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Project: 11CA39760

File: TC8352

Report: 11CA16184-A2-FCC

Date: August 10, 2011

Model: EX240W (Basic), RadiForce EX240W

FCC Certification Report

For

LCD Color Medical Monitor

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

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Only those products bearing the UL Mark should be considered as being covered by UL.

Summary of Test Results:

The following tests were performed on a sample submitted for evaluation of compliance with 47 CFR Part 15.107 (a) / 47 CFR Part 15.109 (g) Class B.				
Test #	Test Name Test Requirement/Specification	Compliant	Not Compliant	See Remark
1	AC Power line Conducted Emission Test	X	-	-
2	Radiated Emission Test	X	-	-

Conclusion:

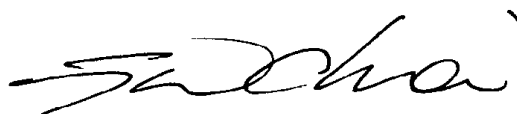
The tests listed in the Summary of Testing section of this report have been performed as a witness testing and the results recorded by UL Korea Ltd. in accordance with the procedures stated in each test requirement and specification. The test list was determined by the Applicant as being applicable to 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.
 August 10, 2011



Reviewed by
 Jeawoon, Choi, Senior Project Engineer
 Conformity Assessment Services - 3014ASEO
 UL Korea Ltd.
 August 10, 2011

Project Number: 11CA39760 File Number TC8352 Page 3 of 29
Model Number: EX240W
Client Name: EIZO NANA CORPORATION

Test Report Details

Test Report No: 11CA16184-A2-FCC
File No TC8352
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-gun, 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: EIZO NANA CORPORATION
153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan
Manufacturer: EIZO NANA CORPORATION
153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan
Factory D&T Inc.
59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA
Trademark: 

Project Number: 11CA39760 File Number TC8352 Page 4 of 29
Model Number: EX240W
Client Name: EIZO NANA CORPORATION

Applicant Contact: Wataru Takashima
Title: Manager
Phone: +81-76-277-6794
E-mail: takasima@eizo.co.jp
Product Type: LCD Color Medical Monitor
Model Number: EX240W
Model Number multiple listing: RadiForce EX240W
The manufacturer has declared to all the multiple Model names into the basic Model without any further evaluation by UL.
Product standards: 47 CFR Part 15.107 (a) / 47 CFR Part 15.109 (g) Class B.
Test Procedure ANSI C63.4 : 2003
Sample Serial Number: N/A
Sample Receive Date: April 18, 2011
Testing Start Date: April 18, 2011
Date Testing Complete: April 22, 2011
Test Report Date: August 10, 2011
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.

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1. General product description

1.1 Equipment Description

Description:
LCD Color Medical Monitor

1.2 Details of Test Equipment (EUT)

Equipment Configuration:				
No.	Product Type	Manufacturer	Model	Comments
1	LCD Color Medical Monitor	EIZO NANA CORPORATION	EX240W	-
2	AC/DC Adapter	BridgePower Corp	JMW1150KA2400F04	-
3	DVI cable	-	-	1 EA
4	VGA cable	-	-	1 EA
5	BNC cable	-	-	1 EA
6	S-Video cable	-	-	1 EA

1.3 Technical Data:

Item		Description
Model		EX240W
LCD Panel	Description	24.1Inch(61.13cm) diagonal
	Resolution	1920 x 1200 @ 60hz
	Display color	1,073,741,824 colors
	Pixel Pitch	0.270 mm x 0.270 mm
Brightness	Brightness	280 cd/m2
Contrast	Contrast	700 : 1
Display Size		518.4mm x 324.0mm)
Scanning Frequency	Horizontal	31.47~79.98Khz
	Vertical	50~85Hz

Input / Output		Input	Output
		1 x DVI 1 x D-SUB 1 x Y-C 1 x C-Video/SOG 2 x SDI 1 x R/Pr, G/Y, B/Pb, H/CS,VS	1 x Y-C 1 x C-Video 1 x SDI 1 x R/Pr, G/Y, B/Pb, H/CS,VS
Temperature	Operating	32° ~ 95°F (0° - 35°C)	
	Storage	-4° ~ 140°F (-20° - 60°C)	
Power Source	Monitor	DC 24V 6.25A	
	AC-Adaptor	AC 100~240V 50/60Hz	
Unit Dimension		598(W) x 382.9(H) x 111.5(D) (mm) - Without stand	

1.4 EUT Internal operating frequency

Frequency (MHz)	Description	Frequency (MHz)	Description
77MHz	Display Frequency	10.00MHz	CPLD Clock
11.0592MHz	U-Com Frequency	27.00MHz	System Clock
324.00MHz	Memory Clock	-	-

1.5 Technical descriptions and documents:

No.	Document Title and Description
1	Auto-Scanning with Digital Control LCD Color Medical Monitor Operation Manual
Note: The manufacturer provided the following document.	

3-R2.8

96.6

59.6

4.8

4.8

EIZO

产品名称/Product Name: 液晶彩色显示器/Color LCD Monitor
 产品商标/Trade mark: RadiForce
 产品型号/Model No. EX240W
 Part Name :

With respect to electric shock, fire and mechanical hazards only in accordance with UL60601-1
 DC 24V --- 6.25A FCC ID : GCJEX240W

AC/DC Adapter 交流/直流 适配器
 Model/型号: JMW1150KA2400F04

CAUTION - See accompanying documents. 注意事项请参阅随机文件

CAUTION - ELECTRIC SHOCK 注意触电危险
 "To avoid electrical shock, do not open the cabinet.
 Refer servicing to qualified personnel only."
 "请不要打开机箱, 以防触电, 维修需通过专业人员进行."
 Lamps Contain Mercury, Dispose According to Local, State or Federal Laws.

制造商
 EIZO NANAO CORPORATION
 153 Shinmokuohsawa,
 Hakusan-shi, Japan
 www.eizo.com

UL
 60601-1
 Medical Equipment
 E341800

UL5001-1
 CAN/CSA C22.2
 NO.601.1

IPX1

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S/N

Mfd.

2. Test condition

2.1 Equipment Used During Test:

Use*	Product Type	Manufacturer	Model	Comments
EUT	LCD Color Medical Monitor	EIZO NANA CORPORATION	EX240X	-
EUT	AC/DC adapter	Bridge Power Corp.	JMW1150KA2400F**	-
AE	PC	DELL	OPTIPLEX 760	Used for DVI, D-sub
AE	USB mouse	DELL	M-UAR DEL7	-
AE	USB Keyboard	DELL	SK8175	-
AE	Headset	PILLAR	CH-1700	-
AE	Printer	SAMSUNG	ML-2250G	-
AE	HD & SD Test Generator	Doremi	HDG-20	Used for SDI Mode
AE	Pattern generator	Chroma	22291	Used for C-video, S-Video and Component Mode
AE	LCD Color Display	ADVAN Int'l Corp.	0240030990	Used for SDI out function
AE	AC/DC adapter	Bridge Power Corp.	JMW1150KA2400F**	Connected to LCD monitor
AE	Extension Cable	-	1501047006	75-ft DC extension Cable
AE	Extension Cable	-	1501047005	15-ft DC extension Cable
AE	Extension Cable	-	1501047004	5-ft DC extension Cable

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

2.2 Input/output Ports:

Port #	Name	Type*	Cable Max. >3m	Cable Shielded	Comments
1	Mains	AC	1.8 m	Unshielded	Hospital-grade AC Power cord
2	DVI In	I/O	1.8 m	Shielded	29 pin DVI-I
3	VGA In	I/O	1.8 m	Shielded	15 pin D-Sub
4	SDI In, Out	I/O	1.8 m	Shielded	BNC
5	S-Video In	I/O	1.8 m	Shielded	S-Video
6	C-Video In	I/O	1.8 m	Shielded	BNC
7	Component (Y/Pb/Pr) In	I/O	1.8 m	Shielded	5 Port BNC

* **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.

