

**SNP-GK69-MH SPECIFICATION**

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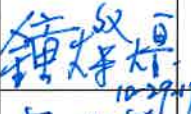
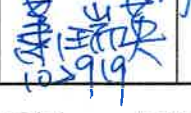
For

SWITCHING POWER SUPPLY

**M/N : SNP-GK69-MH**

STANDARD PRODUCT

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Reviewed by Product Engineer						
Typed by Document Assistant						
<b>SKYNET ELECTRONIC</b>		<b>LAST REV. NO.</b>				

## 1.0 INTRODUCTIONS

SNP-GK69-MH is a 60W rated output 24V/2.5A, 75W max. load 84W peak load switching mode supply for medical & ITE application.

The feature on this model: design for BF application、high torque capability、up to 8,000uF loading start-up、low leakage current : touch < 100uA、flexible installation for Class II、2"×4"×1" compact size、5000m operating altitude、-35°C to 70°C convection cooling、eco-friendly design.

## 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

3A<sub>rms</sub> max/115Vac, 1.5A<sub>rms</sub> max/230Vac

### 2.4 Inrush current

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

## 3.0 OUTPUT SPECIFICATIONS

All specs under item 3.0 except with special notes are defined and tested at nominal line input, rated load and 25°C

### 3.1 Load range

Vo	min. load	rated load	max. load	peak load
+24V	0A	2.5A	3.125A	3.5A

#### 3.1.1 Factory adjustment

+23.6V to +24.4V (60% rated load, 115Vac)

#### 3.1.2 Peak load max duration

5sec. (duty cycle < 50%, average power < rated power)

#### 3.1.3 Cooling

Rated load for convection cooling

### 3.2 Ripple and noise

< 1% (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 Capacitive load start-up

< 18,000uF

### 3.6 Start up Time

< 0.5 Sec (100VAC)

**4.0 GENERAL FEATURES**

All specs under item 4.0 except with special notes are defined and tested at nominal line input, rated load and 25°C

**4.1 Efficiency**

>84.5% at 100% rated load

**4.2 Hold up time**

16 ms typical

**4.3 Protection**

**4.3.1 Over-voltage protection**

Trip point : +28V to +33.5V

Protection mode : Latch-off

**4.3.2 Short circuit and over-load protection**

Protection mode : Auto-recovery

**5.0 ENVIRONMENT SPECIFICATIONS**

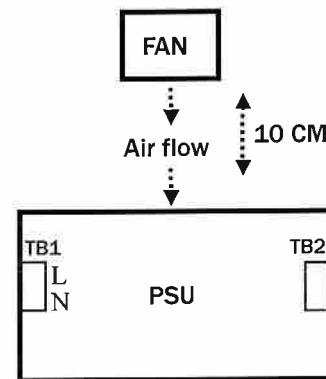
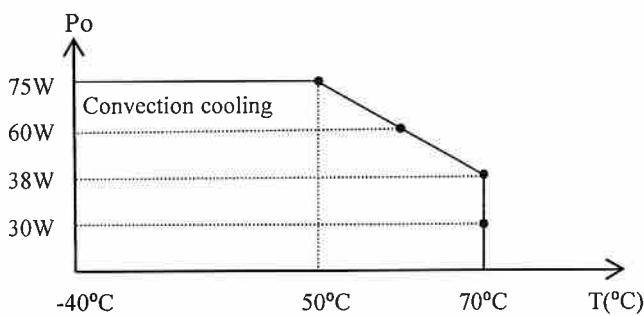
**5.1 Operating temperature**

-35°C to 70°C

(For both rated and max load. output load derates linearly to 50% from 50°C to 70°C)

(Rated load with convection cooling ; max. load with 10 CFM forced air cooling)

Output derating curve



**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

**6.0 INTERNATIONAL STANDARDS**

**6.1 Safety standards**

Label voltage: 100Vac to 240Vac  
 UL/CSA/EN 60950-1, 2<sup>nd</sup> edition  
 ANSI/AMMI/CSA/EN 60601-1, 3<sup>rd</sup> edition +A1

