

**SPECIFICATION**

and

**PERFORMANCE**

for

SWITCHING POWER SUPPLY

**M/N : SNP-C06F**

Reviewed by Project Manager	张明峰 01-2406	高秋杰 071811				
Typed by Document Assistant	张素茹 012306	高秋杰 071811				
<b>SKYNET ELECTRONIC</b>			<b>LAST REV. NO.</b>			

## 1.0 INTRODUCTIONS

It is a four outputs power supply built in 24V output for the special purpose.

## 2.0 INPUT SPECIFICATIONS

### 2.1 Input Voltage

The range of input voltage is from 85VAC to 264VAC, nominal line is 115VAC/230VAC. (Label 100 ~ 240VAC)

### 2.2 Input Frequency

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

### 2.3 Input Current

The maximum input current is 1.5A at 115VAC or 0.8A 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	Peak load	voltage accuracy
+5V	0A	3A	5A	6A	4.95V to 5.05V
+12V	0A	0.9A	2A	3A	11.40V to 12.60V
+24V	0A	0.9A	1.5A	2A	22.8V to 25.2V
-12V	0A	0.5A	1A		-11.4V to -12.6V

At factory, the +5V output is set between +4.95V to +5.05V at 60% rated load and nominal line input, and the other outputs should be checked within the accuracy range. The total max output power shall be kept within 53.4W. Total peak power should be less than 80W and can be supplied up to 8 sec. at nominal line.

### 3.2 Ripple and noise

The peak to peak ripple and noise for each output is less than 1% of each output voltage at rated load, nominal line. Measuring is done by 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF & 10uF parallel capacitor.

### 3.3 Line regulation

The output line regulation, for all outputs are less than + -1% while measuring at rated load and + -10% of nominal line input voltage changing.

### 3.4 Load regulation

The load regulation for +5V and +12V outputs are less than + -2% for +24V and -12V outputs are less than  $\pm 3\%$ , which are measured by changing the output load + -40% from 60% rated load, and the other outputs are kept at 60% rated load and nominal line input.

**4.0 GENERAL FEATURES**

**4.1 Efficiency**

The efficiency is 83% typ. while measuring at nominal line and rated load.

**4.2 Hold up time**

The hold up time is 16ms typ. 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**

**4.3.1 Over voltage protection**

The built-in crowbar circuit will shut down the outputs to avoid damaging the external circuits. The trip point of over voltage protection is around +5.7V to +7V. To recover from over voltage protection, cycle the AC line OFF and ON is necessary.

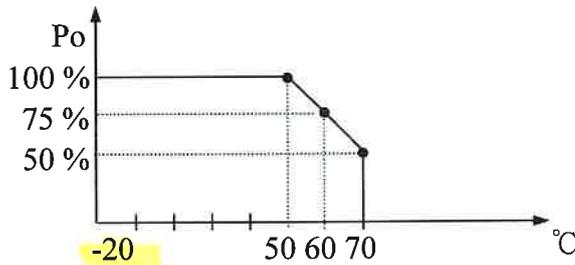
**4.3.2 Short circuit and over load protection**

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

**5.0 ENVIRONMENT SPECIFICATIONS**

**5.1 Operating temperature**

-20°C to 70°C (50°C to 70 °C can operate decreasingly 2.5% / °C from 50 °C)



**5.2 Storage temperature**

-40°C to +75°C

**5.3 Operating humidity**

10% to 90% Non-Condensing.

**5.4 Altitude**

Will operate properly at any altitude between 0 to 6000ft.

## 6.0 INTERNATIONAL STANDARDS

### 6.1 Safety standards

Designed to meet the following regulations :

UL 60950-1

CSA C22.2 NO.60950-1

EN 60950-1

IEC 60950-1

### 6.2 EMI standards

Designed to meet the following limits :

FCC docket 20780 curve "B"

