



ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test report file number : E038R-069

Applicant : KTV Global Corporation

Address : 149, Gongdan1-Dong, Gumi-City, KyungSangBuk-Do, 730-031, Korea

Manufacturer : KTV Global Corporation

Address : 149, Gongdan1-Dong, Gumi-City, KyungSangBuk-Do, 730-031, Korea

Type of Equipment : 15.1" LCD TV & Monitor

FCC ID : BRFLT151AA

Model Name : LT151AA

Serial number : N/A

Total page of Report : 18 pages (including this page)

Date of Incoming : August 11, 2003

Date of Issuing : October 17, 2003

SUMMARY

The equipment complies with the regulation; **FCC PART 15 SUBPART B, SECTION 15.101**

This test report contains only the results of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production

Prepared by:

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ONETECH Corp.

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**1. VERIFICATION OF COMPLIANCE**

- APPLICANT : KTV Global Corporation
- ADDRESS : 149, Gongdan1-Dong, Gumi-City, KyungSangBuk-Do, 730-031, Korea
- CONTACT PERSON : Mr. Eui-Yeun Kim / Senior Engineer
- TELEPHONE NO : +82-54-467-3550
- FCC ID : BRFLT151AA
- MODEL NO/NAME : LT151AA
- SERIAL NUMBER : N/A
- DATE : August 26, 2003

DEVICE TYPE	Peripheral Device for Class B Computing Device - Unintentional Radiator
E.U.T. DESCRIPTION	15.1" LCD TV & Monitor
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 1992
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15, SECTION 15.101
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	Yes
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

- This device has shown compliance with the conducted emissions limits in 15.107 adopted under FCC 02-107 (ET Docket 98-80). The device may be marketed after July 11, 2005 affected by the 15.37(j) transition provisions.
- The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



2. GENERAL INFORMATION

2.1 Product Description

The KTV Global Corporation, Model LT151AA (referred to as the EUT in this report) 15.1" LCD TV & Monitor that is LCD Monitor with TV receiver. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. OR CRY. FREQ.(FREQ.>=1MHz)	12MHz, 14.318MHz, 18.432MHz, 20.25MHz
NUMBER OF LAYERS	4 Layers
INVERTER M/N, MFR	DS-1007NF, DS-PLUS INC. / Alternate: FIF1542-OK, FRONTEK CO., LTD.
TELEVISION SYSTEM	NTSC
TUNER Type NO. / MFR	TCLN9081PA27D / SAMSUNG
ANTENNA INPUT IMPEDANCE	75ohms Coaxial
EXTERNAL TERMINALS	Video In, S-Video In, Audio In, PC Video In, PC Audio In, DC IN, Headphone out, Tuner In

2.2 Model Differences:

-. The difference(s) compared to the EUT is as follows:

	Model Name	Model Difference
Basic Model	LT151AA	
Added Model	SLC15A60 OCL-151L KLT151	Only type designation according to brand name

2.3 Related Submittal(s) / Grant(s)

Original submittal only



2.4 Test System Details

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	FCC ID	Description	Connected to
LT151AA	KTV Global Corporation	BRFLT151AA	15.1" LCD TV & Monitor (EUT)	PC
0217B1248	LI SHIN	N/A	AC/DC Adapter	EUT
SMS-015N	SUNGIL	N/A	Speaker	EUT
DVD2000	TAEYOUNG	N/A	DVD Player	EUT
DCM	DELL	DOC	PC	-
KB-9963	COMPAQ	DOC	KEYBOARD	PC
M-SAS51	LOGITECH	JNZ211167	MOUSE	PC
2225C	HP	DSI6XU2225	PRINTER	PC
020-0470	Cardinal	GDE0196	MODEM	PC

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4/1992. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 426-1 Daessangryung-Ri, Chowol-Myun, Kwangju-Kun, Kyunggi-Do 464-080 Korea. Description details of test facilities were submitted to the Commission on January 18, 2002. (Registration Number: 92819)



3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
MAIN BOARD	Neovalley	N/A	N/A
TUNER BOARD	KTV Global Corporation	N/A	N/A
CONTROL BOARD	KTV Global Corporation	N/A	N/A
INVERTER BOARD	DS-PLUS INC.	DS-1007NF	N/A
INVERTER BOARD (Alt.)	FRONTEK CO., LTD.	FIF1542-OK	N/A
REMOTE SENSOR BOARD	KTV Global Corporation	N/A	N/A
LCD Panel	LG Phillips LCD	LC151X01 (C3P1)	N/A

3.2 EUT Operating Condition

The windows program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. This program was included into HOST. Once loaded, this program sequentially exercises each system component in turn. The series of H characters are printed on the EUT until the screen is completely full. Other input/output cables for video/audio signals are connected for other peripherals.

