



**3" x 5" x 1.18"**

## General Specifications:

Input voltage ..... 90VAC to 264VAC  
 Input frequency..... 47Hz to 63Hz  
 Inrush current ..... < 30A at 115VAC  
 (cold start at 25°C) or < 60A at 230VAC  
 Efficiency ..... 78%~87% depends on models  
 at rated load and 115VAC  
 Hold up time ..... longer than 20ms  
 at rated load and 115VAC  
 Over load protection ..... auto recovery  
 Short circuit protection ..... auto recovery  
 Leakage current ..... < 300uA

## Features:

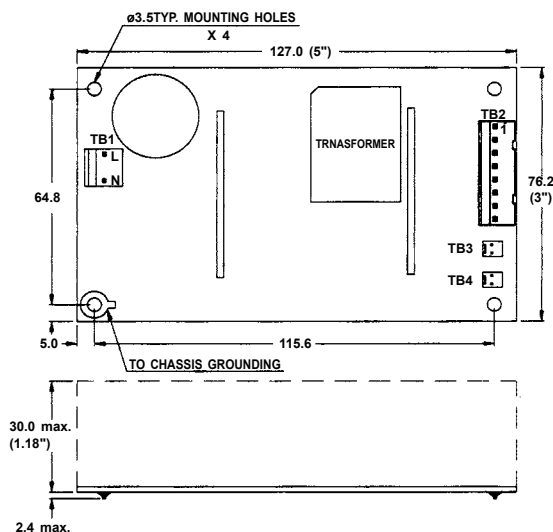
- Only 1.18 inch height
- With ITE & Medical safety
- Efficiency between 78% to 87%
- Operation from 0°C to 70°C by convection

## Applications:

- For dental, laboratory products, pumps, monitors, sleep apnea devices and many other uses.

Over voltage protection ..... latch off  
 Remote sense ..... compensate for 0.5V load drop min.  
 Operating temperature (open frame type) ..... 0°C to 70°C  
 derating: 2.5% / °C > 50°C  
 Cooling ..... free air convection  
 Storage temperature ..... -40°C to +85°C  
 EMI ..... FCC "B"  
 EN55022"B", EN55011"B"  
 EMS ..... EN61000-4-2,-3,-4,-5,-6,-8,-11  
 Safety ..... UL 60950, 2601  
 CSA C22.2 No. 234, 601.1  
 EN 60950-1, EN 60601-1

## Mechanical Specifications:



## Notes:

- Size: 3" x 5" x 1.18"
- Mounting Hole: 64.8 x 115.6 (mm)
- Connectors:
  - TB1 - AC input : Molex 5277-2 or equivalent for all models
  - TB2 - DC output : Molex 5273-8 or equivalent for all models
  - TB3 - for LED : Molex 5045-2 or equivalent for SNP-Z071, -Z073, -Z077, -Z078, -Z079, -Z07E
  - TB4 - for FAN : Molex 5045-2 or equivalent for SNP-Z076, -Z07B
  - TB3 - for LED : Molex 5045-2 or equivalent for SNP-Z076, -Z07B
  - TB4 - for Remote sense : Molex 5045-2 or equivalent for SNP-Z077
  - TB3 - for LED : Molex 5045-2 or equivalent for SNP-Z077
- Output Pin assignment:
 

PIN NO.	1	2	3	4	5	6	7	8
SNP-Z071	+5V	+5V	GND	GND	+12V	+12V	-12V	NC
SNP-Z073	+5V	+5V	GND	GND	GND	GND	+12V	+12V
SNP-Z076	+5V	+5V	+5V	+5V	GND	GND	GND	GND
SNP-Z077	+12V	+12V	+12V	GND	GND	GND	GND	+5V
SNP-Z078	+15V	+15V	+15V	GND	GND	GND	GND	+5V
SNP-Z079	+24V	+24V	+24V	GND	GND	GND	GND	+5V
SNP-Z07T	+48V	+48V	+48V	GND	GND	GND	GND	+5V
SNP-Z07B	+3.3V	+3.3V	+3.3V	+3.3V	GND	GND	GND	GND
SNP-Z07E	+3.3V	+3.3V	GND	GND	+5V	+5V	-12V	+12V
- Packing:
  - Net weight: 225 g approx. / unit
  - Gross weight: 14 kg approx. / carton, 48 units / carton
  - Carton size (mm): 397 (L) x 339 (W) x 327 (H)

