



SK TECH CO., LTD.

Page 1 of 23

Certificate of Compliance

Test Report No.:	SKTFCE-050601-044		
NVLAP CODE :	200220-0		
Applicant:	Woosung Nextier Corp.		
Applicant Address:	#821-3, Byucksan Digit.Valley II 153-023, 481-10, Gasan, Geumcheon- Gu Seoul, Korea		
Manufacturer :	Woosung Nextier Corp.		
Manufacturer Address:	#821-3, Byucksan Digit.Valley II 153-023, 481-10, Gasan, Geumcheon- Gu Seoul, Korea.		
Product:	PDP TV Monitor		
FCC ID:	TDCNP-42S3B1	Model No.:	NP-42S3B1
Receipt No.:	SKTEU05-0147	Date of receipt:	Mar. 02, 2005
Date of Issue:	June. 01, 2005		
Testing location:	SK TECH CO., LTD. 820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea		
Test Standards:	ANSI C63.4 / 2003		
Rule Parts:	FCC part 15 Subpart B		
Equipment Class :	Class B Digital Device Peripheral		
Test Result:	The above mentioned product has been tested and passed.		

Prepared by: S.Y.Ye

Tested by: S.B.Ko/Engineer

Approved by: C.H.Jeong
/Manager& Chief Engineer

Signature	Date
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Signature	Date
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Signature	Date
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Other Aspects :

Abbreviations : · OK, Pass = passed · Fail = failed · N/A = not applicable

- ☞ This test report is not permitted to copy partly without our permission.
- This test result is dependent on only equipment to be used.
- This test result is based on a single evaluation of one sample of the above mentioned.
- This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S Government.
- We certify that this test report has been based on the measurement standards that is traceable to the national or International standards.

NVLAP Lab. Code: 200220-0



» » Contents « «

Contents	2
List of Tables	2
List of Figures	2
1. General	3
2. Test Site	3
2.1 Location	3
2.2 List of Test and Measurement Instruments	4
2.3 Test Date	4
2.4 Test Environment	4
3. Description of the tested samples	5
3.1 Rating and Physical Characteristics	5
3.2 Submitted Documents	5
4. Measurement Conditions	7
4.1 Modes of Operation	7
4.2 List of Peripherals	7
4.3 Type of Used cables	8
4.4 Test Setup	9
4.5 Uncertainty	10
5. EMISSION Test	13
5.1 Conducted Emissions	13
5.2 Radiated Emissions	22

» List of Tables

Table 1	List of test and measurement Equipment	4
Table 2	Test Data, Radiated Emissions	23

» List of Figures

Figure 1	Spectral Diagram, LINE-PE(QUASIPEAK)	14
Figure 2	Test Data, LINE-PE(QUASIPEAK)	15
Figure 3	Spectral Diagram, Neutral -PE(QUASIPEAK)	16
Figure 4	Test Data, Neutral-PE(QUASIPEAk)	17
Figure 5	Spectral Diagram, LINE-PE (AVERAGE)	18
Figure 6	Test Data LINE-PE(AVERAGE)	19
Figure 7	Spectral Diagram, Neutral-PE(AVERAGE)	20
Figure 8	Test Data, Neutral-PE(AVERAGE)	21



1. General

This equipment has been shown to be capable of compliance with the applicable technical standards and was tested in accordance with the measurement procedures as indicated in this report.

We attest to the accuracy of data. All measurements reported herein were performed by SK Tech Co., Ltd. and were made under Chief Engineer's supervision.

We assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

2. Test Site

SK TECH Co., Ltd.

2.1 Location

820-2, Wolmoon Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea

The test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

This laboratory is accredited by NVLAP for NVLAP Lab. Code : 200220-0 and DATech for DAR-Registration No.:DAT-P-076/97-01



2.2 List of Test and Measurement Instruments

Table 1 : List of Test and Measurement Equipment

- Conducted Disturbance

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESHS10	862970/019	10.2005
Artificial Mains Network	ESH2-Z5	834549/011	08.2005
EMI Receiver	ESHS10	835871/002	11.2005
Artificial Mains Network	ESH3-Z5	836679/018	08.2005

- Radiated Disturbance

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESVS 10	825120/013	10.2005
EMI Receiver	ESVS 10	834468/008	11.2005
Spectrum Analyzer	R3361A	11730187	10.2005
Amplifier	8447F	3113A05153	08.2005
Log Periodic Antenna	UHALP9107	1819	10.2005
Biconical Antenna	BBA9106	91031626	10.2005
Open Site Cable	N/A	N/A	N/A
Antenna Turntable Driver	5907	N/A	N/A
Antenna Turntable controller	5906	N/A	N/A
Amp & Receiver connection cable	N/A	N/A	N/A
Amp & Spectrum connection cable	N/A	N/A	N/A
50Ω Switcher	MP59B	6100214538	N/A

2.3 Test Date

Date of Application : Mar. 02, 2005

Date of Test : Apr. 09, 2005 ~ May. 02, 2005

2.4 Test Environment

See each test item's description.



