UL Korea, Ltd

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Project: 09CA41702
File: TC8312
Report 09CA41702-FCC
Date: October 7, 2009
Model: VP4732 (VP4732F)

FCC Test Report

FCC Certification
Part 15 Subpart B Class B

For

D&T Inc.

59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA

UL Korea Ltd.

33rdFl. Gangnam finance Center, 737 Yeoksam-Dong, Kangnam-Gu, Seoul, 135-984, Korea

TEST REPORT DETAILS

Test report No:	09CA41702-FCC
Tests Performed By:	UL Korea Ltd. 33rd FL. GFC Bldg. 737 Yeoksam-dong, Kangnam-ku, Seoul, 135-984, Korea
Test Site:	CHUNGBUK TECHNOPARK 685-3 Yangcheong-ri, Ochang-eub,Cheongwon-kun,Chungbuk-province,Republic of Korea The test facility was deemed to have the environment and capabilities necessary to perform the tests included in the test package.
Applicant:	D&T Inc. 59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA
Manufacturer:	D&T Inc. 59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA
Factory:	D&T Inc. 59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA
Applicant Contact: Phone: E-mail:	MR. Won-Woo Lee 82-42-360-8055 wwlee88@dntinc.co.kr
Product Type:	LCD Medical monitor
FCC ID:	THCVP4732
Model Number: Model Number multiple listing:	VP4732 VP4732F
Product standards:	FCC Part 15 Subpart B Class B
Sample Serial Number:	N/A
Sample Receive Date:	September 11, 2009
Testing Start Date:	September 11, 2009
Date Testing Complete: Test Report Date:	September 30, 2009 October 7, 2009
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 componens. 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.

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

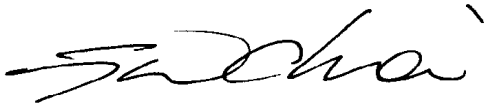
The tests listed in the Summary of Testing section of this report have been performed and the results recorded by UL Korea, Ltd. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under 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 7, 2009



Reviewed by
Jeawoon, Choi, Senior Project Engineer
Conformity Assessment Services – 3014ASEO
UL Korea Ltd.
October 8, 2009

REPORT DIRECTORY

1. EQUIPMENT UNDER TEST (EUT)

1.1 Report Revision history

Revision Date	Description	Remarks	Revision reviewed By
N/A	Original Report	-	-

1.2 Equipment Description

Description:
The VP4732 is intended for use by general surgeons, gynecologists, urologists, thoracic, orthopedic, ENT, and plastic surgeons adequately trained in these surgical procedures.

1.3 Details of Test Equipment (EUT)

Equipment Configuration:				
No.	Product Type	Manufacturer	Model	Comments
1	32" LCD Medical Monitor	D&T Inc.	VP4732	-
2	Medical power supply	BridgePower Corp.	JMW1180KA2400F01	Connected with 32" LCD Medical Monitor
3	DVI cable	Various	Style 20276	-
4	VGA HDDB15cable	Various	Style 1354	-
5	Hospital-grade AC power cord	Various	Various	-
6	BNC cable	Various	Various	-
7	S-Video cable	Various	Style 1354	
8	DC Extension cable	ConMed	900-0034-00	15 ft
9	DC Extension cable	ConMed	900-0034-00	25 ft
10	DC Extension cable	ConMed	900-0034-00	50 ft
11	DC Extension cable	ConMed	900-0034-00	75 ft
12	DC Extension cable	ConMed	900-0034-00	100 ft

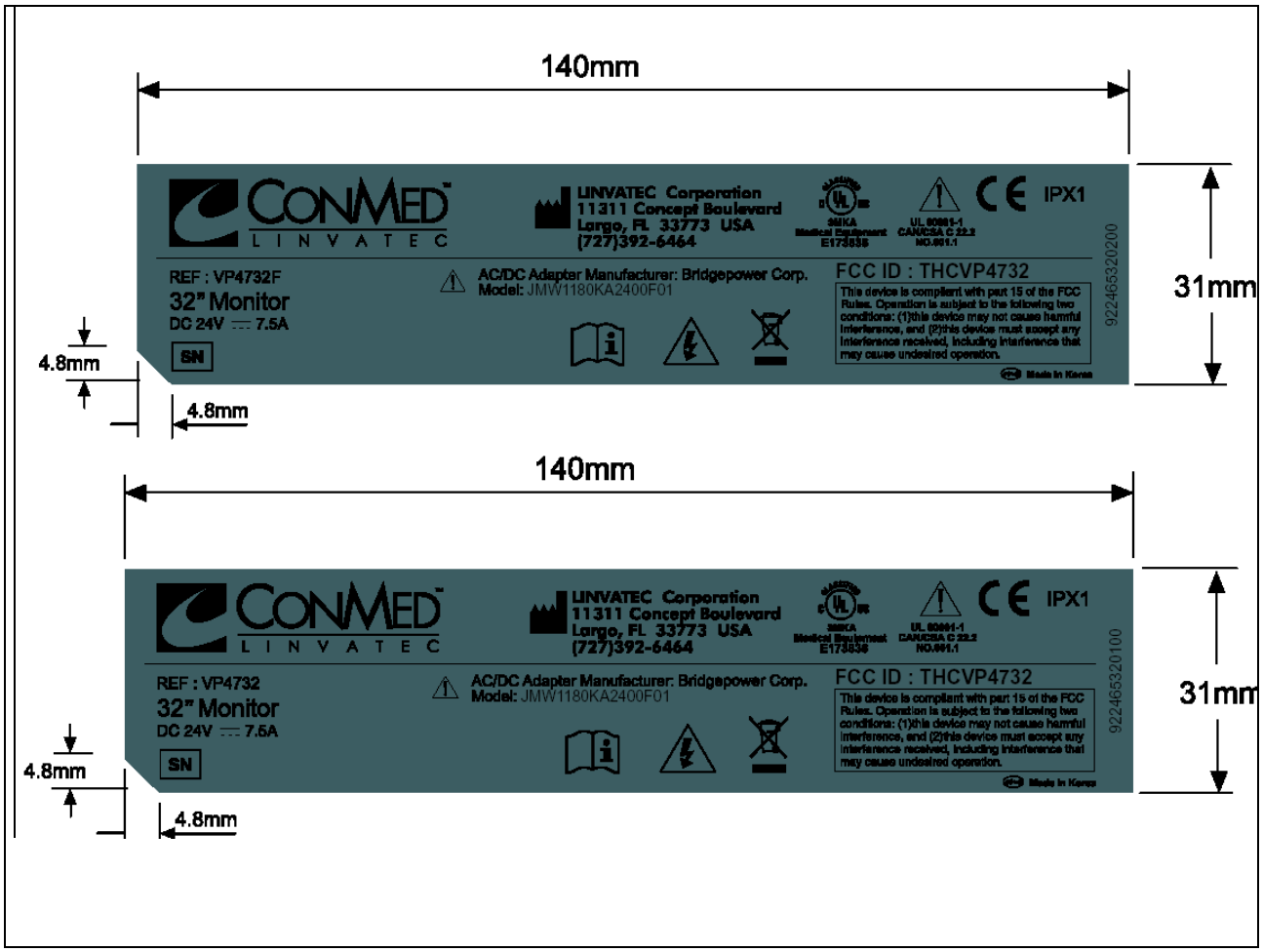
1.4 Equipment Specification

Specification		
LCD Display Panel	LC320WUN-SAB1 (LG Display)	
Type	TFT-LCD	
Screen Size	32 inch diagonal	
Maximum Resolution	1920 x 1080 pixels @	
Pixel Pitch	0.363 mm (H) x 0.363	
Display Colors	1.06 billion	
Contrast Ratio	1300:1	
Viewing Angle	89° /89° /89° /89°	
Response Time	12 msec (Rising + Falling)	
Luminance	500cd/m2	
Synchronization	Horizontal Frequency	30KHz~93KHz
	Vertical Frequency	50Hz~85Hz
Input Signal	1 x DVI-D, 1 x Optical DVI (VP4732F Monitor Only), 1 x D-SUB, 1 x BNC (CVBS), 2 x BNC (SVHS Y/C), 1 x BNC (SDI), 5 x BNC (Component Y/G, Pb/B, Pr/R, C-SYNC/HS, VS Input)	
Input Power of LCD Medical monitor	DC 24V, 7.5A Max	

1.5 Technical descriptions and documents:

No.	Document Title and Description
1	VP4732/VP4732F User Manual
Note: The manufacturer provided the following document.	

