

**SPECIFICATION**

and

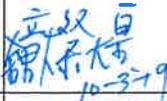
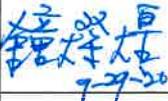
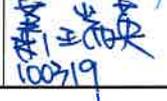
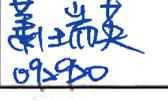
**PERFORMANCE**

for

SWITCHING POWER SUPPLY

**M/N : SNP-Y049-1**

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

## 1.0 INTRODUCTIONS

SNP-Y049-1 is a 40W single output and universal input switching mode power supply. It's designed for IT, industrial and medical applications. Low density, low profile, high efficiency and high reliability are the basic features.

## 2.0 INPUT SPECIFICATIONS

### 2.1 Input Voltage

The range of input voltage is from 90VAC 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 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	peak load	voltage accuracy
+24V	0.1A	1.9A	2.8A	23.76V to 24.24V

At factory, the +24V output is set between +23.76V to +24.24V at 60% rated load and nominal line input.

At peak load, the output can last for 8 seconds without shut down.

### 3.2 Ripple and noise

The peak to peak ripple and noise is less than 1.0% of output voltage at rated load, nominal line. Measuring is done by 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor.

### 3.3 Line regulation

The output line regulation is less than + -1.0% while measuring at rated load and + -10% of nominal line input voltage changing.

### 3.4 Load regulation

The load regulation is less than + -1.0%, which is measured by changing the output load + -40% from 60% rated load, and at nominal line input.

**4.0 GENERAL FEATURES**

**4.1 Efficiency**

The efficiency is 84% typ. while measuring at nominal line and rated load.

**4.2 Hold up time**

The hold up time is 14mS 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 +26.2V to +31V. To recover from over voltage protection, cycle the AC line OFF and ON is necessary.

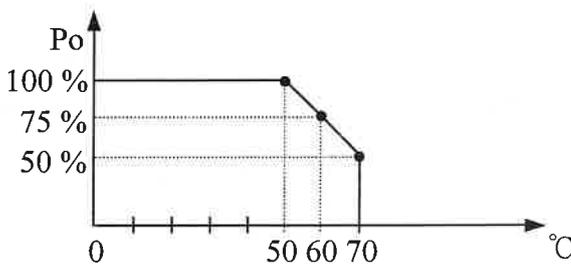
**4.3.2 Short circuit and over load protection**

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 with derating as below.)



**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 10000ft.

## 6.0 INTERNATIONAL STANDARDS

### 6.1 Safety standards

Designed to meet the following regulations :

UL/CSA 62368-1 2<sup>nd</sup> edition 2014-12-01

EN 62368-1 2014+A11

IEC 62368-1:2014

ANSI/AAMI/CSA/EN60601-1, 3<sup>rd</sup> edition +A1

### 6.2 EMI standards

Designed to meet the following limits :

FCC docket 20780 curve "B"

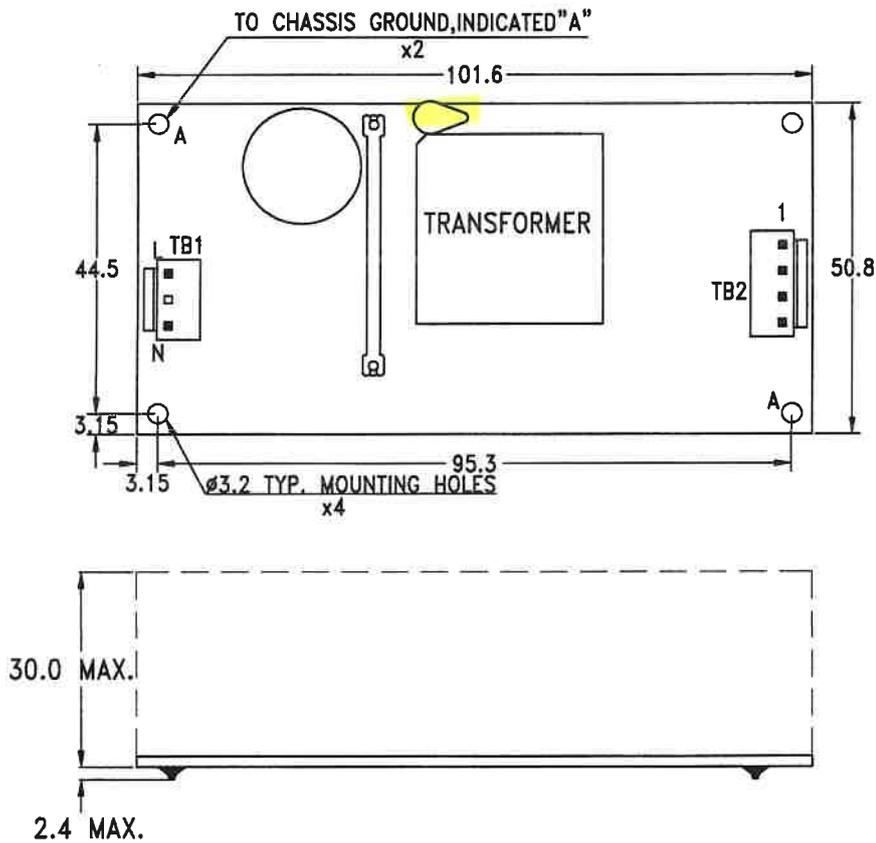
EN55011 class "B"

