



UL Korea, Ltd

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Project: 08CA59898
File: TC8326
Report: 08CA59898-FCC
Date: December 24, 2008
Model: 240-030-970

FCC Test Report

FCC Certification Part 15 Subpart B Class B

For

**ADVAN Int'l Corp.
47817 Fremont Blvd. Fremont CA 94538, Fremont, California, U.S.A**

UL Korea Ltd.

**33rd Fl. Gangnam finance Center, 737 Yeoksam-Dong, Kangnam-Gu, Seoul, 135-984, Korea
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**A not-for-profit organization dedicated
to public safety and committed to
quality service for over 100 years**

Project Number: 08CA59898
Model Number: 240-030-970

File Number TC8326

Test Report No: 08CA59898-FCC
Date of Issue: December 24, 2008

TEST REPORT DETAILS

Test report No: 08CA59898-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

Applicant: ADVAN Int'l Corp.
47817 FREMONT BLVD FREMONT CA 94538 UNITED STATES

Manufacturer: ADVAN Int'l Corp.
47817 FREMONT BLVD FREMONT CA 94538 UNITED STATES

Factory: D&T Inc.
59-9 JANG-DONG YUSEONG-GU DAEJEON 305-343 KOREA

Applicant Contact: Dae Sung Oh
Title: General Manager
Phone: 82-2-703-5197
E-mail: pilotdan@advancorp.com
Test Report Date: September 24, 2008

Product Type: LCD Color Display
Trademark: ADVAN
Model Number: 240-030-970
Model Number multiple listing: 0240030970,
WISE HDTV SURGICAL DISPLAY
FCC ID: QVXAMM260WTDSW
Product standards: FCC Part 15 Subpart B Class B

Sample Serial Number: None (Proto type)
Sample Receive Date: September 01, 2008
Testing Start Date: September 01, 2008
Date Testing Complete: December 22, 2008

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: 08CA59898
Model Number: 240-030-970

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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, Associate Project Engineer
Conformity Assessment Services - 3014ASEO
UL Korea Ltd.
December 24, 2008



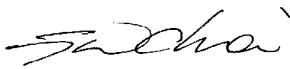
Reviewed by
Jeawoon, Choi, Senior Project Engineer
Conformity Assessment Services – 3014ASEO
UL Korea Ltd.
December 24, 2008

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1. EQUIPMENT UNDER TEST (EUT)

1.1 Report Revision history

Revision Date	Description	Remarks	Revision reviewed By
December 22, 2008	1. AC/DC adapter Add (Manufacturer: Protek, Model: PMP150). 2. D.C Extension Cable Add. 3. DVI optical Input Module Add. 4. Original report No: 08CA45713	-	

1.2 Equipment Description

Description:
The 240-030-970 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	LCD Color Display	ADVAN Int'l Corp.	240-030-970	-
2	AC/DC Adapter	AULT KOREA Corp.	JMW1150KA2400F07	Stryker P/N 240-030-950
3	AC/DC Adapter	Protek	MP150	
4	DC Extension Cable	Bridge Power	1501047	15ft
5	DC Extension Cable	Bridge Power	1501047001	75ft
6	DC Extension Cable	Nortra	240-030-932	75ft with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)
7	DC Extension Cable	Nortra	240-030-722	15ft with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)
8	DC Extension Cable	Bridge Power	1501047001	1500mm, 4.92126ft
9	DVI cable	-	-	1 EA
10	VGA HDDB15 cable	-	-	1 EA
11	Hospital-grade AC power cord	-	-	1 EA
12	BNC cable	-	-	1 EA
13	S-Video cable	-	-	1 EA

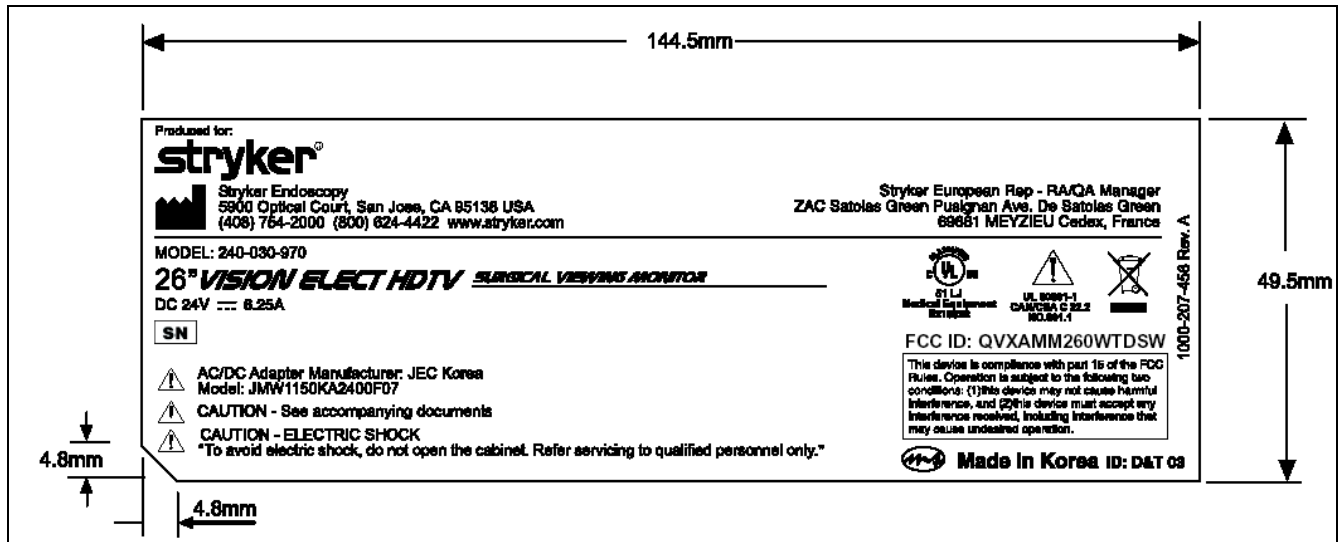
1.4 Equipment Specification

Display	
LCD Display Panel	25.54 inches, (a-Si TFT Active matrix LCD)
Synchronization	2.5 - 5.0 Vpp separated sync
Pixel Pitch	0.2865(W) × 0.2865(H)
Response Time	<25ms Typ
View Angle	+/-89° (L/R) × +/-89° (U/D)
Display Colors	16 million colors
Native Resolution	1920 dots × 1200 dots
Input Signal	1 × DVI 1 × Optical DVI 1 × VGA 1 × HD/SD-SDI 1 × C-Video/SOG 1 × S-Video 1 × Component (Y/G, Pb/B, Pr/R, H/CS, VS) 1 × Wireless (optional)
Maximum Pixel Clock	170MHz
Electrical	
Power Adapter	AC 100-240V; DC 24V
Power Consumption	150W (max)
Dimensions	
Dimensions (W × H × D)	616.4 × 428.8 × 121.2mm
Weight	19.62 lbs
VESA Mounting Interface	VESA 100 × 100mm
Operating Conditions	
Operating Temperature	41 to 90°F (5 to 32.2°C)
Relative Humidity	10 to 60%
Atmospheric Pressure Range	500 to 1060 hPa
Electrical Input Rating	24V DC 6.25A

1.5 Technical descriptions and documents:

No.	Document Title and Description
1	240-030-970 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	26" LCD Color Display	ADVAN Int'l Corp.	240-030-970	-
EUT	AC/DC Adapter	AULT KOREA Corp.	JMW1150KA2400F07	-
EUT	AC/DC Adapter	Protek	PMP150	-
AE	PC	DELL	OPTIPLEX 755	Used for DVI, Optical-DVI, D-sub and Component mode
AE	Headset	ACTTO	-	-
AE	Printer	SAMSUNG	ML-2250G	-
AE	USB mouse	ANYZEN	SMOU50001WX-BK	-
AE	USB Keyboard	SAMSUNG	SEM-DT35US	-
AE	SDI Patten Generator	ASTRO	SC-2055A	Used for SDI mode
AE	Pattern generator	Chroma	22291	Used for C-video, S-Video mode
AE	LCD Monitor	D&T	VP-4726 (F)	External Monitor
AE	LCD Monitor adapter	AULT KOREA Corp.	JMW1150KA2400F07	Connected to LCD monitor
AE	DVI to Optical DVI	Self EDID	DDL-T001	-

* 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 AC Power cord
2	DVI In	I/O	1.8 m	Shielded	24 pin DVI-D
3	Optical DVI In	I/O	22.6 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	S-Video
7	Component (Y/Pb/Pr) In	I/O	1.8m	Shielded	5 Port BNC
8	C-Video In	I/O	1.8m	Shielded	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.

1.9 EUT Internal Operating Frequencies

Frequency (MHz)	Description	Frequency (MHz)	Description
192.375 MHz	Memory Clock	27.00 MHz	System Clock
158.625 MHz	Display Clock	28.322 MHz	System Clock
170.00 MHz	Maximum Pixel Clock	-	-

1.10 Power Interface

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

Project Number: 08CA59898
Model Number: 240-030-970

File Number TC8326

Test Report No: 08CA59898-FCC
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2. EUT OPERATION MODES FOR TESTING

2.1 Test Configuration #1

Test Mode #1	
Color Display Monitor	Manufacturer: ADVAN Int'l Corp. Model: 240-030-970
AC/DC Adapter	Manufacturer: AULT KOREA Corp. Model: JMW1150KA2400F07
DC Extension Cable	Manufacturer: Nortra Model: 240-030-722, (15ft) with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter).

2.2 Test Configuration #2

Test Mode #2	
Color Display Monitor	Manufacturer: ADVAN Int'l Corp. Model: 240-030-970
AC/DC Adapter	Manufacturer: Protek Model: PMP1507
DC Extension Cable	Manufacturer: Bridge power Model: 1501047 (15ft)

2.3 Test Mode of LCD Color Display Monitor for Test Configuration #1

Mode #	Mode	Comments
1	DVI Mode	Worst case condition
2	Optical DVI Mode	-
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.

2.4 Test Mode of LCD Color Display Monitor for Test Configuration #2

Mode #	Mode	Comments
1	DVI Mode	-
2	Optical DVI Mode	Worst case condition
3	VGA Mode	-
4	SDI In/Out Mode	-
5	S-VIDEO Mode	-
6	C-Video Mode	Worst case condition
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.

2.5 Test Resolution of LCD Color Display Monitor for Test Configuration #1

Mode #		Resolution	Comments
1	DVI Mode	640 * 480 @ 60Hz	-
2		1024 * 768 @ 60Hz	-
3		1920 * 1200 @ 60Hz	Worst case condition
4	SDI Mode	720p	Worst case condition
Note: 1. Video resolution where it refers from above is representative worst case.			

2.6 Test Resolution of LCD Color Display Monitor for Test Configuration #2

Mode #		Resolution	Comments
1	Optical DVI Mode	640 * 480 @ 60Hz	-
2		1024 * 768 @ 60Hz	-
3		1600 * 1200 @ 60Hz	Worst case condition
4	C-Video Mode	NTSC	Worst case condition
Note: 1. Video resolution where it refers from above is representative worst case.			

2.7 Used DC extension Cable for Test Configuration #1

Mode #	Manufacturer	Model	Preliminary Test mode	Comment
1	Bridge power	1501047 (15ft)	DVI, Optical DVI, VGA, SDI, S-Video, C-Video, Component Mode.	-
2	Bridge power	1501047001 (75ft)		-
3	Nortra Cable	240-030-932 (75ft) with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)		-
4	Nortra Cable	240-030-722, (15ft) with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)		Worst case condition
5	Bridge power	1501047001 (1500mm, 4.92126ft)		-

