

**SPECIFICATION**

**For**

SWITCHING POWER SUPPLY

**M/N : SNP-H067-M**

**STANDARD PRODUCT**

Reviewed by Product Manager	<i>Claris</i> 123012	<i>J~</i> 3-1-18	<i>Ji~</i> 1-7-19			
Typed by Document Assistant	<i>陳詭著</i> 102512	<i>葉瑞英</i> 03018	<i>葉瑞英</i> 010719			
<b>SKYNET ELECTRONIC</b>			<b>LAST REV. NO.</b>			

## 1.0 INTRODUCTIONS

SNP-H067-M is an open frame and rated 60W SMPS for general purpose use. It features in Medical safety 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<sub>rms</sub> max/115Vac, 0.9A<sub>rms</sub> 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
+12V	0A	5.0A	6.5A

#### 3.1.1 Factory adjustment

+11.8V to +12.2V (60% rated load, 115Vac)

#### 3.1.2 Peak load max duration

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

### 3.2 Ripple and noise

< 120mV (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

< 45000uF

## 4.0 GENERAL FEATURES

### 4.1 Efficiency

85% typical

### 4.2 Hold up time

16 ms typical

### 4.3 Protection

#### 4.3.1 Over-voltage protection

Trip point : +14.5V to +18.5V (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)

(-20°C can startup with 50% rated load)

(0°C can startup with 100% rated load)

### 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 standards

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 EMI standards

FCC docket 20780 curve "B"

CISPR 22 "B"

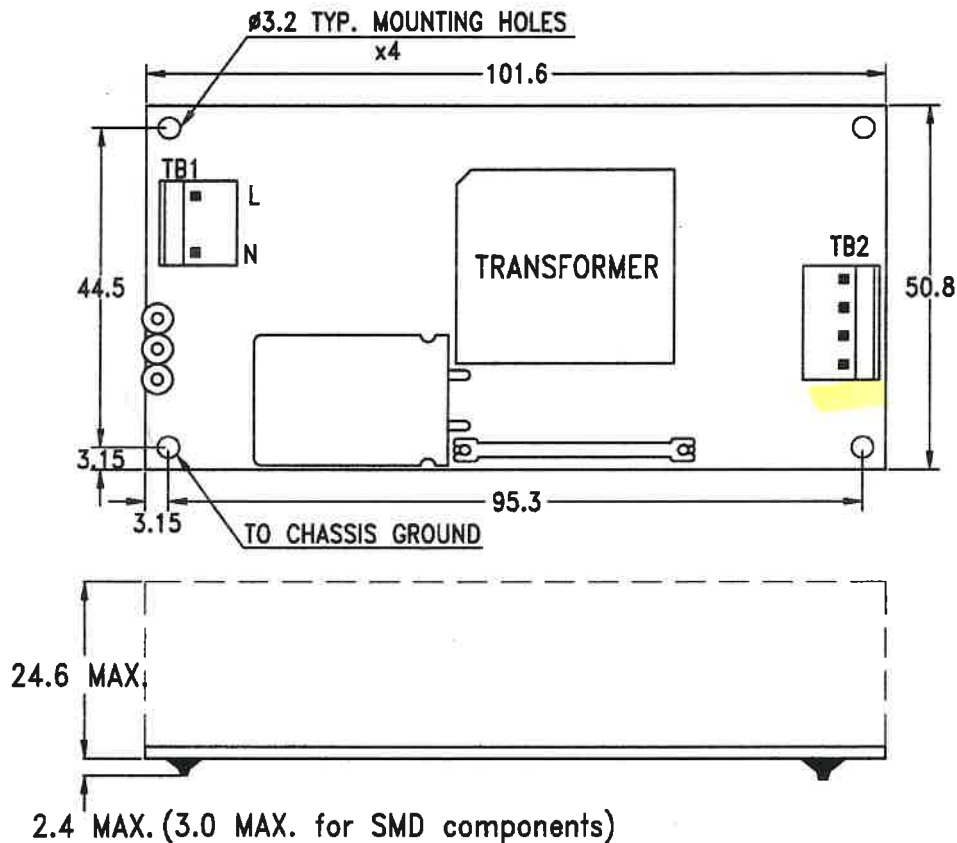
EN 61000-3-2 class "A"

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 (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**

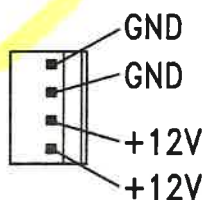
Dimensions shown in mm as above . Tolerance specified is  $\pm 0.4$ mm.