3. Description of the tested samples

The EUT is the Plasma Display Panel Television.

(Model NP-42S3** is basic model.- ** in the model designation can be number 1 to 9 or blank or letter A to Z denoting national market.)

3.1 Rating and Physical Characteristics

Technical Specifications

Item		Specifications
Display	Screen Size (Active Area)	42" (920.1 mm(H) x 518.4 mm(V) ± 5mm)
	Aspect ratio	16:9
	Number of Pixels	852 (H) x 480 (V)
	Pixel Pitch	1.080 mm (H) x 1.080mm (V)
	Displayable Colors	16.77 million colors
	Brightness	1000 cd/m ₂
	Contrast Ratio	3000:1
	Color Temperature	9500 K
	Viewing Angle	Over 160 degrees
In / Out Terminals	Speaker Output	10W(L) + 10W(R)[rms] / 8Ω 2 Way 2 Speaker
		10W(L) + 10W(R)[rms] / 8Ω 2 Way 6 Speaker System
	RS-232C	D-Sub 9-pin x 1 TXD/RXD
	DVI Input	Digital RGB : TMDS 1024 X 768 / 75 Hz (XGA)
		Audio : 0.5V[rms] (L+R)
	RGB Input	RGB : 0.7V[p-p](75Ω), H/CS/V : TTL (2.2 kΩ), SOG : 1V[p-p](75Ω) 1024 X 768 / 75 Hz (XGA)
		Audio : 0.5V[rms] (L+R)
	Component Input	Y: 1V[p-p](75Ω), Pb/Cb : 0.7V[p-p](75Ω), Pr/Cr : 0.7V[p-p](75Ω) EDTV : 525i(480i), 625i(576i) SDTV : 625p(576p), 525p(480p) HDTV : 750p(720p), 1125i(1035i,1080i)
		Audio : 0.5V[rms] (L+R)
	S-Video Input	Y: 1V[p-p] (75Ω), C: 0.286V[p-p] (75Ω) [NTSC] Y: 1V[p-p] (75Ω), C: 0.3V[p-p] (75Ω) [PAL/SECAM]
		Video : 1V[p-p] (75Ω) [NTSC/PAL/SECAM]
	Video Input	Audio : 0.5V[rms] (L+R)
		Video : 1V[p-p] (75Ω)
	Monitor Output	Video : 1V[p-p] (75Ω)
		Audio : 0.5V[rms] (L+R)
	Scart	Video : 1V[p-p] (75Ω) Y: 1V[p-p] (75Ω), C : 0.3V[p-p] (75Ω) RGB : 0.7V[p-p] (75Ω)
		Audio : 0.5V[rms] (L+R)
	Antenna Input	DIN - Type x 1 Analog Air/Cable (75Ω) [Unbalanced] PAL/SECAM - B/G, D/K, I, L/L'
General	Power Supply	AC 100-240 V~, 50/60 Hz
	Power Consumption (Typical)	310 W



	Dimensions (W x H x D)	Without Stand	1028 mm x 625 mm x 89.8 mm
		With Stand	1028 mm x 692.5 mm x 270 mm
	Weight	Without Stand	30 kg
		With Stand	35kg
Environment Condition	Temperature	Operational	0 ~ 40 °C
		Storage	-20 ~ 60 °C
	Humidity	Operational	20 ~ 80% RH (No condensation)
		Storage	10 ~ 90% RH (No condensation)
	Pressure	Operational	800 ~ 1100 hPa (Altitude : 0 ~ 2,000 m)
		Storage	700 ~ 1100 hPa (Altitude : 0 ~ 3,000 m)

External Speaker (Optional)

Item	Specifications
Dimensions (W x H x D)	113 mm x 81.2 mm x 626.6 m
Weight	4.6 kg (L + R)
Type	2 Way 6 Speaker System
Input	10 W (RMS)
Impedance	8 Ω
Output Sound Pressure	87 dB/W/M
Frequency Response	45 Hz ~ 20 KHz

Internal Speaker (Optional)

Item	Specifications
Type	2 Way 2 Speaker System
Input	10 W (RMS)
Impedance	8 Ω
Output Sound Pressure	88 dB/W/M
Frequency Response	140 Hz ~ 10 KHz

Standard	Owner's Instructions, Remote Control/AAA Batteries, Antenna Cable, Power Cord, Speaker Cables
Optional	Foot Stand, Table-Top Stand, Wall-Mount Bracket, Ceiling-Mount Bracket, Internal Speaker System, External Speaker System, DVI Cable, VGA(D-SUB) Cable, Audio Cable, Component Cable, RCA Video Cable, RCA Audio Cable, S-Video Cable, Scart Cable

3.2 Submitted Documents

N/A



4. Measurement Conditions

Operating voltage of the EUT is 120V, 60Hz

4.1 Modes of Operation

- 1)PC Mode: After we connected PC to EUT through the VGA Cable, we ran "H" pattern program that is stored to PC and the signal was displayed in EUT, during the all test.
- 2)TV Mode: After we connected Patten Generator to EUT through the Video Cable, we were Transmitted the color bar signal generated by the Pattern Generator to EUT. And the signal was displayed in EUT, during the all tests.

