

規格書




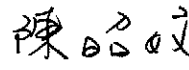
SPECIFICATION

品名 SWITCHING POWER SUPPLY
STYLE NAME :

型號 P2M-5800V
MODEL NO. :

料號
PART NO. :

版次 A2
REVISION :

APPROVE 核准	 DEC.19.2008	正式 資料 用 章	
CHECK BY 審核	 DEC.19.2008		
FORM MAKER 經辦	 DEC.19.2008		

新巨企業股份有限公司
電源事業處
ZIPPY TECHNOLOGY
CORP.

10F, NO.50 MIN CHYUAN RD.,
SHIN-TIEN CITY, TAIPEI HSIEN,
TAIWAN, R.O.C.
TEL. : +886(2)29188512
FAX. : +886(2)29134969

Revision

Rev.	Page	Item	Date	Description
A2	8	4.2.3	DEC-19-2008	Update +5V OCP

MODEL NO. P2M-5800V

- 1.0 Scope
- 2.0 Input requirements
 - 2.1 Voltage
 - 2.2 Frequency
 - 2.3 Stead-state current
 - 2.4 Inrush current
 - 2.5 Power factor correction
- 3.0 Output requirements
 - 3.1 DC load requirements
 - 3.2 Regulation and protection
 - 3.3 Ripple and noise
 - 3.3.1 Specification
 - 3.3.2 Ripple voltage test circuit
 - 3.3.3 Ripple & Noise voltage test circuit
 - 3.4 Overshoot
 - 3.5 Efficiency
 - 3.6 Typical Distribution of Efficiency
- 4.0 Protection
 - 4.1 Input
 - 4.2 Output
 - 4.2.1 OPP
 - 4.2.2 OVP
 - 4.2.3 OCP
 - 4.2.4 Short
- 5.0 Power supply sequencing
 - 5.1 Turn on
 - 5.2 Hold up time
 - 5.3 Power off sequence
- 6.0 Signal requirements
 - 6.1 Power good (POR)
 - 6.2 Under voltage sense level
 - 6.3 Remote on/off control
- 7.0 Environment
 - 7.1 Operation
 - 7.2 Humidity
 - 7.3 Altitude
 - 7.4 Insulation resistance
 - 7.5 Leakage current

8.0 Safety

8.1 UL & UL+C

8.2 TUV

8.3 CCC

8.4 Power Line Transient

8.5 RFI / EMI Standards

9.0 Reliability

9.1 Burn in

10.0 Mechanical requirements

10.1 Physical dimension

11.0 Output power derating characteristics

12.0 Output voltage Timing

1.0 Scope

This specification defines the performance characteristics of a grounded, Ac input, 800 watts, 5 output level power supply. This specification also defines world wide safety requirements and manufactures process test requirements.

2.0 Input requirements

2.1 Voltage (sinusoidal) : 100~240 VAC full range (With $\pm 10\%$ tolerance).

2.2 Frequency

The input frequency range will be 47hz~63hz.

2.3 Steady-state current

12A/6A at any low/high range input voltage.

2.4 Inrush current

35/70 Amps @ 110/220 VAC (at 25 degree C ambient cold start)

2.5 Power factor correction

The power supply modules shall incorporate universal power input with active power factor correction, which shall reduce the line harmonics in accordance with the IEC61000-3-2 standards.

PFC: up to the target of 95% @230V, full load.

3.0 Output requirements

3.1 DC load requirements

Normal Output voltage	Load current(A)		Regulation tolerance	
	Min.	Max.	Min.	Max.
+5V	0.5	25	-5%	+5%
+12V	2	62	-5%	+5%
-12V	0	0.8	-10%	+10%
+3.3V	0.5	25	-5%	+5%
+5Vsb	0	3	-5%	+5%

+5V and +3.3V Max. power : 170W

Total power : 800W (MAX)

