



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE589 Silicon Rectifier General Purpose, Fast Recovery

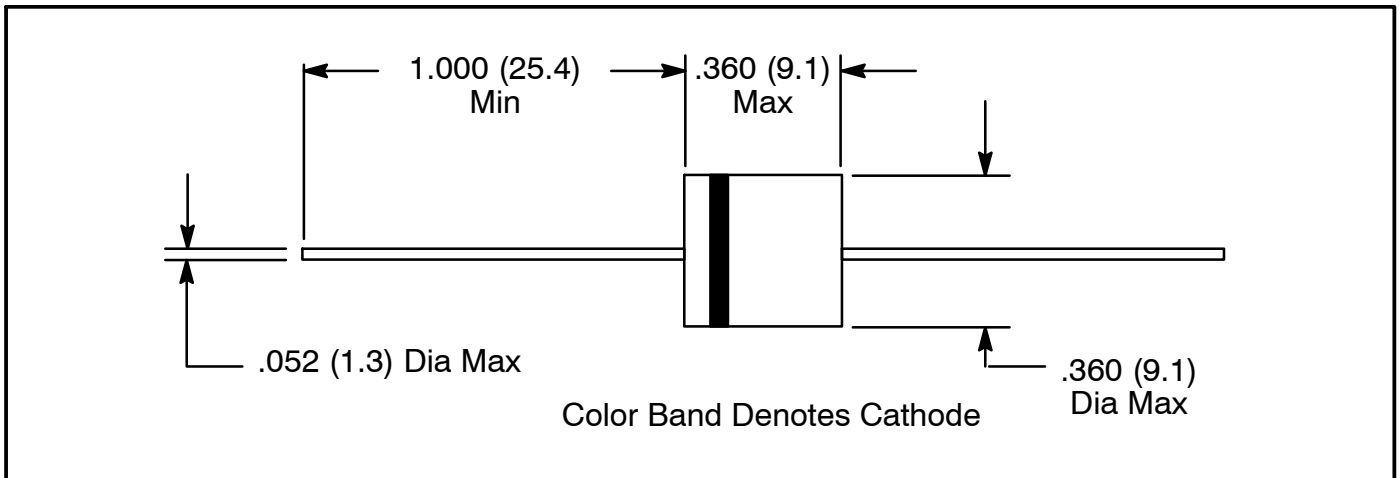
Features:

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Maximum Ratings and Electrical Characteristics: ($T_A = +25^\circ\text{C}$, Note 1 unless otherwise specified)

Maximum Recurrent Peak Reverse Voltage, V_{RRM}	400V
Maximum RMS Voltage, V_{RMS}	280V
Maximum DC Blocking Voltage, V_{DC}	400V
Maximum Average Forward Rectified Current ($T_A = +55^\circ\text{C}$, .375" lead length), $I_{F(AV)}$	6A
Peak Forward Surge Current, I_{FSM} (8.3ms single half sine-wave superimposed on rated load)	250A
Maximum Instantaneous Forward Voltage ($I_F = 6A$), V_F	1.3V
Maximum DC Reverse Current ($V_{DC} = 400V$), I_R $T_A = +25^\circ\text{C}$, $V_{DC} = 400V$	5 μ A
$T_A = +125^\circ\text{C}$	200 μ A
Maximum Reverse Recovery Time (Note 2), t_{rr}	150ns
Typical Junction Capacitance (Note 3), C_J	50pF
Typical Thermal Resistance, Junction-to-Ambient, R_{thJA}	30 $^\circ\text{C/W}$
Operating Junction Temperature Range, T_J	-65 $^\circ$ to +150 $^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65 $^\circ$ to +150 $^\circ\text{C}$

- Note 1. Single phase, half wave, 60Hz. Resistive or inductive load. For capacitive load, derate current by 20%.
- Note 2. Reverse Recovery Test Conditions: $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$.
- Note 3. Measured at 1MHz and applied reverse voltage of 4 VDC.
- Note 4. Mount on Cu-Pad Size 16mm x 16mm on PCB.



Rev. 11-21

