

Features

Regulated Converters

- Ultracompact AC-DC Power Supply
- 4 Watt PCB Mount Package
- Universal Input Voltage Range
- 3kVAC Isolation (4kVAC available as Option)
- Very Low No Load Input Current
- Short Circuit Protected
- UL Certified

Description

The RAC04 series is an ultra-compact universal input AC/DC power module for PCB mounting. 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
RAC04-3.3SA	90-264	3.3	1200	70	14000µF
RAC04-05SA	90-264	5	800	72	8000µF
RAC04-09SA	90-264	9	444	76	2400µF
RAC04-12SA	90-264	12	333	76	1000µF
RAC04-15SA	90-264	15	267	76	700µF
RAC04-24SA	90-264	24	167	77	220µF

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

Input Voltage Range	90-264VAC or 120-370VDC	
Rated Power	4 Watts max	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (full load)	115VAC/230VAC	75mA/55mA max.
No Load Power Consumption	115VAC/230VAC	160mW max.
Inrush Current (<0.5ms)	115VAC/230VAC	15A/25A max.
Leakage Current	0.3mA max	
Output Voltage Accuracy (full load)	±2%	
Line Voltage Regulation (low line, high line at full load)	±0.2% typ	
Load Voltage Regulation	3.3V, 5V Outputs	±1% typ
(0% to 100% full load)	All others	±0.5% typ
Output Ripple and Noise (20MHz limited)	All Others	150mVp-p max
	24V Output	200mVp-p max
Operating Frequency	132kHz typ	
Hold-up time	15ms min.	
Efficiency at full Load	see table	
No Load input current	1.5mA typ.	
RMS Isolation Voltage (input to output)	3kVAC / 1minute	
	(Optional: Datecode xxxx/4kV) Tested at 4kVAC / 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	(free air convection, with derating)	-40°C to +70°C
Storage Temperature Range	-40°C to +125°C	
Humidity	95% RH max	
Case Material	Epoxy with Fibreglass (UL94V-0)	
Package Weight	26g	
EMC	Conducted and Radiated	EN 55022 Class B
	Noise Immunity	EN 55024
MTBF (+25°C)	using MIL-HDBK-217F	>350 x 10 ³ hours

POWERLINE AC/DC-Converter

RECOM

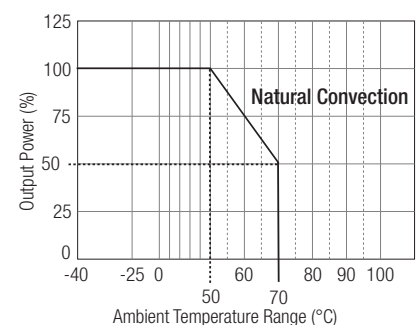
4 Watt Single Output



UL-60950-1 Certified
E196683

RAC04

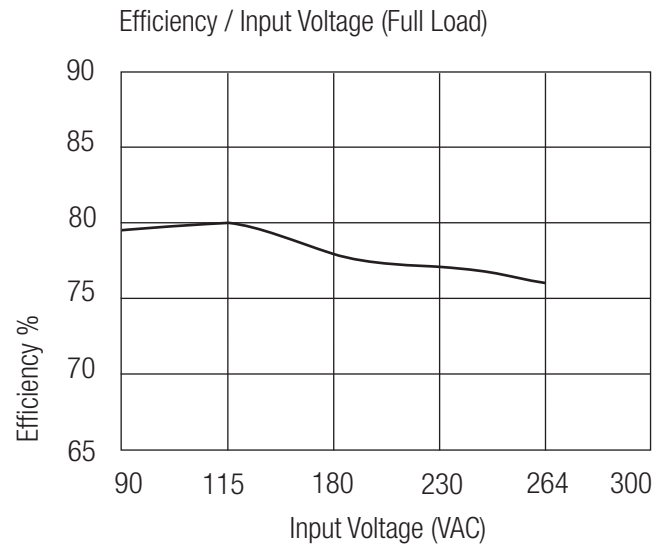
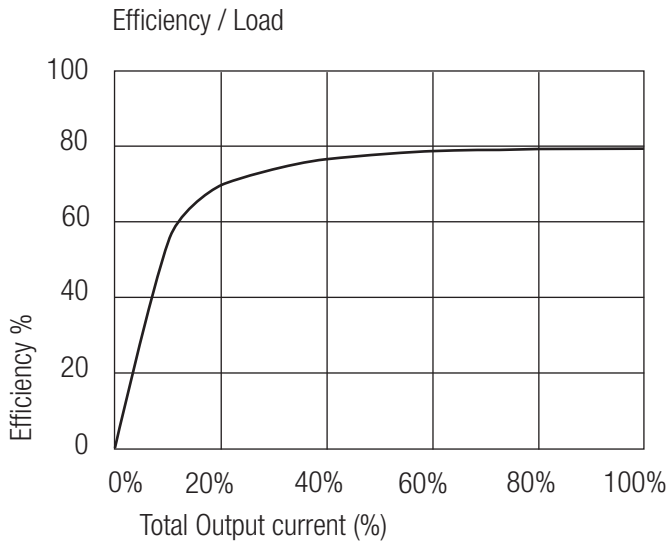
Derating Graph (Ambient Temperature)



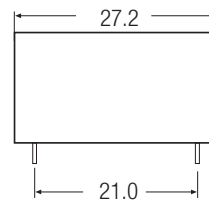
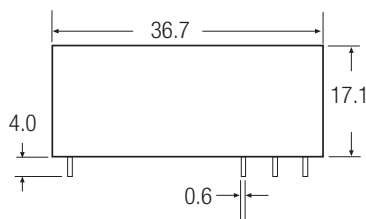
Please Read Application Notes

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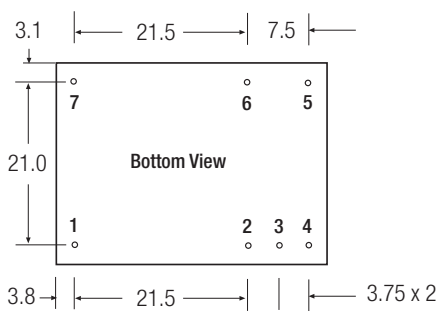
Typical Characteristics



Standard Package Style and Pinning



3rd angle projection



Pin Connections

Pin #	Single Output
1	NC
2	+VDC out
3	-VDC out
4	NC
5	VAC in (L)
6	VAC in (N)
7	NC

NC = No Connection

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Standard Application Circuit

Suggested fuse rating
1A Slo Blo