## Output Specifications:

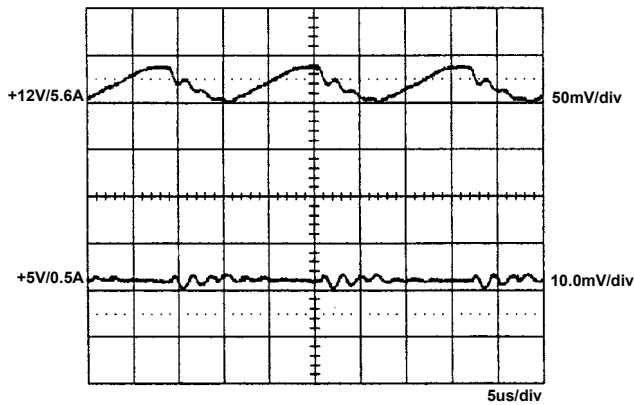
MODEL NO.	OUTPUT RAIL	LOAD			VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.	EFFICIENCY TYPICAL
		MIN.	RATED	PEAK					
SNP-Z071	+5V	0A	3.5A	5A	+4.95V~+5.05V	1%	±1%	±3%	78%
	+12V	0A	3.5A	9A	+11.4V~+12.6V	1%	±1%	±3%	
	-12V	0A	0.3A		-11.4V~-12.6V	1%	±1%	±5%	
SNP-Z073	+5V	0A	3.5A	5A	+4.95V~+5.05V	1%	±1%	±3%	78%
	+12V	0A	4A	9A	+11.4V~+12.6V	1%	±1%	±3%	
SNP-Z076	+5V	0A	14A		+4.95V~+5.05V	1%	±1%	±1%	79%
SNP-Z077	+12V	0A	5.6A	9A	+11.88V~+12.12V	1%	±1%	±1%	81%
	+5V	0A	0.5A		+4.75V~+5.25V	1%	±1%	±1%	
SNP-Z078	+15V	0A	4.8A	8A	+14.85V~+15.15V	1%	±1%	±1%	82%
	+5V	0A	0.5A		+4.75V~+5.25V	1%	±1%	±1%	
SNP-Z079	+24V	0A	3A	5A	+23.76V~+24.24V	1%	±1%	±1%	84%
	+5V	0A	0.5A		+4.75V~+5.25V	1%	±1%	±1%	
SNP-Z07T	+48V	0A	1.6A		+47.6V~+48.4V	1%	±1%	±1%	86%
SNP-Z07E	+3.3V	0A	6A	10A	+3.26V~+3.33V	50mV	±1%	±3%	78%
	+5V	0A	4A	7A	+4.75V~+5.25V	1%	±1%	±3%	
	+12V	0A	2A		+11.4V~+12.6V	1%	±1%	±5%	
	-12V	0A	0.6A		-11.4V~-12.6V	1%	±1%	±5%	

### Note:

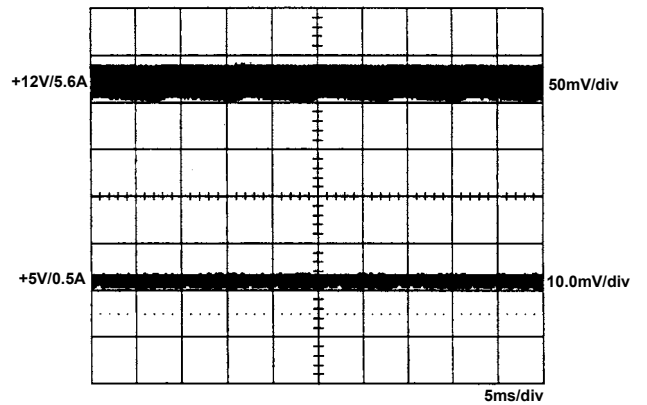
- For SNP-Z07E, +3.3V and +5V can provide up to peak load continuously but the maximum combination load should be less than 45W. In other models, peak load can be provided temporarily and continuous staying in more than rated load is not allowed.
- At factory, all outputs in 60% rated load condition, 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.
- Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
- 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. For SNP-Z076, one extra 39uF electrolytic capacitor should be added.
- 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.
- Rated load is maximum loading for flat mounting and free air convection cooling.
- +5V output can be optional for SNP-Z077, -Z078, -Z079.
- 12V output can be optional for SNP-Z07E.
- Model Selection:  
SNP-Z07x is for both of ITE application and medical application.

