# EMC TEST REPORT

Project No.	LBE20121335	Revision No.			NONE			
	Name of organization	Samsung Electro	onics	Co., L	td.			
Applicant	Address	18600 Broad wid	k St.	Ranch	o Dominguez C	A 90220		
	Date of application	February 21 , 2012						
	Type of device	Class B p	ersor	al com	nputers and peri	pherals		
	Equipment authorization	☐ Declaration of	☐ Declaration of Conformity ☐ Certification ☐ Verification					
EUT	Kind of product	LCD Monitor						
Equipment Under Test	Model No.	LS27B240						
Onder rest		Variant Model	el No. None					
	Manufacturer	Tianjin Samsung Electronics Co., LTD. Weisi Rd. Micro-Electronic Industrial Park, Jingang Rd. Xiqing Dist, Tianjin, 300385 China				gang Rd.		
Ammlia d Ota		FCC Part 15, Subpart B class B						
Applied Sta	andards	ANSI C63.4-2009						
	Test period	February 21 , 2012~ February 24 , 2012						
	Issue date	February 24 , 2012						
Test result	: Complied	1						
The equipment under test has found to be compliant with the applied standards. (Refer to the attached test result for more detail.)								
Tested by		Reviewed by: Xiao Li						
	***	李逐						
		<u> </u>						

The test results in this report only apply to the tested sample. This report must not be reproduced, except in full, without written permission from CSQAL



TSEC Wei 4 Road, Microelectronics Industrial Park, Jingang High way, Tianjin, China Tel: 86 22 23961234, Fax: 86 22 23961234-5214







According to Sec. 2.1077, 47 CFR of the FCC Rules.

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.

Equipment EUT Type	Class B personal computers and peripherals		
Kind of product	LCD Monitor		
Trade Name	Samsung Electronics		
Model	LS27B240		
Anniind Dulan	FCC Part 15, Subpart B Class B		
Applied Rules	ANSI C63.4-2009		
Manufacturer	Tianjin Samsung Electronics Co., LTD. Weisi Rd. Micro-Electronic Industrial Park, Jingang Rd. Xiqing Dist, Tianjin,300385 China		

We hereby *declare that* the equipment bearing the trade name and model number specified above was tested conforming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commission's requirements.

U.S. RESPONSIBLE PARTY	Samsung Electronics America QA Lab 18600 Broad wick St. Rancho Dominguez CA 90220
CONTACT PERSON	Mr. Peter Ra, Manager  E-Mail: raaaa@samsung.com Tel: 1-310-900-5250 Fax: 1-310-537-5500



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LCD Monitor LS27B240



# 1. Summary of test results

The EUT has been tested according to the following specifications:

Applied	Test type	Applied standard	Result	Remarks
	Conducted Disturbance	FCC Part 15 Subpart B	Complied	Meets Class B Limit
	Radiated Disturbance	ANSI C63.4-2009	Complied	Meets Class B Limit

Note: These results are deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations.

### 2. General Information

### 2.1 Test facility

The following firm has submitted the information required by Section 2.948 of the FCC Rules for measuring devices subject to Certification under Parts 15 & 18. The FCC takes no responsibility regarding the capability of this firm for performing the required measurements. Accordingly, this firm should not advertise or otherwise imply FCC approval of CSQAL.

CHINA SAMSUNG QUALITY ASSURANCE LABORATORY is LOCATED ON Block D, 17 - 19, Wei 4 Road, Microelectronics Industrial Park, Jingang Highway, Tianjin China.

Registration Number: 745769

E-mail Address:xiaoli@samsung.com Phone Number:86-22-2396-1234-5211

All testing are performed in Semi-anechoic chambers conforming to the site attenuation

Characteristics defined by ANSI C63.4, CISPR 22, 16-1 and 16-2 and Shielded rooms. CSQAL is operated as testing laboratory in accordance with the requirements of ISO/IEC

17025:2005.



# 3. Test Setup configuration

# 3.1 Test Peripherals

The peripherals which were interconnected to the EUT during the test are as follows:

Item	Model No.	Serial No.	Manufacturer	Note
LCD Monitor	LS27B240	-	Samsung	EUT
ADAPTER	SVD5614V	CN07BN4400461ADC07B993044	Samsung	FOR EUT
PC	DM-V200	ZLPZ9WAZ500828F	Samsung	-
Printer	CLP-315	Z0CEBAZZ500252J	Samsung	-
USB Keyboard	SK-8185	OY526K	Dell	-
USB Mouse	MOC5UO	J0G00G9L	Dell	-

# 3.2 EUT operating mode(s)

To achieve compliance applied standard specification, the following mode(s) were made during compliance testing:

Operating Mode 1	D-Sub (PC Video IN or Analog) IN Display		
Operating Mode 2	DVI IN Display		

# 3.3 Details of Sampling

Customer selected, single unit.

