

Features

Regulated Converters

- 30mW max. No Load Power Consumption
- High Efficiency up to 80%
- Isolated Output 3kVAC / 1 min
- SCP, OVP Protection
- Wide Operating Temperature Range: -40°C to +85°C
- Universal Input 85-305VAC

RECOM
AC/DC Converter

RAC03-SE/277

**3 Watt
Single
Output**



Description

The ultra-compact RAC03-SE/277 modules are available with output voltages of 3.3, 5, 12 and 24V, and the input-to-output isolation is approximately 3kVAC/1min. With a standby consumption of 30mW maximum, the mini power supplies are particularly suitable for energy-saving sleep mode and standby applications. Because of its compact design (height <17.4 mm), it is a versatile solution for home automation and other similar applications. Complete with an integrated input filter, the series has enhanced EMI performance and complies with EN55022, class B. The mini power supplies are also protected against short circuit with fully automatic restart after the error has been solved. The converters are EN/UL60950-1 certified and come complete with a 3 year warranty.

Selection Guide

| Part Number | Input Voltage Range (VAC) | Output Voltage (VDC) | Output Current (mA) | Efficiency typ. (%) | Max. Capacitive Load (µF) |
|-----------------|---------------------------|----------------------|---------------------|---------------------|---------------------------|
| RAC03-3.3SE/277 | 85-305 | 3.3 | 900 | 71 | 22000 |
| RAC03-05SE/277 | 85-305 | 5.0 | 600 | 76 | 7500 |
| RAC03-12SE/277 | 85-305 | 12 | 250 | 78 | 1000 |
| RAC03-24SE/277 | 85-305 | 24 | 125 | 80 | 200 |



Specifications (measured at TA= 25°C, nominal input voltage, full load and after warm-up)

| BASIC CHARACTERISTICS | | | | |
|--|--|-----------------|--------------|---------------------|
| Parameter | Condition | Min. | Typ. | Max. |
| Input Voltage Range | | 85VAC 120VDC | | 305VAC 430VDC |
| Input Current | full load, 115VAC full load, 230VAC | | 70mA 45mA | |
| absolute max. Input Current | cold start at 25°C, 115VAC cold start at 25°C, 230VAC | | | 15A 30A |
| No load Power Consumption | 85-305VAC, 47-440Hz | | | 30mW |
| Input Frequency | AC Input | 47Hz | | 440Hz |
| Leakage Current | 240VAC | | | 10µA |
| Hold-up time | full load, 115VAC full load, 230VAC | | 15ms 80ms | |
| Operating Frequency | 100% load at nominal Vin | | 45kHz | |
| Efficiency | | | | see Selection Guide |
| Minimum Load | | | 2% typ. | |
| Output Ripple and Noise ⁽¹⁾ | | | 200mVp-p | |

Notes:

Note1: Ripple and Noise is the maximum peak-to-peak voltage value measured at the output with a 20MHz bandwidth, at rated line voltage at full load. And with a 47µF low-ESR electrolytic capacitor in parallel with a 0.1µF ceramic capacitor across output.



UL
E224736

Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to Application Notes

Refer to Applications Notes

Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

| REGULATIONS | | |
|---|----------------------------------|-----------------------|
| Parameter | Condition | Value |
| Output Voltage Tolerance ⁽²⁾ | | ±6% max. |
| Line Voltage Regulation | low line to high line, full load | ±1% min. / ±1.5% typ. |
| Load Voltage Regulation | 10% to 100% load | ±6% max. |

Notes:
 Note2: Includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions.

| PROTECTIONS | | |
|--------------------------------|-------------------|--------------------------------|
| Parameter | Type | Value |
| Short Circuit Protection (SCP) | | continuous, automatic recovery |
| Over Voltage Protection (OVP) | Zener Diode clamp | 112% - 140% |
| Over Current Limit | | 120% - 190% |
| Isolation Voltage | | 3kVAC / 1 Minute |
| Isolation Resistance | | 1GΩ min. |

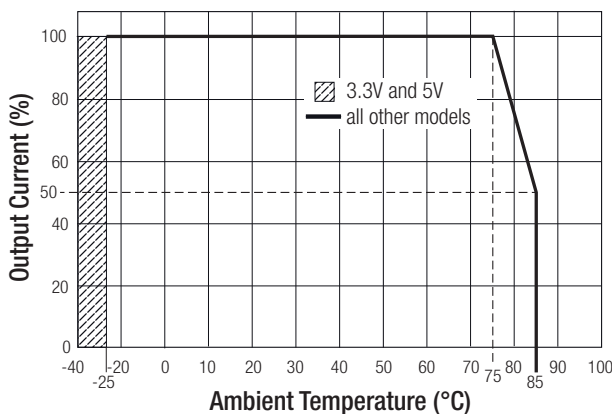
| ENVIRONMENTAL | | |
|-----------------------------|--|--|
| Parameter | Condition | Value |
| Operating Temperature Range | 230VAC, natural convection and with derating | -40°C to +85°C |
| Storage Temperature Range | | -40°C to +85°C |
| Humidity | non-condensing | 95%, RH max. |
| MTBF ⁽³⁾ | MIL-HDBK-217F, 115VAC, +25°C MIL-HDBK-217F, 230VAC, +25°C | 6506 x 10 ⁶ hours 1816 x 10 ⁶ hours |

Notes:

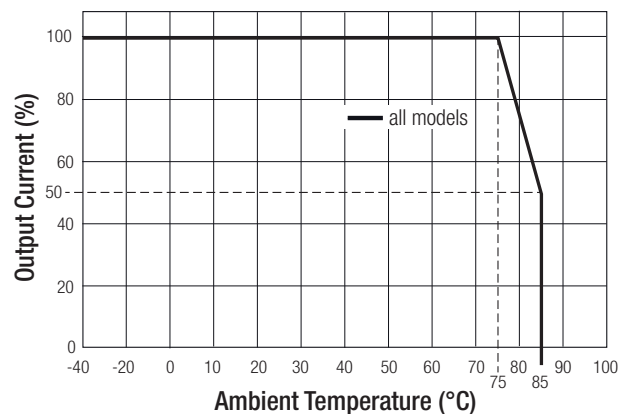
Note3: MTBF is referring RAC03-3.3SE/277

Derating Graph

@ 115VAC



@ 230VAC





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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