And the EUT has alternate inverter board. Therefore the EUT was measured according to each inverter type.

3.3 Cable Description

	Power Cord Shielded (Y/N)	I/O cable Shielded (Y/N)	Length (M)
15.1" LCD TV & Monitor (EUT)	N	Y (VGA Cable)	1.2 (P), 1.2 (D)
AC/DC Adapter	N	N (DC OUT)	1.5 (P), 1.2 (D)
Speaker	N/A	N	1.2 (D)
DVD Player	N	N	1.5 (P), 1.2 (D)
PC	N	-	1.5 (P)
KEYBOARD	N/A	N	1.2(D)
MOUSE	N/A	N	1.2 (D)
PRINTER	N	Y	1.5 (P), 1.5 (D)
MODEM	N	Y	1.5 (P), 1.5 (D)

* The marked "(P)" means the Power Cable and "D" means the I/O Cable.

**3.4 Noise Suppression Parts on Cable**

	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
15.1" LCD TV & Monitor (EUT)	Y	BOTH END (VGA CABLE)	Y	BOTH END
AC/DC Adapter	Y	EUT END	Y	EUT END
Speaker	N	N/A	Y	EUT END
DVD Player	N	N/A	Y	BOTH END
PC	-	-	-	-
KEYBOARD	N	N/A	Y	PC END
MOUSE	N	N/A	Y	PC END
PRINTER	N	N/A	Y	BOTH END
MODEM	N	N/A	Y	BOTH END

3.5 Equipment Modifications

To achieve compliance to CLASS B levels, the following change(s) was made by KTV Global Corporation during compliance testing:

1. Added gasket to close between LCD panel and main metal bracket.
2. Closed the ground of shielded signal cable of LCD panel to main metal bracket.
3. Closed the metal bracket for signal port to ground of main PCB.

3.6 Configuration of Test System

Line Conducted Test : The power was fed to the EUT through AC/DC adapter and the adapter was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4/1992 7.2.3 to determine the worse operating conditions.

Radiated Emission Test : Preliminary radiated emission test was conducted using the procedure in ANSI C63.4/1992 8.3.1.1 to determine the worse operating conditions. Final radiated emission test was conducted at 3 meters open area test site.



4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Resolution 640 x 480	
Resolution 800 x 600	
Resolution 1024 x 768	
Resolution 1280 x 1024	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Resolution 640 x 480	
Resolution 800 x 600	
Resolution 1024 x 768	
Resolution 1280 x 1024	X

**5. FINAL RESULT OF MEASUREMENT**

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test (Type no. of Inverter - DS-1007NF)

Humidity Level : 53 %

Temperature : 20 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107(a)

Type of Test : CLASS B

Result : PASSED BY -4.83 dB at 4.38 MHz (at peak mode)

EUT : 15.1" LCD TV & Monitor

Date: October 13, 2003

Operating Condition : "H" Characters auto scroll (Resolution 1280 x 1024)

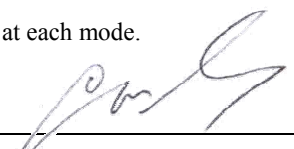
Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
4.22	H	50.41	56.00	-5.59
4.38	N	51.17	56.00	-4.83
4.54	N	50.24	56.00	-5.76
4.72	N	49.92	56.00	-6.08
8.45	H	44.45	60.00	-15.55
8.59	N	45.01	60.00	-14.99
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
4.22	H	35.65	46.00	-10.35
4.38	N	35.46	46.00	-10.54
4.54	N	34.62	46.00	-11.38
4.72	N	33.31	46.00	-12.69

