ELECTRONICS, INC.
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1N4001 thru 1N4007
1.0A Standard Recovery Rectifier

Features:

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- RoHS Compliant

Mechanical Data:

- Case: DO−41, Molded Plastic
- Terminals: Plated Leads Solderable per MIL−STD−202, Method 208
- Polarity: Cathode Band
- Weight: 0.35 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

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

Peak Repetitive Voltage, V_{RRM}
Working Peak Reverse Voltage, V_{RWM}
DC Blocking Voltage, V_R
- 1N4001 . . . . . 50V
- 1N4002 . . . . . 100V
- 1N4003 . . . . . 200V
- 1N4004 . . . . . 400V
- 1N4005 . . . . . 600V
- 1N4006 . . . . . 800V
- 1N4007 . . . . . 1000V

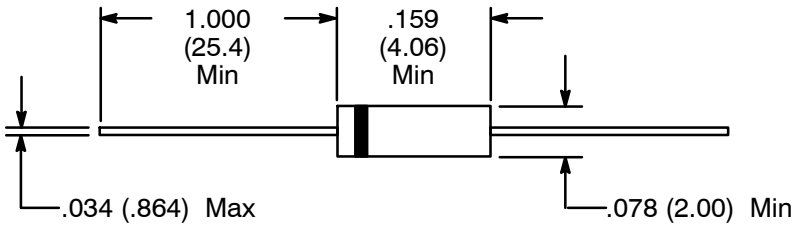
RMS Reverse Voltage, $V_{R(RMS)}$
- 1N4001 . . . . . 35V
- 1N4002 . . . . . 70V
- 1N4003 . . . . . 140V
- 1N4004 . . . . . 280V
- 1N4005 . . . . . 420V
- 1N4006 . . . . . 560V
- 1N4007 . . . . . 700V

Average Rectified Output Current (T_A = +75°C, Note 1), I_O 1.0A
Non−Repetitive Peak Forward Surge Current, I_{FSM}
- (8.3ms Single half sine−wave superimposed on rated load, JEDEC Method) 30A

Forward Voltage (I_F = 1.0A), V_{FM} 1.0V
Peak Reverse Current (T_A = +25°C), I_{RM} 5.0μA
- At Rated DC Blocking Voltage (T_A = +100°C) 50μA

Typical Junction Capacitance (Note 2), C_j 15pF
Typical Thermal Resistance, Junction−to−Ambient, R_{thJA} . . . . . 50°C/W
Operating Temperature Range, T_j . . . . . −65° to +125°C
Storage Temperature Range, T_{STG} . . . . . −65° to +150°C

Note 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
Note 2. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V D.C.



Color Band Denotes Cathode

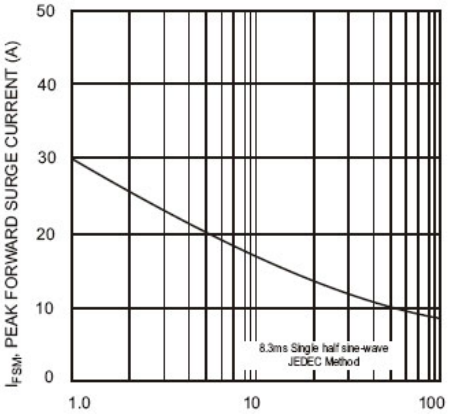


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

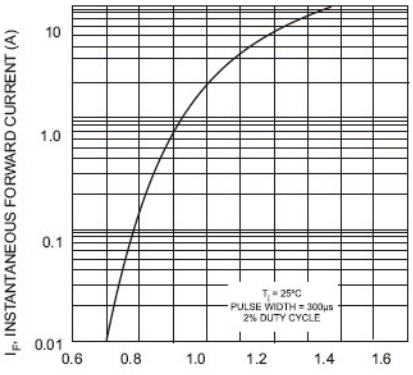


Fig. 2 Typical Forward Characteristics

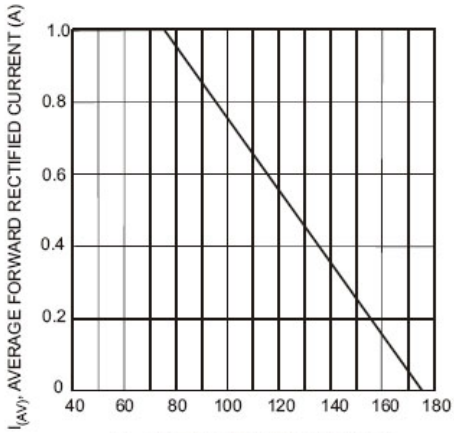


Fig. 1 Forward Current Derating Curve

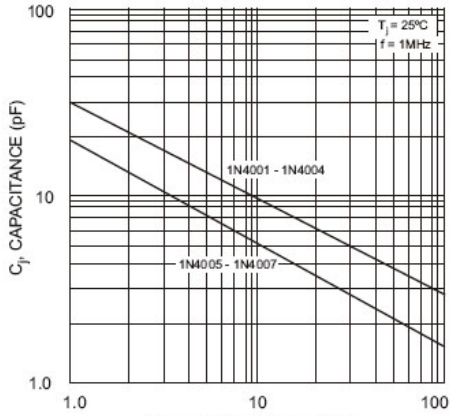


Fig. 4 Typical Junction Capacitance