Application for FCC Certificate
On Behalf of
S3 Graphics, Co., Ltd.

Chrome 530 Graphic Card

Model No.: S3G003

Serial No.: 081029-S3G003B-191

FCC ID : WN9S3G003

Prepared For : S3 Graphics, Co., Ltd.
1025 Mission Court, Fremont, CA 94539, USA

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F08075
Date of Test : Dec 09-10, 2008
Date of Report : Dec 15, 2008

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TEST REPORT FOR FCC CERTIFICATE

Applicant	:	S3 Graphics, Co., Ltd.
Manufacturer	:	Excelsior Electronics Limited
EUT Description	:	Chrome 530 Graphic Card
		(A) Model No. : S3G003
		(B) Serial No. : 081029-S3G003B-191
		(C) Power Supply : DC 12V/3.3V
		(D) Test Voltage : AC 120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008 AND ANSI C63.4-2003

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: S3G003; S/N: 081029-S3G003B-191) which was tested in 3m anechoic chamber on Dec 09-10, 2008 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Dec 09-10, 2008 Date of Report : Dec 15, 2008

Producer : Alan He
ALAN HE / Assistant

Review : Dio Yang
DIO YANG / Supervisor

AUDIX® For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Assistant Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	Chrome 530 Graphic Card
Type of EUT	:	☑ Production ☐ Pre-product ☐ Pro-type
Model No.	:	S3G003
Serial No.	:	081029-S3G003B-191
Max Resolution	:	CRT 2048*1536@75Hz DVI 2560*1600@60Hz HDMI 1920*1080p
Rated Power	:	30W
Rated Voltage	:	12V/3.3V
Rated Current	:	2A
Highest Work Freq.	:	1000MHz
Output Freq. Range	:	25MHz-333MHz
Applicant	:	S3 Graphics, Co., Ltd. 1025 Mission Court, Fremont, CA 94539, USA
Manufacturer	:	Excelsior Electronics Limited Sam Tun Management Zone, Houjie, Dongguan, Guangdong, P.R.China

Remark:

The EUT is a Chrome 530 Graphic Card which input/output ports as follows:

(1) One HDMI Port
: Connected with LCD Monitor

(2) One DVI Port
: Connected with LCD Monitor or
Connected with CRT Monitor through DVI to D-Sub converter

2.2 Peripherals

2.2.1 PC

Manufacturer	:	HP
Model Number	:	dx6120MT
Serial Number	:	CNG53004J2
Power Cord	:	Unshielded, Detachable, 1.80m
Certificate	:	VCCI, FCC DoC, CE, CCC (A000111) MIC (E-A011-04-2659B)

2.2.2 Printer

Manufacturer	:	HP
Model Number	:	C3990A
Serial Number	:	JPZX020487
Data Cable	:	Shielded, Detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	7668200662248
Data Cable	:	Shielded, Undetachable, 1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 Mouse

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	6965712071551
Data Cable	:	Shielded, Undetachable, 1.80m.
Certificate	:	FCC DoC, VCCI, CE/EMC, MIC, GS

2.2.5 Modem

Manufacturer	:	TP-LINK
Model Number	:	TM-EC5658V
Serial Number	:	07123301053
Data Cable	:	Shielded, Detachable, 1.80m
Certificate	:	CE/EMC, FCC DoC, CCC

2.2.6 Monitor #1 (CRT Monitor)

Manufacturer	:	ViewSonic
Model Number	:	VS10284
Serial Number	:	P9K052800024
Data Cable	:	Shielded, Detachable, 1.80m, with two cores
Power Cord	:	Shielded, Detachable, 1.80m
Certificate	:	FCC DoC, CE/EMC, BSMI, CCC

2.2.7 Monitor #2 (LCD Monitor)

Manufacturer	:	BENQ
Model Number	:	FP241W
Serial Number	:	ET61700278CL0
Data Cable	:	Shielded, Detachable, 1.80m
Certificate	:	CCC, FCC DoC, CE/EMC, VCCI , BSMI ID: R43002

2.2.8 Monitor #3 (LCD Monitor)

Manufacturer	:	DELL
Model Number	:	3007WFPt
Serial Number	:	CN-0YW258-71618-78A-G068
Data Cable	:	Shielded, Detachable, 1.80m, with two cores
Certificate	:	FCC DoC, CE/EMC, BSMI, CCC, C-TICK, MIC, VCCI

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on July 26, 2006 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty:		U = 1.26 dB
Radiated Emission Expanded Uncertainty	:	U = 3.02 dB

3 CONDUCTED EMISSION TEST

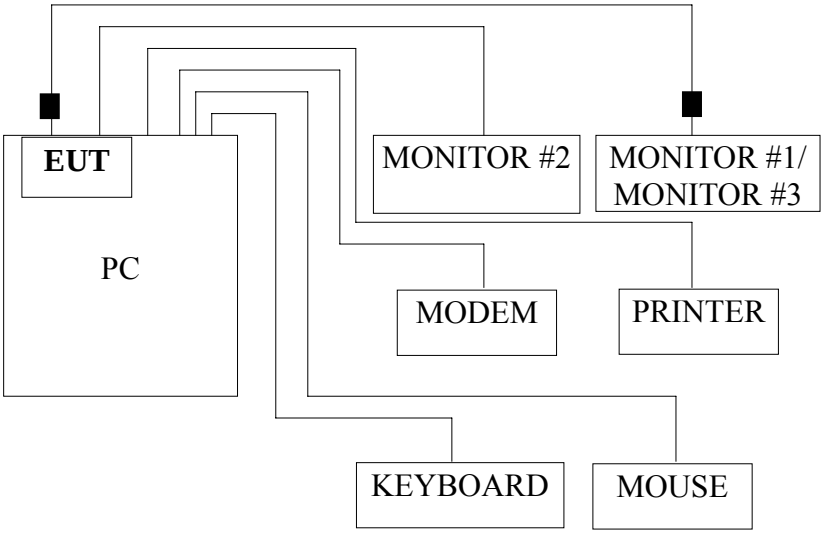
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESHS10	830223/007	Apr 02, 2008	Apr 02, 2009
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2008	Apr 02, 2009
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2008	Apr 02, 2009
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2008	Mar 19, 2009
5.	50Ω Terminator	Anritsu	BNC	001	Apr 02, 2008	Apr 02, 2009
6.	Software	Audix	E3	SET00200 9804M592	--	--

