

PFC + 100W SNP-Z10 Series



Description:

Open frame size of 3" X 5" has become an industrial standard for more than 10 years. The power density is around 2.0 watts/cu.in. at very beginning and then stays at 3.0 watts/cu.in. for a long time. Now, the SNP-Z10 series can offer 6.0 watts/cu.in. plus active PFC in 3" X 5" X 1.2" size. Undoubtedly the SNP-Z10 series is the state-of-the-art at the moment. The patent was granted for this cirucit.

Model available:

- SNP-Z106 for 5V/20A
- SNP-Z107 for 12V/9A
- SNP-Z108 for 15V/7A
- SNP-Z109 for 24V/4.5A
- SNP-Z10T for 48V/2.3A
- SNP-Z101 for 5V/11.5A, 12V/3A, -12V/0.5A
- SNP-Z103 for 5V/7A, 12V/8A
- SNP-Z10D for 3.3V/10A, 5V/8A, 12V/0.5A
- SNP-Z10B for 3.3V/25A

Input voltage	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz
Inrush current	less than 30A at 115VAC
	less than 60A at 230VAC
	cold start, 25°C
Efficiency	80%~90% depends on models
Hold up time	20mS typical

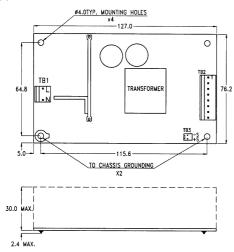
Efficiency	80%~90% depends on models
Hold up time	20mS typical
•	at rated load and 115VAC
Over load protection	auto recovery
Short circuit protection	auto recovery
Over voltage protection	latch off

Max. capacitive load	
SNP-Z107 / 1	10000uF, SNP-Z109 / 2700uF
Remote Sense Co	ompensates for 0.5V load drop
min.Operating temperature	0°C to 50°C convection
Cooling	Free air convection for 100W
with 18C	CFM forced air flow for 130W
Storage temperature	
EMI	
Harmonics	EN61000-3-2
EMS	
Safety	UL 60950
	CSA 22.2 No. 234, EN60950

Mechanical Specifications:

General Specifications:

SNP-Z106



Notes:

- 1. Dimensions shown in mm as above. Tolerance: +/-0.4mm.
- 2. Size:
- 2.1 SNP-Z106, Z107, Z108, Z109, Z10T, Z10B 127.0mm X 76.2mm X 32.4mm 5" X 3" X 1.28"
- 2.2 SNP-Z101, Z103, Z10D 127.0mm X 76.2mm X 34.4mm 5" X 3" X 1.35"
- 3. Connectors:

AC input: Molex 5277-02A or equivalent DC output: Molex 5273 or equivalent Remote Sense: Molex 5045-02A or equivalent

-James-

AUG. 2003

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Output Specifications:

MODEL NO.	OUTPUT RAIL	LOAD MIN. RATED MAX		VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.	
SNP-Z106	+5V	0A	20A	26A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
SNP-Z107	+12V	0A	9A	10.8A	+11.90V~+12.10V	120mVpp	±0.5%	±1%
SNP-Z108	+15V	0A	7A	8.7A	+14.90V~+15.10V	120mVpp	±0.5%	±1%
SNP-Z109	+24V	0A	4.5A	5.4A	+23.80V~+24.20V	200mVpp	±0.5%	±1%
SNP-Z10T	+48V	0A	2.3A	2.7A	+47.60V~+48.40V	200mVpp	±0.5%	±1%
SNP-Z101	+5V	0A	11.5A	15A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
	+12V	0A	3A	5A	+11.40V~+12.60V	100mVpp	±0.5%	±5%
	-12V	0A	0.5A	0.5A	-11.40V~-12.60V	100mVpp	±0.5%	±5%
SNP-Z103	+5V	0A	7A	10A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
	+12V	0A	8A	10A	+11.40V~+13.20V	120mVpp	±0.5%	±5%
SNP-Z10D	+3.3V	0A	10A	15A	+3.20V~+3.40V	50mVpp	±0.5%	±1%
	+5V	0A	8A	10A	+4.75V~+5.25V	50mVpp	±0.5%	±5%
	+12V	0A	0.5A	0.5A	+11.40V~+12.60V	100mVpp	±0.5%	±5%
SNP-Z10B	+3.3V	0A	25A	30A	+3.20 ~+3.40V	50mVpp	±0.5%	±1%

Note:

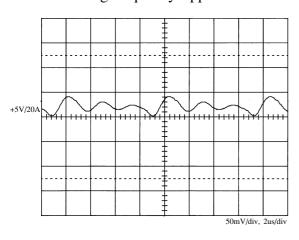
- 1. The total output current is rated load with free air convection and max. load with 18CFM of forced air flow over the unit.
- 2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- 3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
- 4. Load regulation is defined by changing $\pm 40\%$ 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 and a 47u electrolytic 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.

-James

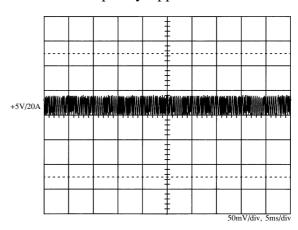
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Performance for SNP-Z106:

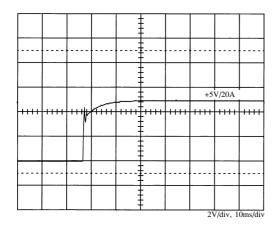
1. Switching frequency ripple



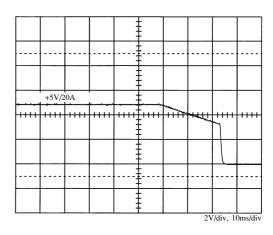
2. Line frequency ripple



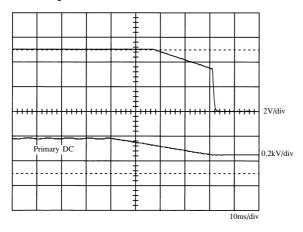
3. Output turn on wave form



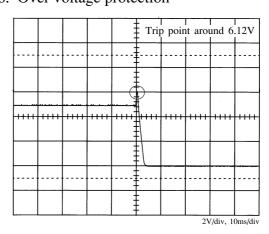
4. Output turn off wave form



5. Hold-up time



6. Over voltage protection

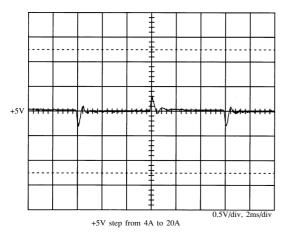


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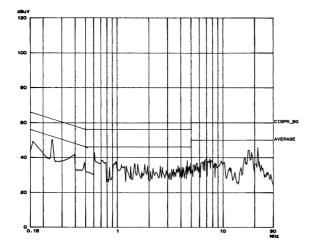


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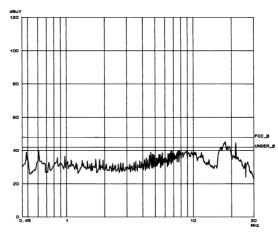
7. +5V step response



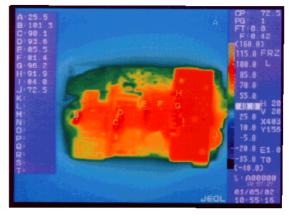
9. EN55022 B



8. FCC B



10. Thermal profile



Test condition:

M/N : SNP-Z106, Input : 104V Output : 5V/20A, Ambient : 25.5°C