# **IT & Medical Applications** (Universal)



#### **Features:**

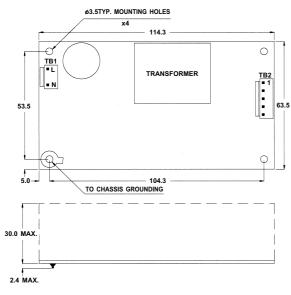
- Only 1.28 inch height
- 4.2 Watt per cubic inch
- With ITE & Medical safety
- Efficiency between 78% to 87%
- Operation from 0°C to 70°C by convection
- Single side PCB for low assembly cost

## **General Specifications:**

Input voltage	90VAC to 264VAC
_	47Hz to 63Hz
	less than 30A at 115VAC
	less than 60A at 230VAC
	cold start, 25°C
Efficiency	78%~87% depends on models
	at rated load and 115VAC
Hold up time	16mS typical
	at rated load and 115VAC
Earth leakage current	< 300uA
Over load protection	auto recovery

Short circuit protection	auto recovery
_	latch off
Operating temperature	0 to 70°C convection
	derating: $2.5\% / ^{\circ}\text{C} > 50 ^{\circ}\text{C}$
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 60950-1, UL 60601-1
	CSA C22.2 No. 60950-1, 601.1
	EN 60950-1, EN 60601-1

# **Mechanical Specifications:**



#### **Notes:**

- Dimensions shown in mm as left. Tolerance: +-1mm (Excluding cables).
- Size: 63.5 X 114.3 X 32.4 (mm) 2.5" X 4.5" X 1.28"

3. Packing

Net weight: 155 g approx. / unit Gross weight: 15 kg approx. / carton, 80units / carton Carton size (mm): 442 (L) x 370 (W) x 301 (H) Connectors

TB1-AC input: JST B3P-VH withdraw one pin or equivalent TB2-DC output: JST B4P-VH or equivalent for single output JST B6P-VH or equivalent for multiple outputs

5. Output Pin assignment

PIN NO.	1	2	3	4	5	6
SNP-Y061	+5V	+5V	GND	GND	+12V	-12V
SNP-Y066	+5V	+5V	+5V	GND	GND	GND
SNP-Y067	+12V	+12V	GND	GND	+5V	NC
SNP-Y067-1	+12V	+12V	GND	GND		
SNP-Y068	+15V	+15V	GND	GND	+5V	NC
SNP-Y068-1	+15V	+15V	GND	GND		
SNP-Y069	+24V	+24V	GND	GND	+5V	NC
SNP-Y069-1	+24V	+24V	GND	GND		
SNP-Y06T	+48V	+48V	GND	GND		
SNP-Y06F	+5V	+5V	GND	GND	+24V	+12V

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# IT & Medical Applications (Universal)

Rated 60W Peak 90W SNP-Y06 Series

## **Output Specifications:**

MODEL	OUTPUT	LOAD				VOLTAGE	RIPPLE	LINE	LOAD	EFFICIENCY
NO.	RAIL	MIN.	RATED	MAX.	PEAK	ACCURACY	NOISE	REG.	REG.	TYPICAL
SNP-Y061	+5V	0A	3A	5A	7A	+4.95V~+5.05V	1%	±1%	±3%	
	+12V	0A	3A	4A	6A	+11.4V~+12.6V	1%	±1%	±3%	82%
	-12V	0A	0.3A			-11.4V~-12.6V	1%	±1%	±5%	
SNP-Y066	+5V	0A	10A		15A	+4.95V~+5.05V	1%	±1%	±1%	80%
SNP-Y067	+12V	0A	4.8A		7.5A	+11.88V~+12.12V	1%	±1%	±1%	83%
	+5V	0A	0.5A		1A	+4.75V~+5.25V	1%	±1%	±1%	
SNP-Y067-1	+12V	0A	5A		7.5A	+11.88V~+12.12V	1%	±1%	±1%	84%
SNP-Y068	+15V	0A	3.8A		6A	+14.85V~+15.15V	1%	±1%	±1%	83%
	+5V	0A	0.5A		1A	+4.75V~+5.25V	1%	±1%	±1%	
SNP-Y068-1	+15V	0.1A	4A		6A	+14.85V~+15.15V	1%	±1%	±1%	84%
SNP-Y069	+24V	0.1A	2.4A		3.8A	+23.75V~+24.24V	1%	±1%	±1%	86%
	+5V	0A	0.5A		1A	+4.75V~+5.25V	1%	±1%	±1%	
SNP-Y069-1	+24V	0.1A	2.5A		3.8A	+23.75V~+24.24V	1%	±1%	±1%	87%
SNP-Y06T	+48V	0A	1.25A		1.9A	+47.6V~+48.4V	1%	±1%	±1%	88%
SNP-Y06F	+5V	0A	3A	5A	7A	+4.90V~+5.10V	1%	±1%	±3%	
	+24V	0A	1.5A	2A	3A	+22.8V~+25.2V	1%	±1%	±3%	83%
	+12V	0A	0.3A			+11.4V~+12.6V	1%	±1%	±3%	

