

SNP-G12T-M SPECIFICATION

SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N : SNP-G12T-M

STANDARD PRODUCT

Reviewed by Product Engineer	 082014	Hu! 072415	Ji- 12-24-18			
Typed by Document Assistant	 082014	 072415	 122418			
SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

SNP-G12T-M is an open frame, general purpose and rated 120W SMPS. It also features in Medical safety and 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

$2A_{\text{rms}}$ max/115Vac, $1A_{\text{rms}}$ 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
+48V	0A	2.5A	3.1A	4.2A

3.1.1 Factory adjustment

+47.8V to +48.2V (60% rated load, 115Vac)

3.1.2 Peak load max duration

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

3.2 Ripple and noise

< 250mV (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

< 1000uF (90Vac, rated load)

4.0 GENERAL FEATURES

4.1 Efficiency

Rated load efficiency : 90% typical

Average efficiency of 25%, 50%, 75% and 100% rated load : >87%

4.2 Hold up time

>20 ms

4.3 No load input power

<0.5W (without FAN connection)

4.4 Protection

4.4.1 Over-voltage protection

Trip point : +50V to +55V (60% rated load)

Protection mode : Latch-off

4.4.2 Output short or overload protection

Protection mode : Auto-recovery

5.0 ENVIRONMENT SPECIFICATIONS

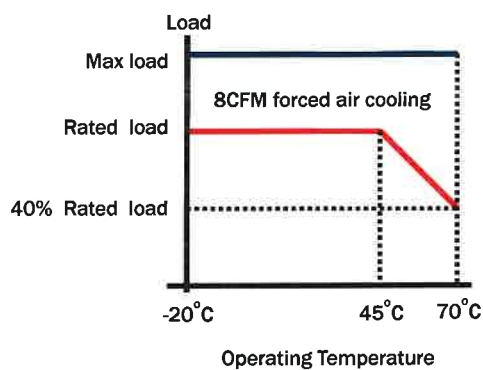
5.1 Operating temperature

-20°C to 70°C

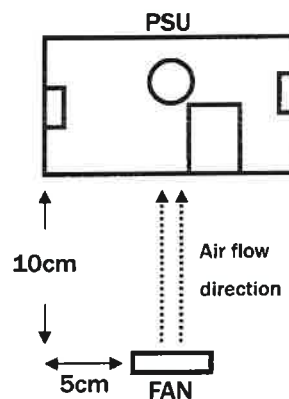
Output load derates linearly to 40% from 45°C to 70°C

