

**SPECIFICATION**

for

SWITCHING POWER SUPPLY

**M/N : SNP-Z109**

Reviewed by Project Manager						
Typed by Document Assistant						
<b>SKYNET ELECTRONIC</b>			<b>LAST REV. NO.</b>			

## 1.0 INTRODUCTIONS

The SNP-Z109 is a single output, 108 Watts version switching power supply.

## 2.0 INPUT SPECIFICATIONS

### 2.1 Input Voltage

The range of input voltage is from 90VAC to 264VAC and the nominal line voltage is 115V 60Hz/230V 50Hz.

### 2.2 Input frequency

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

### 2.3 Input current

The maximum input current is 2A at 115VAC or 1A at 230VAC.

### 2.4 Inrush current

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

## 3.0 OUTPUT SPECIFICATIONS

### 3.1 Load range

output	min. load	rated load	max. load	voltage accuracy
+24V	0A	4.5A	5.4A	23.8V to 24.2V

At factory, in 60% rated load conditions and nominal input, the +24V is checked to be within the specified voltage accuracy range.

The max. load with convection cool can last for around 10 sec. at nominal line, continuously draw peak current will reduce life time and MTBF, and will probably shut down the power supply.

### 3.2 Ripple and noise

The peak to peak ripple and noise for each output is less than 1% of output voltage at rated load and nominal input. Measuring is done by 15MHz band width limited oscilloscope and terminated each output with a 0.47uF capacitor.

### 3.3 Line regulation

The line regulation for each output is less than + -0.5% while measuring at rated load and + -10% of nominal input voltage changing.

### 3.4 Load regulation

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

### 3.5 Remote sense

The compensation of voltage drop for +24V output is 0.5V max.

The +24V output has remote sense capability.

### 3.6 Capacitance loading capability

The capacitance loading capability can be up to 2700uF.

## 4.0 GENERAL FEATURES

### 4.1 Efficiency

The efficiency is higher than 85% typ. while measuring at nominal line and rated load.

### 4.2 Hold up time

The hold up time is longer than 16mS at 115VAC input and rated load, which is measured from the end 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 is around 26.2V to 31V. The power supply will go into auto-recovery mode against short circuit or over load conditions and will auto-recover while faulty condition is removed.

## 5.0 ENVIRONMENT SPECIFICATIONS

### 5.1 Operating temperature

0°C to 50°C

108W with convection cooling.

130W with 18 CFM air flow.

### 5.2 Storage temperature

-40°C to 85°C

### 5.3 Operating humidity

5 ~95% RH, non-condensing .

### 5.4 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

VDE EN 60 950

### 6.2 EMI standards

Designed to meet the following limits :

EN55022 “B”

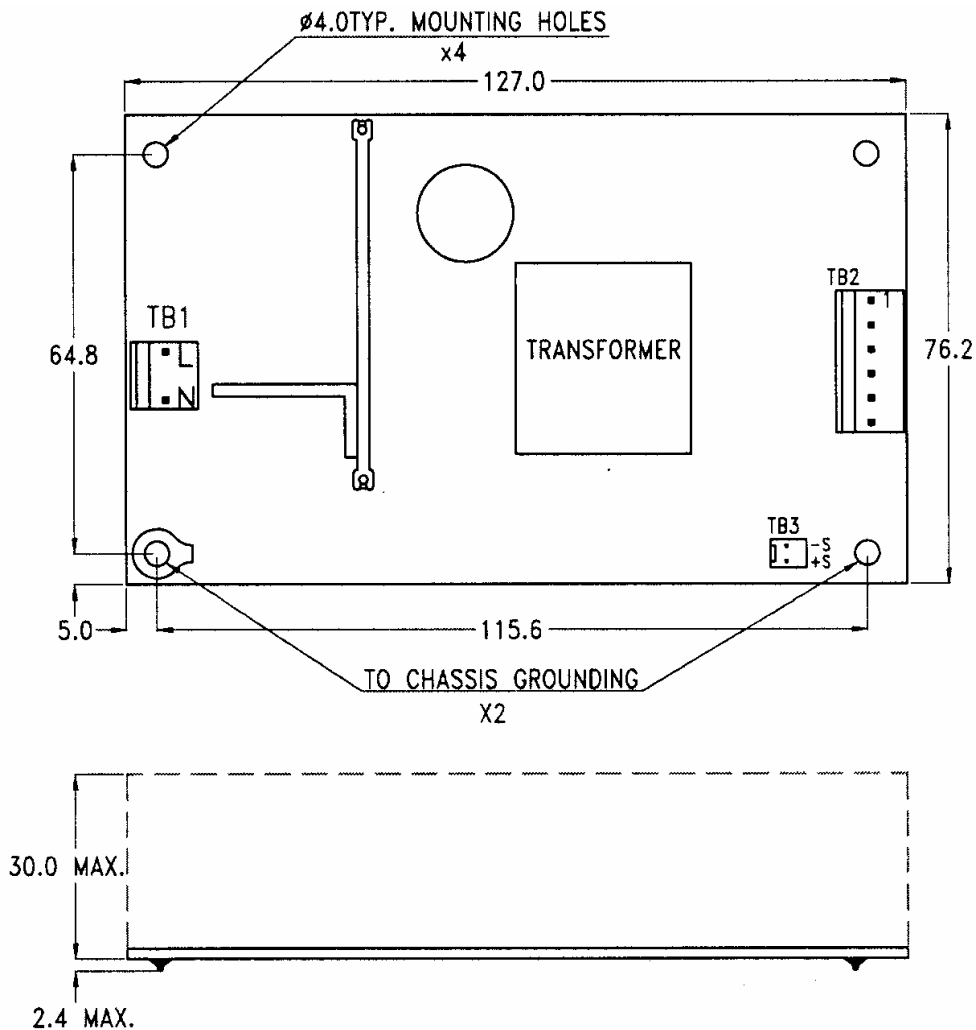
FCC docket 20780 curve “B”

