

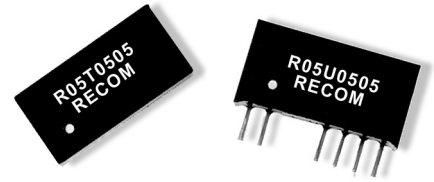
EUROLINE - DC/DC-Converter

RxxT and RxxU Series, 1 Watt, DIP14/SIP7, Isolated (Twin Independent Output)

RECOM

Features

- Output / Output Isolation 1kVDC
- Input / Output Isolation 1kVDC
- Efficiency to 808%
- UL 94V-0 Package Material
- Internal SMD Construction
- Toroidal Magnetics
- MTTF up to 1.9 Million Hours
- Power Sharing on Outputs



Selection Guide 5V and 12V input types

| Part Number | Output Voltage 1 (VDC) | Output Voltage 2 (VDC) | Output Current 1 (mA) | Output Current 2 (mA) | Package Style |
|-------------|------------------------|------------------------|-----------------------|-----------------------|---------------|
| RxxT0503 | 5 | 3.3 | 100 | 152 | DIP14 |
| RxxT0505 | 5 | 5 | 100 | 100 | |
| RxxT0509 | 5 | 9 | 100 | 56 | |
| RxxT0512 | 5 | 12 | 100 | 42 | |
| RxxT0515 | 5 | 15 | 100 | 34 | |
| RxxU0503 | 5 | 3.3 | 100 | 152 | SIP7 |
| RxxU0505 | 5 | 5 | 100 | 100 | |
| RxxU0509 | 5 | 9 | 100 | 56 | |
| RxxU0512 | 5 | 12 | 100 | 42 | |
| RxxU0515 | 5 | 15 | 100 | 34 | |

Absolute Maximum Ratings Over Operating Free Air Temperature Range

| | | |
|---|-----------|-----------------------------------|
| Input Voltage V_{IN} | 5V types | 7V |
| | 12V types | 15V |
| Output Power Total | | 1W |
| Short Circuit Duration ¹⁾ | | 1s |
| Input to Output Isolation Voltage (flash tested for 1 second) | | 1000VDC |
| Output to Output Isolation Voltage (flash tested for 1 second) | | 1000VDC |
| Operating Free Air Temperature Range (requires a minimum of 10 mm air space around the component) | | 0°C to +70°C (see derating Curve) |
| Storage Temperature Range | | -55°C to 150°C |
| Lead Temperature (1.5 mm from case for 10 seconds) | | 300 °C |

¹⁾ Supply voltage must be discontinued at the end of the short circuit duration.

Electrical Specifications (measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

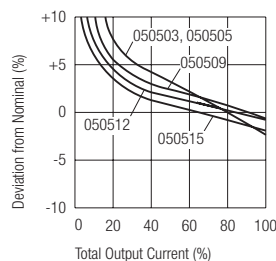
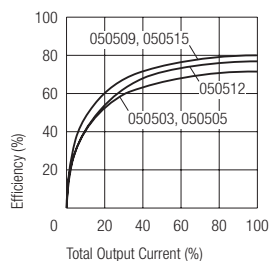
| | | |
|--|---|--|
| Input Voltage Range V_{IN} (continuous operation) | 5V types 12V input types | $5V \pm 10\%$ $12V \pm 10\%$ |
| Load Voltage Regulation (10% load to 100% full load) | 3.3V and 5V output types 9V, 12V and 15V output types | 15% max. 10% max. |
| Line Voltage Regulation | | 1.2% / 1.0% of V_{IN} |
| Output Voltage Accuracy | | See Tolerance Envelope |
| Input Reflected Ripple (20MHz band limited) | | 80mVp-p max. |
| Output Ripple (20MHz band limited) | | 75mVp-p max. |
| Insulation Resistance (at 500VDC) | | 1000M Ω min. |
| Efficiency (at full load) | 3.3V and 5V output types 9V, 12V and 15V output types | 65% min. / 70% typ. 70% min. / 80% typ. |
| Temperature Drift (V_{OUT}) | | 0.03% per $^\circ\text{C}$ max. |
| Temperature Rise above Ambient (at full load) | | 8 $^\circ\text{C}$ max. |
| Switching Frequency at Full Load (depending on the type) | | 100kHz typ. |
| Package Weight | | 2.3 g |
| MTTF ¹⁾ (depending on the type) | -25°C $+25^\circ\text{C}$ $+70^\circ\text{C}$ | 170kHrs min. / 1900kHrs max. 148kHrs min. / 1615kHrs max. 130kHrs min. / 1350kHrs max. |

¹⁾ Calculated using MIL-HDBK-217F with nominal input voltage at full load.