3.2 Regulation and protection

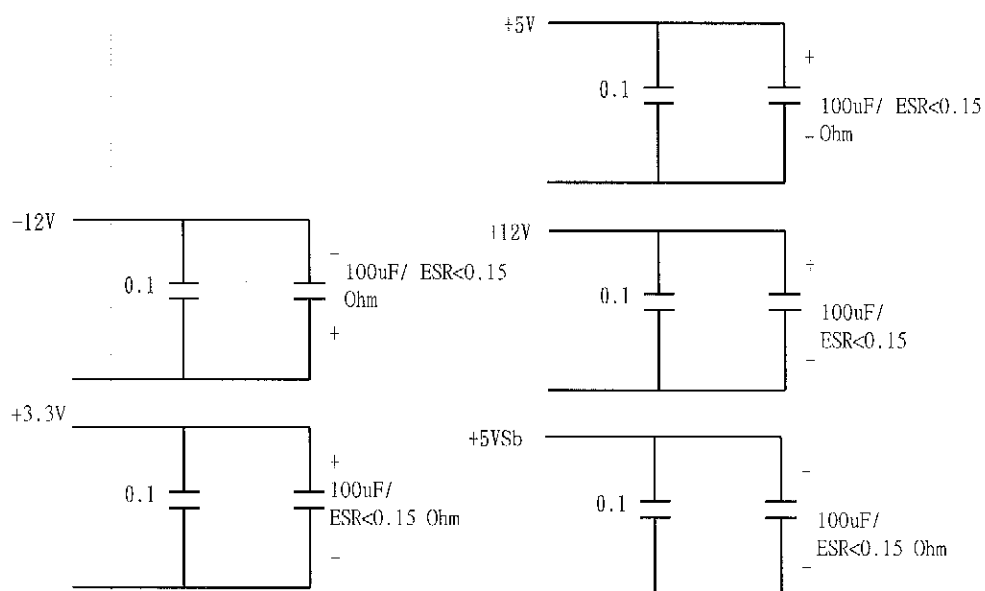
Output DC voltage	Line regulation	Load regulation	Cross regulation
+5V	$\pm 50\text{mV}$	$\pm 250\text{mV}$	$\pm 250\text{mV}$
+12V	$\pm 50\text{mV}$	$\pm 600\text{mV}$	$\pm 600\text{mV}$
-12V	$\pm 50\text{mV}$	$\pm 1200\text{mV}$	$\pm 1200\text{mV}$
+3.3V	$\pm 50\text{mV}$	$\pm 165\text{mV}$	$\pm 165\text{mV}$
+5Vsb	$\pm 50\text{mV}$	$\pm 250\text{mV}$	$\pm 250\text{mV}$

3.3 Ripple and noise

3.3.1 Specification

Parameter	Ripple	Ripple+Noise
+5V	50mV(P-P)	60mV(P-P)
+12V	120mV(P-P)	120mV(P-P)
-12V	120mV(P-P)	120mV(P-P)
+3.3V	50mV(P-P)	60mV(P-P)
+5Vsb	50mV(P-P)	60mV(P-P)

3.3.2 Ripple voltage test circuit



0.1uf is ceramic the other is tantalum.

Noise bandwidth is from DC to 20MHz

3.4 Overshoot

Any overshoot at turn on or turn off shall be less 10% of the nominal voltage value , all output shall be within the regulation limit of section 3.2 before issuing the power good signal of section 6.0.

3.5 Efficiency

Power supply efficiency typical 80-84% at 115V full load.

3.6 Typical Distribution of Efficiency

20% Max load, Efficiency test condition @ Ambient temperature 30 degrees							
Voltage	+12V	+5V	-12V	+3.3V	+5VSB	AC INPUT Voltage	
						115V	230V
Load	10.1A	4A	0.13A	4A	0.5A	>80%	>80%
50% Max load, Efficiency test condition @ Ambient temperature 30 degrees							
Voltage	+12V	+5V	-12V	+3.3V	+5VSB	AC INPUT Voltage	
						115V	230V
Load	25.4A	10.2A	0.32A	10.2A	1.2A	>83%	>85%
100% Max load, Efficiency test condition @ Ambient temperature 30 degrees							
Voltage	+12V	+5V	-12V	+3.3V	+5VSB	AC INPUT Voltage	
						115V	230V
Load	50.8A	20.5A	0.65A	20.5A	2.45A	>80%	>83%

P.S:

Any difference either on the DC output cable (i.e., length, wire gauge) or on the accurate of instruments will conclude different test result.

