, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.

No. 4 Open Area Test Site
 No. 67-4, Tin-Fu Tsun, Lin-Kou,
 Taipei County, Taiwan, R.O.C.

March 31, 2003 Renewal on
 Federal Communication Commission
 Registration Number: 90991

NVLAP Lab. Code : 200077-0
 (NVLAP is a NATA accredited body under Mutual Recognition Agreement)

DAR-Registration No. : DAT-P-145/03-01

1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz~30MHz	±1.73dB
Radiation Test (Distance: 10m)	30MHz~300MHz	±2.99dB
	300MHz~1000MHz	±2.73dB

Remark : Uncertainty = $k_{uc}(y)$

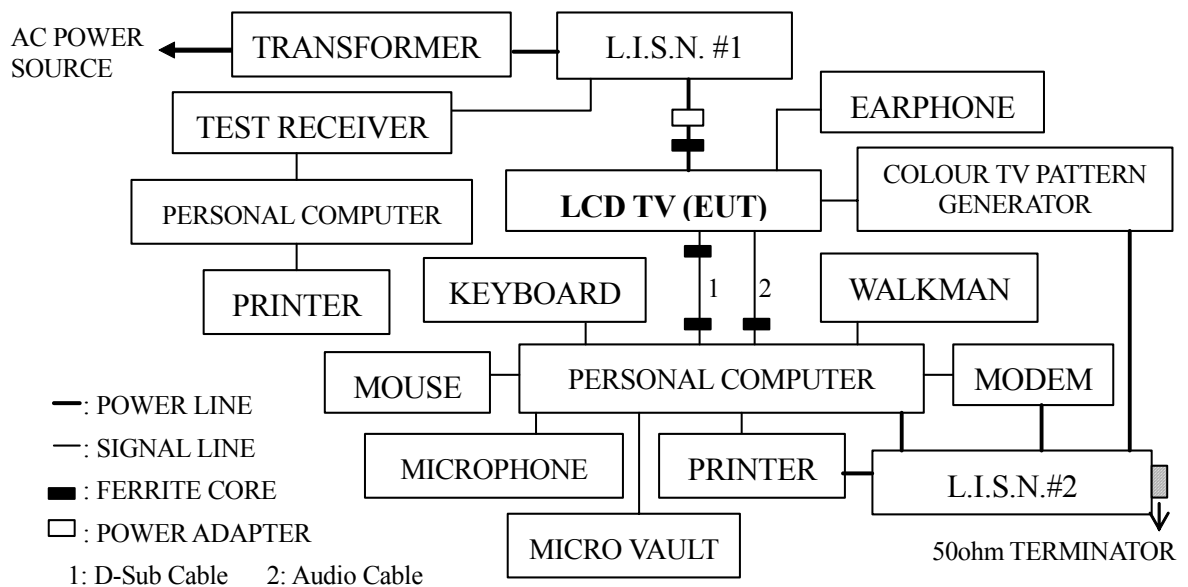
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipments are used during the power line conducted tests :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	Rohde & Schwarz	ESHS10	844591/015	Mar.05, 05'	Mar.04, 06'
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1430-5	Sep.27, 05'	Sep.26, 06'
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Sep.27, 05'	Sep.26, 06'
4.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	004	Apr.09, 05'	Apr.08, 06'

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (§15.107, Class B)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

- Remark:
1. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.
 2. The lower limit applies at the band edges.

2.4. EUT's Configuration during Compliance Measurement

The following equipments were installed on RF LINE VOLTAGE measurement to meet the Commission requirement and operating in a manner which tended to maximize its emission characteristics in a normal application.

2.4.1. LCD TV (EUT)

Model Number	:	15MF605T/37
Serial Number	:	TY0405207
FCC ID	:	A3KM135
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd.
LCD Panel	:	AUO, Type No. T150XG01
D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite Cores
Audio Cable	:	Non-Shielded, Detachable, 1.5m Bonded a ferrite Core
Power Adapter	:	Delta, EADP-45AB B AC Input: 100-240V~, 1.5A, 50-60Hz DC Output: 16V, 2.82A Cable: Non-Shielded, Undetachable, 1.8m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m

2.4.2. Supporting System : As in Section 1.2

2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown on 2.2.
- 2.5.2. Turned on the power of all equipments.
- 2.5.3. Personal computer read data from disk.
- 2.5.4. The PC System running the test program "Testpatv 18" by Windows XP and the screen of EUT displayed "H" pattern by EUT's resolution via D-Sub Input.
- 2.5.5. The PC System running the program "Windows Media Player" and sent the sound to earphone of EUT during all testing.
- 2.5.6. The PC System read data from FDD and then wrote data into FDD, same operation from HDD、Modem.
- 2.5.7. The other peripheral devices were drove and operated in turn during all testing.
- 2.5.8. Repeat above procedure from 2.5.3 to 2.5.7.

2.6. Test Procedure

The EUT was connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N. #2). This provided a 50ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to FCC ANSI C63.4-2003 on conducted measurement.

The bandwidth of the R&S Test Receiver ESHS10 was set at 10kHz.

The frequency range from 150kHz to 30MHz was pre-scanned with a peak detector.

The all final readings from test receiver were measured with Quasi-Peak detector and Average detector. (Remark : If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

2.7. Powerline Conducted Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

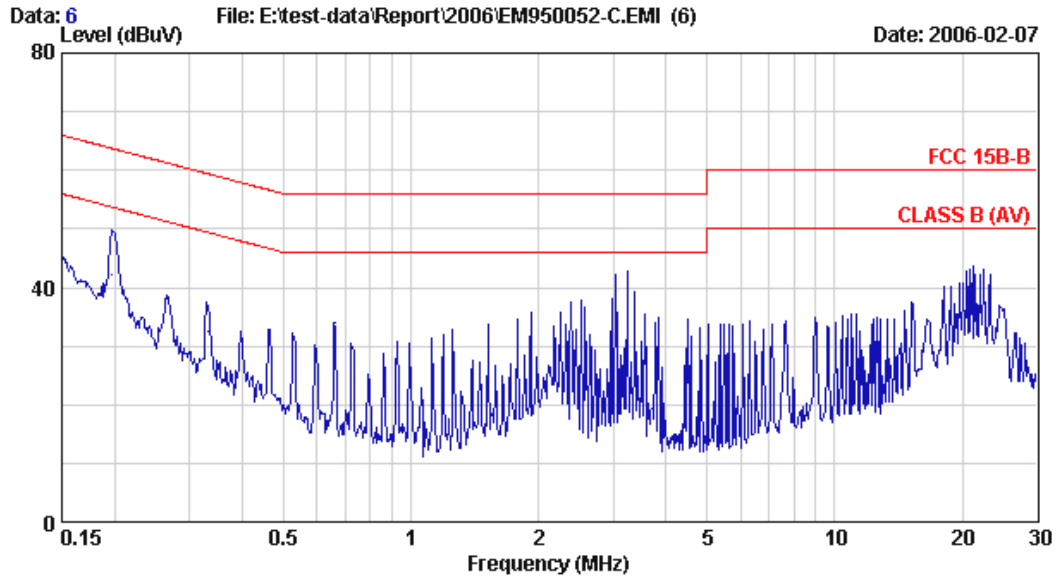
The EUT with following test modes were performed during this section testing and all the test results are listed in next pages.

