TABLE OF CONTENTS

GENERAL INFORMATION

1	APPLICANT	:	CHENG UEI PRECISION INDUSTRY CO., LTD.
2	ADDRESS	:	No. 18, Chung Shan Rd.,
			Tu-Cheng Industry Park, Tu-Cheng City,
			Taipei Hsien, Taiwan, R. O. C.
3	MANUFACTURER	:	CHENG UEI PRECISION INDUSTRY CO., LTD.
4	ADDRESS	:	No. 18, Chung Shan Rd.,
			Tu-Cheng Industry Park, Tu-Cheng City,
			Taipei Hsien, Taiwan, R. O. C.
5	MANUFACTURER	:	TAIWAN VIDEO & MONITOR CORP.
6	ADDRESS	:	No. 3-1, Shen-Keng,
			Peishan Li, Kuanhsi, Shinchu
			Taiwan, R. O .C.

5	DESCRIPTION OF EUT	:	
	EUT	:	LCD Monitor
	FCC ID	:	M6EFPD1520
	Model Number	:	FPD1520
	Serial #	:	N/A
	Data Cable	:	SHIELDED
	Power Cord (AC)		UN-SHIELDED
	Power Cord (DC)	:	SHIELDED
	Power Supply Type	:	SWITCHING ADAPTOR

5.1 The EUT were investigated with three test modes: (•)1024 x 768 (•)800 x 600 (•)640 x 480, and the worst case of three modes is mode (•)1024 x 768.

And the final test data of this report were shown with this test mode.

6 FEATURES OF EUT :

- LCD panel: 15” or 15.1” AM TFT
- Input signal format: RGB analog video
- Frequency: FH 30Khz-70Khz, FV50hz-85hz
- Maximum Resolution: 1024 (H) x 768 (V)

Audio option:

- Output power : 2.5W per channel
- Frequency response: 40-20Khz
- Input impedance: 10K Ohm

MODIFICATION LIST

THE FOLLOWING ACCESSORIES WERE ADDED TO THE EUT DURING TESTING :

Item	Description	Manufacture	Spec./ Model No.	Dimension	Q'ty	Location	Reference
1	EMI Absorbing Plate	Taiwan Tokin	K4E	10 x 4 cm	1	Shielding Plate and LCD Signal Cable	Appendix B Page 6
2	EMI Absorbing Plate	Taiwan Tokin	K4E	3.5 x 2 cm	2	Shielding Plate and LCD Signal Cable	Appendix B Page 6
3	EMI Absorbing Plate	Taiwan Tokin	K4E	3 x 2 cm	2	Shielding Plate and LCD Signal Cable	Appendix B Page 6
4	Conductive Fabric Tape	Jong Chan	CFT-012	3 x 12 cm	1	LCD Signal Cable	Appendix B Page 6
5	Conductive Fabric Tape	Jong Chan	CFT-012	2.5 x 12 cm	1	LCD Signal Cable	Appendix B Page 6
6	Clip-On Mounting	Tenn Max	187RF2C070	10 cm	1	Shielding Plate	Appendix B Page 6
7	Core	Eroc	RH	17.5 x 28.5 x 9.5 mm	2	Both Side of VGA Cable	Appendix B Page 13
8	Core	Eroc	A12RH	14.2 x 28.5 x 8.2 mm	1	Power Supply DC Cable	Appendix B Page 13

CONDUCTED POWER LINE TEST

1 TEST INSTRUMENTS & FACILITIES

The following test Instruments was used during the conducted test :

Item	Instruments/ Facilities	Specification	Manufacturer	Model #	Date Of Cal.
1	EMI Receiver	9KHz ~ 30MHz	ROHDE & SCHWARZ	ESHS 30	MAR/2000
2	LISN	50•/50uH/100A 9KHz ~ 30MHz	SCHWARZ BECK	NNLK 8121	MAR/2000
3	LISN	9KHz ~ 30MHz	ROHDE & SCHWARZ	ESH3-Z5	MAR/2000
4	ESXS-K1	Version 2.03b	ROHDE & SCHWARZ	1082.9678.02 840.913/246	N/A
5	Cables	10KHz ~ 30MHz		NO : 10	JUL/99

2 TEST PROCEDURE

2.1 The EUT was tested according to **ANSI C63.4 - 1992 & CISPR 22**.

2.2 The EUT was placed 0.4 meter from the conducting wall of shielding room and kept at least 0.8 meter from any other grounded conducting surface.

