

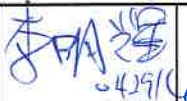
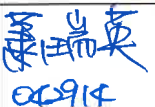
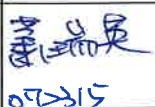

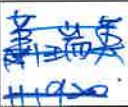
SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N : SNP-P159-S

STANDARD PRODUCT

Reviewed by Product Engineer	 042910	HL- 072315	JVT P-1-16			
Typed by Document Assistant	 042914	 072315	 081616	 11920		
SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

SNP-P159-S is an open frame 150W SMPS with +5Vsb output and remote control function.

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

2Arms max/115Vac, 1Arms max/230Vac

2.4 Inrush current

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

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

V _o	min. load	rated load	peak load
+24V	0A	6A	9A
+5Vsb	0A	2.0A	

3.1.1 Factory adjustment

+23.9V to +24.1V for +24V

+4.90V to +5.10V for +5Vsb

(All output at 60% rated load, 115Vac)

3.1.2 Peak load max duration

5sec. (duty cycle < 10%, average power < rated power)

3.2 Ripple and noise

<50mV for +5Vsb

<200mV for +24V

(20MHz bandwidth limited, 1X probe with 0.47uF parallel capacitor)

3.3 Line regulation

< ±1% (90Vac to 264Vac, comparing with 115Vac)

3.4 Load regulation

< ±1% (20% to 100% rated load, comparing with 60% rated load)

4.0 GENERAL FEATURES

4.1 Efficiency

>89% typical

4.2 Hold up time

20ms typical

4.3 Green power

$P_{in} < 0.1W$ around (remote off connection, +5Vsb/0A)

$P_{in} < 0.5W$ (remote off connection, +5Vsb/60mA)

4.4 Protection

4.4.1 Over-voltage protection

Trip point : +25.5V to +29.5V

Protection mode : Latch-off (main output only)

4.4.2 Short circuit and over load protection

Protection mode (main output) : Auto-recovery (main output only)

Protection mode (+5Vsb) : All Auto-recovery

4.5 Remote control

Active low

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

-20°C to 70°C (output load derates linearly to 50% from 50°C to 70°C)

5.2 Storage temperature

-40°C to 85°C

5.3 Operating humidity

5% to 95% RH, non-condensing

5.4 Altitude

0 to 3000m.

5.5 MTBF

> 140Khrs (based on MIL-HDBK-217F, rated load, 50 °C)

6.0 INTERNATIONAL STANDARDS

6.1 Safety standards

Label Voltage : 100Vac to 240Vac
 UL/CSA/EN 60950-1, 2nd edition

6.2 EMI standards

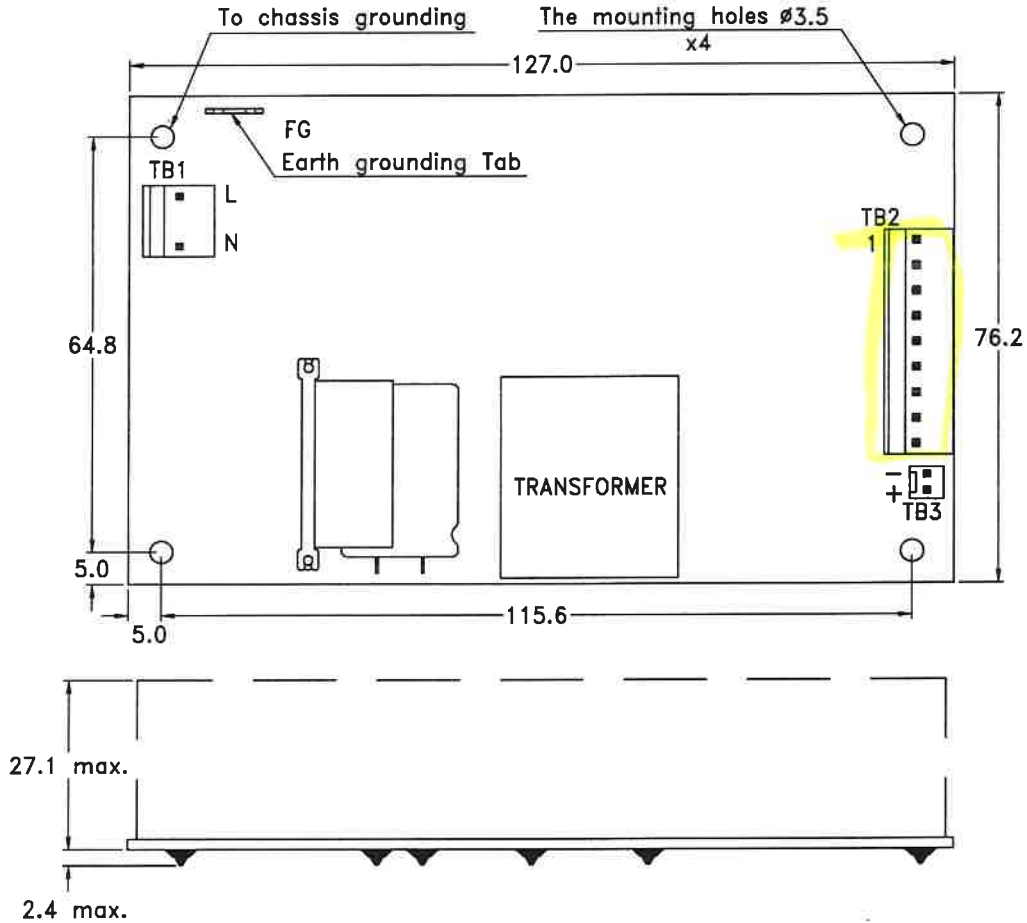
FCC Part 15/EN 55011/EN 55022, level “B”
 EN 61000-3-2 class D
 EN 61000-3-3

