

SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N : SNP-H069-M

STANDARD PRODUCT

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SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

SNP-H069-M is an open frame and rated 60W SMPS for general purpose use. It features in Medical safety, green power and low profile.

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

1.4A_{rms} max/115Vac, 0.9A_{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	peak load
+24V	0A	2.5A	3.5A

3.1.1 Factory adjustment

+23.8V to +24.2V (60% rated load, 115Vac)

3.1.2 Peak load max duration

3sec. (duty cycle < 10%, average power < rated load)

3.2 Ripple and noise

< 100mV (20MHz bandwidth limited, 1X probe with 0.47uF parallel capacitor)

3.3 Line regulation

< ±0.5% (90Vac to 264Vac, compare with 115Vac)

3.4 Load regulation

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

3.5 Start up time

< 0.5sec (100Vac)

3.6 Capacitive load start-up capability

< 18000uF

4.0 GENERAL FEATURES

4.1 Efficiency

86% typical

4.2 Hold up time

16ms typical

4.3 Protection

4.3.1 Over-voltage protection

Trip point : +28V to +36V (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 70°C (Output reduces linearly to 50% load 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

> 0.4Mhrs (based on MIL-HDBK-217F, rated load, 50°C)

6.0 INTERNATIONAL STANDARDS

6.1 Safety approvals

Label voltage : 100Vac to 240Vac

CB : IEC 60601-1 :2005

TUV : EN 60601-1 :2006

cULus : ANSI/AAMI ES 60601-1 : 2005 , 1st Edition

CAN/CSA-C22.2 NO.60601-1 : 08. 2nd Edition

6.1.1 Isolation level

Transformer : Class B

Primary to secondary : double insulation, 2 MOPP

Primary to PE : Basic insulation , 1 MOPP

Secondary to PE : Basic insulation , 1 MOPP

6.2 Emissions and Harmonic currents

FCC docket 20780 level B

CISPR 22 level B

EN 61000-3-2 Class A

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

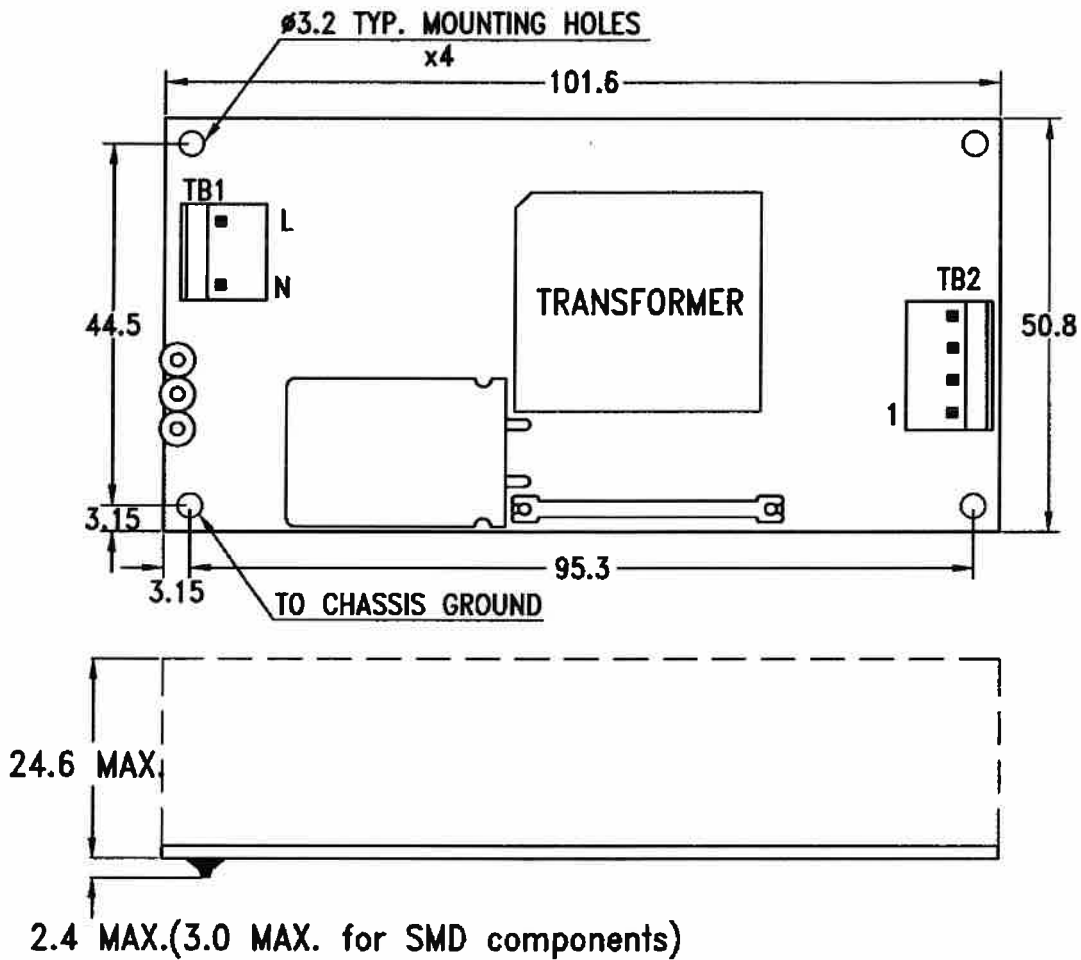
60% dips 200ms, Criterion B

100% dips 10ms, Criterion A

100% dips 20ms, Criterion B

100% dips 5000ms, Criterion B

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

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

7.2 Connectors

TB1--AC Input : Molex 5277-02A or equivalent.

TB2--DC Output : Molex 5273-04A or equivalent.

7.3 DC Output pin assignment

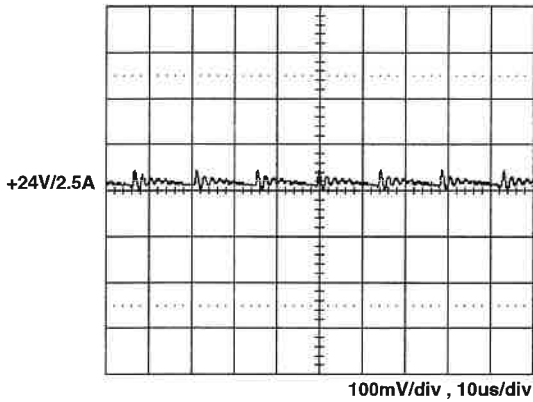
Pin	1	+24V
	2	+24V
	3	GND
	4	GND

7.4 Packing

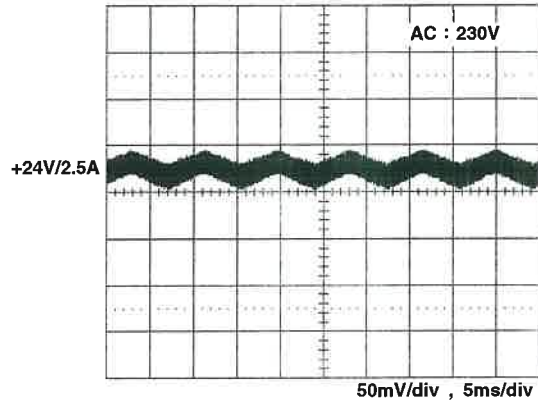
Net weight	: 110 g approx. /unit
Carton size(mm)	: 422 (L) x 382 (W) x 277 (H)
Quantity	: 100 units / carton
Gross weight	: 13.5 kg approx. / carton

