

### Surface Mount Switching Diode

 Lead(Pb)-Free

#### Features:

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

#### Mechanical Data:

- \*Case: SOD-323 Molded Plastic
- \*Terminals: Solderable Per MIL-STD-202, Method 208
- \*Polarity: See Equivalent Circuit Diagram
- \*Weight: 0.004grams(approx)

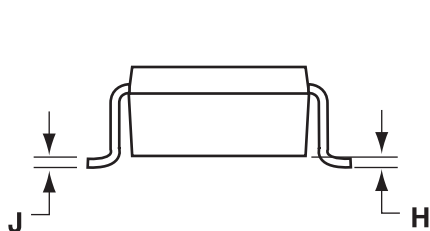
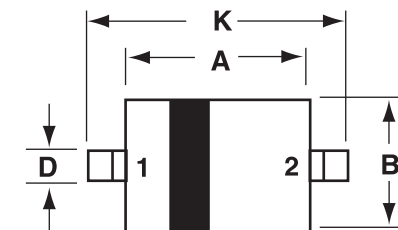
**SWITCHING DIODE**  
**200mAMPERS**  
**120-250VOLTS**



**SOD-323**

### SOD-323 Outline Demensions

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** ( $T_A=25^{\circ}\text{C}$  Unless otherwise noted)

Characteristic	Symbol	BAS19H	BAS20H	BAS21H	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RRM}$	120	200	250	Volts
Working Peak Reverse Voltage DC Blocking Voltage	$V_{RWM}$ $V_R$	100	150	200	Volts
RMS Reverse Voltage	$V_R(\text{RMS})$	71	106	140	V
Forward Continuous Current <sup>(1)</sup>	$I_{FM}$	400			mA
Average Rectified Output Current <sup>(1)</sup>	$I_o$	200			mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	$I_{FSM}$	2.5 0.5			A
Power Dissipation	$P_d$	200			mW
Thermal Resistance Junction to Ambient Air <sup>(1)</sup>	$R_{\theta JA}$	625			$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150			$^{\circ}\text{C}$

**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Forward Voltage $I_F=100\text{mA}$ $I_F=200\text{mA}$	$V_F$	-	1.0 1.25	Volts
Reverse Leakage @Rated DC Blocking Voltage	$I_R$	-	100	nA <sub>dc</sub>
Total Capacitance ( $V_R=1.0\text{V}$ , $f=1.0\text{MHz}$ )	$C_j$	-	5.0	Pf
Reverse Recovery Time $I_F=I_R=30\text{mA}$ $I_{rr}=0.1*I_R$ , $R_L=100\ \Omega$	$t_{rr}$		50	nS

NOTE:

1. Valid provided that terminals are kept at ambient temperature.

**Device Marking**

Item	Marking	Equivalent Circuit diagram
BAS19	JP, A8	
BAS20	JR, T2	
BAS21	JS, T3	

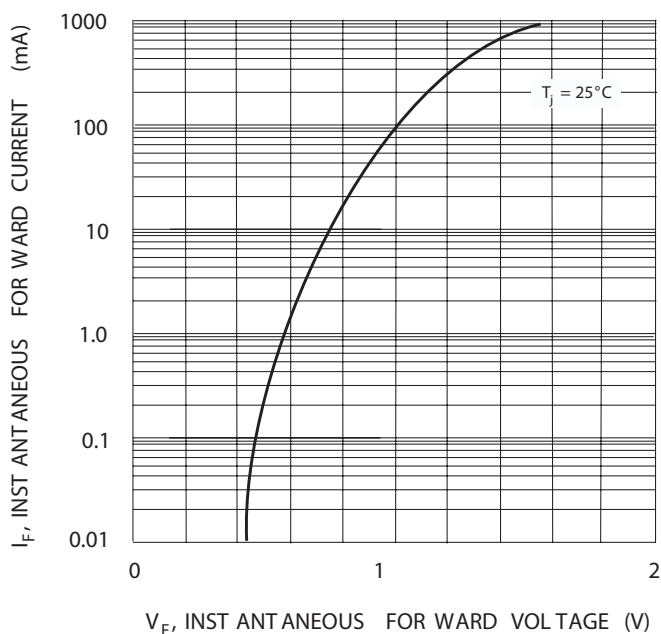


Fig. 1 Forward Characteristics

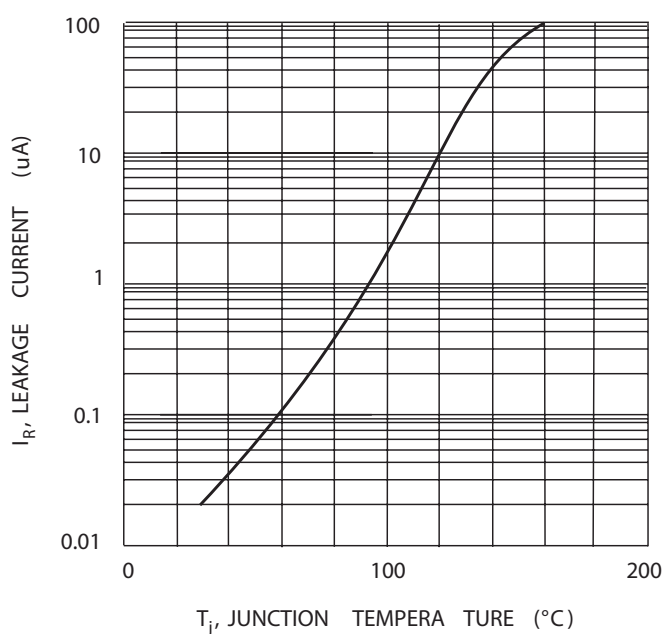


Fig. 2 Leakage Current vs Junction Temperature