Global Certification Corp.

Report No.:F7N1401

GTEST GTES

CERTIFICATE OF COMPLIANCE

For the following equipment :

Equipment Under Test : LCD Monitor

Model Name: FPM-5151G-R3AE, FPM-5151G-X0AE

Applicant: Advantech Co., Ltd.

No. 1, Alley 20, Lane 26, Rueiguang Road , Neihu District, Taipei 114, Taiwan, R.O.C.

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations Part 15 Subpart B and CISPR PUB. 22 and the measurement procedures were according to ANSI C63.4-2003. The said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

FCC part 15 subpart B **IC ICES-003** **Class B**

The test was carried out on NOV.28,2007 at Global Certification Corp.

Albert Tsai

Taipei, Taiwan	NOV.28 , 2007	*Albert Tsai / Manager*	
(Place)	(Date)	(Signature)	Designation Number: TW1030

FCC 47 CFR PART 15 SUBPART B

TEST REPORT

FOR

LCD Monitor

Model : FPM-5151G-R3AE, FPM-5151G-X0AE

Trade Name: Advantech

Issued to
Advantech Co., Ltd.
No. 1, Alley 20, Lane 26, Rueiguang Road , Neihu District, Taipei 114, Taiwan, R.O.C.

Issue by

Global Certification Corp.

EMI Test Site	Sansia Lab	NO.34-3,Zihhe Rd.,Sansia Township,Taipei County 237, Taiwan ,R.O.C.
EMS Test Site	His Chih office and Lab	No.112-3, Shiang Charng Rd.,Sec. 2, His Chih City,Taipei 221,Taiwan R.O.C.

Testing Laboratory
1640

Note: This test refers exclusively to the test presented test model and sample. This report shall not be reproduced except in full, without the written approval of Global Certification Corporation. This document may be altered or revised by Global Certification Corporation. Personnel only, and shall be noted in the revision section of the document.

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PHOTOS OF TEST CONFIGURATION

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TEST DATA

PHOTOS OF EUT

1. GENERAL INFORMATION

Applicant	:	**Advantech Co., Ltd.**
Address	:	**No. 1, Alley 20, Lane 26, Rueiguang Road , Neihu District, Taipei 114, Taiwan, R.O.C.**
Manufacturer	:	**Advantech Co., Ltd.**
Address	:	**No. 1, Alley 20, Lane 26, Rueiguang Road , Neihu District, Taipei 114, Taiwan, R.O.C.**
EUT	:	**LCD Monitor**
Model Name	:	**FPM-5151G-R3AE, FPM-5151G-X0AE**
Model Differences	:	The difference between series of models FPM-5151G-R3AE and FPM-5151G-X0AE are for different OEM manufactures. The model FPM-5151G-R3AE is worst case, and the final test data were shown in this test report.

1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT		
EUT Type	:	☐Proto Type ☑Engineer Type ☐Mass Production
Condition when received	:	☑Good ☐Damage :
EUT Name	:	LCD Monitor
Applicant	:	Advantech Co., Ltd.
Manufacturer	:	Advantech Co., Ltd.
Model Number	:	FPM-5151G-R3AE, FPM-5151G-X0AE
Serial Number	:	N/A
FCC ID	:	N/A
Used Power	:	☑AC POWER ☑DC POWER
Power From		☐N/A ☐Inside ☑Outside ☑Adaptor ☐BATTERY ☐Power Supply ☑DC Power Source ☐Support Unit PC
Power Supply Type	:	☑Switching ☐Linear
Power Cord (Input)	:	AC 110 V 60 Hz 3 Pin 1.8 m Un-Shielded DC 12 V 2 Pin 2 m Un-Shielded
Power Cord (Output)	:	DC 12 V 2 Pin 1.2 m Un-Shielded
The frequency of the EUT	:	
OSC/Clock Frequencies	:	14.318MHz, 12MHz

1.2 I/O PORT OF THE EUT

I/O port type	Q'ty	Connect type	Connected to SUPPORT EQUIPMENT NO.
1) VGA Port	1	1	
2) DVI Port	1	1	
3) RS-232 Port	1	1	
4) USB Port	1	1	
5) USB Port	1	1	

1.3 TEST METHODOLOGY

EUT SYSTEM OPERATION

1. The EUT was configured according to ANSI C63.4 – 2003 Section 5.2, 7.1, 7.2 & CISPR 22 - 2005.
2. All I/O ports were connected to the appropriate peripherals.
3. Photos of test configuration please refer to appendix 1 or 1.4 Setup Diagram.
4. Turn on all the power of EUT and peripheral.
5. PC executes "emctest.exe and loop back test program of I/O control card" and perform the EMC testing procedures.
6. During the test, "H" patterns sends to the EUT through each input port individually.
7. EUT display "H" character
8. Execute read-write program to exercise the EUT under windows.
9. Perform the EMI testing procedures, and measure the maximum emission noise.

All peripherals and cables are listed below (including internal device)

DECISION OF FINAL TEST MODE

1. **The following test mode were scanned during the preliminary test:**

   Mode 1: Resolution 1024*768 VGA+DVI(USB)

   Mode 2 : Resolution 800*600 VGA+DVI(USB)

   Mode 3 : Resolution 800*600 VGA+DVI(RS-232)

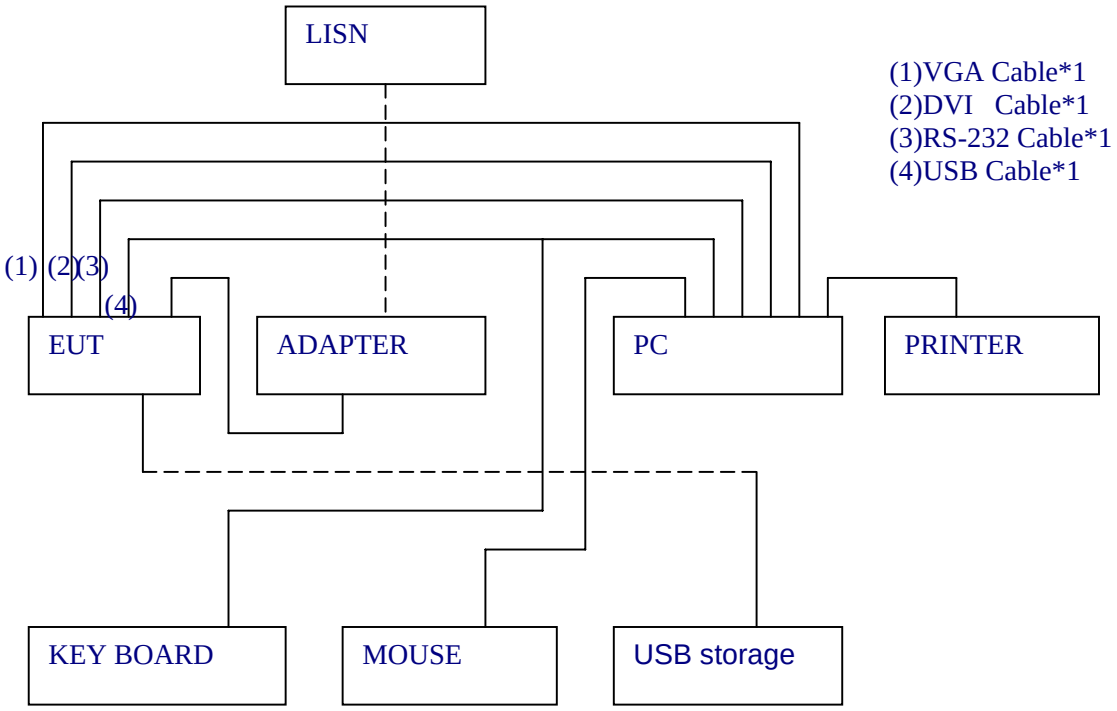
2. **After the preliminary scan, the following test mode was found to produce the highest emission level.**

   Conduction: Mode 2
   Radiation: Mode 2

   Then, the EUT configuration and cable configuration of the above highest emission mode was chosen for all final test item

1.4 DESCRIPTION OF THE SUPPORT EQUIPMENTS

Setup Diagram



See test photographs attached in appendix I for the actual connections between EUT and support equipment.