Test Date : Feb. 07, 2006 Temperature : 19°C Humidity : 48%

Mode	Input Port	Frequency / Resolution	Reference Data No.	
			Neutral	Line
1.	D-Sub	640*480/60Hz, 31kHz	# 6	# 5
2.		800*600/60Hz, 38kHz	# 3	# 4
3.		1024*768/60Hz, 48kHz	# 2	# 1



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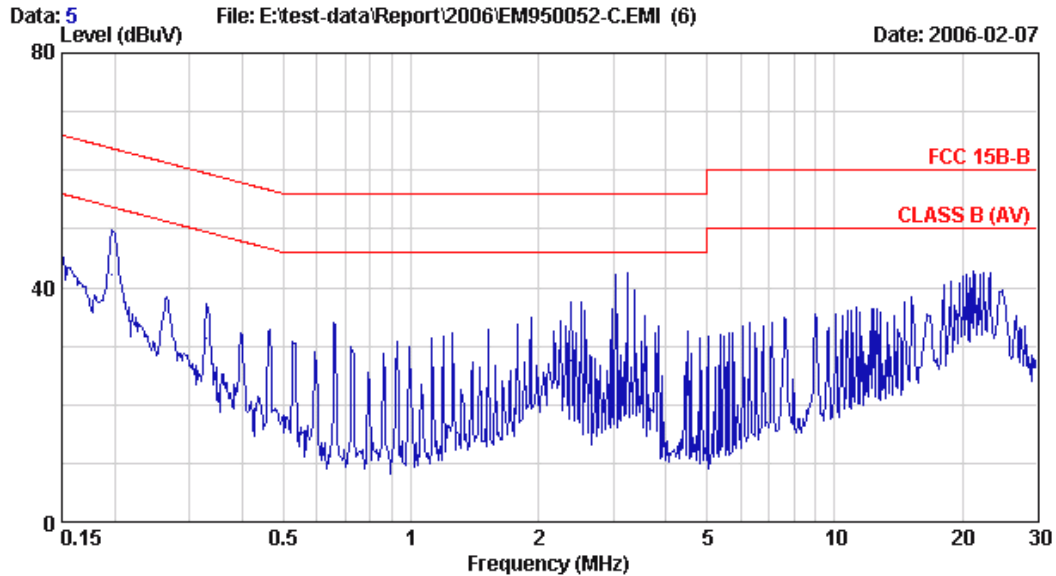
Site : NO.4 Shielded Room Data : 6
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz;31KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.197	0.21	0.21	48.39	48.80	63.74	14.94	QP
2	0.197	0.21	0.21	41.79	42.20	53.74	11.54	AVERAGE
3	0.331	0.13	0.24	36.20	36.57	59.43	22.86	QP
4	0.331	0.13	0.24	32.12	32.49	49.43	16.94	AVERAGE
5	0.663	0.10	0.32	33.52	33.94	56.00	22.06	QP
6	0.663	0.10	0.32	32.74	33.16	46.00	12.84	AVERAGE
7	2.517	0.10	0.50	35.51	36.11	56.00	19.89	QP
8	2.517	0.10	0.50	32.41	33.01	46.00	12.99	AVERAGE
9	3.248	0.10	0.55	41.98	42.63	56.00	13.37	QP
10	3.248	0.10	0.55	33.25	33.90	46.00	12.10	AVERAGE
11	21.142	0.33	0.70	39.81	40.84	60.00	19.16	QP
12	21.142	0.33	0.70	32.26	33.29	50.00	16.71	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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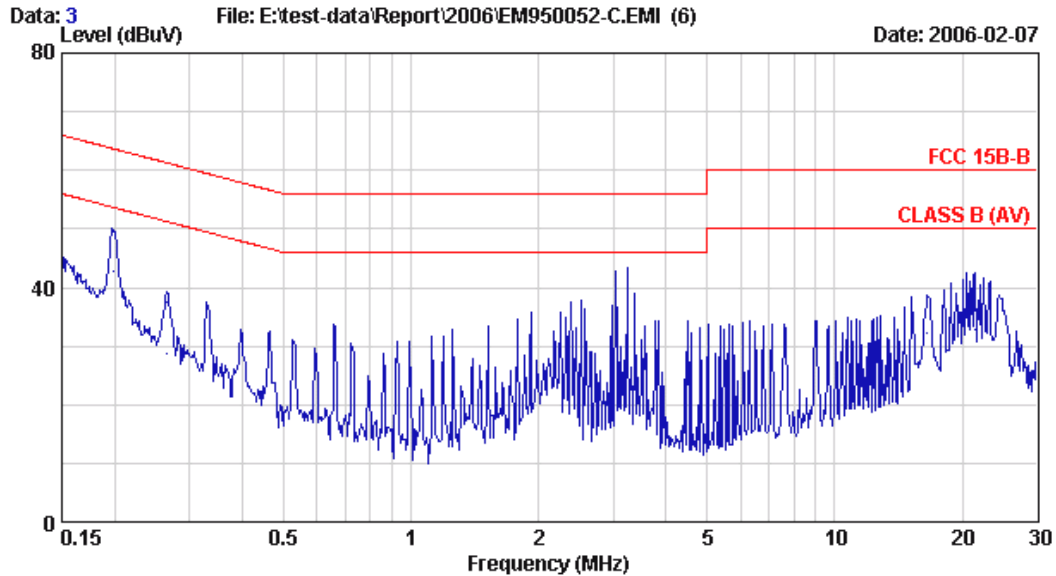
Site : NO.4 Shielded Room Data : 5
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz;31KHz

