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 ^{(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.

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

Specifications (measured at $T_{\Delta} = 25$ °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. Loa	d 1,2% typ.			
Load Regulation		(10% to 100% Load)	4% typ. / 10% max.			
Ripple & Noise @ 20MHz	nVp-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	<u> </u>					
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



O.25 Watt SMD Isolated Single Output





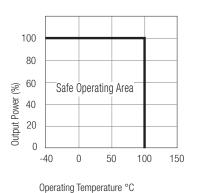


EN-60950-1 Certified UL-60950-1 Certified

RO.255/E

Derating-Graph

(Ambient Temperature)



Refer to Application Notes

^{*}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

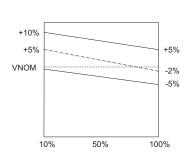
^{**}without marking denotes 5 pins out of 8 fitted (includes "H" option)

ECONOLINE DC/DC-Converter

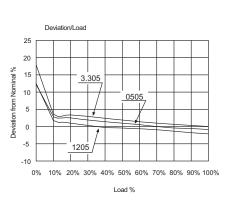
RO.255/E Series

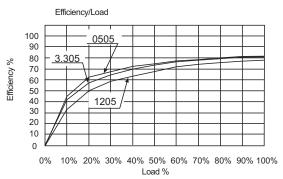
Typical Characteristics

Tolerance Envelope



R0.25S-xx05/E

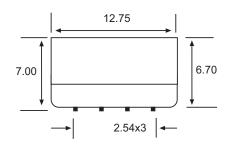




Notes

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

Package Style and Pinning (mm)



RECOM

1131

2 3 4

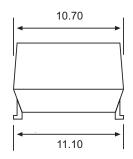
R0.25S-0505/E

5

8

11.10

0.50



12.00 **Footprint**

 5
 +Vout
 +Vout

 3, 6, 7
 NA
 NC

 8
 NC
 NC

Function for 8 Pins

+Vin

-Vout

NC= No Connection

Pin Connections
Pin # Function for 5 Pins

2

4

NA= No Available Electrical Connection

+Vin

-Vout

UNIT: mm TOL.: ± 0.25 mm

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