規格書
SPECIFICATION

品名 SWITCHING POWER SUPPLY
STYLE NAME :

型號 Q1F-1150V12
MODEL NO. :

料號
PART NO. :

版次 A2
REVISION :

APPROVE 核准	張銘樹 May-12-2010	正式資料用章	正式資料 MAY 13 2010 研發本部
CHECK BY 審核	王奕樺 MAY-12-2010		
FORM MAKER 經辦	林秀蓮 MAY-12-2010		

新巨企業股份有限公司
電源事業處
ZIPPY TECHNOLOGY CORP.
POWER DIVISION

10F,NO.50 MIN CHYUAN RD.,
SHIN-TIEN CITY,TAIPEI HSIEN,
TAIWAN,R.O.C.
TEL.：+886(2)29188512
FAX.：+886(2)29134969

Revision

Rev.	Page	Item	Date	Description
A2	7	9.1	2010/5/12	Physical dimension : 125mm(D)x76.2mm(W)x39mm(H)

MODEL NO.Q1F-1150V12

1.0 Scope

This specification defines the performance characteristics of a grounded, AC input,150 watts, 1 output level open frame power supply. This specification also defines world wide safety requirements and manufactures process test requirements.

2.0 Input requirements

2.1 Voltage (sinusoidal) : 90～264 VAC full range.

2.2 Frequency

The input frequency range will be 47hz～63hz.

2.3 Steady-state current

2.5A/1A at any low/high range input voltage.

2.4 Inrush current

35/70Amps @ 115/230 VAC (at 25 degrees ambient cold start)

2.5 Power factor correction

The power supply shall incorporate universal power input with active power factor correction, which shall reduce line harmonics in accordance with the IEC61000-3-2 standards.

PFC can reach the target of 95% @115/230VAC,Full load.

3.0 Output requirements

3.1 DC load requirements

Normal	Load current(A)		Regulation tolerance	
Output voltage	Min.	Max.	Max.	Min.
+12V	0A	12.5A	5%	-5%

1.Without Air-flow (See derating curve)

(1) +12V total output : 120W(MAX)

2.External Forced Air Cooling:

(1)FAN CFM : 10

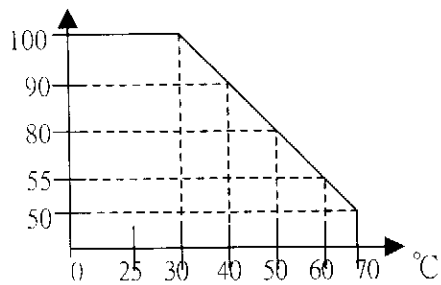
(2)FAN Distance from Unit : 2 cm~10 cm

(3)Air-flow Direction : toward output side

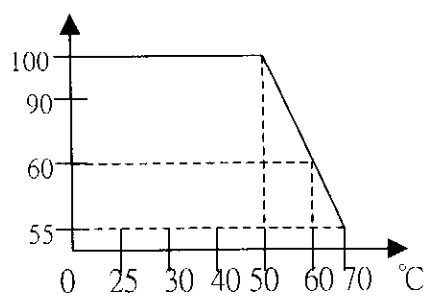
(4) +12V total output : 150W(MAX)

3. Derating curve without air flow

Total power (%) without air-flow



Total power (%) with air-flow



3.2 Regulation

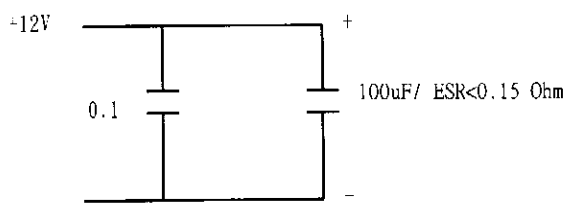
Output DC voltage	Line regulation
+12V	±120mV

3.3 Ripple and noise

3.3.1 Specification

+12V 120mV (P-P)

3.3.2 Ripple voltage test circuit



0.1uf is ceramic the other is tantalum.
Noise bandwidth is from DC to 20MHz

3.4 Overshoot

Any overshoot at turn on or turn off shall be less 10% of the nominal voltage value，all output shall be within the regulation limit of section 3.2 before issuing the power good signal of section 6.0.

