THE 1N4001-1N4007 ARE
NOT RECOMMENDED FOR NEW DESIGNS.
PLEASE CONTACT US.

1N4001 – 1N4007

1.0A RECTIFIER

Features

- Diffused Junction
- High Current Capability and Low-Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

Mechanical Data

- Package: DO-41
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208 e3
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.30 grams (Approximate)

Ordering Information (Note 3)

Part Number	Package	Packing	
		Qty.	Carrier
1N4001-T	DO-41 Plastic	5k	13” Tape & Reel
1N4002-T	DO-41 Plastic	5k	13” Tape & Reel
1N4003-T	DO-41 Plastic	5k	13” Tape & Reel
1N4004-T	DO-41 Plastic	5k	13” Tape & Reel
1N4005-T	DO-41 Plastic	5k	13” Tape & Reel
1N4006-T	DO-41 Plastic	5k	13” Tape & Reel
1N4007-T	DO-41 Plastic	5k	13” Tape & Reel

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 4) @ T_A = +75°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30							A
Forward Voltage @ I_F = 1.0A	V_{FM}	1.0							V
Peak Reverse Current @ T_A = +25°C at Rated DC Blocking Voltage @ T_A = +100°C	I_{RM}	5.0 50							μA
Typical Junction Capacitance (Note 5)	C_j	15				8			pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100							k/W
Maximum DC Blocking Voltage Temperature	T_A	+150							°C
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							°C

Notes: 4. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
5. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

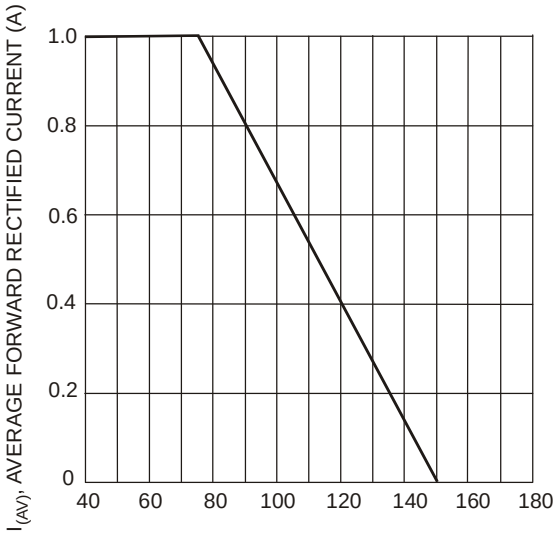


Fig. 1 Forward Current Derating Curve

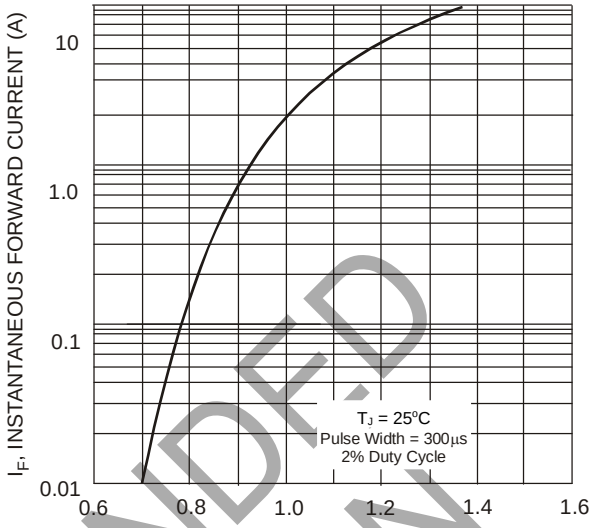


Fig. 2 Typical Forward Characteristics

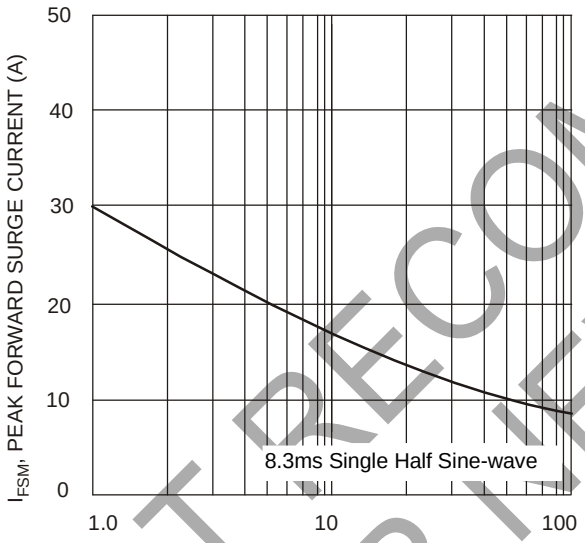


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

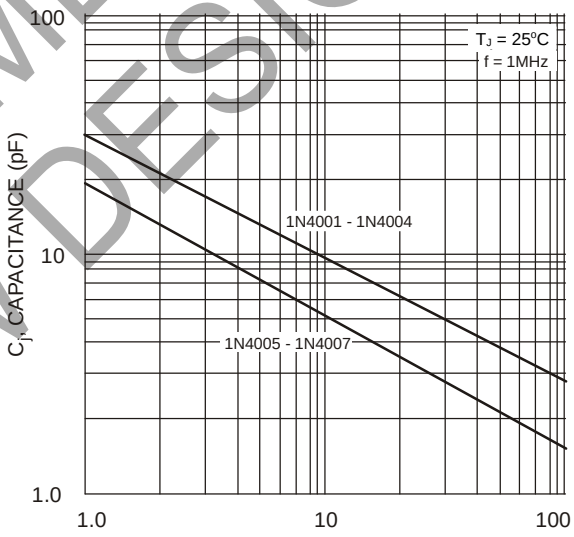
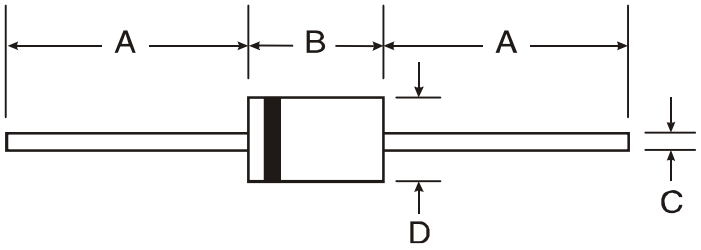


Fig. 4 Typical Junction Capacitance

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

DO-41 (Plastic)



DO-41 (Plastic)		
Dim	**Min**	**Max**
A	25.40	-
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

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