

規格書

SPECIFICATION

品名 SWITCHING POWER SUPPLY
STYLE NAME :

型號 ETA-4500F
MODEL NO. :

料號
PART NO. :

版次 A5
REVISION :

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MODEL NO. ETA-4500F

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1.0 Scope

This specification defines the performance characteristics of a grounded , single-phase , 500 watts , 4 output level power supply. This specification also defines world wide safety requirements and manufactures process test requirements.

2.0 Input requirements

2.1 Voltage (sinusoidal)

Low range	90	132 VAC	Nominal	110	125 VAC
High range	180	263 VAC	Nominal	230	240 VAC

2.2 Frequency

The input frequency range will be 47hz 63hz.

2.3 Steady-state current

10/5 amps maximum (excluding AC output current) at any low/high range input voltage.

2.4 Inrush current

50/100 amps @110/220 VAC (at 25 degrees ambient cold start)

3.0 Output requirements

3.1 AC output requirements

One AC output shall be provided which must meet the following requirements:

Low/high range max. output current 1.0/0.5 amp

3.2 DC load requirements

Nominal Output voltage	Load current		Regulation tolerance	
	Max.	Min	Max.	Min.
+5V	50.0	3.0	+5%	-5%
+12V	19.0	1.0	+5%	-5%
-5V	1.0	0.0	+5%	-5%
-12V	1.5	0.0	+10%	-10%

3.3 Regulation and protection

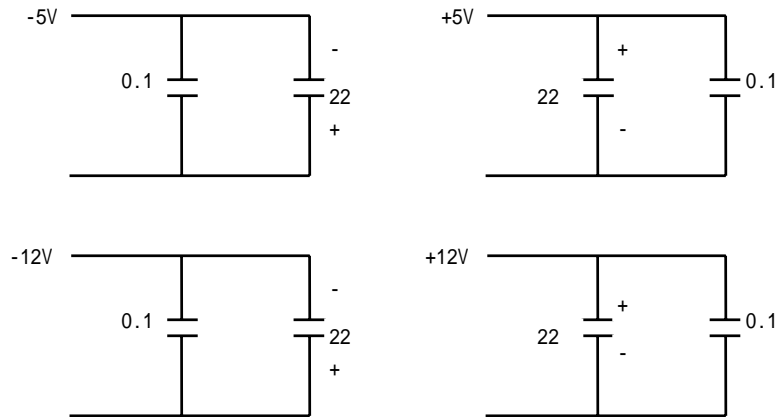
Output DC voltage	Line regulation	Load regulation	Cross regulation
+5V	± 50mV	± 450mV	± 400mV
-5V	± 50mV	± 100mV	± 100mV
+12V	± 50mV	± 900mV	± 800mV
-12V	± 50mV	± 950mV	± 800mV

3.4 Ripple and noise

3.4.1 Specification

+5V	60mV (P-P)
+12V	120mV (P-P)
-12V	120mV (P-P)
-5V	150mV (P-P)

3.4.2 Ripple voltage test circuit



0.1uf is ceramic the other is tantalum.

3.5 Overshoot

Any overshoot at turn on or turn off shall be less 15% 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.

3.6 Efficiency

Power supply efficiency typical 65% at 115V , full load. Power factor can not below 0.6

4.0 Protection

4.1 Input (primary)

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

4.2 Output (secondary)

4.2.1 Over current protection

Over power protection at the power supply latches all DC output into a shutdown state. Over power of this type shall cause no damage to power supply , after over load is removed and a power on/off cycle is initiated , the power supply will restart.

+ 5V-----	55amps to 70amps
+12V-----	20amps to 30amps

4.2.2 Over voltage protection

If an overvoltage fault occurs (internal of the power supply) , the power supply will latch all DC output into a shutdown state before when +5V output exceeds 150% of its nominal value.

4.2.3 Short circuit

A short circuit placed on any DC output to DC return shall cause no damage and power supply latch.

5.0 Power supply sequencing

5.1 Power on (see fig.1)

5.2 Hold up time

When power shutdown DC output 5V must be maintain 16msec in regulation limit at nominal input voltage.

5.3 Power off sequence (see fig. 1)

6.0 Signal requirements

6.1 Power good signal (see fig. 1)

The power supply shall provide a "power good" signal to reset system logic , indicate proper operation of the power supply , and give advance warning of impending loss of regulation at turn off. This signal shall be a TTL compatible up level (2.4V to 5.25V) when +5V output voltage are present and above the minimum UV sense levels specified in paragraph 6.2 , or a down level (0.0V to 0.8V) when any output is below its minimum UV sense level.

