

# Features

## Regulated Converters

- Ultracompact AC-DC Power Supply
- 3 Watt PCB Mount Package
- Universal Input Voltage Range
- Low Cost Pinless Design
- Very Low No Load Input Current
- Short Circuit Protected
- +85°C Maximum Operating Temperature
- Efficiency to 77%

### Description

The RAC03 series is an ultra-compact low cost universal input AC/DC power module for PCB mounting via slots in the PCB (pinless connectors). It features ultralow no-load power consumption, short circuit, overload and output overvoltage protection as well as a built-in EMC Class B filter.

### Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max Capacitive Load
RAC03-3.3SA	90-264	3.3	900	70	14000µF
RAC03-05SA	90-264	5	600	72	8000µF
RAC03-09SA	90-264	9	333	76	3200µF
RAC03-12SA	90-264	12	250	76	1500µF
RAC03-15SA	90-264	15	200	76	1000µF
RAC03-24SA	90-264	24	125	77	470µF

### Specifications (typical at 25°C and after warm up time unless otherwise specified)

Input Voltage Range	90-264VAC or 120-370VDC	
Rated Power	3 Watts max	
Input Frequency Range (for AC Input)	47-63Hz	
Input Current (full load)	115/230VAC	75/55mA max.
No Load Power Consumption	115/230VAC	120/180mW typ.
Inrush Current (<0.5ms)	115/230VAC	20/50A max.
Leakage Current	0.3mA max	
Output Voltage Accuracy (full load)	single outputs	±10%
Line Voltage Regulation (low line, high line at full load)	3.3V output	±5% typ
	All others	±2% typ
Load Voltage Regulation (0% to 100% full load)	3.3V output	±5% typ
	All others	±2% typ
Output Ripple and Noise (20MHz limited)	100mVp-p max	
Operating Frequency	132kHz typ	
Hold-up time	15ms min.	
Minimum Load	0%	
RMS Isolation Voltage (input to output)	3.75kVAC / 1minute	
Temperature Coefficient	±0.02%/°C typ	
Isolation Resistance	100 MΩ max	
Short Circuit Protection	Hiccup, Automatic Restart	
Output Overvoltage Protection	Zener Clamping Diode	
Operating Temperature Range (natural convection)	no derating	-0°C to +60°C
	with derating	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C	
Humidity	95% RH max	
Case Material	Epoxy with Fibreglass (UL94V-0)	
	Fully potted	
Package Weight	26g	
Packing Quantity	12 pcs	
EMC	Conducted and Radiated	EN 55022 Class B
	Noise Immunity	EN 55024
MTBF (+25°C)	using MIL-HDBK-217F	>350 x 10 <sup>3</sup> hours

# POWERLINE

## AC/DC-Converter

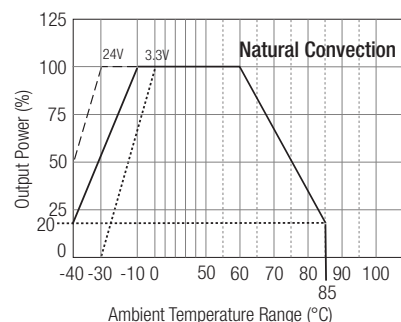


## 3 Watt Single Output



# RAC03

### Derating Graph (Ambient Temperature)



Please Read Application Notes

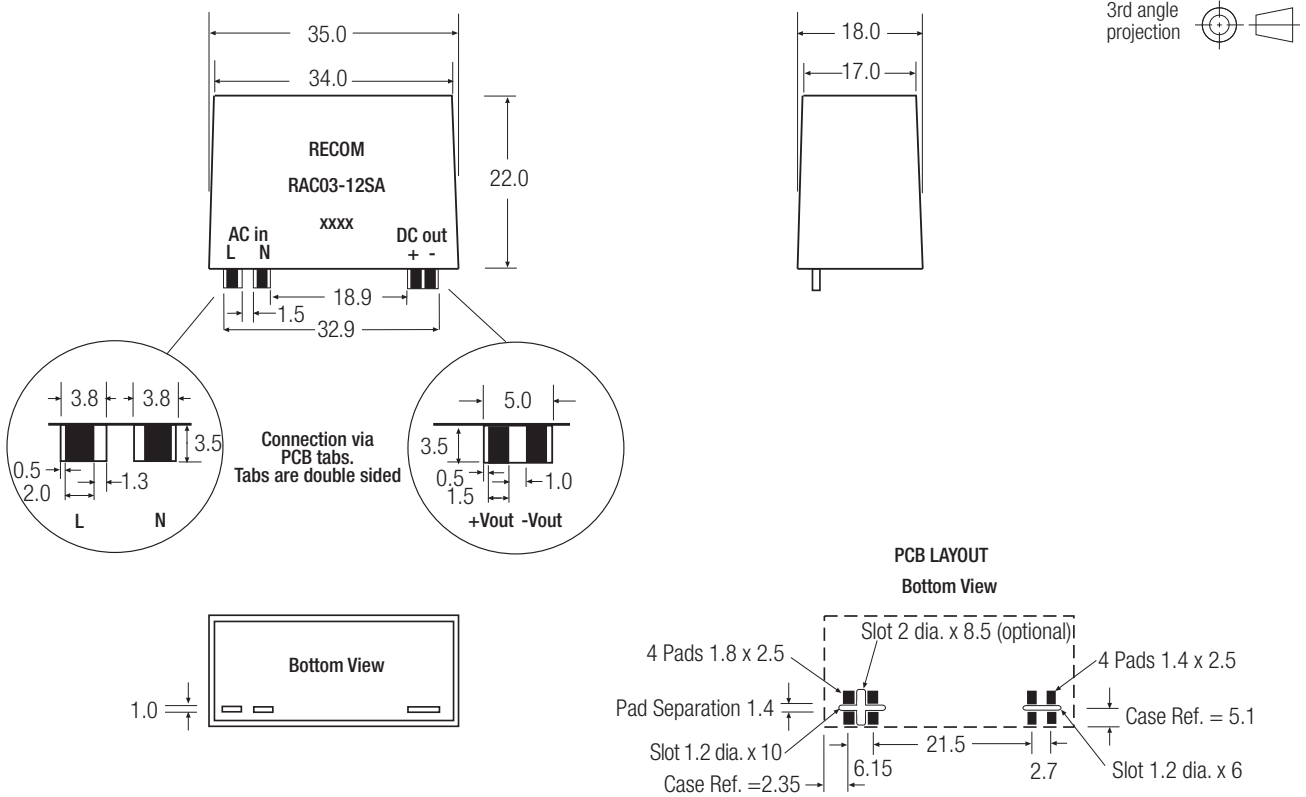
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# POWERLINE

AC/DC-Converter

# RAC03-SA Series

## Standard Package Style and Pinning

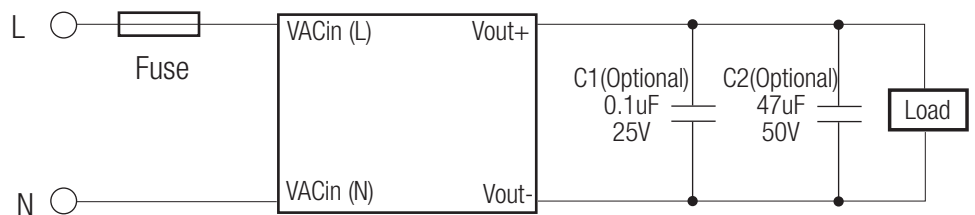


## Standard Application Circuit

Compact single output regulated power supply

Suggested fuse rating:

1A Slo Blo



RAC03