

SPECIFICATION

For

SWITCHING POWER SUPPLY

- **SNP-F50T**

STANDARD PRODUCT

Reviewed by Product Engineer	Jim 2/3/26					
Typed by Document Assistant	黃美芳 020/26					
SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

The SNP-F50T is a 4.5" × 7.5" open-frame power supply that delivers a 48V output with up to 500W under convection cooling. It can ~~also~~ provide 750W with forced-air cooling and supports a 1000W peak for up to 2 seconds. All output power ratings are achieved without line input derating. It's a member of SNP-F50 series

2.0 INPUT SPECIFICATIONS

2.1 Input voltage

Input voltage range 90VAC to 264VAC. Nominal line voltage : 115VAC/230VAC.

2.2 Input frequency

47Hz to 63Hz.

2.3 Input current

10Arms max/115VAC or 5Arms max/230VAC.

2.4 Inrush current

30A max/115VAC, 60A max/230VAC (cold start at 25°C EMI capacitors excluded)

2.5 Test Condition

All specs except international standards or specs with special notes are defined and tested at nominal line input, rated load and 25°C.

3.0 OUTPUT SPECIFICATIONS

3.1 Load range

output	min. load	rated load	max. load	peak load	Surge load
+48V	0A	10.4A	15.6A	20.8 A	28A

3.1.1 Factory adjustment

47.7V to 48.2V (60% rated load, 115Vac)

3.1.2 Total output power

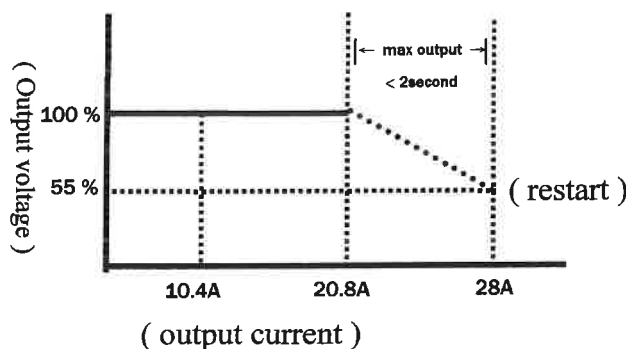
500W with convection cooling ; to 750W with 18CFM forced air cooling.

3.1.3 Peak load capability

1000W for at least 2 sec, and without output voltage drop , at nominal line.

3.1.4 Surge Load capability

1340W for at least 2 sec, and the output voltage won't drop down to 55% , at nominal line.



3.2 Ripple and noise

< 1% (Measuring is done by 15MHz band width limited oscilloscope and terminated output with a 0.47uF capacitor).

3.3 Line regulation

< +/- 0.5% (rated load and + -10% of nominal line input voltage changing).

3.4 Load regulation

< +/- 1% (changing the measured output load + -40% from 60% rated load).

3.5 Capacitive load capability

< 25000uF.

3.6 Remote sense

0.5V line drop min.

3.7 Fan off control

The cooling fan output (TB6) will turn-off to reduce the noise when the output power is lower than 35%±20% of max load.

4.0 GENERAL FEATURES**4.1 Efficiency**

91% typical.

4.2 Hold up time

16mS typical at 115VAC input and rated load

4.3 Protection**4.3.1 Over current protection**

Trip point :110% to 130% Maximum load, at nominal line.

Protection mode : Auto recovery

4.3.2 Short protection

Protection mode : Auto recovery

4.3.3 Over voltage protection

+48V trip point :+55V to 63V.

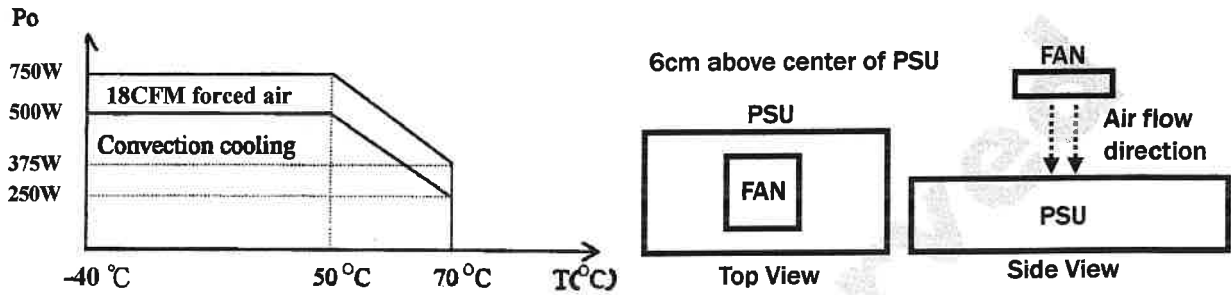
Protection mode : Latch-off.

