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CERTIFICATE OF COMPLIANCE

(CLASS B)

CERTIFICATION OF COMPLIANCE is hereby issued to the named Applicant and is VALID ONLY for the equipment identified below:

Date of Tested :	**Apr. 09. 2002**
Applicant's Name :	**Han Ho Electronics Co.**
Applicant's Address :	**772-5, HanHo B/D 3F, GanSuk-3Dong, NamDong Gu, Incheon, Korea**
Manufacturer's Name :	**Han Ho Electronics Co.**
Manufacturer's Address :	**772-5, HanHo B/D 3F, GanSuk-3Dong, NamDong Gu, Incheon, Korea**
Declares that the product	
Product Description :	**TFT LCD MONITOR**
Brand Name :	Digi-I
Model Number :	**DPF-700**
FCC ID :	**QBDDPF-700**

Conforms to FCC Rules and Regulations Part 15 Subpart B requirements.
This product herewith complies with the requirements of the FCC Rules and Regulations as listed below:
Part 15.107: Conducted Emissions.
Part 15.109: Radiated Spurious Emissions.
TESTED and CERTIFIED by:

KOREA EMC LABORATORY
352 Youngduk-Ri, Kihung-Eup,
Yongin-Si, Kyunggi-Do,
449-908, KOREA

Date : **Apr. 16. 2002**

Report No : **KEL02-F03043**

Authorized Signature :

M. S. CHO / President

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0 . VERIFICATION OF COMPLIANCE

Equipment Under Test : TFT LCD MONITOR

Model Number : DPF-700

Serial Number : Prototype

Manufacturer : Han Ho Electronics Co.
772-5, HanHo B/D 3F, GanSuk-3Dong, NamDong Gu, Incheon, Korea

Type of Test : FCC CLASS B

Report Number : KEL02-F03043

Date Tested : Apr. 09. 2002

Tested By : S. J. KIM

The results show that the sample equipment tested as described in this reports is in compliance with the CLASS B conducted and radiated emission limits of FCC Rules Part 15, Subpart B.

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

Refer to the user's manual for more information.

ITEM	SPECIFICATION
Resolution	800 * 480
Color Depth	65536 colors
Power	DC 12V (Regulated)
AC adapter	100-240 VAC 50/60 Hz, DC 12V
File Format	JPEG/JFIF and Exif (.JPG)
Storage	Compact Flash , Smart Media 3.3V and 5V Smart Media are supported
Serial Connection	USB
Dimension	204 X 150 X 33 mm

1.2 Related Submittal(s)/Grant(s)

N/A

1.3 Tested System Details

Type	Model Name	FCC ID	Serial NO	Manufacturer
TFT LCD MONITOR	DPF-700	QBDDPF-700	Prototype	Han Ho Electronics Co.
Adapter	LSE9901B1260		013901322	LI SHIN
PC	Brio BA 600/500	DoC	SG95100402	HP
Monitor	E70	DoC	AN04400575	Viewsonic Corp.
Keyboard	SKR-2033		6CAD025473	SEJIN
Mouse	KM-318	DoC	NONE	Chuang Feng Electronics Co., Ltd.

1.4 System Configuration

Type	Model Name	Serial NO	Manufacturer	Remark
Main B/D	P10030F04	NONE	JTEAM	Korea
LCD	DTCB18QCF	NONE	Sharp Corp.	Japan
Memory	CompactFlash	NONE	SanDisk Corp.	U.S.A

1.5 General Set-up of the Test Shielded Room

The EUT was set up in accordance with the suggested configuration given in FCC measurement Procedure ANSI C63.4, 1992. The measurement are performed in the shielded room which dimension is 3.0*7.0*2.5(m). The EUT was placed on a non conductive table which is 1.0*1.5(m), 80cm above an earthed ground plane and is kept at least 1m from any other earthed ground plane except the rear of table top being removed 40cm from a vertical conducting plane.

Power to the EUT was provided through the LISN(3725/2,EMCO) which has the Impedance vs Frequency Characteristic in accordance with the Fig.1 Impedance Characteristic of LISN. Peripheral equipment required to provide a functional system(support equipment) for EUT testing was powered through another LISN(NSLK8128,Schwarzbeck).