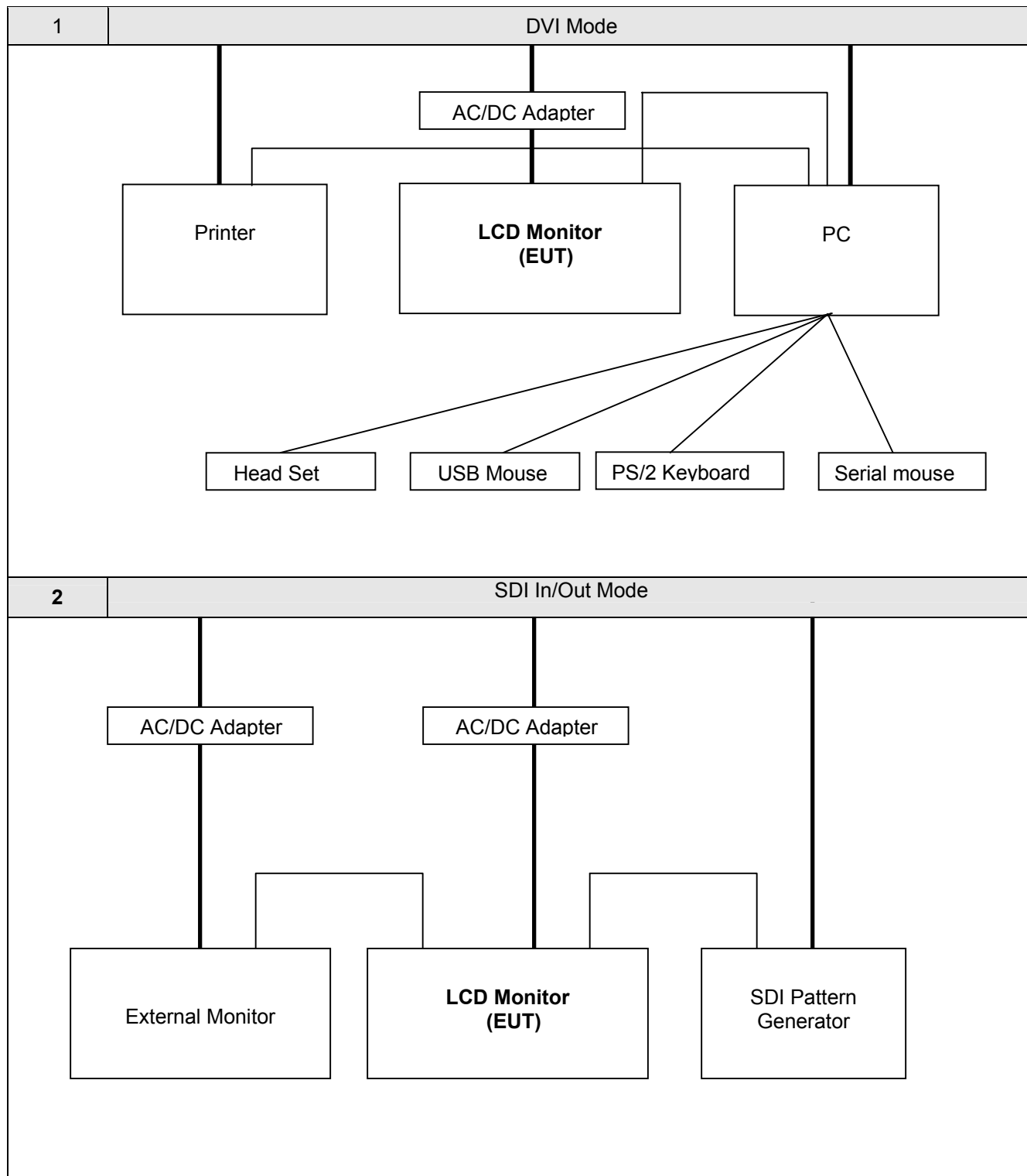
Note: Radiated emission and conducted emission test were performed for all extension power cable during the preliminary testing and selected worst-case condition for final measurements.

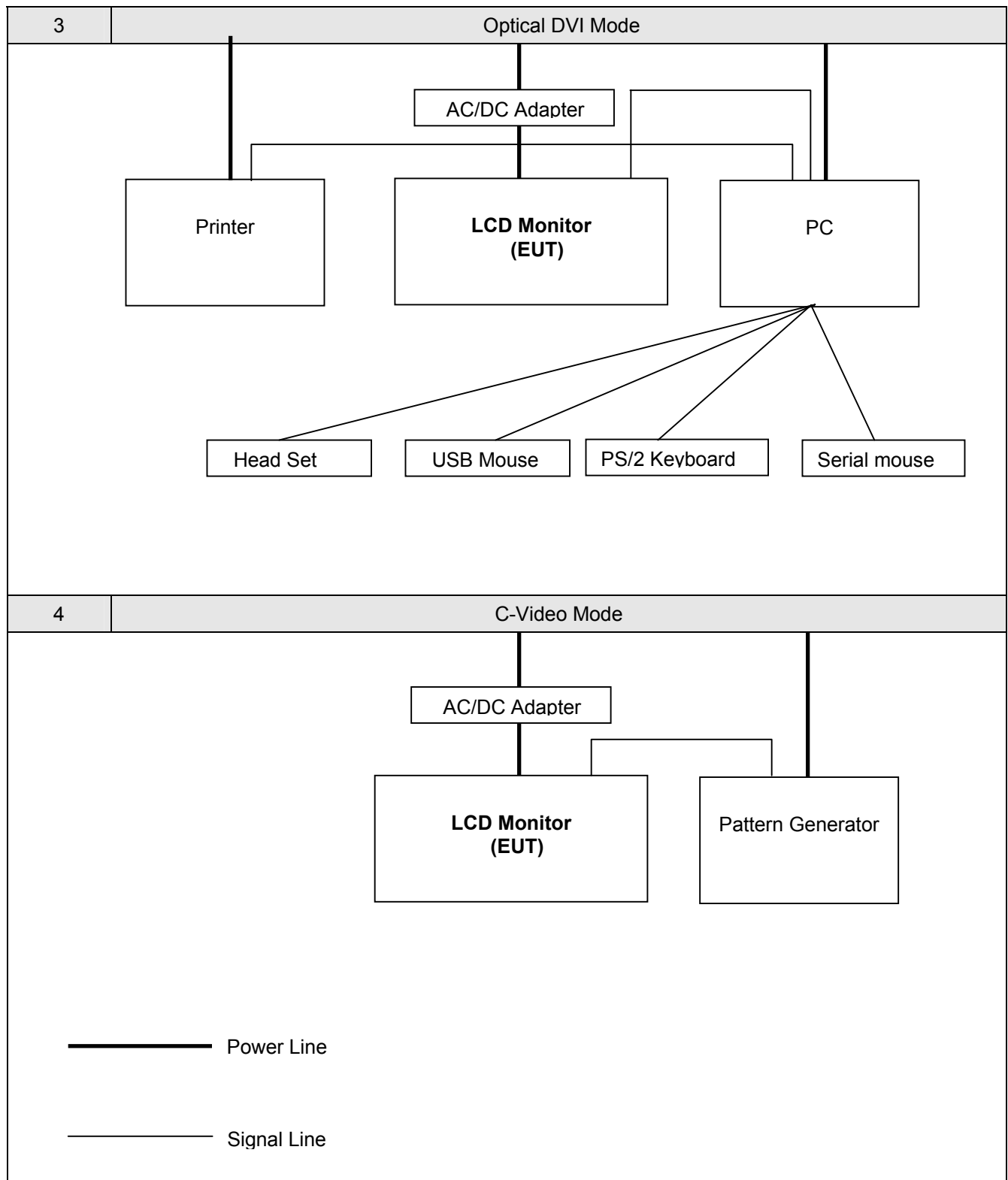
2.8 Used DC extension Cable for Test Configuration #2

Mode #	Manufacturer	Model	Preliminary Test mode	Comment
1	Bridge power	1501047 (15ft)	DVI, Optical DVI, VGA, SDI, S-Video, C-Video, Component Mode.	Worst case condition
2	Bridge power	1501047001 (75ft)		-
3	Nortra Cable	240-030-932 (75ft) with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)		-
4	Nortra Cable	240-030-722, (15ft) with 1501055 (5pin - 2pin converter) and 1501055001 (2pin - 5pin converter)		-
5	Bridge power	1501047002 (1500mm, 4.92126ft)		-

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.

2.9 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		22 °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		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 1.7)		EUT Operation Mode # (See 2)	EUT Configurations Mode # (See Section 2.9)	
1		DVI, SDI In/Out, Optical DVI, S-Video Mode	1, 2, 3 and 4	
Test Equipment Used				
Description	Manufacturer	Model	Identifier	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2009.05.26
LISN	Rohde & Schwarz	ESH2-Z5	100146	2009.03.28
LISN	Schwarzbeck	NNLK8129	8129162	2010.03.24
Pulse Limiter	R&S	ESH3-Z2	3057.8810.54	2009.05.26

