

Certificate of Test

August 2007

WinMate Communications INC.

Product Type : power module
Model Number : DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)
Brand Name : WinMate
Test Report Number : 0707021 Rev. 1
Date of Test : July 10, 2007

This Product was tested to the following standards at the laboratory of Global EMC Standard Tech. Corp., and found Compliance.

Standards:

FCC CFR 47, Part 15 Subpart B / CISPR 22 3rd Edition: 1997, Class B
ANSI C63.4: 2003
Canadian ICES-003

<http://www.gestek.com.tw>



Sharon Chang, President

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Date: August 02, 2007



DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)



hereby declares that the product

Product Name: power module

Model Number: DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)

Conforms to the following specifications:

CISPR 22, Subpart B, Section 15.109(a), Class B Digital Device

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name : _____

Signature : _____

Date : _____



**Test Report
Application for
Declaration of Conformity
On Behalf Of**

WinMate Communications INC.

EUT: power module

Model Number: DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)

Prepared for:

WinMate Communications INC.

**9F, No. 111-6, Shing-De Rd., San-Chung City, Taipei 241, Taiwan,
R.O.C.**

**Report By : Global EMC Standard Tech. Corp.
No.3 Pau-Tou-Tsuo Valley, Chia-Pau
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Taiwan, R.O.C.
Tel : 886-2-2603-5321
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Test results given in this report only relate to the specimen(s) tested, calibrated or measured.
This report shall not be reproduced other than in full without the written consent of Gestek.
This report must not be use to claim product endorsement by any agency of the U.S. Government.
All data in this report are traceable to national standard or international standard.

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1. CERTIFICATION

Applicant : **WinMate Communications INC.**
 EUT Description : power module
 Model Number : DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)
 Brand Name : WinMate
 Serial Number : N/A
 Tested Power Supply : DC Input: 24V, 7.5A

MEASUREMENT PROCEDURES USED:

- CFR 47, Part 15** Radio Frequency Device Subpart B Unintentional Radiators Class B
- CISPR 22 3rd Edition:1997** Limits and methods of measurement of radio disturbance Characteristics of information technology equipment: 1997
- ANSI C63.4** Methods of Measurements of Radio-Noise Emissions from Low- Voltage Electrical and Electronic Equipment in the range of 9kHz To 40GHz:2003
- Canadian ICES-003** Implementation and Interpretation off the Interference-Causing Equipment Standard for Digital Apparatus, ICES-003

THE MEASUREMENT SHOWN IN THE ATTACHMENT WAS MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED, AND THE MAXIMUM ENERGY EMITTED BY THE EQUIPMENT WAS FOUND TO BE WITHIN THE ABOVE LIMITS APPLICABLE.



NVLAP LAB CODE 200085-0

Date of Test : July 10, 2007

In order to ensure the quality and accuracy of this document, the contents have been thoroughly reviewed by the following qualified personnel from GesTek Lab.

Documented By :	Tested By :
_____	_____
Rini Chen / adm. Dept. Supervisor	Jimmy Wang / eng. Dept. Engineer

Approved By :

 Tony Lin / General Manager

This test data shown below is traceable to National or international standard such as NIST/USA, etc. The laboratory's NVLAP accreditation in no way constitutes or implies product certification, approval, or endorsement by NVLAP or the United States government.

2. SUMMARY OF TEST RESULTS

The Worst Emission data was found as following

STANDARD	TEST ITEM	TEST RESULT	REMARKS
(1)FCC Part 15 (2)CISPR 22 3 rd Edition:1997 (3)Canadian ICES-003. Class B	Radiated emission (Mode 1)	PASS	The worst emission frequency is <u>207.5148</u> MHz at <u>Vertical</u> . And minimum passing margin is <u>-5.75</u> dB. Height of antenna is <u>1.0</u> M. Angle of turntable is <u>133</u> ° . The measurement uncertainty is <u>5.1</u> dB.

