

Features

Regulated Converters

- 2:1 Wide Range Voltage Input
- 1kVDC, 2kVDC and 3kVDC Isolation
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- Low Ripple and Noise
- DIP16 and SMD Versions Available
- Efficiency to 83%

ECONOLINE
DC/DC-Converter

RW2 Series

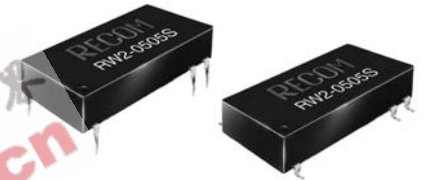
Selection Guide

| Part Number | Input Voltage Range (VDC) | Rated Output Voltage (VDC) | Output Current Full Load (mA) | Efficiency typ./nom Vin (%) | Capacitive Load max. (µF) |
|--------------------|---------------------------|----------------------------|-------------------------------|-----------------------------|---------------------------|
| DIP16 | | | | | |
| RW2-053.3S (H2/H3) | 4.5 - 9 | 3.3 | 500 | 68 | 1000 |
| RW2-0505S (H2/H3) | 4.5 - 9 | 5 | 400 | 73 | 1000 |
| RW2-0509S (H2/H3) | 4.5 - 9 | 9 | 222 | 74 | 470 |
| RW2-0512S (H2/H3) | 4.5 - 9 | 12 | 166 | 75 | 220 |
| RW2-0515S (H2/H3) | 4.5 - 9 | 15 | 134 | 75 | 100 |
| RW2-123.3S (H2/H3) | 9 - 18 | 3.3 | 500 | 69 | 1000 |
| RW2-1205S (H2/H3) | 9 - 18 | 5 | 400 | 75 | 1000 |
| RW2-1209S (H2/H3) | 9 - 18 | 9 | 222 | 78 | 470 |
| RW2-1212S (H2/H3) | 9 - 18 | 12 | 166 | 80 | 220 |
| RW2-1215S (H2/H3) | 9 - 18 | 15 | 134 | 80 | 100 |
| RW2-243.3S (H2/H3) | 18 - 36 | 3.3 | 500 | 70 | 1000 |
| RW2-2405S (H2/H3) | 18 - 36 | 5 | 400 | 78 | 1000 |
| RW2-2409S (H2/H3) | 18 - 36 | 9 | 222 | 81 | 470 |
| RW2-2412S (H2/H3) | 18 - 36 | 12 | 166 | 83 | 220 |
| RW2-2415S (H2/H3) | 18 - 36 | 15 | 134 | 83 | 100 |
| RW2-483.3S (H2/H3) | 36 - 72 | 3.3 | 500 | 73 | 1000 |
| RW2-4805S (H2/H3) | 36 - 72 | 5 | 400 | 76 | 1000 |
| RW2-4809S (H2/H3) | 36 - 72 | 9 | 222 | 79 | 470 |
| RW2-4812S (H2/H3) | 36 - 72 | 12 | 166 | 81 | 220 |
| RW2-4815S (H2/H3) | 36 - 72 | 15 | 134 | 81 | 100 |
| RW2-053.3D (H2/H3) | 4.5 - 9 | ±3.3 | ±250 | 68 | ±470 |
| RW2-0505D (H2/H3) | 4.5 - 9 | ±5 | ±200 | 73 | ±470 |
| RW2-0509D (H2/H3) | 4.5 - 9 | ±9 | ±111 | 74 | ±220 |
| RW2-0512D (H2/H3) | 4.5 - 9 | ±12 | ±83 | 75 | ±100 |
| RW2-0515D (H2/H3) | 4.5 - 9 | ±15 | ±67 | 75 | ±47 |
| RW2-123.3D (H2/H3) | 9 - 18 | ±3.3 | ±250 | 69 | ±470 |
| RW2-1205D (H2/H3) | 9 - 18 | ±5 | ±200 | 75 | ±470 |
| RW2-1209D (H2/H3) | 9 - 18 | ±9 | ±111 | 78 | ±220 |
| RW2-1212D (H2/H3) | 9 - 18 | ±12 | ±83 | 80 | ±100 |
| RW2-1215D (H2/H3) | 9 - 18 | ±15 | ±67 | 80 | ±47 |
| RW2-243.3D (H2/H3) | 18 - 36 | ±3.3 | ±250 | 70 | ±470 |
| RW2-2405D (H2/H3) | 18 - 36 | ±5 | ±200 | 78 | ±470 |
| RW2-2409D (H2/H3) | 18 - 36 | ±9 | ±111 | 81 | ±220 |
| RW2-2412D (H2/H3) | 18 - 36 | ±12 | ±83 | 83 | ±100 |
| RW2-2415D (H2/H3) | 18 - 36 | ±15 | ±67 | 83 | ±47 |
| RW2-483.3D (H2/H3) | 36 - 72 | ±3.3 | ±250 | 73 | ±470 |
| RW2-4805D (H2/H3) | 36 - 72 | ±5 | ±200 | 78 | ±470 |
| RW2-4809D (H2/H3) | 36 - 72 | ±9 | ±111 | 81 | ±220 |
| RW2-4812D (H2/H3) | 36 - 72 | ±12 | ±83 | 83 | ±100 |
| RW2-4815D (H2/H3) | 36 - 72 | ±15 | ±67 | 83 | ±47 |

