



## Switching Adapter (Universal)

**20-30 W  
SNP-V03 series**



### Description:

SNP- V03 series is a 20-30 watts, single output switching mode power supplies in a plastic box with color options (beige or black).

It is designed in full compliance with UL, CSA and VDE regulations and EMI CISPR22 level "B" for general purpose.

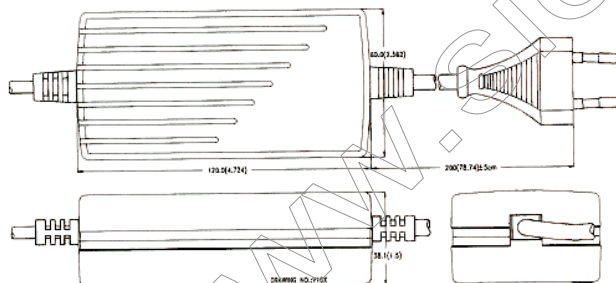
### General Specifications:

Input voltage .....90V AC to 264V AC  
Input frequency..... 47Hz to 63Hz  
Inrush Current .....less than 30A at 115V AC,  
less than 60A at 230V AC,  
cold start, 25°C  
Outputs .....see output table  
Efficiency .....75% typical at nominal line  
and rated load  
Hold up time.....16ms for SNP-VO36, VO37  
13 ms typical for SNP- VO39  
at rated load and 115V AC

Over load protection .. .....auto-recovery  
Short circuit protection .....auto-recovery  
Operating temperature.....0 to 40°C  
Cooling .....Free air convection  
Storage temperature.....-20°C to +85°C  
EMI .....CISPR 22 level "B"  
Safety .....UL 1950 D3  
CSA 22.2 No.234  
VDE EN60 950 (Class 2)

### Mechanical Specifications:

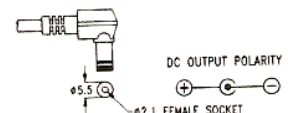
SNP-V039



#### Notes:

1. Dimensions shown in mm (inch) as above. Tolerance: +/- 1mm (Excluding cables).
2. Size:  
60.0mm X 120.0mm X 38.1mm  
2.362" X 4.724" X 1.5"
3. Connectors:  
a) AC input\*\*  
North American type (ungrounded 2 wires), 2m±5cm.  
b) DC output\*\*  
2.1 DIA. socket type, DC power jack (cable length: 2m approx.)

DC power jack specification:



\*\* Options available for AC input & DC output connector if the detailed specifications can be provided.



## Switching Adapter (Universal)

**20-30 W**  
**SNP-V03 series**

### Output Specifications:

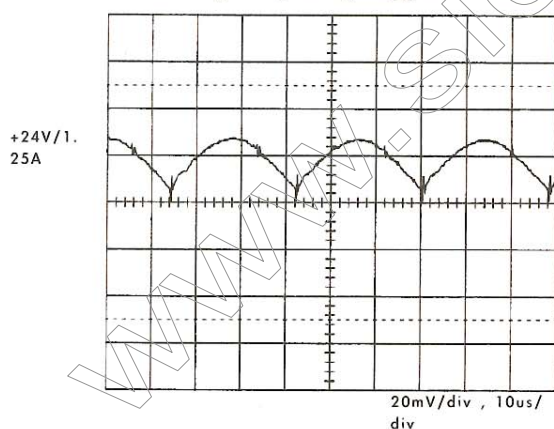
| MODEL NO. | OUTPUT RAIL | LOAD |       |      | VOLTAGE ACCURACY | RIPPLE NOISE | LINE REG. | LOAD REG. |
|-----------|-------------|------|-------|------|------------------|--------------|-----------|-----------|
|           |             | MIN. | RATED | PEAK |                  |              |           |           |
| SNP-V037  | +12V        | 0A   | 2A    | 4A   | +11.4~+12.6V     | 100mVpp      | ±1%       | ±3%       |
| SNP-V039  | +24V        | 0A   | 1.25A | 2.5A | +23.0~+25.0V     | 250mVpp      | ±1%       | ±5%       |

### Note:

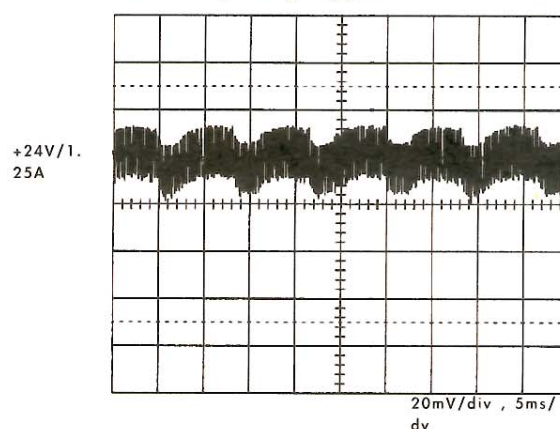
1. Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line 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 when the main output drops down to 95% output voltage.
7. Efficiency is measured at nominal line and rated load.

