SPECIFICATION

for

SWITCHING POWER SUPPLY

M/N : SNP-Z209

Reviewed by Project Manager	梁進宗 3-26-02	梁進宗 5-10-02	梁進宗 6-5-02	梁進宗 10-17-02		
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SKYNET ELECTRONIC			LAST REV. NO. Z209-101702			

1.0 INTRODUCTIONS

SNP-Z209 is an active PFC plus 200W U-shape universal power converter. The power high density, it is designed to comply EN61000-3-2 regulations.

2.0 INPUT SPECIFICATIONS

2.1 Input Voltage

The range of input voltage is from 85VAC to 264VAC. Nominal line 115VAC/230VAC.

2.2 Input frequency

The range of input frequency is from 47Hz to 63Hz.

2.3 Input current

The maximum input current is 4A at 115VAC or 2A at 230VAC.

2.4 Inrush current

The inrush current will not exceed 30A at 115VAC input or 60A at 230VAC input, cold start at 25°C.

3.0 OUTPUT SPECIFICATIONS

3.1 Load range

output	min. load	rated load	max. load	voltage accuracy
+24V	0A	8.5A	10.5A	23.80 to 24.20V

At factory, the output in 60% rated load and nominal line condition, the +24V output is set to between 23.90V and 24.10V.

3.1.1 Total output power

200W with convection cooling. 200W~250W with 18CFM forced air cooling.

3.2 Ripple and noise

The peak to peak ripple and noise for each output is less than 100mV at rated load and nominal line. Measuring is done by 15MHz band width limited oscilloscope and terminated output with a 0.47uF capacitor.

3.3 Line regulation

The line regulation for +24V output is less than + -1% while measuring at rated load and + -10% of nominal line input voltage changing.

3.4 Load regulation

The load regulation for +24V output is less than + -1% measuring are done by changing the measured output load + -40% from 60% rated load and nominal line.

4.0 GENERAL FEATURES

4.1 Efficiency

The efficiency is typical 85% while measuring at nominal line and rated load.

4.2 Hold up time

The hold up time is longer than 20mS at 115VAC input and rated load, which is measured from the and of the last charging pulse to when the main output drops down to 95% output voltage.

4.3 Protection

For some reason the power supply fails to control itself, the build-in over voltage protection circuit will shut down the outputs to prevent damaging external circuits. The trip point of crowbar circuit is around 26.2V to 31. To recover from over voltage protection, cycle the AC line OFF and ON to make it restart.

The power supply will generate a hiccup mode to protect itself againstshort circuit or over load conditions, and will return to normal after wrong conditions are removed.

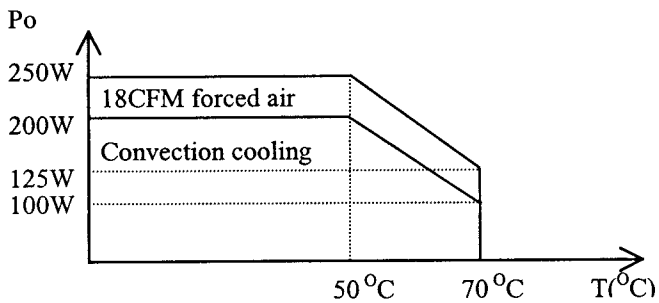
4.4 Thermal protection

The power supply has thermal protection.

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

0°C to 70°C , 0 °C to 50 °C no derating, above the 50 °C, derate 2.5%/ °C up to 50% at 70 °C.



5.2 Storage temperature

-20°C to 85°C

5.3 Altitude

Will operate properly at any altitude between 0 to 10000 ft.