### 6.3 EMS standards

Designed to meet the following limits :

EN61000-4-2	8KV contact, 15KV 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	30A/M	Criterion A
EN61000-4-11	30 % dips 500 ms,	Criterion A
	60 % dips 200 ms,	Criterion B
	100 % dips 10 ms,	Criterion A
	100 % dips 5000 ms,	Criterion B
	100 % dips 20 ms,	Criterion B

**7.0 MECHANICAL SPECIFICATION**



**7.1 Dimensions**

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

**7.2 Connectors**

TB1--AC input : JST B2P3-VH or equivalent.

TB2--DC output : JST B4P-VH or equivalent.

**7.3 DC output pin assignment**

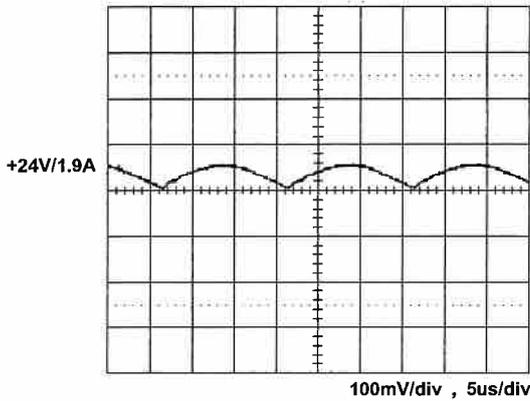
- Pin 1. +24V
- 2. +24V
- 3. GND
- 4. GND

**7.4 Packing**

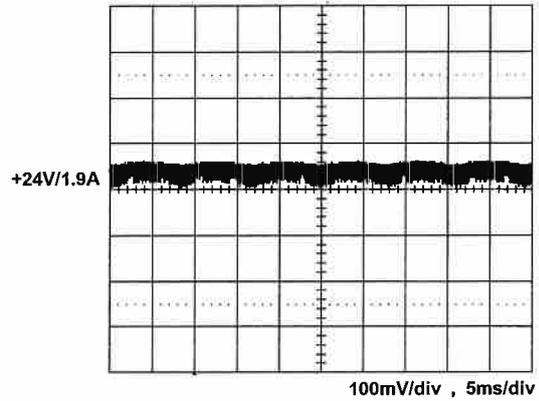
- Net weight : 115 g approx. / unit
- Carton size (mm) : 382 (L) x 374 (W) x 277 (H)
- Quantity : 80 units / carton
- Gross weight : 11.7 kg approx. / carton