2.3 Power Interface:

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Comments
Rated	100-240Vac	-	150W	50-60Hz	-
1	AC 120 V	-	-	60Hz	-

2.4 EUT Operation Modes:

Mode #	Mode	Comments
1	DVI Mode	Worst case condition
2	VGA Mode	-
3	SDI In/Out Mode	Worst case condition
4	S-VIDEO Mode	-
5	C-Video / SOG Mode	-
6	Component (Y/Pb/Pr) Mode/ Analog RGBS 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 2
3. EUT has been performed under continuous displaying "Color Bar" Patten for configuration Modes of 3 to 6.

2.5 Modes of Video resolution

Mode #	Resolution	Comments
1	DVI Mode	800 * 600 @ 60Hz
2		1024 * 768 @ 60Hz
3		1920 * 1200 @ 60Hz
4	SDI In/Out Mode	1080p
		Worst case condition

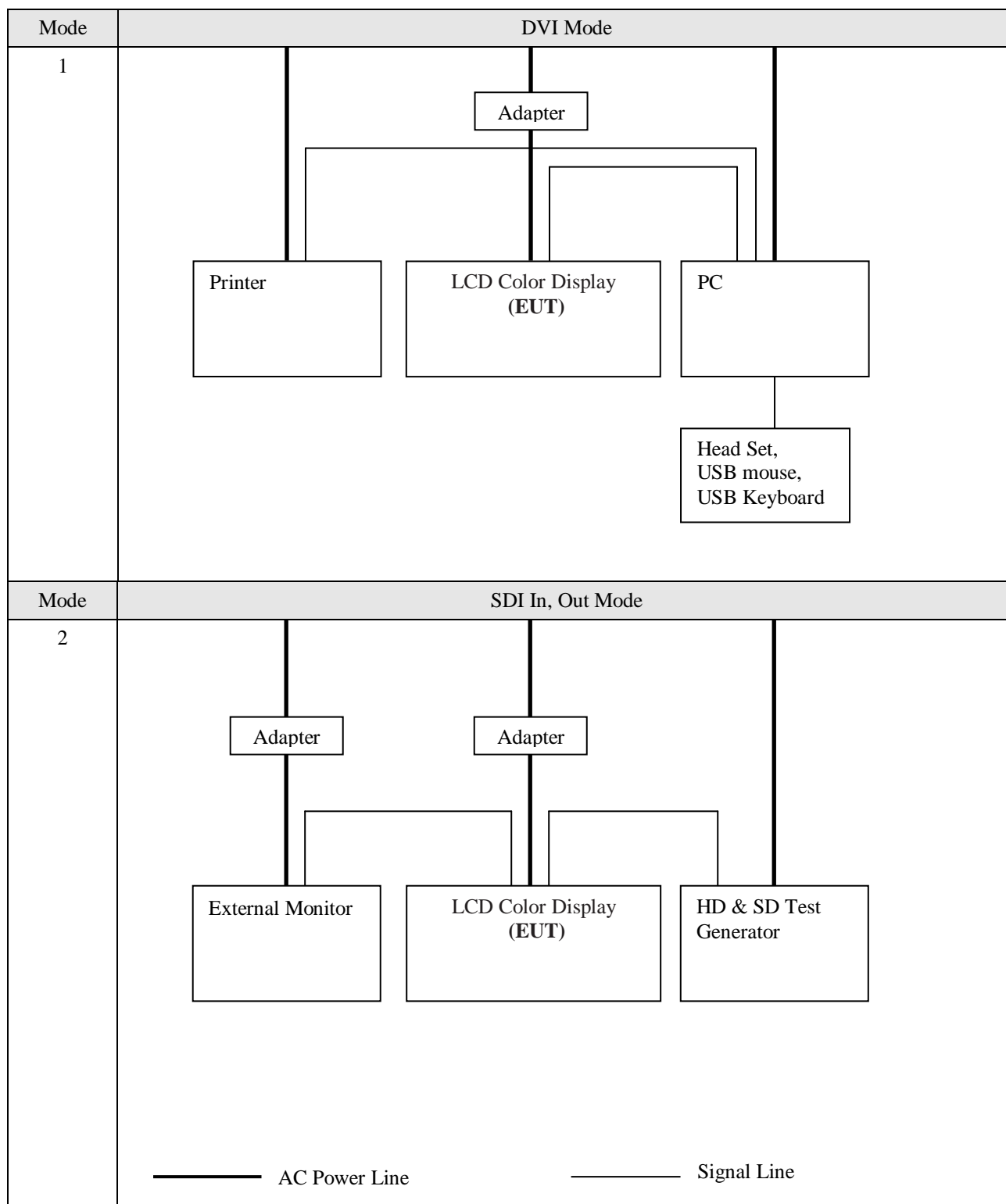
* Note: Video resolution where it refers from above is representative worst case.

2.6 Used D.C. Extension Cable for EMC Test:

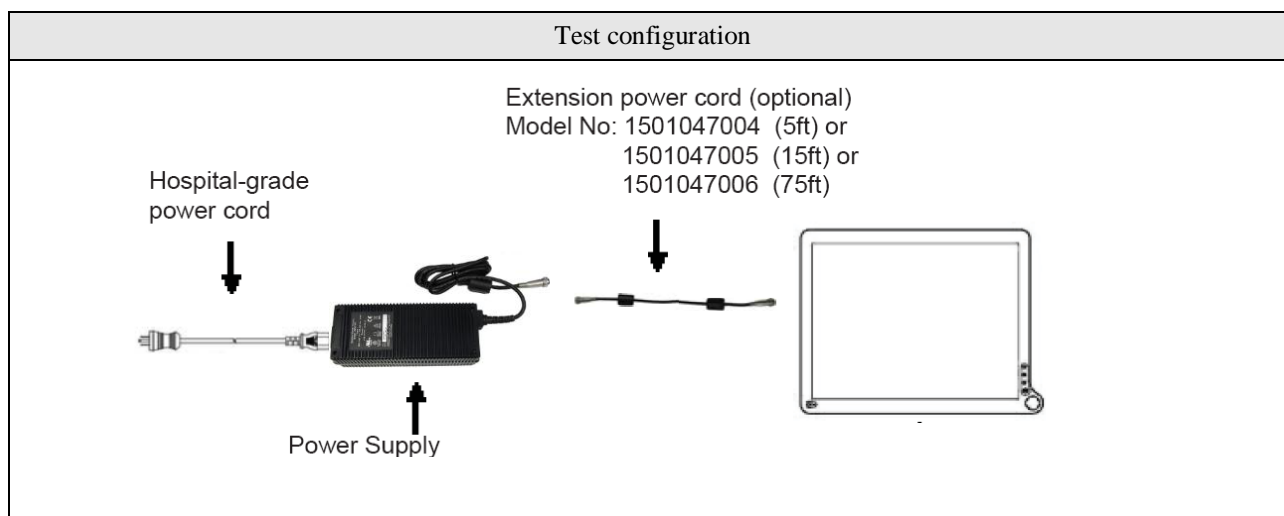
No.	Cable Length	Preliminary Test	Comment
1	5ft	DVI and SDI In/Out Mode	-
2	15ft		-
3	75ft		Worst case condition

* Note: Radiated emission and conducted emission test were performed for all extension power cable during the preliminary testing and selected worst-case condition (75ft) for final measurements.

2.7 Test Configuration:



2.8 Extension cable of Adapter to EUT Test Configuration:



3. RESULT OF TESTING:

No	Test requirements	Standard	Results	Verdict
1	AC Power line Conducted Emission Test	47 CFR Part 15.107(a) / 47 CFR Part 15.109(g) Class B	Met limit Class B	Complied
2	Radiated Emission Test		Met limit Class B	Complied
* Note: This product has been tested in accordance with the measurement procedures specified 47 CFR Part 15.107 (a) / 47 CFR Part 15.109 (g) Class B at the CBTP EMC Laboratory and the test results has been shown to be complied with the EMC requirements specified in the standard above.				