4.2 List of Peripherals

Description	Manufacturer	Model Name	Serial No.	FCC ID
Plasma Display Panel Television (EUT)	Nextier Inc.	NP-42S3**	N/A	-
Keyboard(PS2)	Jing Mold Enterprise Co., Ltd.	LKB-0107	20103462	-
Mouse(USB)	LG	LMULBGS01I	04CU000259	-
Printer(Parallel)	EPSON PRECISION (PHILIPPINES),INC.	EPSON STYLUS PHOTO 830	ELTK014619	-
Personal Computer	LG	W8S	203KI12463	-
Color Video Monitor	HITRON SYSTEMS INC.	CVM1054X	M0090004	-
PAL Pattern Generator	LEADER	LCG-399A	9010004	-

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Page 8 of 23

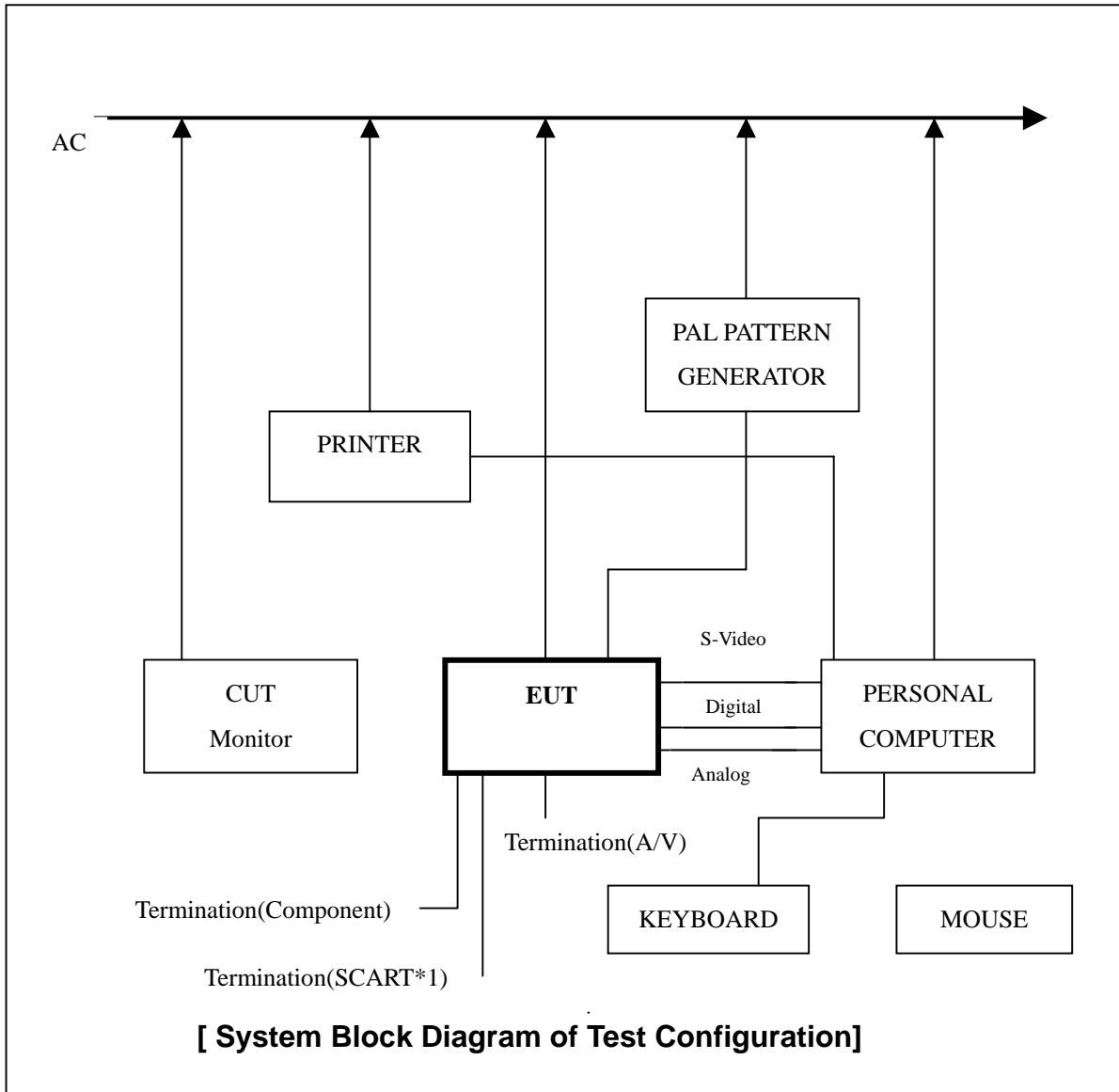
4.3 Type of Used Cables

Description	Length	Type of shield	Manufacturer	Remark
VGA(Digital)	1.2	Shield	-	
VGA(Analog)	1.2	Shield	-	
Tuner Input	3.0	Shield	-	
SCART	1.0	Shield	-	
Power(x5)	1.3	Non-Shield	-	
Parallel	1.3	Shield	-	