2.3 The frequency range form 0.15 MHz to 30 MHz was investigated.

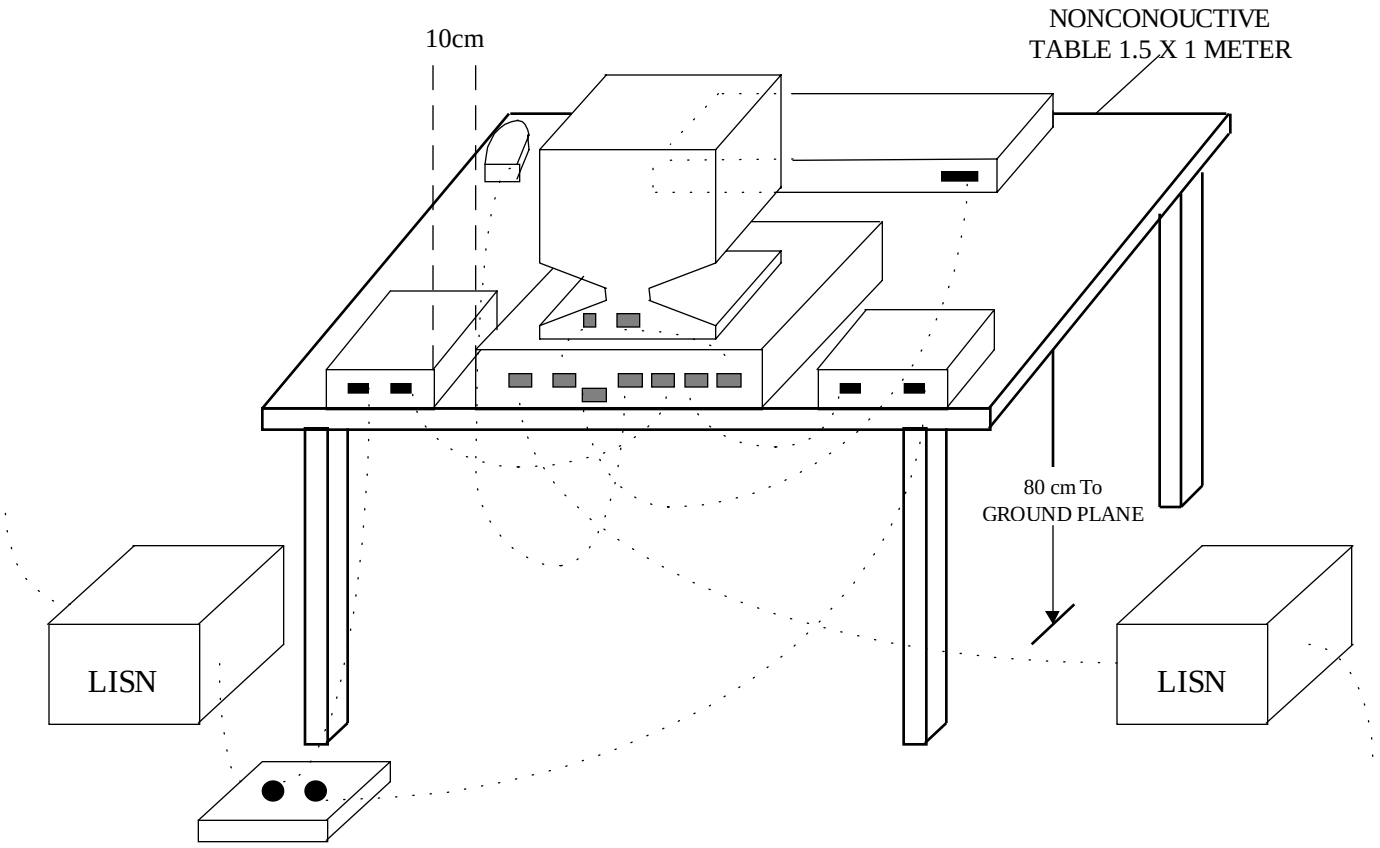
2.4 The LISN used was 50 Ohm / 50 uHenry as specified by **ANSI C63.4 - 1992 & CISPR 22**.
and AC power source is 110V/60Hz.

