

## Features

### Unregulated Converter

- 1 : 1 Input Range
- 0.25W SMD Package
- Efficiency up to 77%
- 1kVDC and 2kVDC Isolation Option
- Operating Temperature from -40°C to +100°C
- EN/UL60950-1 Certified

### Description

The R0.25S/E series DC/DC converter has been designed to offer exceptionally high efficiency, low quiescent current and an extended operating temperature range. Uses include battery powered supplies, high efficiency designs or high temperature applications.

### Selection Guide

Part Number SMD	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	Max Capacitive Load <sup>(1)**</sup>
R0.25S**-3.305/E*	3.3	5	50	75	1000µF
R0.25S**-0505/E*	5	5	50	77	1000µF
R0.25S**-1205/E*	12	5	50	74	1000µF

Other input and output voltage combinations available on request.

\*add Suffix „H“ for 2kVDC Isolation, e.g. R0.25S-3.305/HE

\*add Suffix „-R“ for tape & reel packaging, e.g. R0.25S-3.305/E -R

\*add Suffix „P“ for Continuous Short Circuit Protection, e.g. R0.25S/PE

\*\*without marking denotes 5 pins out of 8 fitted (includes „H“ option)

with marking 8 denotes 8 pins out of 8 fitted („H“ option not available), e.g. R0.25S8-3.305/E

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

Input Voltage Range		$\pm 10\%$ max.
Voltage Set Accuracy	100% Load/nominal $V_{in}$	-2% typ. / $\pm 5\%$ max.
Line Regulation	Low Line to High Line @ max. Load	1,2% typ.
Load Regulation	(10% to 100% Load)	4% typ. / 10% max.
Ripple & Noise @ 20MHz BW		50mVp-p typ. / 100mVp-p max.
Efficiency	100% Load	70% min.
Operating Temperature		-40°C to + 100°C
Storage Temperature		-55°C to +125°C
Isolation Test Voltage	(tested for 1 second) (rated for 1 minute***)	1000VDC 500VAC / 60Hz
Isolation Test Voltage	H-Suffix (tested for 1 second) (rated for 1 minute***)	2000VDC 1000VAC / 60Hz
Isolation Capacitance		75PF max.
Isolation Resistance	Viso = 500V	10 GΩ min.
Humidity		95% max.
Operating Frequency	$V_{in}$ (nom.)	20kHz min. / 70 kHz max.
Short-Circuit Protection		1 Second
MTBF	Using MIL-HDBK 217F (+100°C)	1352 x 10 <sup>3</sup> hours
	Using MIL-HDBK 217F (+25°C)	4494 x 10 <sup>3</sup> hours

Detailed Information see Application Notes chapter „MTBF“

Weight		1.0g
Certification		
UL General Safety	Report: E224736	UL60950-1
EN General Safety		EN60950-1

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

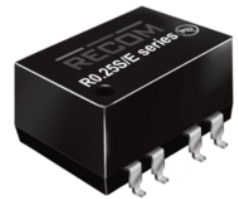
## ECONOLINE

### DC/DC-Converter

with 3 year Warranty

# RECOM

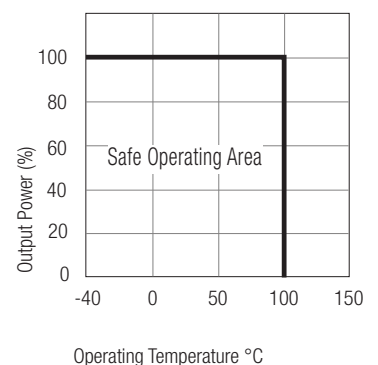
## 0.25 Watt SMD Isolated Single Output



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

## RO.25S/E

### Derating-Graph (Ambient Temperature)

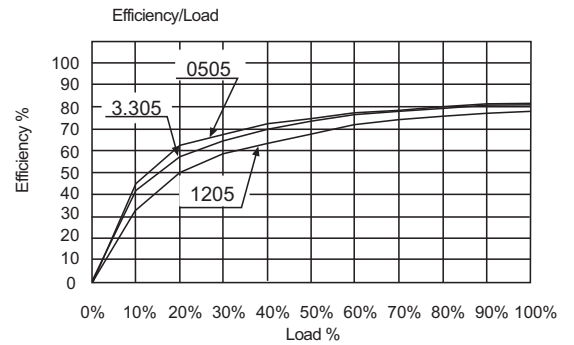
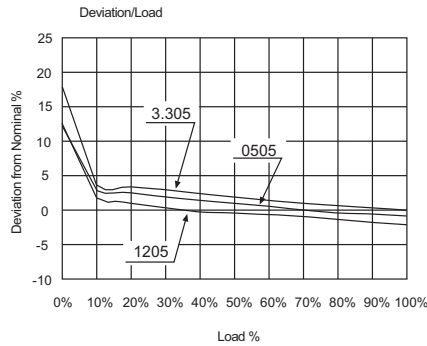
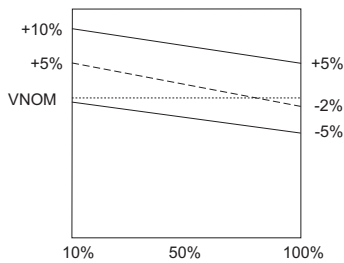


Refer to Application Notes

## Typical Characteristics

### Tolerance Envelope

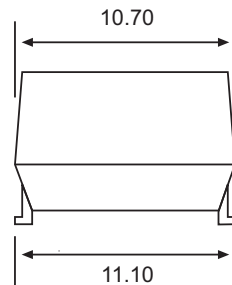
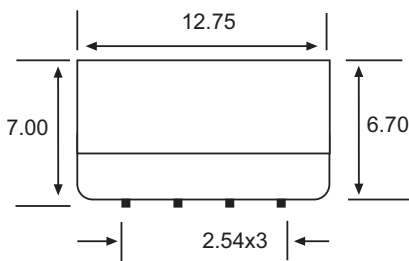
### R0.25S-xx05/E



#### Notes

Note1: Maximum capacitive load is defined as the capacitive load that will allow start up in under 1second without damage to the converter.

### Package Style and Pinning (mm)



#### Pin Connections

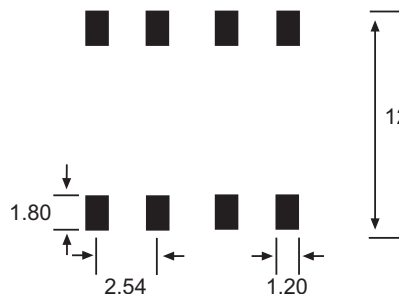
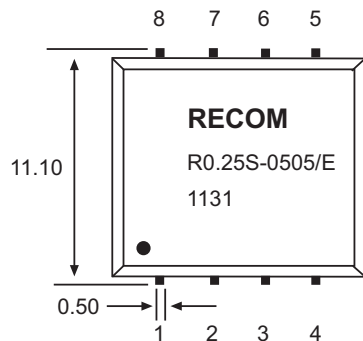
Pin #	Function for 5 Pins	Function for 8 Pins
1	-Vin	-Vin
2	+Vin	+Vin
4	-Vout	-Vout
5	+Vout	+Vout
3, 6, 7	NA	NC
8	NC	NC

NC= No Connection

NA= No Available Electrical Connection

UNIT: mm

TOL.: ± 0.25 mm



#### Footprint