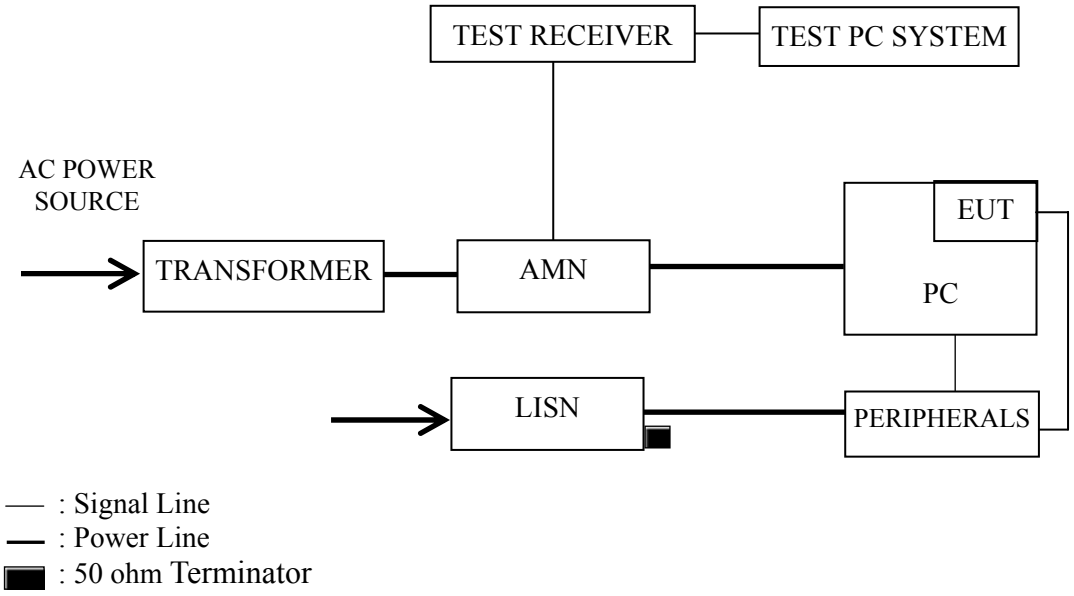
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

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

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to monitors through EUT, the monitors' screen displayed and filled with “H” pattern by it’s resolution. (Via DVI and HDMI output).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

3.5.6 The other peripheral devices were driven and operated during the test.

3.5.7 The test modes are as follows:

Test Mode	Test Mode
DVI + HDMI 640*480@60Hz	CRT + HDMI 640*480@60Hz
DVI + HDMI 1600*1200@60Hz	CRT + HDMI 1600*1200@60Hz
DVI + HDMI 1680*1050@60Hz	CRT + HDMI 1680*1050@60Hz
DVI + HDMI 1920*1200@60Hz	CRT + HDMI 1920*1200@60Hz
DVI + HDMI 2560*1600@60Hz	CRT + HDMI 2048*1536@75Hz

3.6 Test Procedures

The PC was connected to the power mains through an Artificial Mains Network (AMN). The EUT was installed in PC. The other peripheral devices power cord was connected to the power mains through a line impedance stabilization network (L.I.S.N). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESHS10 was set at 10 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
DVI + HDMI 640*480@60Hz	P12
DVI + HDMI 1600*1200@60Hz	P13
DVI + HDMI 1680*1050@60Hz	P14
DVI + HDMI 1920*1200@60Hz	P15
DVI + HDMI 2560*1600@60Hz	P16
CRT + HDMI 640*480@60Hz	P17
CRT + HDMI 1600*1200@60Hz	P18
CRT + HDMI 1680*1050@60Hz	P19
CRT + HDMI 1920*1200@60Hz	P20
CRT + HDMI 2048*1536@75Hz	P21

NOTE 1 – Factor = Cable Loss + AMN Factor.
NOTE 2 – Emission Level = Meter Reading + Factor.
NOTE 3 – "QP" means "Quasi-Peak" values, "AV" means "Average" values.
NOTE 4 – The worst case is for CRT + HDMI 1680*1050@60Hz test mode. The worst emission is detected at 0.182 MHz (Average Value) with corrected signal level of 46.01 dB (μV) (limit is 54.42 dB (μV)), when the Line of the PC is connected to AMN.