Figure 1. Conducted Emission Test Setup of Test Mode #1

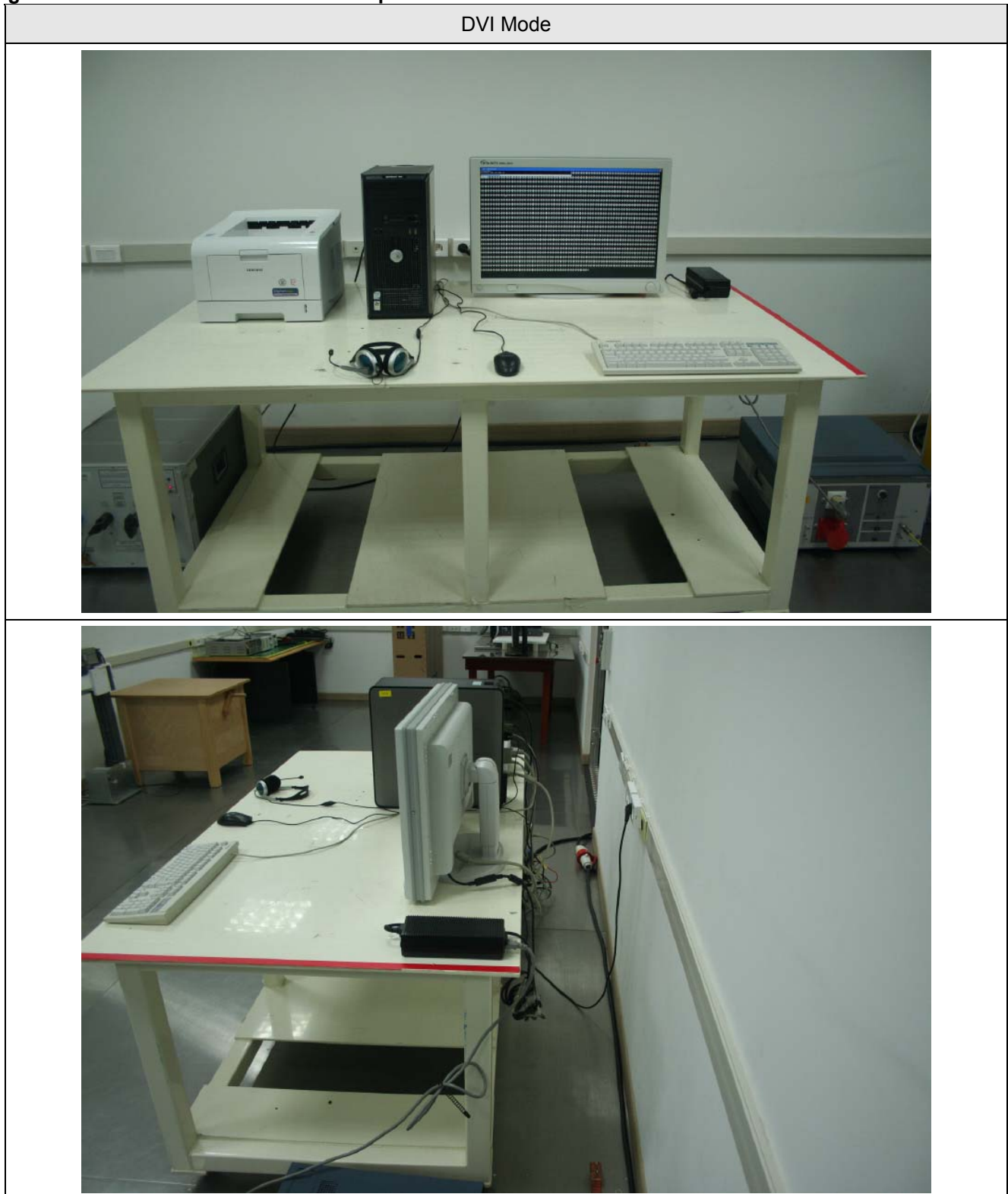


Figure 5. Graphical representation of Test Mode #1

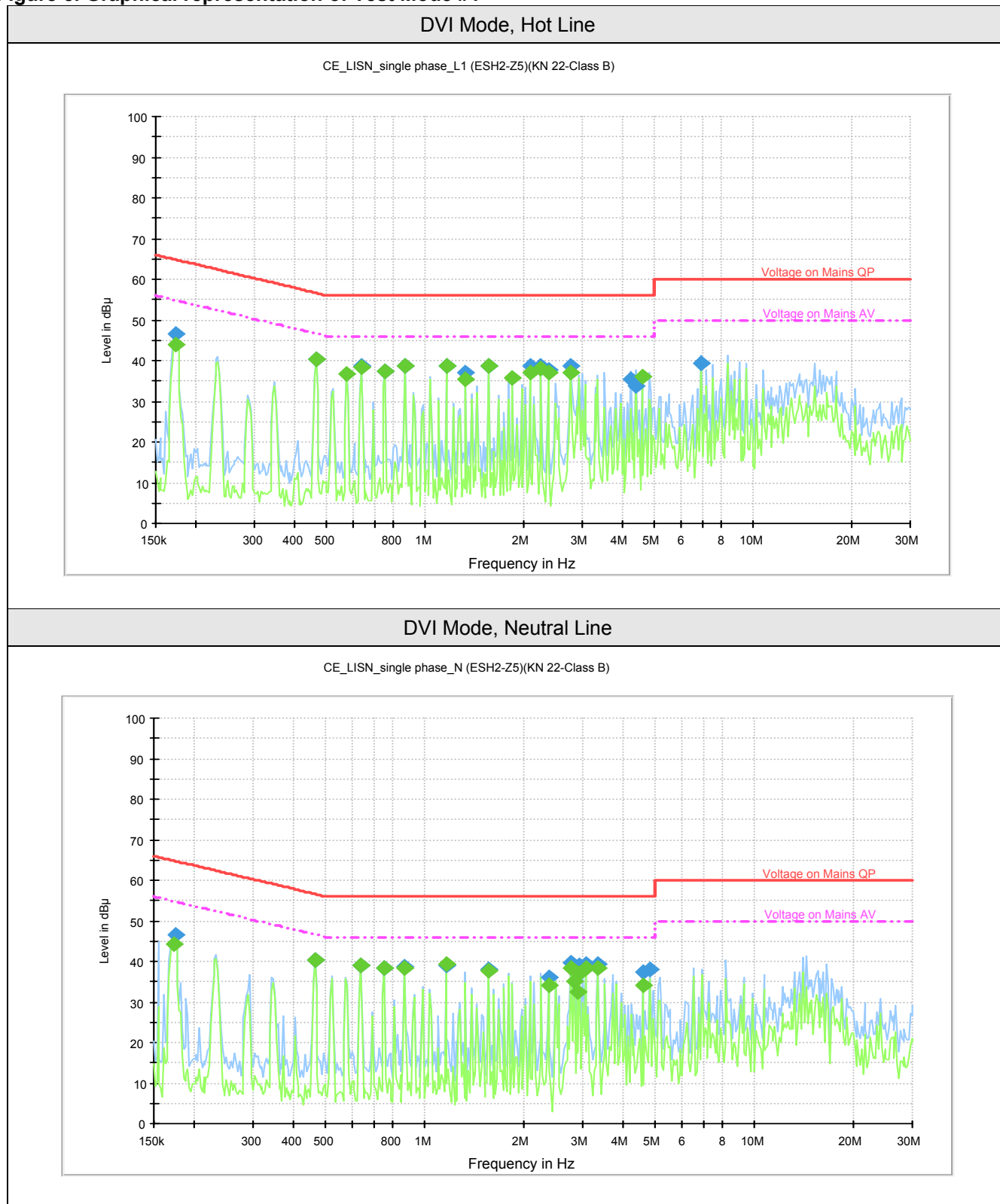


Table 1. Test data for conducted emission of Test Mode #1

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
0.172	0.14	9.76	36.80	34.00	H	46.70	43.90	64.80	54.80	18.10	10.90
0.462	0.13	9.77	30.40	30.50	H	40.30	40.40	56.70	46.70	16.40	6.30
0.635	0.10	9.80	29.10	29.10	N	39.00	39.00	56.00	46.00	17.00	7.00
0.752	0.11	9.79	27.50	27.50	H	37.40	37.40	56.00	46.00	18.60	8.60
0.864	0.19	9.81	28.80	28.60	H	38.80	38.60	56.00	46.00	17.20	7.40
1.153	0.19	9.81	29.10	29.20	N	39.10	39.20	56.00	46.00	16.90	6.80
2.075	0.22	9.88	28.50	26.80	H	38.60	36.90	56.00	46.00	17.40	9.10
2.246	0.22	9.88	28.50	27.80	H	38.60	37.90	56.00	46.00	17.40	8.10
2.769	0.22	9.88	29.60	28.10	N	39.70	38.20	56.00	46.00	16.30	7.80
2.939	0.22	9.88	28.90	27.00	N	39.00	37.10	56.00	46.00	17.00	8.90
3.058	0.32	9.88	29.10	28.10	N	39.30	38.30	56.00	46.00	16.70	7.70
3.345	0.26	9.94	29.10	28.10	N	39.30	38.30	56.00	46.00	16.70	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 2. Conducted Emission Test Setup of Test Mode #1

SDI In/Out Mode



Figure 6. Graphical representation of Test Mode #1

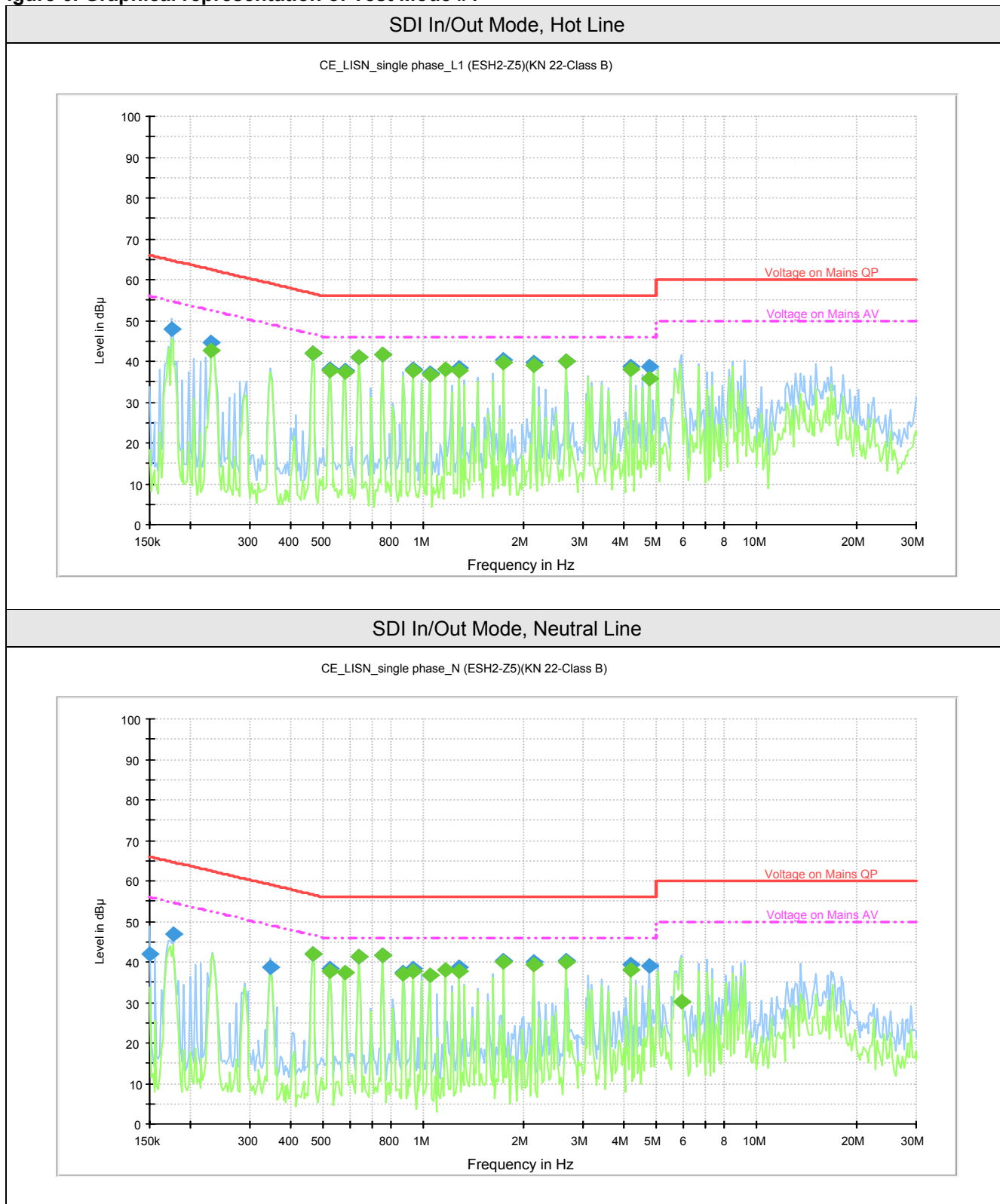


Table 1. Test data for conducted emission of Test mode #1

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
0.174	0.15	9.75	37.90	35.80	H	47.80	45.70	64.80	52.40	17.00	6.70
0.230	0.14	9.76	34.60	32.70	H	44.50	42.60	62.40	52.40	17.90	9.80
0.462	0.13	9.77	32.20	32.10	N	42.10	42.00	56.70	46.70	14.60	4.70
0.520	0.12	9.78	28.20	27.70	H	38.10	37.60	56.00	46.00	17.90	8.40
0.635	0.10	9.80	31.30	31.30	N	41.20	41.20	56.00	46.00	14.80	4.80
0.752	0.11	9.79	31.80	31.70	N	41.70	41.60	56.00	46.00	14.30	4.40
1.274	0.16	9.84	28.50	27.60	H	38.50	37.60	56.00	46.00	17.50	8.40
1.734	0.15	9.85	30.40	29.90	N	40.40	39.90	56.00	46.00	15.60	6.10
2.137	0.22	9.88	29.90	29.20	N	40.00	39.30	56.00	46.00	16.00	6.70
2.661	0.22	9.88	30.20	29.90	N	40.30	40.00	56.00	46.00	15.70	6.00
4.163	0.28	10.02	28.50	27.70	H	38.80	38.00	56.00	46.00	17.20	8.00
4.738	0.26	10.04	28.40	25.60	H	38.70	35.90	56.00	46.00	17.30	10.10
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 3. Conducted Emission Test Setup of Test Mode #2



Figure 7. Graphical representation of Test Mode #2

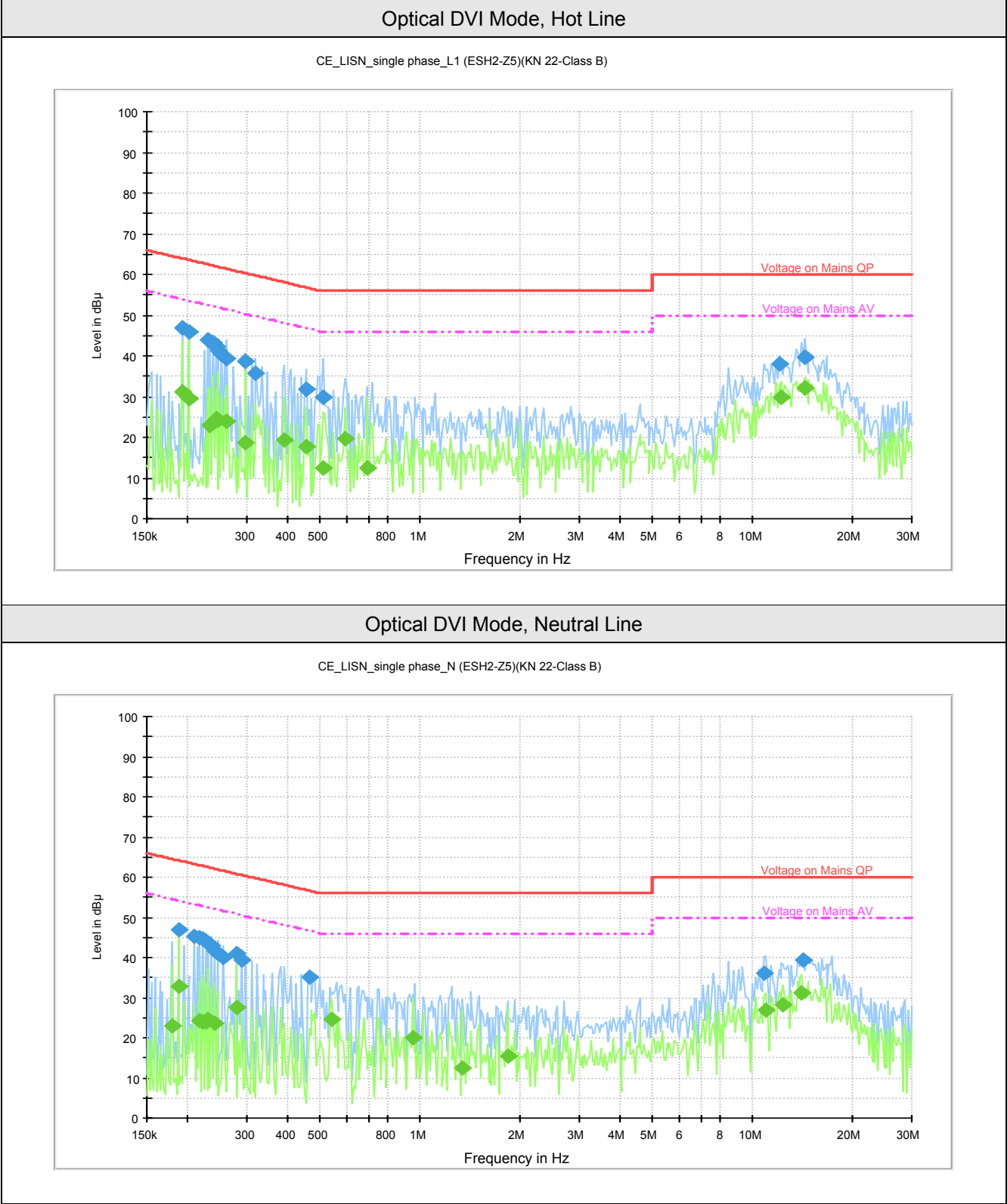


Table 1. Test data for conducted emission of Test Mode #2

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
0.187	0.13	9.77	37.10	22.90	N	47.00	32.80	64.20	54.20	17.20	21.40
0.192	0.12	9.78	36.80	21.20	H	46.70	31.10	63.90	53.90	17.20	22.80
0.200	0.15	9.75	36.00	19.60	H	45.90	29.50	63.60	53.60	17.70	24.10
0.208	0.14	9.76	35.50	15.90	N	45.40	25.80	63.30	54.20	17.90	28.40
0.217	0.15	9.75	34.90	14.40	N	44.80	24.30	62.90	52.90	18.10	28.60
0.221	0.14	9.76	34.60	14.10	N	44.50	24.00	62.80	52.80	18.30	28.80
0.226	0.14	9.76	34.10	14.10	N	44.00	24.00	62.60	52.60	18.60	28.60
0.228	0.14	9.76	34.00	14.00	H	43.90	23.90	62.50	52.40	18.60	28.50
0.230	0.14	9.76	33.70	14.70	N	43.60	24.60	62.40	52.40	18.80	27.80
0.232	0.14	9.76	33.70	13.20	H	43.60	23.10	62.40	52.40	18.80	29.30
0.237	0.13	9.77	33.30	13.60	H	43.20	23.50	62.20	52.20	19.00	28.70
0.242	0.14	9.76	32.50	14.60	H	42.40	24.50	62.00	52.00	19.60	27.50
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 4. Conducted Emission Test Setup of Test Mode #2

