SPECIFICATION

for

SWITCHING POWER SUPPLY

M/N : SNP-D489

Reviewed by Project Manager	J. Chan 02/20	鐘燦煌 10-23-08	鐘燦煌 11-7-08			
Typed by Document Assistant	林錦宏 10/02	黃羿穎 10/22/08	黃羿穎 11/07/08			
SKYNET ELECTRONIC			LAST REV. NO.			

1.0 INTRODUCTIONS

The SNP-D489 is an AC-DC switching power supply with universal input, adjustable single output, 480W continuous output power and redundant capability, which is designed for Din-Rail application.

2.0 INPUT SPECIFICATIONS

2.1 Input Voltage

The range of input voltage is from 90VAC to 264VAC. Nominal line : 115/230VAC.

2.2 Input frequency

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

2.3 Input current

The maximum input current is 10A at 115VAC or 5A at 230VAC.

2.4 Inrush current

The inrush current will not exceed 30A at 115VAC input or 60A at 230VAC input.

3.0 OUTPUT SPECIFICATIONS

3.1 Load range

output	min. load	rated load	max. load	voltage accuracy
+24V	0A	20A	25A	+/-2%

At factory, in 60% rated load conditions, the +24V is checked to be within the specified voltage accuracy range.

The output voltage could be adjustable from 23.5~28VDC.

The max. load could deliver 60 seconds min. at 25°C.

The total continuous output power shall be kept within 480W.

3.2 Ripple and noise

The peak to peak ripple and noise for the output is less than 240mVpp of output voltage at rated load. Measuring is done by 15MHz band width limited oscilloscope and terminated the output with a 0.47uF capacitor.

3.3 Line regulation

The line regulation for the output is less than +/-1% while measuring at rated load and +/-10% of input voltage changing.

3.4 Load regulation

The load regulation for +24V is less than +/-1% measuring is done by changing the measured output load +/-40% from 60% rated load, nominal line.

4.0 GENERAL FEATURES

4.1 Efficiency

The efficiency is 85% typical at 115VAC or 90% typical at 230VAC while measuring at rated load.

4.2 Hold up time

The hold up time is longer than 20mS at 230VAC input, 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

4.3.1 Over voltage protection

For some reason the power supply fails to control itself, the build-in over voltage protection circuit will shut down the output to prevent damaging external circuits. The trip point is 31.5V ~ 35.5V.

4.3.2 Over load & short circuit protection

The power supply will go into hiccup mode against short circuit or over load conditions, and will auto-recovery while faulty conditions are removed.

4.4 Power Sharing

** The power supply could be switched in parallel and can almost equally share the load

current to increase service life and reliability without opening the unit.

** Parallel operation : up to ten units.

4.5 Startup delay

< 1.8sec at 115VAC or < 1sec at 230VAC (counted from Input ON)

4.6 Rise time

< 30ms (at rated load).

4.7 Front panel indicator

Green LED, goes out at Vout at 11V~13V

4.8 MTBF

310,000h at 24Vdc/20A, 230VAC input, 40℃ according to MIL-HDBK 217F(GB).

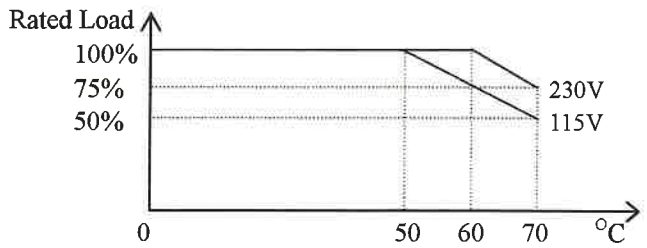
5.0 ENVIRONMENT SPECIFICATIONS

5.1 Operating temperature

-10°C to +70°C (start up at -10°C, nominal line only)

At work, it needs 10 cm convection space from the top ventilation hole to the other object, and 3 cm convection space from the bottom ventilation hole to the other object.

