SPECIFICATION

and

PERFORMANCE

for

SWITCHING POWER SUPPLY

M/N : SNP-X127

Reviewed by Project Engineer		1-7-19				
Typed by Document Assistant		01/07/19				
SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

The SNP-X127 is a single output, universal input, and supplies up to 120W under convection cooling environment, 130W under fan cooling environment. It is designed to comply EN61000-3-2 regulation and fit 1U constraint. Meanwhile, it complies with a variety of safety regulation so that it can be used in medical、industrial、ITE or other equivalent applications.

2.0 INPUT SPECIFICATIONS

2.1 Input Voltage

The range of input voltage is from 90VAC to 264VAC and the nominal line voltage is 115V 60Hz/230V 50Hz. The AC rating show on the label is 100-240VAC.

2.2 Input frequency

The range of input frequency is from 47Hz to 63Hz.

2.3 Input current

The maximum input current is 3A at 115VAC or 1.5A at 230VAC.

2.4 Inrush current

The inrush current will not exceed 30A at 115VAC input or 60A at 230VAC input, cold start, 25℃.

2.5 Green power

No-load input power is less than 0.5W at 115VAC/230VAC input voltage range.

2.6 Power Factor

PF＞0.9 at 115Vac and rated load.

3.0 OUTPUT SPECIFICATIONS

3.1 Load range

output	min. load	rated load	max. load	peak load	voltage accuracy
+12V	0A	10A	11A	13A	11.8V to 12.2V

At factory, in 60% rated load conditions and nominal input, the +12V is checked to be within the specified voltage accuracy range.

The peak load with convection cool can last for around 10 sec. at nominal line, continuously draw peak current will reduce life time and MTBF, and will probably shut down the power supply. .

120W with convection cooling.

130W with 18CFM forced air cooling.

3.2 Ripple and noise

The peak to peak ripple and noise for each output is less than 100mV at rated load and nominal input. Measuring is done by 25MHz band width limited oscilloscope and terminated each output with a 0.47uF +10uF capacitor.

3.3 Line regulation

The line regulation for each output is less than +-0.5% while measuring at rated load and +-10% of nominal input voltage changing.

3.4 Load regulation

The load regulation for +12V is less than +-1% measuring is done by changing the measured output load +-40% from 60% rated load and nominal line.

3.5 Remote sense

The sensation of voltage drop for +12V output is 0.5V max.
The +12V output has remote sense capability.

3.6 Capacitance loading capability

The capacitance loading capability can be up to 10,000uF. test at nominal line and rated load.

4.0 GENERAL FEATURES

4.1 Efficiency

The efficiency is 86% typ. while measuring at nominal line and rated load.
Also, the average efficiency in active mode is higher than 87%, while measuring at nominal line. (100%, 75%, 50% and 25% of rated load)

4.2 Hold up time

The hold up time is higher than 20mS at 115VAC input and rated load, which is measured from the end of the last charging pulse to when the main output drops down to 95% output voltage.

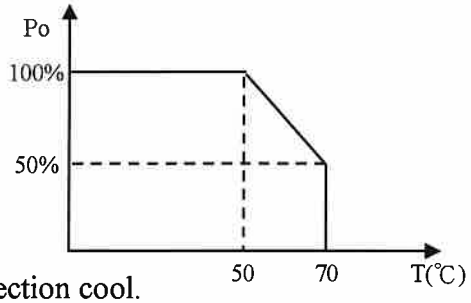
4.3 Protection

For some reason the power supply fails to control itself, the build-in over voltage protection circuit will shut down the outputs to prevent damaging external circuits. The trip point is around 13.1V to 15.1V. The power supply will go into auto-recovery mode against short circuit or over load conditions and will auto-recover while faulty condition is removed.

5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

-20°C to 70°C, 0°C to 50°C no derating, above 50°C, derate at 2.5% per degree from 50°C to 70°C.



120W with convection cool.
130W with 18 CFM air flow.

5.2 Storage temperature

-40°C to 85°C

5.3 Operating humidity

5 ~ 95% RH, non-condensing.

5.4 Altitude

Will operate properly at any altitude between 0 to 3000m.

