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Project: 13CA07259
File: MC16222
Report: 13CA07259-FCC
Date: March 18, 2013
Model: 0240031020
Multi-listing model number: 240-031-020, 0240-031-020
FCC ID: QVXAMM261WTDS

Electromagnetic Compatibility Test Report

For

26" LED Display

**ADVAN INT'L CORP
47817 Fremont Blvd., Fremont, CA 94538 U.S.A.**

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Project Number: 13CA07259
Model Number: 0240031020
Client Name: ADVAN INT'L CORP.
FCC ID: QVXAMM261WTDS

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Summary of Test Results:

The following tests were performed on a sample submitted for evaluation of compliance 47 CFR Part 15.107 (a) / 47 CFR Part 15.109 (a) Class B and ICES-003 Issue 4, Class B digital Apparatus.				
Test #	Test Name Test Requirement/Specification	Compliant	Not Compliant	See Remark
1	AC Power line Conducted Emission Test	X	-	-
2	Radiated Emission Test	X	-	-
*Note: No modifications were made to the EUT in order to achieve and maintain compliance to the standards described in this report.				

Conclusion:

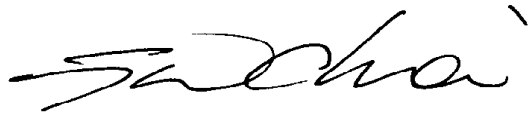
The tests listed in the Summary of Testing section of this report have been performed as a witness testing and the results recorded by UL Korea Ltd. in accordance with the procedures stated in each test requirement and specification. The test list was determined by the Applicant as being applicable to 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
☒ Met the technical requirements under the limited condition
☐ Not met the technical requirements



Witnessed By:
Sung Hoon Back, Senior Project Engineer
UL Verification Services – 3014ASEO
UL Korea Ltd.
March 18, 2013



Reviewed by
Jeawoon Choi, WiSE Engineering Leader
UL Verification Services – 3014ASEO
UL Korea Ltd.
March 18, 2013

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Client Name: ADVAN INT'L CORP.
FCC ID: QVXAMM261WTDS

Test Report Details

Test report No: 13CA07259-FCC
File No: MC16222
Witnessed By: UL Korea Ltd.
33rd FL. GFC Bldg. 737 Yeoksam-dong, Kangnam-ku, Seoul, 135-984, Korea
Test Site: Digital EMC Co., Ltd
683-3, Yuban-Dong, Cheoin-Gu, Yongin-Si, Kyunggi-Do, 449-080, Korea
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 U.S.A.
Manufacturer: ADVAN INT'L CORP
47817 Fremont Blvd., Fremont, CA 94538 U.S.A.
Factory: D&T Inc.
(JANG-DONG, (DAEDEOK VALLEY))
26-121 GAJEONGBUK-RO, YUSEONG-GU, DAEJEON 305-343, KOREA
Applicant Contact: Jun Ho Jang
Phone: 82-70-7842-8018
E-mail: andyjang@advancorp.com

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Model Number: 0240031020
Client Name: ADVAN INT'L CORP.
FCC ID: QVXAMM261WTDS

Product Type: 26" LED Display
Model Number: 0240031020
Multi-listing model number: 240-031-020 and 0240-031-020

The manufacturer has declared to all the multiple model names into the basic model without any further evaluation by UL.

FCC ID: QVXAMM261WTDS

Trademark:



Product standards: FCC Part 15 Subpart B and ICES-003 Issue 4, Class B digital Apparatus.

Test Procedure: ANSI C63.4 : 2009

Sample Serial Number: N/A

Sample Receive Date: March 1, 2013

Testing Start Date: March 1, 2013

Date Testing Complete: March 18, 2013

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 Report Revision History:

Revision Date	Description	Remarks
-	Original	-

1.2 Equipment Description:

Description:
26" LED Display

1.3 Details of Equipment Under Test (EUT):

Equipment Configuration:				
No.	Product Type	Manufacturer	Model	Comments
1	26" LED Display	ADVAN INT'L CORP	0240031020	-
2	AC/DC Adapter	Bridge power	BPM150S24F11	-
3	Hospital-grade AC power cord	Bridge power	-	-
4	Extension cable	Bridge power	1501047020	15-ft. (5 pin) DC extension cable
5	Extension cable	Bridge power	1501047022	75-ft. (5 pin) DC extension cable
6	Extension cable	Bridge power	1501047021	4pin to 5pin extension cable

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1.4 Technical Data:

Display	
LCD Display Panel	26" (661 mm) Diagonal (a-Si TFT active matrix LCD)
Synchronization	2.5 – 5.0 Vpp separated sync
Pixel Pitch	0.300 (H) x 0.300 (V) mm
Response Time	< 18 ms Typ
Viewing Angle	Right/Left/Up/Down 89 Degrees
Display Colors	1 billion colors (10 bit)
Native Resolution	1920 (H) dots × 1080 (V) lines
Input Signal	1 DVI, 1 VGA, 3G/HD/SD-SDI, C-Video, S-Video, Component (Y/G, Pb/B,Pr/R,H,VS)
Maximum Pixel Clock	165 MHz
Electrical	
Power Adapter	Input: 100 – 240 VAC; 50 – 60 Hz; 2.5 A Output: 24V; 6.25 A Model Number: BPM150S24F11
Power Consumption	35 - 65 Watts
Dimensions	
Dimensions (W × H× D)	Input: 100 – 240 VAC; 50 – 60 Hz; 2.5 A Output: 24V; 6.25 A Model Number: BPM150S24F11
Weight (approximate)	8.6 kg; 19 lbs.
VESA Mounting	VESA 100 × 100 mm
Interface	

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1.5 EUT Internal Operating Frequency

Frequency (MHz)	Description	Frequency (MHz)	Description
192.375 MHz	Memory Clock	27.000 MHz	System Clock
148.5 MHz	Display Clock	28.322 MHz	System Clock

1.6 Technical descriptions and documents:

No.	Document Title and Description
1	0240031020 User Manual
*Note: The manufacturer provided the following document.	

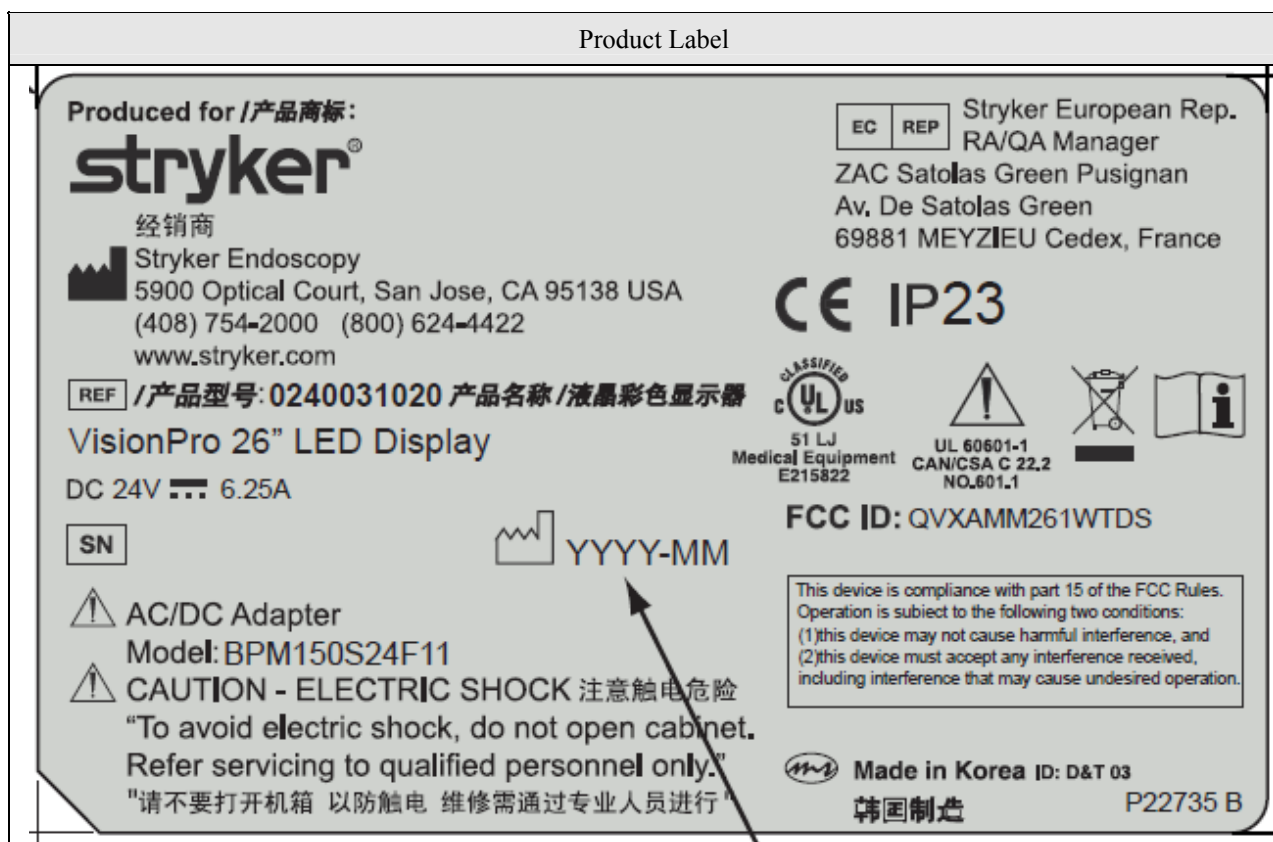
1.7 Detail information of Multi-listing model:

-	Model	Description	Comment
1	0240031020	Basic model	Basic model / Tested
2	240-031-020	Identical with basic model except model name.	Not tested
3	0240-031-020	Identical with basic model except model name.	Not tested
*Note: The manufacturer has declared to all the multiple model names into the basic model without any further evaluation by UL.			

