

Features

Unregulated Converters

- Custom Solutions Available
- 1kVDC Isolation
- No Extern. Components Required
- UL94V-0 Package Material
- No Heatsink Required
- Efficiency to 87%

ECONOLINE

DC/DC-Converter

RI Series

Selection Guide

| Part Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) |
|-------------|---------------------|----------------------|---------------------|----------------|
| SIP4 | | | | |
| RI-xx3.3 | 5, 9, 12, 15, 24 | 3.3 | 606 | 70-75 |
| RI-xx05 | 5, 9, 12, 15, 24 | 5 | 400 | 78-83 |
| RI-xx07 | 5, 9, 12, 15, 24 | 7 | 285 | 78-83 |
| RI-xx09 | 5, 9, 12, 15, 24 | 9 | 222 | 78-83 |
| RI-xx12 | 5, 9, 12, 15, 24 | 12 | 167 | 80-85 |
| RI-xx15 | 5, 9, 12, 15, 24 | 15 | 133 | 80-85 |
| RI-xx24 | 5, 9, 12, 15, 24 | 24 | 83 | 80-87 |

xx = Input Voltage

Specifications (Core Operating Area)

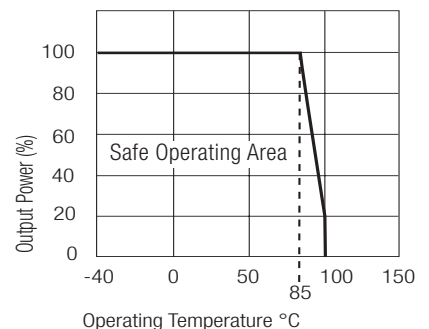
| | | |
|---|---|--------------------------------------|
| Input Voltage Range | | ±10% |
| Output Voltage Accuracy | | ±5% |
| Line Voltage Regulation | | 1.2%/1% of Vin max. |
| Load Voltage Regulation (10% to 100% full load) | 3.3V output types | 20% max. |
| | 5V, output type | 15% max. |
| | 9V, 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) | | 1.000VDC min. |
| Rated Working Voltage (long term isolation) | | see Application Notes |
| Isolation Capacitance | | 30pF min. / 85pF max. |
| Isolation Resistance | | 10 GΩ min. |
| Short Circuit Protection | | 1 Second |
| Operating Temperature Range (free air convection) | | -40°C to +85°C (see Graph) |
| Storage Temperature Range | | -55°C to +125°C |
| Relative Humidity | MSL Level 1 | 95% RH |
| Package Weight | | 1.4g |
| MTBF (+25°C) | } Detailed Information see Application Notes chapter "MTBF" | using MIL-HDBK 217F |
| (+85°C) | | using MIL-HDBK 217F |
| | | 845 x 10 ³ hours |
| | | 160 x 10 ³ hours |

2 Watt SIP4 Single Output



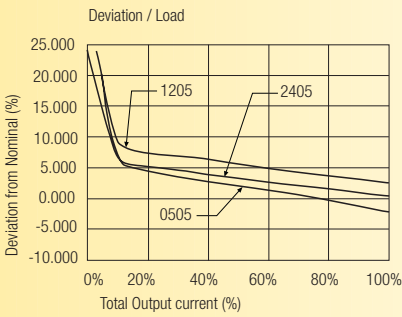
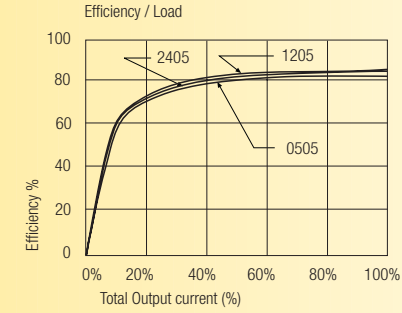
RECOM

Derating-Graph (Ambient Temperature)

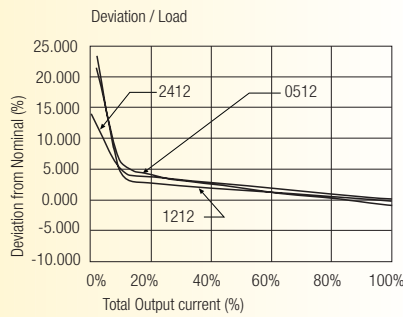
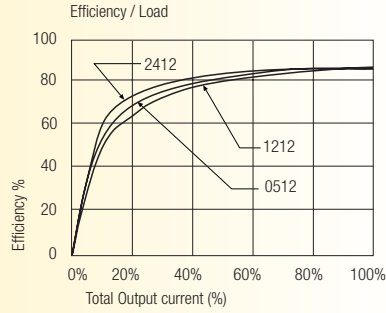


Typical Characteristics

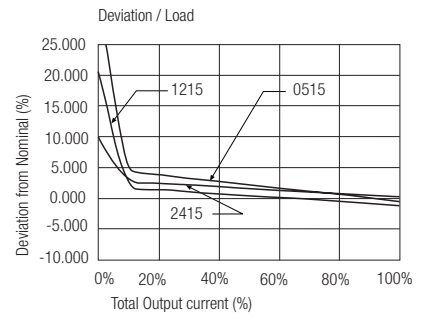
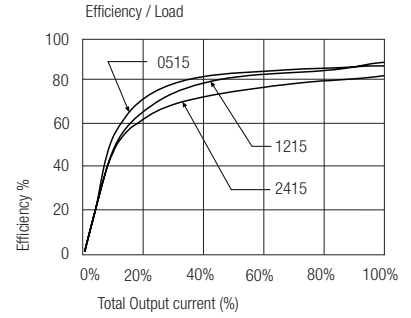
RI-xx05



RI-xx12

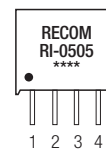
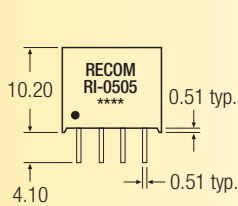


RI-xx15

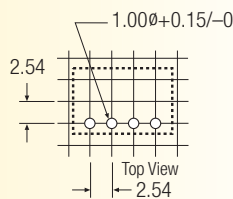
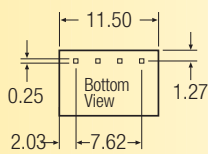


Package Style and Pinning (mm)

4 PIN SIP Package



Recommended Footprint Details



Pin Connections

| Pin # | Dual |
|-------|-------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | -Vout |
| 4 | +Vout |

XX.X ± 0.5 mm
XX.XX ± 0.25 mm