

APPLICATION FOR CERTIFICATION

On Behalf of

Evervictory Electronic Company Limited

All-In-One DVD Overhead System

Model Number: TR-1073; ZE1050D; ZE1050D-E1; ZE1051D;  
ZE1051D-E1; ZE1052D; ZE1052D-E1; ZE1055D;  
ZE1055D-E1; ZE1056D; ZE1056D-E1; ZE1057D;  
ZE1057D-E1

Prepared for : Evervictory Electronic Company Limited  
Chu Chi management district, Humen town, Dongguan city,  
Guangdong province, China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.  
No. 6, Ke Feng Rd., 52 Block,  
Shenzhen Science & Industrial Park,  
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Report Number : ACS-F07500  
Date of Test : Nov.17, 2007  
Date of Report : Nov.23, 2007

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## TEST REPORT CERTIFICATION

Applicant : Evervictory Electronic Company Limited  
 Manufacturer : Evervictory Electronic Company Limited  
 EUT Description : All-In-One DVD Overhead System

(A) MODEL NO. : TR-1073; ZE1050D; ZE1050D-E1;  
 ZE1051D; ZE1051D-E1; ZE1052D;  
 ZE1052D-E1; ZE1055D; ZE1055D-E1;  
 ZE1056D; ZE1056D-E1; ZE1057D;  
 ZE1057D-E1;

(B) SERIAL NO. : N/A

(C) POWER SUPPLY : DC 12V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2007

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test :

Nov.17, 2007

Prepared by :

YoYo Wang / Assistant

Reviewer :

Iceman Hu / Supervisor



Approved & Authorized Signer:

Ken Lu / Deputy Manager

# 1. SUMMARY OF STANDARDS AND RESULTS

## 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003	N/A
Radiated Emission Test	FCC Part 15: 15.239 ANSI C63.4: 2003	PASS
Bandwidth Test	FCC Part 15: 15.239	PASS
N/A is an abbreviation for Not Applicable.		

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

Description : All-In-One DVD Overhead System

Model Number : TR-1073; ZE1050D; ZE1050D-E1; ZE1051D;  
ZE1051D-E1; ZE1052D; ZE1052D-E1; ZE1055D;  
ZE1055D-E1; ZE1056D; ZE1056D-E1; ZE1057D;  
ZE1057D-E1  
(a) ZE1051D, ZE1051D-E1, ZE1056D, ZE1056D-E1 have no  
function of Game;  
(b) Difference among those model No. is appearance color.

Test Model No. : TR-1073

Working Frequency : 88.1MHz to 107.9MHz manually adjusted with 0.2MHz  
separation by press up/down buttons.

Applicant : Evervictory Electronic Company Limited  
Chu Chi management district, Humen town, Dongguan city,  
Guangdong province, China

Manufacturer : Evervictory Electronic Company Limited  
Chu Chi management district, Humen town, Dongguan city,  
Guangdong province, China

Date of Test : Nov.17, 2007

Date of Receipt : Nov.15, 2007

Sample Type : Prototype production

**Note: We selected 88.1MHz, 98.1MHz and 107.9MHz for all test.**

## 2.2. Test Facility

### Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.  
No. 6, Ke Feng Rd., 52 Block, Shenzhen  
Science & Industrial Park, Nantou,  
Shenzhen, Guangdong, China

3m Anechoic Chamber : Jun.13, 2006 File on  
Federal Communication Commission  
Registration Number: 90454

3m & 10m Anechoic Chamber : Jan.31, 2007 File on  
Federal Communication Commission  
Registration Number: 794232

EMC Lab. : Accredited by DATech, German  
Registration Number: DAT-P-091/99-01  
Feb. 02, 2004

Accredited by NVLAP, USA  
NVLAP Code: 200372-0  
Apr.01, 2007

## 2.3. Test Uncertainty

No.	Item	Uncertainty	Remark
1.	Uncertainty for Radiated Emission Test	3.14dB	3m Chamber
2.	Uncertainty for Bandwidth Emission Test	$0.42 \times 10^{-6}$ dB	