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1.8 Equipment Marking Plate of Product:



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2. TEST CONDITION

2.1 Equipment Used During Test:

Use*	Product Type	Manufacturer	Model	Comments
EUT	26" LED Display	ADVAN Int'l Corp.	0240031020	-
EUT	AC/DC Adapter	Bridge power	BPM150S24F11	-
EUT	Extension cable	Bridge power	1501047020	15-ft. (5 pin) DC extension cable
EUT	Extension cable	Bridge power	1501047022	75-ft. (5 pin) DC extension cable
EUT	Extension cable	Bridge power	1501047021	4pin to 5pin extension cable
AE	External monitor	ADVAN Int'l Corp.	AMM240WTD	-
AE	AC/DC Adapter	Bridge power	JMW1150KA2400F04	Connected with external monitor
AE	PC	Dell Inc	Vostro 460	S/N : 6J7JXBX
AE	DVD Player	Sony EMCS sdn Bnd.	DVP-NS92V	S/N : 200407
AE	Keyboard	Dell Inc	KB113t	S/N : (N-01)30KG-71616-24B-0CJB-A00
AE	Mouse	Dell Inc	MS111-T	S/N : (N-0kw2YH-71616-23T-OX-4L
AE	Headset	Cosy	COV903	-
*Note: EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, SIM - Simulator (Not Subjected to Test)				

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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	I/O	1.8	Shielded	24 pin DVI-D
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	C-Video	I/O	1.6	Shielded	-
6	C-Video In, Out	I/O	1.8 m	Shielded	BNC
7	Component In, Out	I/O	1.8 m	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.					

2.3 Power Interface:

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Comments
Rated	100 – 240 VAC	-	-	50-60Hz	Rated of AC to DC Adapter
1	AC 120 V	-	-	60Hz	-

2.4 Test Operating Mode:

Mode #	Mode	Comments
1	DVI Mode	Worst case condition
2	VGA Mode	-
3	SDI In-out Mode	-
4	S-Video Mode	Worst case condition
5	C-Video Mode	-
6	R/G/B/H/V Mode	-
7	Y/Pb/Pr	-
* 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 has been performed under continuous displaying “H” Patten for configuration Modes of 1 and 2. 3. EUT has been performed under continuous displaying “Color Bar” Patten for configuration Modes of 3 and 7.		

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2.5 Modes of Video Resolution:

Mode #		Resolution & Video Bandwidth	Comments
1	DVI Mode	640 x 480 @60Hz	-
2		1024 x 768 @ 60Hz	-
3		1920 x 1080 @60Hz	Worst case condition (Range of Brightness: 100, Range of contrast: 100 And range of backlight: 100.
4	VGA Mode	640 x 480 @60Hz	-
5		1024 x 768 @ 60Hz	-
6		1920 x 1080p @60Hz	-
7	S-Video	480i @3.58MHz	Worst case condition (Range of Brightness: 100, Range of contrast: 100 And range of backlight: 100.
8	C-Video	480i 60Hz	-
9	R/G/B/H/V	480i 60Hz	-
10		720p 60Hz	-
11		1080p 60Hz	-
12	Y/Pb/Pr	480i 60Hz	-
13		720p 60Hz	-
14		1080p 60Hz	-
* Note: Video resolution where it refers from above is representative worst case.			

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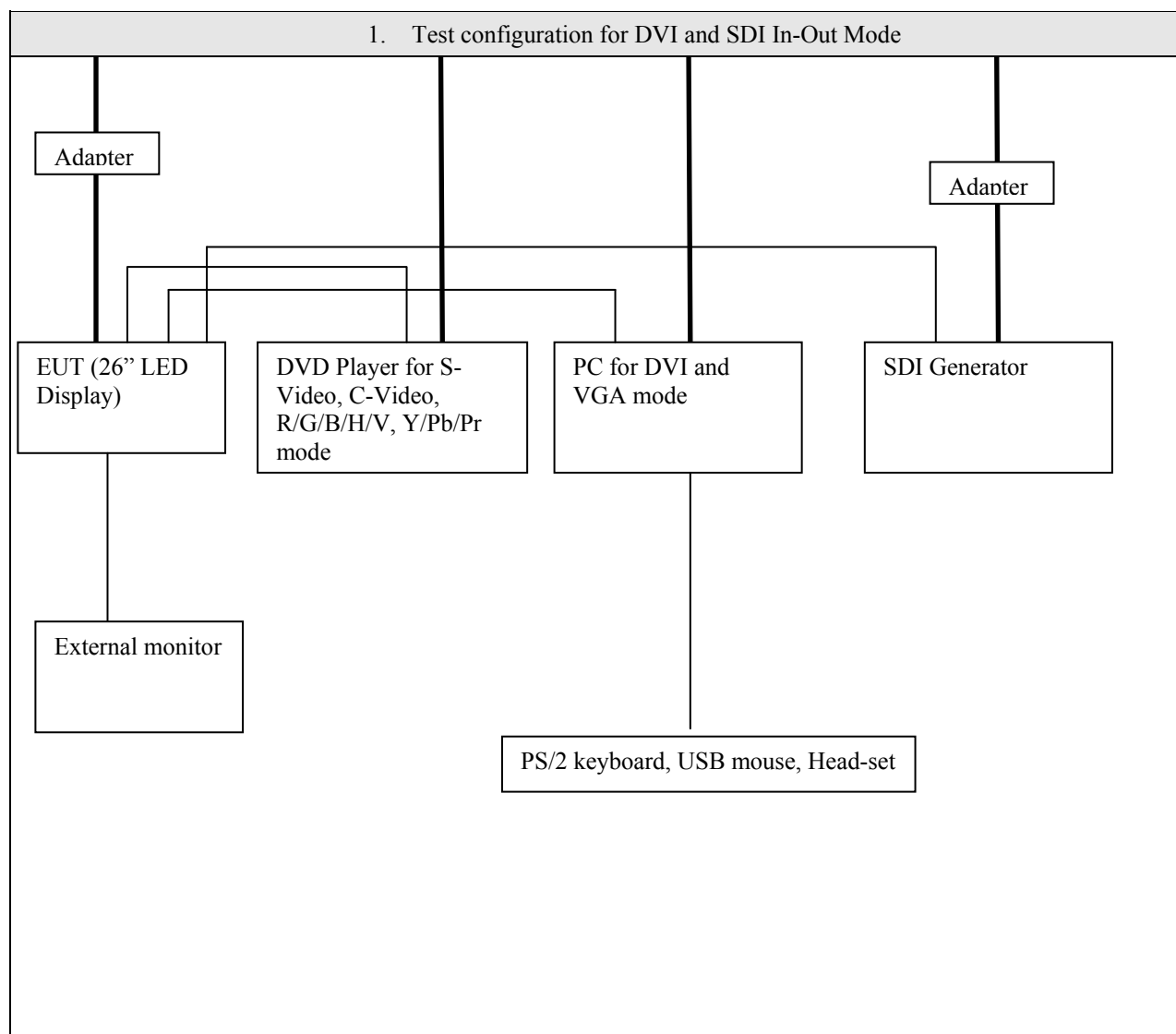
2.6 Used D.C. Extension Cable for Test:

No.	Cable Length	Preliminary Test	Comment
1	15ft	DVI, S-Video and SDI In-out Mode	-
2	75ft		Selected for 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 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 (a) Class B and ICES-003 Issue 4, Class B digital Apparatus.	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 (a) Class B and ICES-003 Issue 4, Class B digital Apparatus at the Digital EMC Laboratory and the test results has been shown to be complied with the EMC requirements specified in the standard above.				