Support Equipment

Peripherals Devices:

OUTSIDE SUPPORT EQUIPMENT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1	PC	A13	L3AB112	R33B65	IBM	Shielded 1.8m	Unshielded 1.8m
2	PRINTER	PHOTO750	BDEK017 629	/3872P01 1	EPSON	Shielded 1.8M	Unshielded 1.8M
3	MOUSE	M-S34	HCA4170 0531	DEL2110 29/4862A 011	Logitech	Shielded 1.8M~PS2	N/A
4	KEY BOARD	RT7D00	TH-0332TR-37171-16R-3087	AQ6-7D00 80COB /3892C595	DELL	Shielded 1.9M/PS2	N/A
5	USB storage	TS2GJFV3 0	156511-64 00	DOC	TRANSCE ND	Shielded 1M	N/A
6.	ADAPTER	LE-9702B+5 012	N/A	R33299	LIEN	N/A	AC: Unshielded

							1.8M DC: Unshielded 1.2m
7	DC POWER SOURCE	GPC-3030DQ	C680186	N/A	GW	DC OUT Unshielded 1m	Unshielded 1.8m
INSIDE SUPPORT EQUIPMENT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1	Main Board	BT-R15LDNQ	N/A	N/A	N/A	Unshielded 0.3m	Unshielded 0.1m
2	Power Board	SYS-S001PWP	N/A	N/A	N/A	N/A	Unshielded 1.2m
3	Touch Board	PW6200	N/A	N/A	Pen Mount	Unshielded 0.3m	N/A
4	Inverter	TBD445LR	N/A	N/A	TDK	N/A	Unshielded 0.3m
5	USB Board	IPPL-6152A FRONFUSB	N/A	N/A	N/A	N/A	Unshielded 0.3m
6	LCD Panel	G150X603V.1	MM6BD4107239-ZS102	N/A	AU	Unshielded 0.1m	Unshielded 0.2m
7	LCD Panel	G150XG01V1	N/A	N/A	AU	Unshielded 0.1m	Unshielded 0.2m

Note: All the above equipment /cable were placed in worse case position to maximize emission signals during emission test

Grounding: Grounding was in accordance with the manufacturer's requirement and conditions for the intended use.

1.5 FEATURES OF EUT : PLEASE REFER TO USER MANUAL OR PRODUCT SPECIFICATION.

2. INSTRUMENT AND CALIBRATION

2.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in the report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

2.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and. Other required standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective.

TABLE 1 LIST OF TEST AND MEASUREMENT EQUIPMENT

Conducted Emission Measurement					
Instrument	Manufacturer	Model No.	Serial No.	Calibration Due Date	Note
Test Receiver	AFJ	ER55C	55090502270	Apr.23.2008	
LISN	SCHAFFNER	NNB41	03/10015	Jun.10.2008	For EUT
LISN	EMCO	3825/2	9001-1589	Apr.09.2008	For Support Unit
RF CABLE	MIYAZAKI	5D-F8	002	May.24.2008	
50ohm Terminal	N/A	N/A	TM003	Apr,18,2008	
Radiated Emission Measurement					
Instrument	Manufacturer	Model No.	Serial No.	Calibration Due Date	Note
Test Receiver	AFJ	ER55R	55300508277	May.20.2008	
Bilog Antenna	SUNOL	JB1	A052104	SEP.30.2008	
Turn table	EMCO	2080	9508-1805	N/A	

Controller	EMCO	2090	9804-1328	N/A	
Amplifier	G.W	GAP-801	EF150001	Jul.18.2008	
EMC Analyzer	AGILENT	E7401A	MY42000145	May.23.2008	
RF Cable	BELDEN	RG-8/U	E037	Jun.07.2008	
Thermo-Hygro meter	WISEWIND	4-IN-1	0412	Apr.10.2008	

※ Calibration interval of instruments listed above is one year

2.3 TEST PERFORMED

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver which bandwidth is set at 9KHz.

Radiated emissions were invested over the frequency range from 30MHz to 1000MHz using a receiver which bandwidth is set at 120KHz. Radiated measurement was performed at distance that from an antenna to EUT is 10meters.

2.4 APPENDIX

Appendix A: Measurement Procedure for Main Power Port Conducted Emissions

The measurements are performed in a Global lab's room; The EUT was placed on non-conductive 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (50ohm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

If the EUT is supplied with a flexible power cord, the power cord length in excess of the distance separating the EUT from the LISN shall be folded back and forth at the center of the lead so as to form a bundle not exceeding 40cm in length. If the EUT is provided with a permanently coiled power cord, bundling of the cord is not required. If the EUT is supplied without a power cord, the EUT shall be connected to the LISN by a power cord of the type specified by the manufacturer which shall not be longer than 1 meter. The excess power cord shall be bundled as described above. If a non-flexible power cord is provided with the EUT, it shall be cut to the length necessary to attach the EUT to the LISN and shall not be bundled.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, hot and neutral, were measured.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

Appendix B: Test Procedure for Radiated Emissions

Preliminary Measurements in the Anechoic Chamber

The radiated emissions are initially measured in the anechoic chamber at a measurement distance of 3 meters. Desktop EUT are placed on a wooden stand 0.8 meter in height. The measurement antenna is 3 meters from the EUT. The test setup in anechoic chamber is the same as open site. The turntable rotated 360°. The antenna height is 1m. The primary objective of the radiated measurements in the anechoic chamber is to identify the frequency spectrum in the absence of the electromagnetic environment existing on the open test site. The frequencies can then be pre-selected on the open test site to obtain the corresponding amplitude. The initial scan is made with the spectrum analyzer in automatic sweep mode. The spectrum peaks are then measured manually to determine the exact frequencies.

Measurements on the Open Site or Chamber

The radiated emissions test will then be repeated on the open site or chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipments are set up on the turntable. Desktop EUT are set up on a wooden stand 0.8 meter above the ground.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. Both reading are recorded with the quasi-peak detector with 120KHz bandwidth. For frequency between 30 MHz and 1000MHz, the reading is recorded with peak detector or quasi-peak detector.

At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings.

Appendix C: Warning Labels

Label Requirements

A Class B digital device subject to certification by the FCC shall carry a warning label which includes the following statement:

*** * * W A R N I N G * * ***

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 received, including interference that may cause undesired operation.

Appendix D: Warning Statement

Statement Requirements

The operators manual for a Class A digital device shall contain the following statements or their equivalent:

*** * * W A R N I N G * * ***

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment This equipment generates, uses, and can radiate radio frequency energy and, if not installed and uses in accordance with the instruction manual, may cause harmful interference to radio communications Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equivalent.

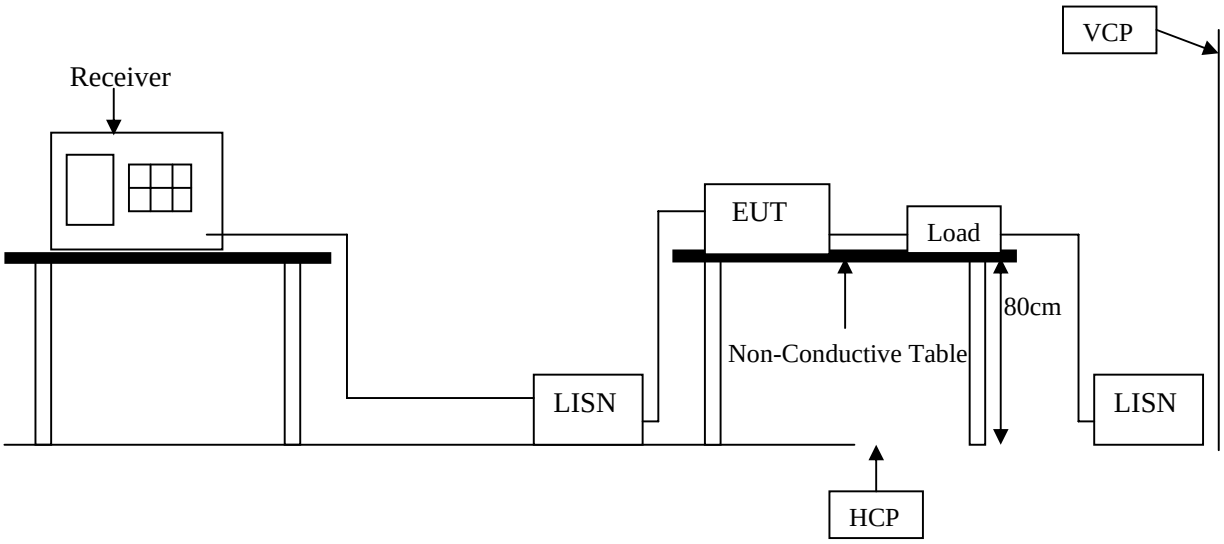
* * * * * * * * * *

If the EUT was tested with special shielded cables the operators manual for such product shall also contain the following statements or their equivalent:

Shielded interface cables and/or AC power cord, if any, must be used in order to comply with the emission limits.

