



UL Korea, Ltd

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Project:	10CA46560
File:	MC15562
Report	10CA46560-FCC
Date:	October 25, 2010
Model:	EX210(Basic),RadiForceEX210

Electromagnetic Compatibility Test Report

FCC Certification Part 15 Subpart B Class B

For

EIZO NANA CORPORATION
153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan

UL Korea Ltd.

33rd Fl. Gangnam finance Center, 737 Yeoksam-Dong, Kangnam-Gu, Seoul, 135-984, Korea
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to public safety and committed to
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Project Number: 10CA46560
Model Number: EX210

File Number MC15562

Test Report No: 10CA46560-FCC
Date of Issue: October 25, 2010

TEST REPORT DETAILS

Test report No: 10CA46560-FCC
Tests Performed By: UL Korea Ltd.
33rd FL. Gangnam Finance Center, 737 Yeoksam-dong,
Kangnam-ku, Seoul, 135-984, Korea

Test site: CHUNGBUK TECHNOPARK
685-3 Yangcheong-ri, Ochang-eub, Cheongwon-gun, Chungbuk-
province, Republic of Korea
Registration No: 647924
The test facility was deemed to have the environment and capabilities
necessary to perform the tests included in the test package

Tests Performed For: EIZO NANA CORPORATION
153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan

Manufacturer: EIZO NANA CORPORATION
153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan

Applicant Contact: Wataru Takashima
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Test Report Date: October 25, 2010
Product Type: Color LCD Display
Model Number: EX210 (Basic), RadiForce EX210
FCC ID: GCJEX210

Product standards: FCC Part 15 Subpart B Class B

Sample Serial Number: None (Proto type)
Sample Receive Date: August 01, 2007
Testing Start Date: August 01, 2007
Date Testing Complete: August 29, 2007

Overall Results: **PASS**

UL Korea Ltd. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. UL Korea Ltd. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from UL Korea Ltd. issued reports.

Project Number: 10CA46560 File Number MC15562 Test Report No: 10CA46560-FCC
Model Number: EX210 Date of Issue: October 25, 2010

TEST SUMMARY

Test Result

Requirement – Test	Reference standards	Verdict
AC Power line Conducted Emission Test	47CFR Part 15.107(a) / 47CFR Part 15.109(g)	Complied
Radiated Emission Test		Complied

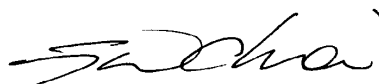
The tests listed in the Summary of Testing section of this report have been performed and the results recorded by UL Korea, Ltd. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

The equipment under test has

- ☒ Met the technical requirements
☐ Not met the technical requirements



Tested by
Sung Hoon Baek, Project Engineer
Conformity Assessment Services - 3014ASEO
UL Korea Ltd.
October 25, 2010



Reviewed by
Jea Woon Choi, Senior Project Engineer
Conformity Assessment Services – 3014ASEO
UL Korea Ltd.
October 25, 2010

Report Directory

1.	EQUIPMENT UNDER TEST(EUT).....	5
1.1	EQUIPMENT DESCRIPTION SPEC	5
1.2	EQUIPMENT MARKING PLATE.....	6
1.3	EQUIPMENT USED DURING TEST.....	7
1.4	INPUT/OUTPUT PORTS.....	7
1.5	EUT INTERNAL OPERATING FREQUENCIES:.....	8
1.6	POWER INTERFACE:	8
2.	EUT OPERATION MODES:	8
3.	EUT CONFIGURATIONS:.....	10
4.	CONDUCTED DISTURBANCE AT THE MAINS PORTS	11
5.	RADIATED DISTURBANCE	24
6.	EUT MODIFICATION	31
7.	MEASUREMENT UNCERTAINTIES	31

1. EQUIPMENT UNDER TEST (EUT)

1.1 Equipment Description Specification

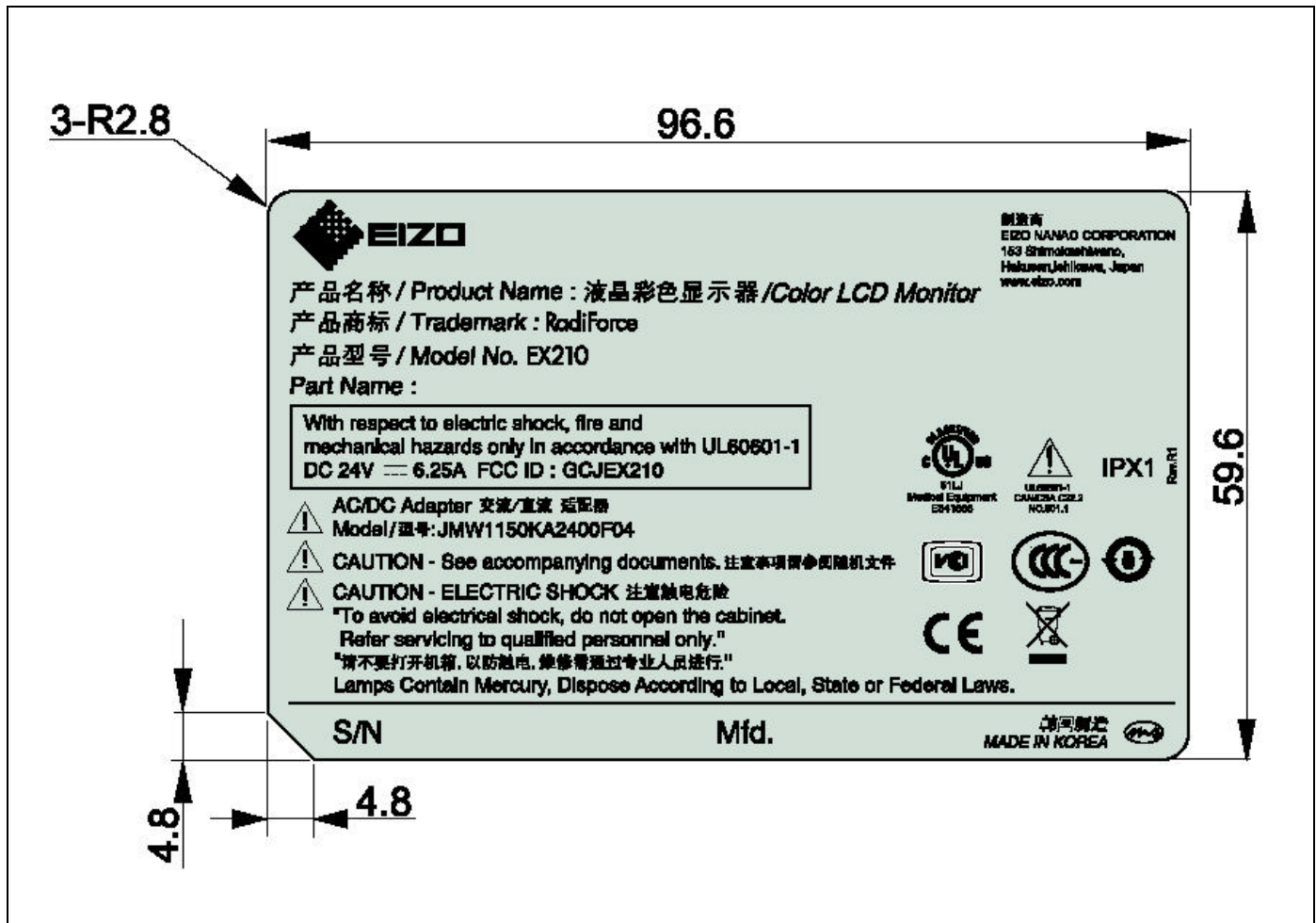
EX210	LCD Panel	21.3" TFT LCD Panel
	Panel A	TX54D31VC0CAB
	Panel B	TX54D32VC0CAA
	Type	Active Matrix
	Resolution	1600 x 1200 @ 60Hz
	Pixel Pitch	0.27 mm
	Display Color	16.7 M Colors
	Color Tone	Up to 256 color tone
	Response Time	<25ms Typ.
	Face Finishing	Protective Filter with Anti-Reflected Hard Coated
	Viewing Angle	+/- 85°(Horizontal), +/- 85° (vertical)
	Sync (Analog)	2.5~5.0Vp-p separated sync
Input Signal (Analog & Digital)	Composite Sync (Analog)	Composite Video (NTSC/PAL)
	Y/C Sync (Analog)	S-Video (NTSC/PAL)
	Input Impedance (Analog)	Video - 75 Ohm, Sync - 1k Ohm
	Digital	DVI-24 bit MSB RGB TMDS dual link
	-	-
Scanning Frequency	Horizontal	31.47~79.98 kHz
	Vertical	50~75.3Hz
Signal Input Connector	Video	DVI, HD15, SD/HD-SDI 1 and 2, Component Y/G, Pb/B, Pr/R, H/CS, VS, C-Video and S-Video
Signal Output Connector (Loop Through)	Video	SD/HD-SDI, Component Y/G, Pb/B, Pr/R, H/CS, VS, C-Video and S-Video
Dimension	Free Mount	20" (W) x 15.31" (H) x 3.3" (D) 512 mm (W) x 389 mm (H) x 85 mm (D)
Weight	Free Mount	16.9 lbs (7.66 Kg)
AC/DC Adapter Description	Display Monitor	DC 24 V
	AC-Adapter	AC100~240 V 120 W Max +/-10 %