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : DVI + HDMI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	50.60	0.21	50.81	64.42	13.61	QP
	0.365	38.62	0.22	38.84	58.61	19.77	
	0.731	36.59	0.23	36.82	56.00	19.18	
	0.974	37.90	0.26	38.16	56.00	17.84	
	13.267	38.30	0.67	38.97	60.00	21.03	
	21.147	41.63	0.77	42.40	60.00	17.60	
	0.182	43.60	0.21	43.81	54.42	10.61	AV
	0.365	29.62	0.22	29.84	48.61	18.77	
	0.731	28.59	0.23	28.82	46.00	17.18	
	0.974	30.90	0.26	31.16	46.00	14.84	
	13.267	30.30	0.67	30.97	50.00	19.03	
	21.147	33.63	0.77	34.40	50.00	15.60	
Neutral	0.182	51.31	0.20	51.51	64.37	12.86	QP
	0.365	38.07	0.22	38.29	58.61	20.32	
	0.731	38.32	0.23	38.55	56.00	17.45	
	1.464	36.49	0.26	36.75	56.00	19.25	
	13.197	41.09	0.58	41.67	60.00	18.33	
	21.600	40.96	0.60	41.56	60.00	18.44	
	0.182	**44.31**	**0.20**	**44.51**	**54.37**	**9.86**	AV
	0.365	31.07	0.22	31.29	48.61	17.32	
	0.731	30.32	0.23	30.55	46.00	15.45	
	1.464	29.49	0.26	29.75	46.00	16.25	
	13.197	33.09	0.58	33.67	50.00	16.33	
	21.600	33.96	0.60	34.56	50.00	15.44	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : DVI + HDMI 1600*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.20	0.21	51.41	64.37	12.96	QP
	0.243	39.63	0.21	39.84	62.00	22.16	
	0.853	38.74	0.25	38.99	56.00	17.01	
	2.201	32.78	0.29	33.07	56.00	22.93	
	13.267	39.85	0.67	40.52	60.00	19.48	
	23.387	40.33	0.84	41.17	60.00	18.83	
	0.182	**45.30**	**0.21**	**45.51**	**54.37**	**8.86**	AV
	0.243	32.50	0.21	32.71	52.00	19.29	
	0.853	33.59	0.25	33.84	46.00	12.16	
	2.201	26.50	0.29	26.79	46.00	19.21	
	13.267	31.70	0.67	32.37	50.00	17.63	
	23.387	34.16	0.84	35.00	50.00	15.00	
Neutral	0.182	51.31	0.20	51.51	64.42	12.91	QP
	0.365	36.30	0.22	36.52	58.61	22.09	
	0.727	36.48	0.23	36.71	56.00	19.29	
	2.055	33.37	0.24	33.61	56.00	22.39	
	13.197	40.49	0.58	41.07	60.00	18.93	
	23.387	40.03	0.65	40.68	60.00	19.32	
	0.182	45.31	0.20	45.51	54.42	8.91	AV
	0.365	31.30	0.22	31.52	48.61	17.09	
	0.731	31.26	0.23	31.49	46.00	14.51	
	2.055	25.00	0.24	25.24	46.00	20.76	
	13.197	33.49	0.58	34.07	50.00	15.93	
	23.387	34.03	0.65	34.68	50.00	15.32	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : DVI + HDMI 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.37	0.20	51.57	64.42	12.85	QP
	0.243	40.13	0.21	40.34	62.00	21.66	
	0.853	38.92	0.23	39.15	56.00	16.85	
	0.974	38.33	0.23	38.56	56.00	17.44	
	13.267	41.20	0.58	41.78	60.00	18.22	
	20.594	40.46	0.57	41.03	60.00	18.97	
	0.182	43.31	0.20	43.51	54.37	10.86	AV
	0.243	31.13	0.21	31.34	52.00	20.66	
	0.853	30.92	0.23	31.15	46.00	14.85	
	0.974	29.33	0.23	29.56	46.00	16.44	
	13.267	33.20	0.58	33.78	50.00	16.22	
	20.594	32.46	0.57	33.03	50.00	16.97	
Neutral	0.182	50.48	0.21	50.69	64.37	13.68	QP
	0.365	37.78	0.22	38.00	58.61	20.61	
	0.731	36.08	0.23	36.31	56.00	19.69	
	2.201	31.93	0.29	32.22	56.00	23.78	
	13.267	37.89	0.67	38.56	60.00	21.44	
	24.015	38.20	0.86	39.06	60.00	20.94	
	0.182	**44.15**	**0.21**	**44.36**	**54.37**	**10.01**	AV
	0.365	31.06	0.22	31.28	48.61	17.33	
	0.731	30.06	0.23	30.29	46.00	15.71	
	2.201	24.35	0.29	24.64	46.00	21.36	
	13.267	31.19	0.67	31.86	50.00	18.14	
	24.015	32.32	0.86	33.18	50.00	16.82	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : DVI + HDMI 1920*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.48	0.21	51.69	64.37	12.68	QP
	0.243	38.23	0.21	38.44	62.00	23.56	
	0.853	38.80	0.25	39.05	56.00	16.95	
	1.464	36.30	0.29	36.59	56.00	19.41	
	13.197	39.19	0.67	39.86	60.00	20.14	
	24.015	39.84	0.86	40.70	60.00	19.30	
	0.182	44.15	0.21	44.36	54.37	10.01	AV
	0.243	33.62	0.21	33.83	52.00	18.17	
	0.853	32.80	0.25	33.05	46.00	12.95	
	1.464	29.30	0.29	29.59	46.00	16.41	
	13.197	32.19	0.67	32.86	50.00	17.14	
	24.015	33.84	0.86	34.70	50.00	15.30	
Neutral	0.182	51.33	0.20	51.53	64.37	12.84	QP
	0.365	38.50	0.22	38.72	58.61	19.89	
	0.853	38.85	0.23	39.08	56.00	16.92	
	2.554	31.16	0.28	31.44	56.00	24.56	
	13.267	41.52	0.58	42.10	60.00	17.90	
	20.814	40.87	0.58	41.45	60.00	18.55	
	0.182	**44.33**	**0.20**	**44.53**	**54.37**	**9.84**	AV
	0.365	31.50	0.22	31.72	48.61	16.89	
	0.853	31.85	0.23	32.08	46.00	13.92	
	2.554	24.16	0.28	24.44	46.00	21.56	
	13.267	33.52	0.58	34.10	50.00	15.90	
	20.814	32.87	0.58	33.45	50.00	16.55	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : DVI + HDMI 2560*1600@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.52	0.21	51.73	64.37	12.64	QP
	0.242	40.71	0.21	40.92	62.04	21.12	
	0.853	38.80	0.25	39.05	56.00	16.95	
	1.464	36.57	0.29	36.86	56.00	19.14	
	13.479	39.21	0.68	39.89	60.00	20.11	
	24.529	41.89	0.88	42.77	60.00	17.23	
	0.182	**45.52**	**0.21**	**45.73**	**54.37**	**8.64**	AV
	0.242	31.71	0.21	31.92	52.04	20.12	
	0.853	31.80	0.25	32.05	46.00	13.95	
	1.464	30.46	0.29	30.75	46.00	15.25	
	13.479	32.21	0.68	32.89	50.00	17.11	
	24.529	35.89	0.88	36.77	50.00	13.23	
Neutral	0.182	51.39	0.20	51.59	64.37	12.78	QP
	0.242	40.21	0.21	40.42	62.04	21.62	
	0.731	38.01	0.23	38.24	56.00	17.76	
	2.077	34.41	0.25	34.66	56.00	21.34	
	13.479	41.58	0.58	42.16	60.00	17.84	
	23.387	42.27	0.65	42.92	60.00	17.08	
	0.182	44.60	0.20	44.80	54.37	9.57	AV
	0.242	33.60	0.21	33.81	52.04	18.23	
	0.731	32.60	0.23	32.83	46.00	13.17	
	2.077	28.36	0.25	28.61	46.00	17.39	
	13.479	34.26	0.58	34.84	50.00	15.16	
	23.387	35.21	0.65	35.86	50.00	14.14	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : CRT + HDMI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.38	0.21	51.59	64.42	12.83	QP
	0.242	40.67	0.21	40.88	62.04	21.16	
	0.731	37.36	0.23	37.59	56.00	18.41	
	1.464	36.18	0.29	36.47	56.00	19.53	
	13.267	37.63	0.67	38.30	60.00	21.70	
	27.271	44.52	1.00	45.52	60.00	14.48	
	0.182	41.35	0.21	41.56	54.42	12.86	AV
	0.242	32.67	0.21	32.88	52.04	19.16	
	0.731	31.36	0.23	31.59	46.00	14.41	
	1.464	30.51	0.29	30.80	46.00	15.20	
	13.267	32.16	0.67	32.83	50.00	17.17	
	27.271	**38.52**	**1.00**	**39.52**	**50.00**	**10.48**	
Neutral	0.182	51.18	0.20	51.38	64.37	12.99	QP
	0.365	38.26	0.22	38.48	58.61	20.13	
	0.731	38.19	0.23	38.42	56.00	17.58	
	1.464	37.16	0.26	37.42	56.00	18.58	
	13.197	40.13	0.58	40.71	60.00	19.29	
	27.271	44.15	0.71	44.86	60.00	15.14	
	0.182	43.18	0.20	43.38	54.37	10.99	AV
	0.365	29.35	0.22	29.57	48.61	19.04	
	0.731	30.19	0.23	30.42	46.00	15.58	
	1.464	29.65	0.26	29.91	46.00	16.09	
	13.197	31.13	0.58	31.71	50.00	18.29	
	27.271	37.15	0.71	37.86	50.00	12.14	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : CRT + HDMI 1600*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.34	0.21	51.55	64.42	12.87	QP
	0.365	38.74	0.22	38.96	58.61	19.65	
	0.731	36.55	0.23	36.78	56.00	19.22	
	1.464	37.08	0.29	37.37	56.00	18.63	
	12.988	37.45	0.67	38.12	60.00	21.88	
	27.271	44.52	1.00	45.52	60.00	14.48	
	0.182	40.39	0.21	40.60	54.42	13.82	AV
	0.365	31.59	0.22	31.81	48.61	16.80	
	0.731	29.55	0.23	29.78	46.00	16.22	
	1.464	30.08	0.29	30.37	46.00	15.63	
	12.988	29.45	0.67	30.12	50.00	19.88	
	27.271	**36.52**	**1.00**	**37.52**	**50.00**	**12.48**	
Neutral	0.182	51.18	0.20	51.38	64.42	13.04	QP
	0.365	38.26	0.22	38.48	58.61	20.13	
	0.853	38.96	0.23	39.19	56.00	16.81	
	1.464	36.57	0.26	36.83	56.00	19.17	
	13.267	39.33	0.58	39.91	60.00	20.09	
	27.271	43.66	0.71	44.37	60.00	15.63	
	0.182	41.59	0.20	41.79	54.42	12.63	AV
	0.365	32.26	0.22	32.48	48.61	16.13	
	0.853	31.96	0.23	32.19	46.00	13.81	
	1.464	30.29	0.26	30.55	46.00	15.45	
	13.267	31.33	0.58	31.91	50.00	18.09	
	27.271	36.66	0.71	37.37	50.00	12.63	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : CRT + HDMI 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.40	0.21	51.61	64.42	12.81	QP
	0.365	38.28	0.22	38.50	58.61	20.11	
	0.731	38.01	0.23	38.24	56.00	17.76	
	1.464	36.30	0.29	36.59	56.00	19.41	
	13.267	38.16	0.67	38.83	60.00	21.17	
	27.271	43.75	1.00	44.75	60.00	15.25	
	0.182	**45.80**	**0.21**	**46.01**	**54.42**	**8.41**	AV
	0.365	31.78	0.22	32.00	48.61	16.61	
	0.731	32.50	0.23	32.73	46.00	13.27	
	1.464	30.50	0.29	30.79	46.00	15.21	
	13.267	32.11	0.67	32.78	50.00	17.22	
	27.271	37.45	1.00	38.45	50.00	11.55	
Neutral	0.182	51.32	0.20	51.52	64.42	12.90	QP
	0.365	38.18	0.22	38.40	58.61	20.21	
	0.853	39.06	0.23	39.29	56.00	16.71	
	1.464	37.26	0.26	37.52	56.00	18.48	
	13.197	39.83	0.58	40.41	60.00	19.59	
	27.271	44.65	0.71	45.36	60.00	14.64	
	0.182	43.32	0.20	43.52	54.42	10.90	AV
	0.365	30.18	0.22	30.40	48.61	18.21	
	0.853	30.06	0.23	30.29	46.00	15.71	
	1.464	29.26	0.26	29.52	46.00	16.48	
	13.197	32.83	0.58	33.41	50.00	16.59	
	27.271	37.65	0.71	38.36	50.00	11.64	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : CRT + HDMI 1920*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.30	0.21	51.51	64.37	12.86	QP
	0.365	38.58	0.22	38.80	58.61	19.81	
	0.853	38.56	0.25	38.81	56.00	17.19	
	1.464	36.53	0.29	36.82	56.00	19.18	
	13.197	37.36	0.67	38.03	60.00	21.97	
	27.271	44.44	1.00	45.44	60.00	14.56	
	0.182	**44.30**	**0.21**	**44.51**	**54.37**	**9.86**	AV
	0.365	33.58	0.22	33.80	48.61	14.81	
	0.853	31.56	0.25	31.81	46.00	14.19	
	1.464	31.53	0.29	31.82	46.00	14.18	
	13.197	31.36	0.67	32.03	50.00	17.97	
	27.271	38.44	1.00	39.44	50.00	10.56	
Neutral	0.182	51.31	0.20	51.51	64.42	12.91	QP
	0.365	38.15	0.22	38.37	58.61	20.24	
	0.731	37.95	0.23	38.18	56.00	17.82	
	0.974	38.22	0.23	38.45	56.00	17.55	
	13.197	40.61	0.58	41.19	60.00	18.81	
	27.271	43.06	0.71	43.77	60.00	16.23	
	0.182	44.31	0.20	44.51	54.42	9.91	AV
	0.365	30.15	0.22	30.37	48.61	18.24	
	0.731	31.95	0.23	32.18	46.00	13.82	
	0.974	32.22	0.23	32.45	46.00	13.55	
	13.197	33.61	0.58	34.19	50.00	15.81	
	27.271	36.06	0.71	36.77	50.00	13.23	

