

## Description:

SNP-903 series is a 30W, universal input switching mode power supply. It is with various output options, which includes triple outputs, dual outputs and single output. Its design meets with UL, CSA, VDE regulations and EMI Vfg 243/1991.

## Model available:

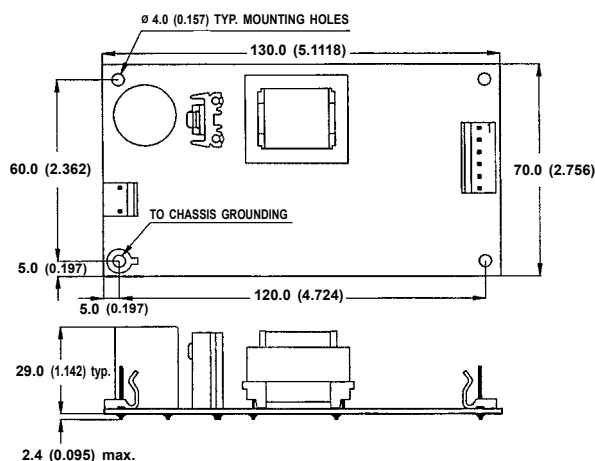
- SNP-9031 for 5V/2A, 12V/1.5A, -12V/0.3A
- SNP-9034 for 5V/1.5A, 15V/1.2A, -15V/0.3A
- SNP-9037 for 12V/25A
- SNP-9039 for 24V/1.3A

## General Specifications:

Input voltage ..... 90VAC to 260VAC  
 Input frequency..... 47Hz to 63Hz  
 Inrush current ..... < 30A at 115VAC  
 (cold start at 25°C) or < 60A at 230VAC  
 Efficiency ..... > 70%  
 at rated load and 115VAC  
 Hold up time ..... > 16ms  
 at rated load and 115VAC  
 Over load protection ..... refer to spec.

Short circuit protection ..... refer to spec.  
 Over voltage protection ..... crowbar  
 Operating temperature (open frame type) ..... 0°C to 50°C  
 Cooling ..... free air convection  
 Storage temperature ..... -20°C to +85°C  
 EMI conduction standard ..... FCC class "B"  
 Vfg 243/1991  
 Safety ..... meet UL 60950-1  
 CSA C22.2 No.60950-1  
 EN 60950-1

## Mechanical Specifications:



### Notes:

1. Dimensions shown in mm (inch) as left. Tolerance specified is  $\pm 0.4$ mm.
2. Size:  
70 x 130 x 28.6 (mm)  
2.756" x 5.118" x 1.128"
3. Mounting holes:  
60 x 120 (mm)  
2.362" x 4.724"
4. Packing:  
Net weight: 130 g approx. / unit  
Gross weight: 10 kg approx. / carton, 60 units / carton  
Carton size (mm): 447 (L) x 318 (W) x 333 (H)
5. Connectors  
TB1 : Molex 5277-2 or equivalent for AC input  
TB2 : Molex 5273-x or equivalent for DC output  
TB2 Pin assignment:

PIN NO.	1	2	3	4	5	6
SNP-9031	+5V	+5V	GND	GND	-12V	+12V
SNP-9034	+5V	+5V	GND	GND	-15V	+15V
SNP-9037	+12V	+12V	GND	GND		
SNP-9039	+24V	+24V	GND	GND		