6.0 INTERNATIONAL STANDARDS

6.1 Safety standards

Designed to meet the following standards :

UL 60950

CSA 22.2 NO.234

EN 60 950

6.2 EMI standards

Designed to meet the following limits :

FCC docket 20780 curve "B"

CISPR 22 "B"

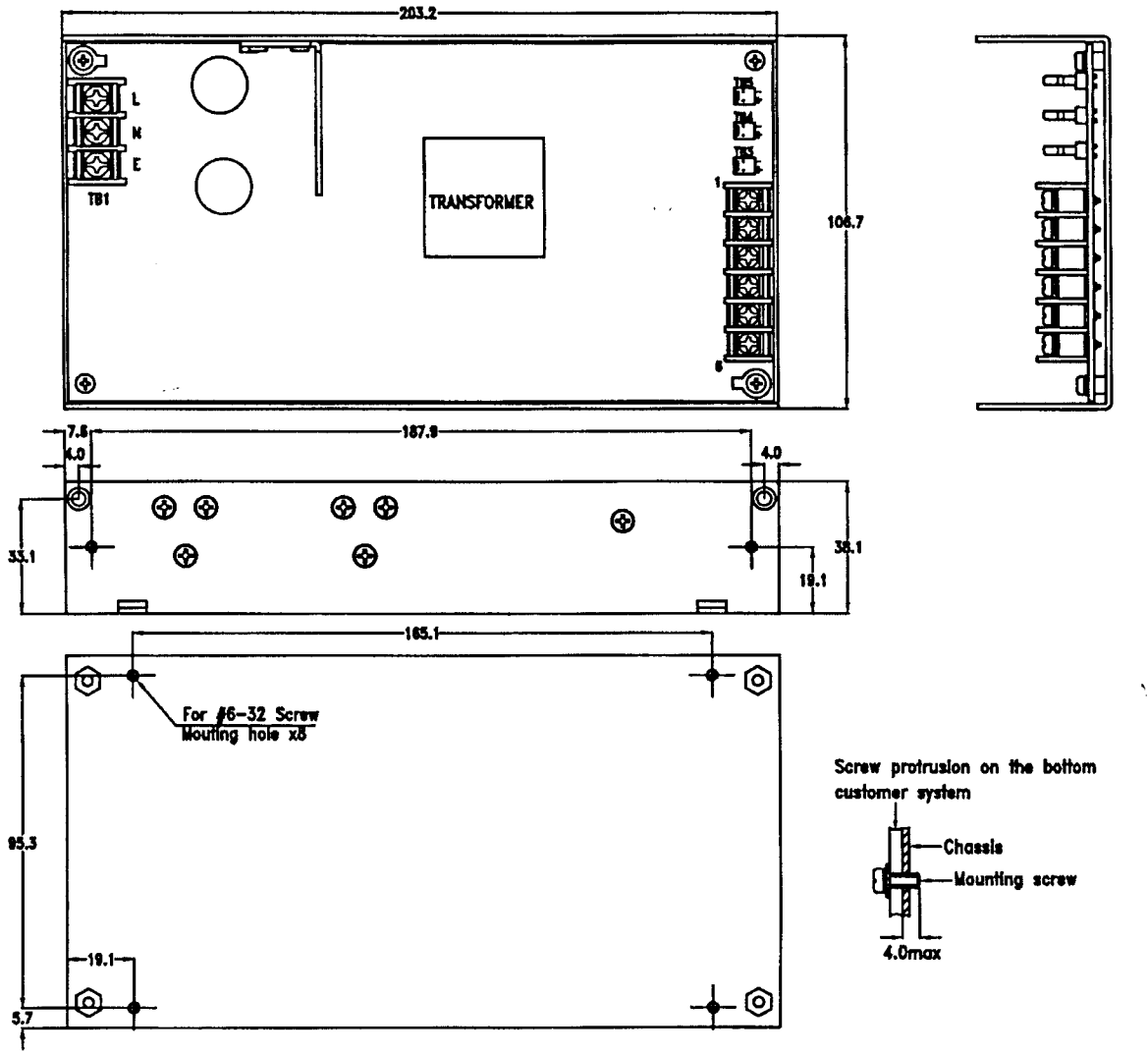
EN 61000-3-2 class D

6.3 EMS standards

Designed to meet the following limits :

EN61000-4-2	4KV contact, 8KV air discharge criterion B
EN61000-4-3	3V/M with 80% AM criterion A
EN61000-4-4	2KV criterion B
EN61000-4-5	Line to Line 1KV ; Line to Earth 2KV. criterion B
EN61000-4-6	3V with 80% AM criterion A
EN61000-4-8	30A/m criterion A
EN61000-4-11	30% dips 10ms, criterion B
	60% dips 100ms, criterion C
	>95% dips 5000ms, criterion C

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

Dimensions shown in mm as above.
Tolerance specified is + -0.4mm between mounting holes, + -0.8mm other dimensions.