C-Video Mode



Figure 8. Graphical representation of Test Mode #2

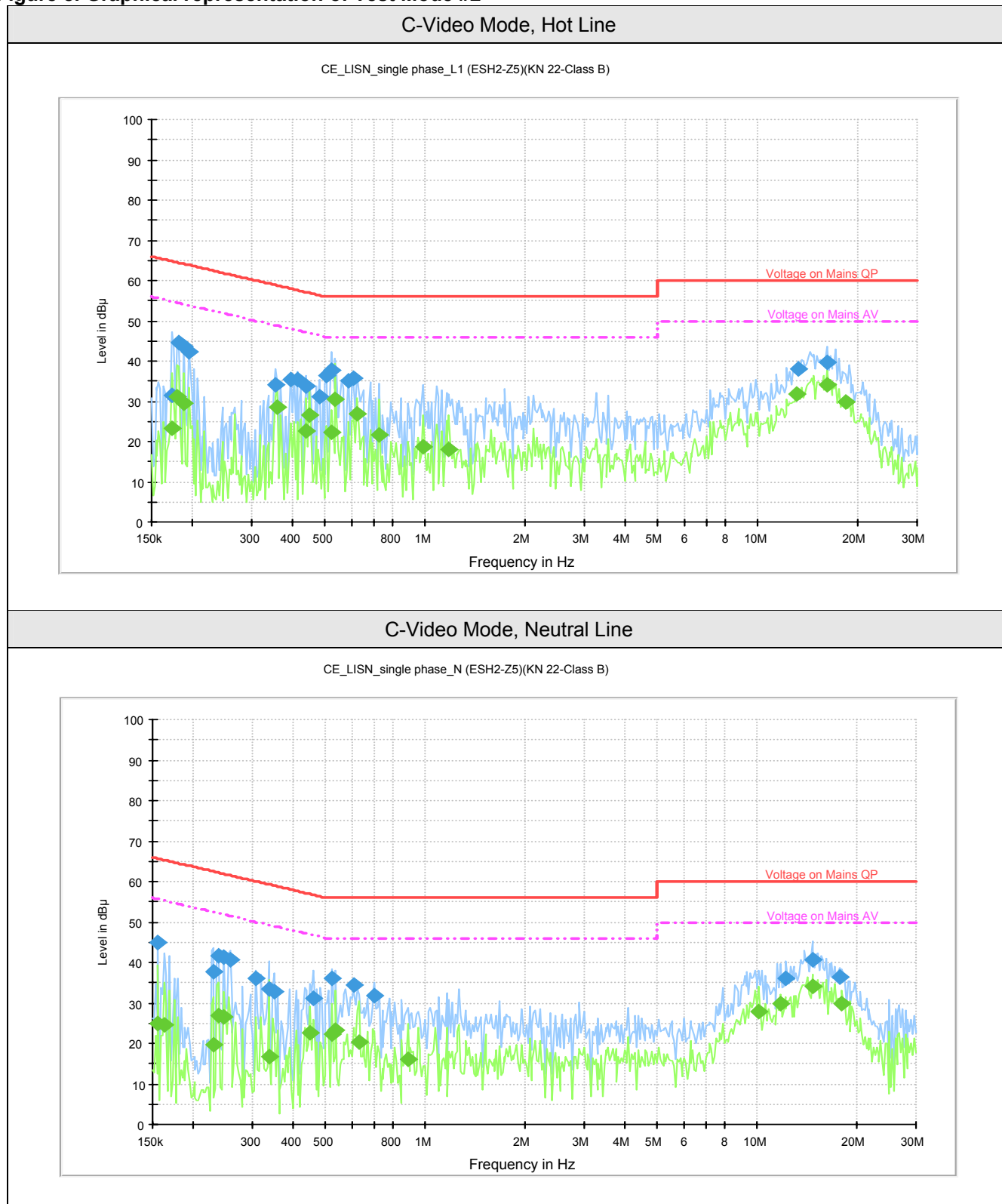


Table 1. Test data for conducted emission of Test Mode #2

C-Video 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
0.156	0.16	9.74	34.90	14.90	N	34.90	14.90	65.70	55.70	30.80	40.80
0.181	0.14	9.76	34.70	21.10	H	34.70	21.10	64.40	54.50	29.70	33.40
0.187	0.13	9.77	33.80	19.50	H	33.80	19.50	64.20	54.10	30.40	34.60
0.237	0.13	9.77	31.80	17.00	N	31.80	17.00	62.20	52.20	30.40	35.20
0.244	0.15	9.75	31.40	16.60	N	31.40	16.60	62.00	52.20	30.60	35.60
0.257	0.14	9.76	30.60	15.70	N	30.60	15.70	61.50	51.90	30.90	36.20
0.505	0.13	9.77	26.60	11.90	H	26.60	11.90	56.00	46.00	29.40	34.10
0.520	0.12	9.78	27.70	12.30	H	27.70	12.30	56.00	46.00	28.30	33.70
0.604	0.11	9.79	26.00	11.40	H	26.00	11.40	56.00	50.00	30.00	38.60
14.586	0.64	10.06	30.10	23.50	N	30.10	23.50	60.00	50.00	29.90	26.50
16.112	0.97	10.03	28.60	23.00	H	28.60	23.00	60.00	50.00	31.40	27.00
17.621	0.79	10.01	25.70	18.90	N	25.70	18.90	60.00	50.00	34.30	31.10
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.											

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		23 °C
		Relative Humidity		38 %
-		Frequency range		Measurement Point
Fully configured sample scanned over the following frequency range		30 MHz – 1.0 GHz		10 meter measurement distance
1.0 GHz – 2.0GHz		3 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		54 (Average), 74 (Peak)		Pass
Conducted Emissions EUT Configuration Settings				
Power Interface Mode # (See Section 1.7)		EUT Operation Mode # (See 2)		EUT Configurations Mode # (See Section 2.9)
1		DVI, SDI In/Out, Optical DVI, S-Video Mode		1, 2, 3 and 4
Test Equipment Used				
Description	Manufacturer	Model	Identifier	Cal. Due
Test Receiver	Rohde & Schwarz	ESIB26	100359	2009.05.26
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 of Test Mode #1, 30 MHz to 1000 MHz

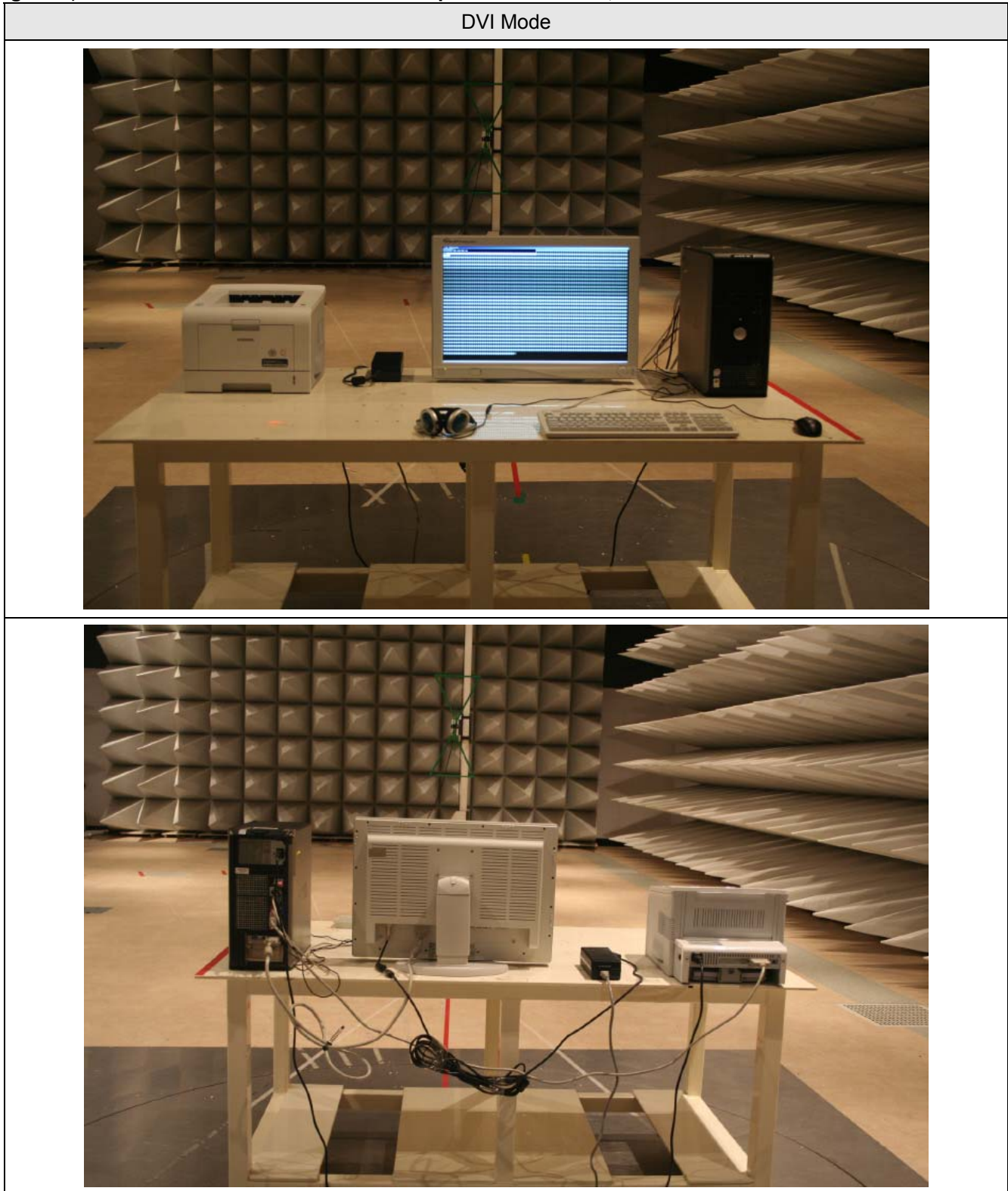


Figure 16. Graphical representation of Test Mode #1, 30 MHz to 1000 MHz

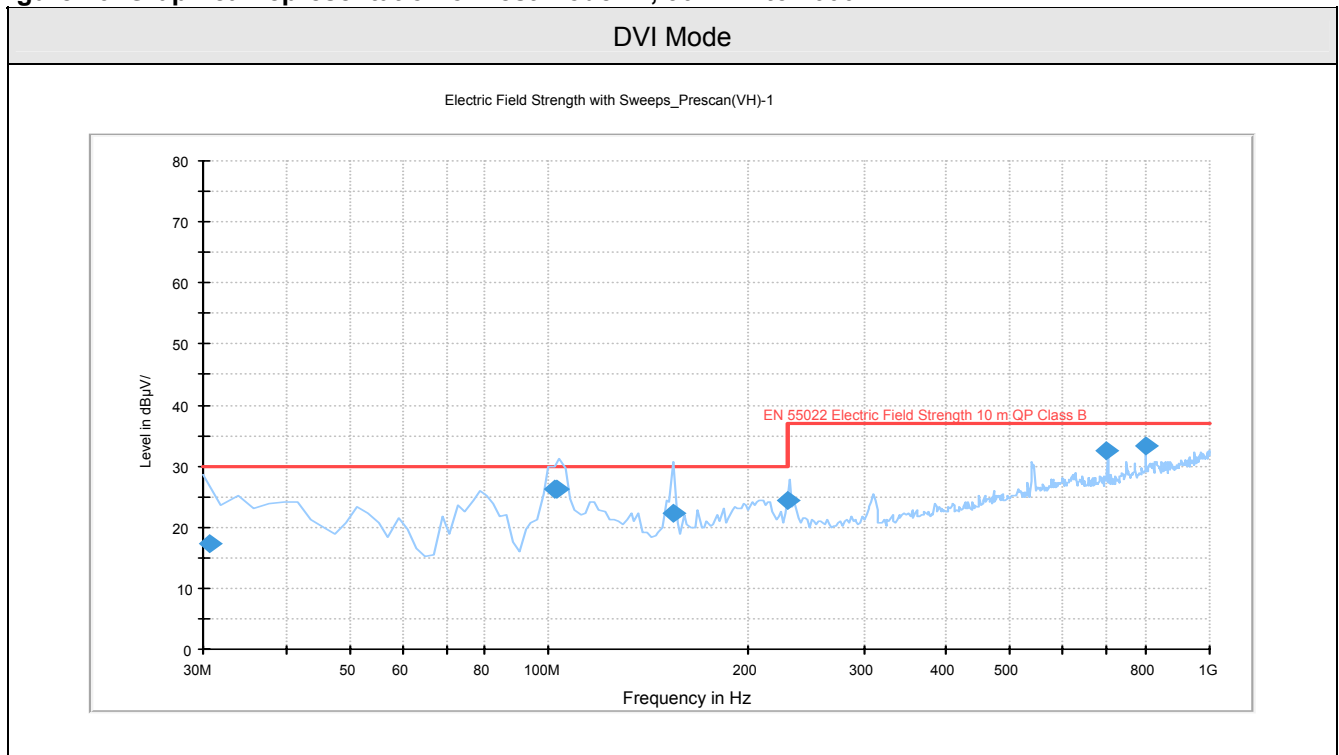


Table 4. Radiated emission Test data of Test Mode #1, 30 MHz to 1000 MHz

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)
101.95	14.10	QP	V	0	1.00	0.41	11.89	26.40	30.00	3.60
154.81	10.00	QP	V	90	1.00	0.49	11.81	22.30	30.00	7.70
230.55	9.60	QP	V	78	1.05	0.49	14.21	24.30	37.00	12.70
700.03	9.30	QP	H	85	1.00	0.49	22.81	32.60	37.00	4.40
800.01	8.90	QP	H	45	1.05	0.50	24.00	33.40	37.00	3.60