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

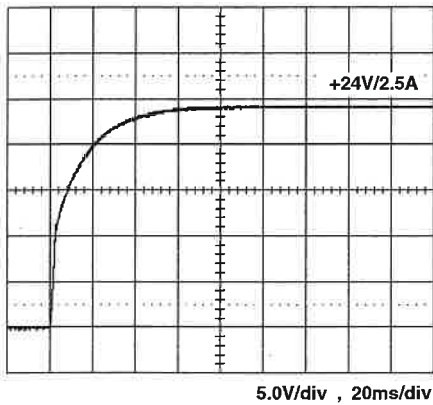
8.1 Switching frequency ripple



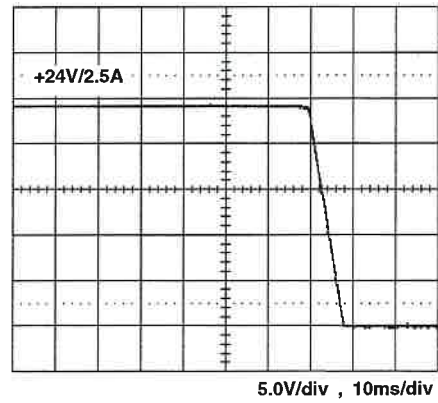
8.2 Line frequency ripple



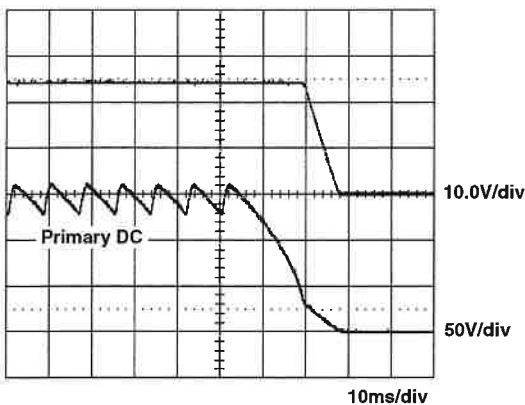
8.3 Output turn on wave form



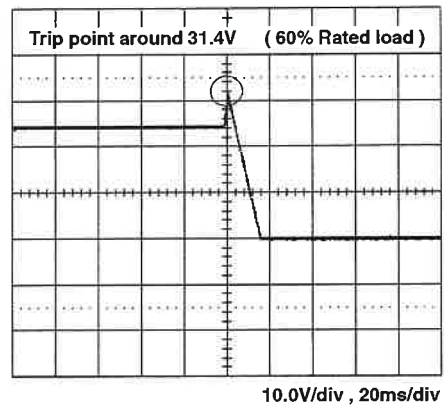
8.4 Output turn off wave form



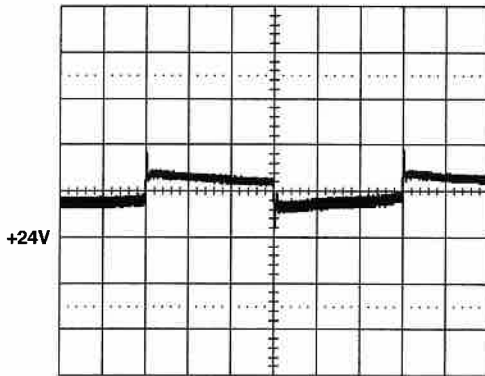
8.5 Hold-up time



8.6 Over voltage protection

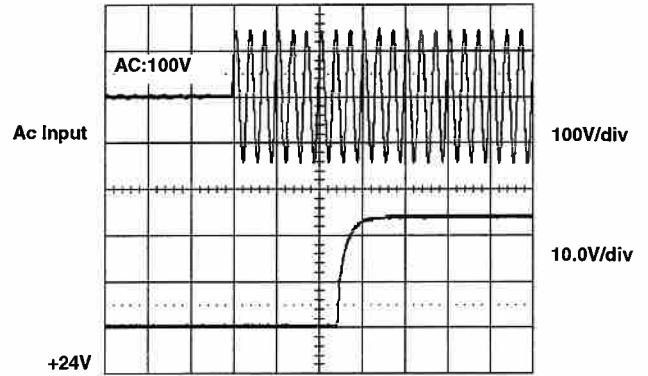


8.7 +24V step response



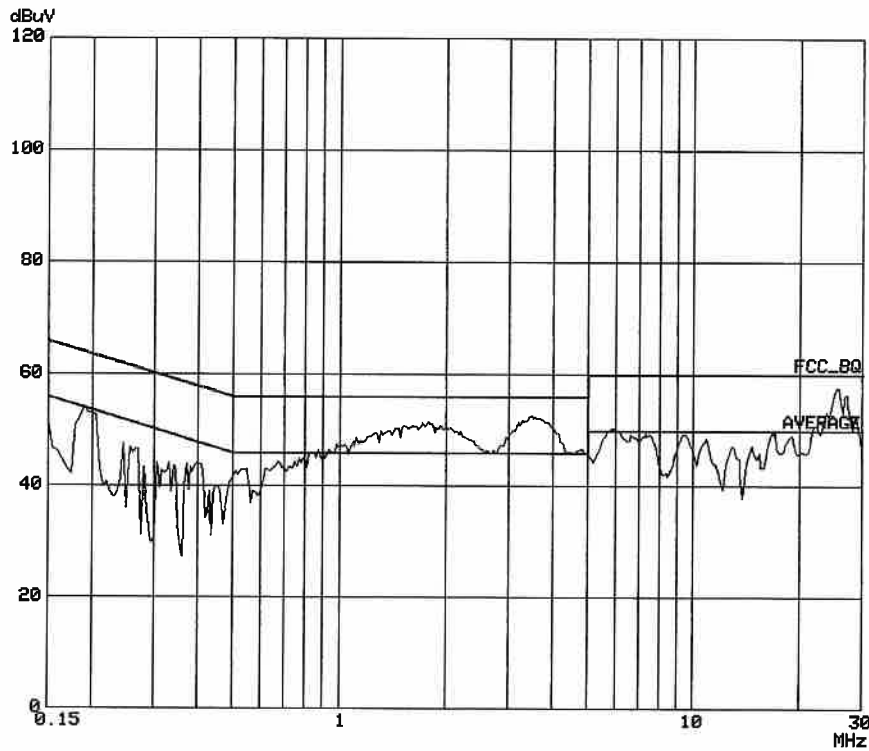
+24V step from 0, 200mV/div , 2ms/div

8.8 Start up Time



50ms/div

8.9 FCC B performance



8.10 EN55022 “B”