Project Number: 10CA46560
Model Number: EX210

File Number TC8352

Test Report No: 10CA46560-FCC
Date of Issue: October 25, 2010

1.2 EQUIPMENT MARKING PLATE



1.3 Equipment Used During Test

Use*	Product Type	Manufacturer	Model
EUT A	LCD Monitor (LCD Panel Model: TX54D31VC0CAB)	EIZO	EX210
EUT B	LCD Monitor (LCD Panel Model: TX54D32VC0CAA)	EIZO	EX210
EUT	AC/DC Adaptor	BridgePower Corp.	JMW1150KA2400F04
EUT	Extension power cord (optional)	BridgePower Corp.	1501047
AE	Key board	Logitech	Y-SM46
AE	Serial mouse	Logitech	M-UV83
AE	Mouse	LG	3D-320
AE	Printer	SAMSUNG	ML-2250G
AE	Video Signal Generator	Master. Co. LTD	MSPG-925LTH
AE	SDI Pattern Generator	ASTRO	SC-2055A
AE	DVD Player	Sherwood	DVD Player V768
AE	Pattern player	EFM-NETWORK	IP PLAY Time H35
AE	PC	CBTP	CBTP
AE	CCTV	SAMSUNG	HK211F

* **Note:** EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, SIM - Simulator (Not Subjected to Test)

1.4 EUT Input/Output Ports

Port #	Name	Type*	Cable Max. >3m	Cable Shielded	Comments
1	DVI In	I/O	1.8	Shielded	24 pin DVI-D
2	VGA In	I/O	1.8	Shielded	15 pin D-Sub
3	SDI-In 1, 2	I/O	1.8	Shielded	BNC
4	SDI-Out	I/O	1.8	Shielded	BNC
5	RGB / Component In, Out	I/O	1.8	Shielded	5 port BNC
6	S-Video In, Out	I/O	1.8	Shielded	S-Video
7	Mains	AC	2.1	Unshielded	

Note:

*AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
I/O = Signal Input or Output Port (Not Involved in Process Control)
TP = Telecommunication Ports
* RS-232 port is used for service purpose only. No user interface port

1.5 EUT Internal Operating Frequencies:

Frequency (MHz)	Description	Frequency (MHz)	Description
10.00 MHz	CPLD Clock	67.50 MHz	Panel clock
27.00 MHz	System clock	324.00 MHz	Memory clock

1.6 Power Interface:

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	AC 100-240	3.0		50~60	Single	Rating of AC/DC Adapter
1	AC 120			60 Hz	Single	

2. EUT Operation Modes for EMI

2.1 Modes of EMI Testing

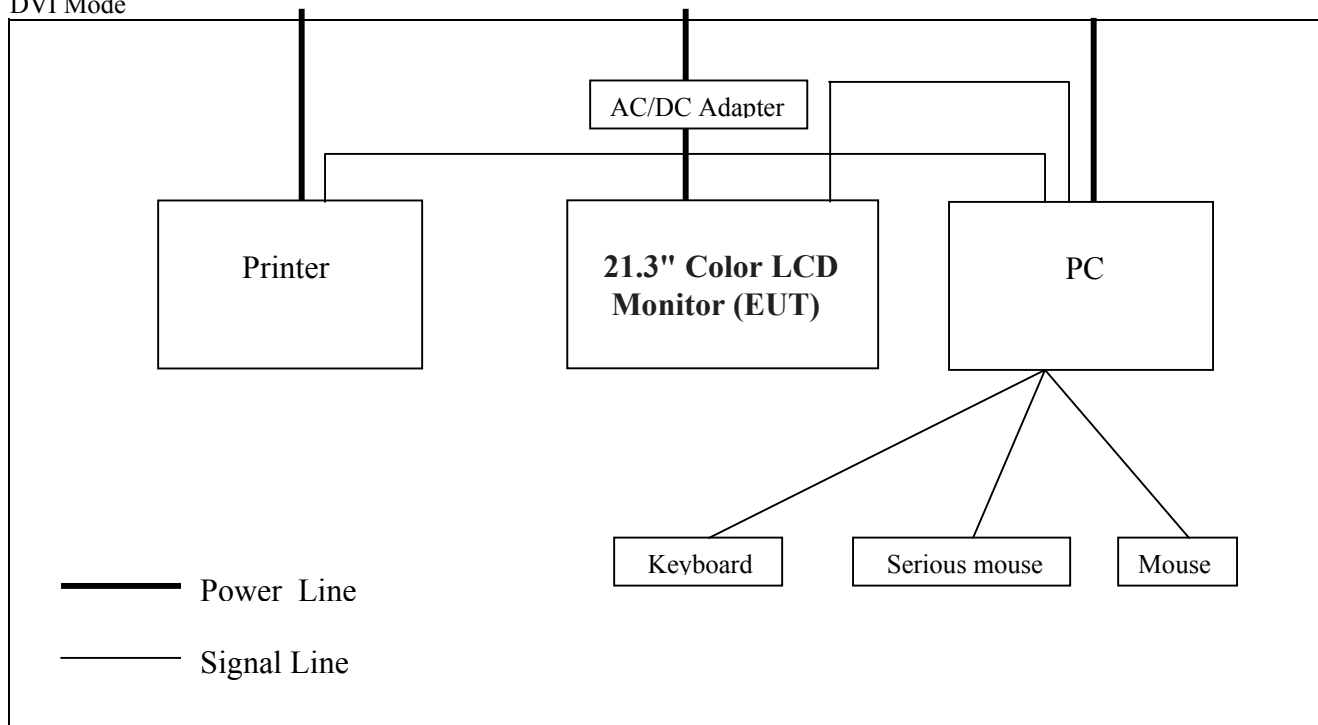
	Mode	Comment
1	DVI Mode with Extension power cord	Worst case condition
2	VGA Mode with Extension power cord	
3	SDI In/Out Mode with Extension power cord	
4	Component In/Out Mode with Extension power cord	
5	Composite In/Out Mode with Extension power cord	
6	C-Video In/Out Mode with Extension power cord	
7	S-VIDEO In/Out Mode with Extension power cord	Worst case condition
Note 1. Testing have been performed under continuous displaying "H" Patten for configuration modes of 1,2. 2. Testing have been performed under continuous displaying "Color Bar" Patten for configuration modes of 3,4,5,6,7. 3. EMI test was performed for both LCD Panel model TX54D31VC0CAB and TX54D32VC0CAA . 4. All the configuration described above have been investigated during the preliminary testing and selected two cases as worst case condition for final measurements.		

2.2 Modes of Video resolution

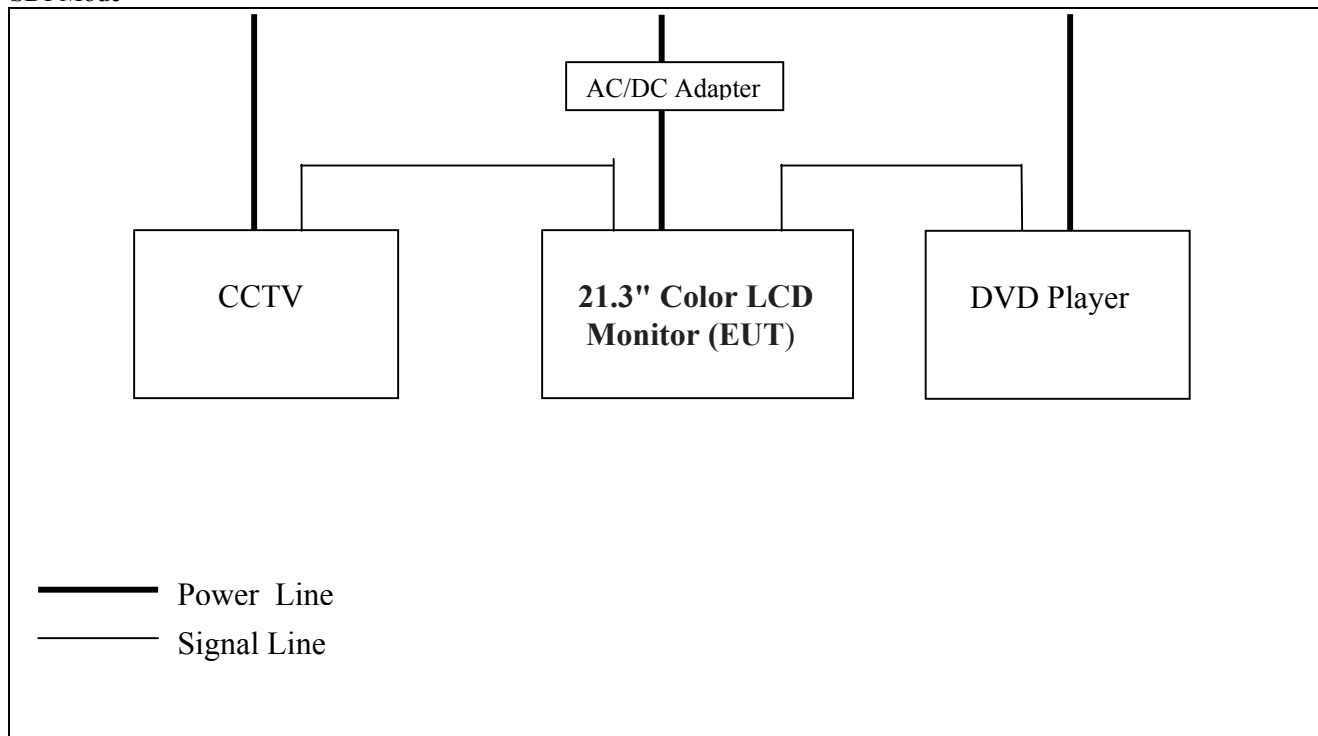
	Resolution	Comment
1	640 * 480 @ 60Hz	VGA Mode
2	1600 * 1200 @ 60Hz	VGA Mode
3	640 * 480 @ 60Hz	DVI Mode
4	1600 * 1200 @ 60Hz	DVI Mode
Note: 1. Video resolution where it refers from above are representative worst case 2. Test was performed for both LCD Panel model TX54D31VC0CAB and TX54D32VC0CAA .		

