

APPLICATION FOR CERTIFICATION
(Class II Permissive Change)
On Behalf of
Philips Electronics Industries (Taiwan) Ltd.
Flat Panel Color Monitor
Model No. : 190C6
FCC ID: A3KM141
Brand : PHILIPS

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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Report Number : EM-F940161
Date of Test : Jul. 14, 2005
Date of Report : Jul. 19, 2005

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TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Philips Electronics Industries (Taiwan) Ltd.
 Manufacturer : Philips Electronics Industries (Taiwan) Ltd.
 Factory #1 : Skyway (Dong Guan) Monitor Factory
 Factory #2 : Philips Consumer Electronics Co., of Suzhou Ltd.
 Factory #3 : Philips Ltd. Assembly Centre Hungary
 EUT Description : Flat Panel Color Monitor
 FCC ID : A3KM141
 (A) MODEL NO. : 190C6
 (B) SERIAL NO. : TY0405233
 (C) BRAND NAME : PHILIPS
 (D) POWER SUPPLY : AC 100-240V~ 60-50Hz
 (E) TEST VOLTAGE : AC 120V/60Hz

Measurement Standard Used:

FCC CFR 47 Part 15 Subpart B/Jan. 2005 and CISPR 22/1997
 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 sections 15.107(a) and 15.109(a)(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 compliant 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 : Jul. 14, 2005

Prepared by : Julie Hsu Jul. 21, 2005
 (Julie Hsu/Assistant Administrator)

Test Engineer : Tony Lee Jul. 22, 2005
 (Tony Lee/Section Manager)

Approved & Authorized Signer : Leon Liu Jul. 22 2005
 (Leon Liu/Senior Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Flat Panel Color Monitor
Model Number	:	190C6
Serial Number	:	TY0405233
FCC ID.	:	A3KM141
Brand	:	PHILIPS
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 Road, Chungli Industrial Park P.O. Box 123, Chungli, Taoyuan, Taiwan, R.O.C
Factory #1	:	Skyway (Dong Guan) Monitor Factory Industrial Zone, Da Ling Shan Town, Dong Guan City, Guang Dong, China
Factory #2	:	Philips Consumer Electronics Co., of Suzhou Ltd. No. 161, Zhujiang Road, New District, Suzhou 215011, China
Factory #3	:	Philips Ltd. Assembly Centre Hungary Holland Fasar 6. PF 204, H-8002 Szekesfehervar, Hungary
Scanning Frequency	:	Horizontal: 30-83kHz Vertical: 56-76Hz
Max Resolution	:	1280*1024
LCD Panel	:	QDI, M/N QDIEL010
Scaler IC	:	Novatek 68521
Power Board	:	Delta, Type No. EADP-43AF A

D-Sub Data Cable : Shielded, Detachable, 1.8m
Bonded two ferrite cores

Power Cord : Non-Shielded, Detachable, 1.8m (3 pin)

Data of Receipt of Sample : Jul. 13, 2005

Date of Test : Jul. 14, 2005

Remark :

This EUT is a modified version of original FCC ID A3KM141, the differences are as follows:

- (1) add a model (190C6)
- (2) add a new LCD Panel (QDI, M/N QDIEL010)
- (3) new cabinet style
- (4) add a new base style (Compact).

A modification of EUT was re-measured and the test data reported in this report.

Item \ Model	190C6
Audio	No Audio
Base	Compact
LCD Panel	QDI, M/N QDIEL010
Scaler IC	Novatek 68521
Data Cable (Input)	D-Sub
Light Frame	No
Power Board	Delta, Type No.EADP-43AF A
USB connector only	No
USB Device (USB HUB)	No

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Name : Dell Dim 4600PC

Model Number : DMC

Serial Number : N/A

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	:	T3A002
FCC ID	:	by DoC
Manufacturer	:	DELL
Data Cable	:	Non-Shielded, Undetachable, 2m

1.2.3. MOUSE

Model Number	:	MO71KC
Serial Number	:	406012041
BSMI ID	:	R41108
FCC ID	:	by DoC
Manufacturer	:	DELL
Data Cable	:	Non-Shielded, Undetachable, 2m

1.2.4. DOT MATRIX PRINTER

Model Number	:	KX-P2135
Serial Number	:	8DMCNC02116
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	:	980034387
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. SPEAKER

Model Number	:	J-008
Serial Number	:	97-C-008923-T
Manufacturer	:	(J-S) JAZZ HIPSTER
Data Cable	:	Non-Shielded, Undetachable, 1m

1.2.7. MICROPHONE

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

1.2.8. WALKMAN

Model Number : RQ-P35LT-K
 Serial Number : HA08496
 Manufacturer : Panasonic
 Data Cable : Non-Shielded, Detachable, 1.8m

1.2.9. 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, 2.0m

1.3. Test Facility

Name of Firm : **Audix Corporation**
 Technical Division EMC Department
 No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, 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 Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.
 Mar. 31, 2003 Re-File 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	$\pm 1.73\text{dB}$
Radiation Test (Distance: 3m)	30MHz~300MHz	$\pm 2.91\text{dB}$
	300MHz~1000MHz	$\pm 2.94\text{dB}$
Radiation Test (Distance: 10m)	30MHz~300MHz	$\pm 2.99\text{dB}$
	300MHz~1000MHz	$\pm 2.73\text{dB}$

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

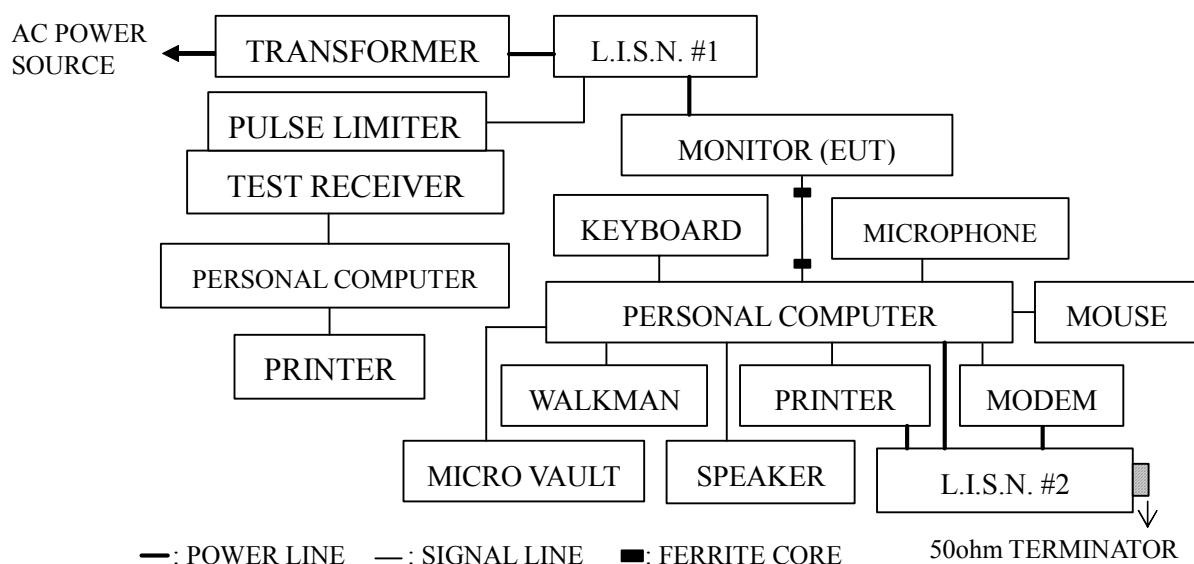
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment were used during the power line conducted tests :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	Rohde & Schwarz	ESCS 30	100039	Jun.23, 05'	Jun.22, 06'
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1430-5	Oct.06, 04'	Oct.05, 05'
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Oct.06, 04'	Oct.05, 05'
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. Flat Panel Color Monitor (EUT)

Model Number	:	190C6
Serial Number	:	TY0405233
FCC ID	:	A3KM141
Brand	:	PHILIPS
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd.
LCD Panel	:	QDI, M/N QDIEL010
Scaler IC	:	Novatek 68521
Power Board	:	Delta, Type No. EADP-43AF A
D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Power Cord	:	Non-Shielded, Detachable, 1.8m (3 pin)

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. Personal computer running the EMI self-test program "H-V1.8" and sent "H" character to Monitor (EUT), the screen of Monitor (EUT) displayed and filled with "H" pattern by EUT's resolution.

2.5.5. Repeat the above procedures from 2.5.3 to 2.5.4.

2.5.6. The other peripheral devices were driven and operated in turn during all testing.

2.6. Test Procedure

The EUT was put on table which was above the ground by 80cm and its power cord was connected to the power mains through a line impedance stabilization network (L.I.S.N. #1) and the other peripheral devices power cord were connected to the power mains through a line impedance stabilization network (L.I.S.N. #2) This provided a 50 ohm 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 ESCS30 was set at 9kHz.

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. 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 conducted testing and all the test results are listed in following pages.

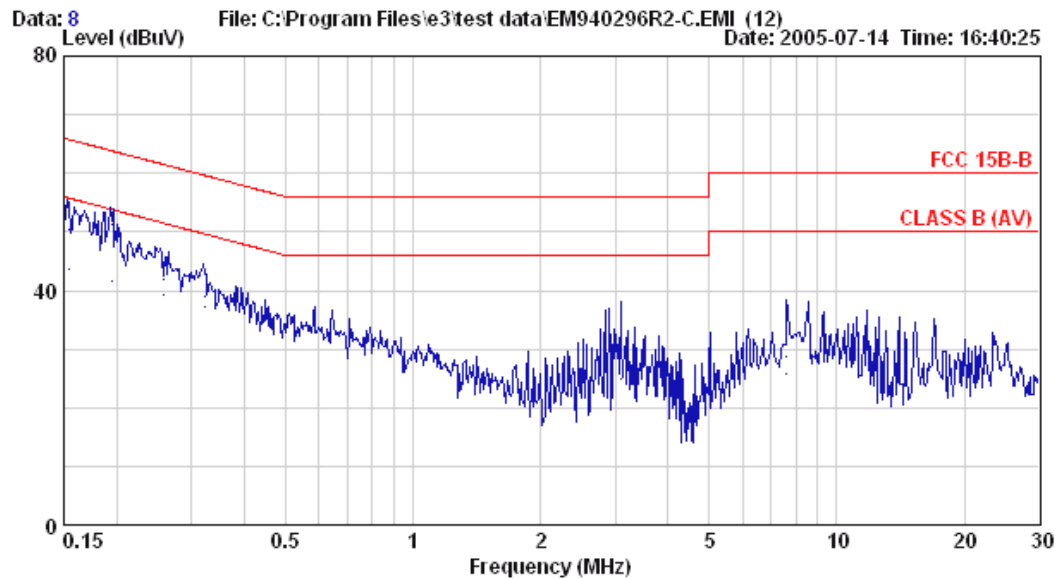
Test Date : Jul. 14, 2005 Temperature : 28°C Humidity : 65%

The details of test modes are as follows :

Mode	Model No. (Serial No.)	LCD Panel (Power Board)	Frequency / Resolution.	Reference Test Data No.	
				Neutral	Line
1.	190C6 (TY0405233)	QDI (Delta)	640*480/60Hz, 31kHz	# 8	# 7
2.			1024*768/75Hz, 60kHz	# 9	# 10
3.			1280*1024/75Hz, 80kHz	# 12	# 11



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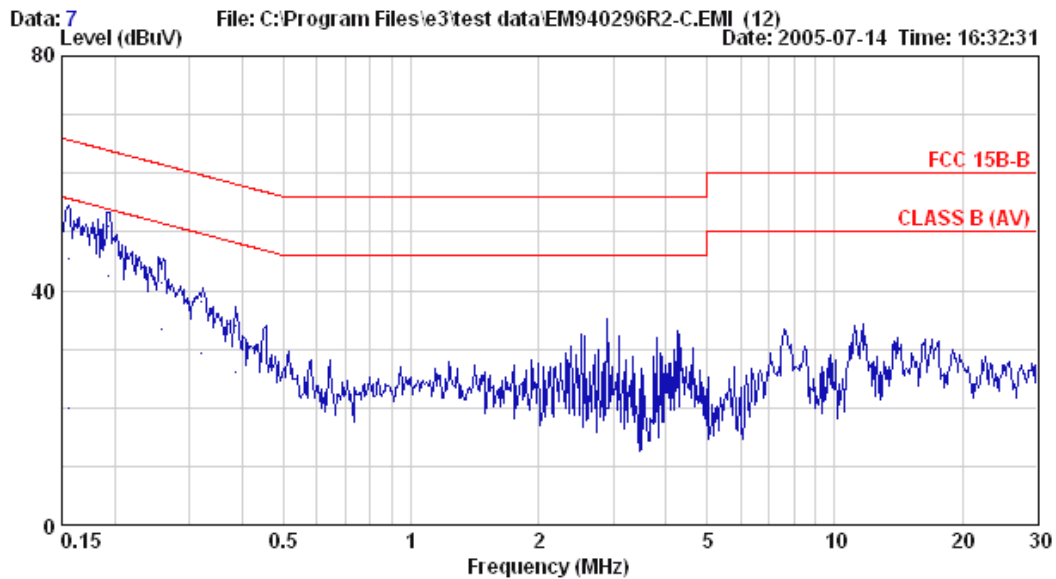
Site : NO.4 Shielded Room Data : 8
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz 31KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.154	0.29	0.20	49.86	50.35	65.76	15.41	QP
2	0.154	0.29	0.20	43.06	43.55	55.76	12.21	AVERAGE
3	0.195	0.21	0.21	50.76	51.17	63.80	12.63	QP
4	0.195	0.21	0.21	41.14	41.55	53.80	12.25	AVERAGE
5	0.257	0.16	0.22	41.54	41.92	61.52	19.59	QP
6	0.257	0.16	0.22	38.98	39.36	51.52	12.15	AVERAGE
7	0.324	0.13	0.24	38.60	38.97	59.61	20.64	QP
8	0.324	0.13	0.24	36.96	37.33	49.61	12.28	AVERAGE
9	3.095	0.10	0.54	28.47	29.11	56.00	26.89	QP
10	3.095	0.10	0.54	24.19	24.83	46.00	21.17	AVERAGE
11	7.622	0.17	0.66	27.89	28.72	60.00	31.28	QP
12	7.622	0.17	0.66	24.89	25.72	50.00	24.28	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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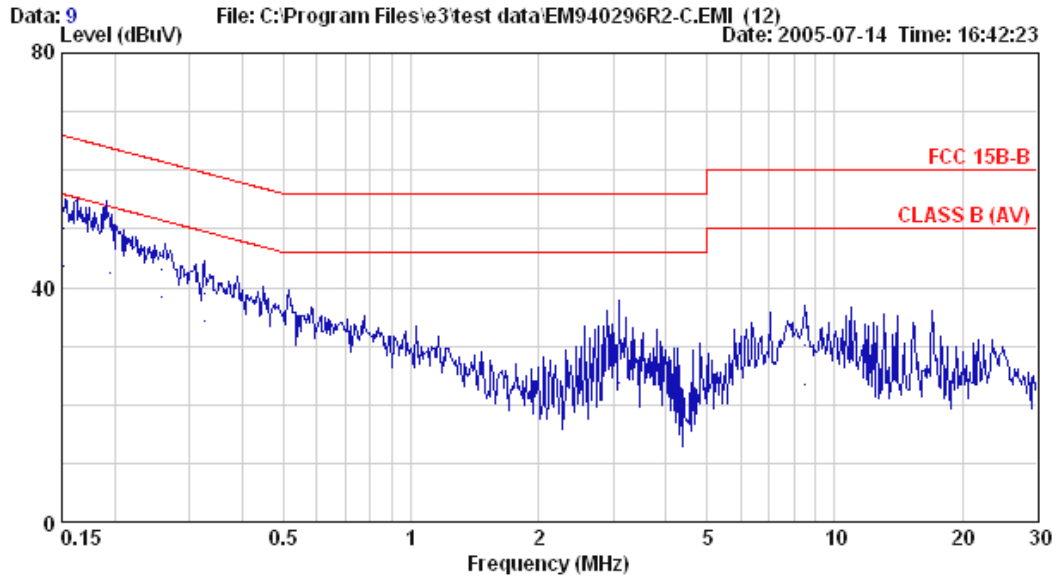
Site : NO.4 Shielded Room Data : 7
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz 31KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.156	0.29	0.20	45.08	45.57	65.69	20.12	QP
2	0.156	0.29	0.20	19.42	19.91	55.69	35.78	AVERAGE
3	0.193	0.21	0.21	50.71	51.13	63.90	12.77	QP
4	0.193	0.21	0.21	42.12	42.54	53.90	11.36	AVERAGE
5	0.259	0.16	0.22	41.04	41.42	61.47	20.04	QP
6	0.259	0.16	0.22	33.16	33.54	51.47	17.92	AVERAGE
7	0.321	0.13	0.24	37.61	37.98	59.69	21.71	QP
8	0.321	0.13	0.24	28.80	29.17	49.69	20.52	AVERAGE
9	0.385	0.11	0.26	33.70	34.06	58.17	24.10	QP
10	0.385	0.11	0.26	25.83	26.19	48.17	21.97	AVERAGE
11	2.907	0.10	0.53	27.09	27.72	56.00	28.28	QP
12	2.907	0.10	0.53	19.38	20.01	46.00	25.99	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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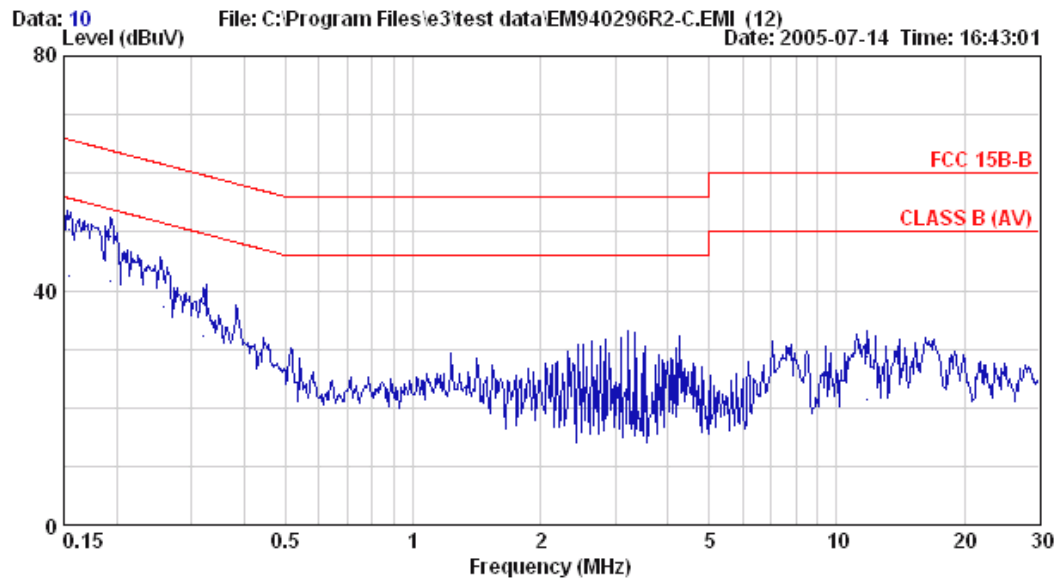
Site : NO.4 Shielded Room Data : 9
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/75Hz 60KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.151	0.30	0.20	49.68	50.18	65.92	15.74	QP
2	0.151	0.30	0.20	43.22	43.72	55.92	12.20	AVERAGE
3	0.195	0.21	0.21	49.88	50.29	63.80	13.51	QP
4	0.195	0.21	0.21	42.06	42.47	53.80	11.33	AVERAGE
5	0.257	0.16	0.22	42.64	43.02	61.51	18.49	QP
6	0.257	0.16	0.22	37.98	38.36	51.51	13.15	AVERAGE
7	0.327	0.13	0.24	38.62	38.99	59.54	20.55	QP
8	0.327	0.13	0.24	34.04	34.41	49.54	15.13	AVERAGE
9	3.097	0.10	0.54	29.73	30.37	56.00	25.63	QP
10	3.097	0.10	0.54	23.19	23.83	46.00	22.17	AVERAGE
11	8.504	0.18	0.68	29.45	30.31	60.00	29.69	QP
12	8.504	0.18	0.68	22.52	23.38	50.00	26.62	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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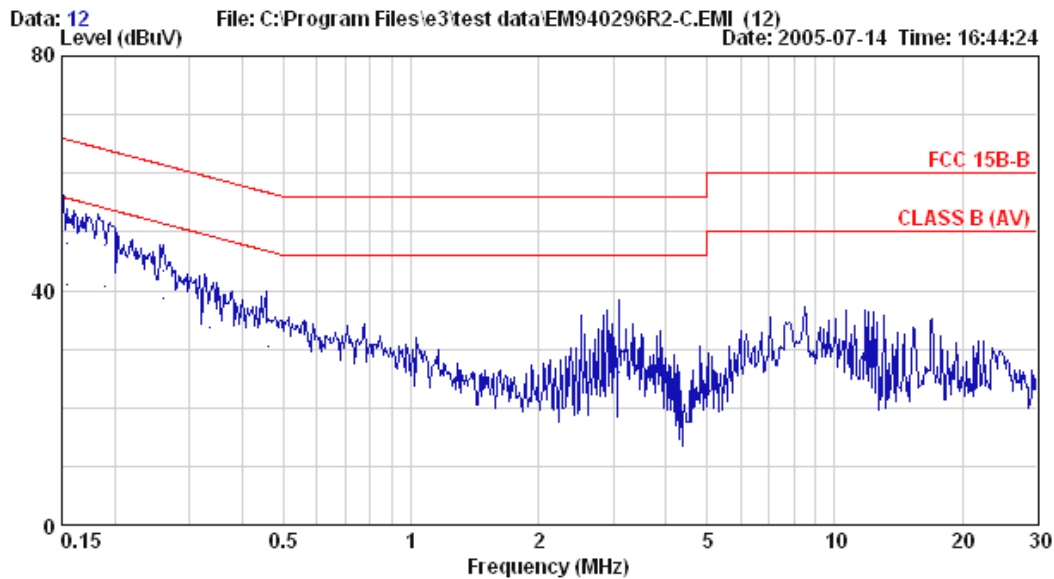
Site : NO.4 Shielded Room Data : 10
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/75Hz 60KHz

