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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 RACO3 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	3.3V output	±5% typ	
(low line, high line at full load)	All others	±2% typ	
Load Voltage Regulation	3.3V output	±5% typ	
(0% to 100% full load)	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 M Ω max	
Short Circuit Protection		Hiccup, Automatic Restart	
Output Overvoltage Protection		Zener Clamping Diode	
Operating Temperature Range	no derating	-0°C to +60°C	
(natural convection)	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	

using MIL-HDBK-217F

POWERLINE

AC/DC-Converter with 3 year Warranty



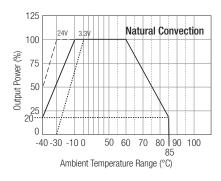
3 Watt Single Output







Derating Graph (Ambient Temperature)



Please Read Application Notes

MTBF (+25°C)

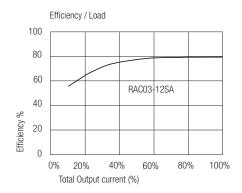
 $>350 \text{ x } 10^{3} \text{ hours}$

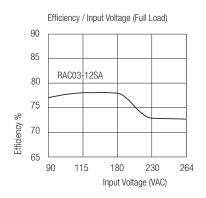
POWERLINE

AC/DC-Converter

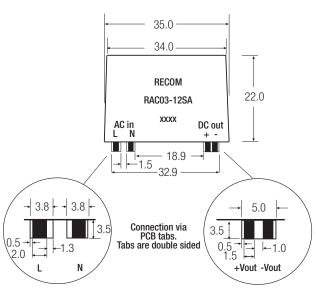
RACO3-SA Series

Typical Characteristics

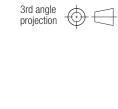




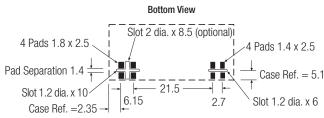
Standard Package Style and Pinning











PCB LAYOUT

Standard Application Circuit

Compact single output regulated power supply

Suggested fuse rating:

1A Slow Blow

