

Features

Unregulated Converter

- Industry Standard Pinout
- 1kVDC or 2kVDC Isolation
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Fully Encapsulated
- Custom Solutions Available
- Efficiency to 85 %

Description

The RE DC/DC converters are typically used in general purpose power isolation and voltage matching applications, and feature a full industrial operating temperature range of -40°C to +85°C without derating.

Selection Guide

Part Number SIP 7	(2kV)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max Capacitive Load ⁽¹⁾
RE-xx3.3S	(H)	3.3, 5, 12, 15, 24	3.3	303	75	2200µF
RE-xx05S	(H)	3.3, 5, 12, 15, 24	5	200	78-80	1000µF
RE-xx09S	(H)	3.3, 5, 12, 15, 24	9	111	78-80	1000µF
RE-xx12S	(H)	3.3, 5, 12, 15, 24	12	83	80-84	470µF
RE-xx15S	(H)	3.3, 5, 12, 15, 24	15	66	80-84	470µF
RE-xx24S	(H)	3.3, 5, 12, 15, 24	24	42	78-85	220µF

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

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RE-0505S/P, RE-0505S/HP

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	3.3V output type	20% max.
(10% to 100% full load)	5V output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Output Ripple and Noise (20MHz limited)		100mVp-p max.
Operating Frequency		50kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load		70% min. / 80% typ.
Minimum Load = 0%	Specifications valid for 10% minimum load only.	
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 / 60Hz
Isolation Capacitance		20pF min. / 75pF 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		2.2g
Packing Quantity		25 pcs per Tube
MTBF (+25°C)	Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 992 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F 145 x 10 ³ hours

continued on next page

**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

DC/DC-Converter

with 3 year Warranty

RECOM

1 Watt

SIP7

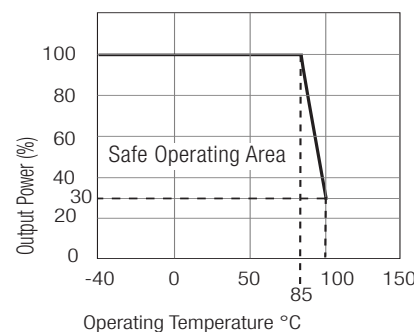
Single Output



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

RE

Derating-Graph (Ambient Temperature)



Refer to Application Notes

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

Certifications

CB Test Report

Report: US/15348/UL

IEC 60950-1:2005 2nd Edition

UL General Safety

Report: E358085

UL 60950-1 2nd Edition

EN General Safety

Report: SPCLVD1109103

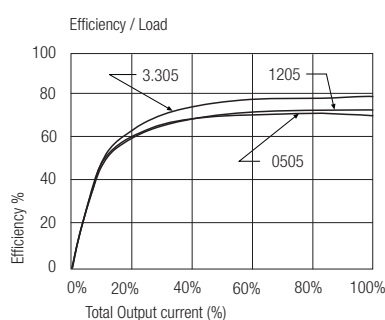
EN60950-1:2006 + A12:2011

Notes

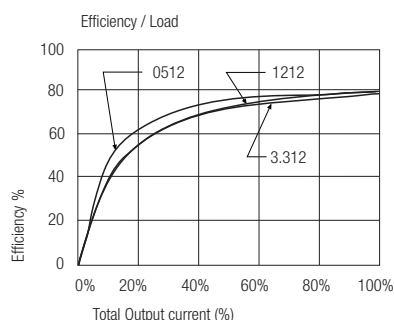
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

Typical Characteristics

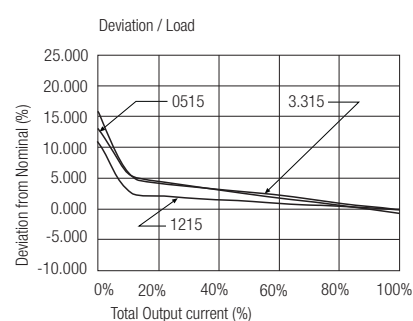
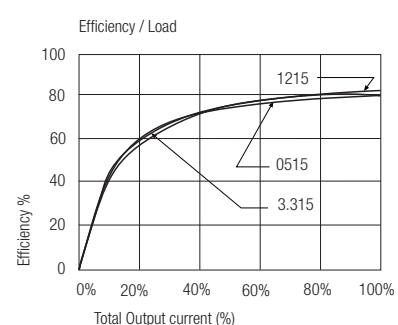
RE-xx05S



RE-xx12S

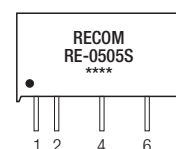
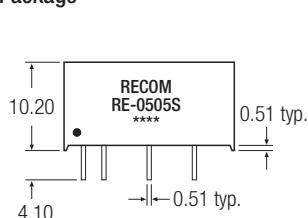


RE-xx15S

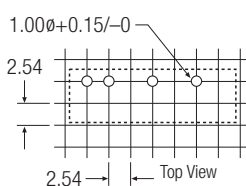
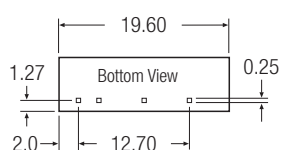


Package Style and Pinning (mm)

7 PIN SIP Package



Recommended Footprint Details



RE Pin Connections

Pin #	Single
1	+Vin
2	-Vin
4	-Vout
6	+Vout
XX.X	$\pm 0.5 \text{ mm}$
XX.XX	$\pm 0.25 \text{ mm}$

The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.