1.6 Equipment Marking Plate



1.7 Equipment Used During Test

Use*	Product Type	Manufacturer	Model	Comments
EUT	32” LCD Medical Monitor	D&T Inc.	VP4732	-
EUT	AC/DC Adapter	BridgePower Corp.	JMW1180KA2400F01	Connected with 32" LCD Medical Monitor
EUT	D.C Extension cable	ConMed	900-0034-00	The cable assembled between LCD Medical monitor and A.C/D.C Adapter.
AE	Headset	PILLAR	-	-
AE	Printer	SAMSUNG	ML-2250G	-
AE	USB mouse	DELL	M-UAR DEL7	-
AE	USB Keyboard	DELL	L30U	-
AE	SDI Patten Generator	DOREMI	HDG-20	Used for SDI mode
AE	Pattern generator	Chroma	22291	Used for C-video, S-Video and Component mode.
AE	LCD Monitor	DELL.	1908WFPf	Used For External Monitor
AE	DVI to Optical DVI connector	Self EDID	DDL-T001	DVI to Optical DVI Converter

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

1.8 EUT Input/Output Ports

Port #	Name	Type*	Cable Max. >3m	Cable Shielded	Comments
1	Mains	AC	1.8 m	Unshielded	Hospital-grade A.C. Power cord
2	DVI In, Out	I/O	1.8 m	Shielded	24 pin DVI-D
3	Optical DVI In	I/O	22.5 m	Unshielded	Optical Cable
4	VGA In	I/O	1.8 m	Shielded	15 pin D-Sub
5	SDI In, Out	I/O	1.8 m	Shielded	BNC
6	S-Video In	I/O	1.8 m	Shielded	-
7	Component (Y/Pb/Pr) In	I/O	1.8m	Shielded	-
8	C-Video	I/O	1.8m	Shielded	-

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

1.9 EUT Internal Operating Frequencies

Frequency (MHz)	Description	Frequency (MHz)	Description
192.375 MHz	Memory Clock	27.00 MHz	System Clock
151.875 MH	Display Clock	28.322 MHz	System Clock

1.10 Power Interface

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	100-240Vac	-	-	50-60Hz	-	-
1	120 V	-	-	60 Hz	-	-

2. EUT OPERATION MODES FOR TESTING

2.1 Test Mode of LCD Color Display Monitor

Mode #	Mode	Comments
1	DVI Mode	-
2	Optical DVI Mode	Worst case condition
3	VGA Mode	-
4	SDI In/Out Mode	Worst case condition
5	S-VIDEO Mode	-
6	C-Video Mode	-
7	Component (Y/Pb/Pr) Mode	-

Note:
1. All the configuration described above has been investigated during the preliminary testing and selected two cases as worst-case condition for final measurements.
2. EUT have been performed under continuous displaying “H” Patten for configuration modes of 1 to 3
3. EUT has been performed under continuous displaying “Color Bar” Patten for configuration modes of 4, 5, 6 and 7.

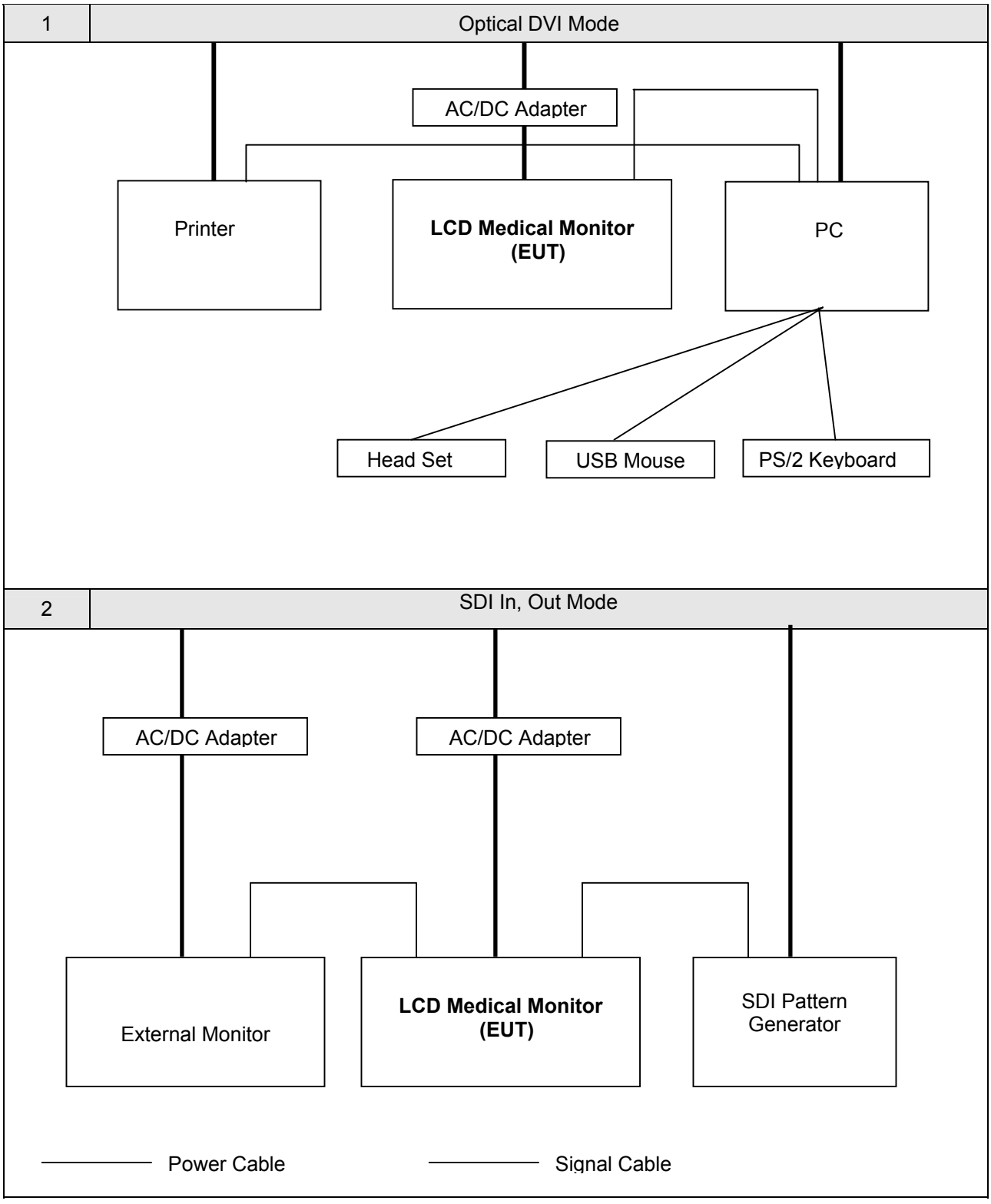
2.2 Test Resolution of LCD Color Display Monitor

Mode #		Resolution	Comments
1	Optical DVI Mode	640 x 480 @ 60 Hz	-
2		800 x 600 @ 75 Hz	
		1024 x 768 @ 85 Hz	-
3		1920 x 1080 @ 60Hz	Worst case condition
4	SDI Mode In/Out Mode	720p	Worst case condition
Note: Video resolution where it refers from above is representative worst case.			

2.3 Used DC extension Cable for Test

Mode #	Manufacturer	Model	Preliminary Test Mode	Comment
1	ConMed	900-0034-00 (10 ft)	DVI, Optical DVI, VGA, SDI, S-Video, C-Video, Component Mode.	-
2	ConMed	900-0034-00 (25 ft)		-
3	ConMed	900-0034-00 (50 ft)		-
4	ConMed	900-0034-00 (75 ft)		-
5	ConMed	900-0034-00 (100 ft)		Worst case condition
Note: Radiated emission and conducted emission test were performed for all extension power cable during the preliminary testing and selected worst-case condition for final measurements.				

2.4 Test Configuration:



3. AC POWER LINE CONDUCTED EMISSION TEST

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 recorded during the test	Laboratory Ambient Temperature	27.1 °C
	Relative Humidity	48.8 %
-	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150 kHz to 30 MHz	AC Mains ports of AC/DC Adapter

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**

Conducted Emissions EUT Configuration Settings

Power Interface Mode # (See Section 1.10)	EUT Operation Mode # (See 2.1)	EUT Configurations Mode # (See Section 2.4)
1	2 and 4	1and 2

Test Equipment Used

Description	Manufacturer	Model	Identifier	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2010.04.24
LISN	Rohde & Schwarz	ESH2-Z5	100146	2010.04.24
LISN	Schwarzbeck	NNLK8129	8129162	2010.04.24
Pulse Limiter	R&S	ESH3-Z2	3057.8810.54	2010.04.24