### **3. POWER LINE CONDUCTED EMISSION TEST**

According to Paragraph (f) of FCC Part 15C , Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	June.25.07	1/2 Year
2.	EMI Spectrum	Agilent	E7403A	MY42000106	May 11, 07	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	May 11, 07	1 Year
4.	Amplifier	HP	8447D	2944A07794	Sep.11, 07	1/2 Year
5.	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.22, 07	1 Year
6.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	July. 16, 07	1/2 Year
7.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	July. 16, 07	1/2 Year
8.	RF Cable	FUJIKURA <sub>w</sub>	RG-55/U	3# Chamber No.3	July. 16, 07	1/2 Year
9.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	July. 16, 07	1/2 Year
10.	Coaxial Switch	Anritsu	MP59B	M73989	July. 16, 07	1/2 Year

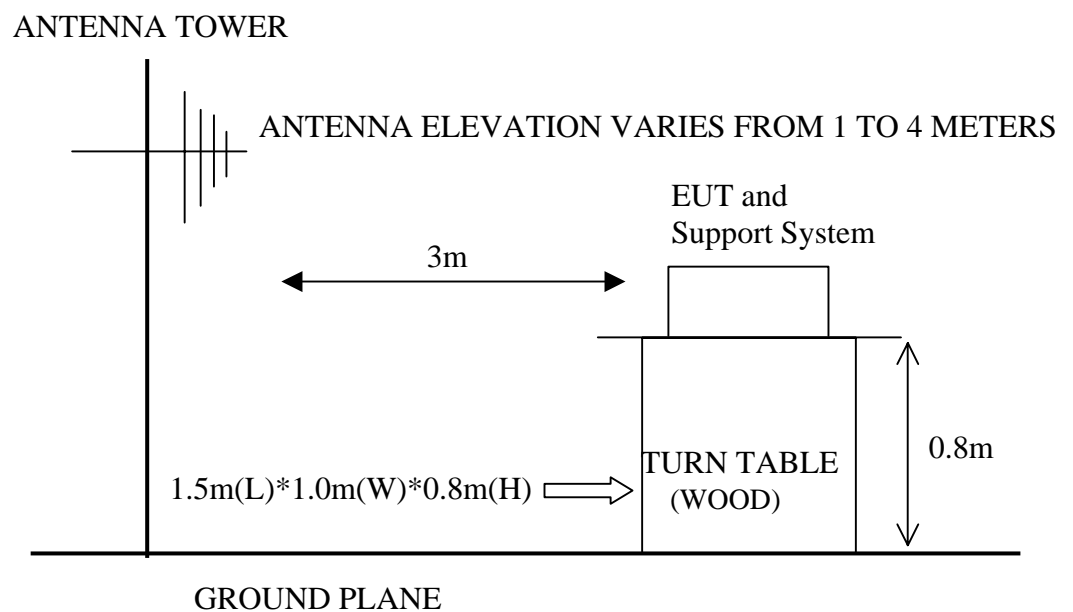
### 4.2. Block Diagram of Test Setup

#### 4.2.1. Block Diagram of connection between EUT and simulators



*(EUT: All-In-One DVD Overhead System)*

#### 4.2.2. Anechoic Chamber Setup Diagram





### 4.3.Radiated Emission Limit 30~1000MHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 108	3	250	48.0 (Average) 68.0 (Peak)
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

- Remark :
- (1) Emission level  $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
  - (2) The smaller limit shall apply at the cross point between two frequency bands.
  - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

### 4.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 4.4.1.All-In-One DVD Overhead System (EUT)

Model Number : TR-1073  
 Serial Number : N/A  
 Manufacturer : Everictory Electronic Company Limited

### 4.5.Operating Condition of EUT

4.5.1.Setup the EUT as shown in Section 4.2..

