

**SNP-G129-MA SPECIFICATION**

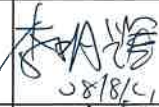

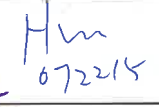
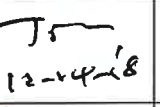
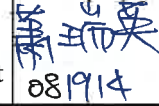

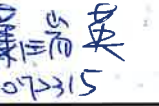

**SPECIFICATION**

**For**

**SWITCHING POWER SUPPLY**

**M/N : SNP-G129-MA**

**STANDARD PRODUCT**

Reviewed by Product Engineer	 08/8/14	 04/27/14	 07/22/15	 12-24-18		
Typed by Document Assistant	 08/19/14	 02/21/15	 07/23/15	 12/24/18		
<b>SKYNET ELECTRONIC</b>				<b>LAST REV. NO.</b>		

## 1.0 INTRODUCTIONS

SNP-G129-MA is an open frame, general purpose and rated 120W SMPS. It also features in Medical safety and nonaudible noise green power.

## 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

$2A_{rms}$  max/115Vac,  $1A_{rms}$  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	max. load	peak load
+24V	0A	5A	6.3A	8.3A

#### 3.1.1 Factory adjustment

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

#### 3.1.2 Peak load max duration

2sec. (duty cycle < 10%, average power < 100W)

### 3.2 Ripple and noise

< 150mV (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)

### 3.5 Capacitive load start-up capability

< 3000 (90Vac rated load)

## 4.0 GENERAL FEATURES

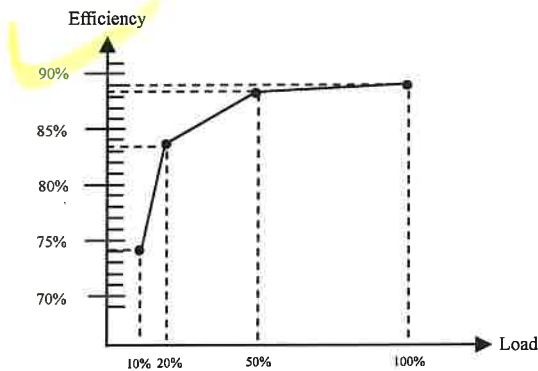
### 4.1 Average efficiency

>87.5% typ. (Average from 20%, 50%, and 100% efficiency)

**4.2 step efficiency**

- >74% at 10% rated load
- >83.5% at 20% rated load
- >88.5% at 50% rated load
- >89% at 100% rated load

**4.3 Efficiency Curve**



**4.4 Hold up time**

> 20ms typical

**4.5 No load input power**

<5W (without FAN connection)

**4.6 Protection**

**4.6.1 Over-voltage protection**

Trip point : +26V to +30V (60% rated load)

Protection mode : Latch - off

**4.6.2 Output short or overload protection**

Protection mode : Auto-recovery

**5.0 ENVIRONMENT SPECIFICATIONS**

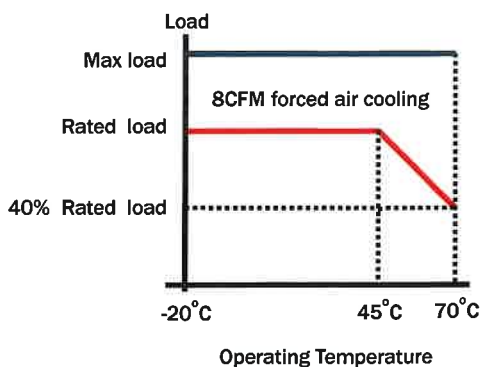
**5.1 Operating temperature**

-20°C to 70°C

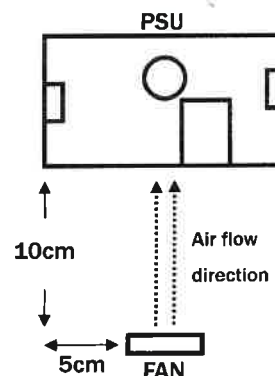
Output load derates linearly to 40% from 45°C to 70°C