3. CONDUCTED EMISSION MEASUREMENT

3.1 TEST SET-UP (PLEASE REFER TO APPENDIX 1)



3.2 LIMIT

Frequency range (MHz)	CLASS A		CLASS B	
	QP dB(uV)	Average dB(uV)	QP dB(uV)	Average dB(uV)
0.15-0.5	79 dBuV	66 dBuV	66 - 56 dBuV	56 - 46 dBuV
0.5-5.0	73 dBuV	60 dBuV	56 dBuV	46 dBuV
5.0-30.0	73 dBuV	60 dBuV	60 dBuV	50 dBuV

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

3.3 TEST PROCEDURE

The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). It provides a 50 ohm / 50 μH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm / 50 μH coupling impedance with 50 ohm termination. (Please refer to the block diagram of the test setup and photograph.)

Both sides of AC line are checked for the maximum conducted emission interference. In order to find the maximum emissions, the relating positions of equipment and all of the interference cables must be changed according to CISPR22 regulation: The measurement procedure on conducted emission interference.

The resolution bandwidth of the field strength meter is set at 9KHz

3.4 TEST SPECIFICATION

ANSI C63.4 – 2003 Section 5.2, 7.1, 7.2 & CISPR 22 - 2005

3.5 RESULT : PASSED

EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

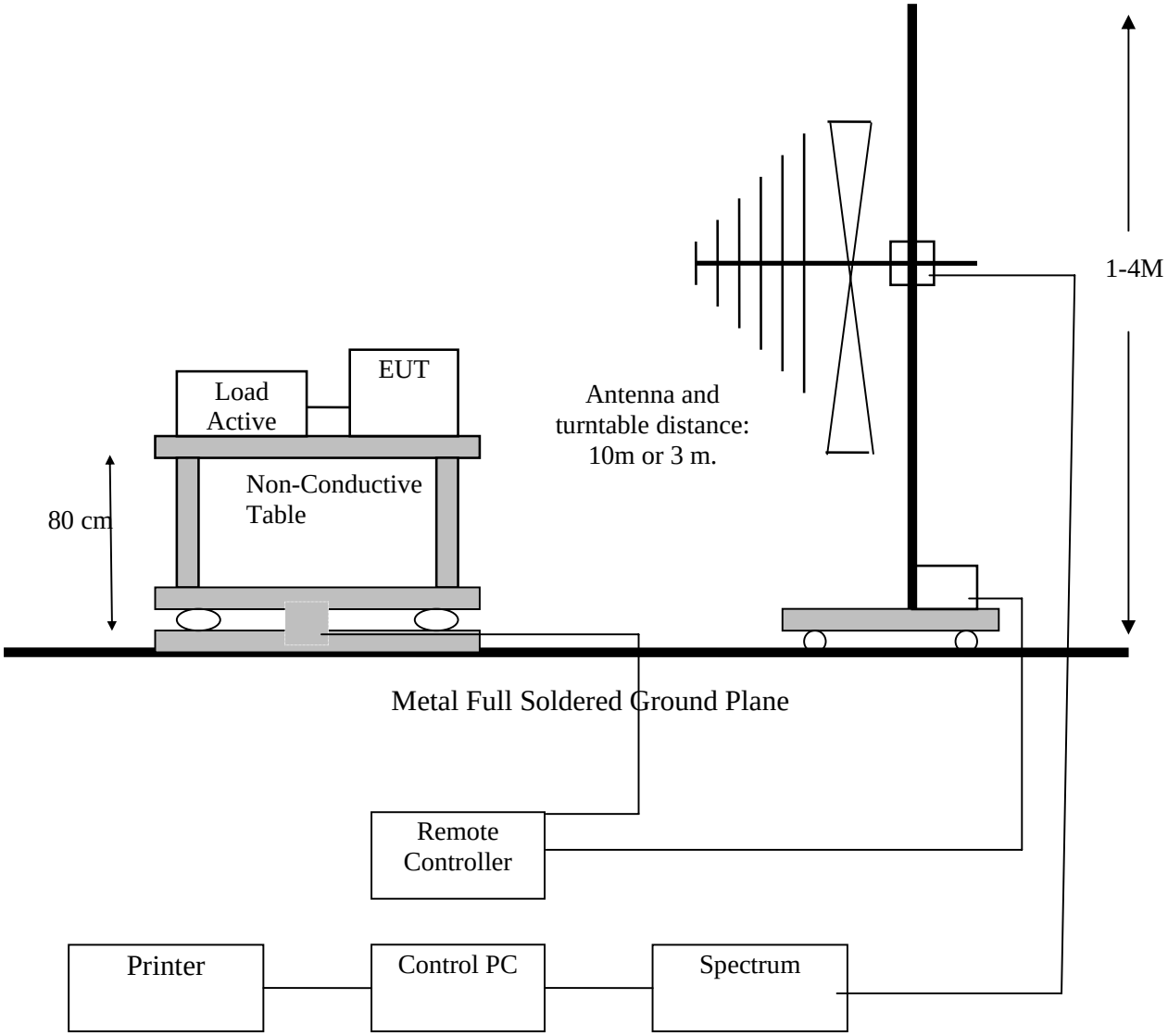
Frequency Range:	150KHz--30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9KHz

3.6 TEST DATA:

Please refer to appendix 2

4. RADIATED EMISSION MEASUREMENT

4.1 TEST SETUP (PLEASE REFER TO APPENDIX 1)



4.2 LIMIT

Frequency	Class A		Class B	
MHz	Distance (Meter)	Limit dBμV/m	Distance (Meter)	Limit dBμV/m
30 ~ 230	10	40	10	30
230 ~ 1000	10	47	10	37
Above 1000	10	49.5	10	43.5

Remark: In the above table, the tighter limit applies at the band edges

4.3 TEST PROCEDURE

The EUT and its simulators are placed on turn table, non-conductive and wooden table, which is 0.8 meter above ground. The turn table rotates 360 degree to determine the position of the maximum emission level. The EUT was positioned such that distance from antenna to the EUT is 10 meters.

The antenna is moved up and down between 1 meter to 4 meter to receive the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interference cables must be manipulated according to CISPR regulation: the test procedure of the radiated emission measurement.

The bandwidth set on the field strength is 120 KHz when the frequency range is below 1GHz

4.4 TEST SPECIFICATION

ANSI C63.4 – 2003 Section 5.2, 7.1, 7.2 & CISPR 22 - 2005

4.5 RESULT: PASSED

The radiated mission test was passed at minimum margin : Horizontal 720.83 MHz/ 33.04 dBuV/m, Antenna Height 1.06 Meter, Turn Table 192 degree,

4.6 TEST DATA:

Please refer to appendix 2

5. MODIFICATION LIST FOR EMC COMPLYING TEST

The modification is solely made by the applicant.
Appendix
Appendix A: Summary of Test Result
Appendix B: The test photograph of EUT
Appendix C: The Detail Photograph of EUT

Appendix A: Summary of Test Result

**** EMC Test Result: The EUT has been pass the all measurements. ****

The uncertainty is calculated in accordance with CISPR16-4-2, the total uncertainty for this test is as follows:

Uncertainty of Conducted Emission Measurement

Contribution	Probability Distribution	150KHz – 30MHz
Receiver reading	Normal (k=2)	±0.2
Cable loss	Normal (k=2)	±0.2
AMN insertion loss	Rectangular	±0.2
RCV/SPA specification	Rectangular	±0.9
combined standard uncertainty Ue(y)	normal	±1.0
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	normal (k=2)	±2.0

Uncertainty of Radiated Emission Measurement

Contribution	Probability Distribution	30MHz~1GHz
Receiver reading	Normal (k=2)	±0.5
Cable loss calibration	Normal (k=2)	±0.3
Antenna factor calibration	Rectangular	±1.5
Pre Amplifier Gain calibration	Rectangular	±0.5
RCV/SPA specification	Rectangular	±0.9
combined standard uncertainty Ue(y)	normal	±1.1
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	normal (k=2)	±2.2

SAMPLE OF FCC DOC LABEL 1

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 received, including interference that may cause undesired operation.