6.0 INTERNATIONAL STANDARDS

6.1 Safety standards

Designed to meet the following standards :

ITE (2nd Edition):

UL 60950-1 : 2007 (cULus)

EN 60950-1 : 2006 +A11 (TUV)

Medical (3rd Edition) :

ANSI/AAMI ES60601-1 : 2005 (cULus)

EN 60601-1 : 2006 (TUV)

6.2 EMI standards

Designed to meet the following limits :

EN55022 "B"

FCC docket 20780 curve "B"

EN 61000-3-2 "D"

6.3 EMS standards

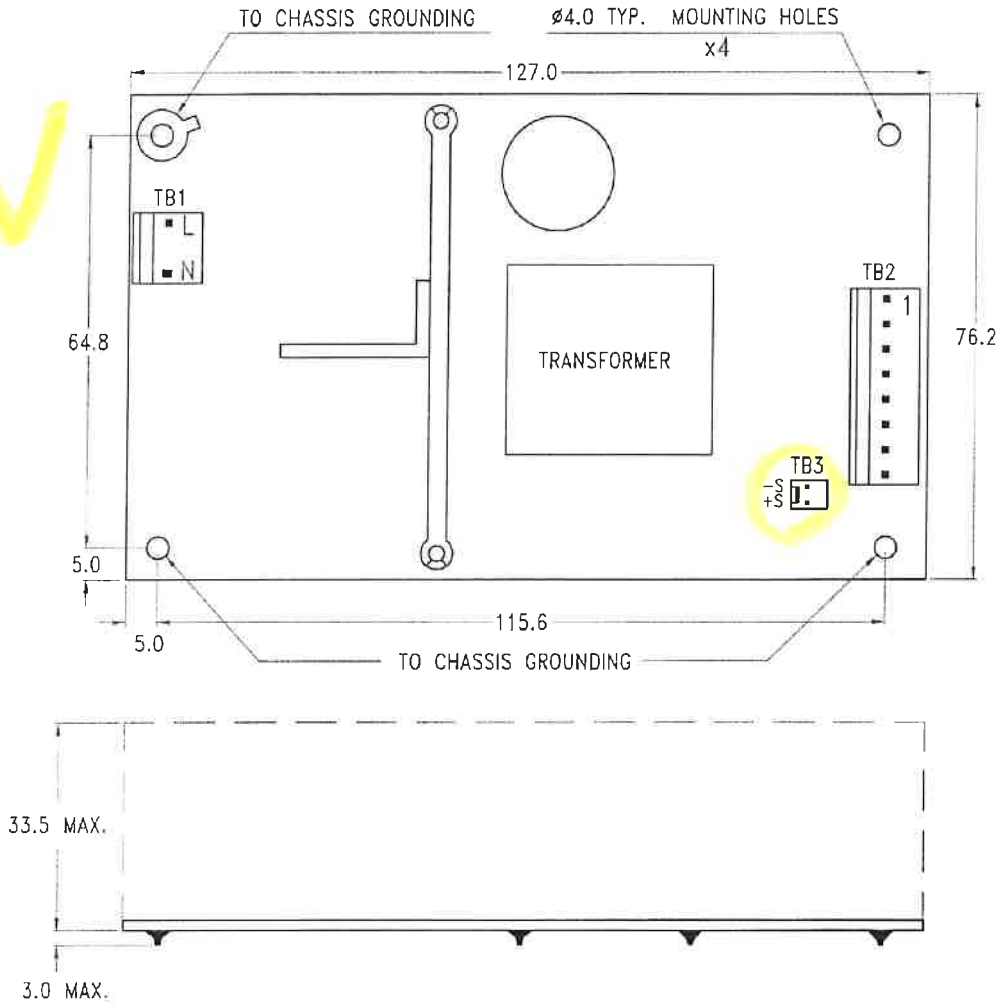
EN61000-4-2	8KV contact discharge, 15KV air discharge	Criterion A
EN61000-4-3	10V/m with 80% AM	Criterion A
EN61000-4-4	2KV (100KHz)	Criterion A
EN61000-4-5	2KV	Criterion A
EN61000-4-6	10V with 80% AM	Criterion A
EN61000-4-8	30A/M	Criterion A
EN61000-4-11	30 % dips 500 ms,	Criterion A
	60 % dips 200 ms,	Criterion B
	100 % dips 10 ms,	Criterion A
	100 % dips 5000 ms,	Criterion B
	100 % dips 20 ms,	Criterion B

