

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%

ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

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 (%)	Max Capacitive Load ⁽¹⁾
SIP 7 2kV	5	5	5	200/200	70	470µF/470µF

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 Vin 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.	
Minimum Load = 0%	Specifications valid for 10% minimum load only.	
Isolation Voltage	(tested for 1 second)	1000VDC
Input/Output and Output/Output	(rated for 1 minute**)	3200VAC / 60Hz
Isolation Voltage	H-suffix	2000VDC
Input/Output	H-suffix	1000VAC / 60Hz
Output/Output		1000VDC
Isolation Capacitance	40pF min. / 120pF 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	2.8g	
Packing Quantity	25 pcs per Tube	
MTBF (+25°C)	Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+85°C)		988 x 10 ³ hours
		using MIL-HDBK 217F
		135 x 10 ³ hours

Certifications

EN General Safety

Report: SPCLVD1109103

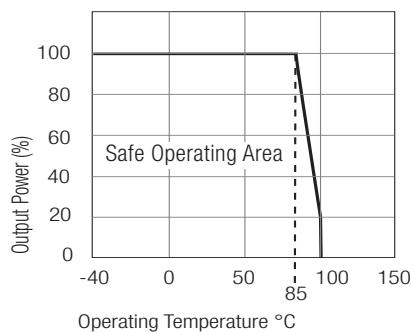
EN60950-1:2006 + A12:2011



EN-60950-1 Certified

RUZ

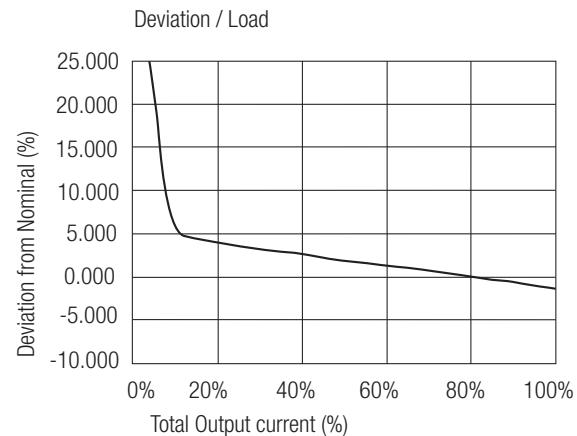
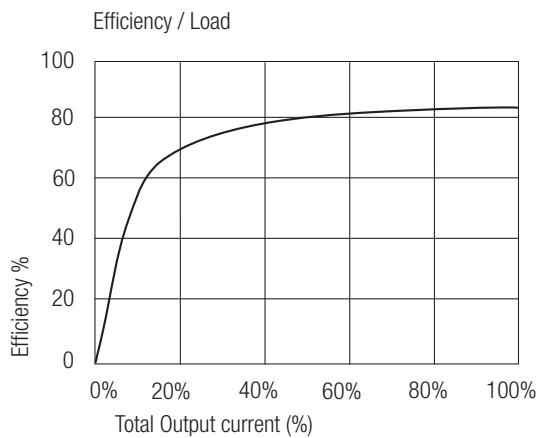
Derating-Graph (Ambient Temperature)



**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.

Refer to Application Notes

Typical Characteristics

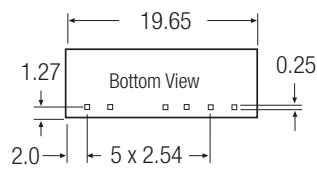
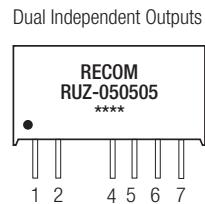
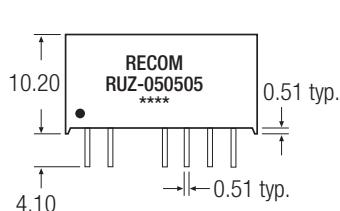


Notes

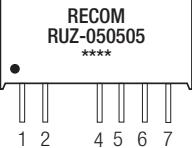
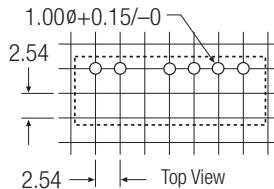
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

Package Style and Pinning (mm)

7 PIN SIP Package



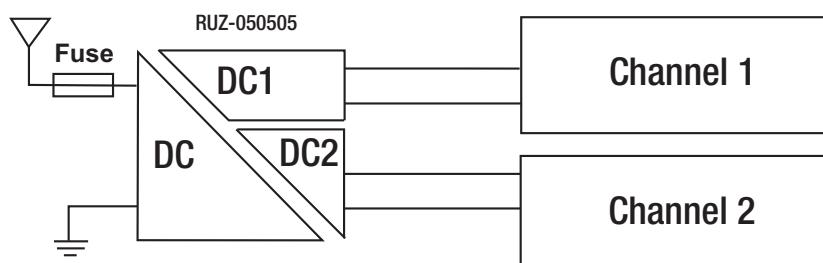
Recommended Footprint Details



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

XX.X \pm 0.5 mm
XX.XX \pm 0.25 mm

Typical Application



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