SAMPLE OF FCC DOC LABEL 2

Trade Name
Model Number

Appendix 1
PHOTOS OF TEST CONFIGURATION

CONDUCTED POWER LINE TEST

Front View

Rear View

RADIATED EMISSION TEST

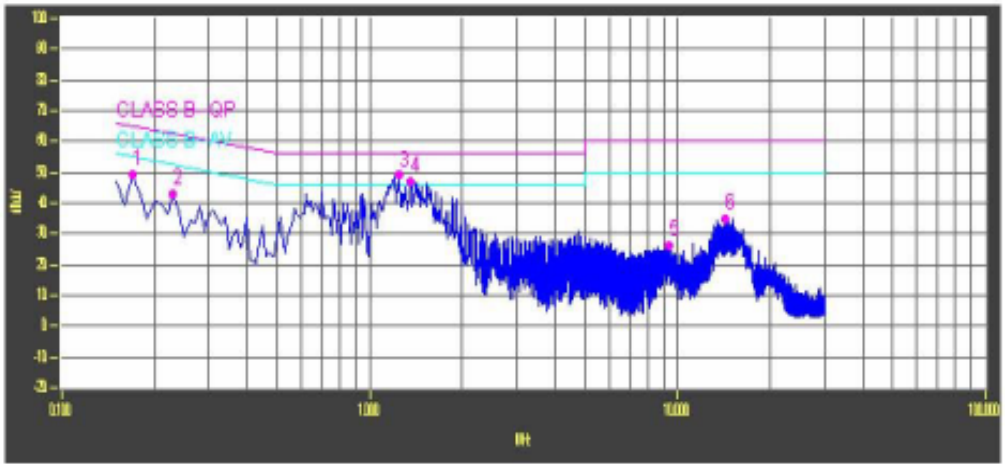
Front View

Rear View

Appendix 2
TEST DATA

Test Data Of Conducted Emission Measurement (LINE)

Power Line Conducted Emissions (LINE)



Report No.: 7N1401
CORR.: PROBE NONE EXTATT bat20m
LIM1: CISPR22-QP-Class B
MODE : SWEEP CAL
STEP : 1.0/ 10KHz IFBw :9KHz
Threshold Level (dBuV): -20.0
Total Peak Found : 6
Company : ADVANTECH

Print Report of 11-24-2007 - 12:58:58
DETECT : PEAK 100ms
LIM2 : CISPR22-AV-Class B
SWEEP : 0.150-30.000MHz
LISN : L
Peak Escursion (dBuV) : 6.0
Peak Displayed : 6
EUT : FPM-5151G-R3AE

Freq	Level	Over Lim	Limit 1	Limit 2	Read lev	LISN Loss	Cable Loss
MHz	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV
1) 0.170	49.48	-15.48	64.96	54.96	39.10	10.10	0.28
2) 0.230	42.88	-19.57	62.45	52.45	32.38	10.10	0.40
3) 1.250	48.98	-7.02	56.00	46.00	38.63	10.10	0.25
4) 1.360	47.00	-9.00	56.00	46.00	36.63	10.10	0.27
5) 9.340	26.05	-33.95	60.00	50.00	16.16	10.29	-0.40
6)14.250	34.88	-25.12	60.00	50.00	24.98	10.30	-0.40

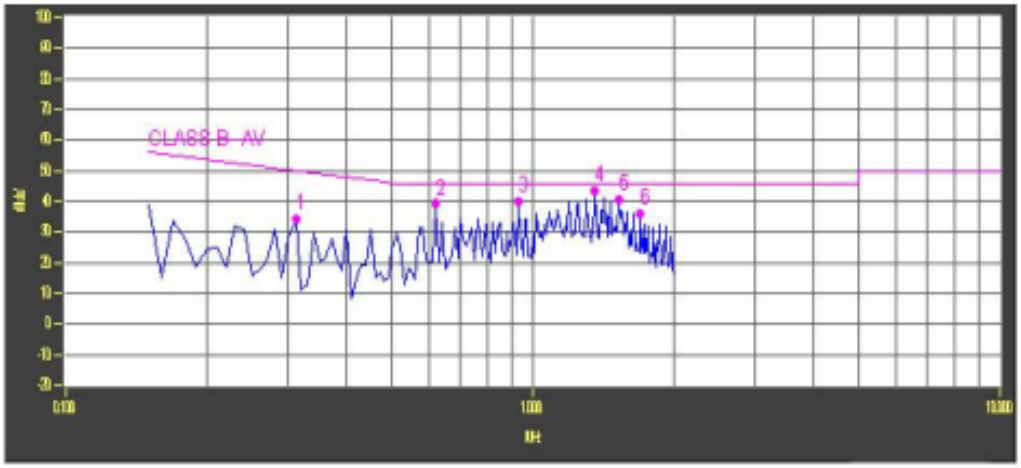
TEST MODE : 800*600,VGA+DVI,USB LCD PANEL MODEL : G150XG01 V1

*Note: Margin = Corrected Amplitude - Limit
Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit

Note: Peak measuring receiver was used and the result complied with both QP and AVE Limits.

Test Data Of Conducted Emission Measurement (LINE-AVG)

Power Line Conducted Emissions (LINE)



Report No.: 7N1401 Print Report of 11-24-2007 - 13:02:02

CORR.: PROBE NONE EXTATT bat20m DETECT : AVG 200ms

LIM1: CISPR22-AV-Class B

MODE : SWEEP CAL SWEEP : 0.150-2.000MHz

STEP : 1.0/ 10KHz IFBw :9KHz LISN : L

Threshold Level (dBuV): -20.0 Peak Escursion (dBuV) : 6.0

Total Peak Found : 6 Peak Displayed : 6

Company : ADVANTECH EUT : FPM-5151G-R3AE

Freq	Level	Over Lim	Limit 1	Read lev	LISN Loss	Cable Loss
MHz	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV
1) 0.310	34.43	-15.54	49.97	23.93	10.10	0.40
2) 0.620	39.18	-6.82	46.00	28.75	10.10	0.33
3) 0.930	39.91	-6.09	46.00	29.58	10.10	0.22
4) 1.360	43.53	-2.47	46.00	33.15	10.10	0.27
5) 1.530	40.70	-5.30	46.00	30.30	10.10	0.31
6) 1.700	35.98	-10.02	46.00	25.54	10.10	0.34

TEST MODE : 800*600,VGA+DVI,USB LCD PANEL MODEL : G150XG01 V1

*Note: Margin = Corrected Amplitude - Limit

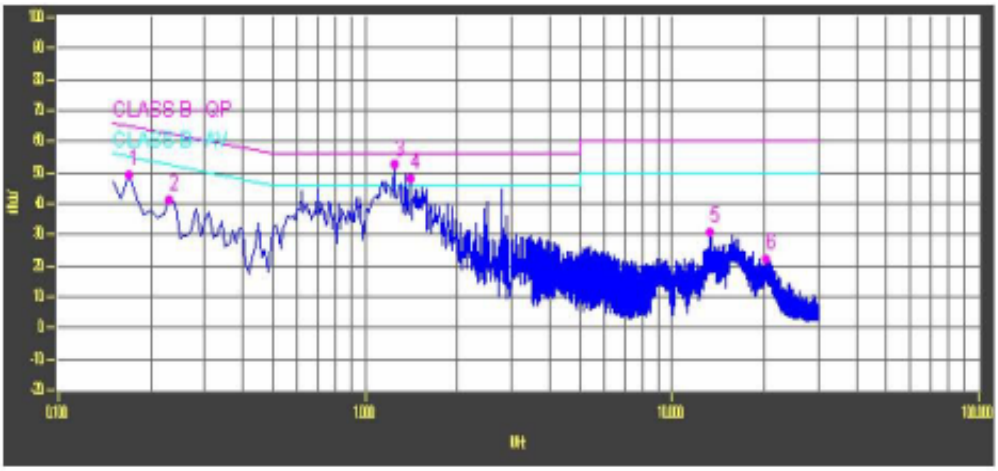
Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

Note: Peak measuring receiver was used and the result complied with both QP and AVE Limits.

Test Data Of Conducted Emission Measurement (NATURAL)

Power Line Conducted Emissions (NATURAL)



Report No.: 7N1401
CORR.: PROBE NONE EXTATT bat20m
LIM1: CISPR22-QP-Class B
MODE : SWEEP CAL
STEP : 1.0/ 10KHz IFBw :9KHz
Threshold Level (dBuV): -20.0
Total Peak Found : 6
Company : ADVANTECH

Print Report of 11-24-2007 - 12:50:25
DETECT : PEAK 100ms
LIM2 : CISPR22-AV-Class B
SWEEP : 0.150-30.000MHz
LISN : N
Peak Escursion (dBuV) : 6.0
Peak Displayed : 6
EUT : FPM-5151G-R3AE

Freq	Level	Over Lim	Limit 1	Limit 2	Read lev	LISN Loss	Cable Loss
MHz	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV
1) 0.170	49.12	-15.84	64.96	54.96	38.74	10.10	0.28
2) 0.230	41.03	-21.42	62.45	52.45	30.53	10.10	0.40
3) 1.240	52.48	-3.52	56.00	46.00	42.13	10.10	0.25
4) 1.410	47.97	-8.03	56.00	46.00	37.58	10.10	0.28
5)13.340	30.90	-29.10	60.00	50.00	21.27	10.03	-0.40
6)20.270	22.24	-37.76	60.00	50.00	12.55	10.09	-0.40