Power to the LISN was filtered to eliminate ambient signal interference. A coaxial type connector which provides a 50 Ohm terminating impedance was provided for the test instrument. The excess length of the power cord was wrapped in the two non metallic pegs attached to the top of the LISN. The two pegs are 9cm high, approximately 2.0cm in diameter and that are spaced 6cm on the center apart.

1.6 Test Facility

Location: Korea EMC Laboratory
352 Yungduck-Ri
Kihung-Eup,Yongin-City
Kyungki-Do,Korea

Site : - 3/10m Open Fielded Radiated
- Indoor Line Conducted Room(Shielded)

The Open Field Radiated and Indoor Line Conducted sites are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 1992. Korea EMC Lab. was refiled in FCC in Feb. 2001.

INSTRUMENTATION

Description	Model	Manufacturer	Serial No	Due Cal.
TEST RECEIVER	ESVS10	Rohde & Schwarz	825120/006	'2002.10.09
TEST RECEIVER	ESH-2	Rohde & Schwarz	893268/004	'2002.06.15
TEST RECEIVER	ESPC	Rohde & Schwarz	844006/038	'2002.05.29
SPECTRUM ANALYZER	8566B	Hewlett-Packard	2421A00473	'2003.03.19
BICONICAL	VHA9103	SCHWARZBECK	1271	'2002.05.26
LOG-PERIODIC	3146	EMCO	9002-2685	'2002.05.26
BI-LOG	VULB9160	SCHWARZBECK	3049	'2002.08.08
BICONICAL	VHA9103	SCHWARZBECK	1728	'2003.06.07
LOG-PERIODIC	USLP9143	SCHWARZBECK	134	'2003.06.07
Artificial-mains Network	NSLK 8128	SCHWARZBECK	8128144	'2002.11.13
AMPLIFIER	8447D	Hewlett-Packard	2944A06481	'2003.12.04
Two Line V-Network	ESH3-Z5	Rohde & Schwarz	860685/005	'2002.08.01
L.I.S.N	3725/2	EMCO	9008-2065	-
PLOTTOR	7550A	Hewlett-Packard	2407A00471	-

The calibration of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors are applied in accordance with instruments contained in the manual for the measuring instrument.

2. MEASUREMENT PROCEDURES

2.1 System Test Configuration

2.1.1 Video mode Justification

The system was tested in 800 x 480 resolution mode.

2.1.2 EUT Exercise Software

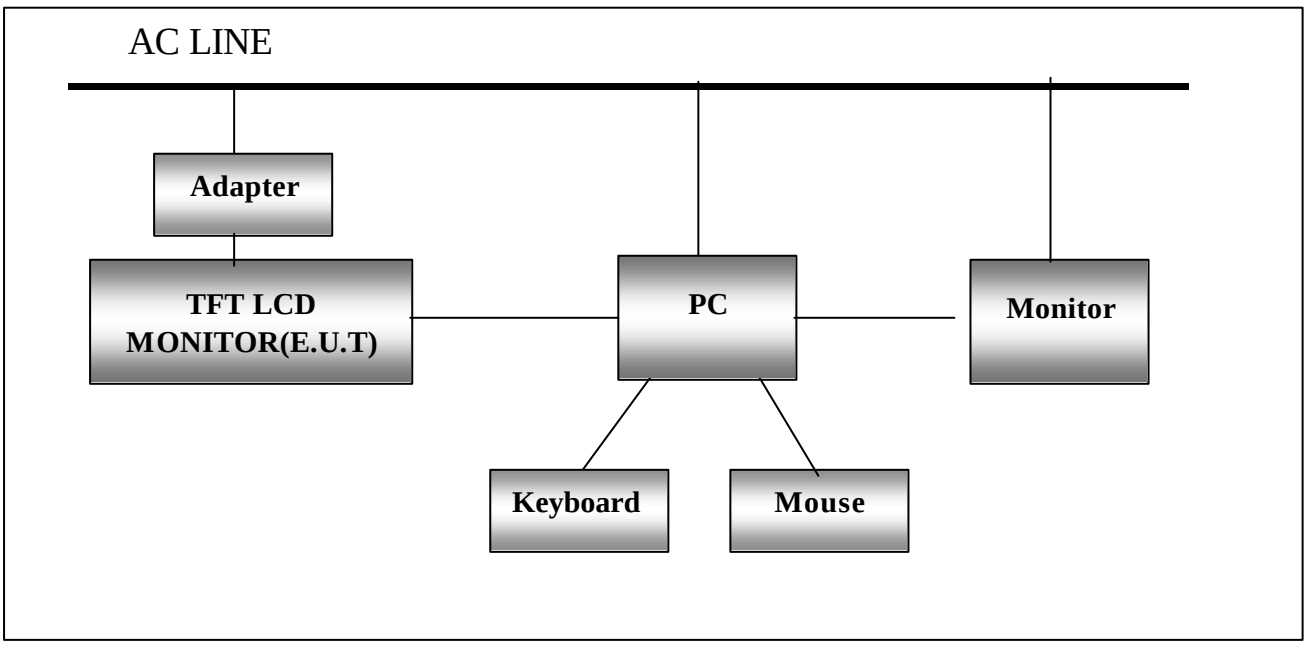
Connecting the USB port of PC and TFT LCD MONITOR. And testing by downloading image files as practicing the Digi program.

