

Switching Diodes

400mW SOD-123

1N4148W

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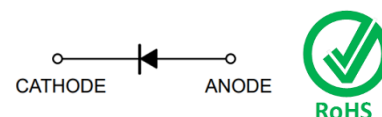
FEATURE

- Fast Switching Speed: $t_{rr} \leq 4.0$ ns
- 400mW Power Dissipation
- 100V Peak Reverse Voltage
- 150mA Average Forward Current
- Low Leakage Current, Low Junction Capacitance



MECHANICAL DATA

- Case: SOD-123, Molded Epoxy Meets UL94V-0
- Terminals: Solderable per MIL-STD, Method 2026
- Polarity: Color Band Denotes Cathode End



MAXIMUM RATING

Parameter, $T_A=25^\circ\text{C}$		Symbol	Value	Unit
Maximum DC Blocking Voltage		V_{DC}	75	V
Maximum Peak Reverse Voltage		V_{RM}	100	V
Maximum DC Reverse Voltage		V_R	75	V
Maximum RMS Voltage		V_{RMS}	50	V
Maximum Average Forward Current		$I_{F(AV)}$	150	mA
Maximum Peak Forward Surge Current	$t=1.0\mu\text{s}$	I_{FSM}	2	A
Maximum Power Dissipation Derate above 25°C		P_D	400	mW
Maximum Forward Voltage	$I_F=0.001\text{A}$	V_F	0.715	V
	$I_F=0.01\text{A}$		0.855	
	$I_F=0.05\text{A}$		1.00	
	$I_F=0.15\text{A}$		1.25	
Maximum DC Reverse Current	$V_R=20\text{V}, T_J=25^\circ\text{C}$	I_R	0.025	μA
	$V_R=75\text{V}, T_J=25^\circ\text{C}$		2.5	
Typical Junction Capacitance (Note 1)		C_J	1.5	pF
Maximum Reverse Recovery (Note 2)		t_{rr}	4.0	ns
Maximum Thermal Resistance		$R_{\theta JA}$	450	$^\circ\text{C/W}$
Operating and Storage Temperature Range		T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Note:

1. C_J at $V_R=0$, $f=1\text{MHz}$.

2. From $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{V}$, $R_L=100\Omega$.

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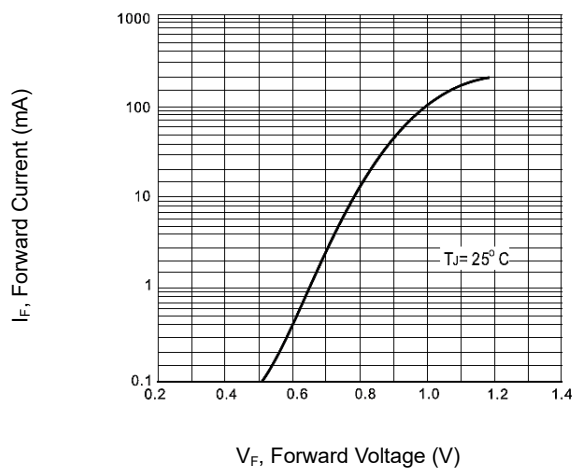
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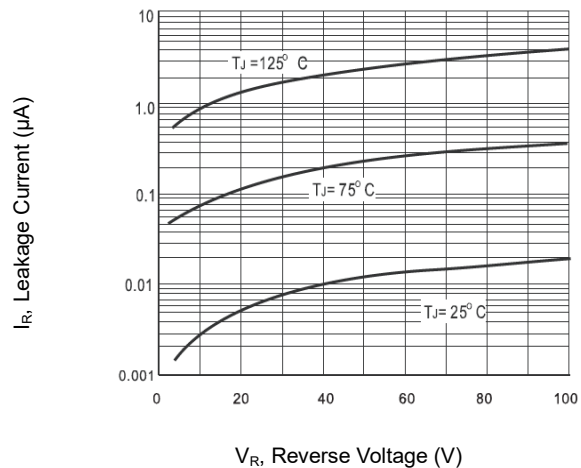
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CHARACTERISTIC CURVES

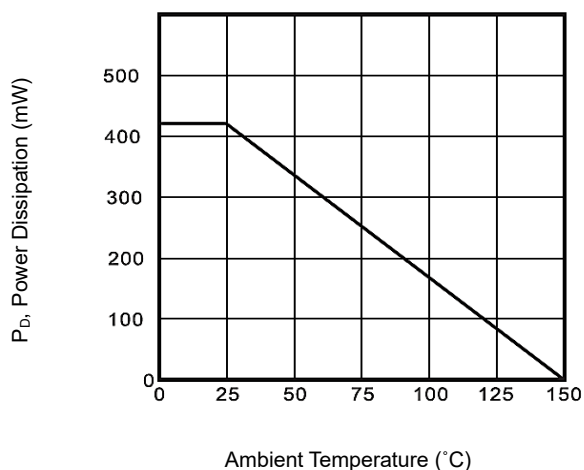
Typical Forward Characteristics



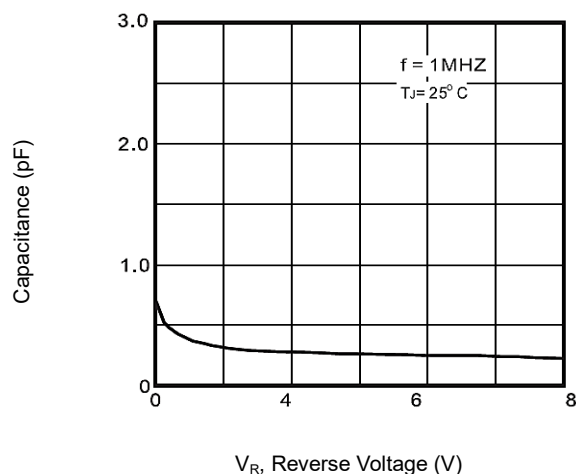
Typical Reverse Characteristics



Power Derating Curve

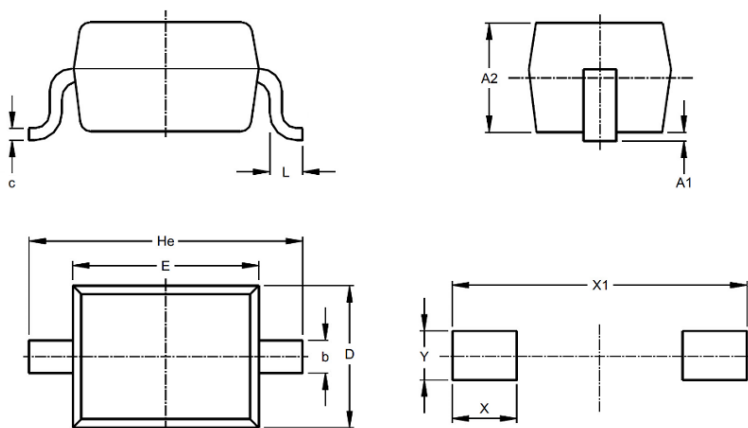


Capacitance Characteristics



DIMENSIONS

Item	Min (mm)	Max (mm)
A1	--	0.12
A2	0.95	1.35
b	0.45	0.65
C	--	0.20
D	1.40	1.80
E	2.50	2.80
He	3.55	3.85
L	0.40	--
X	0.91	
X1	4.18	
Y	1.22	



*Specifications subject to change without notice.