



PHILIPS

Philips Electronics Industries (Taiwan) Ltd - EMC Lab. 5, Tze Chiang 1 Road, Chungli Industrial Park, Chungli, Taoyuan, Taiwan Tel.: +886-3-454-9862 Fax.: +886-3-454-9887 E-mail: ronnie.yang@philips.com	FCC Test Report	Report No.: TYR87-2020 Date : 24 July, 2002 Page : Page 1 of 34		
Customer : Philips Electronics Industries Name : Mr. S.T. Huang – EE LCD Address : 5, Tze Chiang 1 Road, Zip/City : Chungli Industrial Park, Country : Chungli, Taiwan, R.O.C.				
Equipment Under Test (including peripherals) : FCC ID. : A3KM102 Model Name : M782p Serial Number : TY0205268 Description : 17" XGA color monitor, Max. resolution 1280x1024/75Hz				
EMC Standards : FCC Part 15 of October 01,1999 Class B ANSI C63.4-1992 Result : PASSED the limits/test-levels in the standards. Note : The results in this report apply only to the sample(s) and mode(s) tested. It is the manufacturer's responsibility to assume the continued EMC compliance of production models.				
Date of receipt of EUT : 19 Jul. 2002 Date of performance of test : 20 Jul., 2002 to 21 Jul., 2002				
<table border="0"><tr><td style="text-align: center;"> C.C. Wu - EMC Test Engineer</td><td style="text-align: center;"> Ronnie Yang - EMC Manager NVLAP Signatory</td></tr></table>			 C.C. Wu - EMC Test Engineer	 Ronnie Yang - EMC Manager NVLAP Signatory
 C.C. Wu - EMC Test Engineer	 Ronnie Yang - EMC Manager NVLAP Signatory			

Philips Electronics Industries (Taiwan) Ltd

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1. Summary of test results

Test	Standard	Result	Note
Emission, ANSI C63.4-1992			
Conducted emission	FCC Part 15	Passed	
Radiated emission	FCC Part 15	Passed	

Remark:

The test sample fully complies with the requirements set forth in : FCC Part 15 Class B.

2. General Information of EUT

The EUT, 17" color monitor :

Model No. : M782p
FCC ID : A3KM102
Brand : DELL

The color monitor automatically scans horizontal frequencies between 30KHz and 85KHz , and vertical frequencies between 50Hz and 160Hz. This color monitor displays sharp and brilliant images of text and graphics with a maximum resolution up to 1280x1024 pixels.

The monitor has 9 factory-preset modes as indicated in the following table:

#	Resolution	Hor (kHz)	Ver (Hz)	H-pol	V-pol
1	720 x 400	31.469	70.087	-	+
2	640 x 480	31.469	59.940	-	-
3	640 x 480	37.500	75.000	-	-
4	640 x 480	43.269	85.008	-	-
5	800 x 600	46.875	75.000	+	+
6	800 x 600	53.674	85.061	+	+
7	1024 x 768	60.023	75.029	+	+
8	1024 x 768	68.677	84.997	+	+
9	1280 x 1024	79.976	75.024	+	+

3. Test Equipment

Test equipment used for line Conducted and Radiated emissions as following.
All equipment were calibrated according to ANSI C63.4-1992 and ISO-9000 requirement unless otherwise specified.

Traceability to R.O.C. and international standards is assured by using calibrated all equipment.

- For Conducted Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2415A00346	08/15/2001	08/15/2002
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2153	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2154	06/13/2002	06/13/2003
RF Cable	8-meter	N/A	05/29-2002	05/29/2003

- For Radiated Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2415A00346	08/15/2001	08/15/2002
RF Preselector	HP85685A	2901A00946	08/15/2001	08/15/2002
QP Adapter	HP85650A	2043A00366	08/15/2001	08/15/2002
EMI Receiver	HP85460A	3441A00199	09/11/2001	09/11/2002
RFI Filter Section	HP85460A	3330A00177	09/11/2001	09/11/2002
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
Biconical Antenna	EMCO 3110B	3222	06/04/2002	06/04/2003
Biconical Antenna	EMCO 3110B	3224	06/04/2002	06/04/2003
Log-Periodic Antenna	EMCO 3146A	1424	06/04/2002	06/04/2003
Log-Periodic Antenna	EMCO 3146A	1425	06/04/2002	06/04/2003
Turn Table	EMCO 1060	1068	05/27/2002	05/27/2003
Antenna Tower	EMCO 1050	1113	05/27/2002	05/27/2003
RF Cable	M17/75-RG214-NE	N/A	05/27/2002	05/27/2003

4. Test Configuration of EUT and Peripherals

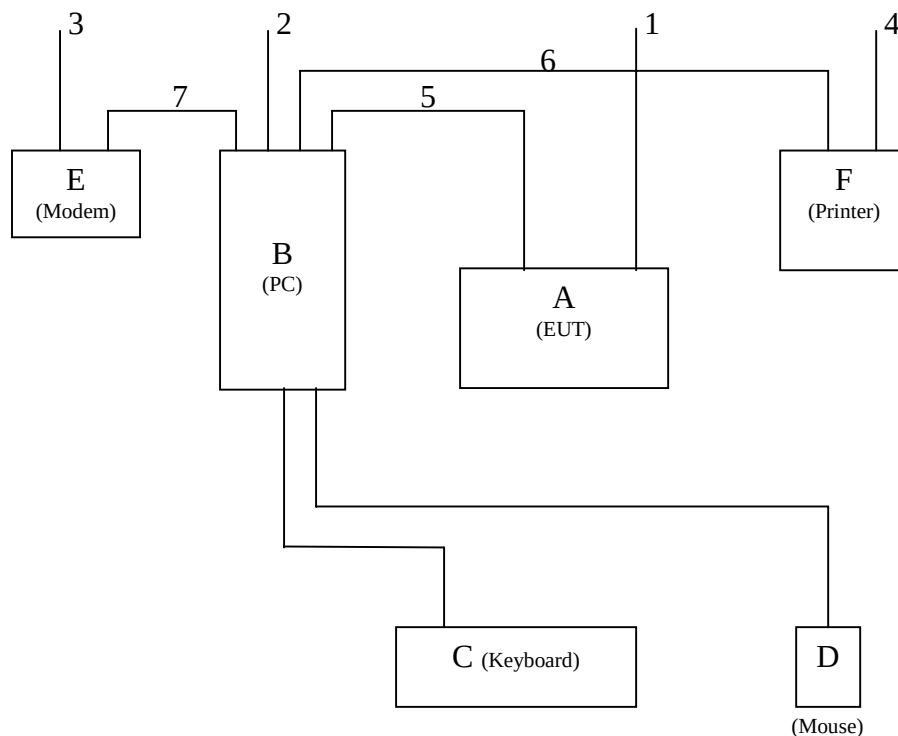
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT “M782p” were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
A	Monitor	DELL M782p	TY0205268	A3KM102	EUT
B	PC	DELL DHM	GV8P21X	FCC logo	
C	Keyboard	DELL SK-8100	CN-09C487-38844-193-7480	FCC logo	
D	Mouse	Logitech M-S34	LNA14011260	DZL211029	
E	Modem	USRobotics 268	2680559278575	CJE-0318	
F	Printer	HP 2225C	3145S02419	DSI6XU2225	

Connected Cables

No.	Description	Manufacturer	Length	Shielded	Remark
1	Power Cord	Long Shine	1.8 meters	No	for EUT
2	Power Cord	Acer	1.8 meters	No	for PC
3	Power Cord	Aceex	2.0 meters	No	for Modem
4	Power Cord	HP	1.8 meters	No	for Printer
5	Video Cable	Long Shine	1.5 meters	Yes	
6	Printer Cable	HP	1.8 meters	Yes	
7	Modem Cable	Aceex	1.5 meters	Yes	

System Block Diagram of Test Configuration



5. Test Procedure

Test was performed by:

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.
CONSUMER ELECTRONICS DIVISION
- EMC LAB

5, Tze Chiang 1 Road, Chungli Industrial Park
P.O. Box 123, Chungli, Taoyuan, Taiwan
Tel : 886-3-4549862 Fax : 886-3-4549887
Internet: ronnie.yang@philips.com

The test was performed in accordance with ANSI C63.4-1992, "AMERICAN NATIONAL STANDARD FOR MEASUREMENT OF RADIO-NOISE EMISSION FROM LOW-VOLTAGE ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9KHz TO 40GHz"

Both conducted and radiated testing were performed according to the procedure in ANSI C63.4-1992. Conducted testing was performed in screen room and radiated testing was performed in open site at an antenna to EUT distance of 3-meter on horizontal and vertical polarization.

