

# Features

## Unregulated Converters

- Dual Output from a Single Input Rail
- Input/Output Isolation 1kVDC or 2kVDC
- Output/Output Isolation 1kVDC
- Power Sharing on Outputs
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- No External Components Required
- Efficiency to 85 %

### Description

The RUZ DC/DC converter offers two independent isolated outputs. Typical applications include multiple channel circuits where inter-channel isolation is also required. The /H option offers 2kVDC isolation between input and outputs. The /P option is with continuous short circuit protection on either or both outputs.

### Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (V1VDC)	Output Voltage (V2VDC)	Output Current (mA)	Efficiency (%)
RUZ-050505	5	5	5	200/200	70

xx = Input Voltage. Other input and output voltage combinations available on request.

\* add Suffix "P" for Continuous Short Circuit Protection, e.g. RUZ-050505/P, RUZ-050505/HP

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

Input Voltage Range		$\pm 10\%$	
Output Voltage Accuracy		$\pm 5\%$	
Line Voltage Regulation		1.2%/1% of $V_{in}$ typ.	
Load Voltage Regulation ((10% to 100% full load)		15% max.	
Output Ripple and Noise (20MHz limited)		150mVp-p max.	
Operating Frequency		20kHz min. / 50kHz typ. / 85kHz max.	
Efficiency at Full Load		70% min. / 80% typ.	
No Load Power Consumption		163mW min. / 223mW typ. / 350mW max.	
Maximum Capacitive Load		33 $\mu\text{F}$ + 33 $\mu\text{F}$	
Isolation Voltage (tested for 1 second)		Input/output 1000VDC min. Output/output 1000VDC min.	
Rated Working Voltage (long term isolation)		see Application Notes	
Isolation Voltage (tested for 1 second)	H-suffix	Input/output 2000VDC min. Output/output 1000VDC min.	
Rated Working Voltage (long term isolation)	H-suffix	see Application Notes	
Isolation Capacitance		40pF min. / 120pF max.	
Isolation Resistance		10 G $\Omega$ 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		2.8g	
Packing Quantity		25 pcs per Tube	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	988 x 10 <sup>3</sup> hours
(+85°C)		using MIL-HDBK 217F	135 x 10 <sup>3</sup> hours

**ECONOLINE**  
DC/DC-Converter

**RECOM**

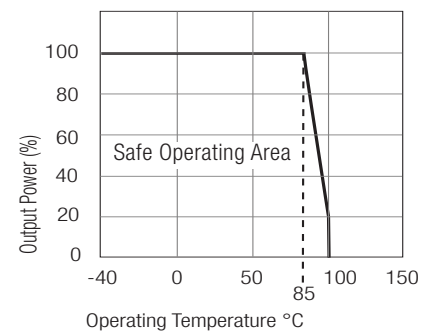
**2 Watt**  
**SIP7**  
**Isolated**  
**Dual Output**



**EN-60950-1 Certified**

**RUZ**

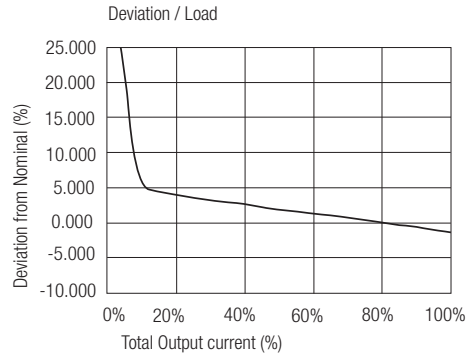
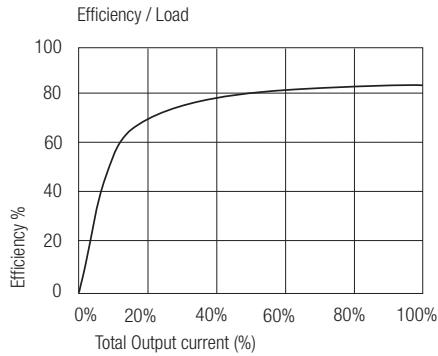
## Derating-Graph (Ambient Temperature)



**Refer to Application Notes**

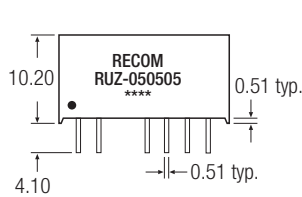
[www.recom-electronic.com](http://www.recom-electronic.com)

## Typical Characteristics

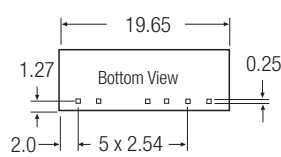
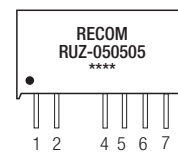


## Package Style and Pinning (mm)

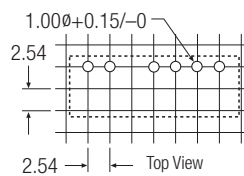
### 7 PIN SIP Package



### Dual Independent Outputs



### Recommended Footprint Details



### Pin Connections

Pin #	Single
1	+Vin
2	-Vin
4	+Vout 1
5	-Vout 1
6	+Vout 2
7	-Vout 2

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

## Typical Application

