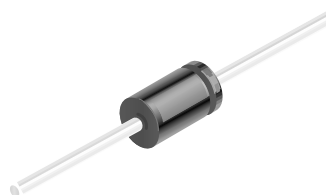


1N4001 - 1N4007

Features

- Low forward voltage drop.
- High surge current capability.



DO-41
COLOR BAND DENOTES CATHODE

General Purpose Rectifiers

Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | | | | Units |
|--------------------|---|-------------|------|------|------|------|------|------|-------|
| | | 4001 | 4002 | 4003 | 4004 | 4005 | 4006 | 4007 | |
| V _{RRM} | Peak Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| I _{F(AV)} | Average Rectified Forward Current, .375" lead length @ T _A = 75°C | 1.0 | | | | | | | A |
| I _{FSM} | Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 30 | | | | | | | A |
| T _{stg} | Storage Temperature Range | -55 to +175 | | | | | | | °C |
| T _J | Operating Junction Temperature | -55 to +175 | | | | | | | °C |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

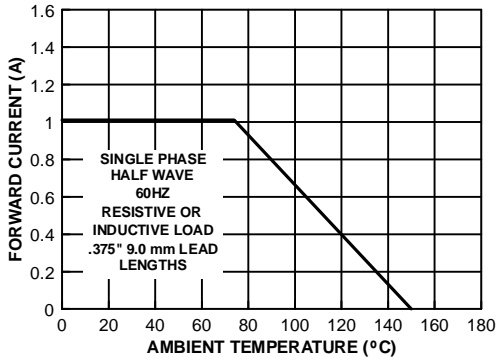
| Symbol | Parameter | Value | Units |
|------------------|---|-------|-------|
| P _D | Power Dissipation | 3.0 | W |
| R _{θJA} | Thermal Resistance, Junction to Ambient | 50 | °C/W |

Electrical Characteristics T_A = 25°C unless otherwise noted

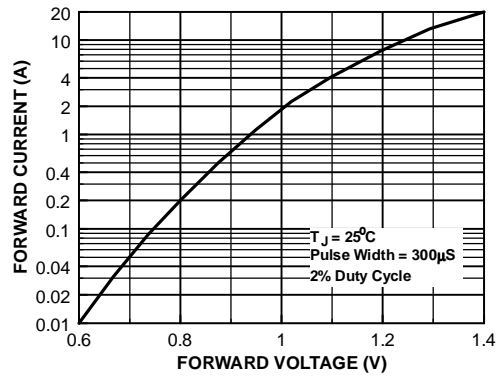
| Symbol | Parameter | Device | | | | | | | Units |
|-----------------|---|------------|------|------|------|------|------|------|-------|
| | | 4001 | 4002 | 4003 | 4004 | 4005 | 4006 | 4007 | |
| V _F | Forward Voltage @ 1.0 A | 1.1 | | | | | | | V |
| I _{rr} | Maximum Full Load Reverse Current, Full Cycle T _A = 75°C | 30 | | | | | | | μA |
| I _R | Reverse Current @ rated V _R T _A = 25°C T _A = 100°C | 5.0 500 | | | | | | | μA |
| C _T | Total Capacitance V _R = 4.0 V, f = 1.0 MHz | 15 | | | | | | | pF |

Typical Characteristics

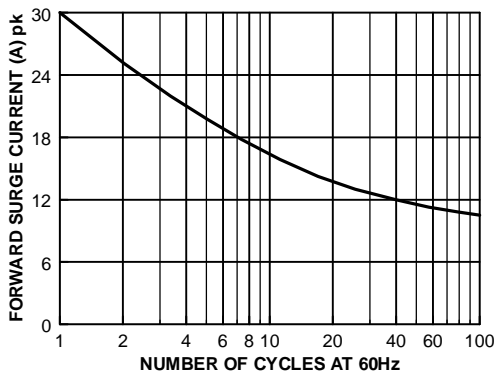
Forward Current Derating Curve



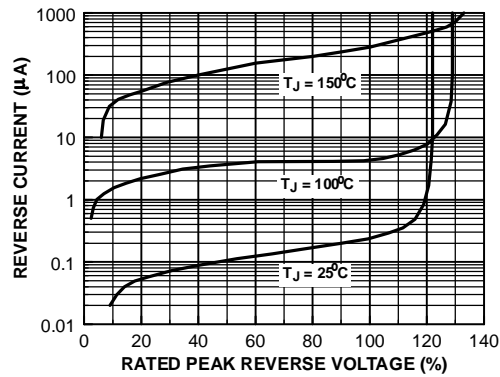
Forward Characteristics



Non-Repetitive Surge Current



Reverse Characteristics



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| | | | | |
|--------------------------------------|---------------------|--------------------|---------------------|-----------------|
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| Bottomless™ | FAST® | LittleFET™ | Power247™ | SuperSOT™-3 |
| CoolFET™ | FASTr™ | MicroFET™ | PowerTrench® | SuperSOT™-6 |
| CROSSVOLT™ | FRFET™ | MicroPak™ | QFET™ | SuperSOT™-8 |
| DOME™ | GlobalOptoisolator™ | MICROWIRE™ | QS™ | SyncFET™ |
| EcoSPARK™ | GTO™ | MSX™ | QT Optoelectronics™ | TinyLogic® |
| E ² CMOS™ | HiSeC™ | MSXPro™ | Quiet Series™ | TruTranslation™ |
| EnSigna™ | I ² C™ | OCX™ | RapidConfigure™ | UHC™ |
| Across the board. Around the world.™ | | OCXPro™ | RapidConnect™ | UltraFET® |
| The Power Franchise™ | | OPTOLOGIC® | SILENT SWITCHER® | VCX™ |
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PRODUCT STATUS DEFINITIONS

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|--------------------------|------------------------|---|
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