## APPLICATION CERTIFICATION FCC Part 15B On Behalf of Shenzhen Sungworld Electronics Co., Ltd.

**MID** 

Model No.: VX-S7001, M7XXXXX, VX-SXXXX

FCC ID: WI3-VX-S7001

Prepared for : Shenzhen Sungworld Electronics Co., Ltd.

Address : 4#, North District, Shangxue Industrial Park, Bantian, Long

Gang District, Shenzhen, China

Prepared by : ACCURATE TECHNOLOGY CO. LTD

Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number : ATE20130171

Date of Test : January 29-February 7, 2013

Date of Report : February 8, 2013

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## **Test Report Certification**

Applicant : Shenzhen Sungworld Electronics Co., Ltd.

Manufacturer : Shenzhen Sungworld Electronics Co., Ltd.

**EUT Description** : MID

(A) MODEL NO.: VX-S7001, M7XXXXX, VX-SXXXX

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 3.7V (Li-polymer battery) & DC 5V (Power by Adapter)

Measurement Procedure Used:

## FCC Rules and Regulations Part 15 Subpart B ANSI C63.4: 2009

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test :	January 29-February 7, 2013
Prepared by :	Apple Lu
	(Apple Lv, Engineer)
Approved & Authorized Signer :	Lemb
	(Sean Liu, Manager)

#### 1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : MID

Model Number : VX-S7001, M7XXXXX, VX-SXXXX

(Note: These samples are same except for the model number is difference. So we prepare the VX-S7001 for

FCC test.)

Power Supply : DC 3.7V (Li-polymer battery) & DC 5V (Power by

adapter)

Adapter : Model number: WYT-0520

Input: AC 100-240V; 50/60Hz 0.3A

Output: DC 5V/2.0A

Highest operation

frequency of the EUT:

1GHz

Applicant : Shenzhen Sungworld Electronics Co., Ltd.

Address : 4#, North District, Shangxue Industrial Park, Bantian,

Long Gang District, Shenzhen, China

Manufacturer : Shenzhen Sungworld Electronics Co., Ltd.

Address : 4#, North District, Shangxue Industrial Park, Bantian,

Long Gang District, Shenzhen, China

Date of sample received: January 29, 2013

Date of Test : January 29-February 7, 2013

1.2. Accessory and Auxiliary Equipment

Notebook PC : Manufacturer: SONY

M/N: PCG-663P

S/N: 28123170 7202526

Printer : Manufacturer: Canon

Model No.: BJC-1000SP

#### 1.3.Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC

The Registration Number is 752051

Listed by Industry Canada

The Registration Number is 5077A-2

Accredited by China National Accreditation Committee

for Laboratories

The Certificate Registration Number is L3193

Name of Firm : ACCURATE TECHNOLOGY CO. LTD

Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

#### 1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment** 

Kind of equipment	Manufacturer	Туре	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Feb. 6, 2013	Feb. 5, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Feb. 6, 2013	Feb. 5, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014

## 3. OPERATION OF EUT DURING TESTING

## 3.1. Operating Mode

The modes are used: 1) Running

- 2) Transfer data
- 3) Camera playing

## 3.2.Configuration and peripherals



(EUT: MID)

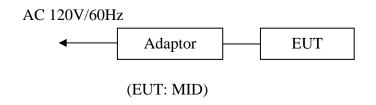
## 4. TEST PROCEDURES AND RESULTS

FCC Rules	<b>Description of Test</b>	Result
Section 15.107	Conducted Emission Test	Compliant
Section 15.109	Radiated Emission Test	Compliant

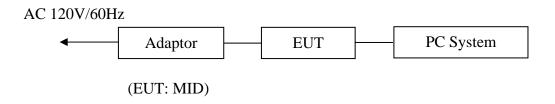
# 5. CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.107(A)

## 5.1.Block Diagram of Test Setup

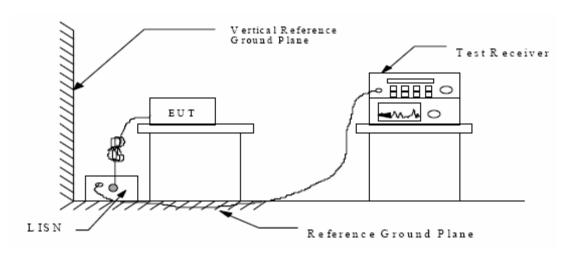
5.1.1.Block diagram of connection between the EUT and simulators5.1.1.1.For Running & Camera playing



5.1.1.2.For Transfer data



#### 5.1.2.Shielding Room Test Setup Diagram



(EUT: MID)

#### 5.2. The Emission Limit

#### 5.2.1.Conducted Emission Measurement Limits According to Section 15.107(a)

Frequency	Limit $dB(\mu V)$					
(MHz)	Quasi-peak Level	Average Level				
0.15 - 0.50	66.0 - 56.0 *	56.0 – 46.0 *				
0.50 - 5.00	56.0	46.0				
5.00 - 30.00	60.0	50.0				

<sup>\*</sup> Decreases with the logarithm of the frequency.

#### 5.3. Configuration of EUT on Measurement

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

#### 5.3.1.MID (EUT)

Model Number : VX-S7001

Serial Number : N/A

Manufacturer : Shenzhen Sungworld Electronics Co., Ltd.

