

Features

Unregulated Converter

- 1 : 1 Input Range
- 0.25W SIP4 Package
- Efficiency up to 82%
- 1kVDC and 2kVDC Isolation Option
- Operating Temperature from -40°C to +100°C

Description

The RM/E series DC/DC converter has been designed to offer exceptionally high efficiency, low quiescent current and an extended operating temperature range. Uses include battery powered supplies, high efficiency designs or high temperature applications.

Selection Guide

Part Number SMD	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	Max Capacitive Load ^{(1)**}
RM-3.305S/E*	3.3	5	50	80	1000µF
RM-0505S/E*	5	5	50	82	1000µF
RM-1205S/E*	12	5	50	78	1000µF

Other input and output voltage combinations available on request

*add Suffix „H“ for 2 kVDC Isolation, e.g. RM-3.305S/HE

Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage full load and after warm-up)

Input Voltage Range	$\pm 10\%$ max.	
Voltage set accuracy	100% Load/nominal Vin	-2% typ. / $\pm 5\%$ max.
Line Regulation	Low Line to High Line @ max. Load	1,2% typ.
Load Regulation (10% to 100% Load)	4% typ. / 10% max.	
Ripple & Noise @ 20MHz BW	RM-3.305S/E others	35mVp-p typ. / 60mVp-p max. 35mVp-p typ. / 50mVp-p max.
Efficiency	100% Load	70% min.
Operating Temperature	-40°C to +100°C	
Storage Temperature	-55°C to +125°C	
Isolation Test Voltage (Tested for 1 second)	RM-xx05S/E RM-xx05S/HE	1000VDC 2000VDC
Isolation Capacitance	75PF max.	
Isolation Resistance	Viso = 500V	10 GΩ min.
Humidity	95% max.	
Operating Frequency	Vin (nom.)	20kHz min. / 70 kHz max.
Short-Circuit Protection	1 Second	
MTBF	Using MIL-HDBK 217F (+100°C) Using MIL-HDBK 217F (+25°C)	1352 x 10 ³ hours 4494 x 10 ³ hours
Detailed Information see Application Notes chapter „MTBF“		
Weight	1.4 g	

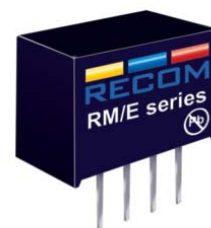
ECONOLINE

DC/DC-Converter

with 3 year Warranty

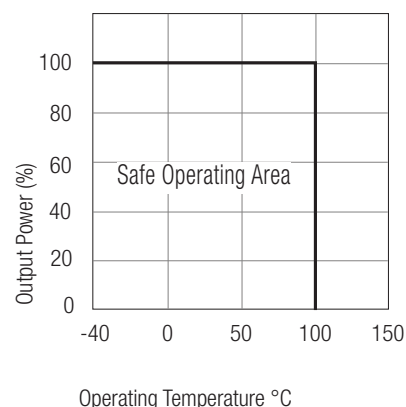


0.25 Watt SIP4 Single Output



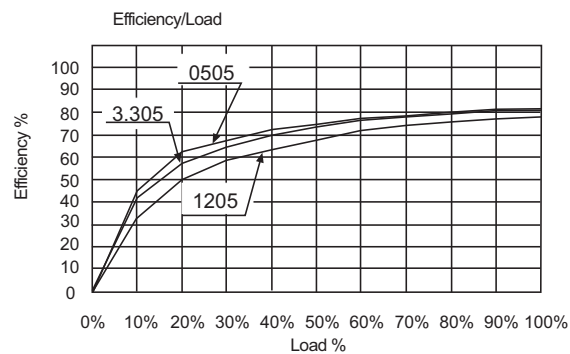
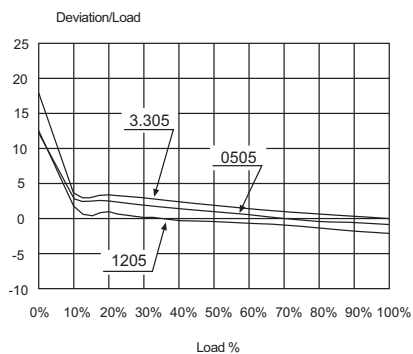
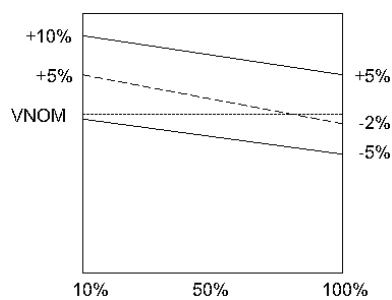
RM/E

Derating-Graph (Ambient Temperature)



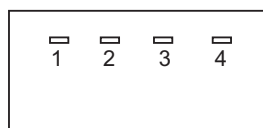
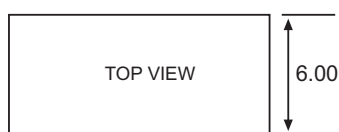
Refer to Application Notes

Typical Characteristics

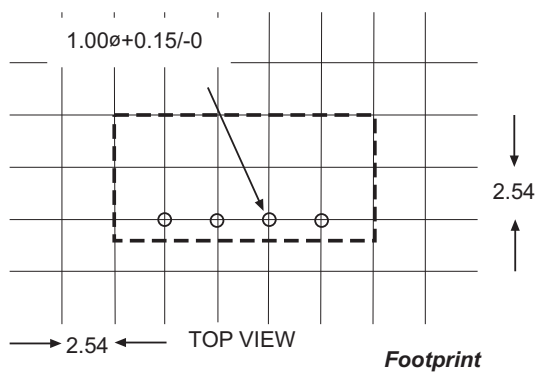
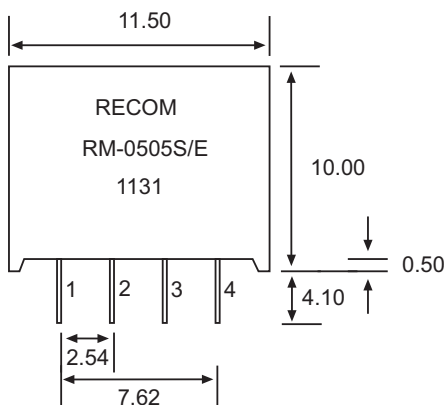


+Vout and -Vout load current (%)

Package Style and Pinning (mm)



BOTTOM VIEW



Pin Connections

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

UNIT: mm
TOL.: ± 0.25 mm