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3. TEST CONDITION AND RESULTS

3.1 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.				
Basic Standard		47 CFR Part 15.107(a) / 47 CFR Part 15.109(a) Class B and ICES-003 Issue 4, Class B digital Apparatus.			
Parameters recorded during the test		Laboratory Ambient Temperature		23 °C	
		Relative Humidity		31 %	
-		Frequency range on each side of line		Measurement Point	
Fully configured sample scanned over the following frequency range		150 kHz to 30 MHz		AC Input port of EUT	
Instrument settings		RBW		9KHz	
		VBW		10 kHz	
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 and 4		1	
Conducted Emissions Test Equipment used:					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	Rohde & Schwarz	ESCI	100364	2013.03.06	2014.03.06
LISN	Rohde & Schwarz	ESH2-Z5	828739/006	2012.09.18	2013.09.18
LISN	TTI	LISN1600	197204	2012.07.02	2013.07.02
50 ohm Terminator	TME	CT-01	N/A	2013.01.08	2014.01.08

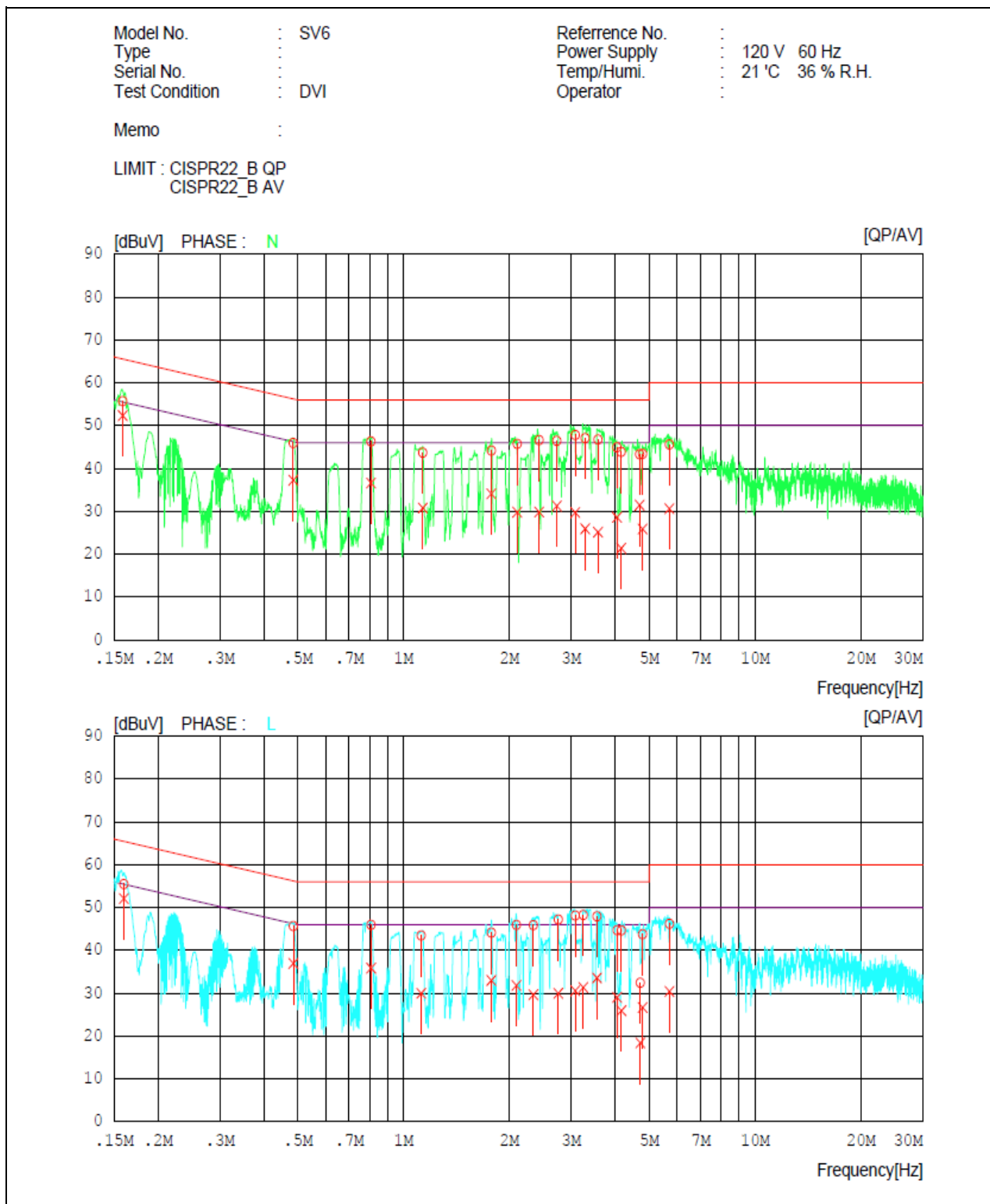
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Figure 1. Graphical representation of conducted emissions : DVI Mode



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Table 1. Conducted emissions Test data : DVI Mode

Model No.	: SV6	Reference No.	:								
Type	:	Power Supply	: 120 V 60 Hz								
Serial No.	:	Temp/Humi.	: 21 'C 36 % R.H.								
Test Condition	: DVI	Operator	:								
Memo	:										
LIMIT : CISPR22_B QP											
CISPR22_B AV											
NO	FREQ	READING	C.FACTOR	RESULT	LIMIT	MARGIN	PHASE				
		QP	AV	QP	AV	QP	AV				
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]				
1	0.15894	54.0	50.6	1.7	55.7	52.3	65.5	55.5	9.8	3.2	N
2	0.48551	45.2	36.6	0.7	45.9	37.3	56.2	46.2	10.3	8.9	N
3	0.80821	45.8	36.1	0.5	46.3	36.6	56.0	46.0	9.7	9.4	N
4	1.13400	43.3	30.4	0.4	43.7	30.8	56.0	46.0	12.3	15.2	N
5	1.77750	43.9	33.8	0.3	44.2	34.1	56.0	46.0	11.8	11.9	N
6	2.10650	45.4	29.5	0.3	45.7	29.8	56.0	46.0	10.3	16.2	N
7	2.43050	46.4	29.6	0.2	46.6	29.8	56.0	46.0	9.4	16.2	N
8	2.72950	46.2	31.1	0.2	46.4	31.3	56.0	46.0	9.6	14.7	N
9	3.08150	47.6	29.5	0.2	47.8	29.7	56.0	46.0	8.2	16.3	N
10	3.28650	46.9	25.7	0.2	47.1	25.9	56.0	46.0	8.9	20.1	N
11	3.57550	46.5	24.9	0.2	46.7	25.1	56.0	46.0	9.3	20.9	N
12	4.04850	44.7	28.4	0.2	44.9	28.6	56.0	46.0	11.1	17.4	N
13	4.16300	43.6	21.2	0.2	43.8	21.4	56.0	46.0	12.2	24.6	N
14	4.69350	43.1	31.2	0.2	43.3	31.4	56.0	46.0	12.7	14.6	N
15	4.78700	43.2	25.7	0.2	43.4	25.9	56.0	46.0	12.6	20.1	N
16	5.70700	45.3	30.3	0.3	45.6	30.6	60.0	50.0	14.4	19.4	N
17	0.16004	53.8	50.4	1.7	55.5	52.1	65.5	55.5	10.0	3.4	L
18	0.48594	45.0	36.3	0.7	45.7	37.0	56.2	46.2	10.5	9.2	L
19	0.80839	45.5	35.4	0.5	46.0	35.9	56.0	46.0	10.0	10.1	L
20	1.12300	43.1	29.6	0.4	43.5	30.0	56.0	46.0	12.5	16.0	L
21	1.77750	43.9	32.7	0.3	44.2	33.0	56.0	46.0	11.8	13.0	L
22	2.09450	45.6	31.6	0.3	45.9	31.9	56.0	46.0	10.1	14.1	L
23	2.34200	45.7	29.5	0.2	45.9	29.7	56.0	46.0	10.1	16.3	L
24	2.75700	47.0	29.8	0.2	47.2	30.0	56.0	46.0	8.8	16.0	L
25	3.08050	48.0	30.4	0.2	48.2	30.6	56.0	46.0	7.8	15.4	L
26	3.24700	48.1	31.2	0.2	48.3	31.4	56.0	46.0	7.7	14.6	L
27	3.55100	47.7	33.4	0.2	47.9	33.6	56.0	46.0	8.1	12.4	L
28	4.05350	44.5	28.9	0.2	44.7	29.1	56.0	46.0	11.3	16.9	L
29	4.16900	44.5	25.7	0.2	44.7	25.9	56.0	46.0	11.3	20.1	L
30	4.71800	32.2	18.2	0.2	32.4	18.4	56.0	46.0	23.6	27.6	L
31	4.78650	43.6	26.5	0.2	43.8	26.7	56.0	46.0	12.2	19.3	L
32	5.71000	45.9	30.1	0.3	46.2	30.4	60.0	50.0	13.8	19.6	L

