

Wall Industries, Inc.

DI01D SERIES

1.2 to 15 Watts
1A Output Current, 3-Pin SIP Package
Wide Input Voltage Range
Non-Isolated DC/DC Converters



0.45" x 0.40" x 0.30" 3-Pin SIP Package

APPLICATIONS

- Wireless Networks
- Telecom/Datacom
- Industrial Control Systems
- Semiconductor Equipment
- Distributed Power Architectures
- Microprocessor Power Applications

DESCRIPTION

The DI01D series consists of high performance non-isolated DC/DC converters that deliver 1A of output current in a small 0.45" x 0.40" x 0.30" 3-Pin SIP package. This series features a wide operating temperature range of -40°C to +85°C, efficiency up to 96%, and short circuit protection. These converters are RoHS compliant and are suitable for use in wireless networks, telecom/datacom applications, industrial control systems, distributed power architectures, semiconductor equipment, and microprocessor power applications.

FEATURES

- RoHS Compliant
- 1A Output Current
- Low Output Ripple & Noise
- Wide Input Voltage Range: 4.6 to 36VDC
- 1.2 to 15 Watts Output Power
- Efficiency up to 96%
- Single Outputs
- 3-Pin SIP Package: 0.45 x 0.40 x 0.30 Inches
- Pin-out Compatible with LM78XX Linear Regulators
- Short Circuit Protection
- UL94V-0 Package Material
- Wide Operating Temperature Range: -40°C to +85°C

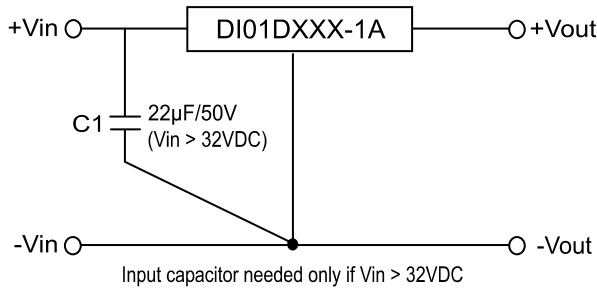
SPECIFICATIONS: DI01D Series						
<p>All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.</p>						
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range			See Table			
Input Filter (See Figure 1)	Input capacitor needed only if Vin >32VDC		C filter			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Tolerance					±2	%
Line Regulation	1.2 ~ 1.5VDC Output Models	LL to HL at full load			0.3	%
	1.8 ~ 15VDC Output Models				0.3	%
Load Regulation	1.2 ~ 1.5VDC Output Models	10% to 100% full load			0.6	%
	1.8 ~ 15VDC Output Models				0.4	%
Output Power			1.2 ~ 15 Watts			
Output Current					1	A
Ripple & Noise (20MHz BW)	1.2 ~ 6.5VDC Output Models	without output capacitor			50	mVp-p
	9 ~ 15VDC Output Models				75	mVp-p
Capacitive Load					470	µF
Transient Response	50% load step change			250		µs
PROTECTION						
Short Circuit Protection			continuous, automatic recovery			
GENERAL SPECIFICATIONS						
Efficiency			See Table			
Switching Frequency				500		KHz
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature	With derating		-40		+85	°C
Storage Temperature			-55		+125	°C
Humidity					95	%
Cooling			Free air convection			
MTBF	+25°C	MIL-HDBK-217F	5,000,000 hours			
	+71°C		1,000,000 hours			
PHYSICAL SPECIFICATIONS						
Case Material			Non-conductive black plastic			
Weight			0.07oz (2.0g)			
Dimensions (L x W x H)			0.45 x 0.40 x 0.30 inches (11.5 x 10.0 x 7.5 mm)			