4.5.2.Let the EUT work in test modes (FM TX Mode) and test it.

### 4.6.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The frequency range from 30MHz to 1000MHz are checked.

The test modes (FM TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on Section 4.7.

#### 4.7.Radiated Emission Test Results

**PASS.**

The frequency range from 30MHz to 1000MHz is investigated. Please see the following pages.

EUT: All-In-One DVD Overhead System      Model No. : TR-1073

Test Date: Nov.17, 2007      Temperature: 24℃      Humidity: 56%

The details of test modes are as follows :

Test Mode	Test Mode	Reference Test Data No.	
		Horizontal	Vertical
1.	Tx 88.1MHz	#149	#150
2.	Tx 98.1MHz	#148	#147
3.	Tx 107.9MHz	#145	#146

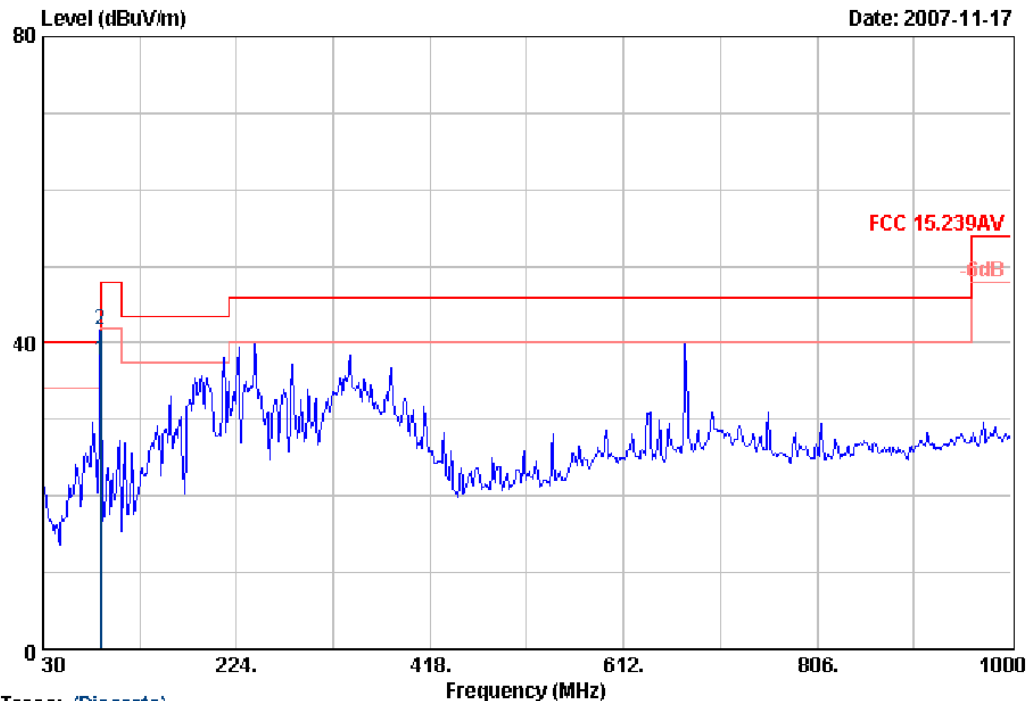


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Data: 149

File: D:\2007 Report Data\EVERVICTORY\ACS7Q1362.EMI (152)

Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 149  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : HORIZONTAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 88.1MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	88.10	8.76	1.02	27.78	37.56	48.00	10.44	Average
2	88.10	8.76	1.02	31.98	41.76	68.00	26.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