3. EUT Configurations:

DVI Mode



SDI Mode



4. CONDUCTED EMISSION

	TEST: Limits of mains terminal disturbance voltage				
Method	Measurements were made on a ground plane that extends 1-meter minimum beyond all sides of the system under test. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.				—
Parameters required prior to the test		Laboratory Ambient Temperature		10 to 40 °C	
		Relative Humidity		10 to 90 %	
Parameters recorded during the test		Laboratory Ambient Temperature		27 °C	
		Relative Humidity		40 %	
		Frequency range on each side of line		Measurement Point	
Fully configured sample scanned over the following frequency range		150 kHz to 30 MHz		Mains	
Limits – Class A					
Frequency (MHz)	Limit (dBµV)				
	Quasi-Peak	Results	Average	Results	
0.15 to 0.50	79	N/A	66	N/A	
0.50 to 30	73	N/A	60	N/A	
Limits – Class B					
Frequency (MHz)	Limit (dBµV)				
	Quasi-Peak	Results	Average	Results	
0.15 to 0.50	66 to 56	Pass	56 to 46	Pass	
0.50 to 5	56	Pass	46	Pass	
5 to 30	60	Pass	50	Pass	
Supplementary information: None					

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2007.04.04	2008.04.04
LISN	SCHWARZBECK	NNLK8129	8129162	2007.04.03	2008.04.03
LISN	Rohde & Schwarz	ESH2-Z5	100146	2007.04.03	2008.04.03

Figure 1
Conducted Emission Test Setup: DVI Mode (LCD Panel: TX54D31VC0CAB)

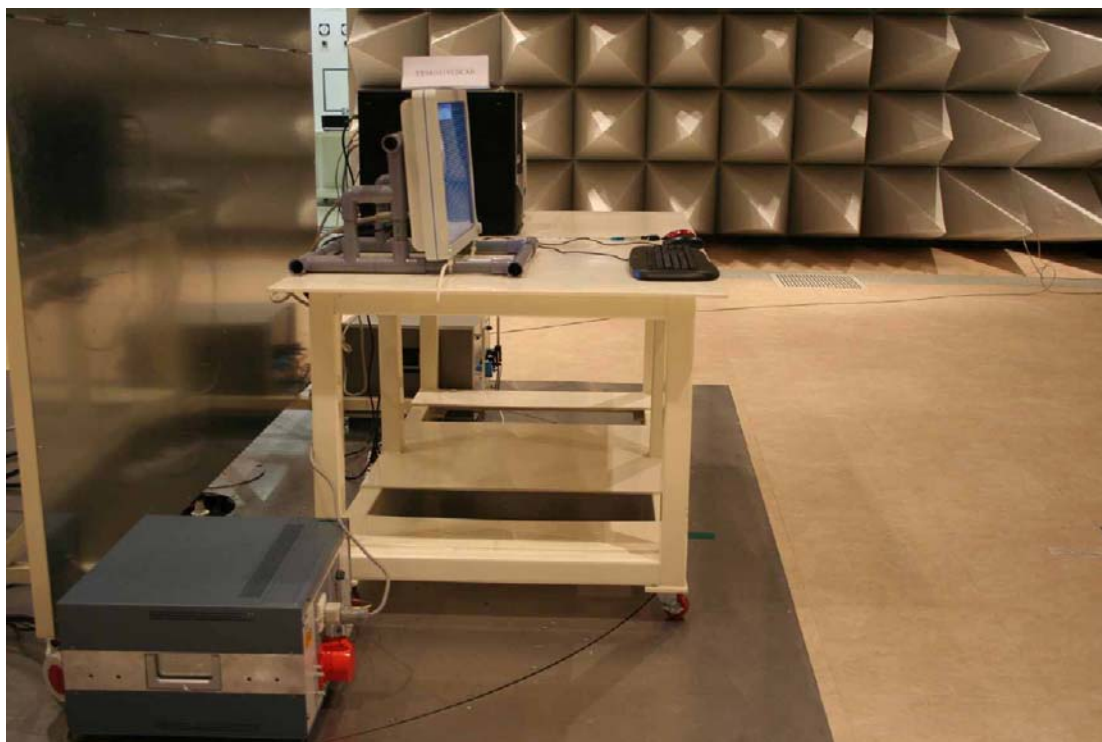


Figure 2
Conducted Emission Test Setup: S-Video Mode (LCD Panel: TX54D31VC0CAB)

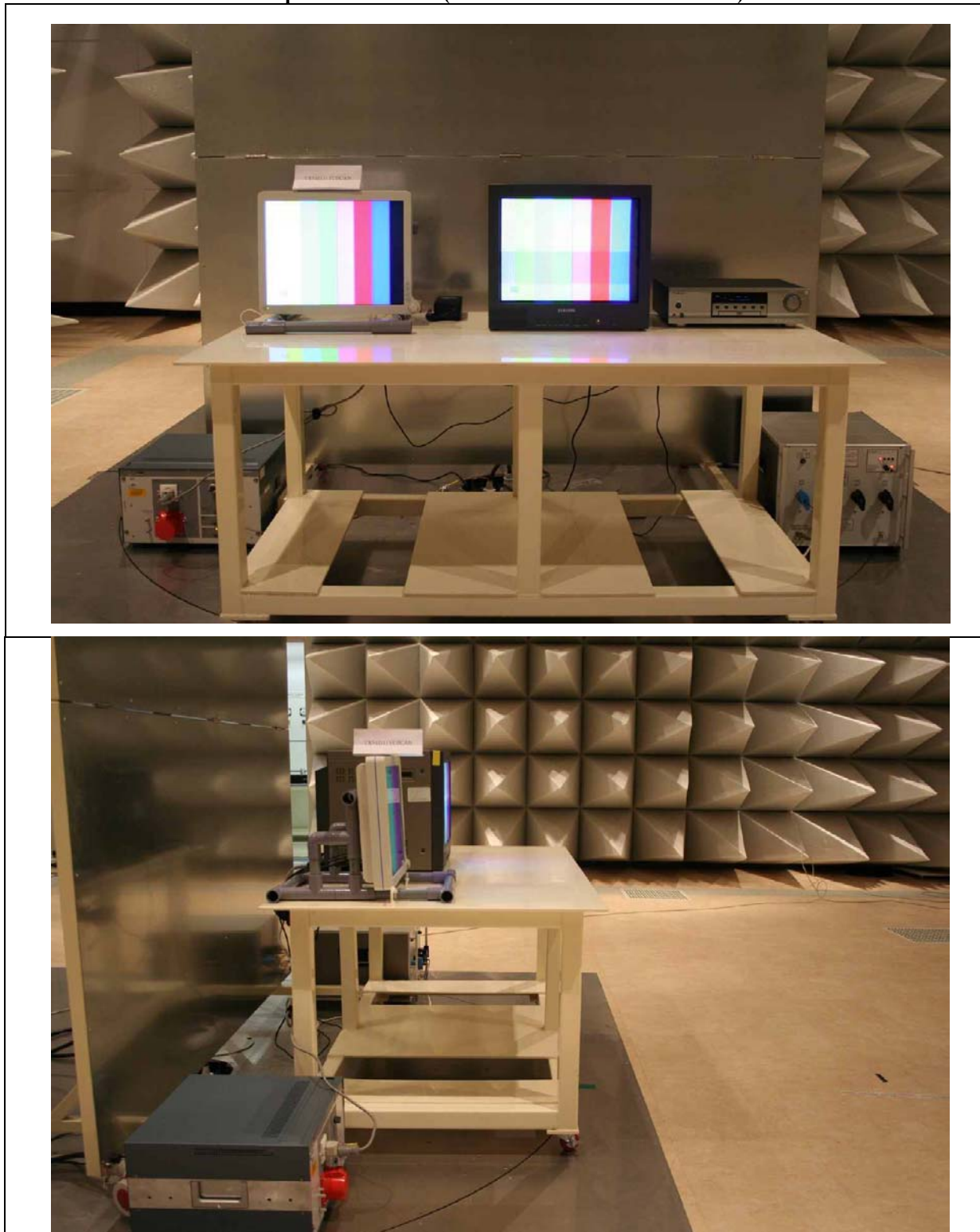


Table 1.

Test data for conducted emission: DVI Mode (LCD Panel: TX54D31VC0CAB)

Test Frequency (MHz)	Correction Factor		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.17	0.06	0.12	48.82	-	H	49.00	-	64.90	54.9.0	15.90	-
0.23	0.07	0.11	43.12	-	H	43.30	-	62.60	52.60	19.30	-
0.34	0.08	0.11	40.61	-	H	40.80	-	59.20	49.20	18.40	-
0.62	0.11	0.10	35.19	-	H	35.40	-	56.00	46.00	20.60	-
1.59	0.11	0.13	36.66	-	H	36.90	-			19.10	-
1.70	0.15	0.13	35.52	-	N	35.80	-			20.20	-
2.10	0.17	0.15	35.38	-	H	35.70	-			20.30	-
2.66	0.22	0.15	36.73	-	H	37.10	-			18.90	-
3.06	0.25	0.15	36.60	-	H	37.00	-			19.00	-
3.62	0.28	0.15	36.27	-	H	36.70	-			19.30	-
4.98	0.30	0.16	36.84	-	N	37.30	-			18.70	-
6.51	0.35	0.24	38.31	-	N	38.90	-	60.00	50.00	21.10	-
7.41	0.37	0.31	37.42	-	N	38.10	-			21.90	-
9.23	0.43	0.27	40.9	-	H	41.60	-			18.40	-
9.51	0.43	0.27	40.00	-	H	40.70	-			19.30	-
11.04	0.46	0.28	38.36	-	H	39.10	-			20.90	-
29.27	0.77	0.15	36.48	-	N	37.40	-			22.60	-

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Table 2.