# 3.4 Cable description

The type(s) of cables which were connected to the ports (of the EUT) are as follows:

No	Connect Cable	Length [m]	Ferrite core [Y/N]	Remark
1	VGA in	1. 5	Y	To PC
2	DVI in	1.5	Y	To PC
3	POWER	1.8	N	FOR EUT







# 3.5 EUT Description

The following features describe EUT represented by this report:

MODEL NAME		\$24B240BL	\$27B240B		
	Size	23.6 inches (59 cm)	27 inches (68 cm)		
Panel	Display area	521.28 mm (H) x 293.22 mm (V)	597.89 mm (H) x 336.31 mm (V)		
	Pixel Pitch	0.2715 mm (H) x 0.2715 mm (V)	0.3114 mm (H) x 0.3114 mm (V)		
Synchroniza-	Horizontal	30 ~ 81 kHz			
tion	Vertical	58 ~ 75 Hz			
Display Color		16.7 M			
December 2	Optimum resolution	1920 x 1080 @ 60 Hz			
Resolution	Maximum resolution	1920 x 1080 @ 60 Hz			
Input Signal, Terminated		RGB Analog, DVI(Digital Visual Interface) Compliant Digital RGB 0.7 Vp-p ± 5% Separate H/V sync, Composite, SOG TTL level (V high ≥ 2.0V, V low ≤ 0.8V)			
Maximum Pixel	Clock	164MHz (Analog,Digital)			
Power Supply		This product supports 100-240 V.Since the standard voltage may differ from country to country, please check the label on the back of the product.			
Signal Cable		15pin-to-15pin D-sub cable, Detachable DVI-D to DVI-D connector, Detachable			
Dimensions (WxHxD) / Weight		558.5 x 361.2 x 49.4 mm (Without Stand) 558.5 x 432.1 x 222.7 mm (With Stand) / 3.9 kg	644.8 x 414.2 x 50.7 mm (Without Stand) 644.8 x 485.2 x 222.7 mm (With Stand) / 4.4 kg		
Environmen- tal consider-	Operating	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Humidity :10 % ~ 80 %, non-condensing			
ations	Storage	Storage Temperature : $-4$ °F $\sim 113$ °F (-2 Humidity : 5 % $\sim$ 95 %, non-condensing	, ,		
Tilt		-1.0°(±2.0°) ~20.0°(±2.0°)			

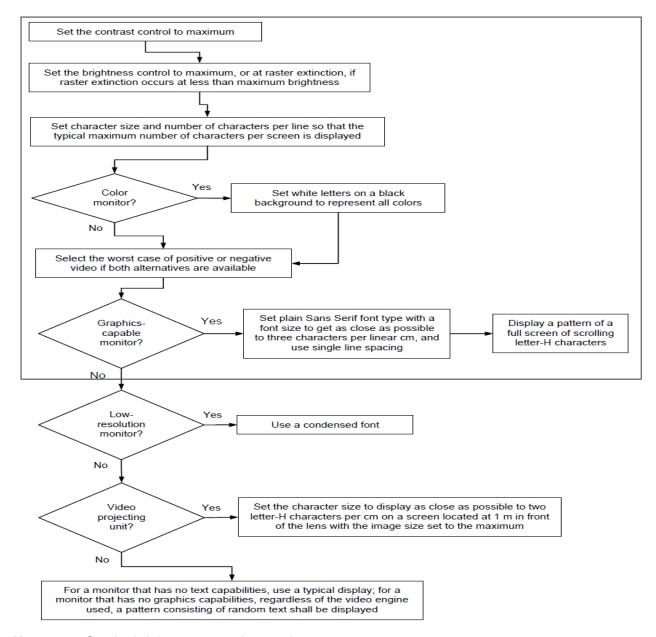
LS27B240



3.6 Description of the EUT exercising method

The EUT exercise program used during EMI testing was CSQAL standardized test program for MS Windows. The program repetitively sends a screen of H - Character to the display. Connect video output of computer on EUT's PC IN (D-sub) port and scrolled H - character continuously on EUT's

The EUT system includes a monitor, the operational conditions shown as follows, within the selected area.



- **Notes:** 1. Set the brightness control to maximum
  - 2. Set the contrast control to maximum
  - 3. Display a pattern of a full screen of scrolling letter-H characters with a font size to get as close as possible to three characters per linear cm and use single line spacing

LCD Monitor LS27B240



### 3.7 Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus: (According to CISPR 16-4 and UKAS Lab 34.)

Test	Measurement uncertainty (C.L. 95 %, k = 2)		
Disturbance voltage at the mains t	2. 9 <b>dB</b>		
	Horizontal	30 MHz - 1 GHz	3. 86 dB
Radiated Disturbance	Vertical	30 MHz - 1 GHz	4. 90 dB
Nadiated Distarbance	Horizontal	1GHz - 6 GHz	3. 964 dB
	Vertical	1GHz - 6 GHz	3. 964 <b>dB</b>



# 4. Results of individual test

#### 4.1 Conducted disturbance

Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.