*** 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.

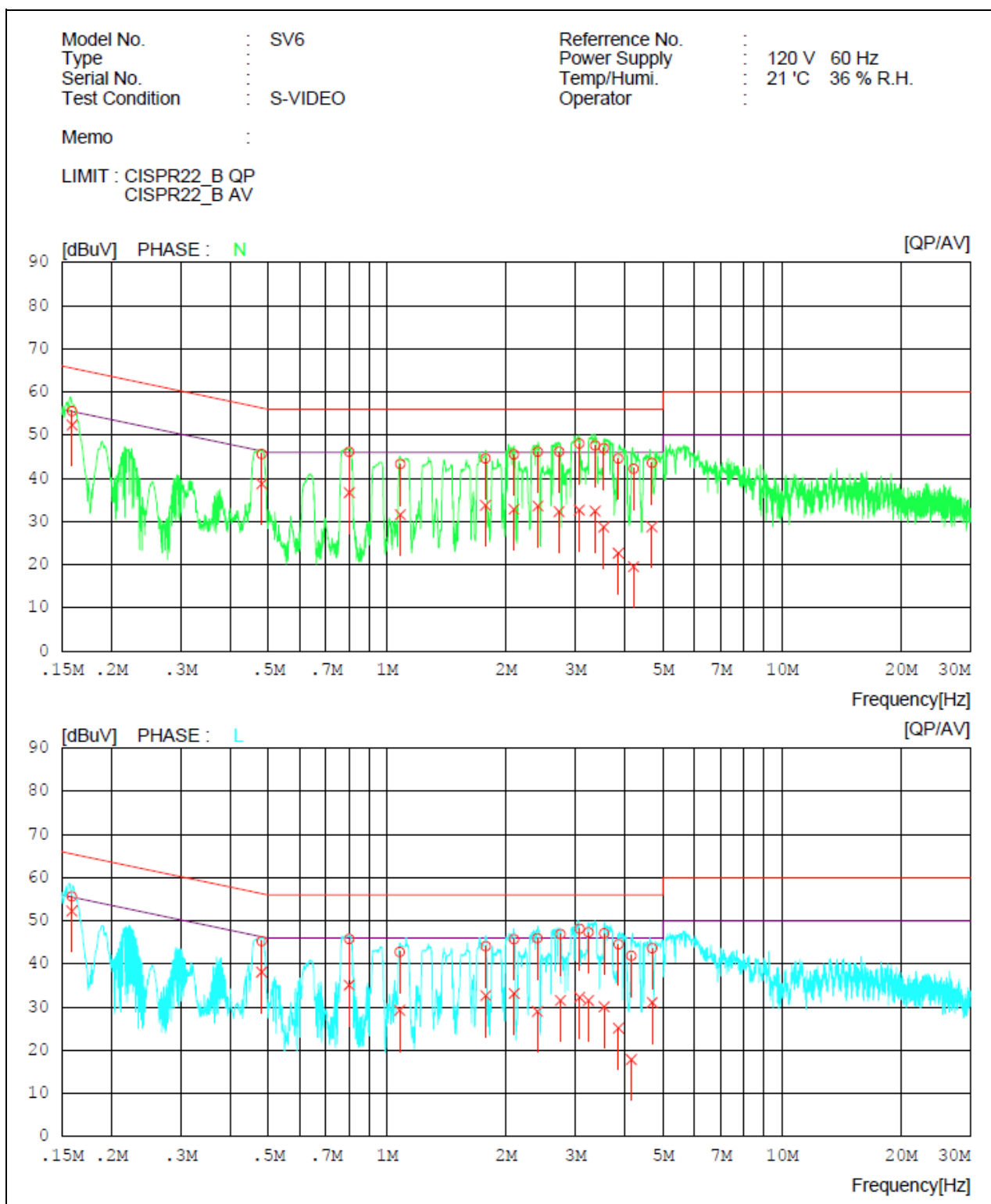
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Figure 2. Graphical representation of conducted emissions : SDI In-Out Mode



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Table 2. Conducted emissions Test data : S-Video Mode

Model No.

SV6

Type

Serial No.

Test Condition

S-VIDEO

Reference No.

Power Supply

120 V 60 Hz

Temp/Humi.

21 'C 36 % R.H.

Operator

Memo

LIMIT : CISPR22_B QP

CISPR22_B AV

NO	FREQ	READING		C.FACTOR	RESULT		LIMIT		MARGIN		PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15934	53.9	50.6	1.7	55.6	52.3	65.5	55.5	9.9	3.2	N
2	0.48164	44.9	38.0	0.7	45.6	38.7	56.3	46.3	10.7	7.6	N
3	0.80220	45.6	36.2	0.5	46.1	36.7	56.0	46.0	9.9	9.3	N
4	1.08000	42.9	31.2	0.4	43.3	31.6	56.0	46.0	12.7	14.4	N
5	1.77600	44.3	33.4	0.3	44.6	33.7	56.0	46.0	11.4	12.3	N
6	2.09550	45.2	32.5	0.3	45.5	32.8	56.0	46.0	10.5	13.2	N
7	2.40950	45.9	33.4	0.2	46.1	33.6	56.0	46.0	9.9	12.4	N
8	2.72650	46.0	32.1	0.2	46.2	32.3	56.0	46.0	9.8	13.7	N
9	3.06850	47.8	32.4	0.2	48.0	32.6	56.0	46.0	8.0	13.4	N
10	3.36400	47.4	32.2	0.2	47.6	32.4	56.0	46.0	8.4	13.6	N
11	3.53900	46.8	28.5	0.2	47.0	28.7	56.0	46.0	9.0	17.3	N
12	3.85150	44.4	22.5	0.2	44.6	22.7	56.0	46.0	11.4	23.3	N
13	4.21150	42.0	19.3	0.2	42.2	19.5	56.0	46.0	13.8	26.5	N
14	4.68750	43.3	28.5	0.2	43.5	28.7	56.0	46.0	12.5	17.3	N
15	0.15910	54.0	50.6	1.7	55.7	52.3	65.5	55.5	9.8	3.2	L
16	0.48111	44.6	37.4	0.7	45.3	38.1	56.3	46.3	11.0	8.2	L
17	0.80198	45.3	34.6	0.5	45.8	35.1	56.0	46.0	10.2	10.9	L
18	1.07650	42.4	28.9	0.4	42.8	29.3	56.0	46.0	13.2	16.7	L
19	1.77850	43.8	32.4	0.3	44.1	32.7	56.0	46.0	11.9	13.3	L
20	2.09750	45.4	32.9	0.3	45.7	33.2	56.0	46.0	10.3	12.8	L
21	2.40350	45.8	28.8	0.2	46.0	29.0	56.0	46.0	10.0	17.0	L
22	2.74750	46.7	31.4	0.2	46.9	31.6	56.0	46.0	9.1	14.4	L
23	3.07350	47.9	32.1	0.2	48.1	32.3	56.0	46.0	7.9	13.7	L
24	3.23750	47.2	31.3	0.2	47.4	31.5	56.0	46.0	8.6	14.5	L
25	3.54750	46.9	29.9	0.2	47.1	30.1	56.0	46.0	8.9	15.9	L
26	3.85500	44.4	25.0	0.2	44.6	25.2	56.0	46.0	11.4	20.8	L
27	4.15550	41.7	17.7	0.2	41.9	17.9	56.0	46.0	14.1	28.1	L
28	4.69200	43.5	30.9	0.2	43.7	31.1	56.0	46.0	12.3	14.9	L

* 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.

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3.2 RADIATED DISTURBANCE

TEST: Limits for radiated disturbance		
Method	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 3m 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. The measurements (above 1 GHz) were made 3 m distance test site. The EUT was placed on a non-conductive turntable approximately 0.8 m above the ground plane. The turntable with EUT was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna. The measurements were conducted with Average and Peak value.	
Basic Standards	47 CFR Part 15.107(a) / 47 CFR Part 15.109(a) Class B and ICES-003 Issue 4, Class B digital Apparatus.	
Parameters recorded during the test	Laboratory Ambient Temperature	21 °C
	Relative Humidity	32 %
-	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 ~ 6.0 GHz	3 meter measurement distance
Instrument settings	RBW: 120KHz, VBW: 300KHz	For 30MHz to 1000Hz
	RBW: 1 MHz, VBW: 3MHz	Above 1GHz
Limits – Class B		
Frequency (MHz)	Limit (dBµV/m)	
	Quasi-Peak	Results
30 to 230	30.00	Pass
230 to 1000	37.00	Pass
-	Average	Peak
Above 1000	54	74
		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 and 4	1

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Radiated Emissions Test Equipment:					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	Rohde & Schwarz	ESU	100014	2013.01.08	2014.01.08
BILOG ANTENNA	SCHAFFNER	CBL6112B	2737	2012.11.06	2014.11.06
Horn Antenna	SCHWARZBECK	BBHA9120A	322	2012.05.15	2014.05.15
Amplifier	H/P	8447E	2945A02865	2013.01.08	2014.01.08
Amplifier	TSJ	MLA-100M18-B01-25	1719458	2012.06.04	2013.06.04