4.4 Test Setup

The test setup photographs showed the external supply connections and interfaces.





4.5 Uncertainty

1) Radiated disturbance

◎ Horizontally polarized radiated disturbances from 30MHz to 1000MHz at a distance of 10m

Input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ci _u (xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver reading	±0.1	K=1	0.1	1	0.1	0.10
2) Attenuation: antenna-receiver	±0.18	K=2	0.09	1	0.09	0.05
3) Antenna factor	±1.5	K=2	0.75	1	0.75	1.00
RECEIVER CORRECTIONS:						
4) Sine wave voltage	±0.56	K=2	0.28	1	0.50	0.50
5) Pulse amplitude response	±1.5	Rectangular (1/3)	0.87	1	0.87	0.87
6) Pulse repetition rate response	±1.5	Rectangular (1/3)	0.87	1	0.87	0.87
7) Noise floor proximity	±0.5	K=2	0.25	1	0.25	0.25
8) AF frequency interpolation	±0.3	Rectangular (1/3)	0.17	1	0.17	0.17
9) Balance	±0.3	Rectangular (1/3)	0.17	1	0.17	0.53
10) AF height deviations	±0.5	Rectangular (1/3)	0.29	1	0.29	0.29
11) Phase center location	±0.3	Rectangular (1/3)	0.17	1	0.17	0.17
12) Directive difference	+1.0	Rectangular (1/3)	0.29	1	0.29	0.29
13) Cross polarization	±0.9	Rectangular (1/3)	0.52	1	0.52	0.52
14) Site corrections	±2.6	Rectangular (1/3)	1.5	1	1.5	1.63
15) Mismatch (ant-receiver)	±1.06	U-shaped (1/2)	0.75	1	0.75	0.67

Combined Uncertainty

$$U_c(x_i) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2 + (9)^2 + (10)^2 + (11)^2 + (12)^2 + (13)^2 + (14)^2 + (15)^2} = 2.37$$

Expanded Uncertainty

$$U = k * U_c(x_i) = 2 * 2.37 = 4.74 \text{dB} \quad (\text{The coverage factor } k = 2 \text{ yields approximately a 95% level of confidence})$$


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Page 11 of 23

◎ Vertically polarized radiated disturbances from 30MHz to 1000MHz at a distance of 10m

Input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ciu(xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver reading	±0.1	K =1	0.1	1	0.1	0.10
2) Attenuation: antenna-receiver	±0.18	K=2	0.09	1	0.09	0.05
3) Antenna factor	±1.5	K=2	0.75	1	0.75	1.00
RECEIVER CORRECTIONS:						
4) Sine wave voltage	±0.56	K=2	0.28	1	0.50	0.50
5) Pulse amplitude response	±1.5	Rectangular (√3)	0.87	1	0.87	0.87
6) Pulse repetition rate response	±1.5	Rectangular (√3)	0.87	1	0.87	0.87
7) Noise floor proximity	±0.5	K=2	0.25	1	0.25	0.25
8) AF frequency interpolation	±0.3	Rectangular (√3)	0.17	1	0.17	0.17
9) Balance	±0.9	Rectangular (√3)	0.52	1	0.52	0.52
10) AF height deviations	±0.3	Rectangular (√3)	0.17	1	0.17	0.17
11) phase center location	±0.3	Rectangular (√3)	0.17	1	0.17	0.17
12) directive difference	+1.0	Rectangular (√3)	0.29	1	0.29	0.29
13) cross polarization	±0.9	Rectangular (√3)	0.52	1	0.52	0.52
14) site corrections	±2.6	Rectangular (√3)	1.5	1	1.5	1.63
15) Mismatch (ant-receiver)	±1.06	U-shaped (√2)	0.75	1	0.75	0.67

Combined Uncertainty

$$Uc(xi) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2 + (9)^2 + (10)^2 + (11)^2 + (12)^2 + (13)^2 + (14)^2 + (15)^2} = 2.43$$

Expanded Uncertainty

$$U = k * Uc(xi) = 2 * 2.43 = 4.86 \text{ dB}$$

(The coverage factor k =2 yields approximately a 95% level of confidence)



