



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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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Features

Regulated Converters

- Universal Input 80-264VAC
- 100mW max No load Power Consumption
- Efficiency up to 79%
- High Operating Temperature Range (-40°C to +80°C)
- Isolated Output 3.75kVAC / 1 min
- Continuous Short Circuit Protection
- Meet EN55022 Class B
- EN, UL and CE Certified

Description

The RAC04-C/230 series are fully certified single and dual regulated AC/DC converters in an encapsulated PCB-mount package style with 3.75kVAC isolation and very low standby power consumption. The converters have SC protected single as well as dual outputs and meet EN55022 class B without any external components. Uses include board-level power supplies, home automation, instrumentation systems and standby applications.

Selection Guide

Part Number	Input Voltage (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (Typ.) (%)	Max. Capacitive Load**
RAC04-3.3SC/230	80-264	3.3	1200	72	10000µF
RAC04-05SC/230	80-264	5	800	75	7200µF
RAC04-12SC/230	80-264	12	333	77	1000µF
RAC04-15SC/230	80-264	15	267	78	820µF
RAC04-24SC/230	80-264	24	167	79	220µF
RAC04-0512DC/230	80-264	5/12	720/33	75	4700/100µF
RAC04-05DC/230	80-264	±5	±400	76	±3300µF
RAC04-12DC/230	80-264	±12	±166	78	±680µF

** measured @115VAC

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

Input Voltage Range (with Derating)	80-264VAC or 113-373VDC	
Input Frequency	47-440Hz	
Input Current (Full Load)	115VAC/230VAC	98mA / 64mA max.
Inrush Current	115VAC/230VAC	15A / 30A max.
No Load Power Consumption	115VAC/230VAC 50/60Hz	100mW max.
Output Voltage Accuracy (Full Load)	Single Outputs	±2% typ.
	Dual Outputs	±2% typ.
Line Voltage Regulation (90-264VAC)	5V / 12V	±2% / ±10% typ.
	Single Outputs	±0.2% typ.
Load Voltage Regulation (10% - 100% load)	Dual Outputs	±0.2% typ.
	5V / 12V	±0.2% / ±1% typ.
Output Ripple&Noise (measured @ 20MHz of bandwidth with 0.1µF & 47µF parallel capacitors)	3.3V/5V Output	±1% typ.
	All Others	±0.5% typ.
Switching Frequency (Full Load)	5V / 12V	±1% / ±5% typ.
		200mVp-p typ.
Hold-Up Time	115VAC	15ms min.
Minimum Load		0%
Isolation Voltage	Input-Output	3.75kVAC / 1minute
Leakage Current	230VAC / 50Hz	0.25mA max.
Isolation Resistance		100M Ω min.

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POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

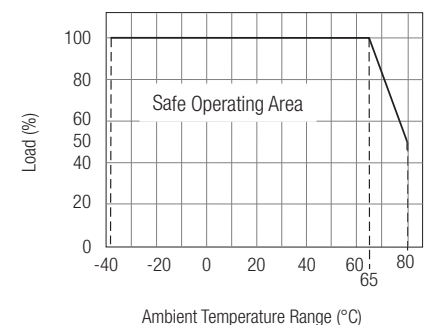
4 Watt Single & Dual Output



EN-60950-1 certified
UL-60950-1 certified

RAC04-C/230

Derating-Graph (Ambient Temperature)

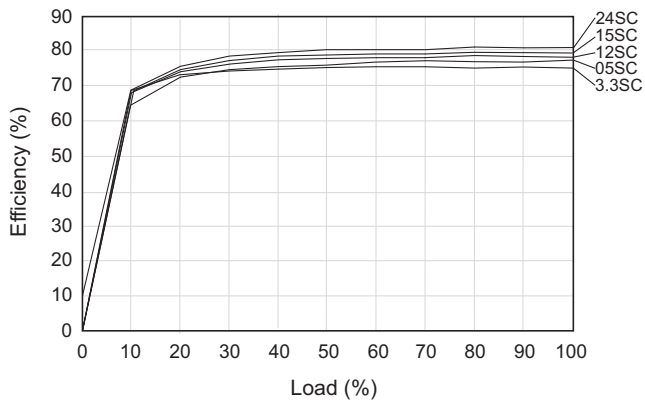


Specifications (measured at TA 25°C, full load after warm-up)