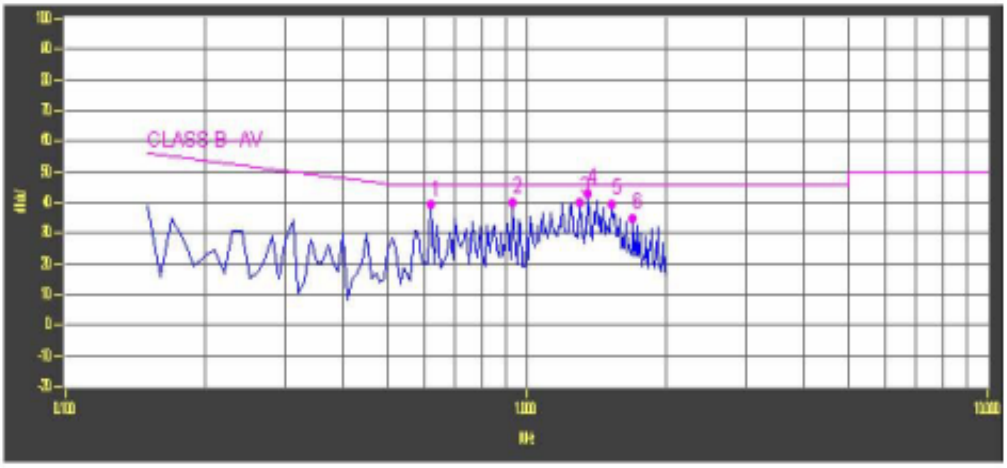
TEST MODE : 800*600,VGA+DVI,USB LCD PANEL MODEL : G150XG01 V1

*Note: Margin = Corrected Amplitude - Limit
Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit

Note: Peak measuring receiver was used and the result complied with both QP and AVE Limits.

Test Data Of Conducted Emission Measurement (NATURAL-AVG)

Power Line Conducted Emissions (NATURAL)



Report No.: 7N1401 | Print Report of 11-24-2007 - 13:05:50

CORR.: PROBE NONE EXTATT bat20m | DETECT : AVG 200ms

LIM1: CISPR22-AV-Class B

MODE : SWEEP CAL | SWEEP : 0.150-2.000MHz

STEP : 1.0/ 10KHz IFBw :9KHz | LISN : N

Threshold Level (dBuV): -20.0 | Peak Escursion (dBuV) : 6.0

Total Peak Found : 6 | Peak Displayed : 6

Company : ADVANTECH | EUT : FPM-5151G-R3AE

Freq	Level	Over Lim	Limit 1	Read lev	LISN Loss	Cable Loss
MHz	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV
1) 0.620	39.20	-6.80	46.00	28.77	10.10	0.33
2) 0.930	40.22	-5.78	46.00	29.89	10.10	0.22
3) 1.300	40.18	-5.82	46.00	29.82	10.10	0.26
4) 1.360	43.12	-2.88	46.00	32.75	10.10	0.27
5) 1.530	39.56	-6.44	46.00	29.15	10.10	0.31
6) 1.700	34.71	-11.29	46.00	24.27	10.10	0.34

TEST MODE : 800*600,VGA+DVI,USB | LCD PANEL MODEL : G150XG01 V1

*Note: Margin = Corrected Amplitude - Limit

Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

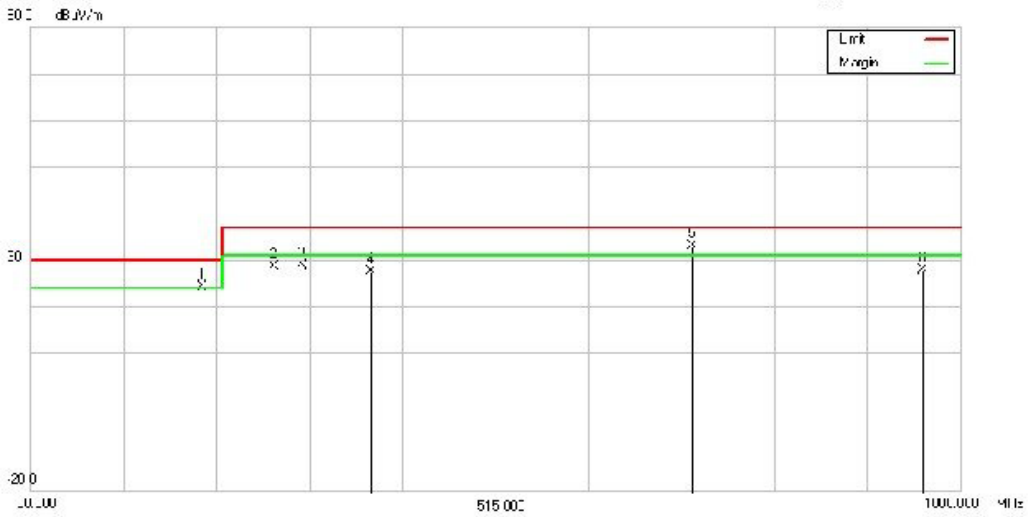
Note: Peak measuring receiver was used and the result complied with both QP and AVE Limits.

Test Data Of Radiated Emission Measurement (Horizontal)

環球認證有限公司
Global Certification Corp.
Address:No.112-3.Shiang Charng Rd.,Sec.2,
Hsi Chin,Taipei Hsien 221,Taiwan,R.O.C.
Tel:02-26426992 Fax:02-26487450

Radiated Emission Measurement

File :7N1401 Data :#3 Date: 2007/11/14 Time: 下午 03:55:19



Site Open site #1	Polarization: ***Horizontal***	Temperature: 24 ℃	
Limit: EN55022,CISPR22,CNS13438 Class B	Power: AC 110V/60Hz	Humidity: 67 %	
Company: ADVANTECH	Distance: 10m RBW: 120 KHz		
EUT: Please refer to page1 of report		Sweep Time: 100 ms	
Model : FPM-5151G-R3AE			
Note: 800*600 VGA+DVI USB+RS232 LCD PANEL:G150XG01 V1			

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	208.5200	20.41	3.77	24.18	30.00	-5.82	QP		0	
2		284.1800	21.63	6.66	28.29	37.00	-8.71	peak		0	
3		313.2900	21.52	7.15	28.67	37.00	-8.33	peak		0	
4		385.0700	18.28	9.08	27.36	37.00	-9.64	peak		0	
5	*	720.7100	17.45	15.51	32.96	37.00	-4.04	QP	107	192	
6		959.3200	8.66	18.97	27.63	37.00	-9.37	peak		0	

*:Maximum data x:Over limit !:over margin •Reference Only

Receiver:		Spectrum Analyzer:	E7401A
Antenna:	A052104-071001(10M)	Engineer Signature:	ALAN
Amplifier:	AMP-EF150001 070719		

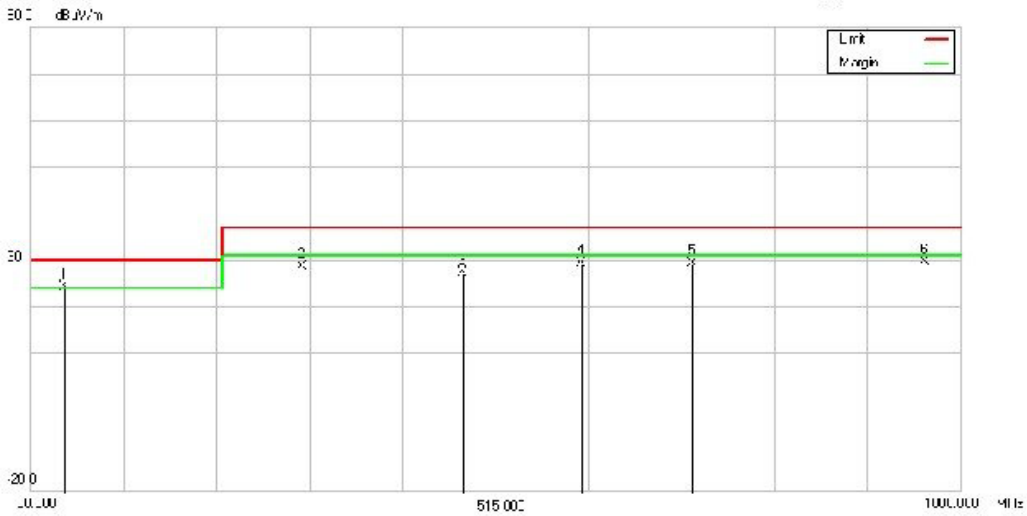
File :7N1401\Data :#3 *Page: 1*

Test Data Of Radiated Emission Measurement (Vertical)

