



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

## NTE506 Silicon Rectifier Diode DO-41/DO-15 Type Package

**Features:**

- Low Reverse Leakage
- High Forward Surge Current Capability

**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%)

Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	1500V
Maximum RMS Voltage, $V_{RMS}$ .....	1050V
Maximum DC Blocking Voltage, $V_{DC}$ .....	1500V
Maximum Average Rectified Forward Current (.375" (9.5mm) lead length), $I_{(AV)}$ .....	500mA
Peak Forward Surge Current, $I_{FSM}$ (8.3ms single half sine-wave superimposed on rated load) .....	30A
Maximum Instantaneous Forward Voltage ( $I_F = 500\text{mA}$ ), $V_F$ .....	2.5V
Maximum DC Reverse Current ( $V_R = 1500\text{V}$ ), $I_R$	
$T_A = +25^\circ\text{C}$ .....	5mA
$T_A = +100^\circ\text{C}$ .....	50mA
Maximum Reverse Recovery Time (Note 1), $t_{rr}$ .....	500ns
Typical Junction Capacitance (Note 2), $C_J$ .....	15pF
Typical Thermal Resistance, Junction-to-Ambient (Note 3), $R_{thJA}$ .....	50°C/W
Operating Temperature Range, $T_{opr}$ .....	-65° to +150°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +150°C
Lead Temperature (During soldering, .375" (9.5mm) from case, 10sec max), $T_L$ .....	+250°C

Note 1. Reverse recovery condition  $I_F = 500\text{mA}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 250\text{mA}$ .

Note 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

Note 3. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted.

