

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%

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.

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 $T_A = 25^\circ\text{C}$, 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% 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 Application Notes chapter "MTBF"	using MIL-HDBK 217F	985 x 10³ hours
(+85°C)			using MIL-HDBK 217F	200 x 10³ 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.

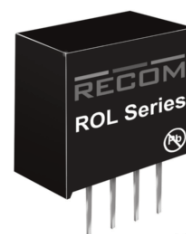
ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

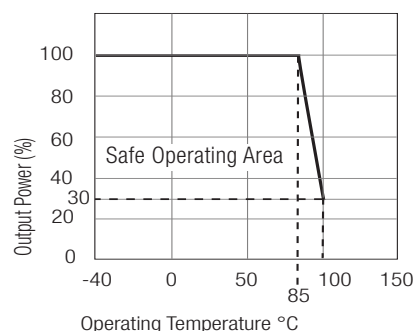
0.5 Watt SIP4 Single Output



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

ROL

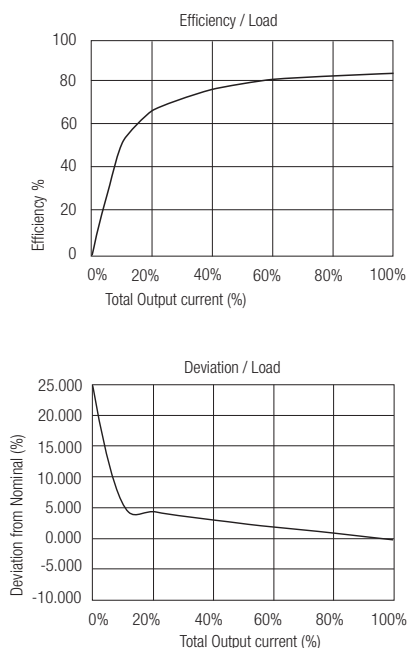
Derating-Graph (Ambient Temperature)



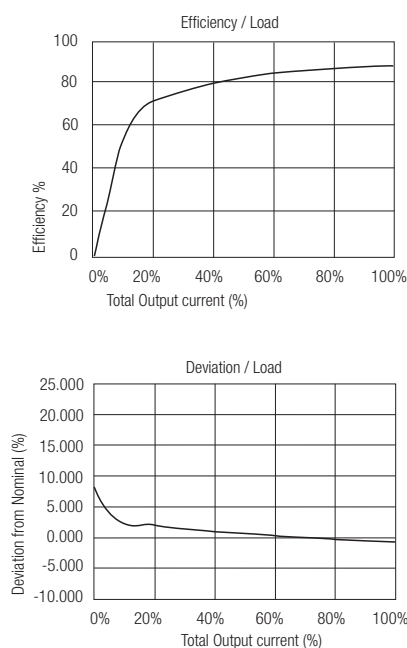
Refer to Application Notes

Typical Characteristics

ROL-0505S



ROL-0515S

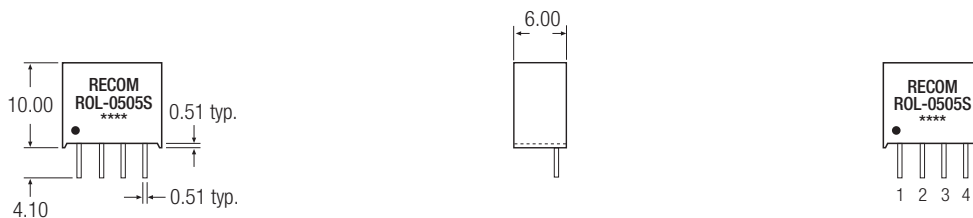


Notes

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.

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