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 3000m

5.5 MTBF

> 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

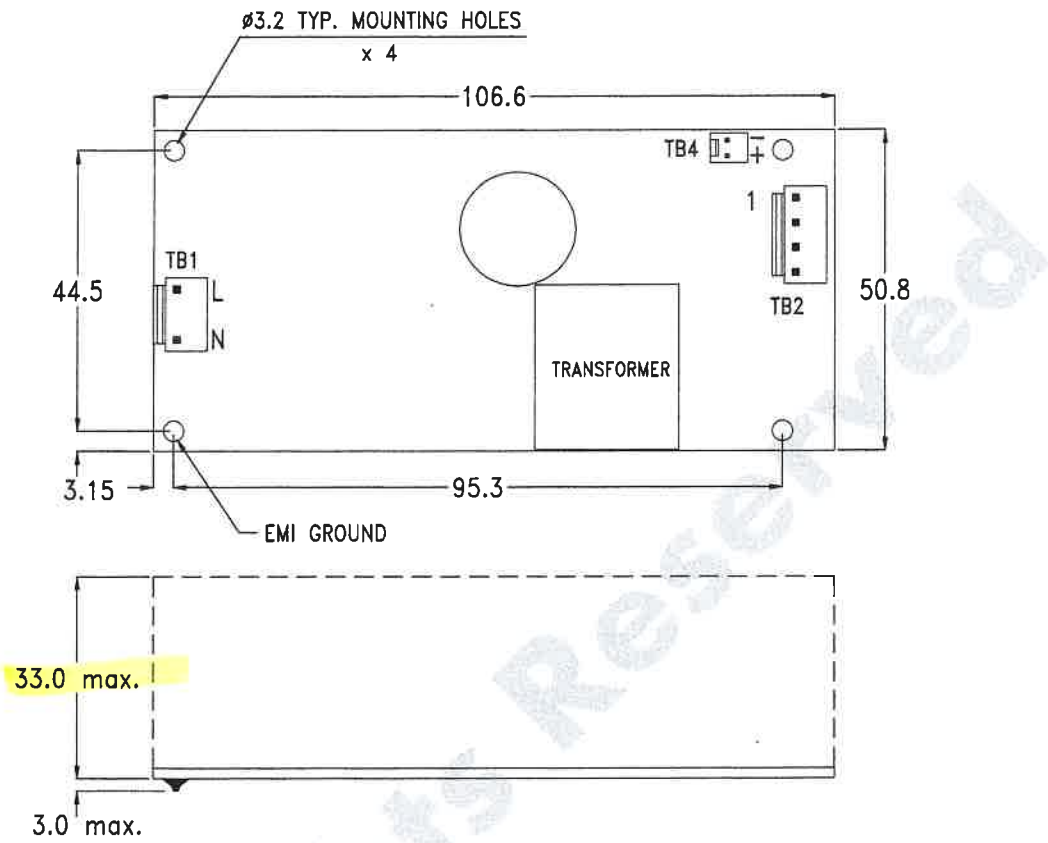
6.3 EMS standards

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

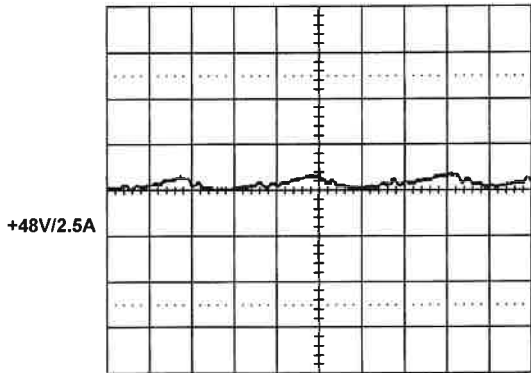
- | | | |
|----------|----|-------|
| Position | 1. | GND |
| | 2. | GND |
| | 3. | + 48V |
| | 4. | + 48V |

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

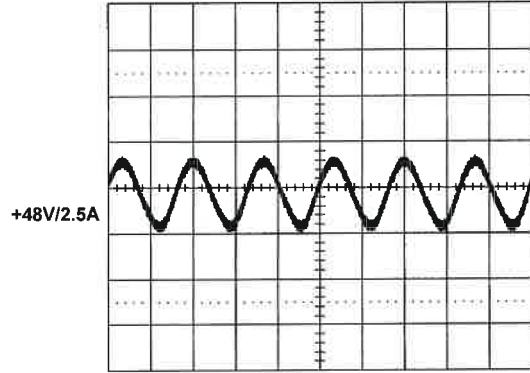
8.0 PERFORMANCE (input voltage is 115VAC, unless others specified)

