

# 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 <sup>(1)</sup> **
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<sub>A</sub> = 25°C, nominal input voltage full load and after warm-up)

Input Voltage Range		±10% max.
Voltage set accuracy	100% Load/nominal Vin	-2% typ. / ±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	35mVp-p typ. / 60mVp-p max.
	others	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 Voltage	(tested for 1 second)	1000VDC
	(rated for 1 minute**)	500VAC / 60Hz
Isolation Voltage	H-Suffix (tested for 1 second)	2000VDC
	H-Suffix (rated for 1 minute**)	1000VAC / 60 Hz
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)	1352 x 10 <sup>3</sup> hours
	Using MIL-HDBK 217F (+25°C)	4494 x 10 <sup>3</sup> hours
<i>Detailed Information see Application Notes chapter „MTBF“</i>		
Weight		1.4 g

\*\*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.

#### Notes

Note1: Maximum capacitive load is defined as the capacitive load that will allow start up in under 1second without damage to the converter.

# ECONOLINE

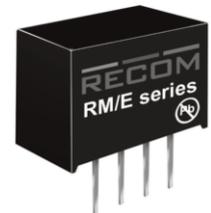
## DC/DC-Converter

with 3 year Warranty

# RECOM

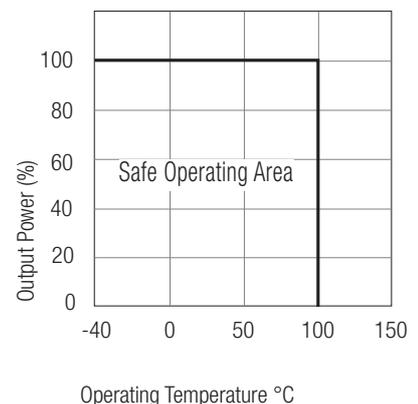
## 0.25 Watt SIP4

## Single Output



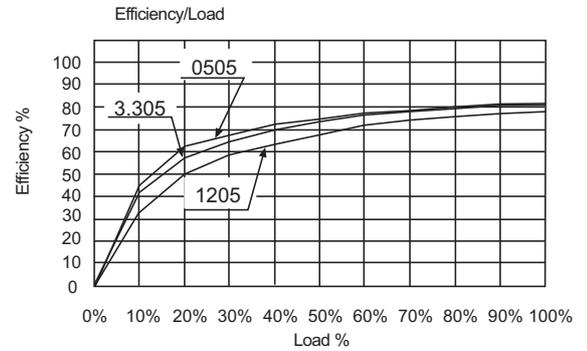
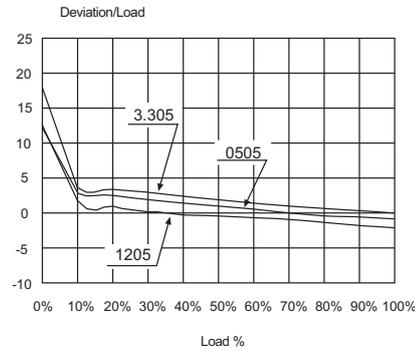
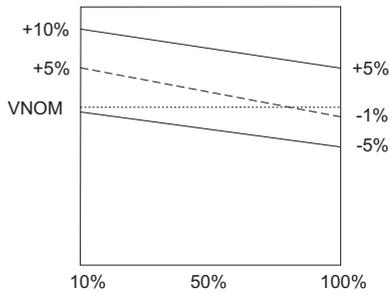
# RM/E

## Derating-Graph (Ambient Temperature)



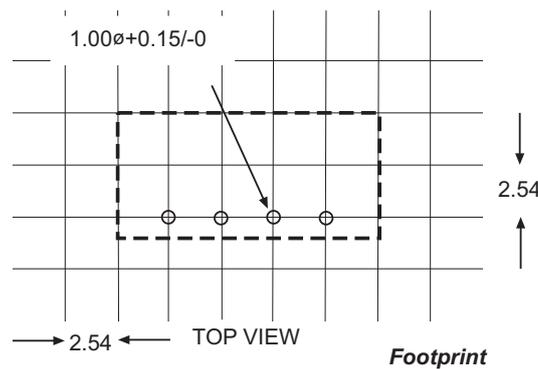
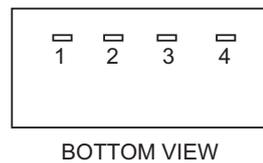
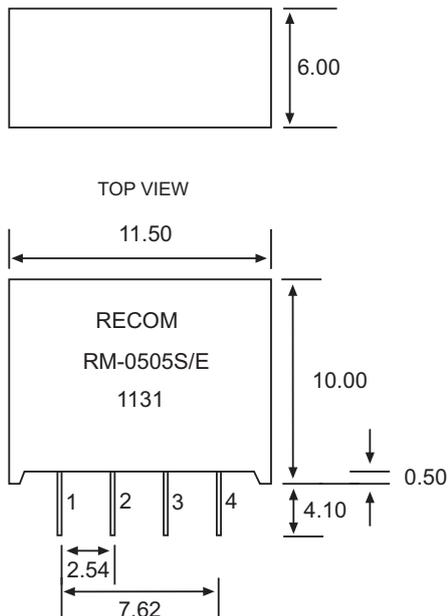
Refer to Application Notes

## Typical Characteristics



+Vout and -Vout load current (%)

## Package Style and Pinning (mm)



### Pin Connections

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

UNIT: mm  
TOL.: ± 0.25 mm

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## RECOM:

[RM-0505S/E](#) [RM-1205S/E](#) [RM-3.305S/E](#) [RM-3.305S/EH](#) [RM-1205S/EH](#) [RM-0505S/EH](#)