Features

Unregulated Converter

- Industry Standard Pinout
- 1kVDC or 2kVDC Isolation
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Fully Encapsulated
- Custom Solutions Available
- Efficiency to 87%

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

Description

The ROL DC/DC converters are typically used in general purpose low power isolation and voltage matching applications, and feature a full industrial operating temperature range of -40°C to +85°C without derating.

0.5 Watt SIP4 Single Output

RoHS 2011/65/EU 6/6

E358085

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

ROL

Selection Guide

Part Number SIP 4	(2kV)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load[1]
ROL-xx05S	(H)	5, 12	5	100	78-82	470µF
ROL-xx12S	(H)	5, 12	12	42	80-86	150µF
ROL-xx15S	(H)	5, 12	15	33	80-87	150µF

xx = Input Voltage (other input and output voltage combinations available on request)

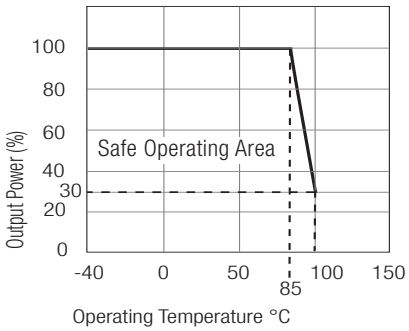
* add Suffix "P" for Continuous Short Circuit Protection, e.g. ROL-0505S/P, ROL-0505S/HP

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

Input Voltage Range			±10%
Output Voltage Accuracy			±5%
Line Voltage Regulation			1.2%/1% of Vin typ.
Load Voltage Regulation (10% to 100% full load)			10% max. / 4% typ.
Output Ripple and Noise (20MHz limited)			100mVp-p max.
Operating Frequency			20kHz min. / 54kHz typ.
Efficiency at Full Load			70% min. / 85% typ.
Efficiency at 50%I Load			65% min. / 80% typ.
Minimum Load = 0%		Specifications valid for 10% minimum load only.	
Isolation Voltage		(tested for 1 second)	1000VDC
		(rated for 1 minute**)	500VAC / 60Hz
Isolation Voltage	H-Suffix	(tested for 1 second)	2000VDC
	H-Suffix	(rated for 1 minute**)	1000VAC / 60Hz
Isolation Capacitance			20pF min. / 75pF max.
Isolation Resistance			10 GΩ min.
Short Circuit Protection			1 Second
P-Suffix			Continuous
Operating Temperature Range (free air convection)			-40°C to +85°C (see Graph)
Storage Temperature Range			-55°C to +125°C
Relative Humidity			95% RH
Package Weight			1.4g
Packing Quantity			42 pcs per Tube
MTBF (+25°C) } *Detailed Information see*		using MIL-HDBK 217F	985 x 10^3 hours
(+85°C) } *Application Notes chapter "MTBF"*		using MIL-HDBK 217F	200 x 10^3 hours
Certifications			
EN General Safety	Report: SPCLVD1109103		EN 60950-1:2006 + A12:2011
UL General Safety	Report: E358085		UL 60950-1, 2nd Edition

**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.

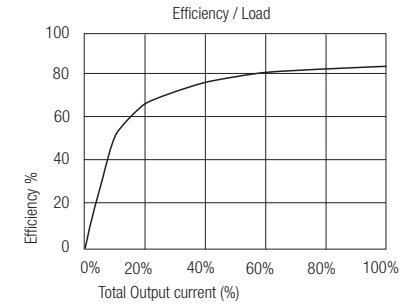
Derating-Graph
(Ambient Temperature)

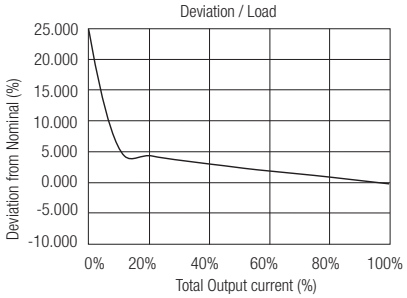


Refer to Application Notes

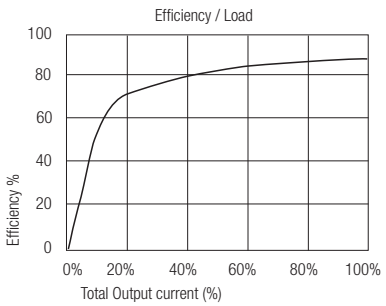
Typical Characteristics

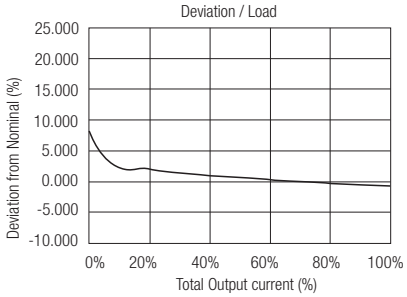
ROL-0505S





ROL-0515S





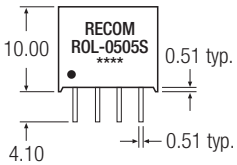
Notes

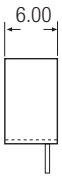
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

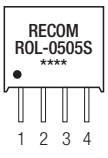
ROL

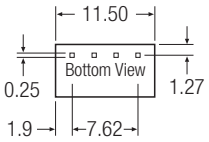
Package Style and Pinning (mm)

4 PIN SIP Package

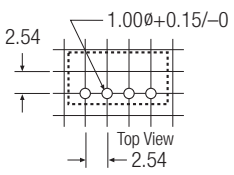








Recommended Footprint Details



ROL Pin Connections

Pin #	Single
1	–Vin
2	+Vin
3	–Vout
4	+Vout

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

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