TEST ENGINEER: YONG XU

EUT : Chrome 530 Graphic Card Temperature : 25℃

Model No. : S3G003 Humidity : 55%RH

Serial No. : 081029-S3G003B-191 Date of Test : Dec 12, 2008

Test Mode : CRT + HDMI 2048*1536@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	51.67	0.21	51.88	64.42	12.54	QP
	0.365	38.88	0.22	39.10	58.61	19.51	
	0.984	38.28	0.26	38.54	56.00	17.46	
	1.464	36.66	0.29	36.95	56.00	19.05	
	13.267	37.03	0.67	37.70	60.00	22.30	
	27.271	44.45	1.00	45.45	60.00	14.55	
	0.182	**44.60**	**0.21**	**44.81**	**54.42**	**9.61**	AV
	0.365	33.20	0.22	33.42	48.61	15.19	
	0.984	32.10	0.26	32.36	46.00	13.64	
	1.464	30.60	0.29	30.89	46.00	15.11	
	13.267	32.16	0.67	32.83	50.00	17.17	
	27.271	38.32	1.00	39.32	50.00	10.68	
Neutral	0.182	51.41	0.20	51.61	64.37	12.76	QP
	0.243	40.42	0.21	40.63	62.00	21.37	
	0.853	38.72	0.23	38.95	56.00	17.05	
	1.464	37.15	0.26	37.41	56.00	18.59	
	13.197	39.94	0.58	40.52	60.00	19.48	
	27.271	43.53	0.71	44.24	60.00	15.76	
	0.182	43.41	0.20	43.61	54.37	10.76	AV
	0.243	33.42	0.21	33.63	52.00	18.37	
	0.853	31.72	0.23	31.95	46.00	14.05	
	1.464	31.15	0.26	31.41	46.00	14.59	
	13.197	33.94	0.58	34.52	50.00	15.48	
	27.271	36.53	0.71	37.24	50.00	12.76	