5.2 Derating Curve



5.3 Storage temperature
-40°C to 85°C

5.4 Altitude
Will operate properly at any altitude between 0 to 10000 ft.

6.0 INTERNATIONAL STANDARDS

6.1 Safety standards
Designed to meet the following standards :
UL 1950
UL 508
CSA 22.2 NO. 950-M90
EN 60 950

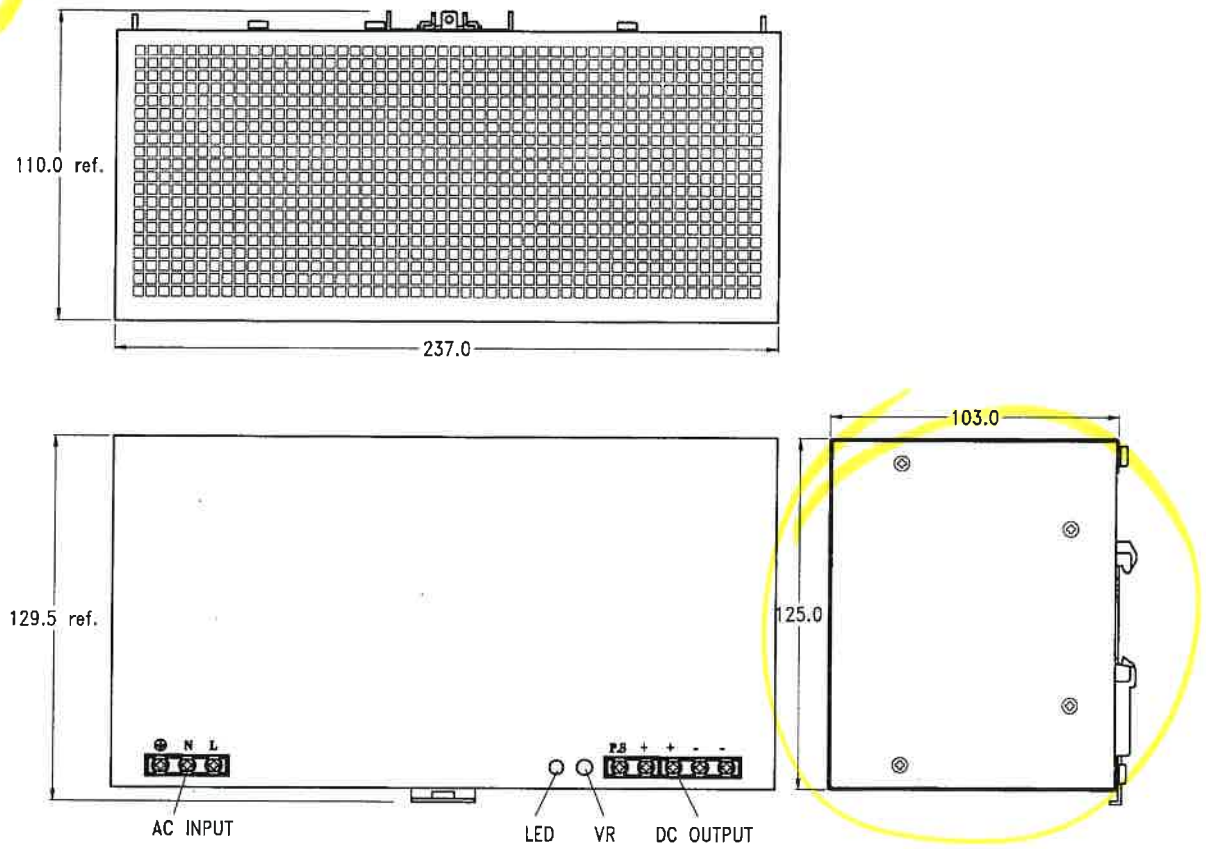
6.2 EMC standards

6.2.1 EMI
Designed to meet the following limits :
EN 55022 "B" (conductive under 4dB, radiation under 6dB)
FCC docket 20780 curve "B" (conductive under 4dB, radiation under 6dB)
EN61000-3-2 Class D
EN50081-1