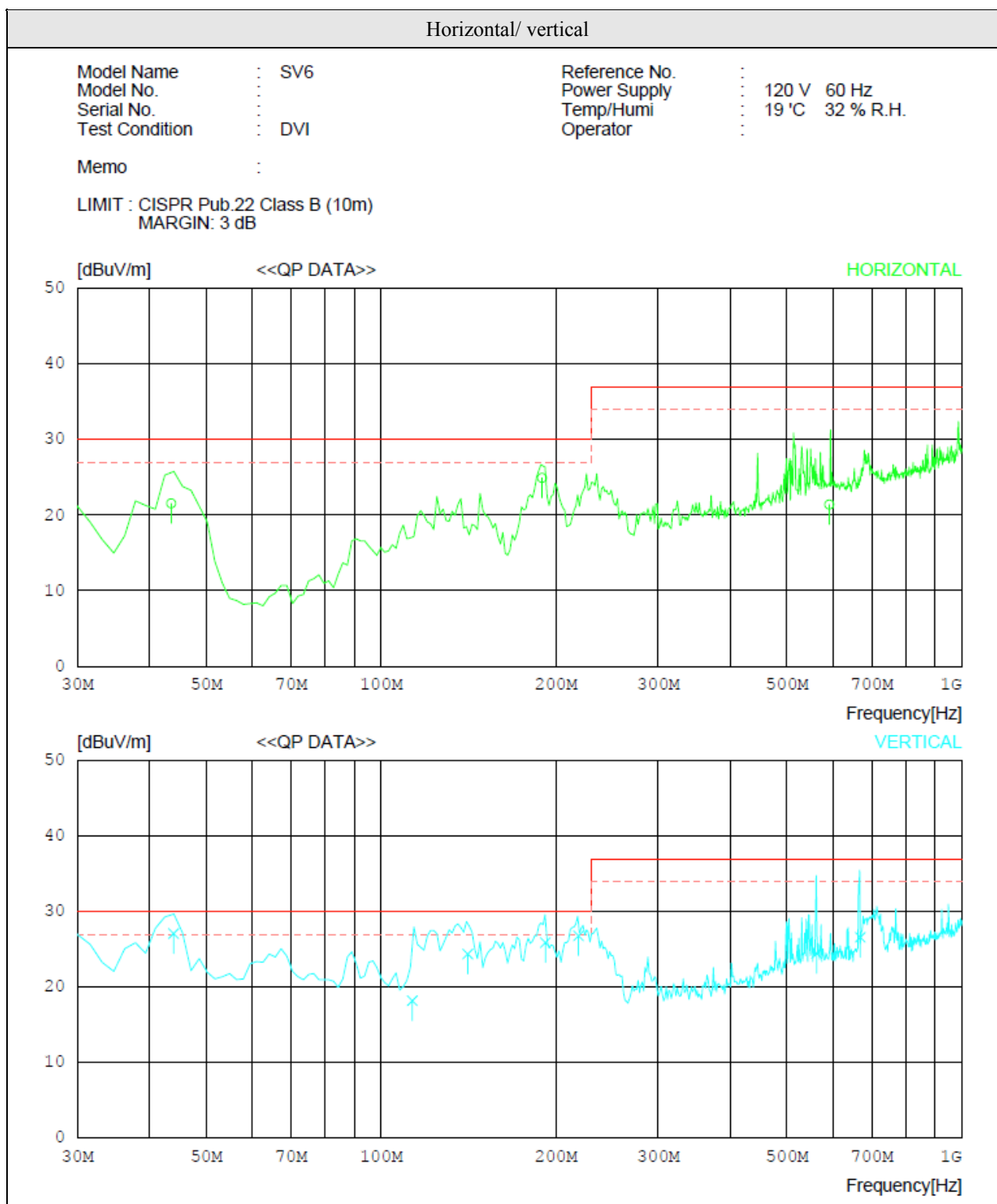
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Figure 3. Graphical representation of Radiated emission : DVI Mode (30 MHz ~ 1 GHz)



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Table 3. Radiated emission Test data : DVI Mode

Model Name	:	SV6	Reference No.	:						
Model No.	:		Power Supply	:	120 V 60 Hz					
Serial No.	:		Temp/Humi	:	19 'C 32 % R.H.					
Test Condition	:	DVI	Operator	:						
Memo	:									
LIMIT : CISPR Pub.22 Class B (10m)										
MARGIN: 3 dB										
No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP	FACTOR							
		[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	43.520	30.9	13.6	1.3	24.2	21.6	30.0	8.4	393	332
2	189.411	36.7	9.7	2.6	24.0	25.0	30.0	5.0	354	148
3	591.669	21.7	18.6	4.5	23.4	21.4	37.0	15.6	299	160
----- Vertical -----										
4	43.945	36.3	13.7	1.3	24.2	27.1	30.0	2.9	384	28
5	113.247	29.1	11.3	1.9	24.1	18.2	30.0	11.8	262	233
6	141.085	35.7	10.9	2.0	24.2	24.4	30.0	5.6	140	302
7	191.843	37.6	9.7	2.6	24.0	25.9	30.0	4.1	116	316
8	218.859	37.2	10.8	2.7	23.9	26.8	30.0	3.2	106	248
9	562.399	25.2	18.2	4.4	23.3	24.5	37.0	12.5	239	79
10	669.016	26.8	18.6	4.9	23.7	26.6	37.0	10.4	190	330
* 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.										

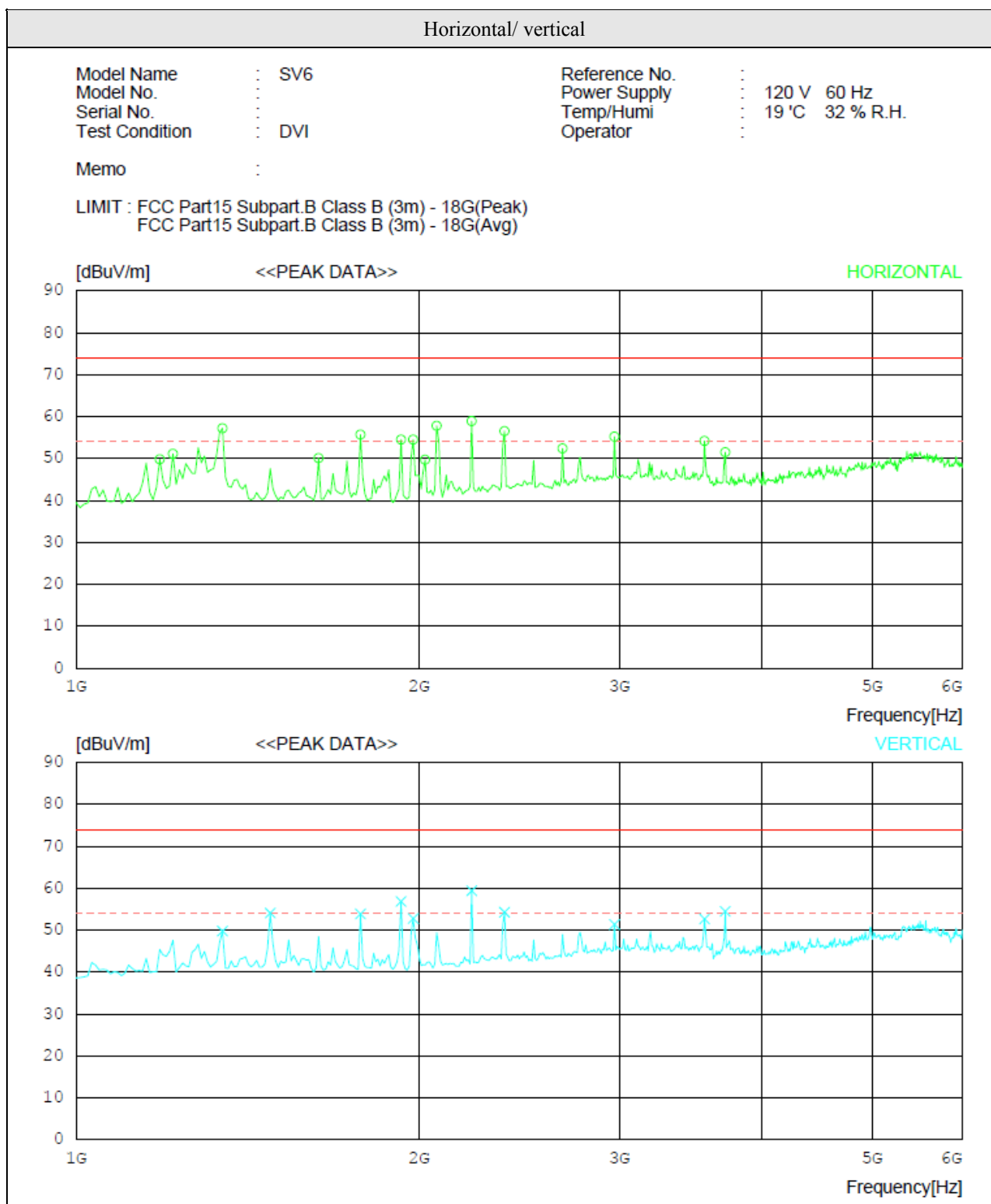
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Figure 4. Graphical representation of Radiated emission : DVI Mode_ Peak



