

Tel:(86) 755-26825180 Fax:(86) 755-86170310

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Test Report

Product Name: 19" LCD Monitor

FCC ID: W6519LCDHL1926

MODEL NO. : HL1926

Applicant:

Shenyang Torch-Bigtide Digital Technology Co., Ltd.

No.18-6B, Yaoyang Road, Huishan Economic Development Area, Shenbei New District, Shenyang, China

Date Received: 11/05/2009

Date Tested: 11/04/2009

APPLICANT: Shenyang Torch-Bigtide Digital Technology Co., Ltd.



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FCC ID: W6519LCDHL1926

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EMC Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
					Interval
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100492	Mar. 10,2009	1 Year
LISN	ROHDE&SCHWARZ	ENV216	100093	Mar. 10,2009	1Year
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101202	Mar. 10,2009	1 Year
Spectrum Analyzer	ANRITSU	MS2651B	6200238316	Mar. 10,2009	1 Year
50 Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar. 10,2009	1 Year
Bilog Antenna	Sunol	JB3	A121206	Mar. 10,2009	1 Year
Horn Antenna	EMCO	3115	640201028-0 6	Mar. 10,2009	1 Year
50 Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar. 10,2009	1 Year
Cable	Resenberger	N/A	NO.1	Mar. 10,2009	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Mar. 10,2009	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Mar. 10,2009	1 Year
Single Phase Power	Kikusui	LIN40MA-PC	LM002352	Mar. 10,2009	1Year
Line Filter		R-L			
AC Power Source	Kikusui	AC40MA	LM003232	Mar. 10,2009	1Year
Test analyzer	Kikusui	KHA1000	LM003720	Mar. 10,2009	1Year
ESD Tester	Kikusui	KES4021	LM003537	Mar. 10,2009	1 Year
Signal Generator	IFR	2032	203002/100	Mar. 10,2009	1 Year
Amplifier	A&R	150W1000	301584	NCR	NCR
Dual Directional Coupler	A&R	DC6080	301508	Mar. 10,2009	1 Year
Power Head	A&R	PH2000	301193	Mar. 10,2009	1 Year
Power Meter	A&R	PM2002	302799	Mar. 10,2009	1 Year
Field Monitor	A&R	FM5004	300329	Mar. 10,2009	1 Year
Field Probe	A&R	FP5000	300221	Mar. 10,2009	1 Year
EMCPRO System	EM Test	UCS-500-M4	V064810202 6	Mar. 10,2009	1 Year
EMCPRO System	EM Test	UCS-500-M4	V064810202 6	Mar. 10,2009	1 Year

Remark:

Test Firm Name: Most Technology Service Co., Ltd.

Test Firm Address:

No. 5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China

FCC Registered Test Site Number: 490827

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of MOST TECHNOLOGY SERVICE CO., LTD. The EUT was transmitting a test signal during the testing.

POWER LINE CONDUCTED INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a 50 U H LISN. Both Lines were observed. The bandwidth of the receiver was 10kHz with an appropriate sweep speed. The ambient temperature of the EUT was 25 with a humidity of 58%.

RADIATION INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. The ambient temperature of the EUT was 25 with a humidity of 58%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer and cable loss. The antenna correction factors and cable loss are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF + CABLE = FS 20 dBuV + 10.36 dB + 0.9 dB = 31.26 dBuV/m @ 3m

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings were converted to average readings based on the duration of "ON" time.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard C63.4-2003 10.1.7 with the EUT 40 cm from the vertical ground wall.

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FCC ID: W6519LCDHL1926

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NUMBER: 15.107

REQUIREMENTS:

 Conducted Limit (dBuV)

 Quasi-peak
 Average

 0.15-0.5
 66 to 56 *
 56 to 46 *

 0.5-5
 56
 46

 5-30
 60
 50

TEST PROCEDURE: ANSI STANDARD C63.4-2003

Test Mode: 1280*1024@60Hz (VGA Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		FCC 15 Subpart B Limit (dBuV/m)Avg	FCC 15 Subpart B Limit (dBuV/m)QP
		Àvg	QP	, , ,	, ,
0.290	L	36.18	44.76	50.50	60.50
0.574	L	34.08	40.70	46.00	56.00
4.210	L	40.93	42.82	46.00	56.00
0.172	N	38.19	46.32	54.86	64.86
3.954	N	40.66	42.85	46.00	56.00
4.146	N	41.13	43.79	46.00	56.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

Test Mode: 1024*768@60Hz (VGA Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		FCC 15 Subpart B Limit (dBuV/m)Avg	FCC 15 Subpart B Limit (dBuV/m)QP
		Avg	QP	, , ,	, , ,
3.950	L	40.76	43.09	46.00	56.00
4.142	L	40.78	43.18	46.00	56.00
19.83	L	42.07	46.86	50.00	60.00
3.950	N	39.97	41.67	46.00	56.00
4.142	N	40.48	42.61	46.00	56.00
19.83	N	42.45	47.26	50.00	60.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

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^{*} Decreases with the logarithm of the frequency.



