

Features

- Low Current Leakage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 35°C/W Junction to Case (Note 2)
- Typical Thermal Resistance: 25°C/W Junction to Lead (Note 2)
- Typical Thermal Resistance: 50°C/W Junction to Ambient (Note 2)

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| 1N4001 | 1N4001 | 50V | 35V | 50V |
| 1N4002 | 1N4002 | 100V | 70V | 100V |
| 1N4003 | 1N4003 | 200V | 140V | 200V |
| 1N4004 | 1N4004 | 400V | 280V | 400V |
| 1N4005 | 1N4005 | 600V | 420V | 600V |
| 1N4006 | 1N4006 | 800V | 560V | 800V |
| 1N4007 | 1N4007 | 1000V | 700V | 1000V |

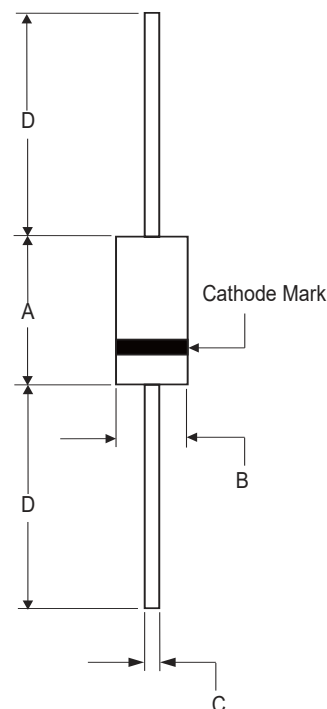
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_A=75^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.0V | $I_{FM}=1.0\text{A}; T_J=25^\circ\text{C}(\text{Note } 3)$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0 μA 50 μA | $T_J=25^\circ\text{C}; T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 15pF | Measured at 1.0MHz $V_R=4.0\text{V}$ |
| Typical Reverse Recovery Time | t_{rr} | 2.0 μs | $I_F=0.5\text{A}; I_R=1.0\text{A}; I_{rr}=0.25\text{A}$ |
| Rating for fusing | I^2t | 3.7A ² S | $t < 8.3\text{ms}$ |
| Maximum Full Load Reverse Current | $I_{R(AV)}$ | 30 μA | Full Cycle Average 0.375" Lead Length $T_L = 75^\circ\text{C}$ |

- Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.
 2. At 0.375" Lead Length P.C.B. Mounted.
 3. Pulse Test: Puls Width 300 usec, Duty Cycle 2%.

1.0 Amp Rectifier 50 to 1000 Volts

DO-41



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|--------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.160 | 0.205 | 4.10 | 5.20 | |
| B | 0.080 | 0.107 | 2.00 | 2.70 | Φ |
| C | 0.028 | 0.034 | 0.71 | 0.90 | Φ |
| D | 1.000 | ----- | 25.40 | ----- | |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

