

1N5059-1N5062

STANDARD AVALANCHE DIODE

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Parameter	Test condition	Sub type	Symbol	Value	Unit
Reverse voltage = repetitive peak reverse voltage		1N5059	$V_R = V_{RRM}$	200	V
		1N5060		400	
		1N5061		600	
		1N5062		800	
Peak forward surge current	$t_p = 10\text{ms}$, half sinewave		I_{FSM}	50	A
Average forward current	$R_{thJA} = 45\text{ K/W}$, $T_{amb} = 50^\circ\text{C}$		I_{FAV}	2	A
	$R_{thJA} = 100\text{ K/W}$, $T_{amb} = 75^\circ\text{C}$			0.8	
Junction and storage temperature range			T_J, T_{stg}	-55 to +175	$^\circ\text{C}$
Maximum pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 1\text{ A}$, inductive load		E_R	20	mJ
Junction ambient	Lead length $l = 10\text{mm}$, $T_L = \text{constant}$		R_{thJA}	45	K/W
	On PC board with spacing 25 mm			100	

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

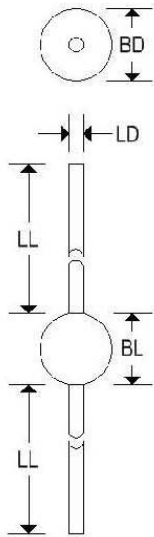
Parameter	Test condition	Sub type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 1\text{ A}$		V_F			1	V
	$I_F = 2.5\text{ A}$					1.15	
Reverse current	$V_R = V_{RRM}$		I_R			1	μA
	$V_R = V_{RRM}$, $T_J = 100^\circ\text{C}$					10	
	$V_R = V_{RRM}$, $T_J = 150^\circ\text{C}$					100	
Reverse breakdown voltage	$I_R = 100\mu\text{A}$	1N5059	$V_{(BR)R}$	225		1600	V
		1N5060		450			
		1N5061		650			
		1N5062		900			
Reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_R = 0.25\text{ A}$		t_{rr}			4	μs
Diode capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_D		40		pF

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MECHANICAL CHARACTERISTICS

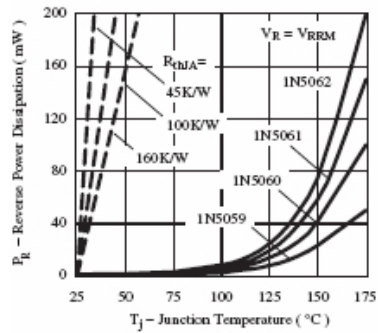
Case	SOD-57
Marking	Body painted, alpha numeric
Polarity	Cathode band



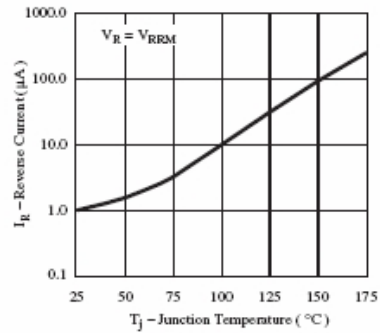
	SOD-57			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.142	-	3.600
BL	-	0.157	-	4.000
LD	-	0.032	-	0.820
LL	1.024	-	26.000	-

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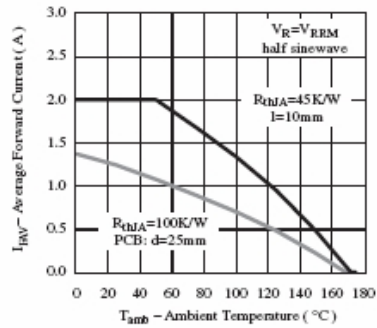
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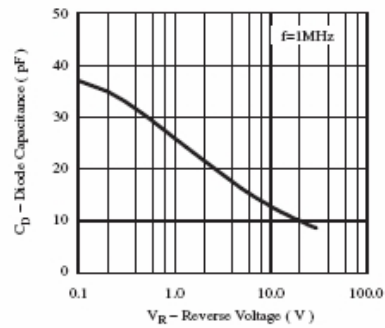
Max. Reverse Power Dissipation vs. Junction Temperature



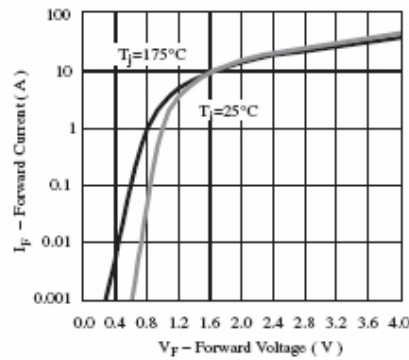
Max. Reverse Current vs. Junction Temperature



Max. Average Forward Current vs. Ambient Temperature



Typ. Diode Capacitance vs. Reverse Voltage



Max. Forward Current vs. Forward Voltage