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Test Mode: 800*600@60Hz (VGA Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		•	
		Avg	QP		
3.950	L	39.53	41.75	46.00	56.00
4.142	L	40.20	42.44	46.00	56.00
4.334	L	40.34	41.85	46.00	56.00
3.950	N	41.46	43.04	46.00	56.00
4.078	N	41.57	43.45	46.00	56.00
4.206	N	40.65	43.59	46.00	56.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

Test Mode: 1280*1024@60Hz (DVI Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		FCC 15 Subpart B Limit (dBuV/m)Avg	FCC 15 Subpart B Limit (dBuV/m)QP
		Avg QP		, (a_a.,,,,g	(0_0.7,)
0.318	L	34.59	43.91	49.75	59.75
3.962	L	41.36	42.62	46.00	56.00
4.090	L	41.84	43.22	46.00	56.00
0.223	N	38.66	46.83	52.70	62.70
0.435	N	31.46	39.70	47.16	57.16
4.154	N	39.38	41.61	50.00	60.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

Test Mode: 1024*768@60Hz (DVI Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		FCC 15 Subpart B Limit (dBuV/m)Avg	FCC 15 Subpart B Limit (dBuV/m)QP
		Avg	QP		, ,
0.458	L	32.39	40.79	46.73	56.73
3.894	L	39.61	41.16	46.00	56.00
4.150	L	39.59	42.29	46.00	56.00
0.211	N	38.87	47.17	53.14	63.14
3.958	N	40.08	42.58	46.00	56.00
4.150	N	41.96	43.28	46.00	56.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

Test Mode: 800*600@60Hz (DVI Input)

Frequency (MHz)	Line Under Test	Emission Level (dBuV/m)		FCC 15 Subpart B Limit (dBuV/m)Avg	FCC 15 Subpart B Limit (dBuV/m)QP
		Avg	QP		,
3.830	L	39.11	41.90	46.00	56.00
4.086	L	41.83	42.99	46.00	56.00
4.402	L	40.02	41.93	46.00	56.00
0.246	N	37.59	47.99	51.87	61.87
4.082	N	40.64	42.08	46.00	56.00
4.338	N	39.22	41.88	46.00	56.00

Note: If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary

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FCC ID: W6519LCDHL1926

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.109

REQUIREMENTS:

S15.109 30 -88 MHz 40 dBuV/m @3M 88 - 216 MHz 43.5 216 - 960 MHz 46 ABOVE 960 MHz 54dBuV/m

Test Data:

REMARK: Emissions attenuated more than 20 dB below the permissible value are not reported.

Test Mode: 1280*1024@60Hz (VGA Input)

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart
		Avg	QP	Peak	B Limit (dBuV/m)
31.94	Vertical		36.41		40.0
480.08	Vertical		36.11		46.0
806.00	Vertical		35.96		46.0
30.00	Horizontal		26.96		40.0
262.80	Horizontal		32.45		46.0
303.54	Horizontal		31.40		46.0

Test Mode: 1024*768@60Hz (VGA Input)

Frequency (MHz)	Antenna Polarization	En	nission Level (d	FCC 15 Subpart	
		Avg	QP	Peak	B Limit (dBuV/m)
30.00	Vertical		40.00		40.0
185.20	Vertical		30.48		43.5
272.50	Vertical		34.09		46.0
39.70	Horizontal		36.57		40.0
121.18	Horizontal		31.97		43.5
480.08	Horizontal		34.49		46.0

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Test Mode: 800*600@60Hz (VGA Input)

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart
		Avg	QP	Peak	B Limit (dBuV/m)
30.00	Vertical		28.73		40.0
185.20	Vertical		30.37		43.5
262.80	Vertical		32.72		46.0
30.00	Horizontal		35.49		40.0
480.08	Horizontal		40.24		46.0
806.00	Horizontal		35.77		46.0

Test Mode: 1280*1024@60Hz (DVI Input)

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart			
		Avg	QP	Peak	B Limit (dBuV/m)			
31.92	Vertical		36.40		40.0			
481.10	Vertical		36.19		46.0			
805.90	Vertical		36.03		46.0			
30.00	Horizontal		27.01		40.0			
264.00	Horizontal		33.40		46.0			
303.55	Horizontal		31.39		46.0			

Test Mode: 1024*768@60Hz (DVI Input)

1001 Wode. 1024 700 @ 00112 (B V1 III)put)								
Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart			
		, ,			B Limit			
		Avg	QP	Peak				
		9	7.		(dBuV/m)			
30.00	Vertical		39.89		40.0			
185.22	Vertical		30.56		43.5			
272.49	Vertical		34.24		46.0			
39.70	Horizontal		36.16		40.0			
121.18	Horizontal		32.90		43.5			
481.16	Horizontal		35.09		46.0			

Test Mode: 800*600@60Hz (DVI Input)

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart
		Avg	QP	Peak	B Limit (dBuV/m)
30.00	Vertical		29.06		40.0
185.26	Vertical		30.28		43.5
262.81	Vertical		32.71		46.0
31.43	Horizontal		35.50		40.0
480.09	Horizontal		40.31		46.0
806.14	Horizontal		35.79		46.0

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