

Features

Regulated Converters

- 2:1 Wide Range Voltage Input
- 1kVDC, 2kVDC and 3kVDC Isolation
- Approved for Medical Applications
- Continuous Short Circuit Protection
- Low Ripple and Noise
- DIP16, mini DIP16 and SMD Cases Styles
- Efficiency to 83%

ECONOLINE

DC/DC-Converter

RW2 Series

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 DIP16 converter, ideal for highly sophisticated industrial and medical designs where a regulated converter is required but space is at a premium. Three different case styles and isolation options are available.

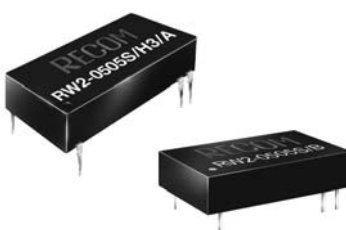
Selection Guide

Part Number	Input Voltage Range	Rated Output Voltage	Output Current Full Load	Efficiency typ./nom Vin	Capacitive Load max.
DIP16 (Mini & SMD)	(VDC)	(VDC)	(mA)	(%)	μF
RW2-053.3S (H2/H3)	4.5 - 9	3.3	500	68	1000
RW2-0505S (H2/H3)	4.5 - 9	5	400	73	1000
RW2-0512S (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
RW2-1212S (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
RW2-2412S (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
RW2-4812S (H2/H3)	36 - 72	12	166	81	220
RW2-4815S (H2/H3)	36 - 72	15	134	81	100
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
RW2-1205D (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
RW2-2405D (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
RW2-4805D (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 "/A" for standard case style, "/SMD" for SMD package or "/B" for smaller case size

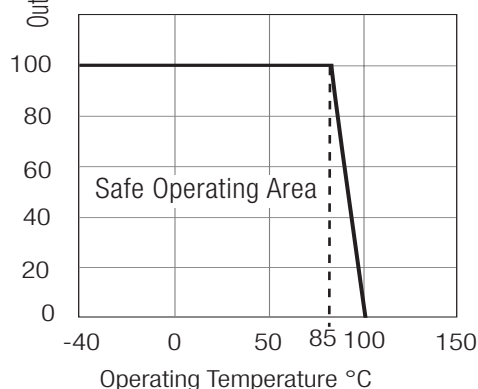
e.g. RW2-0505S/H3/A, RW2-0505D/H2/SMD or RW2-0505S/B



EN-60950-1 Certified
EN-60601-1 Certified
(Suffix H3)

RECOM

Derating-Graph (Ambient Temperature)

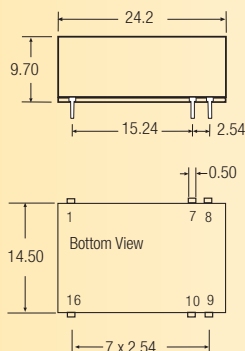


Electrical Specifications (measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

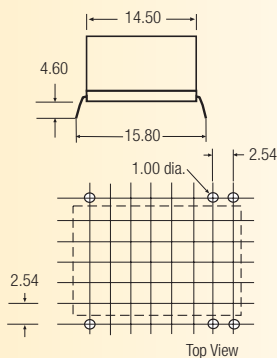
Input Voltage Range		2:1	
Output Accuracy		±2% typ.	
Line Voltage Regulation		±0.5% max.	
Load Voltage Regulation	(20% to 100% full load)	±0.5% typ.	
Output Ripple and Noise (20MHz limited)		50mVp-p max.	
Switching Frequency (at full Load)		100kHz min. / 700kHz max.	
Efficiency at Full Load		70% min. / 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 (see Graph)	
Storage Temperature Range		−55°C to +125°C	
Case Temperature		100°C max.	
Relative Humidity		95% RH	
Package Weight		6.4g	
MTBF (+25°C)	For Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	4366 x10³ hours
(+85°C)		using MIL-HDBK 217F	658 x10³ hours

Package Style and Pinning (mm)

Case Style A (Standard, /H2 and /H3 Options)

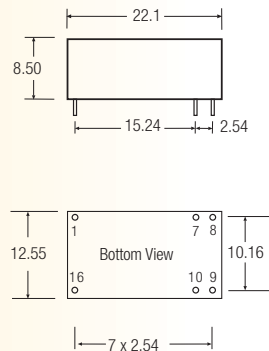


16 Pin DIP Package

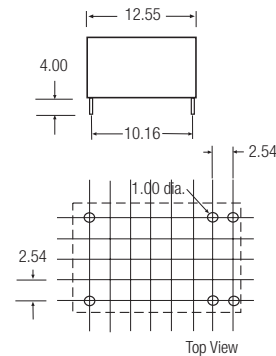


Recommended Footprint Details

Case Style B (Standard Option Only)

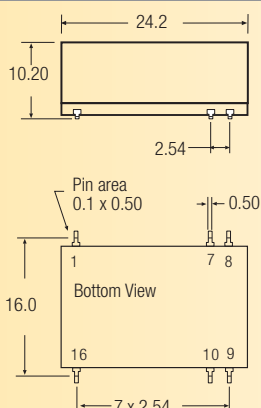


16 Pin Mini-DIP Package

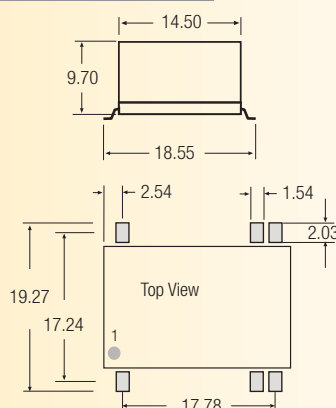


Recommended Footprint Details

Case Style SMD (Standard, /H2 and /H3 Options)



16 Pin SMD Package



Recommended Pad Details



Pin Connections (All Case Styles)

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

XX.X ± 0.5 mm
XX.XX ± 0.35 mm