4.2" x 8" x 1.5"

## Features:

- With built-in PFC
- Only 1.5 inch height
- 4.0 Watt per cubic inch
- With ITE safety only
- Efficiency between 80% to 85%
- Operation from $0^{\circ}C$ to $70^{\circ}C$ by convection
- SNP-Z207-M, SNP-Z209-M for Medical only

## Applications:

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

## General Specifications:

Input voltage .......................................... 90 VAC to 264 VAC

Input frequency ............................................ 47 Hz to 63 Hz

Inrush current ...................................... < 30A at 115VAC

(cold start at $25^{\circ}C$)                  or < 60A at 230VAC

Efficiency ............................. 80%~85% depends on models

Hold up time ......................................................... > 20 ms

at rated load and 115VAC

Over load protection ...................................... auto recovery

Short circuit protection................................. auto recovery

Over voltage protection ........................................... latch off

Operating temperature (open frame type) ........... $0^{\circ}C$ to $70^{\circ}C$

derating: 2.5% / $^{\circ}C$ > $50^{\circ}C$

Cooling ......................................... 200W free air convection

250W 18CFM forced air

Storage temperature ...................................... $-20^{\circ}C$ to  $+85^{\circ}C$

EMI ...................................................................... EN55022 "B"

Harmonics.......................................... EN61000-3-2 class D

EMS......................................... EN61000-4-2,-3,-4,-5,-6,-11

Safety .............................................. UL 60950, UL 60601-1

CSA C22.2 No. 234 & 60601-1

TUV EN60950-1 & 60601-1

## Mechanical Specifications:
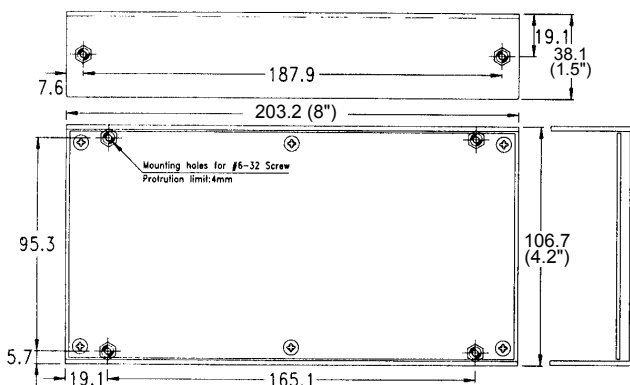


**Notes:**

1.  Size:
    4.2" x 8.0" x 1.5"
2.  Mounting Hole:
    95.3 x 165.1 (mm)
3.  Connectors:
    AC input :  Terminal blocks
    DC output: Terminal blocks
    Fan, Remote sense, LED:
    Molex 5045-02A or equivalent
4.  Output Pin assignment:

| PIN NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| SNP-Z201* | +5V | +5V | GND1 | GND1 | GND1 | +12VA | GND2 | +12VB |
| Other Models | +V | +V | +V | GND | GND | GND | | |

4.  Packing:
    Net weight:  740 g approx. / unit
    Gross weight:  14 kg approx. / carton,  16 units / carton
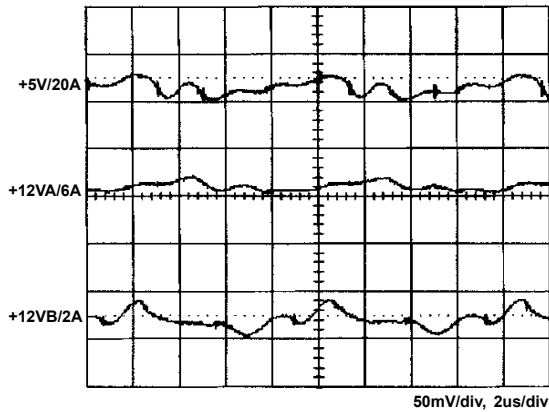    Carton size (mm): 426 (L) x 313 (W) x 267 (H)