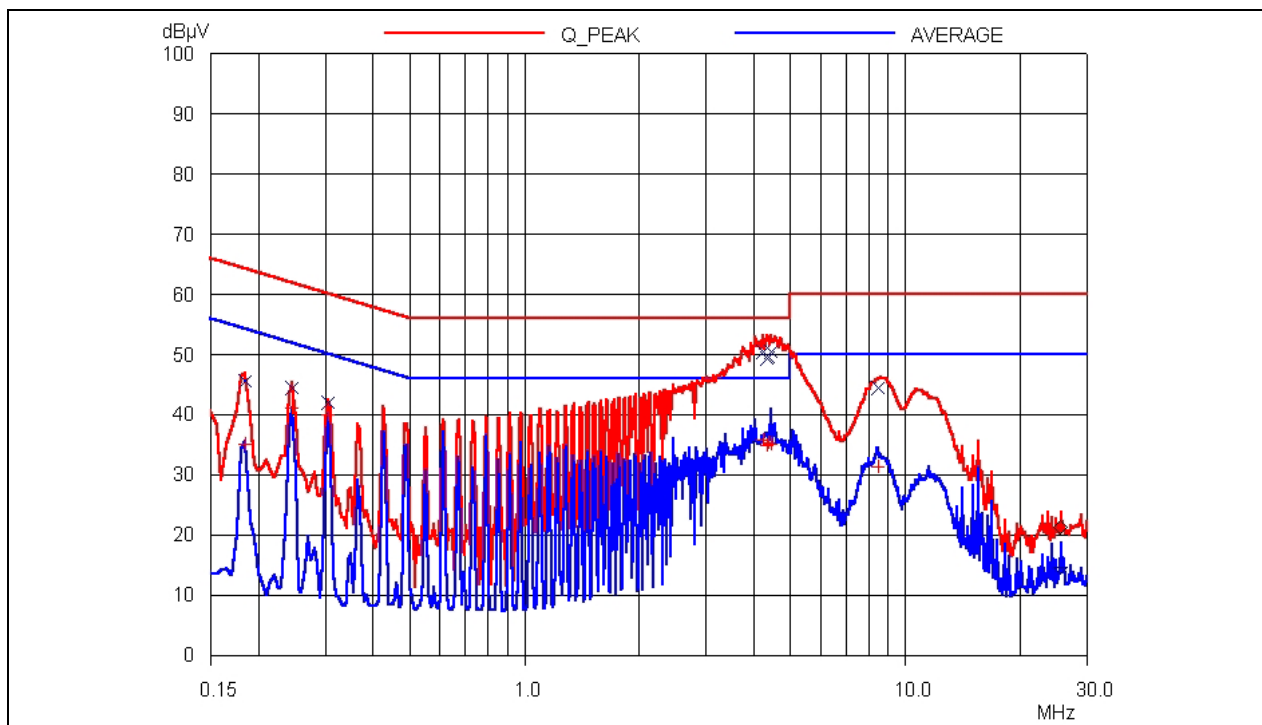
Line Conducted Emissions Tabulated Data

Remark : "H": Hot Line, "N": Neutral line, "Q.P": Quasi-Peak detect

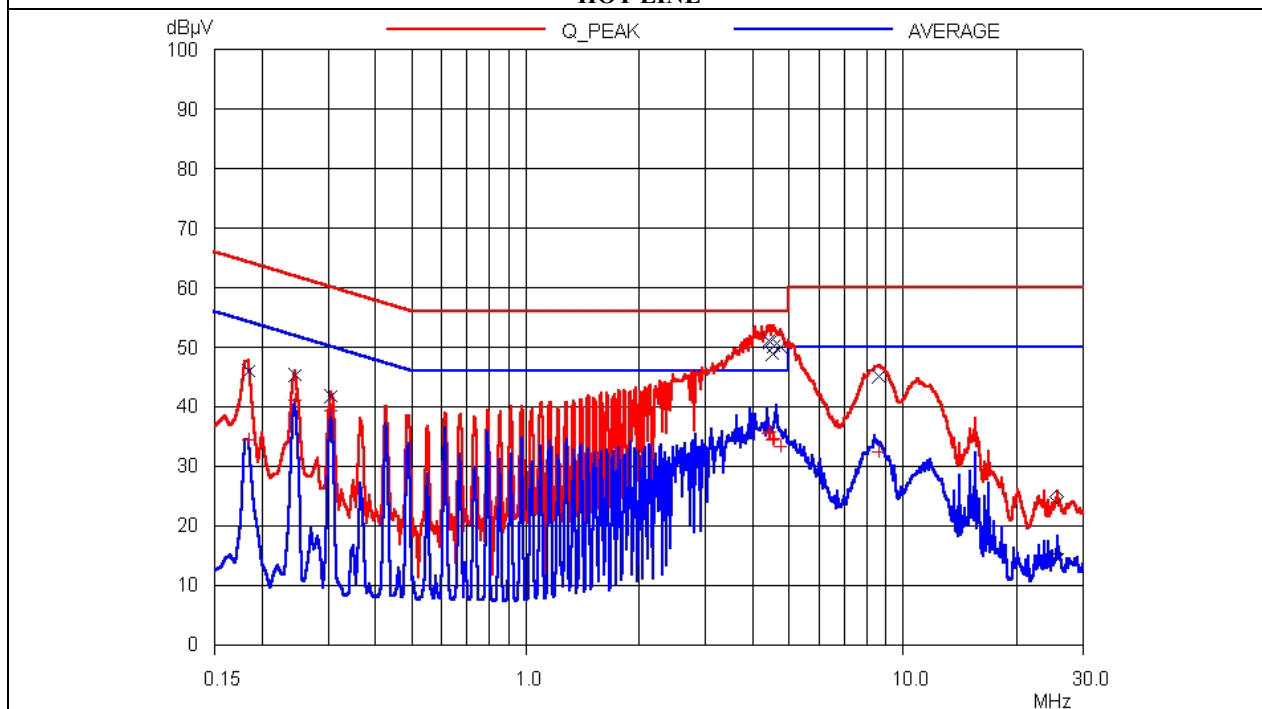
See next page for an overview sweep performed with peak and average detector at each mode.



