



ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test Report No. : E057R-029
Applicant : Vsst., Inc.
Address : Suite 3202, Korea World Trade Center, 150-1, Samsung-Dong, Kangnam-Gu, Seoul, 135-729, Korea
Manufacturer : Vsst., Inc.
Address : Suite 3202, Korea World Trade Center, 150-1, Samsung-Dong, Kangnam-Gu, Seoul, 135-729, Korea
Type of Equipment : MPEG-4 Audio/Video Streaming Network Adaptor
FCC ID : TGXVR-110A
Model Name : VR-110A
Serial number : N/A
Total page of Report : 11 pages (including this page)
Date of Incoming : June 20, 2005
Date of Issuing : July 07, 2005

SUMMARY

The equipment complies with the requirements of **FCC CFR 47 PART 15 SUBPART B, Class B**.

This test report contains only the results of a single test of the sample supplied for the examination. It is not a general valid assessment of the features of the respective products of the mass-production.

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1. VERIFICATION OF COMPLIANCE

- . APPLICANT : Vsst., Inc.
- . ADDRESS : Suite 3202, Korea World Trade Center, 150-1, Samsung-Dong, Kangnam-Gu, Seoul,
135-729, Korea
- . CONTACT PERSON : Mr. Joon-Bum, Park / Manager
- . TELEPHONE NO : +82-2-551-5721
- . FCC ID : TGXVR-110A
- . MODEL NO/NAME : VR-110A
- . SERIAL NUMBER : N/A
- . DATE : July 07, 2005

DEVICE TYPE	Peripheral Device for Class B Computing Device - Unintentional Radiator
E.U.T. DESCRIPTION	MPEG-4 Audio/Video Streaming Network Adaptor
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 2003
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15, SECTION 15.101
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

- . This device has shown compliance with the conducted emissions limits in 15.107 adopted under FCC 02-107 (ET Docket 98-80). The device may be marketed after July 11, 2005 affected by the 15.37(j) transition provisions.
- . The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



2. GENERAL INFORMATION

2.1 Product Description

The Vsst., Inc., Model VR-110A (referred to as the EUT in this report) is a MPEG-4 Audio/Video Streaming Network Adaptor that is support MPEG-4 VOD Server. EVDO mobile phone with RTSP player installed can use it with VOD service. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. or CRY. FREQ.(FREQ.>=1MHz)	25 MHz, 24.576 MHz, 10 MHz, 11.2856 MHz and 110 MHz on the main board 8 MHz on the video board
NUMBER OF LAYERS	4 Layers: Main Board, 6 Layers: Video Board
EXTERNAL CONNECTOR	DC In, Video In, Audio In, Serial, LAN Port, WAN Port, Relay/Sensor/RS485

2.2 Model Differences

- None

2.3 Related Submittal(s) / Grant(s)

- Original submittal only

2.4 Test System Details

The model numbers for all the equipments that were used in the tested system is:

Model	Manufacturer	FCC ID	Description
VR-110A	Vsst., Inc.	TGXVR-110A	MPEG-4 Audio/Video Streaming Network Adaptor (EUT)
YS6K10P	You Shin	N/A	AC/DC Adaptor
PP05LC	DELL	DoC	Notebook PC
N/A	N/A	N/A	CCD Camera
2225C	HP	DSI6XU2225	PRINTER

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at a distance of 3 meters from the EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 426-1 Daessangryung-Ri, Chowol-Eup, Kwangju-City, Kyunggi-Do, 464-080, Korea. Description details of test facilities were submitted to the Commission on April 04, 2003. (Registration Number: 340658)



3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	N/A	N/A	N/A
Video Board	N/A	RMNA_BB	N/A

3.2 Mode of operation during the test

After connecting the EUT to a notebook PC, the captured images by the CCD camera were displayed on the notebook PC through the EUT continuously.

3.3 Cable Description

Cable	Shielded	Ferrite Bead	Metal Hood	Length (m)	Connected to
DC IN	N	EUT END	N	1.2	AC/DC Adaptor
Video In	N	N	BOTH END	1.2	CCD Camera
Audio In	N	N	N	1.0	Notebook PC
Serial	N	N	N	1.0	Notebook PC
LAN	N	N	N	1.5	Notebook PC
WAN	N	N	N	1.5	Remote Hub
Relay/Sensor/RS485	N	N	N	1.2	-



3.4 Equipment Modifications

To achieve compliance to CLASS B levels, the following change(s) was made by ONETECH Corp. during compliance testing:

“There were no Modified items during EMI test”

3.5 Configuration of Test System

Line Conducted Test : The power of the EUT was supplied by AC/DC adapter and the adapter was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2003 7.2.3 to determine the worse operating conditions.