4.0 Protection

4.1 Input (primary)

The input power line must have an over power protection device in accordance with safety requirement of section 8.0

4.2 Output (secondary)

4.2.1 Over power protection

The power supply shall provide over power protection on the power supply latches all DC output into a shutdown state. Over power of this type shall cause no damage to power supply, after over load is removed and a power on/off cycle is initiated, the power supply will restart.

Trigger point total power min. 110%, max. 160%.

4.2.2 Over voltage protection

If an over voltage fault occurs, the power supply will latch all DC output into a shutdown state.

	Min	Typical	Max
+3.3V	3.6V	3.9V	4.3V
+5V	5.6V	6.1V	6.5V
+12V	13.2V	14.1V	15V

4.2.3 Over current protection

If an over current fault occurs, the power supply will latch all DC output into a shutdown state.

	Min	Typical	Max
+3.3V	27.5A	31.25A	37.5A
+5V	33A	39A	45A
+12V	68.2A	80.6A	93A

4.2.4 Short circuit

A: A short circuit placed on any DC output to DC return shall cause no damage.

B: The power supply shall be latched in case any short circuit is taken place at +5V,+3.3V,+12V ,-12Voutput.

C: The power supply shall be auto-recovered in case any short circuit is taken place at +5VSB.

5.0 Power supply sequencing

5.1 Power on (see Fig.1)

5.2 Hold up time

When power shutdown any output must be maintain 17m Sec. in regulation limit at full load under 90VAC input voltage.

5.3 Power off sequence (see Fig. 1)

6.0 Signal requirements

6.1 Power good signal (Figure 1)

The power supply shall provide a "power good" signal to reset system logic , indicate proper operation of the power supply.

At power on , the power good signal shall have a turn on delay of at least 100ms but not greater than 500ms after the output voltages have reached their respective minimum sense levels.

6.2 Under voltage (UV) sense levels

Output	Minimum sense voltage
+5V	+4.50V

6.3 Remote on/off control

The power supply DC outputs (except the +5Vsb) shall be enabled with an active-low, TTL-compatible signal ("ps-on")

When ps-on is pulled to TTL low, the DC outputs are enabled.

When ps-on is pulled to TTL high or open circuited, the DC outputs are disabled.

The DC output enable circuit shall be SELV compliant.

7.0 Environment

7.1 Operation

Temperature	0 to 50degrees centigrade
Storage temperature	-20 to 80 degrees centigrade
Safety regulation temperature	Applied at room temperature (25°C)

7.2 Humidity

Operating humidity	20% to 80%
Non-operating humidity	10% to 90%

7.3 Insulation resistance

Primary to secondary	: 30 meg. Ohm min. 500 VDC
Primary to FG	: 30 meg. Ohm min. 500VDC

7.4 Dielectric withstanding voltage

Primary to secondary	: 3000 VAC for 1 sec.
Primary to FG	: 1500 VAC for 1 sec.

7.5 Leakage current

3.5 mA. max. at nominal voltage 264 VAC

8.0 Safety

The power supply must be certified to the safety standard listed following:

8.1 Recognized to U.S. and Canadian requirements under the component recognition program of Underwriters Laboratories Inc.

8.2 TUV approval TUV EN-60950.
CB approval IEC-60950:1999.

8.3 Certificate for China compulsory product certification
a.) GB4943-2001,GB9254-1998,GB17625.1-2003

8.4 Power Line Transient.

The power supply shall be designed to meet the following standards

- b.) EN 61000-4-2(ESD) Criterion B, $\pm 4\text{KV}$ by contact, $\pm 8\text{KV}$ by air.
- c.) EN 61000-4-4(EFT) Criterion B, $\pm 1\text{KV}$.
- d.) EN 61000-4-5(SURGE) Criterion B, Line-Line $\pm 1\text{KV}$
Line-Earth $\pm 2\text{KV}$.

8.5 RFI / EMI Standards

The power supply shall comply with the following radiated and conducted Emissions standards,

- a.) FCC part 15. class B.
- b.) CISPR 22 (EN 55022). class B.