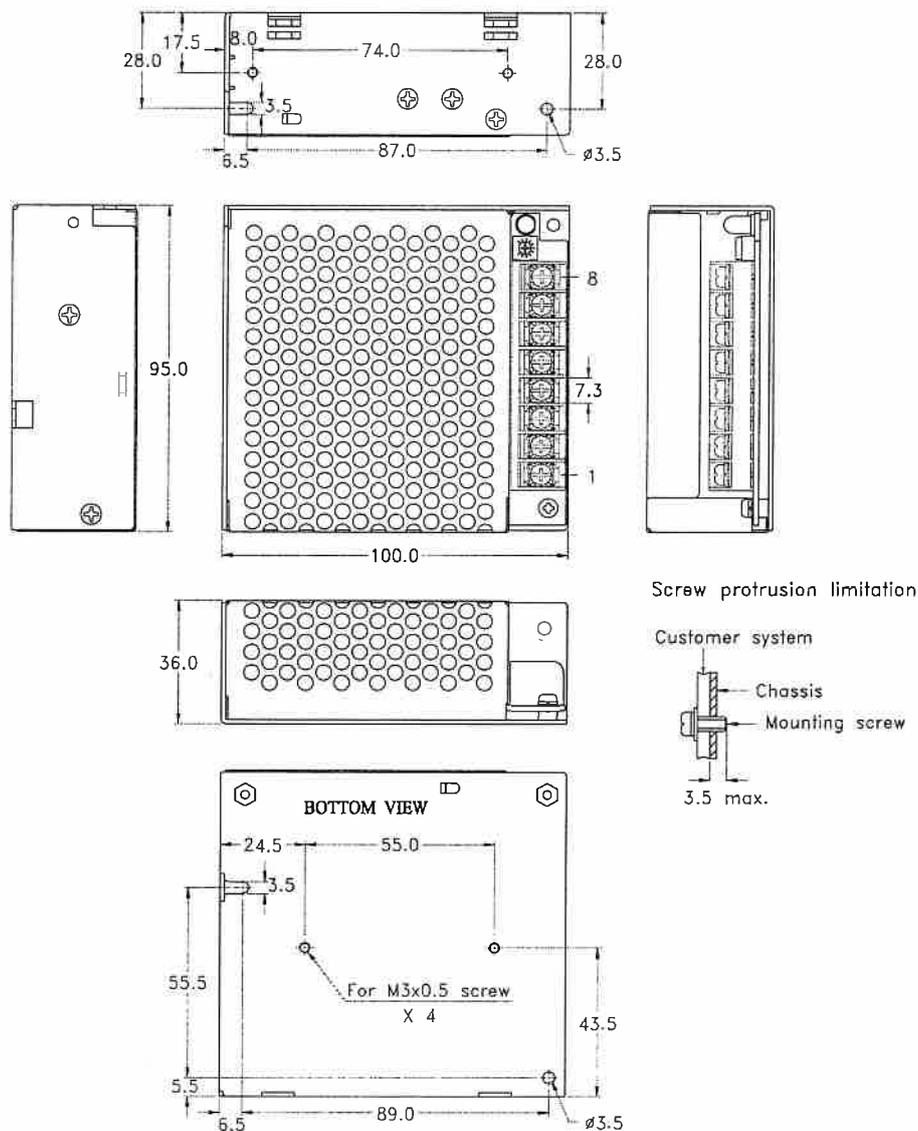
EN55022 class "B"

### 6.3 EMS standards

Designed to meet the following limits :

EN61000-4-2	4KV contact, 8KV air discharge	Criterion A
EN61000-4-3	10V/M with 80% AM	Criterion A
EN61000-4-4	4KV	Criterion A
EN61000-4-5	Line to Line 1KV ; Line to ground 2KV.	Criterion A
EN61000-4-6	10V with 80% AM	Criterion A
EN61000-4-8	3A/M	Criterion A
EN61000-4-11	30 % dips 10 ms, Criterion A 60 % dips 100 ms, Criterion C 95 % dips 5000 ms, 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 & DC Output : Terminal Blocks, pitch of 8.25 mm

7.3 Terminal Blocks pin assignment

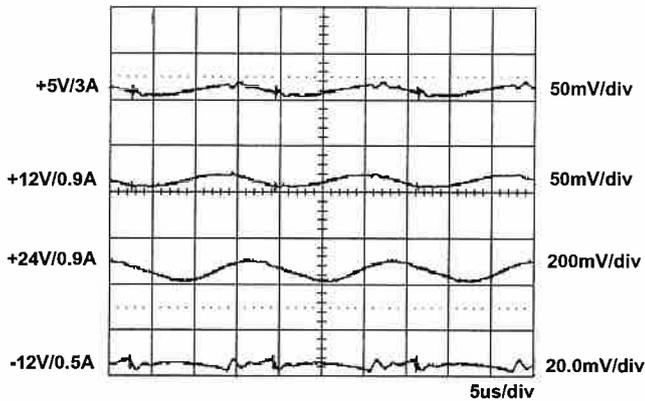
Position	1.	AC / L	5.	+24V
	2.	AC / N	6.	+12V
	3.	Earth	7.	GND
	4.	-12V	8.	+5V