Test data for conducted emission: S-Video Mode (LCD Panel: TX54D31VC0CAB)

Test Frequency (MHz)	Correction Factor		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.17	0.06	0.12	49.22	-	L	49.40	-	64.90	55.00	15.50	-
0.23	0.07	0.11	43.02	-	L	43.20	-	62.50	52.50	19.30	-
0.34	0.08	0.12	38.10	-	N	38.30	-	59.20	49.20	20.90	-
0.45	0.09	0.11	37.50	-	L	37.70	-	56.80	46.80	19.10	-
0.51	0.10	0.10	35.10	-	L	35.30	-	56.00	46.00	20.70	-
0.62	0.11	0.10	36.79	-	L	37.00	-			19.00	-
0.74	0.11	0.15	36.24	-	L	36.50	-			19.50	-
1.19	0.13	0.13	35.44	-	N	35.70	-			20.30	-
1.59	0.15	0.13	36.82	-	L	37.10	-			18.90	-
1.70	0.15	0.13	36.52	-	L	36.80	-			19.20	-
2.10	0.17	0.15	37.08	-	L	37.40	-			18.60	-
2.66	0.22	0.16	36.92	-	N	37.30	-			18.70	-
3.06	0.24	0.15	37.31	-	L	37.70	-			18.30	-
3.62	0.28	0.16	36.46	-	N	36.90	-			19.10	-
4.25	0.28	0.15	34.97	-	L	35.40	-			20.60	-
4.42	0.28	0.15	36.07	-	L	36.50	-			19.50	-
6.52	0.35	0.24	40.11	-	N	40.70	-	60.00	50.00	19.30	-
9.23	0.43	0.27	39.20	-	L	39.90	-			20.10	-
9.80	0.43	0.27	39.40	-	L	40.10	-			19.90	-
10.19	0.44	0.28	38.58	-	L	39.30	-			20.70	-
11.84	0.47	0.32	37.51	-	N	38.30	-			21.70	-

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 3
Graphical representation of conducted emissions: DVI Mode (LCD Panel: TX54D31VC0CAB)

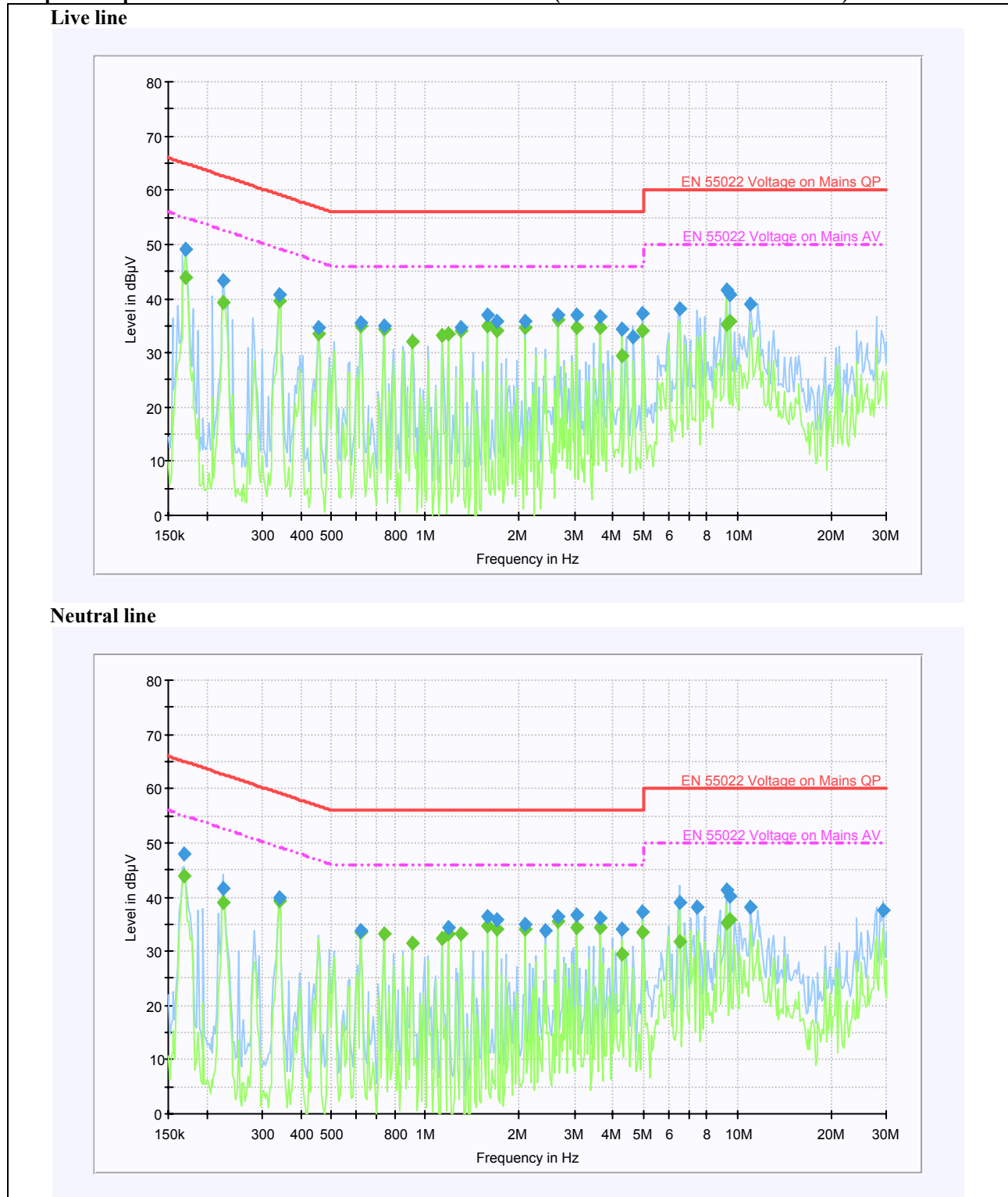


Figure 4.
Graphical representation of conducted emissions: S-Video Mode (LCD Panel: TX54D31VC0CAB)

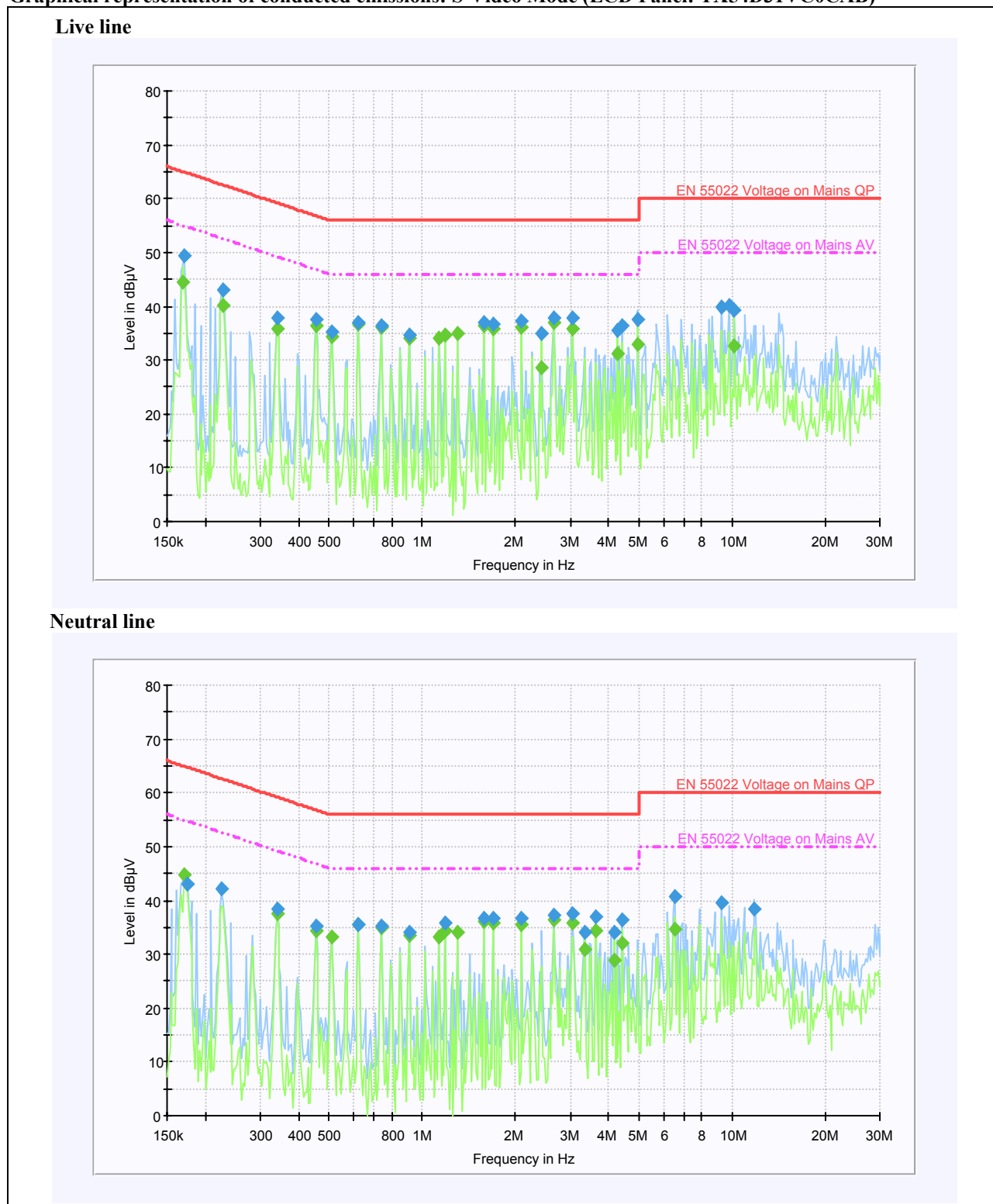


Figure 5
Conducted Emission Test Setup: DVI Mode (LCD Panel: TX54D32VC0CAA)

