

SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N : SNP-V157

STANDARD PRODUCT

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Reviewed by Product Engineer	Jim 12-16-22					
Typed by Document Assistant	葉瑞英 12/15/22					
SKYNET ELECTRONIC		LAST REV. NO.				

1.0 INTRODUCTIONS

SNP-V157 is an active PFC plus 150W universal power converter. It's high power density and is designed to comply EN61000-3-2 regulations.

2.0 INPUT SPECIFICATIONS

2.1 Input Voltage

The range of input voltage is from 90VAC to 264VAC. Nominal line 115VAC/230VAC. Withstand 300Vac surge input for 5sec.

2.2 Input frequency

The range of input frequency is from 47Hz to 63Hz.

2.3 Input current

The maximum input current is 3A at 115VAC or 1.5A at 230VAC.

2.4 Inrush current

The inrush current will not exceed 35A at 115VAC input or 70A at 230VAC input, cold start at 25°C. (EMI capacitors excluded)

2.5 Power Factor

PF > 0.93 at 115Vac/230Vac and rated load.

3.0 OUTPUT SPECIFICATIONS

3.1 Load range

output	min. load	rated load	max. load	peak load	voltage range
+12V	0A	12.5A	18.75A	25A	10.80V to 13.20V

At factory, the output in 60% rated load and nominal line condition, the +12V output is set to between 11.95V and 12.05V.

At peak load and nominal line, the output can last for 5sec without shut down.

3.1.1 Total output power

150W with convection cooling, 150W~225W with 10CFM forced air cooling.

3.2 Ripple and noise

The peak to peak ripple and noise for each output is less than 100mV at rated load and nominal line. Measuring is done by 15MHz band width limited oscilloscope and terminated output with a 0.47uF +47uF capacitor.

3.3 Line regulation

The line regulation for +12V output is less than + -0.5% while measuring at rated load and + -10% of nominal line input voltage changing.

3.4 Load regulation

The load regulation for +12V output is less than + -1% measuring are done by changing the measured output load + -40% from 60% rated load and nominal line.

3.5 Capacitance loading capability

The capacitance load start-up capability can be up to 10000uF at rated load and nominal load.

4.0 GENERAL FEATURES

4.1 Efficiency

The efficiency is higher than 87% while measuring at nominal line and rated load.

4.2 Hold up time

The hold-up time is higher than 16mS at 115VAC input and rated load, which is measured from the end of the last charging pulse to when the main output drops down to 95% output voltage.

4.3 Protection

4.3.1 Over current protection

Trip point : 110% to 130% of max load.

Protection mode : Auto-recovery.

4.3.2 Short protection

Protection mode : Auto-recovery

4.3.3 Over voltage protection

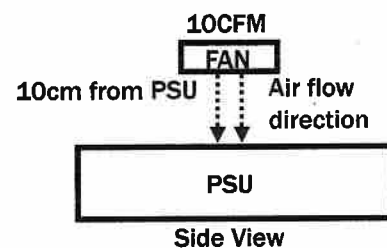
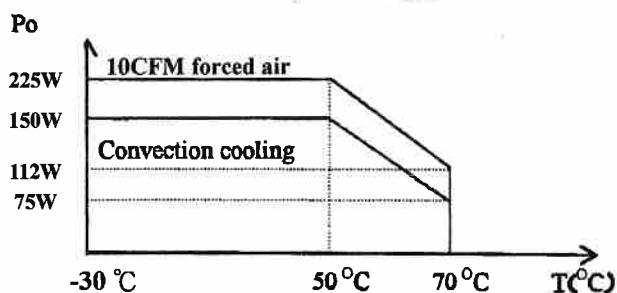
Trip point : +13.1 to 15.1V.

Protection mode : Latch-off.

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

-30°C to 70°C, -30°C to 50°C no derating, above 50°C, derate at 2.5% per degree from 50°C to 70°C.