6.2.2 EMS standards
EN50082-2

EN 61000-4-2	6KV contact discharge, 8KV air discharge	Criteria A
EN 61000-4-3	10V/m	Criteria A
EN 61000-4-4	2KV	Criteria A
EN 61000-4-5	4KV	Criteria A
EN 61000-4-6	10V	Criteria A
EN 61000-4-8	30A/M	Criteria A
EN 61000-4-11	30% 0.5 Periods	Criteria A
	60% 5~50 Periods	Criteria C
	> 95% 250 Periods	Criteria C

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions

Dimensions shown in mm as above. Tolerance specified is + -0.8mm.

7.2 Connectors

AC & DC connector : Terminal blocks (suitable wire 26~10AWG, wire strip length 6~7mm)

7.3 Power on indicator

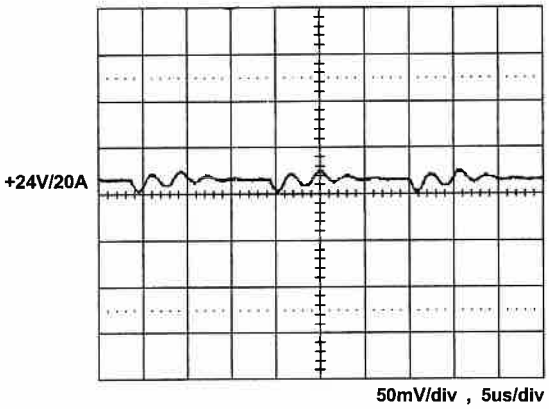