4. TEST CONDITION AND RESULTS

4.1 MAINS TERMINAL DISTURBANCE VOLTAGE 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		24.2 °C
		Relative Humidity		34.7 %
-		Frequency range on each side of line		Measurement Point
Fully configured sample scanned over the following frequency range		0.15 MHz to 30 MHz		AC input port of Adapter
Limits - Class B				
Frequency (MHz)	Limit (dBµV)			
	Quasi-Peak	Result	Average	Result
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
EUT Configuration Settings:				
Power Interface Mode # (See Section 2.3)		EUT Operation Mode # (See 2.4)		EUT Configurations Mode # (See Section 2.7)
1		1, 3		1, 2
Conducted Emissions Test Equipment used:				
Description	Manufacturer	Model	Identifier	Cal. Due
Test Receiver	Rohde & Schwarz	ESPI	101088	2011.06.17
LISN	Rohde & Schwarz	ESH2-Z5	100146	2011.06.18
LISN	Schwarzbeck	NNLK8129	8129162	2011.06.18
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	3057.8810.54	2011.06.18

Figure 1. Conducted Emission Test Setup for DVI Mode:



Figure 2. Graphical representation for DVI Mode:

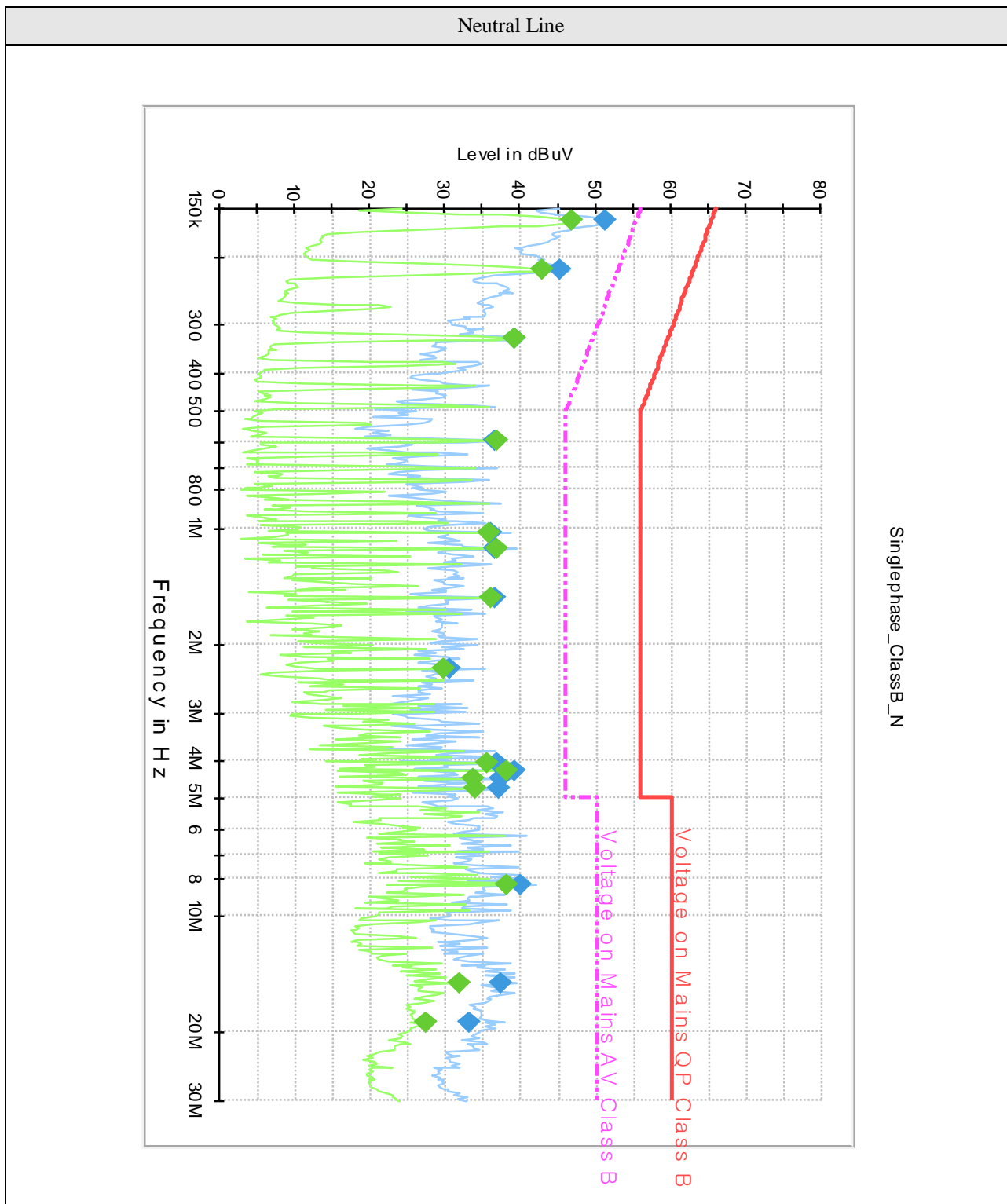


Figure 3. Graphical representation for DVI Mode:

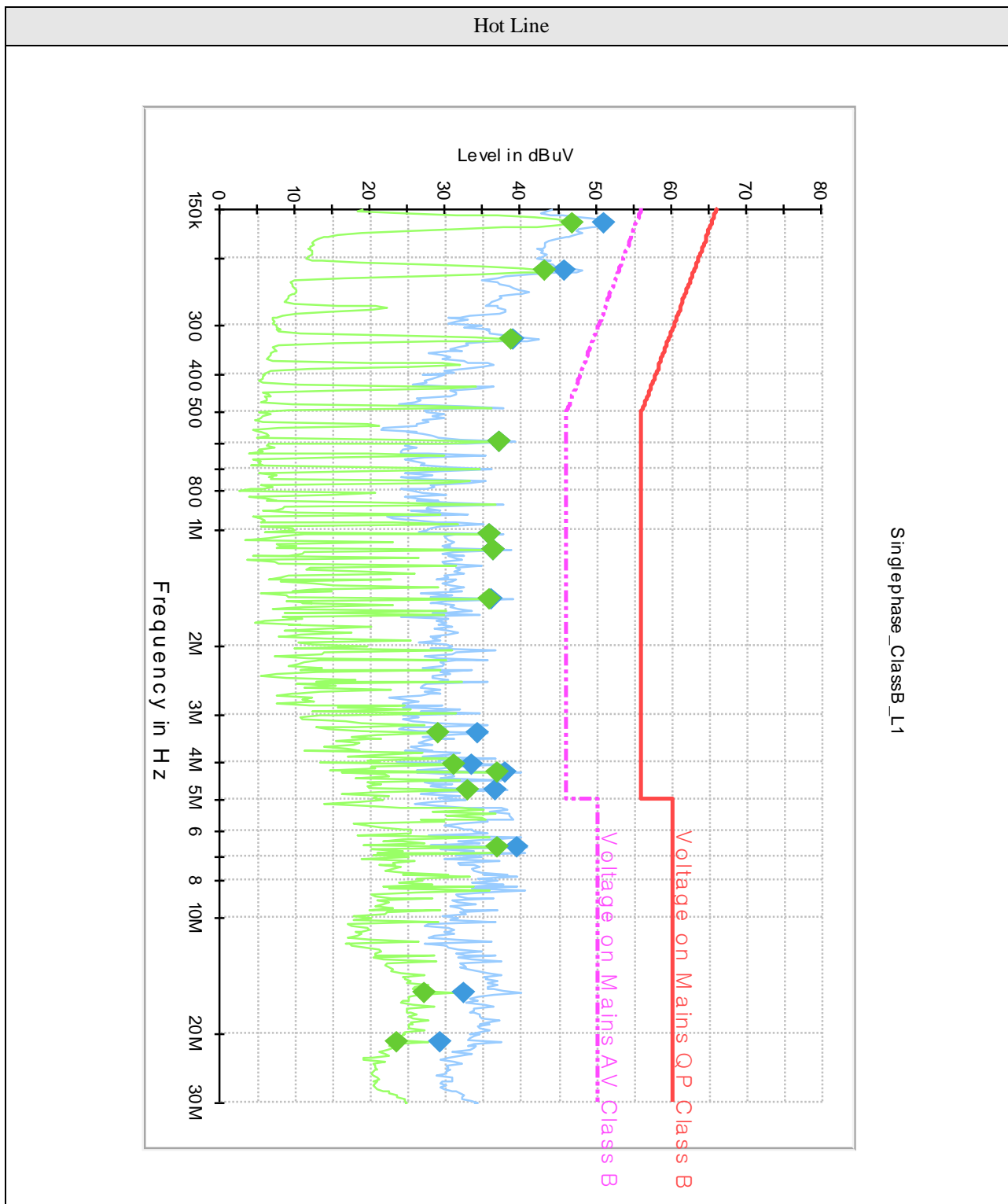


Table 1. Test data of DVI Mode:

