# NOT RECOMMENDED FOR NEW DESIGN USE S1A-S1M series

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 (Note 3)

# $\begin{array}{c|c} & A & B & A & \downarrow \\ \hline & A & C & C & C \end{array}$

25.40

4.06

0.71

2.00

All Dimensions in mm

Dim

Α

В

С

D

DO-41 Plastic

Max

5.21

0.864

2.72

#### **Mechanical Data**

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Page 2
- Marking: Type Number
- Weight: 0.30 grams (Approximate)

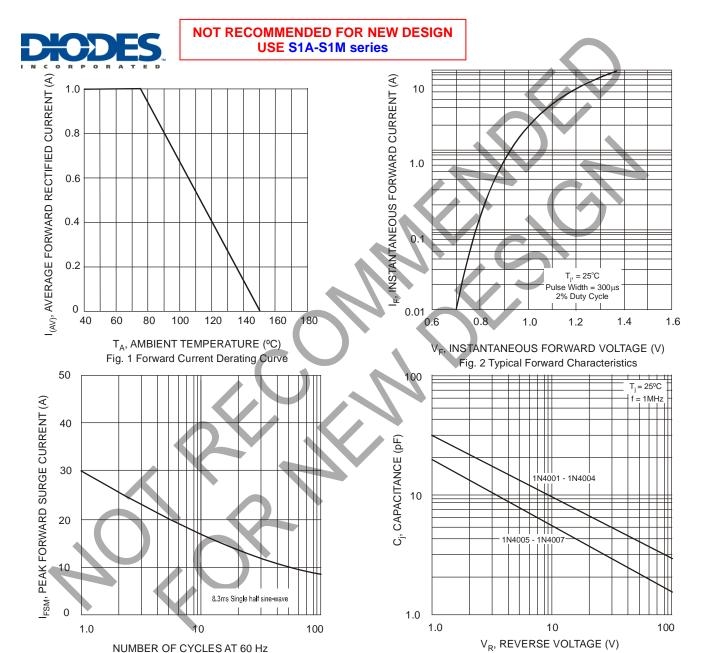
# Maximum Ratings and Electrical Characteristics (@TA = +25°C unless otherwise specified.)

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 <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	>
RMS Reverse Voltage	V <sub>R</sub> V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ T <sub>A</sub> =+75°C		10					Α		
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	30					Α		
Forward Voltage @ I <sub>F</sub> = 1.0A	$V_{FM}$	1.0					V		
Peak Reverse Current @T <sub>A</sub> = +25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = +100°C	I <sub>RM</sub>	5.0 50					μА		
Typical Junction Capacitance (Note 2)	C <sub>i</sub>	15 8			pF				
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100					K/W		
Maximum DC Blocking Voltage Temperature	T <sub>A</sub>	+150					°C		
Operating and Storage Temperature Range	T <sub>J,</sub> T <sub>STG</sub>	-65 to +150					°C		

Notes:

- 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
- 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
- 3. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.



## **Ordering Information** (Note 4)

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

Device	Packaging	Shipping		
1N4001-B	DO-41 Plastic	1K/Bulk		
1N4001-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4002-B	DO-41 Plastic	1K/Bulk		
1N4002-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4003-B	DO-41 Plastic	1K/Bulk		
1N4003-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4004-B	DO-41 Plastic	1K/Bulk		
1N4004-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4005-B	DO-41 Plastic	1K/Bulk		
1N4005-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4006-B	DO-41 Plastic	1K/Bulk		
1N4006-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		
1N4007-B	DO-41 Plastic	1K/Bulk		
1N4007-T	DO-41 Plastic	5K/Tape & Reel, 13-inch		

Note: 4. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.

Fig. 4 Typical Junction Capacitance



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