6.3 EMS standards

Designed to meet the following limits:

EN 61000-4-2	6kV contact discharge, 8kV/air discharge	Criterion A
EN 61000-4-3	10V/M with 80% AM	Criterion A
EN 61000-4-4	2kV	Criterion A
EN 61000-4-5	1kV/Line-Line, 2kV/Line-Earth	Criterion A
EN 61000-4-6	10V with 80% AM	Criterion A
EN 61000-4-8	10A/M	Criterion A
EN 61000-4-11	30% dips 10ms,	Criterion A
	60% dips 100ms,	Criterion C
	95% dips 5000ms,	Criterion C

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

Dimensions shown in mm as above. Tolerance specified is +/-0.4mm dimension.

7.2 Connectors

FG -- Earth Grounding : 0.250" x 0.032" tab terminal

TB1-- AC Input : Molex 5277-02A or equivalent, mating with Molex 5239-03 or equivalent

TB2-- DC Output : Molex 5273-09A or equivalent, mating with Molex 5239-09 or equivalent

TB3-- For +12V Fan use only : Molex 5045-02A or equivalent, mating with Molex 5051-02 or equivalent

7.3 TB2 pin assignment

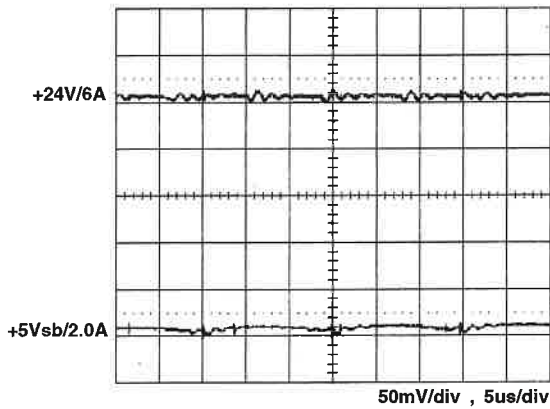
Pin	1	+5Vsb	4	+V	7	RTN2 (COM)
	2	Remote control	5	+V	8	RTN2 (COM)
	3	5V_RTN1 (COM)	6	+V	9	RTN2 (COM)

7.4 Packing

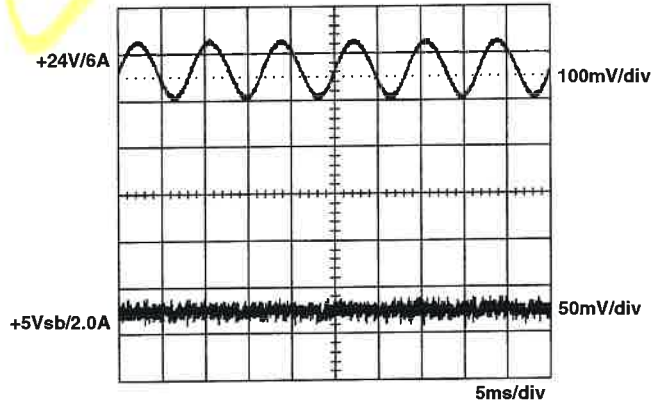
- Net weight : 264 g approx. / unit
- Carton size (mm) : 397(L) x 339 (W) x 327 (H)
- Quantity : 48 units / carton
- Gross weight : 15.1 kg approx. / carton

