Features

Unregulated Converter

- 1:1 Input Range
- 0.25W SIP7 Package
- Efficiency up to 82%
- 1kVDC and 2kVDC Isolation Option
- Operating Temperature from -40°C to +100°C

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

0.25 Watt SIP7 Isolated Single Output

RoHS 2011/65/EU 6/6

RBL/E

Description

The RBL/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]**
RBL-3.305S/E*	3.3	5	50	80	1000µF
RBL-0505S/E*	5	5	50	82	1000µF
RBL-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. RBL-3.305/EH

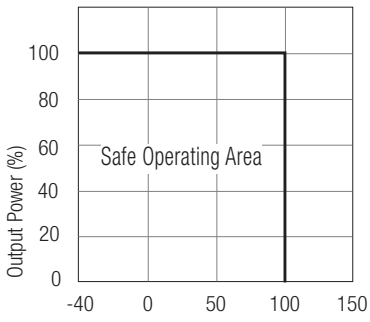
Specifications (measured at T_A = 25°C, nominal input voltage, full load and after warm-up)

Input Voltage Range		±10% max.
Voltage set accuracy	100% Load/nominal Vin	-2% typ. / ±5% max.
Line Regulation		1.2% typ. / 1% of Vin typ.
Load Regulation	(10% to 100% Load)	4% typ. / 10% max.
Ripple & Noise @ 20MHz BW		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 a minute**)	500VAC / 60Hz
Isolation Voltage	H-Suffix (tested for 1 second)	2000VDC
	H-Suffix (rated for a minute**)	1000VAC / 60Hz
Isolation Capacitance		75pF max.
Isolation Resistance		10 GΩ min.
Humidity		95% RH
Operating Frequency	Vin (nom.)	20kHz min. / 70 kHz max.
Quiescent Current (0% Load)	3.3VDC	11.2mA typ.
	5VDC	6mA typ.
	12VDC	4.2mA typ.
Short-Circuit Protection		1 Second
Weight		2.2 g
Packing Quantity		25pcs per tube
MTBF	Using MIL-HDBK 217F (+100°C)	1352 x 10^3 hours
	Using MIL-HDBK 217F (+25°C)	4494 x 10^3 hours

Detailed Information see Application Notes chapter „MTBF“

**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.

Derating-Graph (Ambient Temperature)

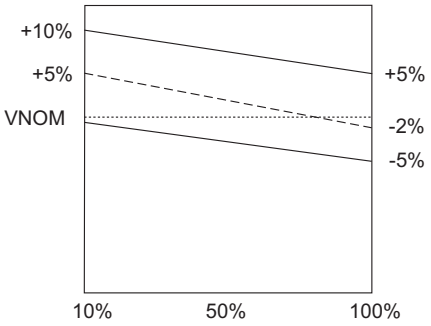


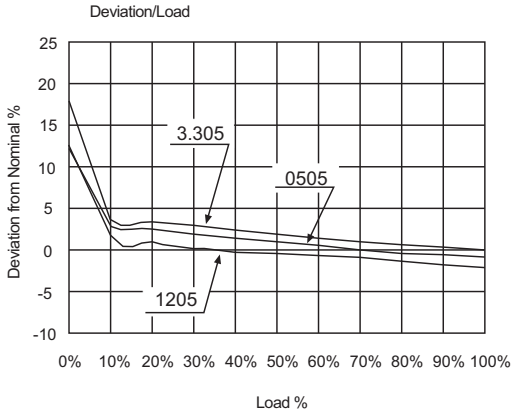
Refer to Application Notes

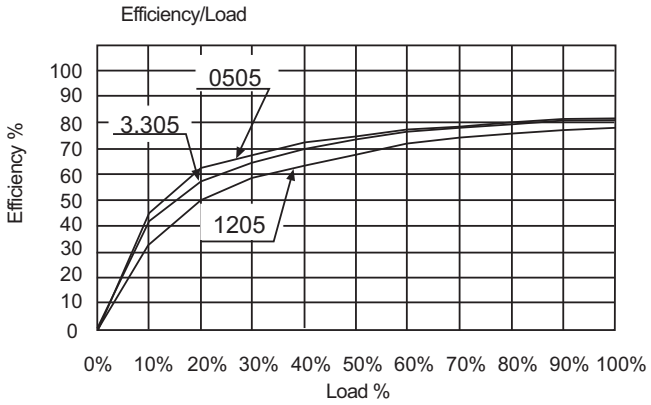
Notes

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

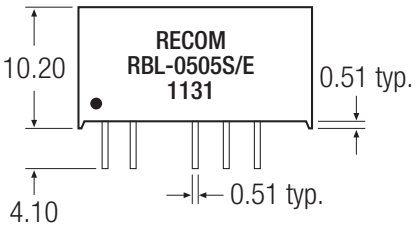
Typical Characteristics

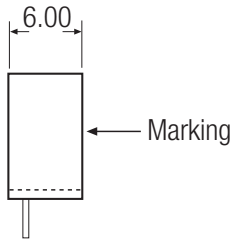


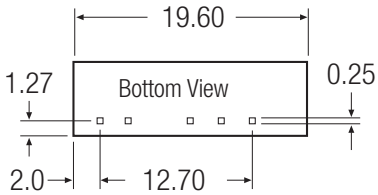




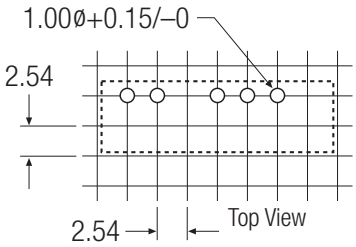
Package Style and Pinning (mm)







Recommended Footprint



Pin Connections

Pin #	Function
1	+Vin
2	-Vin
4	NC
5	-Vout
6	+Vout

NC= No Connection

UNIT: mm
TOL.: ± 0.25 mm

RBL/E

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications.
The Buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or damage property.