2) Conducted disturbance

◎ Conducted disturbance from 150KHz to 30MHz using a 50Ω/50uH AMN

input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ciu(xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver Readeing	±0.1	K=1	0.1	1	0.1	0.10
2) Attenuation:AMN-receiver	±0.36	Triangular ($\sqrt{6}$)	0.15	1	0.15	0.05
RECEIVER CORRECTIONS:						
3) Sine wave voltage	±0.5	K=2	0.25	1	0.25	0.50
4) Pulse amplitude response	±1.5	Rectangular ($\sqrt{3}$)	0.87	1	0.87	0.87
5) Pulse repetition rate response	±1.5	Rectangular ($\sqrt{3}$)	0.87	1	0.87	0.87
6) AMN voltage division factor	±0.07	K=2	0.04	1	0.04	0.1
7) Mismatch : AMN-receiver	±0.55	U-shaped ($\sqrt{2}$)	0.39	1	0.39	0.53
8) AMN impedance	±1.52	Triangular ($\sqrt{6}$)	0.62	1	0.62	1.08

- 1)~8) For numbered comments, refer to following articles

Combined Uncertainty

$$U_c(x_i) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2} = 1.47$$

Expanded uncertainty

$$U = k * U_c(x_i) = 2 * 1.47 = 2.94 \text{ dB}$$

The coverage factor $k = 2$ yields approximately a 95% level of confidence

◎ Refer

- 1) receiver's resolution capacity
- 2) refer to the sub clause 11. of a calibration report
- 3) quoted from CISPR 16-4
- 4) refer to a calibration report
- 5) refer to CISPR 16-4 article 5. 7)
- 6) refer to a calibration report and a measured AMN impedance data



5. EMISSION Test

5.1 Conducted Emissions

Result:**PASS**

The line-conducted facility is located inside a 2.0M x 3.6M x 7.2M shielded enclosure.

The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 604-05.

A 1m x 1.5m wooden table 80cm high is placed 40cm. away from the vertical wall and 1.5m away from the side wall of the shielded room. ROHDE & SCHWARZ Model ESH3-Z5 (10kHz-30MHz) 50ohm/50 uH Line-Impedance Stabilization Networks(LISNs) are bonded to the shielded room. The EUT is powered from the ROHDE & SCHWARZ LISN and the support equipment is powered from the ROHDE & SCHWARZ LISN. Power to the LISNs are filtered by a high-current high-insertion loss Lindgren enclosures power line filters (100dB 14kHz-10GHz).

The purpose of the filter is to attenuate ambient signal interference and this filter is also bonded to the shielded enclosure.

All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2".

If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the ROHDE & SCHWARZ LISN.

All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT.

The spectrum was scanned from 150kHz to 30MHz with 100msec. sweep time.

The frequency producing the maximum level was reexamined using EMI/field Intensity Meter (ESHS 10) and Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode.

The bandwidth of the receiver was set to 10kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission.

Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; if applicable; whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of conducted test.

Each EME reported was calibrated using self-calibrating mode.

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Page 14 of 23

Figure 1 : Spectral Diagram, LINE – PE (QUASIEPEAK)

29 Apr 2005 02:51

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: LINE-PE
QUASI
Result File: saix-na.dat : PDP TV Monitor

Scan Settings	(1 Range)				Receiver Settings				
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB

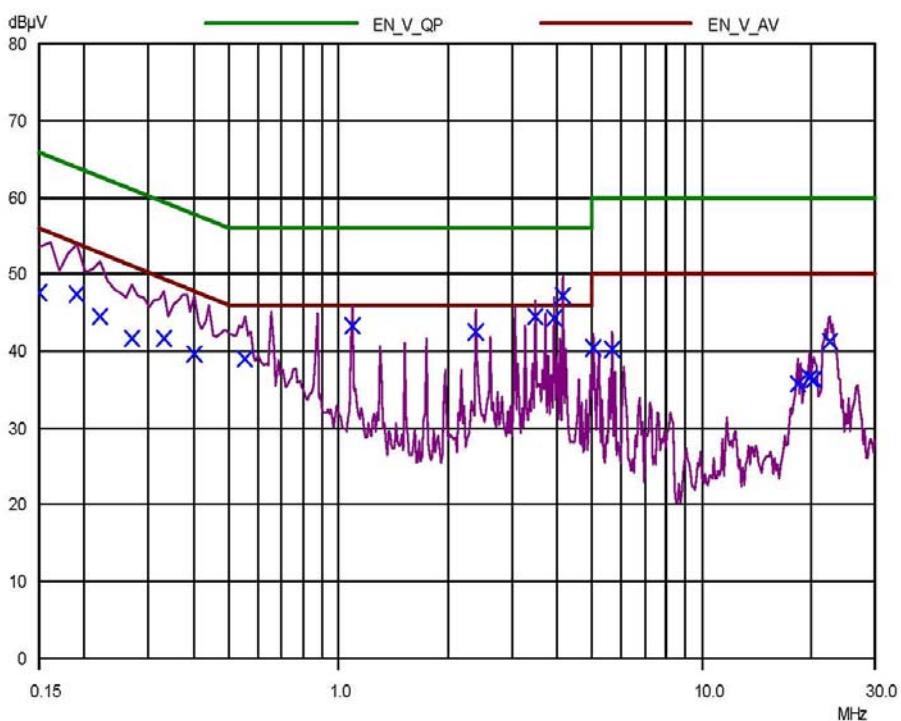




Figure 2: Test Data, LINE – PE (QUASIPEAK)

