

IT & Medical Applications (Universal)



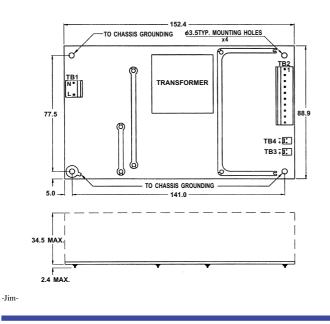
Features:

- Only 1.36 inch height
- 3.8 Watt per cubic inch
- With ITE & Medical safety •
- Efficiency between 72% to 87% •
- Operation from 0°C to 70°C by convection •
- Single side PCB for low assembly cost

General Specifications:

| Input voltage | |
|-----------------------|-----------------------------|
| Input frequency | 47Hz to 63Hz |
| Inrush current | less than 30A at 115VAC |
| | less than 60A at 230VAC |
| Efficiency | . 78%~87% depends on models |
| | at rated load and 115VAC |
| Hold up time | 20ms typical |
| | at rated load and 115VAC |
| Earth leakage current | < 300uA |
| Over load protection | auto recovery |

Mechanical Specifications:



| SEP. | 2005 |
|------|------|
| SEF. | 2005 |

| Short circuit protection | auto recovery |
|-----------------------------------|--------------------------------|
| Over voltage protection | latch off |
| Operating temperature (open frame | e type)0 to 70°C |
| | derating: 2.5% / °C > 50°C |
| Cooling | free air convection |
| Storage temperature | 40°C to +85°C |
| EMI | |
| | EN55022"B", EN55011"B" |
| EMS | EN61000-4-2,-3,-4,-5,-6,-8,-11 |
| Harmonics | EN61000-3-2 class "A" |
| Safety | UL 60950-1, UL 2601 |
| | CSA 22.2 No. 60950-1, 601.1 |
| | EN 60950-1, EN 60601-1 |

Notes:

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 Dimensions shown in mm as left. Tolerance: + -1mm (Excluding cables).

 Size:

 88.9 X 152.4 X 34.5 (mm)

 3.5" X 6" X 1.36"

 Packing

 Net weight: 360 g approx. / unit

 Gorss weight: 74 kg approx. / carton, 32 units / carton

 Carton size (mm): 477 (L) x 290 (W) x 379 (H)

 Connectors

 a) TB1-AC input
 : Molex 5277-102A or equivalent

 b) TB2-DC output
 : Molex 5277-102A or equivalent for sing Molex 5277-12A or equivalent for guardiant

TB3-LED TB4-FAN

- Molex 52/1/-02A or equivalent Molex 5277-10A or equivalent for single to triple outputs Molex 5277-12A or equivalent for quad outputs Molex 5045-02A or equivalent for all models Molex 5045-02A or equivalent for all models Molex 5045-02A or equivalent for SNP-Y116

| PIN NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|-------|-------|-------|------|-----|-----|------|------|------|-----|------|-----|
| SNP-Y111 | +5V | +5V | +5V | GND | GND | GND | +12V | +12V | -12V | NC | | |
| SNP-Y113 | +5V | +5V | +5V | GND | GND | GND | +12V | +12V | NC | NC | | |
| SNP-Y116 | +5V | +5V | +5V | +5V | +5V | GND | GND | GND | GND | GND | | |
| SNP-Y117 | +12V | +12V | +12V | +12V | GND | GND | GND | GND | +5V | NC | | |
| SNP-Y117-1 | +12V | +12V | +12V | +12V | GND | GND | GND | GND | NC | NC | | |
| SNP-Y118 | +15V | +15V | +15V | +15V | GND | GND | GND | GND | +5V | NC | | |
| SNP-Y118-1 | +15V | +15V | +15V | +15V | GND | GND | GND | GND | +5V | NC | | |
| SNP-Y119 | +24V | +24V | +24V | +24V | GND | GND | GND | GND | +5V | NC | | |
| SNP-Y119-1 | +24V | +24V | +24V | +24V | GND | GND | GND | GND | NC | NC | | |
| SNP-Y11T | +48V | +48V | +48V | +48V | GND | GND | GND | GND | NC | NC | | |
| SNP-Y110 | +5V | +5V | +5V | GND | GND | GND | +12V | +12V | -12V | GND | -5V | NC |
| SNP-Y11F | +5V | +5V | +5V | GND | GND | GND | +24V | +24V | +12V | GND | -12V | NO |
| SNP-Y11E | +3.3V | +3.3V | +3.3V | GND | GND | GND | GND | GND | +5V | +5V | +12V | -12 |



Output Specifications:

| MODEL | OUTPUT | LOAD | | | | VOLTAGE | RIPPLE | LINE | LOAD | EFFICIENCY |
|------------|------------------------------|----------------------|--------------------------|------------|-------------|---|------------------------|--------------------------|--------------------------|------------|
| NO. | RAIL | MIN. | RATED | MAX. | PEAK | ACCURACY | NOISE | REG. | REG. | TYPICAL |
| SNP-Y111 | +5V +12V -12V | 0A 0A 0A | 7A 5A 0.5A | 13A 7A | 20A 11A | +4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V | 1% 1% 1% | ±1% ±1% ±1% | ±3% ±3% ±5% | 82% |
| SNP-Y11E | +3.3V +5V +12V -12V | 0A 0A 0A 0A | 10A 8A 2A 0.2A | 12A 10A | | +3.2V~+3.4V +4.75V~+5.25V +11.4V~+12.6V -11.4V~-12.6V | 50mV 1% 1% 1% | ±1% ±1% ±1% ±1% | ±3% ±3% ±5% ±5% | 78% |
| SNP-Y113 | +5V +12V | 0A 0A | 7A 5A | 13A 7A | 20A 11A | +4.95V~+5.05V +11.4V~+12.6V | 1% 1% | ±1% ±1% | ±3% ±3% | 82% |
| SNP-Y116 | +5V | 0A | 20A | | | +4.95V~+5.05V | 1% | ±1% | ±1% | 80% |
| SNP-Y117 | +12V +5V | 0A 0A | 8.5A 1A | | 13A | +11.88V~+12.12V +4.75V~+5.25V | 1% 1% | ±1% ±1% | ±1% ±1% | 83% |
| SNP-Y117-1 | +12V | 0A | 9A | | 13A | +11.88V~+12.12V | 1% | ±1% | ±1% | 84% |
| SNP-Y118 | +15V +5V | 0A 0A | 7A 1A | | 10.5A 1A | +14.85V~+15.15V +4.75V~+5.25V | 1% 1% | ±1% ±1% | ±1% ±1% | 83% |
| SNP-Y118-1 | +15V | 0.1A | 7A | | 10.5A | +14.85V~+15.15V | 1% | ±1% | ±1% | 84% |
| SNP-Y119 | +24V +5V | 0A 0A | 4.5A 1A | | 6.5A 1A | +23.75V~+24.24V +4.75V~+5.25V | 1% 1% | ±1% ±1% | ±1% ±1% | 85% |
| SNP-Y119-1 | +24V | 0.1A | 4.5A | | 6.5A | +23.75V~+24.24V | 1% | ±1% | ±1% | 86% |
| SNP-Y11T | +48V | 0A | 2.3A | | 3.5A | +47.6V~+48.4V | 1% | ±1% | ±1% | 87% |
| SNP-Y110 | +5V +12V -12V -5V | 0A 0A 0A 0A | 6A 5A 0.5A 0.5A | 13A 7A | 20A 11A | +4.95V~+5.1V +11.4V~+12.6V -11.4V~-12.6V -4.75V~-5.25V | 1% 1% 1% 1% | ±1% ±1% ±1% ±1% | ±3% ±3% ±5% ±3% | 82% |
| SNP-Y11F | +5V +24V +12V -12V | 0A 0A 0A 0A | 6A 2A 2A 0.3A | 10A 3A | 15A 5.5A | +4.9V~+5.1V +22.8V~+25.2V +11.4V~+12.6V -11.4V~-12.6V | 1% 1% 1% 1% | ±1% ±1% ±1% ±1% | ±3% ±3% ±5% ±5% | 82% |

Note:

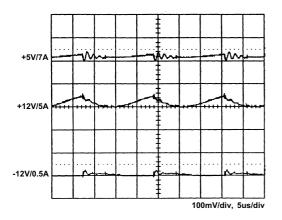
- 1. At peak load, the output can last for 8 seconds without shut down.
- The maximum combinational load of SNP-Y06D for +3.3V & +5V is 38W. 2.
- 3. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the 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. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal 6. 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.
- The efficiency is measured at nominal line and rated load. 8.

-Jim-

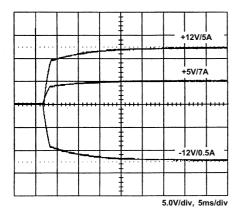


Performance for SNP-Y111:

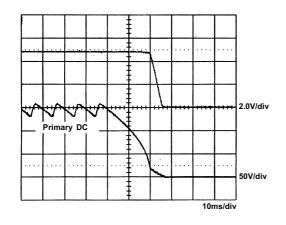
1. Switching frequency ripple



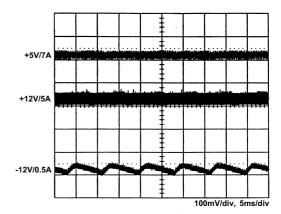
3. Output turn on wave form



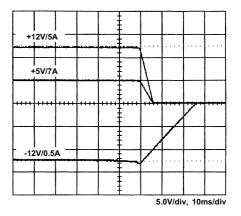
5. Hold-up time



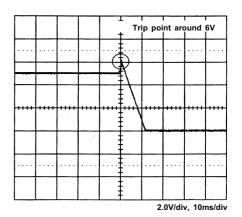
2. Line frequency ripple



4. Output turn off wave form



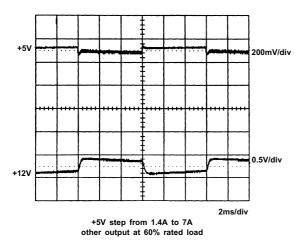
6. Over voltage protection



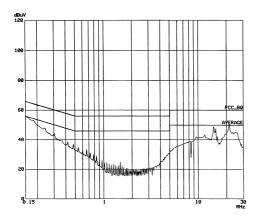
-Jim-



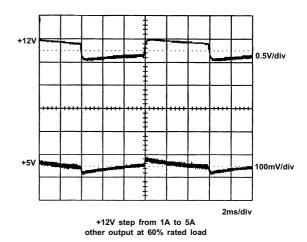
7. +5V step response



9. FCC B



8. +12V step response



10. EN 55011 B

