Features

Unregulated Converters

- Efficiency 84% Full Load/70% with 20% Load
- Low Deviation (10% ~ 100% Load)
- 1kVDC and 2kVDC Isolation Option
- Safety Certified
- -40°C to +100°C Operating Temperature Range
- 1W SIP4 Package

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

Description

The RO/E series is an unregulated DC/DC converter in standard SIP4 package style. This series has been designed to offer exceptionally high efficiency at low loads, an extended operating temperature range and low deviation (10% ~ 100% load). Uses include applications with restricted energy budget and industrial applications where a high efficiency level is required.

1 Watt SIP4 Single Output

Selection Guide

Part Number SMD	Isolation Voltage (kVDC)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (typ.)	Capacitive Load (max.)
RO-3.305S/E*	1	3.3	5	200	83%	2200µF
RO-0505S/E*	1	5	5	200	84%	2200µF
RO-1205S/E*	1	12	5	200	84%	2200µF
RO-2405S/E*	1	24	5	200	82%	2200µF

* add Suffix "/H" for 2kVDC Isolation Voltage - e.g. RO-3.305S/EH

* add Suffix "/P" for Continuous Short Protection - e.g. RO-3.305S/EHP, RO-3.305S/EP

RoHS 2002/95/EC 6/6

EN-60950-1 (pending)
UL-60950-1 (pending)

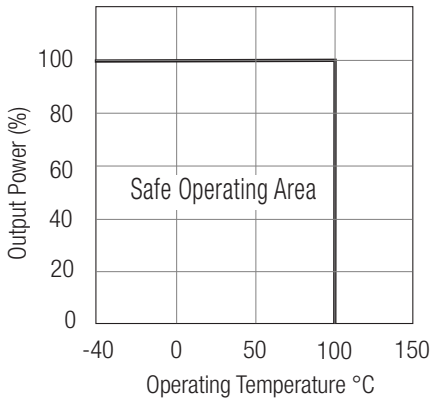
Specifications (measured at T_A = 25°C, nominal input voltage, full load and after warm-up)

Input Voltage Range			±10%
Output Voltage Accuracy			±5% max.
Line Voltage Regulation	low line to high line at full load		1.2% max.
Load Voltage Regulation	Load Deviation 10% to 100%		12% typ.
Output Ripple and Noise (20MHz BW)			50mVp-p typ., 100mVp-p max.
Operating Frequency (Vin=nominal input)			20kHz min. / 90kHz max.
Efficiency			see Selection Guide
Minimum Load = 0%			Specifications valid for 10% minimum load only
Isolation Voltage	RO-xx05/E	tested for 1 second	1000 VDC
	RO-xx05/EH	tested for 1 second	2000 VDC
Isolation Capacitance			75pF max.
Isolation Resistance	(Viso=500V)		10GΩ min.
Short-Circuit Protection			1 second
Operating Temperature Range			-40°C to +100°C
Storage Temperature			-55°C to +125°C
Relative Humidity			95% RH
Package Weight			1.4g
MTBF (+25°C)	using MIL-HDBK 217F		3459 x 10^3 hours
MTBF (+100°C)	using MIL-HDBK 217F		756 x 10^3 hours

Note: Detailed Information see Application Notes chapter "MTBF"

RO/E

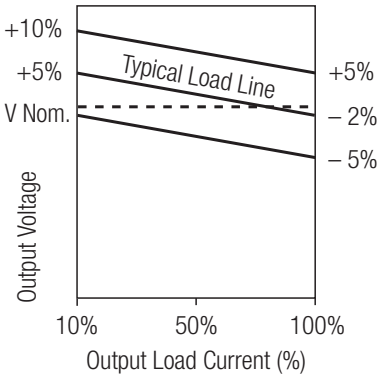
Derating-Graph
(Ambient Temperature)



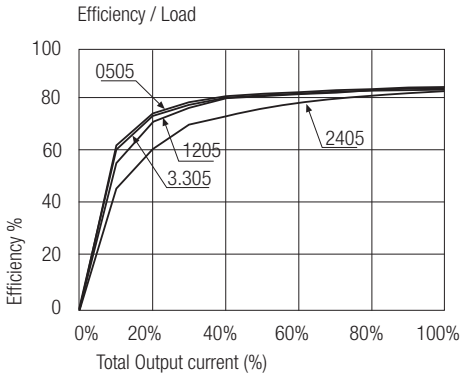
Refer to Application Notes

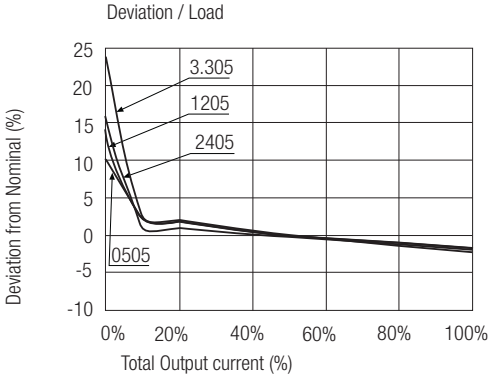
Typical Characteristics

Tolerance Envelope

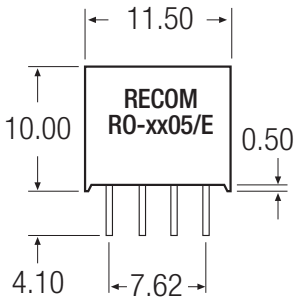


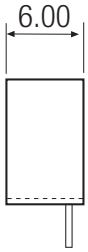
RO-xx05/E





Package Style and Pinning

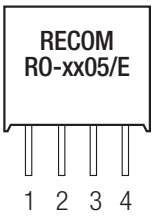




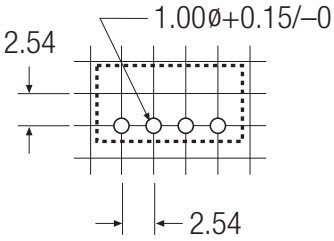
3rd angle projection

Pin Connections	Function
Pin #	4 Pins
1	-Vin
2	+Vin
3	-Vout
4	+Vout

Unit: mm
Tolerance: ± 0.25 mm



Footprint (top view)



RO/E