3. GENERAL INFORMATION

3.1 PRODUCTION DESCRIPTION

Product Name : power module
Model Number : DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)
Brand Name : WinMate
Serial Number : N/A
Applicant : WinMate Communications INC.
Address : 9F, No. 111-6, Shing-De Rd., San-Chung City, Taipei 241, Taiwan, R.O.C.
Manufacturer : WinMate Communications INC.
Address : 9F, No. 111-6, Shing-De Rd., San-Chung City, Taipei 241, Taiwan, R.O.C.
Power Supply : DC Input: 24V, 7.5A; DC Output: 12V, 5A; 5V, 7A; 3.3V, 5A; -12V, 0.5A

3.2 TEST MODES & EUT COMPONENTS DESCRIPTION

EUT: power module, M/N: DD-24Ax-xxx(x=0~9, a~z, A~Z, blank)	
Test Mode Name	Mode 1 –Full Load

Note:

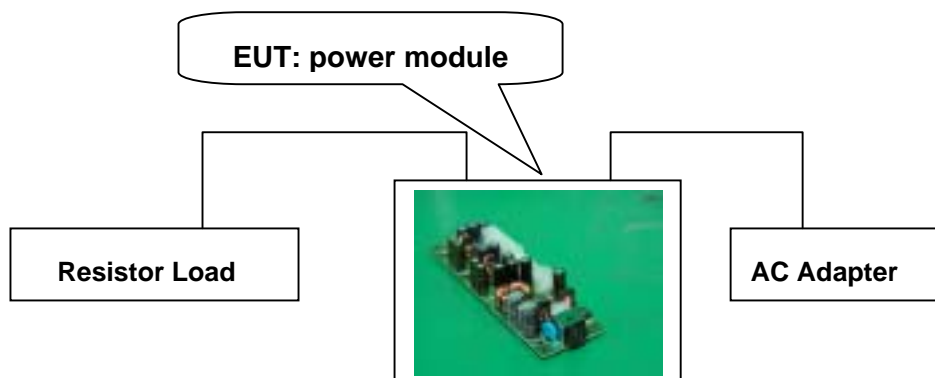
1. According to pre-scan data, we determine the data shown in this test report, which reflects the worst-case data for each operation mode.
2. The EUT has series model numbers for the requirement of marketing.

3.3 CONFIGURATION OF THE TESTED SYSTEM

The FCC IDs/Types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

Device	No.	Configuration
Resistor Load	R03-001	DC BURN IN LOAD
		Manufacturer : D-RAM
		Model Number : 2000-2
		Serial Number : ProtoType
AC Adapter	-----	Manufacturer : CHI SAM ELECTRONIC ENTERPRISE CO., LTD.
		Model Number : PL200-24P

3.4 BLOCK DIAGRAM OF CONNECTIONS BETWEEN EUT AND SIMULATORS



3.5 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2003.

Radiated testing was performed at an antenna to EUT distance of 10 meters.

(For frequencies below 1000MHz)

3.6 TEST FACILITY

Ambient conditions in the laboratory:

ITEMS	Requirement
TEMPERATURE (°C)	10-40
HUMIDITY (%RH)	10-90
BAROMETRIC PRESSURE (mbar)	860-1060
FCC SITE DESCRIPTION	Aug. 10, 1995 /Aug. 25, 1998 File on FCC Engineering Laboratory Federal Communication Commission 7435 Oakland Mills Road Columbia, MD 21046 Reference 31040/SIT1300F2
NVLAP LAB. CODE	200085-0 United States Department of commerce National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program Accreditation on NVLAP effective through Sep. 30,2007 For CISPR 22, FCC Method and AS/NZS CISPR 22 Measurement.
Taiwan Accreditation Foundation (TAF)	Recognized by the Council of Taiwan Accreditation Foundation and confirmed to meet the requirements of ISO/IEC 17025. Registration No.: 1082 Registration on TAF effective through Sep. 19,2009

4. RADIATED EMISSION MEASUREMENT

4.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Radiated emission measurement was performed at: Site #1 Site #2 Site #3 Site #4