At power on , the power good signal shall have a turn on delay of at least 100ms but not greater than 500ms after the output voltages have reached their respective minimum sense levels.

6.2 Under voltage (UV) sense levels

<u>Output</u>	<u>Minimum sense voltage</u>
+5V	+4.50V

7.0 Environment

7.1 Operation

Temperature 0 to 50 degrees centigrade

7.2 Insulation resistance

Primary to secondary : 30 meg. Ohm min. 500 VDC
Primary to PG : 30 meg. Ohm min. 500VDC

7.3 Dielectric withstanding voltage

Primary to secondary : 2500 VAC for 1 sec.
Primary to PG : 2500 VAC for 1 sec.

7.4 Leakage current
3.5 mA. max. at nominal voltage 250 VAC

8.0 Safety

- 8.1 Underwriters laboratory (UL) recognition.
The power supply designed to meet UL 1950.
- 8.2 Canadian standards association (CSA) approval
The power supply designed to meet CSA 1402C & CSA 950.
- 8.3 TUV approval
The power supply shall be designed to meet TUV EN-60950.

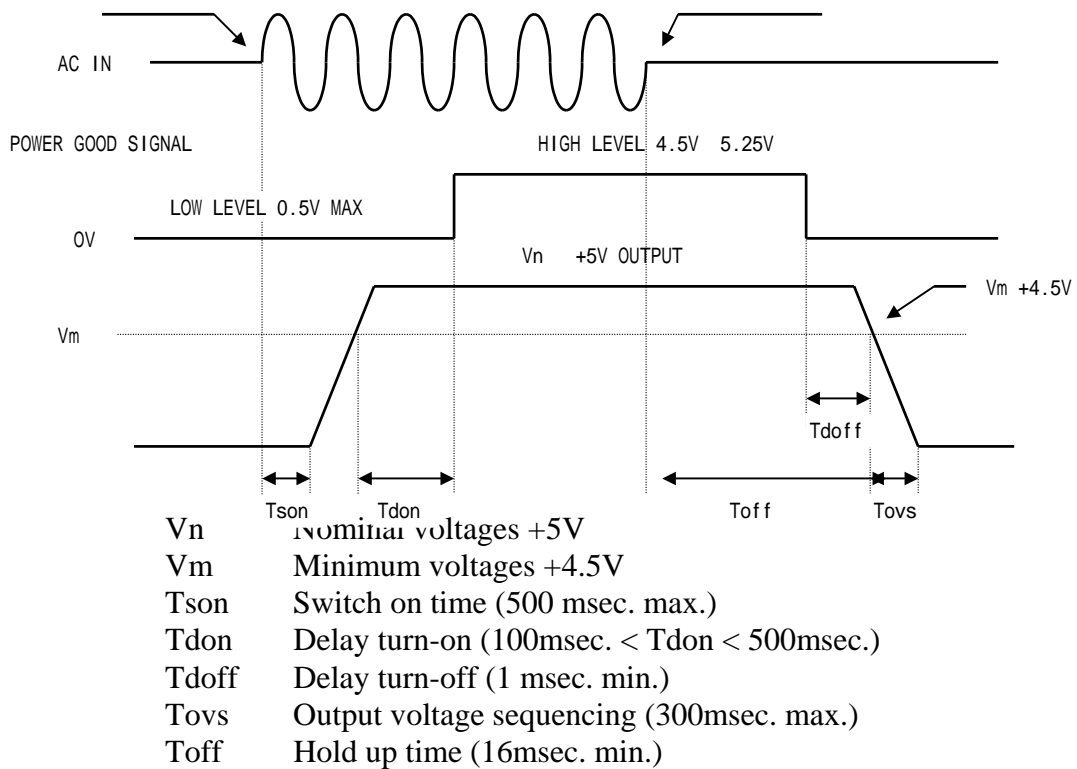
9.0 Reliability

9.1 Burn in

All products shipped to customer must be burn in. The burn in shall be performed at high line voltage.

10.0 Mechanical requirements

- 10.1 Physical dimension : 212 mm * 150 mm * 150 mm
- 10.2 Connector power input (DELTA 10GEEG3E) or equivalent.
- 10.3 Connector AC output (RONG FENG SS-8B) or equivalent.



《Figure 1》