Figure 1. Conducted Emission Test Setup

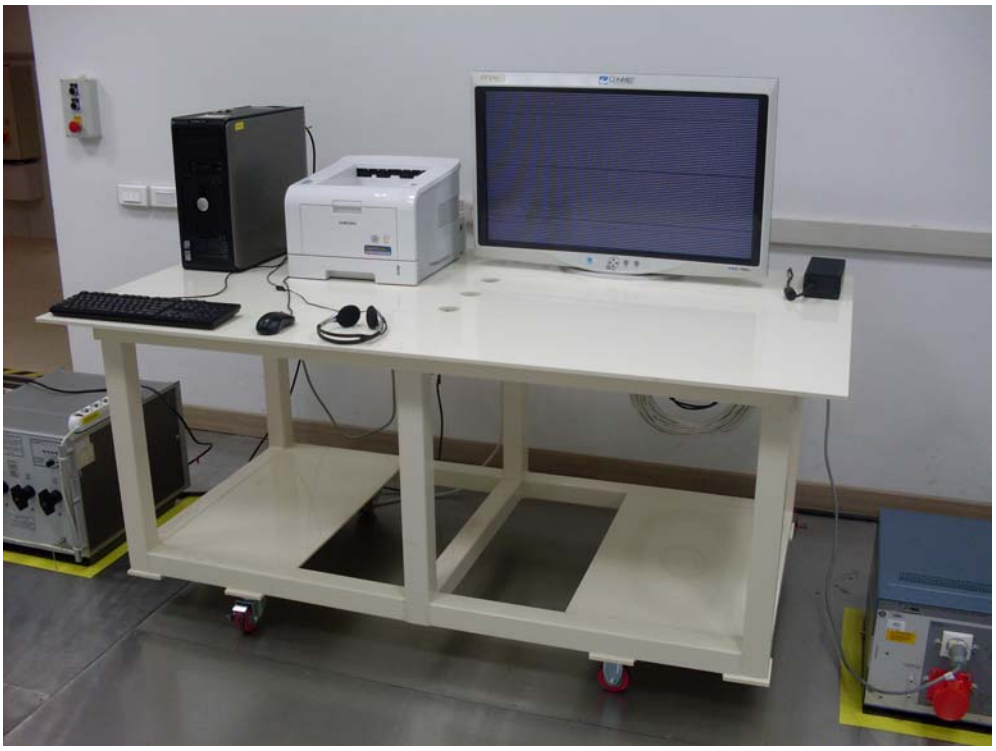
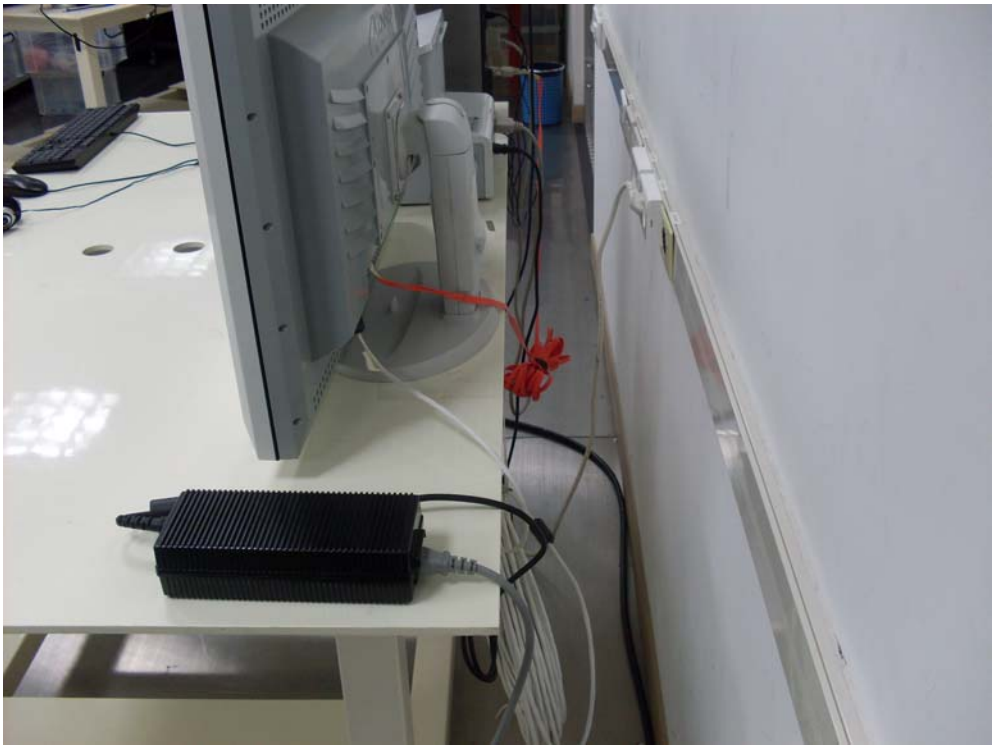
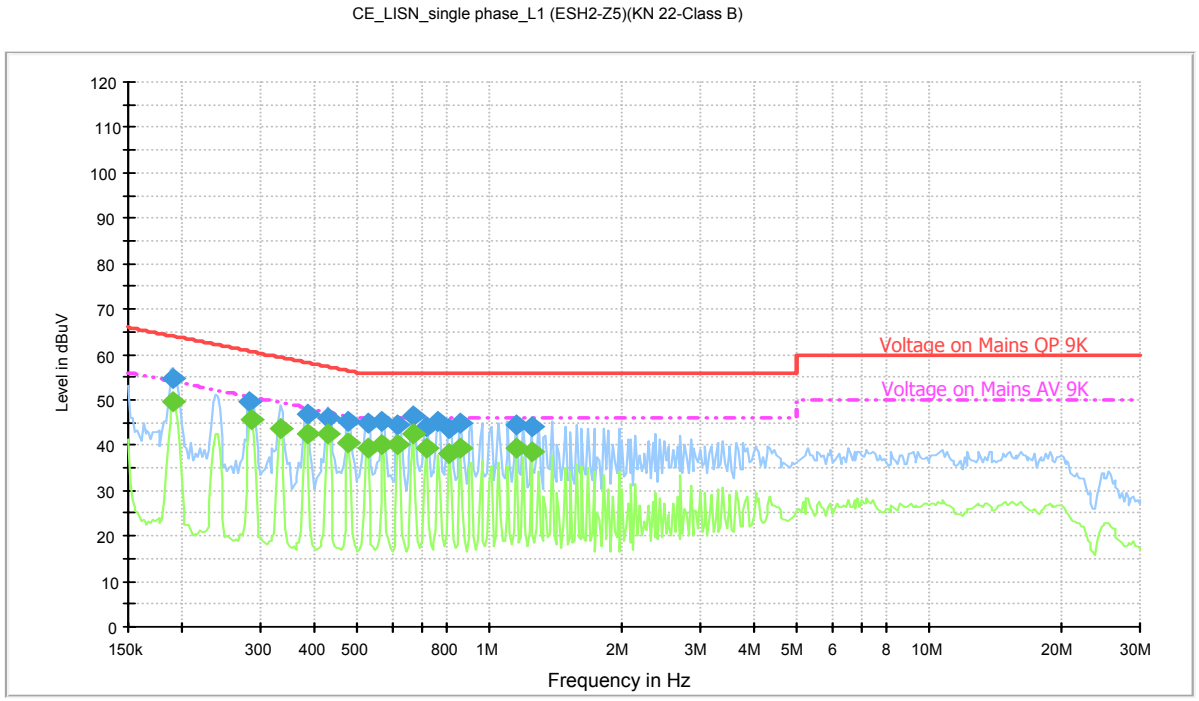
Optical DVI Mode



Figure 5. Graphical representation

Optical DVI Mode, Hot Line



Optical DVI Mode, Neutral Line

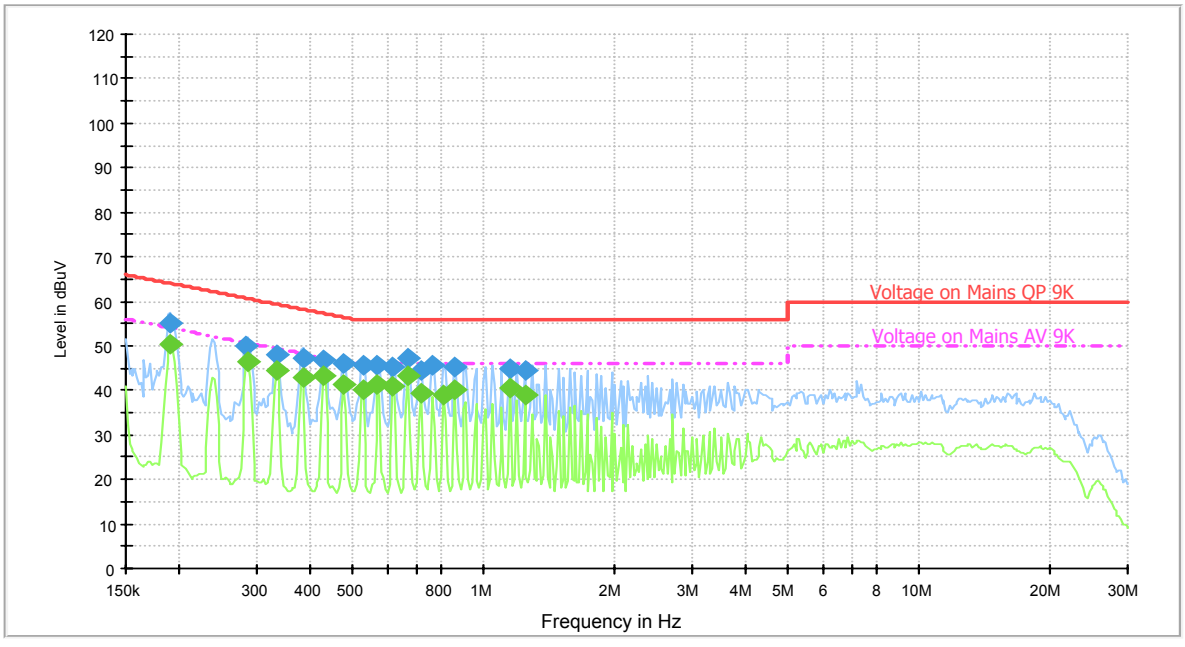


Table 1. Test data for conducted emission

Optical DVI Mode											
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
0.19	0.13	9.77	45.30	40.60	N	55.20	50.50	64.00	54.00	8.80	3.50
0.28	0.14	9.76	40.20	36.10	N	50.10	46.00	60.70	50.70	10.60	4.70
0.33	0.14	9.76	38.10	34.60	N	48.00	44.50	59.40	49.40	11.40	4.90
0.43	0.14	9.76	37.00	33.40	N	46.90	43.30	57.30	47.30	10.40	4.00
0.48	0.12	9.78	36.00	31.20	N	45.90	41.10	56.40	46.40	10.50	5.30
0.57	0.12	9.78	35.20	30.30	L1	45.10	40.20	56.00	46.00	10.90	5.80
0.62	0.12	9.78	34.80	30.40	L1	44.70	40.30	56.00	46.00	11.30	5.70
0.67	0.12	9.78	37.30	32.90	N	47.20	42.80	56.00	46.00	8.80	3.20
0.72	0.11	9.79	34.70	29.60	N	44.60	39.50	56.00	46.00	11.40	6.50
0.76	0.11	9.79	35.30	27.10	L1	45.20	37.00	56.00	46.00	10.80	9.00
0.81	0.09	9.81	33.80	28.10	L1	43.70	38.00	56.00	46.00	12.30	8.00
0.86	0.19	9.81	35.20	30.00	N	45.20	40.00	56.00	46.00	10.80	6.00
1.14	0.19	9.81	35.00	30.40	N	45.00	40.40	56.00	46.00	11.00	5.60
1.24	0.18	9.82	33.90	28.50	L1	43.90	38.50	56.00	46.00	12.10	7.50