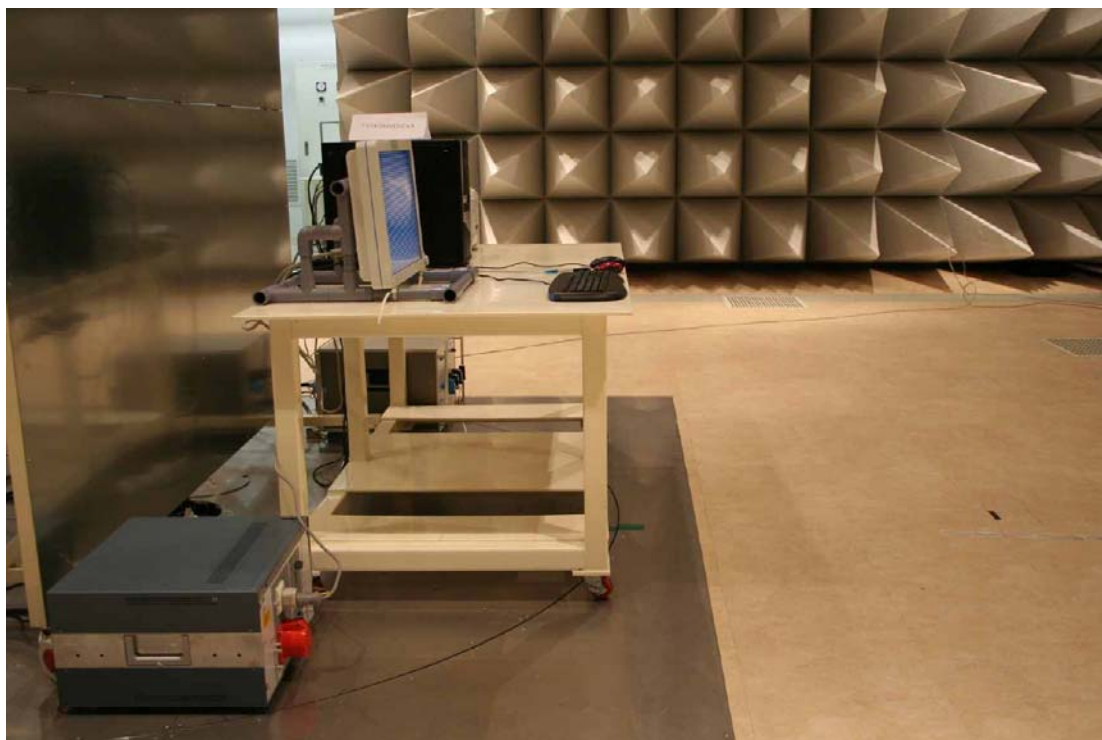
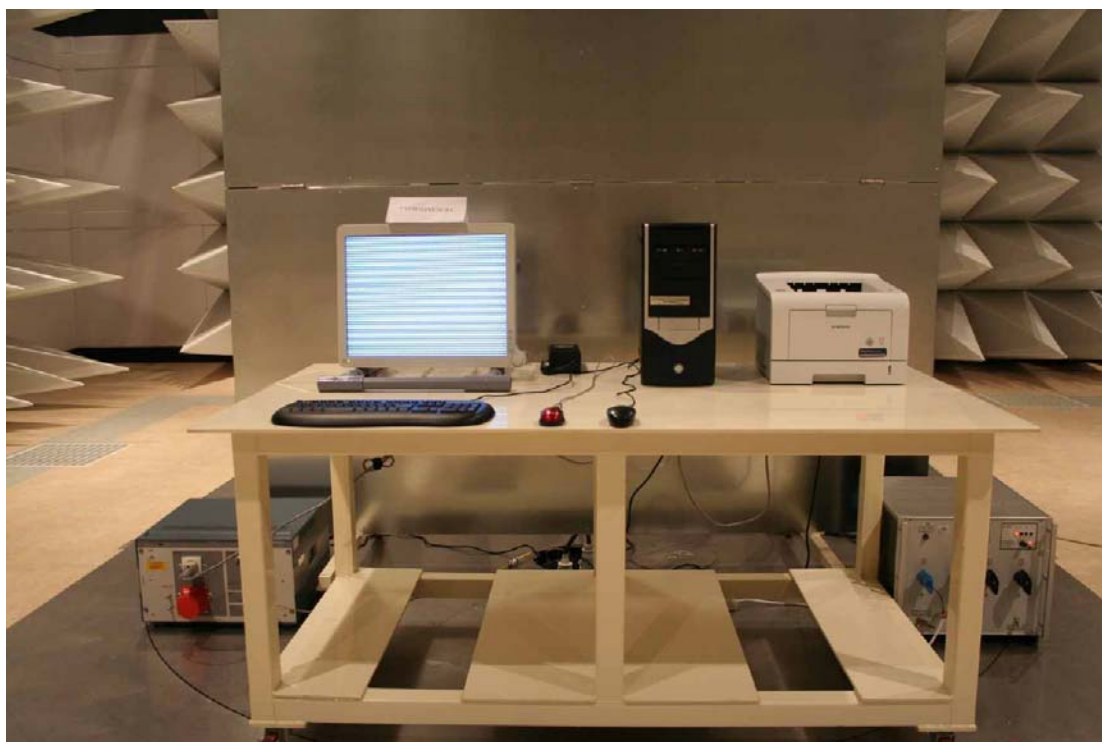


Figure 6
Conducted Emission Test Setup: S-Video Mode (LCD Panel: TX54D32VC0CAA)

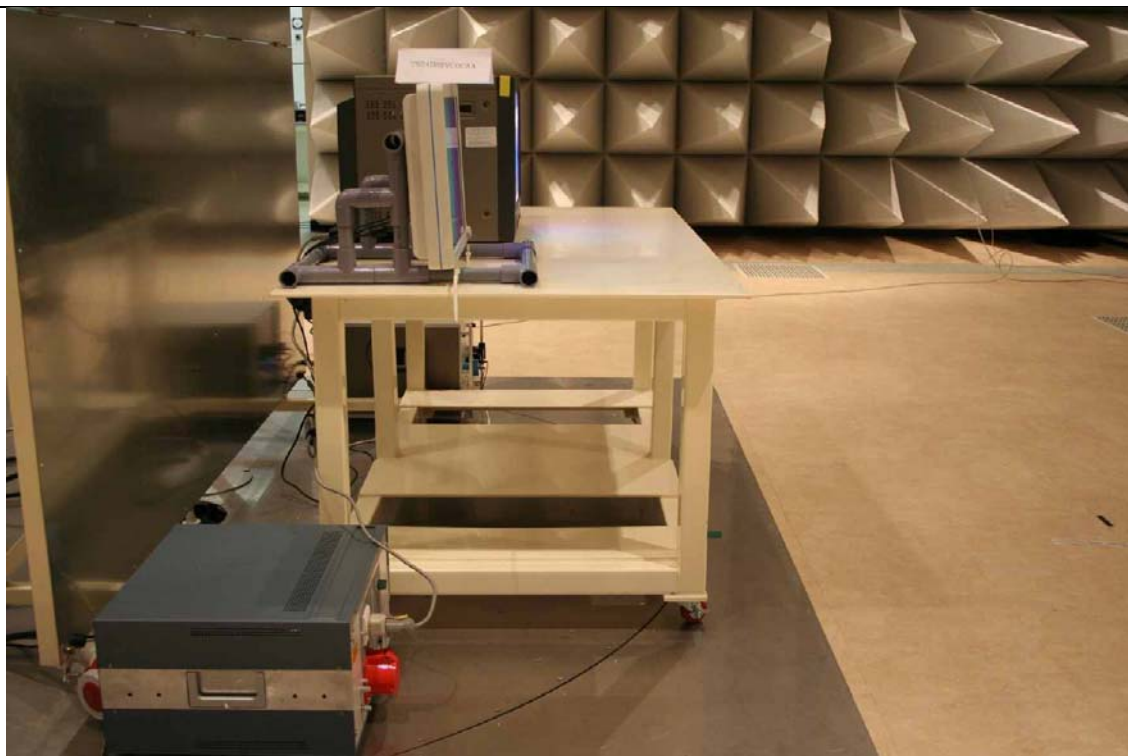
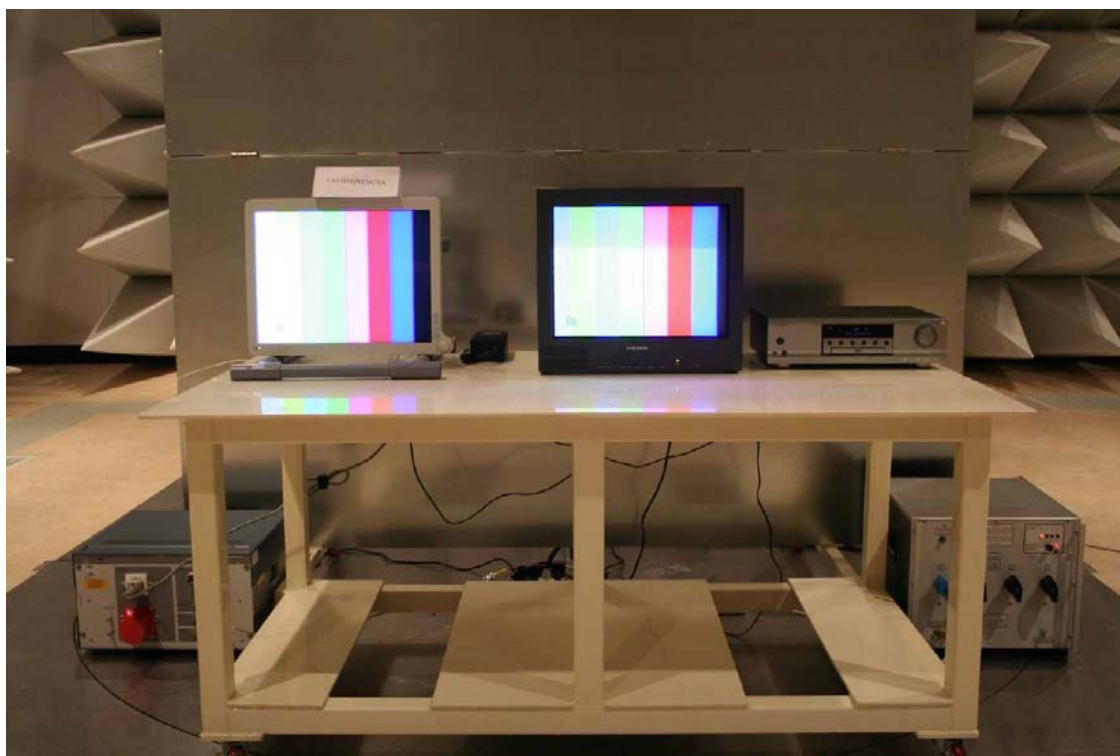


