

FCC ID:X4TSCT-4VS83-2



## FCC PART 15 SUBPART B

### Test Report

FOR

Applicant: SUNYOUNG ELECTRONIC (SHENZHEN)Co.,LTD

Address: Room 2811, United plaza A, No.5022, Binhe Road  
Futian District, Shenzhen, China

Product Name: Video Server

Model Name: SCT-4VS83

Brand Name: N/A

FCC ID: **X4TSCT-4VS83-2**

Date of Issue: Mar.10, 2011

Issued by: Most Technology Service Co., Ltd.

Address: No.5, 2nd Langshan Road, North District, Hi-tech  
Industrial Park, Nanshan, Shenzhen, Guangdong, China

Tel: 86-755-86170306

Fax: 86-755-86170310

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## 1. Verification of Conformity

**Equipment under test:** Video Server  
**Brand Name:** N/A  
**Model Number:** SCT-4VS83  
**FCC ID:** **X4TSCT-4VS83-2**  
**Applicant:** SUNYOUNG ELECTRONIC (SHENZHEN)CO.,LTD

Room 2811, United Plaza A,NO.5022, Binhe Road ,  
Futian District, Shenzhen, China

**Manufacturer:** SUNYOUNG ELECTRONIC (SHENZHEN)CO.,LTD  
Room 2811, United Plaza A,NO.5022, Binhe Road ,  
Futian District, Shenzhen, China

**Technical Standards:** FCC Part 15 Subpart B  
**File Number:** MOST MTECP03042  
**Date of test:** Mar. 03, 2011-Mar 08, 2011

**Deviation:** None  
**Condition of Test Sample:** Normal  
**Test Result:** **PASS**

The above equipment was tested by Most for compliance with the requirements set forth in FCC Rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in the report.

Test by:  (candy Zhang)

Reviewed by:  (key Wang)

Approved by:  (Yvette Zhou)

FCC ID:X4TSCT-4VS83-2

## 2. General information

### 2.1 Product information

Power Adaptor FM120010-US

Motherboard 4VS83-A1

Chip 8183

NOTE: Please refer to the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

### 2.2. Objective

The objective of the report is to perform tests according to FCC Part 15 Subpart B for the EUT FCC ID Certification:

NO.	Identity	Document Title
1	FCC PART15 Subpart B	Class B personal computers and peripherals.....

### 2.3 Test standards and results

Test items and the results are as bellow:

NO.	Section	Description	Result	Date of test
1	15.107	Conducted	Pass	2011-03-05
2	15.109	Radiated emission	Pass	2011-03-06

### 2.4 Measurement uncertainty

No.	Item	Uncertainty
1.	Uncertainty for Conducted Disturbance Test	1.25dB
2.	Uncertainty for Radiated Disturbance Test	3.15dB

### 2.5 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35 °C
- Humidity: 30-60%
- Atmospheric pressure: 86-106kPa

## 3: Test facility

### 3.1 test facility

Test Site: Most Technology Service Co., Ltd  
Location: No.5, Nangshan 2<sup>nd</sup> Rd., North Hi-tech Industrial Park, Shenzhen, Guangdong, China.  
Description: There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test sites and the line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4-2003and CISPR 16 requirements. The FCC Registration Number is **490827**  
Site Filing: The site description is on file with the Federal Communications Commission ,7435 Oakland Mills Road, Columbia , MD 21046  
Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 16 requirements that Meet industry regulatory agency and accreditation agency requirement.  
Ground Plane: Two conductive reference ground planes were used during the Line Conducted emission, One in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna .It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

### 3.2 General Test Procedures

Test mode: The following data show only with the worst case setup  
Conducted Emissions: The EUT is placed on the test table, which is 0.8 m above ground plane. According to the requirements Section 13.1.4.1 of ANSI C63.4 .Conducted emissions from the EUT measured in the frequency range between 0.15MHz and 30MHz using CISPR Quasi-peak and average detector modes.  
Radiated Emissions: The EUT is placed on a turntable, which is 0.8m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which Varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by Changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum Emissions, exploratory radiated emission measurements were made according to the requirements in section 13.1.4.1 of ANSI C63.4.  
Setting :  
9KHZ~150KHZ RBW 200HZ VBW1KHZ  
150KHZ~30MHZ RBW 9KHZ VBW 30KHZ  
30MHZ~1GHZ RBW 120KHZ VBW 300KHZ  
Above 1GHZ RBW 1MHZ VBW 3MHZ