3.5 Efficiency

Power supply efficiency typical 82%(+/-2%) at 115VAC/230VAC and Load condition : 12V/12.5A

4.0 Protection

4.1 Input (primary)

The input power line must have an over power protection device in accordance with safety requirement of section 8.0

4.2 Output (secondary)

4.2.1 Over power protection

The power supply shall provide over power protection, It shall be auto-recovered when the power supply over load . Over power of this type shall cause no damage to power supply，after over load is removed，the power supply will restart.
Trip point total power min. 110%，max. 170%.

4.2.2 Over voltage protection

If an over voltage fault occurs , the power supply will be auto-recovered until over voltage fault removed.

	Min	Typical	Max
+12V	13.2V	14.3V	15.0V

4.2.3 Short circuit

A: A short circuit placed on any DC output to DC return shall cause no damage.

B: The power supply shall be auto-recovered in case any short circuit is taken place at +12V.

5.0 Power supply sequencing

5.1 Power on (see fig.1)

5.2 Hold up time

When AC source shutdown DC output must be maintain 32msec in regulation limit at normal input voltage AC115V

5.3 Power off sequence (see fig. 1)

6.0 Environment

6.1 Temperature

Operating temperature:	0 to 70 degrees centigrade(90～264 VAC) Pleasc refer to Page 4 derating curve
Non-Operating temperature:	-20 to 80 degrees centigrade

6.2 Humidity

Operating humidity	20% to 80%
Non-operating humidity	10% to 90%

6.3 Insulation resistance

Primary to secondary	: 100 meg. Ohm min. 500 VDC
Primary to FG	: 100 meg. Ohm min. 500VDC

6.4 Dielectric withstanding voltage

Primary to secondary	: 3K VAC for 60 Second.
Primary to FG	: 1500 VAC for 60 Second.

6.5 Leakage current

3mA max. at nominal voltage 264VAC

7.0 Safety

Meet UL 60950, TUV EN-60950,CCC

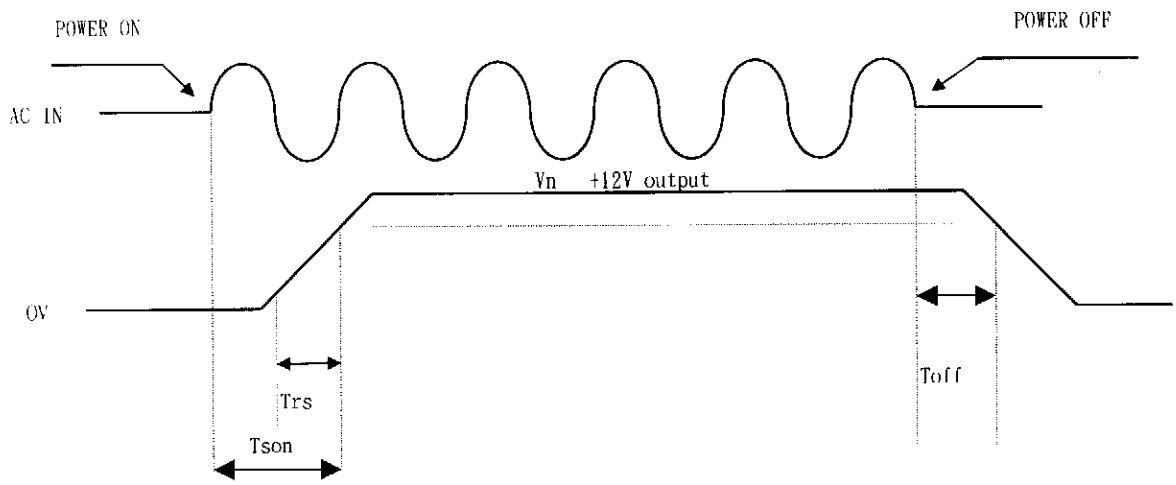
8.0 Reliability

8.1 Burn in

All products shipped to customer must be processed by burn-in. The burn- in shall be performed for 1 hour at full load.

9.0 Mechanical requirements

9.1 Physical dimension : 125mm(D)×76.2mm(W)×39mm(H)



Vn	Nominal voltages +12V
Tson	Switch on time (1000 ms. max.)
Trs	+12V rise time (50ms. max.)
Toff	Hold up time (32ms Min) at 115VAC

《Figure 1》