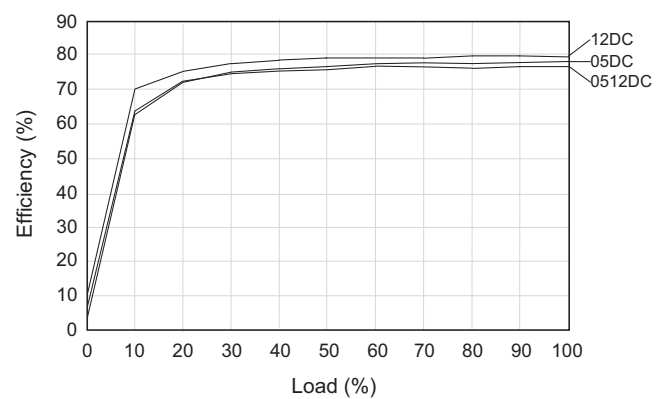
Short Circuit Protection		Auto Recovery
Over Voltage Category		OVC II
Operating Temperature Range		-40°C to +65°C (without Derating)
	Natural Convection	-40°C to +80°C (with Derating)
Storage Temperature Range		-40°C to +100°C
Case Material		UL94V-0 Black Plastic
Relative Humidity	Non-condensing	95% RH max.
Package Weight		31.5g typ.
Dimension	(L x W x H)	36.7 x 27.2 x 17.1mm
EMC	Conducted and Radiated	EN55022 Class B
	Noise Immunity	EN55024
MTBF (+25°C)	MIL-HDBK-217F	500 x 10 ³ hours
Certification	CE	EN55022 Class B
UL General Safety	Report: E224736	UL60950-1, 2nd Edition
EN General Safety	Report: 131055-1CB-M1	EN60950-1, 2006, 2nd Edition + A12:2012
CB General Safety	Report: 131055-1CB-M1	IEC 60950-1: 2005; 2nd Edition