Radiated Emission Test : Preliminary radiated emission test was conducted using the procedure in ANSI C63.4: 2003 8.3.1.1 to determine the worse operating conditions. Final radiated emission test was conducted at 3 meters open area test site.

4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
The images captured by the camera were displayed on the notebook PC continuously.	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
The images captured by the camera were displayed on the notebook PC continuously.	X



5. FINAL RESULT OF MEASUREMENT

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test

Humidity Level	: <u>44 %</u>	Temperature: <u>22 °C</u>
Limits apply to	: <u>FCC CFR 47, PART 15, SUBPART B, SECTION 15.107 (a)</u>	
Type of Test	: <u>CLASS B</u>	
Result	: <u>PASSED BY -5.37 dB at 1.65 MHz</u>	

EUT	: MPEG-4 Audio/Video Streaming Network Adaptor	Date: June 16, 2005
Operating Condition	: The images captured by the camera were displayed on the notebook PC continuously.	
Detector	: CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)	

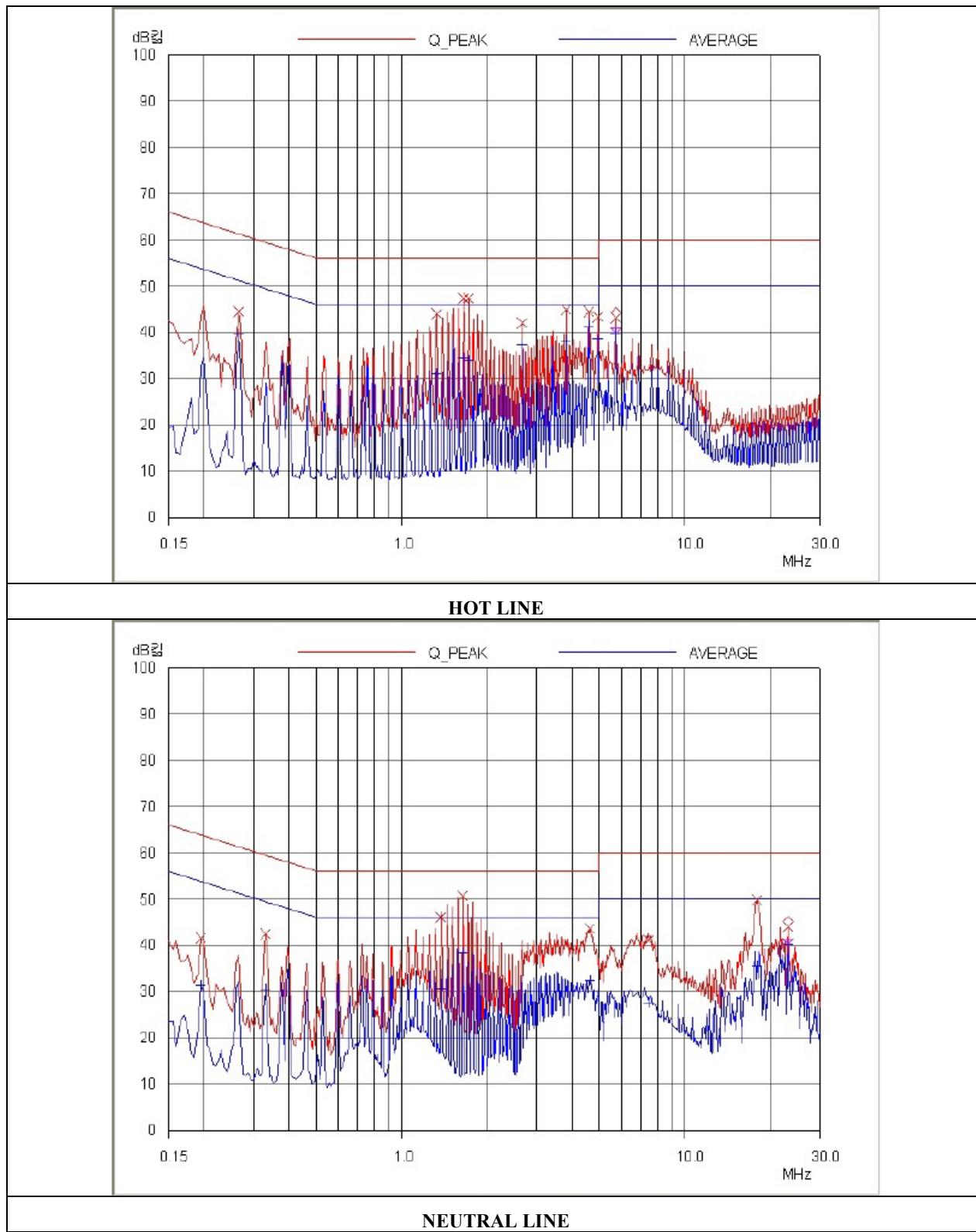
Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
1.38	N	45.91	56.00	-10.09
1.65	N	50.63	56.00	-5.37
1.66	H	47.24	56.00	-8.76
1.72	H	47.28	56.00	-8.72
3.78	H	44.81	56.00	-11.19
17.93	N	49.68	60.00	-10.32
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
1.38	N	30.55	46.00	-15.45
1.65	N	38.37	46.00	-7.63
1.66	H	34.49	46.00	-11.51
1.72	H	33.97	46.00	-12.03
3.78	H	38.28	46.00	-7.72
17.93	N	35.61	50.00	-14.39

