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1N4001 THRU 1N4007

1 Amp Rectifier
50 - 1000 Volts

Features

- Halogen free available upon request by adding suffix "-HF"
- Low Current Leakage and Low Cost
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant.)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance: 35°C/W Junction to Case
  25°C/W Junction to Lead at 0.375" Lead Length P.C.B. Mounted

Catalog 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

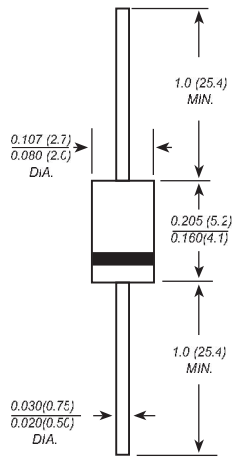
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A = 75°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	T_J = 25°C T_J = 125°C
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V
Typical Reverse Recovery Time	T_{rr}	2.0us	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Rating for fusing	I^2t	3.7A^2s	t<8.3ms

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

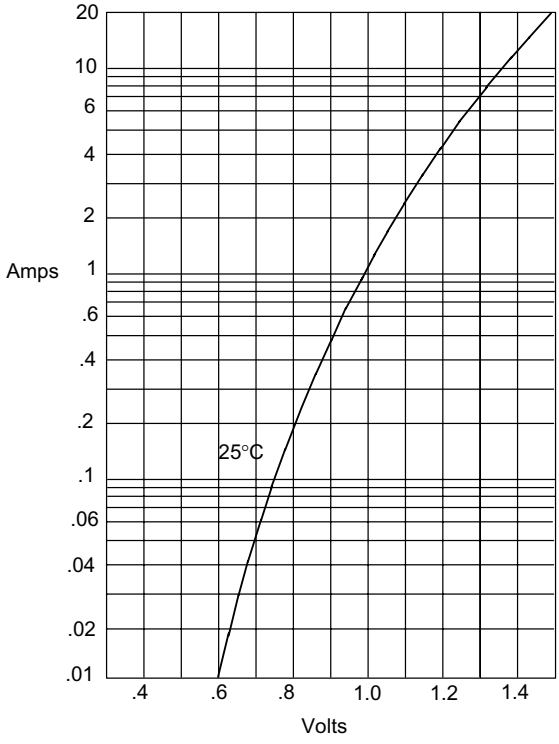
DO-41



Dimensions in inches and (millimeters)

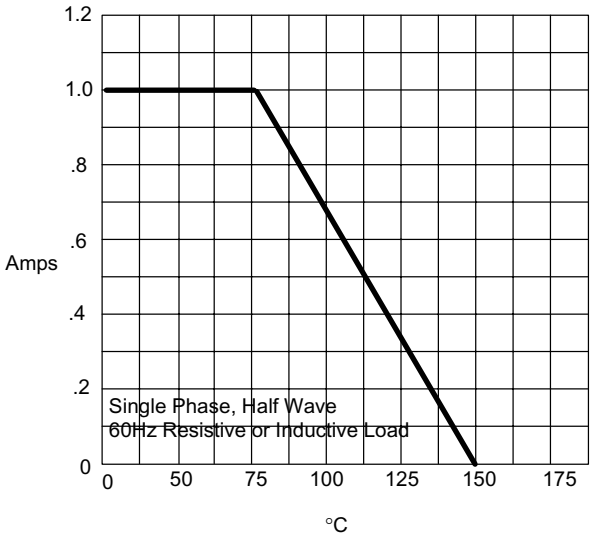
1N4001 thru 1N4007

Figure 1
Typical Forward Characteristics



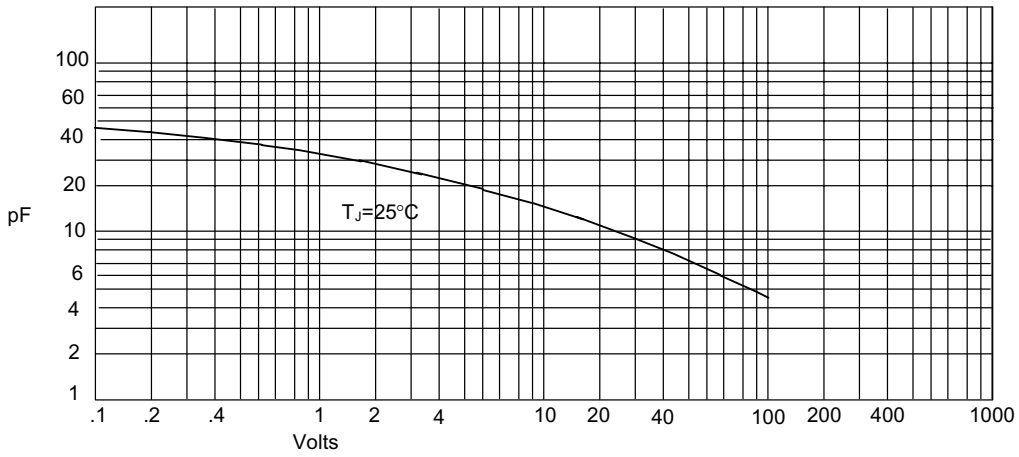
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



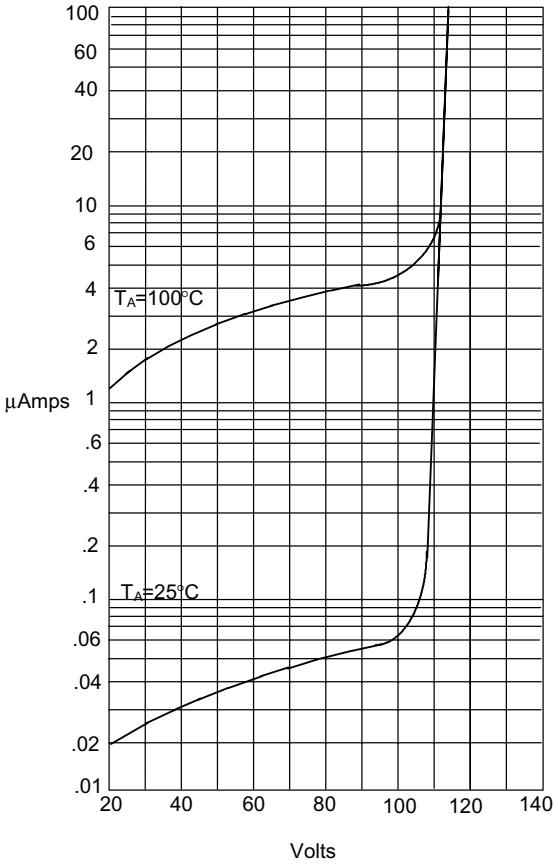
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



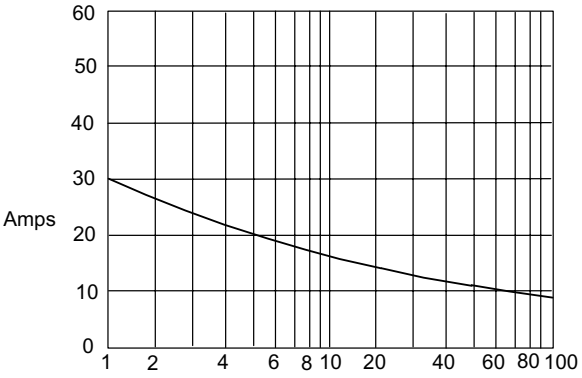
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles