

Features

Unregulated Converters

- 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 %

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 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	1000µF
ROM-xx12S	3.3, 5, 12	12	83	78-82	470µF
ROM-xx15S	3.3, 5, 12	15	66	80-84	470µF

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°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	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 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			1g
Packing Quantity			42 pcs per Tube
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
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: SPLVD1109103	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

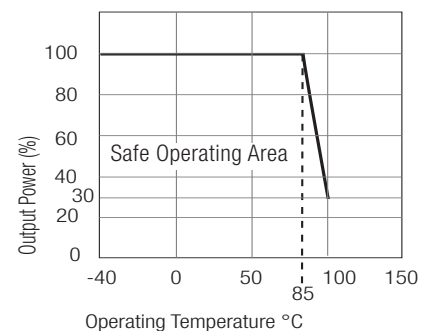
1 Watt SIP4 Micro Single Output



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

ROM

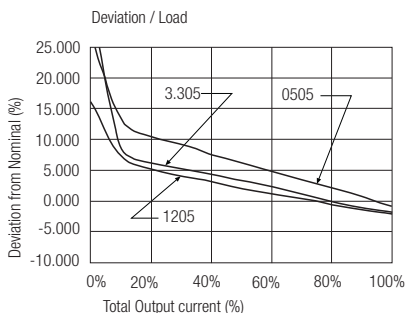
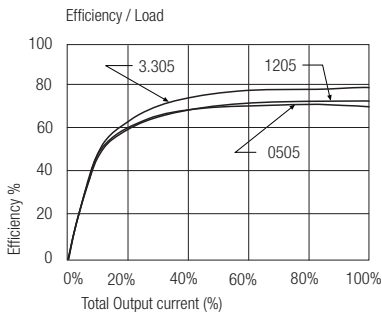
Derating-Graph (Ambient Temperature)



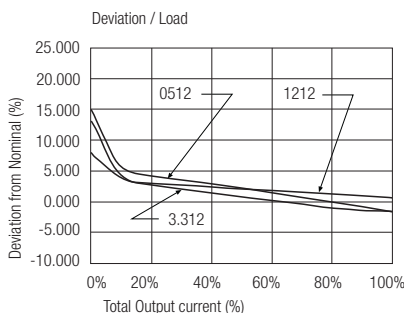
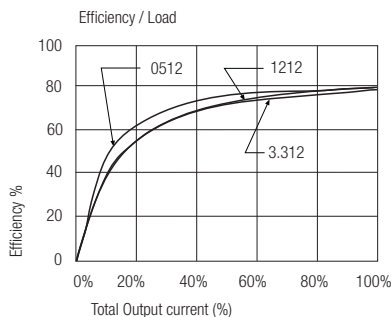
Refer to Application Notes

Typical Characteristics

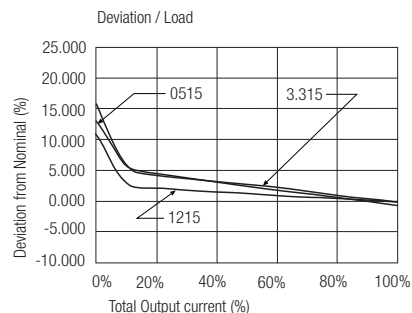
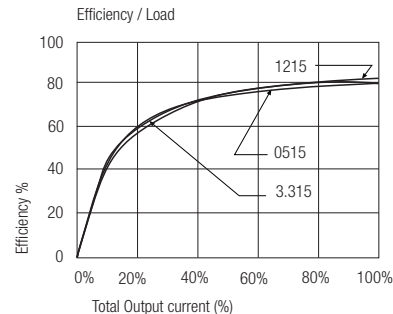
ROM-xx05S



ROM-xx12S



ROM-xx15S

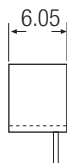
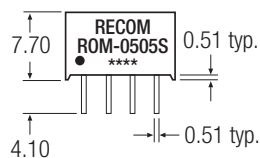


Notes

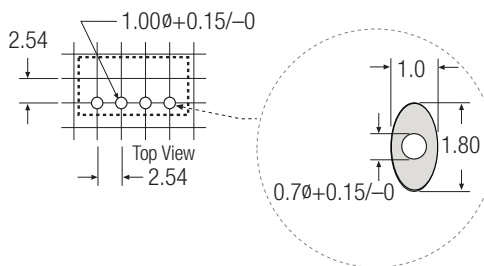
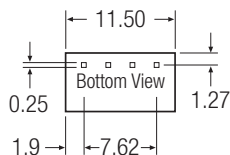
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

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.X ± 0.5 mm
XX.XX ± 0.25 mm

Mouser Electronics

Authorized Distributor

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RECOM:

[ROM-0505S/P](#) [ROM-0512S/P](#) [ROM-0515S](#) [ROM-0515S/P](#) [ROM-1205S/P](#) [ROM-1212S/P](#) [ROM-1215S](#) [ROM-1215S/P](#) [ROM-0505S](#) [ROM-0512S](#) [ROM-1205S](#) [ROM-1212S](#) [ROM-3.305S/P](#) [ROM-3.315S](#) [ROM-3.305S](#) [ROM-3.312S](#) [ROM-3.315S/P](#) [ROM-3.312S/P](#)