

### General Purpose Rectifier

Parameter	Value	Unit
$V_{RRM}$	50~1000	V
$I_{F(AV)}$	1.0	A

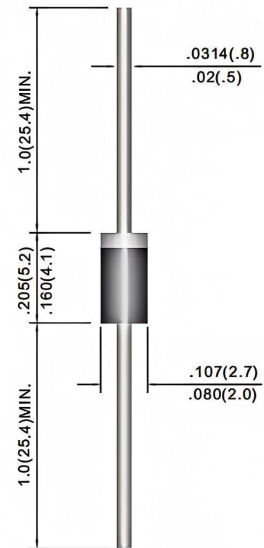
#### Features

- For surface mounted applications
- Low profile package
- Glass passivated chip junction
- Ideal for automated placement

#### Applications

- For use in general purpose rectification in power supplies, inverters, converters, and as freewheeling diodes for consumer and telecommunications applications.

DO-41



Dimensions in inches and (millimeters)

#### Absolute Maximum Ratings and Characteristics (at $T_J = 25^\circ\text{C}$ unless otherwise specified)

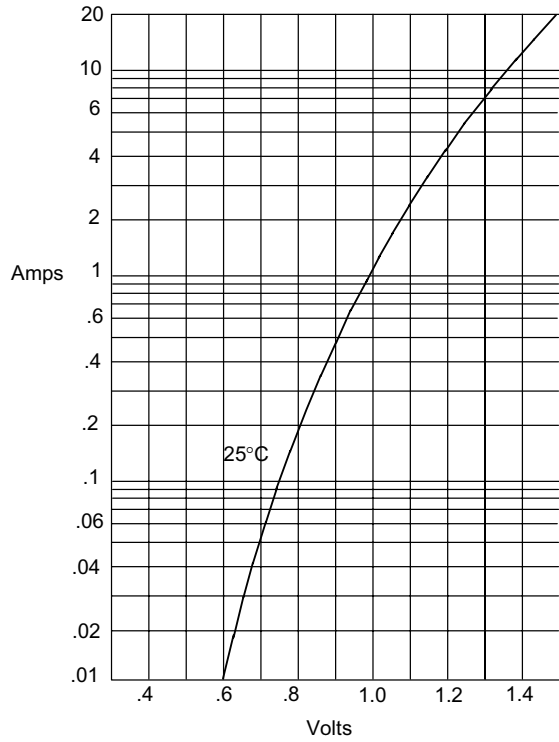
Parameter	Symbol	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_a = 75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1A	$V_F$	1.0							V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=125^\circ\text{C}$	$I_R$	5 50							$\mu\text{A}$
Typical Junction Capacitance (1)	$C_j$	15							pF
Typical Reverse Recovery Time $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$	$T_{rr}$	2.0							us
Rating for fusing $t < 8.3\text{ms}$	$I^2t$	3.7							$\text{A}^2\text{S}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

