



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

- Regulated Power Supply
- Constant Voltage / Constant Current Output
- Continuous Short Circuit Protection
- Isolated Output 3kVAC / 1 min
- Meet EN55022 and FCC Class B
- Ultra-low Stand-By Power Consumption

Selection Guide

Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Typical Efficiency (%)	Constant Current Range* (mA)	Max. Capacitive Load
RAC03-3.3SCR/277*	85-305	3.3	900	69	950-1200	22000
RAC03-05SCR/277*	85-305	5	600	71	650-850	10000
RAC03-12SCR/277*	85-305	12	250	76	280-370	1500
RAC03-24SCR/277*	85-305	24	125	78	140-185	200

* add „-Tray“ for Tray packaging, e.g. RAC03-05SCR/277-Tray

Specifications (measured at TA 25°C)

Input Voltage Range	85-305VAC or 120-430VDC	
Rated Power	3 Watts	
Input Frequency Range (for AC Input)	47-440Hz	
Input Current (Full Load)	115VAC / 230VAC	70mA / 45mA typ.
No Load Power Consumption	85-305VAC / 47-440Hz	40mW max.
Inrush Current (<2ms)	115VAC 230VAC	15A max. 30A max.
Output Voltage	3.3V-24V	
Output Voltage Tolerance**	3.3V 5V 12V / 24V	±4% typ. / ±8% max. ±3% typ. / ±5% max. ±2.5% typ. / ±3.5% max.
Output Current	see Selection Guide	
Output Ripple & Noise*** (with 47µF + 0.1µF on output)	3.3V others	200mVp-p 150mVp-p
Switching Frequency	@ Full Load	45KHz typ.
Minimum Load	Specification valid	10%
Line Voltage Regulation	LL-HL @ Full Load	±0.7% typ. / ±1% max.
Load Regulation (10%-100% Load)	3.3V 5V 12V 24V	±5.5% typ. / ±9% max. ±5% typ. / ±7.5% max. ±4% typ. / ±5.5% max. ±3.5% typ. / ±4.5% max.
Leakage Current	85-305VAC / 47-440Hz	10mA max.
Isolation Voltage	3kVAC / 1 minute	
Isolation Resistance	1GΩ min	
Short Circuit Protection	Continuous, Auto Restart	
Over Current Limit	105% - 150%	
Over Voltage Protection (Zener diode clamp)	130%-160%	
Operating Temperature Range	natural convection, without derating natural air convection, with derating	-25°C to +75°C -25°C to +85°C
Storage Temperature Range	-40°C to +85°C	
Relative Humidity	95% RH max.	
Case Material	UL94V-0 Black Plastic	
Potting Material	Epoxy	

continued on next page

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

3 Watt Single Output

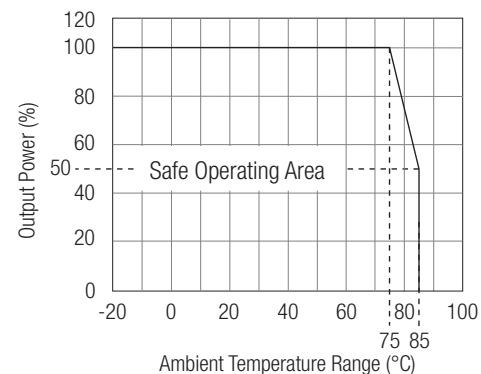


**CE Marked
UL-60590-1 Certified**

RAC03-SCR/277

Derating Graph

(Ambient Temperature)



Specifications (measured at TA 25°C)

Package Weight	41g typ.	
Package Quantity	12pcs	
	„-Tray“-Version	72pcs
Physical Dimension (LxWxH)	50.3 x 50.3 x 11.0mm	
RoHS	Test Report: KA/2012/91224	
EMC	EN55022 Class B	
UL General Safety	File Number: E224736	UL-60950-1
EN General Safety	Report: TI20925N01-E	EN-55022: 2010 Class B, EN55024:2010
MTBF	TA = 25°	1300 x 10 ³ hours
(using MIL-HDBK-217F)	TA = 75°	160 x 10 ³ hours

Notes:

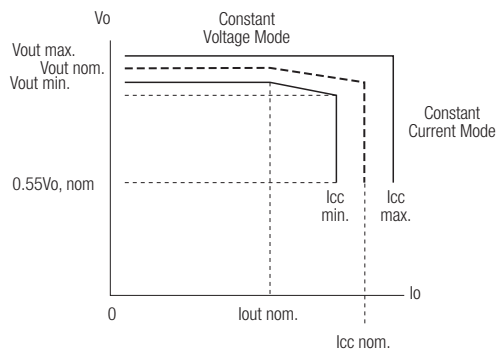
*The “constant current operation range” is over 55% - 90% of Vo nom. The specification includes all the tolerances of current accuracy, line regulation and load regulation. Typically, the constant current tolerance could be within ±7%.

**The “output voltage tolerance” includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions.

***“Ripple and Noise” is the maximum peak-to-peak voltage value measured at the output with a 20 MHz bandwidth, at rated line voltage at full load.

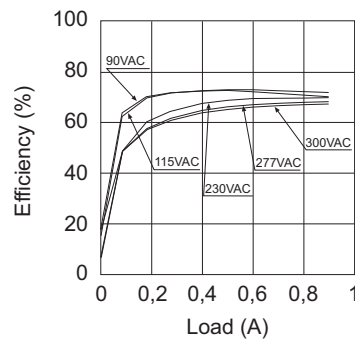
RACO3-xxSCR/277

Output V-I Characteristics

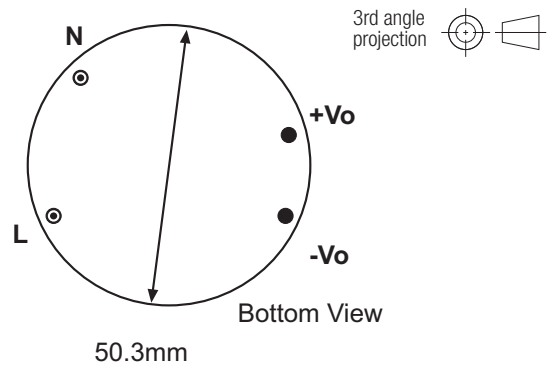
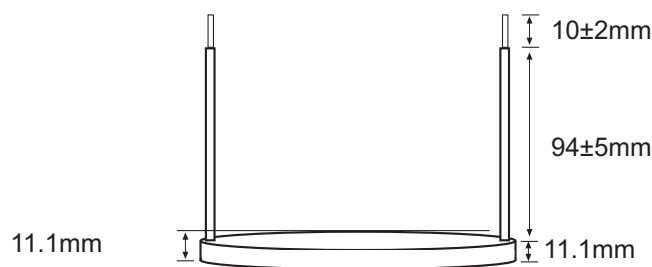


RACO3-3.3SCR/277

Efficiency vs Load



Mechanical Dimension



Wire Connections

Wire #	Color	AWG#	Part No.	Connection
1	Brown	AWG#22	1015	VAC in (L)
2	Blue	AWG#22	1015	VAC in (N)
3	Red	AWG#22	1007	+VDC out
4	Black	AWG#22	1007	-VDC out

Tolerance ±0.5mm unless otherwise specified

RACO3-SCR
/277