Test Frequency (MHz)	Correction Factor (dB)		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.161	9.78	0.12	41.20	36.80	N	51.10	46.70	65.00	55.00	13.90	8.30
0.162	9.78	0.12	40.90	36.70	L1	50.80	46.60	65.00	55.00	14.20	8.40
0.215	9.78	0.12	35.80	33.20	L1	45.70	43.10	63.00	53.00	17.30	9.90
0.592	9.75	0.15	27.00	27.10	L1	36.90	37.00	56.00	46.00	19.10	9.00
1.131	9.82	0.18	26.60	26.60	N	36.60	36.60	56.00	46.00	19.40	9.40
1.509	9.81	0.19	26.40	26.10	N	36.40	36.10	56.00	46.00	19.60	9.90
4.205	10.03	0.27	28.80	27.80	N	39.10	38.10	56.00	46.00	16.90	7.90
4.691	10.01	0.29	26.10	22.60	L1	36.40	32.90	56.00	46.00	19.60	13.10
6.580	10.13	0.37	28.80	26.30	L1	39.30	36.80	60.00	50.00	20.70	13.20
* 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 4. Conducted Emission Test Setup for SDI In/Out Mode:



Figure 5. Graphical representation for SDI In/Out Mode:

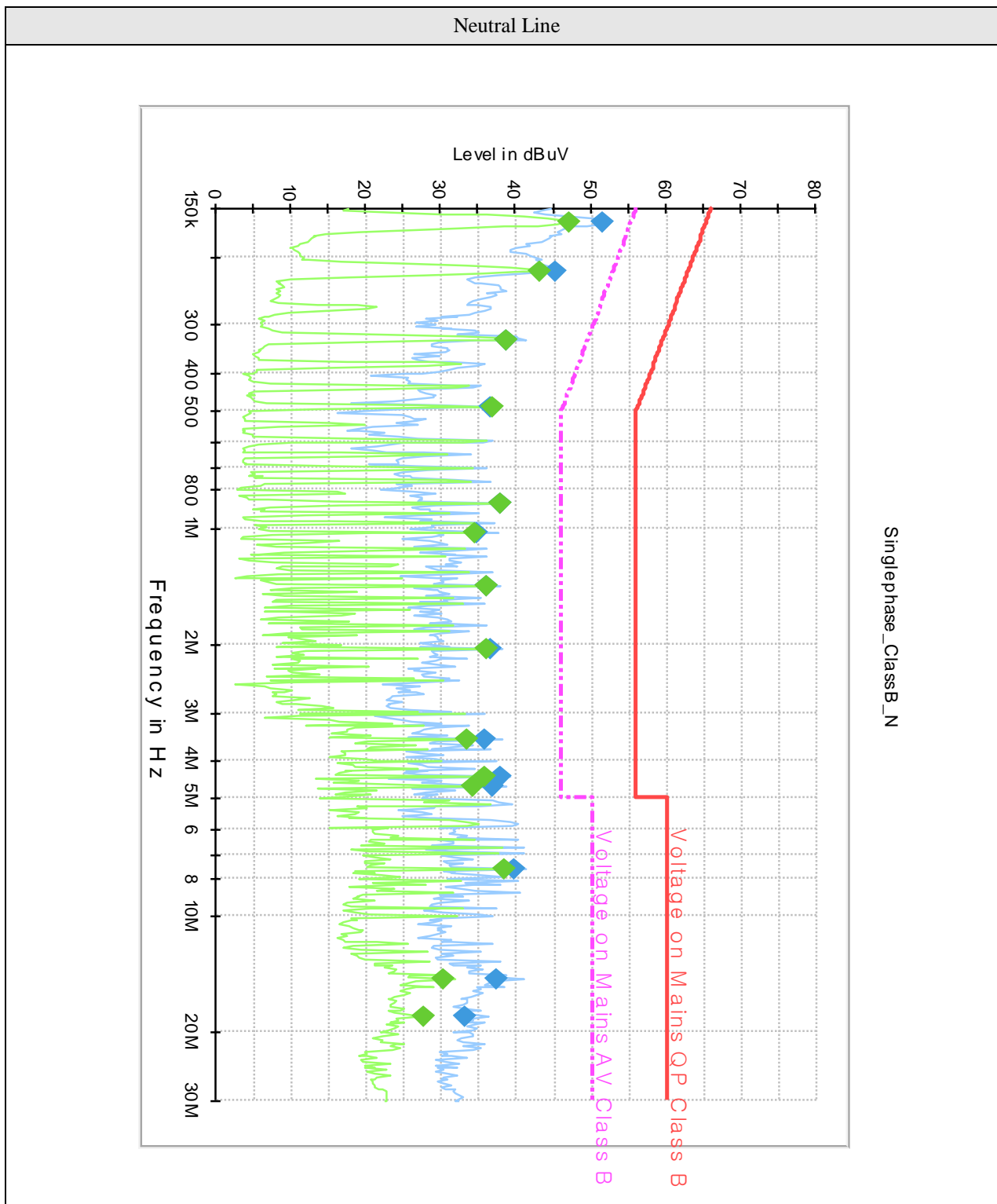


Figure 6. Graphical representation for SDI In/Out Mode:

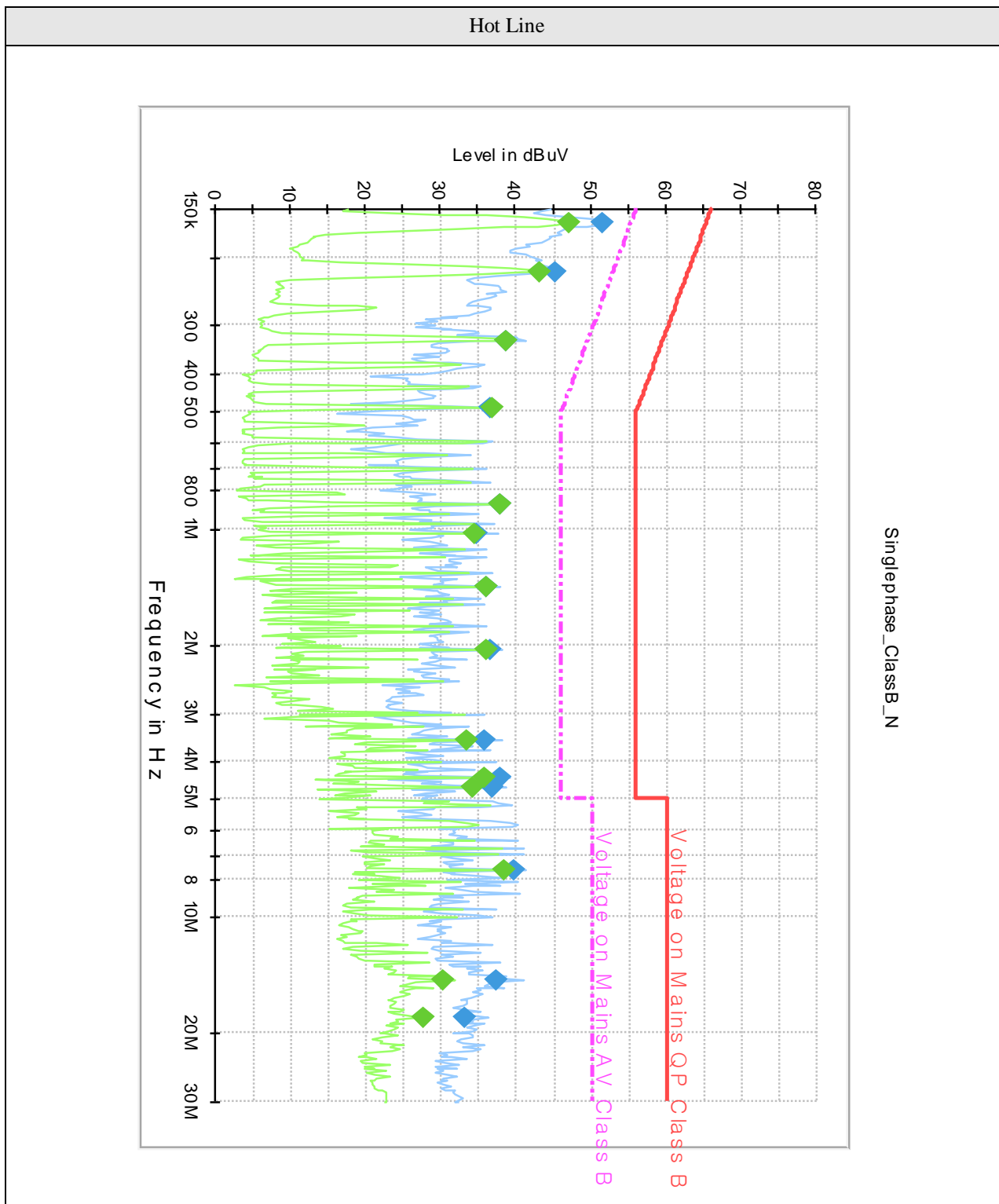


Table 2. Test data for SDI In/Out Mode:

Test Frequency (MHz)	Correction Factor (dB)		Reading value (dBuV)		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.162	9.78	0.12	41.40	36.90	N	51.30	46.80	65.00	55.00	13.70	8.20
0.215	9.78	0.12	35.80	33.20	L1	45.70	43.10	63.00	53.00	17.30	9.90
0.217	9.78	0.12	35.30	33.20	N	45.20	43.10	63.00	53.00	17.80	9.90
0.485	9.76	0.14	26.70	26.80	N	36.60	36.70	56.00	46.00	19.40	9.30
0.592	9.75	0.15	27.00	27.10	L1	36.90	37.00	56.00	46.00	19.10	9.00
0.864	9.83	0.17	27.80	27.90	N	37.80	37.90	56.00	46.00	18.20	8.10
1.024	9.82	0.18	25.80	25.60	L1	35.80	35.60	56.00	46.00	20.20	10.40
1.131	9.82	0.18	26.20	26.30	L1	36.20	36.30	56.00	46.00	19.80	9.70
1.407	9.81	0.19	26.00	26.00	N	36.00	36.00	56.00	46.00	20.00	10.00
1.509	9.81	0.19	26.00	25.60	L1	36.00	35.60	56.00	46.00	20.00	10.40
2.054	9.90	0.20	26.40	25.90	N	36.50	36.00	56.00	46.00	19.50	10.00
4.205	10.03	0.27	27.40	26.40	L1	37.70	36.70	56.00	46.00	18.30	9.30
4.376	10.02	0.28	27.40	25.40	N	37.70	35.70	56.00	46.00	18.30	10.30

*** 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.

4.2 RADIATED DISTURBANCE

TEST: Limits for radiated disturbance					
Method	A pretest was performed at 3m distances in an anechoic screened enclosure, scanning the frequency range, and locating any frequencies at the which EUT radiated. Frequency scans were conducted with a peak detector with horizontal and vertical polarization of the antenna. Measurements were done in the frequency range 30-1000 MHz. The main test was then conducted by measurements at each frequency found in the pretest. These measurements were done at an open area test site at 10m distances, with a quasi-peak detector. EUT was positioned on a wooden table 0.8m above the floor, at the edge of the turntable. Cables connected to EUT were fixed to cause maximum emission. A maximum emitting point for each frequency was found by turning EUT 0-360 degrees, and adjust the antenna height between 1-4m. A quasi-peak detector measurement was then done at the maximum emitting point.				
Parameters recorded during the test		Laboratory Ambient Temperature		10 °C	
		Relative Humidity		54 %	
-		Frequency range		Measurement Point	
Fully configured sample scanned over the following frequency range		30 MHz to 2.0 GHz		3 meter measurement distance	
Limits – Class B					
Frequency (MHz)		Limit (dBµV/m)			
		Quasi-Peak		Results	
30 to 88		40.00		Pass	
88 to 216		43.52		Pass	
216 to 960		46.02		Pass	
960 to 1000		53.97		Pass	
EUT Configuration Settings:					
Power Interface Mode # (See Section 2.3)		EUT Operation Mode # (See 2.4)		EUT Configurations Mode # (See Section 2.7)	
1		1, 3		1, 2	
Radiated Emissions Test Equipment:					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Test Receiver	Rohde & Schwarz	ESPI	101206	2010.07.08	2011.07.08
Amplifier	HP	Amplifier	3113A05153	2010.07.08	2011.07.08
BiconiLog Antenna	Schwarzbeck	VULB9168	9168-289	2010.05.17	2011.05.17

Figure 7. Photo of Radiated emission test setup for DVI Mode:

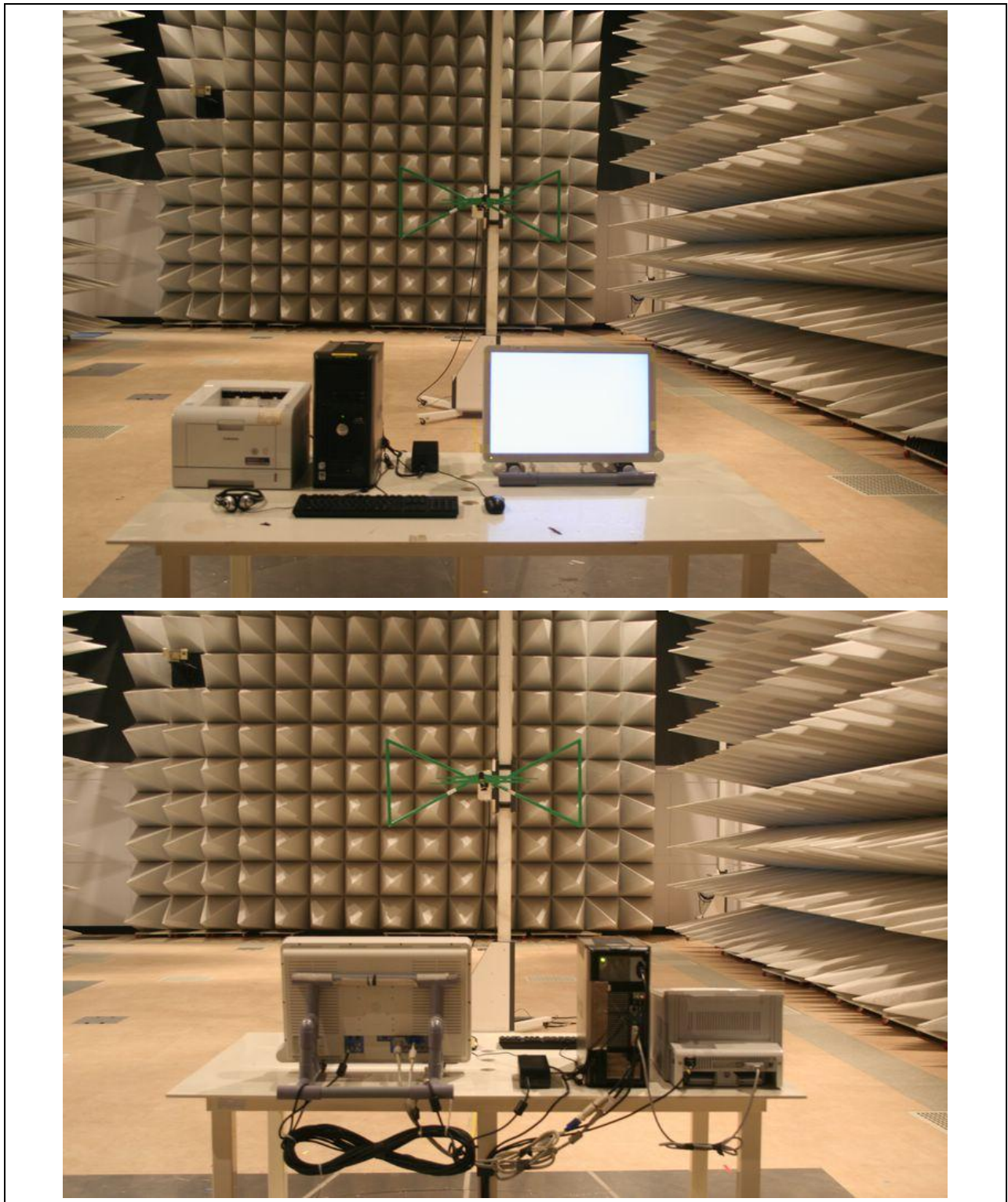


Figure 8. Graphical representation, 30 MHz to 1000 MHz

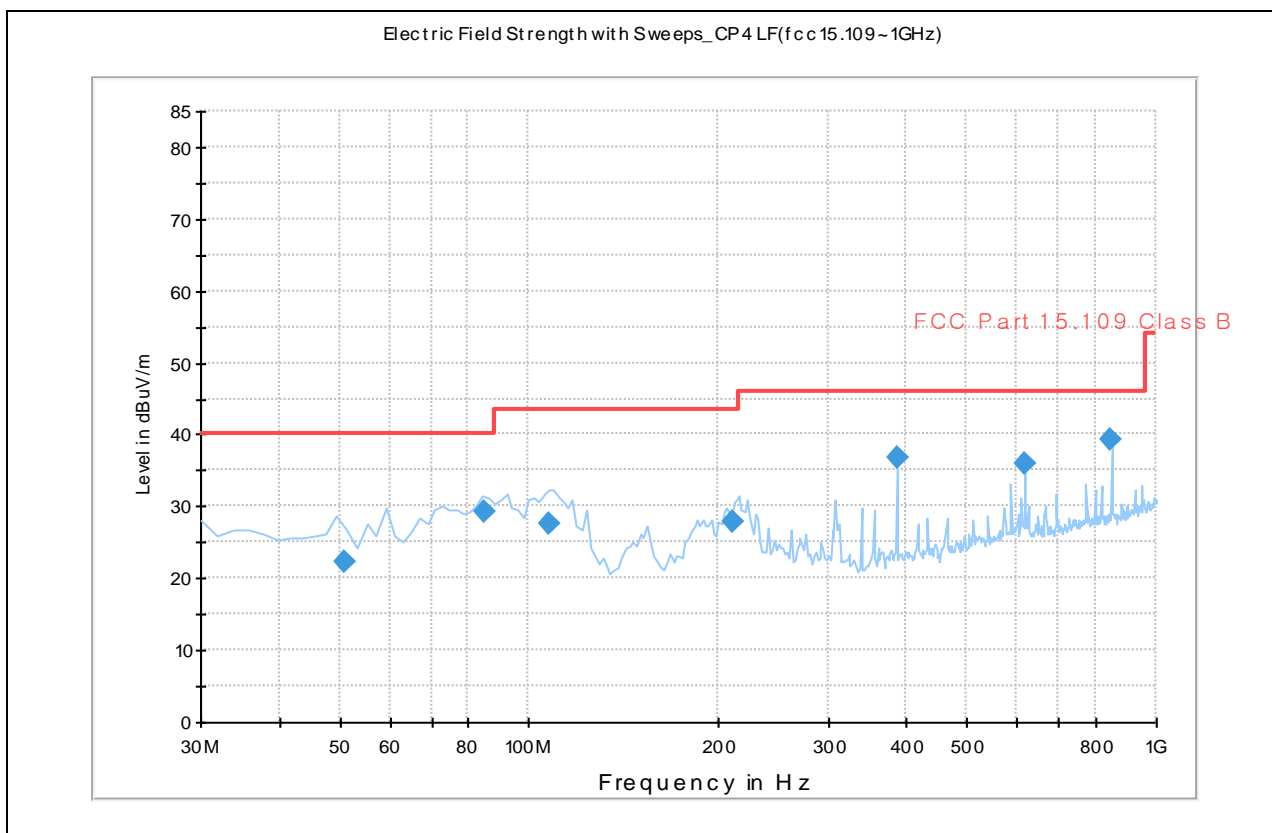


Table 3. Radiated emission Test data for DVI Mode, 30 to 1000MHz:

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Cable Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
50.71	13.80	QP	V	114.0	1.00	1.21	7.39	22.40	40.00	17.60
85.18	19.50	QP	V	10.0	1.00	1.62	8.08	29.20	40.00	10.80
107.81	14.70	QP	V	0.0	1.00	1.79	11.11	27.60	43.50	15.90
211.67	14.30	QP	H	281.0	2.00	2.58	11.12	28.00	43.50	15.50
385.73	17.60	QP	H	141.0	1.00	3.44	15.66	36.70	46.00	9.30
617.18	13.40	QP	H	115.0	2.00	4.28	18.22	35.90	46.00	10.10
847.04	15.40	QP	H	99.0	3.00	5.02	18.78	39.20	46.00	6.80

