

Features

Regulated Converters

- 35mW max of No Load Power Consumption
- Output CV/CC Control
- Isolated Output 3kVAC / 1 min
- Short Circuit Protection
- Overvoltage Protection
- Meet EN55022 and FCC Class B
- Built-In Fusible Resistor

POWERLINE

AC/DC-Converter

with 3 year Warranty

RECOM

Selection Guide

Part Number	Output Voltage (VDC)	Max. Current (Io, max)	Total Regulation(1)	Ripple & Noise(2)	Efficiency (Typ.)	Max. Capacitive Load
RAC02-3.3SC/277	3.3	600mA	±6%	300mV	67%	24000µF
RAC02-05SC/277	5	400mA	±6%	200mV	71%	7500µF
RAC02-12SC/277	12	167mA	±6%	200mV	74%	1200µF
RAC02-24SC/277	24	83mA	±6%	200mV	76%	200µF

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

Input Voltage Range	85-305VAC or 120-430VDC	
Input Frequency	47-440Hz	
Input Current (full load)	115VAC/230VAC	47mA / 30mA typ.
Inrush Current	115VAC/230VAC	15A / 30A max.
No Load Power Consumption	85-305VAC	35mW max.
Output Voltage (Vout nom.)	3.3V-24V	
Output Voltage Tolerance	±6% max.	
Minimum Load	2%	
Line Voltage Regulation	LL-HL at full Load	±1.5% max.
Load Voltage Regulation	2-100% Load	see Selection Guide
Switching Frequency	at full Load	45kHz typ.
Isolation Voltage	Input-Output	3kVAC / 1 minute
Leakage Current	85-305VAC	10uA max.
Isolation Resistance	1G Ω min	
Short Circuit Protection	Continuous, Auto Restart	
Over-Voltage Protection	Zener clamp, set at 4.4~5.0V for 3.3V and 110~140% of its nominal output voltage for others.	
Operating Temperature Range	natural convection, without derating	-25°C ~ +75°C
	natural air convection, with derating	-25°C ~ +85°C
Storage Temperature Range	-40°C ~ +85°C	
Case Material	UL94V-0 black plastic	
Potting Material	Silicon	
Relative Humidity	95% RH max.	
Package Weight	24.5g typ.	
Package Quantity	22 pcs	
MTBF (using MIL-HDBK217F)	TA = 25°C	> 1300x10 ³ hours
	TA = 75°C	> 165x10 ³ hours
Physical	Dimension (LxWxH)	33.7 x 22.2 x 17.75 mm
EMI	EN55022, Class B	
Safety Standard		
EN General Safety	EN-60950-1	
UL General Safety	UL-60950-1	

2 Watt Single Output

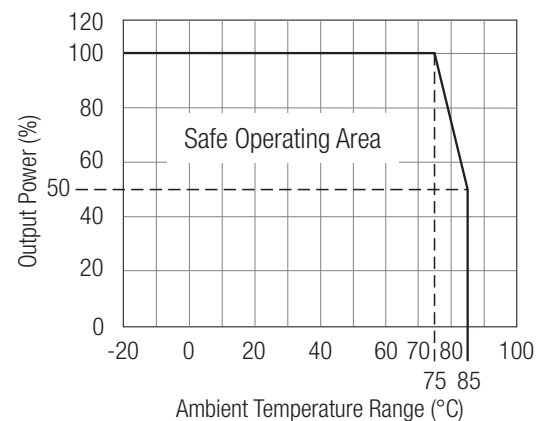


EN-60950-1 (pending)
UL-60950-1 (pending)

RAC02-SC/277

Derating Graph

(Ambient Temperature)



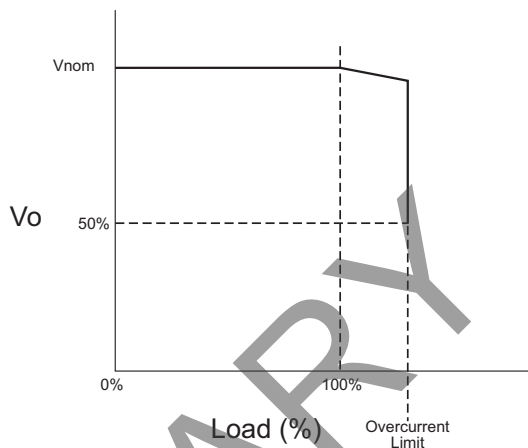
Specifications (measured at TA 25°C, full load after warm-up)

Notes:

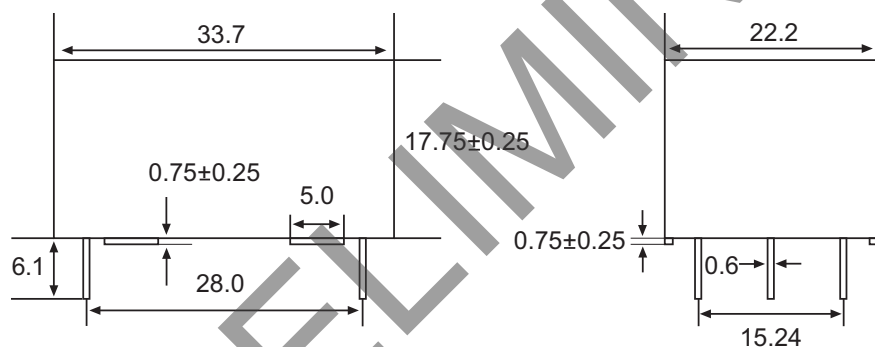
1. „Total Regulation“ is the output voltage tolerance which includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load condition.

2. „Ripple & Noise“ is maximum peak-to-peak voltage value measured at output within 20MHz bandwidth at rated line voltage and output load ranges, and with a 47 µF low-ESR electrolytic capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

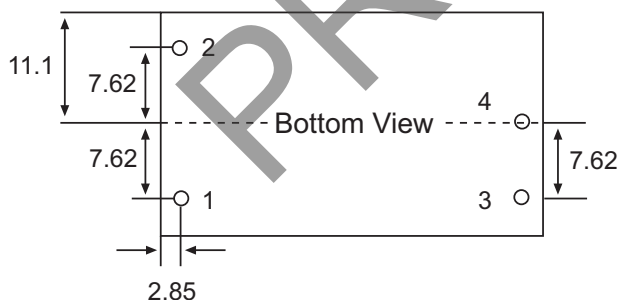
Output V-I Characteristic



Package Style and Pinning



3rd angle projection



Pin Connections

Pin #	Single Out
1	VAC in (N)
2	VAC in (L)
3	-VDC out
4	+VDC out

Tolerance ±0.5mm unless otherwise specified

RAC02/277