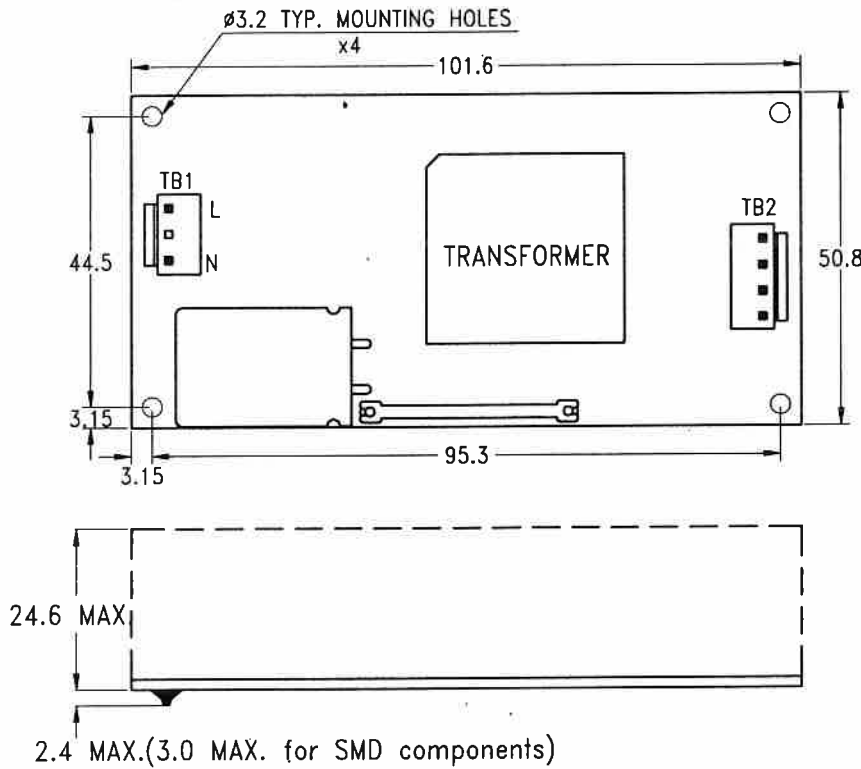
**6.2 EMI standards**

FCC docket 20780 curve "B"  
 EN55022, level "B"  
 EN55011, level "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	2kV/Line-Line,	Criterion A
EN61000-4-6	10V with 80% AM	Criterion A
EN61000-4-8	30A/m	Criterion A
EN61000-4-11	100% dips 10ms,	Criterion A
	100% dips 20ms,	Criterion B
	30% dips 500ms,	Criterion A
	60% dips 200ms,	Criterion B
	100% dips 5000ms,	Criterion B

**7.0 MECHANICAL SPECIFICATION**



Note :

- 1. Plastic spacer support for mounting holes are suitable to keep the safety spacing.

**7.1 Dimensions**

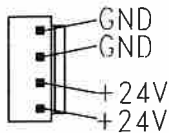
Dimensions shown in mm as above. Tolerance specified is  $\pm 0.4$ mm .

**7.2 Connectors**

TB1--AC Input : JST B2P3-VH or equivalent, mating with JST NVAR-02VS or equivalent.

TB2--DC Output : JST B4P-VH or equivalent, mating with JST VHR-4N or equivalent.

