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

1 Watt SIP4 Micro Size Single Output

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

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

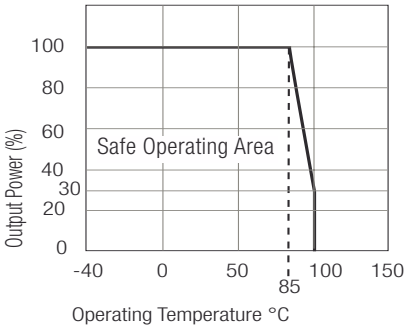
Description

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)

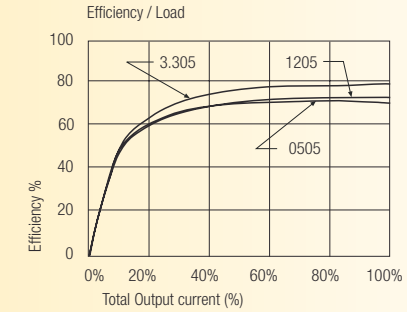
Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of Vin typ.
Load Voltage Regulation (10% to 100% full load)	1.8V, 3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Output Ripple and Noise (20MHz limited)		100mVp-p max.
Operating 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.
Isolation Voltage Rated Working Voltage	(tested for 1 second) (long term isolation)	3000VDC min. see Application Notes
Isolation Capacitance		20pF min. / 75pF max.
Isolation Resistance		15 GΩ 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

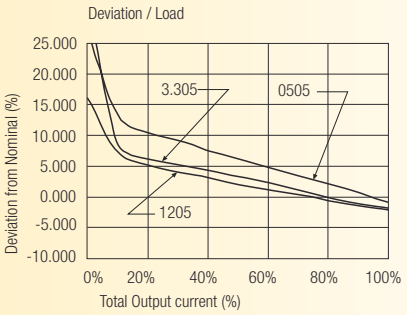
Derating-Graph
(Ambient Temperature)



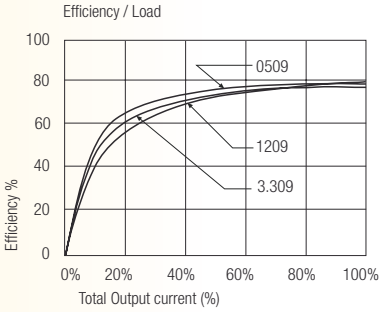
Typical Characteristics

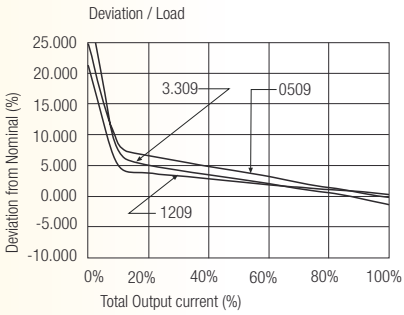
ROM-xx05S



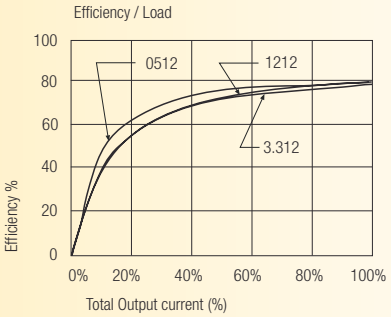


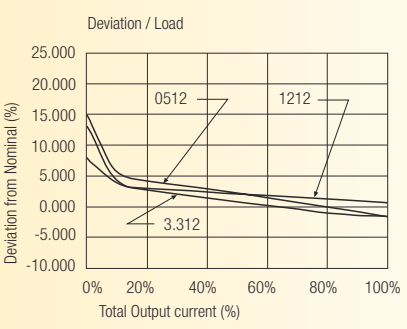
ROM-xx09S



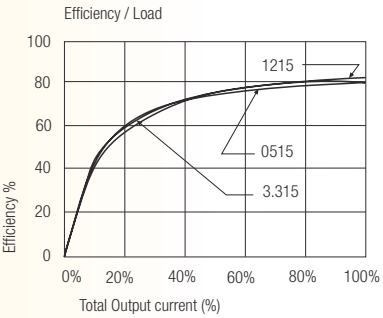


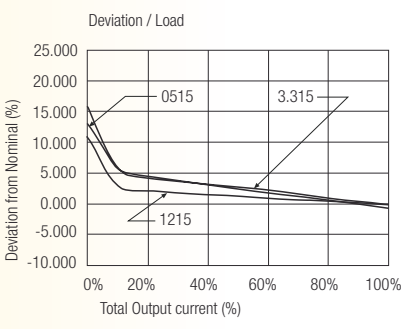
ROM-xx12S





ROM-xx15S

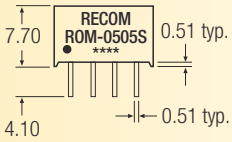


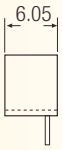


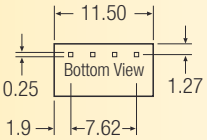
Package Style and Pinning (mm)

3rd angle projection

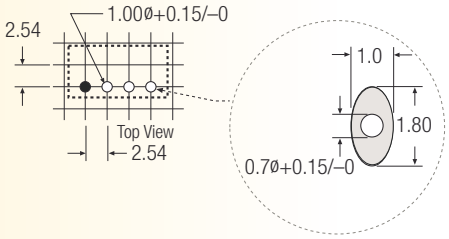
4 PIN SIP Micro Size Package







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