ELECTROMAGNETIC EMISSION COMPLIANCE REPORT
FOR FCC CLASS B CERTIFICATION

Test Report No.	**: E075R-050**
AGR No.	**: A073A-045**
Applicant	**: MIP Co.**
Address	**: 1001 Ace Twin Tower II Bldg., 212-30, Guro-dong, Guro-gu, Seoul, Korea**
Manufacturer	**: MIP Co.**
Address	**: 1001 Ace Twin Tower II Bldg., 212-30, Guro-dong, Guro-gu, Seoul, Korea**
Type of Equipment	**: Electronic Signature Capture Pad (Peripheral Device for Class B Computing Device)**
FCC ID	**: VDXMIPTEK**
Model Name	**: MSP-2000**
Multiple Model Name	**: MSP-2000B**
Serial number	**: N/A**
Total page of Report	**: 12 pages (including this page)**
Date of Incoming	**: May 22, 2007**
Date of Issuing	**: May 28, 2007**

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: Do-Seob, Choi / Project Engineer
EMC Div.
ONETECH Corp.

Reviewed by: G. W. Lee / Chief Engineer
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ONETECH Corp.

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1. VERIFICATION OF COMPLIANCE

-. APPLICANT : MIP Co.

-. ADDRESS : 1001 Ace Twin Tower II Bldg., 212-30, Guro-dong, Guro-gu, Seoul, Korea

-. CONTACT PERSON : Mr. Young-Nam, An / Manager

-. TELEPHONE NO : +82-2-867-5481~2

-. FCC ID : VDXMIPTEK

-. MODEL NAME : MSP-2000

-. BRAND NAME : N/A

-. SERIAL NUMBER : N/A

-. DATE : May 28, 2007

DEVICE TYPE	Peripheral Device for Class B Computing Device - Unintentional Radiator
E.U.T. DESCRIPTION	Electronic Signature Capture Pad
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	None
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

-. 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.

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2. GENERAL INFORMATION

2.1 Product Description

The MIP Co., Model MSP-2000 (referred to as the EUT in this report) is an Electronic Signature Capture Pad. 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)	16 MHz and 6 MHz
POWER REQUIREMENT	DC 5V
NUMBER OF LAYERS	2 Layers
EXTERNAL CONNECTOR	USB Port

2.2 Model Differences

The following lists consist of the added model and their differences.

	Model Name	Model Differences
Basic Model	MSP-2000	-
Multiple Model	MSP-2000B	The model is same to the basic model except for the enclosure.

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
MSP-2000	MIP Co.	VDXMIPTEK	Electronic Signature Capture Pad (EUT)	Notebook PC
PP05LC	Dell Computer	DoC	Notebook PC	-
MO56UOA	Dell Computer	N/A	Mouse	Notebook PC
2225C	HP	DSI6XU2	Printer	Notebook PC
3453C	U.S.Robotics	CJE-0263	Modem	Notebook PC

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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 EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 307-51 Daessangryung-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-080, Korea. Description details of test facilities were submitted to the Commission on August 30, 2005. (Registration Number: 340658)

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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	SIGN-PAD-POS	N/A
LCD Board	N/A	CMBG24064A01-00	N/A

3.2 Mode of operation during the test

-. The EUT was operated with normal operating mode during the test.

3.3 Cable Description

Ports Name	Shielded	Ferrite Bead	Metal Shell	Length (m)	Connected to
USB Port	Y	EUT END	PC END	1.5	Notebook PC

3.4 Equipment Modifications

-. None

3.5 Configuration of Test System

Line Conducted Test : The EUT was connected Notebook PC and the AC/DC adaptor of the Notebook PC were 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.

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4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The operating condition (Please check one only)
The EUT was operated with PAD mode.	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The operating condition (Please check one only)
The EUT was operated with PAD mode.	X

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5. FINAL RESULT OF MEASURMENT

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 : 39 % Temperature: 24 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107 (a)

Type of Test : CLASS B

Result : PASSED BY –10.05dB at 0.15 MHz under peak mode

EUT : Electronic Signature Capture Pad Date: May 22, 2007

Operating Condition : The EUT was operated with PAD mode.

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

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)	Average (dBuV)		Margin (dB)
		Emission level	Limits		Emission level	Limits	
0.15	N	55.95	66.00	-10.05	40.19	56.00	-15.81
0.16	H	55.49	65.73	-10.24	39.44	55.73	-16.29
0.19	H	50.68	64.26	-13.58	36.74	54.26	-17.52
0.31	N	44.94	60.11	-15.17	34.31	50.11	-15.80
3.62	N	42.38	56.00	-13.62	22.82	46.00	-23.18
3.65	H	41.42	56.00	-14.58	22.82	46.00	-23.18

Line Conducted Emission Tabulated Data

Remark : “H”: Hot Line, “N”: Neutral line

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

Tested by: Eung-Chan, Kim / Test Engineer

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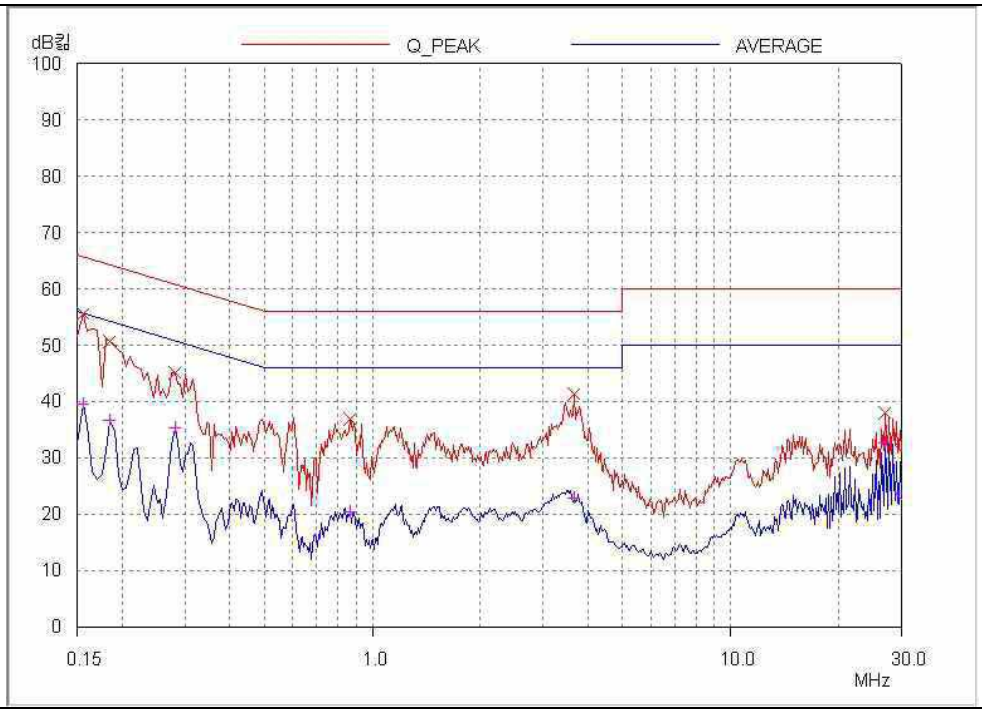
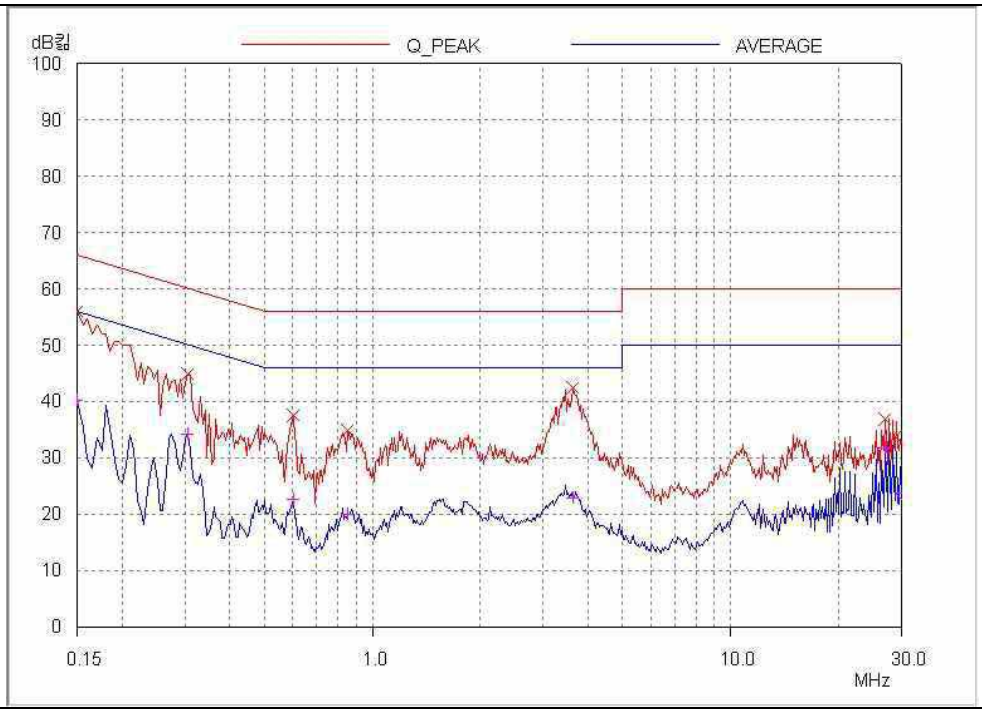