Standard Isolation is 1kVDC. Add suffix **/H2** for 2kVDC Isolation, **/H3** for 3kVDC Isolation.

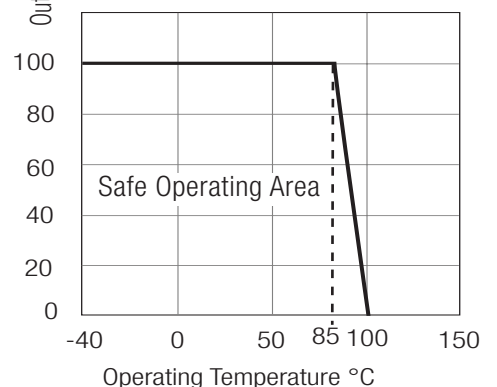
Add suffix **"/SMD"** for SMD Package e.g. RW2-0505S/H3/SMD

2 Watt DIP16 & SMD Single & Dual Output



RECOM

Derating-Graph (Ambient Temperature)



Description

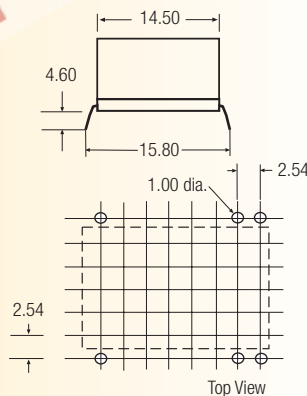
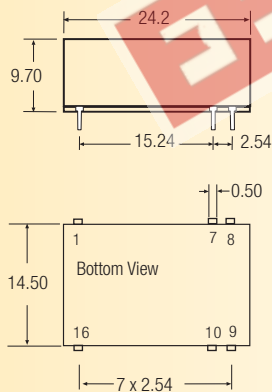
High power-density, 2:1 input voltage range and a wide temperature range of -40°C to +85°C are just some of the characteristics of this versatile surface mount converter, ideal for highly sophisticated industrial designs where space is at a premium.

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

| | | |
|---|--|--|
| Input Voltage Range | | 2:1 |
| Output Accuracy | | ±2% typ. |
| Line Voltage Regulation | | ±0.5% max. |
| Load Voltage Regulation | (20% to 100% full load) | ±0.5% typ. |
| Output Ripple and Noise (20MHz limited) | | 50mVp-p max. |
| Switching Frequency (at full Load) | | 100kHz min. |
| Efficiency at Full Load | | 70% min. / 80% typ. |
| Isolation Voltage | (tested for 1 second) | 1000VDC min. H2 2000VDC min. H3 3000VDC min. |
| Rated Working Voltage | (long term isolation) | see Application Notes |
| Isolation Capacitance | | 30pF max. |
| Isolation Resistance | | 1GΩ min. |
| Short Circuit Protection | | Continuous |
| Operating Temperature Range | | -40°C to +85°C |
| Storage Temperature Range | | -55°C to +125°C |
| Relative Humidity | | 95% RH |
| Package Weight | | 6.4g |
| MTBF (+25°C) | } Detailed Information see Application Notes chapter "MTBF" | using MIL-HDBK 217F 4366 x10 ³ hours |
| (+85°C) | | using MIL-HDBK 217F 658 x10 ³ hours |

Package Style and Pinning (mm)

16 Pin DIP Package



Pin Connections

| Pin # | Single | Dual |
|-------|--------|-------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Com |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.35 mm

Recommended Footprint Details

16 Pin SMD Package