9.0 Reliability

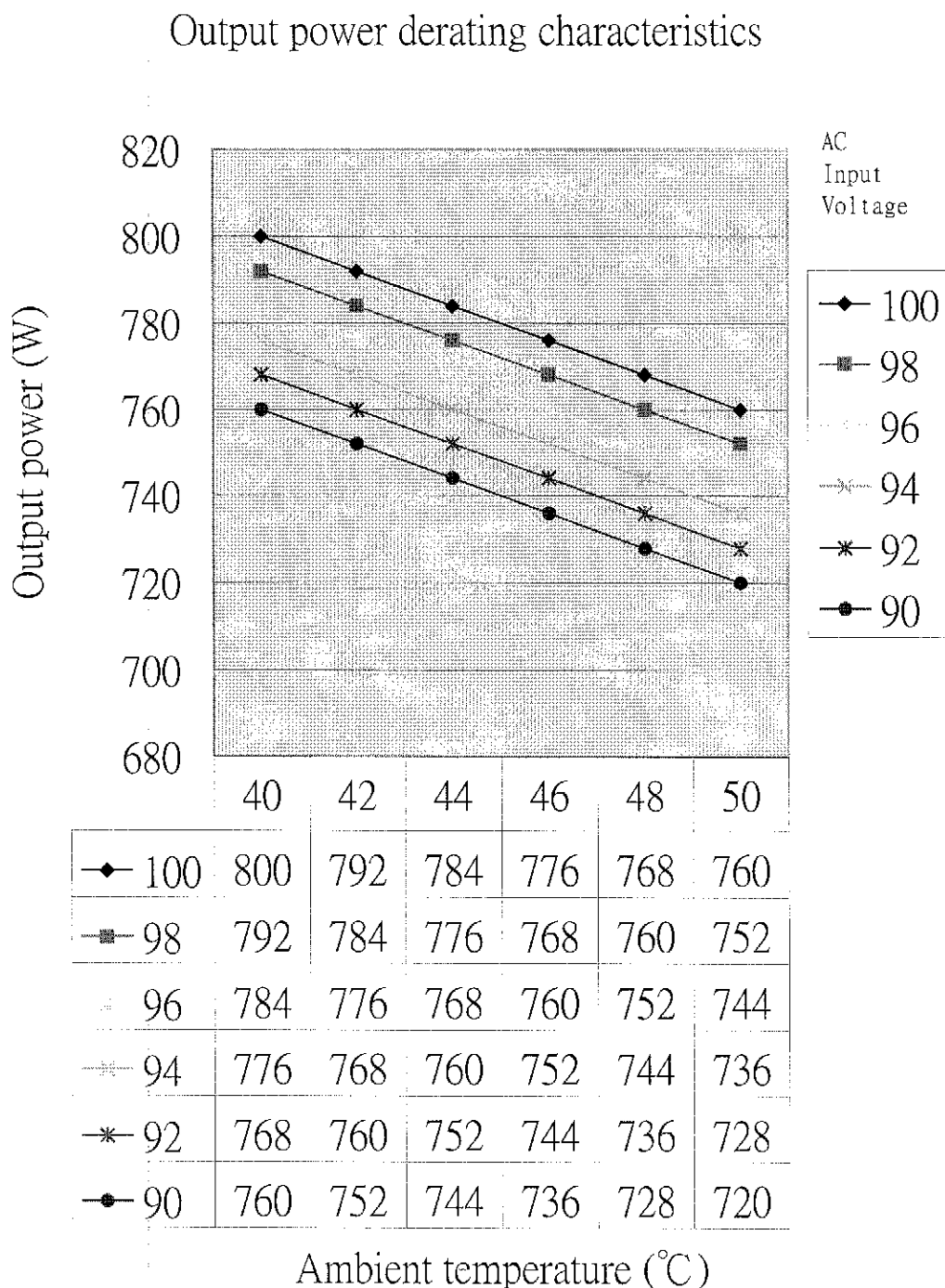
9.1 Burn in

All products shipped to customer must be burn in. The burn in shall be performed at high line voltage.

10.0 Mechanical requirements

10.1 Physical dimension : 70mm (H) x 100mm (W) x 280mm (D)

11.0 Output power derating characteristics



Page 11 of 11