**7.3 DC Output pin assignment**

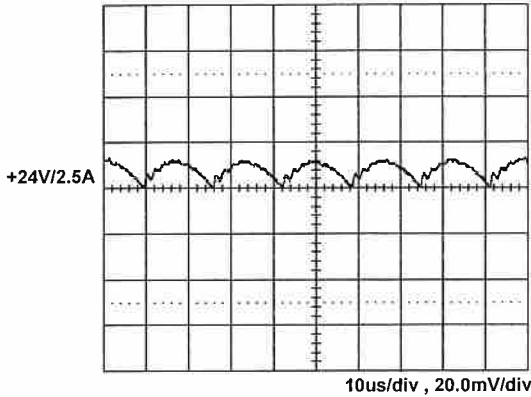


**7.4 Packing**

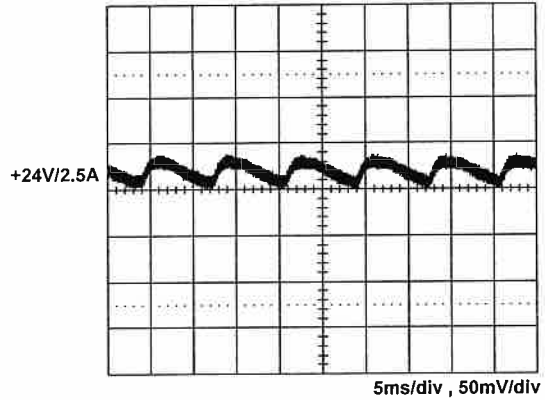
Net weight	:	120g approx. / unit
Carton size(mm)	:	422(L) x 382(W) x 277(H)
Quantity	:	100 units / carton
Gross weight	:	14.5kg approx. / carton