## 4. Setup of Equipment Under Test

### 4.1 SUPPORT EQUIPMENT

Manufacturer	Description	Model	Serial number
Lenovo	PC	T3900	SS05750640
Lenovo	USB Driver	DTUG2 2G	
Dell	Monitor	E178FPc	78682

### 4.2 TEST EQUIPMENT LIST

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100492	Mar. 06, 2011	1 Year
LISN	ROHDE&SCHWARZ	ENV216	100093	Mar. 06, 2011	1 Year
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	101202	Mar. 06, 2011	1 Year
Spectrum Analyzer	ANRITSU	MS2651B	6200238316	Mar. 06, 2011	1 Year
50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar. 06, 2011	1 Year
Bilog Antenna	Sunol	JB3	A121206	Mar. 06, 2011	1 Year
Horn Antenna	EMCO	3115	640201028-06	Mar. 06, 2011	1 Year
50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar. 06, 2011	1 Year
Cable	Resenberger	N/A	NO.1	Mar. 06, 2011	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Mar. 06, 2011	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Mar. 06, 2011	1 Year
DC Power Filter	Duoji	DL2X30B	N/A	Mar. 06, 2011	1 Year
Single phase power Line filter	Duoji	FNF 202B30	N/A	Mar. 06, 2011	1 Year
3 phase power line filter	Duoji	FNF 402B30	N/A	Mar. 06, 2011	1 Year
Test receiver	Rohde&schwarz	ESCI	100492	Mar. 06, 2011	1 Year
Coaxial switch	Anritsu Corp	MP59B	6200283933	Mar. 06, 2011	1 Year
AC power soure	KIKUSUI	AC40MA	LM003232	Mar. 06, 2011	1 Year
EMCPRO System	EM TEST	UCS-500-M4	V0648102026	Mar. 06, 2011	1 Year
Absorbing Clamp	Luthi	MDS21	3635	Mar. 06, 2011	1 Year

# 5: Test Requirements

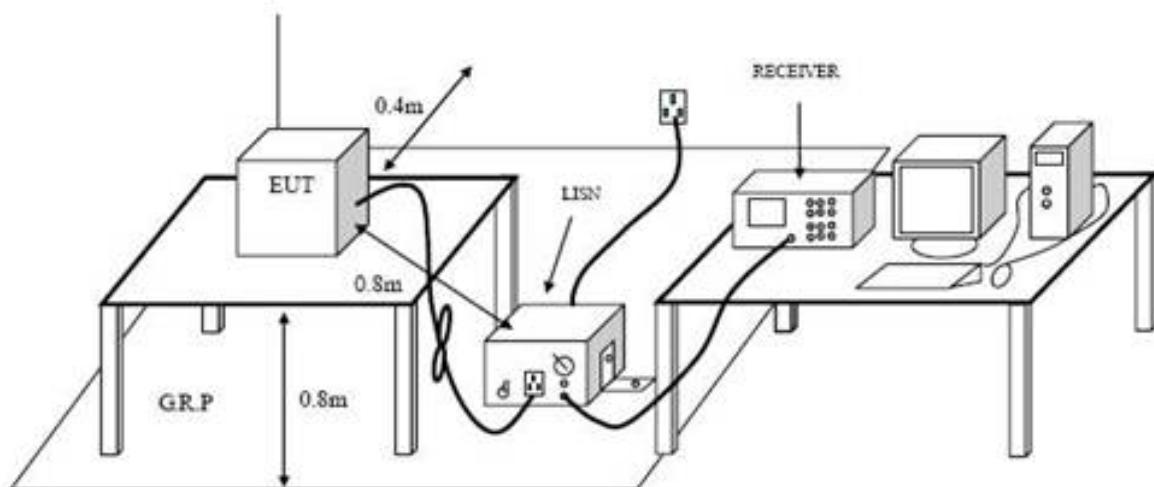
## 5.1 Limits of line conducted emission test