#### 5.4. Operating Condition of EUT

- 5.4.1. Setup the EUT and simulator as shown as Section 5.1.
- 5.4.2. Turn on the power of all equipment.
- 5.4.3.Let the EUT work in modes (Running, Transfer data, Camera playing) and measure it.

#### 5.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 500hm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

#### 5.6. Power Line Conducted Emission Measurement Results

**PASS.**The frequency range from 150kHz to 30MHz is checked.

Date of Test:January 30, 2013Temperature:25°CEUT:MIDHumidity:50%Model No.:VX-S7001Power Supply:AC 120V/60HzTest Mode:RunningTest Engineer:PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.310189	49.50	11.6	60	10.5	QP	N	GND
0.361001	49.30	11.7	59	9.4	QP	N	GND
0.519130	46.30	12.0	56	9.7	QP	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.318980	37.30	11.6	50		AV	N	GND
0.355282	38.30	11.7	49		AV	N	GND
4.913107	34.00	11.4	46		AV	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.359562	50.50	11.7	59	8.2	QP	L1	GND
0.527486	46.80	12.0	56	9.2	QP	L1	GND
0.638894	48.80	11.9	56	7.2	QP	L1	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.359562	40.60	11.7	49	8.1	AV	L1	GND
0.475482	37.10	12.0	46	9.3	AV	L1	GND
4.972301	38.50	11.4	46	7.5	AV	L1	GND

Emissions attenuated more than 20 dB below the permissible value are not reported. The spectral diagrams are attached as below.

Date of Test:January 30, 2013Temperature:25°CEUT:MIDHumidity:50%Model No.:VX-S7001Power Supply:AC 120V/60HzTest Mode:Transfer dataTest Engineer:PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.362445 0.437246 0.517062	49.50 49.40 47.10	11.7 11.9 12.0	59 57 56	9.2 7.7 8.9	QP QP QP	L1 L1 L1	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.362445 0.477384 4.992190	39.90 37.30 38.70	11.7 12.0 11.4	49 46 46	8.8 9.1 7.3	AV AV AV	L1 L1 L1	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.311430 0.358130 0.515002	49.50 49.90 46.10	11.6 11.7 12.0	60 59 56	10.4 8.9 9.9	QP QP QP	N N N	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.317709 0.358130 4.952491	37.90 38.40 34.20	11.6 11.7 11.4	50 49 46	11.9 10.4 11.8	AV AV AV	N N N	GND GND GND

Emissions attenuated more than 20 dB below the permissible value are not reported. The spectral diagrams are attached as below.

Date of Test:January 30, 2013Temperature:25°CEUT:MIDHumidity:50%Model No.:VX-S7001Power Supply:AC 120V/60HzTest Mode:Camera playingTest Engineer:PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.305276	48.50	11.6	60	11.6	QP	N	GND
0.351053	48.70	11.7	59	10.2	QP	N	GND
0.517062	46.20	12.0	56	9.8	QP	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.313927	37.90	11.6	50		AV	N	GND
0.356703	38.20	11.7	49		AV	N	GND
4.893533	33.70	11.4	46		AV	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.477384	47.60	12.0	56		QP	L1	GND
0.611446	44.10	12.0	56		QP	L1	GND
4.893533	47.50	11.4	56		QP	L1	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.359562	40.20	11.7	49	8.5	AV	L1	GND
0.475482	37.20	12.0	46	9.2	AV	L1	GND
4.932760	38.20	11.4	46	7.8	AV	L1	GND

Emissions attenuated more than 20 dB below the permissible value are not reported. The spectral diagrams are attached as below.

#### CONDUCTED EMISSION STANDARD FCC PART15B

MID M/N:VX-S7001

Manufacturer: Sungworld Operating Condition: Running

Test Site: 1#Shielding Room Operator: Bob

Test Specification: N AC120V/60Hz

Report NO.: ATE20130171 Comment: Start of Test: 1/30/2013 / 2:07:34PM

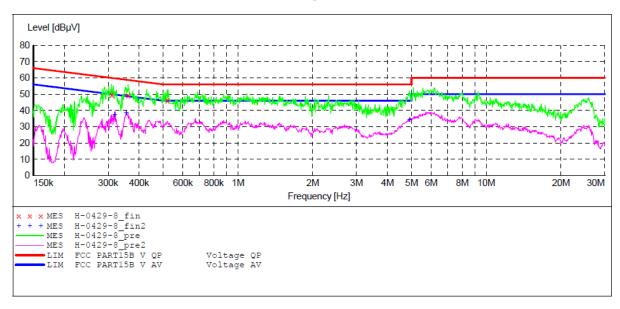
SCAN TABLE: "V 150K-30MHz fin"

\_SUB\_STD\_VTERM2 1.70 Short Description:

Start Stop Step Detector Meas. IF Transducer Bandw. Width Time

Frequency Frequency 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "H-0429-8 fin"

1/30/2013 2:	09PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
MHz	dΒμV	dB	dΒμV	dB			
0.310189	49.50	11.6	60	10.5	QP	N	GND
0.361001	49.30	11.7	59	9.4	QΡ	N	GND
0.519130	46.30	12.0	56	9.7	QP	N	GND