First, pre-scan all modes in screen room then select **2 higher modes** (worst case) were tested and reported.

The line conductive interference was tested with 110VAC and 220VAC receptively.

Unshielded power cord was used during test.
D-sub I/F cable with three ferrite cores was used.

Tested and reported modes as following:

Test Item	File No.	Resolution	Frequencies	I/F Cable
Conducted	EMI02-037-C	1280x1024	80KHz/75Hz	D-sub
		1024x768	68.7KHz/85Hz	D-sub
Radiated	EMI02-037-R	1280x1024	80KHz/75Hz	D-sub
		1024x768	68.7KHz/85Hz	D-sub

Set up the EUT and all peripherals as chapter 6 of ANSI C63.4-1992 for AC power line conducted emissions testing and radiated emissions testing.

Turn on the power of EUT and all peripherals, select an appropriate displaying mode using the "setup" software. Then run an EMI test program "HTEST.EMI" as a basic software to execute the EUT operating under test. A pattern of scrolling H's should be displayed on the monitor.

Step 1 : Run the "HTEST.EMI" on personal computer then sends "H" character to monitor continuously until full screen.

Step 2 : Personal computer sends a complete line of continuously repeating "H" to HP 2225C printer.

Step 3 : Personal computer sends a file of "H" pattern to floppy disk then read a file of "H" pattern from floppy disk.

Step 4 : Personal computer sends a file of "H" pattern to hard disk then read a file of "H" pattern from hard disk.

Step 5 : Personal computer sends a file of "H" pattern to USRobotics 268 modem.

Step 6 : Return to step 1

All data in this report are "PEAK" value within 15dB margin unless otherwise noted.

6. Measurement Uncertainty

The system uncertainty listed below are based on the instrument absolute specifications, and do not include uncertainties of the equipment under test.

Uncertainty for Radiated Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
Antenna factor calibration	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Antenna position ver.	+/-2.0
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
Mismatch	+/-1.1
System repeatability	+/-0.5

Uncertainty for Conducted Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
LISN specification	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Pulse limiter Spec.	+/-0.3
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
System repeatability	+/-0.5

7. Conducted Emissions Test

Conducted Emissions

FCC Part 15

Operating conditions EUT:

EUT powered on with scrolling “H” pattern.

Limits:

Frequency range (MHz)	Class A (dBUv) QP	Class B (dBUv) QP
0.45 – 1.705	60.0	48.0
1.705 – 30.0	69.5	48.0

Test Result :

Passed FCC Class B Limits

Option:

The following option may be employed if the conducted emissions exceed the limits, as appropriate, when measured using instrumentation employing a quasi-peak detector function: If the level of the emission measured using the quasi-peak instrumentation is 6dB, or, more higher than the level of the same emission measured with instrumentation having an average detector and a 9KHz minimum bandwidth, that emission is considered broadband and the level obtained with the quasi-peak detector may be reduced by 13dB for comparison to the limits.

Remark:

Date of Test

: 20 Jul., 2002 to 21 Jul., 2002

Test Engineer

: C.C.Wu

For detail measurement results see next pages.

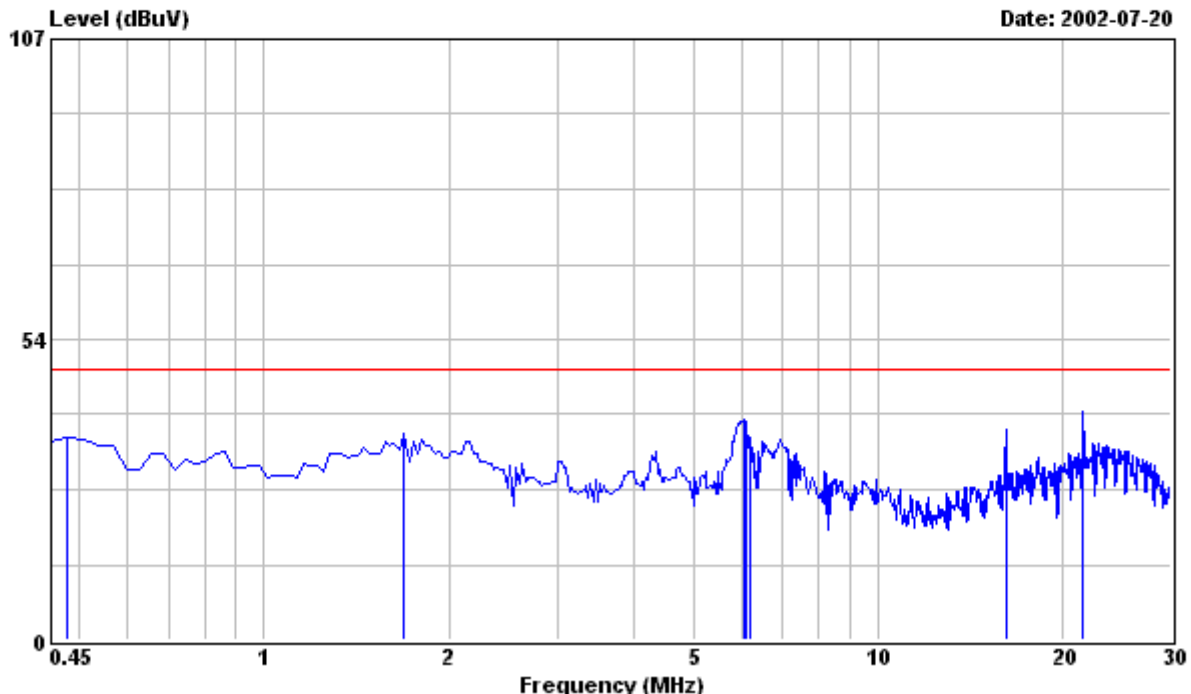


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Data#: 1

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : DELL M782p Serial No:TY0205268
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
0.480	35.80	48.00	0.22	36.02	-11.98	
1.691	36.40	48.00	0.40	36.80	-11.20	
6.065	39.00	48.00	0.40	39.40	-8.60	
6.124	38.30	48.00	0.40	38.70	-9.30	
6.183	35.50	48.00	0.40	35.90	-12.10	
16.230	36.90	48.00	0.73	37.63	-10.37	
21.549	39.80	48.00	0.83	40.63	-7.37	
21.608	39.90	48.00	0.84	40.74	-7.26	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