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

\* the limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

The lower limit shall apply at the transition frequency

## 5.2 BLOCK DIAGRAM OF TESP SETUP



## 5.3 preliminary procedure of line conducted emission test

- 1) the equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height 0.8 meters is used and is placed on the ground plane as per FCC 15 (see Test Facility for the dimensions of the ground plane noo-conductive covering to insulate the EUT from the ground plane).
- 2) Support equipment, if needed, was placed as per FCC Part 15.
- 3) All I/O Cables were positioned to simulate typical actual usage as per FCC Part 15.
- 4) The EUT received AC 120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5) All support equipments received power from a second LISN supplying power of AC 120V/60Hz, if any.
- 6) The EUT Test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer/Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer/Receiver.
- 7) Analyzer / Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The following test mode(s) were scanned during the preliminary test:

Preliminary Conducted Emission Test				
Frequency Range Investigated		150KHz to 30MHz		
Mode of operation	Date	Report No.	Date#	Worst Mode
Normal Working	2011-03-05	MOST MTECP03042	RM001_(L,N)	<input checked="" type="checkbox"/> YES

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing

## 5.4 Test result of line conducted emission test



Address No.5,Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong ,China  
Tel: 0755-86170306 Fax: 0755-86170310

## Conducted Emission Measurement

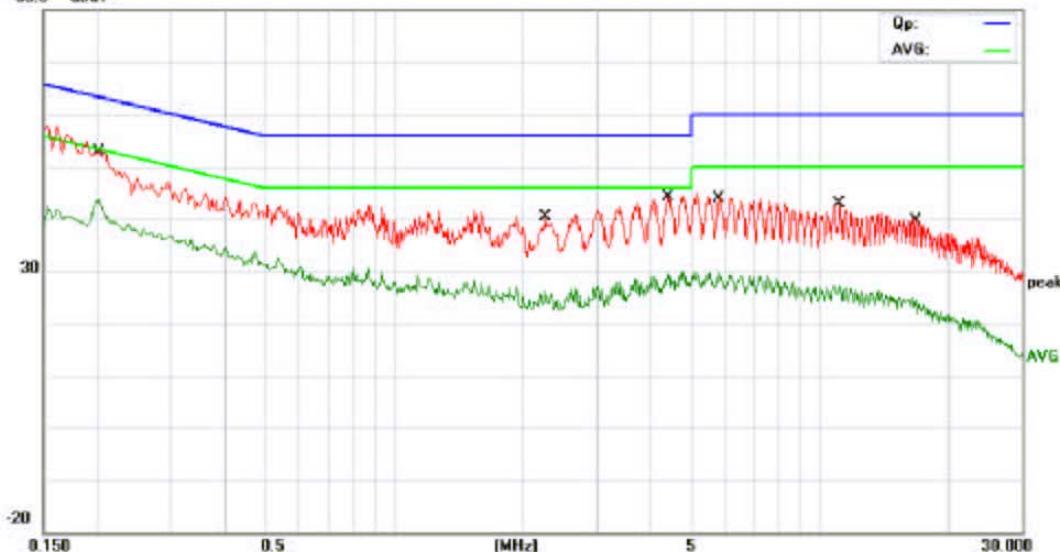
File: Video Server

Data #3

Date: 11/03/06/

Time: 15/03/37

80.0 dBuV



Site: site #1

Phase: **L1**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: DC 12V Adapter AV 120V/60Hz

Humidity: 60 %

EUT: Video Server

M/N: SCT-4VS83

Mode: Running

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2040	40.30	11.97	52.27	63.45	-11.18	QP
2	*	0.2040	30.91	11.97	42.88	53.45	-10.57	AVG
3		2.2860	29.36	9.29	38.65	56.00	-17.35	QP
4		2.2860	15.67	9.29	24.96	46.00	-21.04	AVG
5		4.4140	32.62	11.41	44.03	56.00	-11.97	QP
6		4.4140	18.05	11.41	29.46	46.00	-16.54	AVG
7		5.8380	31.84	11.50	43.34	60.00	-16.66	QP
8		5.8380	16.86	11.50	28.36	50.00	-21.64	AVG
9		11.2300	33.11	9.00	42.11	60.00	-17.89	QP
10		11.2300	17.99	9.00	26.99	50.00	-23.01	AVG
11		16.8500	30.73	9.00	39.73	60.00	-20.27	QP
12		16.8500	15.60	9.00	24.60	50.00	-25.40	AVG