#### Note:

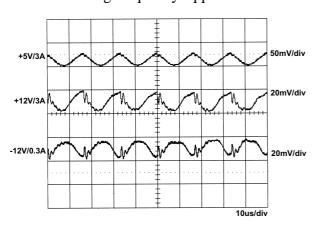
- 1. At peak load, the output can last for 8 seconds without shut down.
- 2. The maximum combinational load of SNP-Y06D for +3.3V & +5V is 38W.
- 3. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the specified accuracy range at rated load.
- 4. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
- 5. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
- 6. 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.
- 7. 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.
- 8. The efficiency is measured at nominal line and rated load.

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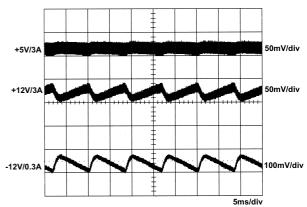
# IT & Medical Applications (Universal)

#### **Performance for SNP-Y061:**

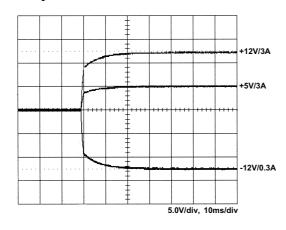
### 1. Switching frequency ripple



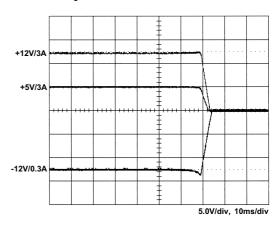
# 2. Line frequency ripple



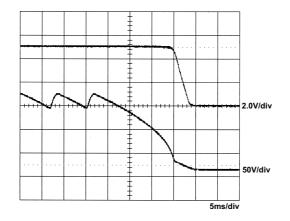
### 3. Output turn on wave form



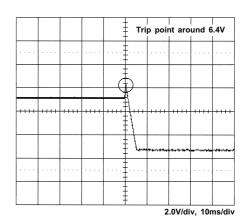
4. Output turn off wave form



### 5. Hold-up time



### 6. Over voltage protection

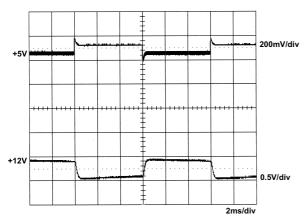


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# IT & Medical Applications (Universal)

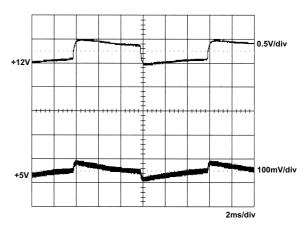
Rated 60W Peak 90W SNP-Y06 Series

### 7. +5V step response



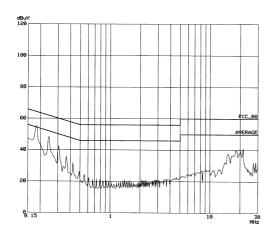
+5V step from 0.6A to 3A other output at 60% rated load

## 8. +12V step response



+12V step from 0.6A to 3A other output at 60% rated load

#### 9. FCC B



#### 10. EN 55022 B