6.4 Energy saving standards

Designed to meet the following standard :

Energy Star Ver. 2.0

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

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

7.2 Connectors

TB1--AC input : Molex 5277-02A or equivalent
TB2--DC output : Molex 5273-08A or equivalent
TB3--Remote Sense : Molex 5045-02A or equivalent

7.3 DC output pin assignment

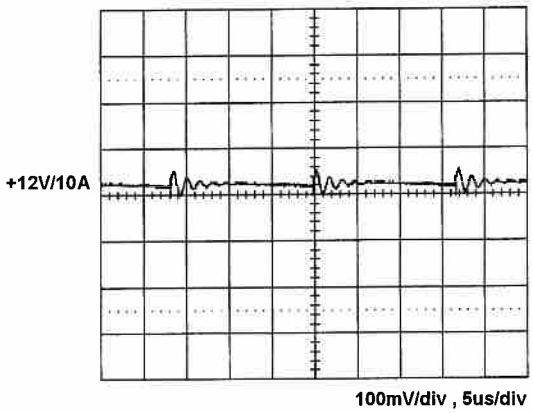
PIN	1.	+12V	5.	GND
	2.	+12V	6.	GND
	3.	+12V	7.	GND
	4.	+12V	8.	GND

7.4 Packing

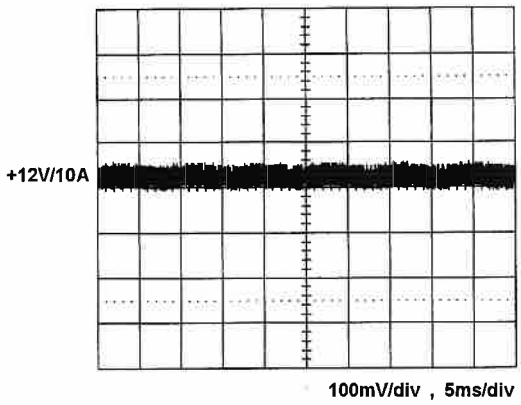
Net weight : 290 g approx. / unit
Carton size (mm): 339 (L) x 339 (W) x 327 (H)
Quantity : 36 units / carton
Gross weight : 13.0 kg approx. / carton