\*Maximum data x Over limit ! Over margin

Engineer Signature: One



Address No.5,Langshan 2nd Rd., North Hi-Tech Industrial park  
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## Conducted Emission Measurement

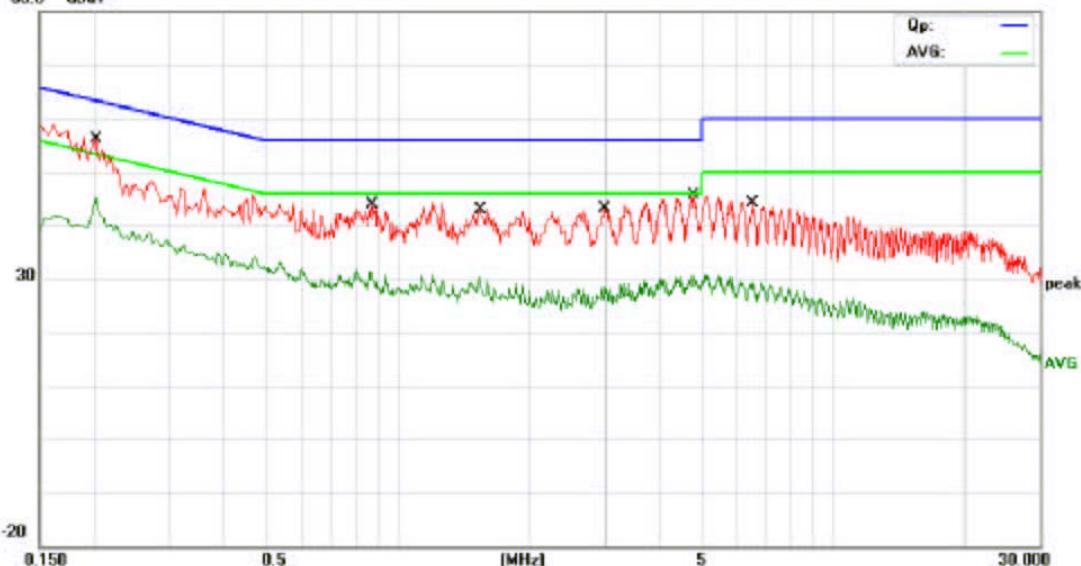
File :Video Server

Data :#4

Date: 11/03/05/

Time: 15/05/18

80.0 dBuV



Site site #1

Phase: **N**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: DC 12V Adapter AV 120V/60Hz

Humidity: 60 %

EUT: Video Server

M/N: SCT-4VS83

Mode: Running

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
1	*	0.2006	43.75	12.00	55.75	63.59	-7.84	QP	
2		0.2006	32.33	12.00	44.33	53.59	-9.26	AVG	
3		0.8700	32.80	10.00	42.80	56.00	-13.20	QP	
4		0.8700	21.12	10.00	31.12	46.00	-14.88	AVG	
5		1.5540	32.58	9.45	42.03	56.00	-13.97	QP	
6		1.5540	19.04	9.45	28.49	46.00	-17.51	AVG	
7		3.0060	33.09	10.01	43.10	56.00	-12.90	QP	
8		3.0060	18.60	10.01	28.61	46.00	-17.39	AVG	
9		4.8060	33.72	11.81	45.53	56.00	-10.47	QP	
10		4.8060	18.80	11.81	30.61	46.00	-15.39	AVG	
11		6.5580	31.21	11.07	42.28	60.00	-17.72	QP	
12		6.5580	16.90	11.07	27.97	50.00	-22.03	AVG	

