

Features

Unregulated Converters

- Twin Independent Outputs
- Output/Output Isolation 1kVDC
- Power Sharing on Outputs
- Input/Output Isolation 1kVDC
- Standard and Miniature Versions
- Optional Continuous Short Circuit Protected
- Custom Solutions Available
- Efficiency to 76%

Description

The RU DC/DC converter offers two independent isolated outputs. Typical applications include multiple channel circuits where inter-channel isolation is also required. The RUM offers similar specifications in a miniature case for applications where space is at a premium. Both converters offer 1kVDC input/output isolation and 1kVDC output/output isolation. The /H versions offer 2kVDC isolation between input and outputs.

Selection Guide

Part Number		Input Voltage (VDC)	Output Voltage (V1VDC)	Output Voltage (V2VDC)	Output Current (mA)	Efficiency typ. (%)	Max Capacitive Load ⁽¹⁾
SIP 7	2kV						
RU-3.30505	(H)	3.3	5	5	100/100	76	470µF/470µF
RU-050505	(H)	5	5	5	100/100	72	470µF/470µF
RUM-3.30505	(H)	3.3	5	5	100/100	78	470µF/470µF
RUM-050505	(H)	5	5	5	100/100	72	470µF/470µF

Other input and output voltage combinations available on request

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RU-050505/P, RUM-050505/P, RU-3.30505/HP

Specifications (measured at $T_A = 25^\circ\text{C}$, 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 (10%~100% Load)		15% max 10% typ.		
Output Ripple and Noise (20MHz limited)	RU	75mVp-p max.		
Full Load	RUM	100mVp-p max.		
Operating Frequency		20kHz min. / 70kHz typ. / 105kHz max.		
Efficiency at Full Load		RU 70% min. RUM 70% min.		
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)	500VAC / 60Hz		
Isolation Voltage	H-suffix (tested for 1 second)	2000VDC		
Input/Output	H-suffix (rated for 1 minute)	1000VAC / 60Hz		
Output/Output	H-suffix (rated for 1 minute)	500VAC / 60Hz		
Isolation Capacitance		20pF min. / 94pF 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		2.7g		
Packing Quantity		RU 25 pcs per Tube RUM 30 pcs per Tube		
MTBF (+25°C)		Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1012 x 10³ hours
(+85°C)			using MIL-HDBK 217F	151 x 10³ hours
Certifications				
EN60950-1		Report: SPCLVD1109103	EN60950-1: 2006+A12:2011	

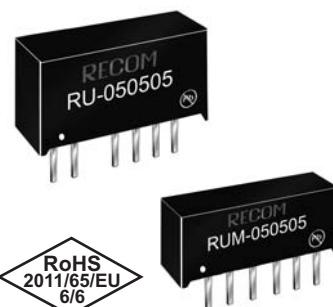
ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

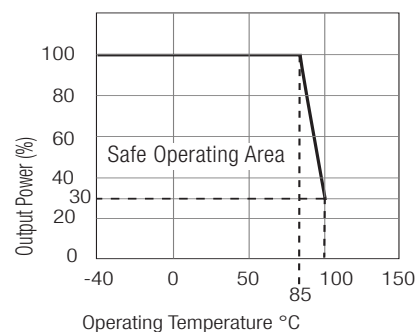
1 Watt SIP7 Isolated Dual Output



EN-60950-1 Certified

RU/RUM

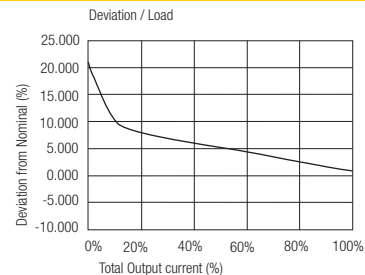
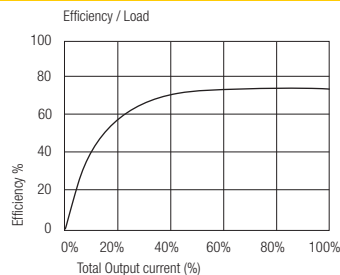
Derating-Graph (Ambient Temperature)



Refer to Application Notes

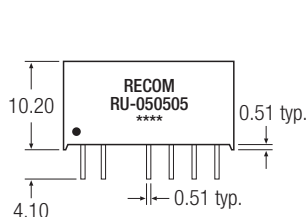
Typical Characteristics

RU-050505
RUM-050505

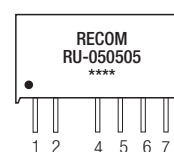


RU Package Style and Pinning (mm)

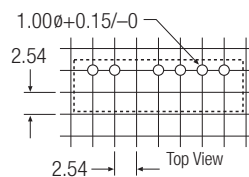
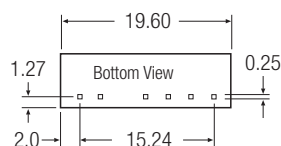
SIP7 Package



3rd angle projection



Recommended Footprint Details



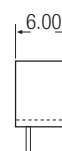
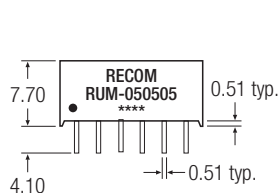
Pin Connections

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

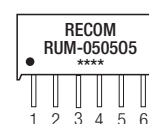
XX.X ± 0.5 mm
XX.XX ± 0.25 mm

RUM Package Style and Pinning (mm)

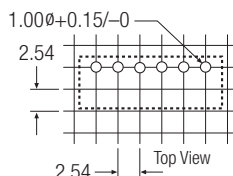
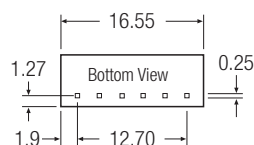
SIP6 Package



3rd angle projection



Recommended Footprint Details



Pin Connections

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

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

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 Application