Line Conducted Emission Tabulated Data

Remark : "H": Hot Line, "N": Neutral line

See next page for an overview sweep performed with average and peak detector.

Tested by: Sung-Chel, You / Test Engineer



**5.2 Radiated Emission Test**

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level	: <u>41 %</u>	Temperature: <u>24 °C</u>
Limits apply to	: <u>FCC CFR 47, PART 15, SUBPART B, SECTION 15.109 (a)</u>	
Type of Test	: <u>CLASS B</u>	
Result	: <u>PASSED BY -2.25 dB at 750.00 MHz</u>	

EUT	: MPEG-4 Audio/Video Streaming Network Adaptor	Date: July 06, 2005
Operating Condition	: The images captured by the camera were displayed on the notebook PC continuously.	
Detector	: CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)	
Frequency Range	: 30 MHz – 2000 MHz	
Distance	: 3 Meter	

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)		Ant. (dBuV/m)	Cable (dB)		Amp. (dBuV/m)	Limit (dBuV/m)
53.00	24.30	V	9.64	1.44	35.38	40.00	-4.62
81.00	25.50	V	6.93	1.72	34.15	40.00	-5.85
125.00	20.10	V	13.41	2.10	35.61	43.52	-7.91
200.00	16.40	V	15.87	2.80	35.07	43.52	-8.45
299.70	18.00	H	20.04	3.80	41.84	46.02	-4.18
375.00	20.00	H	14.90	4.30	39.20	46.02	-6.82
400.00	19.00	H	15.46	4.40	38.86	46.02	-7.16
500.00	21.00	H	17.21	5.50	43.71	46.02	-2.31
600.00	18.50	H	18.65	5.30	42.45	46.02	-3.57
625.00	19.00	H	18.96	5.50	43.46	46.02	-2.56
750.00	15.60	H	21.27	6.90	43.77	46.02	-2.25

Radiated Emissions Tabulated Data

Tested by: Sung-Chel, You / Test Engineer



6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+ Meter reading (dBuV)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/meter)

= Corrected Reading (dBuV/meter)

- Specification Limit (dBuV/meter)

= dB Relative to Spec (+/- dB)



7. LIST OF TEST EQUIPMENT

USE	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL
■	Test receiver	R/S	ESVS10	827864/005	DEC/04	12MONTH
	Spectrum analyzer	HP	8566B	3407A08547	JUL/04	12MONTH
■	Spectrum analyzer	HP	85680B	3001A04955	APR/05	12MONTH
■	RF preselector	HP	85685A	3107A01268	APR/05	12MONTH
■	Quasi-Peak Adapter	HP	8574B	2811A01432	APR/05	12MONTH
■	Biconical antenna	Schwarzbeck	VHA9103	91031852	JAN/05	12MONTH
■	Log Periodic antenna	Schwarzbeck	9108-A(494)	62281001	FEB/05	12MONTH
	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	APR/05	12MONTH
■	Test receiver	R/S	ESHS 10	834467/007	MAY/05	12MONTH
■	LISN	Schwarzbeck	NSLK 8128	8128-216	JUN/05	12MONTH
■		EMCO	3825/2	9109-1869	NOV/04	12MONTH
		Schwarzbeck	NSLK 8126	8126-404	MAY/05	12MONTH
		EMCO	3825/2	9109-1867	JULY/04	12MONTH