7.2 Connectors

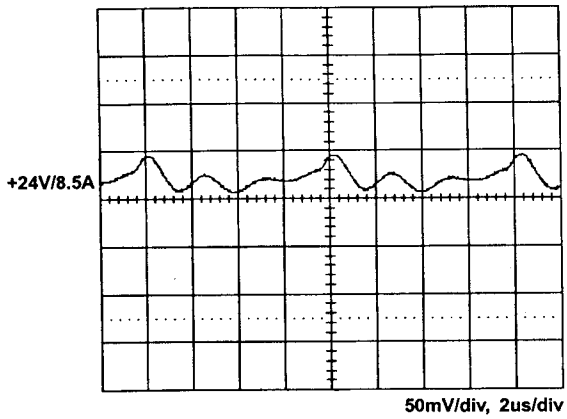
TB1--AC input	:	Terminal blocks
TB2--DC output	:	Terminal blocks
TB3--For +24V fan use	:	Molex 5045-02A or equivalent
TB4--For LED use only	:	Molex 5045-02A or equivalent
TB5--For remote sense use only	:	Molex 5045-02A or equivalent

7.3 DC output pin assignment

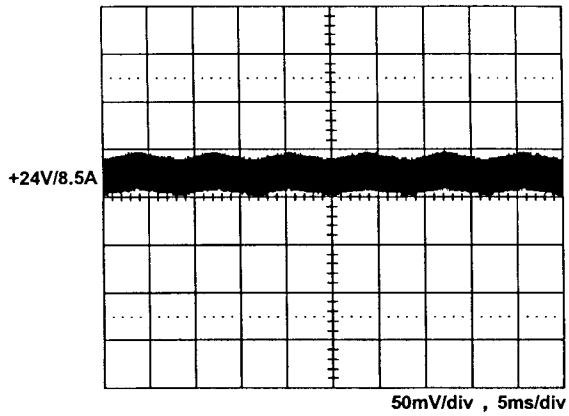
Pin	1.	+24V	4.	GND
	2.	+24V	5.	GND
	3.	+24V	6.	GND

