

Features

Unregulated Converters

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

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 $+85^{\circ}\text{C}$ operating temperature range and optional continuous short circuit protection.

Selection Guide

Part Number SIP4 Micro Size Pack.	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load ⁽¹⁾
ROM-xx05S	3.3, 5, 12	5	200	70-78	1000 μF
ROM-xx12S	3.3, 5, 12	12	83	78-82	470 μF
ROM-xx15S	3.3, 5, 12	15	66	80-84	470 μF

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 Vin typ.	
Load Voltage Regulation	5V Output	15% max.
(10% to 100% full load)	12V, 15V Output	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.	
Minimum Load = 0%	Specifications valid for 10% minimum load only.	
Isolation Voltage	(tested for 1 second)	3000VDC
	(rated for 1 minute**)	1500VAC / 60Hz
Isolation Capacitance	20pF min. / 75pF max.	
Isolation Resistance	15 G Ω min.	
Short Circuit Protection	1 Second	
P-Suffix	Continuous	
Operating Temperature Range (free air convection)	-40°C to $+85^{\circ}\text{C}$ (see Graph)	
Storage Temperature Range	-55°C to $+125^{\circ}\text{C}$	
Relative Humidity	95% RH	
Package Weight	1g	
Packing Quantity	42 pcs per Tube	
MTBF (+25°C)	using MIL-HDBK 217F	977 x 10 ³ hours
(+85°C)	using MIL-HDBK 217F	189 x 10 ³ hours
Certifications		
CB Test Report	Report: US/15348/UL	IEC 60950-1:2005 2nd Ed.
UL General Safety	Report: E350805	UL 60950-1 2nd Ed.
EN General Safety	Report: SPCLVD1109103	EN60950-1:2006 + A12:2011
EN Medical Safety	Report: MDD1205098-4 + RM1205098-4	IEC/EN 60601-1 3rd Edition
	Medical Report + ISO14971 Risk Assessment	

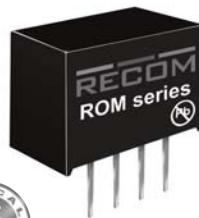
**Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.

ECONOLINE

DC/DC-Converter
with 3 year Warranty

RECOM

1 Watt SIP4 Micro Single Output

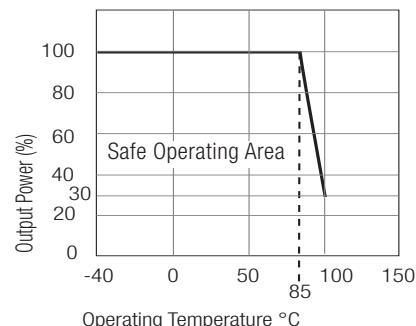


E-358085

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

ROM

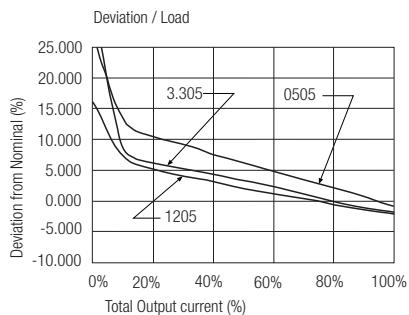
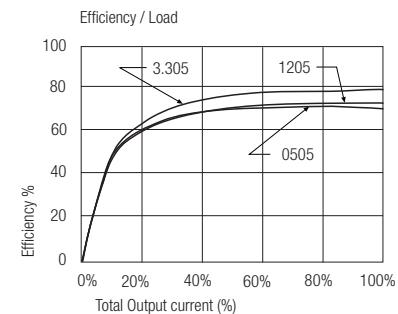
Derating-Graph (Ambient Temperature)



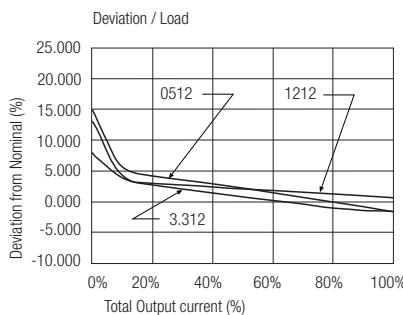
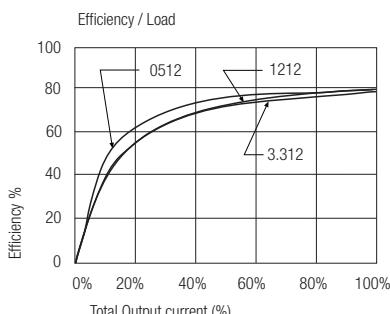
Refer to Application Notes

Typical Characteristics

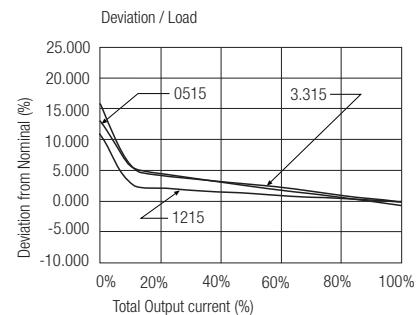
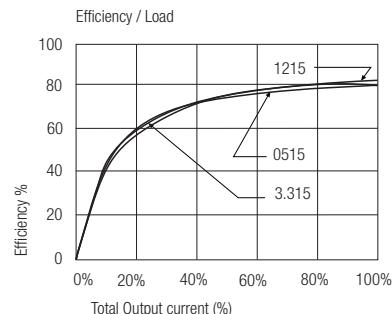
ROM-xx05S



ROM-xx12S



ROM-xx15S

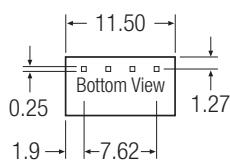
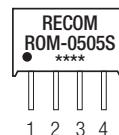
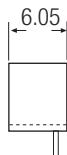
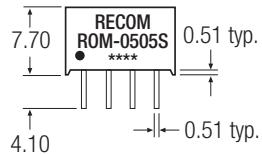


Notes

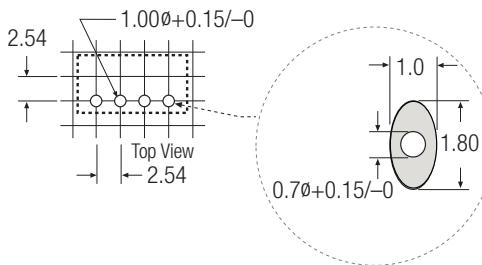
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

Package Style and Pinning (mm)

4 PIN SIP Micro Size Package



Recommended Footprint Details



RO Pin Connections

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

XX.XX \pm 0.5 mm
XX.XX \pm 0.25 mm

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