

Features

Unregulated Converter

- Industry Standard Pinout
- 1kVDC or 2kVDC Isolation
- UL94V-O Package Material
- Optional Continuous Short Circuit Protected
- Fully Encapsulated
- Custom Solutions Available
- Efficiency to 85 %

Description

The RO DC/DC converters are typically used in general purpose 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 (%)
RO-xx3.3S	(H)	3.3, 5, 12, 15, 24	3.3	303	75
RO-xx05S	(H)	3.3, 5, 12, 15, 24	5	200	78-80
RO-xx09S	(H)	3.3, 5, 12, 15, 24	9	111	78-80
RO-xx12S	(H)	3.3, 5, 12, 15, 24	12	83	80-84
RO-xx15S	(H)	3.3, 5, 12, 15, 24	15	66	80-84
RO-xx24S	(H)	3.3, 5, 12, 15, 24	24	42	78-85

xx = Input Voltage (other input and output voltage combinations available on request)
 * add Suffix "P" for Continuous Short Circuit Protection, e.g. RO-0505S/P, RO-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 V_{in} typ.
Load Voltage Regulation (10% to 100% full load)	3.3V output type	20% max.	
	5V output type	15% max.	
	9V, 12V, 15V, 24V output types	10% max.	
Output Ripple and Noise (20MHz limited)			100mVp-p max.
Operating Frequency			50kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load			70% min. / 80% typ.
No Load Power Consumption			101mW min. / 126mW typ. / 220mW max.
Maximum Capacitive Load			33µF
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 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 10 ³ hours
(+85°C)		using MIL-HDBK 217F	200 x 10 ³ hours

ECONOLINE

DC/DC-Converter



1 Watt

SIP4

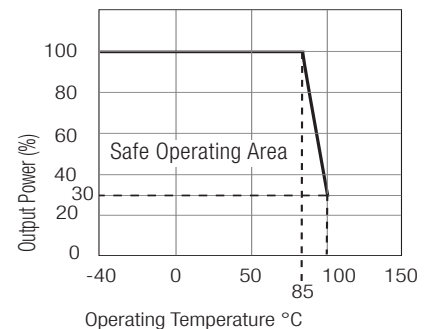
Single Output



EN-60950-1 Certified

RO

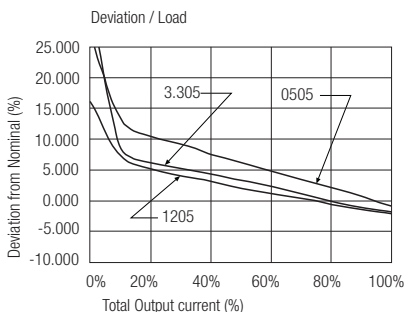
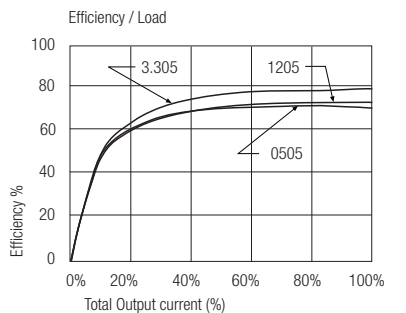
Derating-Graph (Ambient Temperature)



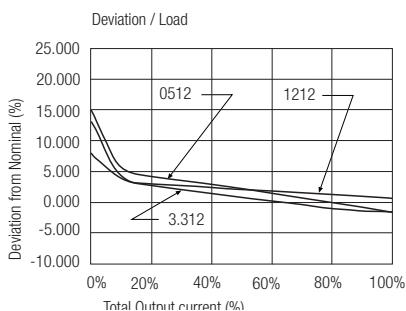
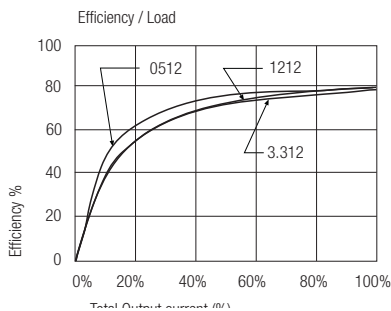
Refer to Application Notes

Typical Characteristics

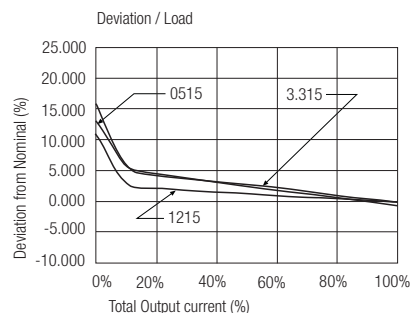
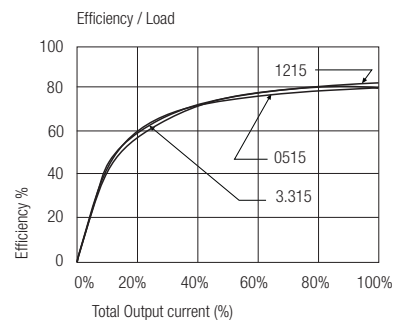
RO-xx05S



RO-xx12S



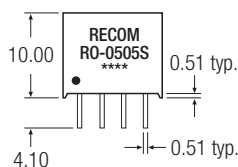
RO-xx15S



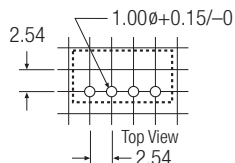
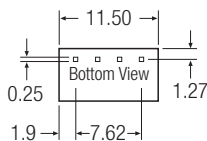
Package Style and Pinning (mm)

RO

4 PIN SIP Package



Recommended Footprint Details



RO Pin Connections

Pin #	Single
1	-Vin
2	+Vin
3	-Vout
4	+Vout
XX.X	± 0.5 mm
XX.XX	± 0.25 mm