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

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

0.25 Watt SMD Isolated Single Output

RoHS 2011/65/EU 6/6

c UL us
E224736

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

R0.25S/E

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(1)**
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)

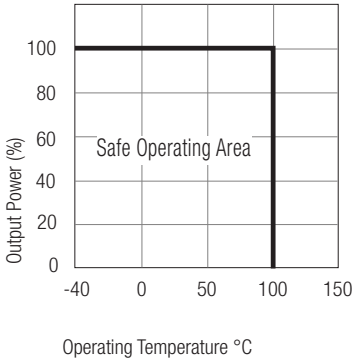
with marking 8 denotes 8 pins out of 8 fitted („H“ option not available), e.g R0.25S8-3.305/E

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

Input Voltage Range			±10% max.
Voltage Set Accuracy		100% Load/nominal Vin	-2% typ. / ±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)	1000VDC
		(rated for 1 minute***)	500VAC / 60Hz
Isolation Test Voltage	H-Suffix	(tested for 1 second)	2000VDC
	H-Suffix	(rated for 1 minute***)	1000VAC / 60Hz
Isolation Capacitance			75PF max.
Isolation Resistance		Viso = 500V	10 GΩ min.
Humidity			95% max.
Operating Frequency		Vin (nom.)	20kHz min. / 70 kHz max.
Short-Circuit Protection			1 Second
MTBF		Using MIL-HDBK 217F (+100°C)	1352 x 10^3 hours
		Using MIL-HDBK 217F (+25°C)	4494 x 10^3 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.

Derating-Graph
(Ambient Temperature)

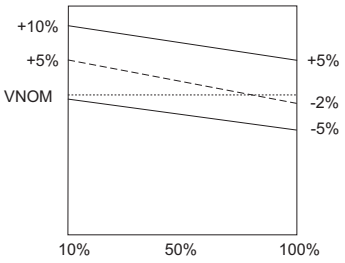


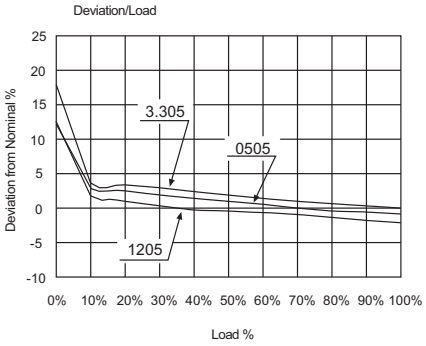
Refer to Application Notes

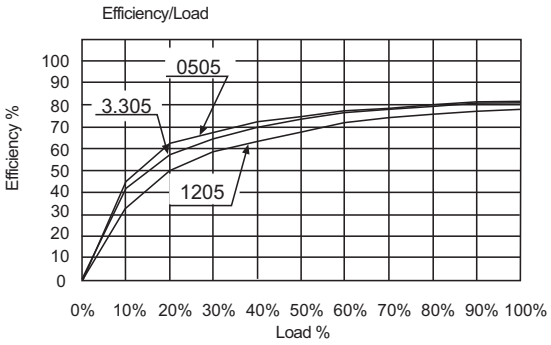
Typical Characteristics

Tolerance Envelope

R0.25S-xx05/E



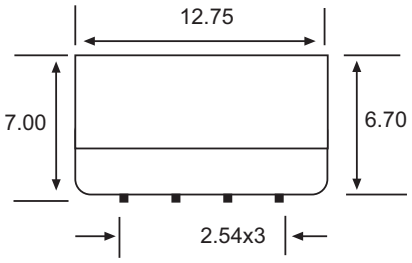


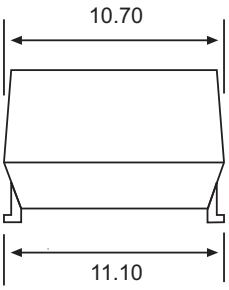


Notes

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)





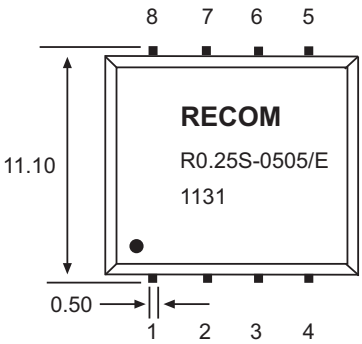
Pin Connections

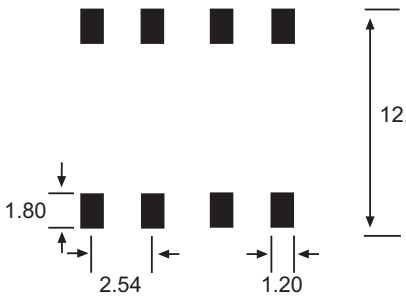
Pin #	Function for 5 Pins	Function for 8 Pins
1	–Vin	- Vin
2	+Vin	+Vin
4	-Vout	-Vout
5	+Vout	+Vout
3, 6, 7	NA	NC
8	NC	NC

NC= No Connection

NA= No Available Electrical Connection

UNIT: mm
TOL.: ± 0.25 mm





Footprint

R0.25S/E

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

RECOM:

R0.25S-0505/E R0.25S-1205/E R0.25S-3.305/E R0.25S-3.305/EP R0.25S-3.305/E-R R0.25S8-3.305/E R0.25S-0505/EH-R R0.25S-0505/EHP R0.25S-0505/E-R R0.25S-1205/EP-R R0.25S8-0505/E R0.25S-3.305/EH-R R0.25S-1205/E-R R0.25S8-3.305/EP-R R0.25S8-1205/EP R0.25S-0505/EHP-R R0.25S-0505/EP-R R0.25S-1205/EH R0.25S-1205/EHP R0.25S-3.305/EHP R0.25S8-0505/EP R0.25S8-1205/EP-R R0.25S-0505/EP R0.25S-1205/EH-R R0.25S-3.305/EH R0.25S-3.305/EP-R R0.25S8-0505/EP-R R0.25S8-0505/E-R R0.25S8-1205/E-R R0.25S8-3.305/EP R0.25S-3.305/EHP-R R0.25S8-1205/E R0.25S8-3.305/E-R R0.25S-0505/EH R0.25S-1205/EHP-R R0.25S-1205/EP