2.5 All the support peripherals are connect to the other LISN.

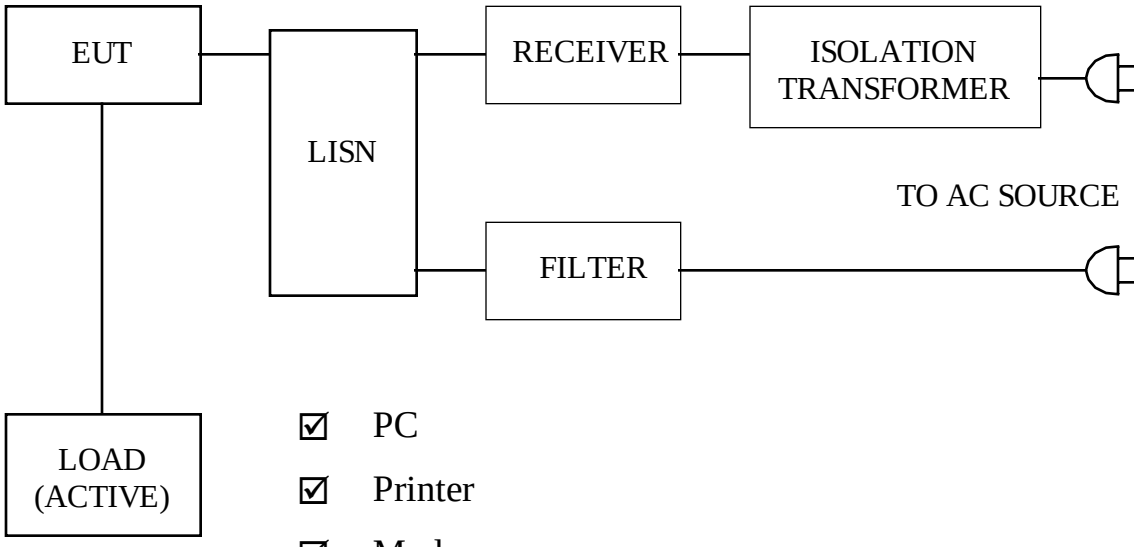
2.6 Cables and peripherals were moved to find the maximum emission levels for each frequency.

3 TEST SETUP

3.1 Typical : Setup Of Conducted Test



3.2 Block Diagram Of Conducted Test



- ☑ PC
- ☑ Printer
- ☑ Modem
- ☑ Mouse
- ☑ Key Board
- ☑ Adaptor

4 CONFIGURATION OF THE EUT

The EUT was configured according to **ANSI C63.4 - 1992 & CISPR 22**. All I/O ports were connected to the appropriate peripherals. All peripherals and cables are listed below (including internal device) :

4.1 EUT

EUT Type	:	☐Proto Type ☑Engineer Type ☐Mass Production
Condition when received	:	☑Good ☐Damage :
Connector Type	:	☑Metal Type ☐Plastic Type
Device	:	LCD Monitor
Applicant	:	CHENG UEI
Manufacturer		CHENG UEI
Manufacturer	:	TAIWAN VIDEO & MONITOR CORP.
Model Number	:	FPD1520
Serial Number	:	N/A
FCC ID	:	M6EFPD1520
Data Cable	:	Shielded, 1.5 m
Power Cord (AC)		Un-Shielded, 1.8 m
Power Cord (DC)	:	Shielded, 1.6 m

4.2 PERIPHERALS

☑ Host Personal Computer

Manufacturer	:	ASUS
Model Number	:	P2B
Serial Number	:	HTPC001
FCC ID	:	FCC DoC
Data Cable	:	Shielded
Power Cord	:	Shielded, 1.8 m

☑ Printer

Manufacturer	:	HP
Model Number	:	DJ400
Serial Number	:	MY7781C1BB
FCC ID	:	B94C2642X
Data Cable	:	Shielded, 1.5m, Connected to the Printer port
Power Cord & Adaptor	:	Un-Shielded, 1.8 m