Rated load with convection cooling; max load with 8 CFM forced air cooling

Output derating curve



Max Load Fan location



**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**

&gt; 160Khrs (based on MIL-HDBK-217F, rated load, 45 °C)

**6.0 INTERNATIONAL STANDARDS****6.1 Safety standards**

Label voltage : 100Vac to 240Vac

UL 60601-1

CSA 22.2 NO.60601-1

EN 60601-1

**6.2 EMI standards**

FCC docket 20780 curve "B"

CISPR 22 "B"

EN 61000-3-2 class "D"

EN 61000-3-3

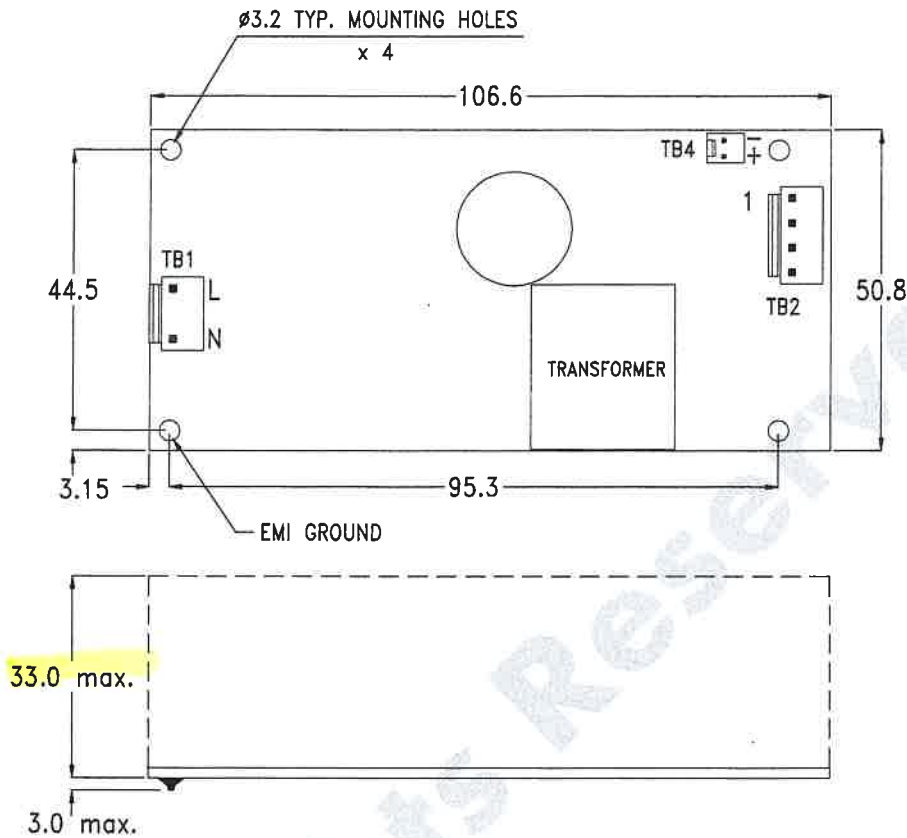
**6.3 EMS standards**

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 5000ms,	Criterion B
	100% dips 20ms,	Criterion B

**7.0 MECHANICAL SPECIFICATION**

**7.1 Dimensions**

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



**7.2 Connectors**

- TB1--AC Input : using JST B2P3-VH or equivalent  
(Mates with : JST VHR-3N housing or equivalent)
- TB2--DC Output : using JST B4P-VH or equivalent  
(Mates with : JST VHR-4N or equivalent)
- TB4--For +12V fan use only : using Molex 5045-02A or equivalent  
(Mates with : Molex 5051-02 housing or equivalent)