29 Apr 2005 02:51

CONDUCTED DISTURBANCE

EUT: NP-42S3**
 Manuf:
 Op Cond:
 Operator:
 Test Spec:
 Comment: LINE-PE
 QUASI
 Result File: saix-na.dat : PDP TV Monitor

Scan Settings	(1 Range)			Receiver Settings						
	Frequencies	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
		150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:					Detector:	X QP				
					Meas Time:	1sec				
					Peaks:	8				
					Acc Margin:	35 dB				

Final Measurement Results

Frequency MHz	QP Level dB μ V	QP Limit dB μ V	QP Delta dB
0.15	47.55	66.00	18.45
0.19	47.43	64.04	16.61
0.22	44.63	62.82	18.19
0.27	41.68	61.12	19.44
0.33	41.60	59.45	17.85
0.4	39.52	57.85	18.33
0.55	38.89	56.00	17.11
1.09	43.36	56.00	12.64
2.39	42.46	56.00	13.54
3.48	44.58	56.00	11.42
3.91	44.42	56.00	11.58
4.13	47.23	56.00	8.77
5.0	40.49	60.00	19.51
5.65	40.16	60.00	19.84
18.32	35.65	60.00	24.35
19.72	36.52	60.00	23.48
20.37	36.22	60.00	23.78
22.45	41.24	60.00	18.76

* limit exceeded

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Page 16 of 23

Figure 3 : Spectral Diagram, NEUTRAL – PE (QUASIPEAK)

29 Apr 2005 02:31

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: NEUTRAL-PE
QUASI
Result File: cea_n.dat : PDP TV Monitor

Scan Settings (1 Range)		Frequencies				Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge		
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB		

Final Measurement: Detector: X QP
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB

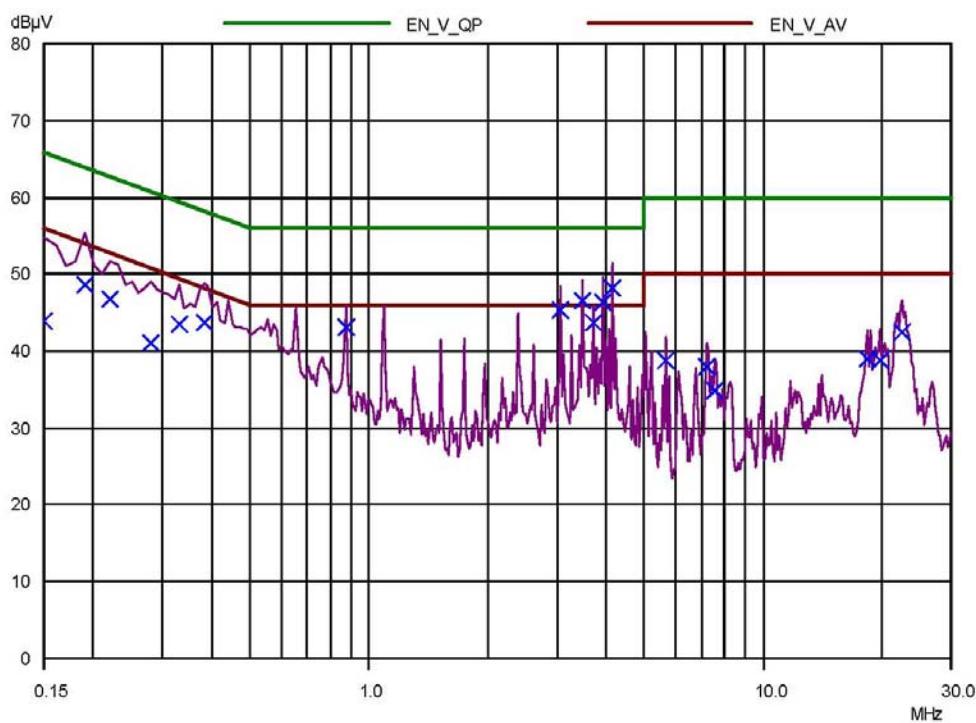




Figure 4 : Test Data, NEUTRAL – PE (QUASIPEAK)

29 Apr 2005 02:31

CONDUCTED DISTURBANCE

EUT: NP-42S3**
 Manuf:
 Op Cond:
 Operator:
 Test Spec:
 Comment: NEUTRAL-PE
 QUASI
 Result File: cea_n.dat : PDP TV Monitor