MODEL SELECTION TABLE

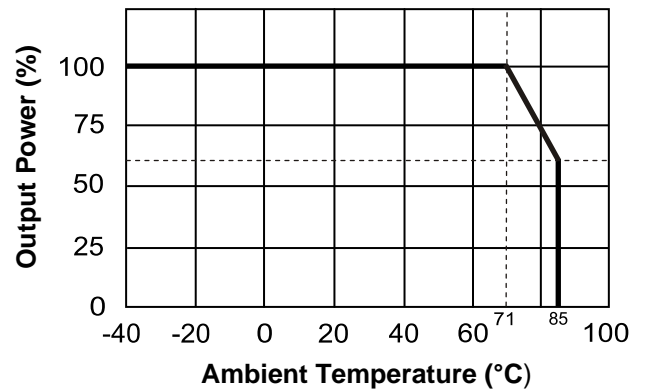
Model Number	Input Voltage Range	Output Voltage	Output Current	Output Power	Efficiency	
					Min Vin	Max Vin
DI01D1R2-1A	4.6 – 36 VDC	1.2 VDC	1A	1.2W	74%	62%
DI01D1R5-1A	4.6 – 36 VDC	1.5 VDC	1A	1.5W	78%	65%
DI01D1R8-1A	4.6 – 36 VDC	1.8 VDC	1A	1.8W	82%	69%
DI01D2R5-1A	4.6 – 36 VDC	2.5 VDC	1A	2.5W	87%	75%
DI01D3R3-1A	4.75 – 36 VDC	3.3 VDC	1A	3.3W	91%	78%
DI01D05-1A	6.5 – 36 VDC	5 VDC	1A	5.0W	92%	84%
DI01D6R5-1A	9 – 36 VDC	6.5 VDC	1A	6.5W	93%	87%
DI01D09-1A	12 – 36 VDC	9 VDC	1A	9.0W	95%	90%
DI01D12-1A	15 – 36 VDC	12 VDC	1A	12W	95%	92%
DI01D15-1A	18 – 36 VDC	15 VDC	1A	15W	96%	94%

APPLICATION EXAMPLE

Figure 1

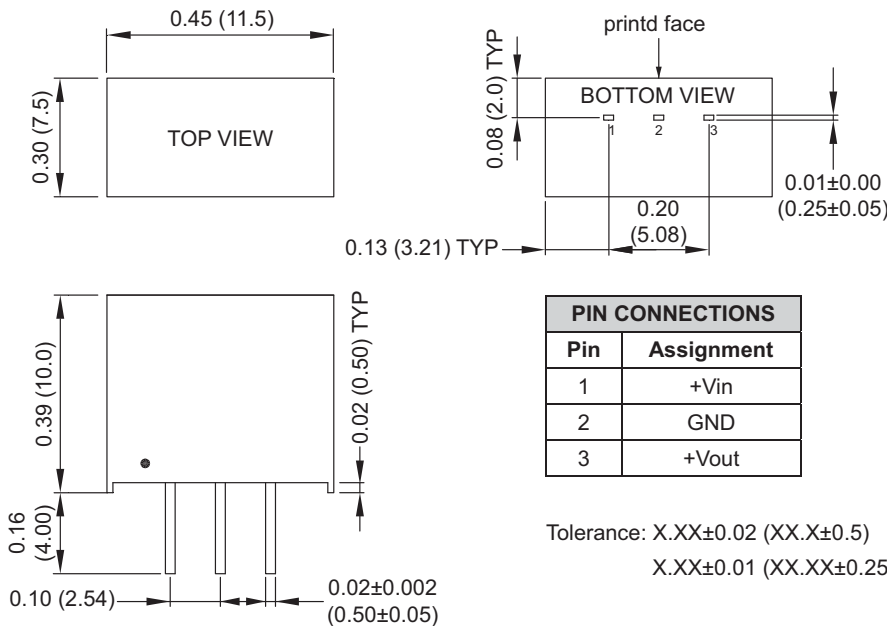


DERATING CURVE



MECHANICAL DRAWING

Unit: inches (mm)



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

<u>Phone:</u>	☎ (603)778-2300
<u>Toll Free:</u>	☎ (888)587-9255
<u>Fax:</u>	☎ (603)778-9797
<u>E-mail:</u>	sales@wallindustries.com
<u>Web:</u>	www.wallindustries.com
<u>Address:</u>	5 Watson Brook Rd. Exeter, NH 03833