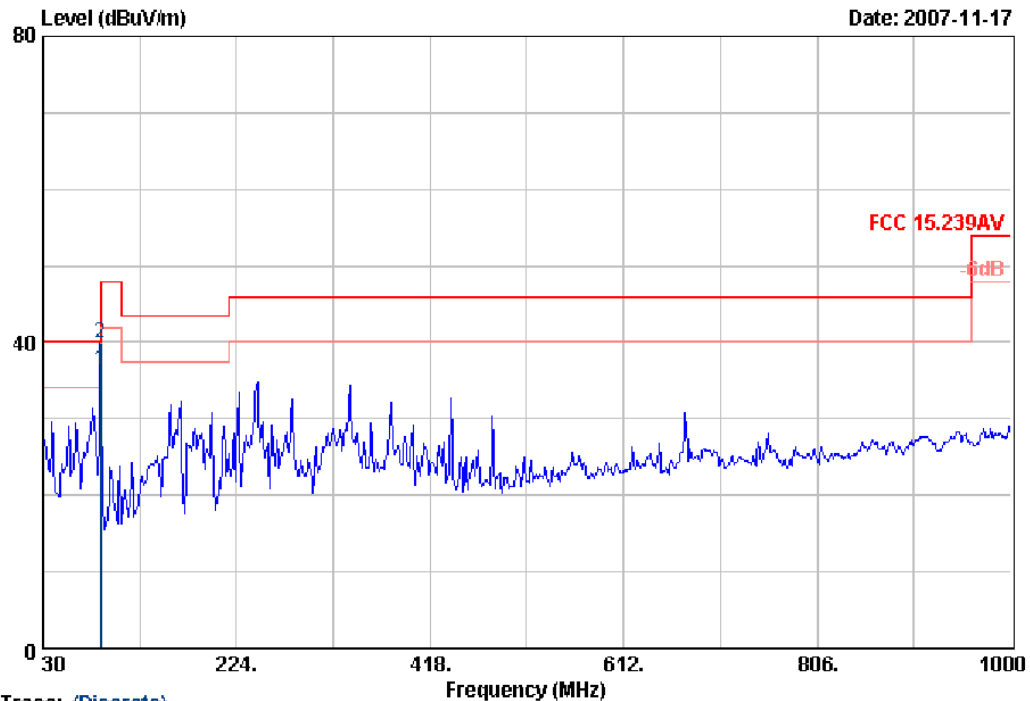


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Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 150  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : VERTICAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 88.1MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	88.10	8.76	1.02	26.53	36.31	48.00	11.69	Average
2	88.10	8.76	1.02	30.10	39.88	68.00	28.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

