## Features

**Unregulated Converters**

- Cost Effective
- 1kVDC & 2kVDC Isolation
- Custom Solutions Available
- Optional Continuous Short Circuit Protected
- No External Components Required
- UL94V-0 Package Material
- Efficiency to 85%

# ECONOLINE
DC/DC-Converter

# REZ Series

## 2 Watt SIP7 Single Output




### Selection Guide

| Part Number | | Input Voltage | Output Voltage | Output Current | Efficiency |
|---|---|---|---|---|---|
| SIP 7 | (2kV) | (VDC) | (VDC) | (mA) | (%) |
| REZ-xx3.3S | (H) | 5, 9, 12, 15, 24 | 3.3 | 606 | 70-75 |
| REZ-xx05S | (H) | 5, 9, 12, 15, 24 | 5 | 400 | 80-85 |
| REZ-xx09S | (H) | 5, 9, 12, 15, 24 | 9 | 222 | 78-84 |
| REZ-xx12S | (H) | 5, 9, 12, 15, 24 | 12 | 168 | 80-85 |
| REZ-xx15S | (H) | 5, 9, 12, 15, 24 | 15 | 132 | 82-85 |
| REZ-xx24S | (H) | 5, 9, 12, 15, 24 | 24 | 83 | 80-85 |

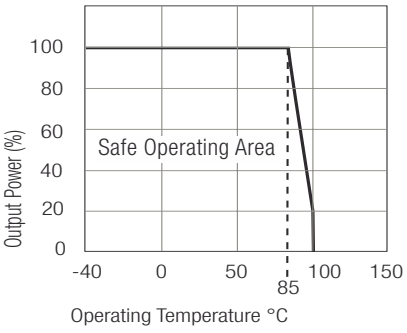
xx = Input Voltage
* add Suffix "P" for Continuous Short Circuit Protection, e.g. REZ-0505S/P, REZ-0505S/HP

### 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 | | | 35kHz min. / 50kHz typ. / 85kHz max. |
| Efficiency at Full Load | | | 70% min. / 80% typ. |
| No Load Power Consumption | | | 134mW min. / 202mW typ. / 260mW max. |
| Isolation Voltage | | (tested for 1 second) | 1000VDC min. |
| Rated Working Voltage | | (long term isolation) | see Application Notes |
| Isolation Voltage | H-Suffix | (tested for 1 second) | 2000VDC min. |
| Rated Working Voltage | H-Suffix | (long term isolation) | 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 | | | 2.7g |
| MTBF (+25°C) } *Detailed Information see Application Notes chapter "MTBF"* | | using MIL-HDBK 217F | 915 x $10^3$ hours |
| (+85°C) } | | using MIL-HDBK 217F | 170 x $10^3$ hours |

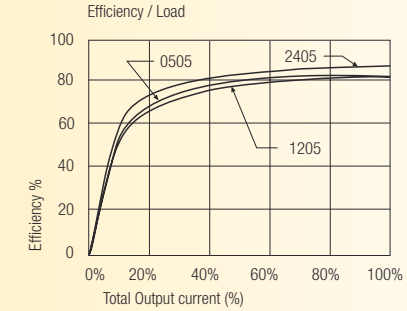
RECOM

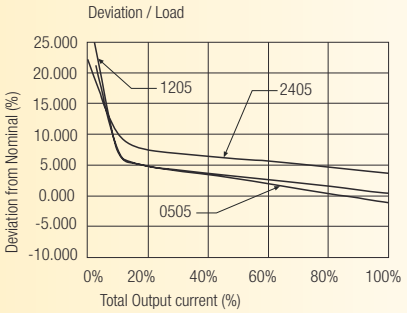
## Derating-Graph
(Ambient Temperature)