8.0 PERFORMANCE (input voltage is 115VAC, unless others specified)

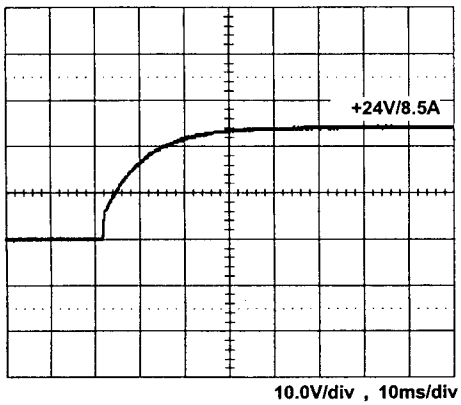
8.1 Switching frequency ripple



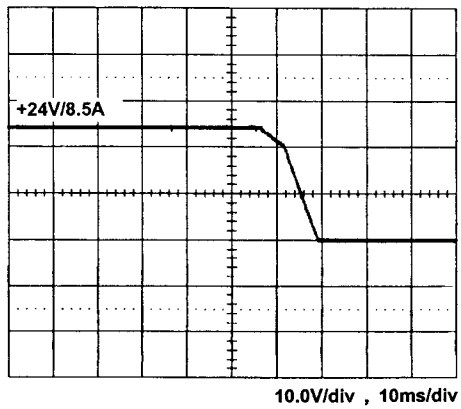
8.2 Line frequency ripple



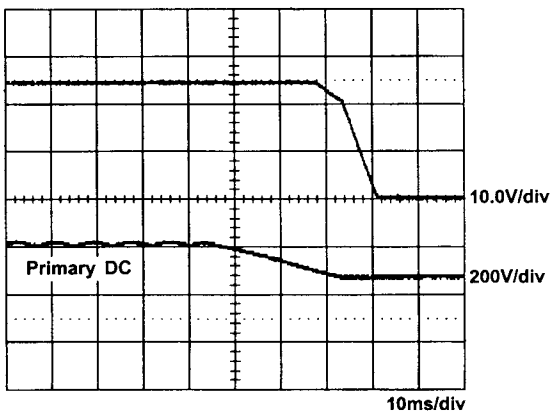
8.3 Output turn on wave form



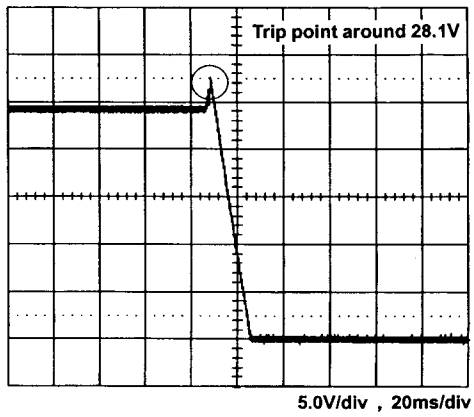
8.4 Output turn off wave form



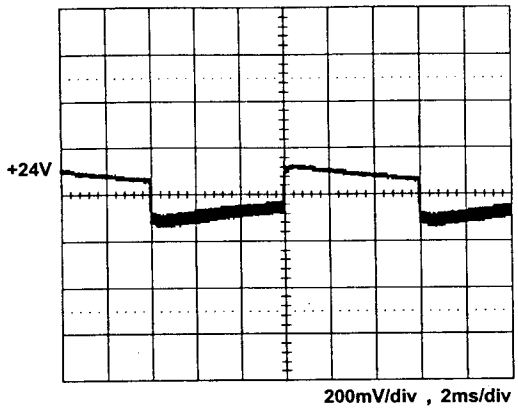
8.5 Hold-up time



8.6 Over voltage protection

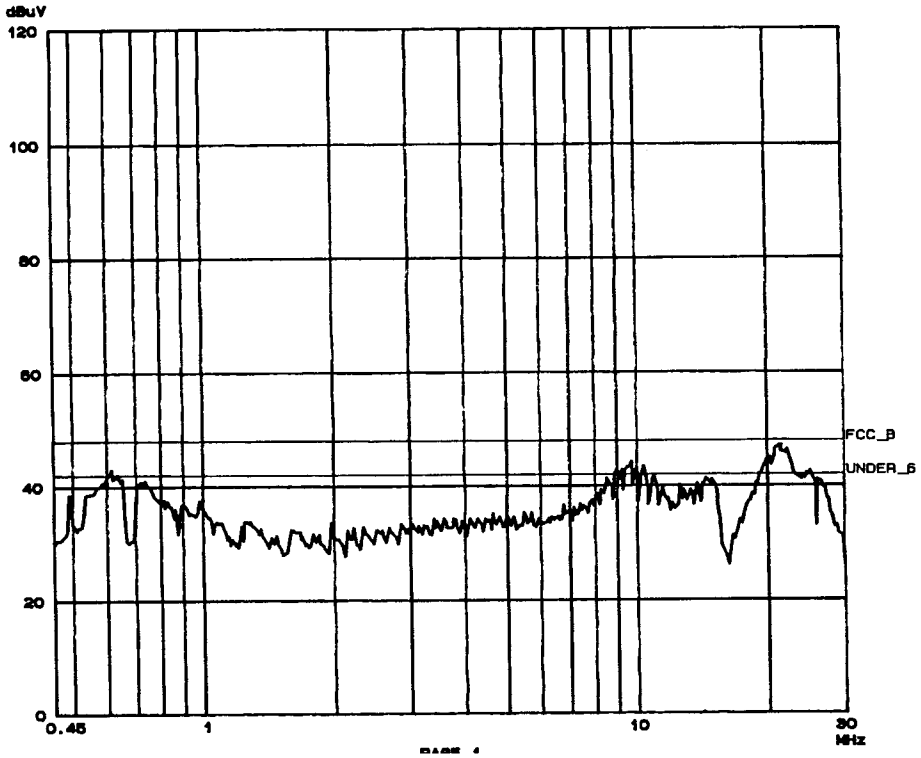


8.7 +24V step response



+24V step from 1.7A to 8.5A

8.8 FCC B performance



8.9 CISPR 22 B