

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
UNINTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART B REQUIREMENT**

OF

**LCD TV (Analog)
CRYSTAL SERIES(Analog)
26"HD READY LCDTV(Analog)
32"HD READY LCD TV(Analog)**

MODEL No.: SEE ANNEX A

**BRAND NAME: Great Wall/SOYO/prive
FCC ID: KXYL2632××××A**

REPORT NO.: SZEE071115119702

ISSUE DATE: December 18, 2007

Prepared for

**CHINA GREAT WALL COMPUTER SHENZHEN CO.,LTD
GREATWALL BUILDING,SCIENCE&INDUSTRIAL
PARK,NANTOU,SHENZHEN,CHINA
TEL: 86-755-2663 9997
FAX: 86-755-2762 2394**

Prepared by

**CENTRE TESTING INTERNATIONAL
1F., BUILDING C,HONGWEI INDUSTRIAL ZONE,
BAOAN 70 DISTRICT, SHENZHEN, CHINA
TEL: 86-755-3368 3668
FAX: 86-755-3368 3385**

**This report shall not be reproduced, except in full, without the written approval of
CENTRE TESTING INTERNATIONAL**

VERIFICATION OF COMPLIANCE

Applicant:	CHINA GREAT WALL COMPUTER SHENZHEN CO.,LTD GREATWALL BUILDING,SCIENCE&INDUSTRIAL PARK,NANTOU,SHENZHEN,CHINA
Product Name:	LCD TV (analog)/CRYSTAL SERIES(analog) 26''HD READY LCDTV(analog)/32''HD READY LCD TV(analog)
Brand Name:	Great Wall/ SOYO/prive
Model Number:	See annex A
Serial Number:	N/A
File Number:	SZEE071115119702
Date of Test:	November 20,2007 ~ December 16 , 2007

We hereby certify that:

The above equipment was tested by Centre Testing International (CTI), The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15B

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

Approved By



Manager
CENTRE TESTING INTERNATIONAL

TABLE OF CONTENTS

Description	Page
1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION.....	4
1.2 MODEL INFORMATION	5
1.3 TEST METHODOLOGY.....	5
1.4 TEST FACILITY	5
1.5 SPECIAL ACCESSORIES	5
1.6 EQUIPMENT MODIFICATIONS	5
2. SYSTEM TEST CONFIGURATION	6
2.1 EUT CONFIGURATION.....	6
2.2 EUT EXERCISE	6
2.3 TEST PROCEDURE.....	6
2.4 LIMITATION	7
2.5 ANTENNA CONDUCTED EMISSION.....	8
3. SUMMARY OF TEST RESULTS	9
4. DESCRIPTION OF TEST MODES	9
5. CONDUCTED EMISSIONS TEST	9
5.1 MEASUREMENT PROCEDURE:	9
5.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	9
5.3 MEASUREMENT EQUIPMENT USED:	10
5.4 MEASUREMENT RESULT:	10
6. RADIATED EMISSION TEST	11
6.1 MEASUREMENT PROCEDURE.....	11
6.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	11
6.4 FIELD STRENGTH CALCULATION	12
7. ANTENNA CONDUCTED POWER.....	14
7.1 MEASUREMENT PROCEDURE.....	14
7.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	14
7.3 MEASUREMENT EQUIPMENT USED:	14
7.4 MEASUREMENT RESULTS:.....	14
APPENDIX 1 PHOTOGRAPHS OF SETUP	15

1. GENERAL INFORMATION

1.1 product description

FUNCTION		26Specifications	32Specifications
LCD Panel	Model name	T260*W03	T315*W02
	Screen Size	26"	32"
	Active Display Area	575.769(H)*323.712(V)	697.68(H)*392.26(V)
	Pixel Pitch	0.4215mm	0.51075mm
	Max. Resolution	1366(H)*768(V)	1366(H)*768(V)
	Aspect ratio	16:9	16:9
	Contrast Ratio	1200:1	1200:1
	Brightness	500cd/m2	500cd/m2
	Response Time	8ms	8ms
	Display Color	16.7M	16.7M
	Viewing Angle	176°	176°
	Lamp Life	60000H	60000H
Video&Audio	TV System	NTSC	NTSC
	Sound System	M/N	M/N
	Stereo System	STEREO/MONO/BTSC/ SAP	STEREO/MONO/BTSC/ SAP
	OSD language	English Etc.	English Etc.
Monitor display System	Frequency range	V:56-75HZ H:30-80KHZ	V:56-75HZ H:30-80KHZ
	Max Display Mode	1920*1080@60HZ	1920*1080@60HZ
	Plug&Play	YES	YES
Others	Power supply	AC100~240V 50/60HZ	AC100~240V 50/60HZ
	Power consumption	160W	160W
	Stand by power consumption	<2W	<2W

1.2 Model information

The schematic and PCB layout(all trade and all models)are identical except for screen size

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The 3m Semi-Anechoic chamber test site and conducted measurement facility used to collect the radiated data is located on the address:

1F.,Building C, Hongwei Industrial Zone 70District.,Baoan,Shenzhen,Guangdong,China .

The Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 requirements. The test site Registration Number:614926

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a normal application.

2.2 EUT Exercise

The EUT was operated in the full load operating mode.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table 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 max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

2.3.3 antenna power conduction

The EUT is placed on a table which is 0.8 m above ground plane. then connect the EUT to a splitter and the other side connect to receiver and Signal Generator, In order to find out maximum emission, need test typical frequency range

2.3.4 monitor operation condition

- a) Set the contrast control to maximum.
- b) Set the brightness control to maximum or at raster extinction if raster extinction occurs at less than maximum brightness.
- c) For color monitors, use white letters on a black background to represent all colors.

2.4 Limitation

(1) Conducted Emission

According to section 15.207(a) Conducted Emission Limits is as following.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Note

1. The lower limit shall apply at the transition frequencies
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

(2) Radiated Emission

- a. The field strength of any emission within this band (section 15.235 frequency between 49.82MHz -49.9MHz) shall not exceed 10000 micro volts/meter at 3 meters. (80dB μ V at 3m) The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.235 for limiting peak emissions apply.
- b. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209(Intentional Radiators general limit).as below.

Frequency (MHz)	Field strength μ V/m	Distance(m)	Field strength at 3m dB μ V/m
1.705-30	30	30	29.54
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

- Remark:
1. Emission level in dBuV/m=20 log (uV/m)
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205
 4. Emission spurious frequency which appearing within the Restricted Bands specified in provision of ξ 15.205, then the general radiated emission limits in ξ 15.209 apply.

Antenna conducted emission

According to section of 15.111 Antenna conducted emission limit is as follows

The power at the antenna terminal at any frequency within the range of measurements specified in Section 15.33 shall not exceed 2.0 nanowatts.

3. Summary Of Test Results

FCC Rules	Description Of Test	Result
§ 15.207	Conducted Emission	Compliant
§ 15.209	Radiated Emission	Compliant
§ 15.111	Antenna power Emission	Compliant

4. Description of test modes

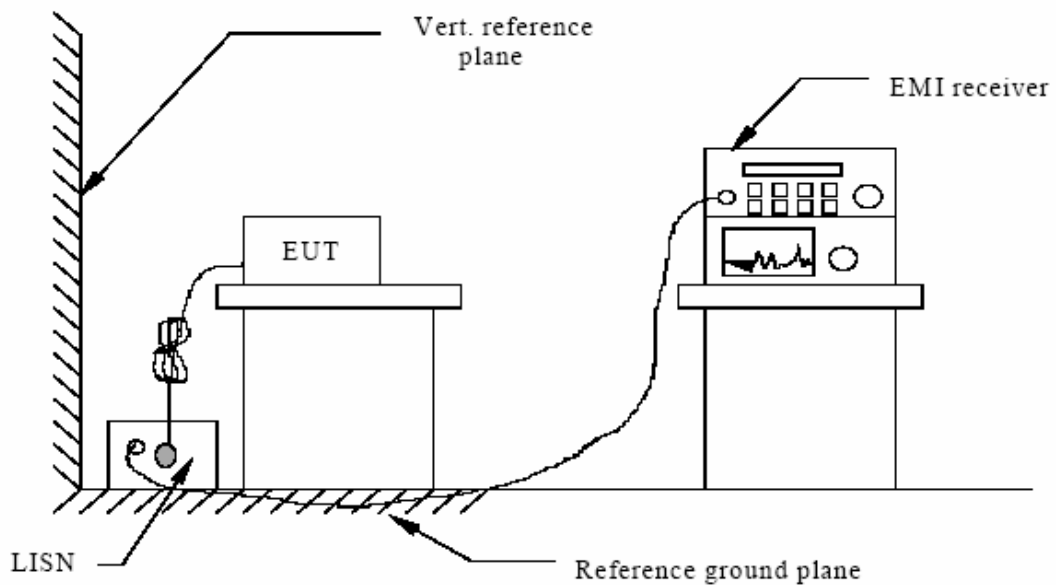
1. The EUT has been tested under full load operating condition.