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.155	0.29	0.20	49.88	50.37	65.74	15.38	QP
2	0.155	0.29	0.20	42.06	42.55	55.74	13.20	AVERAGE
3	0.193	0.21	0.21	48.92	49.34	63.89	14.55	QP
4	0.193	0.21	0.21	41.06	41.48	53.89	12.41	AVERAGE
5	0.259	0.16	0.22	42.52	42.90	61.46	18.56	QP
6	0.259	0.16	0.22	36.89	37.27	51.46	14.19	AVERAGE
7	0.320	0.13	0.24	37.54	37.91	59.70	21.79	QP
8	0.320	0.13	0.24	31.96	32.33	49.70	17.37	AVERAGE
9	3.224	0.10	0.55	26.53	27.18	56.00	28.82	QP
10	3.224	0.10	0.55	21.03	21.68	46.00	24.32	AVERAGE
11	11.814	0.14	0.70	27.84	28.68	60.00	31.32	QP
12	11.814	0.14	0.70	20.61	21.45	50.00	28.55	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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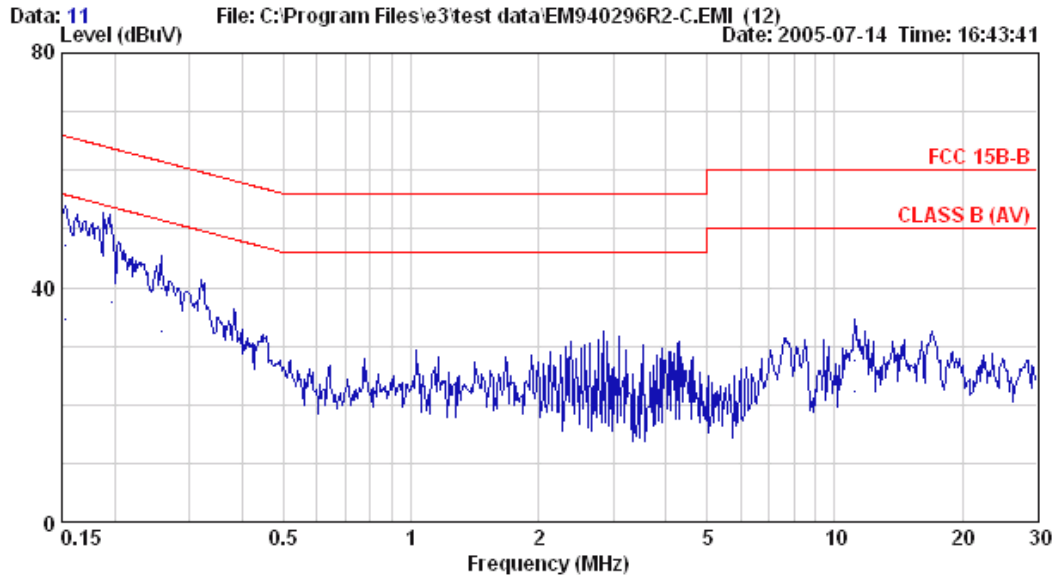
Site : NO.4 Shielded Room Data : 12
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz 80KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.154	0.29	0.20	47.65	48.14	65.79	17.65	QP
2	0.154	0.29	0.20	40.44	40.93	55.79	14.86	AVERAGE
3	0.189	0.22	0.21	47.39	47.82	64.08	16.27	QP
4	0.189	0.22	0.21	40.37	40.80	54.08	13.29	AVERAGE
5	0.260	0.16	0.22	43.11	43.49	61.44	17.94	QP
6	0.260	0.16	0.22	38.37	38.75	51.44	12.68	AVERAGE
7	0.336	0.13	0.24	38.99	39.36	59.31	19.95	QP
8	0.336	0.13	0.24	33.35	33.72	49.31	15.59	AVERAGE
9	0.460	0.10	0.27	34.92	35.29	56.69	21.40	QP
10	0.460	0.10	0.27	30.22	30.59	46.69	16.10	AVERAGE
11	3.101	0.10	0.54	30.24	30.88	56.00	25.12	QP
12	3.101	0.10	0.54	25.41	26.05	46.00	19.95	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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Email:ttmc@ttmc.com.tw



Site : NO.4 Shielded Room Data : 11
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 28°C/65% ESCS30 Engineer: Jingo
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz 80KHz

	Freq.	LISN	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.153	0.29	0.20	46.70	47.19	65.85	18.66	QP
2	0.153	0.29	0.20	34.22	34.71	55.85	21.14	AVERAGE
3	0.197	0.21	0.21	49.86	50.27	63.75	13.48	QP
4	0.197	0.21	0.21	37.06	37.47	53.75	16.28	AVERAGE
5	0.258	0.16	0.22	39.40	39.78	61.51	21.72	QP
6	0.258	0.16	0.22	32.22	32.60	51.51	18.90	AVERAGE
7	0.388	0.10	0.26	31.73	32.09	58.10	26.01	QP
8	0.388	0.10	0.26	31.03	31.39	48.10	16.71	AVERAGE
9	3.101	0.10	0.54	27.35	27.99	56.00	28.01	QP
10	3.101	0.10	0.54	23.03	23.67	46.00	22.33	AVERAGE
11	11.144	0.13	0.70	26.82	27.65	60.00	32.35	QP
12	11.144	0.13	0.70	21.59	22.42	50.00	27.58	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 tests :

3.1.1. For 30MHz~1000MHz Frequency

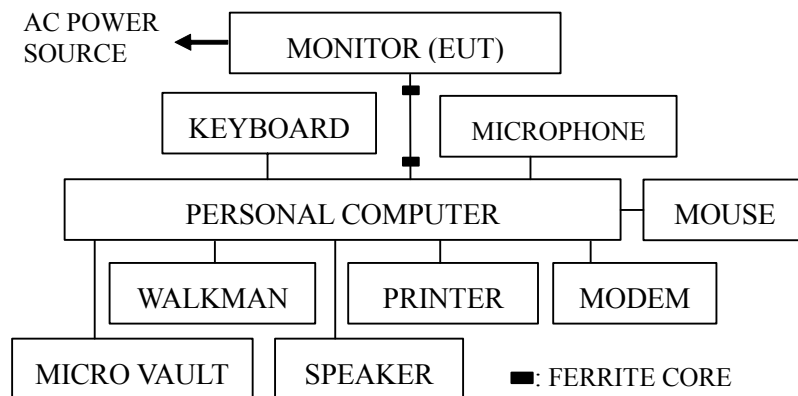
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	Rohde&Schwarz	ESVS10	845165/018	Jun.08, 05'	Jun.07, 06'
2.	Broadband Antenna	Chase	VBA6106A	1263	Nov.15, 04'	Nov.14, 05'
3.	Log Periodic Antenna	Chase	UPA6109	1020	Nov.15, 04'	Nov.14, 05'

3.1.2. Above 1GHz Frequency

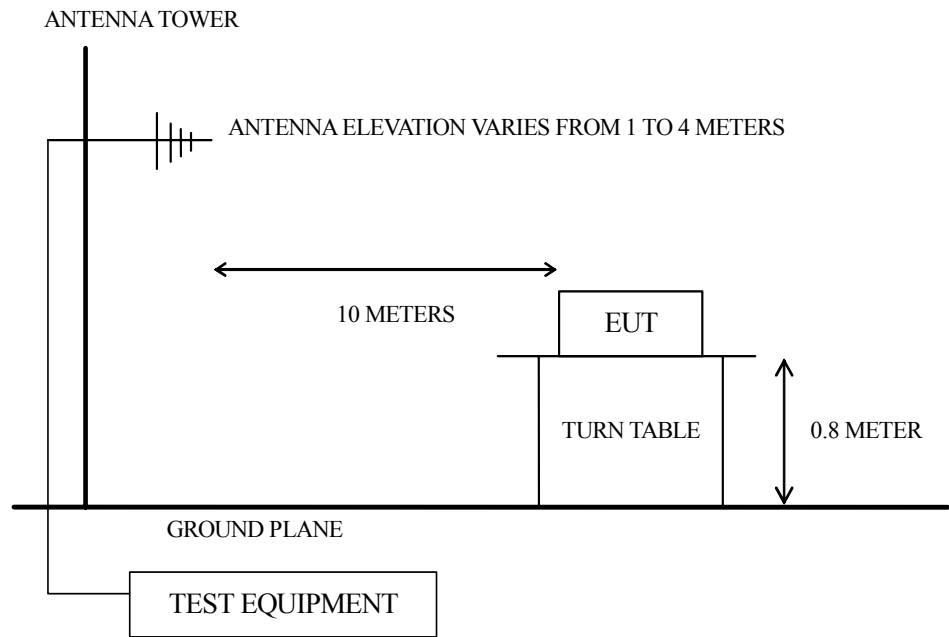
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY42000132	Jun.04, 05'	Jun.03, 06'
2.	Amplifier	HP	8449B	3008A00529	Jan.14, 05'	Jan.13, 06'
3.	Horn Antenna	EMCO	3115	9609-4927	Jul. 08, 05'	Jul. 07, 06'

3.2. Block Diagram of Test Setup

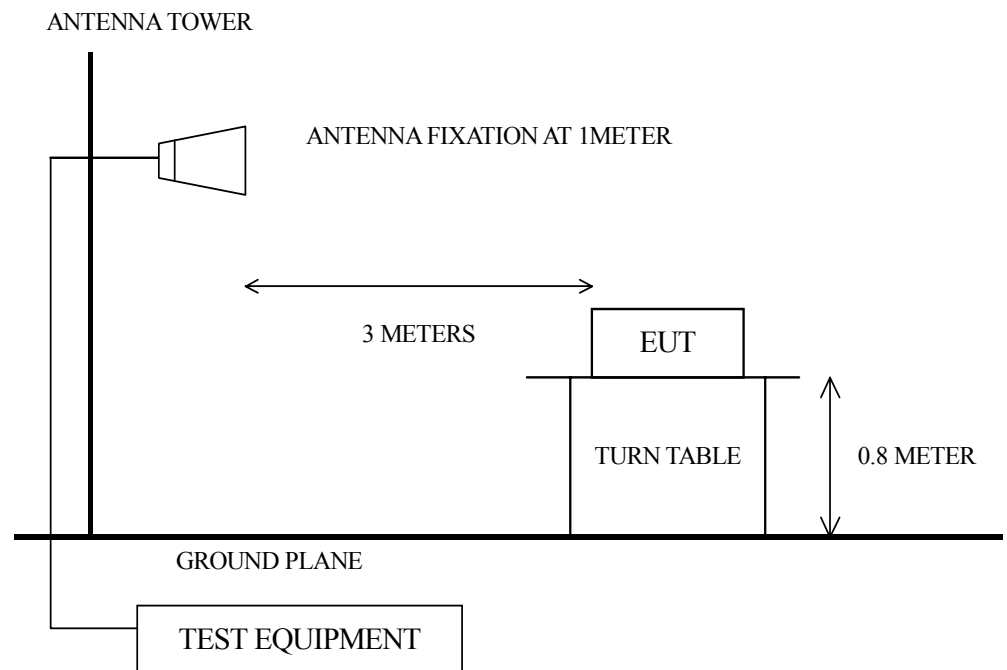
3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Open Area Test Site Setup Diagram (10m) for 30-1000MHz



3.2.3. Open Area Test Site Setup Diagram (3m) for above 1GHz



3.3. Radiation Limit (15.109/CISPR 22, 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 (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000 ~ 2000	3	74.0 (Peak)
1000 ~ 2000	3	54.0 (Average)

- Note :
- (1) 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 E.U.T.
 - (3) There is no over 1GHz limits in CISPR 22 standard. Therefor, a FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.109 (g).
 - (4) The 3m limit apply relation: $L2 = L1(d1/d2)$

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

- 3.6.1. For Frequency Range 30MHz-1000MHz measurement at distance of 10m at open area test site:

The EUT and its simulators were 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 10 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 at open area test site, bilog antenna at simple anechoic chamber) 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 checked with Peak detector and all final readings of measurement were with Quasi-Peak detector at open area test site.

3.6.2. For Frequency Range 1GHz-2GHz measurement at distance of 3m at open area test site:

The EUT and its simulators were placed on a turn table which was 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level, EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. The antenna was fixed at 1 meter high (maximum emission level receiving position) above the ground. A calibrated Horn Antenna was used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement, and both average and peak emission level were recorded from spectrum analyzer. In order to find the maximum emission level, all the interface cables were manipulated according to ANSI C63.4-2003 on radiated measurement.

The resolution bandwidth of spectrum analyzer E7405A was set at 1MHz.

The frequency range from 1GHz to 2GHz was pre-scanned and all final readings of measurement were with Peak detector and Average detector at open area test site.

3.7. Radiated Emission Measurement Results

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

For 30~1000MHz Frequency Range

EUT with following test modes were measured during this section testing and all the test results are attached in next pages.

Test Date : Jul. 14, 2005 Temperature : 32°C Humidity : 61%

The details of test modes are as follows :

Mode	Model No. (Serial No.)	LCD Panel (Power Board)	Frequency / Resolution.	Reference Test Data No.	
				Horizontal	Vertical
1.	190C6 (TY0405233)	QDI (Delta)	640*480/60Hz, 31kHz	15	16
2.			1024*768/75Hz, 60kHz	14	13
※ 3.			1280*1024/75Hz, 80kHz	12	11

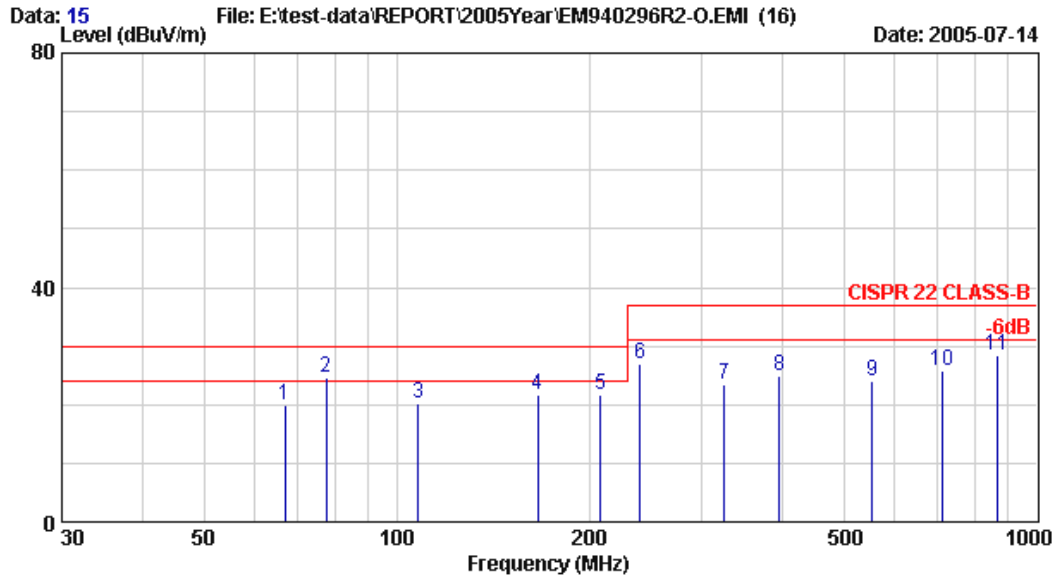
(※ mode for maximum detected emission)

For 1 ~ 2GHz Frequency Range

We attached the spectrum above 1GHz, measured and found the noise from EUT was lower than ambient.