#### MEASUREMENT RESULT: "H-0429-8 fin2"

1	/30/2013 2:	09PM						
	Frequency				_	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.318980	37.30	11.6	50	12.4	AV	N	GND
	0.355282	38.30	11.7	49	10.5	AV	N	GND
	4.913107	34.00	11.4	46	12.0	AV	N	GND

#### CONDUCTED EMISSION STANDARD FCC PART15B

MID M/N:VX-S7001 EUT:

Manufacturer: Sungworld Operating Condition: Running

Test Site: 1#Shielding Room Operator: Bob Test Specification: L AC120V/60Hz

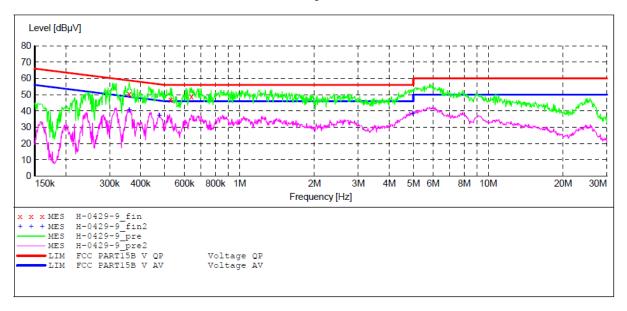
Report NO.:ATE20130171 1/30/2013 / 2:10:16PM Comment: Start of Test:

SCAN TABLE: "V 150K-30MHz fin"
Short Description: \_SUB\_STD\_VTERM2 1.70

Detector Meas. IF
Time Bandw. Start Step Transducer Stop

Frequency Frequency Width 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "H-0429-9 fin"

1/30/2013 2	:12PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dΒμV	dB	dΒμV	dB			
0.359562	50.50	11.7	59	8.2	QP	L1	GND
0.527486	46.80	12.0	56	9.2	QP	L1	GND
0.638894	48.80	11.9	56	7.2	QP	L1	GND

#### MEASUREMENT RESULT: "H-0429-9 fin2"

1/30/2013 2:	12PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dBuV	dB			
0.359562	40.60	11.7	49	8.1	AV	L1	GND
0.475482	37.10	12.0	46	9.3	AV	L1	GND
4.972301	38.50	11.4	46	7.5	AV	L1	GND

#### CONDUCTED EMISSION STANDARD FCC PART15B

EUT: MID M/N:VX-S7001 Manufacturer: Sungworld Operating Condition: Transfer data

1#Shielding Room Test Site:

Operator: Bob

Test Specification: L AC120V/60Hz

Comment: Report NO.: ATE20130171 1/30/2013 / 2:12:45PM Start of Test:

#### SCAN TABLE: "V 150K-30MHz fin"

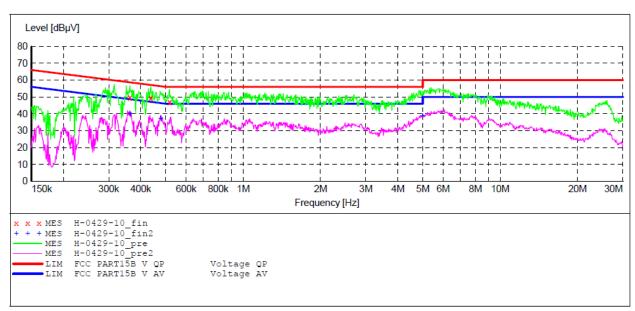
\_SUB\_STD\_VTERM2 1.70 Short Description:

Stop Step Detector Meas. IF Transducer

Time Bandw.

Frequency Frequency Width 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "H-0429-10 fin"

1/30/2013 2:	14PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
MHz	dΒμV	dB	dΒμV	dB			
0.362445	49.50	11.7	59	9.2	QP	L1	GND
0.437246	49.40			7.7	QP	L1	GND
0.517062	47.10	12.0		8.9	OP	L1	GND

#### MEASUREMENT RESULT: "H-0429-10 fin2"

1/30/2013 2	:14PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
MHz	dΒμV	dB	dΒμV	dB			
0.362445	39.90	11.7	49	8.8	AV	L1	GND
0.477384	37.30	12.0	46	9.1	AV	L1	GND
4.992190	38.70	11.4	46	7.3	AV	L1	GND

#### CONDUCTED EMISSION STANDARD FCC PART15B

MID M/N:VX-S7001

Manufacturer: Sungworld Operating Condition: Transfer data Test Site: 1#Shielding Room

Operator: Bob

Test Specification: N AC120V/60Hz

Comment: Report NO.:ATE20130171 Start of Test: 1/30/2013 / 2:15:17PM

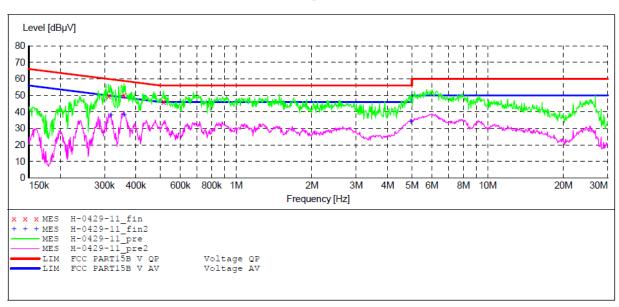
#### SCAN TABLE: "V 150K-30MHz fin"