**7.3 DC Output pin assignment**

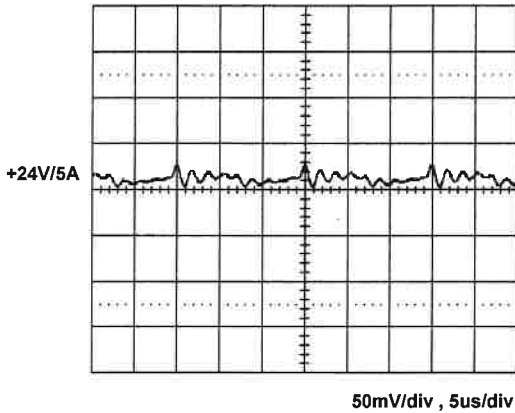
- Position 1 : GND
- 2 : GND
- 3 : + 24V
- 4 : + 24V

**7.4 Packing**

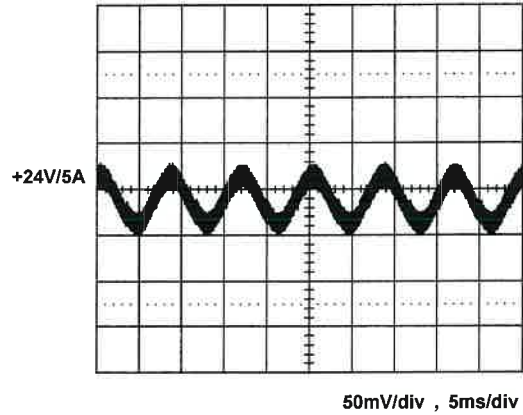
- Net weight : 160g approx. / unit
- Carton size(mm) : 446 (L) x 412 (W) x 287(H)
- Quantity : 80 units / carton
- Gross weight : 16.0 kg approx. / carton

