

**SPECIFICATION**

For

SWITCHING POWER SUPPLY

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

**STANDARD PRODUCT**

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SKYNET ELECTRONIC			LAST REV. NO.			

**1.0 INTRODUCTIONS**

SNP-G129-A is an open frame, general purpose and rated 120W SMPS. It also features in ITE 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<sub>rms</sub> max/115Vac, 1A<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	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**

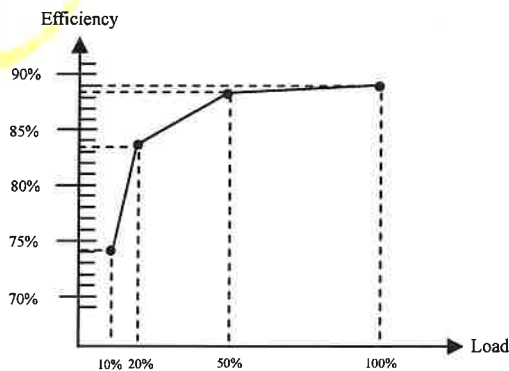
**4.1 Average efficiency**

>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**

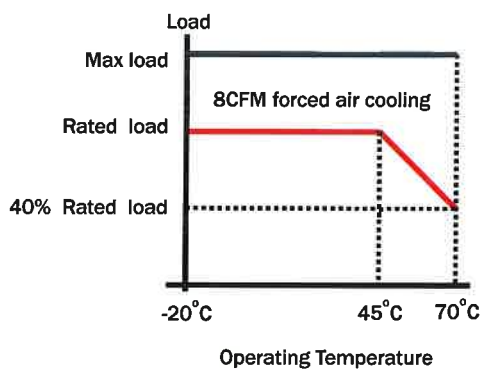
**5.1 Operating temperature**

-20°C to 70°C

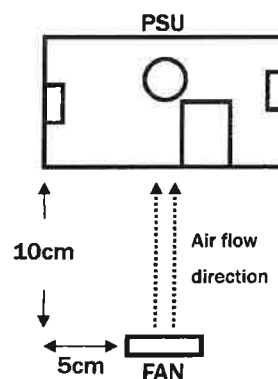
Output load derates linearly to 40% from 45°C to 70°C

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 60950-1

CSA 22.2 NO.60950-1

EN 60950-1

**6.2 EMI standards**

FCC docket 20780 curve "B"

CISPR 22 "B"

EN 61000-3-2 class "D"