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

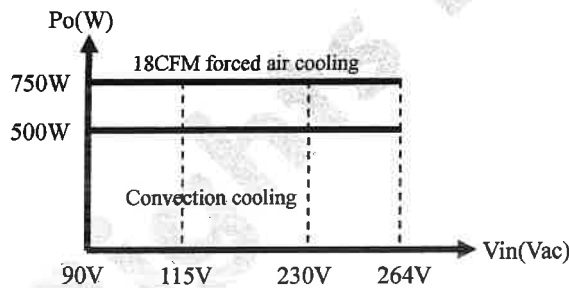
(A) Output power v.s. Temperature

- (1) -40°C to 50°C no derating
- (2) 50°C ~ 70°C derate at 2.5% per degree
- (3) Rated load with convection cooling; max load with 18CFM forced air cooling



(B) Output power v.s. Input Voltage

- (1) 90Vac ~ 264Vac , no derating.



5.2 Storage temperature

-40°C to 85°C

5.3 Operating humidity

5% to 95% RH, non-condensing

5.4 Altitude

0 to 5000m

5.5 MTBF

>200Khrs(based on SR-332,rated load, 50°C)

6.0 INTERNATIONAL STANDARDS

6.1 Safety standards (Label voltage: 100Vac to 240Vac)

UL/EN/IEC62368-1

ANSI/AMMI/CSA/EN 60601-1

6.2 EMI standards

FCC level "B"

EN55032, level "B"

EN55011, level is "B"

EN 61000-3-2 class "D"

EN 61000-3-3

6.3 EMS standards

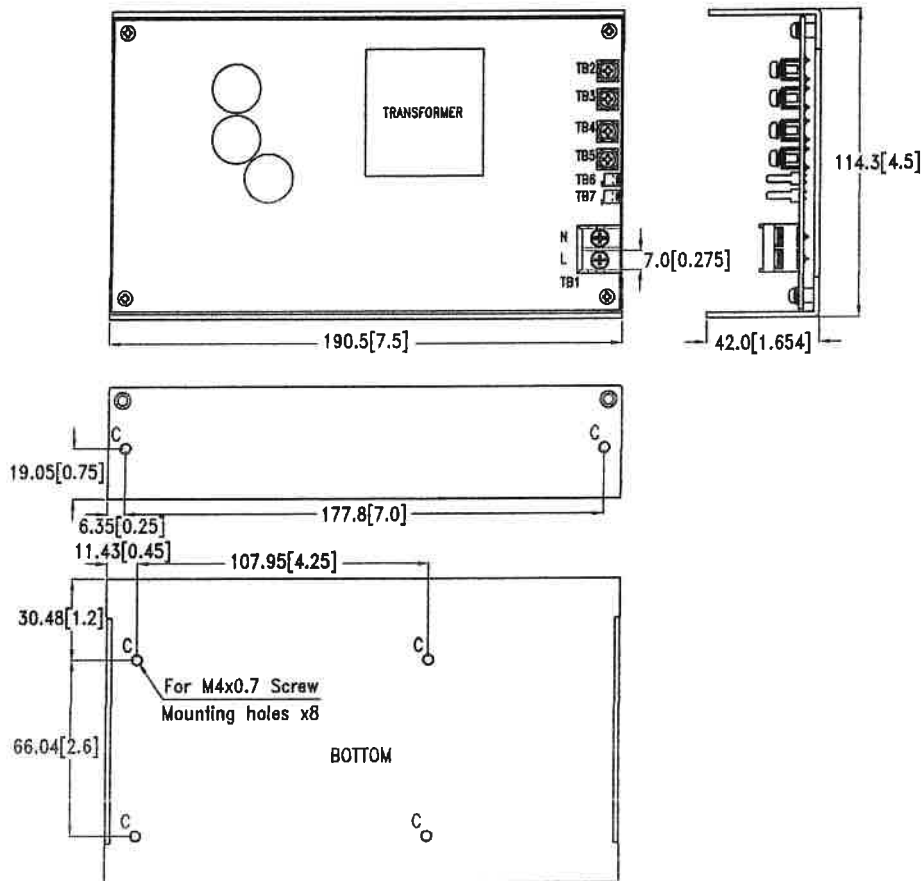
EN61000-4-2	8kV/contact discharge, 15kV/air discharge	Criterion A
EN61000-4-4	2kV	Criterion A
EN61000-4-5	1kV/Line-Line, 2kV/Line-Earth	Criterion A
EN61000-4-11	30% dips 500ms,	Criterion A
	60% dips 200ms,	Criterion B
	100% dips 10ms,	Criterion A
	100% dips 20ms,	Criterion B
	100% dips 500ms,	Criterion B