The EUT measured in accordance with the methods described in standards. Including the worst-case data points for each tested configuration.

#### Limits for conducted disturbance at the mains ports of class B ITE

Frequency range Limits	Limits dB(μV)			
MHz	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: 1  $\mu$ V is regarded as 0 dB.

Note 2: The limits shall decreases linearly with the logarithm of the frequency in the range 150 – 500 kHz.

Note 3: If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector is unnecessary.

Note 4: The lower limit shall apply at the transition frequency.

If the reading on the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 seconds at each measurement frequency, the highest reading shall be recorded, with the exception of any brief isolated high reading (which shall be ignored). Including the worst-case data points for each tested configuration.

#### 4.1.1 Test instrumentation

Test instrumentation used in the Conducted disturbance test was as follows:

Test	Model		Serial or	Calibration	
instrumentation	Manutacturer		Firmware (No./Ver.)	Date	Interval (Month)
Test Software	EP5CE	TOYO	V 4.7.10	N/A	N/A
Measuring receiver	ESCI	R&S	101027	2011.03.26	12
Artificial mains network	ENV216	R&S	101122	2011.08.23	12
Artificial mains network	ENV216	R&S	101059	2011.08.23	12
ISN	ISN T800	TESEQ	28602	2011.03.02	12
ISN	ISN T8-CAT6	TESEQ	27286	2011.03.02	12

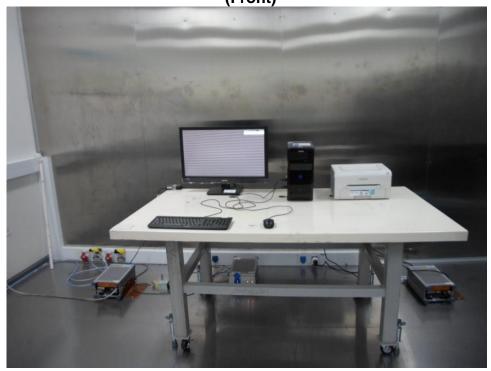
**LCD Monitor** 

LS27B240

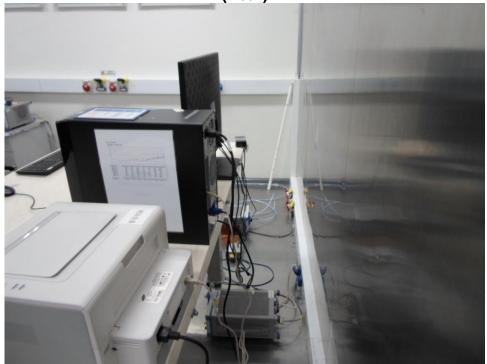


# 4.1.2 Photograph of the test Configuration

(Front)







LCD Monitor LS27B240



#### 4.1.3 Test results

Test date	2012. 2.21		Test engineer		Yangjie	
Climate condition	Ambient temperature	<b>24</b> ℃	Relative humidity	16%	Atmospheric pressure	102.5 kPa
Test place	Shielded Room #2					

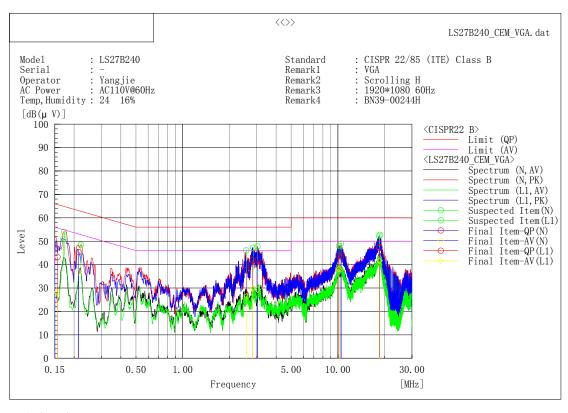
#### 4.1.4 Test data

■ Operating Mode: VGA IN

Set the brightness control to maximum Set the contrast control to maximum Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