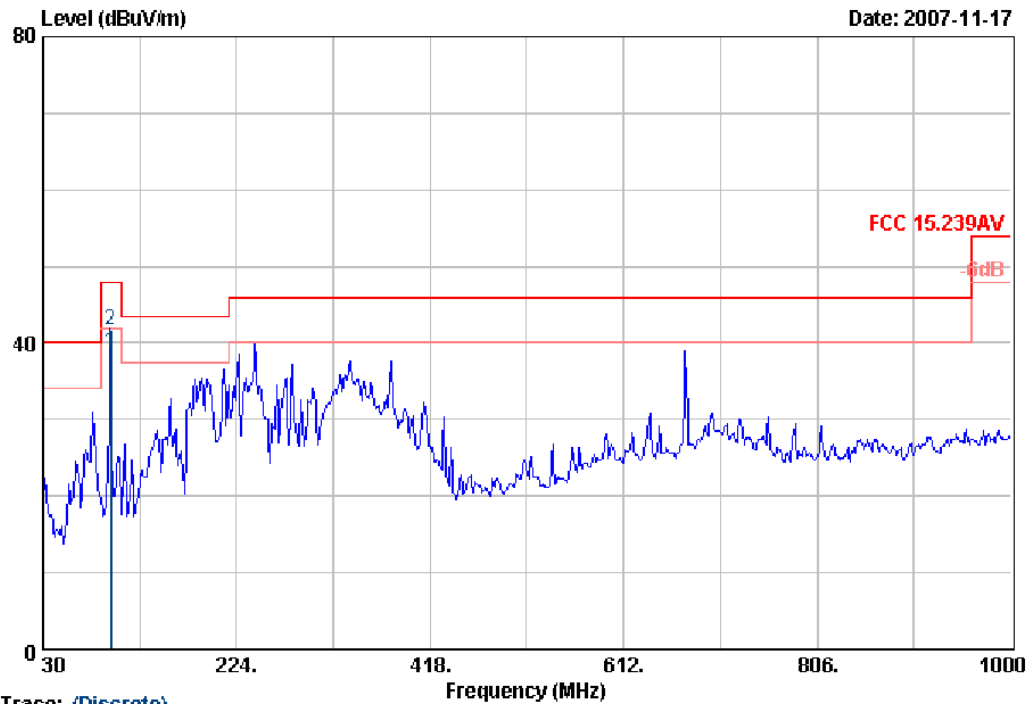


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Data: 148

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Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 148  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : HORIZONTAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 98.1MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	98.10	9.96	1.08	27.80	38.84	48.00	9.16	Average
2	98.10	9.96	1.08	30.68	41.72	68.00	26.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

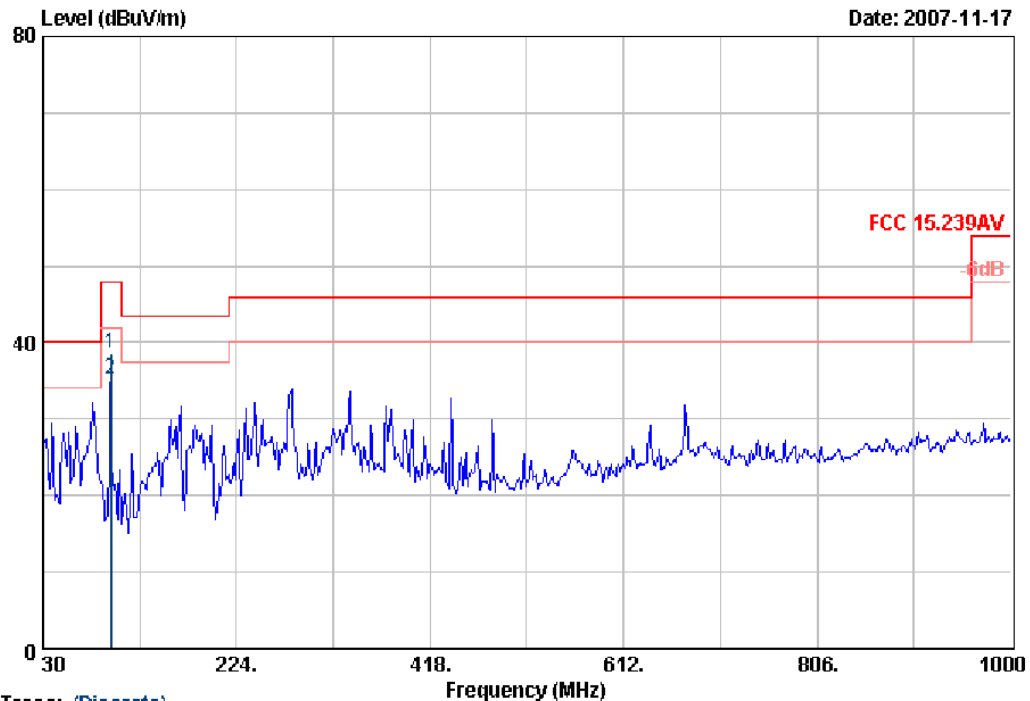


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Data: 147

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Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 147  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : VERTICAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 98.1MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	98.10	9.96	1.08	27.60	38.64	68.00	29.36	Peak
2	98.10	9.96	1.08	24.10	35.14	48.00	12.86	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official  
 limit are not reported.

