

## Features

## Unregulated Converters

- Dual Output from a Single Input Rail
- 1kVDC & 2kVDC Isolation
- Power Sharing on Output
- Optional Continuous Short Circuit Protected
- Custom Solutions Available
- UL94V-0 Package Material
- Efficiency to 86%

## ECONOLINE

DC/DC-Converter

# RD & RC Series

## 2 Watt SIP7 & DIP14 Dual Output

### Selection Guide

Part Number		Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SIP 7	DIP 14	2kV	(VDC)	(mA)	(%)
RD-xx3.3D	RC-xx3.3D (H)	5, 9, 12, 15, 24	±3.3	±303	75
RD-xx05D	RC-xx05D (H)	5, 9, 12, 15, 24	±5	±200	75-82
RD-xx09D	RC-xx09D (H)	5, 9, 12, 15, 24	±9	±111	80-84
RD-xx12D	RC-xx12D (H)	5, 9, 12, 15, 24	±12	±84	80-84
RD-xx15D	RC-xx15D (H)	5, 9, 12, 15, 24	±15	±66	82-86
RD-xx24D	RC-xx24D (H)	5, 9, 12, 15, 24	±24	±42	82-86

xx = Input Voltage

\* add Suffix "P" for Continuous Short Circuit Protection, e.g. RD-0505D/P, RD-0505D/HP

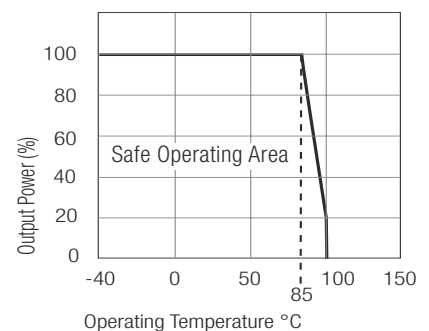


### Specifications (Core Operating Area)

Input Voltage Range	±10%		
Output Voltage Accuracy	±5%		
Line Voltage Regulation	1.2%/1% of Vin typ.		
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.	
	5V output type	15% max.	
	9V, 12V, 15V, 24V output types	10% max.	
Output Ripple and Noise (20MHz limited)	150mVp-p max.		
Operating Frequency	34kHz min. / 50kHz typ. / 85kHz max.		
Efficiency at Full Load	70% min. / 80% typ.		
No Load Power Consumption	163mW min. / 223mW typ. / 350mW max.		
Isolation Voltage (tested for 1 second)	1000VDC min.		
Rated Working Voltage (long term isolation)	see Application Notes.		
Isolation Voltage (tested for 1 second)	H-Suffix	2000VDC min.	
Rated Working Voltage (long term isolation)	H-Suffix	see Application Notes	
Isolation Capacitance	40pF min. / 115pF 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		
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

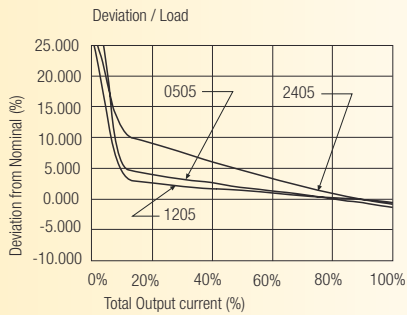
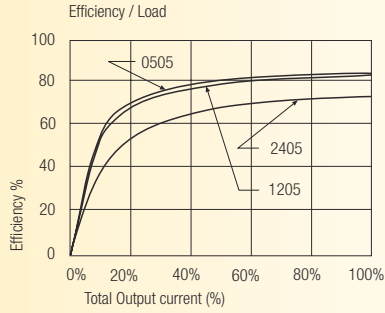


## Derating-Graph (Ambient Temperature)

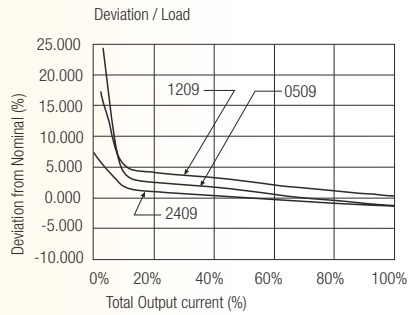
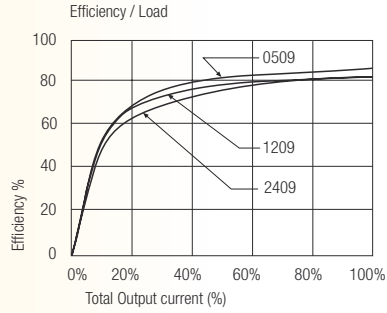