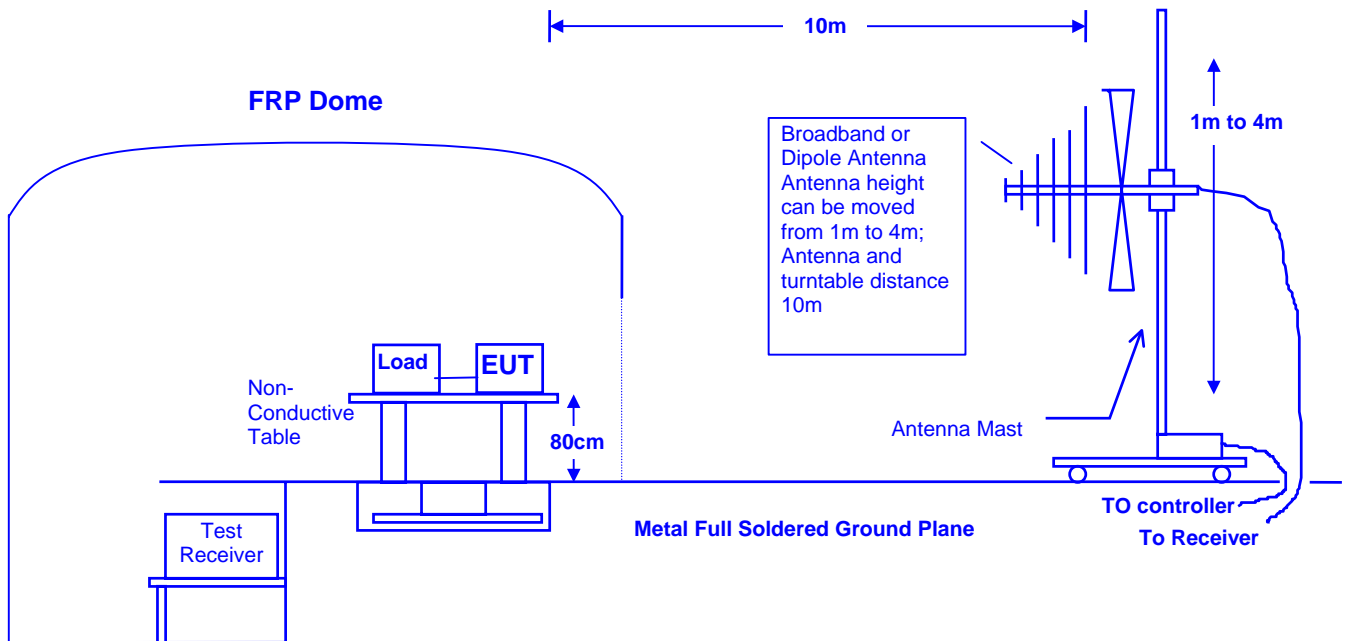
Item	Instrument	Manufacturer	Model	Serial No.	Last Cal. Date
1	Test Receiver	R & S	ESVS30	829007/014	01/19/07
2	Spectrum Analyzer	HP	8594E	3911A07933	12/19/06
3	Pre-Amplifier	HP	8447D	2944A08272	09/12/06
4	BILOG Antenna	SCHAFFNER	CBL6112B	2620	11/24/06
5	CABLE	GTK	N/A	GTK-E-A316-01	11/08/06
6	Open Site	GTK	N/A	B1	11/20/06

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

4.2 OPEN TEST SITE SETUP DIAGRAM

Note: This is a reprehensive setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



4.3 RADIATED EMISSION LIMIT

FCC Class A Limit at 10m

Frequency	Distance	Field Strength	
		$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 to 88	10	90	39.0
88 to 216	10	150	43.5
216 to 960	10	210	46.4
Above 960	10	300	49.5

Remark :1. The tighter limit shall apply at the edge between two frequency bands.

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

CISPR Class B Limit at 10m

Frequency	Distance	Field Strength
		$\text{dB}(\mu\text{V/m})$
30 to 230	10	30
230 to 1000	10	37

Remark :1. The tighter limit shall apply at the edge between two frequency bands.

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4 EUT CONFIGURATION

The equipment which is listed 4.1 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 4.2, was placed on a non-conductive table whose total height equaled 80 cm. This table can be rotated 360 degree. The measurement antenna was mounted to a non-conductive mast capable of moving the antenna vertically. Antenna height was varied from 1 meter to 4 meters and the system under test was rotated from 0 degree through 360 degrees relative to the antenna position and polarization (Horizontal and Vertical). Also the I/O cable position was investigated to find the maximum emission condition.