Tested by: In-Sub, Youn / Test Engineer



HOT LINE



NEUTRAL LINE



5.2 Conducted Emission Test (Type no. of Inverter – FIF1542-OK)

Humidity Level : 52 %

Temperature : 19 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107(a)

Type of Test : CLASS B

Result : PASSED BY -4.32 dB at 4.87 MHz (at peak mode)

EUT : 15.1" LCD TV & Monitor

Date: October 17, 2003

Operating Condition : "H" Characters auto scroll (Resolution 1280 x 1024)

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

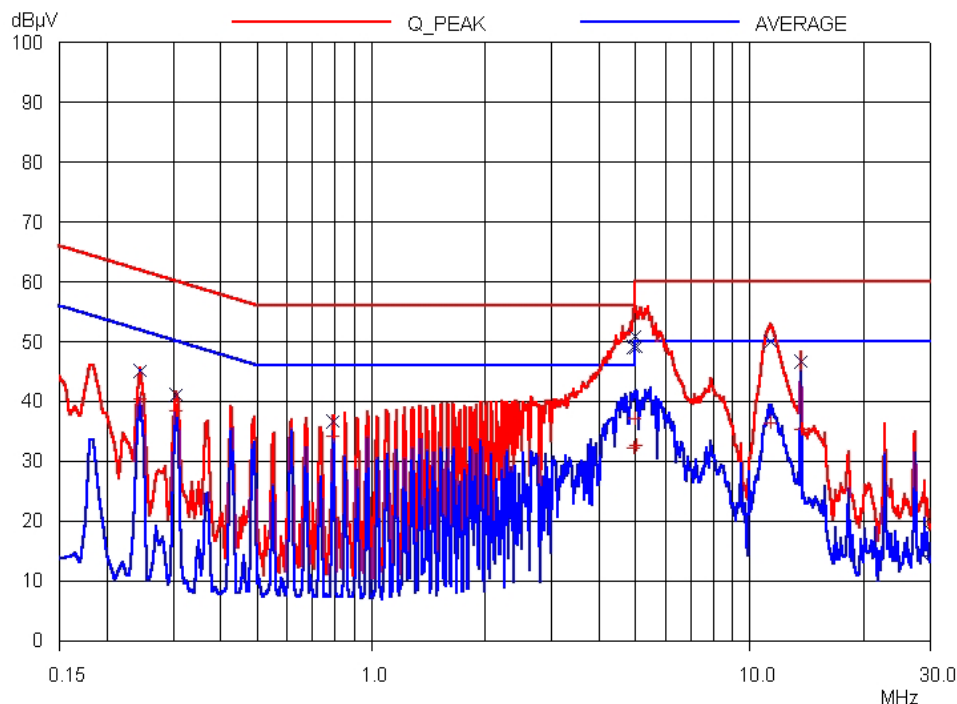
Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.24	H	45.17	61.92	-16.75
4.87	N	51.68	56.00	-4.32
4.96	H	50.93	56.00	-5.07
5.12	N	52.53	60.00	-7.47
11.30	N	50.56	60.00	-9.44
13.61	N	46.65	60.00	-13.35
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
4.87	N	36.03	46.00	-9.97
4.96	H	37.09	46.00	-8.91
5.12	N	36.47	50.00	-13.53
11.30	N	39.61	50.00	-10.39

