FCC ID: BR8VD-697H

EMC

TEST REPORT

REPORT NO. : F87091505
MODEL NO. : VD-697H
DATE OF TEST : Sept. 18, 1998

PREPARED FOR : ADI CORP.

ADDRESS : 14TH FL. NO. 1, SEC. 4, NAN-KING E. RD.,
TAIPEI, TAIWAN, R.O.C.

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION

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12F, NO.1, SEC.4, NAN-KING EAST RD.,
TAIPEI, TAIWAN, R.O.C.

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1. CERTIFICATION

Issue Date: Oct. 03, 1998

Product	:	COLOR MONITOR
Trade Name	:	ADI
Model No.	:	VD-697H
Applicant	:	ADI CORP.
Standard	:	FCC Part 15, Subpart B, Class B ANSI C63.4-1992 CISPR 22:1993+A1+A2

We hereby certify that one sample of the designation has been tested in our facility on Sept. 18, 1998. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

The test results show that the EUT as described in this report is in compliance with the Class B limits of conducted and radiated emission of applicable standards.

TESTED BY: San Lin , DATE: 10/03/98
(San Lin)

CHECKED BY: Yemmy , DATE: 10/03/98
(Yemmy Soong)

APPROVED BY: Mike Su , DATE: 10/03/98
(Mike Su)

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	COLOR MONITOR
Model No.	:	VD-697H
Power Supply Type	:	Switching
Power Cord of monitor	:	Nonshielded (1.8m)
Data Cable of monitor	:	Shielded (1.5m) including Audio, Video & Mic cable

Note: The EUT is a 17" color monitor with resolution up to 1280x1024.

The EUT has internal speakers which were connected to the sound card of PC.

The EUT was tested with a USB box, model: UH-200, which acted as a base for the EUT.

There is a ferrite core on the video cable outside the monitor.

For more detailed features description, please refer to ATTACHMENT 1 – TECHNICAL DESCRIPTION OF EUT and User's Manual.

2.2 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories are used to form representative test configuration during the tests.

No.	Product	Brand	Model No.	FCC ID	I/O Cable
1	PERSONAL COMPUTER	HP	D4572A	FCC Doc Approved	Nonshielded Power (1.8m)
2	KEYBOARD	HP	C3758A	CIGE03633	Shielded Signal (1.8m)
3	USB BOX	ADI	UH-200	BR8UH-200	DC Power to monitor (0.2m)
4	PRINTER	HP	2225C+	DSI6XU2225	Shielded Signal (1.2m) Nonshielded Power (1.8)
5	MODEM	ACEEX	1414	IFAXDM1414	Shielded Signal (1.8m) Nonshielded Power (1.8m)
6	MOUSE	HP	M-S34	DZL211029	Shielded Signal (1.8m)
7	CCD CAMERA 2X	COMPAQ	YC72-CPQ	EDUYC72-CPQ	Shielded Signal (2.1m)
8	SOUND CARD	YA HSIN	AUDIO 1869	FCC Doc Approved	N/A
9	VGA DISPLAY	DIAMOND	STEALTH 64 3200 PCI	FTUPC19684M	N/A

Note: 1. Support unit 7 was connected to the USB port of EUT.
2. Two USB cables (1.8m) were connected to the two USB port of EUT to form two open loop cables.

2.3 TEST METHODOLOGY AND CONFIGURATION

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4: 1992. Radiated testing was performed at an antenna to EUT distance of 10 m on an open area test site.

Please refer to the photos of test configuration in Item 5.

3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

RADIATED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8594A	3144A00308	Sept. 3, 1999
HP Preamplifier	8447D	2944A08119	Jan. 20, 1999
HP Preamplifier	8347A	3307A01088	Sept. 9, 1999
ROHDE & SCHWARZ TEST RECEIVER	ESVP	893496/030	July 15, 1999
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 28, 1998
CHASE Bilog Antenna	CBL6112A	2329	Sept. 19, 1999
EMCO Turn Table	1060	1195	N/A
EMCO Tower	1051	1163	N/A
Open Field Test Site	Site 2	ADT-R02	Sept. 18, 1999

Note: 1. The measurement uncertainty is less than +/- 3dB, which is calculated as per NAMA's document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESH3	893495/006	July 15, 1999
ROHDE & SCHWARZ Spectrum Monitor	EZM	893787/013	July 16, 1999
ROHDE & SCHWARZ Artificial Mains Network	ESH3-Z5	839135/006	July 14, 1999
EMCO-L.I.S.N.	3825/2	9204-1964	July 14, 1999
Shielded Room	Site 2	ADT-C02	N/A

Note: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMA's document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

3.2 LIMITS OF CONDUCTED AND RADIATED EMISSION

LIMIT OF RADIATED EMISSION OF CISPR 22

FREQUENCY (MHz)	Class A (at 10m) dBuV/m	Class B (at 10m) dBuV/m
30 - 230	40	30
230 - 1000	47	37

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
Above 1000	300	49.5	500	54.0

Note: (1) The lower limit shall apply at the transition frequencies.