EN61000-3-2

**6.3 EMS standards**

EN61000-4-2	6KV contact discharge, 8KV air discharge	criteria A
EN61000-4-3	10V/m	criteria A
EN61000-4-4	2KV	criteria A
EN61000-4-5	2KV	criteria A
EN61000-4-6	3V	criteria A
EN61000-4-11	30% dips 10ms	criteria B
	60% dips 100ms	criteria C
	95% dips 5000ms	criteria C

**7.0 MECHANICAL SPECIFICATION**



**7.1 Dimensions**

Dimensions shown in mm as above. Tolerance specified is + -0.4mm.

**7.2 Connectors**

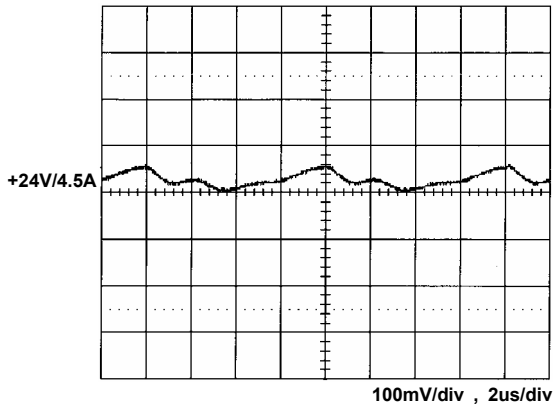
- TB1--AC input : Molex 5277-02A or equivalent
- TB2--DC output : Molex 5273-06A or equivalent
- TB3--Remote Sense : Molex 5045-02A or equivalent

**7.3 DC output pin assignment**

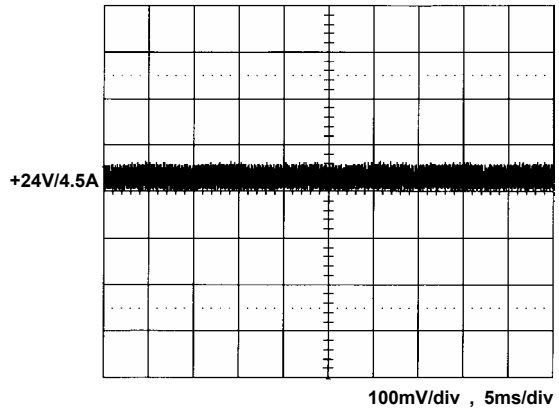
- Pin 1. +24V
- 2. +24V
- 3. +24V
- 4. GND
- 5. GND
- 6. GND