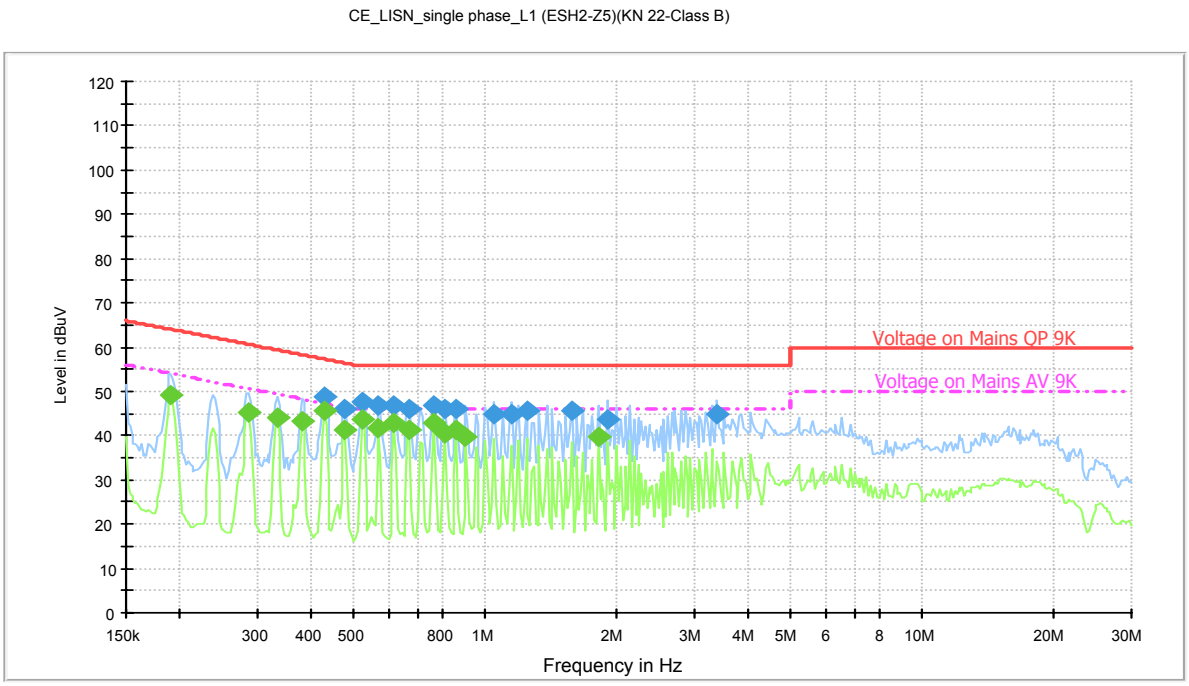
Note:
1. Margin (dB)= Limit (dBuV) - Level (dBuV)
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 2. Conducted Emission Test Setup

SDI In/Out Mode

Figure 6. Graphical representation

SDI In/Out Mode, Hot Line



SDI In/Out Mode, Neutral Line

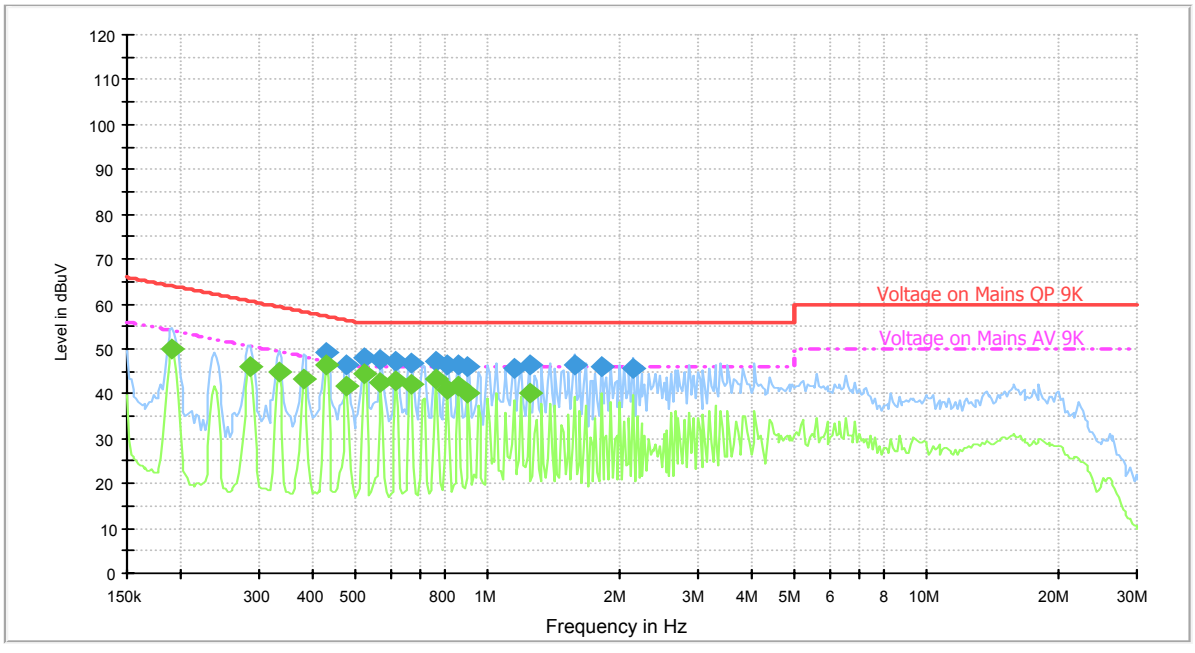


Table 1. Test data for conducted emission

SDI In/Out Mode											
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
0.43	0.14	9.76	39.40	33.40	N	49.30	43.30	57.30	47.30	8.00	4.00
0.52	0.12	9.78	38.10	31.40	N	48.00	41.30	56.00	46.00	8.00	4.70
0.57	0.12	9.78	37.60	32.60	N	47.50	42.50	56.00	46.00	8.50	3.50
0.62	0.12	9.78	36.90	32.80	L1	46.80	42.70	56.00	46.00	9.20	3.30
0.67	0.12	9.78	36.10	31.40	L1	46.00	41.30	56.00	46.00	10.00	4.70
0.76	0.11	9.79	37.30	32.70	N	47.20	42.60	56.00	46.00	8.80	3.40
0.81	0.19	9.81	36.50	30.90	N	46.50	40.90	56.00	46.00	9.50	5.10
0.90	0.20	9.80	36.00	30.30	N	46.00	40.30	56.00	46.00	10.00	5.70
1.04	0.10	9.80	34.90	32.60	L1	44.80	42.50	56.00	46.00	11.20	3.50
1.24	0.18	9.82	36.30	30.30	N	46.30	40.30	56.00	46.00	9.70	5.70
1.57	0.16	9.84	36.30	26.00	N	46.30	36.00	56.00	46.00	9.70	10.00
1.80	0.14	9.86	35.90	29.00	N	45.90	39.00	56.00	46.00	10.10	7.00
1.90	0.14	9.86	33.60	32.60	L1	43.60	42.60	56.00	46.00	12.40	3.40
2.14	0.22	9.88	35.60	27.90	N	45.70	38.00	56.00	46.00	10.30	8.00
3.38	0.26	9.94	34.50	24.80	L1	44.70	35.00	56.00	46.00	11.30	11.00

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.