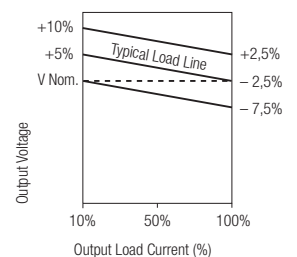
Please contact us, if you need exact parameters for the converter you have selected.

Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

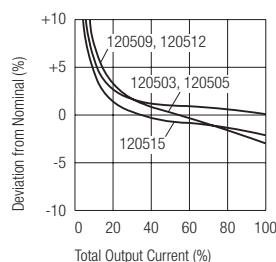
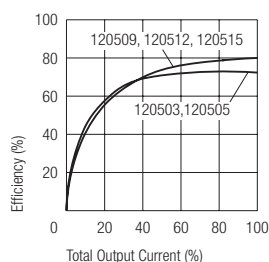
R05T/Uxx



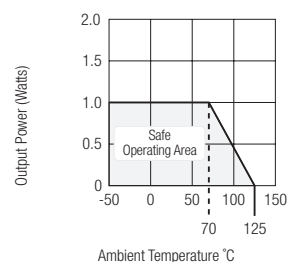
Tolerance Envelope



R12T/Uxx

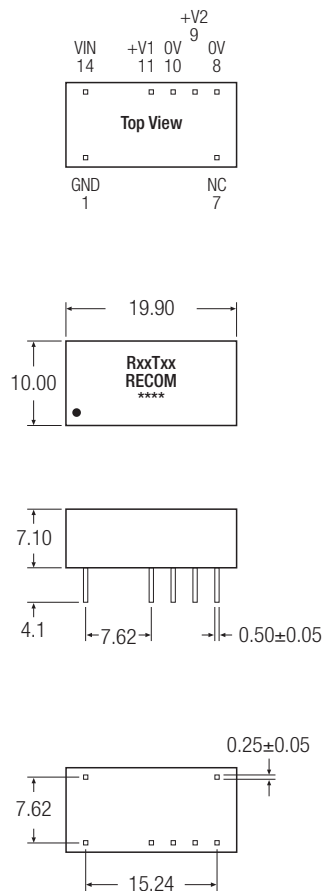


Temperature Derating Graph

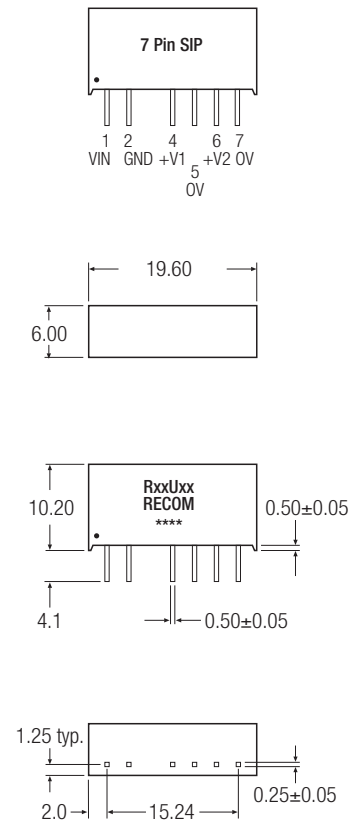


Package Style and Pinning (mm)

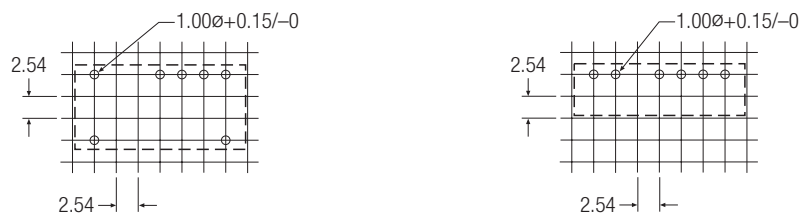
14 Pin DIP Package Style



7 Pin SIP Package Style



Recommended Footprint Details



XX.X ± 0.5 mm
 XX.XX ± 0.25 mm