7.4 Packing

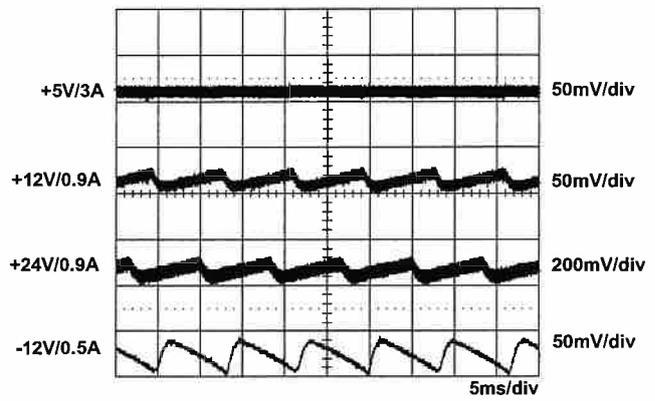
Net weight	:	390 g approx. / unit
Carton size (mm)	:	403 (L) x 313 (W) x 278 (H)
Quantity	:	30 units / carton
Gross weight	:	14.2 kg approx. / carton

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

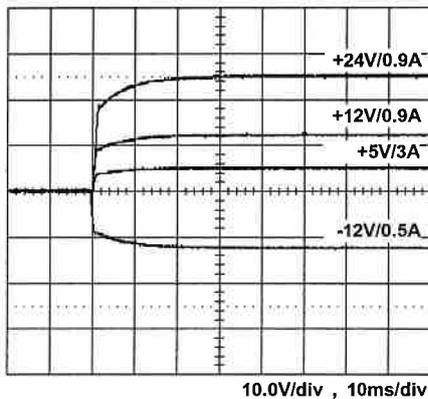
8.1 Switching frequency ripple



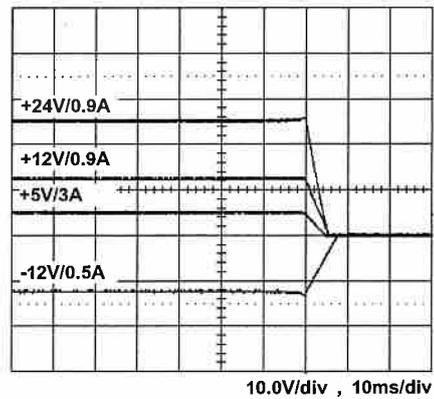
8.2 Line frequency ripple



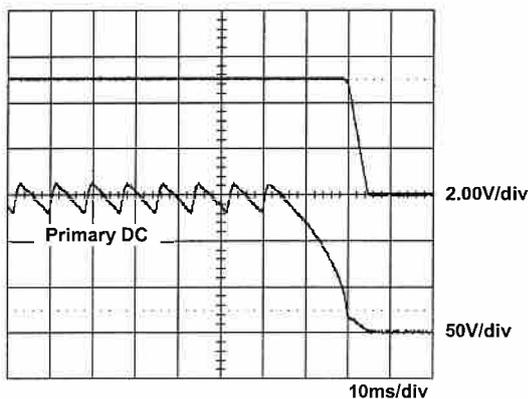
8.3 Output turn on wave form