LCD Monitor LS27B240



Final	Result

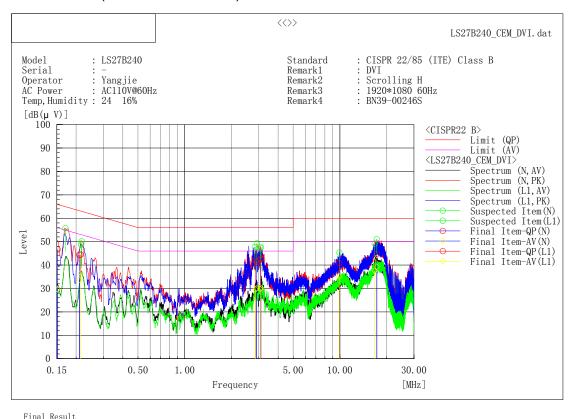
	N Phase										
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin	Remark
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB]	[dB]	
	0. 150	36. 9	20.0	9.6	46. 5	29.6	66.0	56.0	19.5	26. 4	
	2 0. 21371	35.8	27.1	9.6	45. 4	36. 7	63. 1	53. 1	17.7	16.4	
	3. 03924	32. 2	19.7	9. 7	41.9	29.4	56.0	46.0	14. 1	16.6	
4	10.48296	33.6	28. 1	9.8	43.4	37. 9	60.0	50.0	16.6	12. 1	
	5 18. 57201	37. 3	31.7	10.0	47.3	41.7	60.0	50.0	12.7	8.3	
	– L1 Phase	-									
No.	Frequency	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Remark
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB]	[dB]	
	l 0. 15634	33. 7	18. 4	9.6	43. 3	28. 0	65. 7	55. 7	22.4	27. 7	
	2.58836	28.0	16. 9	9. 7	37. 7	26. 6	56. 0	46.0	18. 3	19. 4	
	3 2. 82614	32. 1	19.9	9. 7	41.8	29. 6	56. 0	46.0	14. 2	16. 4	
4											
	1 10. 16425	33.9	28.3	9.8	43.7	38. 1	60.0	50.0	16.3	11.9	



#### ■ Operating Mode: DVI IN Display

Set the brightness control to maximum Set the contrast control to maximum

Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



LIHS	ii kesuit										
	N Phase										
No.	Frequency	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Remark
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB(µV)]	[dB]	[dB]	
1	2.9055	31.6	20.3	9. 7	41.3	30.0	56. 0	46.0	14.7	16.0	
2	3. 09309	32. 5	20.6	9. 7	42. 2	30. 3	56. 0	46.0	13.8	15. 7	
3	17. 29614	34.8	29. 4	9. 9	44. 7	39. 3	60.0	50.0	15. 3	10.7	
4	0. 152	37. 1	20.0	9. 6	46. 7	29.6	65. 9	55. 9	19. 2	26. 3	
5	0. 20993	34.8	24. 1	9.6	44. 4	33. 7	63. 2	53. 2	18.8	19.5	
	I 1 D1										
	L1 Phase			_							
No.	Frequency	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Remark
											remer ii
		QP	AV	5 . 3	QP	AV	QP	AV	QP	ΑV	Tromat II
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	QP [dB(μV)]	ΑV [dB(μV)]	QP [dB(μV)]	ΑV [dB(μV)]	QP [dB]	AV [dB]	TOMOS II
1	2. 85933	[dB(µV)] 32.1	[dB(μV)] 19.9	9. 7	QP [dB(μV)] 41.8	AV [dB(μV)] 29.6	QP [dB(μV)] 56.0	AV [dB(μV)] 46.0	QP [dB] 14. 2	AV [dB] 16. 4	TOMAL T
2	2. 85933 3. 0806	[dB(μV)] 32.1 33.0	[dB(μV)] 19.9 20.0	9. 7 9. 7	QP [dB(μV)] 41.8 42.7	AV [dB(μV)] 29.6 29.7	QP [dB ( μ V) ] 56. 0 56. 0	AV [dB(μV)] 46.0 46.0	QP [dB] 14. 2 13. 3	AV [dB] 16. 4 16. 3	Nomer 1
	2. 85933 3. 0806 16. 7721	[dB(µV)] 32.1 33.0 32.8	[dB(μV)] 19.9 20.0 27.6	9. 7 9. 7 9. 9	QP [dB(μV)] 41.8 42.7 42.7	AV [dB(μV)] 29.6 29.7 37.5	$\begin{array}{c} QP \\ [dB(\;\mu\;V)] \\ 56.0 \\ 56.0 \\ 60.0 \end{array}$	AV [dB(μV)] 46.0 46.0 50.0	QP [dB] 14. 2 13. 3 17. 3	AV [dB] 16. 4 16. 3 12. 5	Nomer 1
2 3 4	2. 85933 3. 0806 16. 7721 9. 9113	[dB(μV)] 32.1 33.0	[dB ( $\mu$ V) ] 19. 9 20. 0 27. 6 25. 3	9. 7 9. 7 9. 9 9. 8	QP [dB(μV)] 41.8 42.7	AV [dB(μV)] 29.6 29.7 37.5 35.1	QP [dB(μV)] 56.0 56.0 60.0 60.0	AV [dB(μV)] 46.0 46.0 50.0 50.0	QP [dB] 14. 2 13. 3 17. 3 19. 2	AV [dB] 16. 4 16. 3 12. 5 14. 9	romar r
2	2. 85933 3. 0806 16. 7721	[dB(µV)] 32.1 33.0 32.8	[dB(μV)] 19.9 20.0 27.6	9. 7 9. 7 9. 9	QP [dB(μV)] 41.8 42.7 42.7	AV [dB(μV)] 29.6 29.7 37.5	$\begin{array}{c} QP \\ [dB(\;\mu\;V)] \\ 56.0 \\ 56.0 \\ 60.0 \end{array}$	AV [dB(μV)] 46.0 46.0 50.0	QP [dB] 14. 2 13. 3 17. 3	AV [dB] 16. 4 16. 3 12. 5	Nomen II

