

## Features

### Regulated Converters

- DIP24 Miniature Package
- 2:1 Wide Range Voltage Input
- 3kVDC Isolation
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- Low profile 7mm Height
- Cost Effective
- Short Lead Time
- No External Capacitor needed
- Full SMD Construction
- 100% Burned In
- Efficiency to 85%

### Selection Guide

| Part Number     | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) |
|-----------------|---------------------|----------------------|---------------------|----------------|
| DIP24 Miniature | (VDC)               | (VDC)                | (mA)                | %              |
| RW-1205D        | 9 – 18              | ±5                   | ±300                | 76             |
| RW-1209D        | 9 – 18              | ±9                   | ±167                | 80             |
| RW-1212D        | 9 – 18              | ±12                  | ±125                | 83             |
| RW-1215D        | 9 – 18              | ±15                  | ±100                | 83             |
| RW-2405D        | 18 – 36             | ±5                   | ±300                | 78             |
| RW-2409D        | 18 – 36             | ±9                   | ±167                | 81             |
| RW-2412D        | 18 – 36             | ±12                  | ±125                | 85             |
| RW-2415D        | 18 – 36             | ±15                  | ±100                | 85             |
| RW-4805D        | 36 – 72             | ±5                   | ±300                | 78             |
| RW-4809D        | 36 – 72             | ±9                   | ±167                | 82             |
| RW-4812D        | 36 – 72             | ±12                  | ±125                | 84             |
| RW-4815D        | 36 – 72             | ±15                  | ±100                | 84             |

### Description

The RW series with 2:1 input voltage ranges and max. height of 7,0 mm has been designed for the telecom - and industrial automation markets. They are particularly aimed at applications where pcb-space is at a premium, still requiring industrial standard pinning. The converters supply the full 3 Watts without additional heat-sinks over the temperature range -40°C to +85°C.

### Specifications (Core Operating Area)

|   |                                   |                       |
|---|-----------------------------------|-----------------------|
| Input Voltage Range                               | 2:1                               |                       |
| Output Voltage Accuracy                           | ±1% typ. / ±2% max.               |                       |
| Line Voltage Regulation                           | 0.1% typ. / 0.2% max.             |                       |
| Load Voltage Regulation (10% to 100% full load)   | 0.2% typ. / 0.5% max.             |                       |
| Output Ripple and Noise (20MHz limited)           | 50mVp-p max.                      |                       |
| Operating Frequency                               | 100KHz min. / 150kHz typ.         |                       |
| Efficiency at Full Load                           | See above                         |                       |
| Isolation Voltage                                 | (tested for 1 second)             | 3.000VDC min.         |
| Rated Working Voltage                             | (long term isolation)             | see Application Notes |
| Isolation Capacitance                             | 20pF min. / 40pF typ. / 60pF max. |                       |
| Isolation Resistance                              | 1 GΩ min.                         |                       |
| Short Circuit Protection                          | Continuous                        |                       |
| Operating Temperature Range (free air convection) | -40°C to +85°C (see Graph)        |                       |
| Storage Temperature Range                         | -55°C to +125°C                   |                       |

continued on next page

## ECONOLINE

DC/DC-Converter

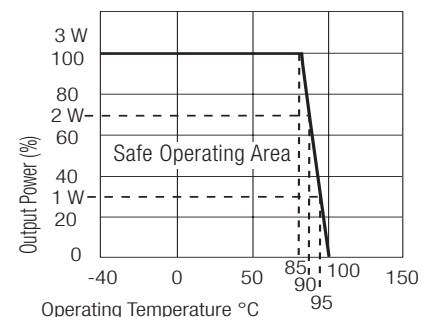
# RW-xxxxD Series

**3 Watt  
DIP24 low  
Profile package  
Dual Regulated  
Output**



**RECOM**

## Derating-Graph (Ambient Temperature)

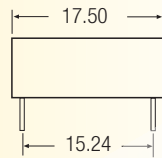
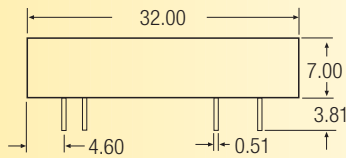


**Specifications (Core Operating Area)**

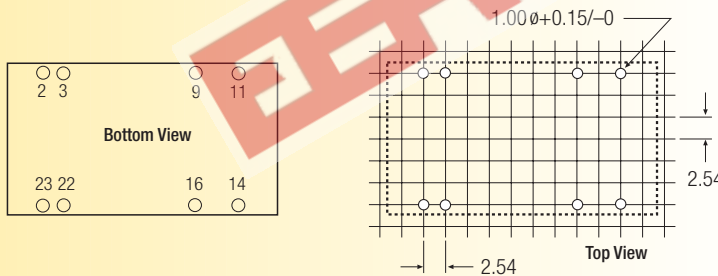
|                   |  |                     |                              |
|-------------------|--|---------------------|------------------------------|
| Case Material     | Non-Conductive Black Plastic                                   |                     |                              |
| Potting Material  | Epoxy ( UL94V-0 )  |                     |                              |
| Relative Humidity | MSL Level 1  | 95% RH              |                              |
| Package Weight    | 7g   |                     |                              |
| MTBF (+25°C)      | } Detailed Information see<br>Application Notes chapter "MTBF" | using MIL-HDBK 217F | 1636 x 10 <sup>3</sup> hours |
| (+85°C)           |  | using MIL-HDBK 217F | 303 x 10 <sup>3</sup> hours  |

**Package Style and Pinning (mm)**

24 PIN DIP Miniature Package Style



Recommended Footprint Details



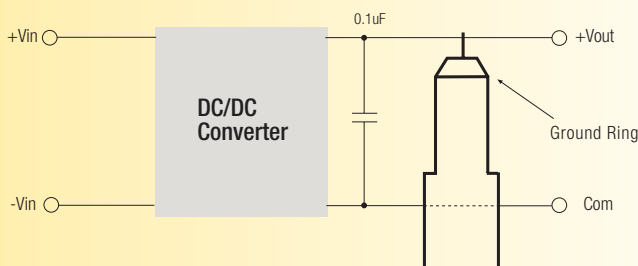
Pin Connections

| Pin     | Dual  |
|---------|-------|
| 2 & 3   | -Vin  |
| 9 & 16  | Com   |
| 11      | -Vout |
| 14      | +Vout |
| 22 & 23 | +Vin  |

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

**Note:** pinout is the same like REC-series, A-pinout

To measure the output ripple & noise with short runs by 0.1uF/50V @ 20MHz nominal input and full load. Please see as below:



**RW-xx15D**

Efficiency / Load