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)

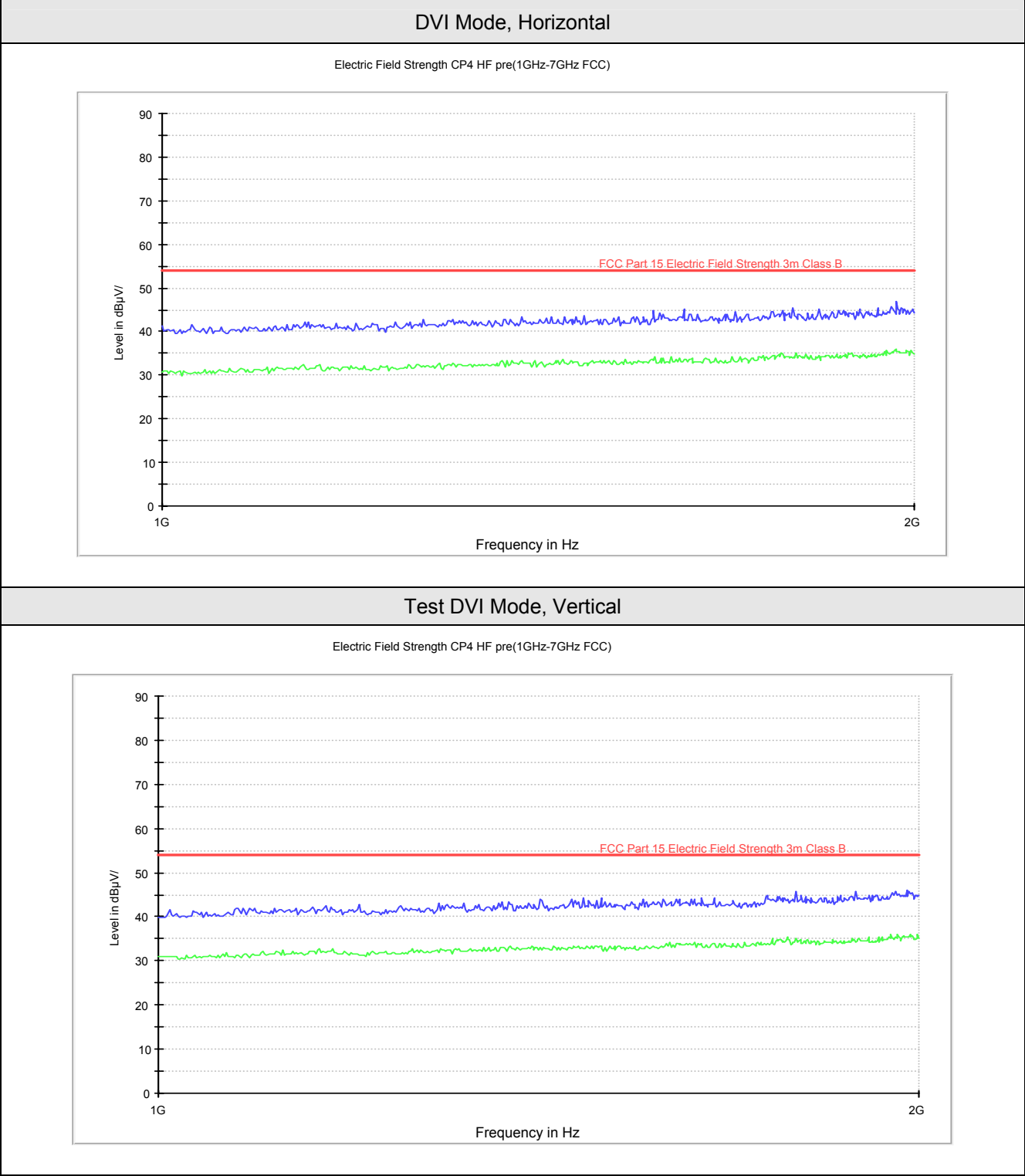
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 11, Photo of Radiated emission test setup of Test Mode #1, 1.0 GHz to 2.0 GHz

DVI Mode



Figure 16. Graphical representation of Test Mode #1, 1.0 GHz to 2.0 GHz



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Table 5. Radiated emission Test data of Test Mode #1, 1.0 GHz to 2.0 GHz

SDI In/Out Mode											
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/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)
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
Note: The test results were under required limit with 20dB margin or more.											

Figure 9, Photo of Radiated emission test setup of Test Mode #1, 30 MHz to 1000 MHz

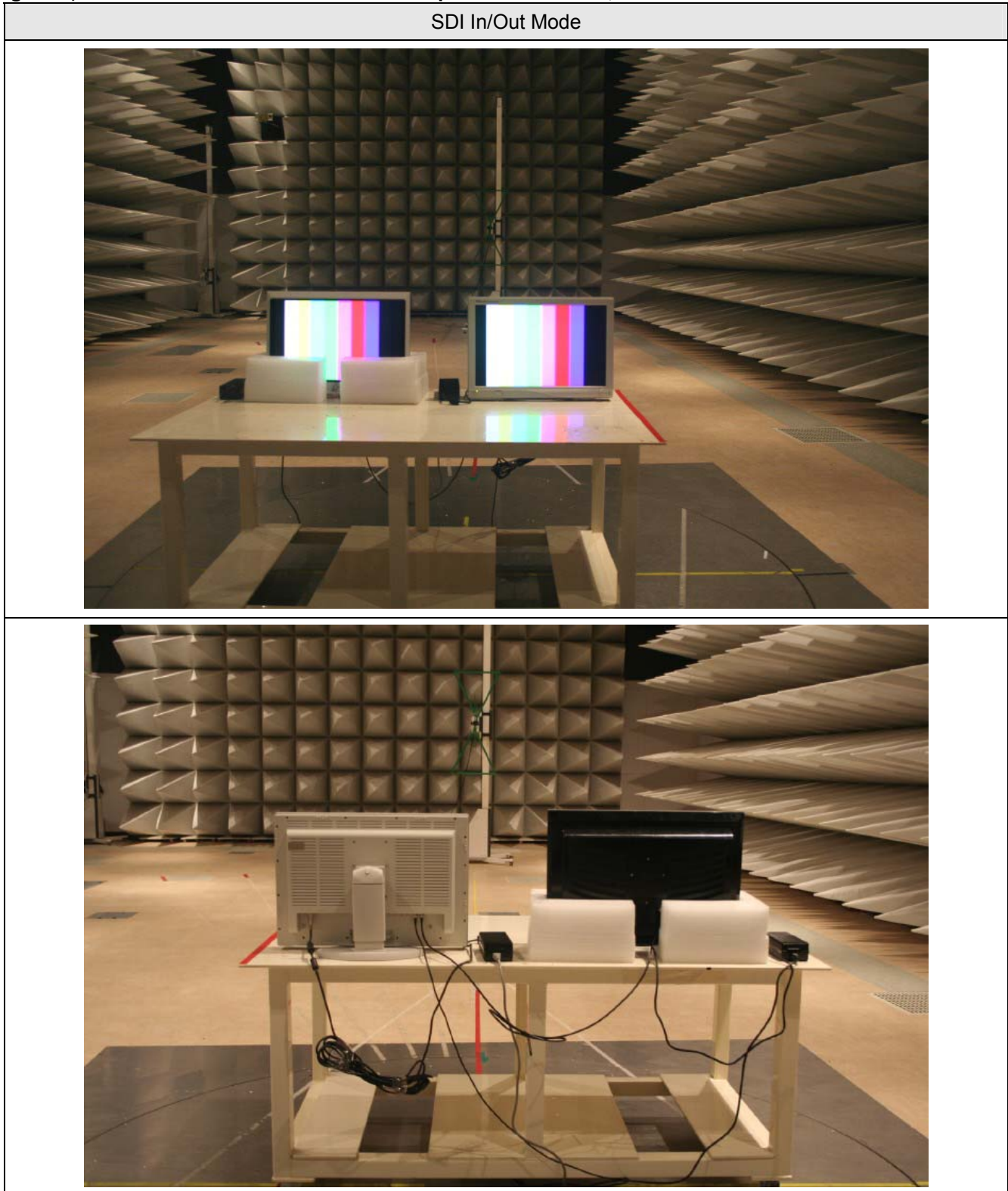


Figure 16. Graphical representation of Test Mode #1, 30 MHz to 1000 MHz

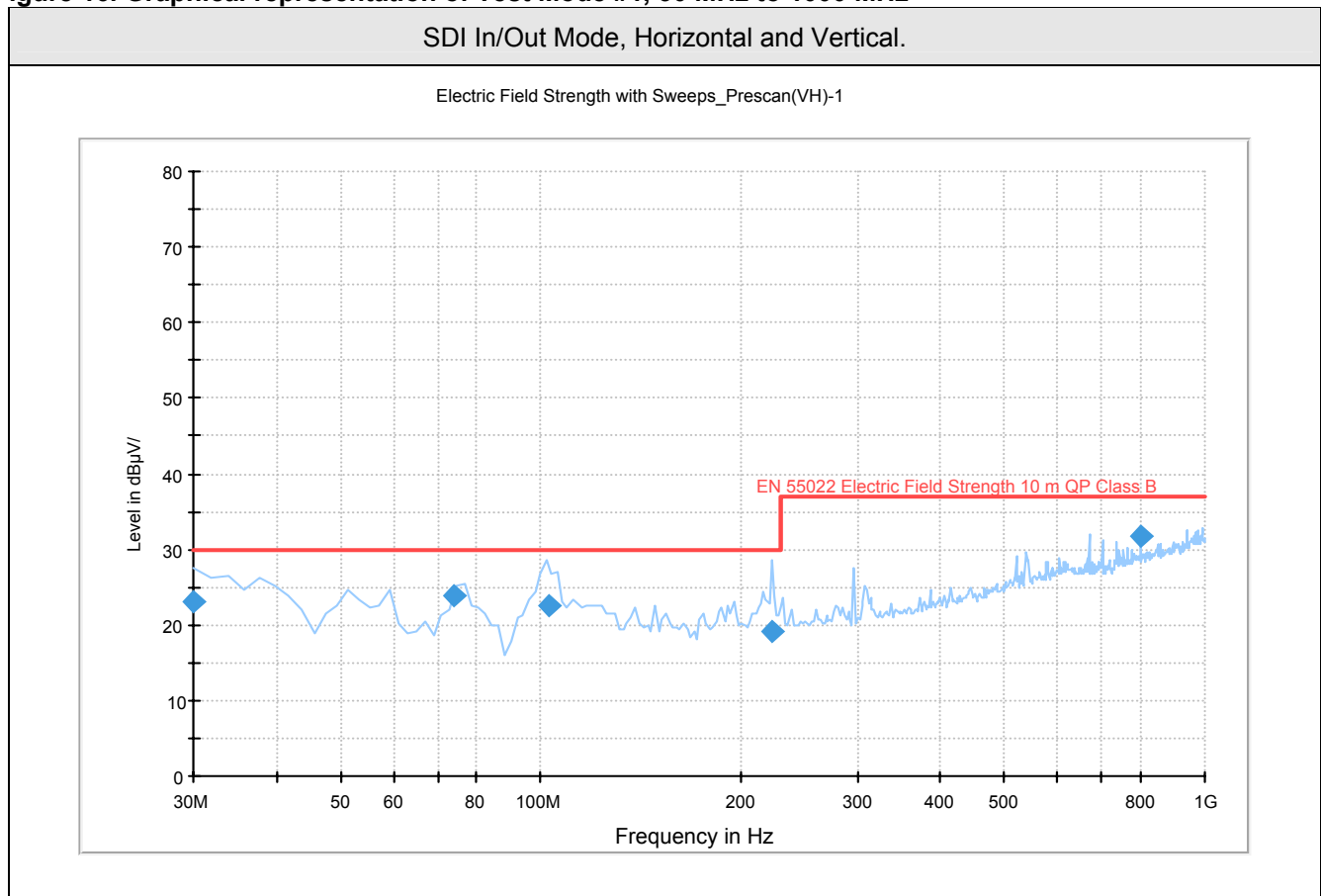


Table 4. Radiated emission Test data of Test Mode #1, 30 to 1000 MHz

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)
30.04	3.40	QP	V	0	1.05	0.10	19.50	23.00	30.00	7.00
74.27	16.90	QP	V	34	2.05	0.41	7.59	24.90	30.00	5.10
103.14	10.10	QP	V	45	1.00	0.49	11.91	22.50	30.00	7.50
222.78	12.00	QP	H	45	4.00	0.49	13.71	26.20	30.00	3.80
700.02	9.40	QP	H	90	1.00	0.49	22.81	32.70	37.00	4.30
800.01	10.20	QP	H	45	1.00	0.50	24.00	34.70	37.00	2.30