\*Maximum data

x:Over limit

!:over margin

Engineer Signature: One

# 6: Test Radiated Emission Requirement

## 6.1 limits of radiated disturbances at 3m distances for class B

30 -88 MHz 40 dBuV/m @3M

88 - 216 MHz 43.5

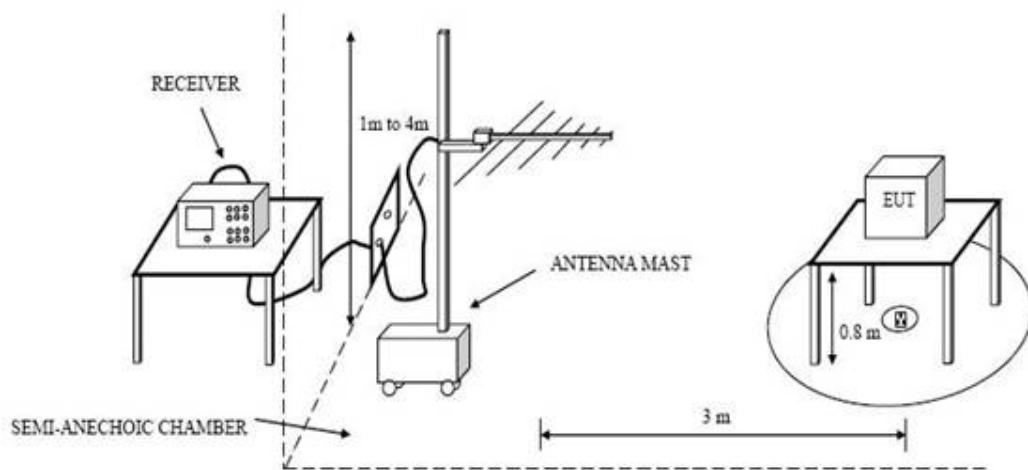
216 - 960 MHz 46

ABOVE 960 MHz 54dBuV/m

Note: adjust the brightness and contrast to maximum

Emissions attenuated more than 20 dB below the permissible value are not reported.

## 6.2: BLOCK OF RADIATION INTERFERENCE



## 6.3 Preliminary radiated emission test

In the frequency range above 30MHz, Bi-log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

Preliminary Radiated Emission Test				
Frequency Range Investigated		30MHz to 1000MHz		
Mode of operation	Date	Report No.	Date#	Worst Mode
Normal Working	2011-03-06	MOST MTECP03042	RM001_(H,V)	<input checked="" type="checkbox"/> YES

## 6.4 Test result of radiation emission test



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## Radiated Emission Measurement

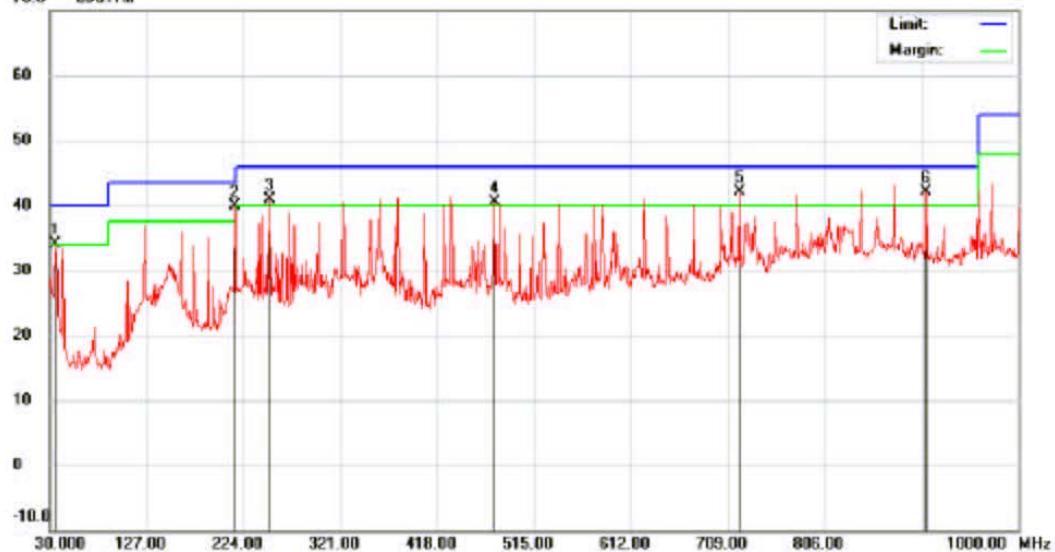
File: Video Server

Data #4

Date: 2011-3-06

Time: 9:31:39

70.0 dBuV/m



Site: site MOST 3M

Polarization: **Horizontal**

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: DC 12V Adapter AC 120V/60Hz

