FCC 47 CFR PART 15 SUBPART B

TEST REPORT

For

Applicant	:	**Shenyang Torch-Bigtide Digital Technology Co., Ltd.**
Address	:	**NO. 18-6B,Yaoyang Road, Huishan Economic Development Area, Shenbei New District, Shenyang**
Product Name	:	**19“LCD Monitor**
Model Number	:	**HL1916ST, HL1916T, HL1916S, C14S**
Remark	:	**The equipment under test (EUT), model HL1916ST, HL1916S, C14S, all are 19 inch LCD monitors, Model HL1916ST is equipped with touch screen and model HL1916S（C14S） is equipped without touch screen, except that all the internal structure and the circuit are the same to each other. all tests are performed on the model HL1916ST to represent the model HL1916S(C14S).there is no difference between HL1916S and C14S except their model names that identified by client.**
Brand Name	:	**N/A**
FCC ID	:	**W6519LCHL1916S**
Report No.	:	**MTE/SAL/F14020134**
Date of Issue	:	**Mar. 11, 2014**

Issued by	:	**Most Technology Service Co., Ltd.**
Address	:	**No.5, Langshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong, China**
Tel	:	**86-755-86026850**
Fax	:	**86-755-26013350**

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1. VERIFICATION OF CONFORMITY

Equipment Under Test:	19“LCD Monitor
Brand Name:	N/A
Model Number:	HL1916ST
Series Number:	HL1916T, HL1916S, C14S
FCC ID:	W6519LCHL1916S
Applicant:	Shenyang Torch-Bigtide Digital Technology Co., Ltd.
	NO. 18-6B,Yaoyang Road, Huishan Economic Development Area, Shenbei New District, Shenyang
Manufacturer:	Shenyang Torch-Bigtide Digital Technology Co., Ltd.
	NO. 18-6B,Yaoyang Road, Huishan Economic Development Area, Shenbei New District, Shenyang
Technical Standards:	FCC Part 15 B
File Number:	MTE/SAL/F14020134
Date of test:	Mar. 10, 2014
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by MOST for compliance with the requirements set forth in FCC Part 15 and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature): _____

Sophia Liu Mar. 11, 2014

Review by (+ signature): _____

Henry Chen Mar. 11, 2014

Approved by (+ signature): _____

Yvetter Zhou(Manager) Mar. 12, 2014

2. GENERAL INFORMATION

2.1 PRODUCT INFORMATION

Description:	19” LCD Monitor
Model Name:	HL1916ST
Series Number:	HL1916T, HL1916S, C14S
Model Difference description:	The equipment under test (EUT), model HL1916ST, HL1916S, C14S, all are 19 inch LCD monitors, Model HL1916ST is equipped with touch screen and model HL1916S（C14S） is equipped without touch screen, except that all the internal structure and the circuit are the same to each other. all tests are performed on the model HL1916ST to represent the model HL1916S(C14S).there is no difference between HL1916S and C14S except their model names that identified by client.
Power Supply:	AC 100V-240V, 50/60Hz
Temperature Range:	-20°C ~ +50°C

NOTE:

1. For a more detailed features description about the EUT, please refer to User’s Manual.

2.2 OBJECTIVE

Perform FCC Part 15 Subpart B tests for FCC Marking.

2.3 TEST STANDARDS AND RESULTS

Test items and the results are as bellow:

EMISSION			
Standard	**Item**	**Result**	**Remarks**
FCC 47 CFR Part 15 Subpart B	Conducted	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit

Note: 1. The test result judgment is decided by the limit of measurement standard
2. The information of measurement uncertainty is available upon the customer's request.

2.4 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35ºC
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

2.5 MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

The report uncertainty of measurement y±U, where expended uncertainly U is based on a standard uncertainty multiplied by a coverage factor of k=2,Providing a level of confidence of approximately 95%

- Uncertainty of Conducted Emission, Uc = ±1.8dB
- Uncertainty of Radiated Emission, Uc = ±3.2dB

3. TEST METHODOLOGY

3. 1TEST FACILITY

Test Site:	Most Technology Service Co., Ltd.
Location:	No.5, Langshan 2nd Rd, North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong, China
Description:	There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009 and CISPR 16 requirements. The FCC Registration Number is **490827.** The **CNAS** Registration Number is **CNAS L3573.**
Site Filing:	The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4:2009 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.
Ground Plane:	Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

3.2 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4:2009,Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2009.

3.3 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

4 SETUP OF EQUIPMENT UNDER TEST

4.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

4.2 SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
Mouse	Lenovo	M-UAE96	E-C011-05-3735(B)	1.6M Un-Shielded	
Keyboard	HP	SK-2880	BC34C0CJ6UZ888	1.5M Un-Shielded	
PC	Lenovo	SS05750640	T3900	1.8M Un-Shielded	

Remark:

All the equipment/cables were placed in the worst-case [-configuration to maximize the emission during the test.

Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4. 3 TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at MOST for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calibration due date
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2015/03/10
2	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2015/03/10
3	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015/03/07
4	Terminator	Hubersuhner	50Ω	No.1	2015/03/07
5	RF Cable	SchwarzBeck	N/A	No.1	2015/03/07
6	Test Receiver	Rohde & Schwarz	ESPI	101202	2015/03/10
7	Bilog Antenna	Sunol	JB3	A121206	2015/03/14
8	Test Antenna - Horn	SCHWARZBECK	BBHA9120D	756	2015/03/14
9	Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	--	2015/03/14
10	Cable	Resenberger	N/A	NO.1	2015/03/07
11	Cable	SchwarzBeck	N/A	NO.2	2015/03/07
12	Cable	SchwarzBeck	N/A	NO.3	2015/03/07
13	DC Power Filter	DuoJi	DL2×30B	N/A	2015/03/07
14	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	2015/03/07
15	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	2015/03/07
16	Test Receiver	Rohde & Schwarz	ESCI	100492	2015/03/10
17	Absorbing Clamp	Luthi	MDS21	3635	2015/03/14
18	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015/03/07
19	AC Power Source	Kikusui	AC40MA	LM003232	2015/03/10
20	Test Analyzer	Kikusui	KHA1000	LM003720	2015/03/10
21	Line Impendence Network	Kikusui	LIN40MA-PCR-L	LM002352	2015/03/10
22	ESD Tester	Kikusui	KES4021	LM003537	2015/03/07
23	EMCPRO System	EM Test	UCS-500-M4	V0648102026	2015/03/10
24	Signal Generator	IFR	2032	203002/100	2015/03/10
25	Amplifier	A&R	150W1000	301584	2015/03/14
26	CDN	FCC	FCC-801-M2-25	47	2015/03/10
27	CDN	FCC	FCC-801-M3-25	107	2015/03/10
28	EM Injection Clamp	FCC	F-203I-23mm	403	2015/03/10
29	RF Cable	MIYAZAKI	N/A	No.1/No.2	2015/03/10
30	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2015/03/10
31	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2015/03/10

NOTE: *Equipments listed above have been calibrated and are in the period of validation.*

5. 47 CFR PART 15B REQUIREMENTS

5.1 GENERAL INFORMATION

The field strength of radiation emission was measured in the following position: EUT stand-up position (Y axis), lie-down position (X, Z axis).

The following data show only with the worst case setup.

The worst case of X axis was reported.

Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report.

EUT Test Procedure:

1. Put EUT on the test table.
2. Power on the EUT.
3. Make sure the EUT operates normally during the test.

Mode 1: Running

During the measurement, A Communication link was established by EUT between two ports. The EUT was playing the data exchange function.

The EUT configuration of the emission test was **PC+ Mouse + Keyboard + EUT.**

6. LINE CONDUCTED EMISSION TEST

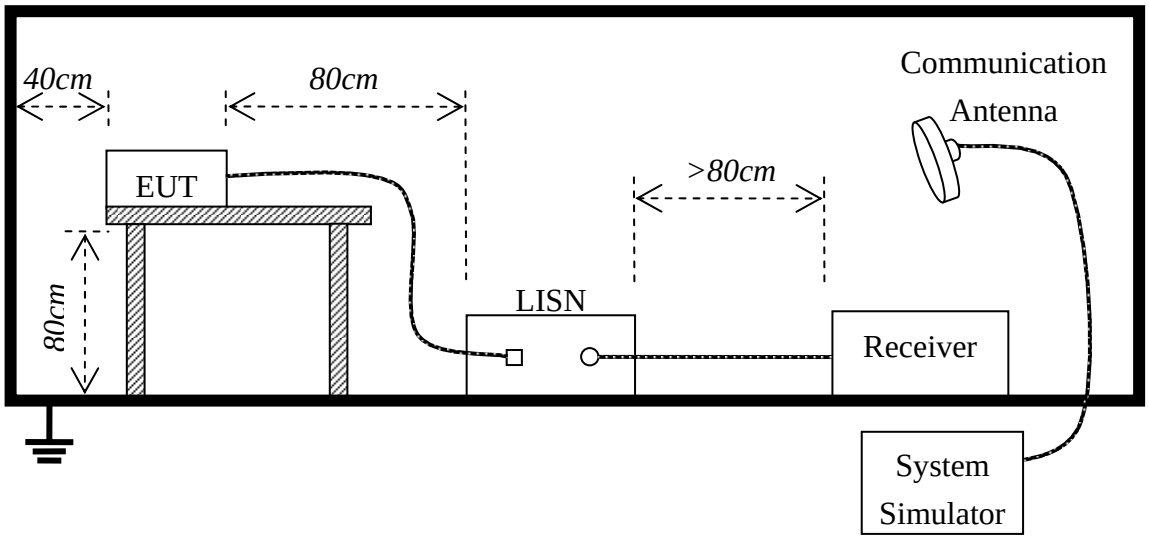
6.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz-500kHz	66-56	56-46
500kHz-5MHz	56	46
5MHz-30MHz	60	50