\_SUB\_STD\_VTERM2 1.70 Short Description:

Detector Meas. IF Time Bandw. Start Stop Step Transducer Mea. Time

Frequency Frequency Width 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "H-0429-11 fin"

1	L/30/2013 2:	17PM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
	MHz	dΒμV	dB	dΒμV	dB			
	0.311430	49.50	11.6	60	10.4	QP	N	GND
	0.358130	49.90				QP	N	GND
	0.515002	46.10	12.0	56	9.9	QP	N	GND

#### MEASUREMENT RESULT: "H-0429-11 fin2"

1/30/2013	2:17PM						
				Margin	Detector	Line	PΕ
MHz	dΒμV	dB	dΒμV	dB			
0.317709	37.90	11.6	50	11.9	AV	N	GND
0.358130	38.40	11.7	49	10.4	AV	N	GND
4.952491	34.20	11.4	46	11.8	AV	N	GND

#### CONDUCTED EMISSION STANDARD FCC PART15B

MID M/N:VX-S7001 EUT:

Manufacturer: Sungworld Operating Condition: Camera

Test Site: 1#Shielding Room

Bob Operator:

Test Specification: N AC120V/60Hz

Comment: Report NO.: ATE20130171 Start of Test: 1/30/2013 / 2:28:17PM

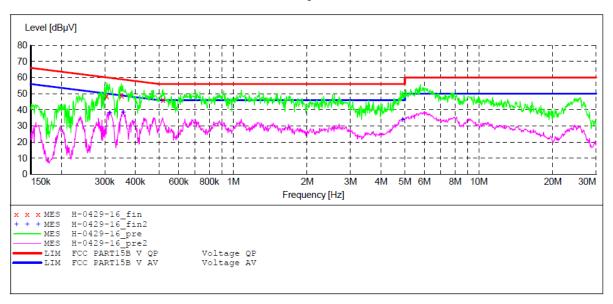
SCAN TABLE: "V 150K-30MHz fin"

Short Description: \_\_\_\_\_SUB\_STD\_VTERM2 1.70

Detector Meas. IF
Time Bandw. Start Stop Step Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "H-0429-16 fin"

1	/30/2013 2:3	30PM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.305276	48.50	11.6	60	11.6	QP	N	GND
	0.351053	48.70	11.7	59	10.2	QP	N	GND
	0.517062	46.20	12.0	56	9.8	QP	N	GND

#### MEASUREMENT RESULT: "H-0429-16 fin2"

1/30/2013 2:	30PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dΒμV	dB	dΒμV	dB			
0.313927	37.90	11.6	50	12.0	AV	N	GND
0.356703	38.20	11.7	49	10.6	AV	N	GND
4.893533	33.70	11.4	46	12.3	AV	N	GND

#### CONDUCTED EMISSION STANDARD FCC PART15B

EUT: MID M/N:VX-S7001

Manufacturer: Sungworld Operating Condition: Camera

Test Site: 1#Shielding Room

Bob Operator:

Test Specification: L AC120V/60Hz

Report NO.: ATE20130171 Comment: 1/30/2013 / 2:30:50PM Start of Test:

SCAN TABLE: "V 150K-30MHz fin"

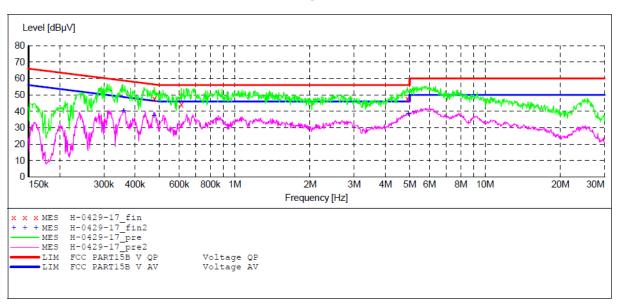
\_SUB\_STD\_VTERM2 1.70 Short Description:

Detector Meas. IF
Time Bandw. Start Step Transducer Stop

Width

Frequency Frequency 150.0 kHz 30.0 MHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008 0.8 %

Average



#### MEASUREMENT RESULT: "H-0429-17 fin"

1/30/2013 2: Frequency MHz			Limit dBµV	Margin dB	Detector	Line	PE
0.477384 0.611446 4.893533	44.10	12.0		8.8 11.9 8.5	QР	L1 L1 L1	GND GND GND

#### MEASUREMENT RESULT: "H-0429-17 fin2"

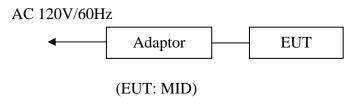
1/30/2013 2	:33PM						
Frequency				Margin	Detector	Line	PΕ
MHz	dΒμV	dB	dΒμV	dB			
0.359562	40.20	11.7	49	8.5	AV	$_{ m L1}$	GND
0.475482	37.20	12.0	46	9.2	AV	L1	GND
4.932760	38.20	11.4	46	7.8	AV	L1	GND

