

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 ~ +85°C without derating.

Selection Guide

Part Number	(2kV)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
ROL-xx05S	(H)	5, 12	5	100	78-82
ROL-xx12S	(H)	5, 12	12	42	80-86
ROL-xx15S	(H)	5, 12	15	33	80-87

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		$\pm 10\%$
Output Voltage Accuracy		$\pm 5\%$
Line Voltage Regulation		1.2%/1% of V_{in} 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.
No Load Power Consumption		45mW min. / 75mW typ. / 155mW max.
Maximum Capacitive Load		22 μF
Isolation Voltage		(tested for 1 second) 1000VDC min.
Rated Working Voltage		(long term isolation) see Application Notes
Isolation Voltage	H-Suffix	(tested for 1 second) 2000VDC min.
Rated Working Voltage	H-Suffix	(long term isolation) see Application Notes
Isolation Capacitance		20pF min. / 75pF max.
Isolation Resistance		10 G Ω 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 10 ³ hours
(+85°C)		using MIL-HDBK 217F 200 x 10 ³ hours

ECONOLINE
DC/DC-Converter

RECOM

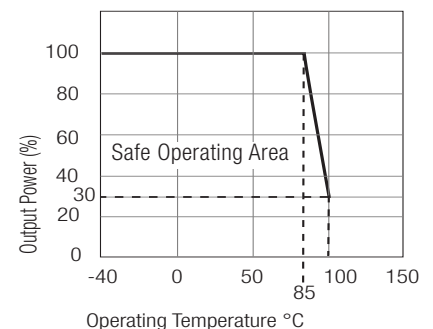
0.5 Watt
SIP4
Single
Output



EN-60950-1 Pending

ROL

Derating-Graph (Ambient Temperature)

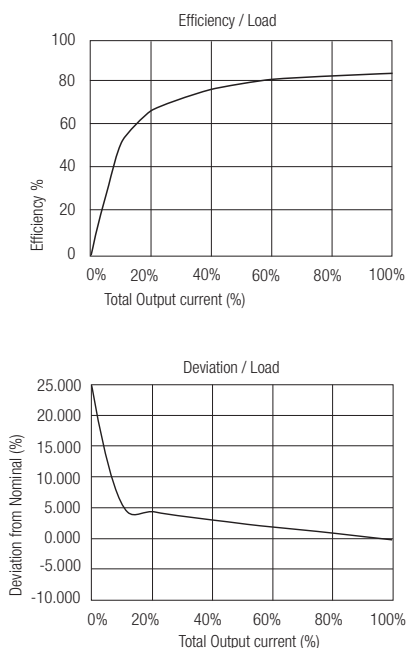


Refer to Application Notes

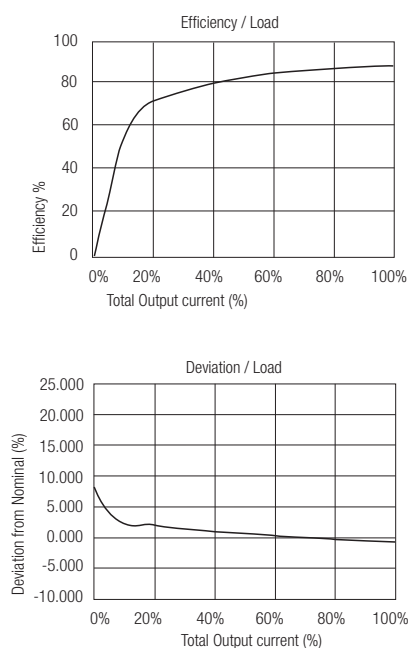
www.recom-electronic.com

Typical Characteristics

ROL-0505S

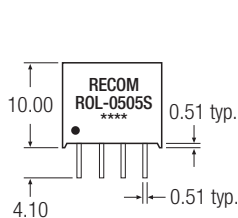


ROL-0515S

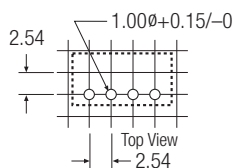
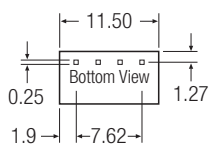


Package Style and Pinning (mm)

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	