Humidity: 60 %

EUT: Video Server

Distance:

M/N: SCT-4VS83

Mode: Running

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table		
			Level	Factor	ment					Degree	
			MHz	dBuV	dB	dBuV/m	dB	Detector	cm	degree	Comment
1	1	35.8200	13.86	20.27	34.13	40.00	-5.87	QP			
2	*	215.2700	23.74	16.12	39.86	43.50	-3.64	QP			
3	!	250.1899	23.57	17.40	40.97	46.00	-5.03	QP			
4	1	475.2300	19.10	21.41	40.51	46.00	-5.49	QP			
5	1	720.6399	17.32	24.71	42.03	46.00	-3.97	QP			
6	1	907.8500	14.58	27.56	42.14	46.00	-3.86	QP			

\*:Maximum data x:Over limit !:Over margin

Engineer Signature: Zero



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
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### Radiated Emission Measurement

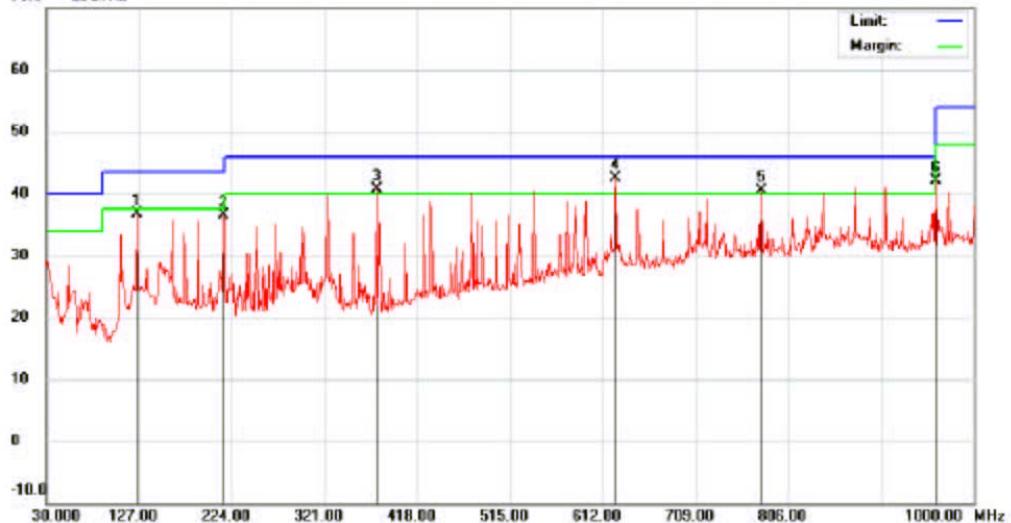
File: Video Server

Data: #3

Date: 2011-3-06

Time: 9:27:39

70.0 dBuV/m



Site: site MOST 3M

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: DC 12V Adapter AC 120V/60Hz

Humidity: 60 %

EUT: Video Server

Distance:

M/N: SCT-4VS83

Mode: Running

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		125.0600	19.00	17.70	36.70	43.50	-6.80	QP		
2		215.2700	20.33	16.12	36.45	43.50	-7.05	QP		
3	!	375.3199	22.40	18.24	40.64	46.00	-5.36	QP		
4	*	625.5800	18.83	23.62	42.45	46.00	-3.55	QP		
5	!	777.8700	14.30	26.14	40.44	46.00	-5.56	QP		
6		960.2300	14.11	28.00	42.11	54.00	-11.89	QP		

\*:Maximum data x:Over limit !:over margin

Engineer Signature: Zero