



ELECTRONICS, INC.
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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

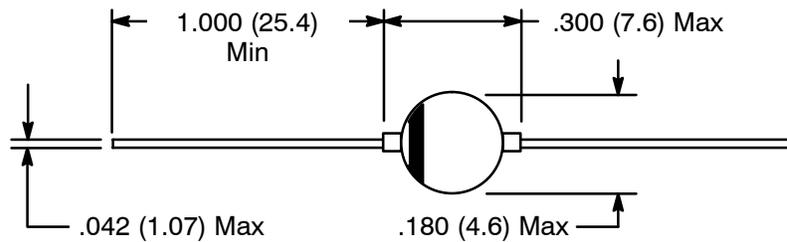
Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

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° to $+175^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° 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)

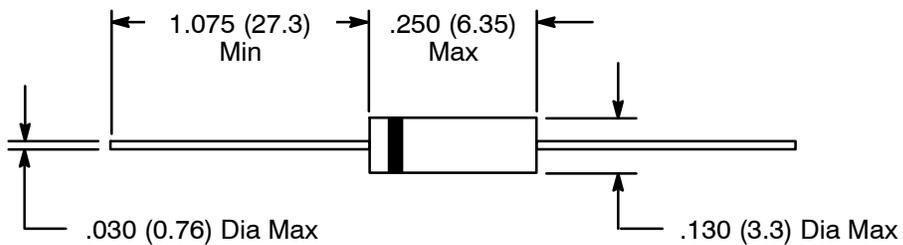
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F = 1\text{A}$	-	-	1	V
		$I_F = 2.5\text{A}$	-	-	1.15	V
Reverse Current	I_R	$V_R = V_{RRM}$	-	-	1	μA
		$T_J = +100^\circ\text{C}$	-	-	10	μA
		$T_J = +150^\circ\text{C}$	-	-	100	μA
Reverse Breakdown Voltage 1N5059	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	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	μs
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