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Email:ttmc@ttmc.com.tw



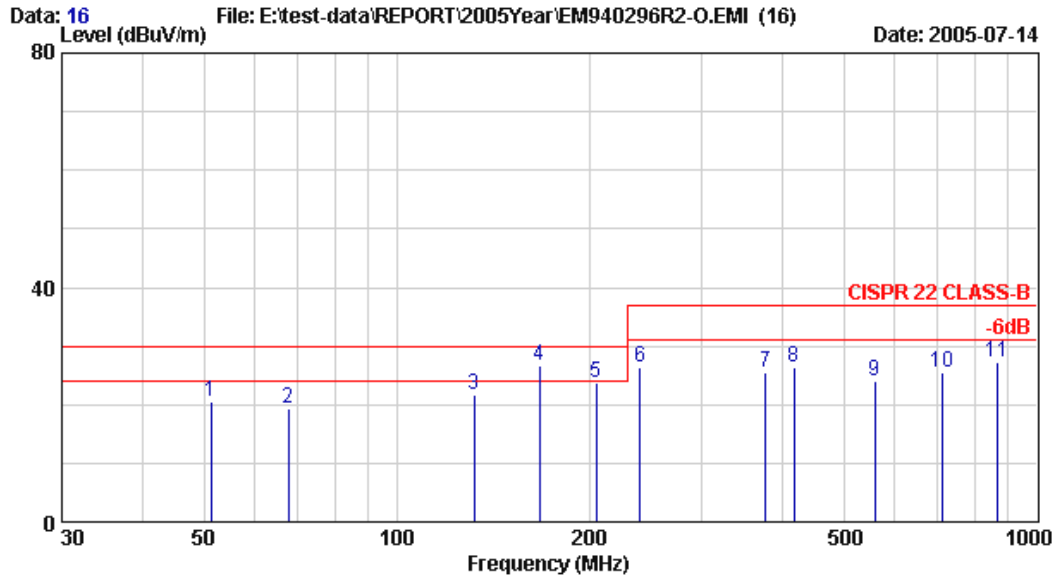
Site no. : NO.4 Open Site Data no. : 15
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz ; 31KHz
S/N:TY0405233

		Ant.	Cable		Emission		
Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	66.850	12.65	0.87	6.30	19.82	30.00	10.18
2	77.648	13.66	0.93	10.15	24.73	30.00	5.27
3	108.202	18.49	1.11	0.50	20.10	30.00	9.90
4	166.312	21.03	1.37	-0.74	21.66	30.00	8.34
5	208.307	21.62	1.53	-1.41	21.75	30.00	8.25
6	239.830	22.63	1.62	2.75	27.00	37.00	10.00
7	325.210	14.46	1.96	7.09	23.51	37.00	13.49
8	396.617	15.99	2.18	6.85	25.02	37.00	11.98
9	553.844	20.03	2.55	1.49	24.07	37.00	12.93
10	711.097	21.58	3.07	1.23	25.88	37.00	11.12
11	868.324	24.69	3.37	0.26	28.33	37.00	8.67

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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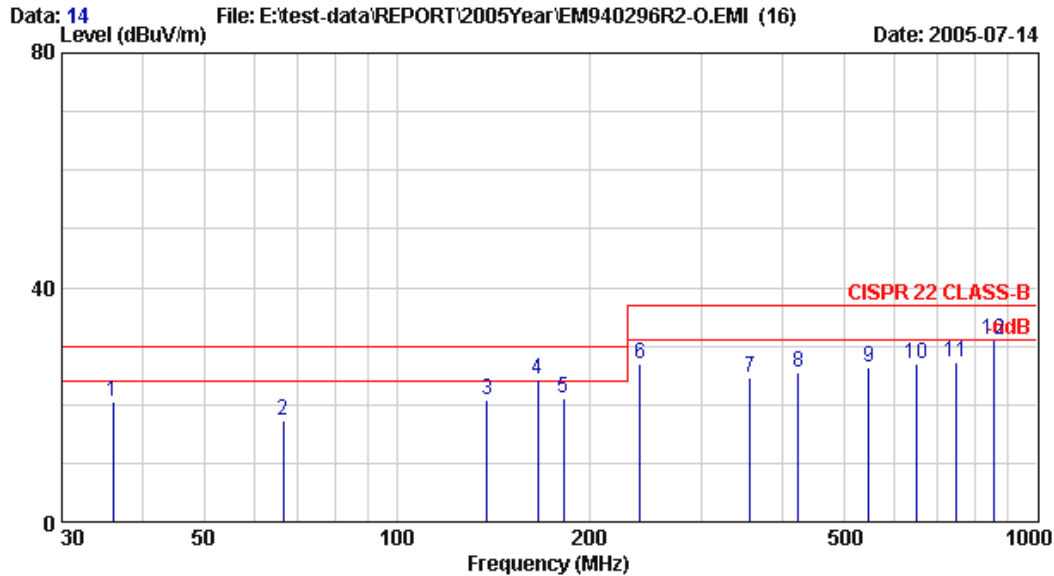
Site no. : NO.4 Open Site Data no. : 16
 Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : VERTICAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
 EUT : Flat Panel Color Monitor M/N:190C6
 Power Rating : 120Vac/60Hz
 Test Mode : 640*480/60Hz ; 31KHz
 S/N:TY0405233

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	51.288	15.64	0.75	4.19	20.58	30.00	9.42	
2	67.822	12.52	0.88	6.06	19.45	30.00	10.55	
3	132.060	19.63	1.20	1.00	21.82	30.00	8.18	
4	167.374	21.16	1.37	4.11	26.64	30.00	3.36	
5	205.230	22.43	1.57	-0.30	23.70	30.00	6.30	
6	239.973	22.65	1.62	2.22	26.49	37.00	10.51	
7	377.506	15.38	2.12	7.86	25.35	37.00	11.65	
8	417.952	17.04	2.25	7.02	26.30	37.00	10.70	
9	559.100	20.38	2.57	1.20	24.15	37.00	12.85	
10	711.338	21.43	3.07	0.90	25.40	37.00	11.60	
11	868.426	24.39	3.37	-0.60	27.16	37.00	9.84	

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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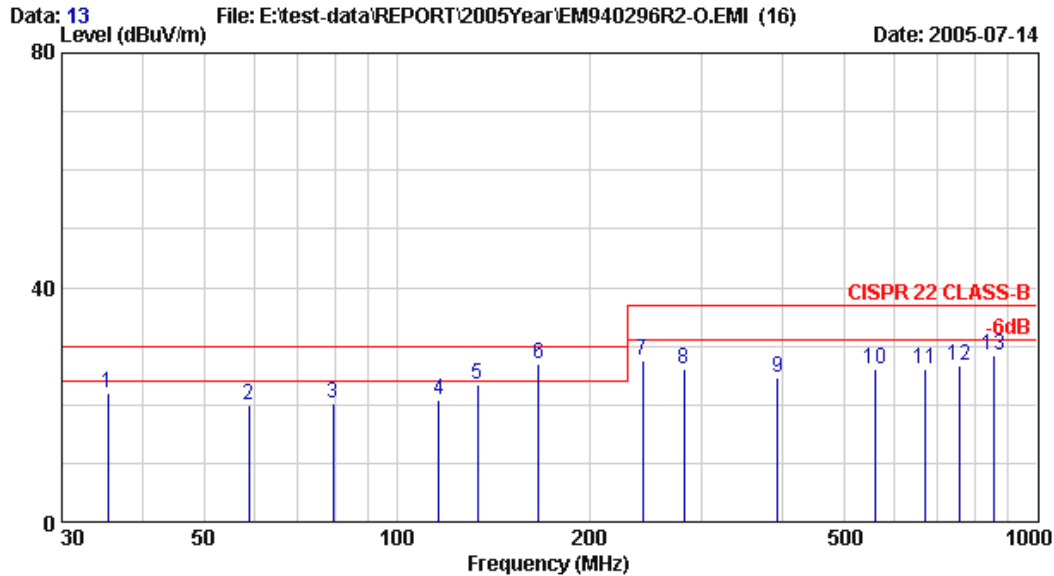
Site no. : NO.4 Open Site Data no. : 14
 Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
 EUT : Flat Panel Color Monitor M/N:190C6
 Power Rating : 120Vac/60Hz
 Test Mode : 1024*768/75Hz ; 60KHz
 S/N:TY0405233

	Freq.	Ant.	Cable		Emission		
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)
1	36.102	20.79	0.60	-0.85	20.54	30.00	9.46
2	66.592	12.65	0.87	3.84	17.36	30.00	12.64
3	138.622	20.56	1.29	-1.05	20.80	30.00	9.20
4	166.294	21.03	1.37	1.95	24.35	30.00	5.65
5	182.360	21.11	1.53	-1.53	21.11	30.00	8.89
6	240.260	22.77	1.62	2.69	27.08	37.00	9.92
7	356.151	15.36	2.11	7.11	24.58	37.00	12.42
8	423.657	16.48	2.27	6.70	25.44	37.00	11.56
9	546.318	19.09	2.53	4.70	26.32	37.00	10.68
10	647.962	21.63	2.89	2.31	26.83	37.00	10.17
11	748.962	23.02	3.18	1.00	27.20	37.00	9.80
12	855.269	24.80	3.37	3.01	31.18	37.00	5.82

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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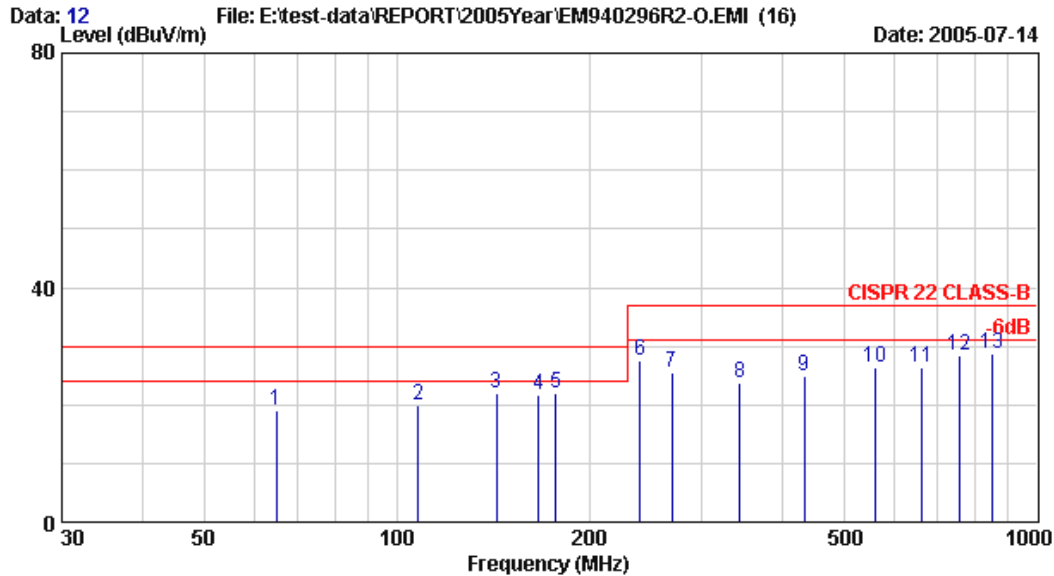
Site no. : NO.4 Open Site Data no. : 13
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/75Hz ; 60KHz
S/N:TY0405233

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	35.431	21.60	0.59	-0.26	21.94	30.00	8.06	
2	58.762	14.07	0.84	5.12	20.03	30.00	9.97	
3	79.666	14.21	0.94	5.14	20.29	30.00	9.71	
4	116.396	17.76	1.10	1.92	20.78	30.00	9.22	
5	133.660	19.71	1.22	2.60	23.53	30.00	6.47	
6	166.738	21.15	1.37	4.30	26.82	30.00	3.18	
7	242.462	22.48	1.63	3.56	27.67	37.00	9.33	
8	281.051	23.36	1.74	1.12	26.21	37.00	10.79	
9	393.704	16.85	2.16	5.71	24.72	37.00	12.28	
10	558.174	20.38	2.56	3.00	25.94	37.00	11.06	
11	668.400	21.64	2.95	1.37	25.96	37.00	11.04	
12	756.275	23.44	3.20	-0.10	26.54	37.00	10.46	
13	854.650	25.24	3.37	-0.06	28.55	37.00	8.45	

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. : 12
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : HORIZONTAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz ; 80KHz
S/N:TYO405233

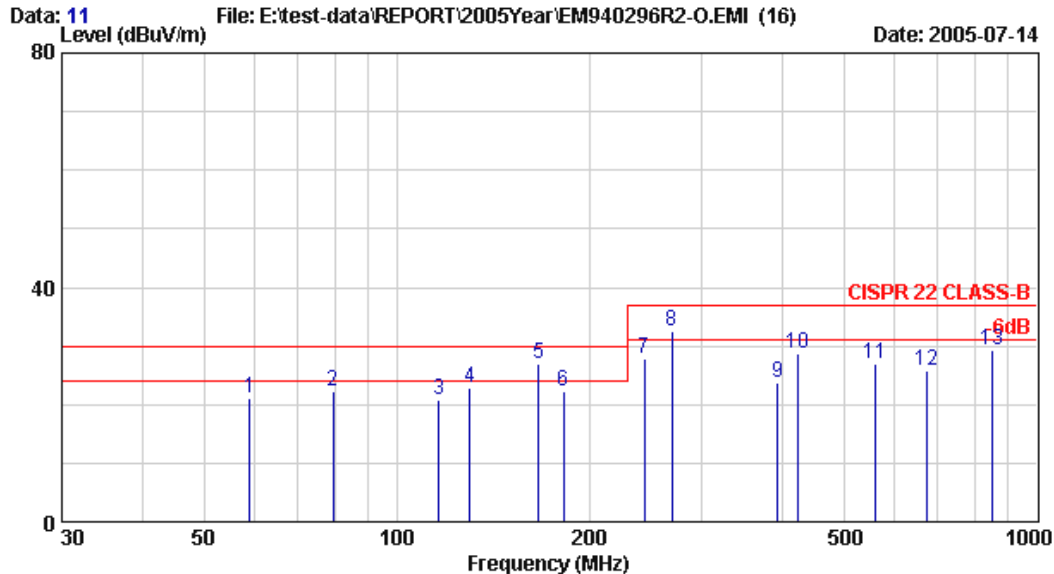
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	64.812	12.90	0.87	5.15	18.92	30.00	11.08	
2	108.165	18.49	1.11	0.22	19.82	30.00	10.18	
3	143.161	20.48	1.34	0.03	21.85	30.00	8.15	
4	166.412	21.03	1.37	-0.79	21.61	30.00	8.39	
5	177.447	21.04	1.43	-0.40	22.07	30.00	7.93	*
6	240.335	22.77	1.62	3.05	27.44	37.00	9.56	
7	268.723	23.91	1.72	-0.14	25.49	37.00	11.51	
8	343.599	14.53	2.08	7.20	23.81	37.00	13.19	
9	432.602	16.70	2.30	5.90	24.90	37.00	12.10	
10	558.195	20.59	2.57	3.12	26.28	37.00	10.72	
11	660.528	21.58	2.93	1.92	26.43	37.00	10.57	
12	757.274	23.06	3.20	2.18	28.44	37.00	8.56	
13	850.277	24.82	3.37	0.58	28.76	37.00	8.24	

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 177.447MHz with corrected signal level of 22.07dBμV/m (limit was 30dBμV/m) when the antenna was at horizontal polarization and was at 4m high and the turn table was at 160°.
4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



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Email:ttmc@ttmc.com.tw



Site no. : NO.4 Open Site Data no. : 11
Dis. / Ant. : 10m VBA6106A/UPA6109 Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 32°C/61% ESVS 10 Engineer : ALEX HUANG
EUT : Flat Panel Color Monitor M/N:190C6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz ; 80KHz
S/N:TY0405233

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	59.029	14.07	0.84	6.25	21.16	30.00	8.84	
2	79.662	14.21	0.94	7.06	22.21	30.00	7.79	
3	116.386	17.76	1.10	1.94	20.80	30.00	9.20	
4	129.977	19.55	1.17	2.06	22.78	30.00	7.22	
5	166.713	21.15	1.37	4.31	26.83	30.00	3.17	*
6	182.162	21.53	1.53	-0.70	22.36	30.00	7.64	
7	243.705	22.46	1.64	3.67	27.76	37.00	9.24	
8	268.723	24.09	1.72	6.77	32.58	37.00	4.42	
9	393.770	16.85	2.16	4.60	23.61	37.00	13.39	
10	422.686	17.21	2.27	9.32	28.79	37.00	8.21	
11	557.836	20.28	2.56	4.10	26.94	37.00	10.06	
12	671.611	21.97	2.96	0.81	25.74	37.00	11.26	
13	850.901	25.29	3.37	0.65	29.31	37.00	7.69	

- 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 166.713MHz with corrected signal level of 26.83dB μ V/m (limit was 30dB μ V/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 90°.
4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

4. DEVIATION TO TEST SPECIFICATIONS

During 1GHz to 2GHz frequency range measurement, due to low loss cable length limitation, the horn antenna couldn't move up and down between 1 to 4 meters. But the test result was not affected due to the worst receiving condition of horn antenna should be at 1 meter high for above 1 GHz radiation measurement.