## Output Specifications:

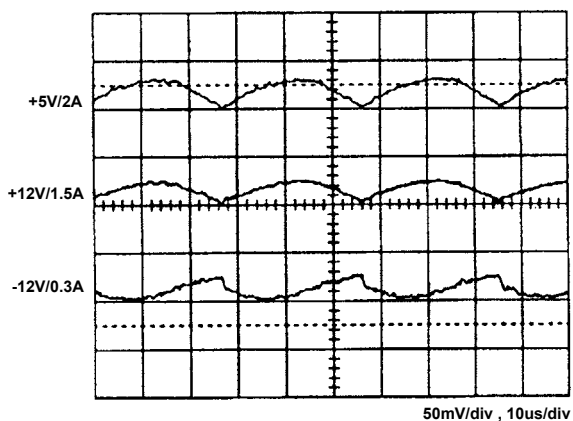
MODEL NO.	OUTPUT RAIL	LOAD				VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.
		MIN.	RATED	MAX.	PEAK				
SNP-9031	+5V	0A	2A		3A	+4.95~+5.05V	1%	±1%	±1%
	+12V	0A	1.5A		3A	+11.4~+12.6V	1%	±1%	±4%
	-12V	0A	0.3A		0.5A	-11.4~-13.0V	1%	±1%	±5%
SNP-9034	+5V	0A	1.5A		3A	+4.98~+5.02V	1%	±1%	±1%
	+15V	0A	1.2A		2A	+14.25~+15.75V	1%	±1%	±4%
	-15V	0A	0.3A		0.5A	-14.00~-16.00V	1%	±1%	±4%
SNP-9037	+12V	0A	2.5A		4A	+11.97~+12.03V	1%	±1%	±1%
SNP-9039	+24V	0A	1.3A		2A	+23.82~+24.21V	1%	±1%	±1%

### Note:

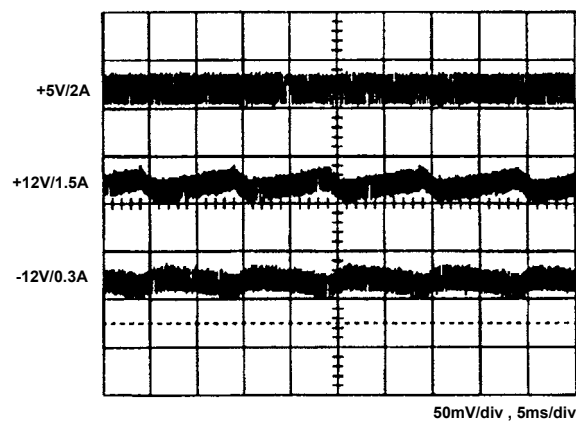
1. Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.
2. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the specified accuracy range at rated load.
3. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
4. Load regulation is defined by changing  $\pm 40\%$  of measured output load from 60% rated load at another output set to 60% rated load.
5. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drop down to regulation limit at rated load and nominal line.
7. Rated load is maximum loading for flat mounting and free air convection cooling.

