

Features

Unregulated Converters

Rev.0

- Micro Size SIP4 Package
- 3kVDC Isolation
- Approved for Medical Applications
- Industry Standard Pinout
- Optional Continuous Short Circuit Protected
- UL94V-0 Package Material
- Efficiency to 85 %

ECONOLINE

DC/DC-Converter

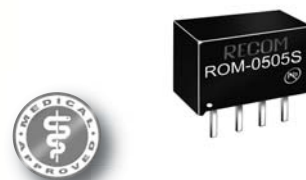
ROM Series

1 Watt

SIP4

Micro Size

Single Output



EN-60950-1 Certified
EN-60601-1 Certified

Description

The ROM Micro Size DC/DC converter has been designed for isolating or converting DC power rails where board height is at a premium. Although it has a micro-size 7.7mm package, it does not compromise on features and offers a high 3kVDC Isolation, a -40°C to +85°C operating temperature range and optional continuous short circuit protection.

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
ROM-xx05S	5, 12	5	200	70-78
ROM-xx12S	5, 12	12	83	78-82
ROM-xx15S	5, 12	15	66	80-84

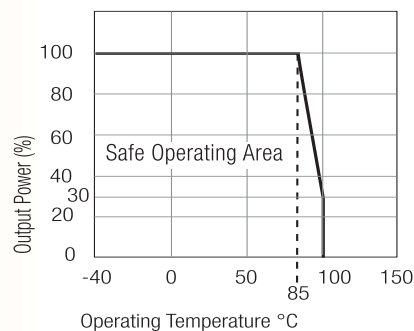
xx = Input Voltage (other input and output voltage combinations available on request)

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

Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

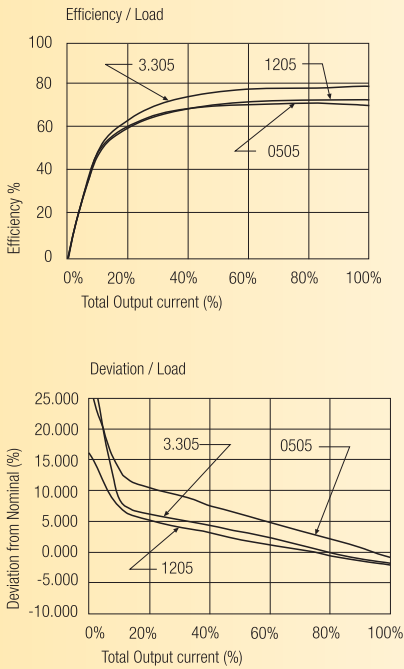
Input Voltage Range		$\pm 10\%$	
Output Voltage Accuracy		$\pm 5\%$	
Line Voltage Regulation		1.2%/1% of V_{in} typ.	
Load Voltage Regulation (10% to 100% full load)	5V output type 12V, 15V output types	15% max. 10% max.	
Output Ripple and Noise (20MHz limited)		100mVp-p max.	
Operating Frequency		50kHz 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		33 μF	
Isolation Voltage (tested for 1 second)		3000VDC min.	
Rated Working Voltage (long term isolation)		see Application Notes	
Isolation Capacitance		20pF min. / 75pF max.	
Isolation Resistance		15 $\text{G}\Omega$ min.	
Short Circuit Protection P-Suffix		1 Second 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		1g	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	977 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F	189 x 10 ³ hours

Derating-Graph (Ambient Temperature)

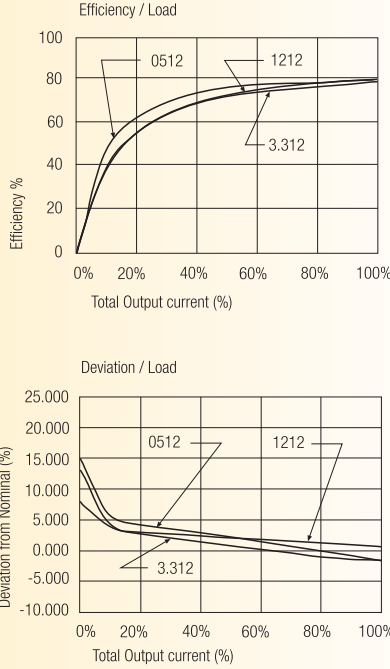


Typical Characteristics

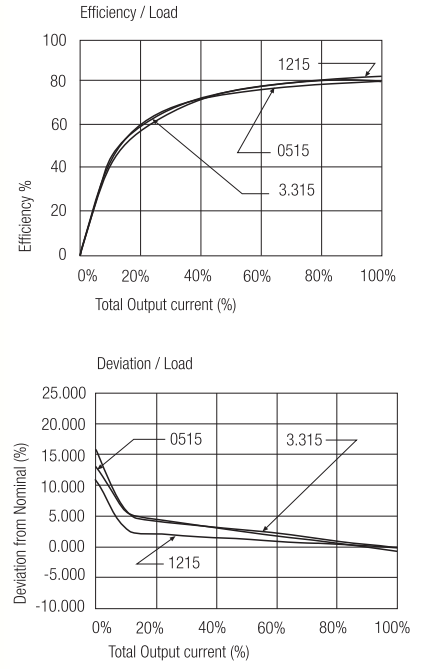
ROM-xx05S



ROM-xx12S

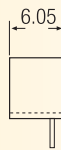
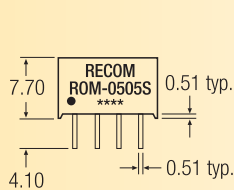


ROM-xx15S

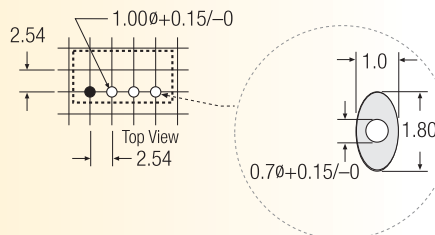
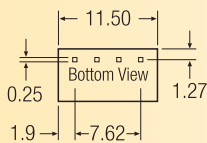


Package Style and Pinning (mm)

4 PIN SIP Micro Size Package



Recommended Footprint Details



R0 Pin Connections

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