## 6. RADIATED EMISSION FOR FCC PART 15 SECTION 15.109(A)

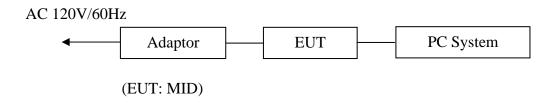
## 6.1.Block Diagram of Test Setup

6.1.1.Block diagram of connection between the EUT and simulators

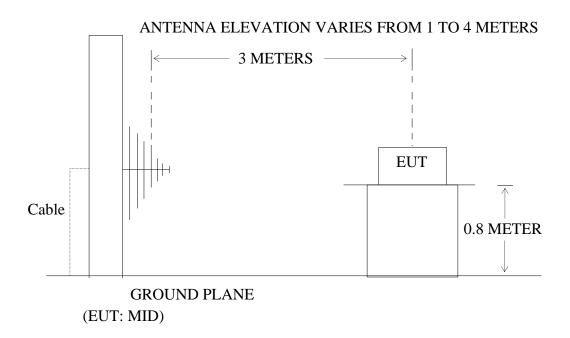
6.1.1.1. For Running & Camera playing



6.1.1.2.For Transfer data



6.1.2.Semi-Anechoic Chamber Test Setup Diagram



#### 6.2. The Emission Limit For Section 15.109 (a)

#### 6.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

	Lin	nit
Frequency (MHz)	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value $(dB\mu V/m)$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

#### 6.3.EUT Configuration on Measurement

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

#### 6.3.1.MID (EUT)

Model Number : VX-S7001

Serial Number : N/A

Manufacturer : Shenzhen Sungworld Electronics Co., Ltd.

#### 6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in (Running, Transfer data, Camera playing) mode measure it.

#### 6.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement.

The bandwidth of test receiver is set at 120kHz in 30-1000MHz and 1MHz in above 1000MHz.

The frequency range from 30MHz to 5000MHz is checked.

## 6.6.The Emission Measurement Result **PASS.**

Date of Test: February 1, 2013 Temperature: 25°C

EUT: MID Humidity: 50%

Model No.: VX-S7001 Power Supply: AC 120V/60Hz

Test Mode: Running Test Engineer: PEI

Frequency: 30-	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	32.4109	13.13	15.95	29.08	40.00	-10.92	QP
	2	55.6782	10.37	13.94	24.31	40.00	-15.69	QP
	3	142.2684	13.88	11.48	25.36	43.50	-18.14	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	32.2972	15.55	15.96	31.51	40.00	-8.49	QP
	2	58.0759	10.33	13.47	23.80	40.00	-16.20	QP
	3	143.2717	19.21	11.48	30.69	43.50	-12.81	QP
Frequency: 10	00-500	0MHz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1169.790	52.81	-12.50	40.31	74.00	-33.69	peak
Horizontal	2	1169.790	47.15	-12.50	34.65	54.00	-19.35	AVG
	3	3570.187	41.97	-2.89	39.08	74.00	-34.92	peak
	4	3570.187	36.32	-2.89	33.43	54.00	-20.57	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1169.790	53.39	-12.50	40.89	74.00	-33.11	peak
Vertical	2	1169.790	48.12	-12.50	35.62	54.00	-18.38	AVG
	3	2397.074	52.82	-7.48	45.34	74.00	-28.66	peak
	4	2397.074	47.54	-7.48	40.06	54.00	-13.94	AVG

Date of Test: February 1, 2013 Temperature: 25°C

EUT: MID Humidity: 50%

Model No.: VX-S7001 Power Supply: AC 120V/60Hz

Test Mode: Transfer data Test Engineer: PEI

Frequency: 30-	-1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	32.1840	16.11	15.98	32.09	40.00	-7.91	QP
	2	142.7692	15.49	11.49	26.98	43.50	-16.52	QP
	3	419.8509	13.78	20.09	33.87	46.00	-12.13	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	35.0156	18.21	15.69	33.90	40.00	-6.10	QP
	2	52.0826	13.47	14.29	27.76	40.00	-12.24	QP
	3	148.3951	25.55	11.51	37.06	43.50	-6.44	QP
Frequency: 10	000-500	0MHz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1965.930	49.63	-9.21	40.42	74.00	-33.58	peak
Horizontal	2	1965.930	44.46	-9.21	35.25	54.00	-18.75	AVG
	3	2397.074	52.35	-7.48	44.87	74.00	-29.13	peak
	4	2397.074	47.51	-7.48	40.03	54.00	-13.97	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1965.930	50.54	-9.21	41.33	74.00	-32.67	peak
Vertical	2	1965.930	45.51	-9.21	36.30	54.00	-17.70	AVG
	3	2749.020	46.16	-6.10	40.06	74.00	-33.94	peak
	4	2749.020	41.17	-6.10	35.07	54.00	-18.93	AVG