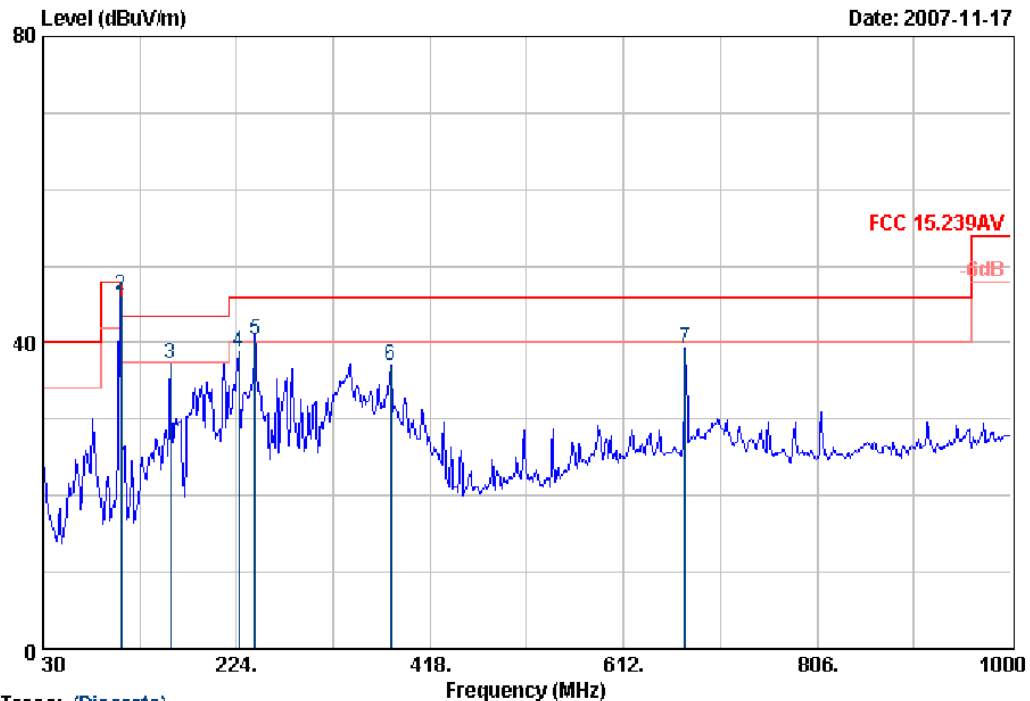


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Data: 145

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Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 145  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : HORIZONTAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 107.9MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	107.90	11.08	1.07	32.80	44.95	48.00	3.05	Average
2	107.90	11.08	1.07	34.00	46.15	68.00	21.85	Peak
3	158.04	11.12	1.27	24.87	37.26	43.50	6.24	QP
4	225.94	10.66	1.40	26.62	38.68	46.00	7.32	QP
5	242.43	12.05	1.42	26.79	40.26	46.00	5.74	QP
6	378.23	15.72	1.78	19.51	37.01	46.00	8.99	QP
7	674.08	20.66	2.42	16.09	39.17	46.00	6.83	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