*** Note:**

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

Figure 10. Graphical representation, 1.0 GHz to 2.0 GHz

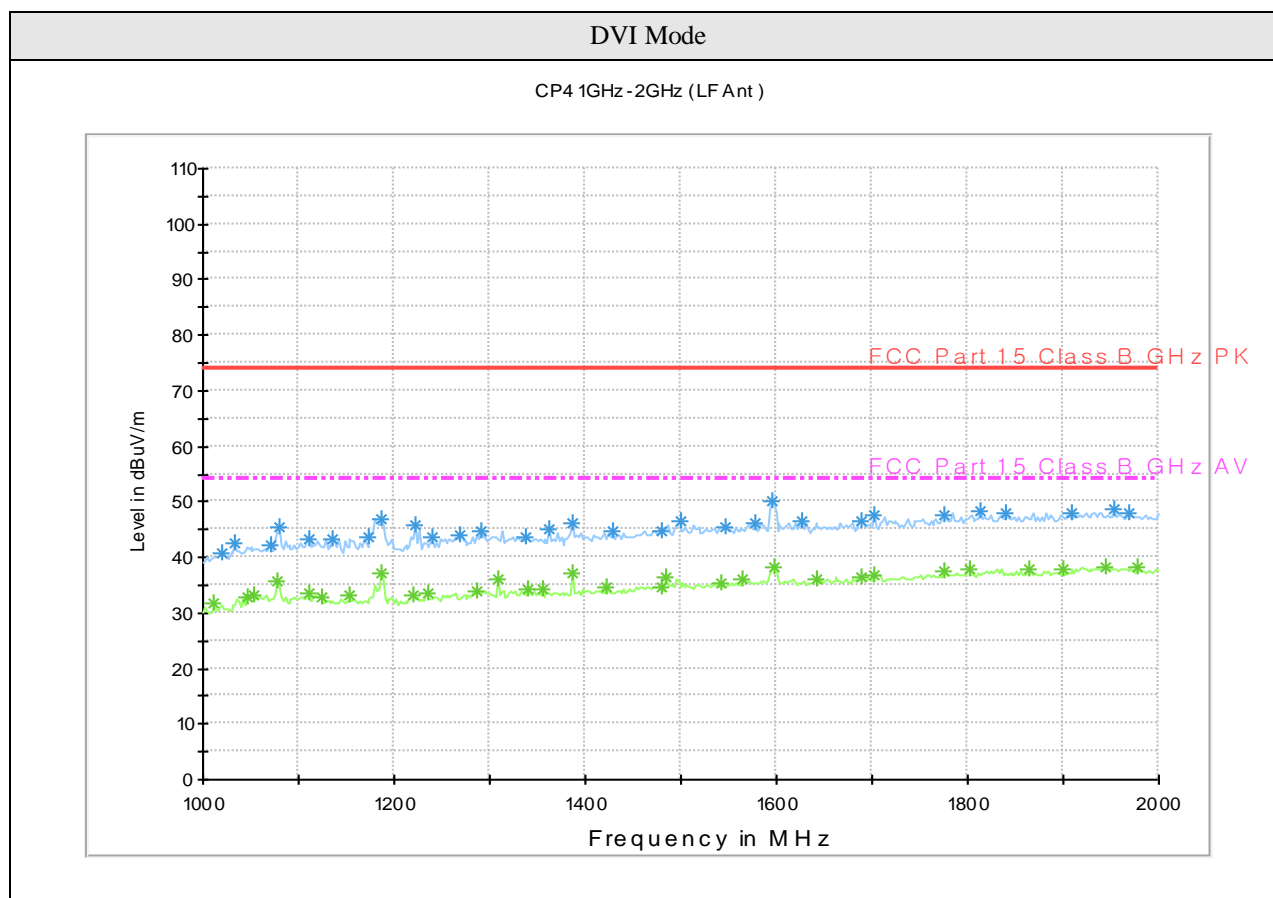


Table 5. Radiated emission Test data, DVI Mode, 1.0 GHz to 2.0 GHz

Frequency (MHz)	Correction Factor			Antenna Height (m)	Peak					Average				
	Antenna (dB/m)	Amp (dB)	Cable (dB)		Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)
1080.16	24.18	0	3.12	0.01	H	74.00	18.20	45.50	28.50	H	54.00	7.60	34.90	19.10
1186.37	24.32	0	3.58	0.01	H	74.00	19.10	47.00	27.00	H	54.00	9.10	37.00	17.00
1222.44	24.50	0	3.90	0.01	H	74.00	17.30	45.70	28.30	H	54.00	3.30	31.70	22.30
1386.77	25.13	0	4.77	0.01	V	74.00	16.40	46.30	27.70	V	54.00	7.10	37.00	17.00
1499.00	24.90	0	6.00	0.01	V	74.00	15.50	46.40	27.60	V	54.00	4.40	35.30	18.70
1595.19	24.86	0	6.54	0.02	V	74.00	18.60	50.00	24.00	V	54.00	6.50	37.90	16.10
1813.63	25.02	0	7.58	0.02	V	74.00	23.18	48.20	25.80	V	54.00	11.18	36.20	17.80
1953.91	25.64	0	7.46	0.02	H	74.00	23.16	48.80	25.20	H	54.00	11.46	37.10	16.90

Figure 8. Photo of Radiated emission test setup for SDI In/Out Mode, 30 to 1000MHz:

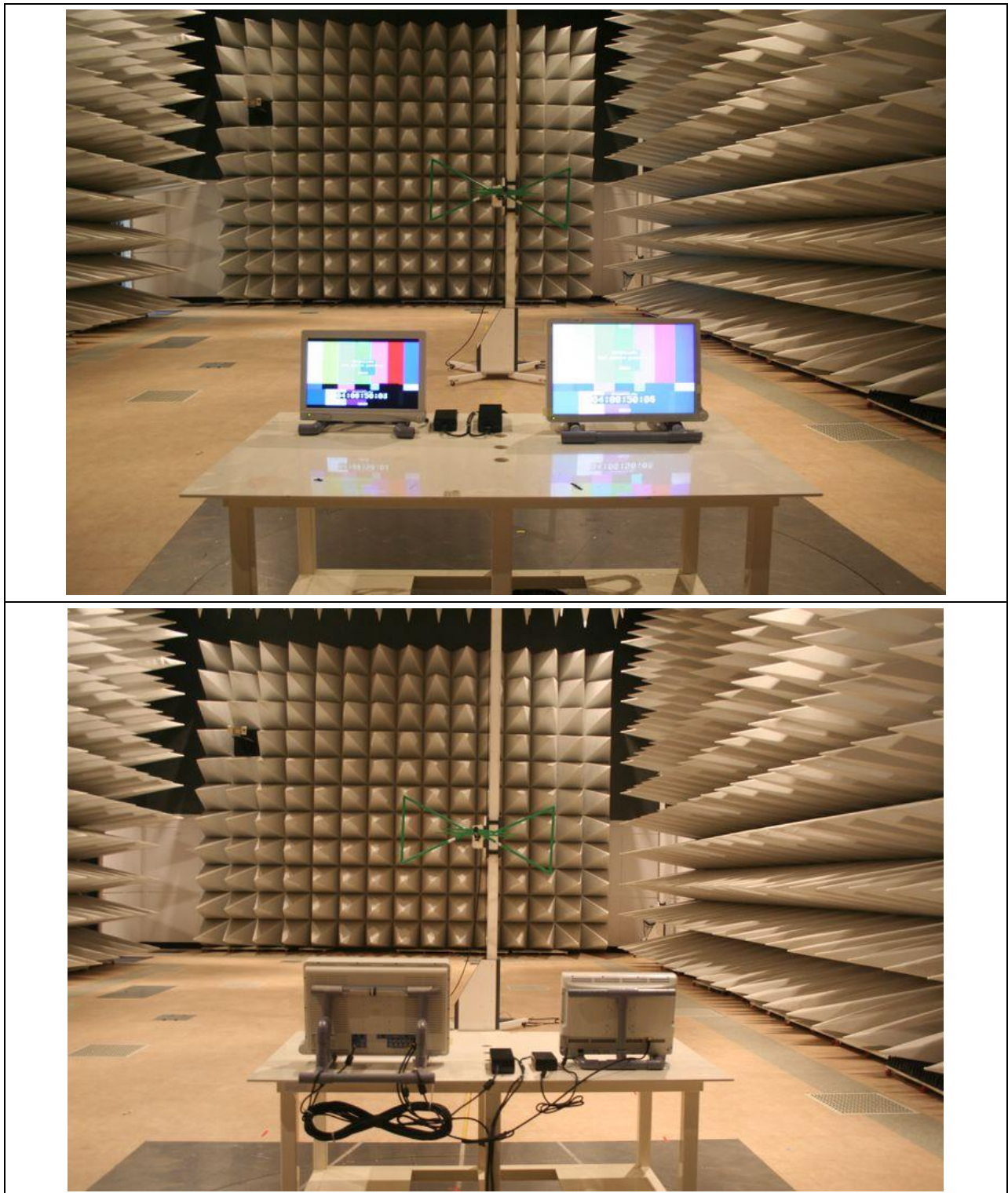


Figure8. Graphical representation, 30 MHz to 1000 MHz

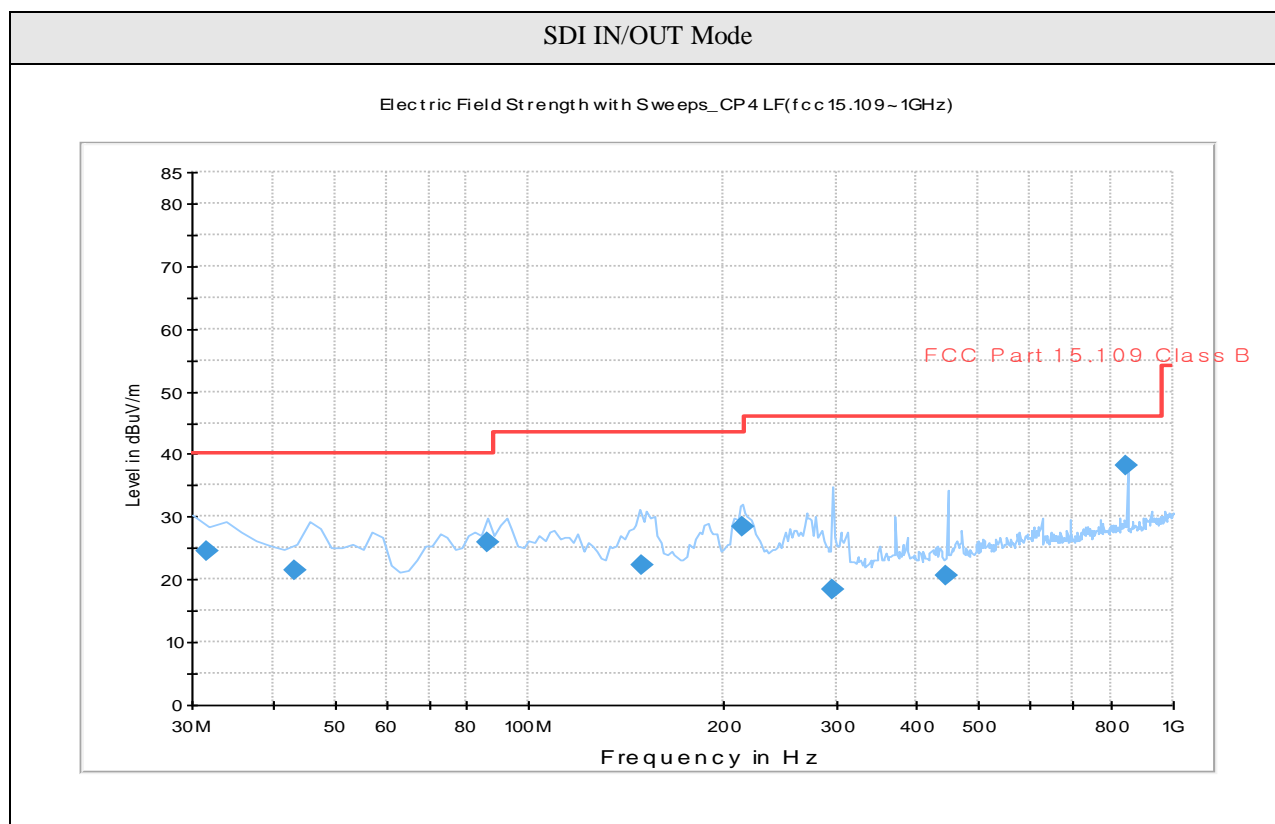


Table 4. Radiated emission Test data for SDI In/Out Mode, 30 to 1000MHz:

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Cable Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin (dB)
31.55	5.90	QP	V	133.00	1.00	1.02	17.68	24.60	40.00	15.40
43.44	9.70	QP	V	0.00	1.00	1.10	10.70	21.50	40.00	18.50
86.19	16.10	QP	V	299.00	1.00	1.66	8.24	26.00	40.00	14.00
150.15	9.80	QP	V	0.00	1.00	2.02	10.38	22.20	43.50	21.30
214.33	14.70	QP	H	280.00	2.00	2.54	11.26	28.50	43.50	15.00
296.54	1.70	QP	V	290.00	2.00	2.89	13.81	18.40	46.00	27.60
444.92	0.50	QP	H	40.00	1.00	3.60	16.40	20.50	46.00	25.50
847.02	14.50	QP	H	123.00	1.00	5.02	18.78	38.30	46.00	7.70

*** 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 9. Graphical representation, 1.0 GHz to 2.0 GHz

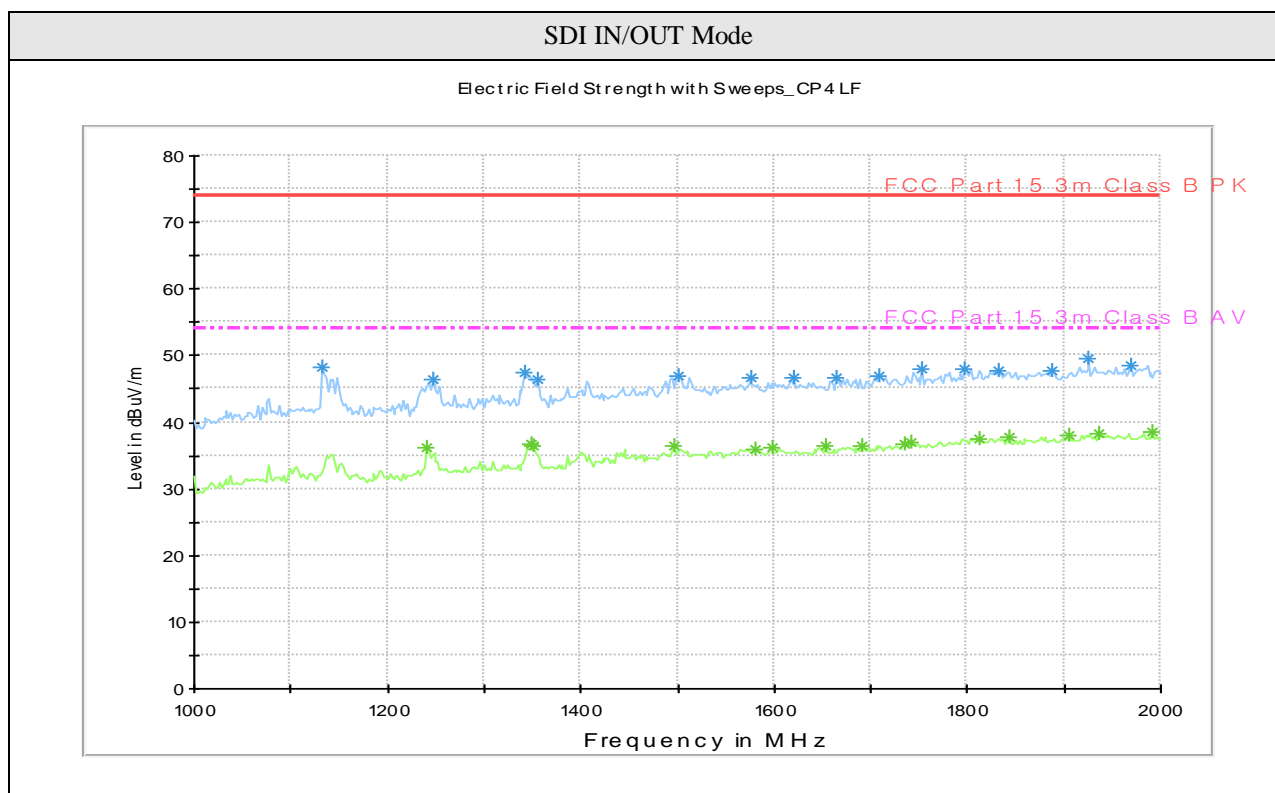


Table 6. Radiated emission Test data, DVI Mode, 1.0 GHz to 2.0 GHz

Frequency (MHz)	Correction Factor			Antenna Height (m)	Peak					Average				
	Antenna (dB/m)	Amp (dB)	Cable (dB)		Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)
1132.26	24.22	0	3.48	0.02	V	74.00	20.60	48.30	25.70	V	54.00	4.80	32.50	21.50
1342.69	25.08	0	4.52	0.02	V	74.00	17.80	47.40	26.60	V	54.00	4.70	34.30	19.70
1501.00	24.90	0	6.00	0.01	V	74.00	16.10	47.00	27.00	V	54.00	4.70	35.60	18.40
1709.42	24.72	0	6.98	0.03	H	74.00	15.30	47.00	27.00	H	54.00	4.00	35.70	18.30
1797.60	24.96	0	7.44	0.01	H	74.00	15.50	47.90	26.10	H	54.00	4.00	36.40	17.60
1887.78	25.30	0	7.60	0.04	V	74.00	14.90	47.80	26.20	V	54.00	3.70	36.60	17.40
1925.85	25.49	0	7.51	0.02	H	74.00	24.21	49.70	24.30	H	54.00	12.61	38.10	15.90
1969.94	25.73	0	7.37	0.03	H	74.00	22.87	48.60	25.40	H	54.00	11.07	36.80	17.20

Appendix A: Test Facility



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. : KR0017



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 July 17, 2005 (Reg. No. 553281). 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-2414, (Conducted Emissions) C-2641.

Appendix B: Measurement Uncertainties

Test	Uncertainty
Radiated Emissions	$U = k * U_c(x_i) = 4.20 \text{ dB}$
Conducted Emissions	$U = k * U_c(x_i) = 3.14 \text{ dB}$