5.2 Storage temperature

-20°C to 85°C

5.3 Operating humidity

5% to 95% RH, non-condensing

5.4 Altitude

Will operate properly at any altitude between 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/CSA/EN/IEC 62368-1:2018

ANSI/AMMI/CSA/EN/IEC 60601-1, 3.1rd edition

6.2 EMI standards

FCC level "B"

EN55032, level "B"

EN55011, level "B"

EN 61000-3-2 class "D"

EN 61000-3-3

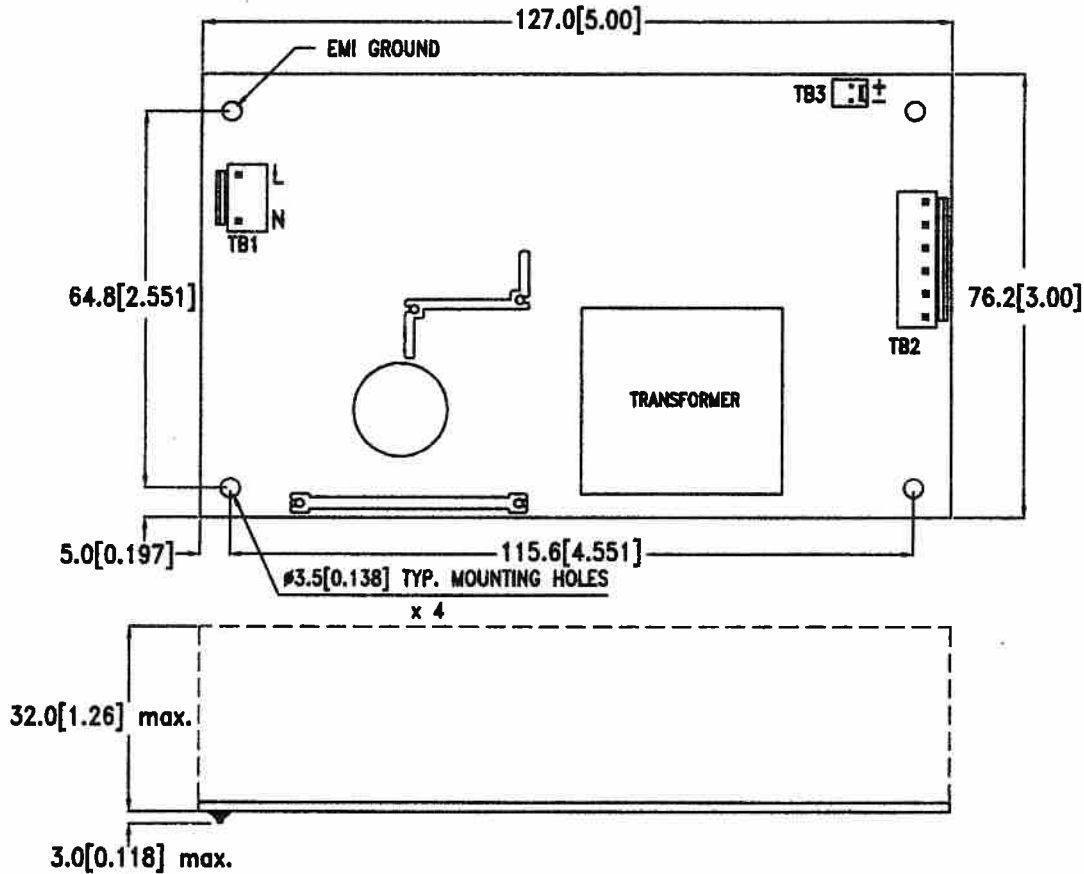
6.3 EMS standards

EN61000-4-2	8kV/contact discharge, 15kV/air discharge	Criterion A
EN61000-4-3	10V/M with 80% AM	Criterion A
EN61000-4-4	2kV	Criterion A
EN61000-4-5	2kV/Line-Line, 4kV/Line-Earth	Criterion A
EN61000-4-6	10V with 80% AM	Criterion A
EN61000-4-8	30A/m	Criterion A
EN61000-4-11	30% dips 500mS	Criterion A
	60% dips 200mS	Criterion B
	100% dips 10mS	Criterion A
	100% dips 5000mS	Criterion B
	100% dips 20mS	Criterion B

7.0 Mechanical specification

7.1 Dimensions

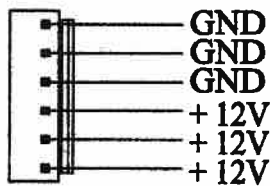
Dimensions shown in mm[inch] as below . Tolerance specified is + -0.4mm[0.016].