-Steven-

*10 years Warranty (contact Skynet's Distributors for details)*

# General Purpose

## Output Specifications:

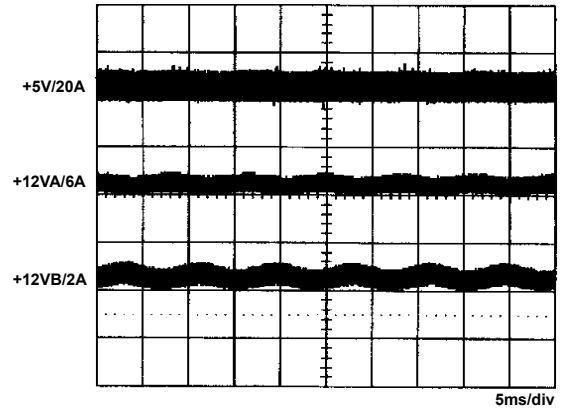| MODEL | OUTPUT | LOAD | | | | VOLTAGE | RIPPL | LINE | LOAD |
|---|---|---|---|---|---|---|---|---|---|
| NO. | RAIL | MIN. | RATED | MAX. | PEAK | ACCURACY | NOISE | REG. | REG. |
| SNP-Z201 | +5V | 2A | 20A | 25A | | +4.95V~+5.05V | 50mVpp | ±1% | ±1% |
| | +12VA | 0A | 6A | 8A | | +11.4V~+12.60V | 120mVpp | ±1% | ±1% |
| | +12VB | 0A | 2A | 3A | | +11.4V~+12.60V | 120mVpp | ±1% | ±5% |
| SNP-Z207 | +12V | 0A | 17A | 21A | | +11.40V~+12.60V | 100mVpp | ±1% | ±1% |
| SNP-Z207-M | +12V | 0A | 17A | 21A | | +11.40V~+12.60V | 100mVpp | ±1% | ±1% |
| SNP-Z208 | +15V | 0A | 13.5A | 17A | | +14.25V~+15.75V | 100mVpp | ±1% | ±1% |
| SNP-Z205 | +18V | 0A | 11.3A | 14A | | +17.1V~+18.9V | 150mVpp | ±1% | ±1% |
| SNP-Z209 | +24V | 0A | 8.5A | 10.5A | | +23.80V~+24.20V | 100mVpp | ±1% | ±1% |
| SNP-Z209-M | +24V | 0A | 8.5A | 10.5A | | +23.80V~+24.20V | 100mVpp | ±1% | ±1% |
| SNP-Z20T | +48V | 0A | 4.3A | 5.2A | | +45.60V~+50.40V | 100mVpp | ±1% | ±1% |

## Note:

1. Each output can provide up to max load separately when the power supply starts up.  To exceed the max. output power continuously 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 ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±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 the time which the main output drops down to low limit of main output  at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.
8. +12VB is floating.
9. Model Selection:
   SNP-Z20x is for ITE application.
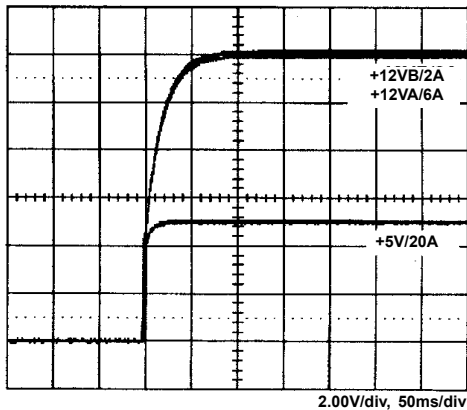   SNP-Z207-M and SNP-Z209-M are for medical application.

