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%

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 DIP16 (Mini & SMD)	Input Voltage Range (VDC)	Rated Output Voltage (VDC)	Output Current Full Load (mA)	Efficiency typ./nom Vin (%)	Max Capacitive Load[1]
RW2-053.3S (H2/H3)	4.5 - 9	3.3	500	68	4700µF
RW2-0505S (H2/H3)	4.5 - 9	5	400	73	1000µF
RW2-0512S (H2/H3)	4.5 - 9	12	166	75	1000µF
RW2-0515S (H2/H3)	4.5 - 9	15	134	75	1000µF
RW2-123.3S (H2/H3)	9 - 18	3.3	500	69	4700µF
RW2-1205S (H2/H3)	9 - 18	5	400	75	1000µF
RW2-1212S (H2/H3)	9 - 18	12	166	80	1000µF
RW2-1215S (H2/H3)	9 - 18	15	134	80	1000µF
RW2-243.3S (H2/H3)	18 - 36	3.3	500	70	4700µF
RW2-2405S (H2/H3)	18 - 36	5	400	78	1000µF
RW2-2412S (H2/H3)	18 - 36	12	166	83	1000µF
RW2-2415S (H2/H3)	18 - 36	15	134	83	1000µF
RW2-483.3S (H2/H3)	36 - 72	3.3	500	73	4700µF
RW2-4805S (H2/H3)	36 - 72	5	400	76	1000µF
RW2-4812S (H2/H3)	36 - 72	12	166	81	1000µF
RW2-4815S (H2/H3)	36 - 72	15	134	81	1000µF
RW2-0505D (H2/H3)	4.5 - 9	±5	±200	73	±680µF
RW2-0509D (H2/H3)	4.5 - 9	±9	±111	74	±680µF
RW2-0512D (H2/H3)	4.5 - 9	±12	±83	75	±680µF
RW2-0515D (H2/H3)	4.5 - 9	±15	±67	75	±680µF
RW2-1205D (H2/H3)	9 - 18	±5	±200	75	±680µF
RW2-1209D (H2/H3)	9 - 18	±9	±111	78	±680µF
RW2-1212D (H2/H3)	9 - 18	±12	±83	80	±680µF
RW2-1215D (H2/H3)	9 - 18	±15	±67	80	±680µF
RW2-2405D (H2/H3)	18 - 36	±5	±200	78	±680µF
RW2-2409D (H2/H3)	18 - 36	±9	±111	81	±680µF
RW2-2412D (H2/H3)	18 - 36	±12	±83	83	±680µF
RW2-2415D (H2/H3)	18 - 36	±15	±67	83	±680µF
RW2-4805D (H2/H3)	36 - 72	±5	±200	78	±680µF
RW2-4809D (H2/H3)	36 - 72	±9	±111	81	±680µF
RW2-4812D (H2/H3)	36 - 72	±12	±83	83	±680µF
RW2-4815D (H2/H3)	36 - 72	±15	±67	83	±680µF

Standard Isolation is 1kVDC. Add suffix "**/H2**" for 2kVDC Isolation, "**/H3**" for 3kVDC Isolation.
Add no suffix for standard case style, "**/SMD**" for SMD package or "**/B**" for smaller case size
e.g. RW2-0505S/H3, RW2-0505D/H2/SMD or RW2-0505S/B

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

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

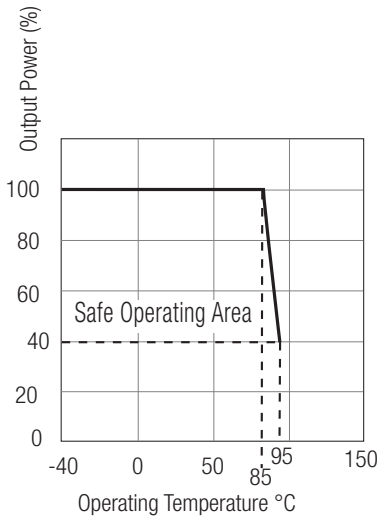
2 Watt DIP16, Mini DIP16 & SMD Single & Dual Output

RoHS 2002/95/EC 6/6

EN-60950-1 Certified (All Suffixes)
EN-60601-1 Certified* (*/H suffix)

