

### Surface Mount Switching Diode

 Lead(Pb)-Free

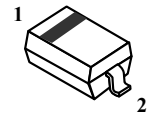
#### Features:

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

#### Mechanical Data:

- \* Case: SOD-323, Molded Plastic
- \* Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- \* Polarity: Cathode Band
- \* Weight: 0.01grams (approx)

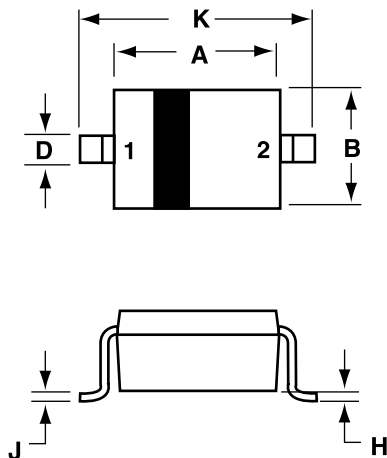
**SWITCHING DIODE**  
**250m AMPERES**  
**100 VOLTS**



**SOD-123**

### SOD-123 Outline Dimensions

Unit:mm



SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

PIN 1. CATHODE  
 2. ANODE

## Maximum Ratings (T<sub>A</sub>=25°C Unless Otherwise note)

Rating	Symbol	Value	Unit
Reverse Voltage Non-Repetitive Peak	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	75	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current	I <sub>FM</sub>	500	mA
Average Rectified Output Current	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0μs @ t=1.0s	I <sub>FSM</sub>	4.0 2.0	A
Total Device Dissipation	P <sub>D</sub>	400	mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	315	K/W
Junction and Storage Temperature	T <sub>J</sub>	+ 150	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C


## Electrical Characteristics (T<sub>A</sub>=25°C Unless Otherwise note)

Characteristics	Symbol	Min	Max	Unit
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### Off Characteristics

Reverse Breakdown Voltage I <sub>R</sub> =10μA	V <sub>R</sub>	-	75	ns
Forward Voltage I <sub>F</sub> =5.0mA I <sub>F</sub> =10mA I <sub>F</sub> =100mA I <sub>F</sub> =150mA	V <sub>F</sub>	0.62 - - -	0.72 0.855 1.00 1.25	V
Reverse Voltage Leakage Current V <sub>R</sub> =75V V <sub>R</sub> =20V	I <sub>R</sub>	-	2.5 25	μA nA
Diode Capacitance V <sub>R</sub> =0, f=1.0MHz	C <sub>T</sub>	-	4.0	pF
Reverse Recover Time I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1 x I <sub>R</sub> , R <sub>L</sub> =100Ω	t <sub>rr</sub>	-	4.0	ns

## Device Marking

Item	Marking	Equivalent Circuit Diagram
1N4448W	T5	

## Typical Characteristics

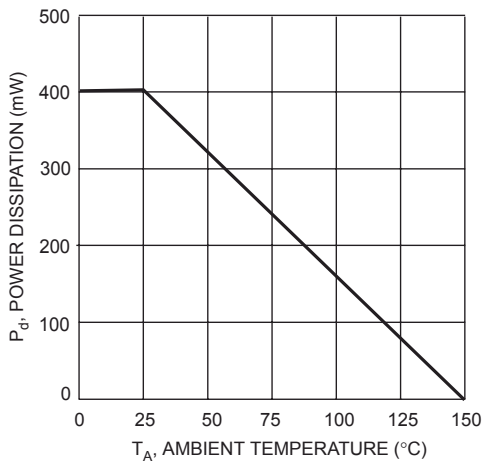


Fig. 1 Power Derating Curve

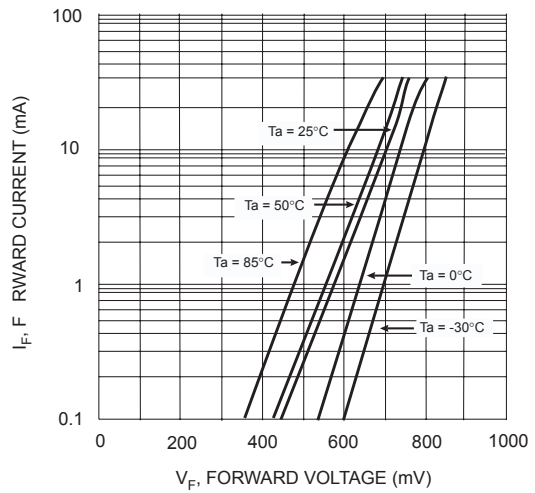


Fig. 2 Typical Forward Characteristics

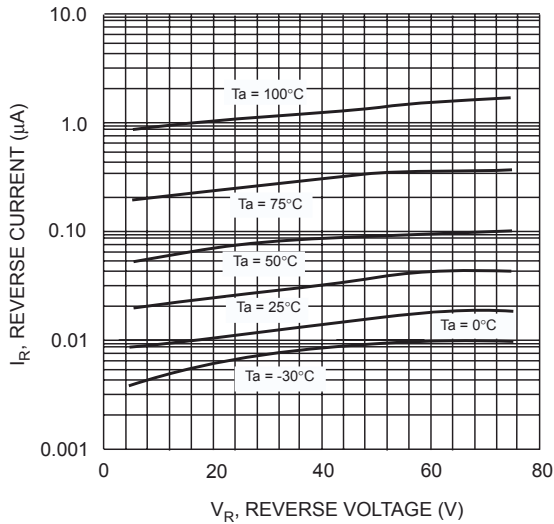


Fig. 3 Typical Reverse Characteristics

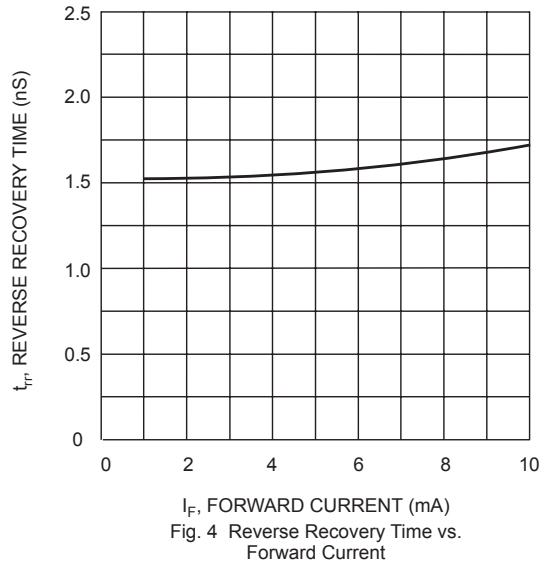


Fig. 4 Reverse Recovery Time vs. Forward Current

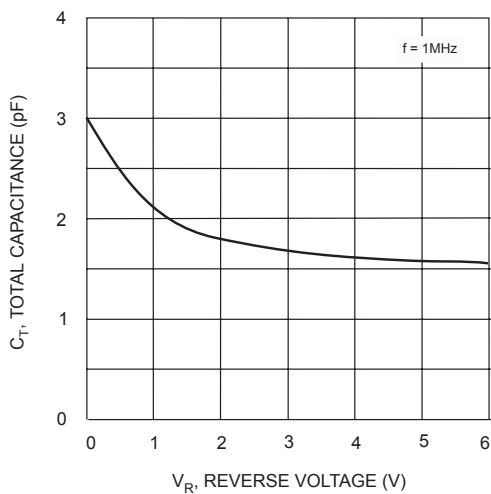


Fig. 5 Total Capacitance vs. Reverse Voltage