



ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test report file number : E03DR-037

Applicant : DVICO INC.
**Address : Onse Telecom B/D 4F, 192-2, Goomi-Dong, Boondang-Ku, Sungnam-City,
Kyungki-Do, 463-810, Korea**

Manufacturer : DVICO INC.
**Address : Onse Telecom B/D 4F, 192-2, Goomi-Dong, Boondang-Ku, Sungnam-City,
Kyungki-Do, 463-810, Korea**

Type of Equipment : Editing Card

FCC ID : PAHFUSIONMPEGII

Model Name : Fusion MPEG II

Serial Number : N/A

Total page of Report : 12 pages (including this page)

Date of Incoming : April 23, 2003

Date of Issuing : December 16, 2003

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.

Prepared by: 
G. W. Lee/ Chief Engineer
EMC Div.
ONETECH Corp.

Reviewed by: 
Y. K. Kwon/ Director
EMC Div.
ONETECH Corp.



CONTENTS

	Page
1. VERIFICATION OF COMPLIANCE	3
2. GENERAL INFORMATION.....	4
2.1 PRODUCT DESCRIPTION.....	4
2.2 MODEL DIFFERENCES:.....	4
2.3 RELATED SUBMITTAL(S) / GRANT(S)	4
2.4 TEST SYSTEM DETAILS	4
2.5 TEST METHODOLOGY	5
2.6 TEST FACILITY	5
3. SYSTEM TEST CONFIGURATION.....	6
3.1 JUSTIFICATION	6
3.2 EUT EXERCISE SOFTWARE.....	6
3.3 CABLE DESCRIPTION	6
3.4 NOISE SUPPRESSION PARTS ON CABLE	6
3.5 EQUIPMENT MODIFICATIONS	7
3.6 CONFIGURATION OF TEST SYSTEM	7
4. PRELIMINARY TEST	7
4.1 AC POWER LINE CONDUCTED EMISSION TEST	7
4.2 RADIATED EMISSION TEST	7
5. FINAL RESULT OF MEASUREMENT	8
5.1 CONDUCTED EMISSION TEST.....	8
5.2 RADIATED EMISSION TEST	10
6. FIELD STRENGTH CALCULATION	11
7. LIST OF TEST EQUIPMENT.....	12

**1. VERIFICATION OF COMPLIANCE**

- APPLICANT : DVICO INC.
- ADDRESS : Onse Telecom B/D 4F, 192-2, Goomi-Dong, Boondang-Ku, Sungnam-City, Kyungki-Do,
463-810, Korea
- CONTACT PERSON : Mr. Young-Jin, Park / Engineer
- TELEPHONE NO : +82-31-728-1394
- FCC ID : PAHFUSIONMPEGII
- MODEL NAME : Fusion MPEG II
- SERIAL NUMBER : N/A
- DATE : December 16, 2003

DEVICE TYPE	Peripheral Device for Class B Computing Device - Unintentional Radiator
E.U.T. DESCRIPTION	Editing Card
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 2001
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15(B), 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 DVICO INC., Model Fusion MPEG II (referred to as the EUT in this report) is an Editing Card that is converts all type of analog audio/video signals to digital stream. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Non-Metal
LIST OF EACH OSC. or CRY. FREQ.(FREQ.>=1MHz)	24 MHz, 27MHz and 32.110MHz on Main Board
NUMBER OF LAYERS	6 Layers
EXTERNAL CONNECTOR	Video In(S-Video, Composite), Audio In(R, L), USB Interface

2.2 Model Differences:

The difference(s) compared to the EUT is as follows: 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	Connected to
Fusion MPEG II	DVICO INC.	PAHFUSIONMPEGII	Editing Card (EUT)	PC
GX240	DELL Computer Corp.	DoC	PC	-
DRLCD15TV	BTC KOREA	DoC	MONITOR	PC
SK-8110	SILITEK	DoC	KEYBOARD	PC
X06-08477	Microsoft Corp.	DoC	MOUSE	PC
2225C	HP	DSI6XU2225	PRINTER	PC
020-0470	Cardinal	GDE0196	MODEM	PC
GHV-S9990	GoldStar	N/A	VCR	EUT



2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4: 2001. Radiated testing was performed at a distance of 3 meters from 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-Myun, Kwangju-Kun, Kyunggi-Do 464-080 Korea. Description details of test facilities were submitted to the Commission on January 18, 2002. (Registration Number: 92819)

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 B'D	DVICO INC.	Fusion MPEG II	N/A

3.2 EUT exercise Software

- After connecting the EUT to the personal computer and the VCR, the "Color Bar" images were continuously displayed to the screen of PC monitor through the VCR.

3.3 Cable Description

	Power Cord Shielded (Y/N)	I/O cable Shielded (Y/N)	Length (M)
Editing Card (EUT)	N/A	N	1.2(D)(USB)
PC	N	-	1.8(P)
MONITOR	N	Y	1.5(P), 1.5(D)
KEYBOARD	N/A	N	1.5(D)
MOUSE	N/A	N	1.3 (D)
PRINTER	N	Y	1.8(P), 1.5(D)
MODEM	N	Y	1.8(P), 1.5(D)
VCR	N	Y	1.8(P), 1.5(D)

* The marked "(P)" means the Power Cable and "D" means the I/O Cable.