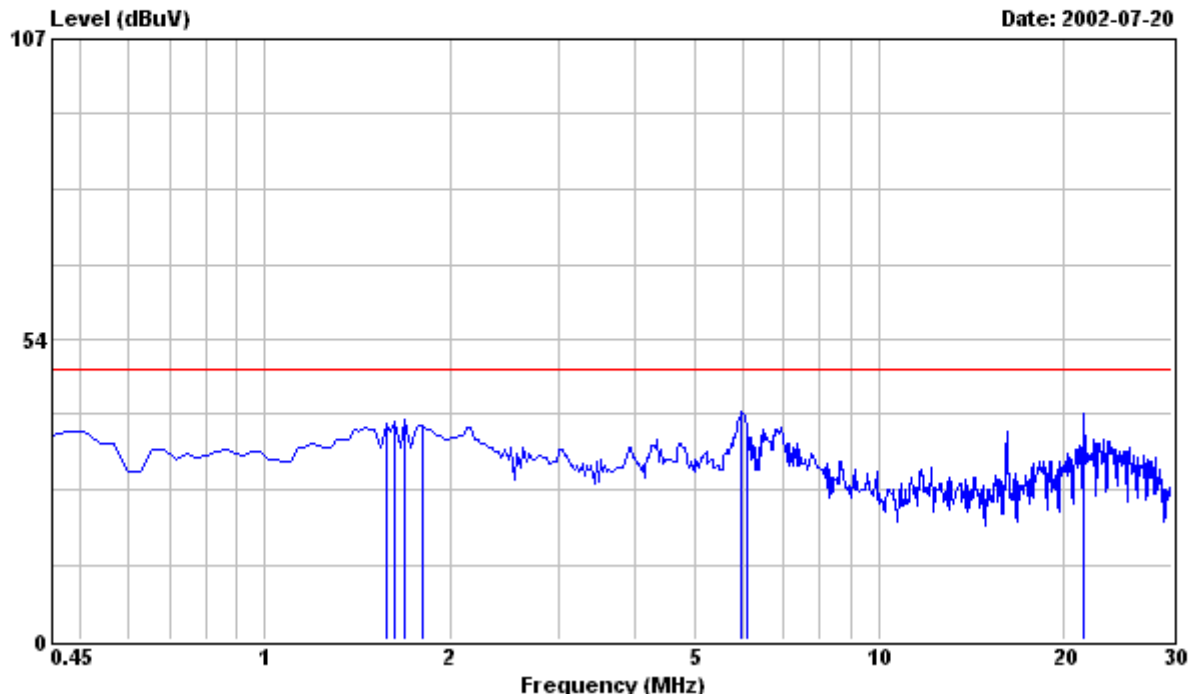


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Data#: 2

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : DELL M782p Serial No:TY0205268
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
1.573	38.00	48.00	0.40	38.40	-9.60	
1.632	38.30	48.00	0.40	38.70	-9.30	
1.691	38.80	48.00	0.40	39.20	-8.80	
1.809	37.80	48.00	0.40	38.20	-9.80	
5.976	40.10	48.00	0.40	40.50	-7.50	
6.124	38.10	48.00	0.40	38.50	-9.50	
21.549	39.40	48.00	0.93	40.33	-7.67	
21.608	39.50	48.00	0.94	40.44	-7.56	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

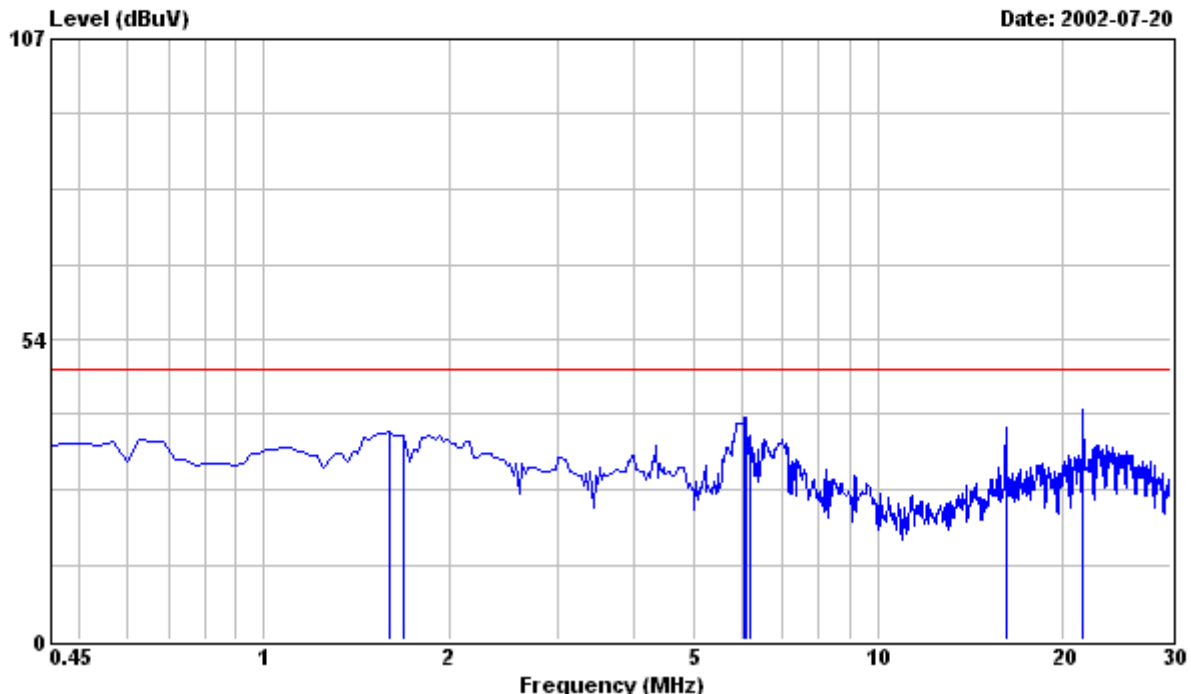


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Data#: 3

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : DELL M782p Serial No:TY0205268
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
1.602	36.60	48.00	0.40	37.00	-11.00	
1.691	36.10	48.00	0.40	36.50	-11.50	
6.065	39.10	48.00	0.40	39.50	-8.50	
6.124	39.20	48.00	0.40	39.60	-8.40	
6.183	36.00	48.00	0.40	36.40	-11.60	
16.230	37.10	48.00	0.73	37.83	-10.17	
21.549	40.10	48.00	0.83	40.93	-7.07	
21.608	39.20	48.00	0.84	40.04	-7.96	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

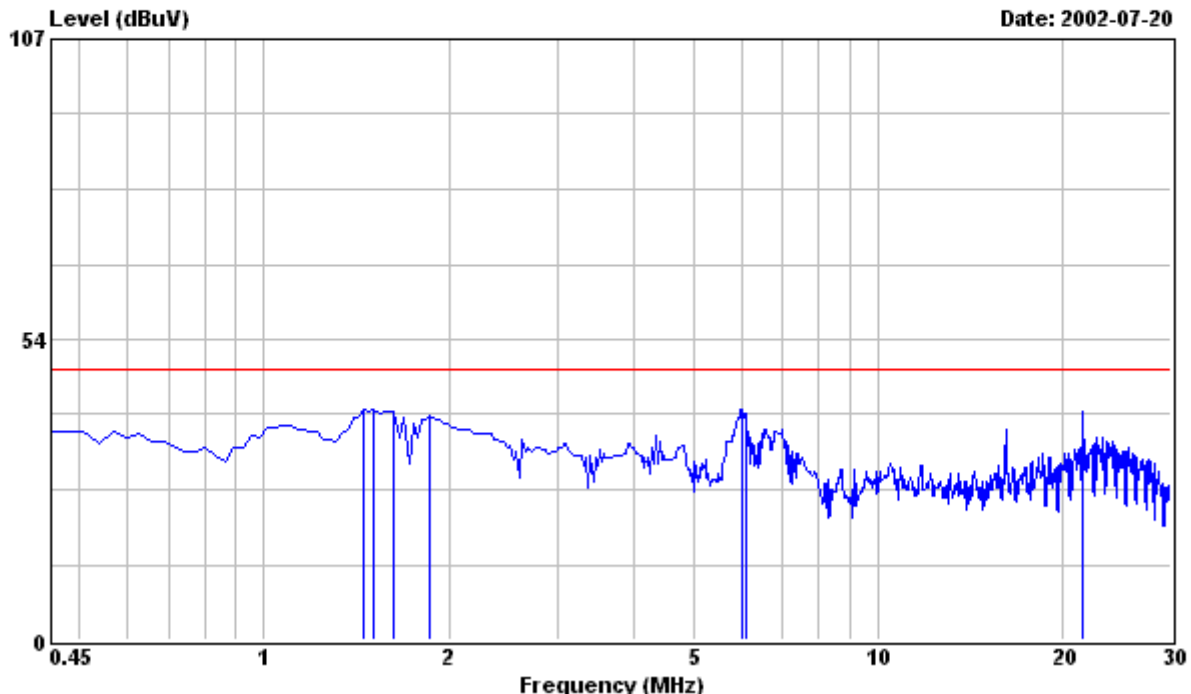


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Data#: 4

File#: C:\Program Files\es\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : DELL M782p Serial No:TY0205268
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
1.455	40.50	48.00	0.40	40.90	-7.10	
1.514	40.50	48.00	0.40	40.90	-7.10	
1.632	40.30	48.00	0.40	40.70	-7.30	
1.868	39.50	48.00	0.40	39.90	-8.10	
6.005	40.50	48.00	0.40	40.90	-7.10	
6.124	39.90	48.00	0.40	40.30	-7.70	
21.549	39.60	48.00	0.93	40.53	-7.47	
21.608	39.30	48.00	0.94	40.24	-7.76	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