5. PHOTOGRAPHS

5.1. Photos of Conducted Emission Measurement



FRONT VIEW OF CONDUCTED MEASUREMENT



BACK VIEW OF CONDUCTED MEASUREMENT

5.2. Photos of Radiated Measurement at Open Area Test Site (30-1GHz)



FRONT VIEW OF RADIATED MEASUREMENT



BACK VIEW OF RADIATED MEASUREMENT

Test Mode : 1280*1024/75Hz, 80kHz



SETUP WITH MAXIMUM DETECTED EMISSION AT HORIZONTAL POLARIZATION



SETUP WITH MAXIMUM DETECTED EMISSION AT VERTICAL POLARIZATION

5.3. Photos of Radiated Measurement at Open Area Test Site (Above 1GHz)



FRONT VIEW OF RADIATED MEASUREMENT



BACK VIEW OF RADIATED MEASUREMENT



APPLICATION FOR CERTIFICATION
(Class II Permissive Change)
On Behalf of
Philips Electronics Industries (Taiwan) Ltd.
Flat Panel Color Monitor
Model No. : 190X6
FCC ID: A3KM141
Brand : PHILIPS

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
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TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Philips Electronics Industries (Taiwan) Ltd.
 Manufacturer : Philips Electronics Industries (Taiwan) Ltd.
 Factory #1 : Skyway (Dong Guan) Monitor Factory
 Factory #2 : Philips Consumer Electronics Co., of Suzhou Ltd.
 Factory #3 : Philips Ltd. Assembly Centre Hungary
 EUT Description : Flat Panel Color Monitor
 FCC ID : A3KM141
 (A) MODEL NO. : 190X6
 (B) SERIAL NO. : TY0405135
 (C) BRAND NAME : PHILIPS
 (D) POWER SUPPLY : AC 100-240V~ 60-50Hz
 (E) TEST VOLTAGE : AC 120V/60Hz

Measurement Standard Used:

FCC CFR 47 Part 15 Subpart B/Jan. 2005 and CISPR 22/1997
 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 sections 15.107(a) and 15.109(a)(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 compliant 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 : Jun. 02 ~ 14, 2005

Prepared by : Julie Hsu Jun 30 2005
 (Julie Hsu/Assistant Administrator)

Test Engineer : Tony Lee Jun 30 2005
 (Tony Lee/Section Manager)

Approved & Authorized Signer : Leon Liu Jun 30 2005
 (Leon Liu/Senior Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Flat Panel Color Monitor
Model Number	:	190X6
Serial Number	:	TY0405135
FCC ID.	:	A3KM141
Brand	:	PHILIPS
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 Road, Chungli Industrial Park P.O. Box 123, Chungli, Taoyuan, Taiwan, R.O.C
Factory #1	:	Skyway (Dong Guan) Monitor Factory Industrial Zone, Da Ling Shan Town, Dong Guan City, Guang Dong, China
Factory #2	:	Philips Consumer Electronics Co., of Suzhou Ltd. No. 161, Zhujiang Road, New District, Suzhou 215011, China
Factory #3	:	Philips Ltd. Assembly Centre Hungary Holland Fasar 6. PF 204, H-8002 Szekesfehervar, Hungary
Scanning Frequency	:	Horizontal: 30-83kHz Vertical: 56-76Hz
Max Resolution	:	1280*1024
LCD Panel	:	LG Philips, M/N LM190E03
Scaler IC	:	GM5321
Power Board	:	Lien Chang, Type No. AIP-0093

D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
DVI Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
USB Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.8m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m (3 pin)
Data of Receipt of Sample	:	May 24, 2005
Date of Test	:	Jun. 02 ~ 14, 2005

Remark :

This EUT is a modified version of original FCC ID A3KM141, the differences are as follows:

- (1) add a model (190X6)
- (2) add a new LCD Panel (LG Philips, M/N LM190E03)
- (3) new cabinet style
- (4) add a new base style [Foldable (C shape)].

A modification of EUT was re-measured and the test data reported in this report.

Item \ Model	190X6
Audio	Audio inside the front cabinet
Base	Foldable (C shape)
LCD Panel	LG Philips, M/N LM190E03
Scaler IC	GM5321
Data Cable (Input)	D-Sub 、 DVI
Light Frame	Yes
Power Board	Lien Chang, Type No. AIP-0093
USB connector only	Yes
USB Device (USB HUB)	No

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Name	:	Dell Dim 4600PC
Model Number	:	DMC
Serial Number	:	N/A
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	:	T3A002
FCC ID	:	by DoC
Manufacturer	:	DELL
Data Cable	:	Non-Shielded, Undetachable, 2m

1.2.3. DOT MATRIX PRINTER

Model Number	:	KX-P2135
Serial Number	:	8DMCNC02203
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

1.2.4. MOUSE

Model Number	:	MO71KC
Serial Number	:	406012041
BSMI ID	:	R41108
FCC ID	:	by DoC
Manufacturer	:	DELL
Data Cable	:	Non-Shielded, Undetachable, 2m

1.2.5. MODEM

Model Number	:	DM-1414
Serial Number	:	980034389
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 : HA08715
 Manufacturer : Panasonic
 Data Cable : Non-Shielded, Detachable, 1.8m

1.2.8. EARPHONE (Link to EUT)

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

1.2.9. USB2.0 EXTERNAL HDD (Link to EUT)

Model Number : F12-U
 Serial Number : A0100214-4CG0020
 Manufacturer : TeraSys
 FCC ID : by DoC
 BSMI ID : 3902C223
 Data Cable : Shielded, Detachable, 1.0m

1.3. Test Facility

Name of Firm : **Audix Corporation**
 Technical Division EMC Department
 No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, 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. 3 Open Test Site

No. 67-4, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.

Feb. 09, 2003 Re-File on
 Federal Communication Commission
 Registration Number: 90996

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	$\pm 1.73\text{dB}$
Radiation Test (Distance: 3m)	30MHz~300MHz	$\pm 2.91\text{dB}$
	300MHz~1000MHz	$\pm 2.94\text{dB}$
Radiation Test (Distance: 10m)	30MHz~300MHz	$\pm 2.99\text{dB}$
	300MHz~1000MHz	$\pm 2.73\text{dB}$

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

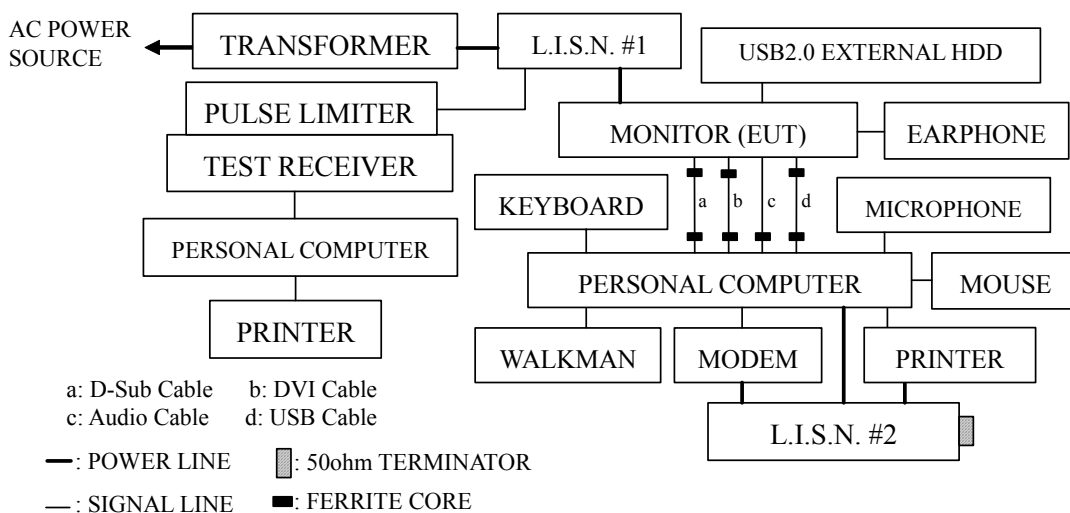
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment were 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	Oct.06, 04'	Oct.05, 05'
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Oct.06, 04'	Oct.05, 05'
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. Flat Panel Color Monitor (EUT) #1

Model Number	:	190X6
Serial Number	:	TY0405135
FCC ID	:	A3KM141
Brand	:	PHILIPS
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd.
LCD Panel	:	LG Philips, M/N LM190E04
Scaler IC	:	GM5321
Power Board	:	Lien Chang, Type No. AIP-0093
D-Sub Data Cable	:	Shielded, Detachable, 1.8m
		Bonded two ferrite cores
DVI Data Cable	:	Shielded, Detachable, 1.8m
		Bonded two ferrite cores
USB Cable	:	Shielded, Detachable, 1.8m
		Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.8m
		Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m (3 pin)

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. Personal computer running the EMI self-test program "H-V1.8" and sent "H" character to Monitor (EUT), the screen of Monitor (EUT) displayed and filled with "H" pattern by EUT's resolution.

2.5.5. Personal Computer running the "Media Player" program and send the music sound to speaker of monitor (EUT) via Audio port.

2.5.6. Repeat the above procedures from 2.5.3 to 2.5.5.

2.5.7. The other peripheral devices were driven and operated in turn during all testing.

2.6. Test Procedure

The EUT was put on table which was above the ground by 80cm and its power cord was connected to the power mains through a line impedance stabilization network (L.I.S.N. #1) and the other peripheral devices power cord were connected to the power mains through a line impedance stabilization network (L.I.S.N. #2) This provided a 50 ohm 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. 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 conducted testing and all the test results are listed in following pages.

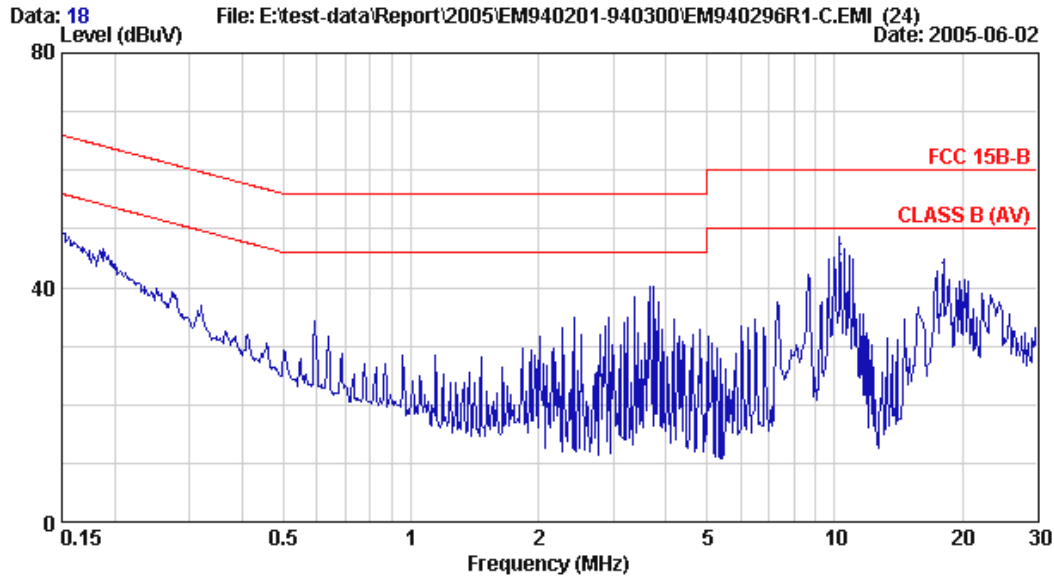
Test Date : Jun. 02, 2005 Temperature : 25°C Humidity : 64%

The details of test modes are as follows :

Mode	Model No. (Serial No.)	LCD Panel (Power Board)	Data Cable	Frequency / Resolution.	Reference Test Data No.	
					Neutral	Line
1.	190X6 (TY0405135)	LG Philips, (Lien Chang)	D-Sub	640*480/60Hz, 30kHz	# 18	# 17
2.				1024*768/75Hz, 61kHz	# 15	# 16
3.				1280*1024/75Hz, 80kHz	# 14	# 13
4.			DVI	640*480/60Hz, 30kHz	# 19	# 20
5.				1024*768/75Hz, 61kHz	# 22	# 21
6.				1280*1024/75Hz, 80kHz	# 23	# 24



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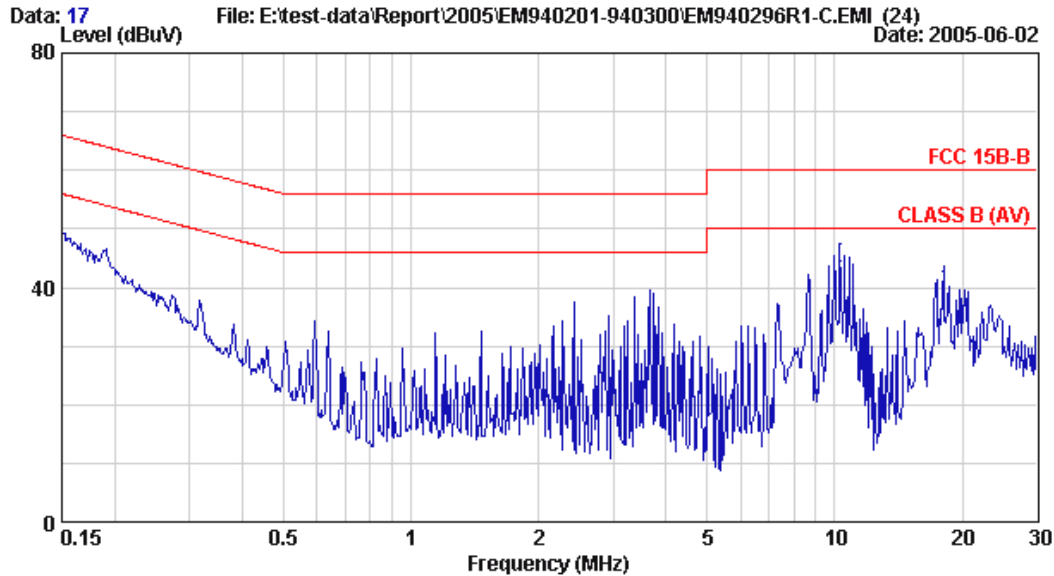
Site : NO.4 Shielded Room Data : 18
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480 /60Hz 30KHz D-SUB

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.150	0.30	0.20	47.58	48.08	65.99	17.91	QP
2	0.150	0.30	0.20	41.74	42.24	55.99	13.75	AVERAGE
3	0.594	0.10	0.30	32.44	32.84	56.00	23.16	QP
4	0.594	0.10	0.30	32.30	32.70	46.00	13.30	AVERAGE
5	3.660	0.10	0.58	39.47	40.15	56.00	15.85	QP
6	3.660	0.10	0.58	39.27	39.95	46.00	6.05	AVERAGE
7	8.727	0.18	0.68	40.19	41.05	60.00	18.95	QP
8	8.727	0.18	0.68	39.82	40.68	50.00	9.32	AVERAGE
9	10.318	0.20	0.70	46.54	47.44	60.00	12.56	QP
10	10.318	0.20	0.70	44.83	45.73	50.00	4.27	AVERAGE
11	18.026	0.26	0.70	43.18	44.14	60.00	15.86	QP
12	18.026	0.26	0.70	39.89	40.85	50.00	9.15	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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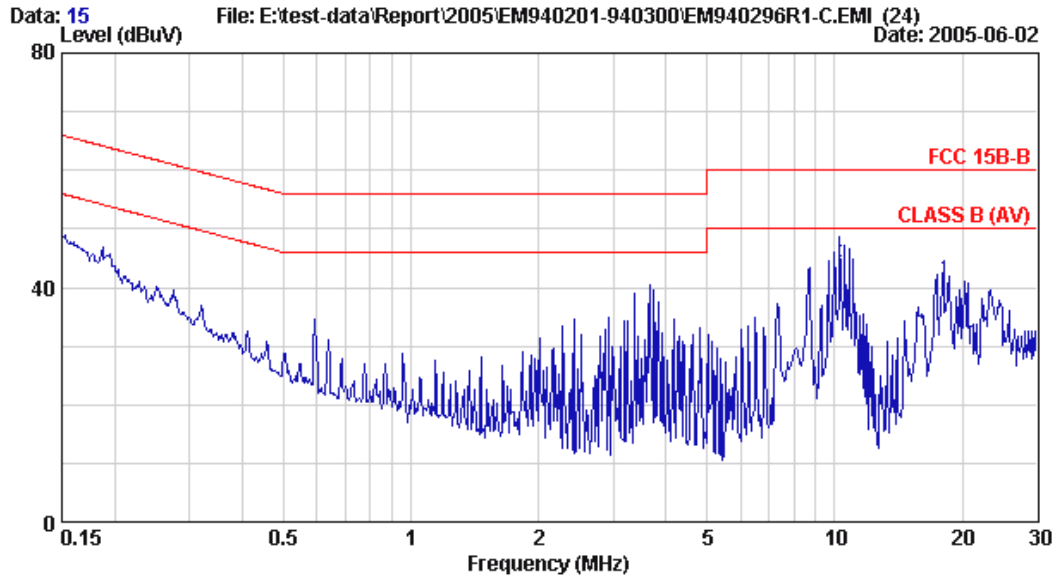
Site : NO.4 Shielded Room Data : 17
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480 /60Hz 30KHz D-SUB

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.150	0.30	0.20	48.33	48.83	66.00	17.17	QP
2	0.150	0.30	0.20	42.09	42.59	56.00	13.41	AVERAGE
3	0.594	0.10	0.31	33.07	33.48	56.00	22.52	QP
4	0.594	0.10	0.31	32.94	33.35	46.00	12.65	AVERAGE
5	3.659	0.10	0.58	39.00	39.68	56.00	16.32	QP
6	3.659	0.10	0.58	38.80	39.48	46.00	6.52	AVERAGE
7	8.727	0.10	0.68	40.47	41.25	60.00	18.75	QP
8	8.727	0.10	0.68	38.84	39.62	50.00	10.38	AVERAGE
9	10.319	0.11	0.70	46.54	47.35	60.00	12.65	QP
10	10.319	0.11	0.70	43.78	44.59	50.00	5.41	AVERAGE
11	18.025	0.26	0.70	41.88	42.84	60.00	17.16	QP
12	18.025	0.26	0.70	39.79	40.75	50.00	9.25	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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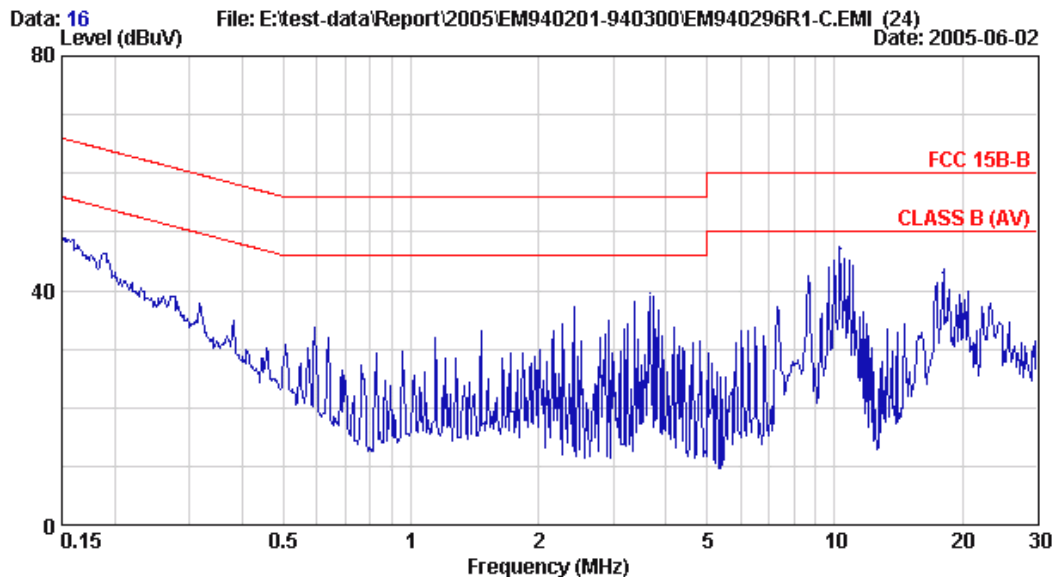
Site : NO.4 Shielded Room Data : 15
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768 /75Hz 61KHz D-SUB

	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	0.150	0.30	0.20	48.23	48.73	65.97	17.25	QP
2	0.150	0.30	0.20	41.44	41.94	55.97	14.04	AVERAGE
3	0.594	0.10	0.30	32.42	32.82	56.00	23.18	QP
4	0.594	0.10	0.30	32.30	32.70	46.00	13.30	AVERAGE
5	3.659	0.10	0.58	39.71	40.39	56.00	15.61	QP
6	3.659	0.10	0.58	39.52	40.20	46.00	5.80	AVERAGE
7	8.726	0.18	0.68	41.27	42.13	60.00	17.87	QP
8	8.726	0.18	0.68	40.21	41.07	50.00	8.93	AVERAGE
9	10.320	0.20	0.70	46.38	47.28	60.00	12.72	QP
10	10.320	0.20	0.70	44.60	45.50	50.00	4.50	AVERAGE
11	18.027	0.26	0.70	43.28	44.24	60.00	15.76	QP
12	18.027	0.26	0.70	39.68	40.64	50.00	9.36	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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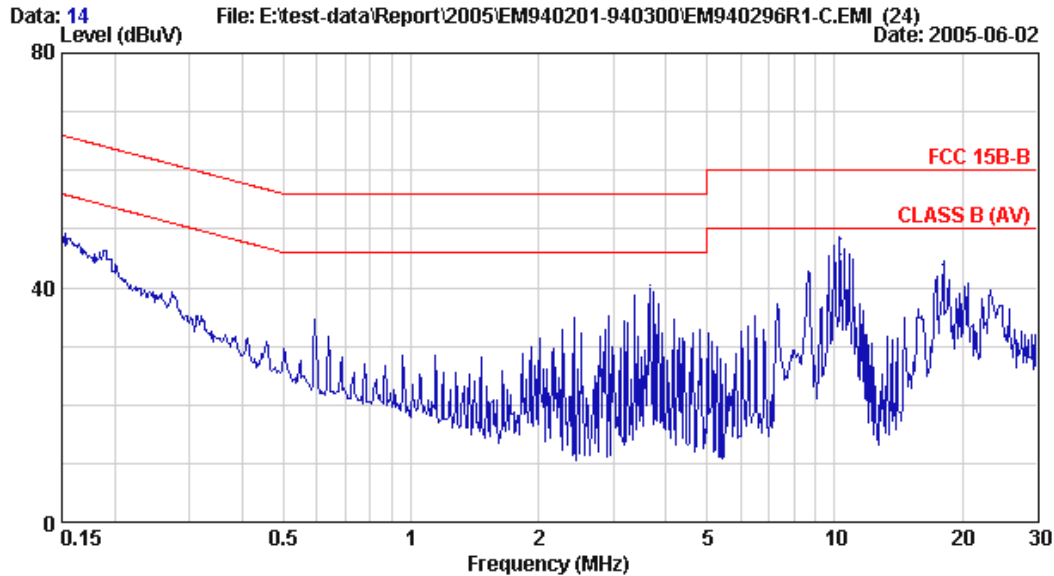
Site : NO.4 Shielded Room Data : 16
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768 /75Hz 61KHz D-SUB

	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	0.151	0.30	0.20	47.05	47.55	65.97	18.42	QP
2	0.151	0.30	0.20	41.70	42.20	55.97	13.77	AVERAGE
3	0.593	0.10	0.30	33.07	33.47	56.00	22.53	QP
4	0.593	0.10	0.30	32.98	33.38	46.00	12.62	AVERAGE
5	3.659	0.10	0.58	39.02	39.70	56.00	16.30	QP
6	3.659	0.10	0.58	38.77	39.45	46.00	6.55	AVERAGE
7	8.727	0.10	0.68	40.47	41.25	60.00	18.75	QP
8	8.727	0.10	0.68	38.64	39.42	50.00	10.58	AVERAGE
9	10.319	0.11	0.70	46.28	47.09	60.00	12.91	QP
10	10.319	0.11	0.70	43.76	44.57	50.00	5.43	AVERAGE
11	18.027	0.26	0.70	42.18	43.14	60.00	16.86	QP
12	18.027	0.26	0.70	39.47	40.43	50.00	9.57	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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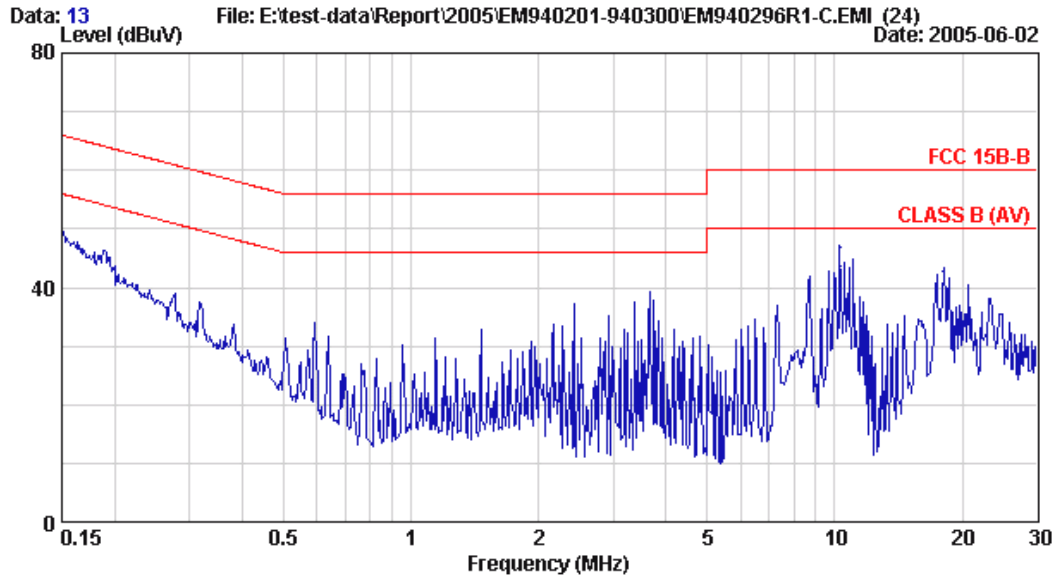
Site : NO.4 Shielded Room Data : 14
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024 /75Hz 80KHz D-SUB

	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	0.150	0.30	0.20	46.56	47.06	65.99	18.93	QP
2	0.150	0.30	0.20	42.71	43.21	55.99	12.78	AVERAGE
3	0.594	0.10	0.30	32.46	32.86	56.00	23.14	QP
4	0.594	0.10	0.30	32.35	32.75	46.00	13.25	AVERAGE
5	3.659	0.10	0.58	39.83	40.51	56.00	15.49	QP
6	3.659	0.10	0.58	39.66	40.34	46.00	5.66	AVERAGE
7	8.726	0.18	0.68	41.44	42.30	60.00	17.70	QP
8	8.726	0.18	0.68	40.19	41.05	50.00	8.95	AVERAGE
9	8.726	0.18	0.68	41.52	42.38	60.00	17.62	QP
10	8.726	0.18	0.68	40.30	41.16	50.00	8.84	AVERAGE
11	10.319	0.20	0.70	47.58	48.48	60.00	11.52	QP
12	10.319	0.20	0.70	44.88	45.78	50.00	4.22	AVERAGE
13	18.025	0.26	0.70	43.10	44.06	60.00	15.94	QP
14	18.025	0.26	0.70	39.96	40.92	50.00	9.08	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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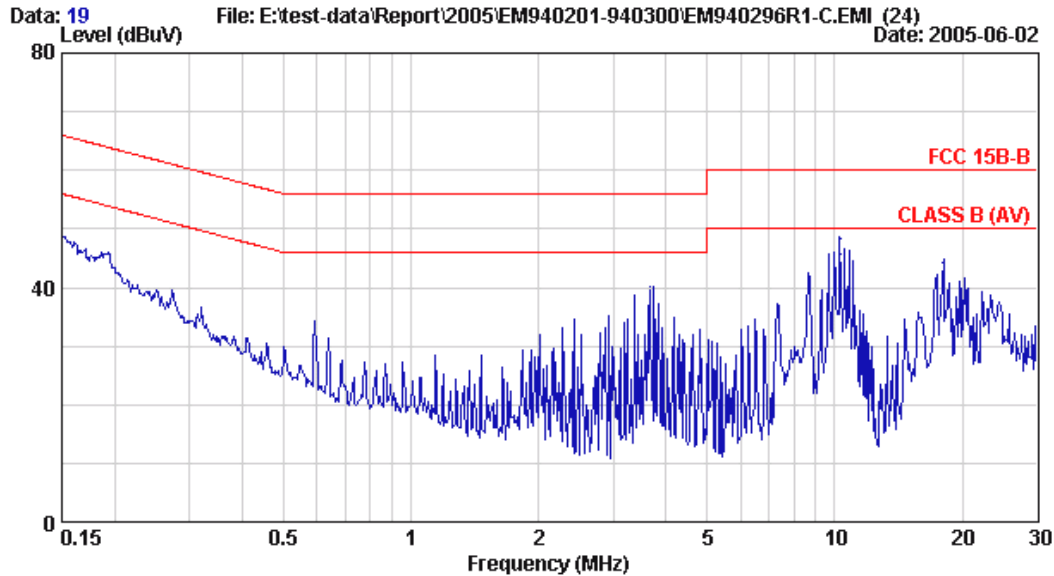
Site : NO.4 Shielded Room Data : 13
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024 /75Hz 80KHz D-SUB

		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dB μ V)	(dB μ V)	(dB μ V)	(dB)	
1	0.151	0.30	0.20	47.13	47.63	65.97	18.34	QP
2	0.151	0.30	0.20	43.23	43.73	55.97	12.24	AVERAGE
3	0.595	0.10	0.31	32.64	33.05	56.00	22.95	QP
4	0.595	0.10	0.31	32.57	32.98	46.00	13.02	AVERAGE
5	3.661	0.10	0.58	38.46	39.14	56.00	16.86	QP
6	3.661	0.10	0.58	38.24	38.92	46.00	7.08	AVERAGE
7	8.727	0.10	0.68	40.01	40.79	60.00	19.21	QP
8	8.727	0.10	0.68	39.33	40.11	50.00	9.89	AVERAGE
9	10.322	0.11	0.70	46.16	46.97	60.00	13.03	QP
10	10.322	0.11	0.70	43.00	43.81	50.00	6.19	AVERAGE
11	18.025	0.26	0.70	41.88	42.84	60.00	17.16	QP
12	18.025	0.26	0.70	39.47	40.43	50.00	9.57	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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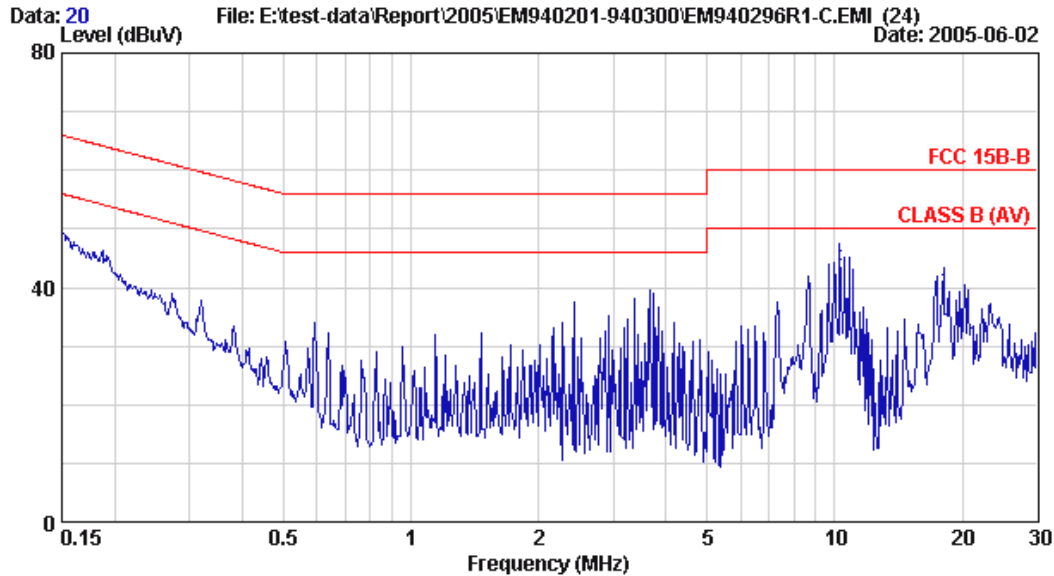
Site : NO.4 Shielded Room Data : 19
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480 /60Hz 30KHz DVI

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.151	0.30	0.20	47.41	47.91	65.97	18.06	QP
2	0.151	0.30	0.20	42.37	42.87	55.97	13.10	AVERAGE
3	0.594	0.10	0.31	33.44	33.85	56.00	22.15	QP
4	0.594	0.10	0.31	33.30	33.71	46.00	12.29	AVERAGE
5	3.659	0.10	0.58	39.57	40.25	56.00	15.75	QP
6	3.659	0.10	0.58	39.39	40.07	46.00	5.93	AVERAGE
7	8.727	0.18	0.68	41.05	41.91	60.00	18.09	QP
8	8.727	0.18	0.68	39.54	40.40	50.00	9.60	AVERAGE
9	10.318	0.20	0.70	47.42	48.32	60.00	11.68	QP
10	10.318	0.20	0.70	44.81	45.71	50.00	4.29	AVERAGE
11	18.026	0.26	0.70	43.16	44.12	60.00	15.88	QP
12	18.026	0.26	0.70	39.87	40.83	50.00	9.17	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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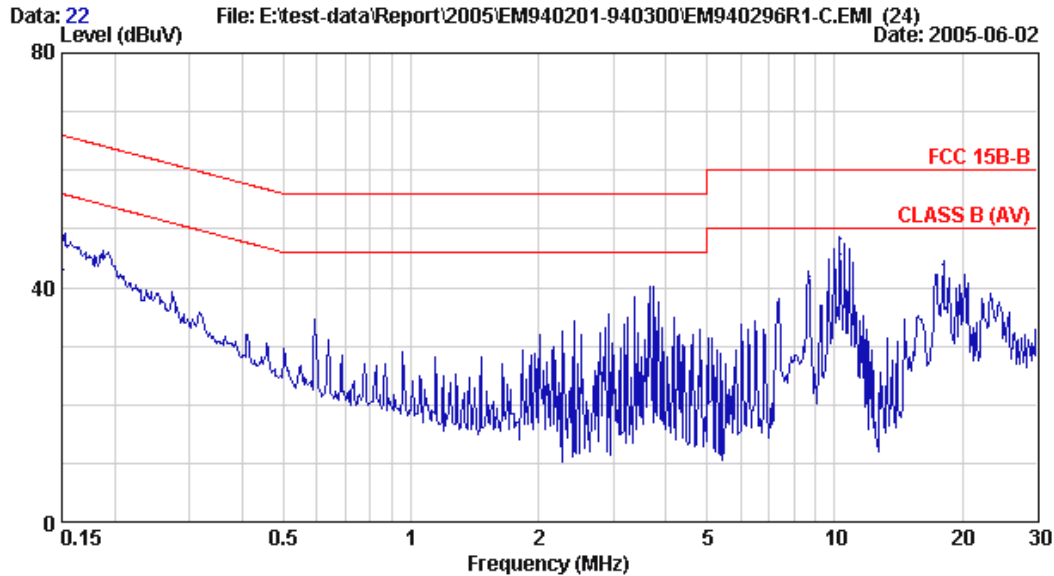
Site : NO.4 Shielded Room Data : 20
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480 /60Hz 30KHz DVI

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.150	0.30	0.20	40.13	40.63	66.00	25.37	QP
2	0.150	0.30	0.20	22.32	22.82	56.00	33.18	AVERAGE
3	0.593	0.10	0.30	33.13	33.53	56.00	22.47	QP
4	0.593	0.10	0.30	33.01	33.41	46.00	12.59	AVERAGE
5	3.660	0.10	0.58	38.80	39.48	56.00	16.52	QP
6	3.660	0.10	0.58	38.62	39.30	46.00	6.70	AVERAGE
7	8.727	0.10	0.68	39.23	40.01	60.00	19.99	QP
8	8.727	0.10	0.68	37.52	38.30	50.00	11.70	AVERAGE
9	10.318	0.11	0.70	45.52	46.33	60.00	13.67	QP
10	10.318	0.11	0.70	43.90	44.71	50.00	5.29	AVERAGE
11	18.027	0.26	0.70	41.12	42.08	60.00	17.92	QP
12	18.027	0.26	0.70	37.35	38.31	50.00	11.69	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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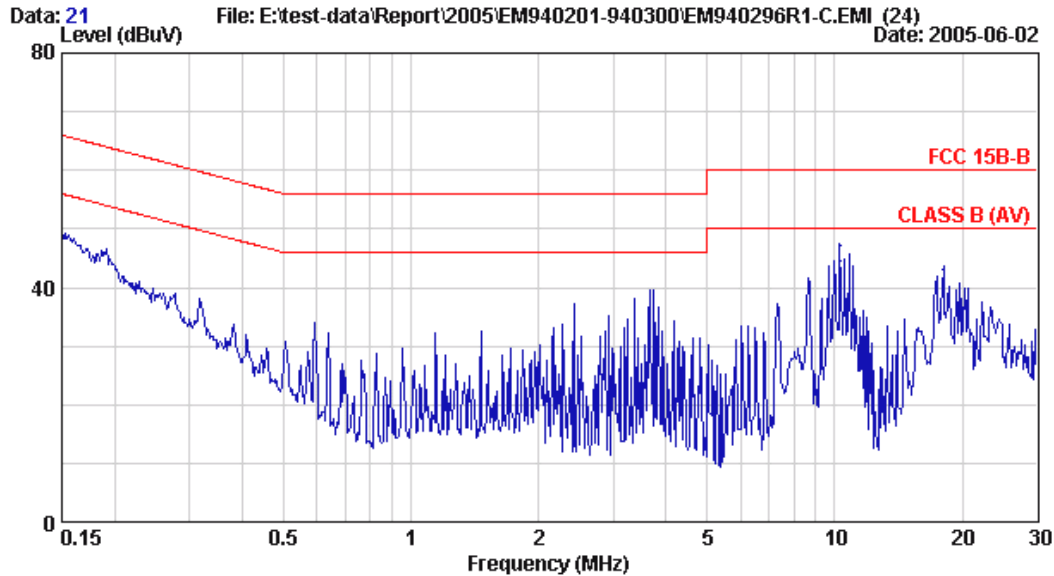
Site : NO.4 Shielded Room Data : 22
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768 /75Hz 61KHz DVI

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Margin (dB)	Remark
1	0.151	0.30	0.20	47.53	48.03	65.96	17.93	QP
2	0.151	0.30	0.20	42.49	42.99	55.96	12.97	AVERAGE
3	0.594	0.10	0.30	32.52	32.92	56.00	23.08	QP
4	0.594	0.10	0.30	32.38	32.78	46.00	13.22	AVERAGE
5	3.660	0.10	0.58	39.49	40.17	56.00	15.83	QP
6	3.660	0.10	0.58	39.33	40.01	46.00	5.99	AVERAGE
7	8.726	0.18	0.68	41.05	41.91	60.00	18.09	QP
8	8.726	0.18	0.68	38.83	39.69	50.00	10.31	AVERAGE
9	10.318	0.20	0.70	47.50	48.40	60.00	11.60	QP
10	10.318	0.20	0.70	44.87	45.77	50.00	4.23	AVERAGE
11	18.024	0.26	0.70	42.88	43.84	60.00	16.16	QP
12	18.024	0.26	0.70	39.75	40.71	50.00	9.29	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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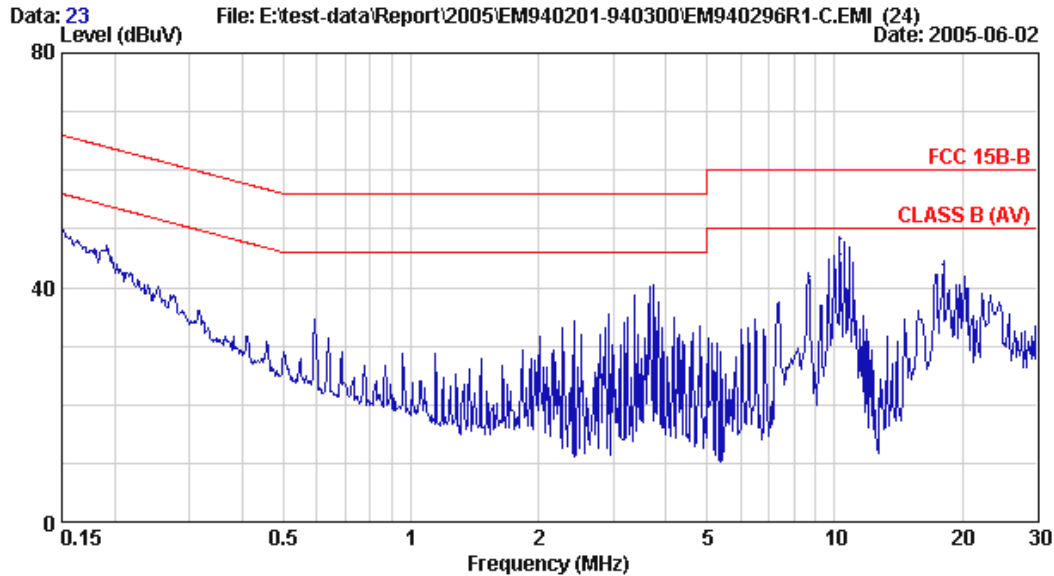
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Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768 /75Hz 61KHz DVI

	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	0.150	0.30	0.20	47.69	48.19	66.00	17.81	QP
2	0.150	0.30	0.20	42.37	42.87	56.00	13.13	AVERAGE
3	0.593	0.10	0.30	33.09	33.49	56.00	22.51	QP
4	0.593	0.10	0.30	32.99	33.39	46.00	12.61	AVERAGE
5	3.659	0.10	0.58	38.88	39.56	56.00	16.44	QP
6	3.659	0.10	0.58	38.69	39.37	46.00	6.63	AVERAGE
7	8.726	0.10	0.68	40.25	41.03	60.00	18.97	QP
8	8.726	0.10	0.68	38.68	39.46	50.00	10.54	AVERAGE
9	10.317	0.11	0.70	46.42	47.23	60.00	12.77	QP
10	10.317	0.11	0.70	43.78	44.59	50.00	5.41	AVERAGE
11	18.025	0.26	0.70	42.08	43.04	60.00	16.96	QP
12	18.025	0.26	0.70	39.67	40.63	50.00	9.37	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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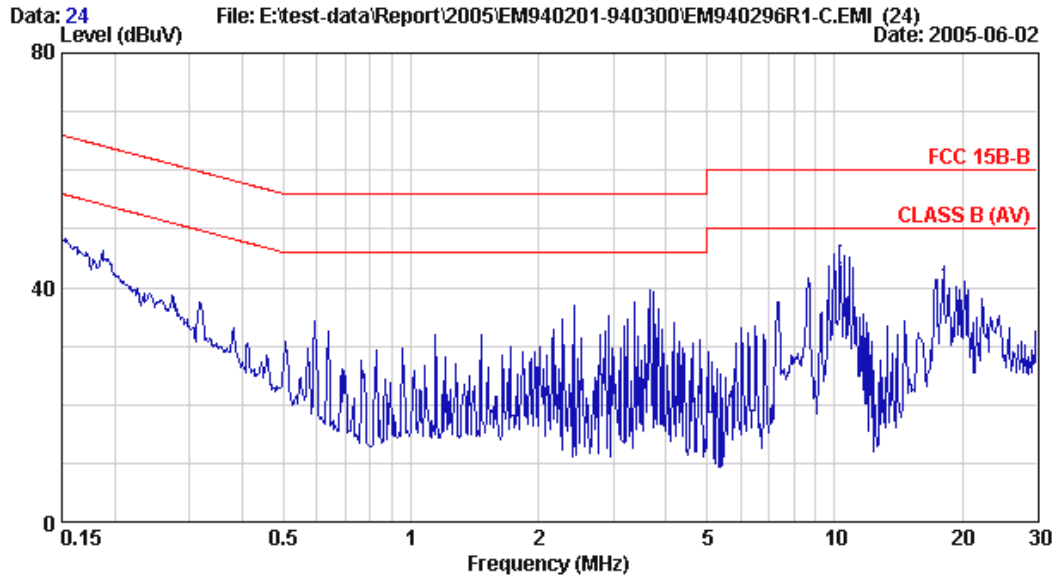
Site : NO.4 Shielded Room Data : 23
Condition : KNW-407 Phase : NEUTRAL
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024 /75Hz 80KHz DVI

	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	0.151	0.30	0.20	48.55	49.05	65.97	16.92	QP
2	0.151	0.30	0.20	42.65	43.15	55.97	12.82	AVERAGE
3	0.594	0.10	0.30	33.52	33.92	56.00	22.08	QP
4	0.594	0.10	0.30	32.40	32.80	46.00	13.20	AVERAGE
5	3.659	0.10	0.58	39.51	40.19	56.00	15.81	QP
6	3.659	0.10	0.58	39.33	40.01	46.00	5.99	AVERAGE
7	8.726	0.18	0.68	40.91	41.77	60.00	18.23	QP
8	8.726	0.18	0.68	38.59	39.45	50.00	10.55	AVERAGE
9	10.317	0.20	0.70	47.34	48.24	60.00	11.76	QP
10	10.317	0.20	0.70	44.88	45.78	50.00	4.22	AVERAGE
11	18.024	0.26	0.70	43.06	44.02	60.00	15.98	QP
12	18.024	0.26	0.70	39.83	40.79	50.00	9.21	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 : 24
Condition : KNW-407 Phase : LINE
Limit : FCC 15B-B
Env. / Ins. : 25°C/ 64% ESHS10 Engineer: Tim
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024 /75Hz 80KHz DVI

	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	0.150	0.30	0.20	46.90	47.40	65.98	18.58	QP
2	0.150	0.30	0.20	43.62	44.12	55.98	11.86	AVERAGE
3	0.594	0.10	0.30	33.25	33.65	56.00	22.35	QP
4	0.594	0.10	0.30	33.10	33.50	46.00	12.50	AVERAGE
5	3.659	0.10	0.58	38.88	39.56	56.00	16.44	QP
6	3.659	0.10	0.58	38.69	39.37	46.00	6.63	AVERAGE
7	8.725	0.10	0.68	40.08	40.86	60.00	19.14	QP
8	8.725	0.10	0.68	38.59	39.37	50.00	10.63	AVERAGE
9	10.318	0.11	0.70	46.48	47.29	60.00	12.71	QP
10	10.318	0.11	0.70	43.37	44.18	50.00	5.82	AVERAGE
11	18.026	0.26	0.70	42.02	42.98	60.00	17.02	QP
12	18.026	0.26	0.70	38.73	39.69	50.00	10.31	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 tests :

3.1.1. For 30MHz~1000MHz Frequency

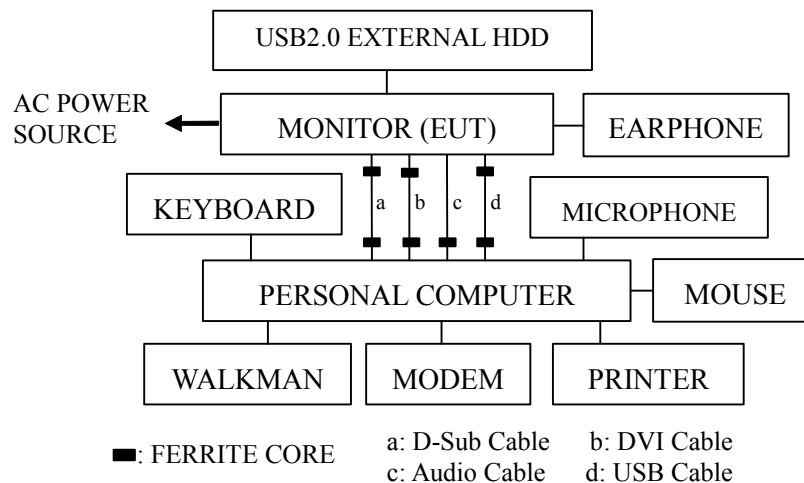
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8590L	3710A01838	N/A	N/A
2.	Test Receiver	Rohde & Schwarz	ESVS10	845165/002	Apr.22, 05'	Apr.21, 06'
3.	Amplifier	HP	8447D	2727A06154	N/A	N/A
4.	Broadband Antenna	Chase	VBA6106A	1231	Nov.15, 04'	Nov.14, 05'
5.	Log Periodic Antenna	Chase	UPA6109	1027	Nov.15, 04'	Nov.14, 05'

3.1.2. Above 1GHz Frequency

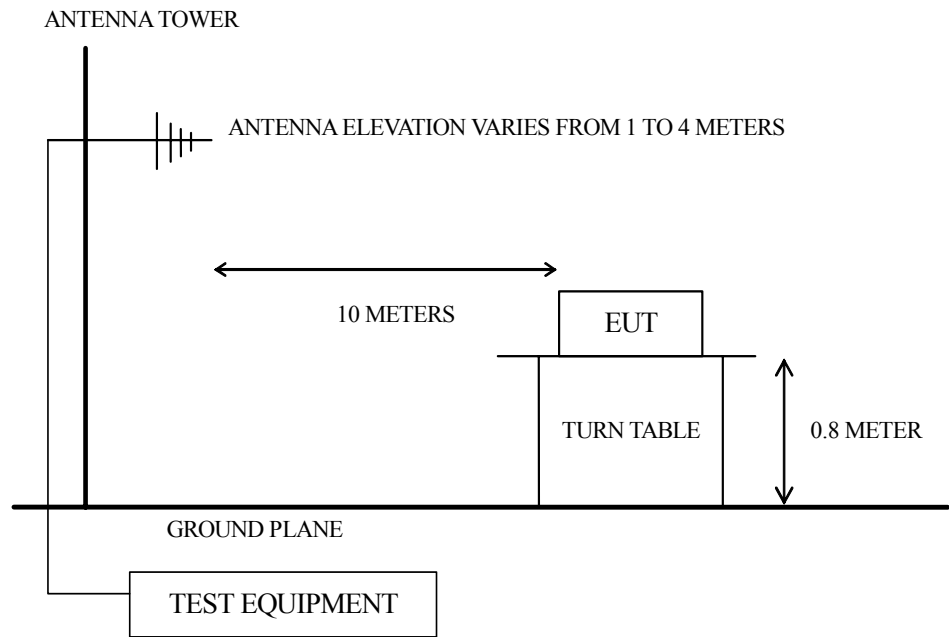
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY42000132	Jun.04, 05'	Jun.03, 06'
2.	Amplifier	HP	8449B	3008A01284	Jul.02, 04'	Jul.01, 05'
3.	Horn Antenna	EMCO	3115	9609-4927	Jul.06, 04'	Jul.05, 05'

3.2. Block Diagram of Test Setup

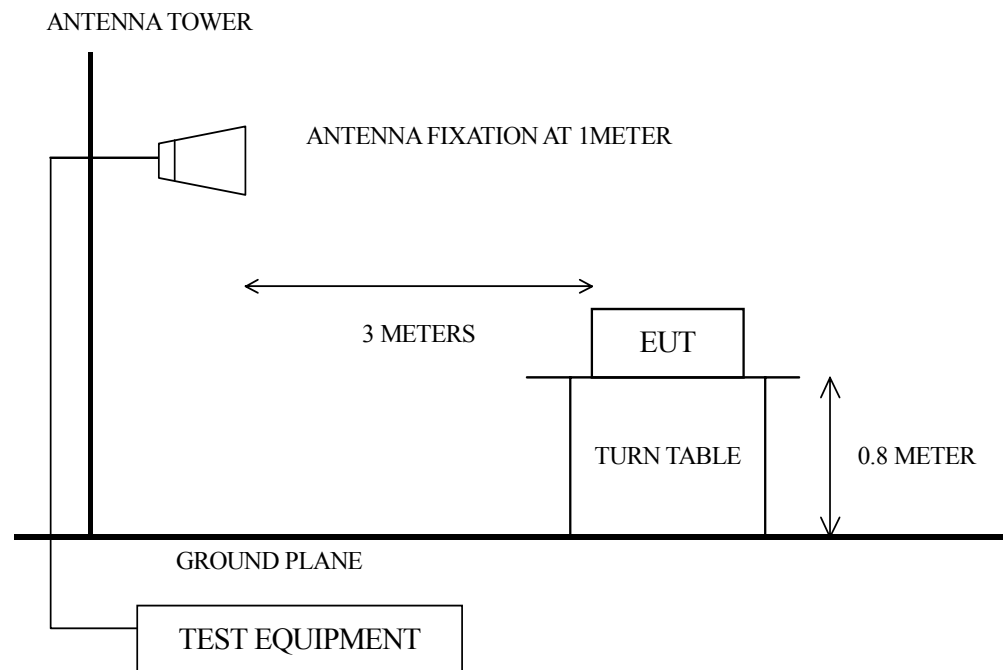
3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Open Area Test Site Setup Diagram (10m) for 30-1000MHz



3.2.3. Open Area Test Site Setup Diagram (3m) for above 1GHz



3.3. Radiation Limit (15.109/CISPR 22, 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 (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000 ~ 2000	3	74.0 (Peak)
1000 ~ 2000	3	54.0 (Average)

- Note :
- (1) 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 E.U.T.
 - (3) There is no over 1GHz limits in CISPR 22 standard. Therefor, a FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.109 (g).
 - (4) The 3m limit apply relation: $L2 = L1(d1/d2)$

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

- 3.6.1. For Frequency Range 30MHz-1000MHz measurement at distance of 10m at open area test site:

The EUT and its simulators were 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 10 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 at open area test site, bilog antenna at simple anechoic chamber) 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 checked with Peak detector and all final readings of measurement were with Quasi-Peak detector at open area test site.

3.6.2. For Frequency Range 1GHz-2GHz measurement at distance of 3m at open area test site:

The EUT and its simulators were placed on a turn table which was 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level, EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. The antenna was fixed at 1 meter high (maximum emission level receiving position) above the ground. A calibrated Horn Antenna was used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement, and both average and peak emission level were recorded from spectrum analyzer. In order to find the maximum emission level, all the interface cables were manipulated according to ANSI C63.4-2003 on radiated measurement.

The resolution bandwidth of spectrum analyzer 8593EM was set at 1MHz.

The frequency range from 1GHz to 2GHz was pre-scanned and all final readings of measurement were with Peak detector and Average detector at open area test site.

3.7. Radiated Emission Measurement Results

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

For 30~1000MHz Frequency Range

EUT with following test modes were measured during this section testing and all the test results are attached in next pages.