2.2 Special Accessories

2.3 Equipment Modifications

No equipment modifications were performed during testing.

2.4 System Configuration Diagram



2.5 PRELIMINARY TESTING

It is often valuable to performing preliminary radiated measurements at a closer distance than specified for compliance to determine the emission characteristics of the EUT. At close-in distance, it is easier to determine the spectrum signature of EUT, and if applicable, the EUT configuration that emanate the maximum level of emissions. The data may not be precisely correlatable results.

2.6 SHIELDED ENCLOSURE

To search the Radiated frequency outline of an EUT a shielded screen room may be used. If the shielded room is used for radiated data, the data page will state that the EUT was in a shielded enclosure. All data collected in a screen room for radiated emissions is for frequency outline only. If an EUT is placed in screen room for Line Conducted Data, the data page will show that a screen room was used and data frequencies and levels will be correct and used for test data.

2.7 DATA REPORTING FORMAT

The measurement results expressed in accordance with C63.4 and specified limits where applicable are presented in tabular or graphical form, or alternatively as recorder charts or photographs of a spectrum analyzer display, showing the level vs. frequency.

2.8 OPERATING CONDITIONS

The EUT was operated at the specified load conditions(mechanical and/or electrical)for which it was designed.

2.9 CONDITIONING OF THE EUT

The EUT was operated for a sufficient period of time to approximate normal operating conditions.

2 10 Power line Conducted Emissions

The EUT is set up in accordance with the suggested configuration given in FCC Measurement Procedure ANSI C63.4-1992. The measurements are performed in a 3m x 6m x 2.5m shielded room. A wooden table which height is 80 cm is located at the center of the shielded room; desktop EUTs are placed on top of this table. The rear of the EUT and table are placed 40 cm apart from the shielded room wall. All items on the table (or test-table) were placed at least 10 cm apart each other. Excess EUT power cord is folded back and forth to form a 30 cm by 40 cm bundle. Interconnecting cables which hang closer than 40 cm to the ground plane are folded back and forth to form a 30 cm by 40 cm long bundle, hanging approximately in the middle between the ground plane and table. The EUT power cord was plugged into a LISN 80 cm away, while all other devices were plugged into a second LISN, also 80 cm away.

The highest emissions were also analyzed in detail by operating the spectrum analyzer in fixed tuned mode to determine the precise amplitude of the emissions. On the other hand, the interconnecting cables were moved around the table to maximize the emissions, and the position of the peripheral devices were interchanged to check whether there is any changes in emissions.

2.11 Open field Radiated Emissions Tests

The EUT and support equipment are set up on the turntable in an open field site. Desktop EUTs are set up on a wooden stand (test-table), 80 cm above the ground plane. All items on the table were placed at least 10 cm apart each other. Interconnecting cables which hang closer than 40 cm to the ground plane are folded back and forth to form a 30 cm by 40 cm long bundle, hanging approximately between the ground plane and table. The highest emissions were also analyzed, in detail, with the tuned aerial to search the precise amplitude of the emissions. On the other hand, the interconnecting cables were moved around the table and if the highest amplitudes is observed, the EUT is rotated in the horizontal plane while changing the antenna polarization to the vertical plane to maximize the field strength. Once the maximum field strength is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings. The position of the peripheral devices are interchanged to check for any changes in emissions. In rare instances, the maximum field strength may occur with the antenna polarized between vertical and horizontal.