8.1 Switching frequency ripple



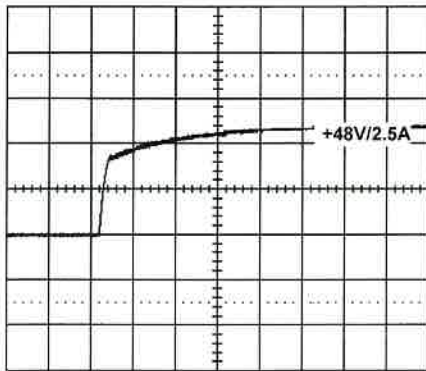
50mV/div ,5us/div

8.2 Line frequency ripple



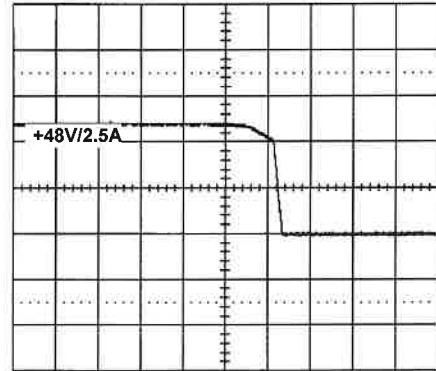
100mV/div , 5ms/div

8.3 Output turn on wave form



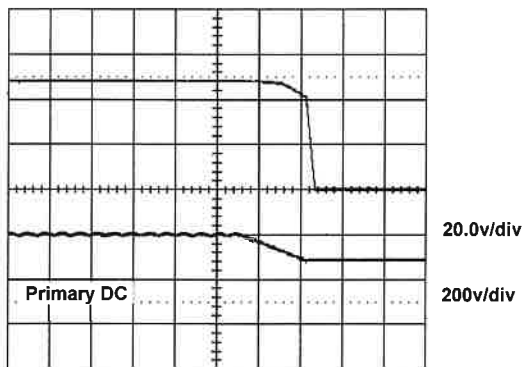
20.0v/div , 20ms/div

8.4 Output turn off wave form



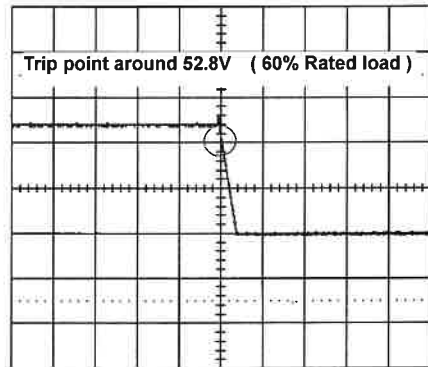
20.0v/div , 20ms/div

8.5 Hold-up time



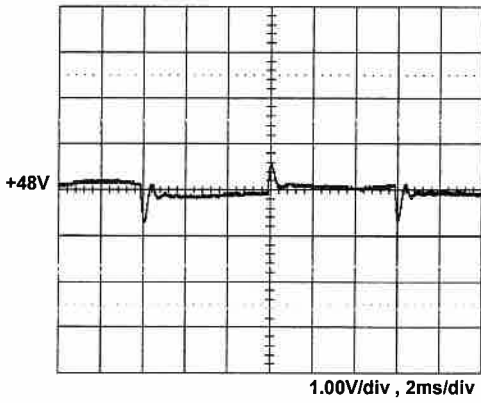
20ms/div

8.6 Over voltage protection



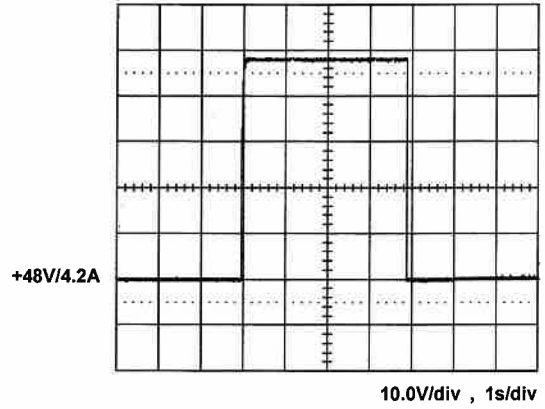
20.0V/div , 20ms/div

8.7 +48V step response

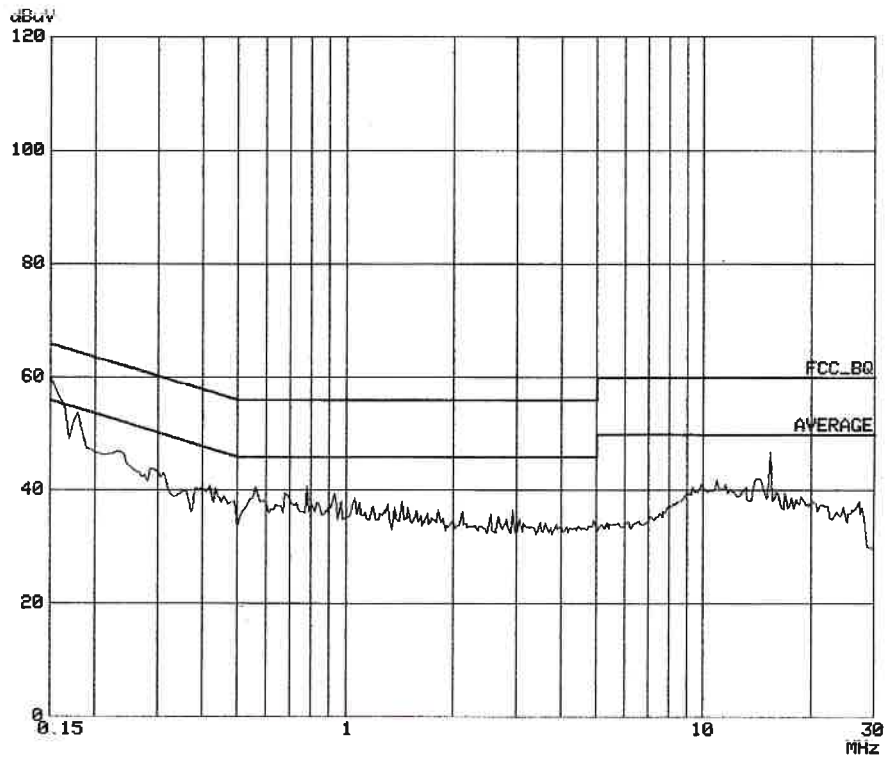


+48V step from 0.75A to 2.5A

8.8 peak load



8.9 FCC B performance



8.10 CISPR 22 B