7.0 MECHANICAL SPECIFICATION

7.1 Dimensions

Dimensions below are shown in mm[inch].

Tolerance specified is $\pm 0.4\text{mm}[0.016]$ between mounting holes, $\pm 0.8[0.031]$ mm other dimensions.



7.2 Connectors

- TB1-- AC input : 2P/ Terminal Block with cover (M3 screw torque:8kg-cm)
- TB2~TB5-- DC Output : Terminal Blocks (#6-32 screw torque:10kg-cm)
- TB6-- For+12V fan use only : Molex 5045-02A or equivalent.
- TB7-- Remote Sense : Molex 5045-02A or equivalent.

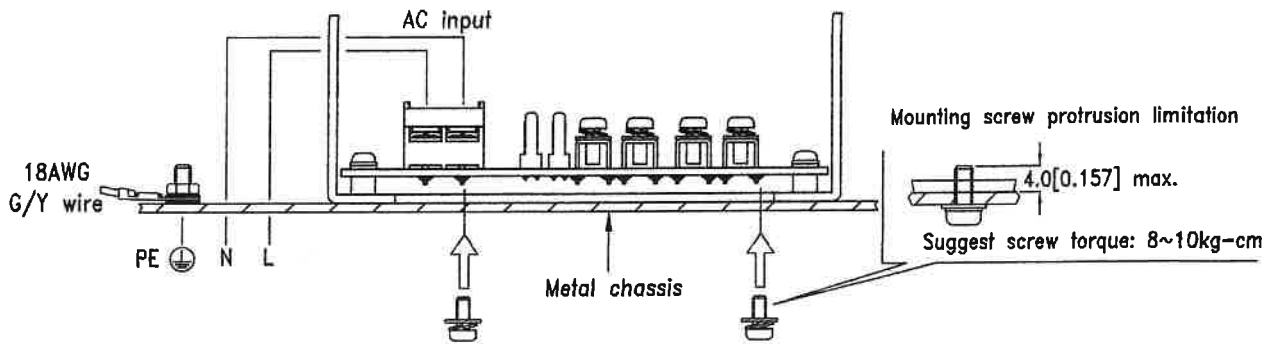
7.3 DC output pin assignment

TB2 & TB3 : GND	TB6 : Pin1	GND	TB7 : Pin1	-RS
TB4 & TB5 : +48V	Pin2	FAN	Pin2	+RS

7.4 Packing

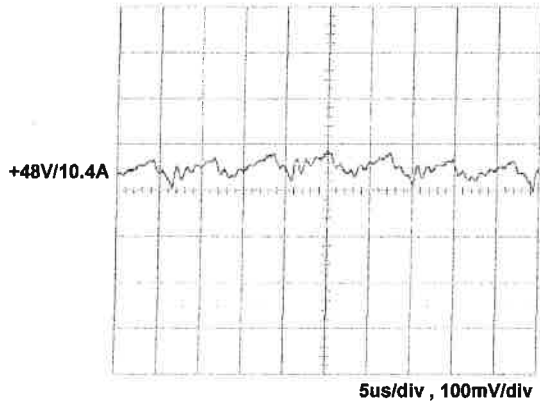
- Net weight : 1330g approx. / unit
- Carton size(mm) : 510 (L) x 335 (W) x 215 (H)
- Quantity : 8 units / carton
- Gross weight : 13.3kg apporx. / carton