	Freq.	LISN	Cable	Emission				
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.198	0.20	0.21	48.71	49.12	63.71	14.59	QP
2	0.198	0.20	0.21	41.86	42.27	53.71	11.44	AVERAGE
3	0.330	0.13	0.24	35.58	35.95	59.46	23.51	QP
4	0.330	0.13	0.24	31.02	31.39	49.46	18.07	AVERAGE
5	0.664	0.10	0.32	33.08	33.50	56.00	22.50	QP
6	0.664	0.10	0.32	32.33	32.75	46.00	13.25	AVERAGE
7	2.386	0.10	0.49	33.08	33.67	56.00	22.33	QP
8	2.386	0.10	0.49	27.01	27.60	46.00	18.40	AVERAGE
9	3.246	0.10	0.55	41.76	42.41	56.00	13.59	QP
10	3.246	0.10	0.55	32.78	33.43	46.00	12.57	AVERAGE
11	21.141	0.33	0.70	39.67	40.70	60.00	19.30	QP
12	21.141	0.33	0.70	34.12	35.15	50.00	14.85	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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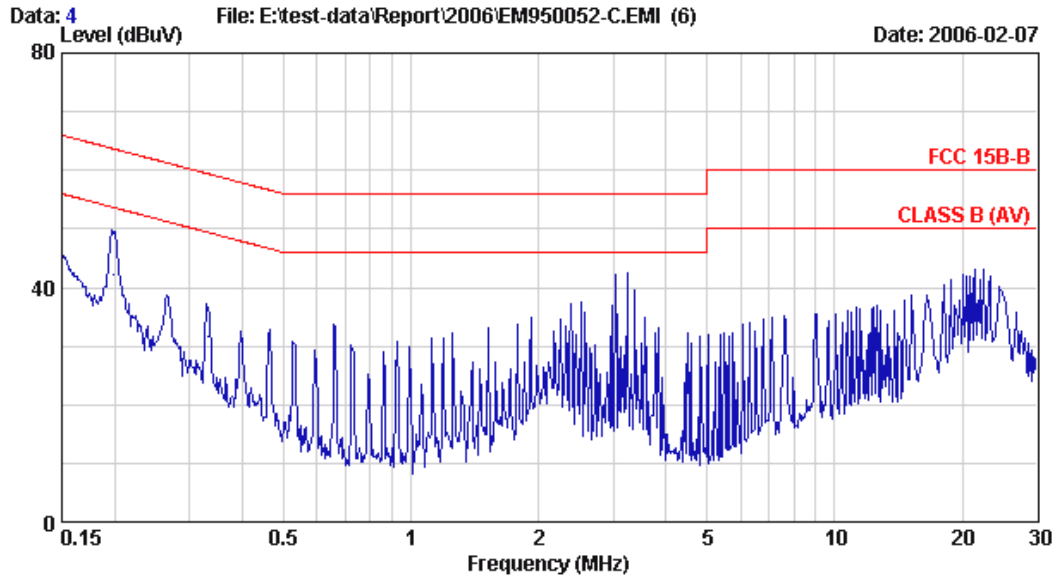
Site : NO.4 Shielded Room Data : 3
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 800*600/60Hz;38KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.198	0.20	0.21	49.13	49.54	63.69	14.15	QP
2	0.198	0.20	0.21	42.27	42.68	53.69	11.01	AVERAGE
3	0.266	0.16	0.23	37.21	37.60	61.25	23.65	QP
4	0.266	0.16	0.23	28.41	28.80	51.25	22.45	AVERAGE
5	0.664	0.10	0.32	32.88	33.30	56.00	22.70	QP
6	0.664	0.10	0.32	32.01	32.43	46.00	13.57	AVERAGE
7	3.247	0.10	0.55	42.18	42.83	56.00	13.17	QP
8	3.247	0.10	0.55	33.36	34.01	46.00	11.99	AVERAGE
9	16.571	0.24	0.70	36.73	37.67	60.00	22.33	QP
10	16.571	0.24	0.70	31.44	32.38	50.00	17.62	AVERAGE
11	21.476	0.33	0.70	39.01	40.04	60.00	19.96	QP
12	21.476	0.33	0.70	31.82	32.85	50.00	17.15	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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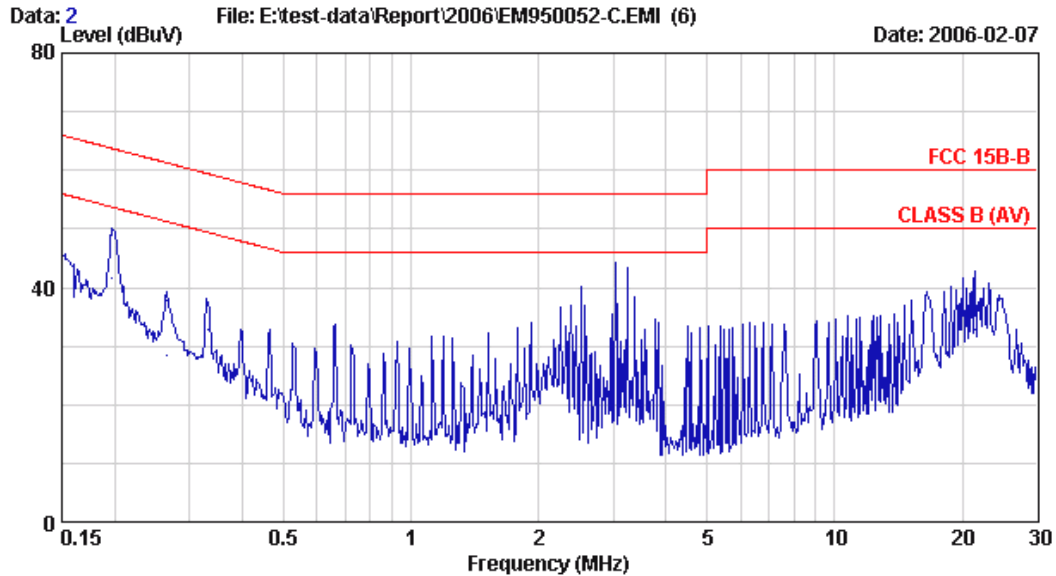
Site : NO.4 Shielded Room Data : 4
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 800*600/60Hz;38KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.198	0.20	0.21	48.83	49.24	63.70	14.46	QP
2	0.198	0.20	0.21	41.88	42.29	53.70	11.41	AVERAGE
3	0.331	0.13	0.24	35.96	36.33	59.44	23.11	QP
4	0.331	0.13	0.24	31.19	31.56	49.44	17.88	AVERAGE
5	0.665	0.10	0.32	32.42	32.84	56.00	23.16	QP
6	0.665	0.10	0.32	31.61	32.03	46.00	13.97	AVERAGE
7	2.518	0.10	0.50	34.01	34.61	56.00	21.39	QP
8	2.518	0.10	0.50	30.52	31.12	46.00	14.88	AVERAGE
9	3.248	0.10	0.55	41.66	42.31	56.00	13.69	QP
10	3.248	0.10	0.55	32.76	33.41	46.00	12.59	AVERAGE
11	21.474	0.33	0.70	39.37	40.40	60.00	19.60	QP
12	21.474	0.33	0.70	33.92	34.95	50.00	15.05	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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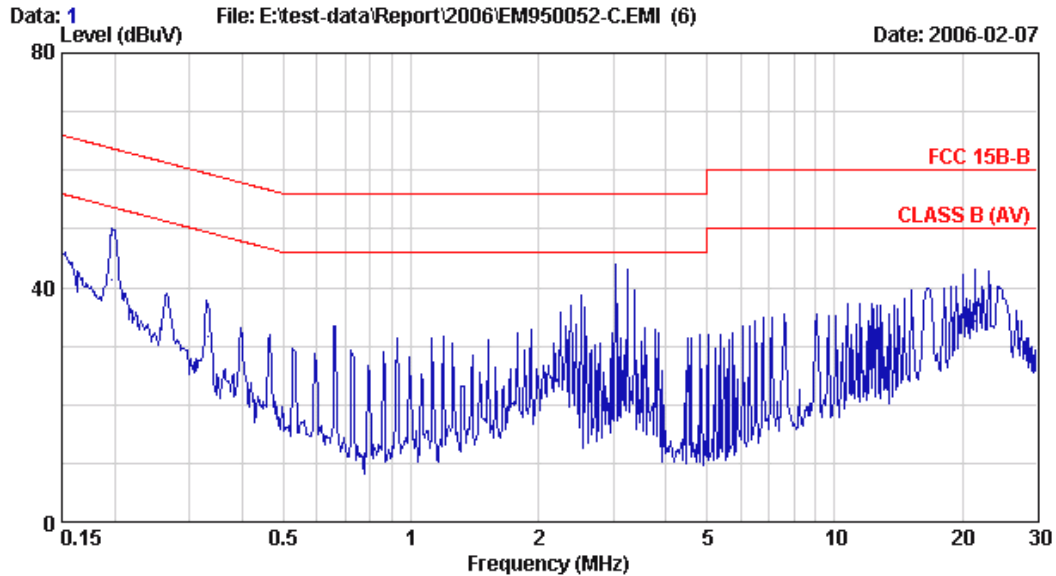
Site : NO.4 Shielded Room Data : 2
Condition : KMW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/60Hz;48KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.197	0.21	0.21	48.57	48.98	63.74	14.76	QP
2	0.197	0.21	0.21	41.31	41.72	53.74	12.02	AVERAGE
3	0.264	0.16	0.23	37.37	37.76	61.30	23.54	QP
4	0.264	0.16	0.23	28.05	28.44	51.30	22.86	AVERAGE
5	0.331	0.13	0.24	36.94	37.31	59.43	22.12	QP
6	0.331	0.13	0.24	32.31	32.68	49.43	16.75	AVERAGE
7	0.662	0.10	0.32	33.42	33.84	56.00	22.16	QP
8	0.662	0.10	0.32	32.20	32.62	46.00	13.38	AVERAGE
9	3.049	0.10	0.54	41.98	42.62	56.00	13.38	QP
10	3.049	0.10	0.54	34.37	35.01	46.00	10.99	AVERAGE
11	21.476	0.33	0.70	39.13	40.16	60.00	19.84	QP
12	21.476	0.33	0.70	31.84	32.87	50.00	17.13	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Site : NO.4 Shielded Room Data : 1
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 19°C/ 48% ESHS10 Engineer: Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/60Hz;48KHz