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

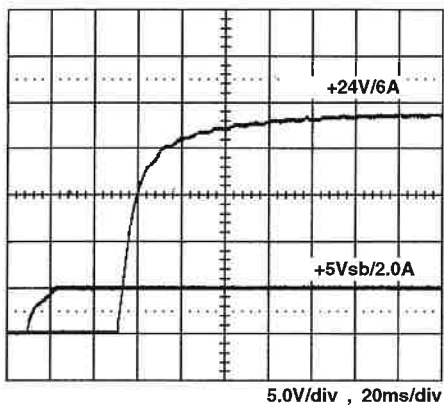
8.1 Switching frequency ripple



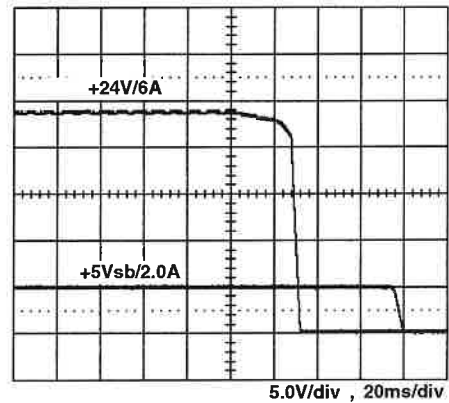
8.2 Line frequency ripple



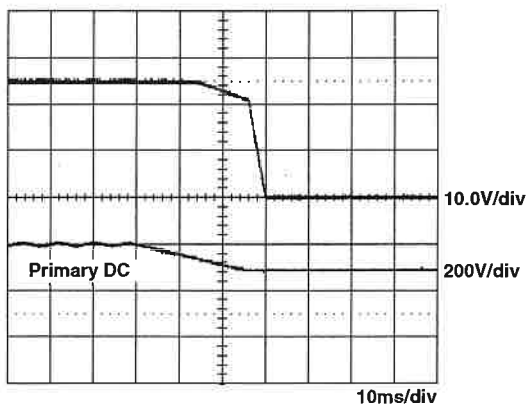
8.3 Output turn on wave form



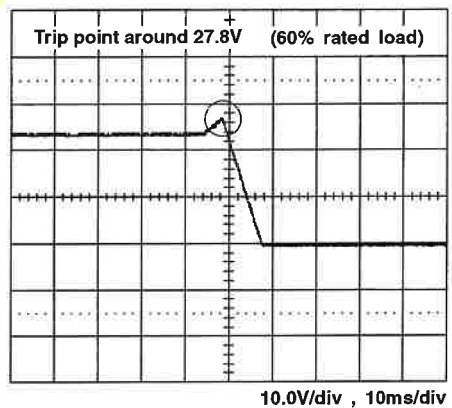
8.4 Output turn off wave form



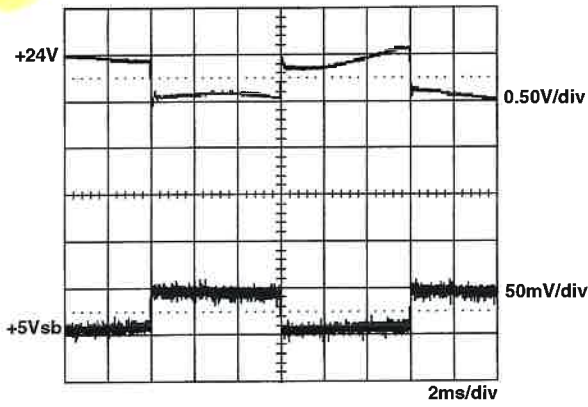
8.5 Hold-up time



8.6 Over voltage protection

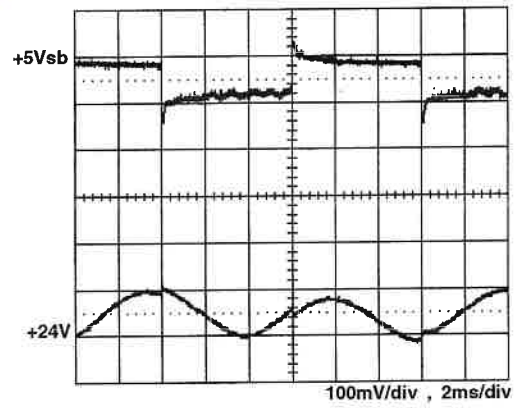


8.7 24V Step response



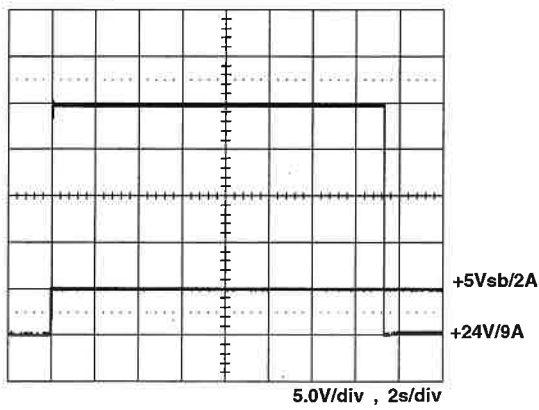
+24V step from 1.2A to 6A
other output at 60% load