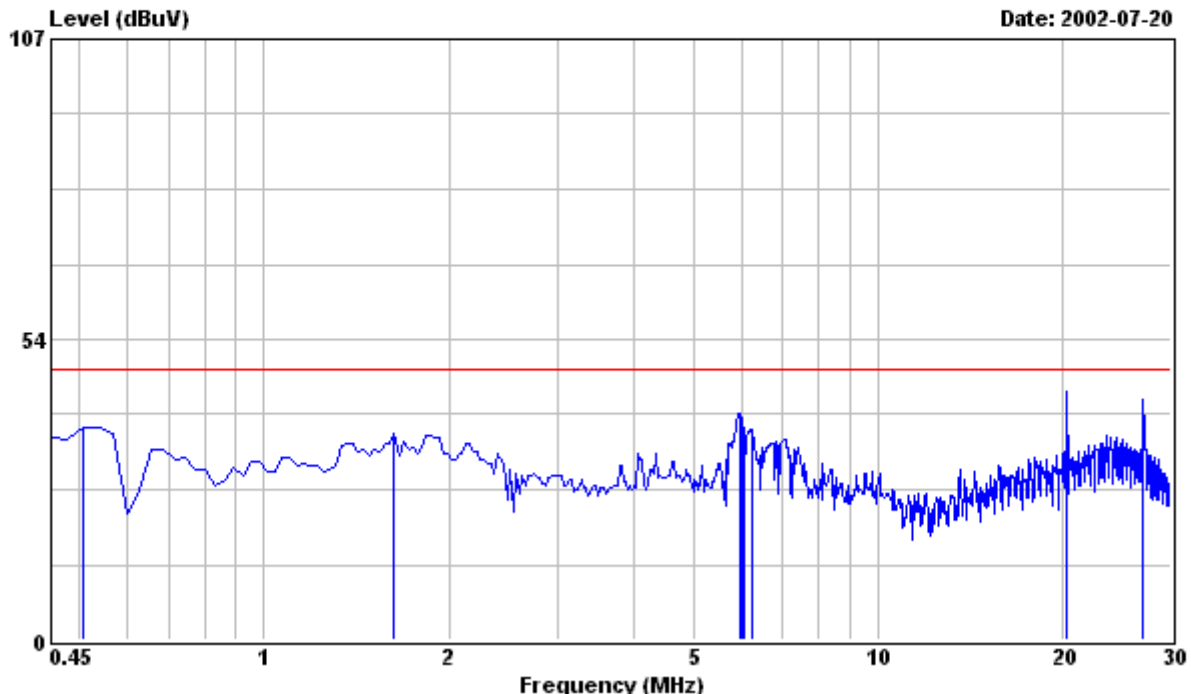


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Data#: 5

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : DELL M782p Serial No:TY0205268
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68,7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
0.509	37.70	48.00	0.23	37.93	-10.07	
1.632	36.50	48.00	0.40	36.90	-11.10	
5.946	40.00	48.00	0.40	40.40	-7.60	
6.005	39.20	48.00	0.40	39.60	-8.40	
6.065	37.40	48.00	0.40	37.80	-10.20	
6.242	36.90	48.00	0.40	37.30	-10.70	
20.367	43.50	48.00	0.81	44.31	-3.69	
27.104	42.10	48.00	0.86	42.96	-5.04	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

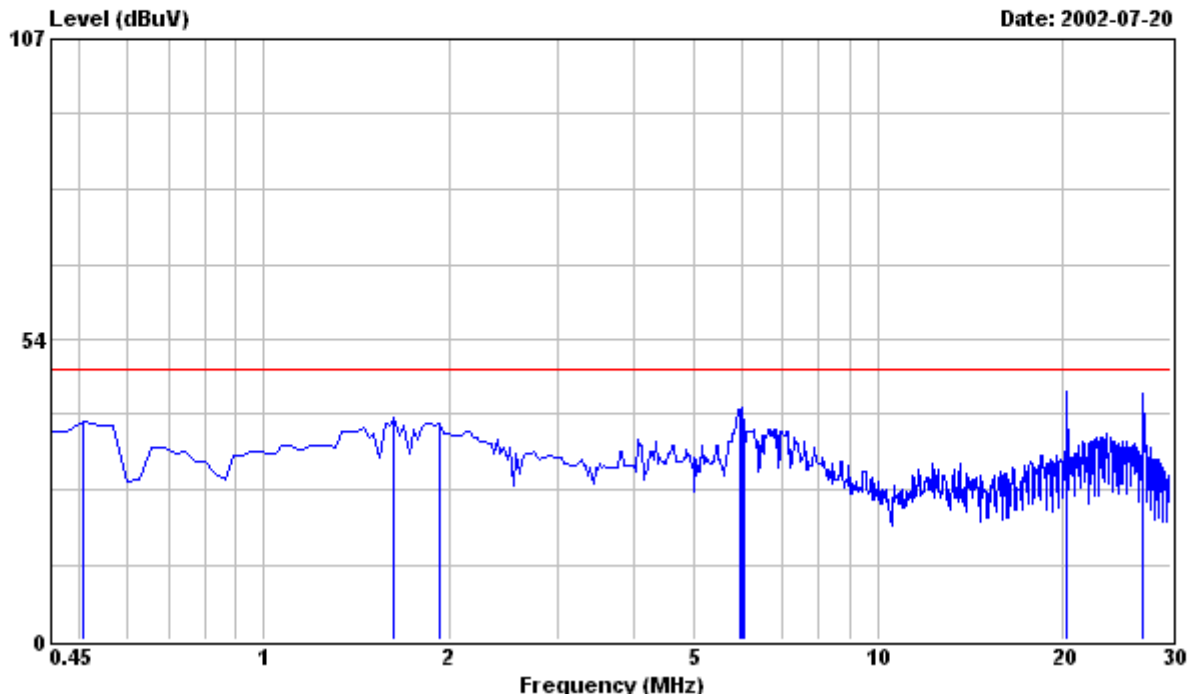


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Data#: 6

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : DELL M782p Serial No:TY0205268
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68,7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
0.509	38.60	48.00	0.23	38.83	-9.17	
1.632	39.20	48.00	0.40	39.60	-8.40	
1.928	38.10	48.00	0.40	38.50	-9.50	
5.946	40.70	48.00	0.40	41.10	-6.90	
6.005	40.90	48.00	0.40	41.30	-6.70	
6.065	38.80	48.00	0.40	39.20	-8.80	
20.367	43.40	48.00	0.91	44.31	-3.69	
27.104	42.80	48.00	0.96	43.76	-4.24	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

