

## NTE580 General Purpose Silicon Rectifier Fast Recovery

### Features:

- High Temperature Metallurgically Bonded—No Compression Contacts
- Fast Switching for High Efficiency
- 3A Operation at  $T_A = +25^\circ\text{C}$  with No Thermal Runaway

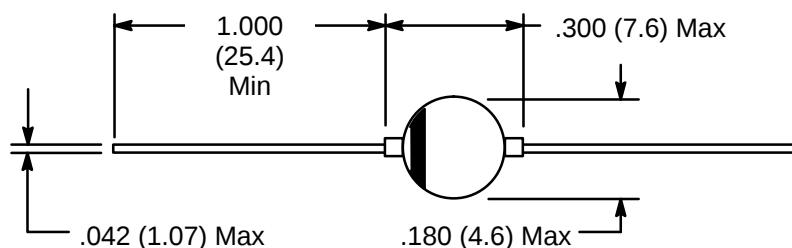
### Maximum Ratings and Electrical Characteristics:

( $T_A = +25^\circ\text{C}$  unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%)

|                                                                                                         |                                     |
|---------------------------------------------------------------------------------------------------------|-------------------------------------|
| Maximum Recurrent Peak Reverse Voltage .....                                                            | 600V                                |
| Maximum RMS Voltage .....                                                                               | 420V                                |
| Maximum DC Blocking Voltage .....                                                                       | 600V                                |
| Maximum Average Forward Rectified Current (.375" (9.5mm) Lead Length, $T_A = +75^\circ\text{C}$ ) ..... | 3A                                  |
| Peak Forward Surge Current (8.3ms Single Half Sine—Wave Superimposed on Rtd Load) .                     | 100A                                |
| Maximum Instantaneous Forward Voltage ( $I_F = 3A$ ) .....                                              | 1.3V                                |
| Maximum DC Reverse Current ( $V_{DC} = 600V$ , $T_A = +25^\circ\text{C}$ ) .....                        | 5 $\mu\text{A}$                     |
| Maximum Average Reverse Current ( $P_{RV} = 600V$ )                                                     |                                     |
| $T_A = +25^\circ\text{C}$ .....                                                                         | 2 $\mu\text{A}$                     |
| $T_A = +100^\circ\text{C}$ .....                                                                        | 100 $\mu\text{A}$                   |
| Maximum Reverse Recovery Time (Note 1) .....                                                            | 150ns                               |
| Typical Junction Capacitance (Note 2) .....                                                             | 65pF                                |
| Operating Junction Temperature Range, $T_J$ .....                                                       | $-65^\circ$ to $+175^\circ\text{C}$ |
| Storage Temperature Range, $T_{stg}$ .....                                                              | $-65^\circ$ to $+175^\circ\text{C}$ |
| Lead temperature (During Soldering, .375" (9.5mm) from case, 10sec), $T_L$ .....                        | $+350^\circ\text{C}$                |

Note 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .

Note 2. Measured at 1MHz and applied reverse voltage of 4V.



Color Band Denotes Cathode