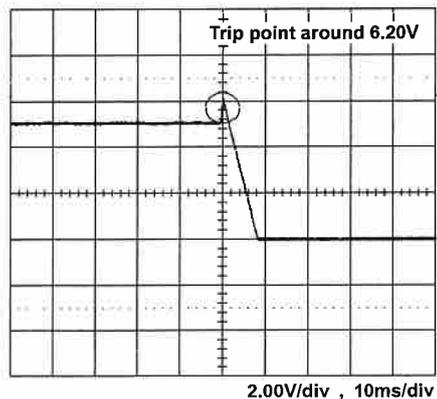
8.4 Output turn off wave form



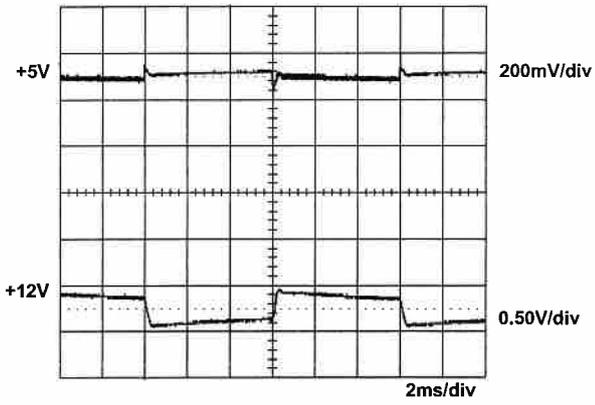
8.5 Hold-up time



8.6 Over voltage protection

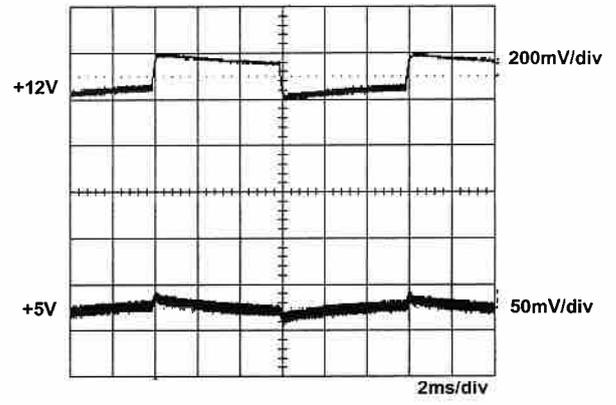


8.7 +5V step response



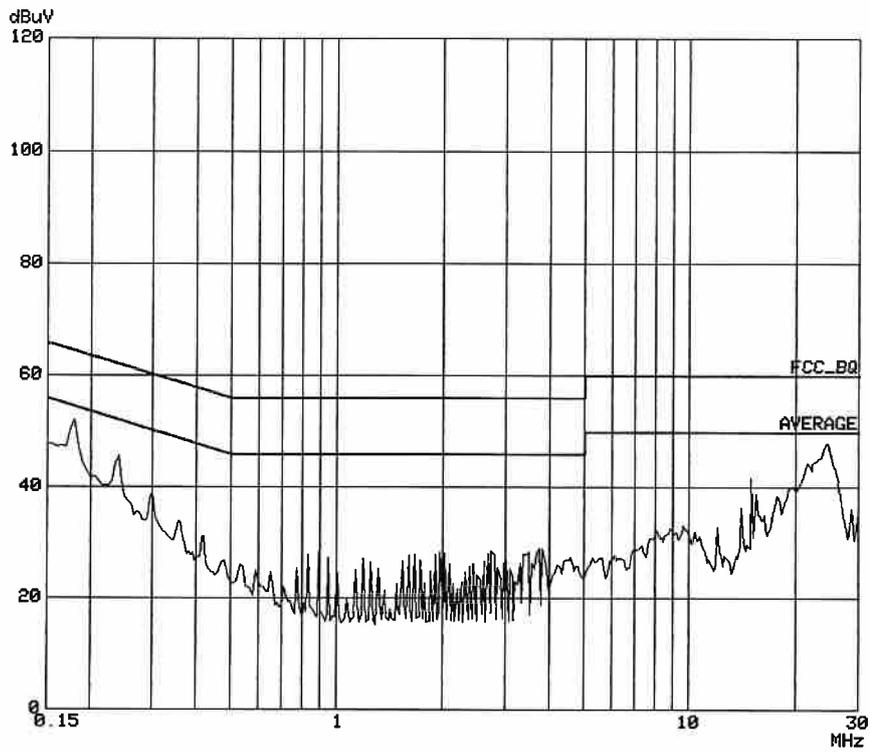
+5V step from 0.6A to 3A  
other output at 60% load

8.8 +12V step response



+12V step from 0.18A to 0.9A  
other output at 60% load

8.9 FCC B performance



8.10 EN55022 class "B"