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)

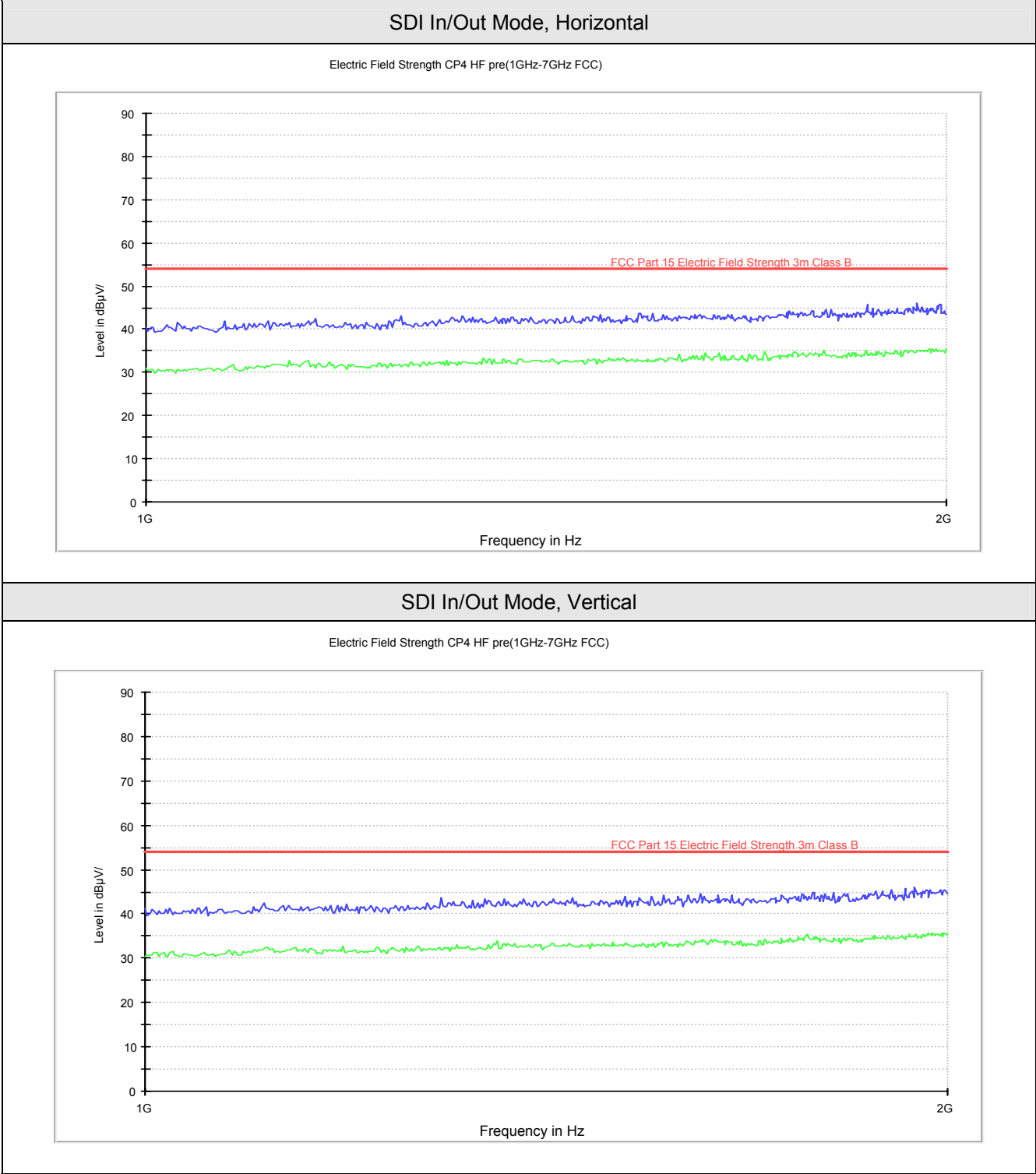
2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

Figure 11, Photo of Radiated emission test setup of Test Mode #1, 1.0 GHz to 2.0 GHz

SDI In/Out Mode



Figure 16. Graphical representation of Test Mode #1, 1.0 GHz to 2.0 GHz



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Table 5. Radiated emission Test data of Test Mode #1, 1.0 GHz to 2.0 GHz

Optical DVI Mode										
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/AV)	Pol (V/H)	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Note: The test results were under required limit with 20dB margin or more.										

Figure 9, Photo of Radiated emission test setup of Test Mode #2, 30 MHz to 1000 MHz

Optical DVI Mode

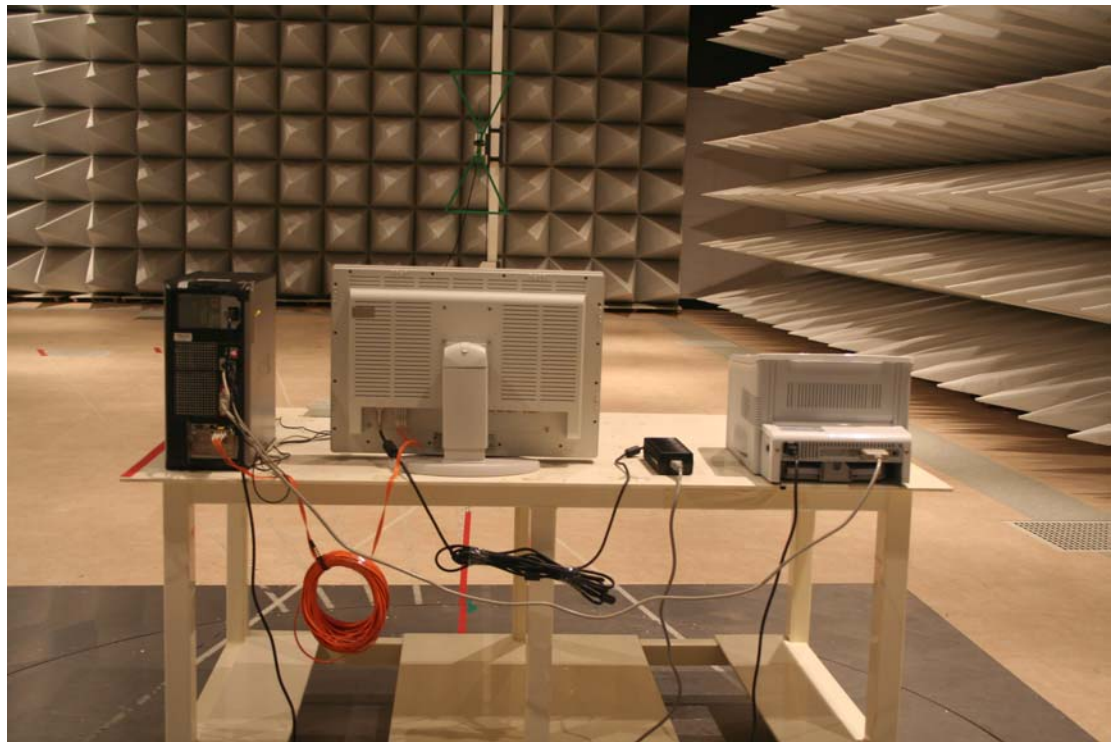
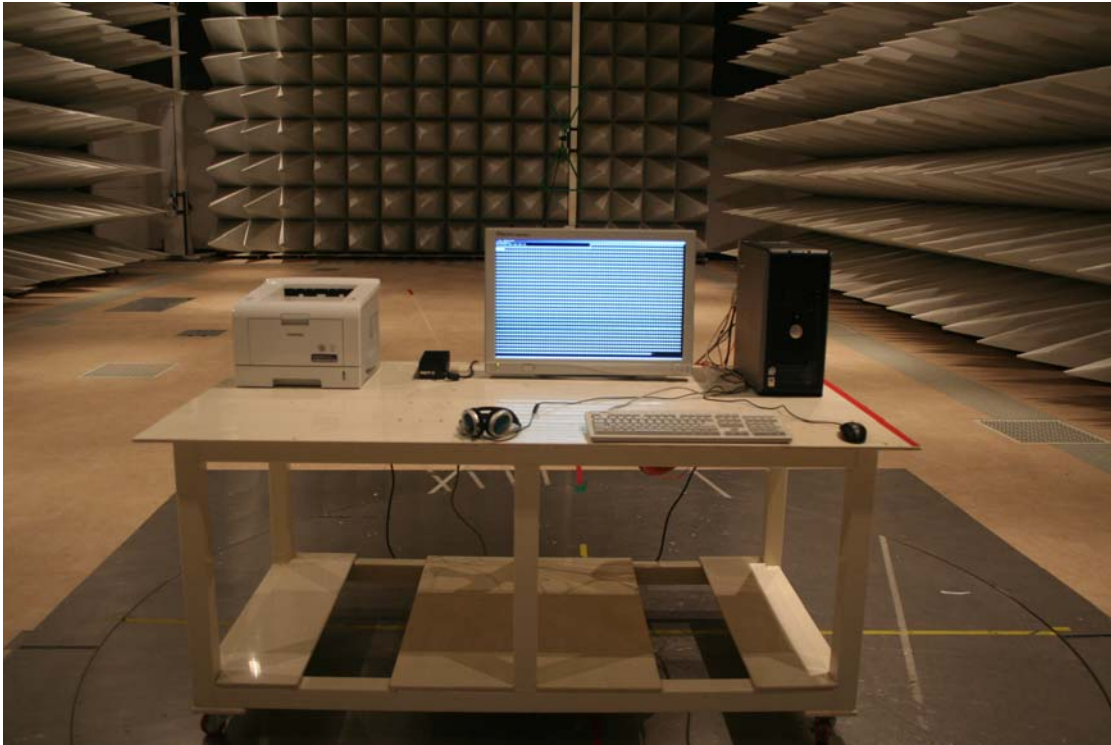