4.5 OPERATING CONDITION OF EUT

1. Setup the EUT and simulators.
2. Turn on the power of all equipments.
3. Start Test.

4.6 RADIATED EMISSION DATA

The measurement range of radiated emission, which is from **30 MHz to 1 GHz**, was investigated. All readings are quasi-peak values with a resolution Bandwidth of 120 KHz. The initial step in collecting radiated emission data is a spectrum analyzer peak scans of the measurement range for all the test modes and then use test receiver for final measurement. Then the worst modes were reported the following data pages.

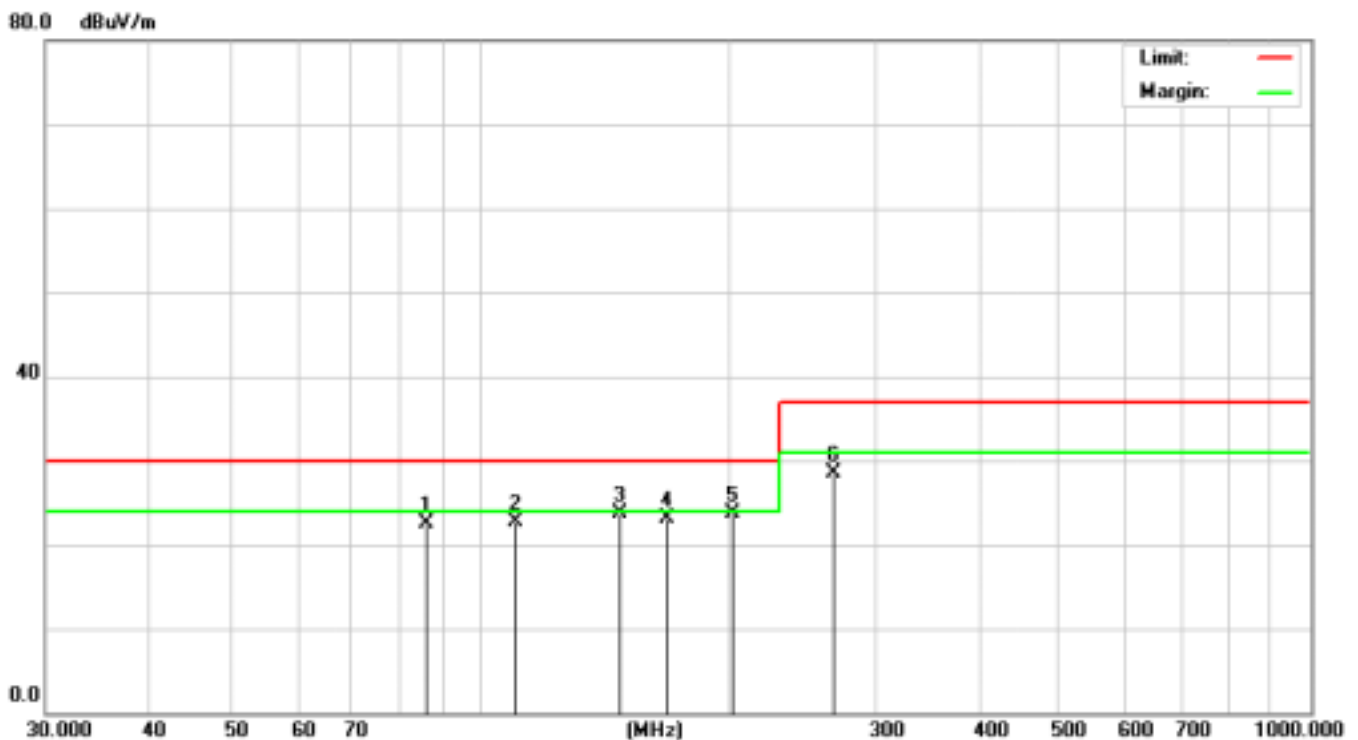
4.7 RADIATED EMISSIONS MEASUREMENT RESULTS

Date of Test	July 10, 2007	Temperature	25 deg/C
EUT	Power module	Humidity	67 %RH
Working Cond.	Mode 1	Display Pattern	N/A
Antenna distance	10m at Horizontal	Frequency Range	30-1000MHz
Test Power Supply	DC Input: 24V, 7.5A		

No.	Frequency MHz	Reading Level dBµV	Factor dB	Measurement dBµV/m	Limit dBµV/m	Over Limit dB	Detector
1	86.4798	39.78	-17.23	22.55	30.00	-7.45	QP
2	110.4753	35.62	-12.84	22.78	30.00	-7.22	QP
3	147.5624	36.47	-12.80	23.67	30.00	-6.33	QP
4	168.6213	36.21	-13.17	23.04	30.00	-6.96	QP
5	202.4578	36.56	-12.83	23.73	30.00	-6.27	QP
6	268.2099	37.43	-8.99	28.44	37.00	-8.56	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “ ” means that this data is the worse case measurement level.
6. The measurement uncertainty is 5.1 dB.