Note) Level (Quasi-Peak and/or Average) = Meter Reading (Quasi-Peak and/or Average) + Factor (LISN Insertion Loss + Cable Loss)

Margin = Limit - Level (Quasi-Peak and/or Average)





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#### 4.2 Radiated disturbance

Of those disturbances above (L - 20dB), where L is the limit level in logarithmic units, record at least the disturbance levels and the frequencies of the six highest disturbances.

The following data lists the significant emission frequencies, measured levels, correction factors (for antenna and cables), orientation of table, polarization and height of antenna, the corrected reading, the limit, and the amount of margin. All measurements were taken utilizing quasi-peak detection unless stated otherwise.

Measurements were performed at an antenna to EUT distance of 3 meters and elevated between 1 and 4 meters. Both vertical and horizontal antenna polarizations were measured.

Above 1GHz, peak detector function mode was used with resolution bandwidth of 1 MHz and a video bandwidth of 1 MHz. If the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range Limits	Quasi-peak Limits (microvolts/meter)
MHz	Class B
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

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

Note 2: Additional provisions may be required for cases where interference occurs.

Note 3: 1 µV/m is regarded as 0 dB.

Measurements above 1GHz were performed at an antenna to EUT distance of 3 meters and elevated 1 to 4 meters in FAC. Both vertical and horizontal antenna polarizations were measured.

Limits for radiated disturbance of ITE at a measuring distance of 3 m

Clas	ss A	Class B			
Peak dB(µV/m)	Average dB(μV/m)	Peak dB(μV/m)	Average dB(µV/m)		
76	56	70	50		
80	60	74	54		
	Peak dB(μV/m) 76	dB(μV/m) dB(μV/m) 76 56	Peak         Average         Peak           dB(μV/m)         dB(μV/m)         dB(μV/m)           76         56         70		

Including the worst-case data points for each tested configuration.



### 4.2.1 Test instrumentation

Test instrumentation used in the Radiated disturbance was as follows:  $30 \text{MHz}^{\sim} 1 \text{GHz}$ 

			Serial or	Calibra	ntion
Test instrumentation	Model name	Manufacturer	Firmware (No./Ver.)	Date	Interval (Month)
Test Software	EP5/RE	TOYO	V 4.7.10	N/A	N/A
Bi-con Antenna	CBL6112D	SCHAFFNER	29069	2011.04.04	24
EMI Receiver	ESCI	R&S	101026	2011.03.26	12
AMPLIFIER	310N	SONOMA	300911	2011.08.23	12
Ant Mast	MA4000	INN CO	-	N/A	N/A
Mast Controller	CO2000	INN CO	-	N/A	N/A
RF Selector	NS4900N	TOYO	-	N/A	N/A