4. RADIATED EMISSION TEST

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 3-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 recorded during the test	Laboratory Ambient Temperature	26.9 °C		
	Relative Humidity	47.4 %		
-	Frequency range	Measurement Point		
Fully configured sample scanned over the following frequency range	30 MHz – 2.0 GHz	10 meter measurement distance for 30 MHz to 1000 MHz and 3 meter measurement distance for 1 GHz to 2 GHz.		
Limits - Class B				
Frequency (MHz)	Limit (dBµV/m)			
Quasi-Peak	Results			
30 to 230	30	Pass		
230 to 1000	37	Pass		
1000 to 2000	54 (Average), 74 (Peak)	Pass		
Conducted Emissions EUT Configuration Settings				
Power Interface Mode # (See Section 1.10)	EUT Operation Mode # (See 2.1)	EUT Configurations Mode # (See Section 2.4)		
1	2 and 4	1and 2		
Test Equipment Used				
Description	Manufacturer	Model	Identifier	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2010.05.26
BiconiLog ANT	CBL6112D	Schaffner	21784	2010.04.21
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-539	2010.03.24
Position controller	Inn-co	CO 2000	11261105/L	-
Antenna Mast	Inn-co	MA 4000	-	-
Turntable	Inn-co	DT 3000	-	-

Figure 9, Photo of Radiated emission test setup, 30 MHz to 1000 MHz

Optical DVI Mode

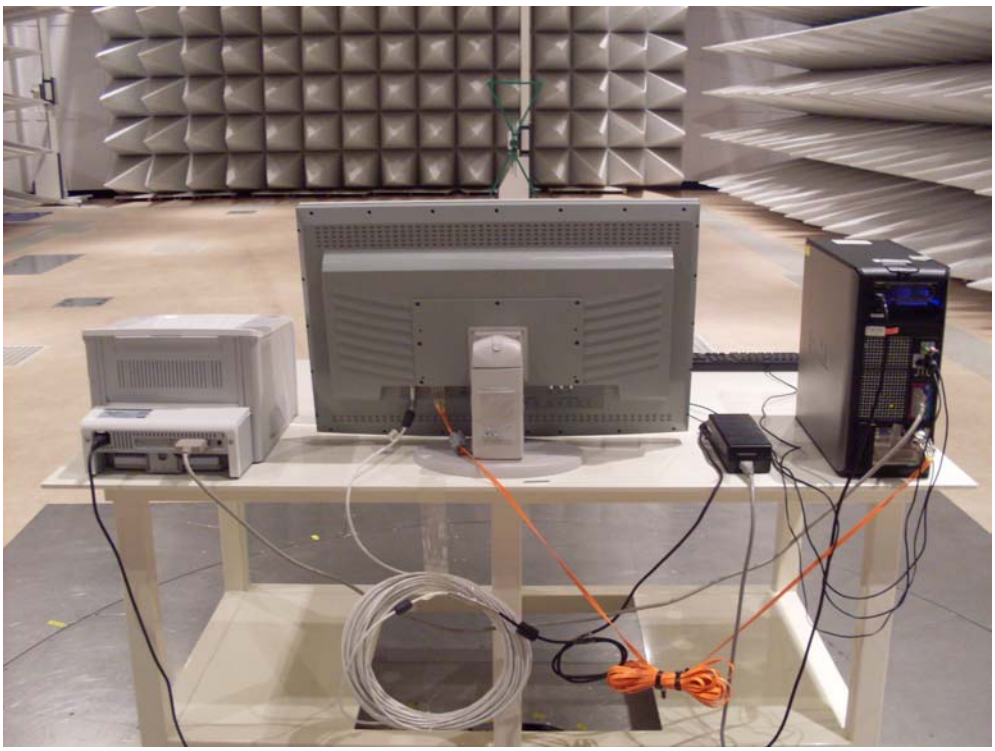


Figure 16. Graphical representation, 30 MHz to 1000 MHz

Optical DVI Mode

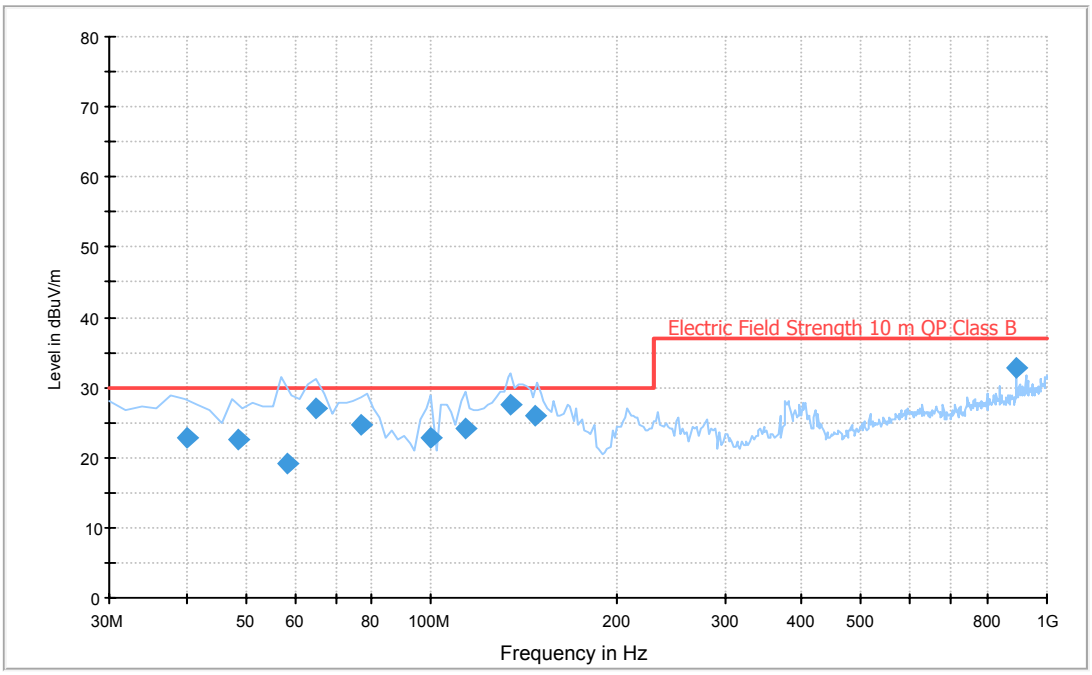


Table 4. Radiated emission Test data, 30 MHz to 1000 MHz

Optical DVI Mode										
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
48.74	13.40	QP	V	282.00	4.00	1.73	7.47	22.60	30.00	7.40
58.39	12.10	QP	V	76.00	4.00	1.12	5.78	19.00	30.00	11.00
65.09	19.80	QP	V	282.00	2.00	0.79	6.31	26.90	30.00	3.10
77.14	16.40	QP	V	5.00	1.95	1.22	7.08	24.70	30.00	5.30
99.91	10.60	QP	V	5.00	1.00	1.62	10.58	22.80	30.00	7.20
113.98	11.10	QP	V	5.00	1.00	1.15	11.95	24.20	30.00	5.80
134.52	14.30	QP	V	40.00	1.05	1.25	11.95	27.50	30.00	2.50
147.93	13.50	QP	V	26.00	1.95	1.97	10.43	25.90	30.00	4.10
890.99	8.70	QP	V	155.00	1.95	4.16	19.84	32.70	37.00	4.30