3. Measurement Data

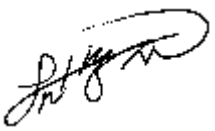
3.1 CONDUCTED EMISSION DATA

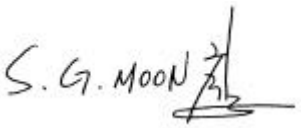
TEST : TFT LCD MONITOR ; DPF-700
DATE : Apr. 09. 2002

Freq. (MHz)	EUT State	Polarity (H/N)	Level (Q.P) (dBuV)	LIMIT (Q.P) (dBuV)	Margin for(Q.P) (dBuV)
0.460	Refer to Note	L1	32.8	48.0	15.2
0.526		L1	40.9	48.0	7.1
0.987		L2	36.1	48.0	11.9
2.435		L1	44.2	48.0	3.8
2.501		L1	40.9	48.0	7.1
2.699		L1	44.8	48.0	3.2
2.767		L1	44.0	48.0	4.0
3.621		L1	36.1	48.0	11.9
5.202		L1	35.3	48.0	12.7
5.398		L1	37.2	48.0	10.8
6.716		L1	35.6	48.0	12.4
8.757		L1	37.0	48.0	11.0
11.192		L1	34.0	48.0	14.0
25.013		L1	33.1	48.0	14.9

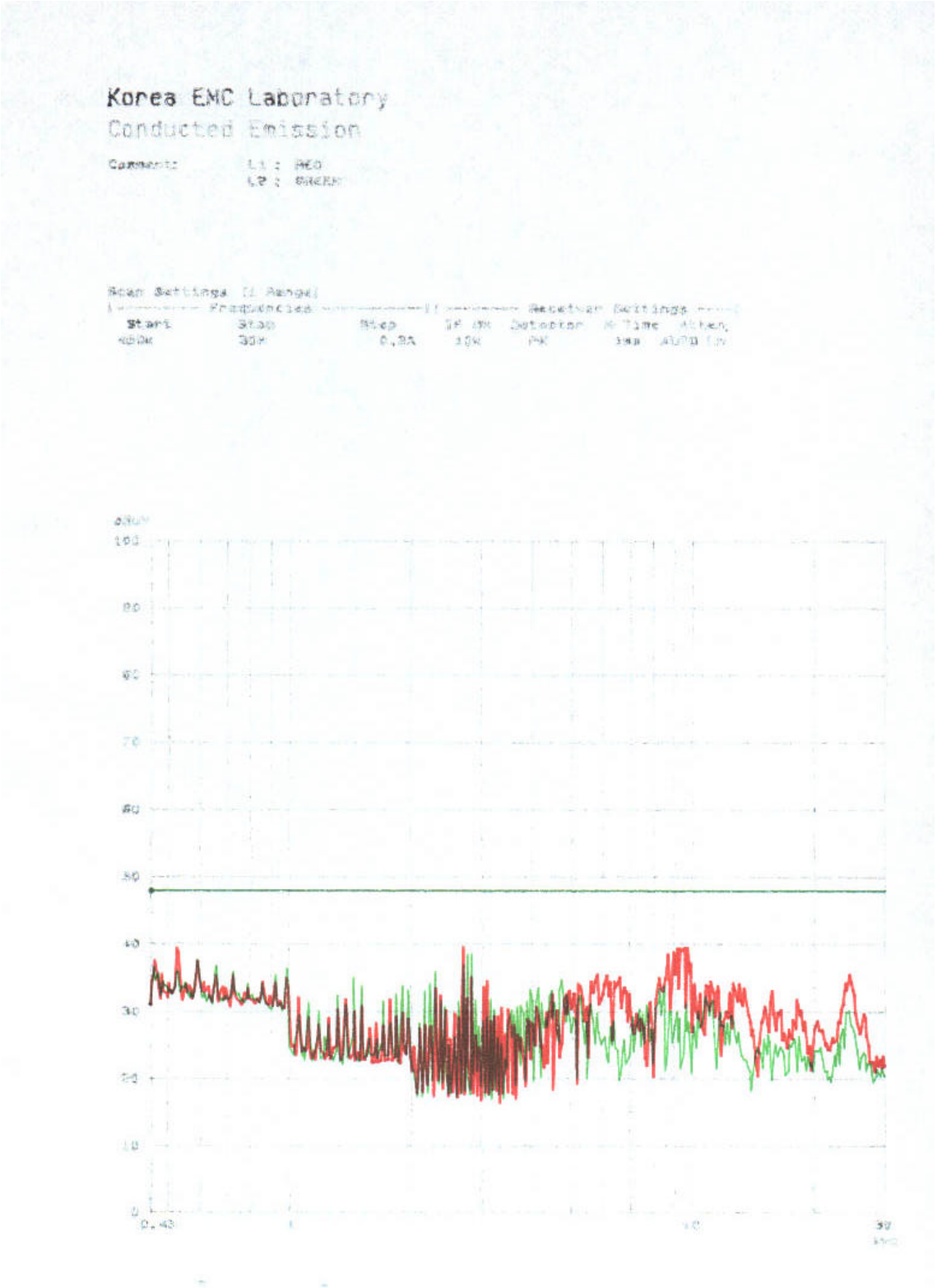
Notes: The test is implemented in a shielded room in accordance with ANSI C63.4
L1 : HOT LINE , L2 : NEUTRAL LINE