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

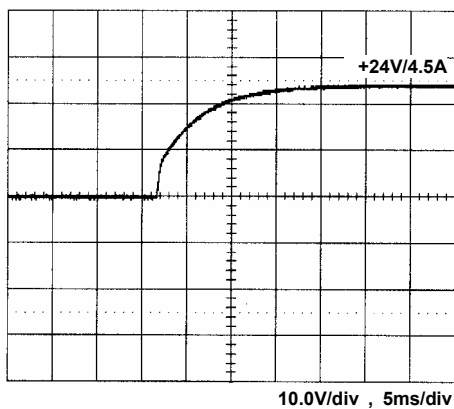
8.1 Switching frequency ripple



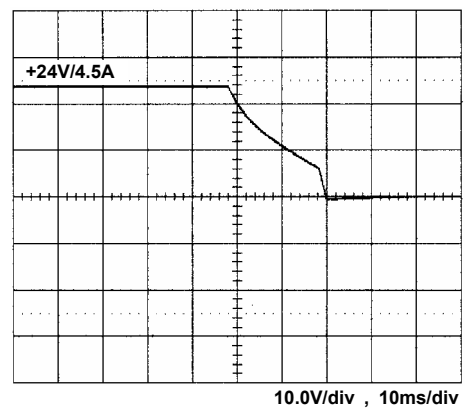
8.2 Line frequency ripple



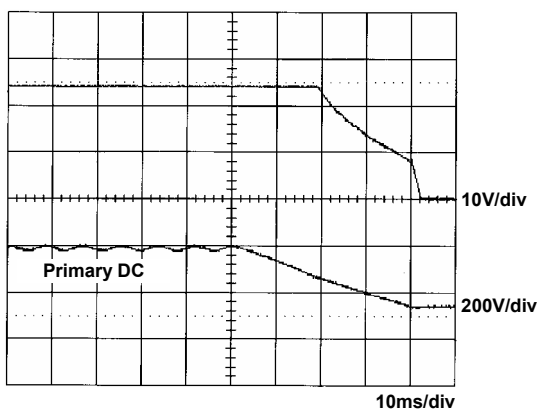
8.3 Output turn on wave form



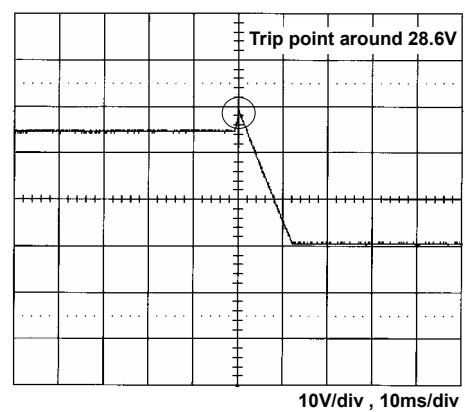
8.4 Output turn off wave form



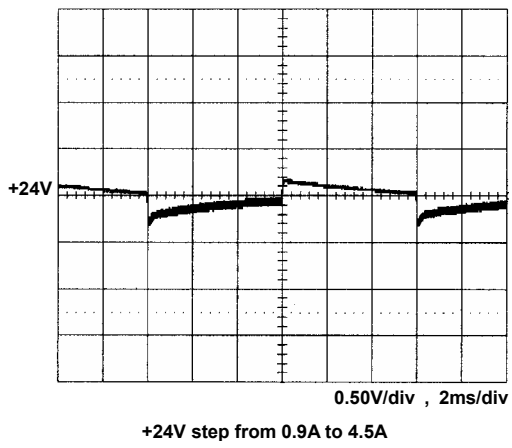
8.5 Hold-up time



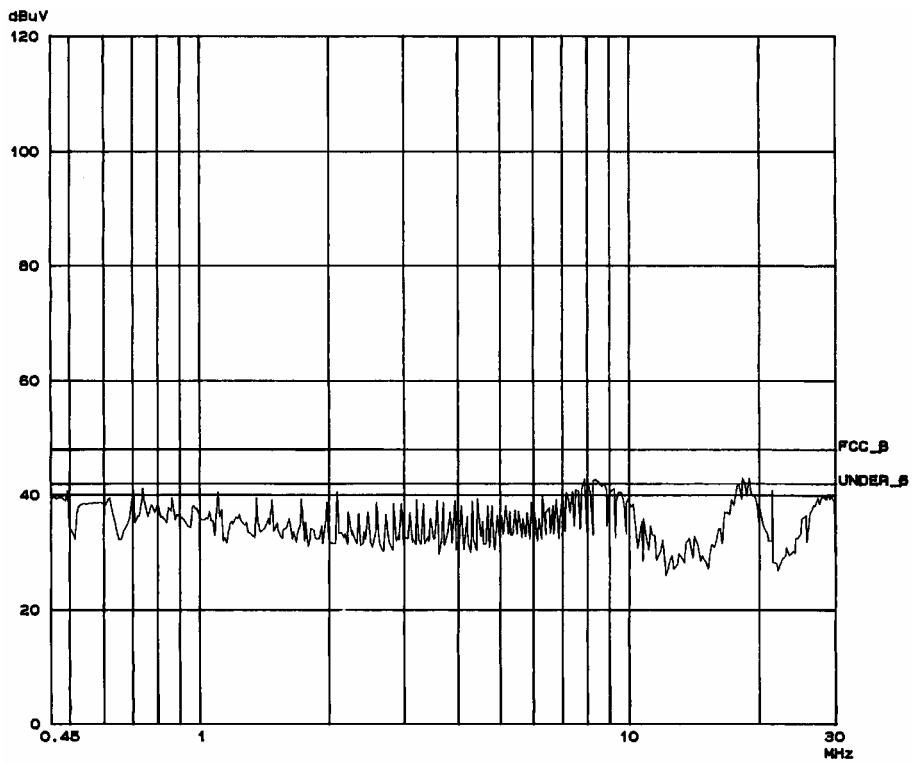
8.6 Over voltage protection



8.7 +24V step response



### 8.8 FCC B performance



### 8.9 EN55022 B

