### Features

- 1:1 Input Range
- Efficiency up to 69%
- 1kVDC and 2kVDC Isolation Option
- 1W SMD Package
- -40°C to +85°C Operating Temperature Range
- Continuous Short Circuit Protection

### Regulated Converters

**RAZ** ECONOLINE
DC/DC-Converter

**RAZ** Single Output
1 Watt SMD

### Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Voltage (VDC)</th>
<th>Output Voltage (VDC)</th>
<th>Output Current (mA)</th>
<th>Efficiency (typ.)</th>
<th>Capacitive Load (max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAZ-0505S*</td>
<td>5</td>
<td>5</td>
<td>200</td>
<td>67%</td>
<td>2200µF</td>
</tr>
<tr>
<td>RAZ-1205S*</td>
<td>12</td>
<td>5</td>
<td>200</td>
<td>68%</td>
<td>2200µF</td>
</tr>
<tr>
<td>RAZ-2405S*</td>
<td>24</td>
<td>5</td>
<td>200</td>
<td>69%</td>
<td>2200µF</td>
</tr>
</tbody>
</table>

* add Suffix "/H" for 2kVDC/1min. Isolation - e.g. RAZ-0505S/H

* add Suffix "-R" for tape & reel packing - e.g. RAZ-1205S-R, RAZ-2405S/H-R

### Specifications

(measured at TA = 25°C, nominal input voltage and rated output current unless otherwise specified)

- Input Voltage Range ±10% max.
- Output Voltage Accuracy -1% typ., ±5% max.
- Line Voltage Regulation (low line to high line at max. load) 1% max.
- Load Voltage Regulation (10% to 100% full load) 1% max.
- Output Ripple and Noise (20MHz BW) 50mVp-p typ., 75mVp-p max.
- Operating Frequency (Vin=nominal input) 20kHz min. / 35kHz typ. / 60kHz max.
- Efficiency at Full Load see Selection Guide
- Minimum Load = 0%
- Specifications valid for 10% minimum load only
- Isolation Voltage (tested for 1 minute) RAZ-xx05S 1000 VDC RAZ-xx05S/H 2000 VDC
- Isolation Capacitance 6pF typ., 10pF max.
- Isolation Resistance (Viso=500V) 10GΩ min.
- Short-Circuit Protection continuous
- Operating Temperature Range -40°C to +85°C
- Storage Temperature -55°C to +125°C
- Relative Humidity 95% RH
- Package Weight 1.6g
- MTBF (+25°C) Detailed Information see Application Notes chapter "MTBF" using MIL-HDBK 217F 3914 x 10⁶ hours
- MTBF (+85°C) using MIL-HDBK 217F 855 x 10⁶ hours

### Certifications

- EN General Safety EN60950-1-2nd Edition
- Medical Report + ISO14971 Risk Assessment

**Note 1:** Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

### Derating-Graph

(Ambient Temperature)

![Derating-Graph Image]

Refer to Application Notes
ECONOLINE
DC/DC-Converter

Typical Characteristics

![Efficiency vs Load Graph]

Package Style and Pinning

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>+Vin</td>
</tr>
<tr>
<td>13</td>
<td>-Vout</td>
</tr>
<tr>
<td>14</td>
<td>+Vout</td>
</tr>
<tr>
<td>27</td>
<td>-Vin</td>
</tr>
</tbody>
</table>

NC = No Connection

Unit: mm
Tolerance: ± 0.25 mm