

Features

Unregulated Converter

- Single Output Rail
- Industry Standard Pinout
- 1kVDC or 2kVDC Isolation
- High Efficiency for Low Power Applications
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Fully Encapsulated
- Custom versions available
- Efficiency to 76%

Description

The RM series DC/DC converter has been designed for isolating or converting DC power rails with very light loads. Efficiencies are typically 10% higher than a comparable 0.5W or 1W converters run at the same low load.

Selection Guide

Part Number		Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SIP 4	(2kV)				
RM-xx3.3S	(H)	3.3, 5, 12, 15, 24	3.3	76	65-70
RM-xx05S	(H)	3.3, 5, 12, 15, 24	5	50	66-72
RM-xx09S	(H)	3.3, 5, 12, 15, 24	9	28	70-72
RM-xx12S	(H)	3.3, 5, 12, 15, 24	12	21	70-72
RM-xx15S	(H)	3.3, 5, 12, 15, 24	15	17	70-76

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

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

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 V _{in} typ.
Load Voltage Regulation (10% to 100% full load)	3.3V output types 5V output type 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Output Ripple and Noise (20MHz limited)		50mVp-p max.
Operating Frequency		50kHz min. / 90kHz typ. / 105kHz max.
Efficiency at Full Load		65% min. / 75% typ.
No Load Power Consumption		45mW min. / 75mW typ. / 155mW max.
Maximum Capacitive Load		22µF
Isolation Voltage	(tested for 1 second)	1000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Voltage	H-Suffix (tested for 1 second)	2000VDC min.
Rated Working Voltage	H-Suffix (long term isolation)	see Application Notes
Isolation Capacitance		25pF min. / 82pF max.
Isolation Resistance		10 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	RM types RL types	1.4g 1.8g
Packing Quantity		42 pcs per Tube
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+85°C)		using MIL-HDBK 217F

RM

ECONOLINE

DC/DC-Converter



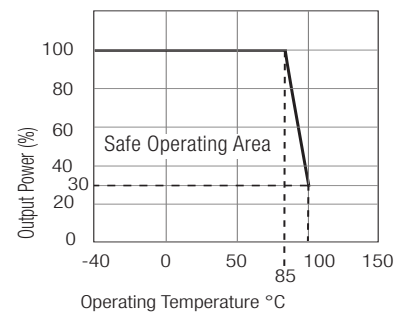
0.25 Watt SIP4 Single Output



EN-60950-1 Certified

RM

Derating-Graph (Ambient Temperature)

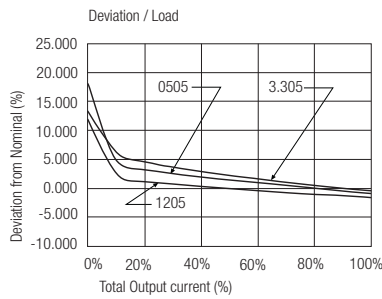
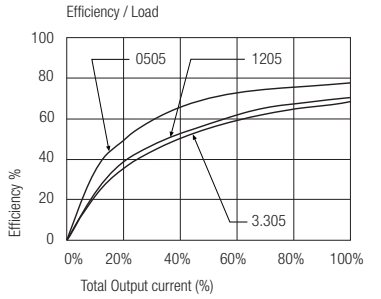


Refer to Application Notes

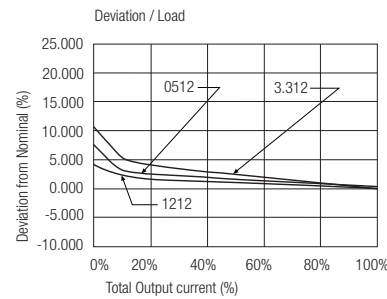
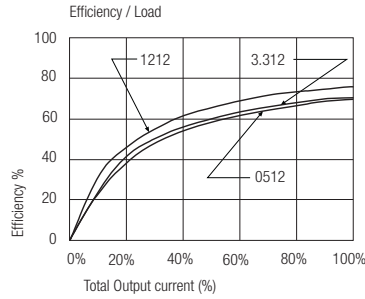
www.recom-electronic.com

Typical Characteristics

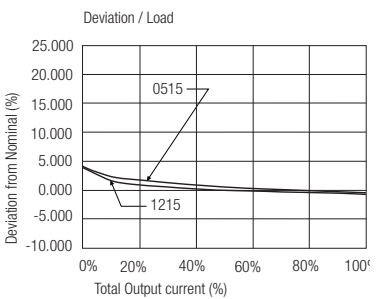
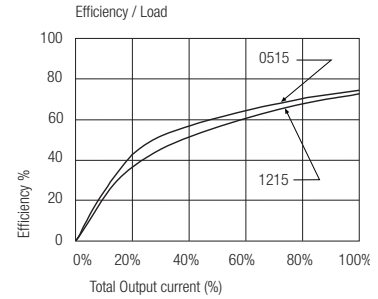
RM-xx05S



RM-xx12S

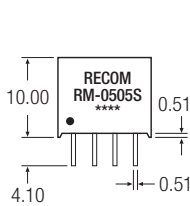


RM-xx15S

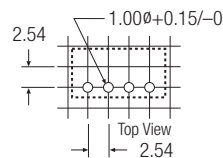
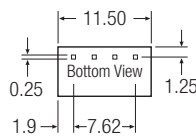


Package Style and Pinning (mm)

4 PIN SIP Package



Recommended Footprint Details



RM Pin Connections

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

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

RM