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, 1.0 GHz to 2.0 GHz

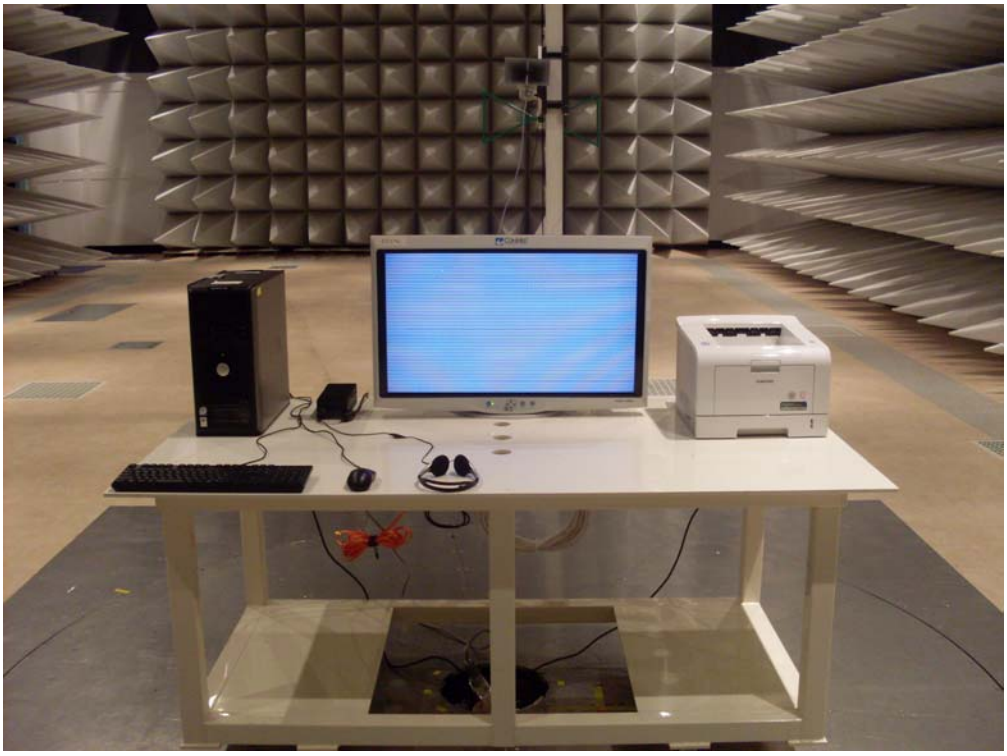
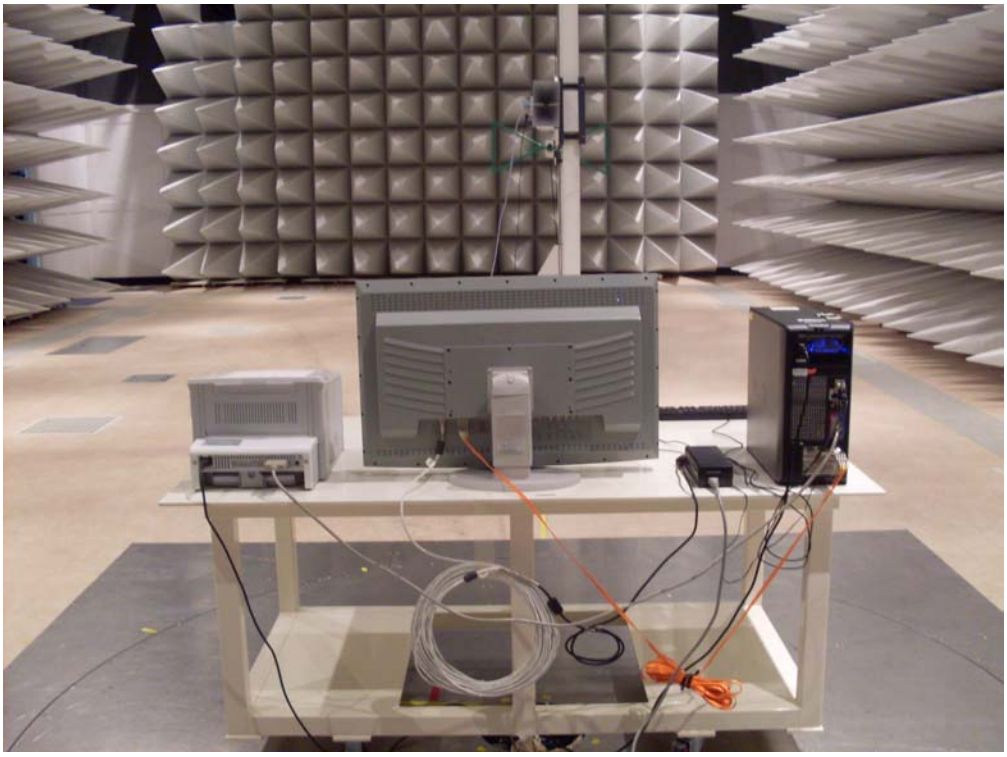
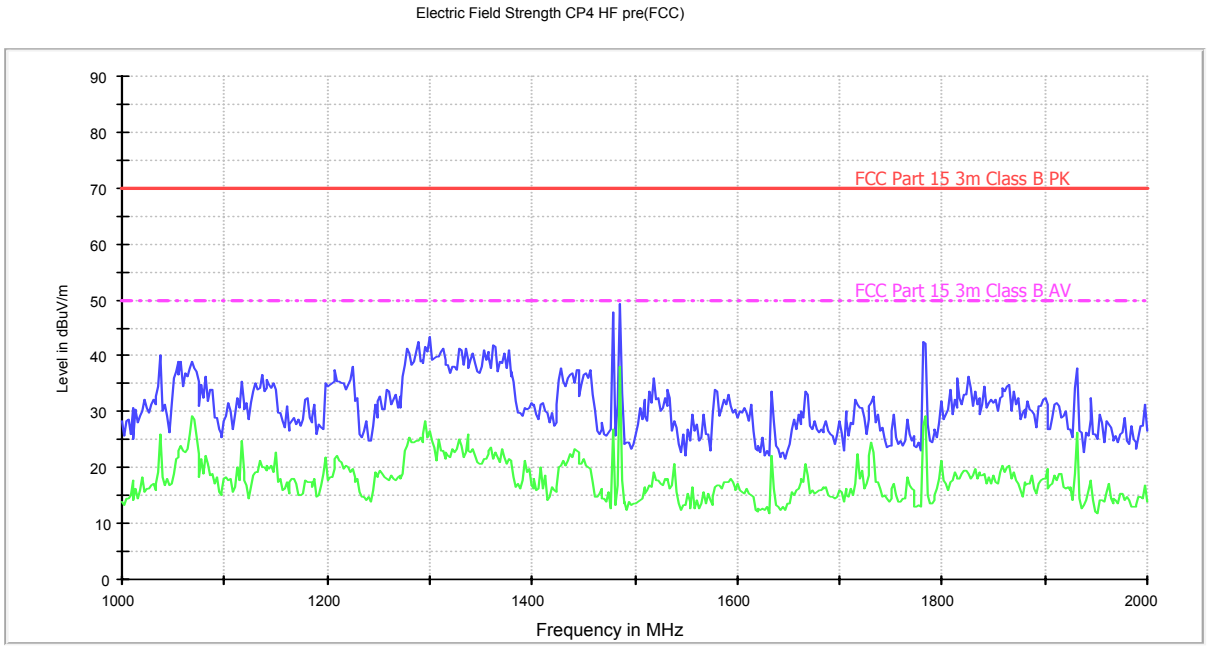
Optical DVI Mode



Figure 16. Graphical representation, 1.0 GHz to 2.0 GHz

Optical DVI Mode, Horizontal



Optical DVI Mode, Vertical

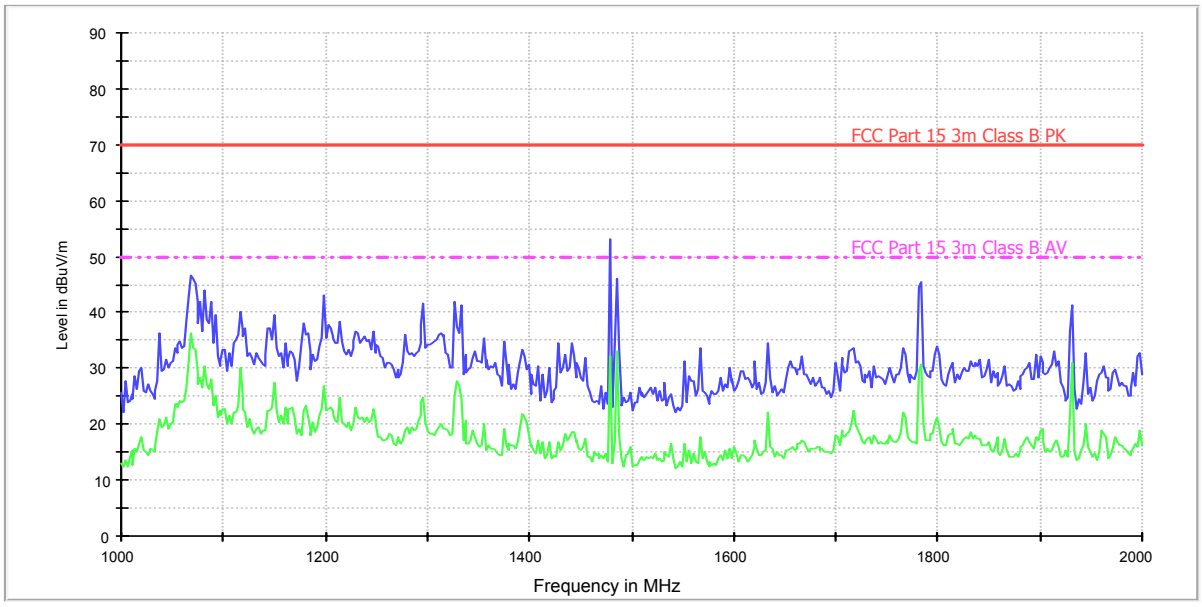


Table 5. Radiated emission Test data, 1.0 GHz to 2.0 GHz

Optical DVI Mode, Peak detector mode											
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (PK)	Pol (V/H)	Azimuth	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
1070.14	59.16	PK	V	30	1.00	41.72	24.25	4.47	46.16	74.00	27.84
1198.40	54.88	PK	V	15	1.50	40.78	24.16	4.72	42.98	74.00	31.02
1300.60	54.28	PK	H	0	1.00	40.96	25.03	4.93	43.28	74.00	30.72
1478.96	64.35	PK	V	15	1.00	41.54	25.14	5.30	53.25	74.00	20.75
1783.57	56.34	PK	V	0	1.00	41.44	24.69	5.75	45.34	74.00	28.66
Note: N/A											

Optical DVI Mode, AV detector mode											
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (AV)	Pol (V/H)	Azimuth	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
1070.14	49.00	AV	V	30	1.00	41.72	24.25	4.47	36.00	54.00	18.00
1198.40	38.40	AV	V	15	1.50	40.78	24.16	4.72	26.50	54.00	27.50
1300.60	36.50	AV	H	0	1.00	40.96	25.03	4.93	25.50	54.00	28.50
1478.96	43.60	AV	V	15	1.00	41.54	25.14	5.30	32.50	54.00	21.50
1783.57	42.00	AV	V	0	1.00	41.44	24.69	5.75	31.00	54.00	23.00
Note: N/A											