EN 61000-3-3

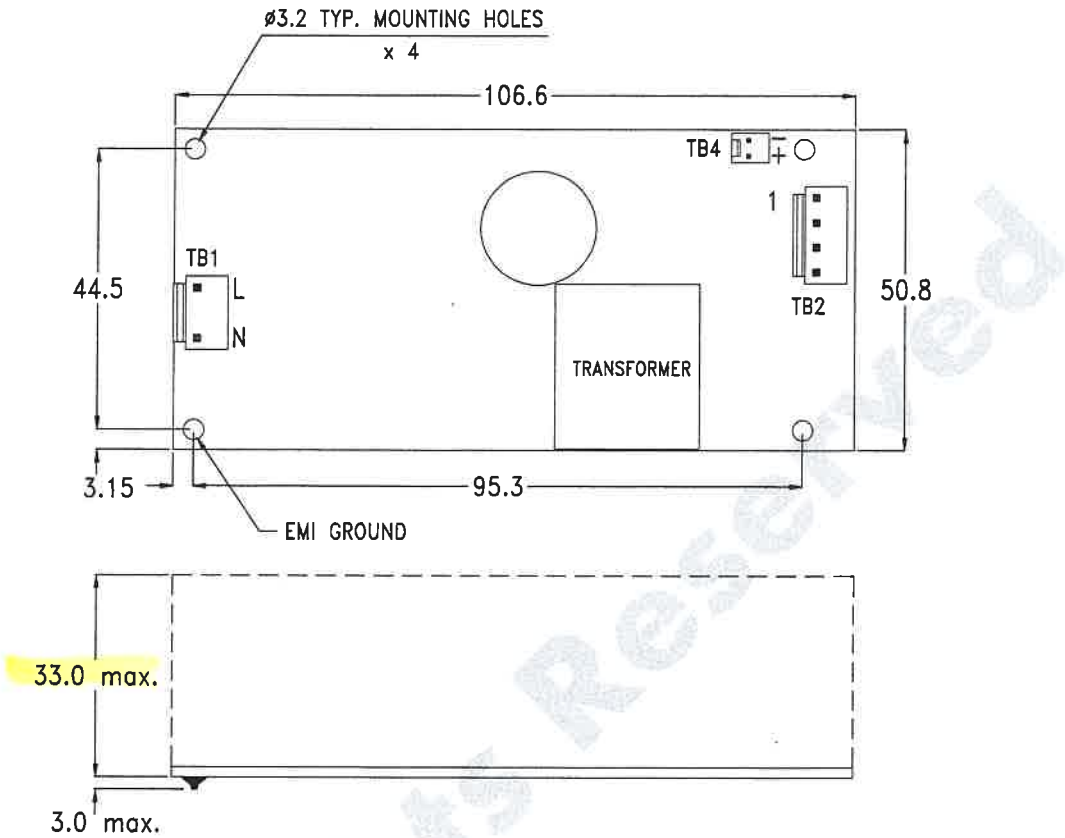
**6.3 EMS standards**

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**

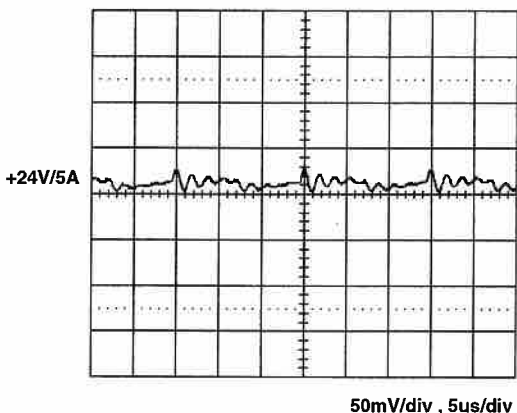
- Position 1 : GND
- 2 : GND
- 3 : + 24V
- 4 : + 24V

**7.4 Packing**

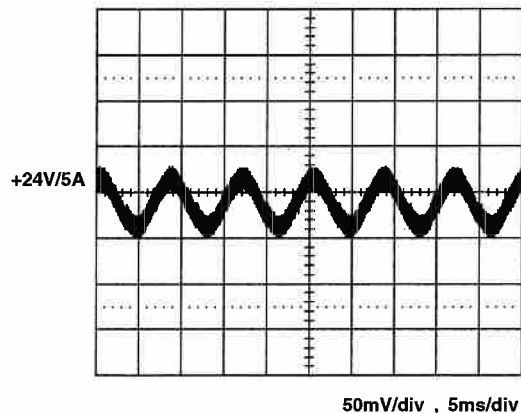
- Net weight : 160g approx. / unit
- Carton size(mm) : 446 (L) x 412 (W) x 287(H)
- Quantity : 80 units / carton
- Gross weight : 16.0 kg approx. / carton