***Note:** 1. the lower limit shall apply at the transition frequency.*

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

6.2. BLOCK DIAGRAM OF TEST SETUP



6.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per FCC Part 15 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per FCC Part 15.
3) All I/O cables were positioned to simulate typical actual usage as per FCC Part 15.
4) The EUT through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5) All support equipments received power from a second LISN supplying power of AC 120V/60Hz, if any.
6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7) Analyzer / Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.
8) During the above scans, the emissions were maximized by cable manipulation.
9) The following test mode(s) were scanned during the preliminary test:

Preliminary Conducted Emission Test				
Frequency Range Investigated		150KHz TO 30 MHz		
Mode of operation	Date	Report No.	Data#	Worst Mode
Running	2014-03-10	MTE/SAL/F14020134	HL1916ST	☒

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

6.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

EUT and support equipment was set up on the test bench as per step 9 of the preliminary test.
A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –20dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test modes were carried out for all operation modes, The worst data was shown as the follow.

6.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

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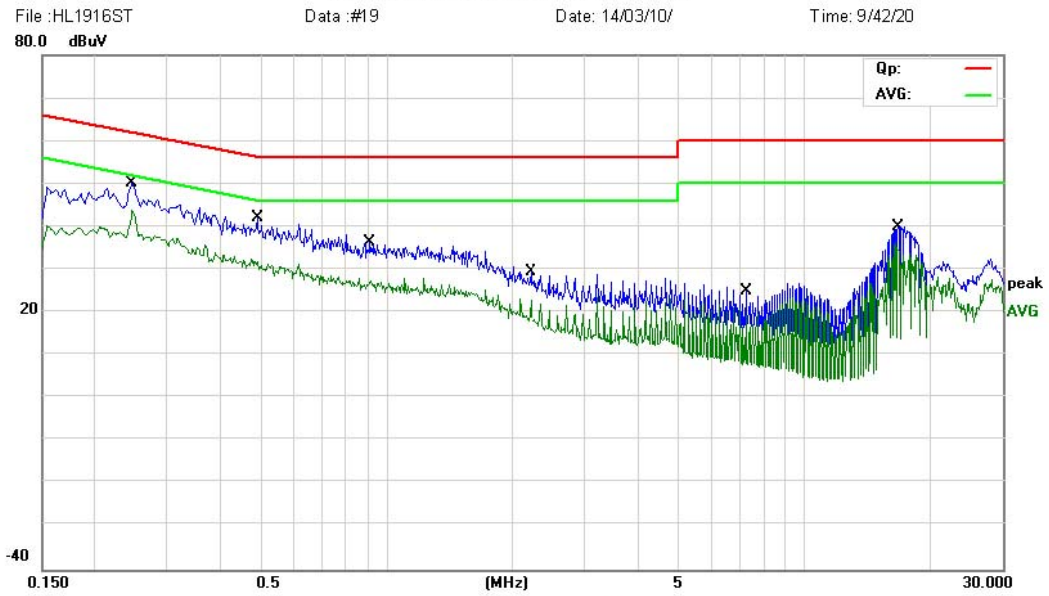
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement



Site site #1 Phase: N Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2460	38.54	11.69	50.23	61.89	-11.66	QP	
2		0.4940	31.88	10.04	41.92	56.10	-14.18	QP	
3		0.9140	26.30	10.00	36.30	56.00	-19.70	QP	
4		2.2220	20.09	9.22	29.31	56.00	-26.69	QP	
5		7.2860	14.32	10.63	24.95	60.00	-35.05	QP	
6		16.7900	30.87	9.00	39.87	60.00	-20.13	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
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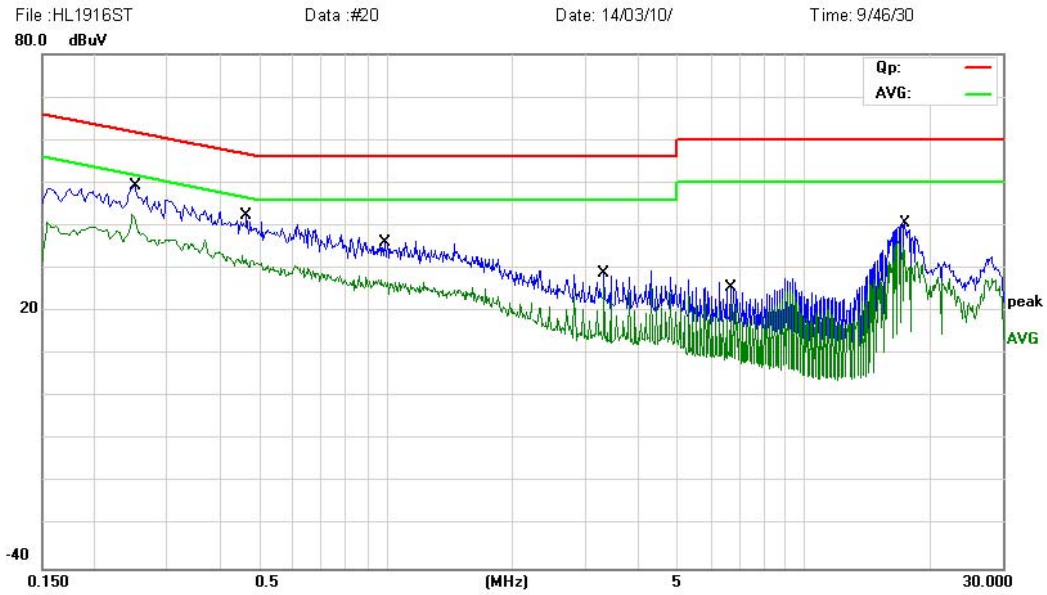
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement



Site site #1
Limit: FCC Part15 B Class B QP
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI L

Phase: L1
Power: 1

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	37.72	11.67	49.39	61.76	-12.37	QP	
2		0.4660	32.08	10.23	42.31	56.58	-14.27	QP	
3		0.9900	26.18	10.00	36.18	56.00	-19.82	QP	
4		3.3340	18.38	10.33	28.71	56.00	-27.29	QP	
5		6.6660	14.66	11.00	25.66	60.00	-34.34	QP	
6		17.5340	31.58	9.00	40.58	60.00	-19.42	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
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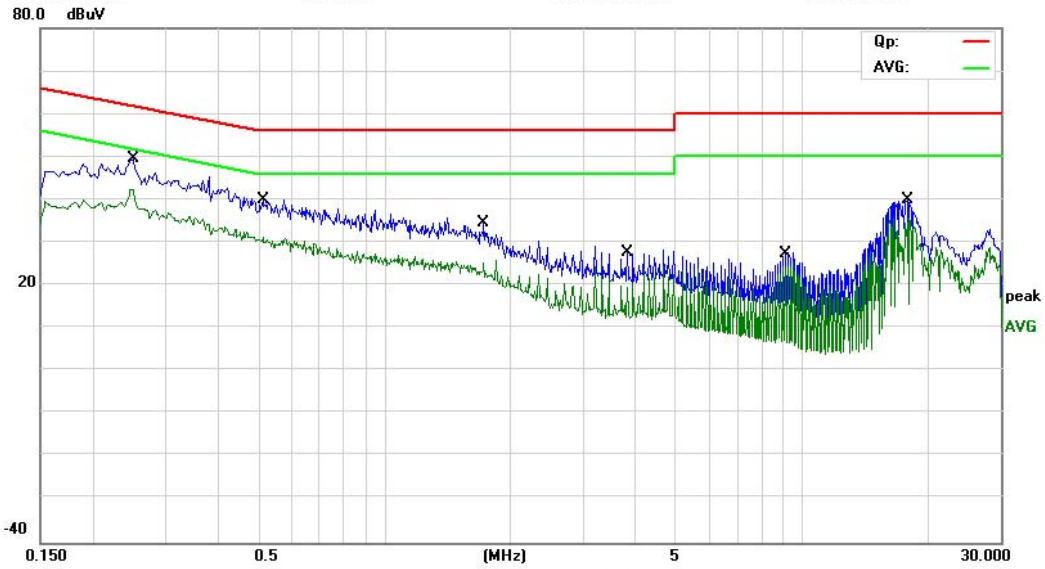
Conducted Emission Measurement

File :HL1916ST Data :#21 Date: 14/03/10/ Time: 9/49/51



Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	37.84	11.67	49.51	61.76	-12.25	QP	
2		0.5140	30.03	10.00	40.03	56.00	-15.97	QP	
3		1.7300	25.39	9.27	34.66	56.00	-21.34	QP	
4		3.8300	16.81	10.83	27.64	56.00	-28.36	QP	
5		9.0180	17.30	9.59	26.89	60.00	-33.11	QP	
6		18.0340	31.04	9.00	40.04	60.00	-19.96	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