	Freq.	LISN	Cable	Emission				
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.197	0.21	0.21	48.59	49.00	63.75	14.74	QP
2	0.197	0.21	0.21	40.92	41.33	53.75	12.41	AVERAGE
3	0.331	0.13	0.24	36.62	36.99	59.43	22.44	QP
4	0.331	0.13	0.24	31.27	31.64	49.43	17.79	AVERAGE
5	0.663	0.10	0.32	32.86	33.28	56.00	22.72	QP
6	0.663	0.10	0.32	31.70	32.12	46.00	13.88	AVERAGE
7	2.519	0.10	0.50	35.21	35.81	56.00	20.19	QP
8	2.519	0.10	0.50	28.61	29.21	46.00	16.79	AVERAGE
9	3.049	0.10	0.54	41.50	42.14	56.00	13.86	QP
10	3.049	0.10	0.54	32.94	33.58	46.00	12.42	AVERAGE
11	21.477	0.33	0.70	39.19	40.22	60.00	19.78	QP
12	21.477	0.33	0.70	33.11	34.14	50.00	15.86	AVERAGE

Remarks: 1.Emission Level= LISN Factor + Cable Loss + Reading.
2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

3. RADIATED EMISSION MEASUREMENT

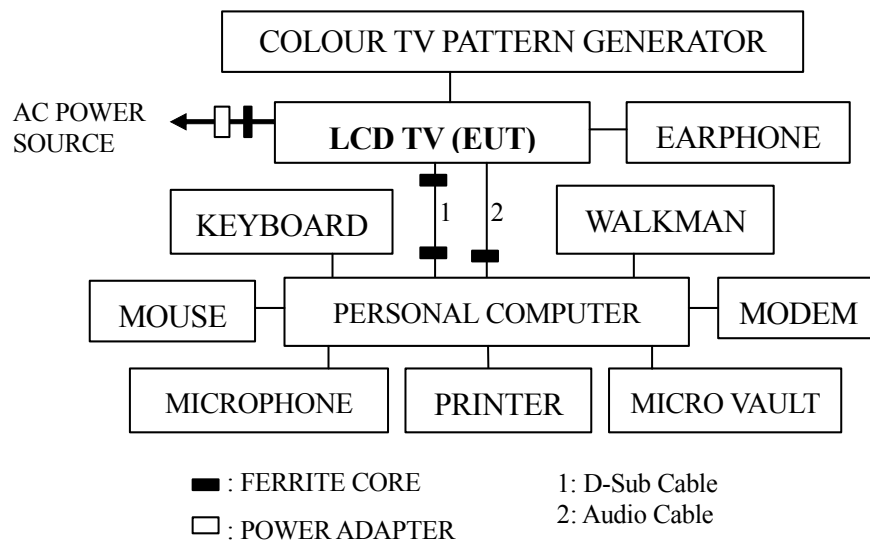
3.1. Test Equipment

The following test equipments are used during the radiated emission measurement :

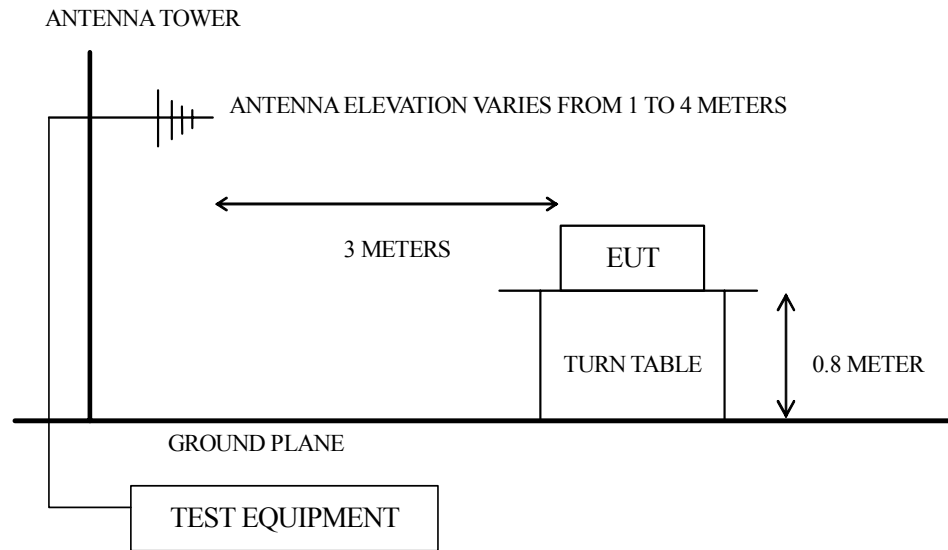
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8590L	3624A01446	N/A	N/A
2.	Test Receiver	Rohde&Schwarz	ESVS10	845165/018	Jun.08, 05'	Jun.07, 06'
3.	Amplifier	HP	8447D	2727A05737	N/A	N/A
4.	Broadband Antenna	Chase	VBA6106A	1231	Nov.12, 05'	Nov.11, 06'
5.	Log Periodic Antenna	Chase	UPA6109	1020	Nov.12, 05'	Nov.11, 06'

3.2. Block Diagram of Test Setup

3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Open Area Test Site Setup Diagram



3.3. Radiation Limit (§15.109, Class B)

All emanations from a class B computing devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Frequency MHz	Distance Meter	Field Strength Limit	
		$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

Remark : (1) Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$)

The tighter limit applies at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(3) FCC limit is used based on CFR 47 Part 15.35 (b).