8.0 INSTALLATION INSTRUCTION

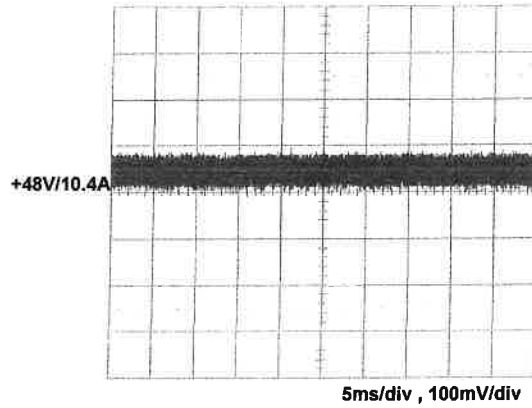


9.0 PERFORMANCE (input voltage is 115VAC, unless others specified)

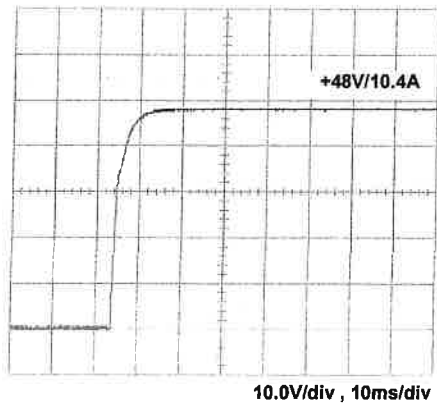
9.1 Switching frequency ripple



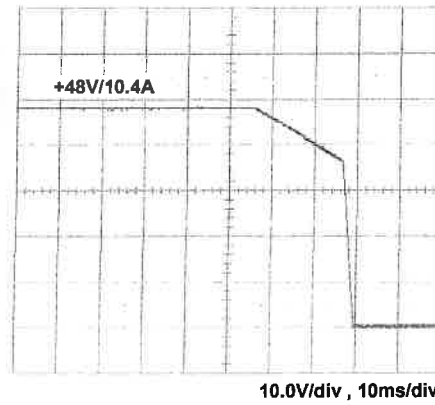
9.2 Line frequency ripple



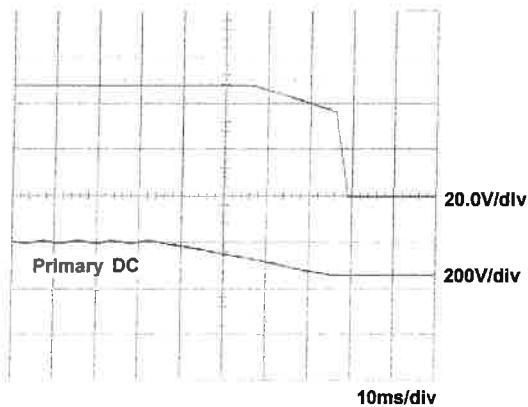
9.3 Output turn on wave form



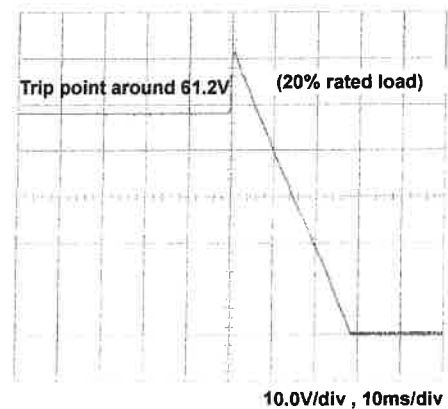