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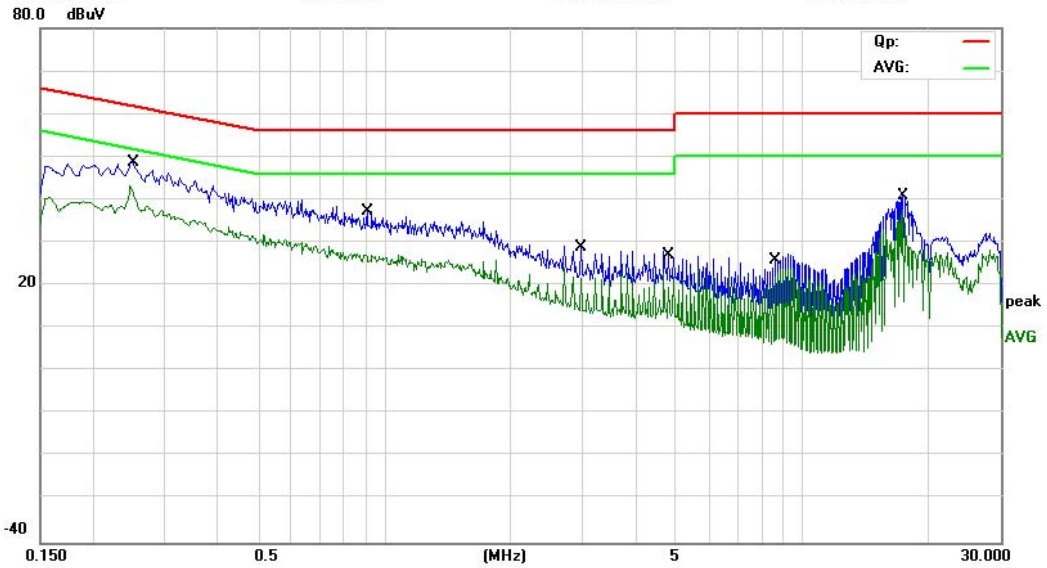
Conducted Emission Measurement

File :HL1916ST Data :#22 Date: 14/03/10/ Time: 9/53/59



Site site #1 Phase: N Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	37.12	11.67	48.79	61.76	-12.97	QP	
2		0.9100	27.26	10.00	37.26	56.00	-18.74	QP	
3		2.9660	18.91	9.97	28.88	56.00	-27.12	QP	
4		4.8140	15.26	11.81	27.07	56.00	-28.93	QP	
5		8.6460	16.04	9.81	25.85	60.00	-34.15	QP	
6		17.5420	31.82	9.00	40.82	60.00	-19.18	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
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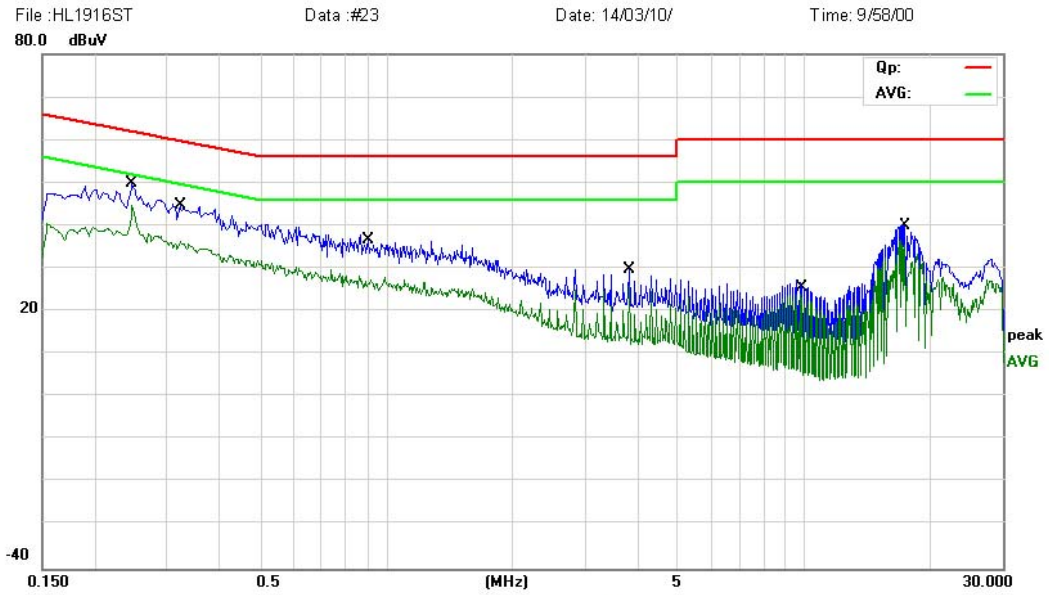
Conducted Emission Measurement



Site site #1
Limit: FCC Part15 B Class B QP
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI H

Phase: N
Power: 1

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2460	38.03	11.69	49.72	61.89	-12.17	QP	
2		0.3220	33.50	11.19	44.69	59.66	-14.97	QP	
3		0.9060	26.57	10.00	36.57	56.00	-19.43	QP	
4		3.8300	18.80	10.83	29.63	56.00	-26.37	QP	
5		9.8860	16.48	9.07	25.55	60.00	-34.45	QP	
6		17.5420	30.80	9.00	39.80	60.00	-20.20	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
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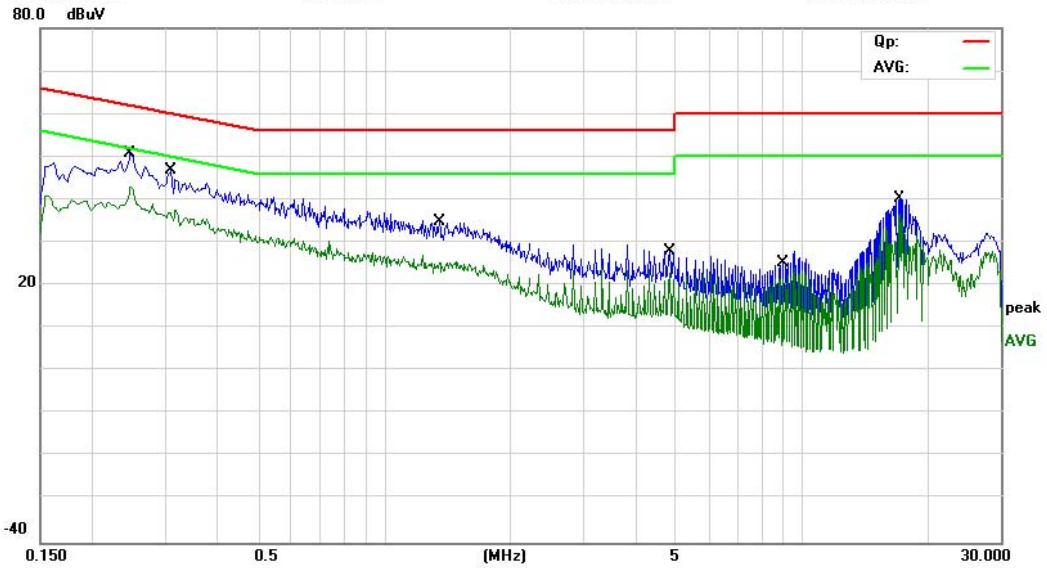
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement

File :HL1916ST Data :#24 Date: 14/03/10/ Time: 10/02/50



Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2460	39.10	11.69	50.79	61.89	-11.10	QP	
2		0.3100	35.71	11.27	46.98	59.97	-12.99	QP	
3		1.3540	25.16	9.65	34.81	56.00	-21.19	QP	
4		4.8260	15.98	11.83	27.81	56.00	-28.19	QP	
5		9.0300	15.82	9.58	25.40	60.00	-34.60	QP	
6		17.1940	31.28	9.00	40.28	60.00	-19.72	QP	

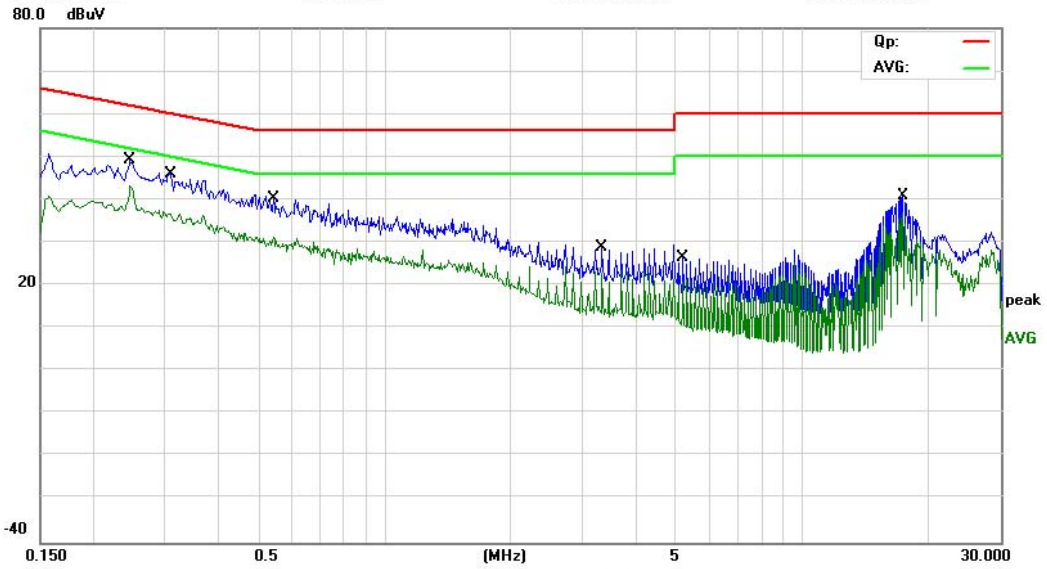
*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement

File :HL1916ST Data :#25 Date: 14/03/10/ Time: 10/07/00



Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2460	37.51	11.69	49.20	61.89	-12.69	QP	
2		0.3100	34.69	11.27	45.96	59.97	-14.01	QP	
3		0.5460	30.25	10.00	40.25	56.00	-15.75	QP	
4		3.3420	18.40	10.34	28.74	56.00	-27.26	QP	
5		5.1940	14.45	11.88	26.33	60.00	-33.67	QP	
6		17.5660	31.77	9.00	40.77	60.00	-19.23	QP	

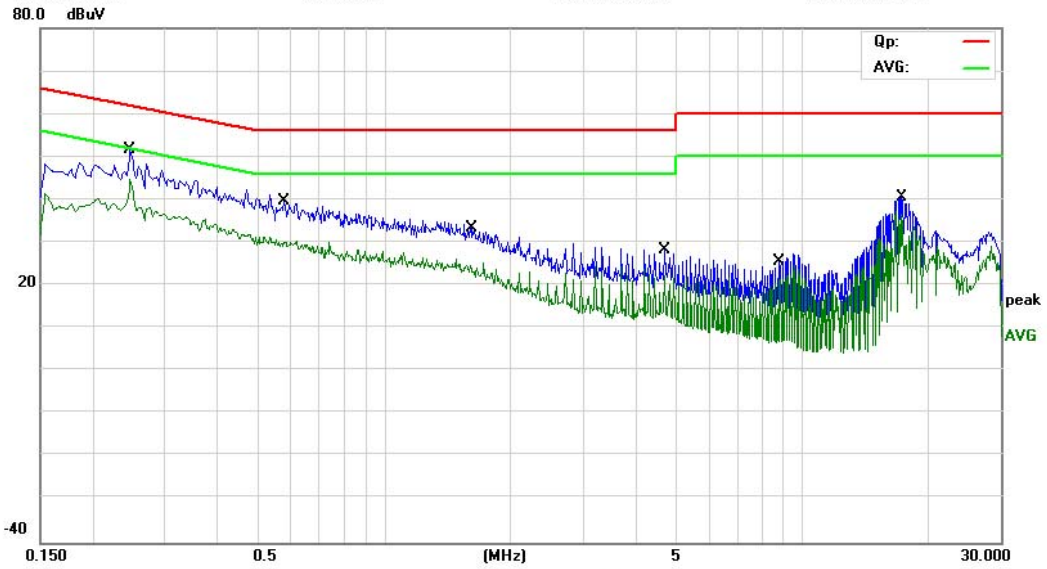
*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement

File :HL1916ST Data :#26 Date: 14/03/10/ Time: 10/10/10



Site site #1 Phase: N Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2460	39.97	11.69	51.66	61.89	-10.23	QP	
2		0.5780	29.69	10.00	39.69	56.00	-16.31	QP	
3		1.6220	24.08	9.38	33.46	56.00	-22.54	QP	
4		4.7020	16.49	11.70	28.19	56.00	-27.81	QP	
5		8.7820	15.89	9.73	25.62	60.00	-34.38	QP	
6		17.3180	31.49	9.00	40.49	60.00	-19.51	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

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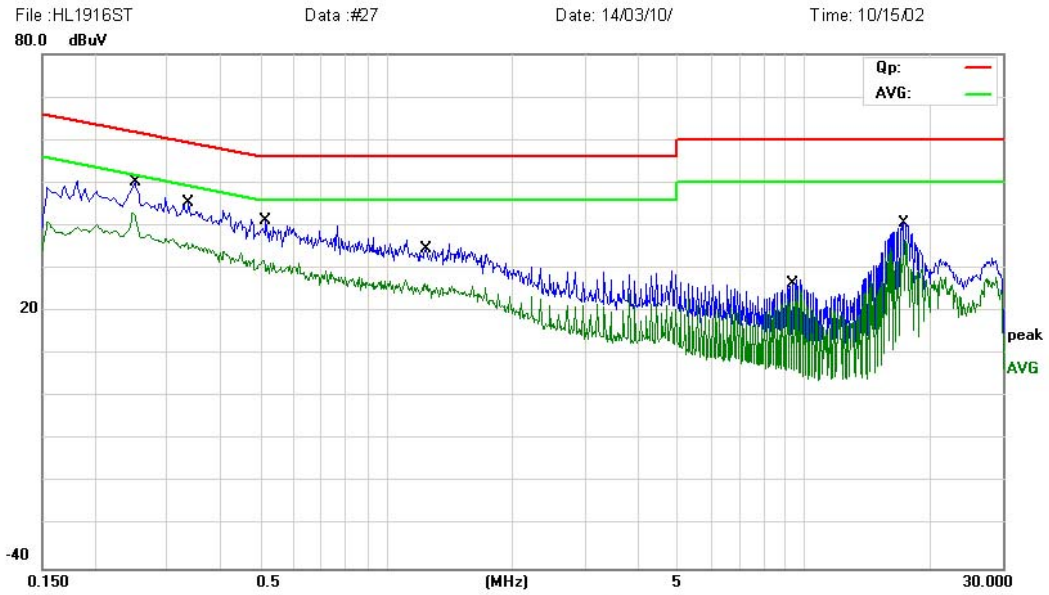
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement



Site site #1
Limit: FCC Part15 B Class B QP
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA M

Phase: N
Power: 1

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	38.35	11.67	50.02	61.76	-11.74	QP	
2		0.3380	34.31	11.08	45.39	59.25	-13.86	QP	
3		0.5180	31.23	10.00	41.23	56.00	-14.77	QP	
4		1.2460	24.85	9.75	34.60	56.00	-21.40	QP	
5		9.4060	17.02	9.36	26.38	60.00	-33.62	QP	
6		17.4460	31.41	9.00	40.41	60.00	-19.59	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

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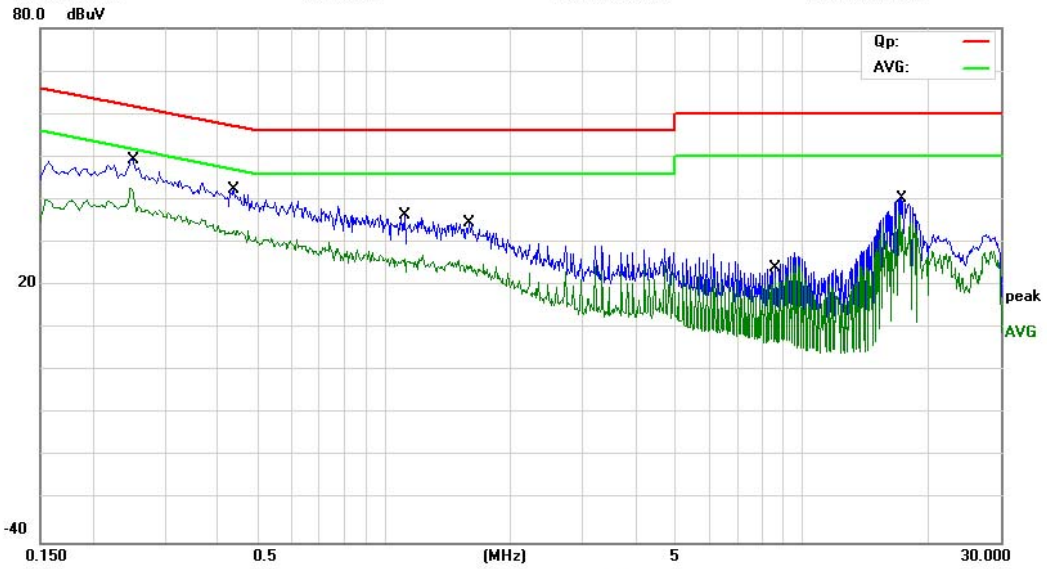
Conducted Emission Measurement

File :HL1916ST Data :#28 Date: 14/03/10/ Time: 10/19/20



Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	37.62	11.67	49.29	61.76	-12.47	QP	
2		0.4380	32.03	10.41	42.44	57.10	-14.66	QP	
3		1.1180	26.46	9.88	36.34	56.00	-19.66	QP	
4		1.5980	25.26	9.40	34.66	56.00	-21.34	QP	
5		8.6620	14.10	9.80	23.90	60.00	-36.10	QP	
6		17.4420	31.32	9.00	40.32	60.00	-19.68	QP	