Figure 9, Photo of Radiated emission test setup, 30 MHz to 1000 MHz

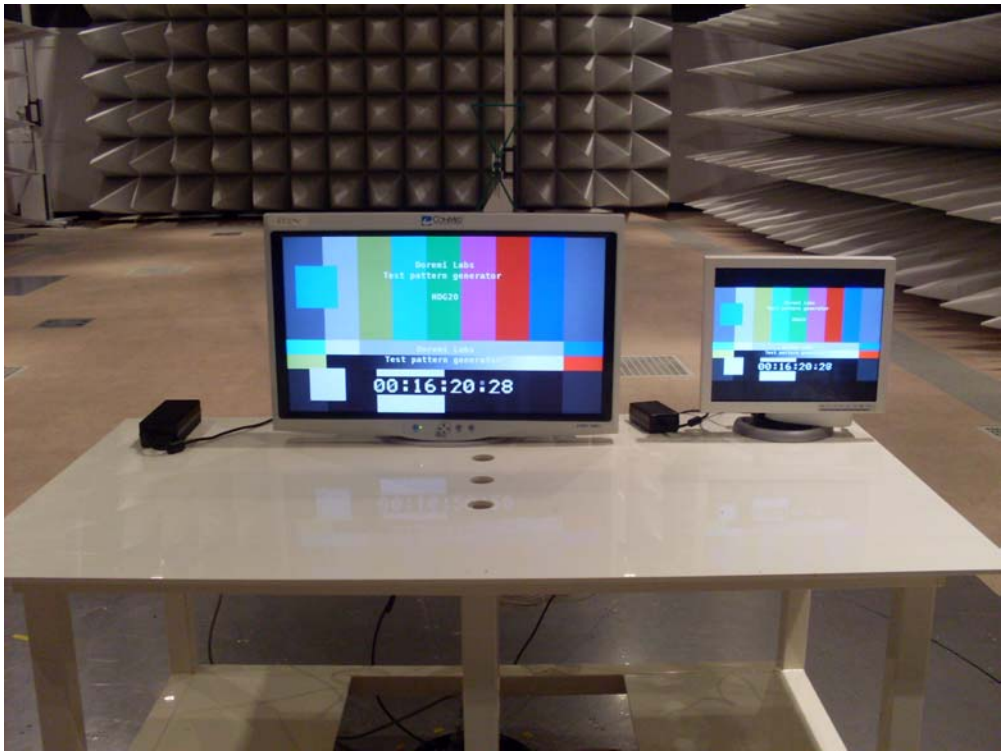
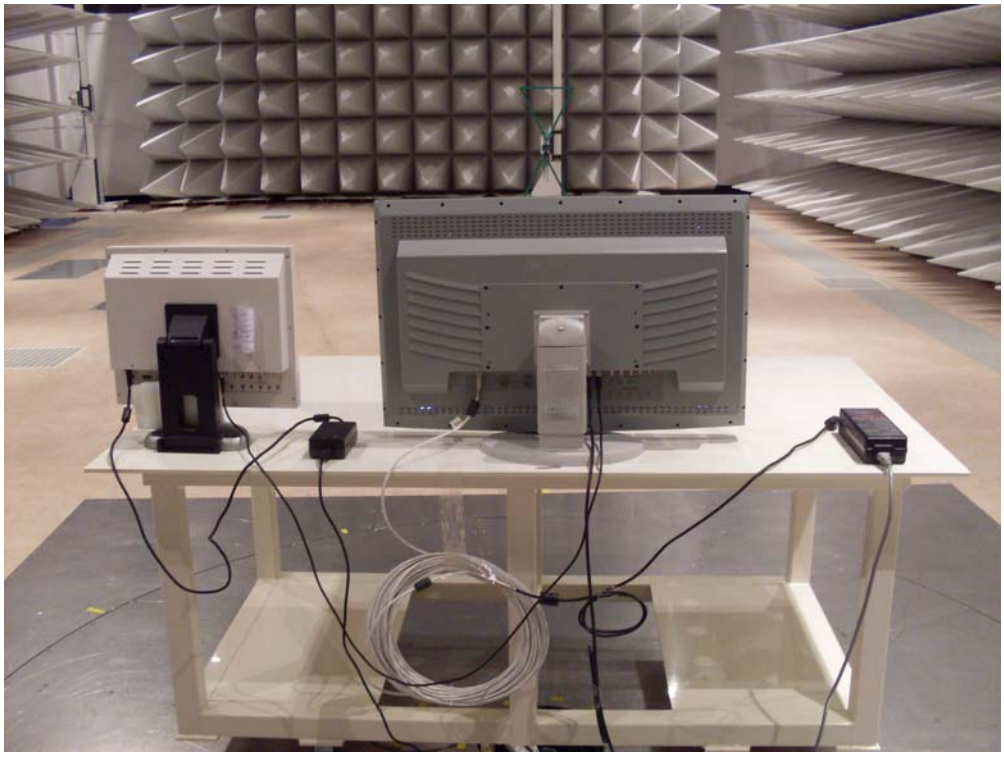
SDI In/Out Mode



Figure 16. Graphical representation, 30 MHz to 1000 MHz

SDI In/Out Mode, Horizontal and Vertical.

Table 4. Radiated emission Test data, 30 to 1000 MHz

SDI In/Out Mode										
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Gain/Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
37.09	6.90	QP	V	251.00	100.00	2.84	12.76	22.50	30.00	7.50
50.02	11.90	QP	V	282.00	195.00	1.13	7.47	20.50	30.00	9.50
57.21	15.30	QP	V	301.00	200.00	1.42	5.78	22.50	30.00	7.50
64.17	16.70	QP	V	282.00	195.00	1.22	5.78	23.70	30.00	6.30
141.91	12.10	QP	V	327.00	100.00	2.37	10.43	24.90	30.00	5.10
175.47	11.00	QP	V	0.00	200.00	2.29	9.81	23.10	30.00	6.90

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, 1.0 GHz to 2.0 GHz

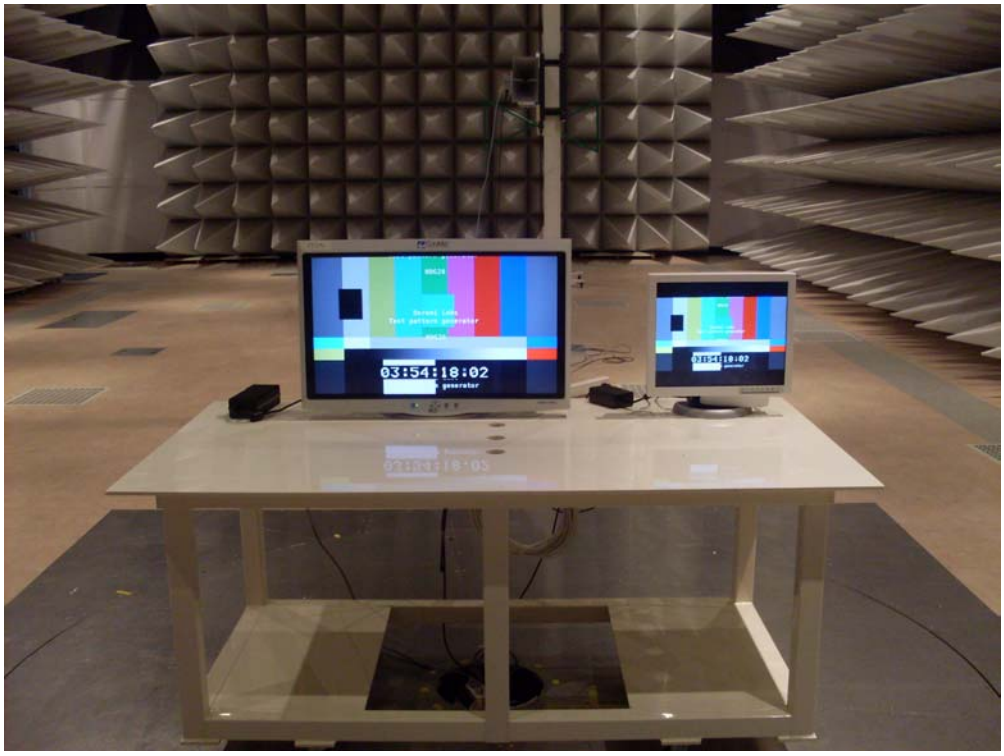
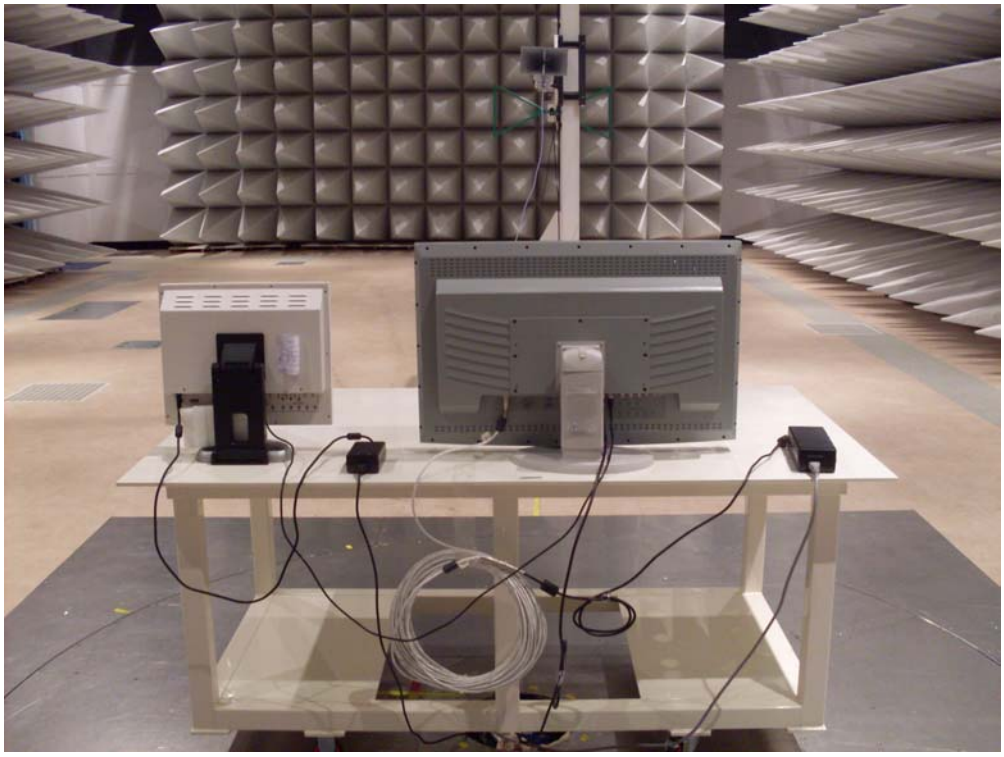
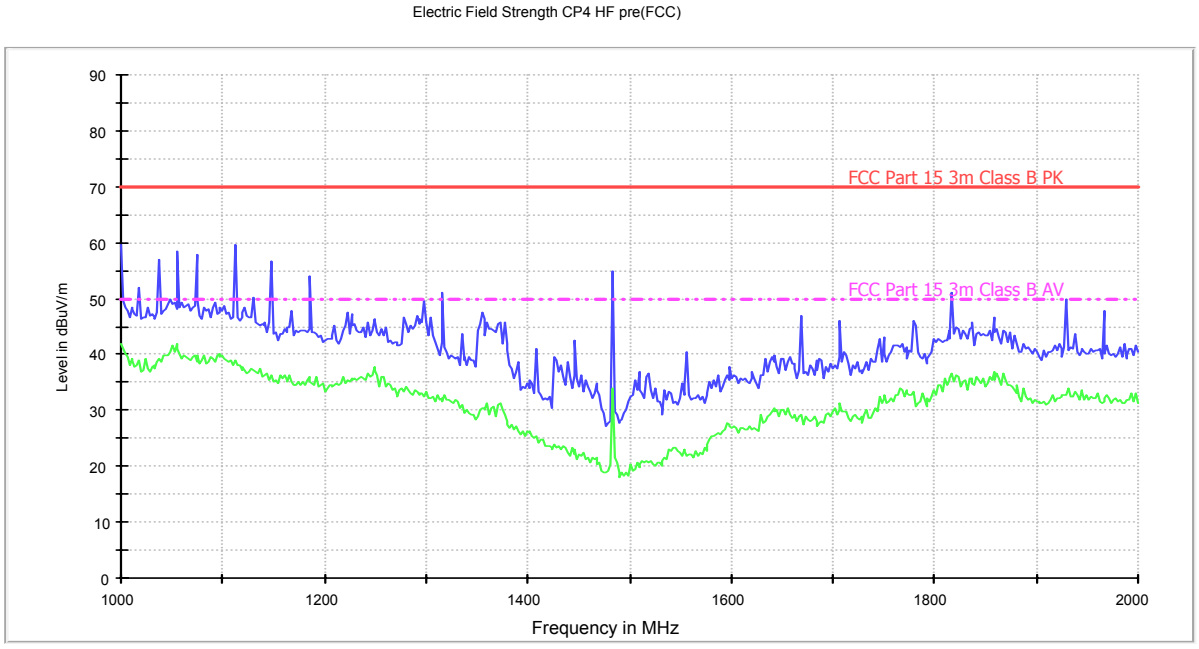
SDI In/Out Mode