Figure 16. Graphical representation of Test Mode #2, 30 MHz to 1000 MHz

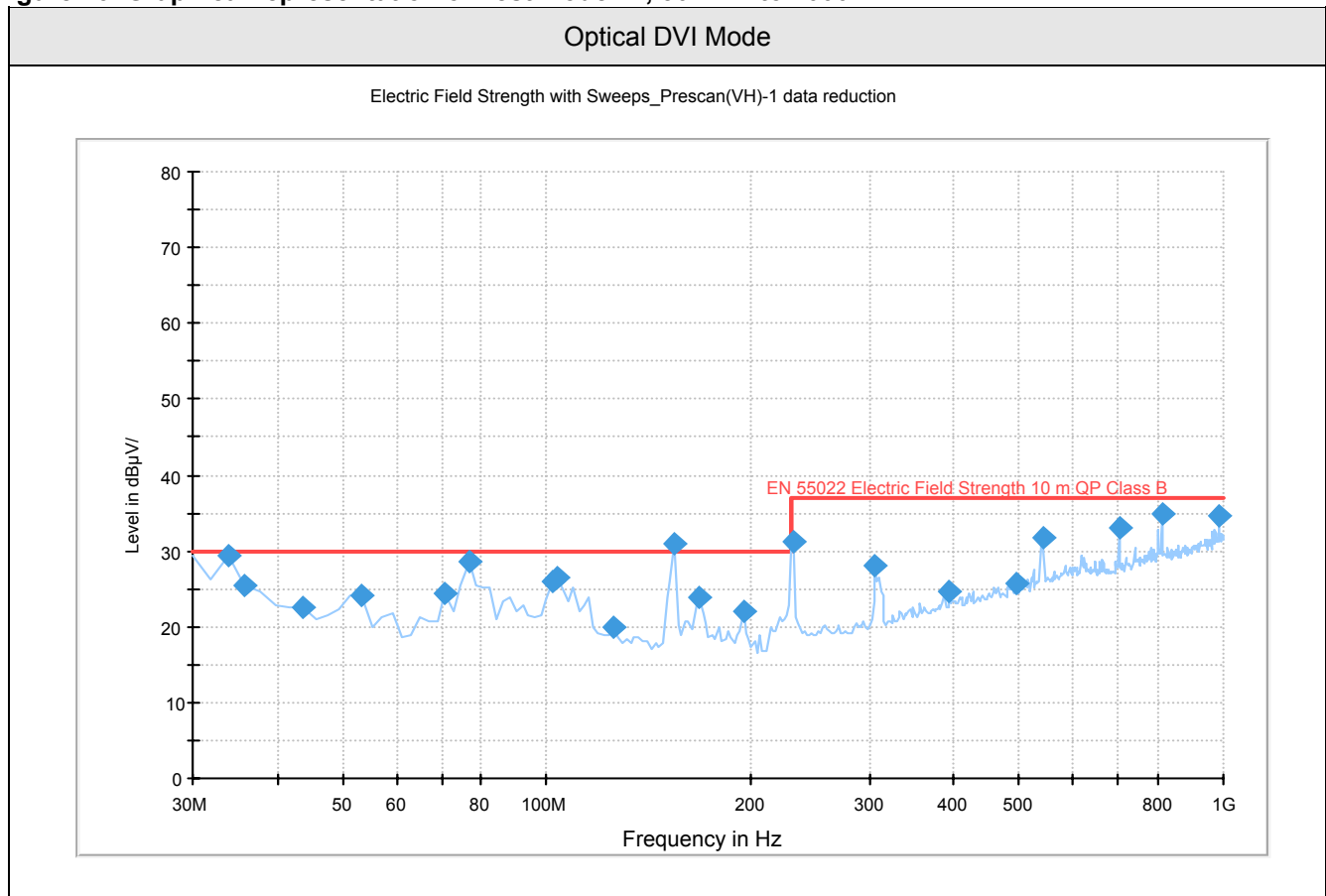


Table 4. Radiated emission Test data of Test Mode #2, 30 to 1000 MHz

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)
33.89	3.50	QP	V	43	2.00	0.10	17.40	21.00	30.00	9.00
76.65	15.50	QP	V	45	2.00	0.41	7.79	23.70	30.00	6.30
154.41	12.30	QP	V	90	2.00	0.49	11.81	24.60	30.00	5.40
232.16	14.40	QP	V	35	2.00	0.49	14.21	29.10	37.00	7.90
700.64	9.80	QP	H	105	3.00	0.49	22.81	33.10	37.00	3.90
810.02	10.23	QP	H	87	1.00	0.50	24.00	34.73	37.00	2.27
985.87	0.77	QP	V	45	1.00	0.52	25.98	27.27	37.00	9.73

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 11, Photo of Radiated emission test setup of Test Mode #2, 1.0 GHz to 2.0 GHz

Optical DVI Mode

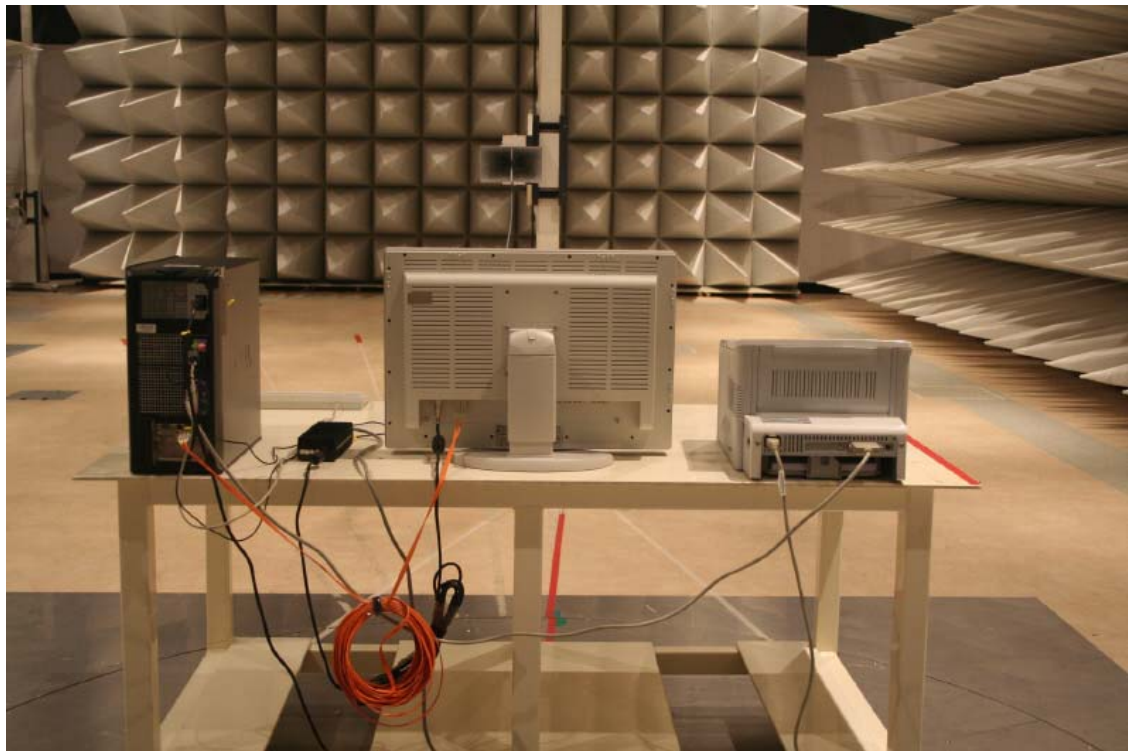
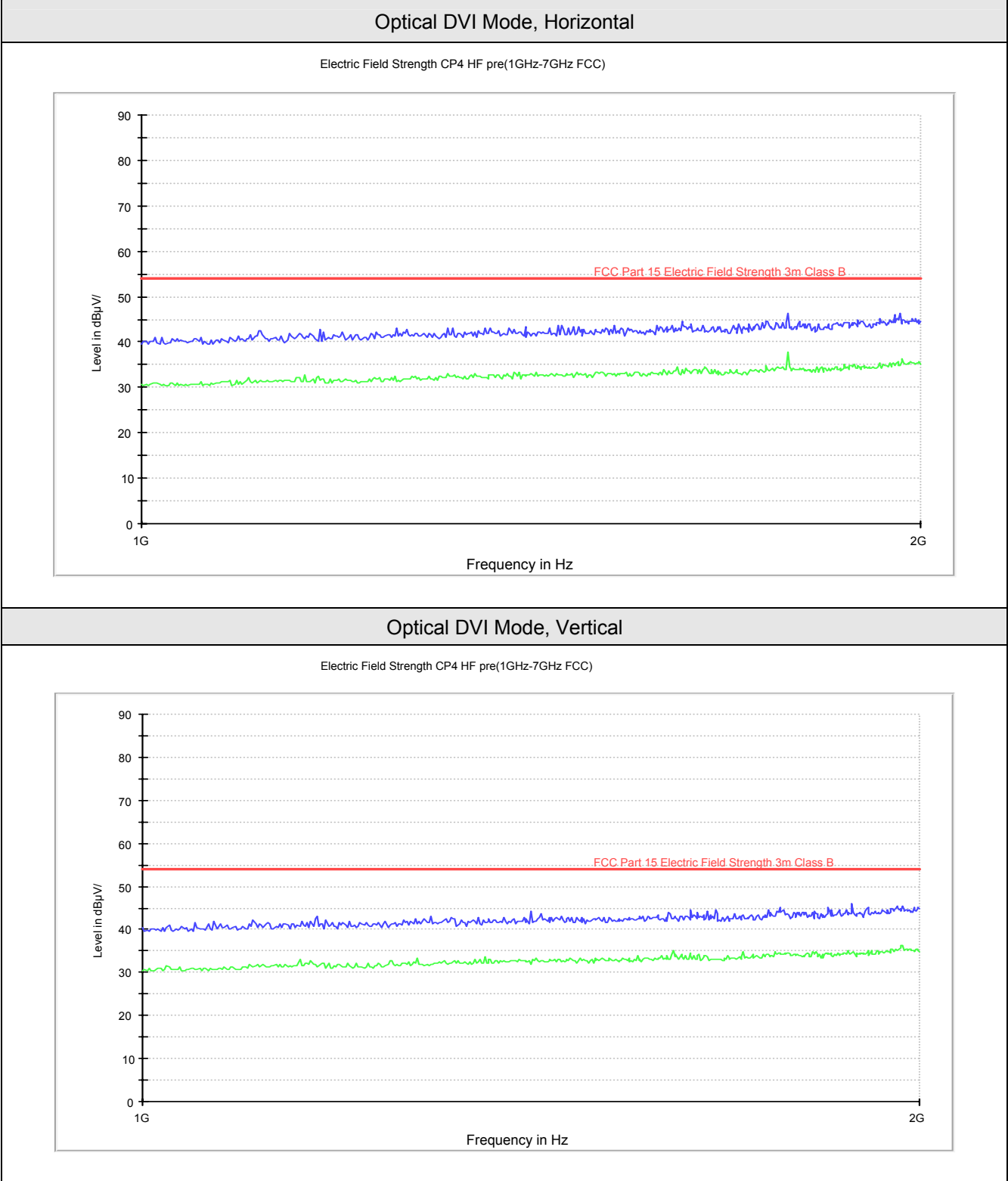


Figure 16. Graphical representation of Test Mode #2, 1.0 GHz to 2.0 GHz



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Table 5. Radiated emission Test data of Test Mode #2, 1.0 GHz to 2.0 GHz

Optical DVI Mode										
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/AV)	Pol (V/H)	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Note: The test results were under required limit with 20dB margin or more.										

Figure 9, Photo of Radiated emission test setup of Test Mode #2, 30 MHz to 1000 MHz