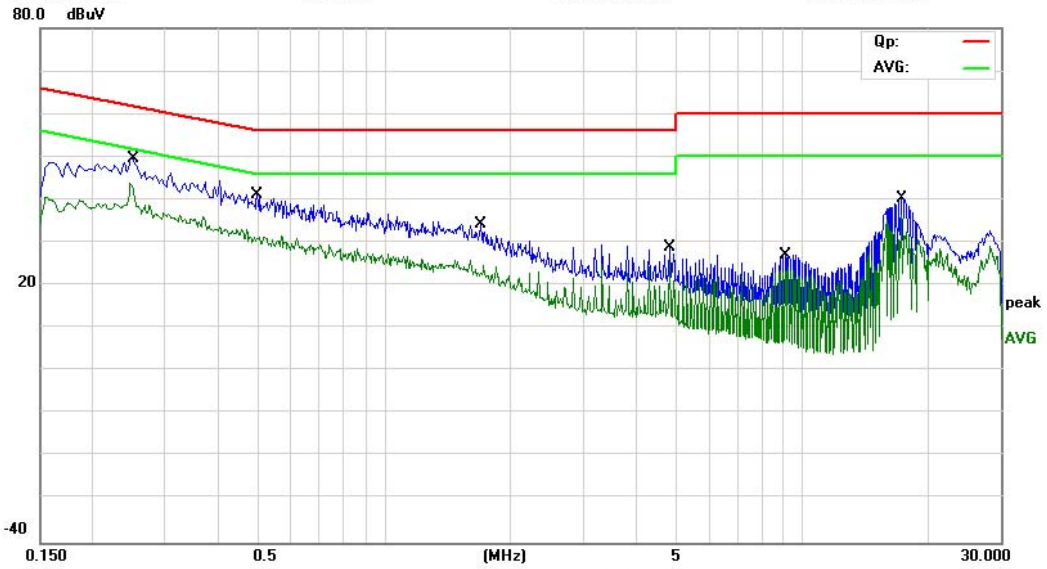
*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement

File :HL1916ST Data :#29 Date: 14/03/10/ Time: 10/23/20



Site site #1 Phase: L1 Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2500	37.99	11.67	49.66	61.76	-12.10	QP	
2		0.4980	31.02	10.01	41.03	56.03	-15.00	QP	
3		1.7020	24.92	9.30	34.22	56.00	-21.78	QP	
4		4.8260	17.08	11.83	28.91	56.00	-27.09	QP	
5		9.1540	17.63	9.51	27.14	60.00	-32.86	QP	
6		17.4500	31.22	9.00	40.22	60.00	-19.78	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

Compliance Laboratory
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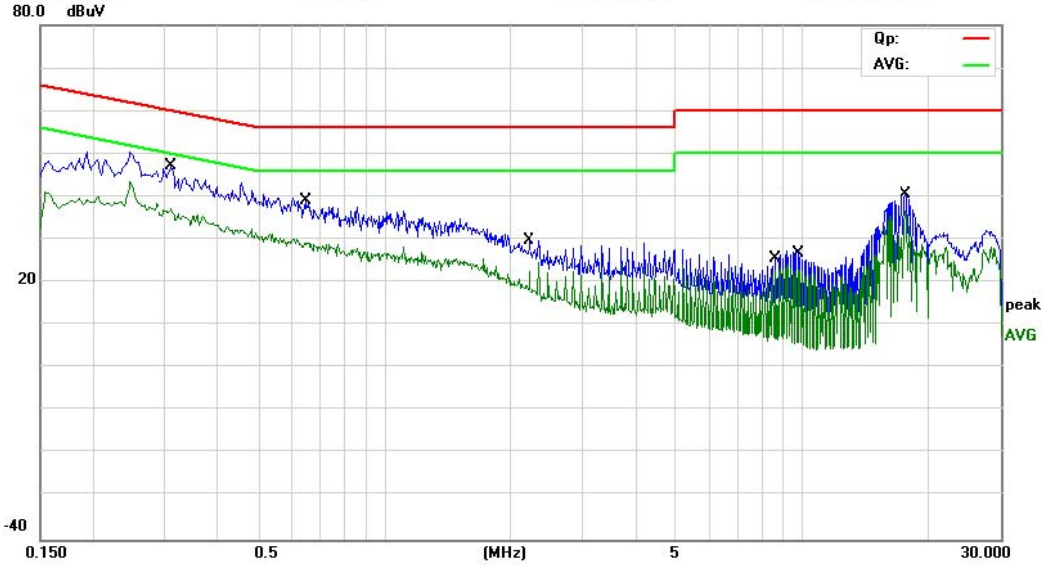
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Conducted Emission Measurement

File :HL1916ST Data :#30 Date: 14/03/10/ Time: 10/27/26



Site site #1 Phase: N Temperature: 26
Limit: FCC Part15 B Class B QP Power: 1 Humidity: 60 %
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.3100	35.77	11.27	47.04	59.97	-12.93	QP	
2		0.6500	29.15	10.00	39.15	56.00	-16.85	QP	
3		2.2260	20.63	9.23	29.86	56.00	-26.14	QP	
4		8.5380	13.99	9.88	23.87	60.00	-36.13	QP	
5		9.7780	17.57	9.13	26.70	60.00	-33.30	QP	
6		17.8180	31.52	9.00	40.52	60.00	-19.48	QP	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Alex

7. RADIATED EMISSION TEST

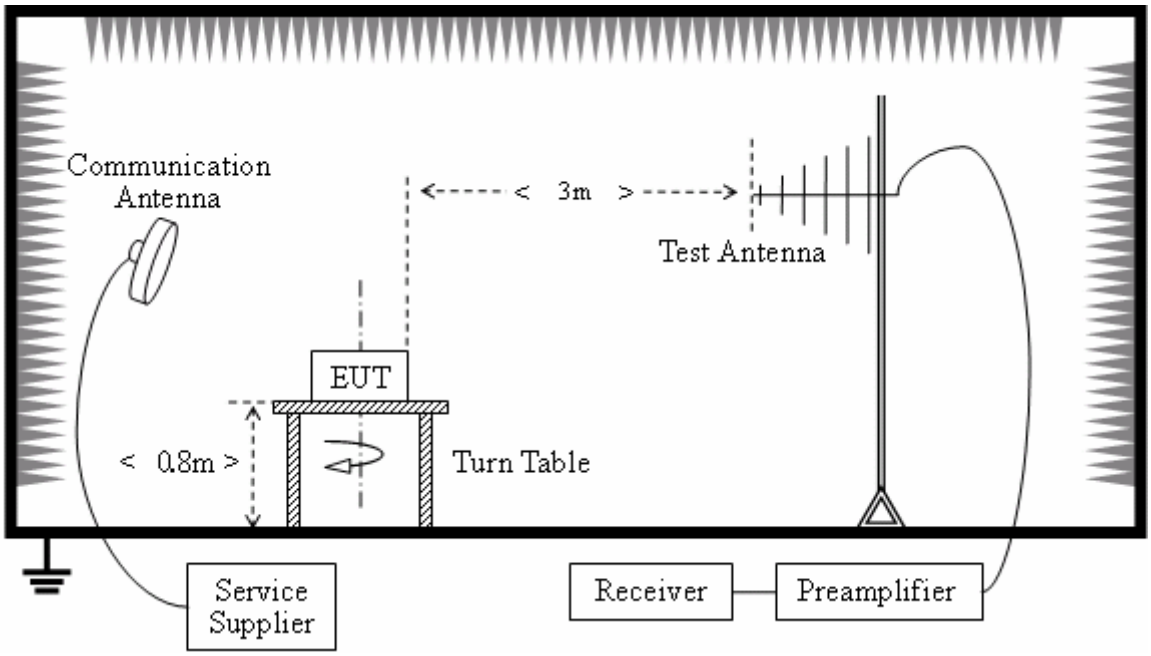
7.1. LIMITS OF RADIATED DISTURBANCES AT 3M DISTANCES FOR CLASS B

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

7.2 TEST DESCRIPTION



(1) The EUT was palced on a turntable with 0.8 meter above ground.

(2) The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

(3) The table was rotated 360 degrees to determine the position of the highest radiation.

(4) The antenna is a Bi-Log antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.

(5) For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1m to 4m) and turntable(from 0 degree to 360 degrees) to find the maximum reading.

(6) Set the test-receiver system to Peak Detect Function and specified bandwidth with maximum hold mode.

(7) If the emission level of the EUT in peak mode was 3dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.

(8) Emission level(dBuV/m)=20 log Emission level(uv/m).

(9) Corrected reading: Antenna Factor + cable loss + read level - Preamp Factor = level

7.3 TEST RESULT

Preliminary Radiated Emission Test				
Frequency Range Investigated			30 MHz TO 1000 MHz	
Mode of operation	**Date**	**Report No.**	**Data#**	**Worst Mode**
Running	2014-03-10	MTE/SAL/F14020134	HL1916ST	☒

Note:

The test modes were carried out for all operation modes, The worst data was shown as the follow.