Line Conducted Emissions Tabulated Data

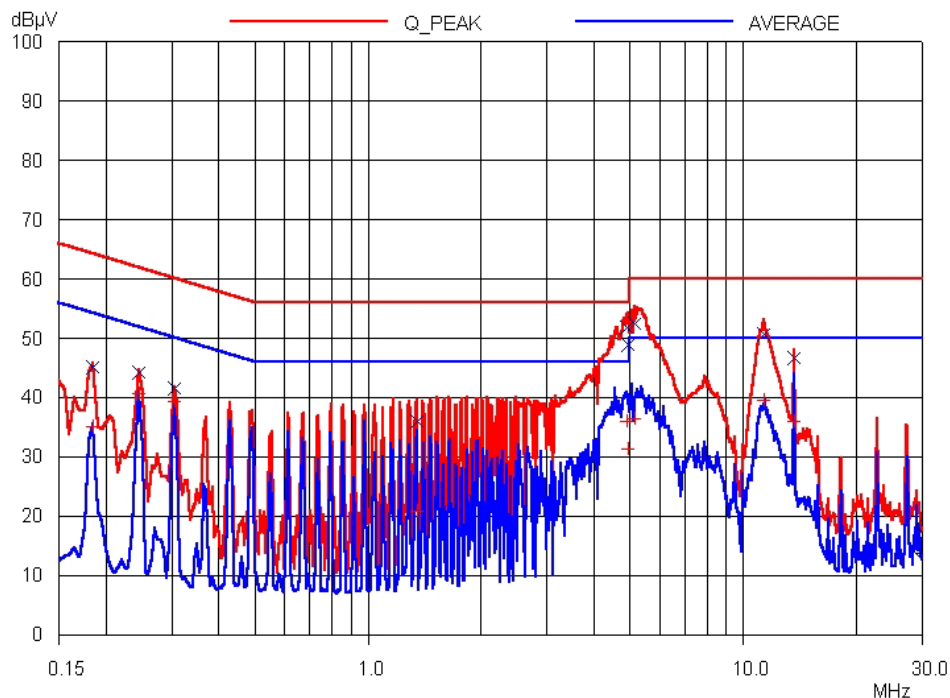
Remark : "H": Hot Line, "N": Neutral line, "Q.P": Quasi-Peak detect

See next page for an overview sweep performed with peak and average detector at each mode.

Tested by: In-Sub, Youn / Test Engineer



HOT LINE



NEUTRAL LINE



5.3 Radiated Emission Test (Type no. of Inverter - DS-1007NF)

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level : 51 % Temperature : 23 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109 (a)
 Type of Test : CLASS B
 Result : PASSED BY -5.24 dB at 157.52 MHz

EUT : 15.1" LCD TV & Monitor Date: August 14, 2003
 Operating Condition : "H" Characters auto scroll (Resolution 1280 x 1024)
 Frequency of Emission : 30MHz – 1000MHz
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
64.44	18.70	V	6.87	0.60	26.17	40.00	-13.83
66.05	15.30	V	6.62	0.54	22.46	40.00	-17.54
78.79	27.00	H	6.60	0.62	34.22	40.00	-5.78
115.85	21.30	V	12.48	0.27	34.05	43.52	-9.47
128.72	17.50	V	13.70	0.40	31.60	43.52	-11.92
141.68	17.70	H	14.61	0.64	32.95	43.52	-10.57
157.52	22.34	H	15.27	0.67	38.28	43.52	-5.24
171.11	13.00	H	15.68	0.63	29.31	43.52	-14.21
185.06	12.30	V	16.02	0.69	29.01	43.52	-14.51
205.80	18.40	H	16.43	0.71	35.54	43.52	-7.98
212.20	18.00	H	16.64	0.73	35.37	43.52	-8.15
225.20	16.40	H	17.08	0.78	34.26	46.02	-11.76
236.00	20.90	H	17.22	0.63	38.75	46.02	-7.27
257.60	18.60	H	17.59	0.44	36.63	46.02	-9.39
264.20	15.20	H	17.75	0.44	33.39	46.02	-12.63
269.40	17.60	H	17.88	0.44	35.92	46.02	-10.10
315.20	16.40	H	13.86	0.80	31.06	46.02	-14.96



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FCC-003 (Rev.0)

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**5.3 Radiated Emission Test (Type no. of Inverter - DS-1007NF) (Continued)**

