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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Switch Mode Power Supplies Single Output AC/DC Power Supply

# **ALS50-12**

## **Description:**

The ALS50-12 is a single output power supply. It provides a DC output power in a cost-effective open frame package. Excellent performance specifications are provided, together with compliance to European EMC (EN55022, Class A), and Low Voltage directive (TUV EN60950).

## Specifications (@25C)

#### **Input Characteristics:**

Input Voltage (5): 110/220Vac (90-260Vac, 120-370Vdc)

Input Frequency Range (1): 47-63Hz

Max Input Current: 1.0A @ 110Vac; 0.5A @ 220Vac

Max Inrush Current: 30A @ 220VAc

Hold-Up Time: 17ms typ @ 110Vac, 100% Load

### **Output Characteristics:**

 Output Voltage:
 12.0Vdc

 Output Current (1):
 4.2A

 Output Power (1):
 50W

 Ripple & Noise (20 MHz BW):
 120mV

 Line Regulation (4):
 1.0%

 Load Regulation (3):
 2.0%

 Temperature Drift:
 0.02%/°C

Rise-up Time: 500ms max, 110Vac, 100% Load

Over Current Protection: Shutdown, O.C.P Point>120%, recycle AC supply to recover

Over Voltage Protection: >105% Zener across output

Short Circuit Protection: Unit shutdown, recycle AC supply to recover

Adj. O/P Voltage Range (1,2): ±10%

# **Environmental Specifications:**

EMI (Conducted RFI):

EFT:

Built to comply with EN55022-B

Built to comply with IEC61000-4-4

ESD:

Built to comply with IEC61000-4-2

Surge:

Built to comply with IEC61000-4-5

**Operating Temperature:** Convection cooling 0 to 50°C:100%; 60°C:70%

Operating Humidity: 30% to 90% RH
Storage Temperature: -25 to 85°C
Storage Humidity: 10% to 95% RH
Cooling: Convection cooling

Vibration: 1min sweep 10-55Hz, 2G Amplitude, X,Y,Z axis 1hr each

Shock: <20G

# General Specifications:

Efficiency: 70% Typical
Dimensions (WxLxH): 76.20x127x35.56mm

Weight: 300g

Warranty: 2 years @ 40°C, 100% Load

### **Safety Standards:**

**Standard:** UL1950 (E204980)

TUV EN60950 (50070245) Built to meet CSA 22.2

**Dielectric Strength:** I/P-O/P:3kVac, I/P-FG:2.5kVac, <10mA, 1min

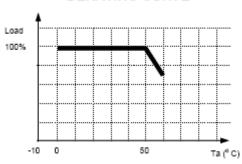
**Insulation Resistance:** O/P-FG: 500VDC>100Mohms







## DERATING CURVE



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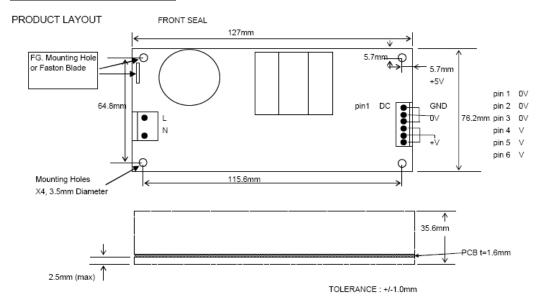


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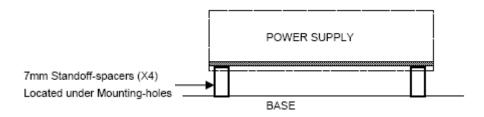
# **Technical Notes:**

- 1. Throughout Vin range. Vout must be measured as near as possible to power supply.
- 2. Total output power by any combination of channel must not exceed Pou(m).
- 3. Vout deviation as lout varies from lo(min)-lo(max).
- 4. Vout deviation as Vin varies from 90 260Vac.
- 5. Where UL and CSA is concerned, official rated input voltage range is 100-120Vac/200-240Vac.

## **Outline Dimensions (mm):**



# **Mounting Method:**



#### **Connector Types:**

 AC Housing: Molex 09-50-3031
 Crimp Terminals: Molex 08-50-0105

 DC Housing: Molex 09-50-3061
 Crimp Terminals: Molex 08-50-0105

RoHS Compliance: As of manufacturing date February 2005, all standard products meet the requirements of 2011/65/EU, known as the RoHS initiative.

\* Upon printing, this document is considered "uncontrolled". Please contact Triad Magnetics' website for the most current version.

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