3.4 Noise Suppression Parts on Cable

	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
Editing Card (EUT)	Y	BOTH END EUT END(S-Video)	Y	BOTH END
PC	-	-	-	-
MONITOR	Y	BOTH END	Y	BOTH END
KEYBOARD	N	N/A	Y	PC END
MOUSE	N	N/A	Y	PC END
PRINTER	N	N/A	Y	BOTH END
MODEM	N	N/A	Y	BOTH END
VCR	Y	BOTH END	Y	BOTH END

It should not be reproduced except in full, without the written approval of ONETECH.

EMC-003 (Rev.0)

HEAD OFFICE : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Kyunggi-Do, 462-121, Korea
(TEL: +82-31-746-8500, FAX: +82-31-746-8700)

EMC Testing Dept : 426-1 Daessangryung-Ri, Chowol-Myun, Kwangju-City, Kyunggi-Do 464-860 Korea. (TEL: +82-31-765-8289, FAX: +82-31-766-2904)



3.5 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”

3.6 Configuration of Test System

Line Conducted Test : The EUT was connected to USB port of PC and the power line of PC 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: 2001, 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: 2001, 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 “Color Bar” images were continuously displayed to the screen of PC monitor through the VCR.	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 “Color Bar” images were continuously displayed to the screen of PC monitor through the VCR.	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 TestHumidity Level : 42 %Temperature: 26 °CLimits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107 (a)Type of Test : CLASS BResult : PASSED BY -17.83 dB at 0.74 MHz

EUT : Editing Card

Date: May 29, 2003

Operating Condition : The "Color Bar" images were displayed to the screen of PC monitor through the VCR.

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.58	N	33.01	56.00	-22.99
0.74	H	38.17	56.00	-17.83
1.25	N	32.80	56.00	-23.20
1.73	H	34.03	56.00	-21.97
6.34	N	38.32	60.00	-21.68
7.50	N	41.45	60.00	-18.55
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
-				
-				

