

Features

Unregulated Converters

- Micro Size SIP4 Package
- 3kVDC Isolation
- Industry Standard Pinout
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Cost Effective
- Efficiency to 85%

ECONOLINE

DC/DC-Converter

ROM Series

Selection Guide

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency
SIP4 Micro Size Pack.	(VDC)	(VDC)	(mA)	(%)
ROM-xx1.8S	1.8, 3.3, 5, 9, 12, 15, 24	1.8	550	70
ROM-xx3.3S	1.8, 3.3, 5, 9, 12, 15, 24	3.3	303	75
ROM-xx05S	1.8, 3.3, 5, 9, 12, 15, 24	5	200	70-78
ROM-xx09S	1.8, 3.3, 5, 9, 12, 15, 24	9	111	70-78
ROM-xx12S	1.8, 3.3, 5, 9, 12, 15, 24	12	83	78-82
ROM-xx15S	1.8, 3.3, 5, 9, 12, 15, 24	15	66	80-84
ROM-xx24S	1.8, 3.3, 5, 9, 12, 15, 24	24	41	74-85

xx = Input Voltage

* add Suffix "P" for Continuous Short Circuit Protection, e.g. ROM-051.8S/P

Description

The ROM Micro Size DC/DC converter has been designed for isolating or converting DC power rails respectively. It provides a small micro-size package, high efficiency, low output ripple, high 3kVDC Isolation and an extended -40°C to +85°C operating temperature range. State of the art packaging and automated manufacturing ensures cost-effectiveness and short lead times.

Specifications (Core Operating Area)

Input Voltage Range		±10%	
Output Voltage Accuracy		±5%	
Line Voltage Regulation		1.2%/1% of Vin typ.	
Load Voltage Regulation (10% to 100% full load)	1.8V, 3.3V output types	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.	
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 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	
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

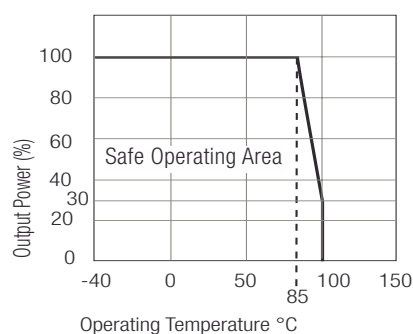
1 Watt SIP4 Micro Size Single Output



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

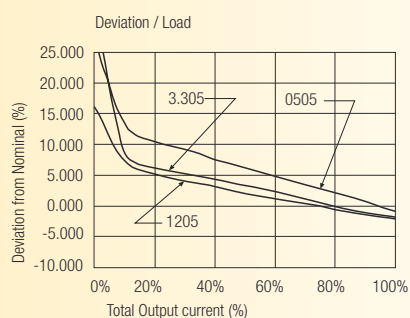
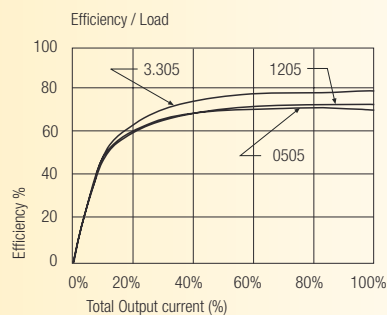


Derating-Graph (Ambient Temperature)

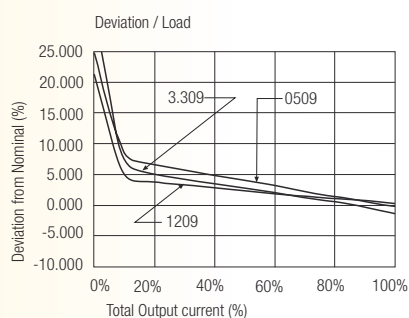
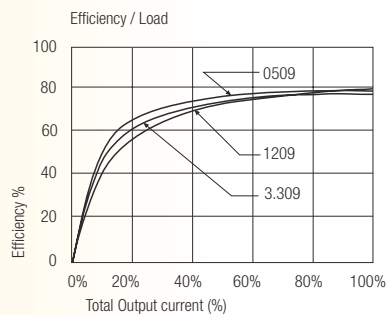


Typical Characteristics

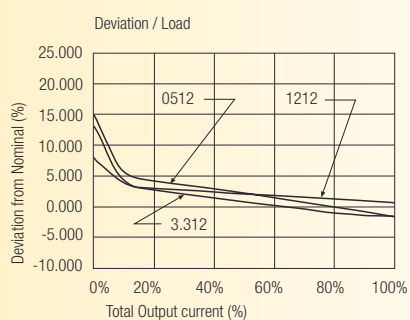
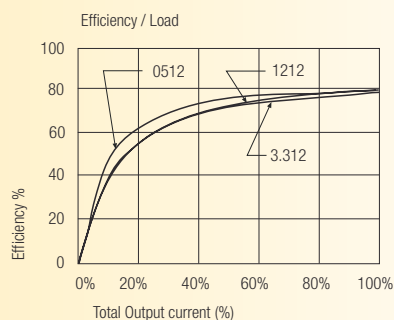
ROM-xx05S



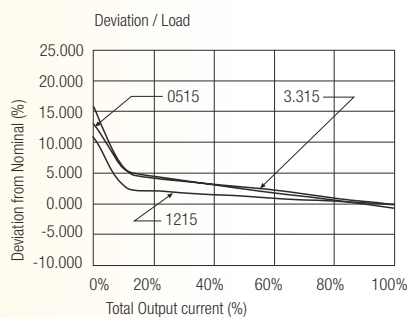
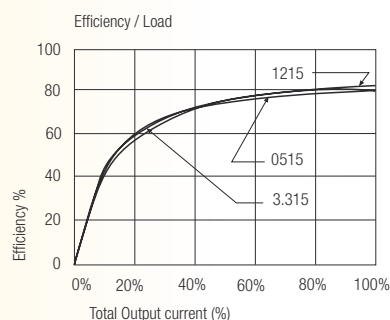
ROM-xx09S



ROM-xx12S



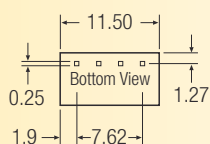
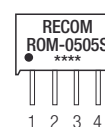
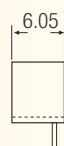
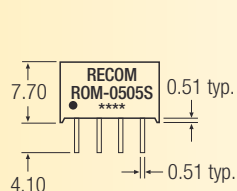
ROM-xx15S



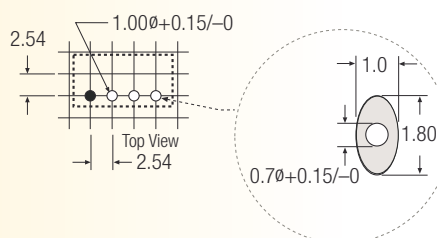
Package Style and Pinning (mm)

4 PIN SIP Micro Size Package

3rd angle
projection



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	