Table 3

Test data for conducted emission: DVI Mode (LCD Panel: TX54D32VC0CAA)

Test Frequency (MHz)	Correction Factor		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.16	0.06	0.12	44.12	-	H	44.30	-	65.20	55.20	20.90	-
0.17	0.06	0.13	47.51	-	N	47.70	-	64.90	55.10	17.20	-
0.22	0.07	0.11	41.92	-	H	42.10	-	62.70	52.70	20.60	-
0.34	0.08	0.12	43.70	-	N	43.90	-	59.20	49.20	15.30	-
0.45	0.09	0.12	36.99	-	N	37.20	-	56.80	46.80	19.60	-
0.62	0.11	0.13	35.36	-	N	35.60	-	56.00	46.00	20.40	-
2.66	0.22	0.15	35.73	-	H	36.10	-			19.90	-
3.06	0.24	0.15	35.01	-	H	35.40	-			20.60	-
0.29	0.29	0.15	36.26	-	H	36.70	-			19.30	-
6.45	0.35	0.22	38.43	-	H	39.00	-	60.00	50.00	21.00	-
6.85	0.36	0.22	39.32	-	H	39.90	-			20.10	-
7.41	0.37	0.27	39.86	-	H	40.50	-			19.50	-
8.44	0.41	0.31	38.28	-	N	39.00	-			21.00	-
8.61	0.42	0.27	37.61	-	H	38.30	-			21.70	-
9.23	0.43	0.31	40.86	-	N	41.60	-			18.40	-
9.51	0.43	0.27	41.10	-	H	41.80	-			18.20	-
9.80	0.43	0.31	38.86	-	N	39.60	-			20.40	-
11.72	0.48	0.28	40.14	-	H	40.90	-			19.10	-
12.56	0.48	0.28	38.14	-	H	38.90	-			21.10	-
13.47	0.52	0.28	38.90	-	H	39.70	-			20.30	-
28.41	0.76	0.15	31.99	-	N	32.90	-			27.10	-

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Table 4

Test data for conducted emission: S-Video Mode (LCD Panel: TX54D32VC0CAA)

Test Frequency (MHz)	Correction Factor		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.15	0.05	0.13	38.82	-	N	39.00	-	66.00	55.00	27.00	-
0.17	0.06	0.12	49.32	-	H	49.50	-	65.00	54.90	15.50	-
0.23	0.07	0.11	43.22	-	H	43.40	-	62.50	52.50	19.10	-
0.34	0.08	0.12	38.20	-	N	38.40	-	59.20	49.20	20.80	-
0.45	0.09	0.11	37.50	-	H	37.70	-	56.80	46.80	19.10	-
0.51	0.10	0.10	35.10	-	H	35.30	-	56.00	46.00	20.70	-
0.62	0.11	0.10	36.69	-	H	36.90	-			19.10	-
0.74	0.11	0.15	36.24	-	H	36.50	-			19.50	-
1.19	0.13	0.13	35.74	-	H	36.00	-			20.00	-
1.59	0.15	0.13	37.02	-	H	37.30	-			18.70	-
1.70	0.15	0.15	36.50	-	H	36.80	-			19.20	-
2.10	0.17	0.15	36.68	-	H	37.00	-			19.00	-
2.66	0.22	0.15	37.33	-	H	37.70	-			18.30	-
3.06	0.24	0.15	37.91	-	H	38.30	-			17.70	-
4.42	0.28	0.15	36.57	-	H	37.00	-			19.00	-
4.64	0.29	0.15	36.46	-	H	36.90	-			19.10	-
4.98	0.29	0.15	35.96	-	H	36.40	-			19.60	-
6.51	0.35	0.22	39.63	-	H	40.20		60.00	50.00	19.80	
7.05	0.36	0.31	35.63	-	N	36.30				23.70	
8.61	0.42	0.27	38.51	-	H	39.20				20.80	
9.23	0.43	0.31	38.36	-	N	39.10				20.90	
9.80	0.43	0.27	40.10	-	H	40.80				19.20	
10.19	0.44	0.28	39.18	-	H	39.90				20.10	

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 7

Graphical representation of conducted emissions: DVI Mode (LCD Panel: TX54D32VC0CAA)

