

# IT & Medical Applications (Universal)

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**Features:** 

Only 1.28 inch height

6.3 Watt per cubic inch

With ITE & Medical safety

Efficiency between 77% to 87%

Operation from 0°C to 70°C by convection

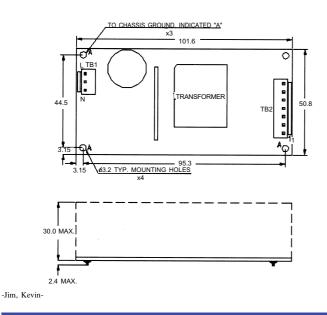
### Warranty 10 years



# **General Specifications:**

Input voltage	
Input frequency	
Inrush current	less than 40A at 115VAC
	less than 70A at 230VAC
	cold start, 25°C
Efficiency 7	7%~87% depends on models
	at rated load and 115VAC
Hold up time	16mS typical, or 50mS typical
at rated los	ad and 115VAC, or 230VAC
Over load protection	auto recovery

# **Mechanical Specifications:**



Short circuit protection ......auto recovery Over voltage protection .....latch off Operating temperature .....0 to 70°C convection 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, UL 2601 CSA 22.2 No.234, No. 601.1 EN 60950, EN 60601-1

#### Notes:

- 1. Dimensions shown in mm as left. Tolerance: + -1mm (Excluding cables).
- 2. Size: 50.8 X 101.6 X 32.4 (mm)
- 2" X 4" X 1.28"
- 3. Packing:

Net weight: 140 g approx. / unit Gross weight: 13.5 kg approx. / carton, 80 units / carton Carton size (mm): 382 (L) x 374 (W) x 277 (H)

 Connectors: AC input : JST B2P3-VH or equivalent DC output : JST B4P-VH or equivalent for single output JST B7P-VH or equivalent for multiple outputs
Output Pin assignment:

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PIN NO.	1	2	3	4	5	6	7
SNP-Z061	-12V	+5V	+5V	GND	GND	+12V	+12V
SNP-Z06D	+12V	+5V	+5V	GND	GND	+3.3V	+3.3V
SNP-Z063	NC	+5V	+5V	GND	GND	+12V	+12V
SNP-Z06A	NC	+5V	+5V	GND	GND	+24V	+24V
SNP-Z066	GND	GND	GND	+5V	+5V	+5V	
SNP-Z066-1	GND	GND	GND	+5V	+5V	+5V	
SNP-Z067	+5V	GND	GND	GND	+12V	+12V	
SNP-Z067-1	NC	GND	GND	GND	+12V	+12V	
SNP-Z068	+5V	GND	GND	GND	+24V	+24V	
SNP-Z068-1	NC	GND	GND	GND	+24V	+24V	
SNP-Z069	+5V	GND	GND	GND	+24V	+24V	
SNP-Z069-1	NC	GND	GND	GND	+24V	+24V	
SNP-Z06T	NC	GND	GND	GND	+48V	+48V	
SNP-Z06B	GND	GND	GND	+3.3V	+3.3V	+3.3V	



