

## 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 Rted 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.