Efficiency vs Load

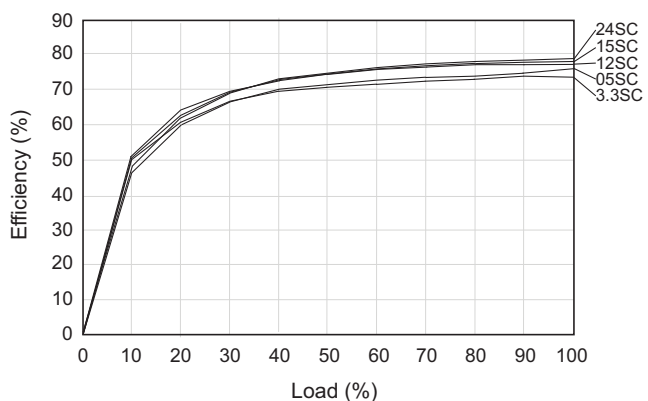
Single Output 115VAC



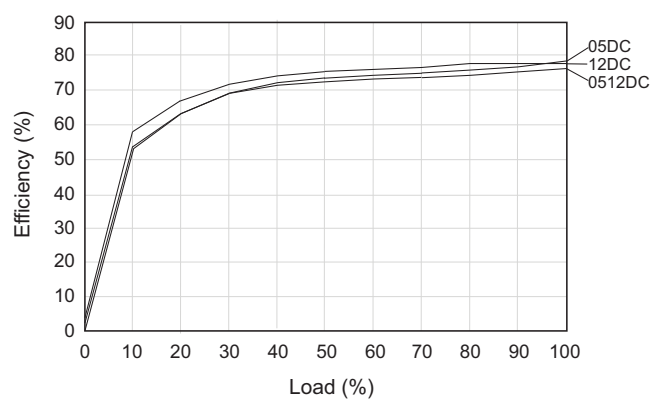
Dual Output 115VAC



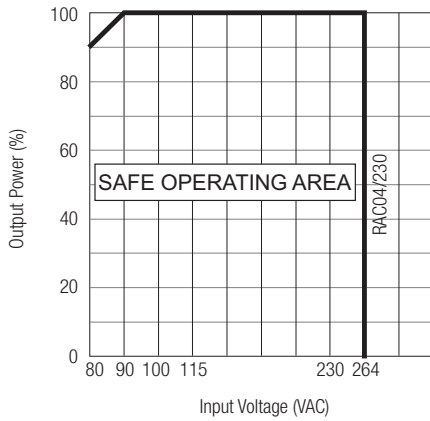
Single Output 230VAC



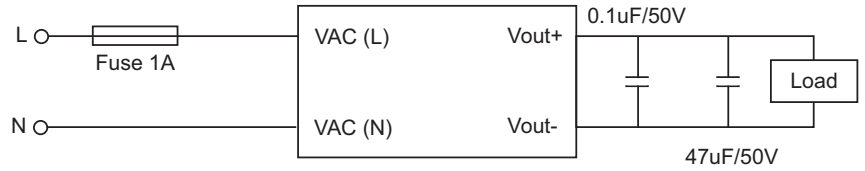
Dual Output 230VAC



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

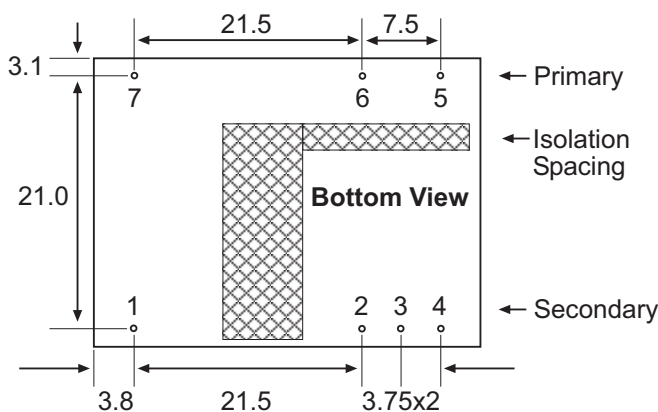
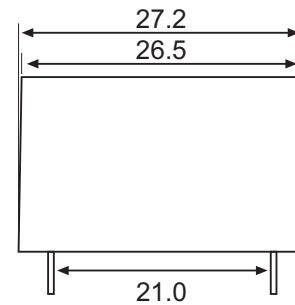
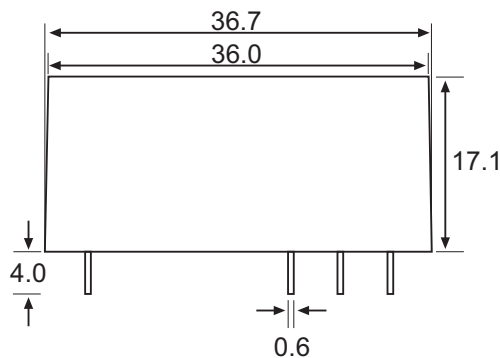


Application Note:



1. Recommended external input fuse 1A/slow blow type.
2. To measure the output ripple & noise connect 0.1uF/50V & 47uF/50V @20MHz, as close to pins as possible with nominal input and full load. Please see above.

Package Style and Pinning



Pin Connections

Pin #	Single Out	Dual Output	Dual Output
1	No Pin	No Pin	No Pin
2	+VDC out	+Vout	+Vout
3	-VDC out	Com	Com
4	NC	-Vout	+12V
5	VAC in (L)	VAC in (L)	VAC in (L)
6	VAC in (N)	VAC in (N)	VAC in (N)
7*	NC	NC	NC

NC = No Connection

xx.x = ±0.5mm

xx.xx = ±0.25mm

* Pin 7 is NC but need 4mm minimum clearance to ground for safety.