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

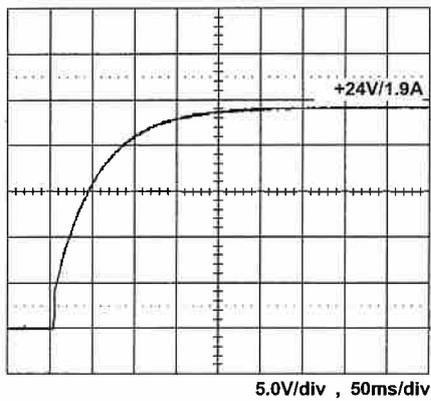
8.1 Switching frequency ripple



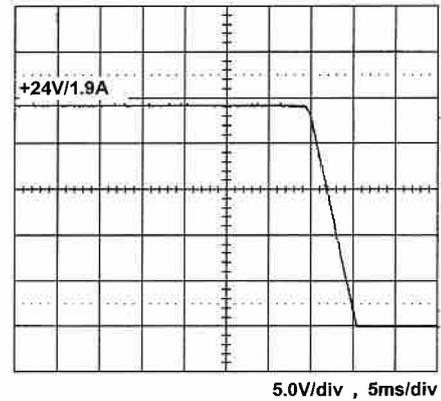
8.2 Line frequency ripple



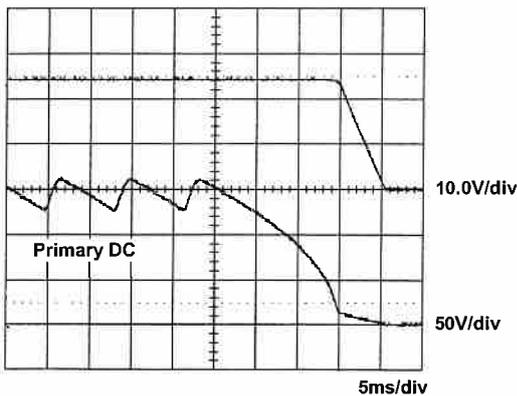
8.3 Output turn on wave form



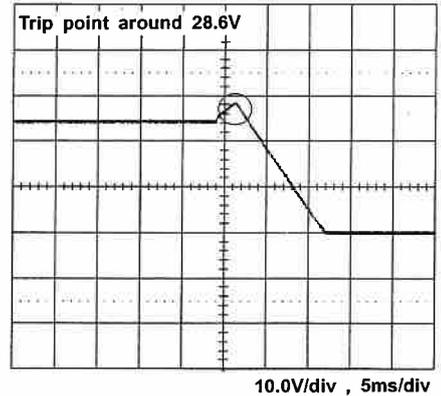
8.4 Output turn off wave form



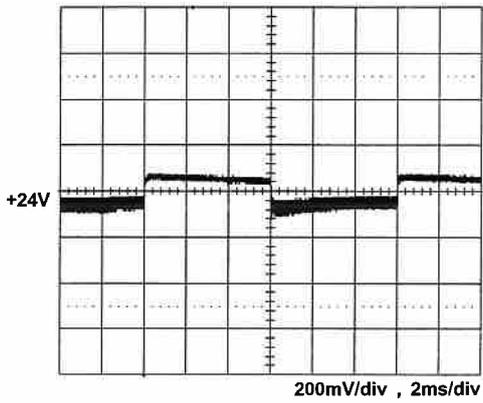
8.5 Hold-up time



8.6 Over voltage protection

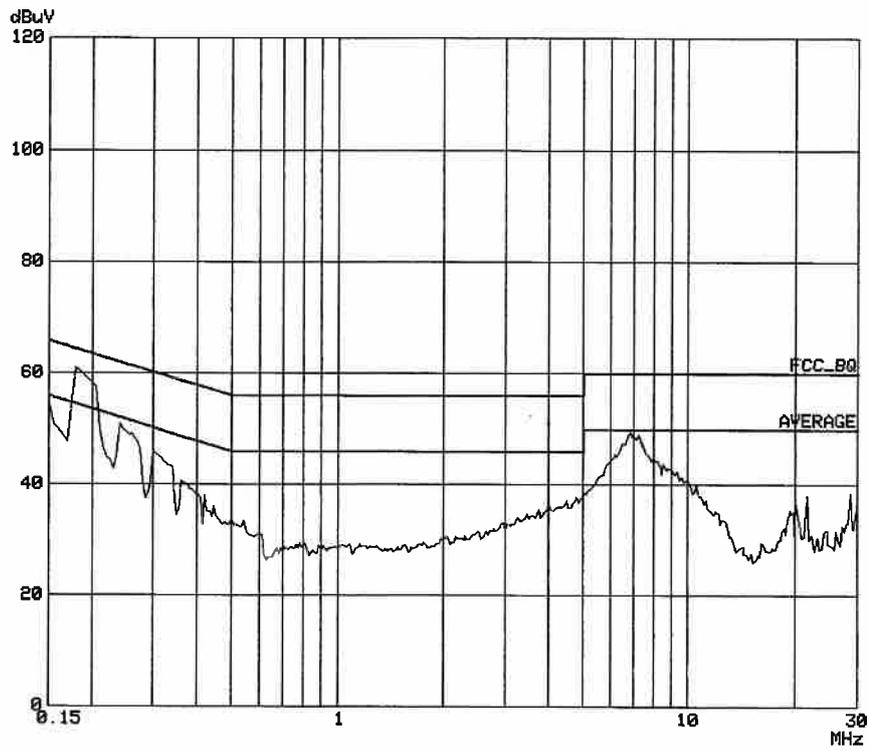


8.7 +24V step response



+24V step from 0.38A to 1.9A

8.8 FCC B performance



8.9 EN55011 class "B"