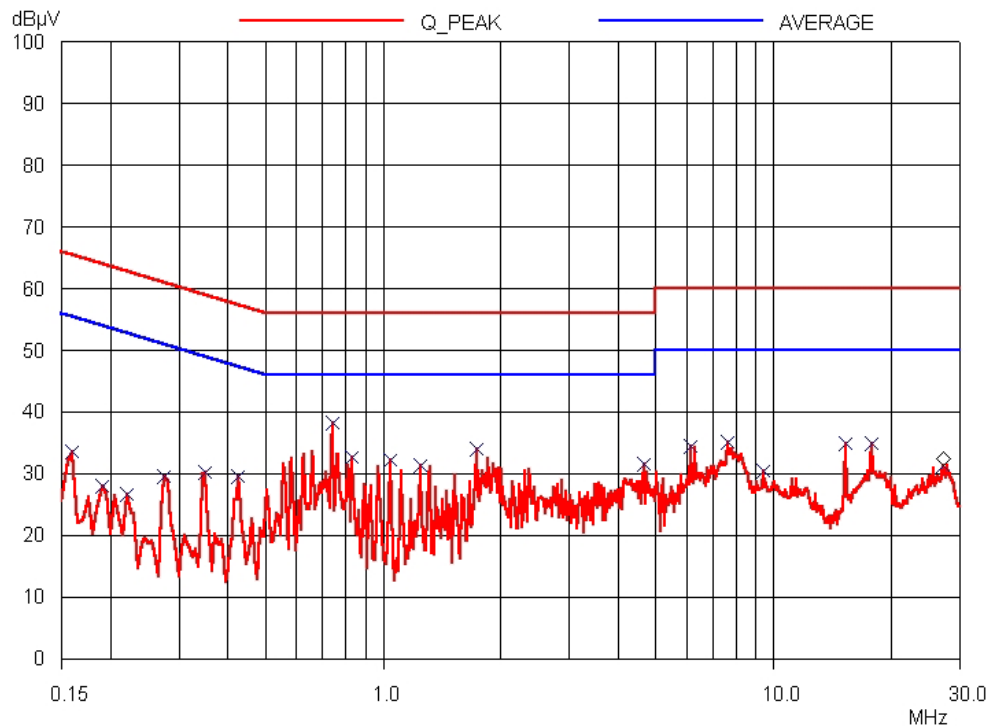
Line Conducted Emission Tabulated Data

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

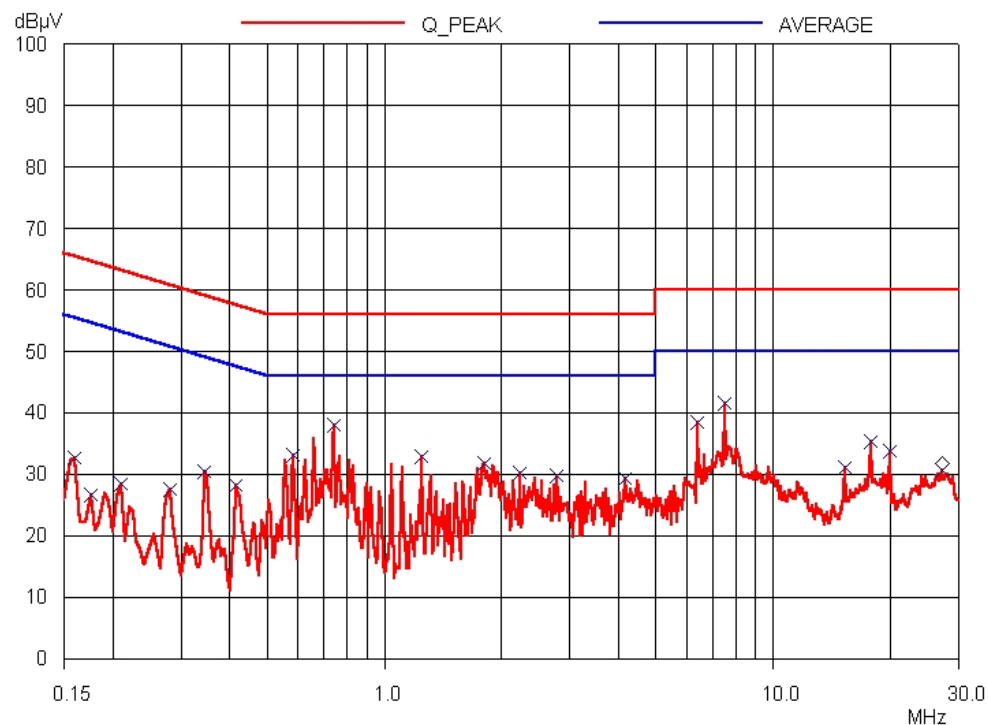
Average data was not measured, because Peak values were under the Average limit.

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

Tested by: Dong-Yub, Lee / Test Engineer



HOT LINE



NEUTRAL LINE

**5.2 Radiated Emission Test**

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

Humidity Level : 42 % Temperature: 27 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109 (a)
 Type of Test : CLASS B
 Result : PASSED BY -3.15 dB at 404.60 MHz

EUT : Editing Card Date: July 21, 2003
 Operating Condition : The "Color Bar" images were displayed to the screen of PC monitor through the VCR.
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter

Radiated Emissions		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
60.00	19.20	H	9.41	0.98	29.59	40.00	-10.41
72.00	23.20	H	7.39	1.00	31.59	40.00	-8.41
120.00	21.20	V	13.47	1.23	35.90	43.50	-7.60
135.00	21.40	V	12.76	1.29	35.45	43.50	-8.05
215.60	17.50	H	10.93	1.65	30.08	43.50	-13.42
242.80	16.60	H	11.75	1.79	30.14	46.00	-15.86
270.00	21.40	H	12.74	1.88	36.02	46.00	-9.98
297.00	15.00	H	14.84	1.99	31.83	46.00	-14.17
351.40	16.40	H	14.47	2.29	33.16	46.00	-12.84
404.60	25.10	H	15.31	2.44	42.85	46.00	-3.15
542.00	15.40	H	17.90	2.76	36.06	46.00	-9.94
810.00	13.70	H	21.51	3.73	38.94	46.00	-7.06

Radiated Emissions Tabulated Data

Tested by: Dong-Yub, Lee / 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

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS 10	827864/005	NOV/03	12MONTH	■
2.	Test receiver	R/S	ESHS 10	834467/007	APR/03	12MONTH	■
3.	Spectrum analyzer	HP	8566B	3407A08547	MAY/03	12MONTH	
4.	Spectrum analyzer	HP	8568B	3109A05456	MAY/03	12MONTH	■
5.	RF preselector	HP	85685A	3107A01264	MAY/03	12MONTH	■
6.	Quasi-Peak Adapter	HP	85650A	3107A01542	MAY/03	12MONTH	■
7.	Matching Pad	TME	ZT-130	9F 954	N/A	N/A	
8.	Color Pattern Generator	LEADER	LT416	3347622	N/A	N/A	
9.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	FEB/03	12MONTH	
10.	Biconical antenna	EMCO	3104C	9109-4443	MAY/03	12MONTH	
				9109-4444	JUL/03	12MONTH	■
		Schwarzbeck	VHA9103	91031852	AUG/02	12MONTH	
11.	Log Periodic antenna	EMCO	3146	9109-3213	AUG/02	12MONTH	
				9109-3214	JUL/03	12MONTH	■
				9109-3217	MAY/03	12MONTH	
		Schwarzbeck	9108-A(494)	62281001	AUG/02	12MONTH	
12.	LISN	EMCO	3825/2	9109-1867	AUG/03	12MONTH	■
				9109-1869	OCT/03	12MONTH	■
13.	Position Controller	EMCO	1090	9107-1038	N/A	N/A	■
14.	Turn Table	EMCO	1080-1.21	9109-1576	N/A	N/A	■
15.	Antenna Master	EMCO	1070-1	9109-1624	N/A	N/A	■