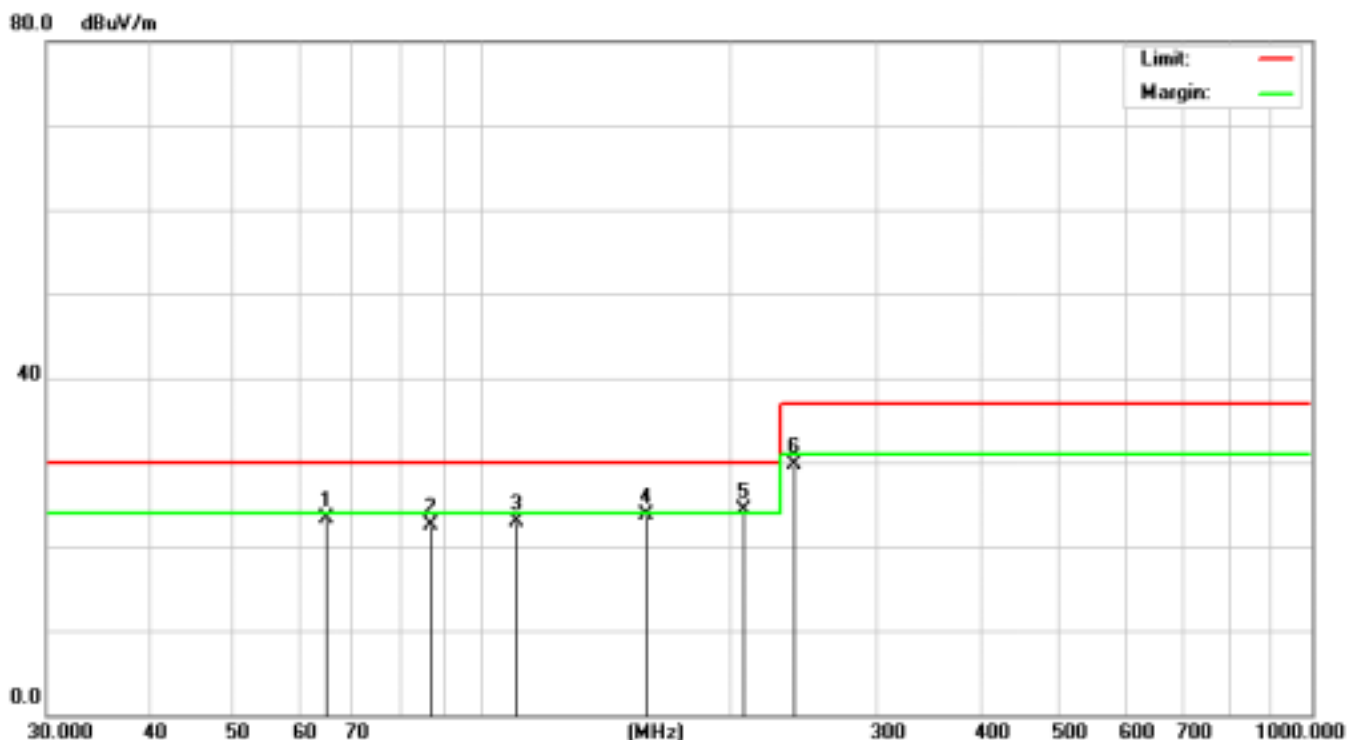
Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

Date of Test	July 10, 2007	Temperature	25 deg/C
EUT	Power module	Humidity	67 %RH
Working Cond.	Mode 1	Display Pattern	N/A
Antenna distance	10m at Vertical	Frequency Range	30-1000MHz
Test Power Supply	DC Input: 24V, 7.5A		