**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**

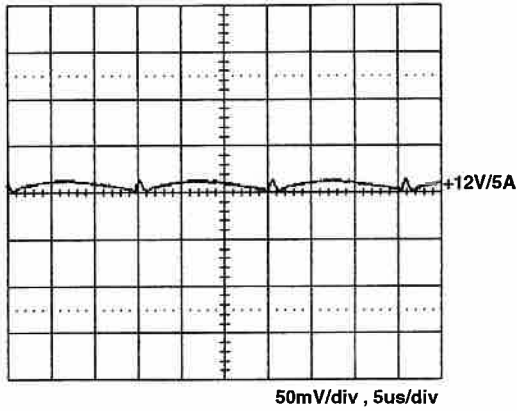


**7.4 Packing**

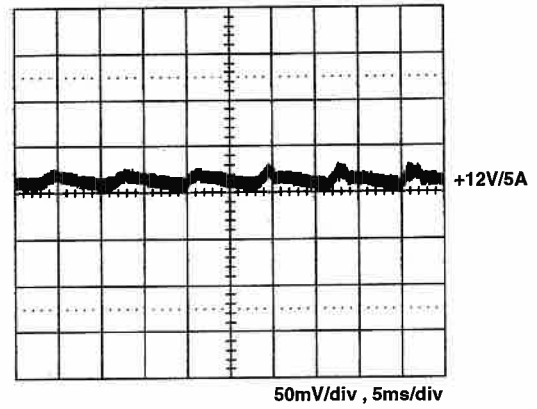
- Net weight : 120 g approx. / unit
- Carton size(mm) : 422 (L) x 382 (W) x 227 (H)
- Quantity : 100 units / carton
- Gross weight : 14.5 kg approx. / carton