TEST ENGINEER: YONG XU

4 RADIATED EMISSION TEST

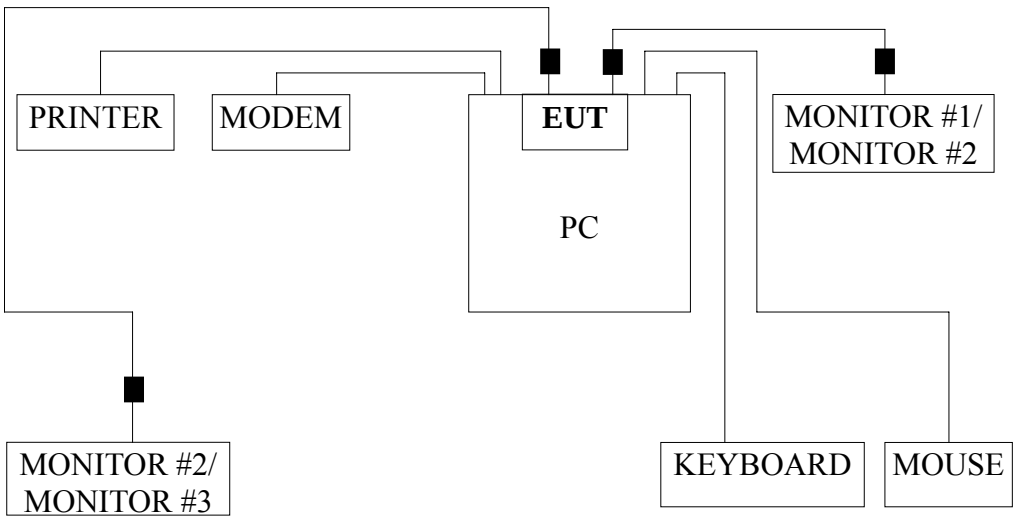
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2008	Mar 07, 2009
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2008	Mar 19, 2009
3.	Preamplifier	HP	8449B	3008A00864	May 19, 2008	May 19, 2009
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2009
5.	Horn Antenna	EMCO	3115	9607-4878	Apr 24, 2008	Apr 24, 2009
6.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2008	May 19, 2009
7.	Software	Audix	E3	SET00200 9912M295-2	--	--

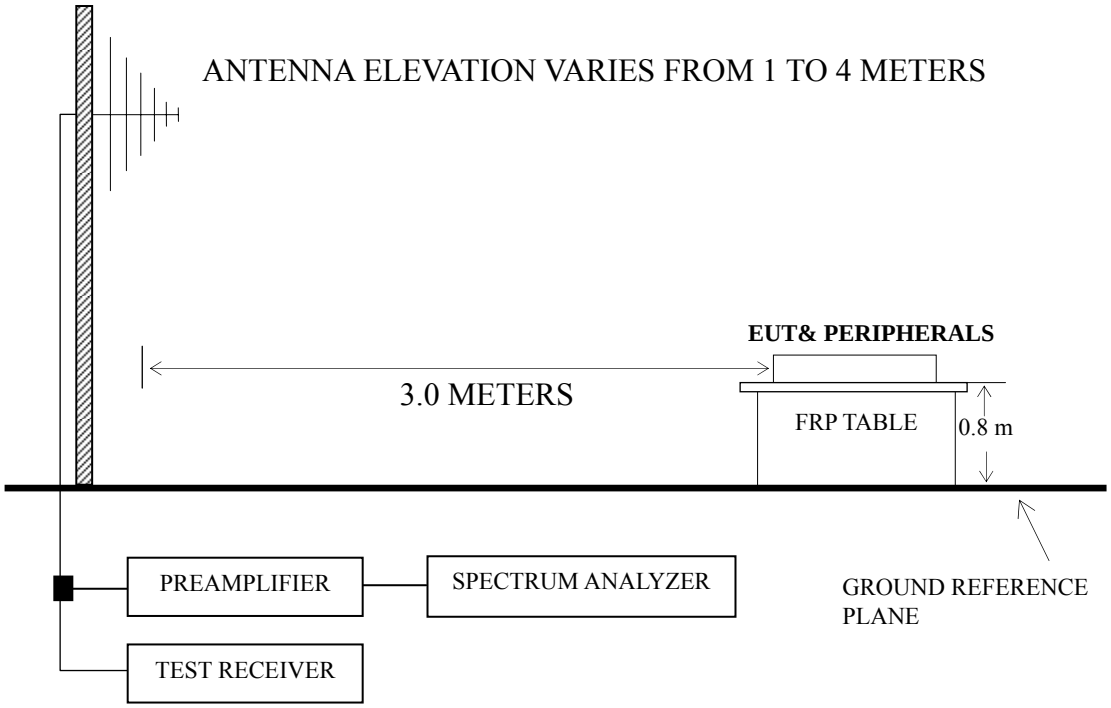
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■: Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		(μV/m)	dB (μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna or Horn Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 5 GHz was checked for all test modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
DVI + HDMI 640*480@60Hz	P26
DVI + HDMI 1600*1200@60Hz	P27
DVI + HDMI 1680*1050@60Hz	P28
DVI + HDMI 1920*1200@60Hz	P29
DVI + HDMI 2560*1600@60Hz	P30
CRT + HDMI 640*480@60Hz	P31
CRT + HDMI 1600*1200@60Hz	P32
CRT + HDMI 1680*1050@60Hz	P33
CRT + HDMI 1920*1200@60Hz	P34
CRT + HDMI 2048*1536@75Hz	P35

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.(< 1GHz)

NOTE 2 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.(> 1GHz)

NOTE 3 – The emission levels that are 20dB below the official limit are not reported.

NOTE 4 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 5 – All reading are Quasi-Peak values below or equal to 1GHz and Peak values above 1GHz. For measurements above 1 GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

NOTE 6 – The worst case is for CRT + HDMI 1680*1050@60Hz test mode. The worst emission at horizontal polarization was detected at 812.790 MHz with corrected signal level of 39.45 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.10 m height and the turntable was at 225°. The worst emission at vertical polarization was detected at 615.880 MHz with corrected signal level of 37.95 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 120°.