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Table 4. Radiated emission Test data : DVI Mode_ Peak

Model Name	: SV6	Reference No.	:							
Model No.	:	Power Supply	:	120 V 60 Hz						
Serial No.	:	Temp/Humi	:	19 °C 32 % R.H.						
Test Condition	: DVI	Operator	:							
Memo	:									
LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)										
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)										
No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	PEAK [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1184.295	60.5	24.2	3.6	38.5	49.8	74.0	24.2	100	358
2	1216.346	61.6	24.2	3.7	38.4	51.1	74.0	22.9	100	358
3	1344.551	67.2	24.4	3.8	38.2	57.2	74.0	16.8	100	358
4	1633.013	59.1	24.6	4.2	37.8	50.1	74.0	23.9	100	227
5	1777.243	64.4	24.6	4.4	37.7	55.7	74.0	18.3	100	140
6	1929.487	62.9	24.6	4.6	37.6	54.5	74.0	19.5	100	358
7	1977.564	62.8	24.6	4.7	37.6	54.5	74.0	19.5	100	358
8	2025.641	57.9	24.7	4.7	37.6	49.7	74.0	24.3	100	358
9	2073.718	65.6	25.0	4.8	37.6	57.8	74.0	16.2	100	358
10	2225.964	65.5	25.9	5.0	37.5	58.9	74.0	15.1	100	358
11	2378.210	62.1	26.7	5.1	37.4	56.5	74.0	17.5	100	140
12	2674.688	56.3	28.0	5.4	37.3	52.4	74.0	21.6	100	158
13	2971.167	58.0	28.9	5.6	37.3	55.2	74.0	18.8	100	358
14	3564.125	55.9	29.0	6.3	37.0	54.2	74.0	19.8	100	358
15	3716.371	52.5	29.4	6.4	36.8	51.5	74.0	22.5	100	143
----- Vertical -----										
16	1344.551	59.8	24.4	3.8	38.2	49.8	74.0	24.2	100	181
17	1480.769	63.4	24.6	4.0	37.9	54.1	74.0	19.9	100	1
18	1777.243	62.6	24.6	4.4	37.7	53.9	74.0	20.1	100	1
19	1929.487	65.3	24.6	4.6	37.6	56.9	74.0	17.1	100	163
20	1977.564	61.1	24.6	4.7	37.6	52.8	74.0	21.2	100	309
21	2225.964	66.0	25.9	5.0	37.5	59.4	74.0	14.6	100	140
22	2378.210	59.9	26.7	5.1	37.4	54.3	74.0	19.7	100	1
23	2971.167	54.2	28.9	5.6	37.3	51.4	74.0	22.6	100	194
24	3564.125	54.4	29.0	6.3	37.0	52.7	74.0	21.3	100	1
25	3716.371	55.5	29.4	6.4	36.8	54.5	74.0	19.5	100	1

*** 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.

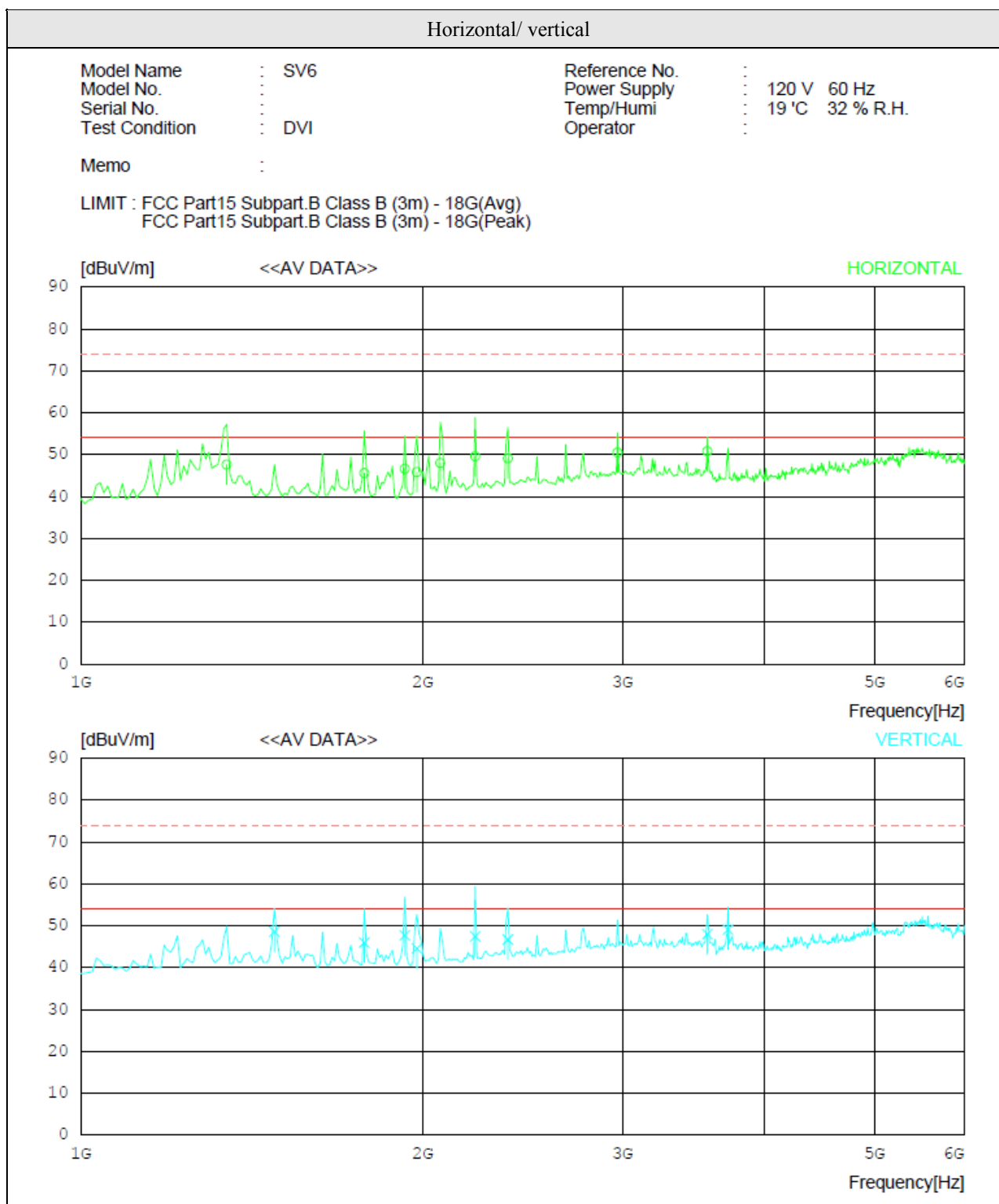
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Figure 5. Graphical representation of Radiated emission : DVI Mode_ Average



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Table 5. Radiated emission Test data : DVI Mode_ Average

Model Name	:	SV6	Reference No.	:						
Model No.	:		Power Supply	:	120 V 60 Hz					
Serial No.	:		Temp/Humi	:	19 'C 32 % R.H.					
Test Condition	:	DVI	Operator	:						
Memo	:									
LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)										
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)										
No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	AV	FACTOR							
		[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1344.551	57.6	24.4	3.8	38.2	47.6	54.0	6.4	100	358
2	1777.243	54.3	24.6	4.4	37.7	45.6	54.0	8.4	100	140
3	1929.487	55.0	24.6	4.6	37.6	46.6	54.0	7.4	100	358
4	1977.564	54.1	24.6	4.7	37.6	45.8	54.0	8.2	100	358
5	2073.718	55.8	25.0	4.8	37.6	48.0	54.0	6.0	100	358
6	2225.964	56.2	25.9	5.0	37.5	49.6	54.0	4.4	100	358
7	2378.210	54.7	26.7	5.1	37.4	49.1	54.0	4.9	100	140
8	2971.167	53.3	28.9	5.6	37.3	50.5	54.0	3.5	100	358
9	3564.125	52.5	29.0	6.3	37.0	50.8	54.0	3.2	100	358
----- Vertical -----										
10	1480.769	57.9	24.6	4.0	37.9	48.6	54.0	5.4	100	1
11	1777.243	54.7	24.6	4.4	37.7	46.0	54.0	8.0	100	1
12	1929.487	56.1	24.6	4.6	37.6	47.7	54.0	6.3	100	163
13	1977.564	52.9	24.6	4.7	37.6	44.6	54.0	9.4	100	309
14	2225.964	54.1	25.9	5.0	37.5	47.5	54.0	6.5	100	140
15	2378.210	52.3	26.7	5.1	37.4	46.7	54.0	7.3	100	1
16	3564.125	49.7	29.0	6.3	37.0	48.0	54.0	6.0	100	1
17	3716.371	50.1	29.4	6.4	36.8	49.1	54.0	4.9	100	1
* 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.										