環球認證有限公司
Global Certification Corp.
Address:No.112-3.Shiang Charng Rd.,Sec.2,
Hsi Chin,Taipei Hsien 221,Taiwan,R.O.C.
Tel:02-26426992 Fax:02-26487450

Radiated Emission Measurement

File :7N1401 Data :#4 Date: 2007/11/14 Time: 下午 04:16:03



Site	Open site #1	Polarization:	***Vertical***	Temperature:	24 ℃
Limit:	EN55022,CISPR22,CNS13438 Class B	Power:	AC 110V/60Hz	Humidity:	67 %
Company:	ADVANTECH	Distance:	10m RBW: 120 KHz		
EUT:	Please refer to page1 of report			Sweep Time: 100 ms	
Model :	FPM-5151G-R3AE				
Note:	800*600 VGA+DVI USB+RS232 LCD PANEL:G150XG01 V1				

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	64.9400	24.47	-0.25	24.22	30.00	-5.78	QP		0	
2		313.2800	21.29	7.15	28.44	37.00	-8.56	peak		0	
3		480.1200	15.46	11.66	27.12	37.00	-9.88	peak		0	
4		604.2700	15.71	13.51	29.22	37.00	-7.78	peak		0	
5		720.6800	13.52	15.51	29.03	37.00	-7.97	peak		0	
6		961.2500	10.33	19.00	29.33	37.00	-7.67	peak		0	

*:Maximum data x:Over limit !:over margin •Reference Only

Receiver:		Spectrum Analyzer:	E7401A
Antenna:	A052104-071001(10M)	Engineer Signature:	ALAN
Amplifier:	AMP-EF150001 070719		

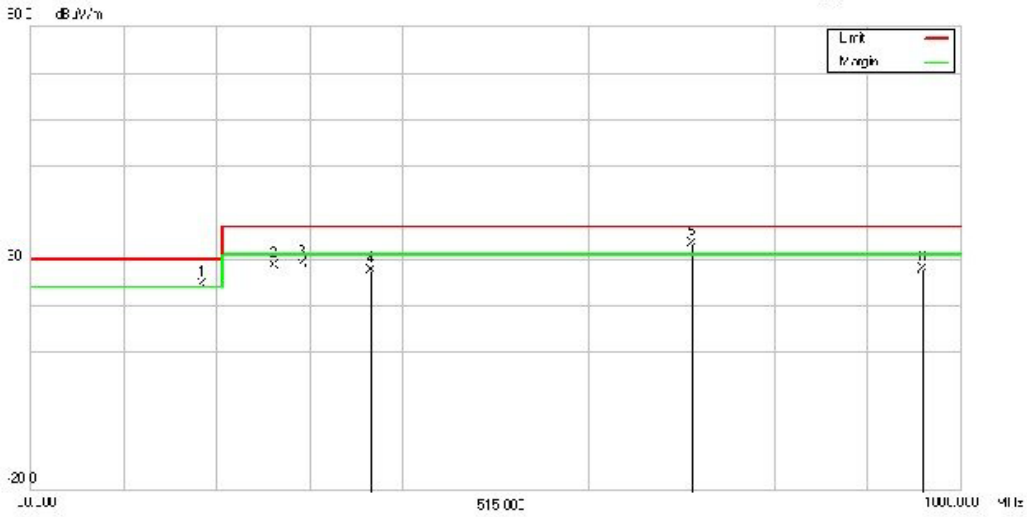
File :7N1401\Data :#4 *Page: 1*

Test Data Of Radiated Emission Measurement (Horizontal)

環球認證有限公司
Global Certification Corp.
Address:No.112-3.Shiang Charng Rd.,Sec.2,
Hsi Chin,Taipei Hsien 221,Taiwan,R.O.C.
Tel:02-26426992 Fax:02-26487450

Radiated Emission Measurement

File :7N1401 Data :#10 Date: 2007/11/14 Time: 下午 05:23:01



Site Open site #1	Polarization: ***Horizontal***	Temperature: 24 ℃	
Limit: EN55022,CISPR22,CNS13438 Class B	Power: DC 12V	Humidity: 67 %	
Company: ADVANTECH	Distance: 10m RBW: 120 KHz		
EUT: Please refer to page1 of report		Sweep Time: 100 ms	
Model : FPM-5151G-R3AE			
Note: 800*600 VGA+DVI USB+RS232 LCD PANEL:G150XG01 V1			

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	208.5800	20.59	3.75	24.34	30.00	-5.66	QP		0	
2		284.2600	21.72	6.66	28.38	37.00	-8.62	peak		0	
3		313.3400	21.65	7.15	28.80	37.00	-8.20	peak		0	
4		385.1200	18.37	9.08	27.45	37.00	-9.55	peak		0	
5	*	720.8300	17.53	15.51	33.04	37.00	-3.96	QP	106	192	
6		959.4600	8.72	18.97	27.69	37.00	-9.31	peak		0	

*:Maximum data x:Over limit !:over margin ●Reference Only

Receiver:		Spectrum Analyzer:	E7401A
Antenna:	A052104-071001(10M)	Engineer Signature:	ALAN
Amplifier:	AMP-EF150001 070719		

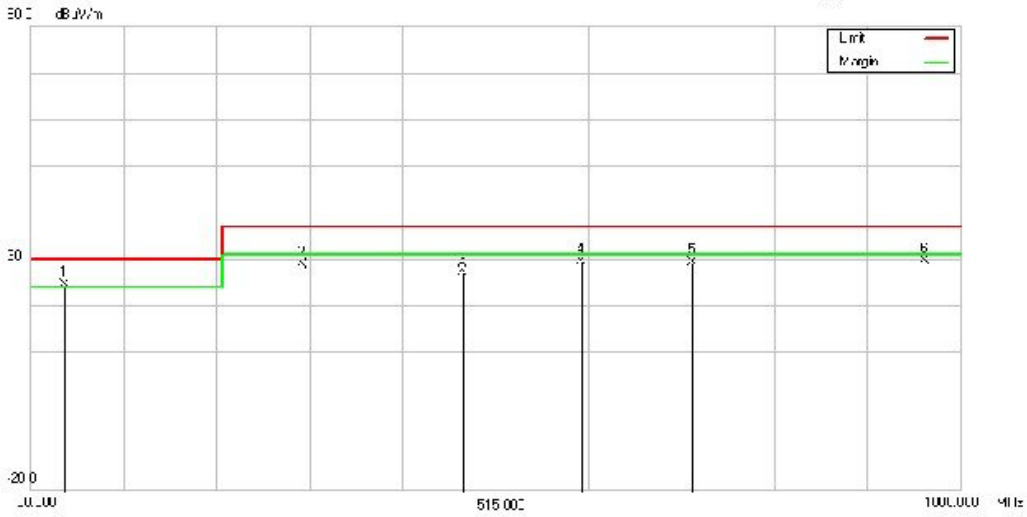
File :7N1401\Data :#10 *Page: 1*

Test Data Of Radiated Emission Measurement (Vertical)

環球認證有限公司
Global Certification Corp.
Address:No.112-3.Shiang Charng Rd.,Sec.2,
Hsi Chin,Taipei Hsien 221,Taiwan,R.O.C.
Tel:02-26426992 Fax:02-26487450

Radiated Emission Measurement

File :7N1401 Data :#11 Date: 2007/11/14 Time: 下午 05:34:50



Site	Open site #1	Polarization:	***Vertical***	Temperature:	24 ℃
Limit:	EN55022,CISPR22,CNS13438 Class B	Power:	DC 12V	Humidity:	67 %
Company:	ADVANTECH	Distance:	10m RBW: 120 KHz		
EUT:	Please refer to page1 of report			Sweep Time: 100 ms	
Model :	FPM-5151G-R3AE				
Note:	800*600 VGA+DVI USB+RS232 LCD PANEL:G150XG01 V1				

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	64.9800	24.57	-0.25	24.32	30.00	-5.68	QP		0	
2		313.3700	21.36	7.15	28.51	37.00	-8.49	peak		0	
3		480.2600	15.52	11.67	27.19	37.00	-9.81	peak		0	
4		604.3500	15.78	13.51	29.29	37.00	-7.71	peak		0	
5		720.7400	13.56	15.51	29.07	37.00	-7.93	peak		0	
6		961.3900	10.38	19.01	29.39	37.00	-7.61	peak		0	

*:Maximum data x:Over limit !:over margin ●Reference Only

Receiver:		Spectrum Analyzer:	E7401A
Antenna:	A052104-071001(10M)	Engineer Signature:	ALAN
Amplifier:	AMP-EF150001 070719		

File :7N1401\Data :#11 *Page: 1*

PHOTO OF EUT

PHOTOS OF EUT

PHOTO OF EUT :