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	DVI + HDMI 640*480@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	70.740	16.30	6.58	0.87	--	23.75	40.00	16.25	QP
	142.520	11.27	11.91	0.91	--	24.09	43.50	19.41	
	200.720	15.81	10.74	1.08	--	27.63	43.50	15.87	
	300.630	13.28	13.93	1.54	--	28.75	46.00	17.25	
	432.550	10.72	16.95	2.16	--	29.83	46.00	16.17	
	598.420	**11.50**	**19.20**	**2.59**	--	**33.29**	**46.00**	**12.71**	
	1332.000	49.29	25.54	4.45	36.87	42.41	74.00	31.59	PK
	1976.000	44.61	27.54	5.28	35.73	41.70	74.00	32.30	
	2612.000	46.78	29.51	5.82	35.11	47.00	74.00	27.00	
	2956.000	47.95	30.40	6.92	34.83	50.44	74.00	23.56	
	3744.000	43.68	32.12	7.93	33.88	49.85	74.00	24.15	
	4184.000	43.31	32.76	9.04	33.84	51.27	74.00	22.73	
Vertical	**35.820**	**9.45**	**16.45**	**0.64**	--	**26.54**	**40.00**	**13.46**	QP
	126.030	10.43	12.71	0.89	--	24.03	43.50	19.47	
	228.850	15.19	12.07	1.20	--	28.46	46.00	17.54	
	329.730	11.32	14.74	1.71	--	27.77	46.00	18.23	
	500.450	8.33	17.90	2.37	--	28.60	46.00	17.40	
	600.360	7.15	19.20	2.59	--	28.94	46.00	17.06	
	1332.000	49.50	25.54	4.45	36.87	42.62	74.00	31.38	PK
	1848.000	45.11	27.19	5.23	35.93	41.60	74.00	32.40	
	2200.000	44.16	28.28	5.30	35.49	42.25	74.00	31.75	
	2908.000	43.76	30.27	6.72	34.87	45.88	74.00	28.12	
	3832.000	42.93	32.28	8.20	33.79	49.62	74.00	24.38	
	4252.000	43.06	32.82	9.21	33.92	51.17	74.00	22.83	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	DVI + HDMI 1600*1200@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	69.770	18.31	6.50	0.87	--	25.68	40.00	14.32	QP
	142.520	11.26	11.91	0.91	--	24.08	43.50	19.42	
	228.850	16.30	12.07	1.20	--	29.57	46.00	16.43	
	432.550	10.02	16.95	2.16	--	29.13	46.00	16.87	
	540.220	13.17	18.42	2.48	--	34.07	46.00	11.93	
	745.860	**10.90**	**20.17**	**3.19**	--	**34.26**	**46.00**	**11.74**	
	1340.000	49.84	25.57	4.45	36.85	43.01	74.00	30.99	PK
	1500.000	46.65	26.14	4.71	36.53	40.97	74.00	33.03	
	2140.000	48.20	28.08	5.30	35.55	46.03	74.00	27.97	
	2968.000	44.33	30.42	6.99	34.83	46.91	74.00	27.09	
	3680.000	44.01	31.99	7.78	33.95	49.83	74.00	24.17	
	4688.000	42.19	33.17	9.84	34.46	50.74	74.00	23.26	
Vertical	38.730	12.30	14.62	0.67	--	27.59	40.00	12.41	QP
	122.150	10.53	12.91	0.88	--	24.32	43.50	19.18	
	228.850	15.02	12.07	1.20	--	28.29	46.00	17.71	
	364.650	9.72	15.73	1.89	--	27.34	46.00	18.66	
	540.220	10.11	18.42	2.48	--	31.01	46.00	14.99	
	675.050	**13.55**	**19.58**	**2.95**	--	**36.08**	**46.00**	**9.92**	
	1332.000	47.92	25.54	4.45	36.87	41.04	74.00	32.96	PK
	1496.000	46.35	26.13	4.71	36.54	40.65	74.00	33.35	
	2124.000	45.72	28.03	5.30	35.57	43.48	74.00	30.52	
	2500.000	47.98	29.19	5.50	35.20	47.47	74.00	26.53	
	3076.000	43.85	30.69	7.10	34.70	46.94	74.00	27.06	
	4012.000	42.28	32.61	8.63	33.62	49.90	74.00	24.10	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	DVI + HDMI 1680*1050@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	68.800	15.08	6.51	0.87	--	22.46	40.00	17.54	QP
	142.520	10.86	11.91	0.91	--	23.68	43.50	19.82	
	200.720	16.16	10.74	1.08	--	27.98	43.50	15.52	
	329.730	10.24	14.74	1.71	--	26.69	46.00	19.31	
	534.400	13.04	18.36	2.46	--	33.86	46.00	12.14	
	668.260	**14.21**	**19.55**	**2.91**	--	**36.67**	**46.00**	**9.33**	
	1340.000	51.11	25.57	4.45	36.85	44.28	74.00	29.72	PK
	1496.000	46.96	26.13	4.71	36.54	41.26	74.00	32.74	
	2148.000	49.22	28.12	5.30	35.54	47.10	74.00	26.90	
	2496.000	52.05	29.17	5.50	35.21	51.51	74.00	22.49	
	2964.000	45.37	30.42	6.99	34.83	47.95	74.00	26.05	
	3720.000	43.51	32.07	7.89	33.90	49.57	74.00	24.43	
Vertical	38.730	11.78	14.62	0.67	--	27.07	40.00	12.93	QP
	105.660	10.77	11.95	0.86	--	23.58	43.50	19.92	
	228.850	14.69	12.07	1.20	--	27.96	46.00	18.04	
	329.730	11.53	14.74	1.71	--	27.98	46.00	18.02	
	534.400	10.04	18.36	2.46	--	30.86	46.00	15.14	
	809.880	**12.93**	**20.80**	**3.34**	--	**37.07**	**46.00**	**8.93**	
	1332.000	48.55	25.54	4.45	36.87	41.67	74.00	32.33	PK
	2104.000	45.84	27.95	5.30	35.59	43.50	74.00	30.50	
	2304.000	46.88	28.61	5.30	35.38	45.41	74.00	28.59	
	2964.000	44.64	30.42	6.99	34.83	47.22	74.00	26.78	
	3592.000	43.15	31.80	7.52	34.05	48.42	74.00	25.58	
	4140.000	42.44	32.72	8.96	33.78	50.34	74.00	23.66	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	DVI + HDMI 1920*1200@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	68.800	16.92	6.51	0.87	--	24.30	40.00	15.70	QP
	142.520	10.82	11.91	0.91	--	23.64	43.50	19.86	
	200.720	17.31	10.74	1.08	--	29.13	43.50	14.37	
	300.630	9.94	13.93	1.54	--	25.41	46.00	20.59	
	500.450	10.95	17.90	2.37	--	31.22	46.00	14.78	
	615.880	**14.38**	**19.29**	**2.67**	--	**36.34**	**46.00**	**9.66**	
	1496.000	47.28	26.13	4.71	36.54	41.58	74.00	32.42	PK
	2016.000	45.12	27.66	5.30	35.68	42.40	74.00	31.60	
	2572.000	51.00	29.40	5.68	35.14	50.94	74.00	23.06	
	3432.000	43.05	31.49	7.31	34.24	47.61	74.00	26.39	
	4052.000	41.29	32.64	8.76	33.66	49.03	74.00	24.97	
	4544.000	41.38	33.06	9.81	34.28	49.97	74.00	24.03	
Vertical	69.770	16.17	6.50	0.87	--	23.54	40.00	16.46	QP
	107.600	4.82	12.10	0.86	--	17.78	43.50	25.72	
	200.720	13.51	10.74	1.08	--	25.33	43.50	18.17	
	300.630	14.22	13.93	1.54	--	29.69	46.00	16.31	
	497.540	11.46	17.88	2.37	--	31.71	46.00	14.29	
	615.880	**12.64**	**19.29**	**2.67**	--	**34.60**	**46.00**	**11.40**	
	1332.000	48.31	25.54	4.45	36.87	41.43	74.00	32.57	PK
	1848.000	46.02	27.19	5.23	35.93	42.51	74.00	31.49	
	2496.000	47.14	29.17	5.50	35.21	46.60	74.00	27.40	
	2948.000	43.94	30.38	6.92	34.84	46.40	74.00	27.60	
	3696.000	43.09	32.01	7.83	33.94	48.99	74.00	25.01	
	4556.000	41.97	33.07	9.81	34.30	50.55	74.00	23.45	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	DVI + HDMI 2560*1600@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	33.880	11.16	17.44	0.61	--	29.21	40.00	10.79	QP
	69.770	16.48	6.50	0.87	--	23.85	40.00	16.15	
	142.520	12.98	11.91	0.91	--	25.80	43.50	17.70	
	228.850	16.18	12.07	1.20	--	29.45	46.00	16.55	
	329.730	11.51	14.74	1.71	--	27.96	46.00	18.04	
	500.450	**11.21**	**17.90**	**2.37**	--	**31.48**	**46.00**	**14.52**	
	1256.000	48.69	25.25	4.30	37.04	41.20	74.00	32.80	PK
	1600.000	45.68	26.48	4.92	36.34	40.74	74.00	33.26	
	2152.000	48.59	28.12	5.30	35.53	46.48	74.00	27.52	
	2964.000	44.87	30.42	6.99	34.83	47.45	74.00	26.55	
	4080.000	43.01	32.66	8.80	33.70	50.77	74.00	23.23	