(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

LIMIT OF CONDUCTED EMISSION OF CISPR 22

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Note: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4. TEST RESULTS (EMISSION)

4.1 RADIO DISTURBANCE

Frequency Range	:	0.15 - 30 MHz (Conducted Emission)
		30 - 2000 MHz (Radiated Emission)
Input Voltage	:	120 Vac, 60 Hz
Temperature	:	28 ℃
Humidity	:	50 %
Atmospheric Pressure	:	998 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -3.9 dB at 9.080 MHz Minimum passing margin of radiated emission: -3.9 dB at 76.08 MHz

Note: The EUT was pretested under the following resolution & horizontal synchronization speed mode:

* 1280x1024mode (64 kHz),
* 1024x768 mode (69kHz),
* 640x480 mode (31.5 kHz)

The worst emission levels were found under 1280x1024mode (64 kHz) and therefore the test data of only this mode is recorded.

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipments.
2. PC runs a test program to enable all functions.
3. PC reads and writes messages from FDD and HDD.
4. PC sends "H" messages to monitor (EUT) and monitor displays "H" patterns on screen.
5. CCD cameras capture an image and sends image messages to EUT and EUT displays them on its screen.
6. PC sends "H" messages to modem.
7. PC sends "H" messages to printer, and the printer prints them on paper.
8. PC sends audio messages to internal speakers of EUT.
9. Repeat steps 3-9.

