

SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N : SNP-E309-M

STANDARD PRODUCT

Reviewed by	<i>Clara</i> 9/5/11	<i>Clara</i> 12/4/11	<i>Hwi</i> 5/24/15	<i>Jim</i> 9-14-13	<i>Jim</i> 1-23-14	
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SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

SNP-E309-M is a 300W SMPS with metal enclosure and built-in forced air cooling.

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

4A_{rms} max/115Vac, 2A_{rms} 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

Vo	min. load	rated load
+24V	0A	12.5A

3.1.1 Factory adjustment

+23.9V to +24.1V (60% rated load, 115Vac)

3.1.2 Min load for FAN

20W min load for main output is required for FAN to start working.

3.2 Ripple and noise

< 200mV (20MHz bandwidth limited, 1X probe with 0.47uF parallel capacitor)

3.3 Line regulation

< ±0.5% (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

Rated load efficiency : 88% typical

Average efficiency of 25%, 50%, 75% and 100% rated load : >87%

4.2 Hold up time

15ms typical

4.3 Protection

4.3.1 Over-voltage protection

Trip point : +25V to +29V (60% rated load)

Protection mode : Latch-off

4.3.2 Short circuit and over-load protection

Protection mode : Auto-recovery

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

-20°C to 65°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 5000m

5.5 MTBF

> 120Khrs (based on MIL-HDBK-217F, rated load, 65 °C)

6.0 INTERNATIONAL STANDARDS

6.1 Safety Approvals

Label Voltage : 100Vac to 240Vac

UL 60601-1

CSA 22.2 NO.60601-1

EN 60601-1

6.2 Emissions and Harmonic currents

FCC docket 20780 level B

CISPR 22 level B

EN 61000-3-2 Class D

EN 61000-3-3

6.3 Immunity

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 (100KHz) Criterion A

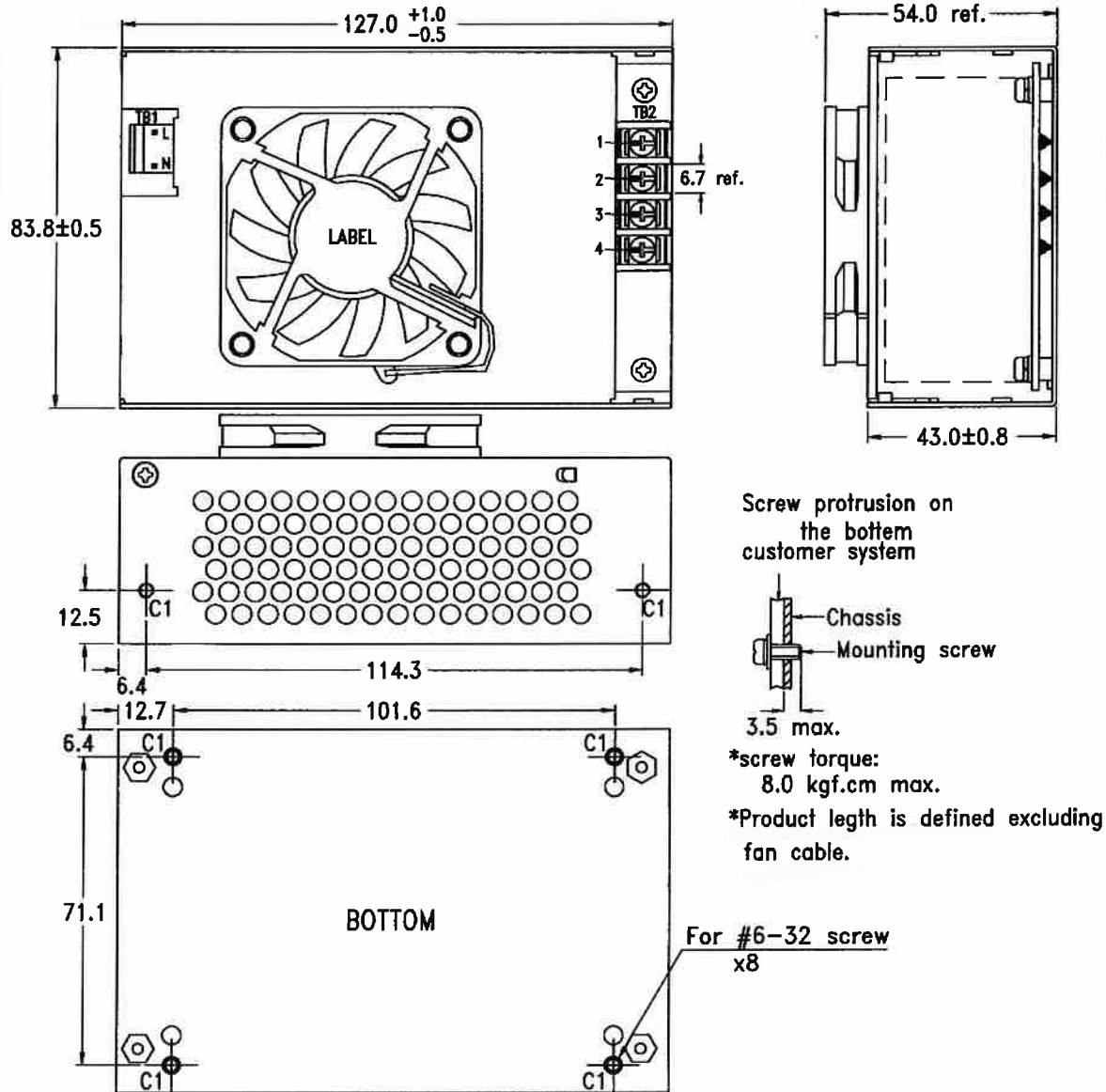
EN61000-4-5 1kV/Line-Line, 2kV/Line-Earth Criterion A