5. Conducted Emissions Test

5.1 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)



5.3 Measurement Equipment Used:

Conducted Emission Test Site # 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Receiver	R&S	ESCI	100435	01/29/2007	01/28/2008
LISN	ETS	3816	00060336	06/07/2007	06/06/2008

5.4 Measurement Result:

Operation mode: VGA Test By: Forrest
 Test data: Nov.27, 2007 polarity: N

NO.	Freq. MHZ	Reading level			factor dB	measurement			limit		Margin	
		Peak	QP	AVG		Peak	QP	AVG	QP	AV	QP	AV
1	0.45	23.84	21.74	13.31	20.35	44.19	42.09	33.7	56.88	46.88	-14.8	-13.2
2	0.778	27.49	25.11	13.03	20.12	47.61	45.23	33.2	56	46	-10.8	-12.9
3	1.094	27.98	25.64	12.01	20.11	48.09	45.75	32.1	56	46	-10.3	-13.9
4	1.42	26.93	24.16	11.81	20.09	47.02	44.25	31.9	56	46	-11.8	-14.1
5	1.63	25.79	22.85	10.71	20.08	45.87	42.93	30.8	56	46	-13.1	-15.2
6	2.02	24.76	22.12	10.71	20.06	44.82	42.18	30.8	56	46	-13.8	-15.2

Operation mode: VGA Test By: Forrest
 Test data: Dec.1,2007 polarity: L

NO.	Freq. MHZ	Reading level			factor dB	measurement			limit		Margin	
		Peak	QP	AVG		Peak	QP	AVG	QP	AV	QP	AV
1	0.506	22.39	19.8	10.46	20.22	42.61	40.02	30.7	56	46	-16	-15.3
2	0.846	24.31	21.8	9.71	20.12	44.43	41.92	29.8	56	46	-14.1	-16.2
3	1.09	26.28	23.91	11.03	20.11	46.39	44.02	31.1	56	46	-12	-14.9
4	1.33	24.79	20.81	5.08	20.09	44.88	40.9	25.2	56	46	-15.1	-20.8
5	1.502	24.71	22.03	10.84	20.08	44.79	42.11	30.9	56	46	-13.9	-15.1
6	2.01	23.9	22.2	9.88	20.06	43.96	42.26	29.9	56	46	-13.7	-16.1

Note: the above test data is worst of all modes for 32"LCD TV , the other model is at least 10 safety margin. The other pre-test data See Annex B

