



**ELECTRONICS, INC.**  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089

## NTE177 General Purpose Silicon Rectifier

**Description:**

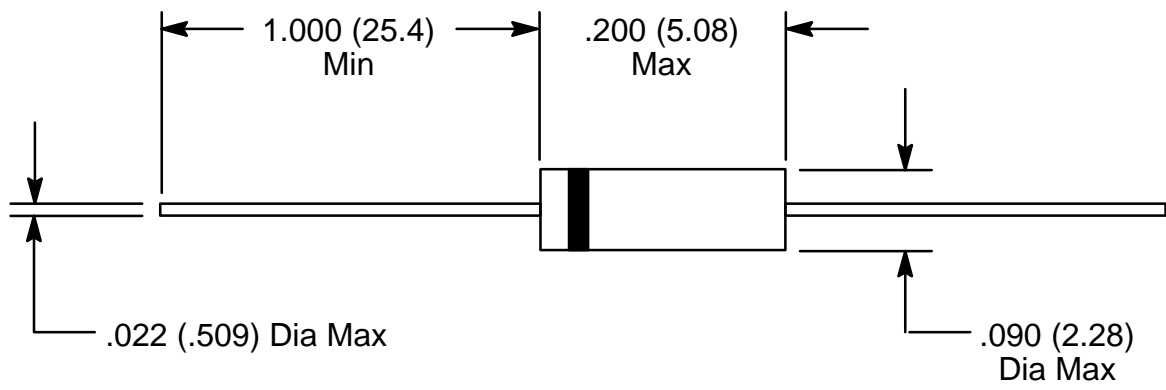
The NTE177 is a general purpose silicon rectifier in a DO35 case designed for switching applications.

**Absolute Maximum Ratings:**

Continuous Reverse Voltage, $V_R$ .....	150V
Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	200V
Forward DC Current, $I_F$ .....	250mA
Average Forward Current, $I_{F(AV)}$ .....	250mA
Repetitive Peak Forward Current, $I_{FRM}$ .....	625mA
Non-Repetitive Peak Forward Current, $I_{FSM}$	
(t < 1s, $T_J = +25^\circ\text{C}$ ) .....	1A
(t = 1 $\mu$ s, $T_J = +25^\circ\text{C}$ ) .....	5A
Total Power Dissipation ( $T_A = +25^\circ\text{C}$ ), $P_{tot}$ .....	400mW
Operating Junction Temperature, $T_J$ .....	+175°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +175°C
Maximum Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	+375°C

**Electrical Characteristics:** ( $T_J = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Instantaneous Forward Voltage Drop	$V_F$	$I_F = 100\text{mA}$	–	–	1.0	V
		$I_F = 200\text{mA}$	–	–	1.25	V
Reverse Current	$I_R$	$V_R = 150\text{V}$	–	–	100	nA
		$V_R = 150\text{V}, T_J = +150^\circ\text{C}$	–	–	100	$\mu\text{A}$
Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	200	–	–	V
Diode Capacitance	$C_d$	$V_R = 0, f = 1\text{MHz}$	–	1.5	5.0	pF
Differential Forward Resistance	$r_i$	$I_F = 10\text{mA}$	–	5	–	$\Omega$
Reverse Recovery Time	$t_r$	When switched from $I_F = 30\text{mA}$ to $I_R = 30\text{mA}$ , $R_L = 100\Omega$ , measured at $I_R = 3\text{mA}$	–	–	50	ns



Color Band Denotes Cathode