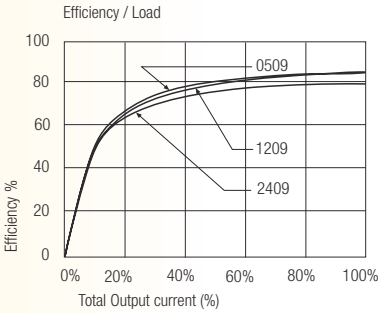
## Typical Characteristics

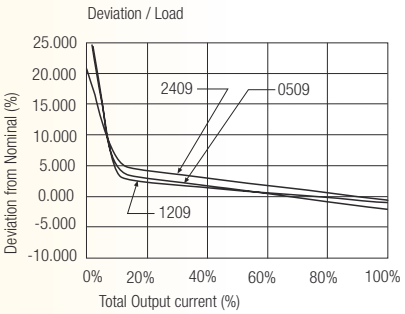
### REZ-xx05S



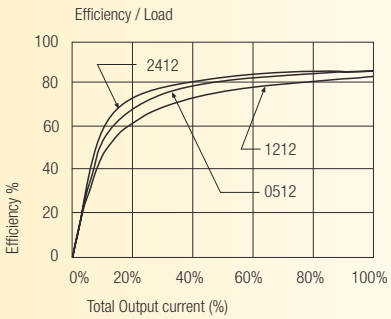



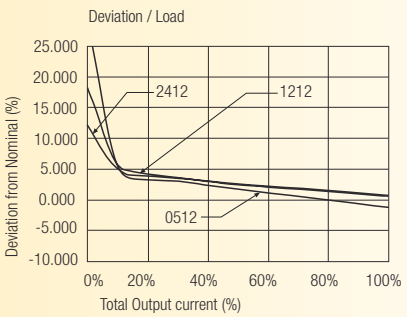

### REZ-xx09S



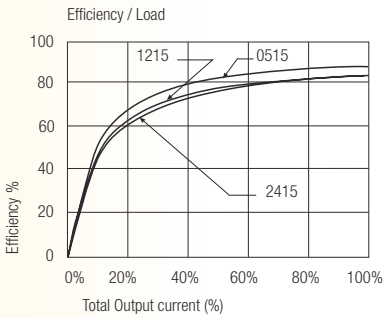



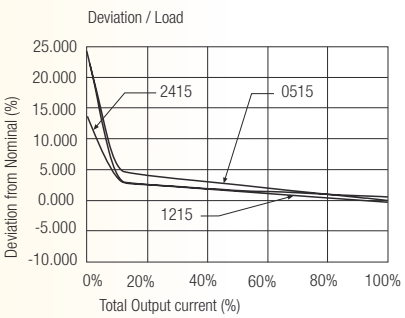

### REZ-xx12S




### REZ-xx15S

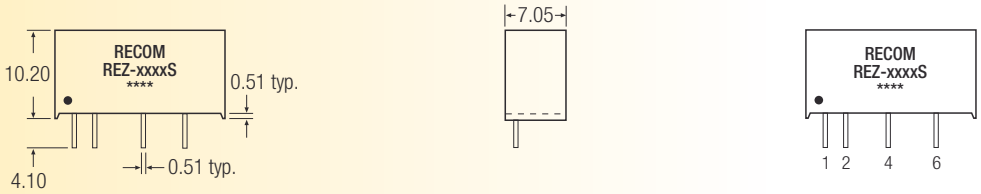


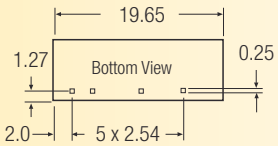



## Package Style and Pinning (mm)

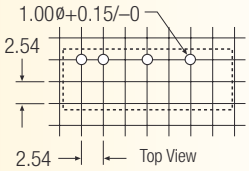
3rd angle projection

### 7 PIN SIP Package




### Recommended Footprint Details




### Pin Connections

| Pin # | Single |
|---|---|
| 1 | +Vin |
| 2 | –Vin |
| 4 | –Vout |
| 6 | +Vout |

XX.X ± 0.5 mm
XX.XX ± 0.25 mm