Features

Regulated Converters

- 30mW max of No Load Power Consumption
- High efficiency up to 80%
- 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

3 Watt Single Output

E224736

RoHS 2011/65/EU 6/6

CE

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

RAC03-SC/277

Selection Guide

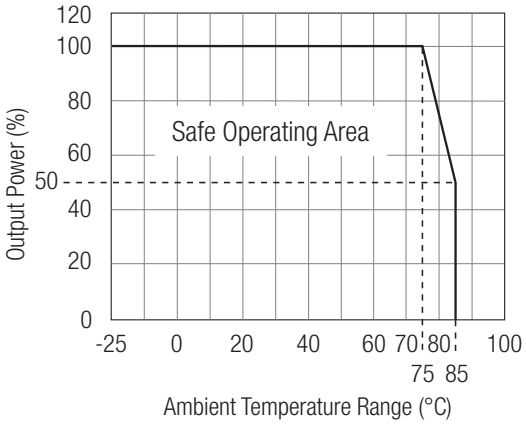
Part Number	Output Voltage (VDC)	Max. Current (Io, max)	Total Regulation(1)	Ripple & Noise(2)	Efficiency (Typ.)	Max. Capacitive Load
RAC03-3.3SC/277	3.3	900mA	±6%	200mV	71%	47000µF
RAC03-05SC/277	5	600mA	±6%	150mV	76%	15000µF
RAC03-12SC/277	12	250mA	±6%	150mV	78%	2200µF
RAC03-24SC/277	24	125mA	±6%	150mV	80%	390µF

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

Input Voltage Range (with Derating)		80-305VAC or 110-430VDC
Input Frequency		47-440Hz
Input Current (full Load)	115VAC/230VAC	70mA / 45mA typ.
Inrush Current	115VAC/230VAC	15A/30A max.
No Load Power Consumption	80-305VAC / 47-440Hz	30mW 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% typ. / ±1.5% max.
Load Voltage Regulation	2-100% Load	see Selection Guide
Overcurrent Limit		116% - 156%
Switching Frequency	at full Load	45kHz typ.
Isolation Voltage	Input-Output	3kVAC / 1 minute
Leakage Current	80-305VAC / 47-440Hz	10uA max.
Isolation Resistance		1G Ω min
Short Circuit Protection		Continuous, Auto Restart
Over-Voltage Protection		Zener clamp, set at 4.4V-5.0V for 3.3V and others 112-140% of its nominal output voltage
Operating Temperature	natural convection, without derating	-25°C ~ +75°C
	natural air convection, with derating	-25°C ~ +85°C
Storage Temperature		-40°C ~ +85°C
Case Material		UL94V-0 black plastic
Potting Material		Silicon
Relative Humidity		95% RH max.
Package Weight		28g
Package Quantity		12 pcs
MTBF	TA = 25°C	> 1000x10³ hours
(using MIL-HDBK217F)	TA = 75°C	> 100x10³ hours
Physical	Dimension (LxWxH)	38.25 x 24.35 x 17.40 mm
EMI		EN55022, Class B
Safety Standard		
EC/EN General Safety	Report: SPCLVD1208051	IEC/EN-60950-1
UL General Safety	Report: E224736-A17-UL	UL-60950-1

Derating Graph

(Ambient Temperature)



RAC03-xxSC/277 Series

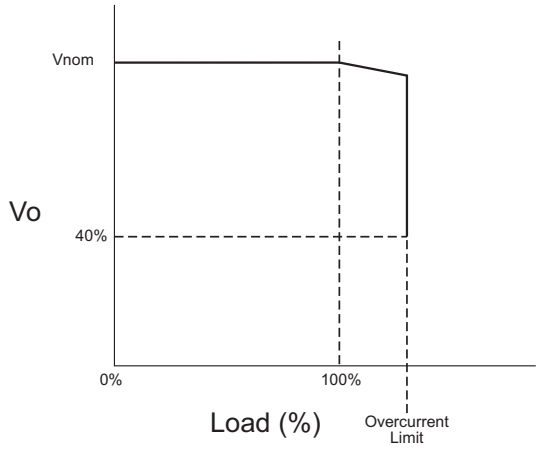
Specifications (measured at TA 25°C, full load after warm-up)