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

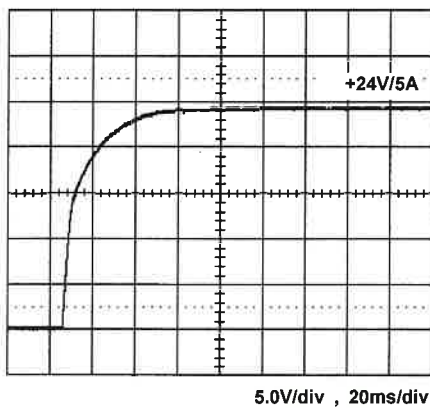
**8.1 Switching frequency ripple**



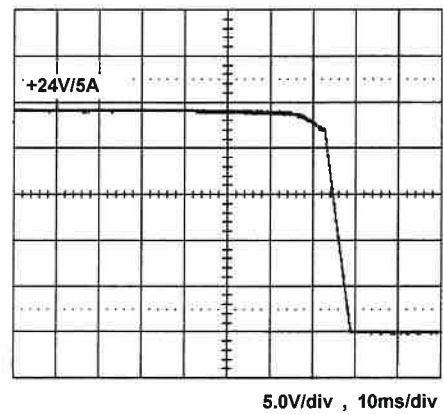
**8.2 Line frequency ripple**



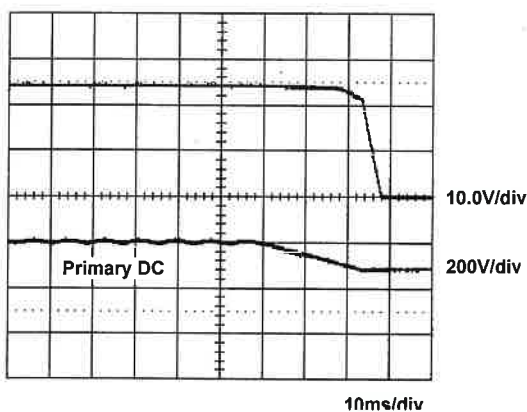
**8.3 Output turn on wave form**



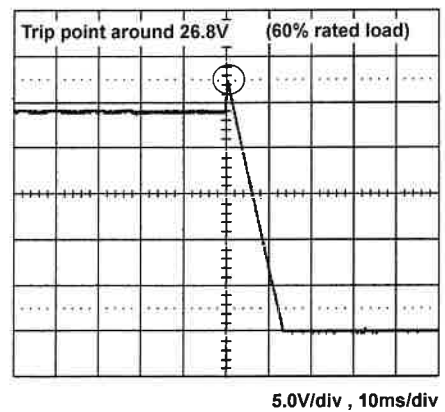
**8.4 Output turn off wave form**



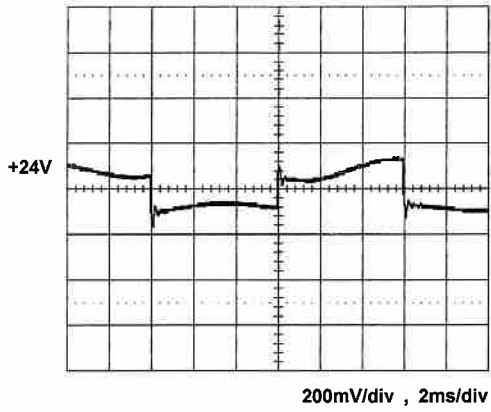
**8.5 Hold-up time**



**8.6 Over voltage protection**

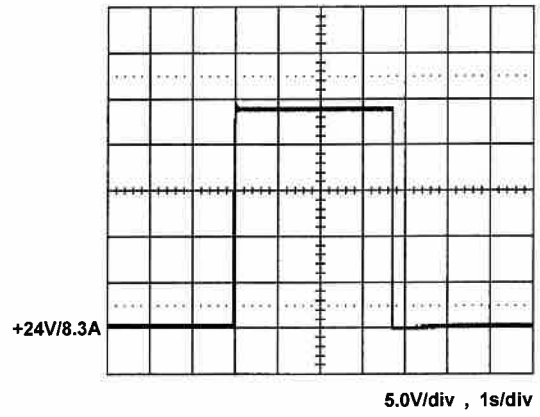


8.7 +24V Step response

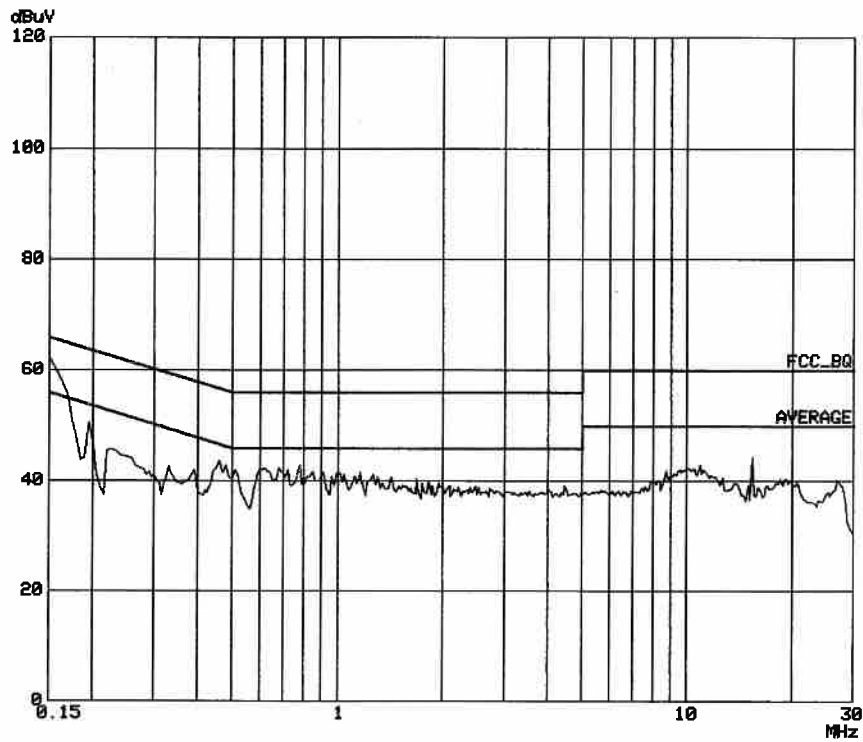


+24V step from 2A to 5A

8.8 Peak Load



8.9 FCC B performance



8.10 EN55022 "B"