**Typical Characteristics**

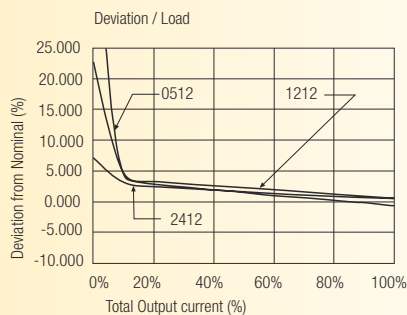
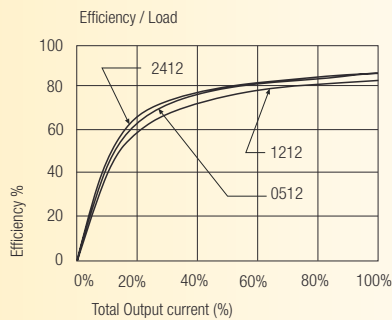
**RD&RC-xx05D**



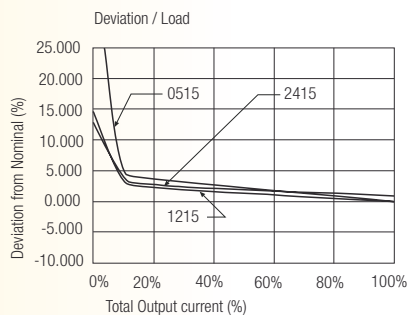
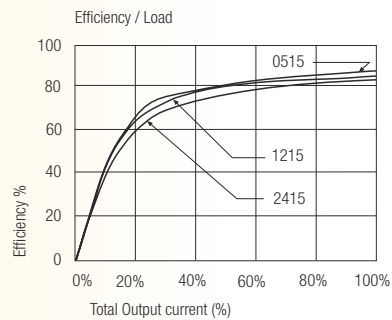
**RD&RC-xx09D**



**RD&RC-xx12D**



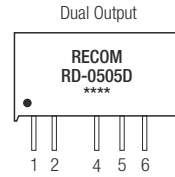
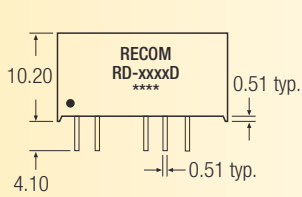
**RD&RC-xx15D**



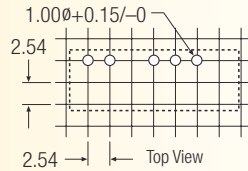
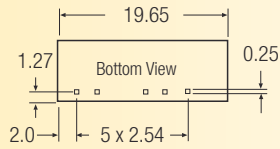
**Package Style and Pinning (mm)**



**7 PIN SIP Package**



**Recommended Footprint Details**

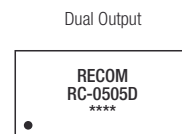
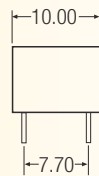
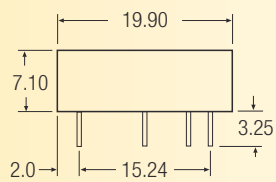


**Pin Connections**

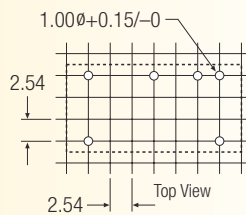
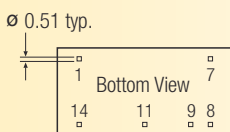
Pin #	RD
1	+Vin
2	-Vin
4	-Vout
5	Com
6	+Vout

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

**14 PIN DIP Package**



**Recommended Footprint Details**



**Pin Connections**

Pin #	RC
1	-Vin
7	NC
8	Com
9	+Vout
11	-Vout
14	+Vin

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm