

Features

Regulated Converters

- 1kVDC Isolation
- SMD Package Styles
- 5V, 12V and 15V Output
- UL94V-0 Package Material
- No Heatsink Required
- No External Components
- Optional Continuous Short Circuit Protected
- Efficiency to 62%

ECONOLINE

DC/DC-Converter

RZ Series

0.5 Watt SMD Isolated Single Output

Selection Guide

| Part Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) |
|-------------|---------------------|----------------------|---------------------|----------------|
| RZ-xx05S | 5, 9, 12, 15, 24 | 5 | 100 | 50 |
| RZ-xx12S | 5, 9, 12, 15, 24 | 12 | 42 | 60 |
| RZ-xx15S | 5, 9, 12, 15, 24 | 15 | 33 | 62 |

xx = Input Voltage

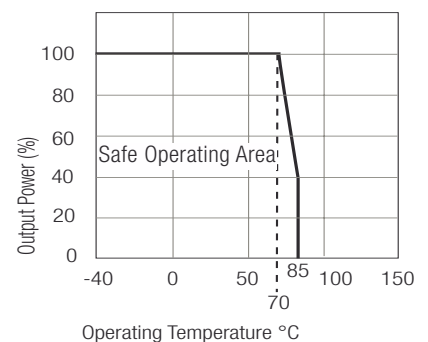
* add Suffix "P" for Continuous Short Circuit Protection, e.g. RZ-0505S/P



Specifications (Core Operating Area)

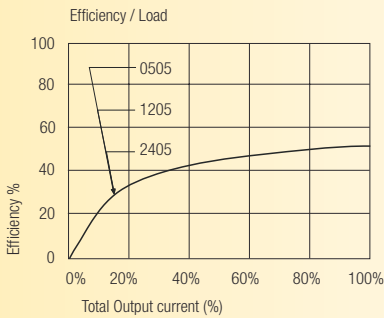
| | | | |
|---|---|---|------------------------------|
| Input Voltage Range | | ±5% | |
| Output Voltage Accuracy | | ±5% | |
| Line Voltage Regulation | | 1% max. | |
| Load Voltage Regulation (10% to 100% full load) | | 1% max. | |
| Output Ripple and Noise (20MHz limited) | | 100mVp-p max. | |
| Operating Frequency | | 50kHz min. / 100kHz typ. / 105kHz max. | |
| Efficiency at Full Load | | 50% min. / 60% typ. | |
| No Load Power Consumption | | 127mW min. / 155mW typ. / 194mW max. | |
| Isolation Voltage | (tested for 1 second) | 1000VDC min. | |
| Rated Working Voltage | (long term isolation) | see Application Notes | |
| Isolation Capacitance | | 25pF min. / 75pF max. | |
| Isolation Resistance | | 10 GΩ min. | |
| Short Circuit Protection | | 1 Second | |
| P-Suffix | | Continuous | |
| Operating Temperature Range (free air convection) | | -40°C to +70°C (see Graph) | |
| Storage Temperature Range | | -55°C to +125°C | |
| Reflow Temperature | ROHS compliant | 245°C (30 sec) max. (for more details see Application Notes) | |
| Relative Humidity | | 95% RH | |
| Package Weight | | 1.9g | |
| MTBF (+25°C) | } Detailed Information see Application Notes chapter "MTBF" | using MIL-HDBK 217F | 1632 x 10 ³ hours |
| (+70°C) | | using MIL-HDBK 217F | 156 x 10 ³ hours |

Derating-Graph (Ambient Temperature)

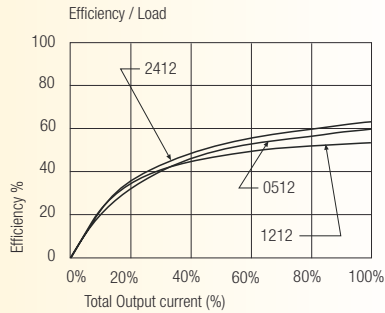


Typical Characteristics

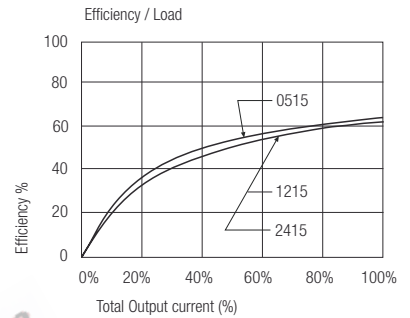
RZ-xx05S



RZ-xx12S

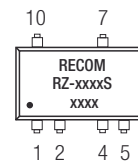
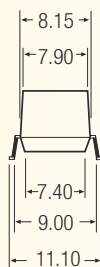
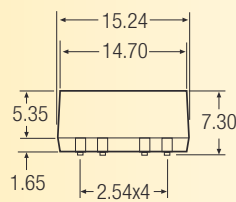


RZ-xx15S



Package Style and Pinning (mm)

10 PIN SMD Package



Pin Connections

| Pin # | Single |
|-------|--------|
| 1 | -Vin |
| 2 | +Vin |
| 4 | -Vout |
| 5 | -Vout |
| 7 | +Vout |
| 10 | NC |

NC= No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Recommended Footprint Details

