The RJZ and RGZ series converters are available in DIP14 packages, so can be used for applications where component height is restricted. The wide selection of input voltage and output voltage options plus an I/O-isolation of 3kVDC or 4kVDC as standard makes these converters suitable for many industrial, medical and IGBT applications.

### 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 (%)</th>
<th>Capacitive Load (μF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIP 14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RJZ-xx3.3S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>3.3</td>
<td>606</td>
<td>70-75</td>
<td>3300μF</td>
</tr>
<tr>
<td>RJZ-xx5S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>5</td>
<td>400</td>
<td>78-85</td>
<td>1200μF</td>
</tr>
<tr>
<td>RJZ-xx9S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>9</td>
<td>222</td>
<td>78-84</td>
<td>1200μF</td>
</tr>
<tr>
<td>RJZ-xx12S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>12</td>
<td>166</td>
<td>80-85</td>
<td>680μF</td>
</tr>
<tr>
<td>RJZ-xx15S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>15</td>
<td>133</td>
<td>82-85</td>
<td>680μF</td>
</tr>
<tr>
<td>RJZ-xx24S*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>24</td>
<td>83</td>
<td>80-85</td>
<td>220μF</td>
</tr>
<tr>
<td>RGZ-xx3.3D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±3.3</td>
<td>±303</td>
<td>±75</td>
<td>±1500μF</td>
</tr>
<tr>
<td>RGZ-xx5D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±5</td>
<td>±200</td>
<td>75-82</td>
<td>±470μF</td>
</tr>
<tr>
<td>RGZ-xx9D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±9</td>
<td>±111</td>
<td>75-80</td>
<td>±470μF</td>
</tr>
<tr>
<td>RGZ-xx12D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±12</td>
<td>±84</td>
<td>78-82</td>
<td>±220μF</td>
</tr>
<tr>
<td>RGZ-xx15D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±15</td>
<td>±66</td>
<td>80-84</td>
<td>±220μF</td>
</tr>
<tr>
<td>RGZ-xx24D*</td>
<td>3.3, 5, 9, 12, 15, 24</td>
<td>±24</td>
<td>±42</td>
<td>82-84</td>
<td>±100μF</td>
</tr>
<tr>
<td>RGZ-xx1509D</td>
<td>5, 12, 24</td>
<td>±15/9</td>
<td>±67/111</td>
<td>70-81</td>
<td>±330μF</td>
</tr>
</tbody>
</table>

* xx = Input Voltage. Other input and output voltage combinations available on request.
* add Suffix “P” for Continuous Short Circuit Protection, e.g. RGZ-0524D/P, RJZ-0505S/HP

### Specifications

- **Input Voltage Range**: ±10%
- **Output Voltage Accuracy**: ±5%
- **Line Voltage Regulation**: 1.2%/1% of Vin typ.
- **Load Voltage Regulation**: 3.3V Types ±20% max.
  5V Types ±15% max.
  All other Types, RGZ-xx1509D ±10% max.

- **Output Ripple and Noise (20MHz limited)**: ±150mVp-p max.
- **Temperature Coefficient**: 0.02%/°C max.
- **Operating Frequency**: 20kHz min. / 50kHz typ. / 90kHz max.
  RGZ-xx1509D: 20kHz min. / 45kHz typ.
- **Efficiency at Full Load**: 70% min. / 80% typ.
- **Minimum Load = 0%**: Specifications valid for 10% minimum load only.

- **Isolation Voltage**: 3000VDC (tested for 1 second) / 1500VAC / 60Hz
- **Isolation Capacitance**: 120pF max.
- **Isolation Resistance**: 15GΩ min.
- **Short Circuit Protection**: 1 Second
- **P-Suffix**: Continuous
- **Operating Temperature Range (free air convection, without derating)**: -40°C to +90°C (see Graph)
- **Case Temperature**: 110°C max.

**Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.**
ECONOLINE
DC/DC-Converter

Specifications (measured at TA = 25°C, nominal input voltage, full load and after warm-up)

- Storage Temperature Range: -55°C to +125°C
- Relative Humidity: 95% RH
- Thermal Impedance: 56.66°C / W
- Package Weight: 2.8g

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.

Certificates
- EN General Safety: Report: SPCLUD1109103
- EN Medical Safety: Report: SPCMDD120598-4

Notes
- 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.

IGBT Application Circuit

Typical Characteristics

RJZ-xx05S

RJZ-xx09S

RJZ-xx12S
ECONOLINE
DC/DC-Converter

Typical Characteristics

RJZ-xx15S

RGZ-xx05D

RGZ-xx12D

RGZ-xx15D

Package Style and Pinning (mm)

14 PIN DIP Package

Pin Connections

The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM’s explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.