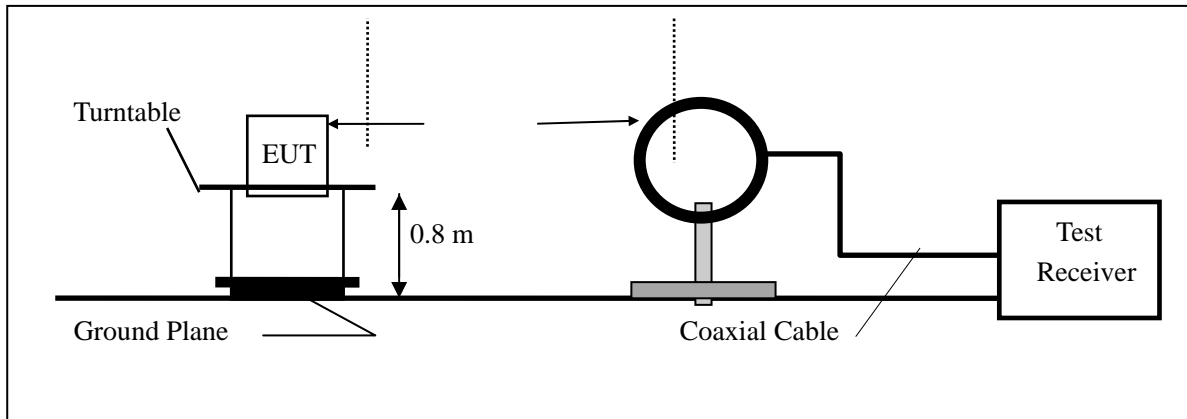
6. Radiated Emission Test

6.1 Measurement Procedure

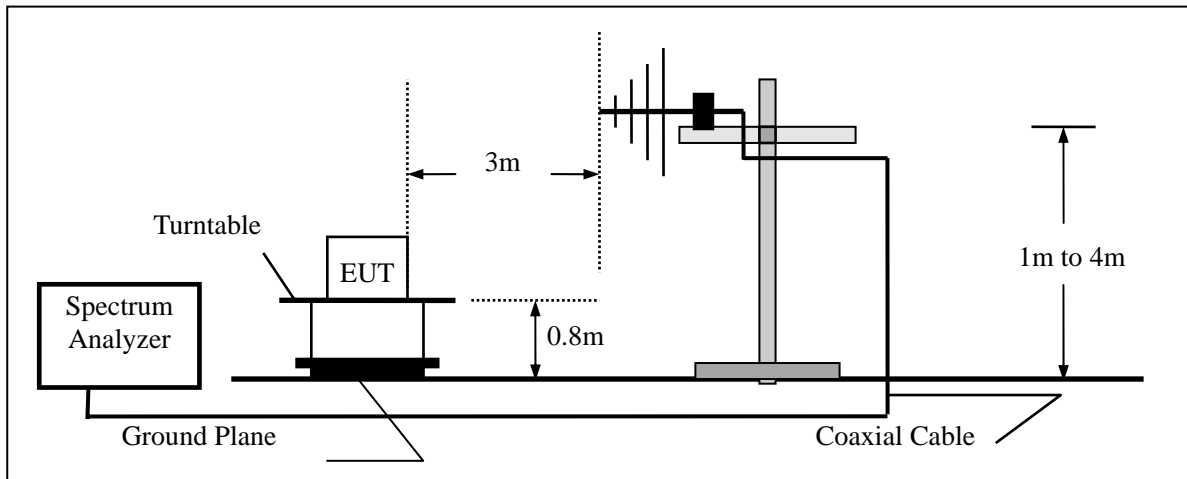
1. The EUT was placed on a turntable which is 0.8m above ground plane.
2. Maximum procedure was performed on the twelve highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

6.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



6.3 Measurement Equipment Used:

Open Area Test Site # 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4443A	MY46185649	06/29/2007	06/28/2008
Biconilog Antenna	ETS	3142C	920250	05/30/2007	05/29/2008
Multi device Controller	ETS	2090	00057230	06/07/2007	06/06/2008
EMI Receiver	R&S	ESCI	100435	01/29/2007	01/28/2008

6.4 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$CF = AF + CL - AG$$

$$FS = RA + CF$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

6.5 Measurement Result

Operation Mode: VGA Test Date : Nov. 23, 2007
 Temperature : 22 Pol: Horizontal
 Humidity : 58 %

Freq. (MHz)	Ant.Pol. H/V	DetectorMode (PK/AV)	Reading (dBuV)	Factor CF(dB)	Limit3m (dBuV/m)	Safe Margin (dB)
30.000	H	Peak	15.43	17.63	40	-6.94
88.200	H	Peak	24.18	9.79	43.5	-9.53
148.016	H	Peak	28.94	10.36	43.50	-4.2
181.966	H	Peak	26.57	11.79	43.50	-5.136
214.300	H	Peak	25.33	12.64	43.50	-5.53
558.640	H	Peak	15.16	21.46	46.00	-9.38

Operation Mode: VGA Test Date : Nov. 23, 2007
 Temperature : 22 Pol: Vertical
 Humidity : 58 %

Freq. (MHz)	Ant.Pol. H/V	DetectorMode (PK/AV)	Reading (dBuV)	Factor CF(dB)	Limit3m (dBuV/m)	Safe Margin (dB)
30.000	V	Peak	18.09	17.63	40	-4.28
78.500	V	Peak	29.62	8.8	40	-1.58
128.610	V	Peak	30.03	9.07	43.50	-4.4
181.960	V	Peak	27.16	11.79	43.50	-4.55
214.300	V	Peak	23.08	12.64	43.50	-7.78
266.030	V	Peak	21.32	14.56	46.00	-10.12

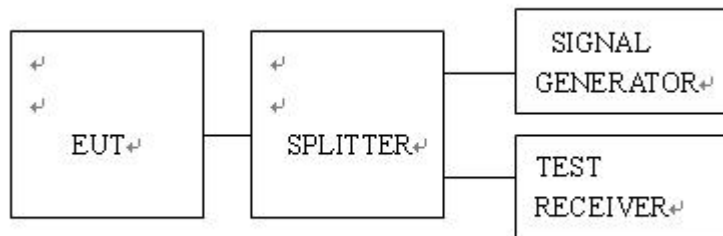
Note: the above test data is worst of all modes for 32" LCD TV, the other modes is at least 10 safety margin. The Other pre-test data See annex C

7. Antenna conducted power

7.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the typical frequency emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

7.2 Test SET-UP (Block Diagram of Configuration)



7.3 Measurement Equipment Used:

Antenna conducted power Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Receiver	R&S	ESCI	100435	01/29/2007	01/28/2008
Signal generator	IFR	3116A	1450067	01/29/2007	01/28/2008
splitter	HK	4118	2376640	01/29/2007	01/28/2008

7.4 Measurement Results:

The antenna conducted power is less than 2nwatts in any frequency. at least 10dB safety margin.
So comply with limit.

APPENDIX 1 PHOTOGRAPHS OF SETUP

RADIATED EMISSION TEST SETUP



CONDUCTED EMISSION TEST SETUP



----End of the report----