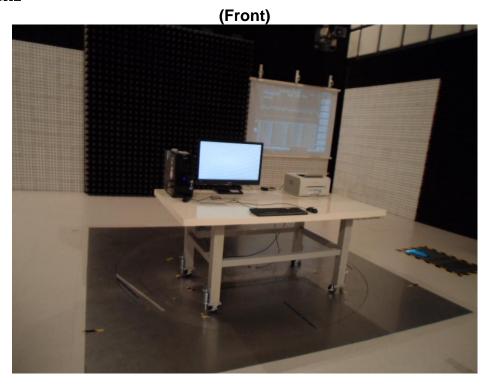
### 1GHz-2GHz

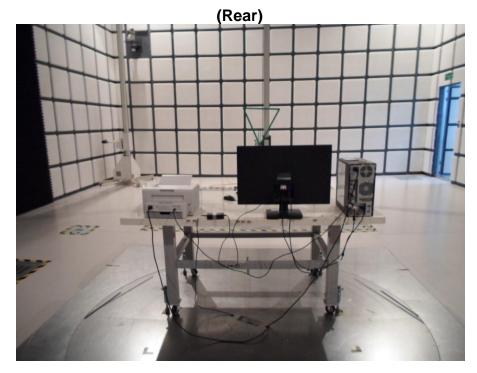
Test			Serial or	Calibra	ation
instrumentatio n	Model name	Manufacturer	Firmware (No./Ver.)	Date	Interval (Month)
Test Software	EP5/RE	TOYO	V 4.7.10	N/A	N/A
Broad-Band Horn Antenna	BBHA9120B	Schwarzbeck	519	2011.04.05	24
EMI Receiver	ESU26	R&S	100243	2011.03.26	12
AMPLIFIER	TPA0108-40	TOYO	0934	2011.08.23	12
Ant Mast	MA4000	INN CO	-	N/A	N/A
Mast Controller	CO2000	INN CO	-	N/A	N/A
Table Controller	CO2000	INN CO	-	N/A	N/A



# 4.2.2 Photograph of the test Configuration

 $30 \mathrm{MHz}^{\sim} 1 \mathrm{GHz}$ 

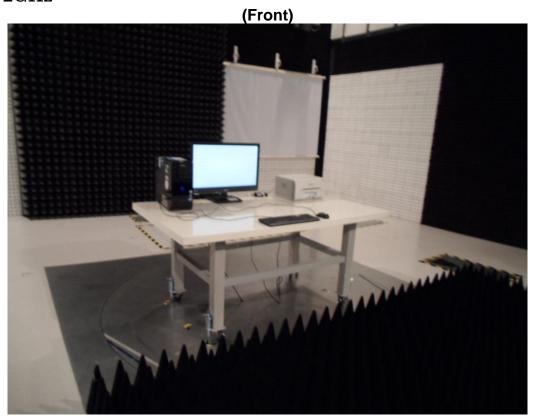


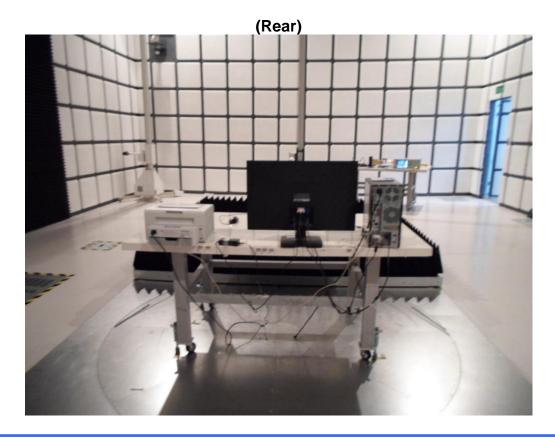


LCD Monitor LS27B240



# 1GHz-2GHz





LCD Monitor

LS27B240



#### 4.2.3 Test results

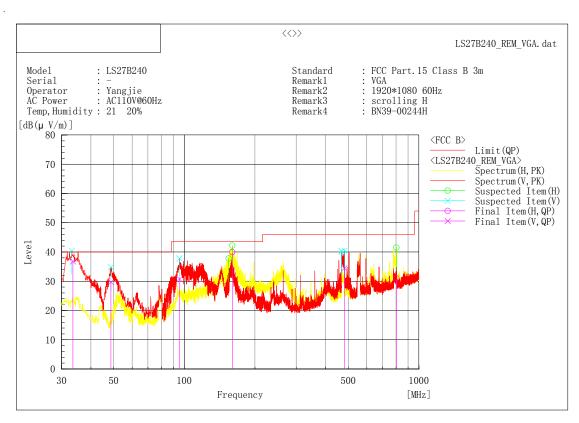
#### 30MHz~1GHz

Test date	2012.02	.22	Test eng	ineer	Yang	iie
Climate condition	Ambient temperature	21 °C	Relative humidity	20%	Atmospheric pressure	102.1 kPa
Test place	•	;	3m Semi-Anec	hoic Cham	ber	

#### ■ Operating Mode: D-Sub (PC Video IN or Analog) IN Display

Set the brightness control to maximum Set the contrast control to maximum

Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



Fina	Final Result													
No.	Frequency	(P)	S.C	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle	Remark			
	[MHz]			[dB(µV)]	[dB(1/m)]	$[dB(\mu V/m)]$	$[dB(\mu V/m)]$	[dB]	[cm]	[°]				
1	33.514	V	S	44.6	-7.8	36.8	40.0	3.2	100.0	296. 3				
2	160.257	Н	S	52.6	-12.7	39. 9	43.5	3.6	195.0	356. 3				
3	803.090	Н		30. 5	0.6	31.1	46.0	14.9	202.0	133. 4				
4	48.673	V		45.0	-15.3	29. 7	40.0	10.3	100.0	129.8				
5	481. 293	V		37. 9	-3.4	34. 5	46.0	11.5	100.0	158. 1				
6	95. 354	V		44. 4	-13.6	30.8	43. 5	12.7	100.0	312.6				