RW2

Derating-Graph
(Ambient Temperature)



Refer to Application Notes

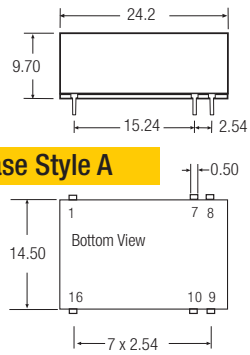
RW2 Series

Electrical Specifications (measured at T_A = 25°C, at nominal input voltage and rated output current unless otherwise specified)

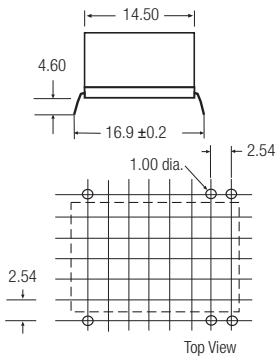
Input Voltage Range		2:1
Output Accuracy		±2% typ.
Line Voltage Regulation		±0.5% max.
Load Voltage Regulation	(20% to 100% full load)	±0.5% typ.
Minimum Load		0%
Output Ripple and Noise (20MHz limited)		50mVp-p max.
Switching Frequency (at full Load)		100kHz min. / 700kHz max.
Efficiency at Full Load		70% min. / 80% typ.
Isolation Voltage	(tested for 1 second)	1000VDC
	(rated for 1 minute)	500VAC / 60Hz
/H2	(tested for 1 second)	2000VDC
	(rated for 1 minute)	1000VAC / 60Hz
/H3	(tested for 1 second)	3000VDC
	(rated for 1 minute)	1500VAC / 60Hz
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
Packing Quantity	Case Style A, SMD	20 pcs per tube
	Case Style B	22 pcs per Tube
MTBF (+25°C) *For Detailed Information see*	using MIL-HDBK 217F	4366 x10³ hours
(+85°C) *Application Notes chapter "MTBF"*	using MIL-HDBK 217F	658 x10³ hours

Package Style and Pinning (mm)

Case Style A

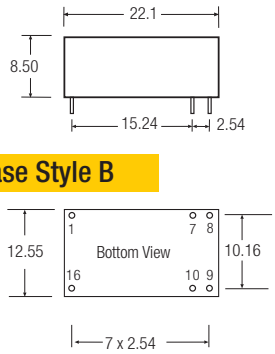


16 Pin DIP Package

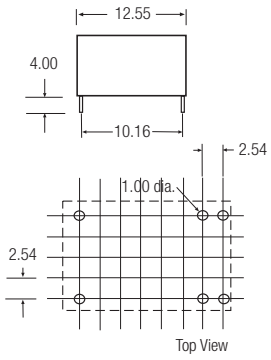


Recommended Footprint Details

Case Style B

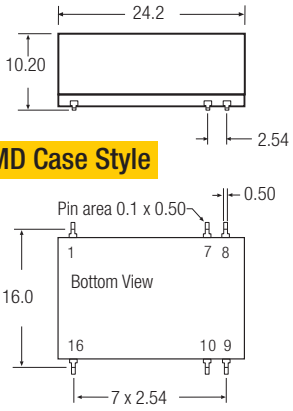


16 Pin Mini-DIP Package

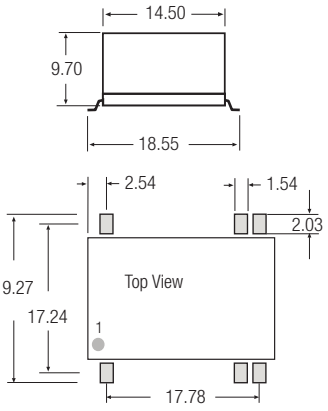


Recommended Footprint Details

SMD Case Style



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

3rd angle projection

XX.X ± 0.5 mm
XX.XX ± 0.35 mm

Certifications

EN General Safety Report: SPCLVD1212007 EN60950-1:2006 + A11:2009
EN Medical Safety Report: MDD1205098-3 + RM1205098-3
IEC/EN 60601-1 3rd Edition Medical Report + ISO14971 Risk Assessment