Figure 16. Graphical representation, 1.0 GHz to 2.0 GHz

SDI In/Out Mode, Horizontal



SDI In/Out Mode, Vertical

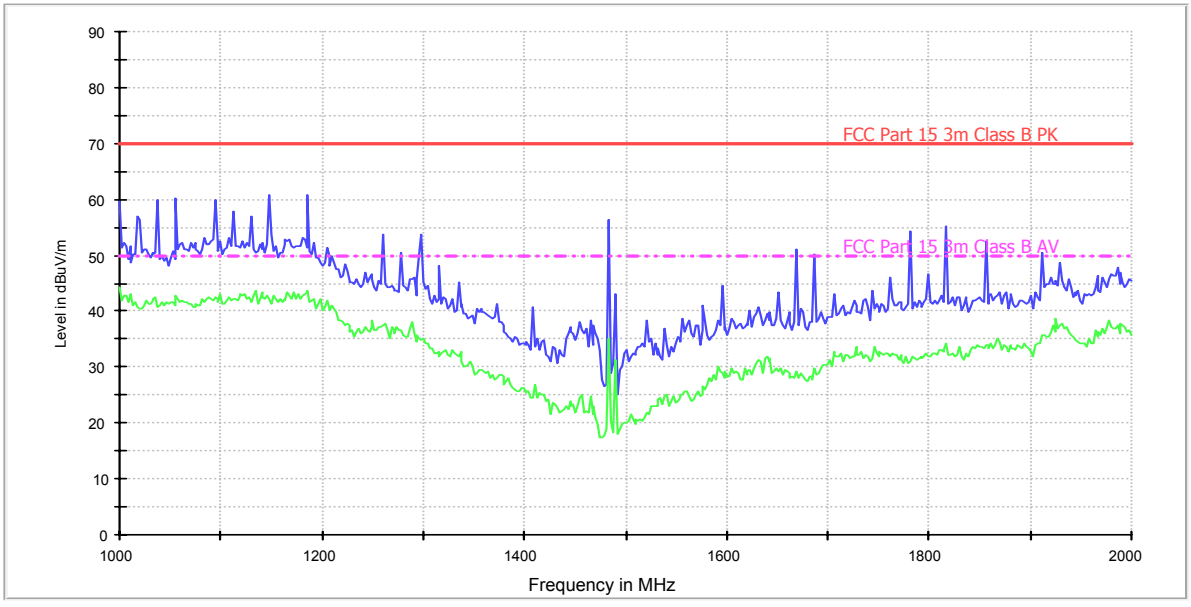


Table 5. Radiated emission Test data, 1.0 GHz to 2.0 GHz

SDI In/Out Mode											
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (PK)	Pol (V/H)	Azimuth	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
1056.11	72.75	PK	V	0	2.00	41.32	24.25	4.47	60.15	74.00	13.85
1112.22	71.84	PK	H	15	1.50	40.92	24.16	4.66	59.74	74.00	14.26
1298.60	64.64	PK	V	15	1.50	40.28	24.35	4.93	53.64	74.00	20.36
1482.97	67.54	PK	V	30	1.00	41.64	25.14	5.30	56.34	74.00	17.66
1817.64	66.00	PK	V	0	1.00	41.71	24.97	5.94	55.20	74.00	18.80
Note: N/A											

SDI In/Out Mode											
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (AV)	Pol (V/H)	Azimuth	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
1056.11	55.10	AV	V	0	2.00	41.32	24.25	4.47	42.50	54.00	11.50
1112.22	49.60	AV	H	15	1.50	40.92	24.16	4.66	37.50	54.00	16.50
1298.60	47.00	AV	V	15	1.50	40.28	24.35	4.93	36.00	54.00	18.00
1482.97	46.20	AV	V	30	1.00	41.64	25.14	5.30	35.00	54.00	19.00
1817.64	42.80	AV	V	0	1.00	41.71	24.97	5.94	32.00	54.00	22.00
Note: N/A											

5. MEASUREMENT UNCERTAINTY

Measurement Uncertainty	
All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are test receiver, cable loss, antenna factor calibration, Antenna directivity, antenna factor variation with height, antenna phase center variation, antenna frequency interpolation, measurement distance variation, site imperfection, mismatch, and system repeatability. Based on CISPR 16-4-2, the measurement uncertainty level with a 95% confidence level was applied	
Conducted emission measurement :(k=2, 95%)	
Frequency	dB
9 kHz-150 kHz	± 3.05 [dBuV]
150 kHz-30 MHz	± 2.53 [dBuV]
Radiated Emission measurement :(k=2, 95%)	
30-300 MHz	3 m: ±3.53 [dBuV/m], 10 m: ± 3.52 [dBuV/m]
300-1000 MHz	3 m: ±3.70 [dBuV/m], 10 m: ± 3.69 [dBuV/m]

6. Affidavit for Multilisting Model Description

D&T
Best Imaging Solution

AFFIDAVIT FOR MULTILISTING MODEL DESCRIPTION

We hereby confirm that the LCD Monitor, model VP4732 manufactured by,as a D&T Inc , as a basic application, has several multilisting models as described below and these multilisting models are the same as basic model except the model name designation and are the same characteristic and construction in electronically and mechanically. So, we declare that these multilisting models to be added on the basic application could be applied without any further engineering investigation and evaluation.
We have a responsible for the compliance of all variants.

Basic model : VP4732
Multilisting model : VP4732F

- Model differentia -
Basic model : VP4732 (without Fiber optical DVI input)
Multilisting model : VP4732F (with Fiberoptical DVI input)

Sincerely,

_____ Signature
Typed Name : YongHee Han
Title : Senior Engineer
Company : D&T Inc.

D&T Inc.
59-9 Jang-Dong, Yuseong-Gu, Deajeon, Korea, 305-343
http://www.dntinc.co.kr TEL . +82-42-360-8000 FAX . +82-42-360-8005

7. Accreditations and Authorizations

MIC: Designated as a testing laboratory by Radio Research Laboratory in accordance with the Regulation on Designation of Testing Laboratory for Information and Communication Equipment. Registration No. : KR-0115

KOLAS: Accredited by Korea Laboratory Accreditation Scheme (KOLAS) as Testing Laboratory in accordance with the provisions of Article 23 of the National Standards Act. These criteria encompass the requirements of ISO/IEC 17025:2000. For a scope listing search at http://kolas.kats.go.kr/02_english/m02_01_s01.asp?OlapCode=KOLU19

FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland and accepted in a letter dated Desember, 03, 2008 (no.329762). As a Conformity Assessment Body (CAB), our organization is designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Part 15 and 18 of the Commission's Rules in a letter dated July 14, 2005.

VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: (Radiated Emissions) R-2579, (Conducted Emissions) C-2822.