## Performance for SNP-Z077 (input voltage is 115VAC, unless others specified):

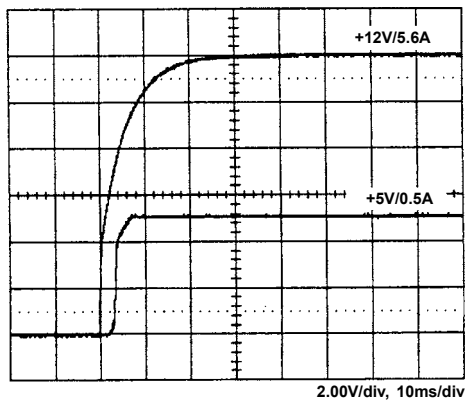
1. Switching frequency ripple



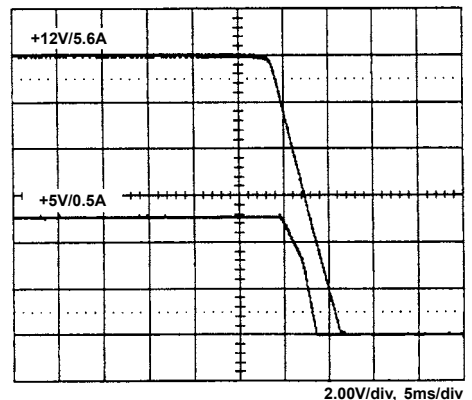
2. Line frequency ripple



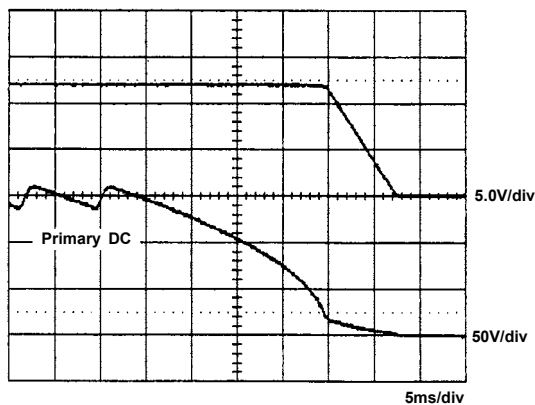
3. Output turn on wave form



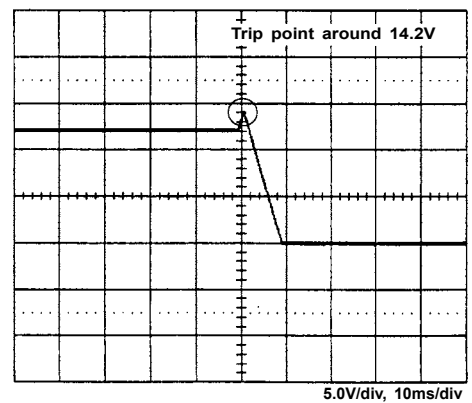
4. Output turn off wave form



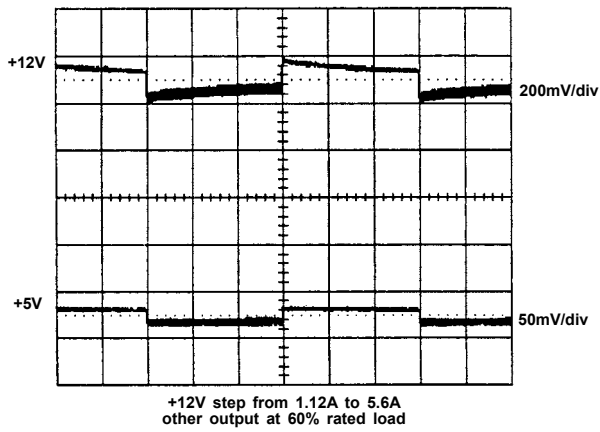
5. Hold-up time



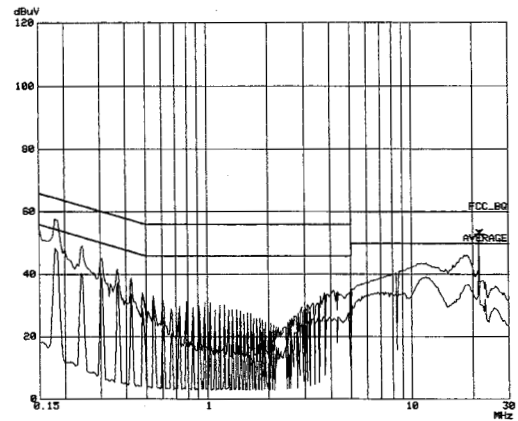
6. Over voltage protection



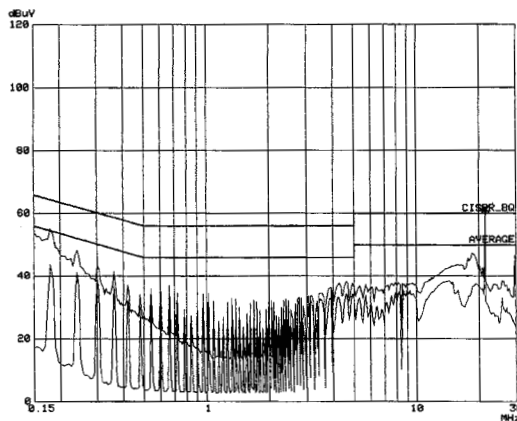
## 7. +12V step response



## 8. FCC B



## 9. CISPR 22 B



## 10. Power derating curve

