

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		$\pm 10\%$
Output Voltage Accuracy		$\pm 5\%$
Line Voltage Regulation		1.2%/1% of V_{in} 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 P-Suffix		1 Second Continuous
Operating Temperature Range (free air convection)		-40°C to $+85^\circ\text{C}$ (see Graph)
Storage Temperature Range		-55°C to $+125^\circ\text{C}$
Relative Humidity		95% RH
Package Weight		2.7g
Packing Quantity	RU	25 pcs per Tube
	RUM	30 pcs per Tube
MTBF ($+25^\circ\text{C}$)		using MIL-HDBK 217F 1012 x 10 ³ hours
($+85^\circ\text{C}$)		using MIL-HDBK 217F 151 x 10 ³ hours

Detailed Information see Application Notes chapter "MTBF"

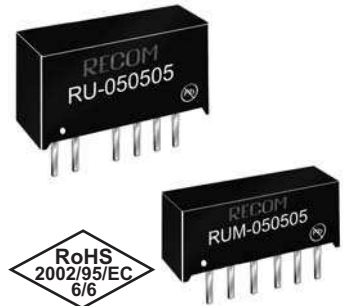
ECONOLINE

DC/DC-Converter

with 3 year Warranty



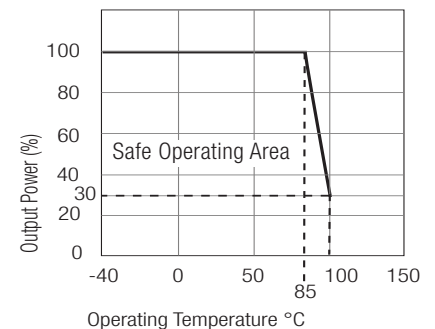
1 Watt SIP7 Isolated Dual Output



RU: EN-60950-1 Certified
RUM: EN-60950-1 Pending

RU/RUM

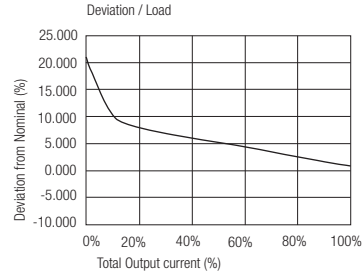
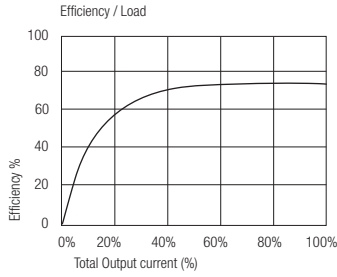
Derating-Graph (Ambient Temperature)



Refer to Application Notes

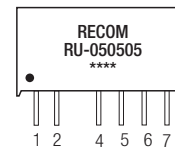
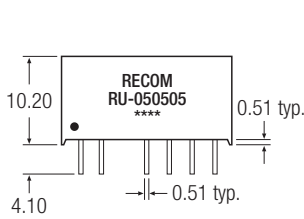
Typical Characteristics

RU-050505
RUM-050505



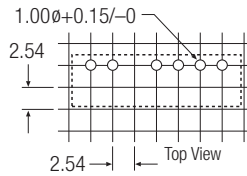
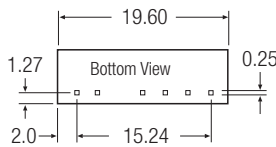
RU Package Style and Pinning (mm)

7 PIN SIP Package



3rd angle projection

Recommended Footprint Details



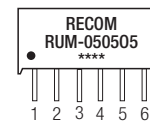
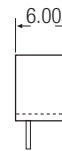
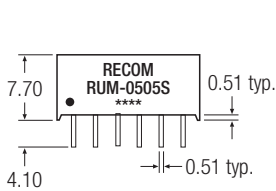
Pin Connections

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

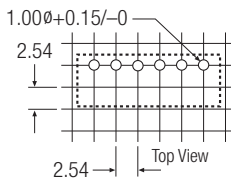
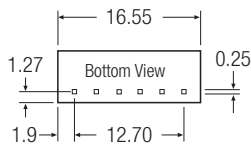
RUM Package Style and Pinning (mm)

6 PIN SIP 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

