Features

Unregulated Converters

- High Efficiency up to 84% Full Load
- Low Deviation (10% ~ 100% Load)
- 1kVDC and 2kVDC Isolation Option
- Safety Certified
- -40°C to +100°C Operating Temperature Range
- 1W SIP7 Package

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

Description

The RB/E series is an unregulated DC/DC converter in standard SIP7 package style. This series has been designed to offer exceptionally high efficiency at low loads, an extended operating temperature range and low deviation (10% to 100%). Uses include applications with restricted energy budget and industrial applications where a high efficiency level is required.

1 Watt SIP7 Single Output



RoHS 2011/65/EU 6/6

E358085

EN-60950-1 Certified
UL-60950-1 Certified

RB/E

Selection Guide

Part Number SMD	Isolation Voltage (kVDC)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (typ.)	Capacitive Load (max.) [1]
RB-3.305S/E*	1	3.3	5	200	83%	2200µF
RB-0505S/E*	1	5	5	200	84%	2200µF
RB-1205S/E*	1	12	5	200	84%	2200µF
RB-2405S/E*	1	24	5	200	81%	2200µF

* add Suffix "/H" for 2kVDC Isolation Voltage - e.g. RB-3.305S/EH
* add Suffix "/P" for Continuous Short Protection - e.g. RB-3.305S/EHP, RB-3.305S/EP

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

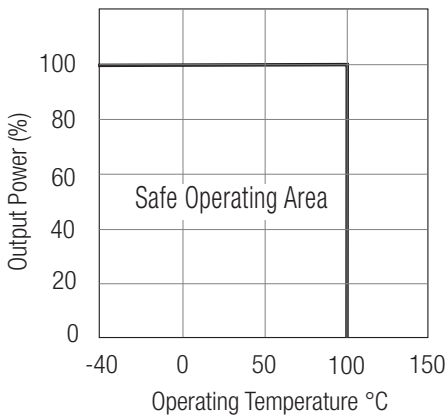
Input Voltage Range			±10%
Output Voltage Accuracy			±5% max.
Line Voltage Regulation		low line to high line at full load	1.2% max.
Load Voltage Regulation		Load Deviation 10% to 100%	12% typ.
Output Ripple and Noise (20MHz BW)			50mVp-p typ., 100mVp-p max.
Operating Frequency (Vin=nominal input)			20kHz min. / 90kHz max.
Efficiency			see Selection Guide
Minimum Load = 0%		Specifications valid for 10% minimum load only	
Isolation Voltage		(tested for 1 second)	1000 VDC
		(rated for 1 minute**)	500VAC / 60Hz
Isolation Voltage	H-Suffix	(tested for 1 second)	2000VDC
	H-Suffix	(rated for 1 minute**)	1000VAC / 60Hz
Isolation Capacitance			75pF max.
Isolation Resistance		(Viso=500V)	10GΩ min.
Short-Circuit Protection			1 second
Operating Temperature Range			-40°C to +100°C
Storage Temperature			-55°C to +125°C
Relative Humidity			95% RH
Package Weight			2.2g
MTBF (+25°C) } *Detailed Information see*		using MIL-HDBK 217F	3459 x 10^3 hours
MTBF (+100°C) } *Application Notes chapter "MTBF"*		using MIL-HDBK 217F	756 x 10^3 hours

**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

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.

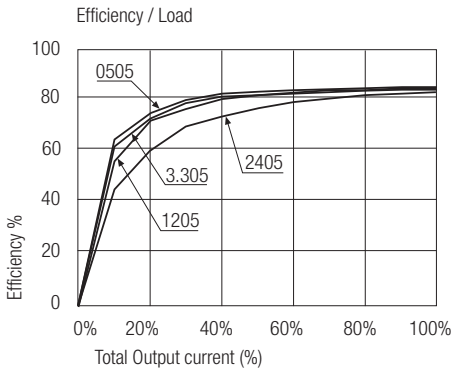
Derating-Graph
(Ambient Temperature)

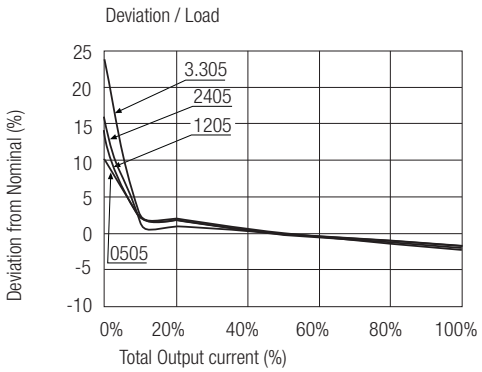


Refer to Application Notes

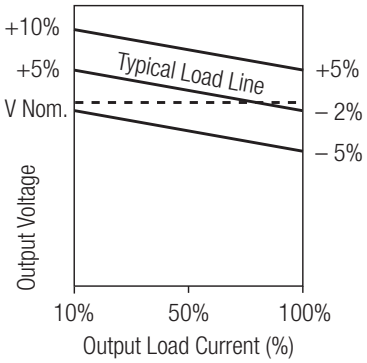
Typical Characteristics

RB-xx05S/E



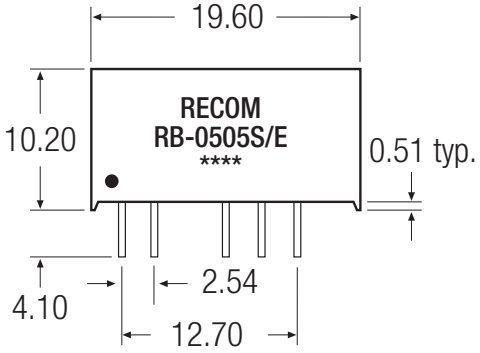


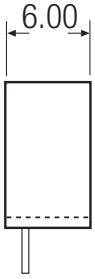
Tolerance Envelope



RB/E

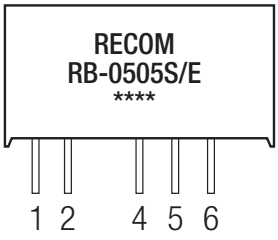
Package Style and Pinning

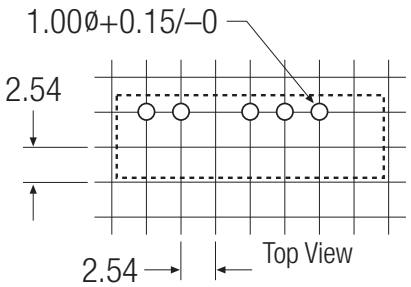




Pin Connections	Function
Pin #	5 Pins
1	+Vin
2	-Vin
4	NC
5	-Vout
6	+Vout

NC = No Internal Connection





Unit: mm
Tolerance: ± 0.25 mm

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