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

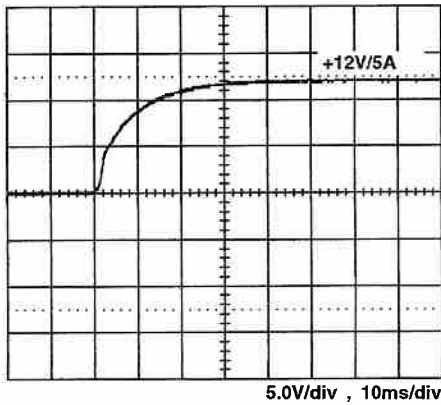
**8.1 Switching frequency ripple**



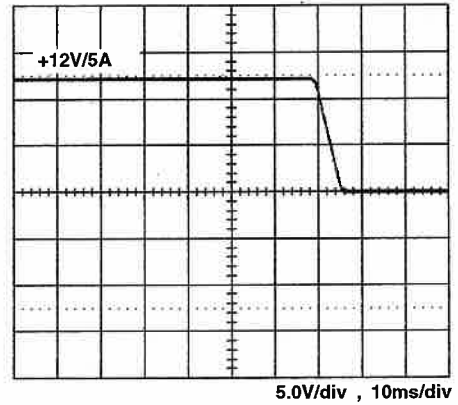
**8.2 Line frequency ripple**



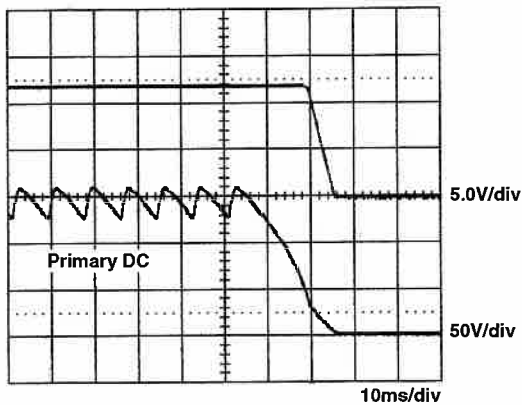
**8.3 Output turn on wave form**



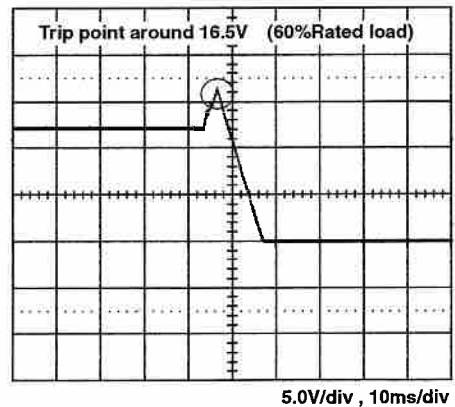
**8.4 Output turn off wave form**



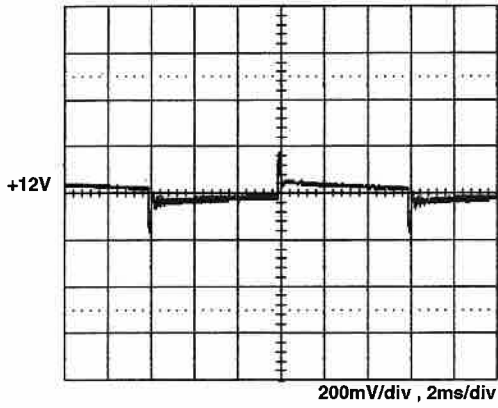
**8.5 Hold-up time**



**8.6 Over voltage protection**

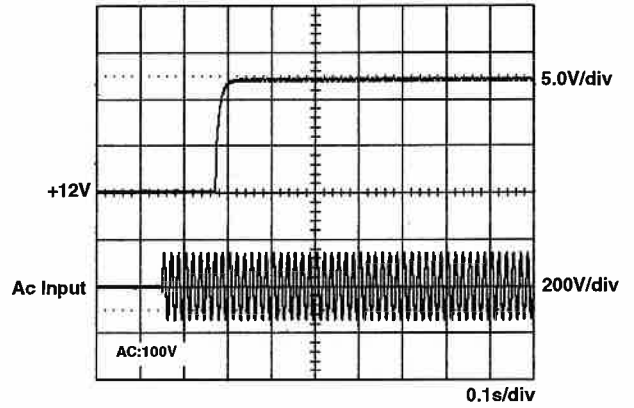


8.7 +12V step response

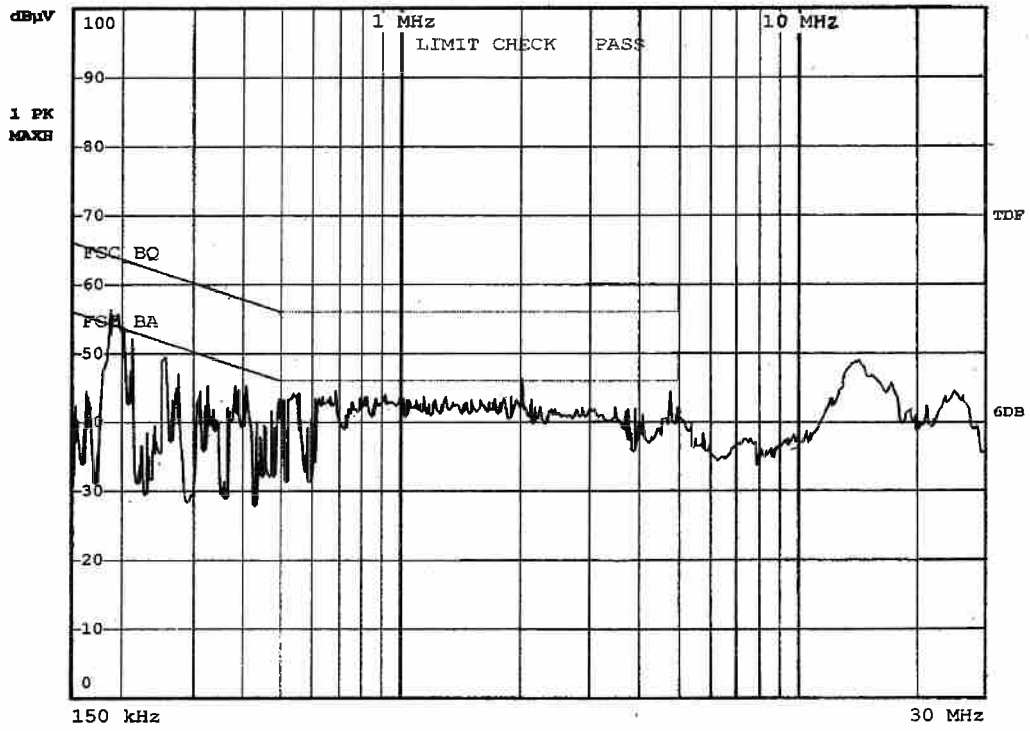


+12V step from 1A to 5A

8.8 Start up Time



8.9 FCC B performance



8.10 CISPR 22 "B"