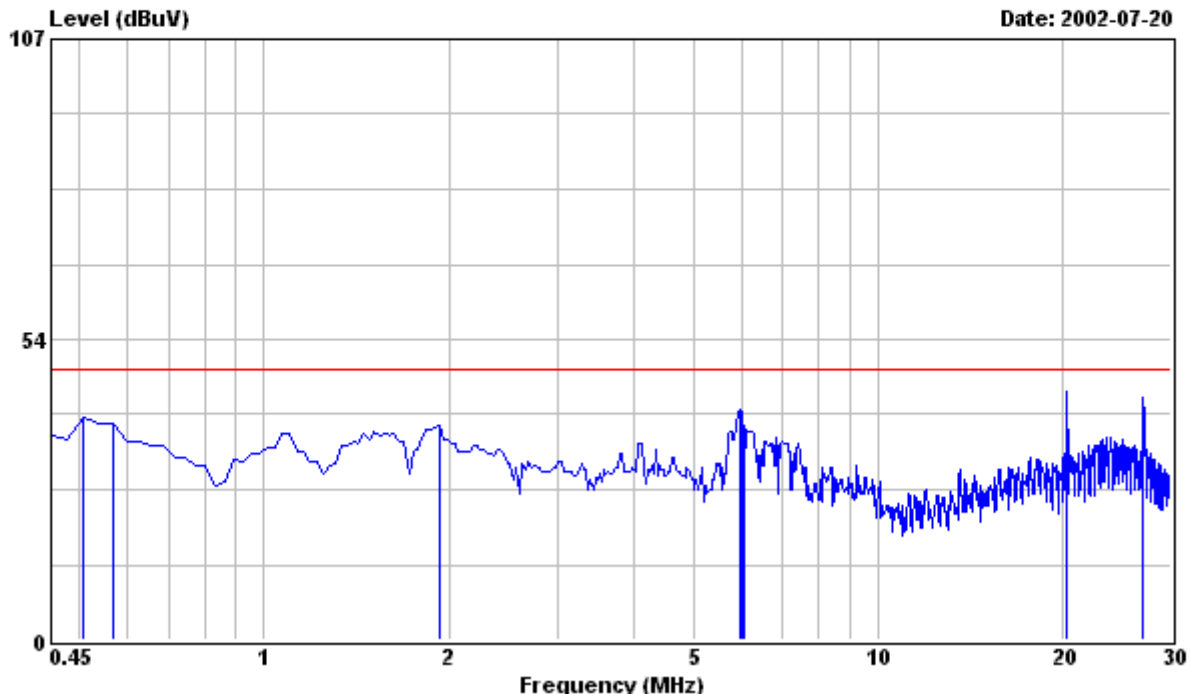


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Data#: 7

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : DELL M782p Serial No:TY0205268
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68,7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
0.509	39.40	48.00	0.23	39.63	-8.37	
0.568	38.40	48.00	0.26	38.66	-9.34	
1.928	37.60	48.00	0.40	38.00	-10.00	
5.946	40.50	48.00	0.40	40.90	-7.10	
6.005	40.40	48.00	0.40	40.80	-7.20	
6.065	37.70	48.00	0.40	38.10	-9.90	
20.367	43.30	48.00	0.81	44.11	-3.89	
27.104	42.30	48.00	0.86	43.16	-4.84	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

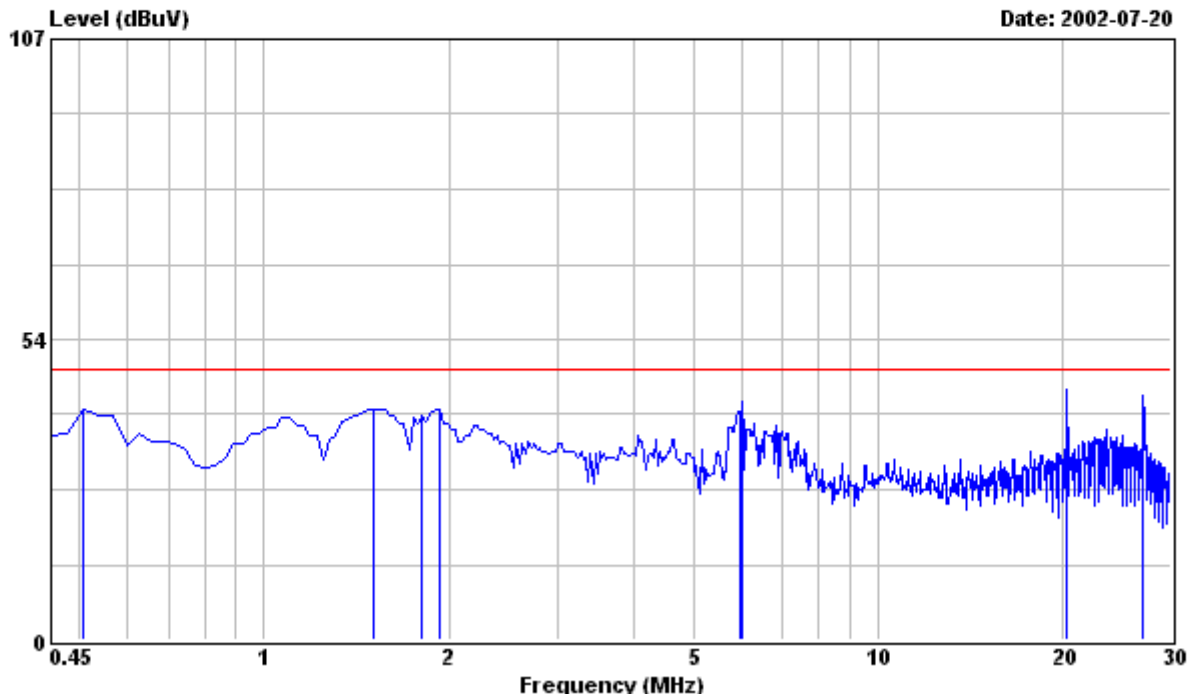


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Data#: 8

File#: C:\Program Files\em3\EMI02-037-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : DELL M782p Serial No:TY0205268
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68,7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
0.509	40.70	48.00	0.23	40.93	-7.07	
1.514	40.60	48.00	0.40	41.00	-7.00	
1.809	39.70	48.00	0.40	40.10	-7.90	
1.928	40.60	48.00	0.40	41.00	-7.00	
5.946	40.40	48.00	0.40	40.80	-7.20	
6.005	42.20	48.00	0.40	42.60	-5.40	
20.367	43.60	48.00	0.91	44.51	-3.49	
27.104	42.50	48.00	0.96	43.46	-4.54	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