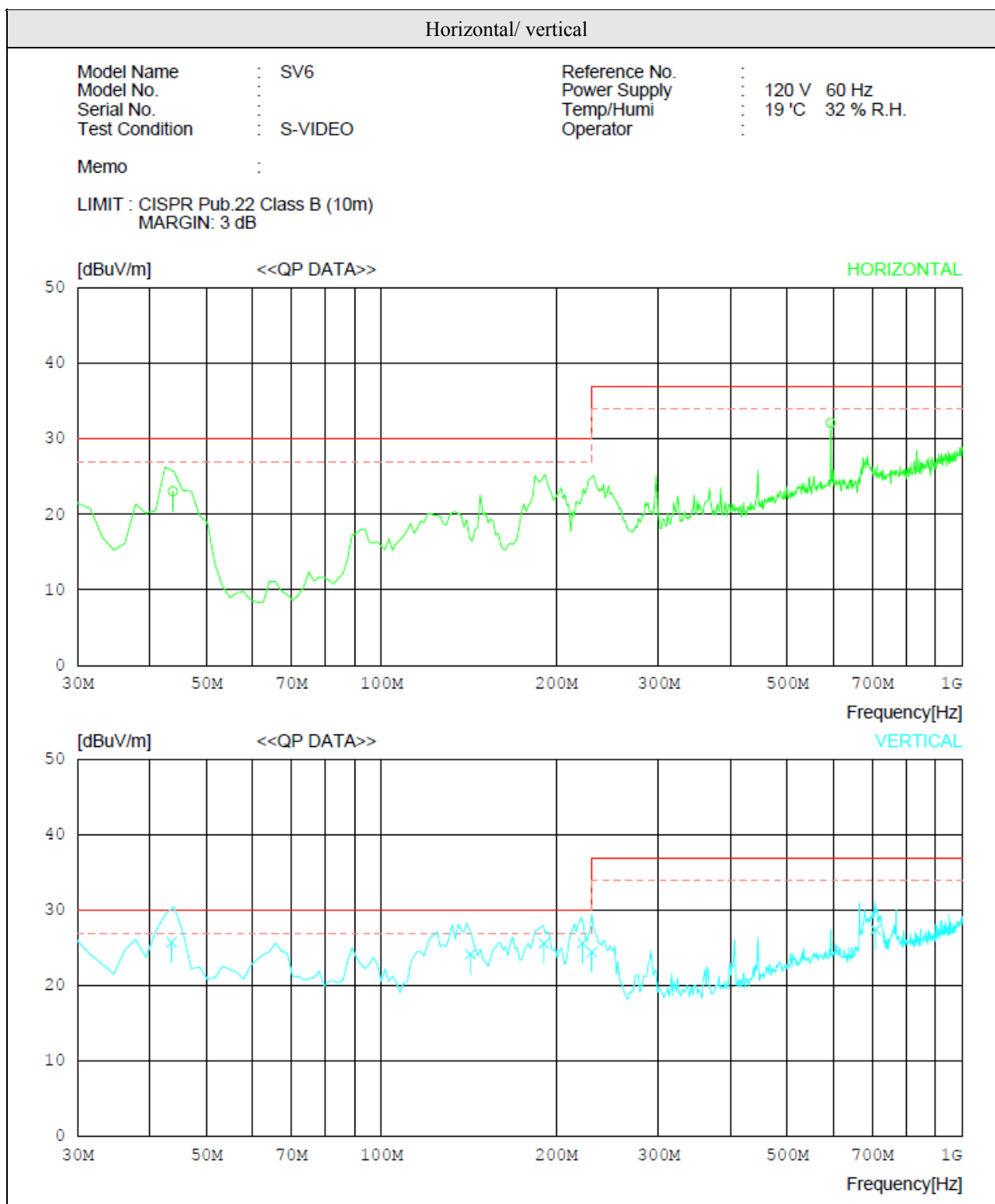
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Figure 6. Graphical representation of Radiated emission : SDI In-Out Mode



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Table 6. Radiated emission Test data : SDI In-Out Mode

Model Name

: SV6

Model No.

:

Serial No.

:

Test Condition

: S-VIDEO

Reference No.

:

Power Supply

: 120 V 60 Hz

Temp/Humi

: 19 'C 32 % R.H.

Operator

:

Memo

:

LIMIT : CISPR Pub.22 Class B (10m)

MARGIN: 3 dB

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP	FACTOR							
		[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	43.792	32.4	13.6	1.3	24.2	23.1	30.0	6.9	382	0
2	594.065	32.4	18.6	4.5	23.4	32.1	37.0	4.9	133	221
----- Vertical -----										
3	43.540	35.1	13.6	1.3	24.2	25.8	30.0	4.2	391	142
4	142.395	35.6	10.8	2.0	24.2	24.2	30.0	5.8	100	273
5	190.466	37.3	9.7	2.6	24.0	25.6	30.0	4.4	137	326
6	222.133	35.9	11.0	2.7	23.9	25.7	30.0	4.3	104	235
7	230.309	34.0	11.5	2.8	23.8	24.5	37.0	12.5	120	240
8	709.493	27.4	18.7	5.2	23.8	27.5	37.0	9.5	224	0

* 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.

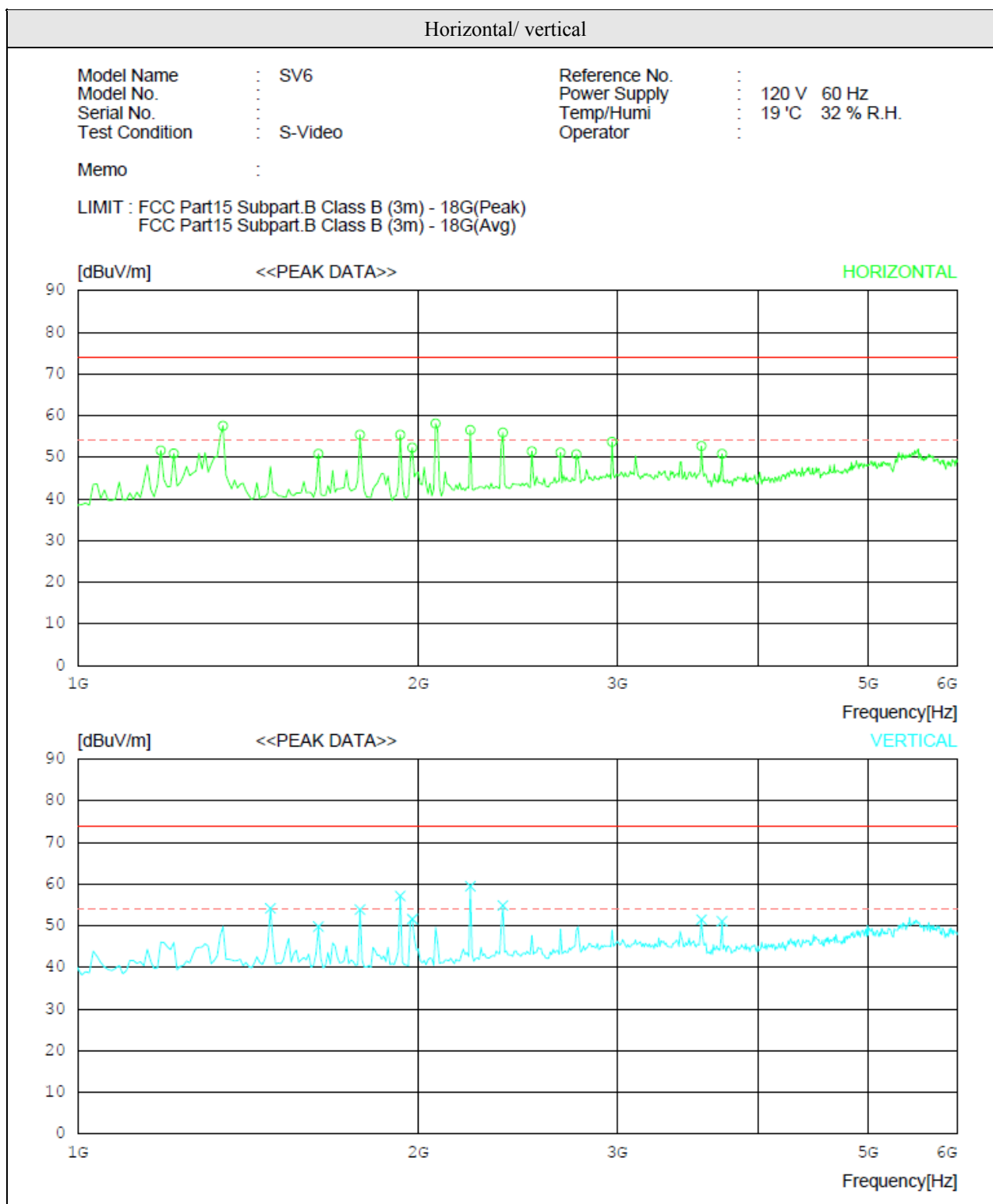
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Figure 7. Graphical representation of Radiated emission : SDI In-out Mode_Peak