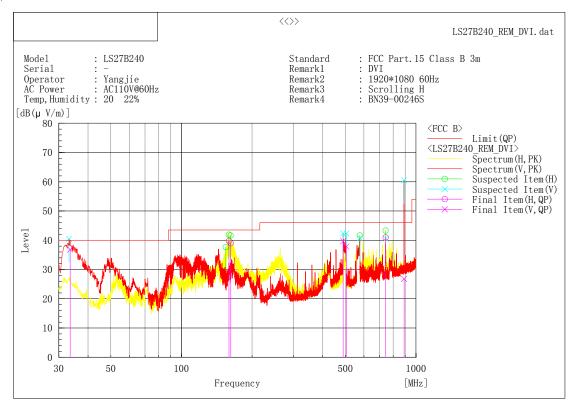


#### ■ Operating Mode:DVI IN Display

Set the brightness control to maximum

Set the contrast control to maximum

Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



Fina	1 Result										
No.	Frequency	(P)	S.C	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle	Remark
	[MHz]			[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[cm]	[°]	
1	890. 215	V	S	24. 8	2.0	26. 8	46. 0	$\bar{1}9.\bar{2}$	102.0	176.0	
2	33. 532	V	S	44.6	-7.8	36.8	40.0	3.2	100.0	297. 2	
3	159. 540	Н	S	52.4	-12.6	39.8	43. 5	3.7	166.0	0.4	
4	162. 335	Н	S	51.9	-12.9	39.0	43. 5	4.5	153.0	0.1	
5	742.804	Н	S	41.0	-0.1	40.9	46.0	5. 1	183.0	312.9	
6	504.088	V		41.2	-3.3	37. 9	46. 0	8. 1	202.0	167.8	
7	100 205	17		49 1	9 4	20. 7	4.C O	6 2	100 0	176 0	

Note) Receiving antenna polarization: Horizontal and/or Vertical

Test Distance: 3m, Antenna Height: 1 to 4 meters

Result (Quasi-Peak) = Reading QP + C.F (Antenna Factor + Cable Loss - Amp. Gain)

Margin QP (Quasi-Peak) = Limit - Level QP

LCD Monitor

LS27B240



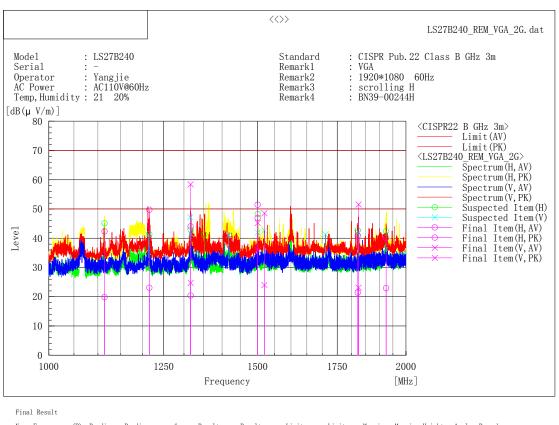
#### 1GHz-2GHz

Test date	2011.11	.09	Test eng	ineer	Yangjie		
Climate condition	Ambient temperature	21 ℃	Relative humidity	20%	Atmospheric pressure	102.2 kPa	
Test place		:	3m Semi-Anec	hoic Cham	ber		