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

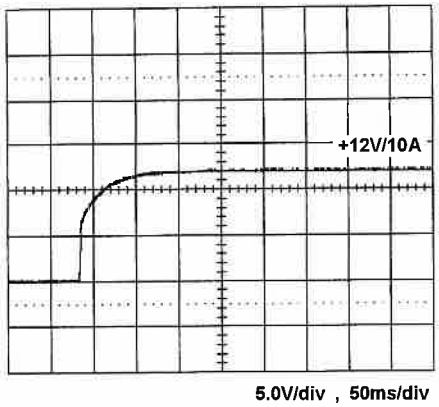
8.1 Switching frequency ripple



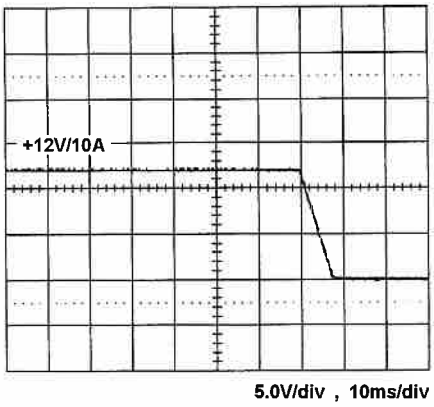
8.2 Line frequency ripple



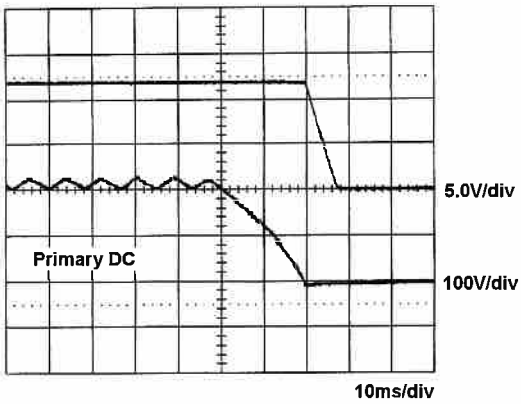
8.3 Output turn on wave form



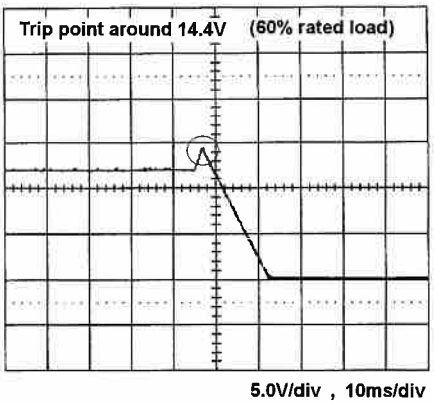
8.4 Output turn off wave form



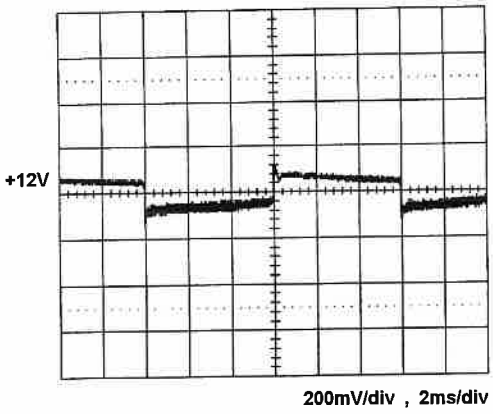
8.5 Hold-up time



8.6 Over voltage protection

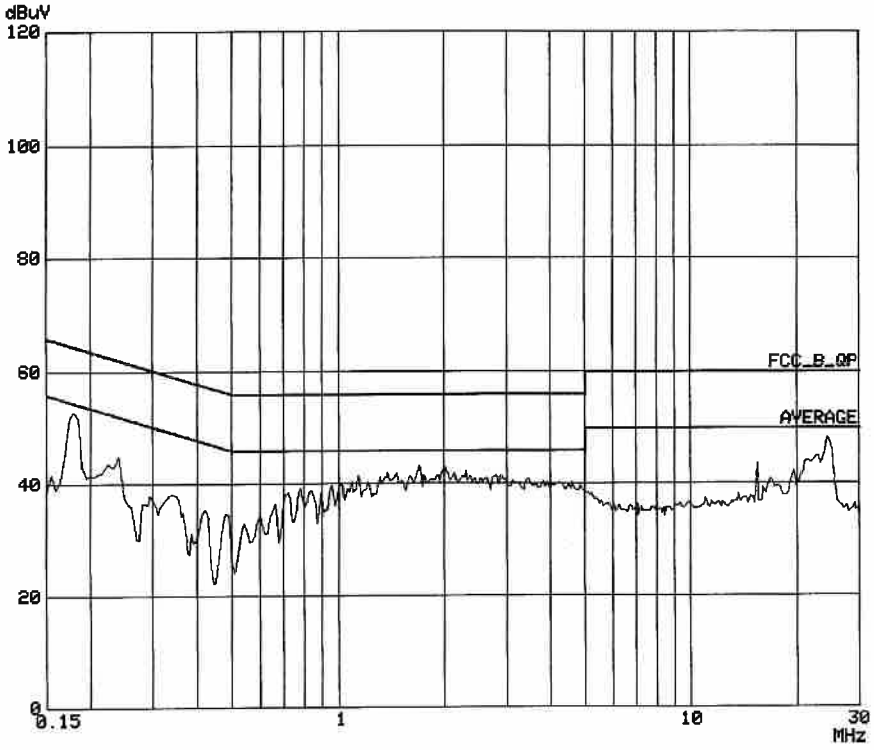


8.7 Step response



+12V step from 2A to 10A

8.8 FCC B performance



8.9 EN55022 "B"