Date of Test: February 1, 2013 Temperature: 25°C

EUT: MID Humidity: 50%

Model No.: VX-S7001 Power Supply: AC 120V/60Hz

Test Mode: Camera playing Test Engineer: PEI

Frequency: 30-1	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	82.5257	23.39	13.01	36.40	40.00	-3.60	QP
	2	265.9035	25.60	15.81	41.41	46.00	-4.59	QP
	3	315.8601	24.32	17.22	41.54	46.00	-4.46	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	82.5257	22.95	13.01	35.96	40.00	-4.04	QP
	2	133.5493	27.25	12.74	39.99	43.50	-3.51	QP
	3	315.8601	25.02	17.22	42.24	46.00	-3.76	QP
Frequency: 10	00-500	0MHz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1110.210	56.02	-12.58	43.44	74.00	-30.56	peak
Horizontal	2	1110.210	51.02	-12.58	38.44	54.00	-15.56	AVG
	3	2392.757	50.14	-7.51	42.63	74.00	-31.37	peak
	4	2392.757	45.55	-7.51	38.04	54.00	-15.96	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1110.210	55.53	-12.58	42.95	74.00	-31.05	peak
Vertical	2	1110.210	50.13	-12.58	37.55	54.00	-16.45	AVG
	3	2397.074	50.60	-7.48	43.12	74.00	-30.88	peak
	4	2397.074	45.62	-7.48	38.14	54.00	-15.86	AVG

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

3. The spectral diagrams are attached as below display the measurement of peak values.



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Job No.: Bob #4788

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Running

Model: VX-S7001

Manufacturer: Sungworld

Note: Report NO.:ATE20130171

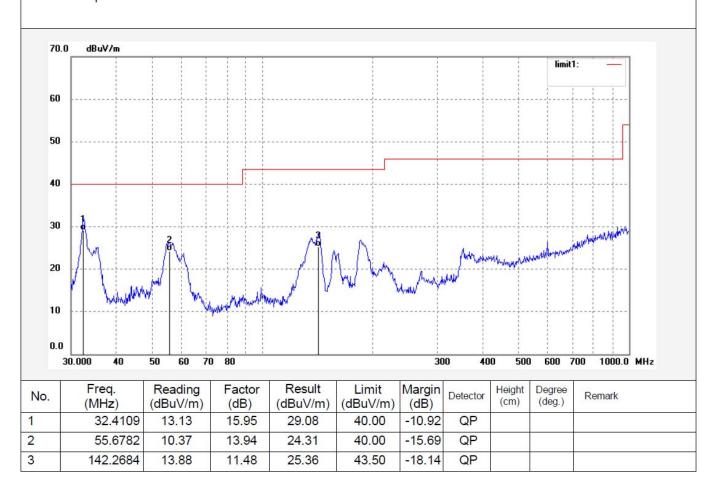
Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:12:12

Engineer Signature: Bob

Distance: 3m





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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #4789

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID Mode: Running Model: VX-S7001 Manufacturer: Sungworld

Note: Report NO.:ATE20130171 Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:14:25

Engineer Signature: Bob

Distance: 3m

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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.2972	15.55	15.96	31.51	40.00	-8.49	QP	7		
2	58.0759	10.33	13.47	23.80	40.00	-16.20	QP			
3	143.2717	19.21	11.48	30.69	43.50	-12.81	QP	· · · · · · · · · · · · · · · · · · ·		



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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #4802 Standard: FCC PK

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: Mode: Running Model: VX-S7001

Manufacturer: Sungworld

Power Source: AC 120V/60Hz Test item: Radiation Test Date: 2013/02/01

Time: 10:48:09

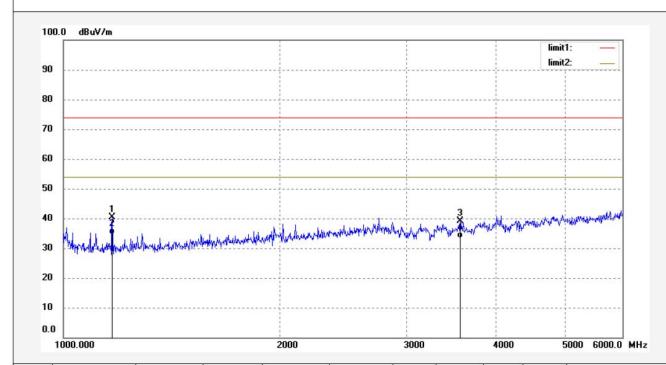
Polarization:

Engineer Signature: Bob

Horizontal

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1169.790	52.81	-12.50	40.31	74.00	-33.69	peak			
2	1169.790	47.15	-12.50	34.65	54.00	-19.35	AVG			
3	3570.187	41.97	-2.89	39.08	74.00	-34.92	peak			
4	3570.187	36.32	-2.89	33.43	54.00	-20.57	AVG			



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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #4803 Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID Mode: Running Model: VX-S7001

Note:

Manufacturer: Sungworld Report NO.:ATE20130171 Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:51:53