-Steven-

![Skynet logo]
**THE RELIABLE SOURCE**

## Performance for SNP-Z201:

1. Switching frequency ripple

+5V/20A

+12VA/6A

+12VB/2A

**50mV/div, 2us/div**

2. Line frequency ripple

+5V/20A

+12VA/6A

+12VB/2A

**5ms/div**

3. Output turn on wave form

+12VB/2A
+12VA/6A

+5V/20A

**2.00V/div, 50ms/div**

4. Output turn off wave form
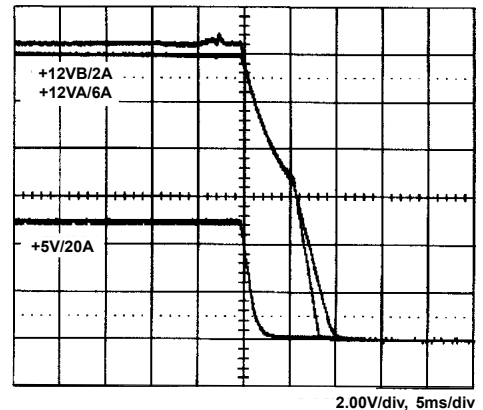
+12VB/2A
+12VA/6A

+5V/20A

**2.00V/div, 5ms/div**

5. Hold-up time

2.00V/div

**Primary DC**

2.00V/div

**10ms/div**

6. Over voltage protection

**Trip point around 6.24V**

**2.00V/div, 10ms/div**

-Steven-

### 7.  +5V step response



+5V                                    0.50V/div

+12VA                                  50ms/div

                                       2ms/div

+5V step from 4A to 20A
other output at 60% load

### 8.  +12V step response



+12VA                                  0.50V/div

+5A                                    100ms/div

                                       2ms/div

+12VA step from 1.2A to 6A
other output at 60% load
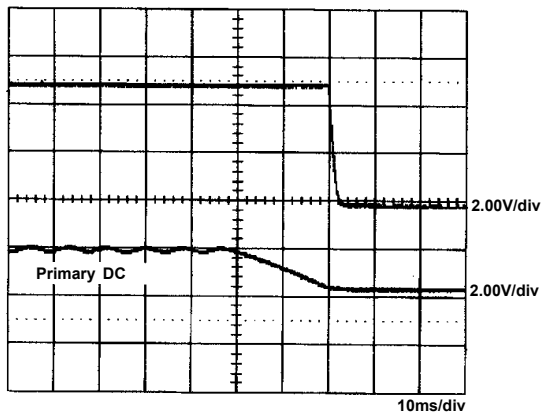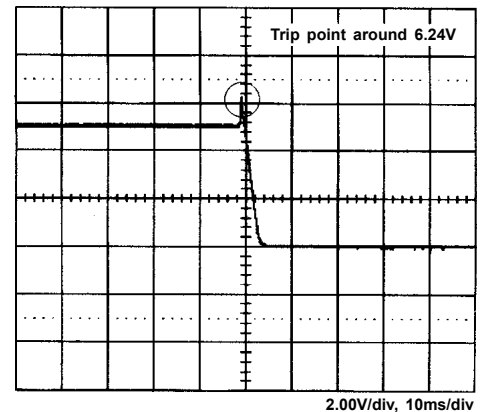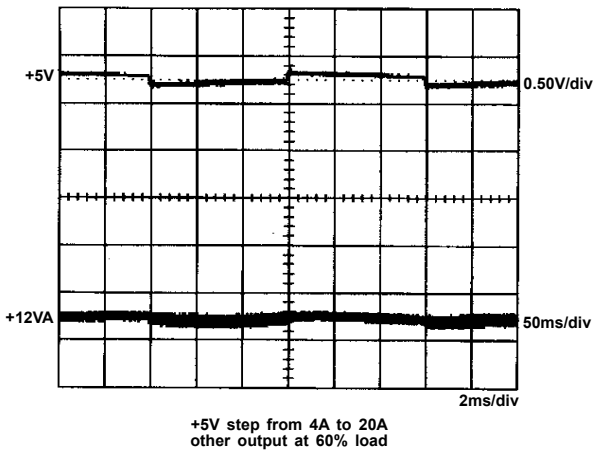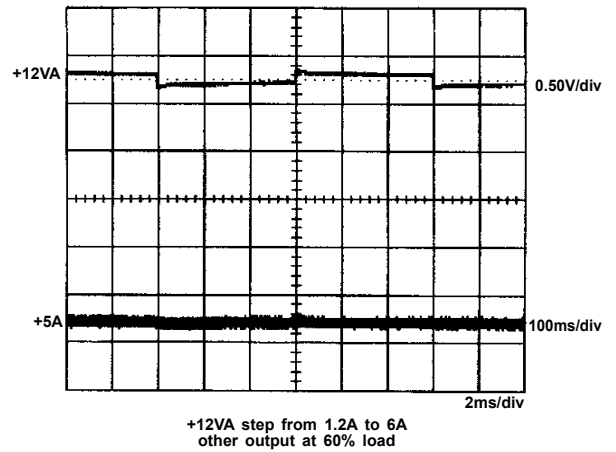
### 9.  FCC B
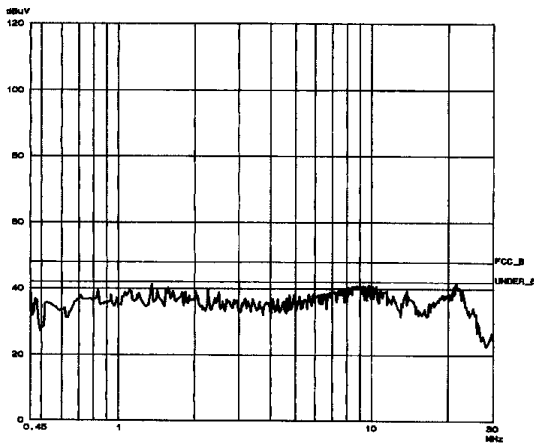


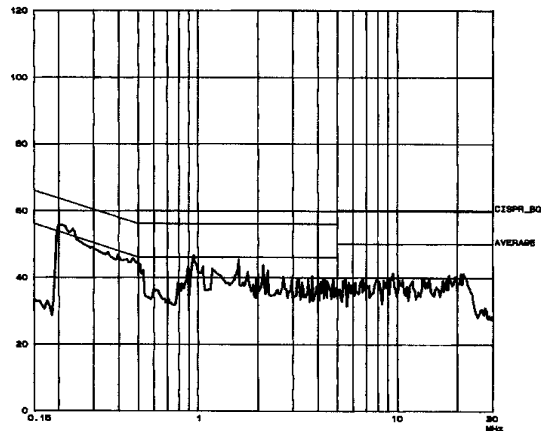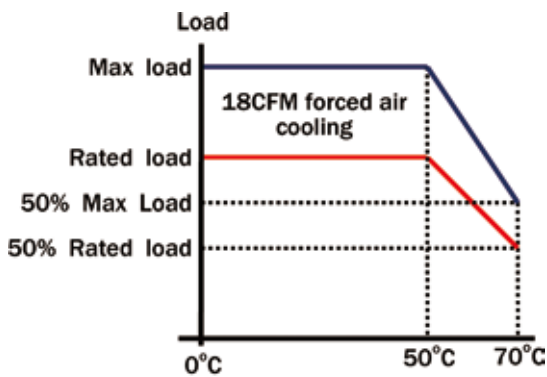### 10.  CISPR 22 B



### 11.  Power derating curve



### 12.  Max. load fan location



-Steven-