Features

Unregulated Converter

- Single Output Rail
- Industry Standard Pinout
- 1kVDC or 2kVDC Isolation
- High Efficiency for Low Power Applications
- UL94V-O 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 SIP 4	(2kV)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load ⁽¹⁾
RM-xx3.3S	(H)	3.3, 5, 12, 15, 24	3.3	76	65-70	1000μF
RM-xx05S	(H)	3.3, 5, 12, 15, 24	5	50	66-72	470µF
RM-xx09S	(H)	3.3, 5, 12, 15, 24	9	28	70-72	470µF
RM-xx12S	(H)	3.3, 5, 12, 15, 24	12	21	70-72	150µF
RM-xx15S	(H)	3.3, 5, 12, 15, 24	15	17	70-76	150µF

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

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		output types	20% max.	
(10% to 100% full load)		itput type	15% max.	
	12V,	15V, 24V output types	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.	
Minimum Load = 0%		Specifications valid for 10% minimum load only.		
Isolation Voltage		d for 1 second)	1000VDC	
	(rated	for 1 minute**)	500VAC / 60Hz	
Isolation Voltage H-Suffix	(teste	d for 1 second)	2000VDC	
H-Suffix	Suffix (rated for 1 minute**)		1400VAC / 60Hz	
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		/pes	1.4g	
	RL ty	rpes	1.8g	
Packing Quantity			42 pcs per Tube	
MTBF (+25°C) Detailed Information se		using MIL-HDBK 217F	1327 x 10 ³ hours	
(+85°C) ∫ Application Notes chap	oter "MTBF"	using MIL-HDBK 217F	302 x 10 ³ hours	

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ECONOLINE

DC/DC-Converter with 3 year Warranty



O.25 Watt SIP4 Single Output





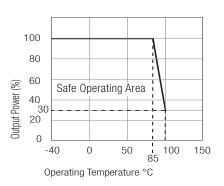


EN-60950-1 Certified UL-60950-1 Certified IEC/EN-60601-1 Certified* *(/Hsuffix)

RM

Derating-Graph

(Ambient Temperature)



Refer to Application Notes

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

^{**}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

RM Series

DC/DC-Converter

Specifications (measured at $T_A = 25$ °C, nominal input voltage, full load and after warm-up)

Certifications

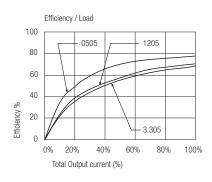
 UL General Safety
 Report: E358085
 UL 60950-1, 2nd Edition

 EN General Safety
 Report: SPCLVD1109103
 EN 60950-1:2006 + A12:2011

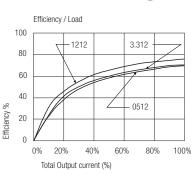
EN Medical Safety Report: MDD1112018 + RM1112018 IEC/EN 60601-1 3rd Edition Medical Report + IS014971 Risk Assessment

Typical Characteristics

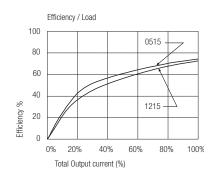
RM-xx05S

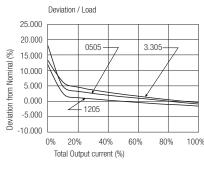


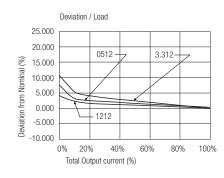
RM-xx12S

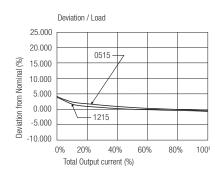


RM-xx15S





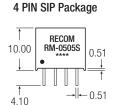




Notes Note 1

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

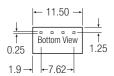
Package Style and Pinning (mm)

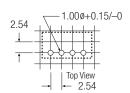






Recommended Footprint Details





RM Pin Connections

Pin #	Single		
1	–Vin		
2	+Vin		
3	-Vout		
4	+Vout		
XX.X ± 0).5 mm		
XX.XX + ().25 mm		

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