	4680.000	42.06	33.16	9.84	34.44	50.62	74.00	23.38	
Vertical	39.700	12.01	14.08	0.68	--	26.77	40.00	13.23	QP
	105.660	10.66	11.95	0.86	--	23.47	43.50	20.03	
	171.620	13.93	10.15	0.99	--	25.07	43.50	18.43	
	329.730	11.07	14.74	1.71	--	27.52	46.00	18.48	
	497.540	8.75	17.88	2.37	--	29.00	46.00	17.00	
	766.230	**12.51**	**20.40**	**3.25**	--	**36.16**	**46.00**	**9.84**	
	1256.000	49.97	25.25	4.30	37.04	42.48	74.00	31.52	PK
	1844.000	47.37	27.19	5.23	35.93	43.86	74.00	30.14	
	2104.000	48.14	27.95	5.30	35.59	45.80	74.00	28.20	
	2552.000	53.31	29.34	5.63	35.16	53.12	74.00	20.88	
	3732.000	44.15	32.10	7.93	33.89	50.29	74.00	23.71	
	4628.000	42.97	33.12	9.82	34.38	51.53	74.00	22.47	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	CRT + HDMI 640*480@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	69.770	16.46	6.50	0.87	--	23.83	40.00	16.17	QP
	113.420	7.12	12.58	0.87	--	20.57	43.50	22.93	
	228.850	16.84	12.07	1.20	--	30.11	46.00	15.89	
	300.630	16.01	13.93	1.54	--	31.48	46.00	14.52	
	500.450	11.59	17.90	2.37	--	31.86	46.00	14.14	
	615.880	**14.11**	**19.29**	**2.67**	--	**36.07**	**46.00**	**9.93**	
	1332.000	53.29	25.54	4.45	36.87	46.41	74.00	27.59	PK
	1472.000	52.74	26.05	4.68	36.58	46.89	74.00	27.11	
	2160.000	49.77	28.14	5.30	35.53	47.68	74.00	26.32	
	2956.000	47.95	30.40	6.92	34.83	50.44	74.00	23.56	
	3744.000	42.68	32.12	7.93	33.88	48.85	74.00	25.15	
	4184.000	41.31	32.76	9.04	33.84	49.27	74.00	24.73	
Vertical	33.880	10.62	17.44	0.61	--	28.67	40.00	11.33	QP
	104.690	10.90	11.88	0.86	--	23.64	43.50	19.86	
	300.630	9.55	13.93	1.54	--	25.02	46.00	20.98	
	329.730	11.18	14.74	1.71	--	27.63	46.00	18.37	
	615.880	13.42	19.29	2.67	--	35.38	46.00	10.62	
	849.650	**11.98**	**21.20**	**3.42**	--	**36.60**	**46.00**	**9.40**	
	1440.000	51.65	25.94	4.63	36.64	45.58	74.00	28.42	PK
	1848.000	50.11	27.19	5.23	35.93	46.60	74.00	27.40	
	2556.000	50.84	29.36	5.68	35.16	50.72	74.00	23.28	
	2948.000	49.95	30.38	6.92	34.84	52.41	74.00	21.59	
	3652.000	45.45	31.93	7.68	33.99	51.07	74.00	22.93	
	3988.000	44.62	32.58	8.59	33.61	52.18	74.00	21.82	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	CRT + HDMI 1600*1200@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	70.740	13.74	6.58	0.87	--	21.19	40.00	18.81	QP
	113.420	7.73	12.58	0.87	--	21.18	43.50	22.32	
	200.720	16.00	10.74	1.08	--	27.82	43.50	15.68	
	432.550	10.67	16.95	2.16	--	29.78	46.00	16.22	
	615.880	15.74	19.29	2.67	--	37.70	46.00	8.30	
	849.650	**13.13**	**21.20**	**3.42**	--	**37.75**	**46.00**	**8.25**	
	1340.000	55.84	25.57	4.45	36.85	49.01	74.00	24.99	PK
	1848.000	49.60	27.19	5.23	35.93	46.09	74.00	27.91	
	2140.000	50.20	28.08	5.30	35.55	48.03	74.00	25.97	
	2920.000	45.81	30.31	6.79	34.86	48.05	74.00	25.95	
	3812.000	43.75	32.24	8.10	33.80	50.29	74.00	23.71	
	4748.000	40.45	33.21	9.85	34.52	48.99	74.00	25.01	
Vertical	38.730	11.08	14.62	0.67	--	26.37	40.00	13.63	QP
	105.660	11.36	11.95	0.86	--	24.17	43.50	19.33	
	171.620	14.93	10.15	0.99	--	26.07	43.50	17.43	
	329.730	11.20	14.74	1.71	--	27.65	46.00	18.35	
	500.450	9.34	17.90	2.37	--	29.61	46.00	16.39	
	615.880	**16.34**	**19.29**	**2.67**	--	**38.30**	**46.00**	**7.70**	
	1264.000	55.73	25.28	4.33	37.02	48.32	74.00	25.68	PK
	1496.000	51.35	26.13	4.71	36.54	45.65	74.00	28.35	
	1848.000	51.10	27.19	5.23	35.93	47.59	74.00	26.41	
	2500.000	50.98	29.19	5.50	35.20	50.47	74.00	23.53	
	3532.000	45.22	31.70	7.41	34.12	50.21	74.00	23.79	
	4248.000	43.89	32.81	9.21	33.92	51.99	74.00	22.01	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	CRT + HDMI 1680*1050@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	71.710	16.41	6.69	0.87	--	23.97	40.00	16.03	QP
	200.720	15.07	10.74	1.08	--	26.89	43.50	16.61	
	228.850	16.65	12.07	1.20	--	29.92	46.00	16.08	
	461.650	12.13	17.40	2.26	--	31.79	46.00	14.21	
	615.880	16.52	19.29	2.67	--	38.48	46.00	7.52	
	812.790	**15.25**	**20.84**	**3.36**	--	**39.45**	**46.00**	**6.55**	
	1196.000	51.06	25.00	4.21	37.18	43.09	74.00	30.91	PK
	1496.000	52.96	26.13	4.71	36.54	47.26	74.00	26.74	
	2148.000	52.22	28.12	5.30	35.54	50.10	74.00	23.90	
	2540.000	50.76	29.32	5.63	35.17	50.54	74.00	23.46	
	3876.000	44.74	32.37	8.30	33.74	51.67	74.00	22.33	
	4116.000	44.07	32.70	8.88	33.75	51.90	74.00	22.10	
Vertical	37.760	10.92	15.20	0.66	--	26.78	40.00	13.22	QP
	106.630	10.42	12.02	0.86	--	23.30	43.50	20.20	
	120.210	10.74	12.98	0.88	--	24.60	43.50	18.90	
	171.620	13.80	10.15	0.99	--	24.94	43.50	18.56	
	329.730	11.36	14.74	1.71	--	27.81	46.00	18.19	
	615.880	**15.99**	**19.29**	**2.67**	--	**37.95**	**46.00**	**8.05**	
	1232.000	53.46	25.15	4.27	37.09	45.79	74.00	28.21	PK
	1500.000	56.51	26.14	4.71	36.53	50.83	74.00	23.17	
	2104.000	48.84	27.95	5.30	35.59	46.50	74.00	27.50	
	2548.000	52.49	29.34	5.63	35.16	52.30	74.00	21.70	
	3760.000	45.57	32.14	7.97	33.86	51.82	74.00	22.18	
	4620.000	44.00	33.11	9.82	34.38	52.55	74.00	21.45	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	CRT + HDMI 1920*1200@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	69.770	16.76	6.50	0.87	--	24.13	40.00	15.87	QP
	142.520	10.33	11.91	0.91	--	23.15	43.50	20.35	
	228.850	16.26	12.07	1.20	--	29.53	46.00	16.47	
	431.580	11.55	16.95	2.16	--	30.66	46.00	15.34	
	615.880	14.99	19.29	2.67	--	36.95	46.00	9.05	
	767.200	**13.70**	**20.40**	**3.25**	--	**37.35**	**46.00**	**8.65**	
	1340.000	56.72	25.57	4.45	36.85	49.89	74.00	24.11	PK
	1496.000	55.28	26.13	4.71	36.54	49.58	74.00	24.42	
	2072.000	52.47	27.85	5.30	35.62	50.00	74.00	24.00	
	2500.000	54.07	29.19	5.50	35.20	53.56	74.00	20.44	
	3432.000	46.05	31.49	7.31	34.24	50.61	74.00	23.39	
	4248.000	44.70	32.81	9.21	33.92	52.80	74.00	21.20	
Vertical	38.730	11.49	14.62	0.67	--	26.78	40.00	13.22	QP
	123.120	11.18	12.86	0.89	--	24.93	43.50	18.57	
	171.620	13.22	10.15	0.99	--	24.36	43.50	19.14	
	281.230	11.04	13.57	1.44	--	26.05	46.00	19.95	
	366.590	9.58	15.77	1.89	--	27.24	46.00	18.76	
	615.880	**16.27**	**19.29**	**2.67**	--	**38.23**	**46.00**	**7.77**	
	1332.000	56.31	25.54	4.45	36.87	49.43	74.00	24.57	PK
	1848.000	51.02	27.19	5.23	35.93	47.51	74.00	26.49	
	2496.000	48.14	29.17	5.50	35.21	47.60	74.00	26.40	
	3220.000	45.98	31.02	7.19	34.51	49.68	74.00	24.32	
	4132.000	43.76	32.71	8.92	33.78	51.61	74.00	22.39	
	4556.000	42.97	33.07	9.81	34.30	51.55	74.00	22.45	