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Table 7. Radiated emission Test data : SDI In-out Mode_ Peak

Model Name	: SV6	Reference No.	:							
Model No.	:	Power Supply	: 120 V 60 Hz							
Serial No.	:	Temp/Humi	: 19 'C 32 % R.H.							
Test Condition	: S-Video	Operator	:							
Memo	:									
LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)										
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)										
No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	PEAK [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1184.295	62.3	24.2	3.6	38.5	51.6	74.0	22.4	100	358
2	1216.346	61.4	24.2	3.7	38.4	50.9	74.0	23.1	100	189
3	1344.551	67.5	24.4	3.8	38.2	57.5	74.0	16.5	100	181
4	1633.013	59.8	24.6	4.2	37.8	50.8	74.0	23.2	100	358
5	1777.243	64.1	24.6	4.4	37.7	55.4	74.0	18.6	100	142
6	1929.487	63.8	24.6	4.6	37.6	55.4	74.0	18.6	100	358
7	1977.564	60.6	24.6	4.7	37.6	52.3	74.0	21.7	100	358
8	2073.718	65.9	25.0	4.8	37.6	58.1	74.0	15.9	100	358
9	2225.964	63.1	25.9	5.0	37.5	56.5	74.0	17.5	100	358
10	2378.210	61.5	26.7	5.1	37.4	55.9	74.0	18.1	100	358
11	2522.443	55.9	27.5	5.3	37.3	51.4	74.0	22.6	100	358
12	2674.688	55.0	28.0	5.4	37.3	51.1	74.0	22.9	100	160
13	2762.831	54.2	28.3	5.5	37.3	50.7	74.0	23.3	100	62
14	2971.167	56.5	28.9	5.6	37.3	53.7	74.0	20.3	100	151
15	3564.125	54.4	29.0	6.3	37.0	52.7	74.0	21.3	100	358
16	3716.371	51.8	29.4	6.4	36.8	50.8	74.0	23.2	100	358
----- Vertical -----										
17	1480.769	63.5	24.6	4.0	37.9	54.2	74.0	19.8	100	1
18	1633.013	58.8	24.6	4.2	37.8	49.8	74.0	24.2	100	157
19	1777.243	62.6	24.6	4.4	37.7	53.9	74.0	20.1	100	164
20	1929.487	65.6	24.6	4.6	37.6	57.2	74.0	16.8	100	1
21	1977.564	59.9	24.6	4.7	37.6	51.6	74.0	22.4	100	1
22	2225.964	66.1	25.9	5.0	37.5	59.5	74.0	14.5	100	1
23	2378.210	60.5	26.7	5.1	37.4	54.9	74.0	19.1	100	1
24	3564.125	53.2	29.0	6.3	37.0	51.5	74.0	22.5	100	359
25	3716.371	52.1	29.4	6.4	36.8	51.1	74.0	22.9	100	63

*** 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.

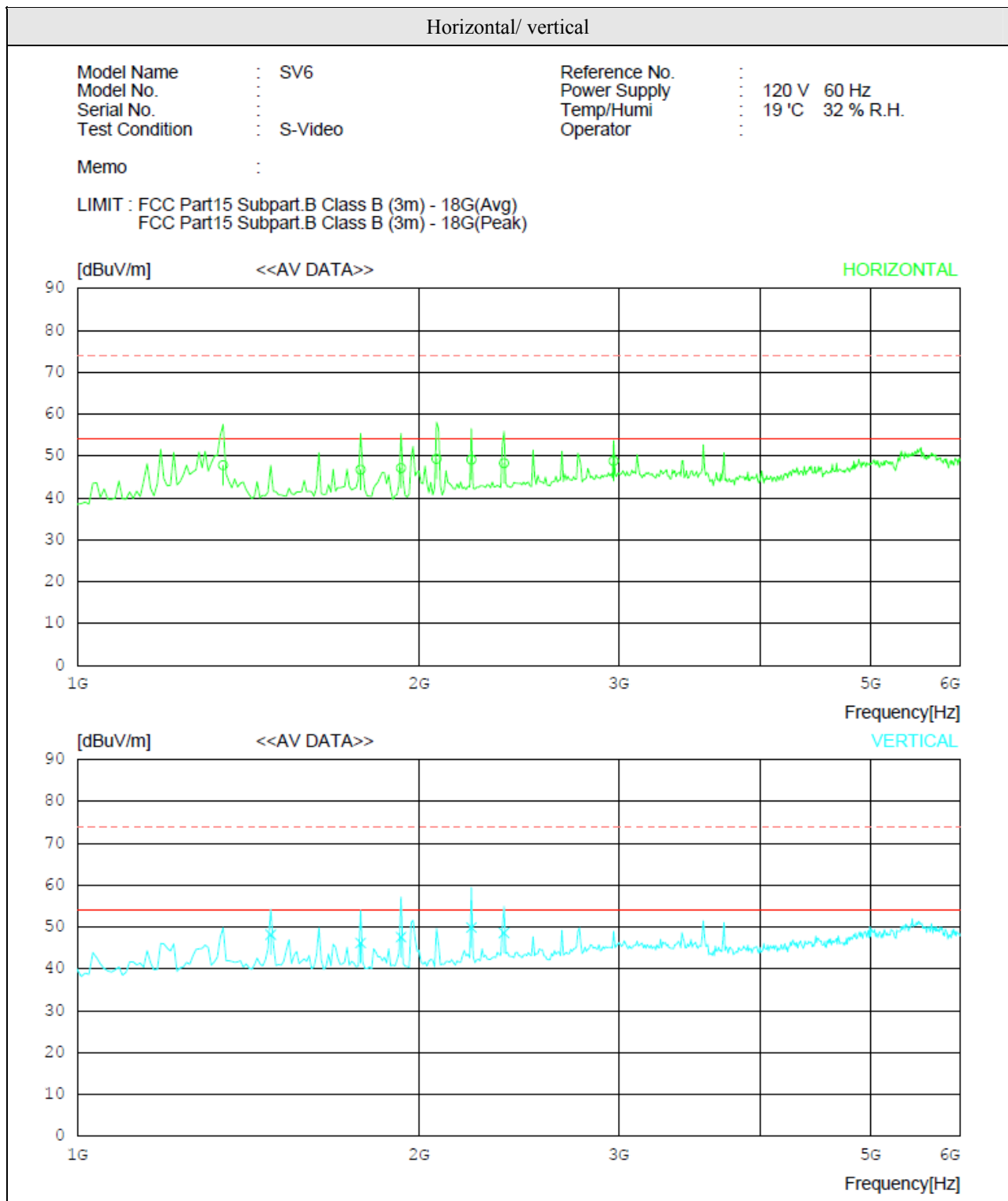
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Figure 8. Graphical representation of Radiated emission : SDI In-out Mode_ Average



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Table 8. Radiated emission Test data : SDI In-out Mode_ Average

Model Name	:	SV6	Reference No.	:						
Model No.	:		Power Supply	:	120 V 60 Hz					
Serial No.	:		Temp/Humi	:	19 'C 32 % R.H.					
Test Condition	:	S-Video	Operator	:						
Memo	:									
LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)										
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)										
No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	AV	FACTOR							
		[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1344.551	57.8	24.4	3.8	38.2	47.8	54.0	6.2	100	181
2	1777.243	55.4	24.6	4.4	37.7	46.7	54.0	7.3	100	142
3	1929.487	55.5	24.6	4.6	37.6	47.1	54.0	6.9	100	358
4	2073.718	57.1	25.0	4.8	37.6	49.3	54.0	4.7	100	358
5	2225.964	55.7	25.9	5.0	37.5	49.1	54.0	4.9	100	358
6	2378.210	53.9	26.7	5.1	37.4	48.3	54.0	5.7	100	358
7	2971.167	51.6	28.9	5.6	37.3	48.8	54.0	5.2	100	151
----- Vertical -----										
8	1480.769	57.5	24.6	4.0	37.9	48.2	54.0	5.8	100	1
9	1777.243	54.9	24.6	4.4	37.7	46.2	54.0	7.8	100	164
10	1929.487	56.0	24.6	4.6	37.6	47.6	54.0	6.4	100	1
11	2225.964	56.5	25.9	5.0	37.5	49.9	54.0	4.1	100	1
12	2378.210	54.2	26.7	5.1	37.4	48.6	54.0	5.4	100	1
* 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.										

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 Model Number: 0240031020
 Client Name: ADVAN INT'L CORP.
 FCC ID: QVXAMM261WTDS

4. TESTING LABORATORY INFORMATION

DIGITAL EMC CO., LTD.

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Digital EMC Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
Site Filing	USA	FCC	101842 678747	Test Facility list & NSA Data
	Japan	VCCI	C-1427 R-1364, R-3385 T-1442, G-338	Test Facility list & NSA Data
Certification	Korea	KC	KR0034	Test Facility list & NSA Data
	Germany	TUV	ROK1124C	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competent of calibration and testing laboratory”.