3.4. EUT's Configuration during Compliance Measurement

The configuration of EUT and its simulators were the same as those used in conducted measurement. Please refer to 2.4.

3.5. Operating Condition of EUT

Same as conducted measurement which was listed in 2.5. except the test set up replaced by section 3.2.

3.6. Test Procedure

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table rotate 360 degrees to determine the position of the maximum emission level. EUT was set 3 meters away from the receiving antenna which were mounted on a antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) and dipole antenna were used as receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4-2003 on radiated measurement.

The bandwidth of the R&S Test Receiver ESVS10 was set at 120kHz.

The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector.

The all final readings from test receiver were measured with Quasi-Peak detector.

3.7. Radiated Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

EUT with the selected as following test modes were performed during radiated measurement and all the test results are attached next pages.

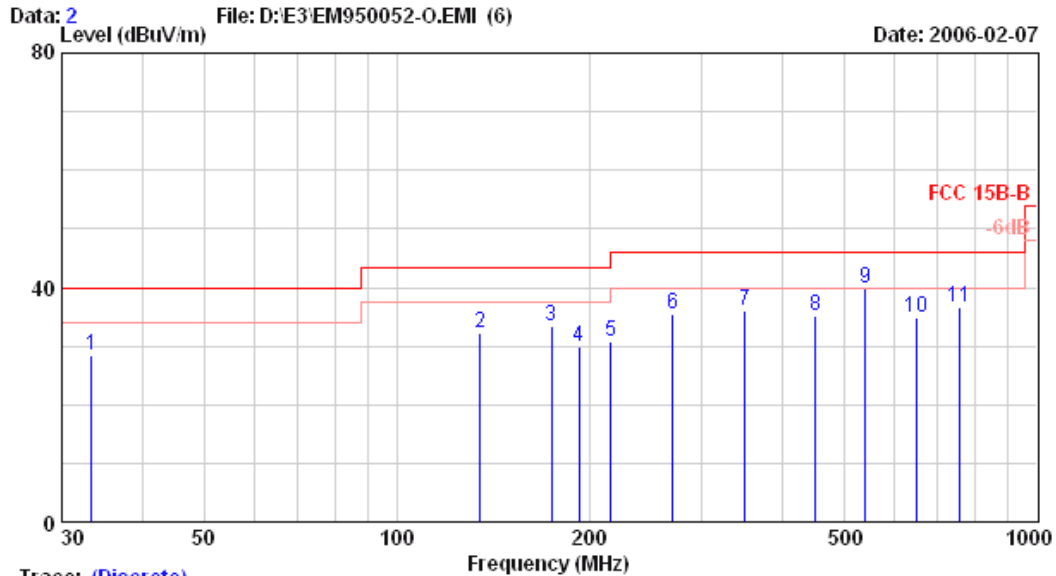
Test Date : Feb. 07, 2006 Temperature : 18°C Humidity : 64%

Mode	Input Port	Frequency / Resolution	Reference Data No.	
			Horizontal	Vertical
1.	D-Sub	640*480/60Hz, 31kHz	# 2	# 1
2.		800*600/60Hz, 38kHz	# 3	# 4
※ 3.		1024*768/60Hz, 48kHz	# 5	# 6

(※ mode for maximum detected emission)



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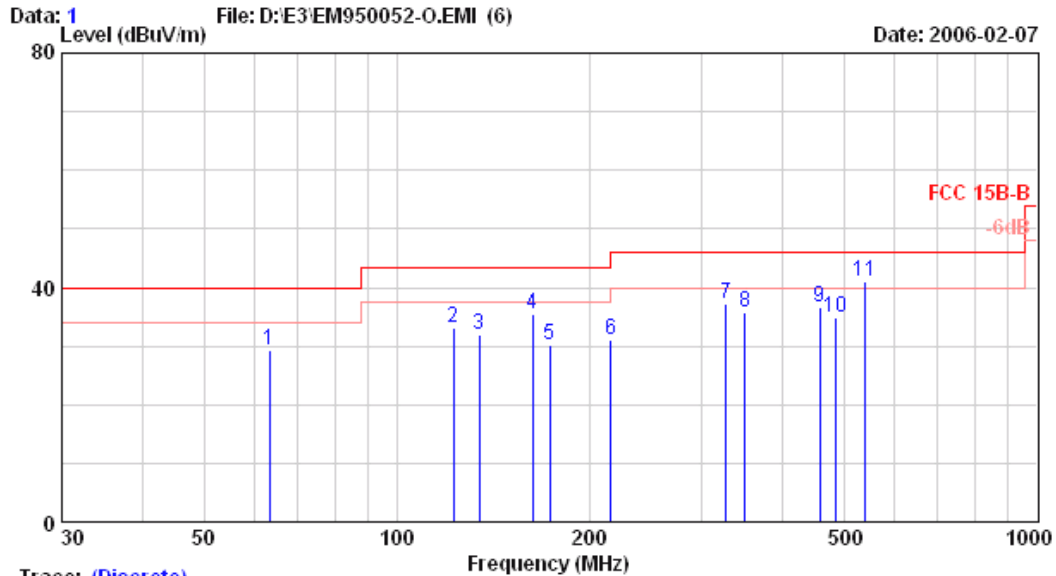
Site no. : NO.4 Open Site Data no. : 2
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 640*480 / 60Hz;31KHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	33.328	21.08	0.88	6.44	28.40	40.00	11.60	
2	134.980	20.07	1.74	10.47	32.28	43.50	11.22	
3	174.472	20.84	1.98	10.48	33.30	43.50	10.20	
4	192.875	20.88	2.15	6.85	29.88	43.50	13.62	
5	216.321	21.12	2.30	7.32	30.74	46.00	15.26	
6	270.325	23.40	2.62	9.55	35.57	46.00	10.43	
7	350.459	14.43	3.14	18.48	36.05	46.00	9.95	
8	450.682	16.27	3.70	15.33	35.29	46.00	10.71	
9	540.356	18.10	4.21	17.44	39.74	46.00	6.26	
10	648.458	21.08	4.69	9.10	34.87	46.00	11.13	
11	755.237	22.77	5.19	8.76	36.73	46.00	9.27	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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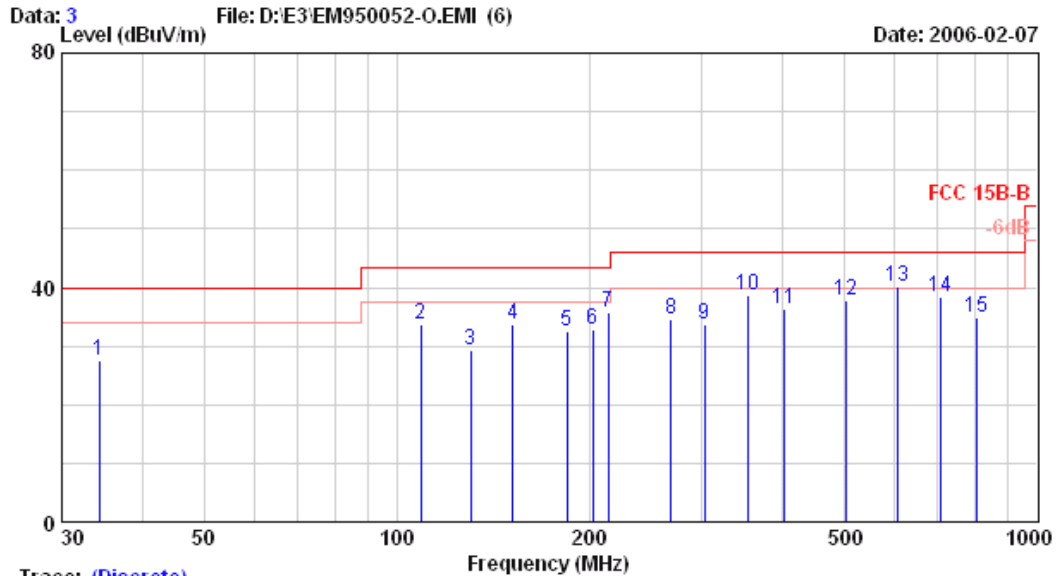
Site no. : NO.4 Open Site Data no. : 1
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 640*480 / 60Hz;31KHz