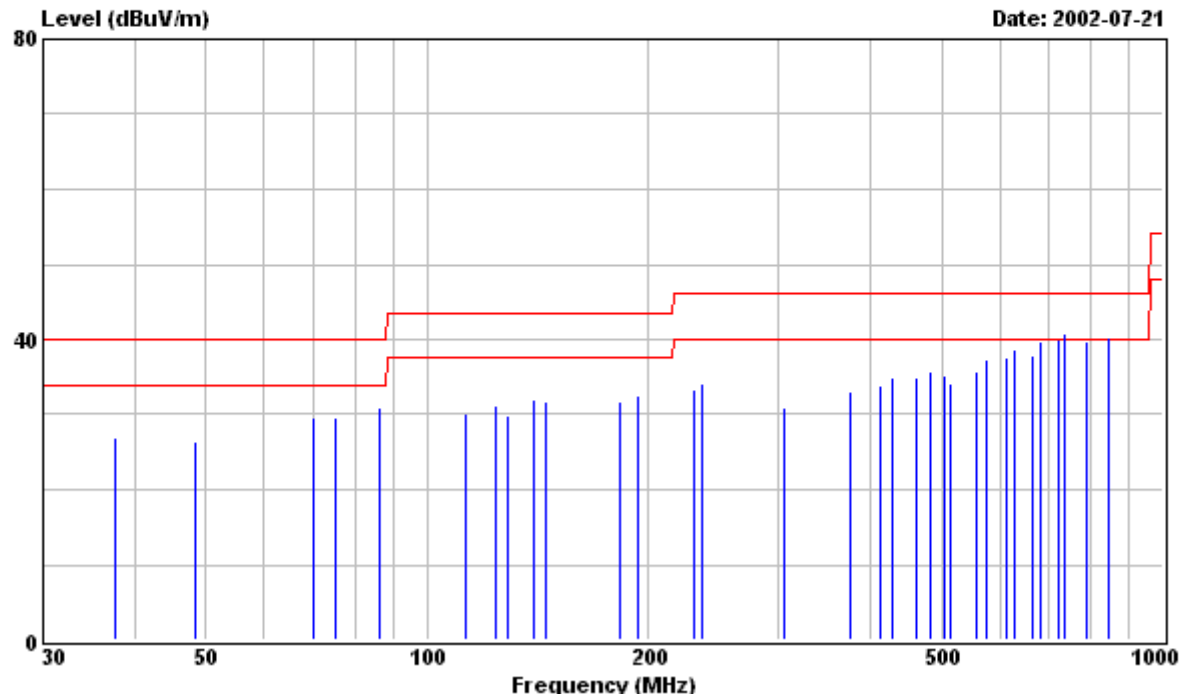


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Data#: 1

File#: C:\Program Files\em3\EMI02-037-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : DELL M782p Serial No:TY0205268
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
MHz	dBuV	dBuV	dBuV/m	dB/m	HORIZONTAL dBuV/m	dBuV/m
37.600	14.30	---	40.00	12.76	27.06	-12.94
48.320	15.50	---	40.00	11.03	26.53	-13.47
69.820	19.60	---	40.00	10.00	29.60	-10.40
75.180	19.30	---	40.00	10.21	29.51	-10.49
85.920	20.10	---	40.00	10.70	30.80	-9.20
112.780	18.20	---	43.50	12.06	30.26	-13.24
123.510	18.70	---	43.50	12.47	31.17	-12.33
128.870	17.10	---	43.50	12.66	29.76	-13.74
139.620	19.00	---	43.50	13.06	32.06	-11.44
144.980	18.60	---	43.50	13.24	31.84	-11.66
182.580	17.00	---	43.50	14.65	31.65	-11.85
193.320	16.90	---	43.50	15.67	32.57	-10.93

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
					HORIZONTAL	
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m
230.900	14.30	---	46.00	18.99	33.29	-12.71
236.260	14.70	---	46.00	19.45	34.15	-11.85
306.080	14.30	---	46.00	16.59	30.89	-15.11
375.890	15.20	---	46.00	17.98	33.18	-12.82
413.470	15.30	---	46.00	18.59	33.89	-12.11
429.580	16.00	---	46.00	18.81	34.81	-11.19
461.810	15.60	---	46.00	19.25	34.85	-11.15
483.280	16.10	---	46.00	19.51	35.61	-10.39
504.770	15.30	---	46.00	19.79	35.09	-10.91
515.510	14.40	---	46.00	19.96	34.36	-11.64
558.450	15.10	---	46.00	20.62	35.72	-10.28
574.560	16.60	---	46.00	20.85	37.45	-8.55
612.150	16.20	---	46.00	21.51	37.71	-8.29
628.260	16.70	---	46.00	21.88	38.58	-7.42
665.850	15.20	---	46.00	22.77	37.97	-8.03
681.960	16.50	---	46.00	23.13	39.63	-6.37
719.540	16.10	---	46.00	23.77	39.87	-6.13
735.650	16.80	---	46.00	23.98	40.78	-5.22
735.650	---	13.90	46.00	23.98	37.88	-8.12
789.350	15.00	---	46.00	24.70	39.70	-6.30
843.050	14.70	---	46.00	25.46	40.16	-5.84
843.050	---	11.90	46.00	25.46	37.36	-8.64

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

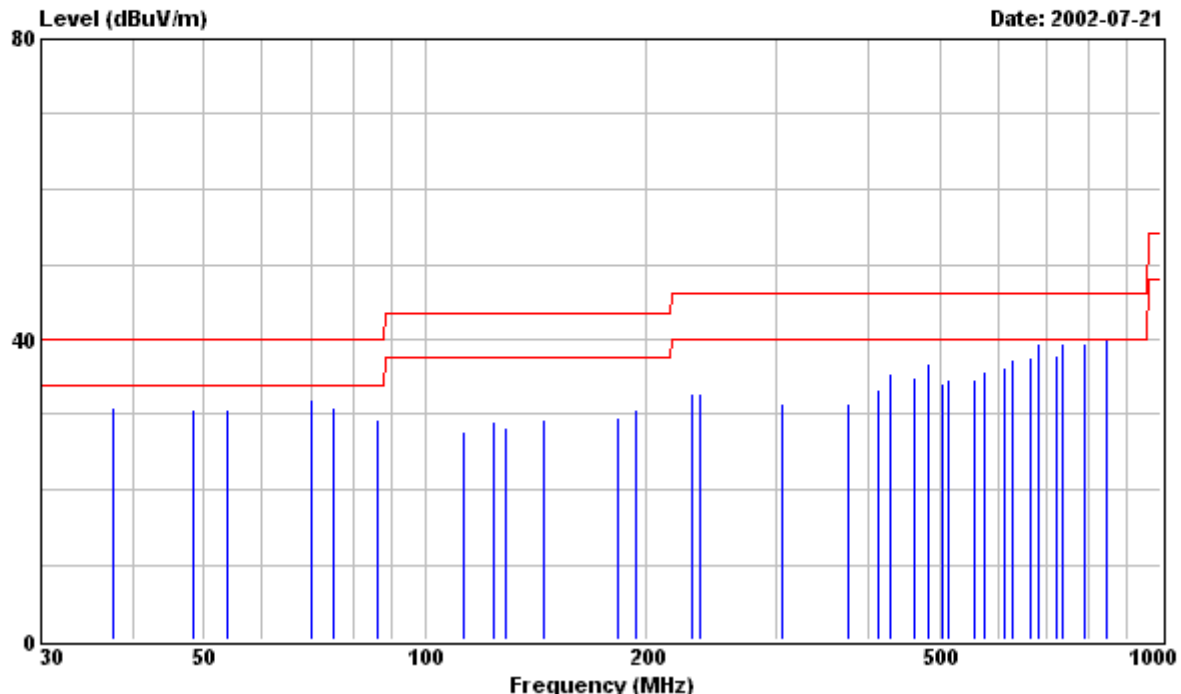


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Data#: 2

File#: C:\Program Files\em3\EMI02-037-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : DELL M782p Serial No:TY0205268
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
MHz	dBuV	dBuV	dBuV/m	dB/m	VERTICAL dBuV/m	dBuV/m
37.600	18.10	---	40.00	12.76	30.86	-9.14
48.320	19.60	---	40.00	11.03	30.63	-9.37
53.690	20.20	---	40.00	10.45	30.65	-9.35
69.820	21.90	---	40.00	10.00	31.90	-8.10
75.180	20.60	---	40.00	10.21	30.81	-9.19
85.920	18.70	---	40.00	10.70	29.40	-10.60
112.780	15.80	---	43.50	12.06	27.86	-15.64
123.510	16.50	---	43.50	12.47	28.97	-14.53
128.870	15.60	---	43.50	12.66	28.26	-15.24
144.980	16.10	---	43.50	13.24	29.34	-14.16
182.580	14.90	---	43.50	14.65	29.55	-13.95
193.320	15.00	---	43.50	15.67	30.67	-12.83

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
					VERTICAL	
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m
230.900	13.90	---	46.00	18.99	32.89	-13.11
236.260	13.30	---	46.00	19.45	32.75	-13.25
306.080	14.90	---	46.00	16.59	31.49	-14.51
375.890	13.60	---	46.00	17.98	31.58	-14.42
413.470	14.80	---	46.00	18.59	33.39	-12.61
429.580	16.70	---	46.00	18.81	35.51	-10.49
461.810	15.80	---	46.00	19.25	35.05	-10.95
483.280	17.30	---	46.00	19.51	36.81	-9.19
504.770	14.30	---	46.00	19.79	34.09	-11.91
515.510	14.70	---	46.00	19.96	34.66	-11.34
558.450	14.10	---	46.00	20.62	34.72	-11.28
574.560	15.00	---	46.00	20.85	35.85	-10.15
612.150	14.70	---	46.00	21.51	36.21	-9.79
628.260	15.40	---	46.00	21.88	37.28	-8.72
665.850	14.70	---	46.00	22.77	37.47	-8.53
681.960	16.20	---	46.00	23.13	39.33	-6.67
719.540	14.00	---	46.00	23.77	37.77	-8.23
735.650	15.40	---	46.00	23.98	39.38	-6.62
789.350	14.80	---	46.00	24.70	39.50	-6.50
843.050	14.50	---	46.00	25.46	39.96	-6.04