☑ Modem

Manufacturer	:	ACEEX
Model Number	:	1414
Serial Number	:	9013522
FCC ID	:	IFAXDM1414
Data Cable	:	Shielded, 1.5m, Connected to the COM port
Power Cord & Adaptor	:	Un-Shielded, 1.8 m

☑ Mouse (PSII)

Manufacturer	:	HP
Model Number	:	M-S34
Serial Number	:	LZA64519290
FCC ID	:	DZL211029
Data Cable	:	Shielded, 1.8m, Connected to the PSII port
Power Cord	:	N/A

☑ KeyBoard (PSII)

Manufacturer	:	AST
Model Number	:	SK-2000REW
Serial Number	:	C9612097280
FCC ID	:	GYUR34SK
Data Cable	:	Shielded, 1.5m, Connected to the PSII port
Power Cord	:	N/A

☑ Adaptor

Manufacturer	:	LI SHIN
Model Number	:	LSE9802A
Serial Number	:	000042
FCC ID	:	N/A
Data Cable	:	N/A
Power Cord	:	Shielded, 1.6 m

4.3 REMARK :

5 EUT OPERATING CONDITION

5.1 Operating condition is according to **ANSI C63.4 - 1992 & CISPR 22**.

5.2 The oscillator frequency of the EUT were 30-70 KHz.

5.3 Turn on the power of all equipments.

5.4 Test program sent "H" pattern to peripherals as following :

5.4.1 EUT

5.4.2 Printer

5.4.3 Modem

5.4.4 Keyboard

5.5 The photos of conducted test configuration, please refer to appendix A.

6 LIMIT OF CONDUCTED POWER LINE EMISSION CLASS B :

CISPR 22

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

6.1 In the above table, the tighter limit applies at the band edges.

7 RESULT OF CONDUCTED POWER LINE TEST

7.1 The frequency range from 0.15 MHz to 30 MHz was investigated. All readings are quasi-peak values and average.

7.2 IF bandwidth : 9 kHz, Meas Time : 1 sec.

7.3 Temperature : 20 •, Humidity : 72 % RH.

7.4 Deviations from the specifications : None

7.5 Line :

Frequency	Level (dBuV)		Limit (dBuV)		Margin (dBuV)	
(MHz)	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
0.167	56.46	43.10	65.11	55.11	-8.65	-12.01
0.388	33.74	34.06	58.11	48.11	-24.37	-14.05
0.935	36.33	35.03	56.00	46.00	-19.67	-10.97
2.420	31.99	27.87	56.00	46.00	-24.01	-18.13
9.030	35.53	28.23	60.00	50.00	-24.47	-21.77
18.000	36.04	31.16	60.00	50.00	-23.96	-18.84

7.6 Neutral :

Frequency	Level (dBuV)		Limit (dBuV)		Margin (dBuV)	
(MHz)	Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
0.277	44.96	43.37	60.89	50.89	-15.93	-7.52
0.328	41.19	38.83	59.49	49.49	-18.30	-10.66
1.880	32.64	28.81	56.00	46.00	-23.36	-17.19
4.805	35.38	29.41	56.00	46.00	-20.62	-16.59
7.015	29.44	24.23	60.00	50.00	-30.56	-25.77
16.125	35.88	29.36	60.00	50.00	-24.12	-20.64

REMARK :

1. Model : FPD1520
2. Measuring mode : 1024 x 768
3. Uncertainty in conduction emission measured : < ± 2.0dB.
4. " * ", means this data is worse case emission level.
5. Result : **PASSED**

RADIATED EMISSION TEST

1 TEST INSTRUMENTS & FACILITIES

The following test Instruments was used during the radiated emission test :