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	63.245	13.69	1.23	14.45	29.38	40.00	10.62	
2	122.586	18.17	1.66	13.33	33.15	43.50	10.35	
3	134.790	19.50	1.74	10.75	32.00	43.50	11.50	
4	162.880	20.69	1.89	12.88	35.45	43.50	8.05	
5	173.465	21.41	2.00	6.86	30.27	43.50	13.23	
6	216.060	21.96	2.30	6.80	31.06	43.50	12.44	
7	326.895	13.15	2.94	21.24	37.33	46.00	8.67	
8	350.235	14.37	3.14	18.35	35.86	46.00	10.14	
9	457.347	17.37	3.62	15.51	36.50	46.00	9.50	
10	486.060	17.43	3.75	13.57	34.75	46.00	11.25	
11	540.075	18.88	4.21	17.98	41.07	46.00	4.93	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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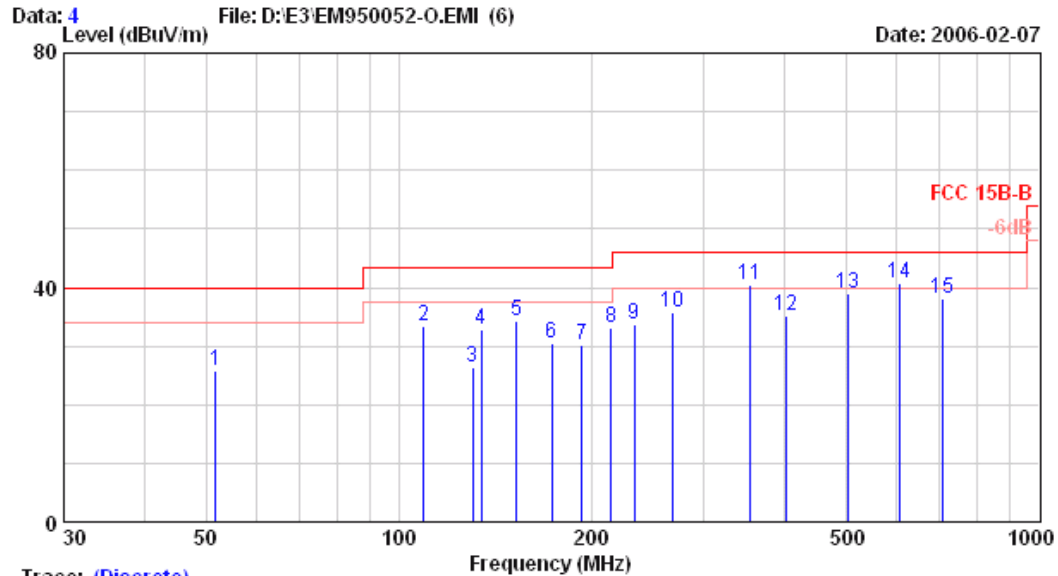
Site no. : NO.4 Open Site Data no. : 3
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 800*600 / 60Hz;38KHz

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	34.327	20.95	0.83	5.90	27.68	40.00	12.32	
2	109.236	18.35	1.59	13.68	33.62	43.50	9.88	
3	130.437	19.81	1.76	7.85	29.42	43.50	14.08	
4	151.877	20.48	1.89	11.43	33.80	43.50	9.70	
5	184.539	20.66	2.08	9.90	32.64	43.50	10.86	
6	202.435	21.04	2.23	9.46	32.73	43.50	10.77	
7	214.237	21.11	2.33	12.46	35.89	43.50	7.61	
8	268.545	23.47	2.56	8.58	34.61	46.00	11.39	
9	302.987	13.61	2.79	17.32	33.73	46.00	12.27	
10	354.326	14.69	3.00	20.96	38.65	46.00	7.35	
11	403.564	15.41	3.33	17.68	36.41	46.00	9.59	
12	503.437	17.70	3.81	16.35	37.86	46.00	8.14	
13	604.564	20.26	4.69	15.24	40.19	46.00	5.81	
14	705.654	21.67	4.89	11.88	38.43	46.00	7.57	
15	806.342	22.67	5.38	6.75	34.79	46.00	11.21	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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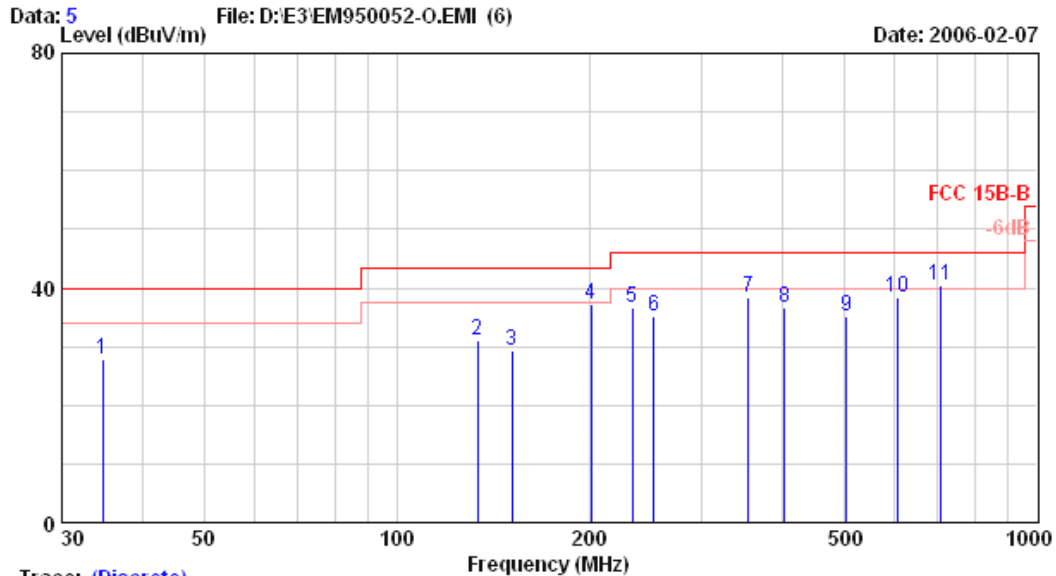
Site no. : NO.4 Open Site Data no. : 4
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 800*600 / 60Hz;38KHz