Scan Settings	(1 Range)				Receiver Settings				
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:					Detector: X QP				
					Meas Time: 1sec				
					Peaks: 8				
					Acc Margin: 35 dB				

Final Measurement Results

Frequency MHz	QP Level dB μ V	QP Limit dB μ V	QP Delta dB
0.15	43.90	66.00	22.10
0.19	48.56	64.04	15.48
0.22	46.75	62.82	16.07
0.28	41.11	60.82	19.71
0.33	43.43	59.45	16.02
0.38	43.76	58.28	14.52
0.87	43.11	56.00	12.89
3.04	45.31	56.00	10.69
3.48	46.62	56.00	9.38
3.69	43.81	56.00	12.19
3.91	46.32	56.00	9.68
4.13	48.23	56.00	7.77
5.65	38.78	60.00	21.22
7.17	37.98	60.00	22.02
7.53	34.93	60.00	25.07
18.32	39.07	60.00	20.93
19.72	38.85	60.00	21.15
22.45	42.48	60.00	17.52

* limit exceeded

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Page 18 of 23

Figure 5 : Spectral Diagram, LINE- PE (AVERAGE)

29 Apr 2005 02:54

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: LINE-PE
AVERAGE
Result File: saix-lq.dat : PDP TV Monitor

Scan Settings	(1 Range)			Receiver Settings					
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB

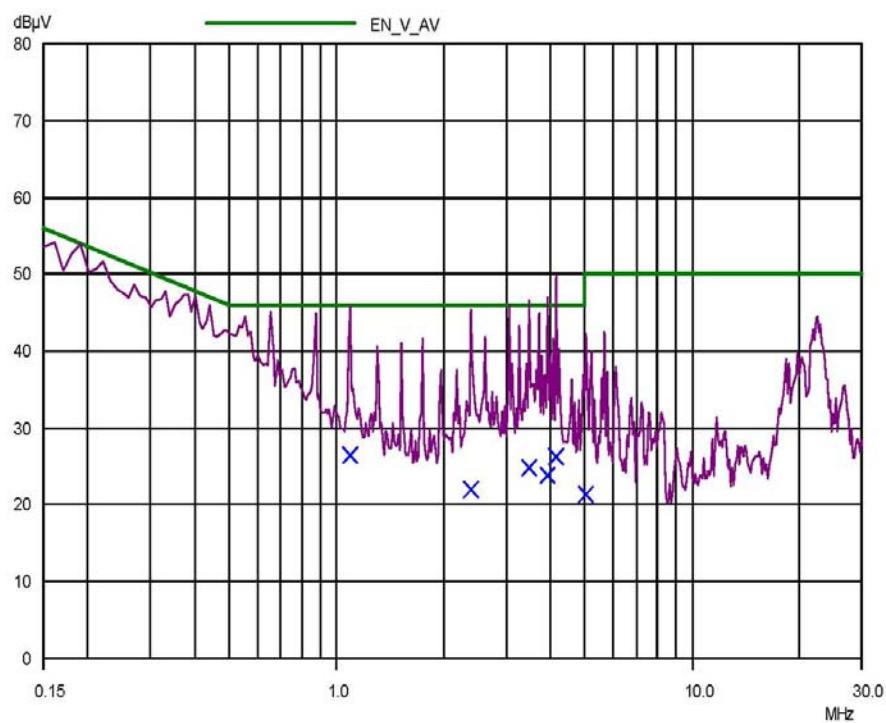




Figure 6 : Test Data, LINE – PE(AVERAGE)

29 Apr 2005 02:54

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: LINE-PE
AVERAGE
Result File: saix-lq.dat : PDP TV Monitor

Scan Settings	(1 Range)				Receiver Settings				
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:					Detector: X AV				
					Meas Time: 1sec				
					Peaks: 8				
					Acc Margin: 35 dB				

Final Measurement Results

Frequency MHz	AV Level dB μ V	AV Limit dB μ V	AV Delta dB
1.09	26.53	46.00	19.47
2.39	22.00	46.00	24.00
3.48	24.76	46.00	21.24
3.91	23.86	46.00	22.14
4.13	26.20	46.00	19.80
5.0	21.32	50.00	28.68