Item	Instruments /facilities	Specification	Manufacturer	Model # / S/N#	Location	Date of Cal.
1	OPEN AREA TEST SITE	☑ OATS 1 ☐ OATS 2				NOV/99 JUN/99
2	EMI TEST RECEIVER	20MHz ~ 5GHz	ROHDE & SCHWARZ	ESBI 845636/007	Open Site I	SEP/99
3	PRE-AMPLIFIER	0.1MHz ~ 1.3 GHz	HP	8447D 1937A02095	Open Site II	MAY/99
4	EMI TEST RECEIVER	20Hz ~ 26.5GHz	ROHDE & SCHWARZ	ESMI 845442/006	Open Site II	APR/99
5	PRE-AMPLIFIER	20MHz ~ 7GHz	ROHDE & SCHWARZ	ESMI-Z7 664126/008	Open Site I	SEP/99
6	ANTENNA (BI-LOG)	25MHz ~ 2GHz	SCHAFFNER	CBL6112B S/N : 2614	Open Site II	JUN/99
7	ANTENNA (BI-LOG)	25MHz ~ 2GHz	SCHAFFNER	CBL6112B S/N : 2611	Open Site I	JUN/99
8	CABLES	30MHz ~ 1GHz		No. 2, No. 4 No. 1, No. 3	OATS 1 OATS 2	NOV/99 JUN/99
9	ANTENNA (DIPOLE)	30 ~ 300MHz	ROHDE & SCHWARZ	HZ-12 842899/08		JUL/99
10	ANTENNA (DIPOLE)	300 ~ 1000MHz	ROHDE & SCHWARZ	HZ-13 842007/0004		JUL/99
11	EMIVM	30 ~ 1000MHz	AUDIX	A582445 A582443	OATS 1 OATS 2	N/A

Note : 1. Items 1 ~ 8 upon which need to calibrated are with period of 1 year, except item 9-10.