## **Output Specifications:**

MODEL	OUTPUT	LOAD		VOLTAGE	RIPPLE	LINE	LOAD	EFFICIENCY		
NO.	RAIL	MIN.	RATED	MAX.	PEAK	ACCURACY	NOISE	REG.	REG.	TYPICAL
SNP-Z061	+5V +12V -12V	0A 0A 0A	3A 3A 0.3A		5A 5A 1A	+4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%	82%
SNP-Z06D	+3.3V +5V +12V	0A 0A 0A	4.5A 3A 0.7A	6A 5A	10A 7A 1A	+3.2V~+3.4V +4.75V~+5.25V +11.4V~+12.6V	50mV 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%	80%
SNP-Z063	+5V +12V	0A 0A	3A 3A		6A 5A	+4.95V~+5.05V +11.4V~+12.6V	1% 1%	±1% ±1%	±3% ±3%	82%
SNP-Z06A	+5V +24V	0A 0A	4A 1.5A		6A 3A	+4.95V~+5.05V +22.8V~+25.2V	1% 1%	±1% ±1%	±3% ±3%	83%
SNP-Z066	+5V	0A	10A		18A	+4.95V~+5.05V	1%	±0.5%	±0.5%	80%
SNP-Z066-1	+5V	0A	12A		18A	+4.95V~+5.05V	1%	±0.5%	±0.5%	85%
SNP-Z067	+12V +5V	0.1A 0A	4.8A 0.5A		7.5A 1A	+11.88V~+12.12V +4.75V~+5.25V	1% 1%	±0.5% ±1%	±0.5% ±1%	82%
SNP-Z067-1	+12V	0A	5A		7.5A	+11.88V~+12.12V	1%	±0.5%	±0.5%	85%
SNP-Z068	+15V +5V	0A 0A	3.8A 0.5A		6A 1A	+14.85V~+15.15V +4.75V~+5.25V	1% 1%	±0.5% ±1%	±0.5% ±1%	84%
SNP-Z068-1	+15V	0.1A	4.3A		6A	+14.85V~+15.15V	1%	±0.5%	±0.5%	85%
SNP-Z069	+24V +5V	0.1A 0A	2.4A 0.5A		3.7A 1A	+23.75V~+24.24V +4.75V~+5.25V	1% 1%	±0.5% ±1%	±0.5% ±1%	85%
SNP-Z069-1	+24V	0.1A	2.7A		3.8A	+23.75V~+24.24V	1%	±0.5%	±0.5%	85%
SNP-Z06T	+48V	0A	1.35A		1.9A	+47.6V~+48.4V	1%	±0.5%	±0.5%	87%
SNP-Z06B	+3.3V	0A	10A		18A	+3.26V~+3.33V	50mV	±0.5%	±1%	77%

#### Note:

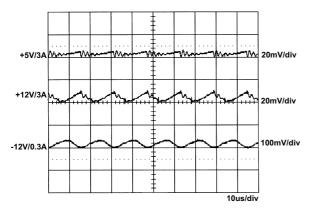
- 1. At peak load, the output can last for 8 seconds without shut down.
- 2. The maximum combinational load of SNP-Z06D for +3.3V & +5V is 30W.
- 3. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the 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  $\pm 40\%$  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.

-Jim, Kevin-

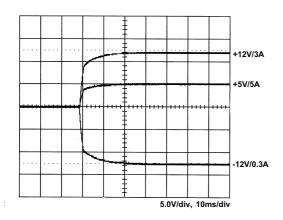


# **Performance for SNP-Z061:**

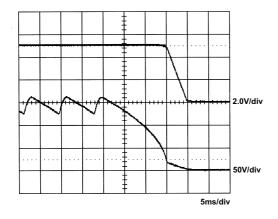
1. Switching frequency ripple



3. Output turn on wave form

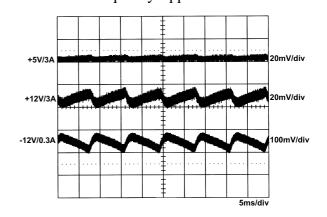


5. Hold-up time

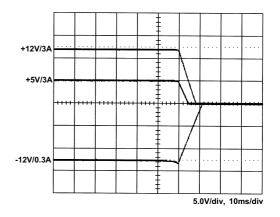


-Jim, Kevin-

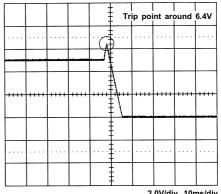
2. Line frequency ripple



4. Output turn off wave form



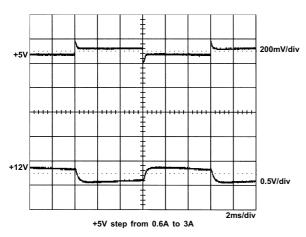
6. Over voltage protection



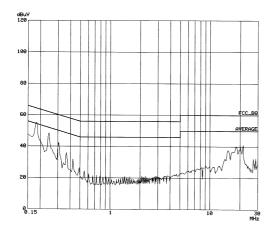
2.0V/div, 10ms/div



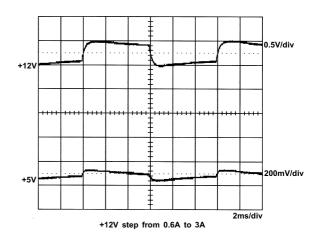
7. +5V step response



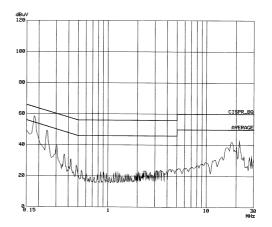
9. FCC B



8. +12V step response



10. EN 55022 B



-Jim, Kevin-