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 500ms, Criterion B
 100% dips 20ms, Criterion B

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

Dimensions shown in mm as above. Tolerance is specified ± 0.4 mm dimension.

7.2 Connectors

- TB1- - AC Input : Molex 5277-02A or equivalent , mating with Molex 5239-03 or equivalent
- TB2- - DC Output : Terminal blocks, pitch - 8.25mm

7.3 DC pin assignment

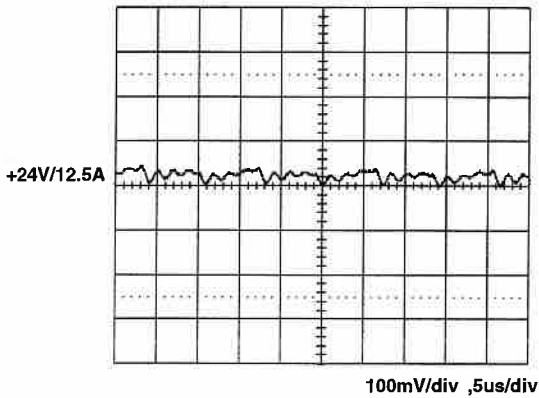
Position 1 +V 2 +V 3 GND 4 GND

7.4 Packing

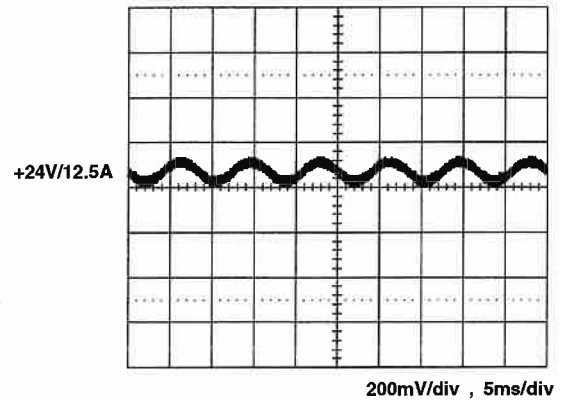
- Net weight : 580 g approx. /unit
- Carton size(mm) : 384 (L) x 339 (W) x 327 (H)
- Quantity : 24 units / carton
- Gross weight : 16.0kg approx. / carton