Test Date : Jun. 14, 2005 Temperature : 28°C Humidity : 50%

The details of test modes are as follows :

Mode	Model No. (Serial No.)	LCD Panel (Power Board)	Data Cable	Frequency / Resolution.	Reference Test Data No.	
					Horizontal	Vertical
1.	190X6 (TY0405135)	LG Philips, (Lien Chang)	D-Sub	640*480/60Hz, 30kHz	# 12	# 11
2.				1024*768/75Hz, 61kHz	# 10	# 9
3.				1280*1024/75Hz, 80kHz	# 7	# 8
4.			DVI	640*480/60Hz, 30kHz	# 4	# 3
5.				1024*768/75Hz, 61kHz	# 5	# 6
6.				1280*1024/75Hz, 80kHz	# 1	# 2

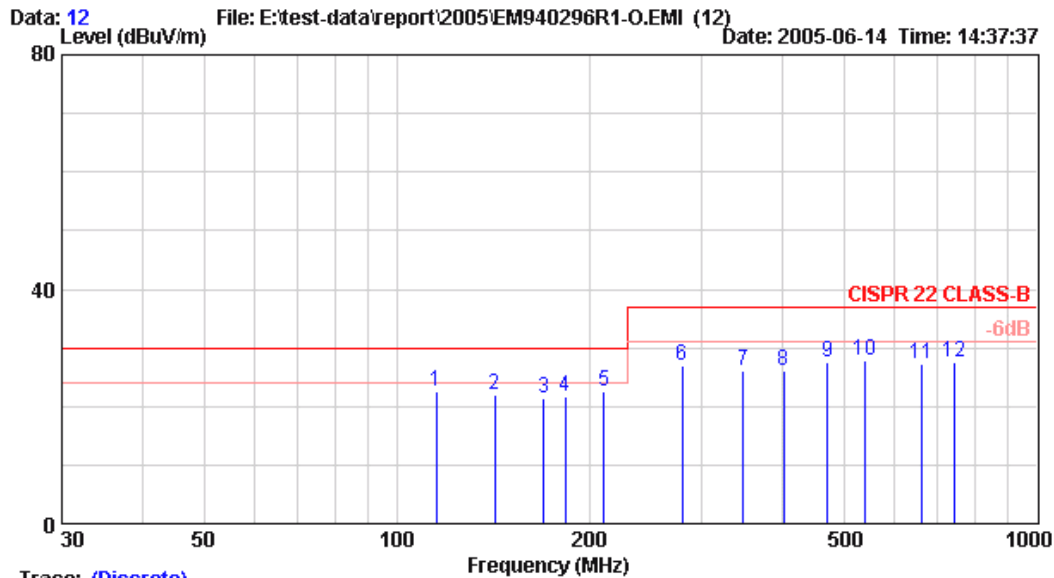
(※ mode for maximum detected emission)

For 1 ~ 2GHz Frequency Range

We attached the spectrum above 1GHz, measured and found the noise from EUT was lower than ambient.



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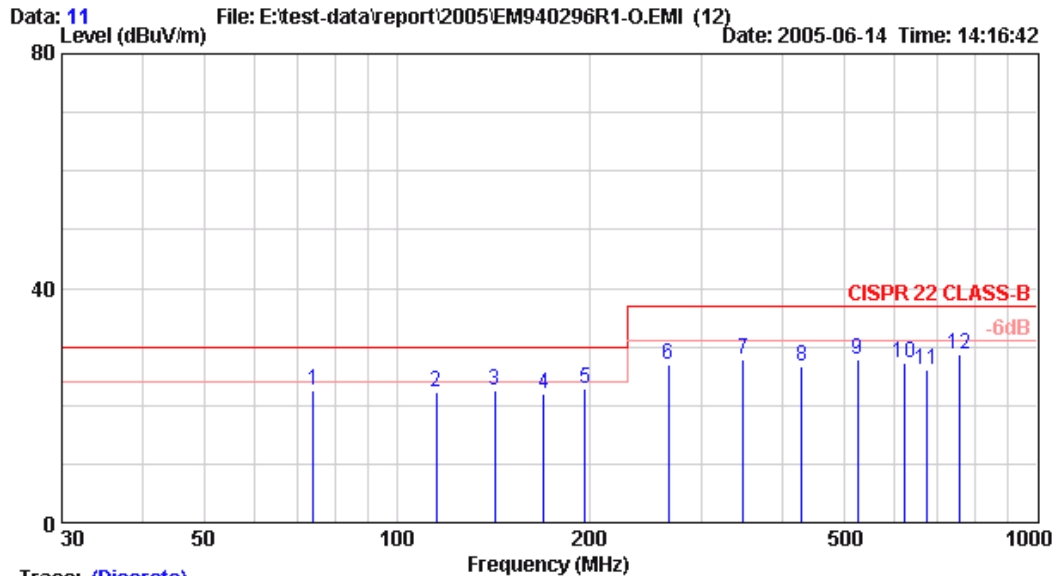
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Dis. / Ant. : 10m 6106A/6109(0104) Ant. pol. : HORIZONTAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz 30KHz D-SUB

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	115.196	18.42	2.00	2.14	22.56	30.00	7.44	
2	142.516	20.01	2.40	-0.50	21.91	30.00	8.09	
3	169.834	20.50	2.40	-1.50	21.40	30.00	8.60	
4	183.493	20.86	2.60	-1.68	21.78	30.00	8.22	
5	210.811	21.11	3.00	-1.43	22.68	30.00	7.32	
6	279.106	23.49	3.40	0.05	26.94	37.00	10.06	
7	347.401	14.72	4.00	7.35	26.07	37.00	10.93	
8	402.037	16.37	4.20	5.40	25.97	37.00	11.03	
9	470.332	17.61	4.80	5.10	27.51	37.00	9.49	
10	538.627	19.26	5.00	3.51	27.77	37.00	9.23	
11	661.558	20.62	5.60	1.12	27.34	37.00	9.66	
12	743.512	21.77	6.20	-0.56	27.41	37.00	9.59	

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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Email:ttmc@ttmc.com.tw
Web:www.ttmc.com



Trace: (Discrete)

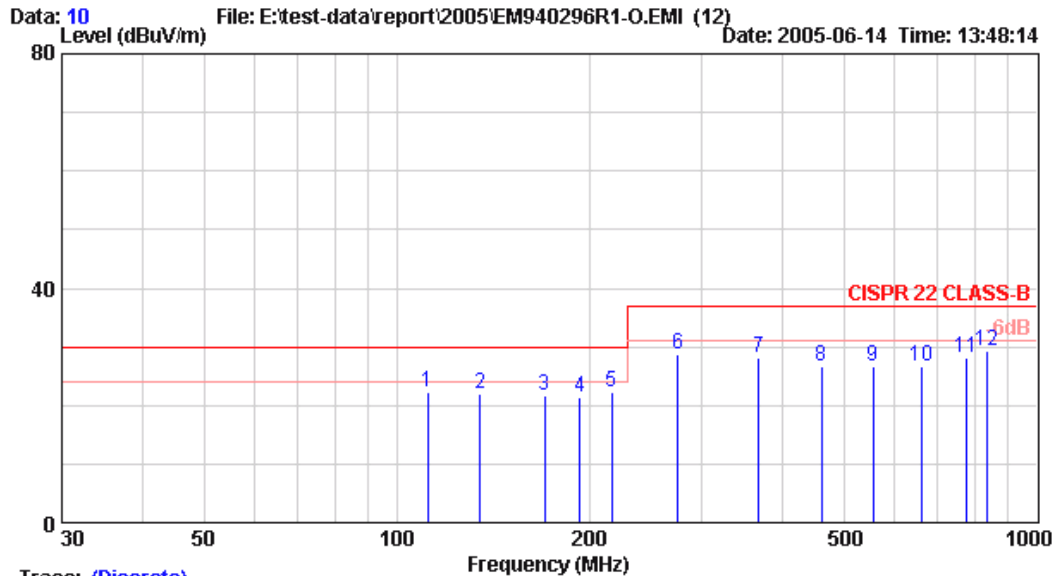
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Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 640*480/60Hz 30KHz D-SUB

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	74.225	13.39	1.60	7.60	22.59	30.00	7.41	
2	115.202	19.15	2.00	1.20	22.35	30.00	7.65	
3	142.520	19.72	2.40	0.52	22.64	30.00	7.36	
4	169.838	20.15	2.40	-0.64	21.91	30.00	8.09	
5	197.156	21.54	2.90	-1.61	22.83	30.00	7.17	
6	265.451	22.46	3.40	1.15	27.01	37.00	9.99	
7	347.405	15.47	4.00	8.29	27.76	37.00	9.24	
8	429.359	16.92	4.40	5.34	26.66	37.00	10.34	
9	524.972	19.31	5.00	3.61	27.92	37.00	9.08	
10	620.585	20.18	5.60	1.39	27.17	37.00	9.83	
11	675.221	21.34	5.60	-0.88	26.06	37.00	10.94	
12	757.175	22.18	6.20	0.28	28.66	37.00	8.34	

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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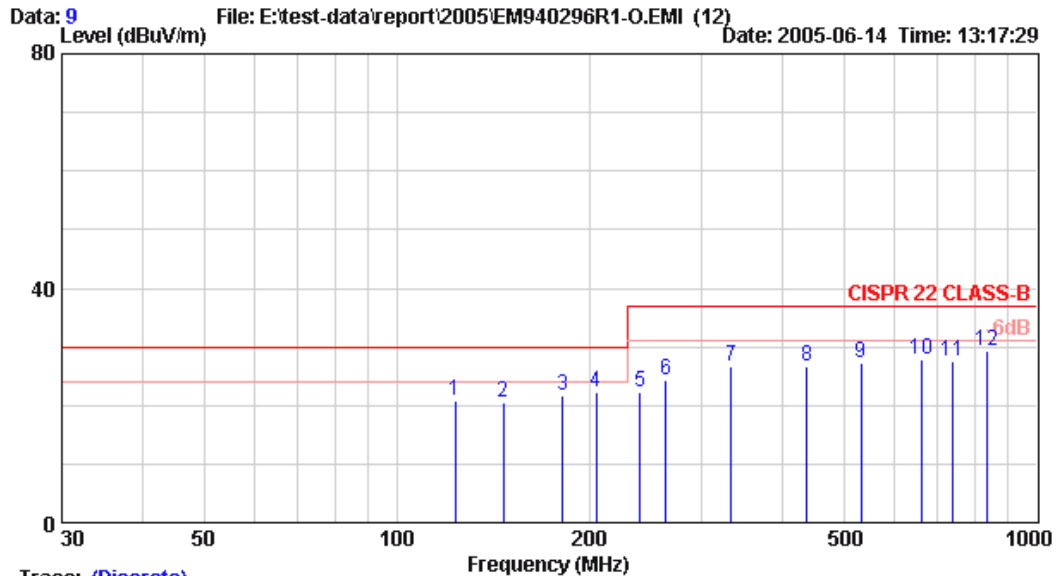
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Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : HORIZONTAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/75HZ 61KHZ D-SUB

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μV)	Emission Level (dB μV/m)	Limits (dB μV/m)	Margin (dB)	Remark
1	111.934	18.31	2.00	2.05	22.36	30.00	7.64	
2	135.206	19.84	2.20	-0.01	22.03	30.00	7.97	
3	170.114	20.50	2.40	-1.23	21.67	30.00	8.33	
4	193.386	20.83	2.80	-2.15	21.48	30.00	8.52	
5	216.658	21.21	3.00	-2.01	22.20	30.00	7.80	
6	274.838	23.30	3.40	1.88	28.58	37.00	8.42	
7	367.926	15.19	4.00	8.80	27.99	37.00	9.01	
8	461.014	17.31	4.40	4.91	26.62	37.00	10.38	
9	554.102	19.97	5.20	1.53	26.70	37.00	10.30	
10	658.826	20.70	5.60	0.45	26.75	37.00	10.25	
11	775.186	22.40	6.20	-0.60	28.00	37.00	9.00	
12	833.366	23.40	6.60	-0.60	29.40	37.00	7.60	

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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Trace: (Discrete)

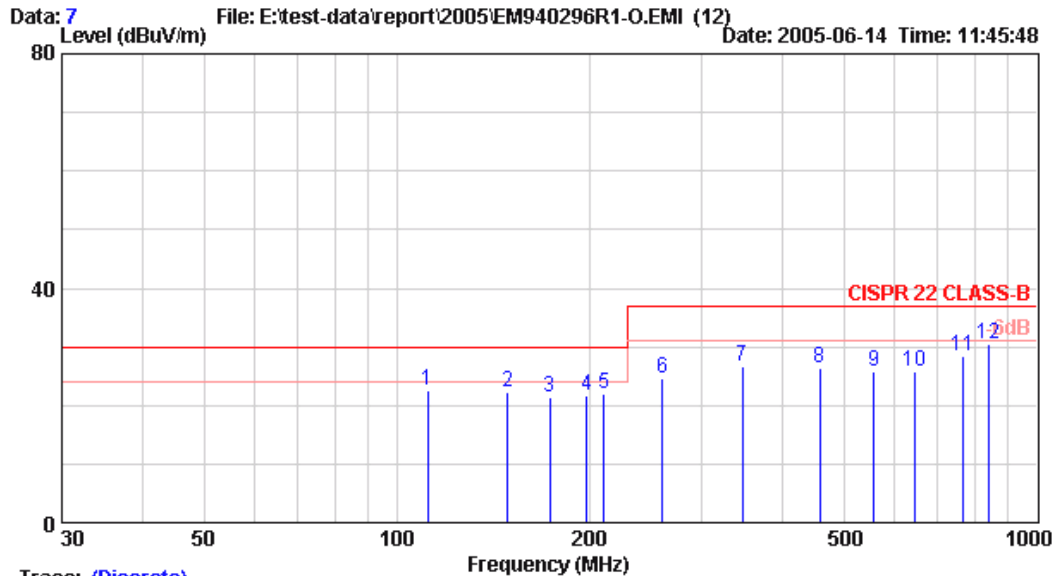
Site no. : NO.3 Open Site Data no. : 9
Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1024*768/75HZ 61KHZ D-SUB

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	123.570	19.13	2.20	-0.49	20.84	30.00	9.16	
2	146.842	20.25	2.40	-2.06	20.59	30.00	9.41	
3	181.750	21.23	2.60	-2.29	21.54	30.00	8.46	
4	205.022	21.57	2.80	-2.07	22.30	30.00	7.70	
5	239.930	20.62	3.20	-1.43	22.39	37.00	14.61	
6	263.202	22.43	3.40	-1.48	24.35	37.00	12.65	
7	333.018	14.90	3.80	8.02	26.72	37.00	10.28	
8	437.742	17.02	4.40	5.10	26.52	37.00	10.48	
9	530.830	19.16	5.00	2.95	27.11	37.00	9.89	
10	658.826	20.82	5.60	1.55	27.97	37.00	9.03	
11	740.278	21.63	6.00	-0.12	27.51	37.00	9.49	
12	833.366	23.09	6.60	-0.44	29.25	37.00	7.75	

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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Trace: (Discrete)

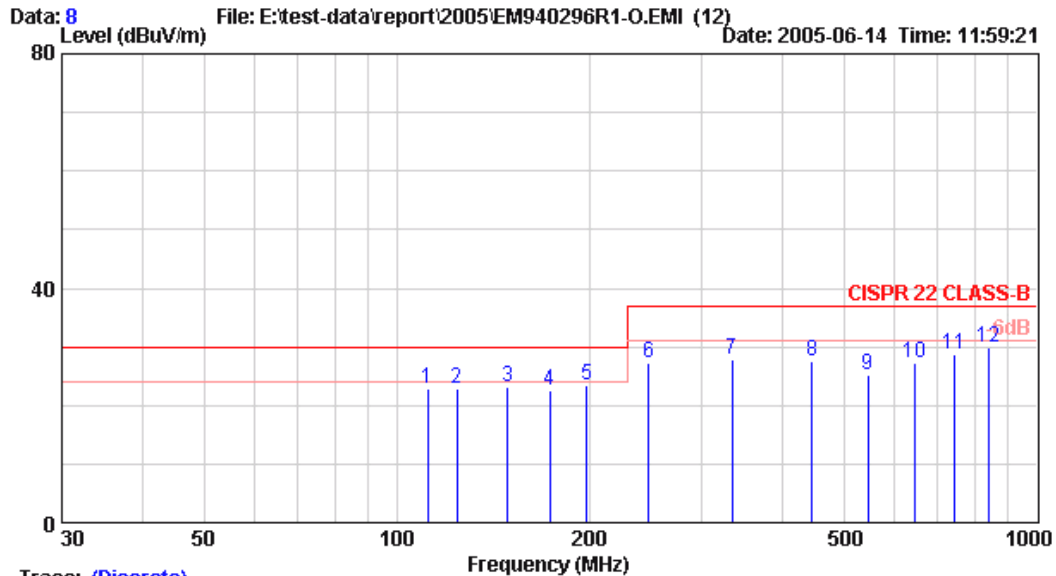
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 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 1280*1024/75Hz 80KHz D-SUB

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	111.920	18.31	2.00	2.16	22.47	30.00	7.53	
2	148.988	19.83	2.40	-0.03	22.20	30.00	7.80	
3	173.700	21.03	2.60	-2.26	21.37	30.00	8.63	
4	198.412	20.75	2.80	-1.95	21.60	30.00	8.40	
5	210.768	21.11	3.00	-2.05	22.06	30.00	7.94	
6	260.192	22.65	3.40	-1.48	24.57	37.00	12.43	
7	346.684	14.80	3.90	7.96	26.66	37.00	10.34	
8	457.888	16.78	4.80	4.65	26.23	37.00	10.77	
9	556.736	19.99	5.20	0.71	25.90	37.00	11.10	
10	643.228	20.31	5.60	-0.26	25.65	37.00	11.35	
11	766.788	22.57	6.20	-0.39	28.38	37.00	8.62	
12	840.924	24.15	6.60	-0.42	30.33	37.00	6.67	

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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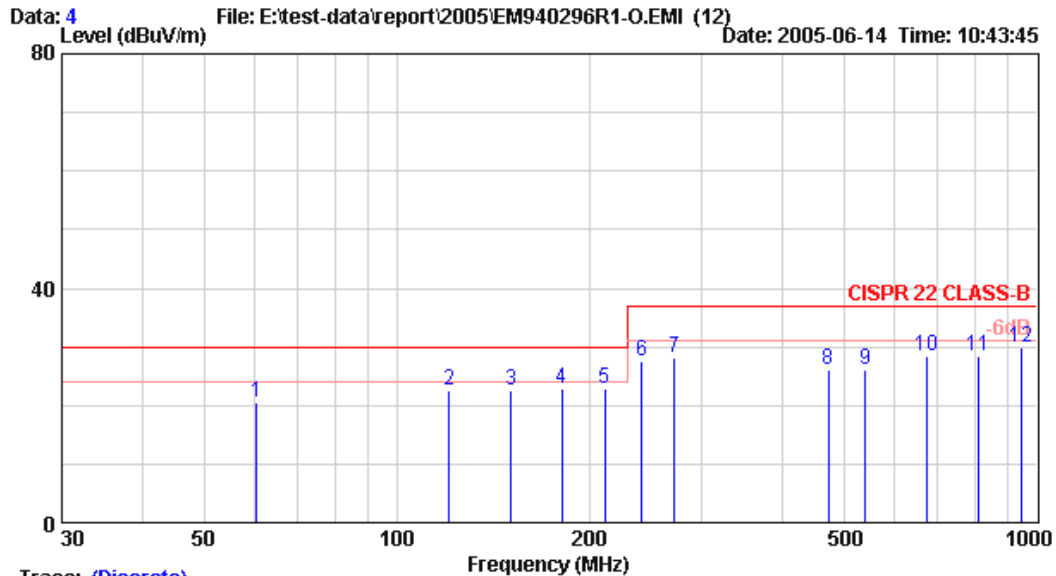
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Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz 80KHz D-SUB