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

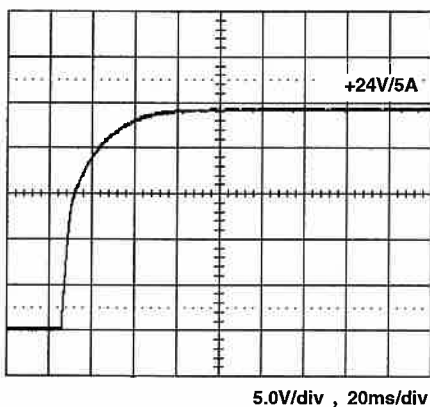
8.1 Switching frequency ripple



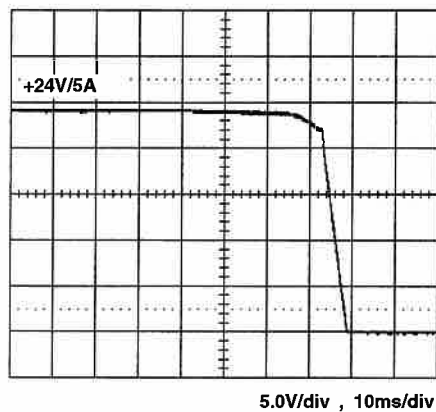
8.2 Line frequency ripple



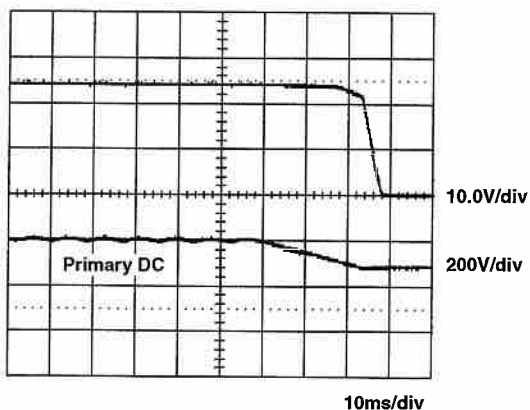
8.3 Output turn on wave form



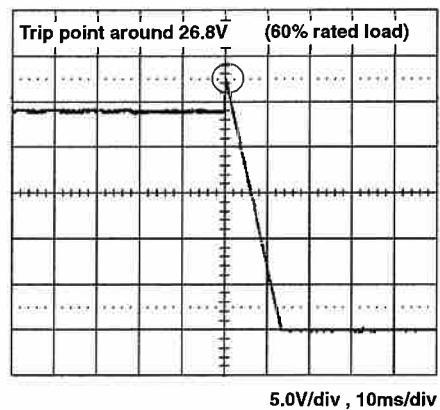
8.4 Output turn off wave form



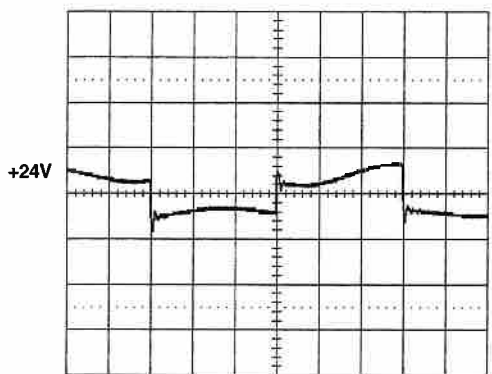
8.5 Hold-up time



8.6 Over voltage protection

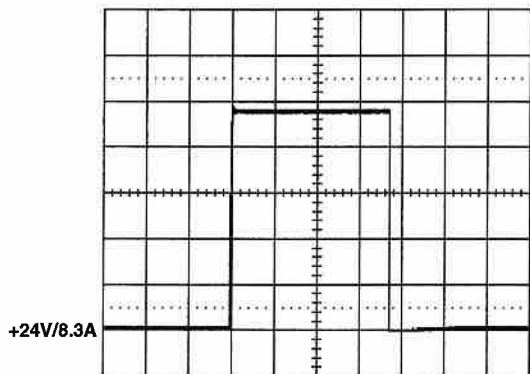


8.7 +24V Step response

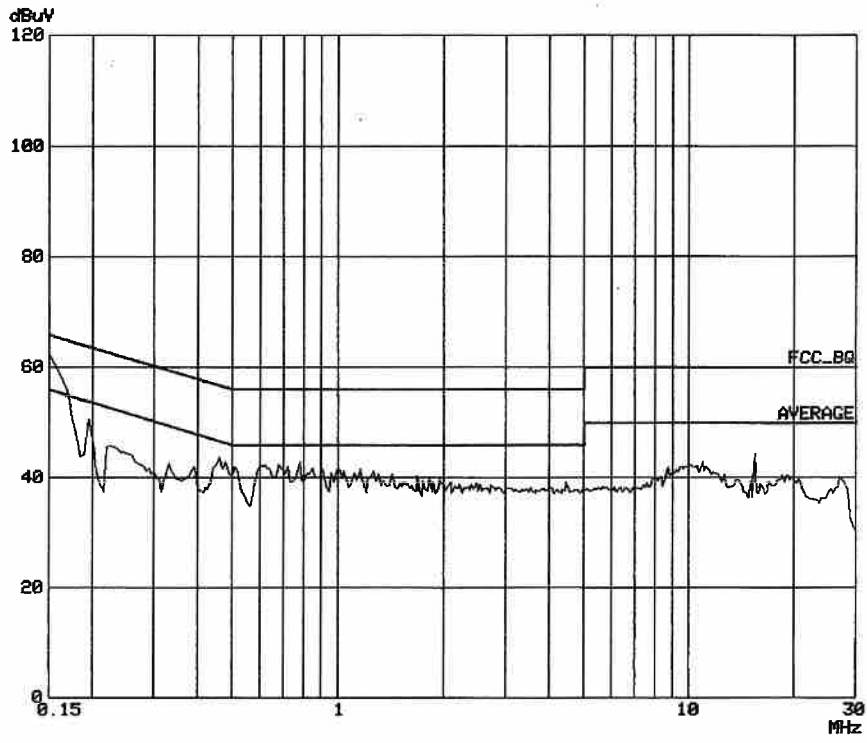


+24V step from 2A to 5A

8.8 Peak Load



8.9 FCC B performance



8.10 EN55022 “B”

