

## Features Unregulated Converters

- Custom Solutions Available
- 1kVDC Isolation
- No External Components Required
- Optional Continuous Short Circuit Protected
- UL94V-0 Package Material
- No Heatsink Required
- Efficiency to 87%

## ECONOLINE DC/DC-Converter

# RI Series

## 2 Watt SIP4 Single Output

### Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SIP4	(VDC)	(VDC)	(mA)	(%)
RI-xx3.3S	5, 9, 12, 15, 24	3.3	606	70-75
RI-xx05S	5, 9, 12, 15, 24	5	400	78-83
RI-xx07S	5, 9, 12, 15, 24	7	285	78-83
RI-xx09S	5, 9, 12, 15, 24	9	222	78-83
RI-xx12S	5, 9, 12, 15, 24	12	167	80-85
RI-xx15S	5, 9, 12, 15, 24	15	133	80-85
RI-xx24S	5, 9, 12, 15, 24	24	83	80-87

xx = Input Voltage

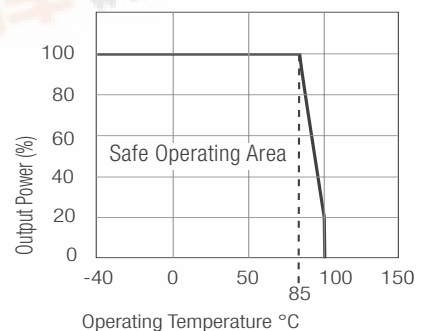
\* add Suffix "P" for Continuous Short Circuit Protection, e.g. RI-0505S/P



### Specifications (Core Operating Area)

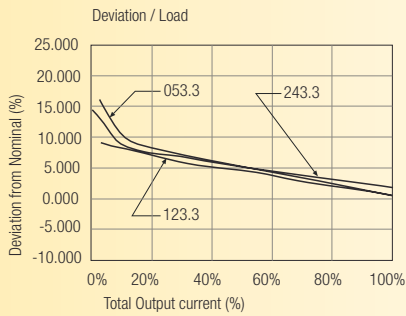
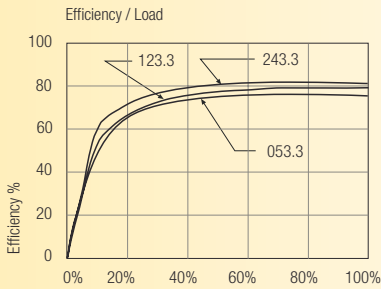
Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of Vin typ.
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.
	5V, output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Output Ripple and Noise (20MHz limited)		200mVp-p max.
Operating Frequency		35kHz min. / 50kHz typ. / 85kHz max.
Efficiency at Full Load		70% min. / 80% typ.
No Load Power Consumption		142mW min. / 185mW typ. / 252mW max.
Isolation Voltage (tested for 1 second)		1000VDC min.
Rated Working Voltage (long term isolation)		see Application Notes
Isolation Capacitance		30pF min. / 85pF max.
Isolation Resistance		10 GΩ min.
Short Circuit Protection P-Suffix		1 Second 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		1.4g
Detailed Information see Application Notes chapter "MTBF"	MTBF (+25°C)	using MIL-HDBK 217F 845 x 10 <sup>3</sup> hours
	(+85°C)	using MIL-HDBK 217F 160 x 10 <sup>3</sup> hours

## Derating-Graph (Ambient Temperature)

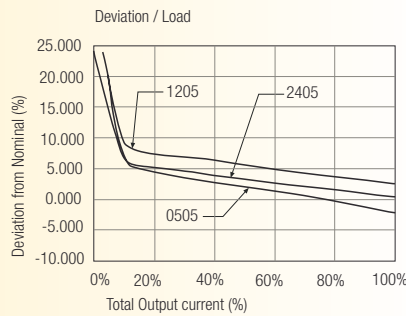
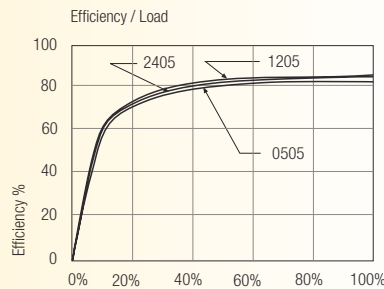