Engineer Signature: Bob

Distance: 3m

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Job No.: Bob #4794

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

Mode: Transfer data

Model: VX-S7001

Manufacturer: Sungworld

EUT: MID

Note: Report NO.:ATE20130171

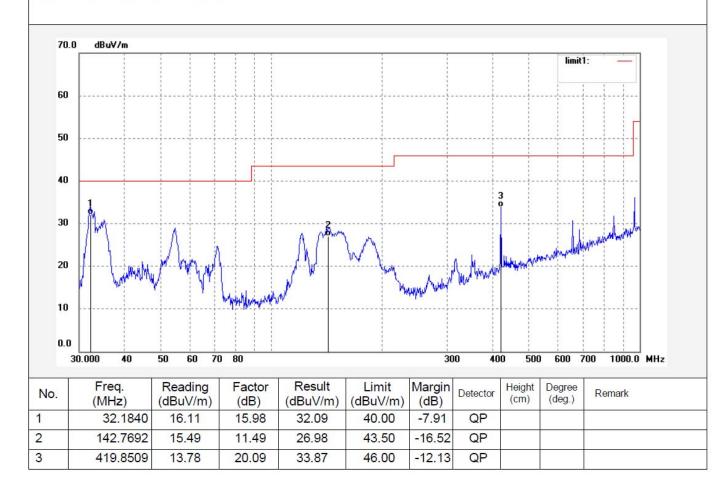
Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:26:31

Engineer Signature: Bob

Distance: 3m





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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #4795

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Transfer data Model: VX-S7001 Manufacturer: Sungworld Polarization: Vertical

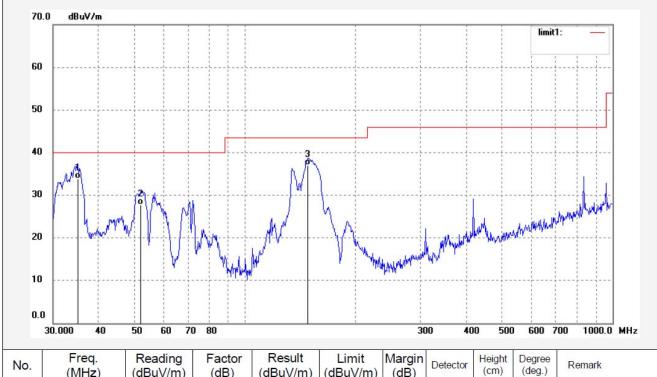
Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:28:44

Engineer Signature: Bob

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.0156	18.21	15.69	33.90	40.00	-6.10	QP			
2	52.0826	13.47	14.29	27.76	40.00	-12.24	QP			
3	148.3951	25.55	11.51	37.06	43.50	-6.44	QP			



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Job No.: Bob #4797 Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Transfer data

Model: VX-S7001

Manufacturer: Sungworld

Polarization: Horizontal

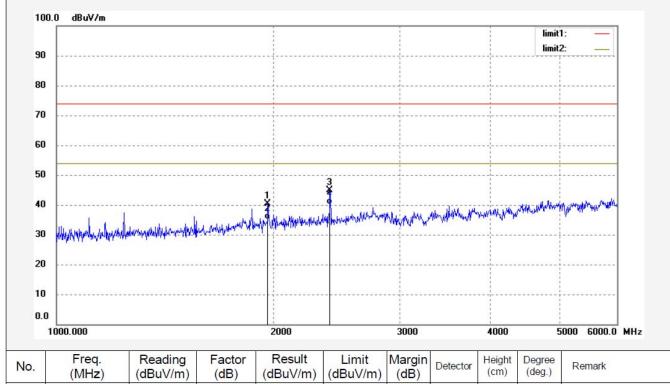
Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:35:27

Engineer Signature: Bob

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1965.930	49.63	-9.21	40.42	74.00	-33.58	peak			
2	1965.930	44.46	-9.21	35.25	54.00	-18.75	AVG			
3	2397.074	52.35	-7.48	44.87	74.00	-29.13	peak			
4	2397.074	47.51	-7.48	40.03	54.00	-13.97	AVG			



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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #4796 Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Transfer data Model: VX-S7001 Manufacturer: Sungworld

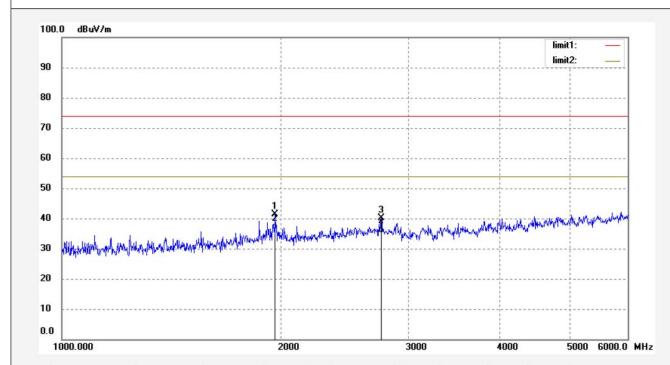
Polarization: Vertical Power Source: AC 120V/60Hz

> Date: 2013/02/01 Time: 10:33:38

Engineer Signature: Bob

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1965.930	50.54	-9.21	41.33	74.00	-32.67	peak			
2	1965.930	45.51	-9.21	36.30	54.00	-17.70	AVG			
3	2749.020	46.16	-6.10	40.06	74.00	-33.94	peak			
4	2749.020	41.17	-6.10	35.07	54.00	-18.93	AVG			



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Job No.: Bob #4790

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Camera Model: VX-S7001 Manufacturer: Sungworld

