

SPECIFICATIONS

MODEL: SA-008**1A-Y

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Type:5-8W

1.0 SCOPE

This document describe the electrical, mechanical and environmental specification of 5-8W series switching adaptor.

2.0 INPUT SPECIFICATION

2.1 Input Voltage and Frequency

The power supply shall meet all specification below when powered from following sources.

Voltage Range	Line Frequency	Min. Voltage	Max. Voltage
100~240VAC	47~63Hz	90VAC	264VAC

Table 2.1.1

2.2 Current

The maximum input current is 0.27A at 100Vac.

2.3 AC Inrush Current

The peak inrush current shall be limited to 30A at 100Vac input for a cold start at 25 .

3.0 OUTPUT SPECIFICATION

3.1 Output Voltage (Load regulation) (See table 3.1.1)

The power supply shall be statically regulated for load.

3.2 Line regulation

The line regulation is less than 1%.

3.3 Ripple and Noise (See table 3.1.1)

Measuring is done by 20MHz bandwidth oscilloscope and terminated each output with a 10uF capacitor and a 0.1uF capacitor.

Model No.	Output Voltage	Output Current	Load Regulation	Ripple and Noise (1%)	Max output power
SA008061A-y	5-6 Vdc	0-1.5A Max.	± 5%	60 mV	5-7.5W
SA008091A-y	6-9 Vdc	0- 1.33A Max.	± 5%	90 mV	5-8W
SA0080121A-y	9-12 Vdc	0-0.88A Max.	± 5%	120 mV	5-8W
SA008151A-y	12-15 Vdc	0-0.66A Max.	± 5%	150 mV	5-8W
SA008181A-y	15-18 Vdc	0-0.53A Max.	± 5%	180 mV	5-8W
SA008241A-y	18-24 Vdc	0-0.45A Max.	± 5%	240 mV	5-8W

Table 3.1.3

3.4 Efficiency

The minimum efficiency shall be 60 % typically at 100Vac input and rated load.

3.5 Hold up time

The hold up time shall be longer than 10ms at 100Vac input and rated load.

3.6 Temperature coefficient

±0.05%/ typical on all output.

change its polarity with respect to its return line. All output shall reach their steady state values within 2S of turn on.

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3.7 Turn on / off delay

During turn on and turn off, no voltage shall exceed its nominal voltage by more than 10% and no output will change its polarity with respect to its return line. All output shall reach their steady state values within 2S of turn on.

3.8 Transient Response and Deviation

The power supply will meet all specifications and maintain output voltage regulation within 5 % of nominal with up to a current change of 50% of maximum current in load for the output #1.

3.9 Indicator

The power supply is designed LED indicator to indicate the power output in its normal condition.

4.0 PROTECTION

4.1 Over voltage protection And Overload Protection (or over current)

The power supply shall shutdown all output when output voltage reaches to its over – voltage protection trigger point. The maximum output current shall be limited (see the table : Table 4.1)

Model No.	over voltage protection	maximum Current limited protection
SA008061A-y	7-9Vdc	2A
SA008091A-y	7-12Vdc	1.6A
SA0080121A-y	12-15Vdc	1.2A
SA008151A-y	17-18 Vdc	1.0A
SA008181A-y	18-21 Vdc	0.8A
SA008241A-y	21-27 Vdc	0.7A

Table 4.1

4.2 Short circuit protection

No damage to the power supply shall be sustained when operating any output under any line condition, into a short circuit condition for an indefinite period of time. The power supply shall be self – recovering when fault condition remove.

4.3 Overshoot

At turn on, the output voltage shall not exceed steady stage by more than 10%.

5.0 RELIABILITY

Calculated MTBF shall exceed 50,000 hours at maximum load and 25 ambient in accordance with MIL-STD-HDBK-217.

6.0 ENVIRONMENTAL

6.1 Operating

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions.

- i. **Ambient Temperature: 0 ~ 40**
- ii. **Relative Humidity: 20% ~ 90%**
- iii. **Altitude : Sea level to 7,000 feet**
- iv. **Vibration: 1.0mm, 10 –25Hz, 15 minutes per cycle for each axis (X, Y, Z)**

6.2 Non - operating

The power supply shall be capable of with standing the following environmental conditions extended periods of time, without sustaining electrical or mechanical dmage and subsequent operational deficiencies:

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6.2.1 Ambient Temperature: -20 ~ 85

6.2.2 Relative Humidity: 10% ~ 90%

6.2.3 Sea level to 7,000 feet

6.2.4 Vibration and Shock:

The power supply shall be designed to with stand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.

7.0 SAFETY SPECIFICATIONS

The power supply must comply with the following international standards:

EN60950 UL1950 IEC950

7.1 Hi-pot test

Primary to Secondary: 4242VDC for 1 sec

7.2 Insulation Resistance

Primary to Secondary: 100 Mega Ohms min.500VDC

7.3 Leakage Current

It shall be less than 0.25mA

8.0 ELECTROMAGNETIC COMPATIBILITY

The power supply must comply with the following EMC standard:

Radiated Emissions EN55022, FCC , CE Level B

Conducted Emissions EN55022, FCC , CE Level B

9.0 OUTWARD DIMENSION DIAGRAM