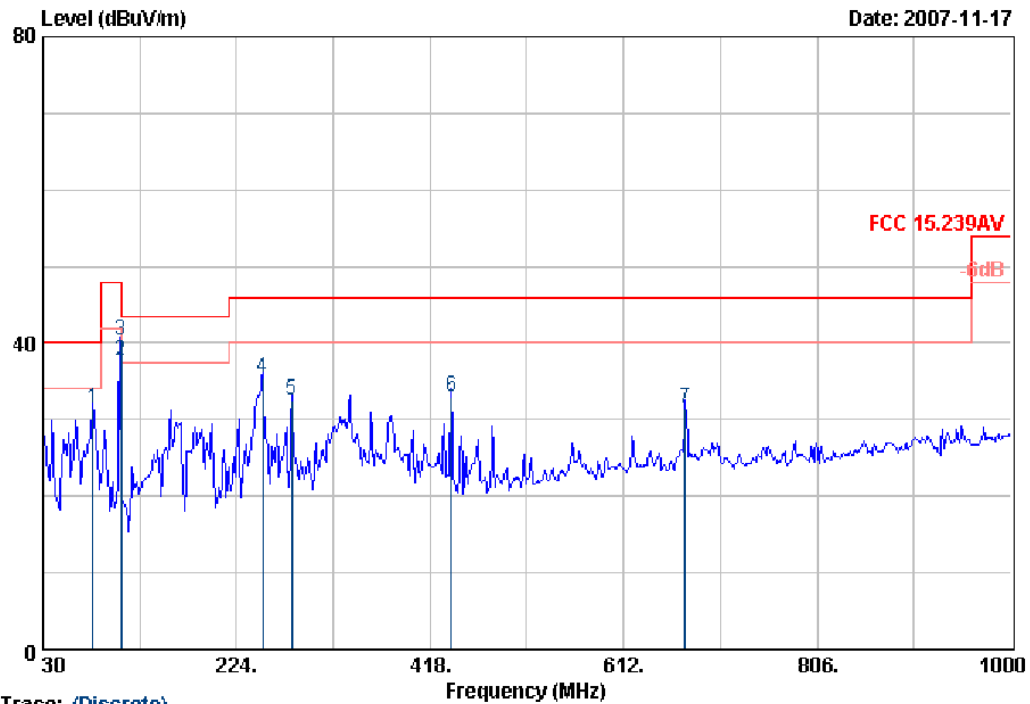


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Date: 2007-11-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 146  
 Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : VERTICAL  
 Limit : FCC 15.239AV  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Skyle  
 EUT : All-In-One DVD Overhead System  
 Power Rating : DC 12V  
 Test mode : FM TX 107.9MHz  
 Memo : M/N:TR-1073

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	80.44	7.90	0.96	22.61	31.47	40.00	8.53	QP
2	107.90	11.08	1.07	25.57	37.72	48.00	10.28	Average
3	107.90	11.08	1.07	28.10	40.25	68.00	27.75	Peak
4	250.19	12.70	1.51	21.21	35.42	46.00	10.58	QP
5	279.29	13.20	1.57	17.76	32.53	46.00	13.47	QP
6	439.34	17.00	2.04	13.99	33.03	46.00	12.97	QP
7	674.08	20.66	2.42	8.34	31.42	46.00	14.58	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