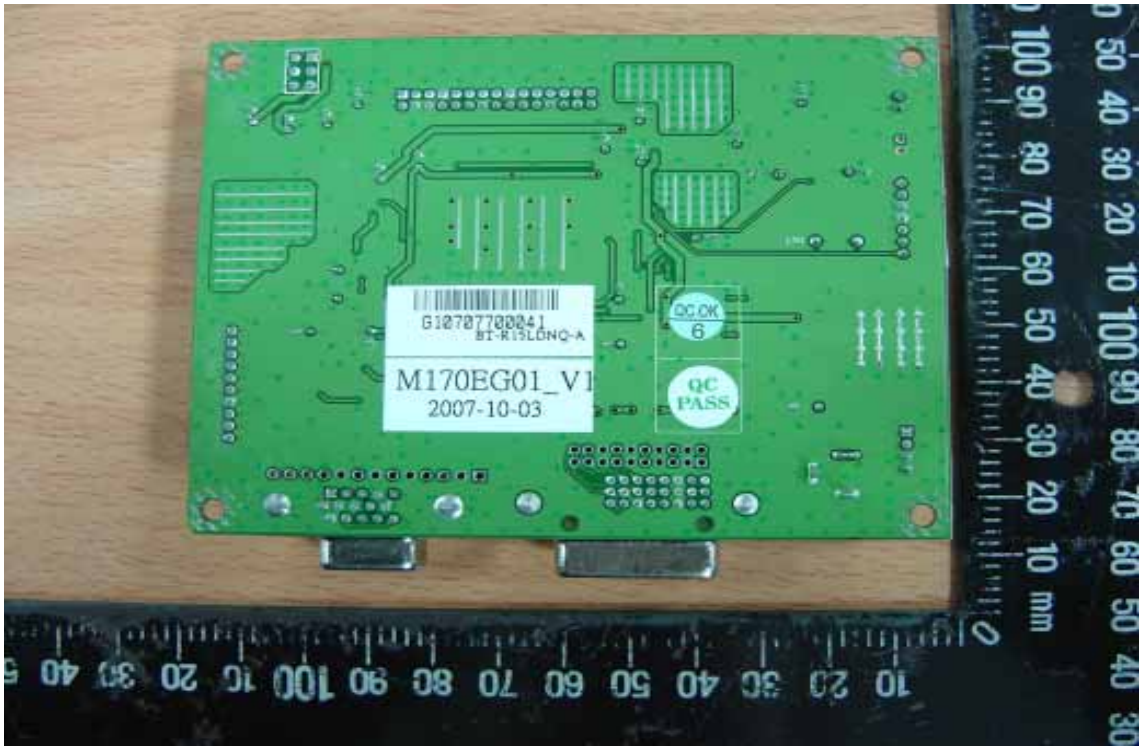
PHOTO OF EUT

Full View of EUT

Inside View of EUT

PHOTO OF EUT

Component Side of Main Board



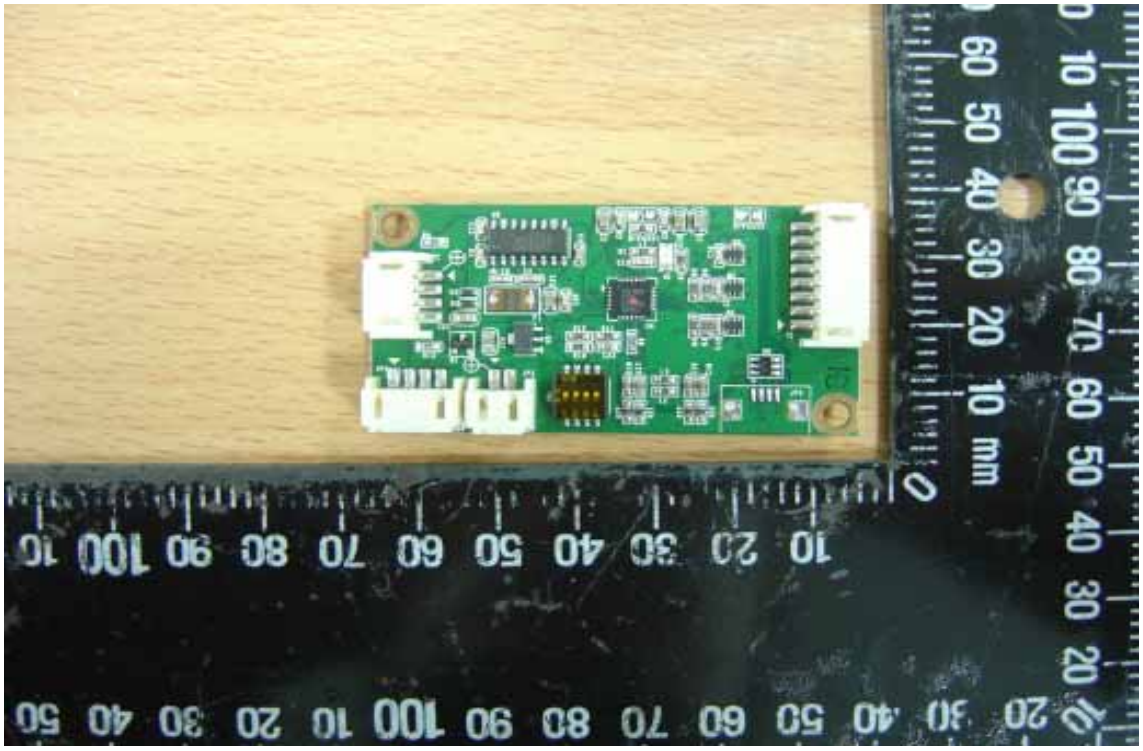
Solder Side of Main Board

PHOTO OF EUT

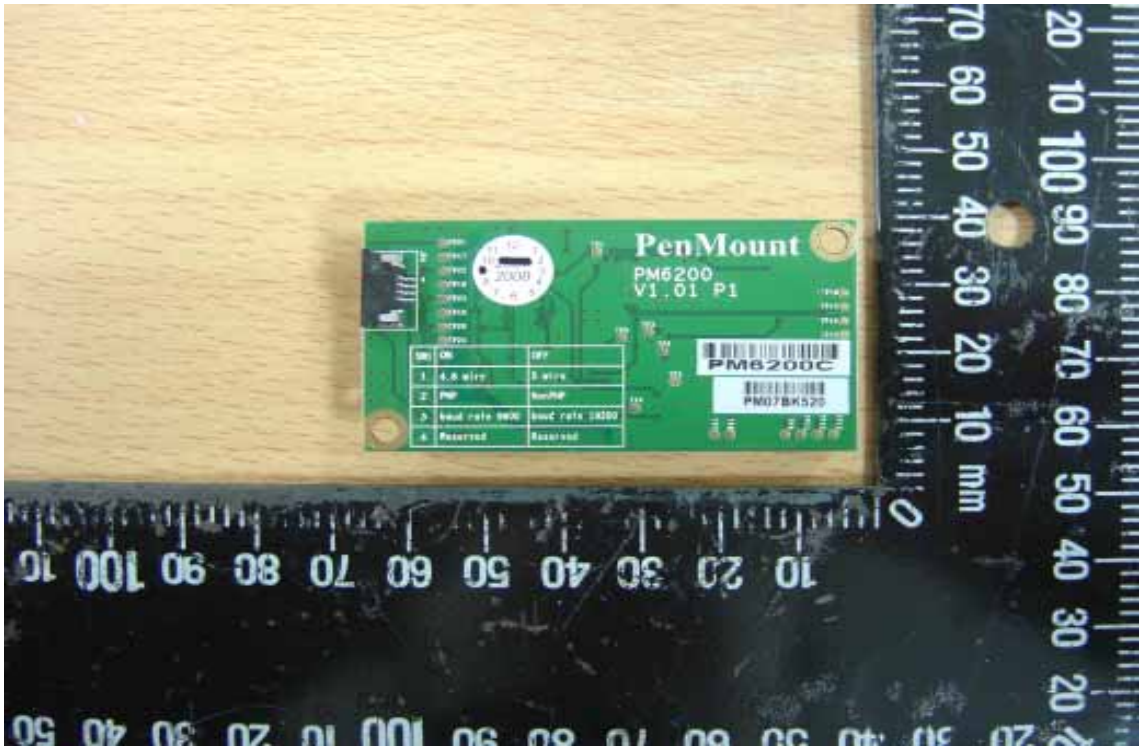
Component Side of Power Board

Solder Side of Power Board

PHOTO OF EUT

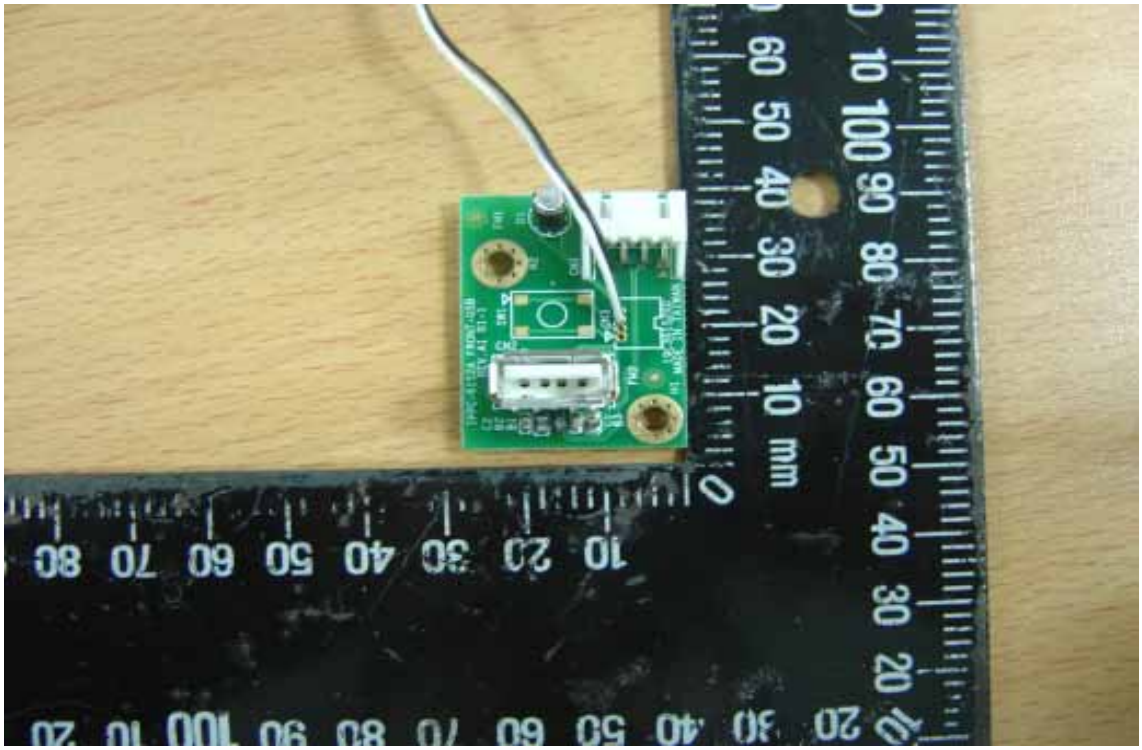


Component Side of Touch Board

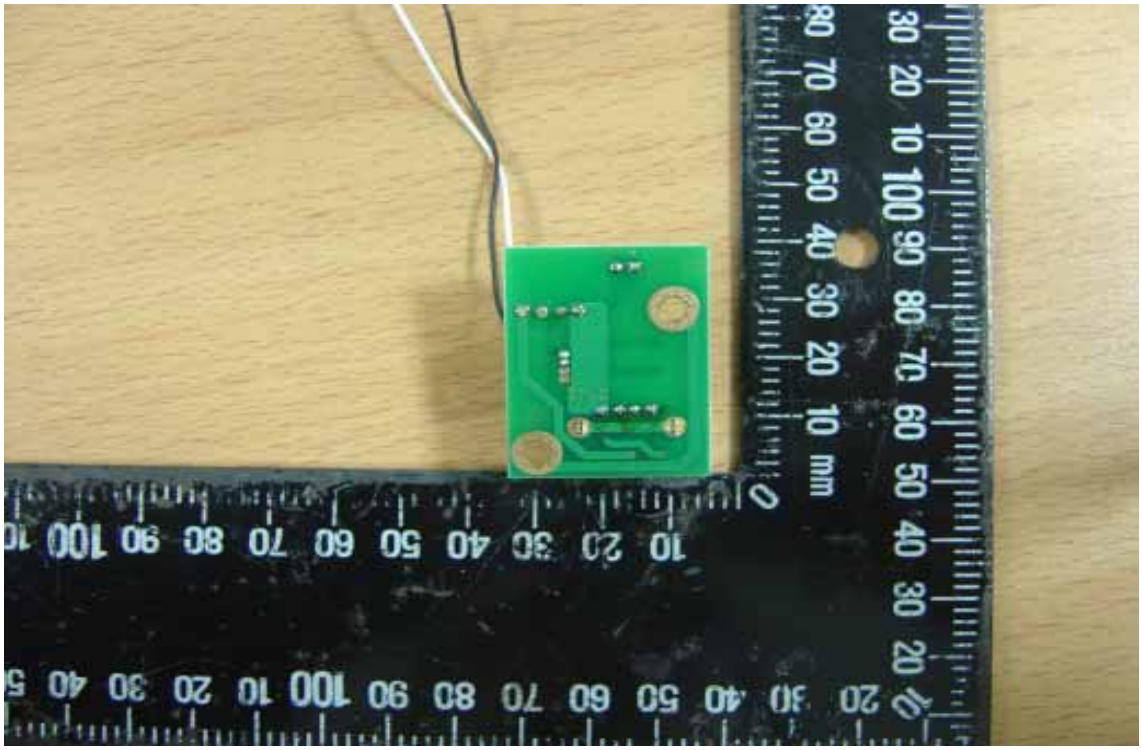