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	111.920	17.71	2.00	3.12	22.83	30.00	7.17	
2	124.276	18.95	2.20	1.75	22.90	30.00	7.10	
3	148.988	20.63	2.40	0.05	23.08	30.00	6.92	
4	173.700	20.21	2.60	-0.16	22.65	30.00	7.35	
5	198.412	21.77	2.80	-1.05	23.52	30.00	6.48	
6	247.836	21.63	3.20	2.29	27.12	37.00	9.88	
7	334.328	14.97	3.80	9.00	27.77	37.00	9.23	
8	445.532	17.04	4.40	6.01	27.45	37.00	9.55	
9	544.380	19.20	5.20	0.93	25.33	37.00	11.67	
10	643.228	20.05	5.60	1.74	27.39	37.00	9.61	
11	742.076	21.89	6.00	0.87	28.76	37.00	8.24	
12	840.924	23.87	6.60	-0.58	29.89	37.00	7.11	

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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Trace: (Discrete)

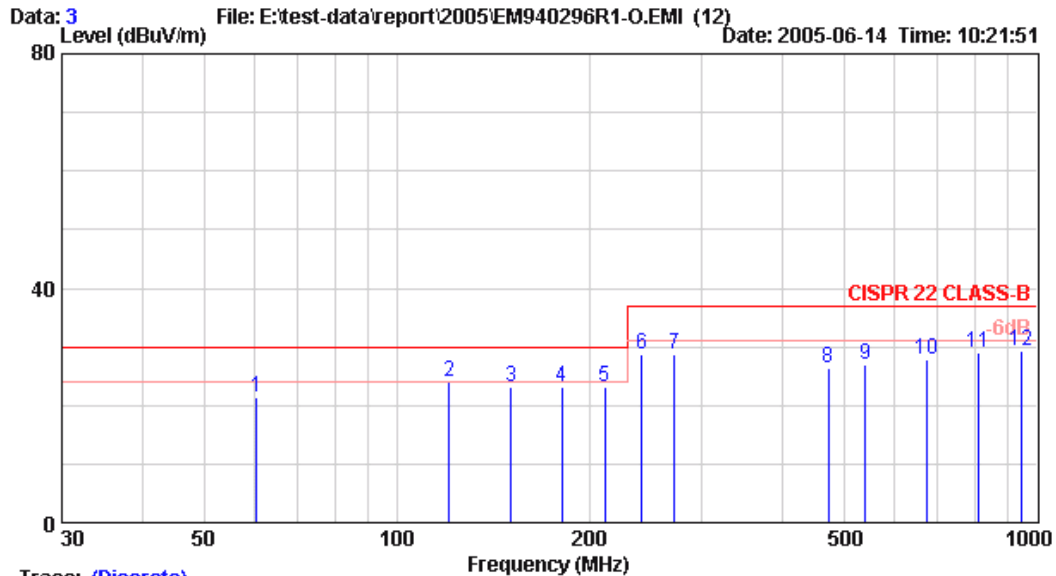
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 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 640*480/60Hz 30KHz DVI

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	60.418	12.29	1.40	6.71	20.40	30.00	9.60	
2	120.801	18.72	2.20	1.64	22.56	30.00	7.44	
3	151.003	20.20	2.40	-0.12	22.48	30.00	7.52	
4	181.209	20.89	2.60	-0.73	22.76	30.00	7.24	
5	211.415	21.06	3.00	-1.20	22.86	30.00	7.14	
6	241.614	22.07	3.20	2.41	27.68	37.00	9.32	
7	271.815	23.33	3.40	1.45	28.19	37.00	8.81	
8	472.507	17.72	4.80	3.47	25.99	37.00	11.01	
9	540.008	19.28	5.20	1.69	26.16	37.00	10.84	
10	675.010	21.25	5.60	1.62	28.47	37.00	8.53	
11	810.012	22.72	6.40	-0.68	28.44	37.00	8.56	
12	945.014	24.48	7.20	-1.91	29.77	37.00	7.23	

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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Trace: (Discrete)

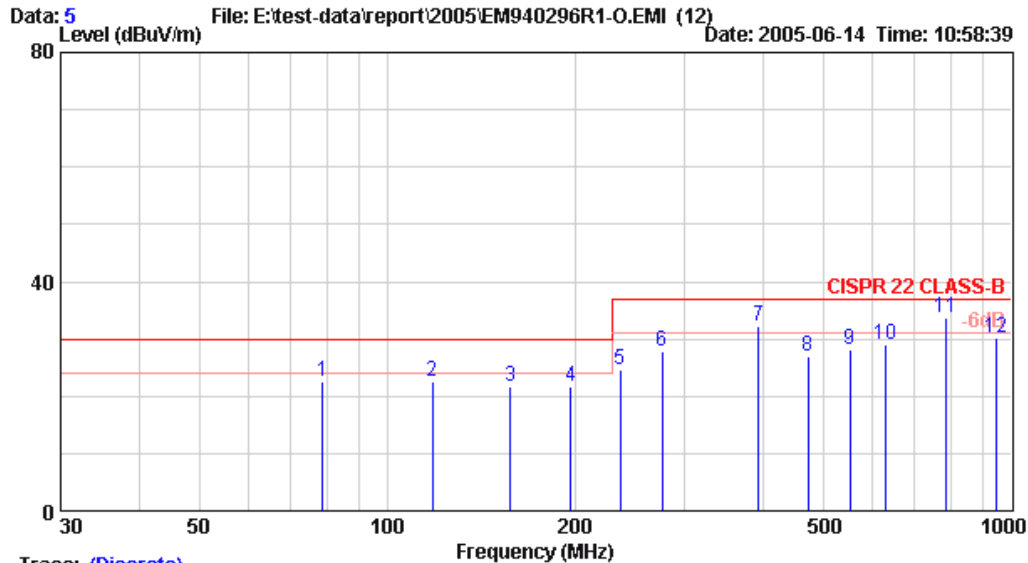
Site no. : NO.3 Open Site Data no. : 3
 Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 640*480/60Hz 30KHz DVI

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB μ V)	(dB μ V/m)	(dB μ V/m)	(dB)	
1	60.412	13.49	1.40	6.65	21.53	30.00	8.47	
2	120.803	19.30	2.20	2.47	23.96	30.00	6.04	
3	151.014	20.88	2.40	-0.12	23.17	30.00	6.83	
4	181.219	21.23	2.60	-0.69	23.15	30.00	6.85	
5	211.418	21.81	3.00	-1.80	23.01	30.00	6.99	
6	241.622	20.87	3.20	4.60	28.67	37.00	8.33	
7	271.820	23.42	3.40	1.78	28.60	37.00	8.40	
8	472.507	18.46	4.80	3.25	26.51	37.00	10.49	
9	540.008	18.96	5.20	2.79	26.95	37.00	10.05	
10	675.010	21.34	5.60	0.90	27.84	37.00	9.16	
11	810.012	22.61	6.40	-0.05	28.96	37.00	8.04	
12	945.014	24.68	7.20	-2.45	29.43	37.00	7.57	

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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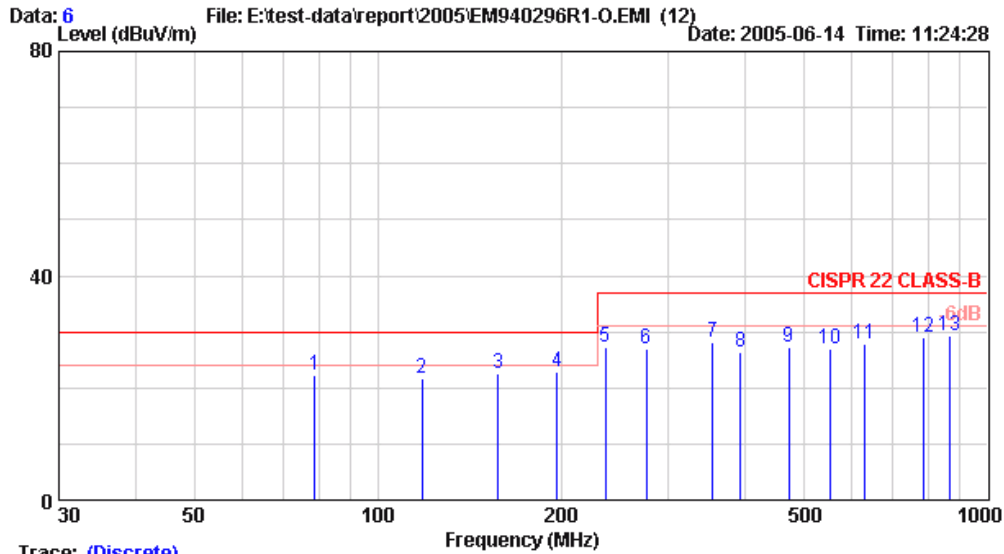
Site no. : NO.3 Open Site Data no. : 5
 Dis. / Ant. : 10m 6106A/6109(0104) Ant. pol. : HORIZONTAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 1024*768/75Hz 61KHz DVI

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	78.747	13.21	1.80	7.47	22.48	30.00	7.52	
2	118.137	18.84	2.00	1.85	22.69	30.00	7.31	
3	157.501	20.14	2.40	-0.86	21.68	30.00	8.32	
4	196.917	20.73	2.90	-1.83	21.80	30.00	8.20	
5	236.258	21.89	3.20	-0.53	24.56	37.00	12.44	
6	275.690	23.61	3.40	0.82	27.83	37.00	9.17	
7	393.755	16.36	4.20	11.63	32.19	37.00	4.81	
8	472.504	17.72	4.80	4.54	27.06	37.00	9.94	
9	551.261	19.36	5.20	3.63	28.19	37.00	8.81	
10	630.010	20.24	5.60	3.04	28.88	37.00	8.12	
11	787.511	22.51	6.40	4.71	33.62	37.00	3.38	*
12	945.010	24.48	7.20	-1.58	30.10	37.00	6.90	

- 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 787.511MHz with corrected signal level of 33.62dB μ V/m (limit was 37dB μ V/m) when the antenna was at horizontal polarization and was at 1m high and the turn table was at 190°.
 4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



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Trace: (Discrete)

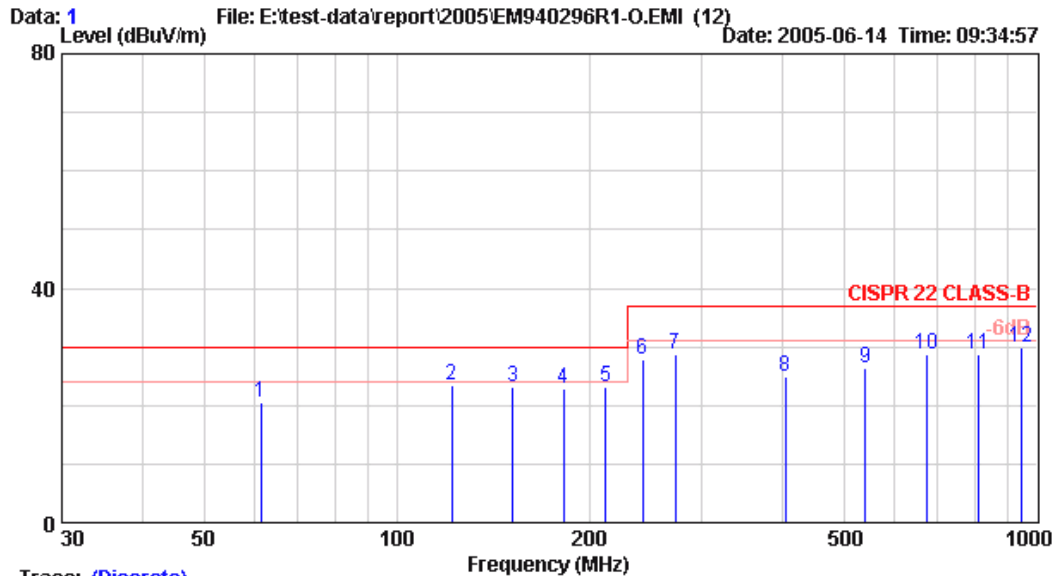
Site no. : NO.3 Open Site Data no. : 6
 Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 1024*768/75Hz 61KHz DVI

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	78.752	13.63	1.80	6.77	22.20	30.00	7.80	
2	118.139	19.66	2.00	-0.11	21.55	30.00	8.45	
3	157.523	19.63	2.40	0.50	22.53	30.00	7.47	
4	196.917	21.54	2.90	-1.71	22.73	30.00	7.27	*
5	236.294	20.19	3.20	3.77	27.16	37.00	9.84	
6	275.687	23.46	3.40	-0.04	26.82	37.00	10.18	
7	354.482	15.99	3.90	8.14	28.03	37.00	8.97	
8	393.877	16.89	4.20	5.16	26.25	37.00	10.75	
9	472.640	18.46	4.80	3.94	27.20	37.00	9.80	
10	551.428	19.47	5.20	2.41	27.08	37.00	9.92	
11	630.205	20.00	5.60	2.26	27.86	37.00	9.14	
12	787.775	22.46	6.40	0.21	29.07	37.00	7.93	
13	866.540	24.01	6.60	-1.16	29.45	37.00	7.55	

- 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 196.917MHz with corrected signal level of 22.73dB μ V/m (limit was 30dB μ V/m) when the antenna was at vertical polarization and was at 2.5m high and the turn table was at 45°.
 4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



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Trace: (Discrete)

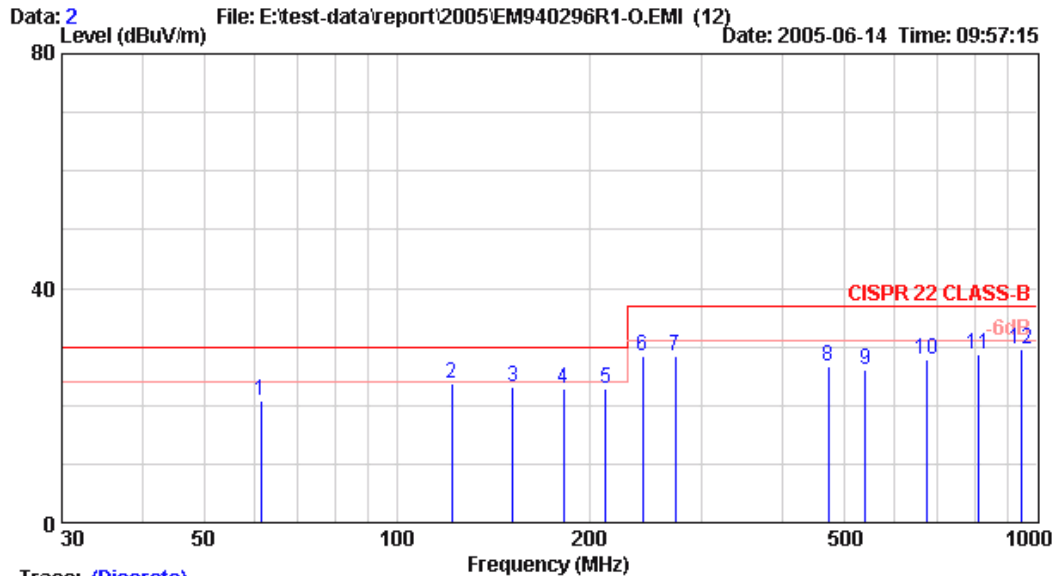
Site no. : NO.3 Open Site Data no. : 1
 Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : HORIZONTAL
 Limit : CISPR 22 CLASS-B
 Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
 EUT : Flat Panel Color Monitor M/N:190X6
 Power Rating : 120Vac/60Hz
 Test Mode : 1280*1024/75Hz 80KHz DVI

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	61.369	12.24	1.40	6.84	20.48	30.00	9.52	
2	121.795	18.73	2.20	2.40	23.33	30.00	6.67	
3	151.984	20.10	2.40	0.59	23.10	30.00	6.90	
4	182.190	20.92	2.60	-0.65	22.88	30.00	7.12	
5	212.388	21.05	2.80	-0.79	23.06	30.00	6.94	
6	242.595	22.10	3.20	2.45	27.74	37.00	9.26	
7	272.796	23.13	3.40	2.06	28.60	37.00	8.40	
8	405.006	16.40	4.20	4.40	25.00	37.00	12.00	
9	540.008	19.28	5.20	1.88	26.35	37.00	10.65	
10	675.010	21.25	5.60	1.75	28.60	37.00	8.40	
11	810.012	22.72	6.40	-0.27	28.85	37.00	8.15	
12	945.014	24.48	7.20	-1.87	29.81	37.00	7.19	

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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Trace: (Discrete)

Site no. : NO.3 Open Site Data no. : 2
Dis. / Ant. : 10m 6106A/6109 (0104) Ant. pol. : VERTICAL
Limit : CISPR 22 CLASS-B
Env. / Ins. : 28°C 50% / ESVS 10 Engineer : Byron Wu
EUT : Flat Panel Color Monitor M/N:190X6
Power Rating : 120Vac/60Hz
Test Mode : 1280*1024/75Hz 80KHz DVI

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
1	61.379	13.21	1.40	6.22	20.83	30.00	9.17	
2	121.777	19.43	2.20	2.07	23.69	30.00	6.31	
3	151.985	20.90	2.40	-0.22	23.08	30.00	6.92	
4	182.187	21.23	2.60	-0.92	22.91	30.00	7.09	
5	212.394	21.69	2.80	-1.73	22.76	30.00	7.24	
6	242.593	20.88	3.20	4.45	28.52	37.00	8.48	
7	272.802	23.23	3.40	1.82	28.45	37.00	8.55	
8	472.507	18.46	4.80	3.27	26.53	37.00	10.47	
9	540.008	18.96	5.20	1.97	26.13	37.00	10.87	
10	675.010	21.34	5.60	0.91	27.85	37.00	9.15	
11	810.012	22.61	6.40	-0.18	28.83	37.00	8.17	
12	945.014	24.68	7.20	-2.41	29.47	37.00	7.53	

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

4. DEVIATION TO TEST SPECIFICATIONS

During 1GHz to 2GHz frequency range measurement, due to low loss cable length limitation, the horn antenna couldn't move up and down between 1 to 4 meters. But the test result was not affected due to the worst receiving condition of horn antenna should be at 1 meter high for above 1 GHz radiation measurement.