

Features

Regulated Converters

- Very Compact AC-DC Power Supply
- 6 Watt PCB Mount Package
- Single and Dual Output Versions
- Universal Input Voltage Range
- Class II Power Supply with 3kVAC Isolation
- Low Output Ripple and Noise
- Short Circuit, Overload, Overtemp Protected
- Low Standby Power Consumption
- UL/cUL Certified, CE Marked

Description

Compact, low cost, high efficiency, universal input switching AC/DC power module for PCB or wired mounting with single or dual outputs. CE marked and UL/cUL Certified.

Selection Guide

| Part Number | Input Range (VAC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) | Max Capacitive Load ⁽¹⁺²⁾ |
|--------------|-------------------|----------------------|---------------------|----------------|--------------------------------------|
| RAC06-3.3SC* | 80-264 | 3.3 | 1500 | 70 | 12000µF |
| RAC06-05SC* | 80-264 | 5 | 1200 | 75 | 6800µF |
| RAC06-09SC* | 80-264 | 9 | 667 | 77 | 2500µF |
| RAC06-12SC* | 80-264 | 12 | 500 | 78 | 1500µF |
| RAC06-15SC* | 80-264 | 15 | 400 | 79 | 750µF |
| RAC06-24SC* | 80-264 | 24 | 250 | 79 | 330µF |
| RAC06-05DC* | 80-264 | ±5 | ±600 | 75 | ±3300µF |
| RAC06-12DC* | 80-264 | ±12 | ±250 | 78 | ±680µF |
| RAC06-15DC* | 80-264 | ±15 | ±200 | 79 | ±330µF |

* add suffix /W for wired version

Specifications (measured at TA 25°C, full load after warm-up)

| | | |
|--|---|-------------------|
| Input Voltage Range (with derating) | 80-264VAC or 115-370VDC | |
| Rated Power | 6 Watts max. | |
| Input Frequency Range (for AC Input) | 47-440Hz | |
| Input Current (full load) | 115/230VAC | 120mA / 78mA typ. |
| No Load Power Consumption | 250mW max. | |
| Inrush Current (<2ms) | 115/230VAC | 30A/60A max. |
| Holdup Time (Full Load) | 115VAC | 10ms typ. |
| Leakage Current | 0.85mA max. | |
| Output Voltage Accuracy (Full load) | ±2% max. | |
| Line Voltage Regulation (low line, high line at full load) | ±0.3% typ. | |
| Load Voltage Regulation (5% to 100% full load) | ±0.5% typ. | |
| Output Ripple and Noise (20MHz BW) | 3.3V Output | 120mVp-p max. |
| (with 100nF across each output) | All Others | 150mVp-p max. |
| Operating Frequency (full load) | 132kHz typ. | |
| Minimum Load = 0% | specifications valid for 5% minimum load only | |
| RMS Isolation Voltage (input to output) | 3kVAC / 1 minute | |
| Isolation Resistance (input to output) | 1 GΩ min. | |
| Isolation Capacitance (input to output) | 1000pF typ. | |
| Short Circuit Protection | Hiccup, Automatic Restart | |
| Overload Protection | 115VAC/230VAC | 115% ~ 145% |
| Output Overvoltage Protection | Zener Diode Clamp | |
| (set at 4.8V - 5.4V for 3.3V and others 110% - 135% of its Nominal Output Voltage) | | |
| Over Voltage Category | OVC II | |

continued on next page

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

6 Watt Single/Dual Output



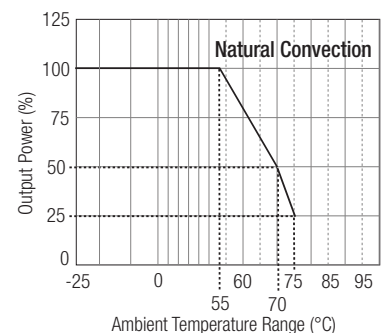
E224736

EN-60950-1 Certified
UL-60950-1 Certified

RAC06-C

Derating-Graph

(Ambient Temperature)



Refer to Application Notes

Specifications (measured at TA 25°C, full load after warm-up)

| | | |
|--|--|--------------------------------------|
| Operating Temperature Range ⁽³⁾ | (free air convection, without derating) | -25°C to +55°C |
| | (free air convection, with derating) | -25°C to +75°C |
| Storage Temperature Range | | -40°C to +100°C |
| Recommended External Input Fuse | | 1.5A Slow Blow |
| Humidity | | 95% RH max. |
| Case Material | Plastic Case filled with Epoxy (UL94V-0) | |
| Package Weight | Single/Dual | 35g/38g |
| Packing Quantity | Single Output | 10 pcs |
| | Dual Output | 9 pcs |
| | /W Version | 1 pc |
| Emissions | CE | EN 55022: 2006 + A1: 2007 / Class B |
| | EMC | EN 55024:1998 + A1:2001 + A2:2003 |
| | Harmonics | EN 61000-3-2:2006 / Class A |
| | Flicker | EN 61000-3-3:1995 + A1:2001 +A2:2005 |
| Immunity | ESD | IEC 61000-4-2 / Criterion B |
| | RS | IEC 61000-4-3 / Criterion A |
| | EFT | IEC 61000-4-4 / Criterion B |
| | Surge | IEC 61000-4-5 / Criterion B |
| | CS | IEC 61000-4-6 / Criterion A |
| | PMF | IEC 61000-4-8 / Criterion A |
| | Voltage Variations | IEC 61000-4-11 / Criteria B + C |
| | MTBF (+25°C) | using MIL-HDBK-217F |
| (+65°C) | | >200 x 10 ³ hours |
| Certifications: | | |
| UL General Safety | Report: E224736 | UL-60950-1, 2nd Edition |
| cUL | Report: E224736 | C22.2 No. 60950-1-07, 2nd Edition |
| EN General Safety | Report: SPCLVD1211033-1 | EN-60950-1:2006 + A12:2011 |
| CE | | EN55022 Class B |

Notes:

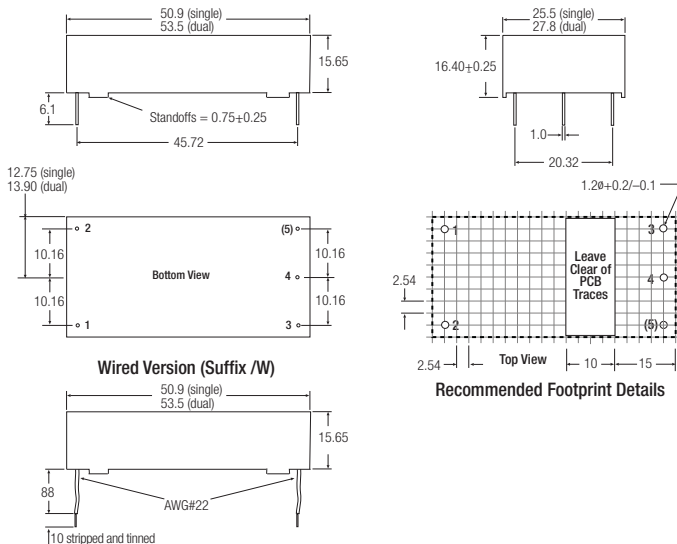
Note1: Measured @ 230VAC / 50Hz / Ta=25°C with constant resistant mode at full load.

Note2: If used @ 115VAC / 60Hz with full load, max. capacitive load is less, please contact RECOM for detailed information.

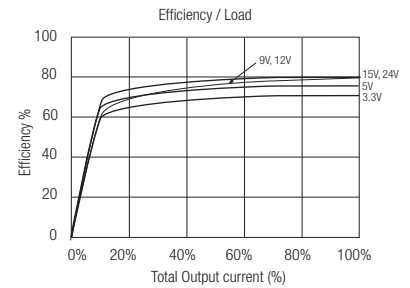
Note3: Start up only is guaranteed at temperatures down to -25°C. Other specifications may not be met.

Package Style and Pinning

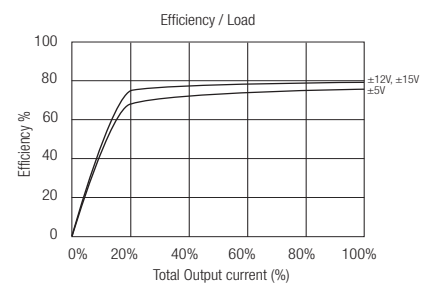
PCB Mounting Version (Standard)



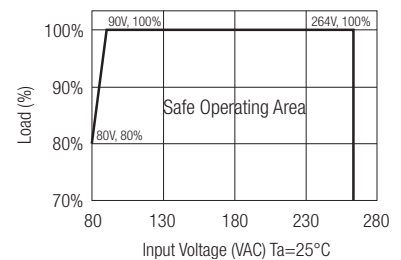
Single Output



Dual Output



Input Voltage Derating Graph



Pin Connections

| Pin # | Single Out | Dual Out |
|-------|------------|------------|
| 1 | VAC in (N) | VAC in (N) |
| 2 | VAC in (L) | VAC in (L) |
| 3 | +VDC out | +VDC out |
| 4 | -VDC out | Com |
| 5 | No Pin | -VDC out |

Tolerance ± 0.5 mm

Wire Connections

| Wire | AWG#22 | Single Out | Dual Out |
|--------|--------|------------|------------|
| Blue | 1015 | VAC in (N) | VAC in (N) |
| Brown | 1015 | VAC in (L) | VAC in (L) |
| Red | 1007 | +VDC out | +VDC out |
| Black | 1007 | -VDC out | Com |
| Orange | 1007 | | -VDC out |

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications. The Buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or damage property.