## Performance for SNP-9031:

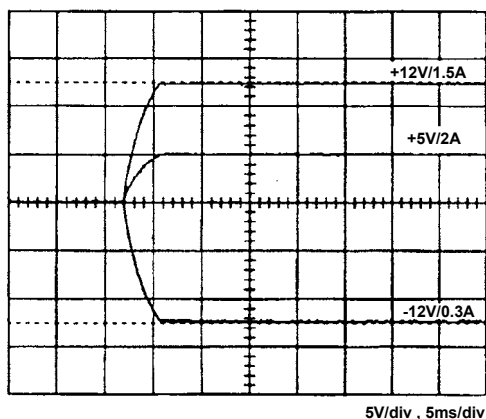
### 1. Switching frequency ripple



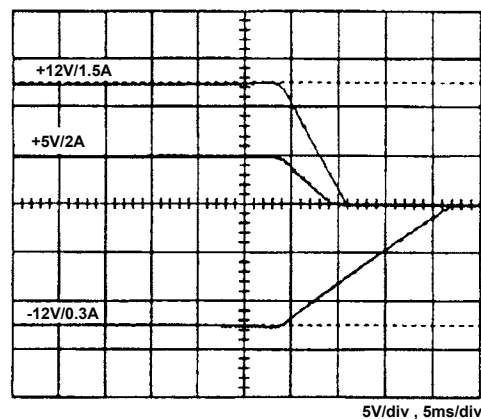
### 2. Line frequency ripple



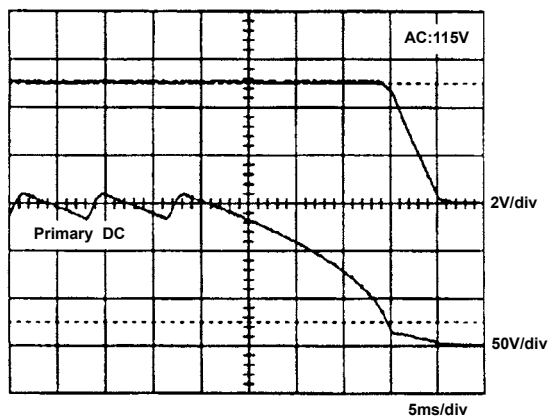
### 3. Output turn on wave form



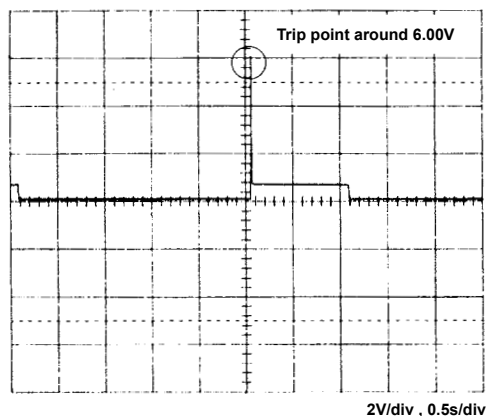
### 4. Output turn off wave form



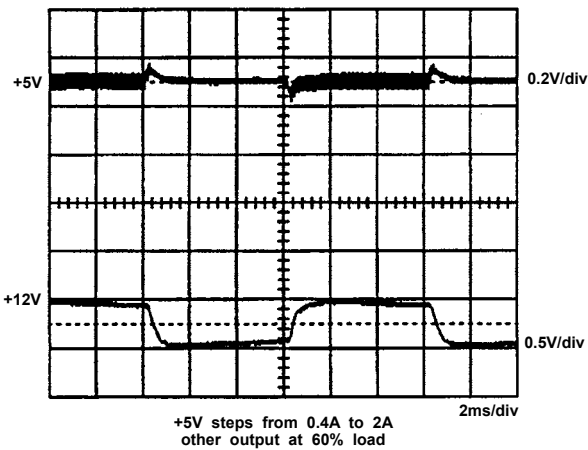
### 5. Hold-up time



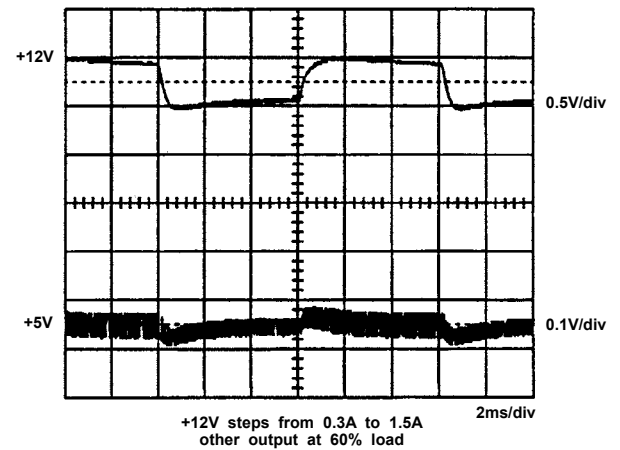
### 6. Over voltage protection



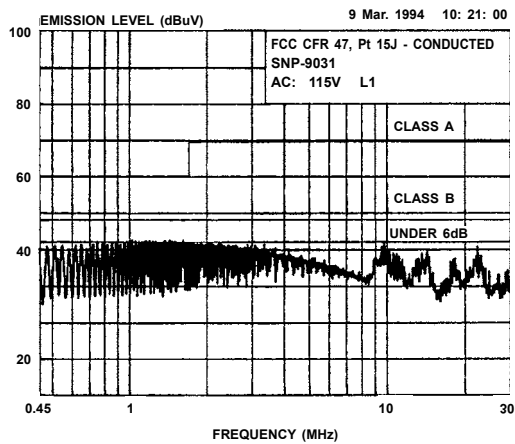
## 7. + 5V step response



## 8. + 12V step response



## 9. FCC B



## 10. Vfg 243/1991