8.8 +5Vsb Step response

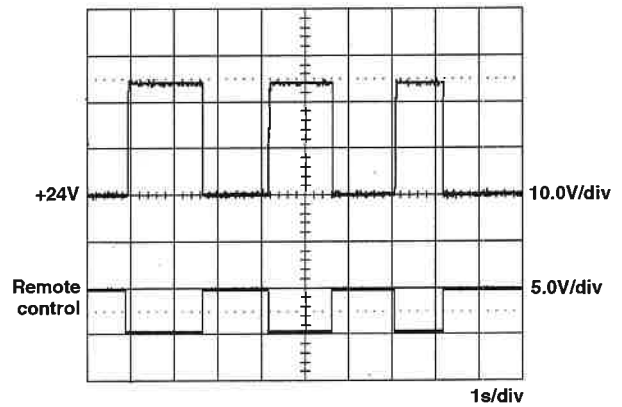


+5Vsb step from 0.4A to 2.0A
other output at 60% load

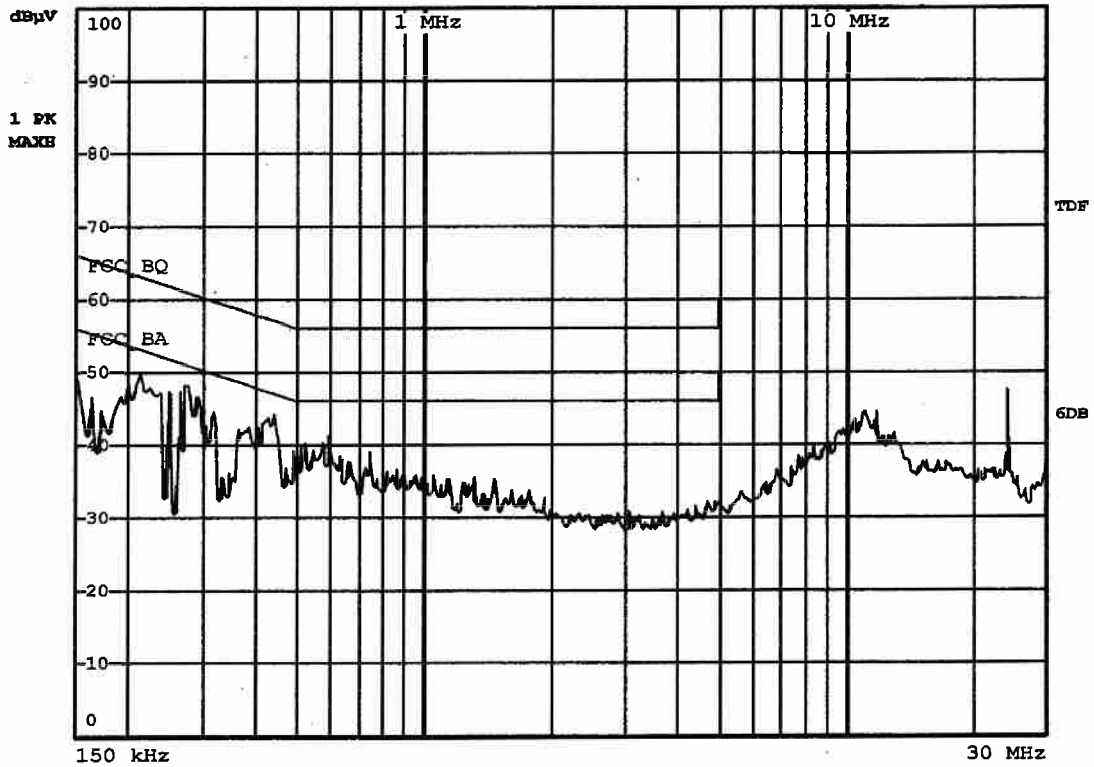
8.9 Peak load



8.10 Remote on/off



8.11 FCC B performance



8.12 CISPR Class "B"