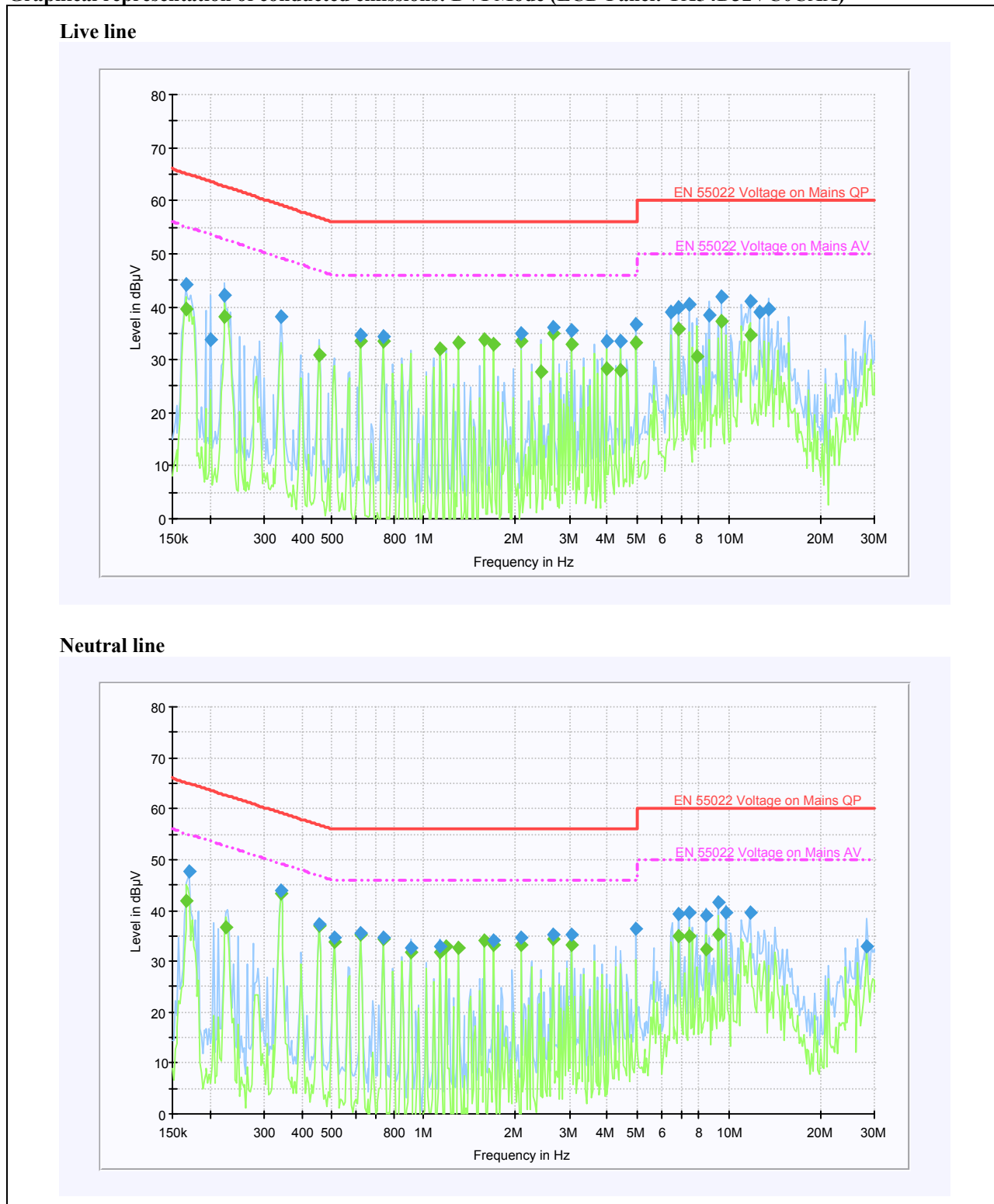
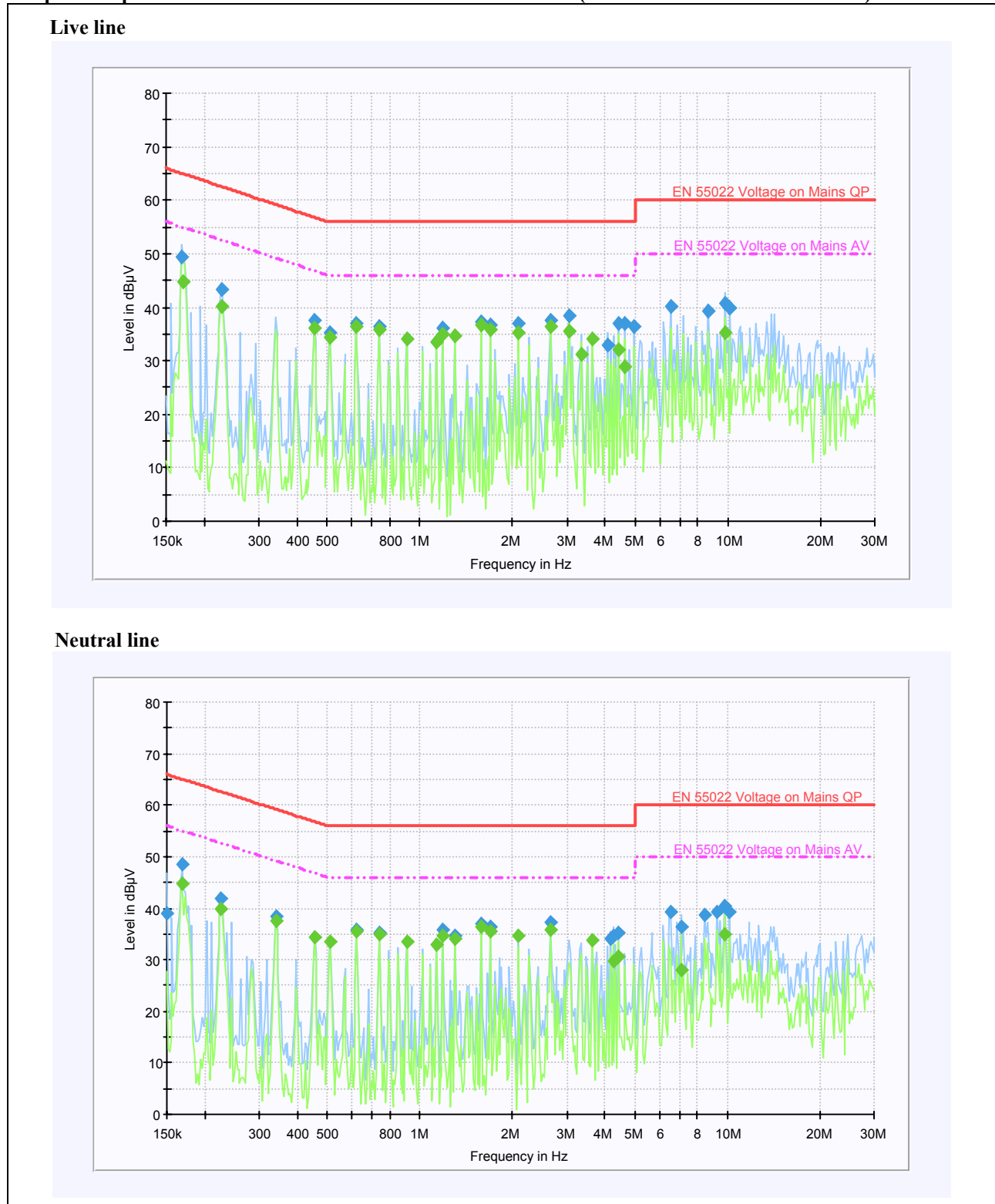


Figure 8
Graphical representation of conducted emissions: S-Video Mode (LCD Panel: TX54D32VC0CAA)



5. RADIATED EMISSION

	TEST: Limits for radiated disturbance		
Method	Measurements were made at Open area test site that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at 1, 2, 3 and 4 meter heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.		—
Parameters required prior to the test	Laboratory Ambient Temperature	10 to 40 °C	
	Relative Humidity	10 to 90 %	
Parameters recorded during the test	Laboratory Ambient Temperature	27.4 °C	
	Relative Humidity	54 %	
	Frequency range	Measurement Point	
Fully configured sample scanned over the following frequency range	30 MHz – 2.0 GHz	(10 meter measurement distance)	
Limits - Class B			
Frequency (MHz)	Limit (dBµV/m)		
	Quasi-Peak	Results	
30 to 230	30	Pass	
230 to 1000	37	Pass	
1000 to 2000	43.5 (Average)	Pass	
Supplementary information: None			

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2007.04.04	2008.04.04
BiconiLog ANT	CBL6112D	Schaffner	21784	2006.06.26	2008.06.26
Position controller	Inn-co	CO 2000	11261105/L	N/A	N/A
Antenna Mast	Inn-co	MA 4000	-	N/A	N/A
Turntable	Inn-co	DT 3000	-	N/A	N/A

Figure 9

Photo of Radiated emission test setup: DVI Mode (LCD Panel: TX54D31VC0CAB)

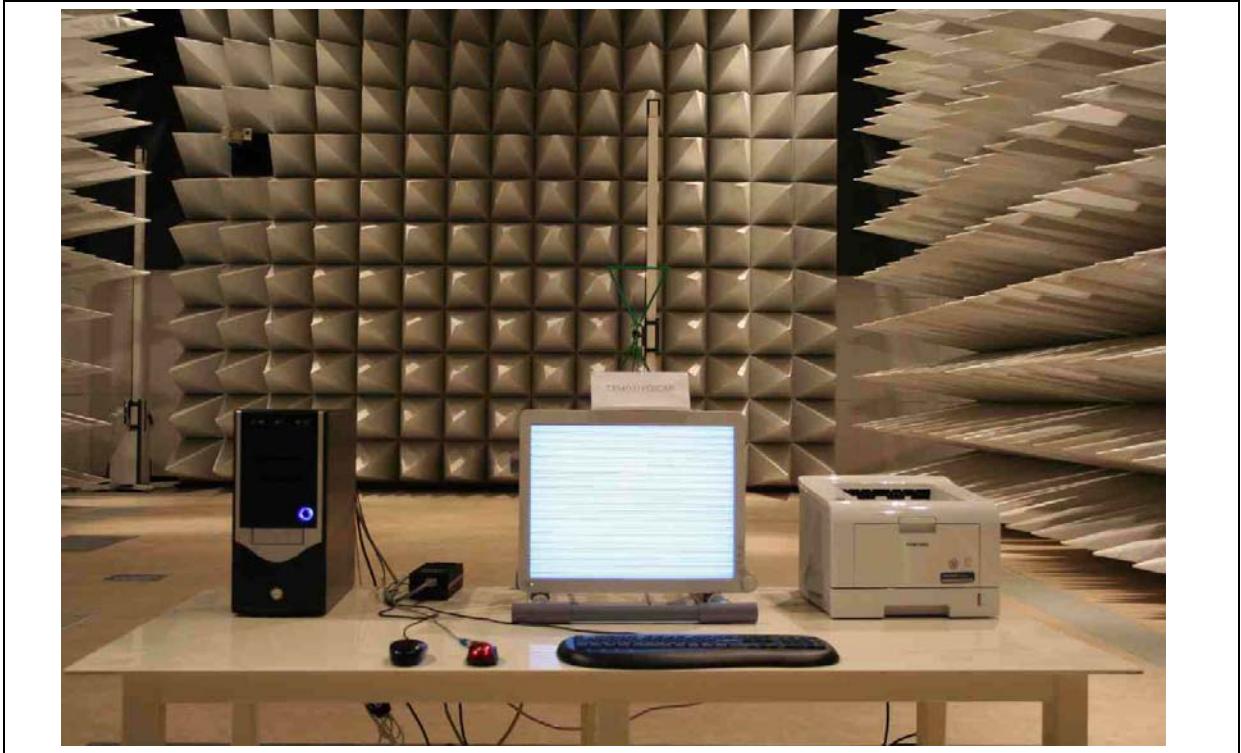


Figure 10

Photo of Radiated emission test setup: S-Video Mode (LCD Panel: TX54D31VC0CAB)



Table 5

Radiated emission Test data: DVI Mode (LCD Panel: TX54D31VC0CAB)

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Transducer Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
113.39	9.32	QP	V	290	1.00	1.60	11.78	22.70	30.00	7.30
129.61	10.90	QP	V	296	1.00	1.80	11.80	24.50	30.00	5.50
219.31	11.50	QP	V	0	1.05	2.40	8.60	22.50	30.00	7.50
356.40	13.12	QP	V	238	1.00	3.20	14.78	31.10	37.00	5.90
485.99	6.20	QP	V	258	3.05	3.80	17.20	27.20	37.00	9.80
971.96	4.80	QP	V	0	1.05	5.60	21.10	31.50	37.00	5.50