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	51.734	15.41	1.05	9.24	25.70	40.00	14.30	
2	109.438	17.11	1.59	14.76	33.46	43.50	10.04	
3	130.541	19.32	1.76	5.33	26.41	43.50	17.09	
4	134.654	19.45	1.76	11.55	32.76	43.50	10.74	
5	152.865	20.57	1.89	11.88	34.34	43.50	9.16	
6	173.459	21.41	2.00	6.98	30.39	43.50	13.11	
7	193.453	21.91	2.15	6.24	30.30	43.50	13.20	
8	214.742	21.71	2.33	8.94	32.98	43.50	10.52	
9	233.324	22.72	2.42	8.57	33.71	46.00	12.29	
10	268.365	23.66	2.56	9.65	35.87	46.00	10.13	
11	354.572	14.60	3.00	22.75	40.35	46.00	5.65	
12	403.856	16.09	3.33	15.66	35.08	46.00	10.92	
13	503.457	17.82	3.81	17.28	38.90	46.00	7.10	
14	604.764	20.15	4.69	15.95	40.79	46.00	5.21	
15	705.735	21.64	4.89	11.67	38.20	46.00	7.80	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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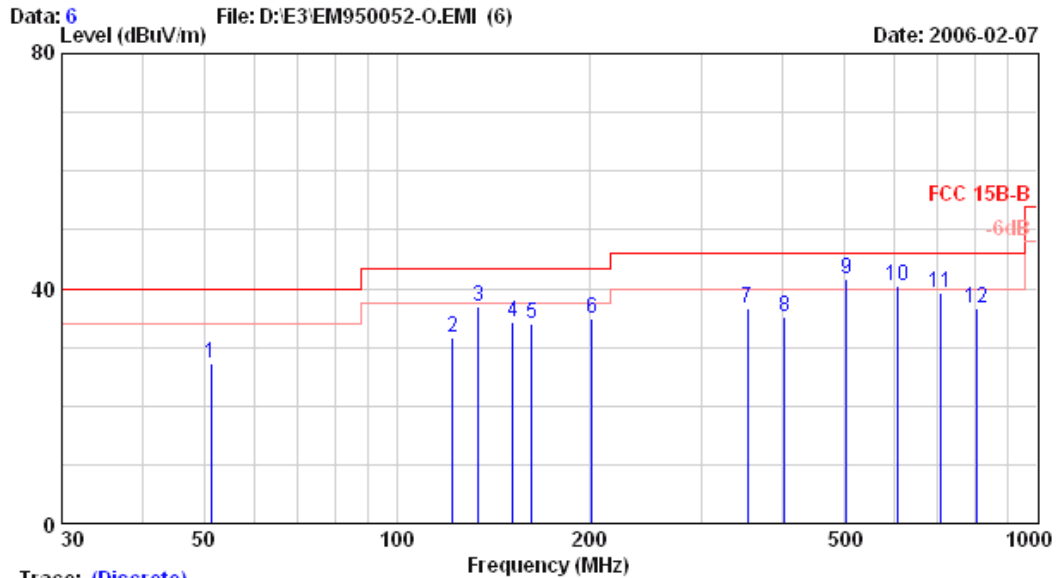
Site no. : NO.4 Open Site Data no. : 5
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 1024*768 / 60Hz;48KHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	34.761	21.08	0.88	5.79	27.75	40.00	12.25	
2	133.986	20.03	1.76	9.35	31.13	43.50	12.37	
3	151.356	20.50	1.84	6.96	29.30	43.50	14.20	
4	201.356	20.99	2.24	13.87	37.10	43.50	6.40	
5	233.735	21.80	2.42	12.35	36.56	46.00	9.44	
6	252.456	22.75	2.52	9.77	35.03	46.00	10.97	
7	353.856	14.64	2.98	20.66	38.28	46.00	7.72	
8	403.466	15.41	3.33	17.98	36.71	46.00	9.29	
9	503.455	17.70	3.81	13.77	35.28	46.00	10.72	
10	604.368	20.26	4.69	13.35	38.30	46.00	7.70	
11	705.580	21.67	4.89	13.78	40.33	46.00	5.67	*

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.
3. The worst emission was detected at 705.580MHz with corrected signal level of 40.33dBuV/m (limit is 46.0dBuV/m) when the antenna was at horizontal polarization and was at 1.2m high and the turn table was at 350°.
4. 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.



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Trace: (Discrete)

Site no. : NO.4 Open Site Data no. : 6
Dis. / Ant. : 3m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : FCC 15B-B
Env. / Ins. : 18°C / 64% ESVS 10 Engineer : Allen Hsia
EUT : LCD TV M/N:15MF605T/37
Power Rating : 120Vac / 60Hz
Test Mode : 1024*768 / 60Hz;48KHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	51.340	15.41	1.05	10.85	27.32	40.00	12.68	
2	122.235	18.17	1.66	11.68	31.50	43.50	12.00	
3	134.235	19.50	1.74	15.67	36.92	43.50	6.58	
4	151.686	20.50	1.84	11.97	34.30	43.50	9.20	
5	162.659	20.69	1.89	11.36	33.94	43.50	9.56	
6	201.544	21.96	2.24	10.65	34.85	43.50	8.65	
7	353.433	14.55	2.98	18.99	36.53	46.00	9.47	
8	403.571	16.09	3.33	15.85	35.28	46.00	10.72	
9	503.564	17.82	3.81	19.86	41.49	46.00	4.51	*
10	604.780	20.15	4.69	15.66	40.50	46.00	5.50	
11	705.456	21.64	4.89	12.77	39.29	46.00	6.71	
12	806.364	23.04	5.38	8.36	36.78	46.00	9.22	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.
3. The worst emission was detected at 503.564MHz with corrected signal level of 41.49dBuV/m (limit is 46.0dBuV/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 155°.
4. 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.