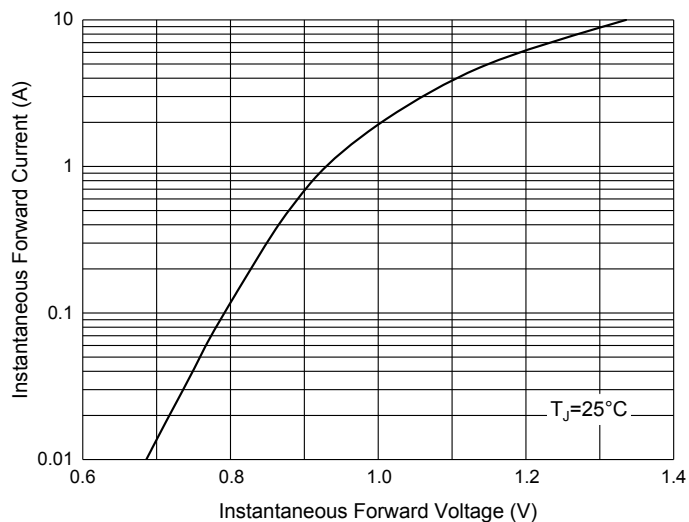


Fig. 2 - Typical Reverse Leakage Characteristics

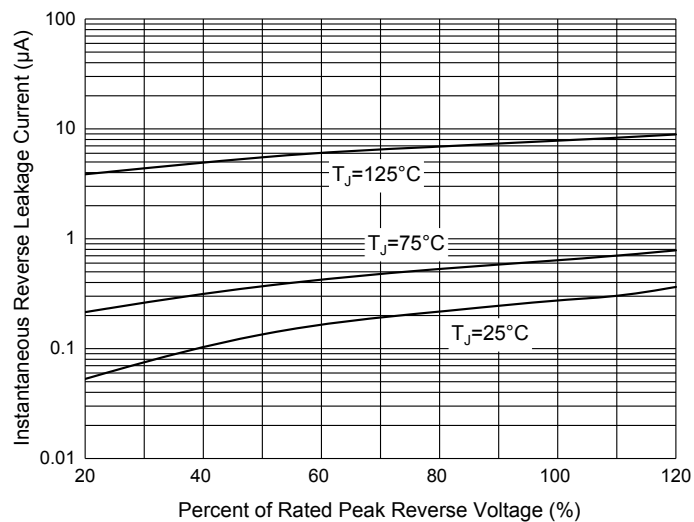


Fig. 3 - Forward Current Derating Curve

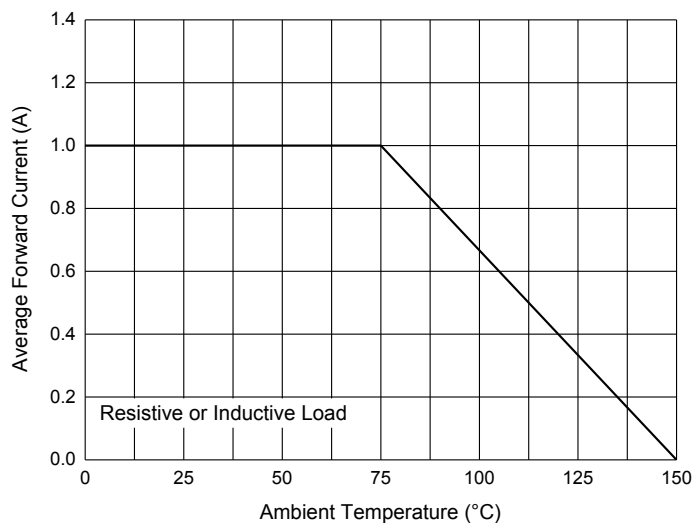
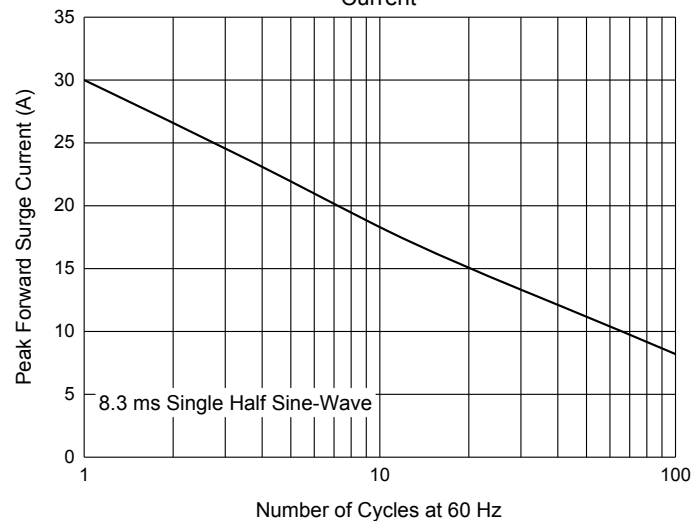


Fig. 4 - Maximum Non-Repetitive Peak Forward Surge Current



Ordering Information

| Device | Packing |
|------------------|------------------------------|
| (Part Number)-TP | Tape&Reel: 5Kpcs/Reel |
| (Part Number)-AP | Ammo Packing: 5Kpcs/Ammo Box |
| (Part Number)-BP | Bulk:1Kpcs/Box,50Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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