7.2 Connectors

- TB1--AC input : JST B2P3-VH or TKP PVHI-03N2
(Mates with : JST VHR-3N or TKP HVH-03)
- TB2--DC output : JST B6P-VH or TKP PVHI-06
(Mates with : JST VHR-6N or TKP HVH-06)
- TB3--For +12V fan use only : Molex 5045-02A or LCU P2050-02
(Mates with : Molex 5051-02 or LCU H2050-02)

7.4 DC Output pin assignment

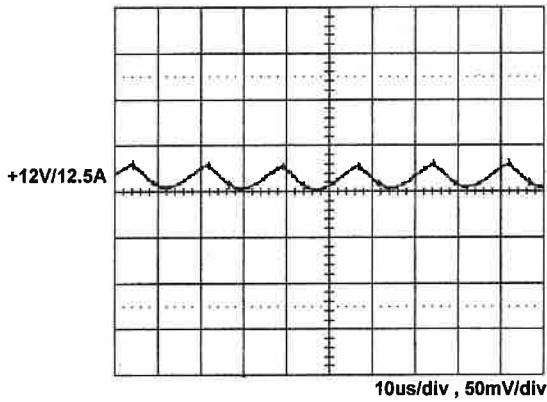


7.5 Packing

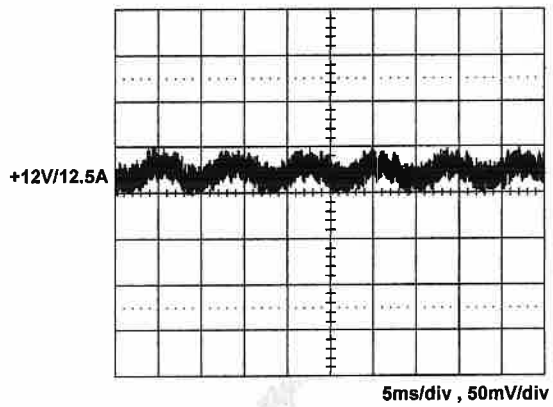
- Net weight : 260g approx. / unit
- Carton size(mm) : 397(L) x 339(W) x 327(H)
- Quantity : 48 units / carton
- Gross weight : 15.0kg approx. / carton