4. DEVIATION TO TEST SPECIFICATIONS

【NONE】

5. PHOTOGRAPHS

5.1. Photos of Powerline Conducted Measurement

Test Mode : D-Sub Input



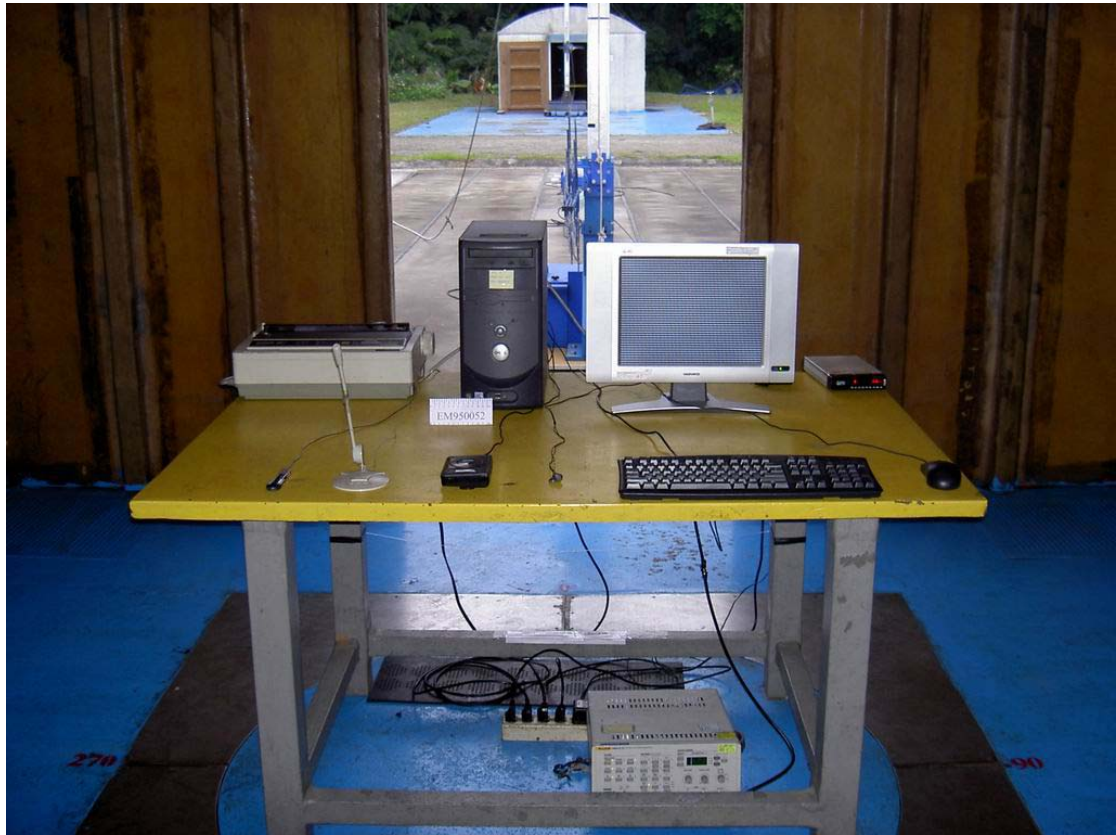
FRONT VIEW OF CONDUCTED TEST



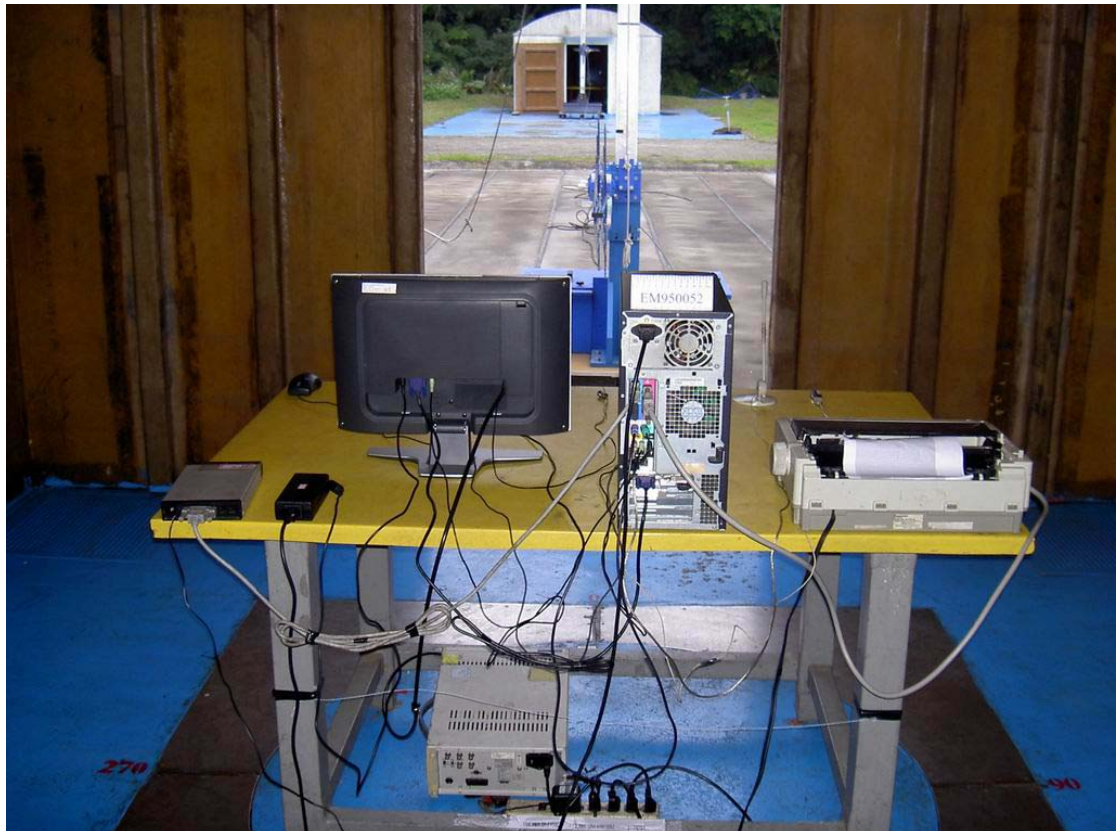
BACK VIEW OF CONDUCTED TEST

5.2. Photos of Radiated Measurement at Open Area Test Site

Test Mode : D-Sub Input



FRONT VIEW OF RADIATED TEST



BACK VIEW OF RADIATED TEST

Test Mode: D-Sub Input, 1024*768/60Hz, 48kHz



SETUP WITH MAXIMUM DETECTED EMISSION AT HORIZONTAL POLARIZATION



SETUP WITH MAXIMUM DETECTED EMISSION AT VERTICAL POLARIZATION