

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

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

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.



SPECIFICATIONS: D101D Series

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.

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SPECIFICATION	TEST CONI	DITIONS	Min	Тур	Max	Unit	
INPUT SPECIFICATIONS							
Input Voltage Range				See 7	Γable		
Input Filter (See Figure 1)	Input capacitor needed only if	Vin >32VDC	C filter				
OUTPUT SPECIFICATIONS		,					
Output Voltage				See 7	Γable		
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				0.6	%	
	1.8 ~ 15VDC Output Models	10% to 100% full load			0.4	%	
Output Power				1.2 ~ 1:	5 Watts	1	
Output Current					1	A	
D: 1 0 M; (20) (II DW)	1.2 ~ 6.5VDC Output Models	without output capacitor			50	mVp-p	
Ripple & Noise (20MHz BW)	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			overy			
GENERAL SPECIFICATIONS	S						
Efficiency				See Table			
Switching Frequency				500		KHz	
ENVIRONMENTAL SPECIFI	CATIONS					'	
Operating Temperature	With derating		-40		+85	°C	
Storage Temperature			-55		+125	°C	
Humidity					95	%	
Cooling				Free air c	onvection	1	
MTBF	+25°C		5,000,000 hours				
	+71°C	MIL-HDBK-217F	1,000,000 hours				
PHYSICAL SPECIFICATION	S						
Case Material			No	n-conductiv	e black pl	astic	
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)					

^{*}Due to advances in technology, specifications are subject to change without notice.



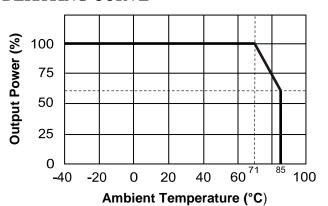
MODEL SELECTION TABLE								
Model Number	Input Voltage Range	Output Voltage	Output Current	Output Power	Efficiency			
Wiodel Nulliber	input voitage Kange				Min Vin	Max Vin		
DI01D1R2-1A	4.6 – 36 VDC	1.2 VDC	1A	1.2W	74%	62%		
DI01D1R5-1A	4.6 – 36 VDC	1.5 VDC	1A	1.5W	78%	65%		
DI01D1R8-1A	4.6 – 36 VDC	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%		

Rev. A

APPLICATION EXAMPLE

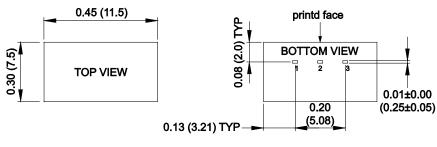
+Vin O DI01DXXX-1A O+Vout C1 22µF/50V (Vin > 32VDC) -Vin O Input capacitor needed only if Vin > 32VDC

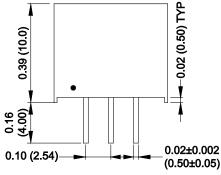
DERATING CURVE



MECHANICAL DRAWING

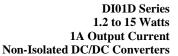






PIN CONNECTIONS		
Pin	Assignment	
1	+Vin	
2	GND	
3	+Vout	

Tolerance: X.XX±0.02 (XX.X±0.5) X.XX±0.01 (XX.XX±0.25)





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:

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