* limit exceeded

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Page 20 of 23

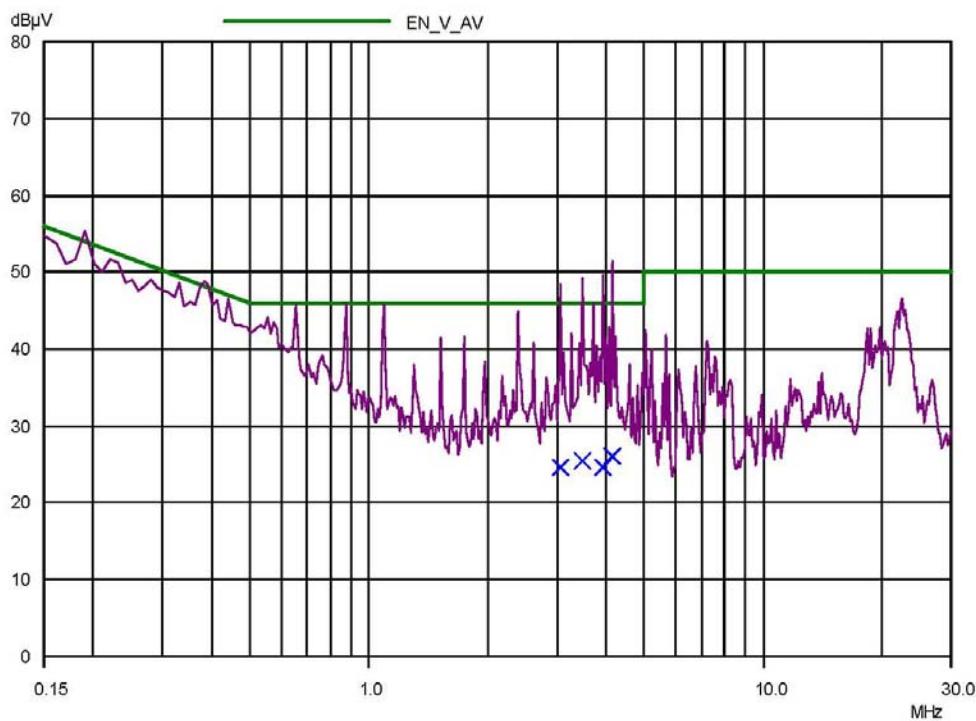
Figure 7 : Spectral Diagram, NEUTRAL- PE (AVERAGE)

29 Apr 2005 02:35

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: NEUTRAL-PE
AVERAGE
Result File: SAIX-NQ.dat : PDP TV Monitor

Scan Settings	(1 Range)			Receiver Settings					
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:				Detector:	X AV				
				Meas Time:	1sec				
				Peaks:	8				
				Acc Margin:	35 dB				



**Figure 8 : Test Data, NEUTRAL – PE (AVERAGE)**

29 Apr 2005 02:35

CONDUCTED DISTURBANCE

EUT: NP-42S3**
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: NEUTRAL-PE
AVERAGE
Result File: SAIX-NQ.dat : PDP TV Monitor

Scan Settings	(1 Range)				Receiver Settings				
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:					Detector: X AV				
					Meas Time: 1sec				
					Peaks: 8				
					Acc Margin: 35 dB				

Final Measurement Results

Frequency MHz	AV Level dB μ V	AV Limit dB μ V	AV Delta dB
3.04	24.61	46.00	21.39
3.48	25.40	46.00	20.60
3.91	24.51	46.00	21.49
4.13	26.03	46.00	19.97

* limit exceeded



5.2 Radiated Emissions

Result :**PASS**

Preliminary measurements were made indoors at 3 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME.

Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found.

The spectrum was scanned from 30 to 300 MHz using biconical antenna and from 300 to 1000 MHz using log-periodic antenna. Above 1GHz, linearly polarized double ridge horn antennas were used.

Final measurements were made outdoors at 3-meter test range using SCHWARZBECK dipole antennas. The test equipment was placed on a wooden table situated on a 4x4 meter area adjacent to the measurement area. Turntable was to protect from weather in the dome that made with FRP.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using EMI/Field Intensity Meter(ESVS 10) and Quasi-Peak Adapter. The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100kHz or 1MHz depending on the frequency or type of signal.

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table.

The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed, and/or support equipment, if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of radiated emission test.

Each EME reported was calibrated using self-calibrating mode.

**Table 2 : Test Data, Radiated Emissions**

Frequency [MHz]	Pol.	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
				Antenna	Cable				
245.13	V	1.2	12.2	17.4	2.6	20.0	32.2	37.0	4.8
283.27	H	2.8	11.4	18.4	2.9	21.3	32.7	37.0	4.3
400.52	H	2.2	8.1	18.2	3.5	21.7	29.8	37.0	7.2
679.83	V	4.0	6.0	22.1	5.5	27.6	33.6	37.0	3.4
830.91	H	30.0	4.6	23.0	4.9	27.9	32.5	37.0	4.5
923.54	V	1.0	2.1	24.7	5.5	30.2	32.3	37.0	4.7

NOTES:

1. All modes of operation were investigated and the worst-case emission are reported.
2. All other emission are non-significant.
3. All readings are calibrated by self-mode in receiver.
4. Measurements using CISPR quasi-peak mode.
5. H = Horizontal, V = Vertical Polarization
6. DATA = Real Reading + T - FACTOR(=Antenna+Cable)
7. Margin = Limits - DATA