Below 1GHz

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Guangdong ,China
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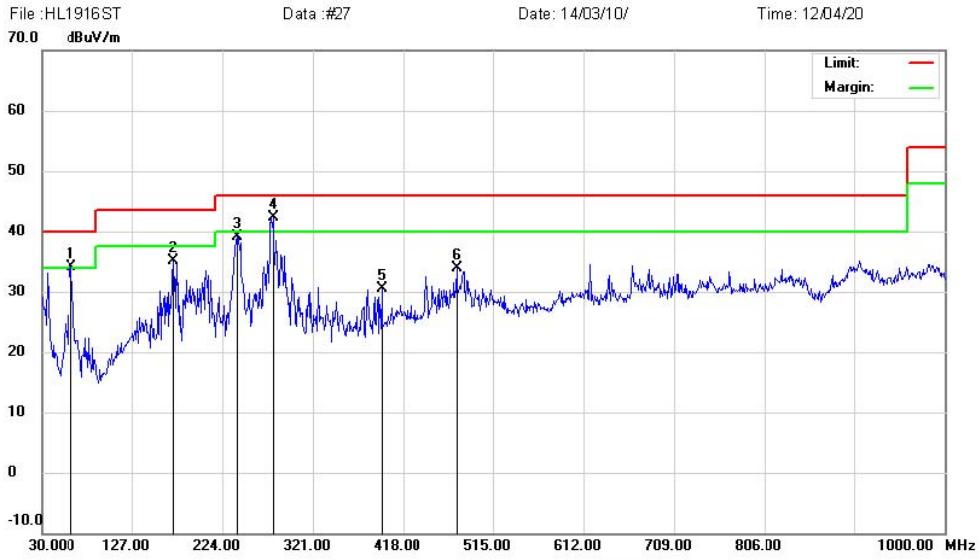
Radiated Emission Measurement



Site site MOST 3M
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA H

Polarization: *Horizontal*
Power: 1

Temperature: 26
Humidity: 61 %

Distance:

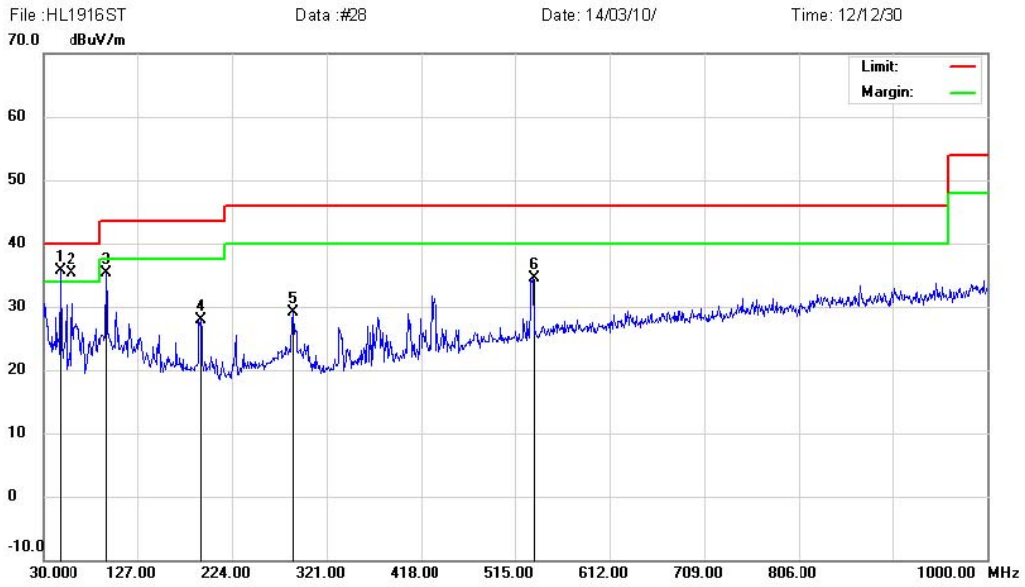
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	61.0400	23.22	10.90	34.12	40.00	-5.88	QP			
2		171.6200	17.97	17.12	35.09	43.50	-8.41	QP			
3		239.5200	22.03	17.17	39.20	46.00	-6.80	QP			
4	*	278.3199	23.06	19.33	42.39	46.00	-3.61	QP			
5		394.7200	11.88	18.54	30.42	46.00	-15.58	QP			
6		476.2000	12.46	21.47	33.93	46.00	-12.07	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Radiated Emission Measurement



Site site MOST 3M
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA H

Polarization: *Vertical*
Power: 1
Distance:

Temperature: 26
Humidity: 61 %

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	*	47.4600	23.32	12.47	35.79	40.00	-4.21	QP			
2	!	59.1000	24.52	10.78	35.30	40.00	-4.70	QP			
3		94.9899	23.21	12.05	35.26	43.50	-8.24	QP			
4		191.9900	11.14	16.70	27.84	43.50	-15.66	QP			
5		287.0500	9.62	19.43	29.05	46.00	-16.95	QP			
6		533.4299	12.31	22.20	34.51	46.00	-11.49	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

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Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
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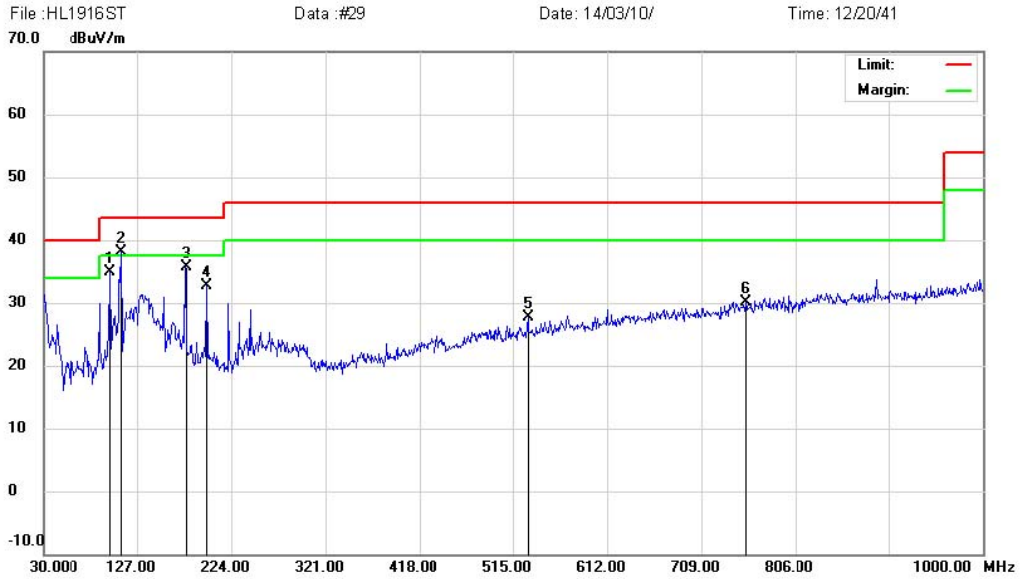
Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA M

Polarization: *Vertical*
Power: 1

Distance: 3m

Temperature: 26
Humidity: 61 %

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		98.8700	21.94	13.00	34.94	43.50	-8.56	QP			
2	*	110.5100	21.92	16.17	38.09	43.50	-5.41	QP			
3		176.4700	18.80	16.88	35.68	43.50	-7.82	QP			
4		198.7800	15.45	17.30	32.75	43.50	-10.75	QP			
5		530.5200	5.59	22.11	27.70	46.00	-18.30	QP			
6		754.5900	4.38	25.71	30.09	46.00	-15.91	QP			

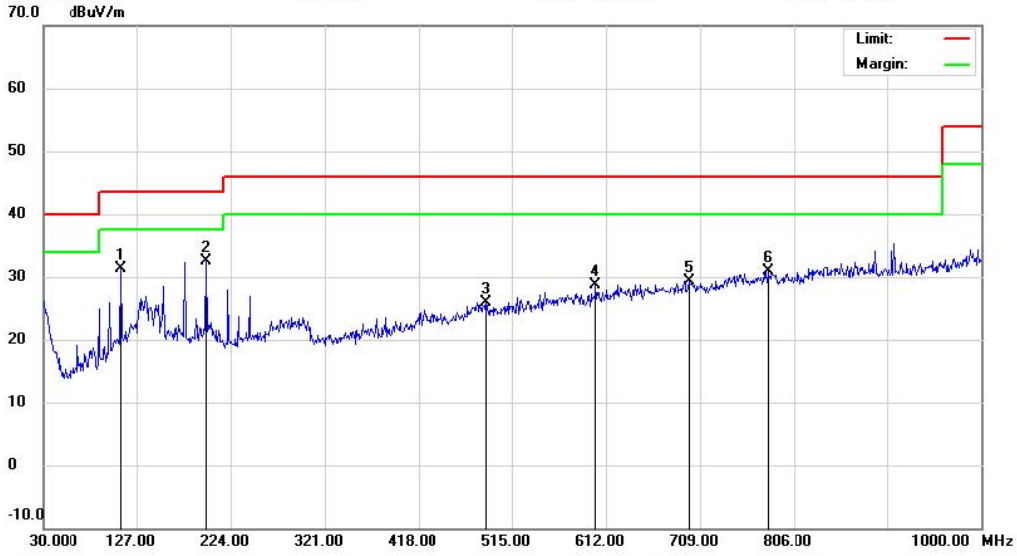
*:Maximum data x:Over limit l:over margin

Engineer Signature: Allen

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File :HL1916ST Data :#30 Date: 14/03/10/ Time: 12/29/00