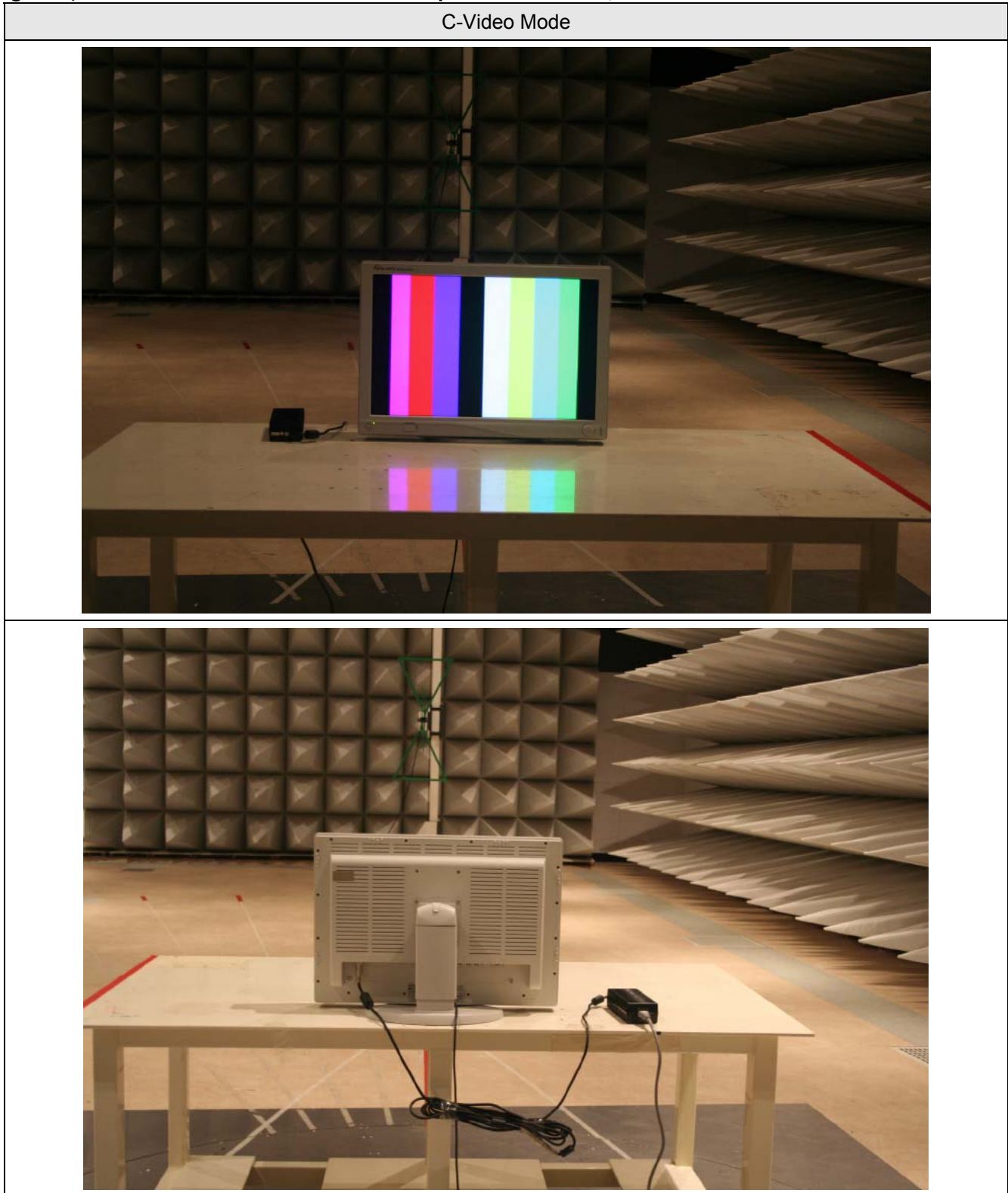


Figure 16. Graphical representation of Test Mode #2, 30 to 1000 MHz

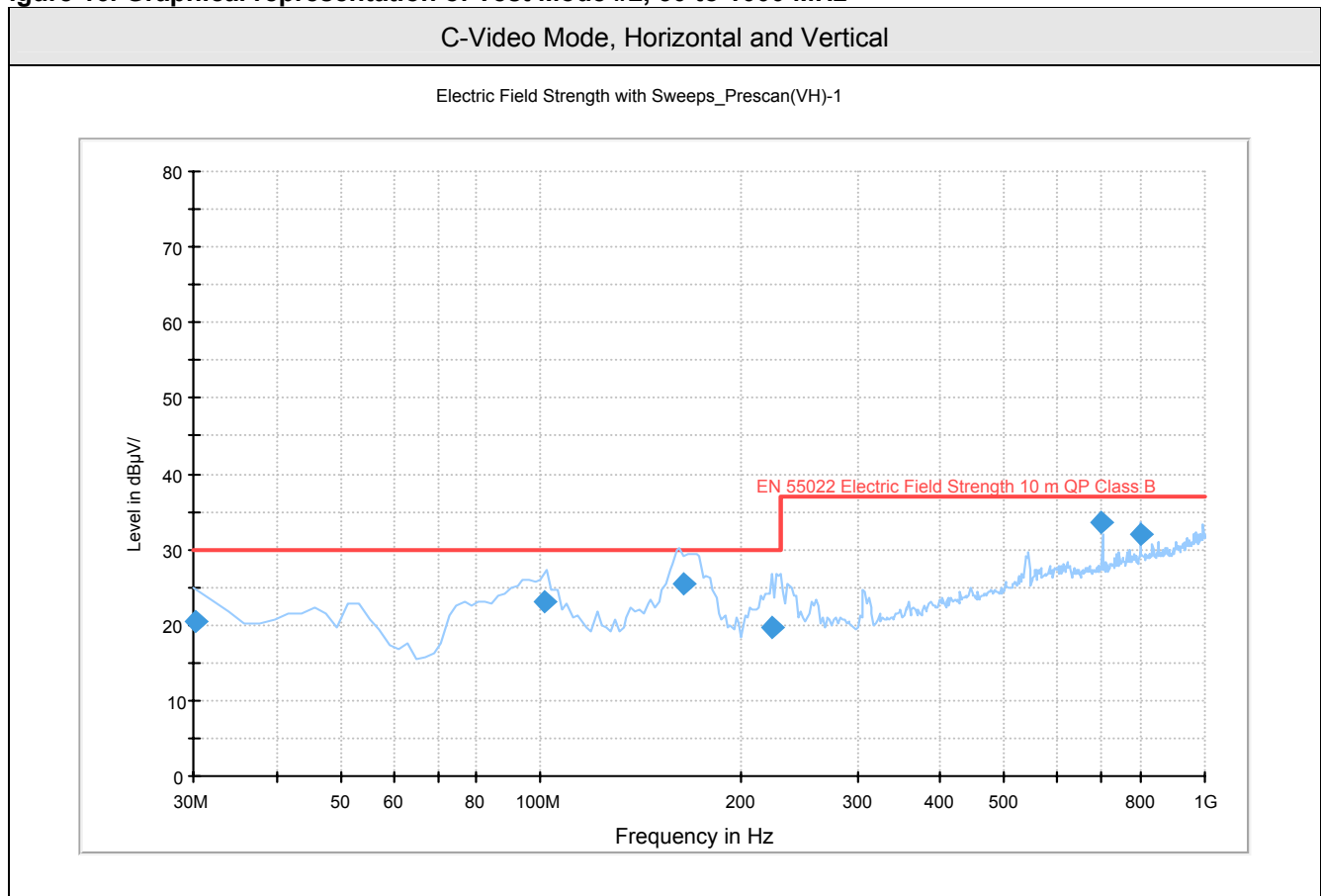


Table 4. Radiated emission Test data of Test Mode #2, 30 to 1000 MHz

C-Video 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)
30.16	1.00	QP	V	25	1.05	0.10	19.40	20.50	30.00	9.50
102.03	11.80	QP	V	30	1.05	0.41	11.79	24.00	30.00	6.00
164.16	13.90	QP	V	30	1.05	0.49	11.61	26.00	30.00	4.00
223.61	9.00	QP	V	45	1.05	0.49	13.71	23.20	30.00	6.80
700.01	10.20	QP	H	45	1.00	0.49	22.81	33.50	37.00	3.50
800.02	8.80	QP	H	91	1.00	0.50	24.00	33.30	37.00	3.70

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 11, Photo of Radiated emission test setup of Test Mode #2, 1.0 GHz to 2.0 GHz

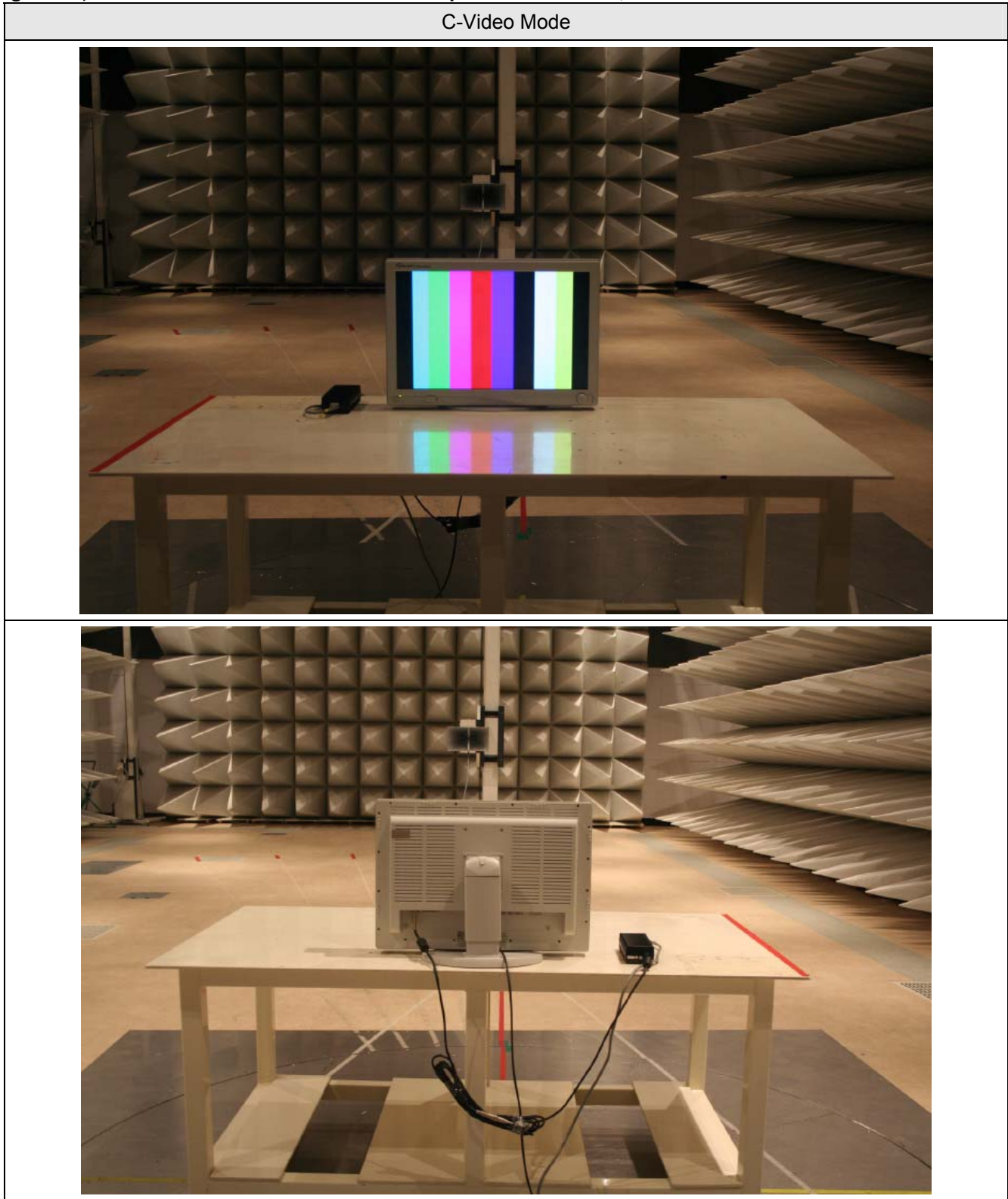
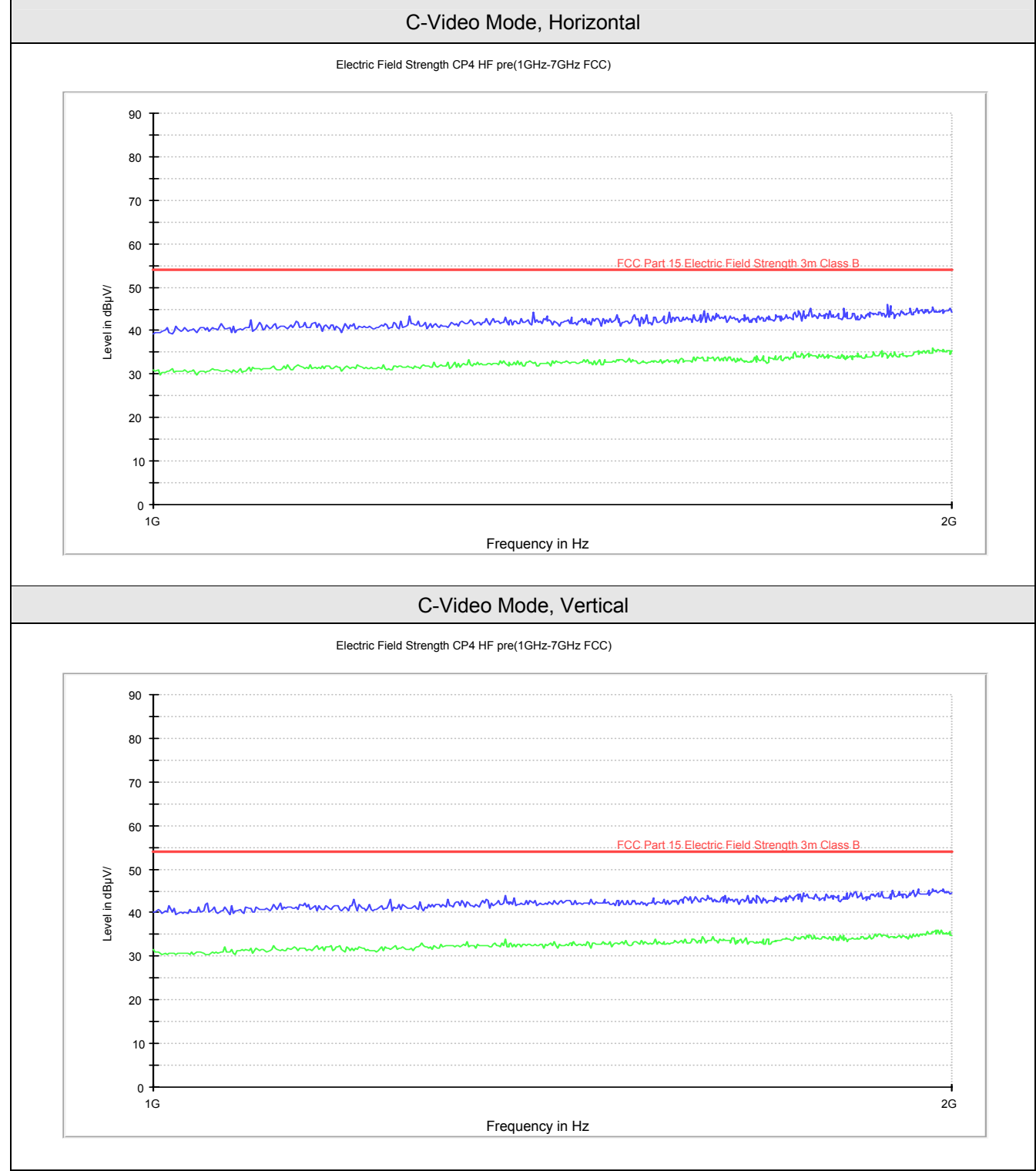


Figure 16. Graphical representation of Test Mode #2, 1.0GHz to 2.0 GHz



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Table 5. Radiated emission Test data of Test Mode #2, 1.0GHz to 2.0 GHz

Optical DVI Mode										
Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/AV)	Pol (V/H)	Antenna Height (m)	AMP Gain (dB)	Antenna Factor (dB/m)	Cable loss (dB)	Level dBuV/m	Limit dBuV/m	Margin (dB)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Note: The test results were under required limit with 20dB margin or more.										

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
9kHz-150 kHz	± 3.05 [dBuV]
150kHz-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



AFFIDAVIT FOR MULTILISTING MODEL DESCRIPTION

We hereby confirm that the LCD Color Display, model 0240030970 manufactured by **ADVAN Int'l Corp.**, 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: 240-030-970

Multilisting model: 0240030970

WISE HDTV SURGICAL DISPLAY

FCC ID Number for Basic & Multilisting Product
QVXAMM260WTDSW

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Jang", is written over a horizontal line.

Signature

Typed Name : Andy Jang

Title : Manager

Department : Marketing

Company : ADVAN INT'L CORP.

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. : 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.