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
322.40	16.40	V	13.99	0.93	31.32	46.02	-14.70
394.40	17.20	H	15.62	0.85	33.67	46.02	-12.35
407.40	20.10	V	15.91	0.77	36.78	46.02	-9.24
482.20	15.40	H	17.15	0.97	33.52	46.02	-12.50
551.60	13.40	V	18.59	1.11	33.10	46.02	-12.92
565.80	18.60	H	18.61	1.04	38.25	46.02	-7.77
866.40	16.40	V	22.18	1.38	39.96	46.02	-6.06
945.60	14.00	V	22.16	1.29	37.45	46.02	-8.57

Radiated Emissions Tabulated Data

Tested by: In-Sub, Youn / Test Engineer



5.4 Radiated Emission Test (Type no. of Inverter - FIF1542-OK)

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level : 51 % Temperature : 23 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109 (a)
 Type of Test : CLASS B
 Result : PASSED BY -3.33dB at 866.80MHz

EUT : 15.1" LCD TV & Monitor Date: August 14, 2003
 Operating Condition : "H" Characters auto scroll (Resolution 1280 x 1024)
 Frequency of Emission : 30MHz – 1000MHz
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
66.29	18.20	V	6.58	0.52	25.30	40.00	-14.70
78.75	26.50	V	6.60	0.62	33.72	40.00	-6.28
109.55	15.80	V	11.67	0.49	27.96	43.52	-15.56
128.81	22.40	V	13.70	0.40	36.50	43.52	-7.02
141.05	20.10	V	14.58	0.66	35.34	43.52	-8.18
161.39	19.10	H	15.38	0.60	35.08	43.52	-8.44
193.52	17.30	H	16.14	0.69	34.13	43.52	-9.39
197.48	14.50	H	16.19	0.74	31.43	43.52	-12.09
236.10	19.10	H	17.22	0.63	36.95	46.02	-9.07
257.80	24.10	H	17.59	0.44	42.13	46.02	-3.89
259.00	19.40	H	17.62	0.44	37.46	46.02	-8.56
263.00	23.63	H	17.72	0.44	41.79	46.02	-4.23
269.60	17.20	H	17.89	0.44	35.53	46.02	-10.49
526.40	18.10	V	18.00	1.16	37.26	46.02	-8.76
541.20	19.40	H	18.37	1.13	38.90	46.02	-7.12
592.20	17.60	H	18.64	0.96	37.20	46.02	-8.82
624.00	15.00	H	19.10	1.06	35.16	46.02	-10.86



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**5.4 Radiated Emission Test (Type no. of Inverter - FIF1542-OK) (Continued)**

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
708.40	19.90	H	20.53	1.35	41.78	46.02	-4.24
787.60	16.40	H	20.76	1.30	38.46	46.02	-7.56
866.80	19.12	V	22.18	1.39	42.69	46.02	-3.33
945.60	13.10	H	22.16	1.29	36.55	46.02	-9.47

Radiated Emissions Tabulated Data

Tested by: In-Sub, Youn / Test Engineer



6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+ Meter reading (dBuV)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/meter)

= Corrected Reading (dBuV/meter)

- Specification Limit (dBuV/meter)

= dB Relative to Spec (+/- dB)

**7. LIST OF TEST EQUIPMENT**

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS 10	827864/005	NOV/03	12MONTH	■
2.	Test receiver	R/S	ESHS 10	834467/007	APR/03	12MONTH	■
3.	Spectrum analyzer	HP	8566B	3407A08547	MAY/03	12MONTH	■
4.	Spectrum analyzer	HP	8568B	3109A05456	MAY/03	12MONTH	■
5.	RF preselector	HP	85685A	3107A01264	MAY/03	12MONTH	■
6.	Quasi-Peak Adapter	HP	85650A	3107A01542	MAY/03	12MONTH	■
7.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	FEB/03	12MONTH	
8.	Biconical antenna	EMCO	3104C	9109-4443	MAY/03	12MONTH	■
				9109-4444	JUL/03		
		Schwarzbeck	VHA9103	91031852	AUG/02		
9.	Log Periodic antenna	EMCO	3146	9109-3213	AUG/02	12MONTH	■
				9109-3214	JUL/03		
		Schwarzbeck	9108-A(494)	9109-3217 62281001	MAY/03 AUG/02		
10.	LISN	EMCO	3825/2	9109-1867	AUG/03	12MONTH	■
				9109-1869	OCT/03		■
11.	Position Controller	EMCO	1090	9107-1038	N/A	N/A	■
12.	Turn Table	EMCO	1080-1.21	9109-1576	N/A	N/A	■
13.	Antenna Master	EMCO	1070-1	9109-1624	N/A	N/A	■