Solder Side of Touch Board

PHOTO OF EUT

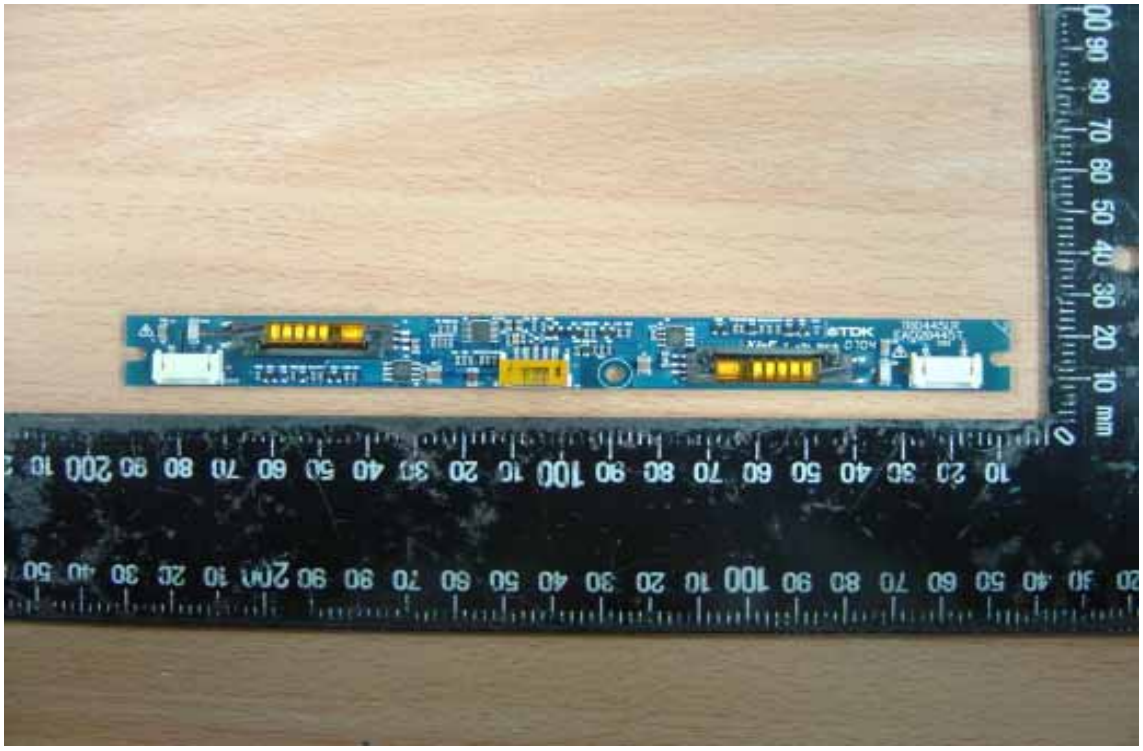


Component Side of USB Board



Solder Side of USB Board

PHOTO OF EUT



Component Side of Inverter

Solder Side of Inverter

PHOTO OF EUT

LCD PANEL MODEL : G150XG01 V1

Front View of LCD Panel

Rear View of LCD Panel

PHOTO OF EUT

LCD PANEL MODEL : G150XG03 V1

Front View of LCD Panel

Rear View of LCD Panel

PHOTO OF EUT

Front View of Adapter

Rear View of Adapter