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

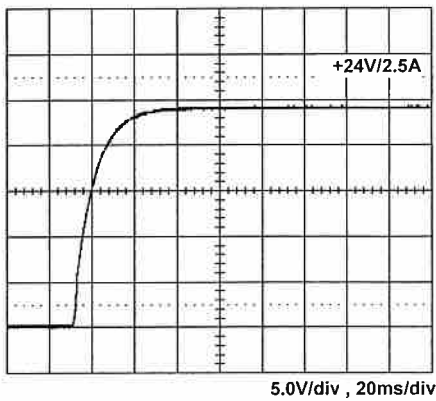
8.1 Switching frequency ripple



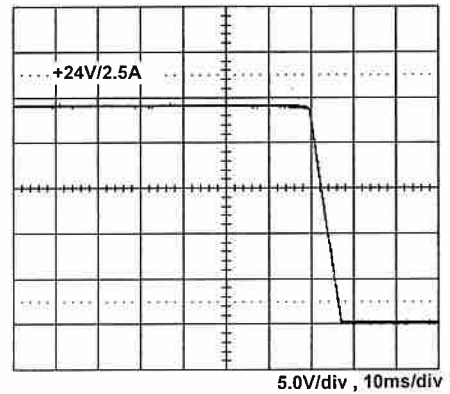
8.2 Line frequency ripple



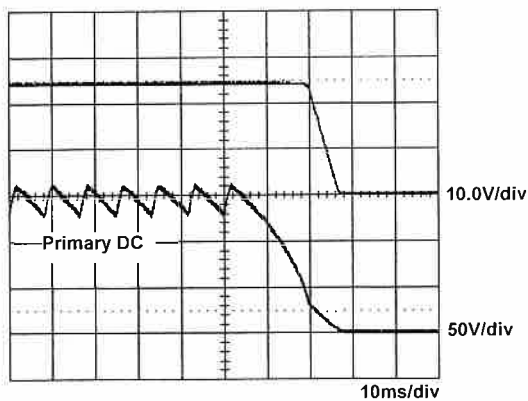
8.3 Output turn on wave form



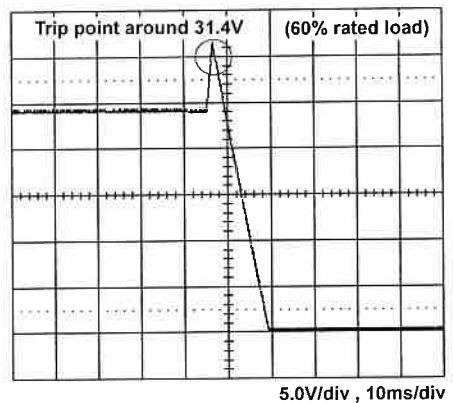
8.4 Output turn off wave form



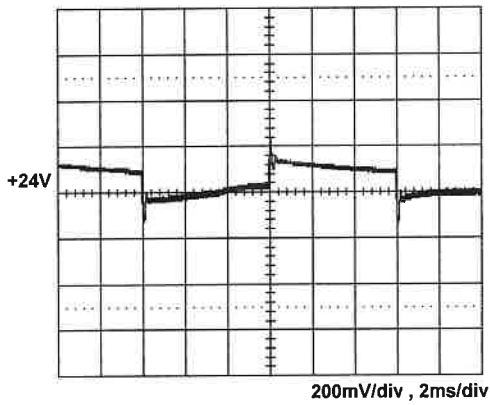
8.5 Hold-up time



8.6 Over voltage protection

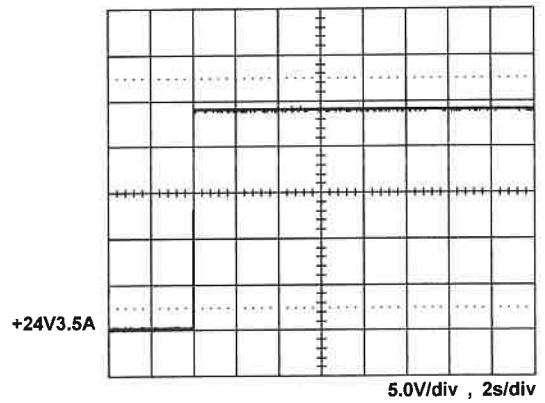


8.7 +24V Step response

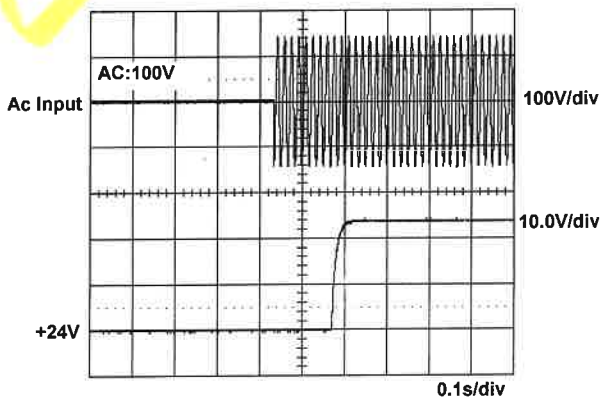


+24V step from 0.5A to 2.5A

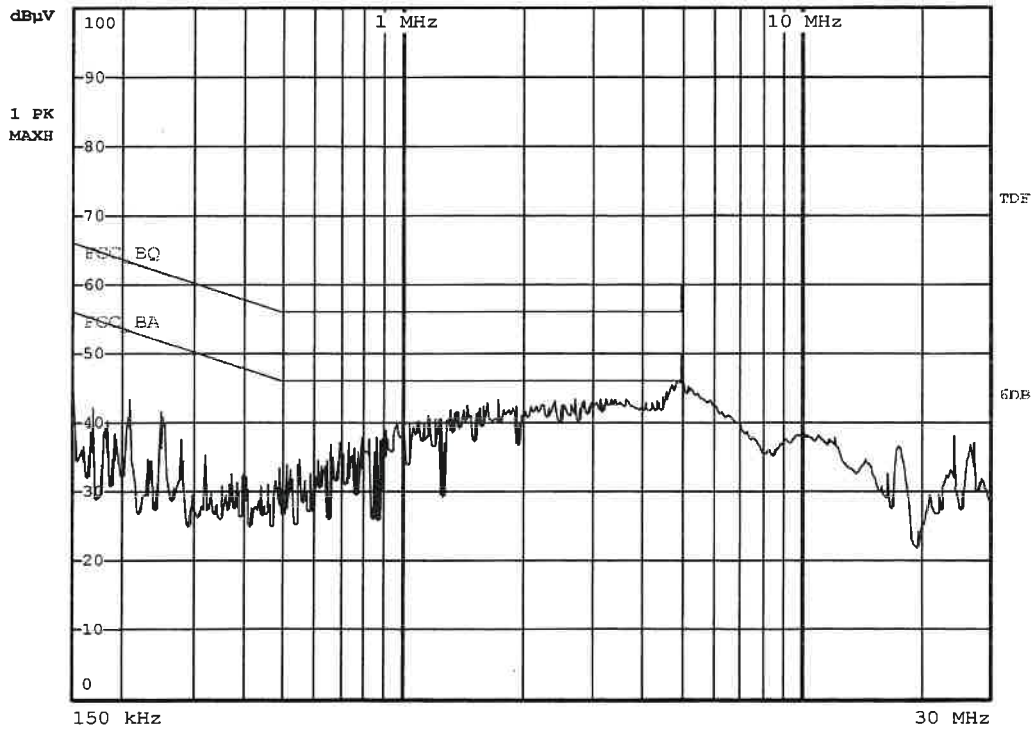
8.8 peak load



8.9 Start up Time



8.10 FCC "B" QP performance



8.11 CISPR "B" QP performance