9.4 Output turn off wave form



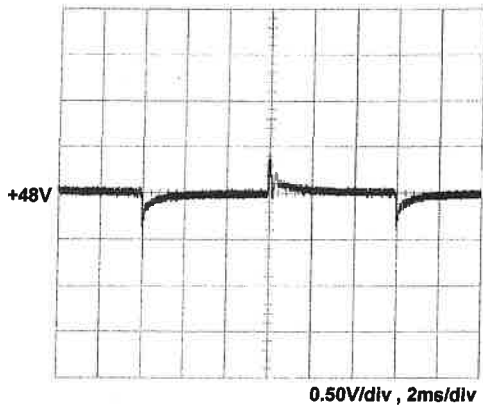
9.5 Hold-up time



9.6 Over voltage protection

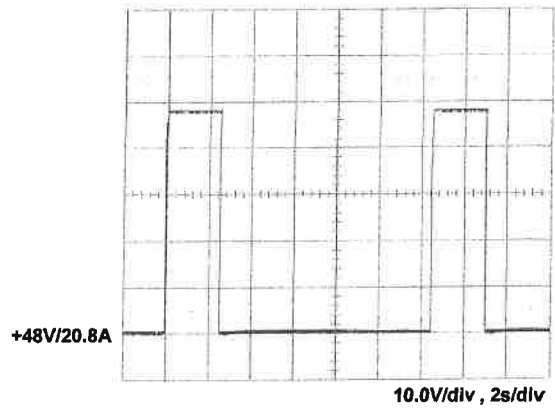


9.7 +48V Step response

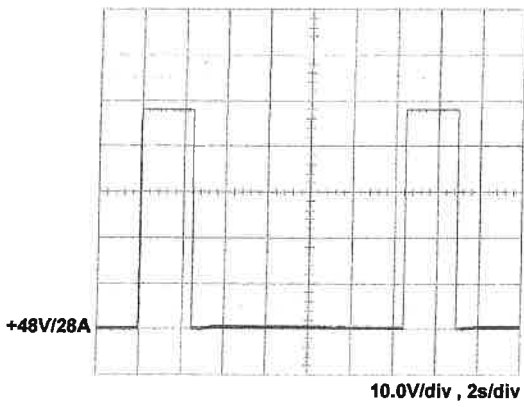


+48V step from 2.08A to 10.4A

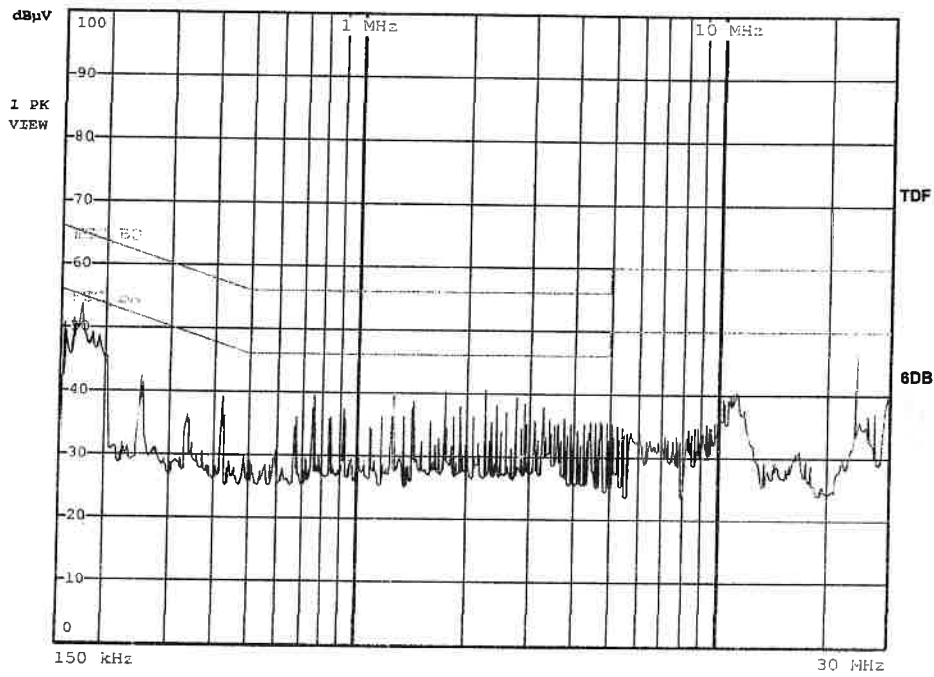
9.8 Peak load



9.9 Surge load



9.10 FCC B performance



9.11 CISPR "B"