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Table 6

Radiated emission Test data: S-Video Mode (LCD Panel: TX54D31VC0CAB)

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Transducer Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
42.73	10.90	QP	V	36	2.05	1.00	10.90	22.80	30	7.20
45.75	13.40	QP	V	0	1.05	1.10	9.90	24.40	30	5.60
61.98	14.60	QP	V	6	3.95	1.20	5.30	21.10	30	8.90
156.64	11.70	QP	H	0	3.95	1.90	9.70	23.30	30	6.70
219.28	12.10	QP	V	356	1.05	2.40	8.60	23.10	30	6.90
877.14	9.00	QP	V	0	2.95	5.20	20.30	34.50	37	2.50

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 11

Photo of Radiated emission test setup: DVI Mode (LCD Panel: TX54D32VC0CAA)

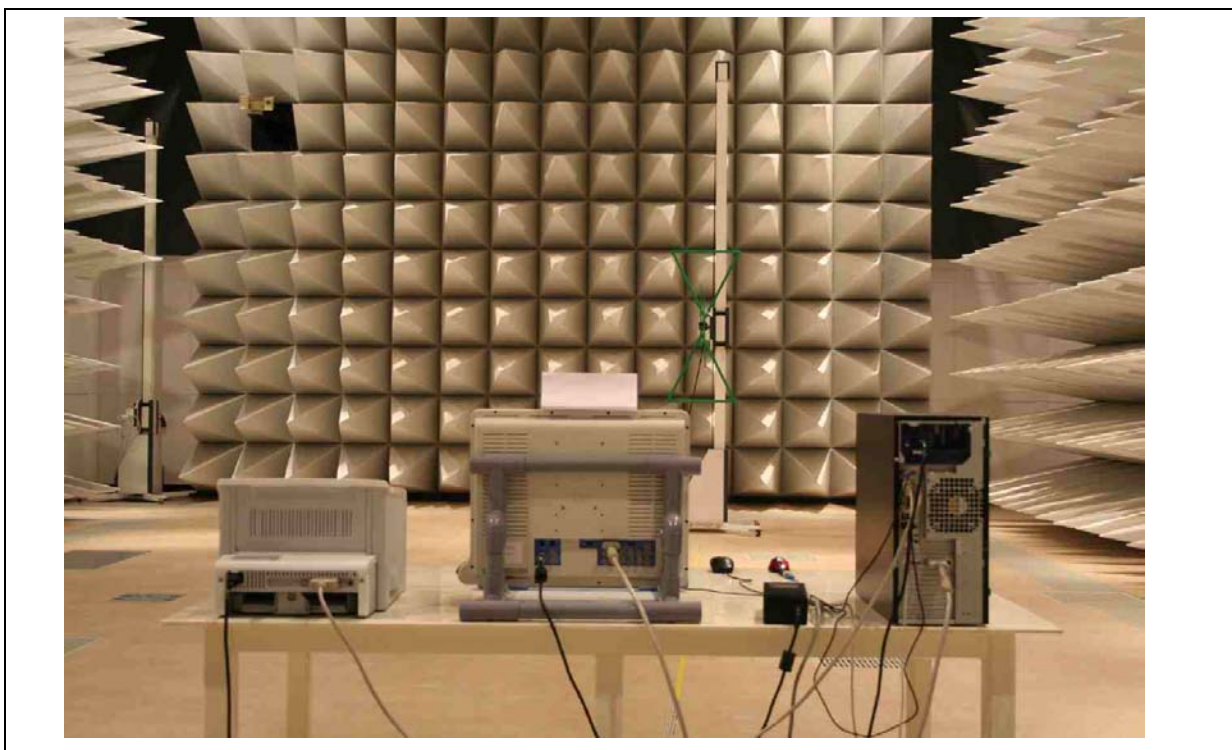
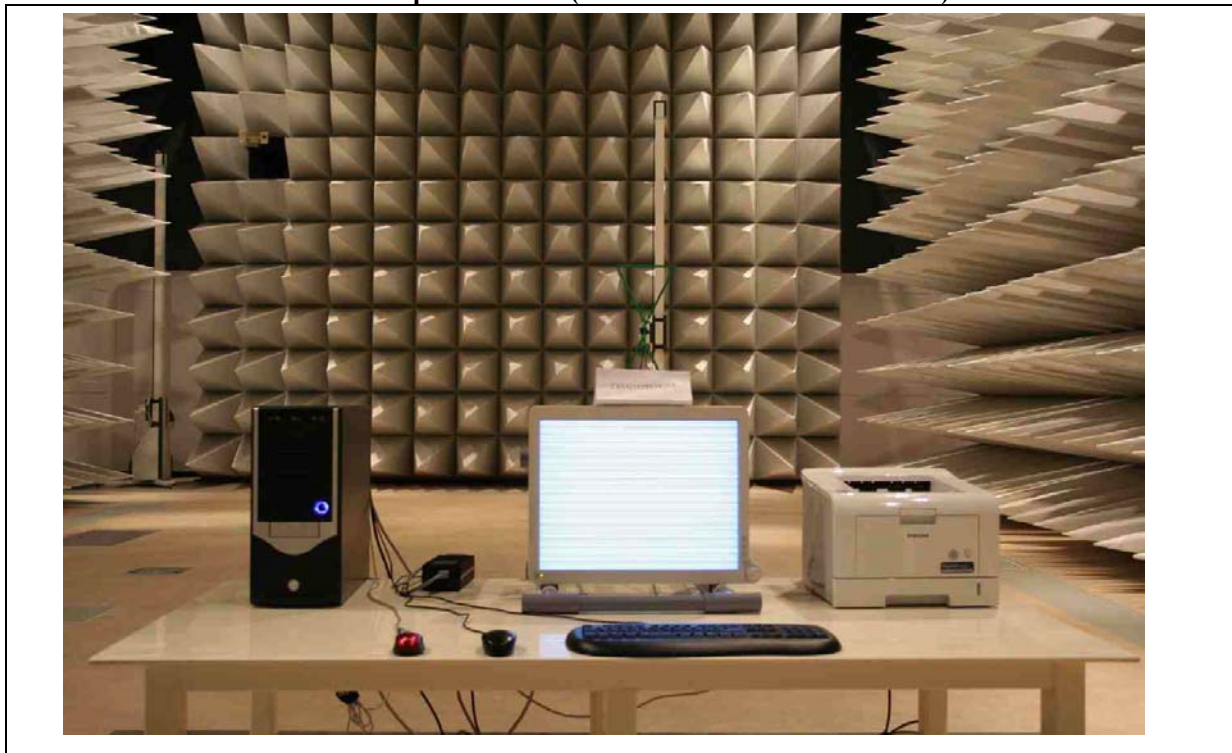


Figure 12

Photo of Radiated emission test setup: S-Video Mode (LCD Panel: TX54D32VC0CAA)



Table 7

Radiated emission Test data: DVI Mode (TX54D32VC0CAA)

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Transducer Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
129.57	10.04	QP	V	262	1.05	1.80	11.26	23.10	30.00	6.90
150.35	7.32	QP	V	358	1.00	3.68	12.40	23.40	30.00	6.60
213.02	7.33	QP	H	204	3.05	3.97	13.80	25.10	30.00	4.90
288.20	14.24	QP	H	162	3.05	4.43	15.43	34.10	37.00	2.90
388.31	12.81	QP	V	312	1.00	4.51	15.68	33.00	37.00	4.00
971.95	13.22	QP	H	252	3.05	4.70	16.58	34.50	37.00	2.50

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Table 8

Radiated emission Test data: S-Video Mode (TX54D32VC0CAA)

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Transducer Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
42.19	10.10	QP	V	352	1.05	1.00	10.90	22.00	30	8.00
42.51	11.30	QP	V	130	1.00	1.00	10.90	23.20	30	6.80
156.64	9.60	QP	H	0	3.95	1.90	9.70	21.20	30	8.80
219.28	11.30	QP	V	0	1.05	2.40	8.60	22.30	30	7.70
337.49	0.83	QP	V	312	2.05	3.10	15.07	19.00	37	18.0
958.49	5.20	QP	H	232	1.05	5.60	20.70	31.50	37	5.50

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

6. EUT Modification

EUT Modification for Radiation Disturbance

#1	Attach the EMI form gasket (10x15x230mm) at this 2 points to make strong ground contact with main frame
#2	Adhere EMI tape at this points to make more strong ground contact
#3	Attach tape to fix light-sensor cable
#4	Insert the ring style ferrite core (SCC Co., Ltd. Type: TC18A) to light-sensor cable.
#5	Adhere EMI tape FFC cable to make shielding ground
#6	Insert the ring style ferrite core (SCC Co., Ltd. Type: TC18A) to sensor cable.
#7	Insert the ring style ferrite core (SCC Co., Ltd. Type: TC18A) to OSD cable.
#8	Adhere EMI tape OSD cable to make shielding ground.
#9	Adhere EMI tape to make more strong ground contact.
#10	Insert the ring style ferrite core (SCC Co., Ltd. Type: SC18A /SC14) to power cable.
#11	Attach the EMI form gasket (14x4x235mm, I/O gasket) to enhance mainframe and shield cover contact.
#12	Attach the EMI form gasket (14x4x220mm) to enhance shield case and rear cover contact

Note: See photos of Internal product for modification details required for compliance to the radiated emission.

7. Measurement Uncertainties

Test	Uncertainty
Radiated Emissions	±3.51 dB
Conducted Emissions	±5.51 dB