4.3 TEST DATA OF CONDUCTED EMISSION

EUT: **COLOR MONITOR** MODEL: **VD-697H**

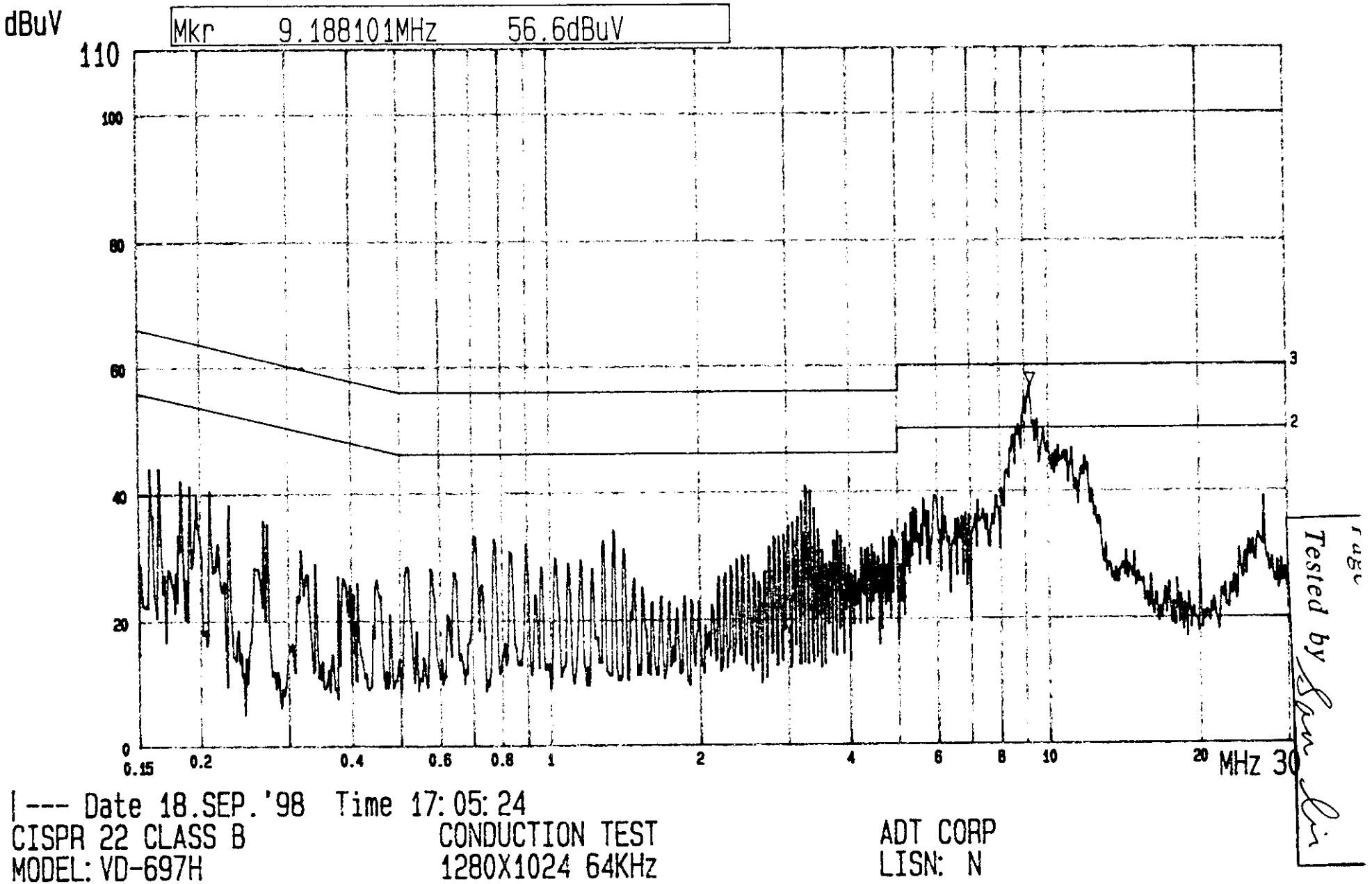
MODE: **1280x1024 (64 kHz)**

6 dB Band Width: 10 kHz

TEST PERSONNEL: Sam Lin

Freq.	L Level		N Level		Limit		Margin [dB (μV)]			
[MHz]	[dB (μV)]		[dB (μV)]		[dB (μV)]		L		N	
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV
0.190	41.20	-	37.90	-	64.04	54.04	-22.8	-	-26.1	-
0.270	35.20	-	32.10	-	62.56	52.56	-27.4	-	-30.5	-
1.270	34.10	-	33.20	-	56.00	46.00	-21.9	-	-22.8	-
3.260	40.10	-	39.30	-	56.00	46.00	-15.9	-	-16.7	-
6.220	39.00	-	37.90	-	60.00	50.00	-21.0	-	-22.1	-
9.080	51.90	46.1	45.50	-	60.00	50.00	-8.1	-3.9	-14.5	-

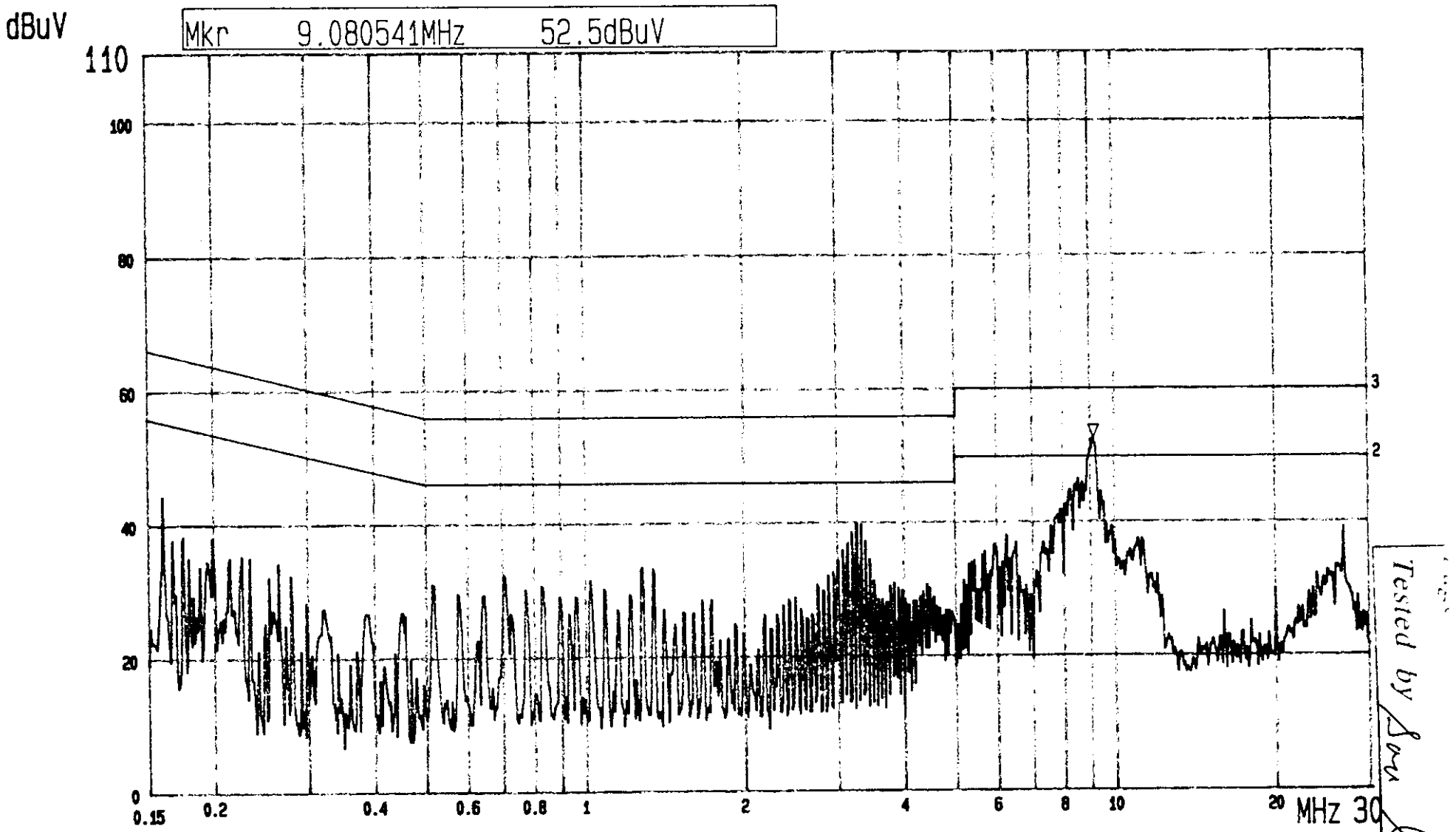
Remarks:
1. "*": Undetectable
2. Q.P. and AV. are abbreviations of quasi-peak and average individually.
3. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.



|--- Date 18.SEP.'98 Time 17:05:24

CISPR 22 CLASS B | CONDUCTION TEST | ADT CORP

MODEL: VD-697H | 1280X1024 64KHz | LISN: N



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CISPR 22 CLASS B CONDUCTION TEST ADT CORP

MODEL: VD-697H 1280X1024 64KHz LISN: L

4.4 TEST DATA OF RADIATED EMISSION

EUT: **COLOR MONITOR** MODEL: **VD-697H**

MODE: **1280x1024 (64 kHz)** POLARITY: Horizontal

ANTENNA: CHASE BILOG CBL6112A

DETECTOR FUNCTION AND BANDWIDTH: Quasi peak, 120 kHz (30-1000 MHz)
Peak, 1 MHz (1000 MHz-2000 MHz)

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

FREQUENCY RANGE: 1000-2000 MHz MEASURED DISTANCE: 3 M

TEST PERSONNEL: Sam Lin

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
76.12	8.1	10.7	18.8	30.0	-11.2
81.21	8.7	15.7	24.4	30.0	-5.6
124.99	14.2	8.8	23.0	30.0	-7.0
131.98	13.9	11.8	25.7	30.0	-4.3
135.37	13.8	11.6	25.4	30.0	-4.6
167.99	11.4	13.8	25.2	30.0	-4.8
176.00	11.5	11.9	23.4	30.0	-6.6
180.00	11.6	13.4	25.0	30.0	-5.0
189.55	11.7	9.6	21.3	30.0	-8.7
216.63	13.1	8.6	21.7	30.0	-8.3
243.68	15.0	9.2	24.2	37.0	-12.8

REMARKS:
1. Emission level (dBuV/m) = Correction Factor (dB/m) +Meter Reading (dBuV).
2. Correction Factor (dB/m) = Ant. Factor (dB/m)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value

TEST DATA OF RADIATED EMISSION

EUT: **COLOR MONITOR**

MODEL: **VD-697H**

MODE: **1280x1024 (64kHz)**

POLARITY: Vertical

ANTENNA: CHASE BILOG CBL6112A

DETECTOR FUNCTION AND BANDWIDTH: Quasi peak, 120 kHz (30-1000 MHz)
Peak, 1 MHz (1000 MHz-2000 MHz)

FREQUENCY RANGE: 30-1000 MHz

MEASURED DISTANCE: 10 M

FREQUENCY RANGE: 1000-2000 MHz

MEASURED DISTANCE: 3 M

TEST PERSONNEL: Sam Liu

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
76.08	7.1	19.0	26.1	30.0	-3.9
81.02	7.8	17.4	25.2	30.0	-4.8
119.99	14.4	9.8	24.2	30.0	-5.8
124.55	14.3	9.7	24.0	30.0	-6.0
131.99	14.2	9.8	24.0	30.0	-6.0
135.39	14.1	11.4	25.5	30.0	-4.5
175.98	11.4	9.0	20.4	30.0	-9.6
189.53	12.0	7.5	19.5	30.0	-10.5
191.98	12.1	12.1	24.2	30.0	-5.8
216.62	13.4	8.2	21.6	30.0	-8.4
243.69	14.7	10.6	25.3	37.0	-11.7

REMARKS:
1. Emission level (dBuV/m) = Correction Factor (dB/m) +Meter Reading (dBuV).
2. Correction Factor (dB/m) = Ant. Factor (dB/m)+Cable loss (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value