

## 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

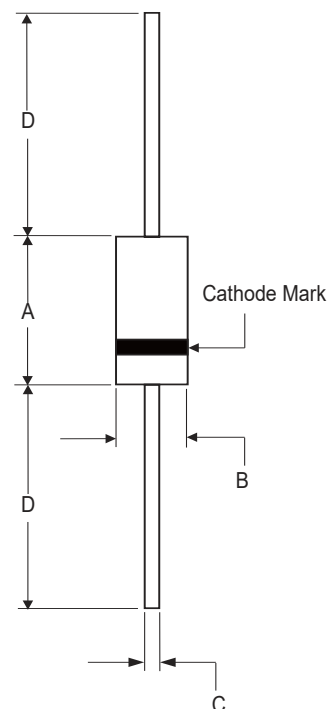
## Electrical Characteristics @ 25°C Unless Otherwise Specified

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 $\mu\text{A}$ 50 $\mu\text{A}$	$T_J=25^\circ\text{C}; T_J=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz $V_R=4.0\text{V}$
Typical Reverse Recovery Time	$t_{rr}$	2.0 $\mu\text{s}$	$I_F=0.5\text{A}; I_R=1.0\text{A}; I_{rr}=0.25\text{A}$
Rating for fusing	$I^2t$	3.7A <sup>2</sup> S	$t < 8.3\text{ms}$
Maximum Full Load Reverse Current	$I_{R(AV)}$	30 $\mu\text{A}$	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	$\Phi$
C	0.028	0.034	0.71	0.90	$\Phi$
D	1.000	-----	25.40	-----	

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

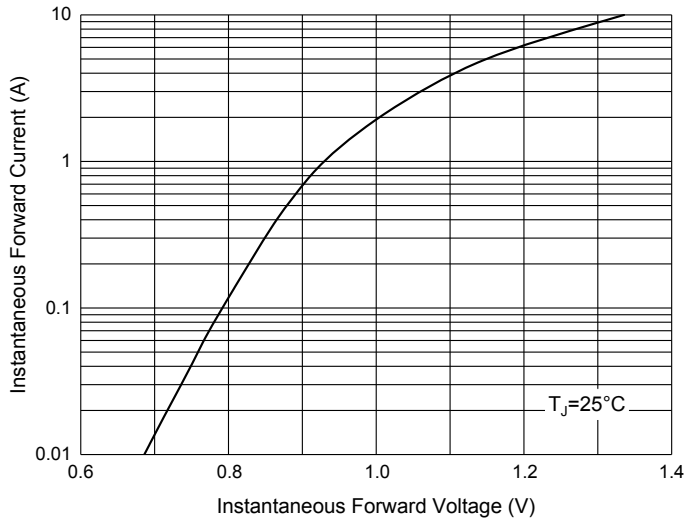


Fig. 2 - Typical Reverse Leakage Characteristics

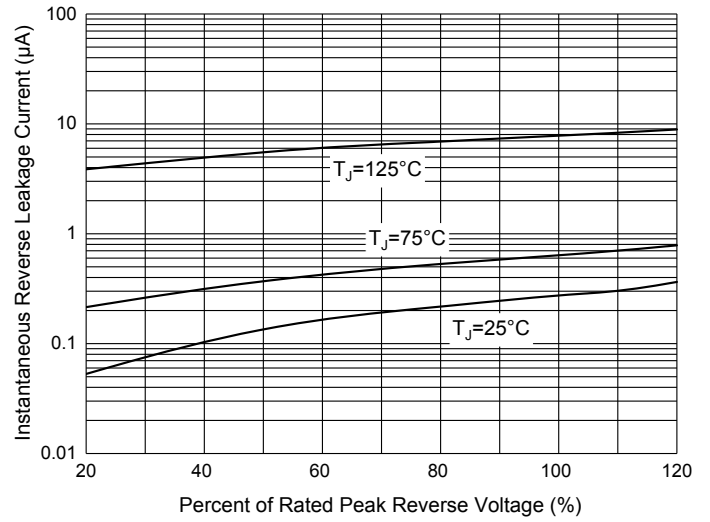


Fig. 3 - Forward Current Derating Curve

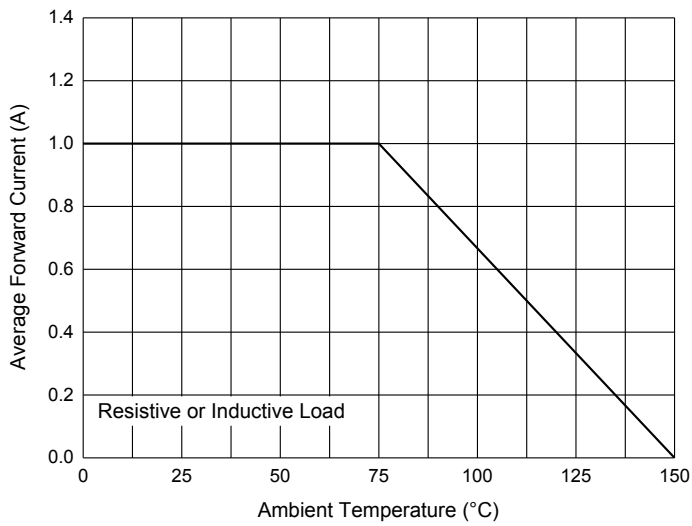
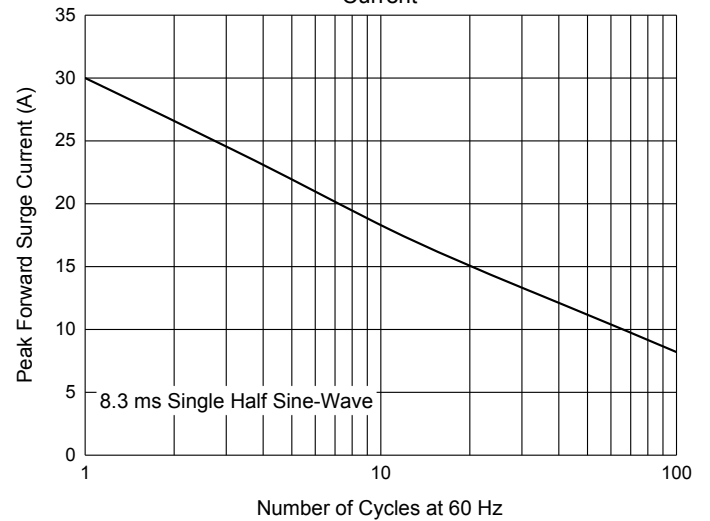


Fig. 4 - Maximum Non-Repetitive Peak Forward Surge Current



## 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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