### Performance for SNP-V039:

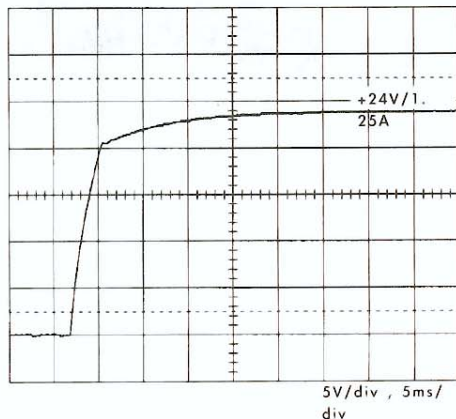
#### 1. Switching frequency ripple



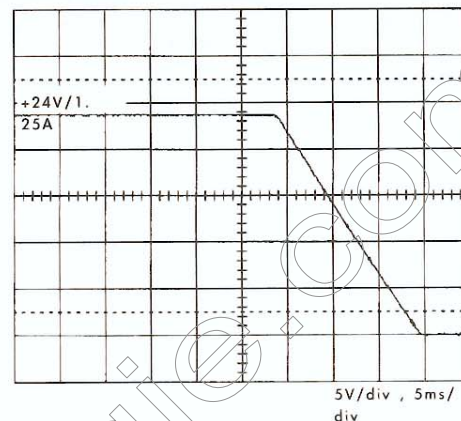
#### 2. Line frequency ripple



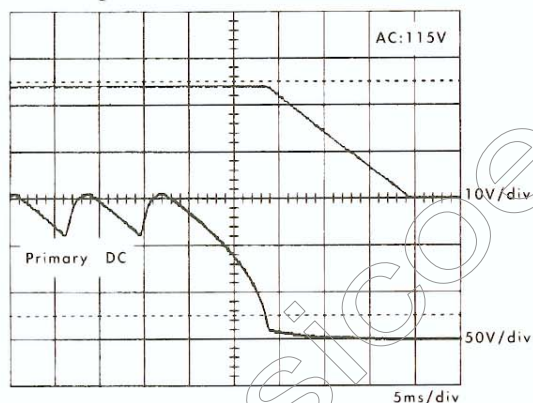
### 3. Output turn on wave form



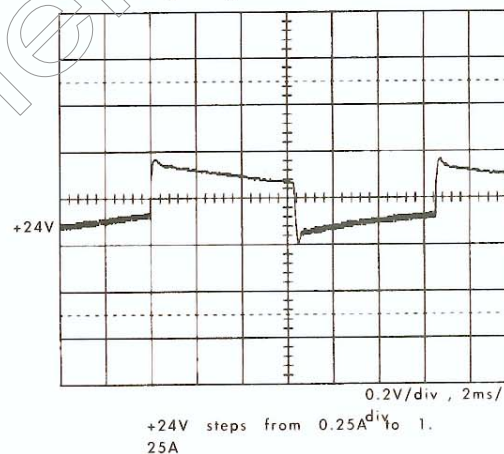
### 4. Output turn off wave form



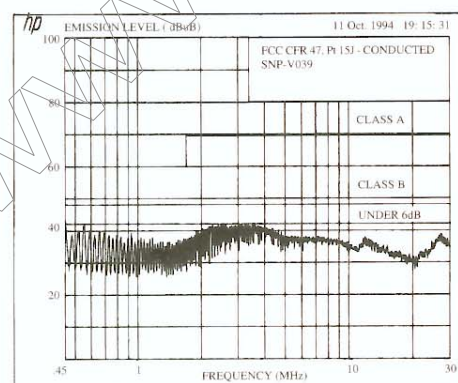
### 5. Hold-up time



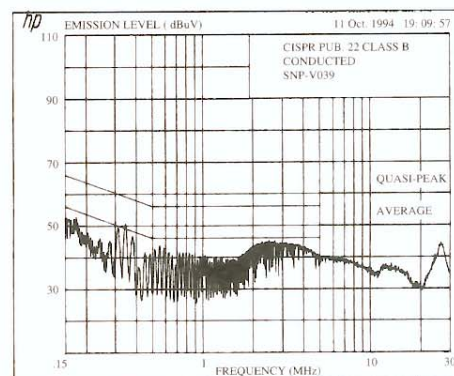
### 6. +24V step response



### 7. FCC B performance



### 8. CISPR PUB. 22 Class B







## Switching Adapter (Universal)

20-30 W  
SNP-V03 series

### 9. CISPR 22 Class B