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

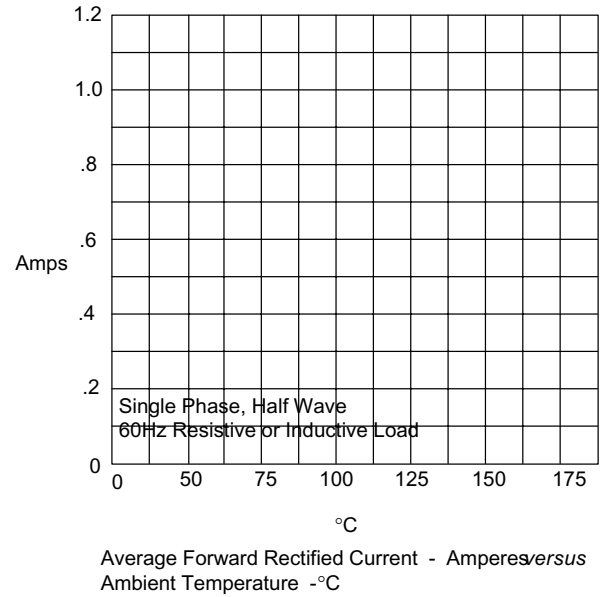
**Typical characteristics**

Figure 1 Typical Forward Characteristics



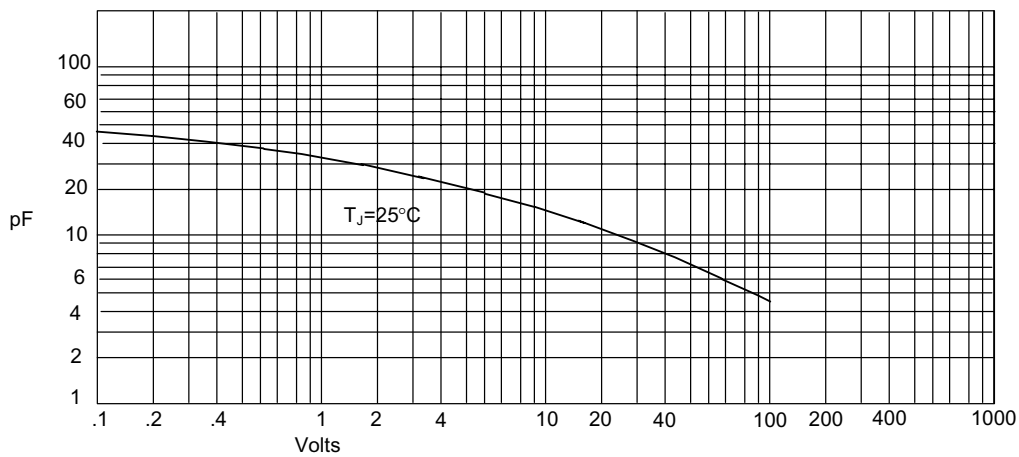
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2 Forward Derating Curve



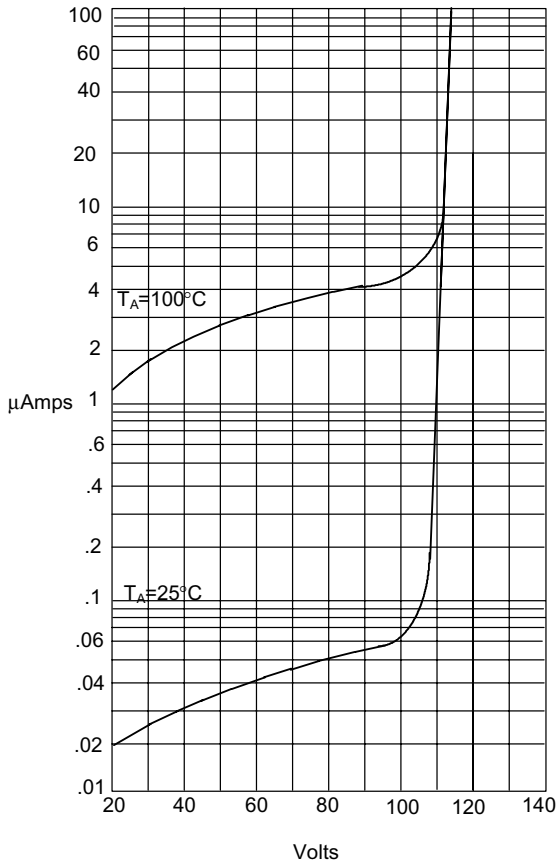
Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 3 Junction Capacitance



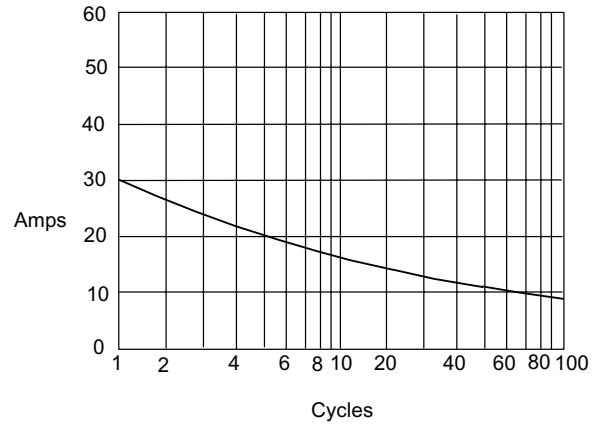
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

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

**\*Important Usage Information and Disclaimer**

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