## Typical Characteristics

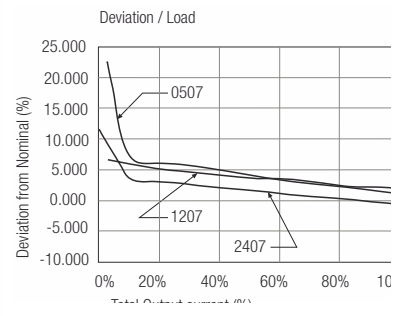
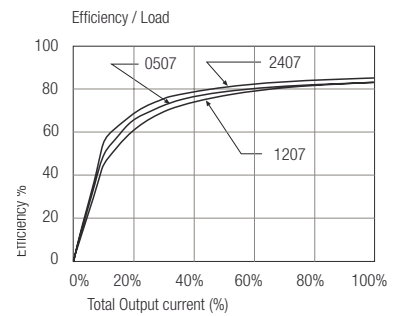
### RI-xx3.3S



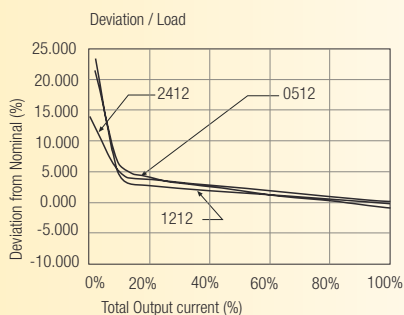
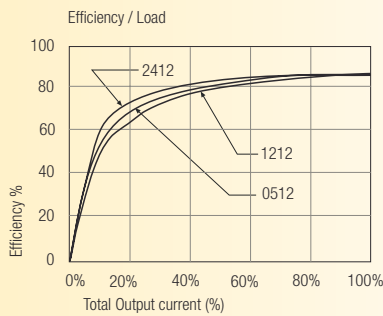
### RI-xx05S



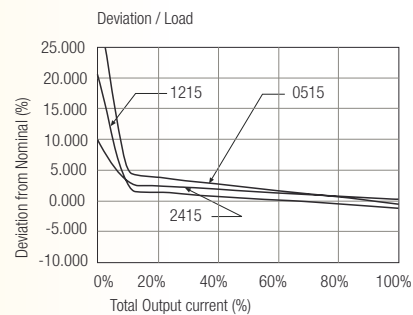
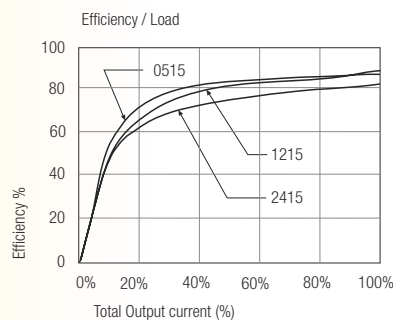
### RI-xx07S



### RI-xx12S



### RI-xx15S



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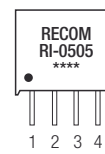
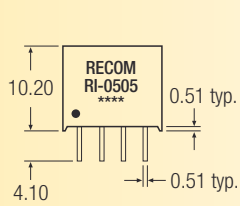
## DC/DC-Converter

# RI Series

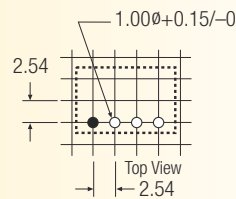
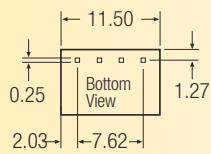
### Package Style and Pinning (mm)

3rd angle projection 

#### 4 PIN SIP Package



#### Recommended Footprint Details



#### Pin Connections

Pin #	Dual
1	-Vin
2	+Vin
3	-Vout
4	+Vout
XX.X $\pm 0.5$ mm	
XX.XX $\pm 0.25$ mm	