2. Items 2 is used for the final measurement.

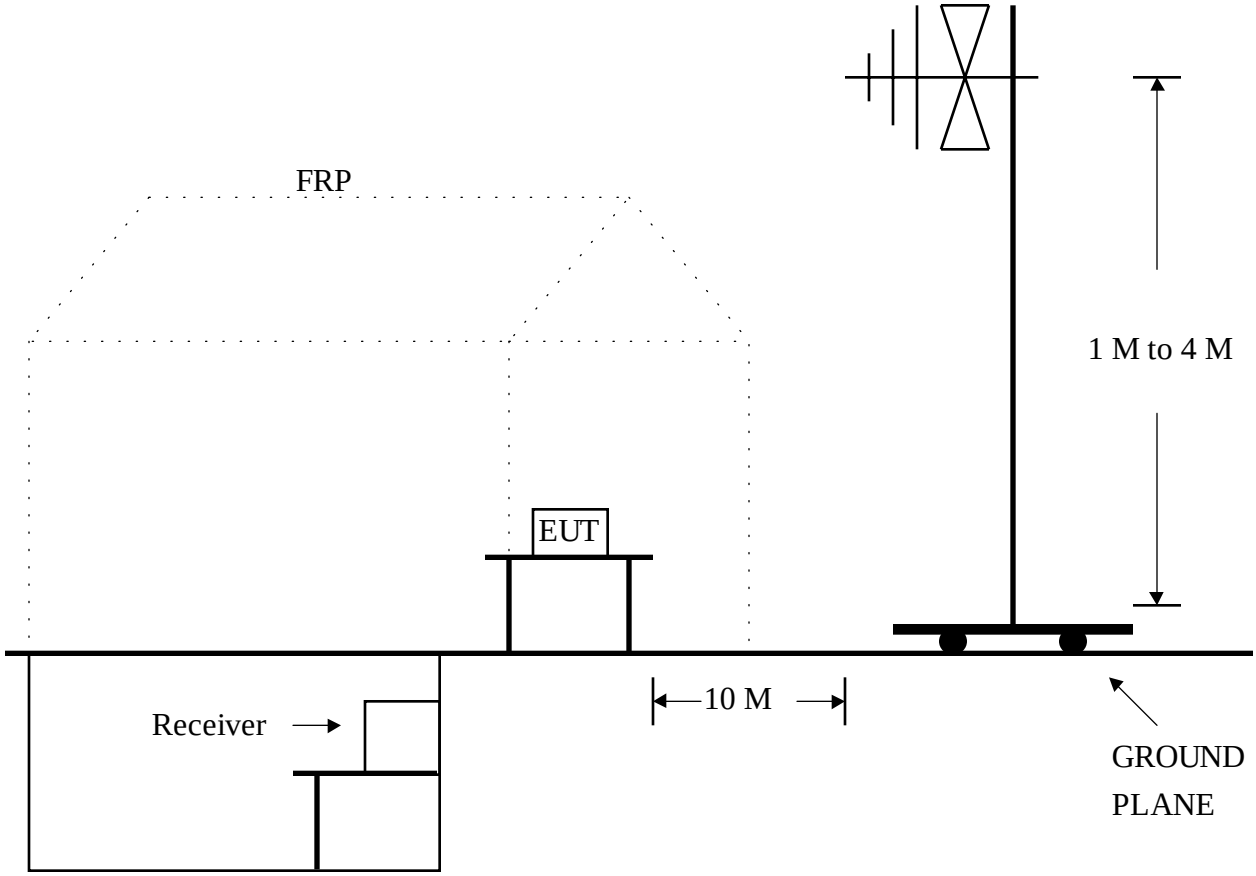
2 TEST PROCEDURE

2.1 The EUT was test according to **ANSI C63.4 - 1992 & CISPR 22**.

2.2 The radiated test was performed at HomeTek Lab's Open Site I.

2.3 The frequency range from 30 MHz to 1 GHz, the measurement were made at 10 meters, with a BI-log antenna.

3 TEST SETUP



4 CONFIGURATION OF THE EUT

Same as "Conducted Power Line test", section 4

5 EUT OPERATING CONDITION

5.1 Same as "Conducted Power Line test", section 5

5.2 The radiated emission in the frequency range from 30 MHz - 1000 MHz was test in a horizontal and vertical polarization at HomeTek Lab's open site I.

5.3 The photos of radiated test configuration, please refer to appendix A.

6 LIMIT OF RADIATED EMISSION CLASS B :

CISPR 22

Frequency (MHz)	Measurement Distance	Limit (dBuV/m)
30 - 230	10 (M)	30
230 - 1000	10 (M)	37

6.1 The tighter limit shall apply at the edge between two frequency bands.

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

7 RESULT OF RADIATED EMISSION TEST

7.1 The frequency range from 30 MHz to 1 GHz was investigated. All readings are quasi-peak values with resolution bandwidth of 120 kHz.

7.2 The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at 10 meters.

7.3 The measurements were made at 10 meters of HomeTek Lab's open site I.

7.4 Temperature : 23 •, Humidity : 55 % RH.

7.5 Radiated Emission data : **Horizontal**

Frequency (MHz)	Reading Level (dBuV)	ANT factor dB/m)	Cable Loss (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV)
45.83	12.58	9.00	0.62	22.20	30	-7.80
124.69	12.58	11.60	0.89	25.07	30	-4.93
158.70	16.74	9.22	1.08	27.04	30	-2.96
170.03	14.79	9.20	1.13	25.12	30	-4.88
181.38	14.45	8.32	1.15	23.92	30	-6.08
226.74	13.00	9.12	1.25	23.37	30	-6.63
379.55	10.87	14.78	1.74	27.39	37	-9.61
578.07	10.98	18.65	2.47	32.10	37	-4.90

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for 578.07 MHz .
- Corrected Reading : (10.98) + (18.65) + (2.47) = 32.10 . (Emission Level)

7.6 Radiated Emission data : **Vertical**

Frequency (MHz)	Reading Level (dBuV)	ANT factor dB/m)	Cable Loss (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV)
79.32	17.65	6.57	0.79	25.01	30	-4.99
124.70	14.86	11.60	0.89	27.35	30	-2.65
184.36	15.87	8.38	1.15	25.40	30	-4.60
215.39	14.85	8.00	1.21	24.06	30	-5.94
260.70	15.85	13.10	1.44	30.39	37	-6.61
390.38	15.51	15.34	1.80	32.65	37	-4.35
526.99	10.20	17.80	2.28	30.28	37	-6.72
721.42	9.05	19.80	2.73	31.58	37	-5.42

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for 721.42 MHz .
- Corrected Reading : (9.05) + (19.80) + (2.73) = 31.58 . (Emission Level)

REMARK :

1. Model : FPD1520
2. Measuring mode : 1024 x 768
3. Uncertainty in radiated emission measured : < ± 4.0dB.
4. " * ", means this data is worse case emission level.
5. Result : **PASSED**

PHOTO OF FCC ID LABEL

SAMPLE OF FCC ID LABEL :

FCC ID : M6EFPD1520

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. And (2) this device must accept any interference that may cause undesired operation.

Please refer to appendix B photo of ID location.