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

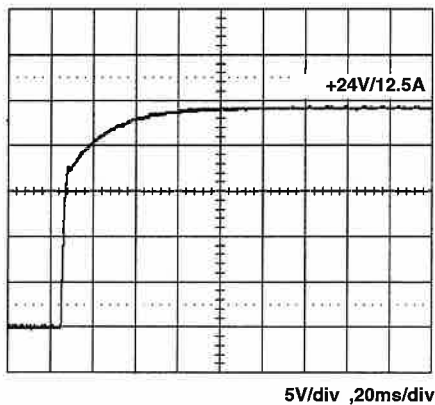
8.1 Switching frequency ripple



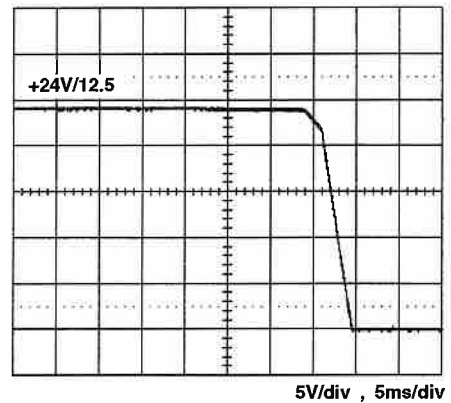
8.2 Line frequency ripple



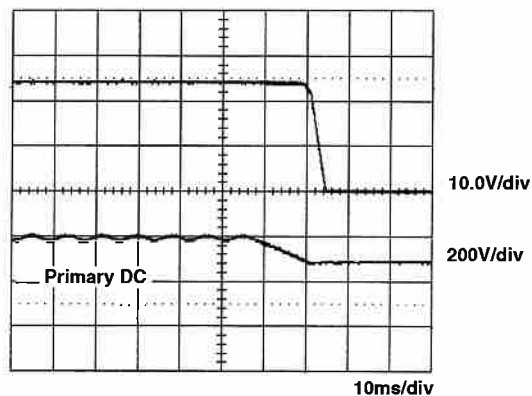
8.3 Output turn on wave form



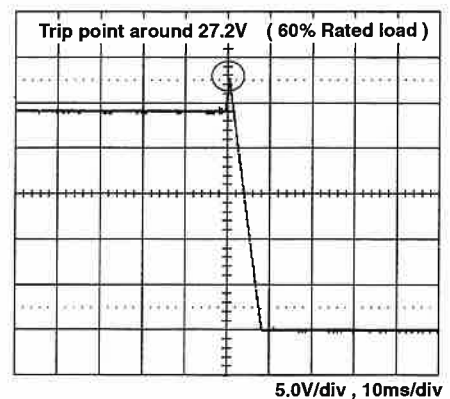
8.4 Output turn off wave form



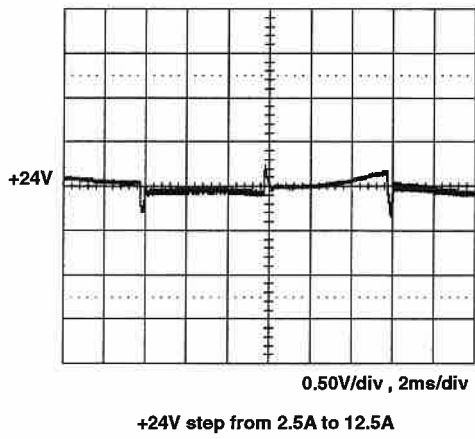
8.5 Hold-up time



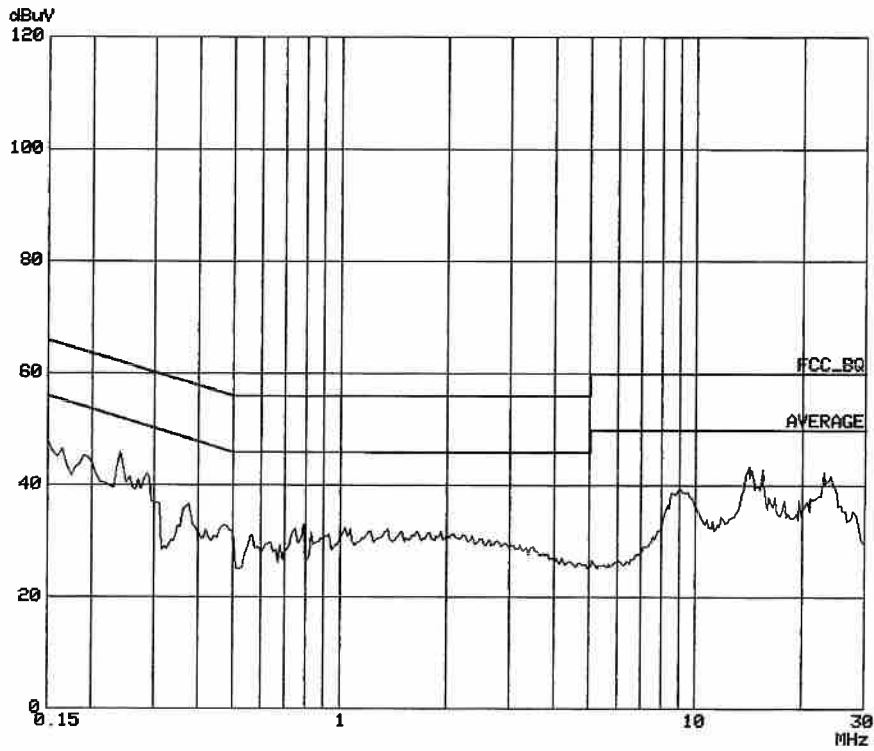
8.6 Over voltage protection



8.7 +24V step response



8.8 FCC B performance



8.9 CISPR 22 B