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA M

Polarization: *Horizontal*
Power: 1
Distance: 3m

Temperature: 26
Humidity: 61 %

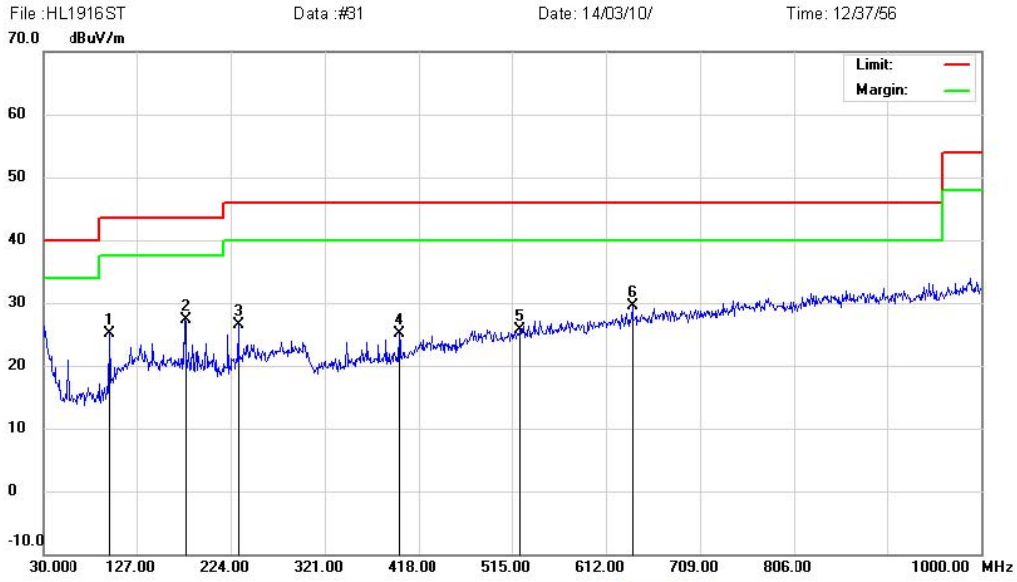
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		110.5100	15.18	16.17	31.35	43.50	-12.15	QP			
2	*	198.7800	15.20	17.30	32.50	43.50	-11.00	QP			
3		488.8100	4.24	21.70	25.94	46.00	-20.06	QP			
4		601.3300	5.62	23.03	28.65	46.00	-17.35	QP			
5		697.3600	4.72	24.62	29.34	46.00	-16.66	QP			
6		778.8400	4.73	26.17	30.90	46.00	-15.10	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: VGA L

Polarization: *Horizontal*
Power: 1
Distance: 3m

Temperature: 26
Humidity: 61 %

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		98.8700	12.05	13.00	25.05	43.50	-18.45	QP			
2	*	176.4699	10.44	16.88	27.32	43.50	-16.18	QP			
3		231.7599	9.86	16.63	26.49	46.00	-19.51	QP			
4		397.6298	6.46	18.61	25.07	46.00	-20.93	QP			
5		523.7300	3.85	21.91	25.76	46.00	-20.24	QP			
6		639.1599	5.58	23.98	29.56	46.00	-16.44	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File :HL1916ST Data :#32 Date: 14/03/10/ Time: 12/45/59

Site Chamber #1 Polarization: *Vertical* Temperature: 26
Limit: FCC Part15 B 3M Radiation Power: 1 Humidity: 61 %
EUT: 19"LCD Monitor Distance: 3m
M/N: HL1916ST
Mode: 1
Note: VGA L

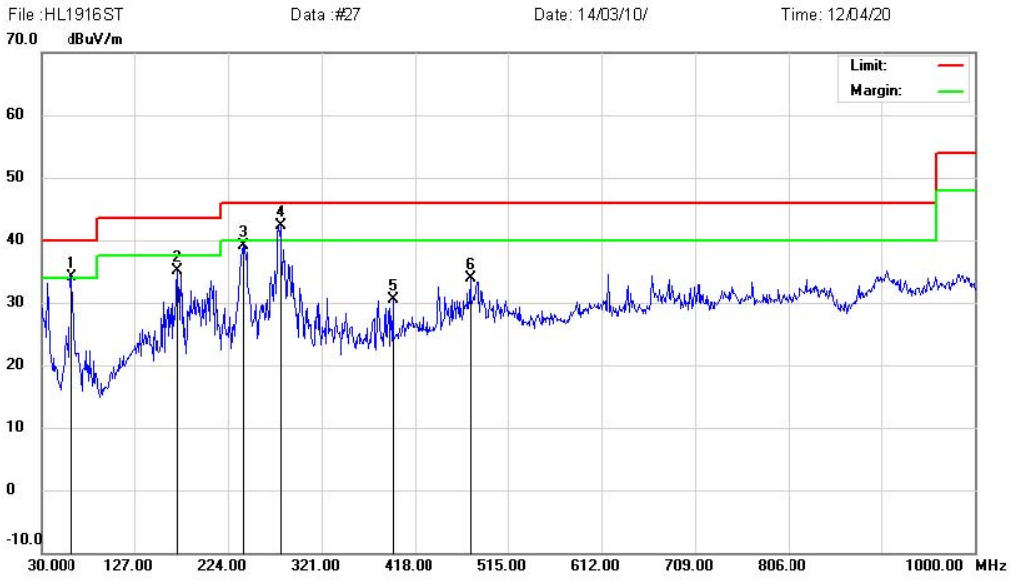
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		30.9700	11.38	22.50	33.88	40.00	-6.12	QP			
2	*	98.8700	26.08	13.00	39.08	43.50	-4.42	QP			
3		121.1800	17.50	17.52	35.02	43.50	-8.48	QP			
4		176.4698	16.80	16.88	33.68	43.50	-9.82	QP			
5		383.0799	18.03	18.16	36.19	46.00	-9.81	QP			
6		689.6000	5.43	24.40	29.83	46.00	-16.17	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong ,China
Tel: 0755-86170306 Fax: 0755-86170310

Radiated Emission Measurement



Site site MOST 3M
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI H

Polarization: *Horizontal*
Power: 1

Temperature: 26
Humidity: 61 %
Distance:

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	!	61.0400	23.22	10.90	34.12	40.00	-5.88	QP			
2		171.6200	17.97	17.12	35.09	43.50	-8.41	QP			
3		239.5200	22.03	17.17	39.20	46.00	-6.80	QP			
4	*	278.3199	23.06	19.33	42.39	46.00	-3.61	QP			
5		394.7200	11.88	18.54	30.42	46.00	-15.58	QP			
6		476.2000	12.46	21.47	33.93	46.00	-12.07	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
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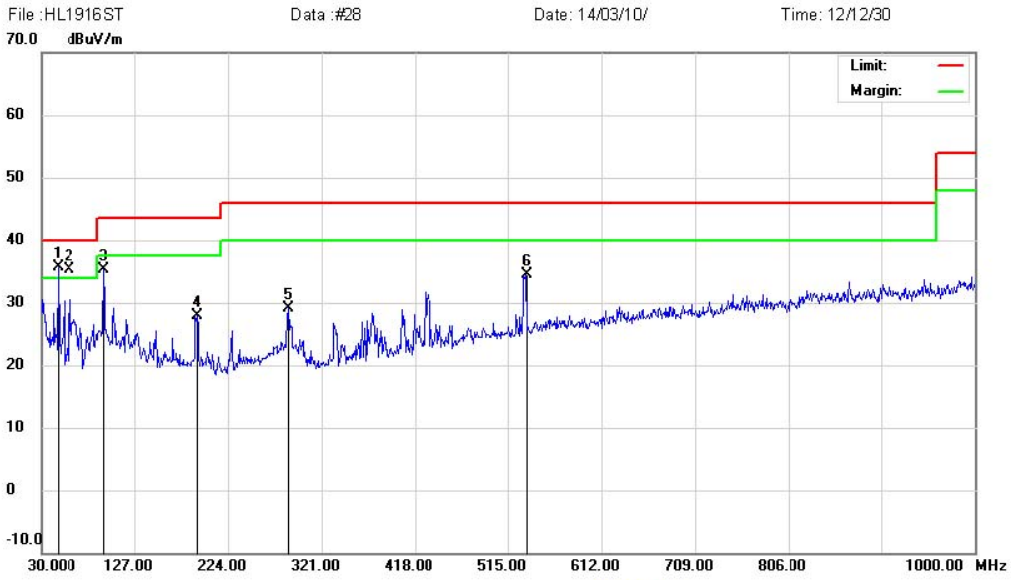
Radiated Emission Measurement



Site site MOST 3M
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI H

Polarization: *Vertical*
Power: 1
Distance:

Temperature: 26
Humidity: 61 %

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	*	47.4600	23.32	12.47	35.79	40.00	-4.21	QP			
2	!	59.1000	24.52	10.78	35.30	40.00	-4.70	QP			
3		94.9899	23.21	12.05	35.26	43.50	-8.24	QP			
4		191.9900	11.14	16.70	27.84	43.50	-15.66	QP			
5		287.0500	9.62	19.43	29.05	46.00	-16.95	QP			
6		533.4299	12.31	22.20	34.51	46.00	-11.49	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
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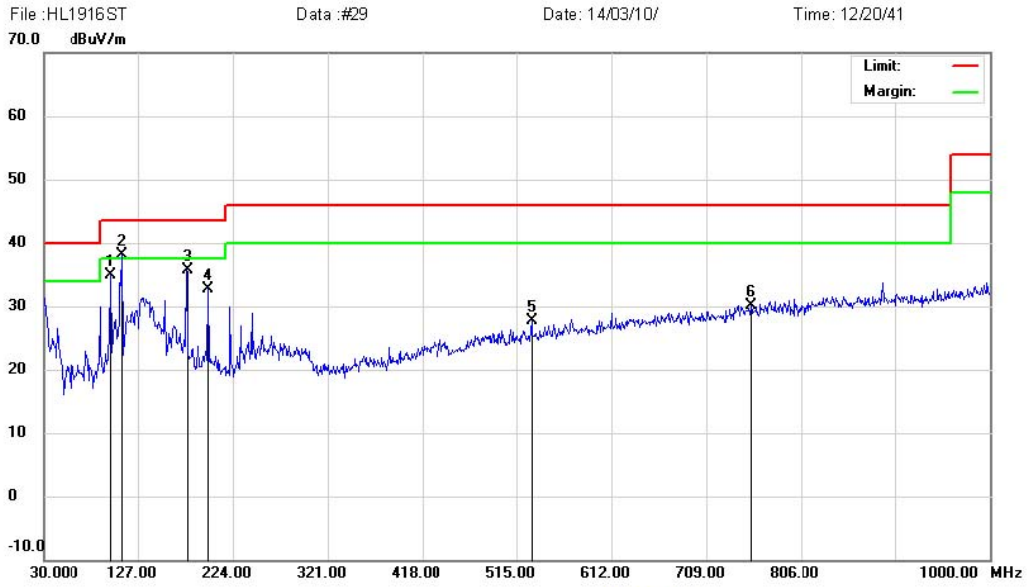
Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI M