No.	Frequency MHz	Reading Level dBµV	Factor dB	Measurement dBµV/m	Limit dBµV/m	Over Limit dB	Detector
1	65.2813	41.87	-18.57	23.30	30.00	-6.70	QP
2	87.1019	39.62	-17.16	22.46	30.00	-7.54	QP
3	110.1576	35.74	-12.86	22.88	30.00	-7.12	QP
4	157.4682	36.68	-13.01	23.67	30.00	-6.33	QP
5	207.5148	36.75	-12.50	24.25	30.00	-5.75	QP
6	238.4697	40.12	-10.44	29.68	37.00	-7.32	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “ ” means that this data is the worse case measurement level.
6. The measurement uncertainty is 5.1 dB.



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

5. PHOTOGRAPHS FOR TEST

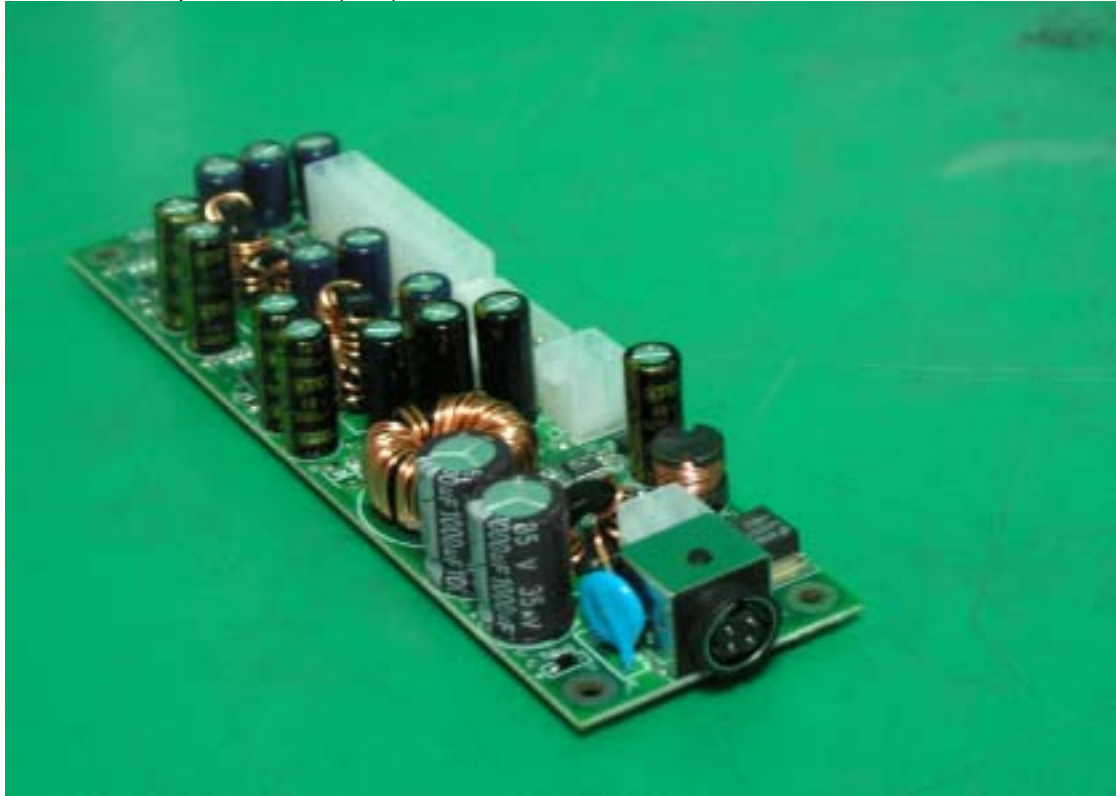
5.1 TEST PHOTOGRAPHS FOR RADIATED

Mode 1



6. PHOTOGRAPHS FOR PRODUCT

1. Front View Of power module (EUT)
2. Back View Of power module (EUT)



7. EMI/EMS REDUCTION METHOD DURING COMPLIANCE TESTING

No modification was made during testing.

Appendix A

Circuit (Block) Diagram

(Shall be added by Applicant)

Appendix B

User Manual

(Shall be added by Applicant)