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

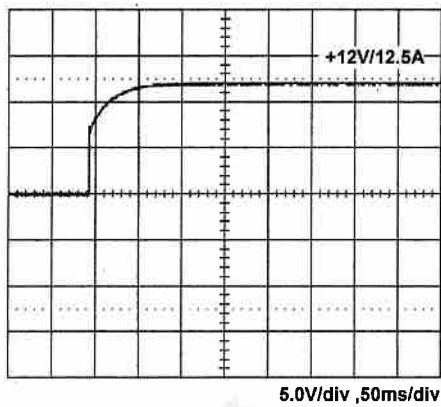
8.1 Switching frequency ripple



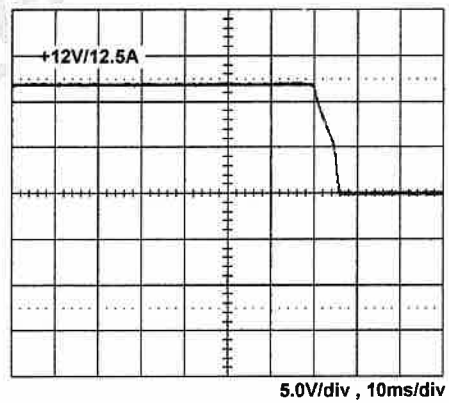
8.2 Line frequency ripple



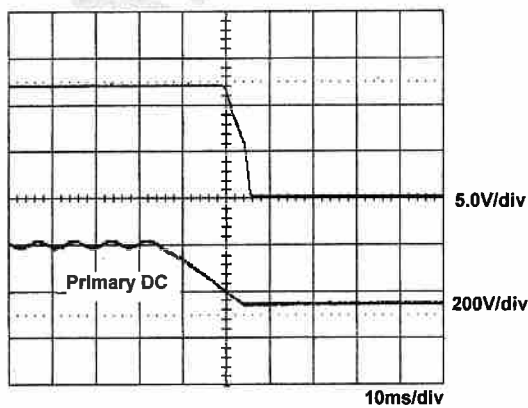
8.3 Output turn on wave form



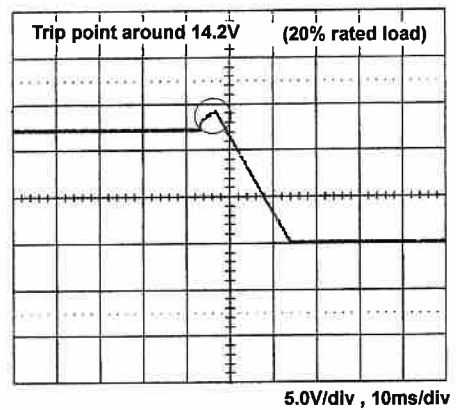
8.4 Output turn off wave form



8.5 Hold-up time

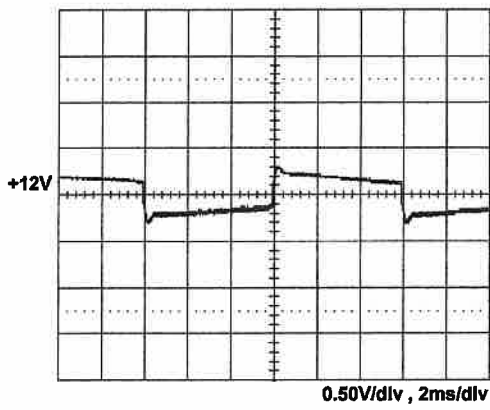


8.6 Over voltage protection

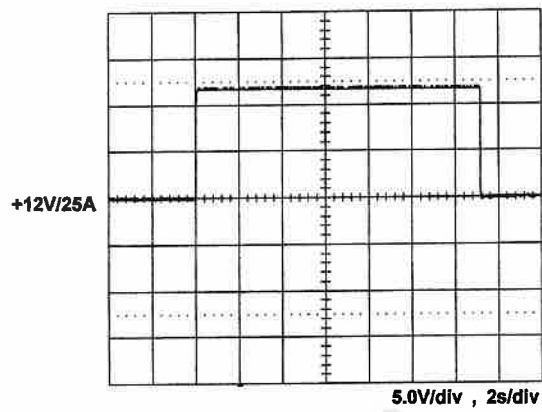


8.7 step response

8.8 peak load

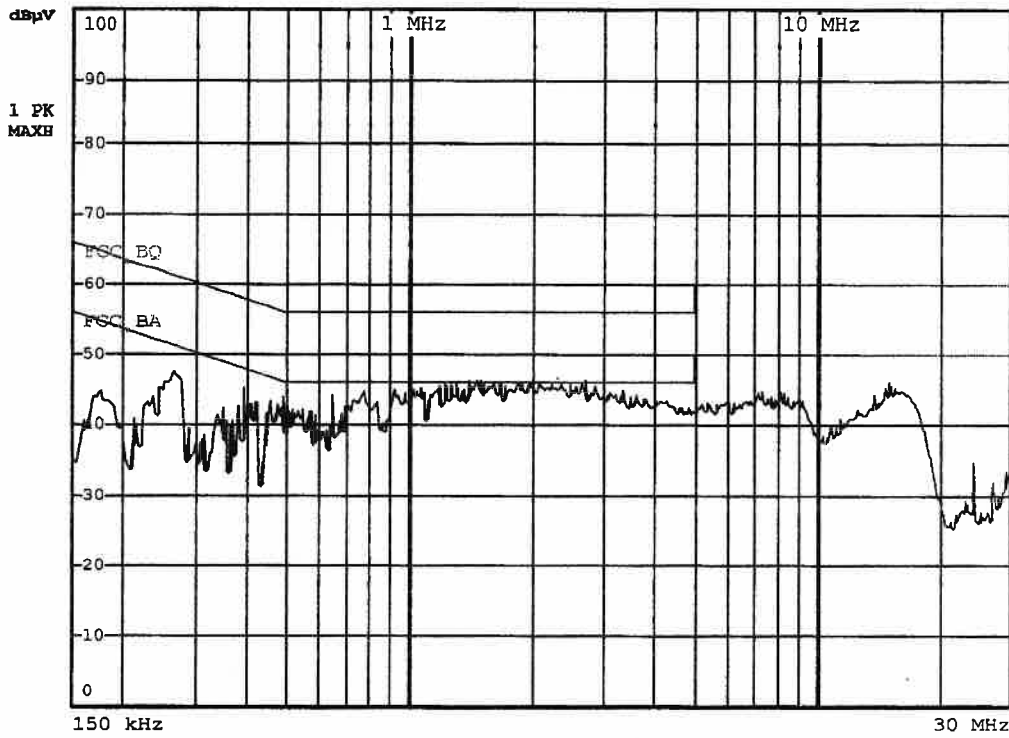


+12V step from 2.5A to 12.5A



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8.9 FCC "B"



8.10 CISPR "B"