Note: Report NO.:ATE20130171

25.60

24.32

15.81

17.22

41.41

41.54

46.00

46.00

265.9035

315.8601

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:17:11

Engineer Signature: Bob

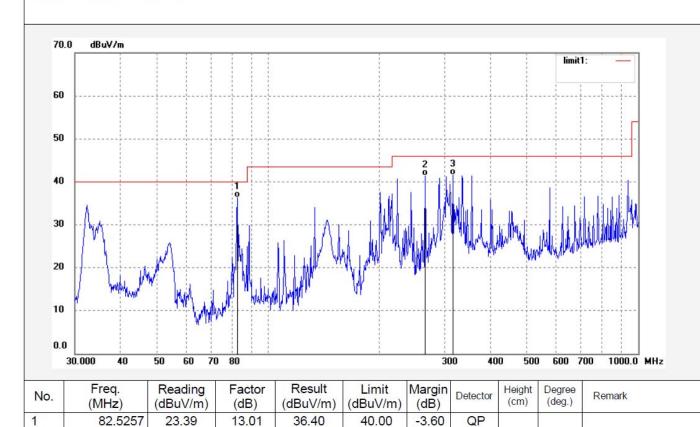
Distance: 3m

QP

QP

-4.59

-4.46



2

3



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Job No.: Bob #4791

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Camera

Model: VX-S7001

Manufacturer: Sungworld

Polarization: Vertical

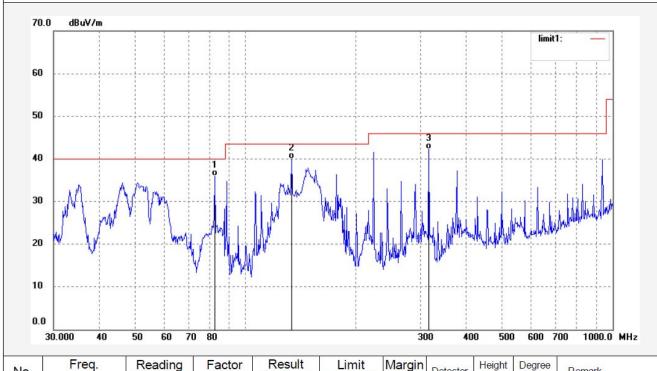
Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 11:19:40

Engineer Signature: Bob

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	82.5257	22.95	13.01	35.96	40.00	-4.04	QP			
2	133.5493	27.25	12.74	39.99	43.50	-3.51	QP			
3	315.8601	25.02	17.22	42.24	46.00	-3.76	QP			



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Job No.: Bob #4801 Standard: FCC PK Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Camera

Model: VX-S7001

Manufacturer: Sungworld

Polarization: Horizontal

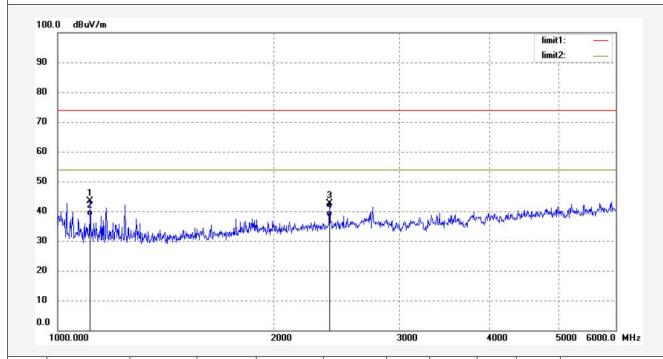
Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:46:36

Engineer Signature: Bob

Distance: 3m

Note: Report NO.:ATE20130171



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1110.210	56.02	-12.58	43.44	74.00	-30.56	peak			
2	1110.210	51.02	-12.58	38.44	54.00	-15.56	AVG			
3	2392.757	50.14	-7.51	42.63	74.00	-31.37	peak			
4	2392.757	45.55	-7.51	38.04	54.00	-15.96	AVG			



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Job No.: Bob #4800

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 55 %

EUT: MID

Mode: Camera

Model: VX-S7001

Manufacturer: Sungworld

Note: Report NO.:ATE20130171

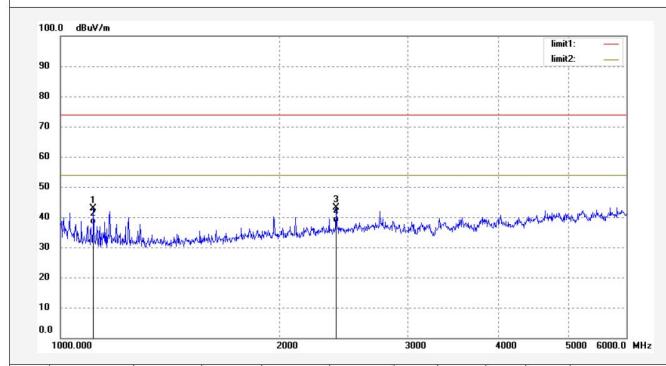
Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 2013/02/01 Time: 10:43:06

Engineer Signature: Bob

Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1110.210	55.53	-12.58	42.95	74.00	-31.05	peak			
2	1110.210	50.13	-12.58	37.55	54.00	-16.45	AVG			
3	2397.074	50.60	-7.48	43.12	74.00	-30.88	peak			
4	2397.074	45.62	-7.48	38.14	54.00	-15.86	AVG			