TEST ENGINEER: RAVEN JIN

EUT	:	Chrome 530 Graphic Card	Temperature :	22℃
Model No.	:	S3G003	Humidity :	60%RH
Serial No.	:	081029-S3G003B-191	Date of Test :	Dec 09, 2008
Test Mode	:	CRT + HDMI 2048*1536@75Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	68.800	15.26	6.51	0.87	--	22.64	40.00	17.36	QP
	112.450	7.06	12.51	0.87	--	20.44	43.50	23.06	
	228.850	17.20	12.07	1.20	--	30.47	46.00	15.53	
	432.550	10.82	16.95	2.16	--	29.93	46.00	16.07	
	615.880	**16.75**	**19.29**	**2.67**	**--**	**38.71**	**46.00**	**7.29**	
	830.250	9.59	21.01	3.38	--	33.98	46.00	12.02	
	1472.000	55.59	26.05	4.68	36.58	49.74	74.00	24.26	PK
	2044.000	52.28	27.75	5.30	35.65	49.68	74.00	24.32	
	2500.000	52.04	29.19	5.50	35.20	51.53	74.00	22.47	
	3052.000	46.03	30.63	7.09	34.74	49.01	74.00	24.99	
	3604.000	45.17	31.84	7.56	34.04	50.53	74.00	23.47	
	4080.000	44.01	32.66	8.80	33.70	51.77	74.00	22.23	
Vertical	**38.730**	**11.84**	**14.62**	**0.67**	**--**	**27.13**	**40.00**	**12.87**	QP
	105.660	10.78	11.95	0.86	--	23.59	43.50	19.91	
	171.620	13.57	10.15	0.99	--	24.71	43.50	18.79	
	329.730	10.96	14.74	1.71	--	27.41	46.00	18.59	
	500.450	8.59	17.90	2.37	--	28.86	46.00	17.14	
	684.750	8.35	19.63	2.99	--	30.97	46.00	15.03	
	1268.000	60.75	25.30	4.33	37.02	53.36	74.00	20.64	PK
	1500.000	56.72	26.14	4.71	36.53	51.04	74.00	22.96	
	1844.000	52.37	27.19	5.23	35.93	48.86	74.00	25.14	
	2596.000	49.71	29.46	5.77	35.12	49.82	74.00	24.18	
	3484.000	46.06	31.59	7.36	34.17	50.84	74.00	23.16	
	4248.000	43.17	32.81	9.21	33.92	51.27	74.00	22.73	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.