Polarization: *Vertical*
Power: 1
Distance: 3m

Temperature: 26
Humidity: 61 %

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		98.8700	21.94	13.00	34.94	43.50	-8.56	QP			
2	*	110.5100	21.92	16.17	38.09	43.50	-5.41	QP			
3		176.4700	18.80	16.88	35.68	43.50	-7.82	QP			
4		198.7800	15.45	17.30	32.75	43.50	-10.75	QP			
5		530.5200	5.59	22.11	27.70	46.00	-18.30	QP			
6		754.5900	4.38	25.71	30.09	46.00	-15.91	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

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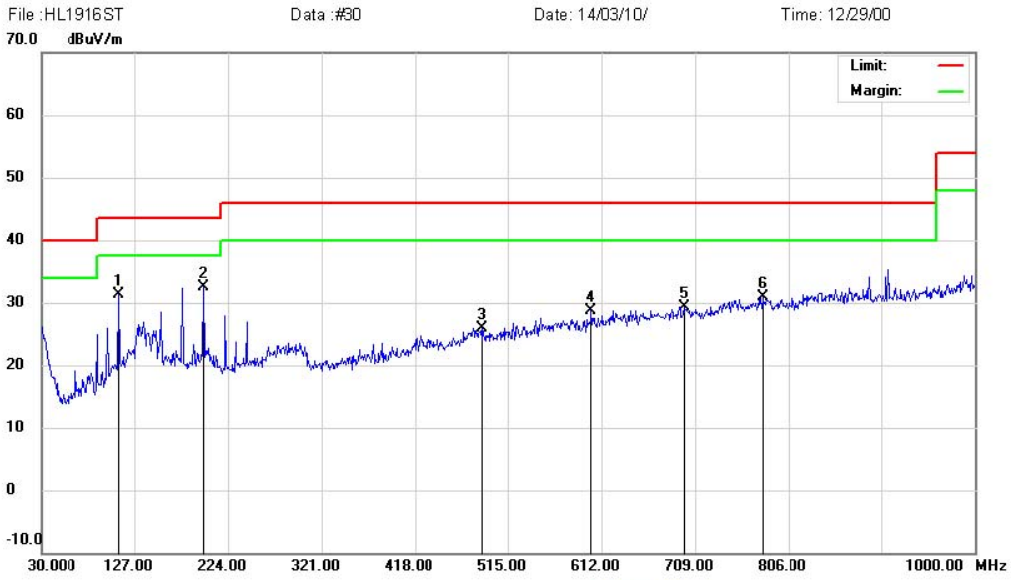
Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI M

Polarization: *Horizontal*
Power: 1

Distance: 3m

Temperature: 26
Humidity: 61 %

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		110.5100	15.18	16.17	31.35	43.50	-12.15	QP			
2	*	198.7800	15.20	17.30	32.50	43.50	-11.00	QP			
3		488.8100	4.24	21.70	25.94	46.00	-20.06	QP			
4		601.3300	5.62	23.03	28.65	46.00	-17.35	QP			
5		697.3600	4.72	24.62	29.34	46.00	-16.66	QP			
6		778.8400	4.73	26.17	30.90	46.00	-15.10	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

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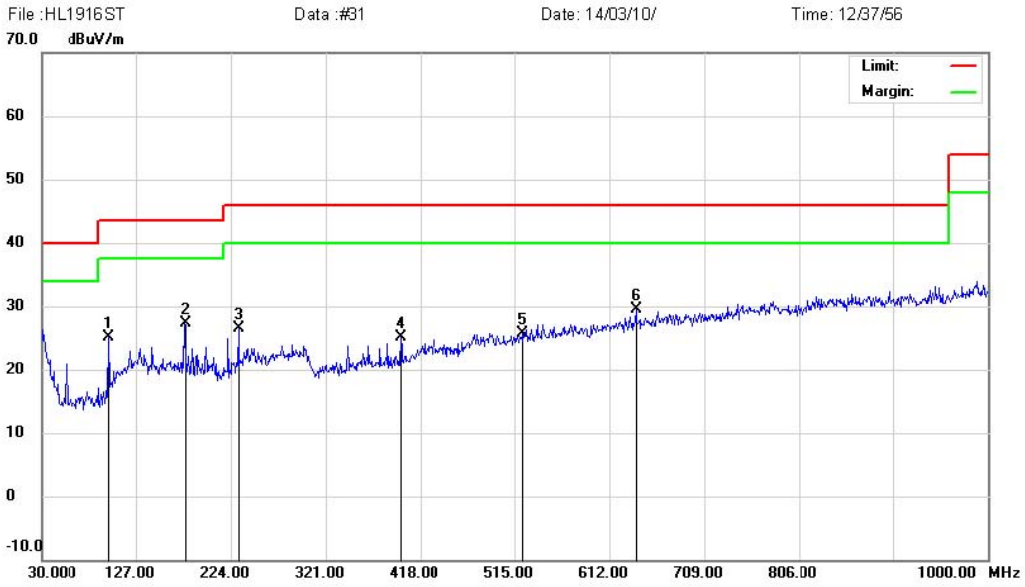
Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI L

Polarization: *Horizontal*
Power: 1
Distance: 3m

Temperature: 26
Humidity: 61 %

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		98.8700	12.05	13.00	25.05	43.50	-18.45	QP			
2	*	176.4699	10.44	16.88	27.32	43.50	-16.18	QP			
3		231.7599	9.86	16.63	26.49	46.00	-19.51	QP			
4		397.6298	6.46	18.61	25.07	46.00	-20.93	QP			
5		523.7300	3.85	21.91	25.76	46.00	-20.24	QP			
6		639.1599	5.58	23.98	29.56	46.00	-16.44	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

Compliance Laboratory
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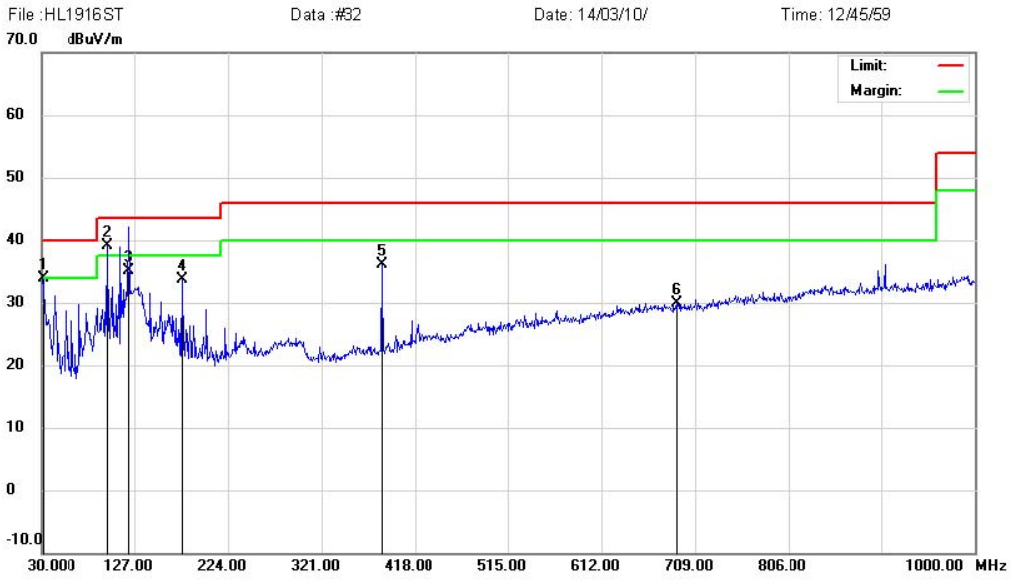
Radiated Emission Measurement



Site Chamber #1
Limit: FCC Part15 B 3M Radiation
EUT: 19"LCD Monitor
M/N: HL1916ST
Mode: 1
Note: DVI L

Polarization: *Vertical*
Power: 1
Distance: 3m

Temperature: 26
Humidity: 61 %

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		30.9700	11.38	22.50	33.88	40.00	-6.12	QP			
2	*	98.8700	26.08	13.00	39.08	43.50	-4.42	QP			
3		121.1800	17.50	17.52	35.02	43.50	-8.48	QP			
4		176.4698	16.80	16.88	33.68	43.50	-9.82	QP			
5		383.0799	18.03	18.16	36.19	46.00	-9.81	QP			
6		689.6000	5.43	24.40	29.83	46.00	-16.17	QP			

*:Maximum data x:Over limit !:over margin

Engineer Signature: Allen

APPENDIX 1
PHOTOGRAPHS OF TEST SETUP

CE TEST SETUP

RE TEST SETUP

------END OF REPORT------