HOT LINE



NEUTRAL LINE

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5.2 Radiated Emission Test

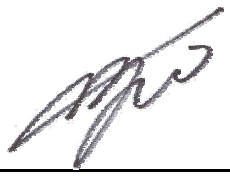
The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level : 43 % Temperature: 23 °C
Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109 (a)
Type of Test : CLASS B
Result : PASSED BY -4.61 dB at 501.00 MHz

EUT : Electronic Signature Capture Pad Date: May 22, 2007
Operating Condition : The EUT was operated with PAD mode.
Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
Frequency Range : 30 MHz – 1000 MHz
Distance : 3 Meter

Frequency (MHz)	Reading (dBuV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBuV/m)	Limits (dBuV/m)	Margin (dB)
119.90	23.00	Peak	V	12.97	2.70	38.67	43.52	-4.85
189.00	17.10	Peak	H	16.05	2.90	36.05	43.52	-7.47
197.00	16.00	Peak	H	16.32	3.25	35.57	43.52	-7.95
381.00	13.00	Peak	H	16.99	4.59	34.58	46.02	-11.44
432.00	18.00	Peak	H	18.45	4.83	41.28	46.02	-4.74
501.00	16.50	Peak	H	19.61	5.30	41.41	46.02	-4.61

Radiated Emissions Tabulated Data



Tested by: Eung-Chan, Kim / Test Engineer

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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)

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7. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS10	827864/005	DEC/06	12MONTH	■
2.	Test receiver	R/S	ESHS10	834467/007	MAY/07	12MONTH	■
3.	Spectrum analyzer	HP	8566B	3407A08547	JUN/06	12MONTH	
		R/S	FSP	100017	JUN/06		■
4.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	MAY/06	12MONTH	
5.	Biconical antenna	EMCO	3110	9003-1121	FEB/06	12MONTH	
		Schwarzbeck	VHA9103	91031852	FEB/07		■
6.	Log Periodic antenna	EMCO	3146	9001-2614	FEB/06	12MONTH	
		Schwarzbeck	9108-A(494)	62281001	FEB/07		■
7.	LISN	EMCO	3825/2	9109-1867	JUN/06	12MONTH	■
				9109-1869	JUN/06		
		Schwarzbeck	NSLK 8128	8128-216	JUL/06		■
8.	Position Controller	HD GmbH	HD100	N/A	N/A	N/A	■
9.	Turn Table	HD GmbH	DS420S	N/A	N/A	N/A	■
10.	Antenna Master	HD GmbH	MA240	N/A	N/A	N/A	■
11.	RF Amplifier	HP	8447D	2727A04987	JUN/06	12MONTH	■

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