#### ■ Operating Mode: D-Sub (PC Video IN or Analog) IN Display

Set the brightness control to maximum Set the contrast control to maximum

Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



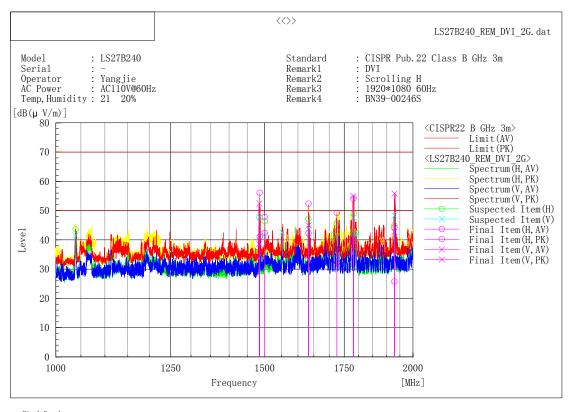
Fina	Final Result													
No.	Frequency	(P)	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Remark
			AV	PK		AV	PK	AV	PK	AV	PK			
	[MHz]		[dB(µV)]	[dB(µV)]	[dB(1/m)]	[dB(µV/m)]	$[dB(\mu V/m)]$	$[dB(\mu V/m)]$	[dB(µV/m)]	[dB]	[dB]	[cm]	[°]	
1	1500.037	Н	61.9	66.4	-15.0	46. 9	51.4	50.0	70.0	3. 1	18.6	145.0	225.8	
2	1316. 908	V	40. 5	74. 2	-15.8	24. 7	58. 4	50.0	70.0	25. 3	11.6	101.0	282.2	
3	1114.375	Н	35. 9	58. 4	-16.1	19.8	42.3	50.0	70.0	30.2	27.7	202.0	43.5	
4	1316.875	Н	36. 2	59.8	-15.8	20.4	44.0	50.0	70.0	29.6	26.0	301.0	341.9	
5	1821.625	Н	35. 1	54. 5	-13.7	21.4	40.8	50.0	70.0	28.6	29. 2	301.0	113.1	
6	1519.375	V	38. 9	63.5	-14.9	24.0	48.6	50.0	70.0	26.0	21.4	100.0	343.2	
7	1924. 625	Н	36.0	53. 2	-13.1	22. 9	40.1	50.0	70.0	27. 1	29.9	202.0	68. 5	
8	1823. 875	V	36.8	65.3	-13.7	23. 1	51.6	50.0	70.0	26. 9	18.4	202.0	167.5	
9	1499.875	V	50.9	60.2	-15.0	35. 9	45. 2	50.0	70.0	14.1	24.8	100.0	348.3	
10	1215. 500	Н	38. 7	65.3	-15.6	23. 1	49.7	50.0	70.0	26.9	20.3	100.0	201.3	



#### ■ Operating Mode: DVI IN Display

Set the brightness control to maximum Set the contrast control to maximum

Scan three resolutions (800\*600@60Hz, 1024\*768@60Hz, 1920\*1080@60Hz), then choose the worst one (1920\*1080@60Hz) for final evaluation.



Final Result															
	No.	Frequency	(P)	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle	Remark
		[MHz]		[dB(µV)]	[dB(µV)]	[dB(1/m)]	[dB(µV/m)]	$[dB(\mu V/m)]$	$[dB(\mu V/m)]$	$[dB(\mu V/m)]$	[dB]	[dB]	[cm]	[°]	
	1	1782.045	Н	51.5	67.8	-13.7	37.8	54. 1	50.0	70.0	12. 2	15. 9	100.0	222. 3	
	2	1929. 271	V	55.8	68. 9	-13.1	42.7	55.8	50.0	70.0	7.3	14.2	101.0	191.2	
	3	1484. 113	V	53. 7	67. 5	-15. 1	38. 6	52. 4	50.0	70.0	11.4	17.6	204.0	124.6	
	4	1485.668	Н	56. 2	71.2	-15. 1	41. 1	56. 1	50.0	70.0	8.9	13.9	106.0	211.9	
	5	1781. 432	V	54.0	68. 7	-13.7	40. 3	55.0	50.0	70.0	9.7	15.0	101.0	177.4	
	6	1632. 955	Н	56.6	66. 7	-14.3	42. 3	52. 4	50.0	70.0	7.7	17.6	101.0	215.4	
	7	1500. 125	Н	57.4	62.8	-15.0	42. 4	47.8	50.0	70.0	7.6	22. 2	101.0	236.6	
	8	1725. 125	Н	45. 9	62.8	-13.6	32. 3	49. 2	50.0	70.0	17.7	20.8	101.0	236.6	
	9	1929. 375	Н	38.8	57.4	-13. 1	25. 7	44. 3	50.0	70.0	24. 3	25. 7	101.0	200.9	
	10	1633, 000	V	47.6	59. 3	-14.3	33, 3	45.0	50.0	70.0	16.7	25.0	101.0	227.6	

Note) Receiving antenna polarization: Horizontal, Vertical

Test Distance: 3m, Antenna Height: 1 to 4 meters

Result (Average) = Reading AV + C.F (Antenna Factor + Cable Loss - Amp. Gain)

Margin AV (Average) = Limit - Result AV

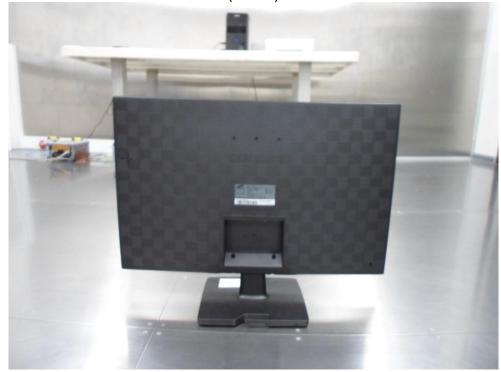


# Appendix A – EUT photography

(Front)



(Rear)



**LCD Monitor** 

LS27B240



(Side)



(Power Adapter)







(Panel 1)



**LCD Monitor** 

LS27B240



# (Board 1)





**LCD Monitor** 

LS27B240



# (Board 2)







### LS27B240



(Crystal)