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

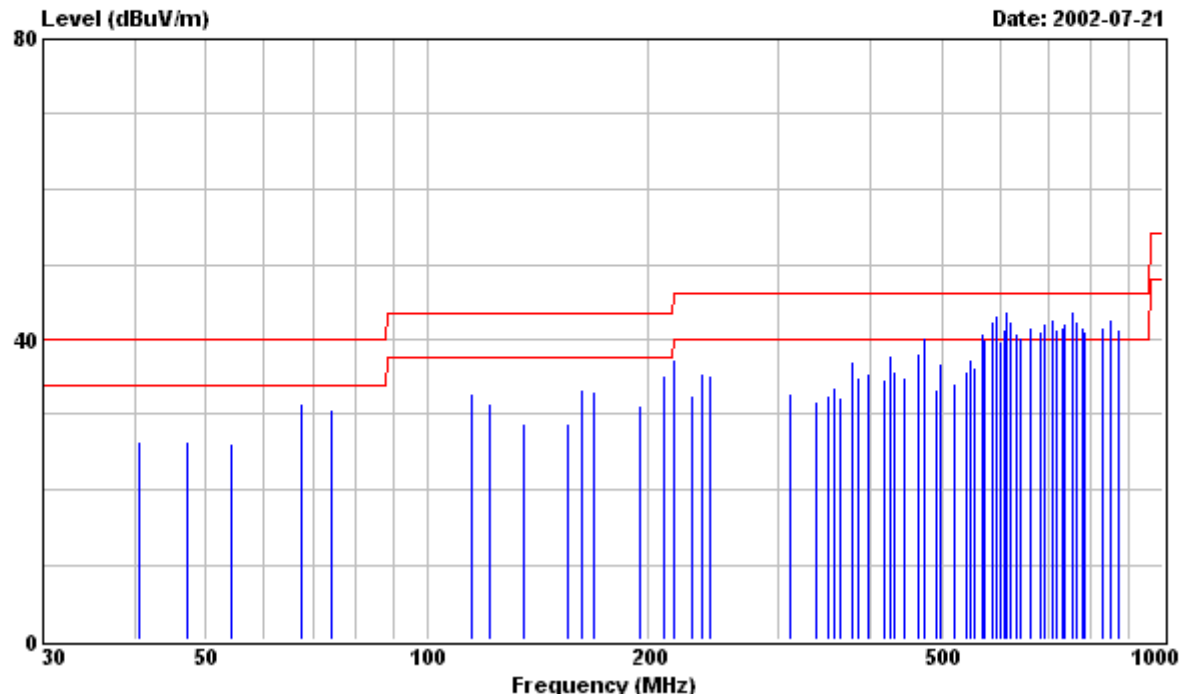


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Data#: 3

File#: C:\Program Files\em3\EMI02-037-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : DELL M782p Serial No:TY0205268
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
MHz	dBuV	dBuV	dBuV/m	dB/m	HORIZONTAL dBuV/m	dBuV/m
40.510	14.30	---	40.00	12.03	26.33	-13.67
47.260	15.20	---	40.00	11.17	26.37	-13.63
54.010	15.70	---	40.00	10.42	26.12	-13.88
67.520	21.40	---	40.00	9.98	31.38	-8.62
74.260	20.40	---	40.00	10.17	30.57	-9.43
114.770	20.70	---	43.50	12.15	32.85	-10.65
121.510	19.00	---	43.50	12.42	31.42	-12.08
135.020	15.79	---	43.50	12.89	28.68	-14.82
155.280	15.30	---	43.50	13.57	28.87	-14.63
162.020	19.70	---	43.50	13.76	33.46	-10.04
168.770	19.00	---	43.50	13.94	32.94	-10.56
195.060	15.30	---	43.50	15.86	31.16	-12.34

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
					HORIZONTAL	
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m
209.280	18.00	---	43.50	17.15	35.15	-8.35
216.030	19.60	---	46.00	17.74	37.34	-8.66
229.530	13.80	---	46.00	18.86	32.66	-13.34
236.270	15.90	---	46.00	19.45	35.35	-10.65
243.030	15.20	---	46.00	19.98	35.18	-10.82
310.520	16.20	---	46.00	16.69	32.89	-13.11
337.530	14.40	---	46.00	17.25	31.65	-14.35
351.040	15.10	---	46.00	17.51	32.61	-13.39
357.790	15.90	---	46.00	17.65	33.55	-12.45
364.540	14.40	---	46.00	17.77	32.17	-13.83
378.030	19.00	---	46.00	18.02	37.02	-8.98
384.780	16.80	---	46.00	18.14	34.94	-11.06
398.280	17.10	---	46.00	18.35	35.45	-10.55
418.530	15.90	---	46.00	18.67	34.57	-11.43
425.280	19.10	---	46.00	18.75	37.85	-8.15
432.030	17.00	---	46.00	18.85	35.85	-10.15
445.530	15.80	---	46.00	19.02	34.82	-11.18
465.800	18.80	---	46.00	19.29	38.09	-7.91
472.550	---	18.81	46.00	19.37	38.18	-7.82
472.550	20.90	---	46.00	19.37	40.27	-5.73
492.800	13.70	---	46.00	19.62	33.32	-12.68
499.540	17.00	---	46.00	19.70	36.70	-9.30
519.790	14.00	---	46.00	20.02	34.02	-11.98
540.050	15.30	---	46.00	20.33	35.63	-10.37
546.790	17.00	---	46.00	20.45	37.45	-8.55
553.550	15.80	---	46.00	20.54	36.34	-9.66
567.050	---	18.54	46.00	20.74	39.28	-6.72
567.050	20.00	---	46.00	20.74	40.74	-5.26
573.800	19.10	---	46.00	20.85	39.95	-6.05
587.300	---	19.60	46.00	21.03	40.63	-5.37
587.300	21.30	---	46.00	21.03	42.33	-3.67
594.050	22.20	---	46.00	21.11	43.31	-2.69
594.050	---	19.94	46.00	21.11	41.05	-4.95
600.800	18.40	---	46.00	21.25	39.65	-6.35
607.550	19.90	---	46.00	21.41	41.31	-4.69
607.550	---	17.24	46.00	21.41	38.65	-7.35
614.300	---	19.95	46.00	21.57	41.52	-4.48
614.300	22.30	---	46.00	21.57	43.87	-2.13
621.050	---	18.15	46.00	21.72	39.87	-6.13
621.050	20.70	---	46.00	21.72	42.42	-3.58
634.560	---	15.79	46.00	22.04	37.83	-8.17
634.560	18.70	---	46.00	22.04	40.74	-5.26
641.310	18.00	---	46.00	22.19	40.19	-5.81
641.310	---	15.22	46.00	22.19	37.41	-8.59
661.560	---	15.88	46.00	22.66	38.54	-7.46
661.560	18.90	---	46.00	22.66	41.56	-4.44

Remarks: 1. All Readings are Peak & Quasi-peak values.