Green light on the panel

7.4 Hook

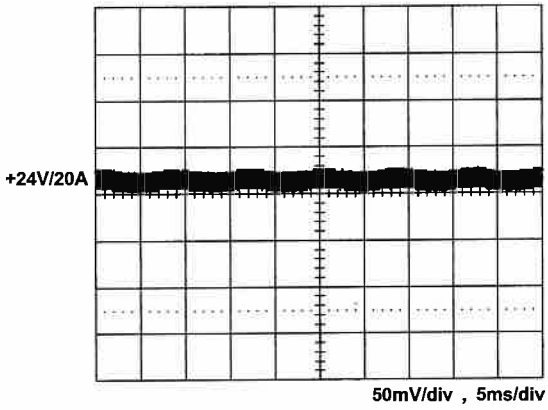
Hook : For 35mm wide rail

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

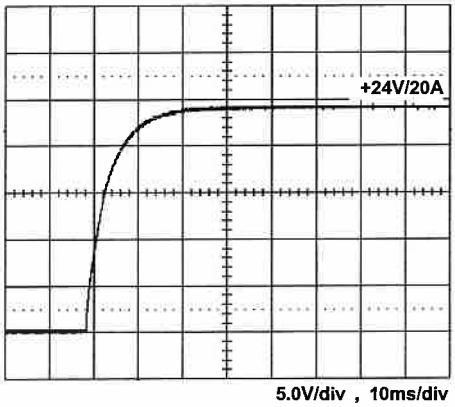
8.1 Switching frequency ripple



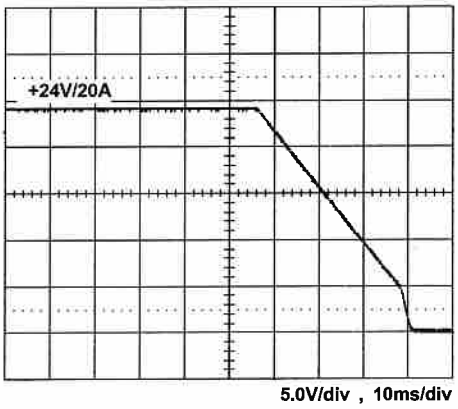
8.2 Line frequency ripple



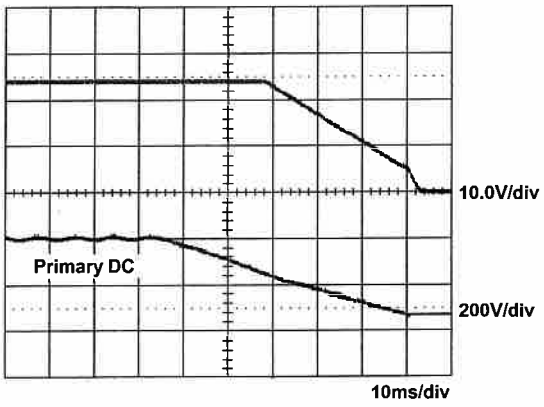
8.3 Output turn on wave form



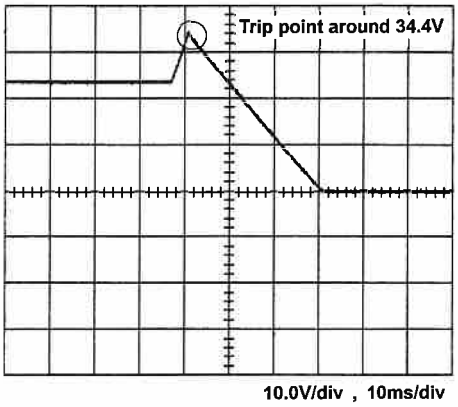
8.4 Output turn off wave form



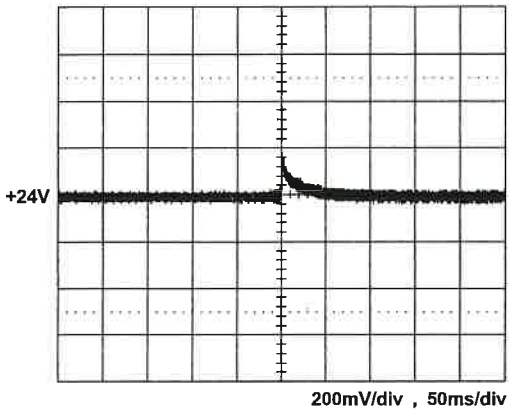
8.5 Hold-up time



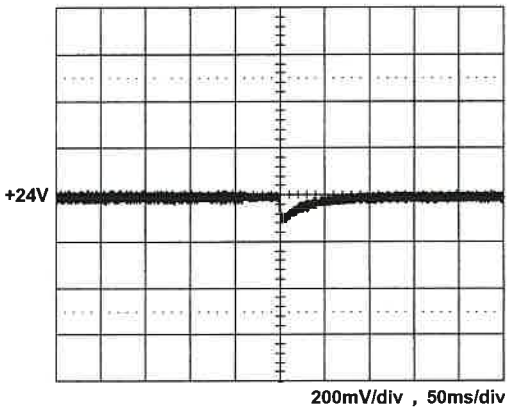
8.6 Over voltage protection



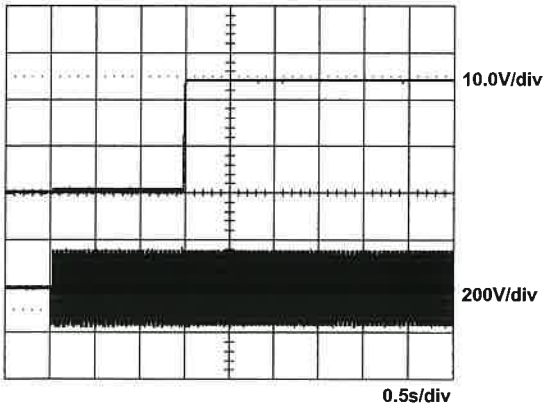
8.7 Power Redundancy (1→2)



