

## Surface Mount Switching Diode

**(Pb)** Lead(Pb)-Free

### Features:

- \* Fast Switching Speed
- \* Surface Mount Package Ideally Suited for Automatic Insertion
- \* For General Purpose Switching Applications
- \* High Conductance

### Mechanical Data:

- \* Case: SOD-323, Molded Plastic
- \* Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- \* Polarity: Cathode Band
- \* Weight: 0.004 grams (approx)

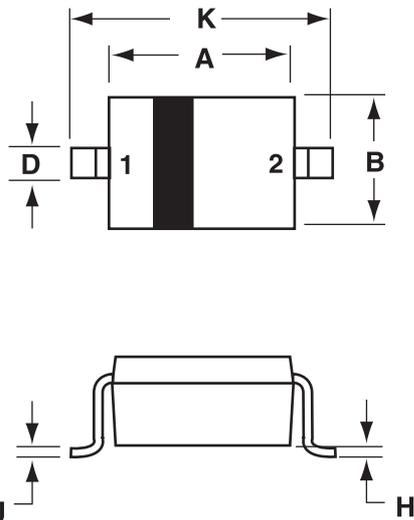
**SWITCHING DIODE  
250m AMPERES  
100 VOLTS**



**SOD-323**

## SOD-323 Outline Dimensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15 REF	
H	0.00	0.10
J	0.089	0.377
K	2.30	2.70

PIN 1. CATHODE  
2. ANODE

**Maximum Ratings** (TA=25°C Unless Otherwise note)

Rating	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0μs @ t=1.0s	$I_{FSM}$	4.0 2.0	A
Total Device Dissipation	$P_D$	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	315	K/W
Junction and Storage Temperature	$T_J$	+150	°C
Storage Temperature	$T_{stg}$	-65 to +150	°C

**Electrical Characteristics** (TA=25°C Unless Otherwise note)

Characteristics	Symbol	Min	Max	Unit
-----------------	--------	-----	-----	------

**Off Characteristics**

Reverse Voltage Leakage Current $I_{R=10\mu A}$	$V_{(BR)R}$	75	-	V
Forward Voltage $I_F=5mA$ $I_F=10mA$ $I_F=100mA$ $I_F=150mA$	$V_F$	0.62 - - -	0.72 0.855 1.00 1.25	V
Reverse Voltage Leakage Current $V_R=75V$ $V_R=20V$	$I_R$	-	2.5 25	μA nA
Diode Capacitance $V_R=0, f=1.0MHz$	$C_T$	-	4.0	pF
Reverse Recover Time $I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$	$t_{rr}$	-	4.0	ns

**Device Marking**

Item	Marking	Equivalent Circuitdiagram
1N4448WS , MMBL4448H	T5	

## Typical Characteristics

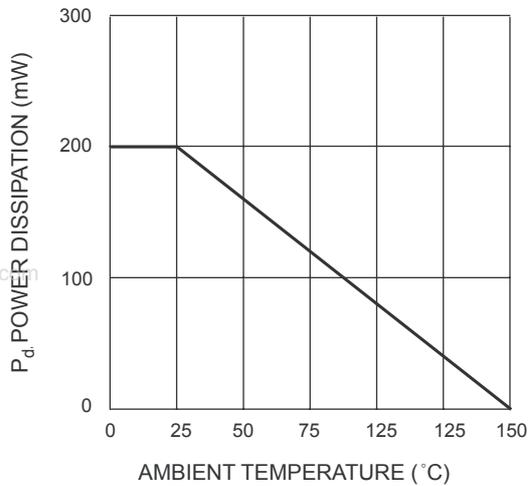


Fig. 1 Forward Current Derating Curve

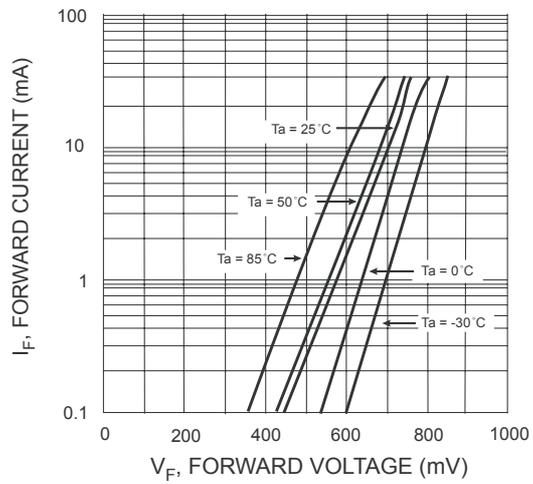


Fig. 2 Typical Forward Characteristics

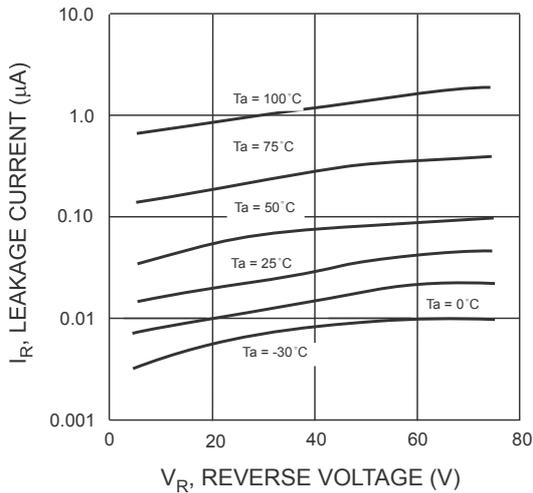


Fig. 3 Typical Reverse Characteristics

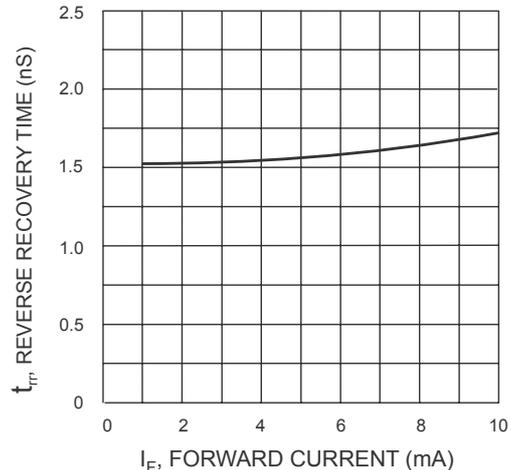


Fig. 4 Reverse Recovery Time vs. Forward Current

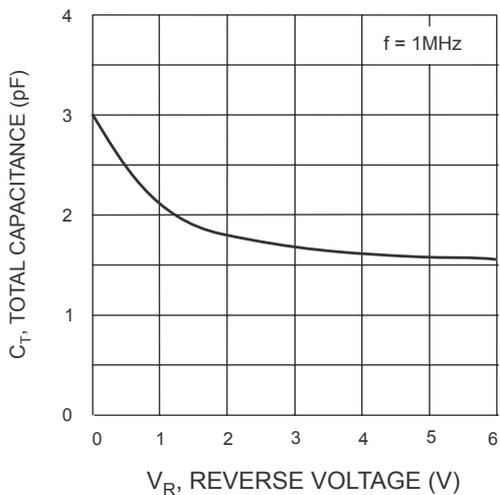


Fig. 5 Total Capacitance vs. Reverse Voltage