



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

## 1N5059 thru 1N5062 General Purpose Silicon Rectifier Fast Recovery

**Features:**

- Controlled Avalanche Characteristics
- Low Reverse Current
- High Surge Current Loading

**Applications:**

- Rectification Diode, General Purpose

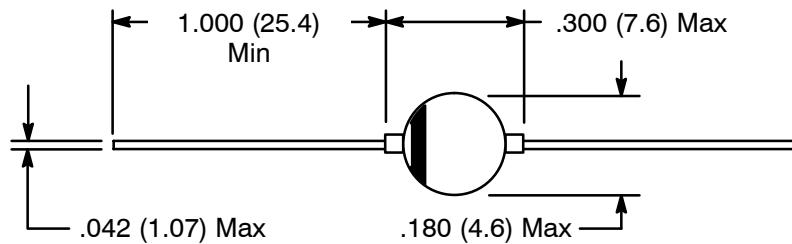
**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Maximum Reverse Voltage, $V_R$	
1N5059 .....	200V
1N5060 .....	400V
1N5061 .....	600V
1N5062 .....	800V
Maximum Repetitive Peak Reverse Voltage, $V_{RRM}$	
1N5059 .....	200V
1N5060 .....	400V
1N5061 .....	600V
1N5062 .....	800V
Peak Forward Surge Current ( $t_p = 10\text{ms}$ , half-sinewave), $I_{FSM}$	50A
Average Forward Current, $I_{FAV}$	
$R_{thJA} = 45\text{K/W}$ , $T_A = +50^\circ\text{C}$ .....	2A
$R_{thJA} = 100\text{K/W}$ , $T_A = +75^\circ\text{C}$ .....	0.8A
Max. Pulse Energy in Avalanche Mode, Non-Repetitive (Inductive Load Switch OFF), $E_R$	
$I_{(BR)R} = 1\text{A}$ , Inductive Load .....	20mJ
Operating Junction Temperature Range, $T_J$	$-55^\circ$ to $+175^\circ\text{C}$
Storage Temperature Range, $T_{stg}$	$-55^\circ$ to $+175^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient, $R_{thJA}$	
Lead Length = 10mm, $T_L = \text{Constant}$ .....	45K/W
On PC Board with Spacing 25mm .....	100K/W

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

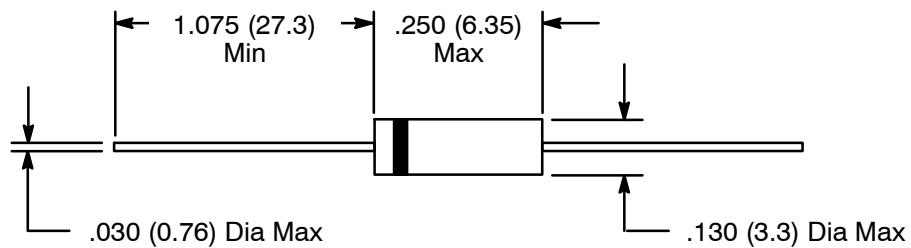
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F = 1\text{A}$	-	-	1	V
		$I_F = 2.5\text{A}$	-	-	1.15	V
Reverse Current	$I_R$	$V_R = V_{RRM}$	-	-	1	$\mu\text{A}$
		$T_J = +100^\circ\text{C}$	-	-	10	$\mu\text{A}$
		$T_J = +150^\circ\text{C}$	-	-	100	$\mu\text{A}$
Reverse Breakdown Voltage 1N5059	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	225	-	1600	V
1N5060			450	-	1600	V
1N5061			650	-	1600	V
1N5062			900	-	1600	V
Reverse Recovery Time	$t_{rr}$	$I_F = 0.5\text{A}, I_R = 1\text{A}, i_R = 0.25\text{A}$	-	-	4	$\mu\text{s}$
Diode Capacitance	$C_D$	$V_R = 0, f = 1\text{MHz}$	-	40	-	pF

**SOD-64**  
(1N5059, 1N5062)



Color Band Denotes Cathode

**DO-15**  
(1N5060, 1N5061)



Color Band Denotes Cathode