Notes:

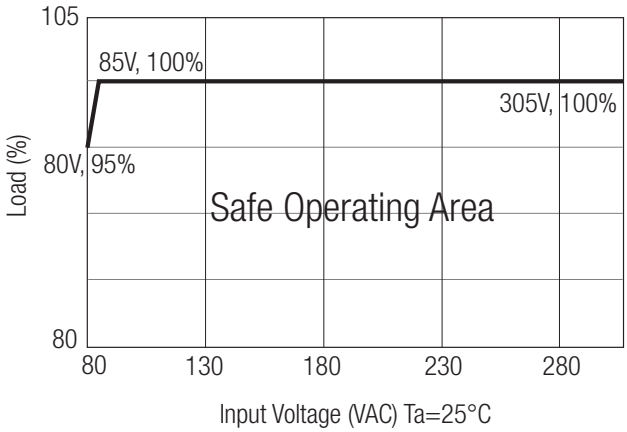
1. „Total Regulation“ is the output voltage tolerance which includes initial voltage precise, thermal drift, line regulation and load regulation at rated input voltage and load condition.

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.

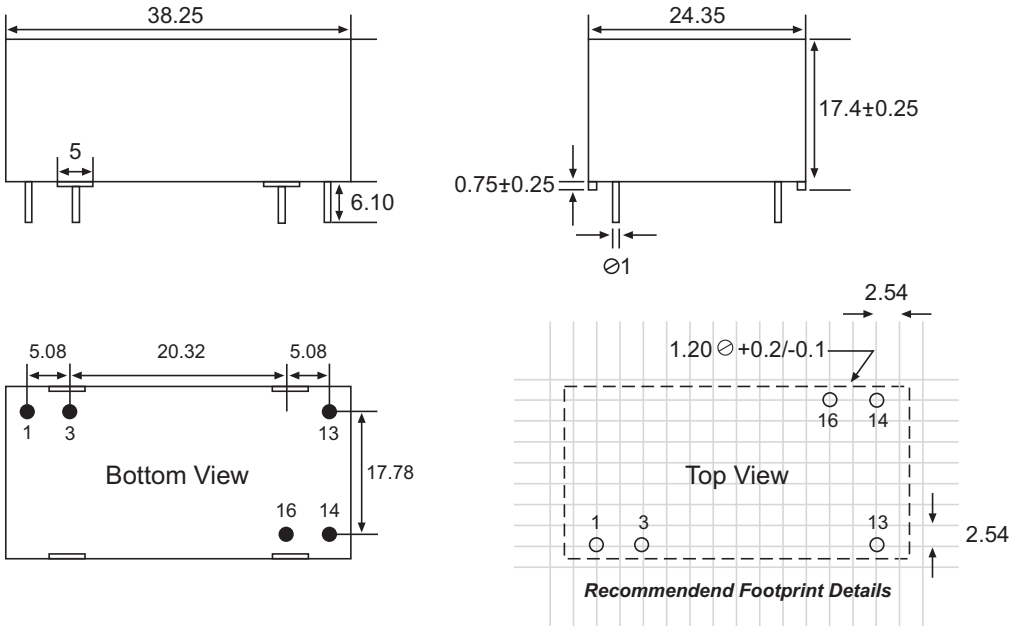
Output V-I Characteristic



Input Voltage Derating Graph



Package Style and Pinning



3rd angle projection

Pin Connections

Pin #	Single Out
1	VAC in (L)
3	VAC in (N)
13	NC
14	-VDC out
16	+VDC out

Tolerance ±0.5mm unless otherwise specified