Test Engineer. Reviewed by.





3.2 Conducted Emission Graph



Red : HOT LINE, Blue : Neutral LINE

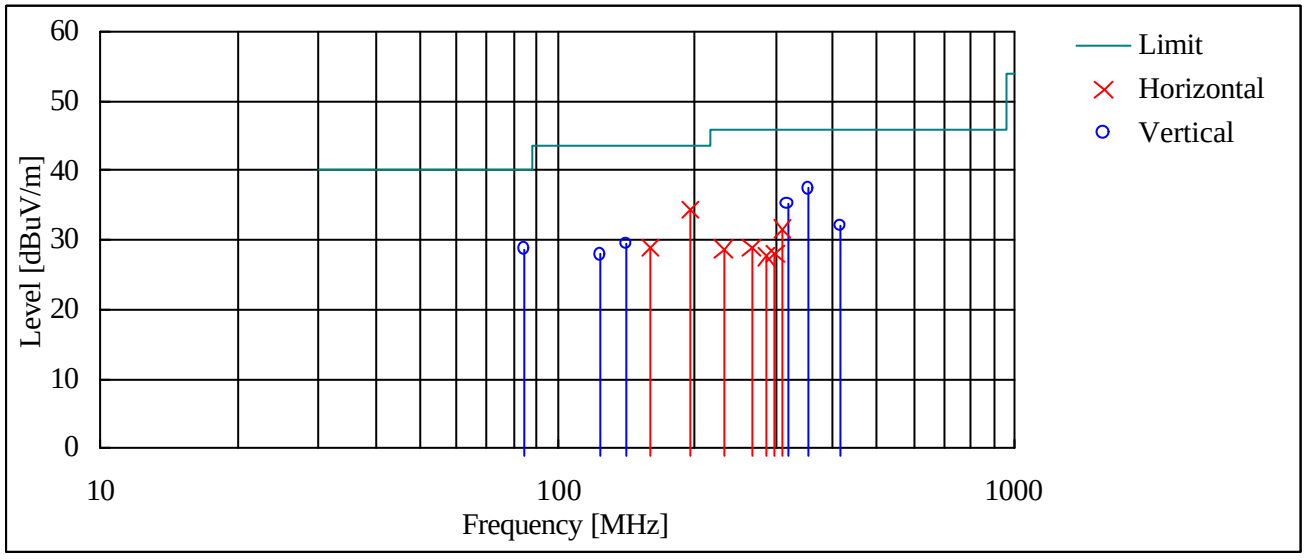
LINE EMISSION GRAPH

3.2 RADIATED EMISSION DATA

TEST : TFT LCD MONITOR : DPF-700

DATE : Apr. 09. 2002

Freq. (MHz)	EUT State	Level (dBuV/m)	Preamp -Pads (dBuV/m)	Af (dBuV/m)	Cl (dBuV/m)	Hor. /Ver	ha(m) Azimuth	Total Results (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
84.349	Refer to note	38.89	21.30	8.51	2.6	V	1.0/80	28.7	40.0	11.3
123.879		38.33	21.30	8.37	2.5	V	1.0/90	27.9	43.5	15.6
141.544		38.99	21.30	9.41	2.3	V	1.0/60	29.4	43.5	14.1
159.246		36.11	21.30	11.09	3.0	H	1.8/90	28.9	43.5	14.6
194.639		42.25	21.30	10.15	3.1	H	1.1/90	34.2	43.5	9.3
229.990		39.08	21.30	7.22	3.7	H	1.2/90	28.7	46.5	17.8
265.421		37.87	21.30	9.03	3.3	H	1.0/10	28.9	46.5	17.6
285.976		36.57	21.30	9.03	3.3	H	1.0/100	27.6	46.5	18.9
299.489		37.07	21.30	9.03	3.3	H	1.0/270	28.1	46.5	18.4
309.653		36.52	21.30	11.58	4.8	H	1.0/100	31.6	46.5	14.9
318.498		40.12	21.30	11.58	4.8	V	1.1/90	35.2	46.5	11.3
353.886		42.32	21.30	11.58	4.8	V	1.1/90	37.4	46.5	9.1
415.238		33.09	21.30	14.61	5.6	V	1.1/70	32.0	46.5	14.5



Notes: The test is performed in a distance of 3 m. Af : Antenna factor, Cl : Cable loss

The test is performed in accordance with ANSI C63.4

Test Engineer. Reviewed by.

S. G. MOON

Korea EMC Laboratory

3.3 SUMMARY

Company	: Han Ho Electronics Co.	
Equipment Under Test	: TFT LCD MONITOR	
Model Number	: DPF-700	Serial Number: Prototype
Type of Test	: FCC CLASS B	Passed/Failed: PASSED

The Equipment Under Test(EUT) was configured and operated in a manner which tends to maximize its emission characteristics in a typical application. Power and signal distribution, ground, interconnecting cabling, and physical placement of equipment were simulating the typical application and usage in so far as practicable.

LINE CONDUCTED TEST: An unshielded power cord was used to connect the EUT to a LISN Box which supplied 120 VAC/60 Hz power. The EUT was tested according to C63.4 test specifications. Line conductance scaned from 450 kHz to 30 MHz range on both Line 1(hot side) and Line 2(neutral side). ***The highest emission was observed at 2.699 MHz on Line 1 with a margin of 3.2 dBuV from the limit.*** All line conductance emissions were within the FCC CLASS B requirements for compliance.

RADIATED TEST: The EUT was placed on a three meter open field test site according to C63.4 test specifications. Preliminary scans ranged from 30 MHz to 1 GHz in both vertical and horizontal polarizations in all possible modes of operation. The highest six point of emission levels were recorded as data each ranges of limit.
The highest emission was observed at 353.886 MHz(Vertical) with margin of 9.1 dBuV from the limit. All radiated emissions were within the FCC CLASS B requirements for compliance.

4. LABELING REQUIREMENT

Section 15.19 of the Code of Federal Regulation

1) A CLASS B computing device subject to certification by the Commission shall be identified pursuant to par. 2.925 et Seq of this chapter. In addition, the label shall include the following statement:

> 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.

Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified in this Section is required to be affixed only to the main control unit.

The users manual or instruction manual for the EUT shall contain the following statement or equivalent.

Caution: Changes or Modifications not expressly approved by the party responsible for compliance could void the users authority to operate the equipment.

If the EUT requires accessories such as special shielded cables and/or connectors to enable compliance with emission limits, the instruction manual for the EUT shall include appropriate instructions on the first page of the text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

For a CLASS B digital device or peripheral, the instructions furnished the user shall include the following or similar statement placed in a prominent location in the text of the manual.

Note: This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of 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 used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.