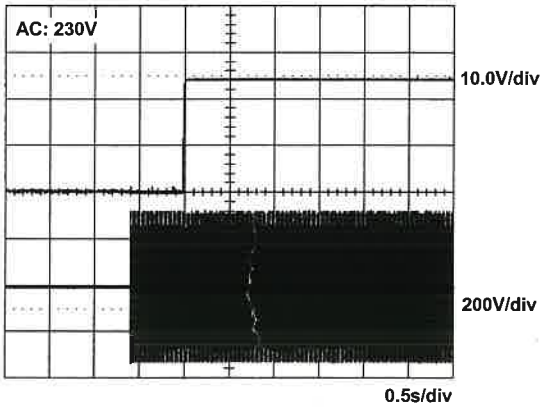
8.8 Power Redundancy (2→1)



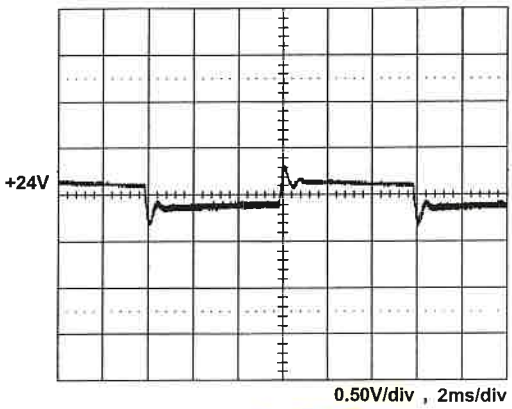
8.9 Startup delay



8.10 Startup delay

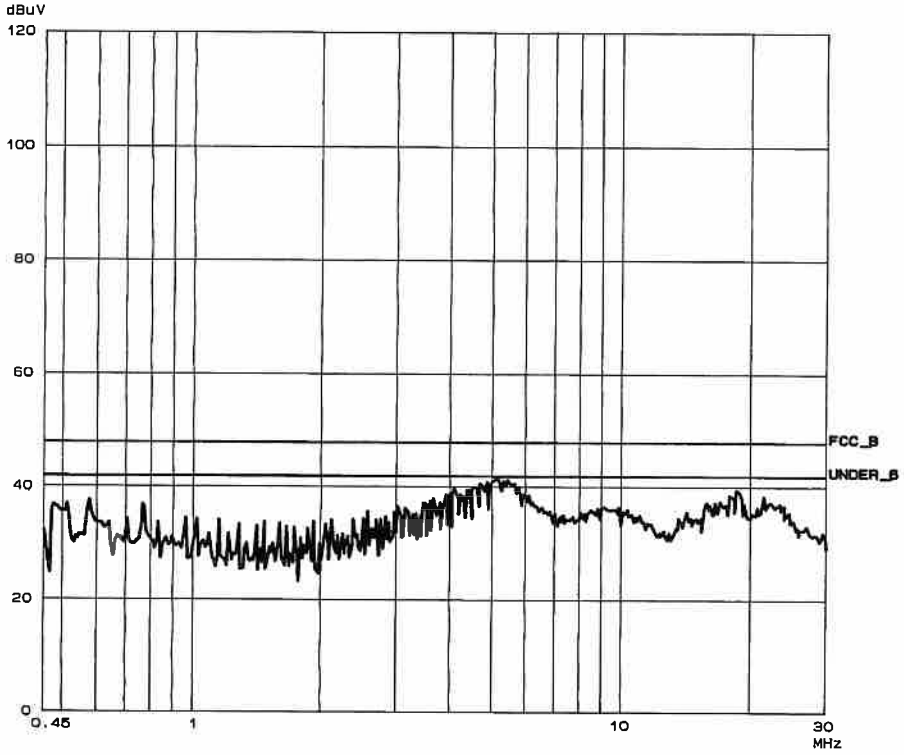


8.11 +24V step response



+24V step from 4A to 20A

8.12 FCC B performance



8.13 EN 55022 B