## 5. BANDWIDTH TEST

### 5.1. Test Equipment

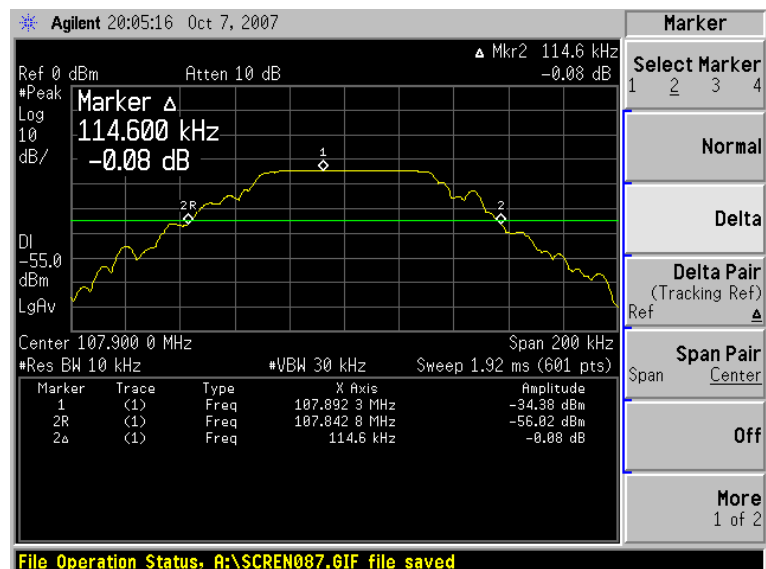
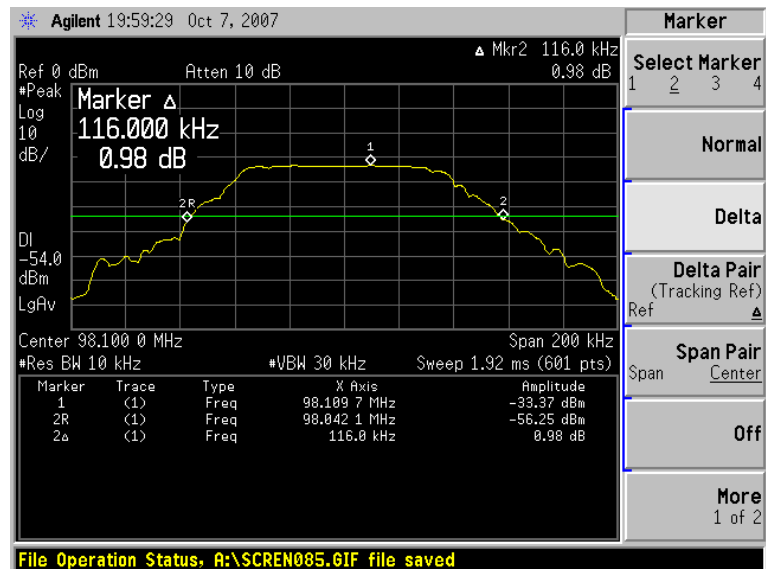
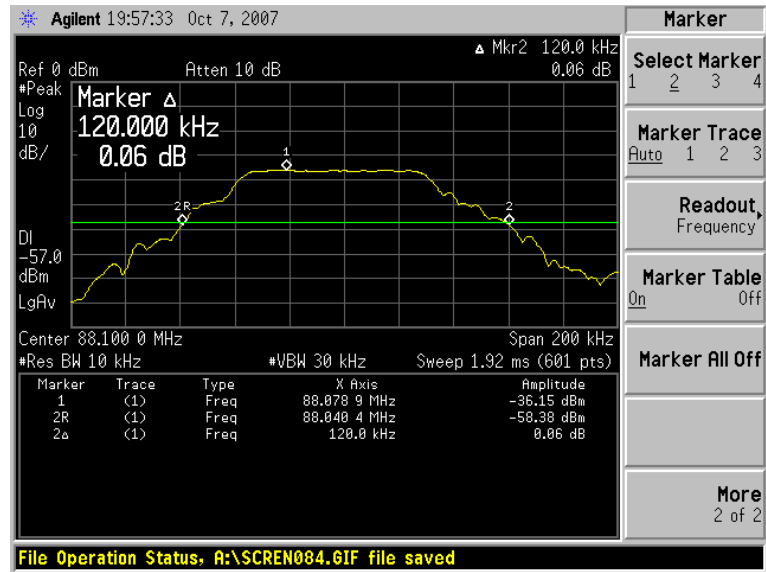
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2.	Amplifier	HP	8447D	2944A07794	May 11, 07	1/2 Year
3.	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.22, 07	1 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

### 5.2. Test Information

EUT:	All-In-One DVD Overhead System
M/N:	TR-1073
Test Date:	Nov.17, 2007
Ambient Temperature:	24°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.239
Test mode:	Maximum Jazz music TX by FM modulation
Test Frequency:	88.1MHz 98.1MHz 107.9MHz
Test By:	Skyle

### 5.3. Test Results

Test Frequency	Bandwidth (kHz)	Limit (kHz)	Conclusion
88.1MHz	120.0	200	PASS
98.1MHz	116.0	200	PASS
107.9MHz	114.6	200	PASS



## **6. DEVIATION TO TEST SPECIFICATIONS**

[ NONE]