2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
					HORIZONTAL	
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m
681.810	---	15.11	46.00	23.13	38.24	-7.76
681.810	17.90	---	46.00	23.13	41.03	-4.97
688.560	---	15.95	46.00	23.29	39.24	-6.76
688.560	18.80	---	46.00	23.29	42.09	-3.91
708.810	---	16.83	46.00	23.64	40.47	-5.53
708.810	19.30	---	46.00	23.64	42.94	-3.06
715.560	17.50	---	46.00	23.74	41.24	-4.76
715.560	---	14.89	46.00	23.74	38.63	-7.37
729.060	17.70	---	46.00	23.91	41.61	-4.39
729.060	---	14.88	46.00	23.91	38.79	-7.21
735.810	18.20	---	46.00	24.01	42.21	-3.79
735.810	---	15.15	46.00	24.01	39.16	-6.84
756.060	---	16.12	46.00	24.25	40.37	-5.63
756.060	19.60	---	46.00	24.25	43.85	-2.15
762.810	18.10	---	46.00	24.36	42.46	-3.54
762.810	---	15.40	46.00	24.36	39.76	-6.24
776.310	17.10	---	46.00	24.53	41.63	-4.37
776.310	---	14.00	46.00	24.53	38.53	-7.47
783.060	16.40	---	46.00	24.59	40.99	-5.01
783.060	---	13.20	46.00	24.59	37.79	-8.21
830.310	16.20	---	46.00	25.29	41.49	-4.51
830.310	---	13.10	46.00	25.29	38.39	-7.61
850.560	17.10	---	46.00	25.59	42.69	-3.31
850.560	---	13.90	46.00	25.59	39.49	-6.51
870.810	15.30	---	46.00	25.90	41.20	-4.80
870.810	---	12.10	46.00	25.90	38.00	-8.00

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

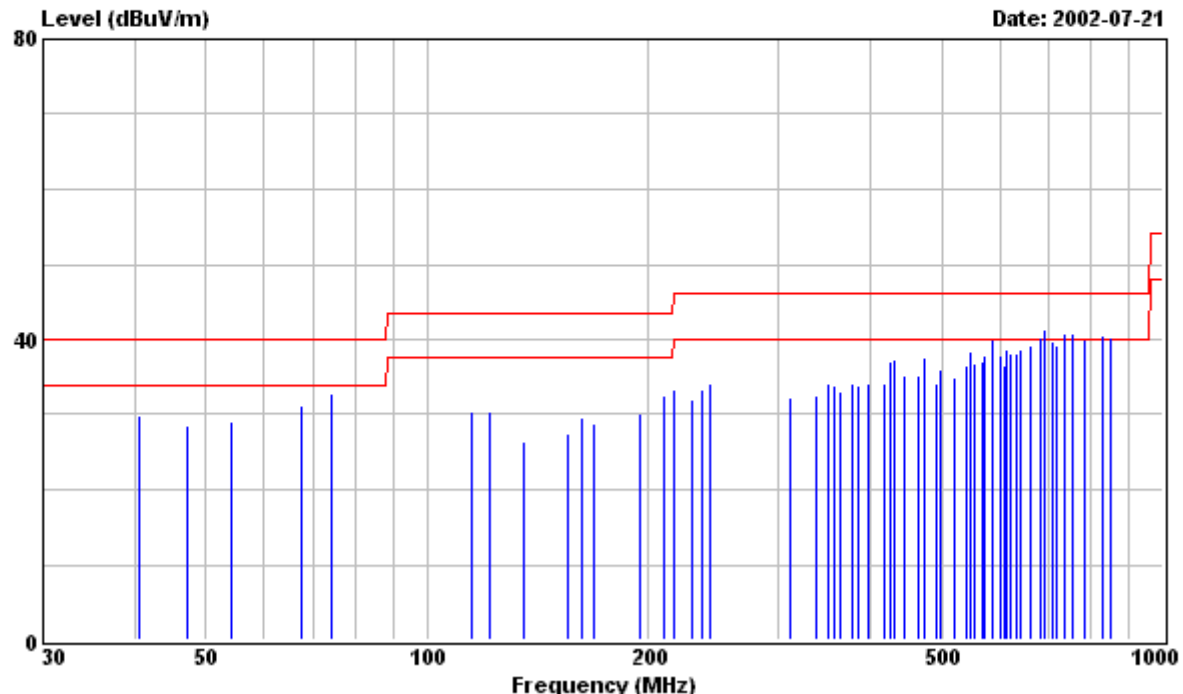


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Data#: 4

File#: C:\Program Files\em3\EMI02-037-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : DELL M782p Serial No:TY0205268
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PHILIPS TUBE,RUN DELL
: "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH DELL
: DHM PC,NVIDIA GeForce 3 VIDEO CARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
MHz	dBuV	dBuV	dBuV/m	dB/m	VERTICAL dBuV/m	dBuV/m
40.510	17.90	---	40.00	12.03	29.93	-10.07
47.260	17.40	---	40.00	11.17	28.57	-11.43
54.010	18.70	---	40.00	10.42	29.12	-10.88
67.520	21.10	---	40.00	9.98	31.08	-8.92
74.260	22.50	---	40.00	10.17	32.67	-7.33
114.770	18.30	---	43.50	12.15	30.45	-13.05
121.510	17.90	---	43.50	12.42	30.32	-13.18
135.002	13.50	---	43.50	12.89	26.39	-17.11
155.280	14.00	---	43.50	13.57	27.57	-15.93
162.020	15.80	---	43.50	13.76	29.56	-13.94
168.770	14.90	---	43.50	13.94	28.84	-14.66
195.060	14.40	---	43.50	15.86	30.26	-13.24

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
MHz	dBuV	dBuV	dBuV/m	dB/m	VERTICAL dBuV/m	dBuV/m
209.280	15.40	---	43.50	17.15	32.55	-10.95
216.030	15.70	---	46.00	17.74	33.44	-12.56
229.530	13.20	---	46.00	18.86	32.06	-13.94
236.270	13.90	---	46.00	19.45	33.35	-12.65
243.030	14.10	---	46.00	19.98	34.08	-11.92
310.520	15.50	---	46.00	16.69	32.19	-13.81
337.530	15.40	---	46.00	17.25	32.65	-13.35
351.040	16.90	---	46.00	17.51	34.41	-11.59
357.790	16.20	---	46.00	17.65	33.85	-12.15
364.540	15.20	---	46.00	17.77	32.97	-13.03
378.030	16.30	---	46.00	18.02	34.32	-11.68
384.780	15.60	---	46.00	18.14	33.74	-12.26
398.280	15.90	---	46.00	18.35	34.25	-11.75
418.530	15.40	---	46.00	18.67	34.07	-11.93
425.280	18.20	---	46.00	18.75	36.95	-9.05
432.030	18.40	---	46.00	18.85	37.25	-8.75
445.530	16.20	---	46.00	19.02	35.22	-10.78
465.800	16.00	---	46.00	19.29	35.29	-10.71
472.550	18.20	---	46.00	19.37	37.57	-8.43
492.800	14.50	---	46.00	19.62	34.12	-11.88
499.540	16.40	---	46.00	19.70	36.10	-9.90
519.790	14.80	---	46.00	20.02	34.82	-11.18
540.050	16.20	---	46.00	20.33	36.53	-9.47
546.790	17.90	---	46.00	20.45	38.35	-7.65
553.550	16.30	---	46.00	20.54	36.84	-9.16
567.050	16.40	---	46.00	20.74	37.14	-8.86
573.800	17.10	---	46.00	20.85	37.95	-8.05
587.300	---	17.67	46.00	21.03	38.70	-7.30
587.300	19.10	---	46.00	21.03	40.13	-5.87
600.800	16.60	---	46.00	21.25	37.85	-8.15
607.550	15.00	---	46.00	21.41	36.41	-9.59
614.300	17.20	---	46.00	21.57	38.77	-7.23
621.050	16.50	---	46.00	21.72	38.22	-7.78
634.560	16.20	---	46.00	22.04	38.24	-7.76
641.310	16.40	---	46.00	22.19	38.59	-7.41
661.560	16.60	---	46.00	22.66	39.26	-6.74
681.810	17.10	---	46.00	23.13	40.23	-5.77
681.810	---	15.70	46.00	23.13	38.83	-7.17
688.560	18.00	---	46.00	23.29	41.29	-4.71
688.560	---	16.30	46.00	23.29	39.59	-6.41
708.810	16.10	---	46.00	23.64	39.74	-6.26
715.560	15.50	---	46.00	23.74	39.24	-6.76
735.810	16.70	---	46.00	24.01	40.71	-5.29
735.810	---	14.00	46.00	24.01	38.01	-7.99
756.060	16.60	---	46.00	24.25	40.85	-5.15
756.060	---	14.50	46.00	24.25	38.75	-7.25

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit
					VERTICAL	
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m
783.060	15.40	---	46.00	24.59	39.99	-6.01
830.310	15.20	---	46.00	25.29	40.49	-5.51
830.310	---	12.40	46.00	25.29	37.69	-8.31
850.560	14.60	---	46.00	25.59	40.19	-5.81
850.560	---	12.20	46.00	25.59	37.79	-8.21

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu