

## Features

- Fast switching device ( $t_{rr} < 50\text{nS}$ )
- Power dissipation of 250mW
- High stability and high reliability
- Low reverse leakage



RoHS  
COMPLIANT



SOD-323

## Mechanical Data

- SOD-323 small outline plastic package
- Epoxy UL: 94V-0
- Polarity: cathode band denotes cathode
- Mounting position: Any

## Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

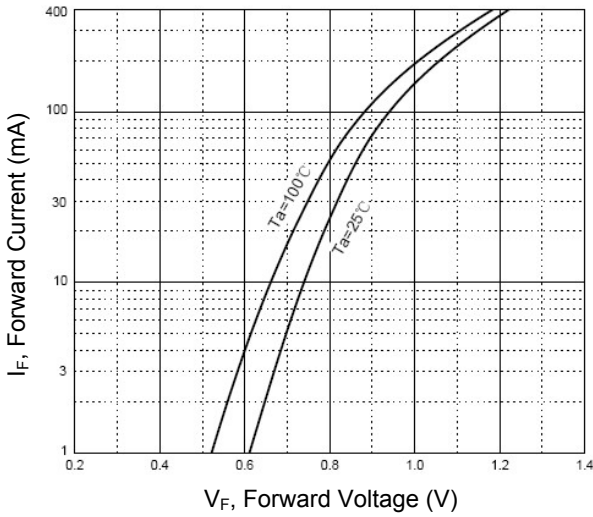
Parameter	Symbol	Value			Unit
		BAV19WS	BAV20WS	BAV21WS	
Reverse Voltage	$V_R$	120	200	250	V
Peak Reverse Voltage	$V_{RM}$	100	150	200	V
Power Dissipation	$P_D$	250			mW
Operating Junction Temperature	$T_J$	150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150			$^\circ\text{C}$
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500			$^\circ\text{C/W}$
Working Inverse Voltage	$W_{IV}$	75			V
Average Rectified Current	$I_O$	200			mA
Non-Repetitive Peak Forward Current	$I_{FM}$	400			mA
Peak Forward Surge Current @ $T_P = 1\text{mS}$ ; $T_A = 25^\circ\text{C}$	$I_{FSM}$	1.7			A

Valid provided that electrodes are kept at ambient temperature.

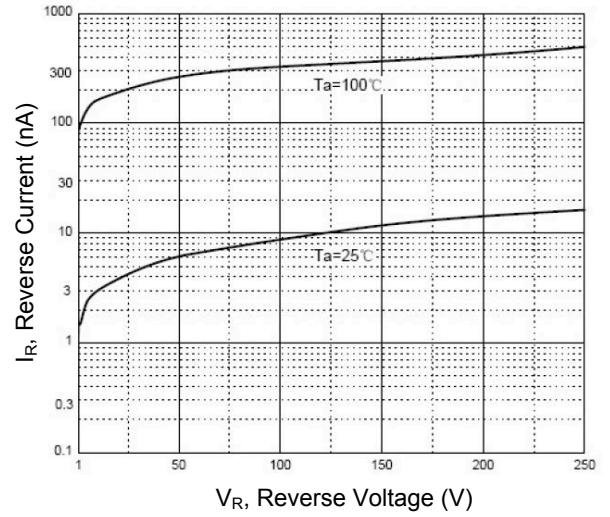
## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Reverse Voltage	$V_R$	$I_B = 100\mu\text{A}$	120	-	V
			200		
			250		
Reverse Leakage Current	$I_R$	$V_R = 100\text{V}$	-	0.1	$\mu\text{A}$
		$V_R = 150\text{V}$			
		$V_R = 200\text{V}$			
Forward Voltage	$V_F$	$I_F = 100\text{mA}$	-	1	V
		$I_F = 200\text{mA}$	-	1.25	
Reverse Recovery Time	$t_{rr}$	$I_F = 30\text{mA}$ , $I_R = 30\text{mA}$ , $R_L = 100\Omega$ , $I_{RR} = 3\text{mA}$	-	50	nS
Capacitance	C	$V_R = 0\text{V}$ , $f = 1\text{MHz}$	-	5	pF

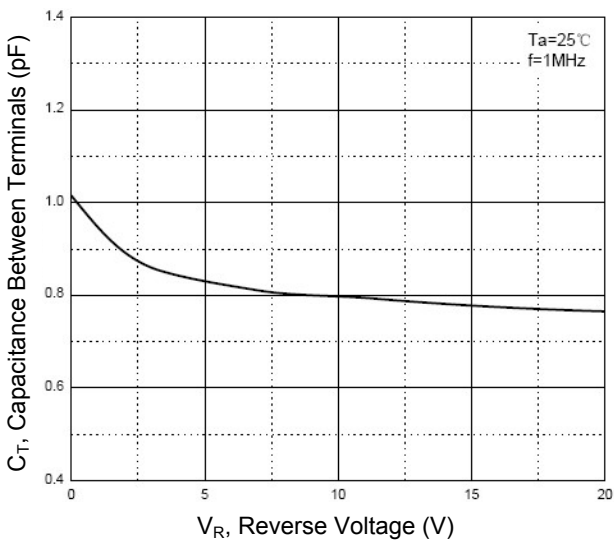
**Typical Electrical Characteristic Curves**



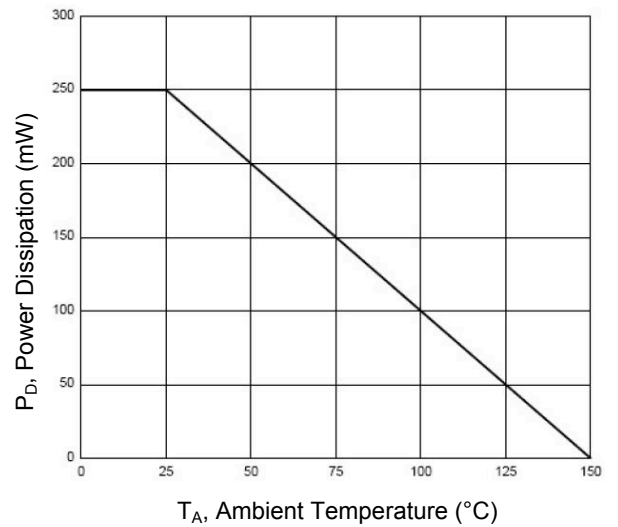
**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**

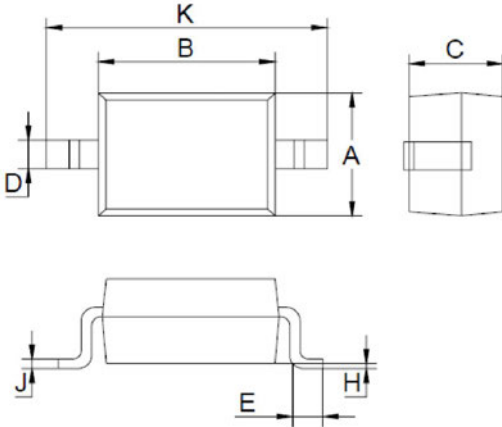


**Figure 3. Capacitance Characteristics**



**Figure 4. Power Derating Curve**

**Package Outline Dimensions (SOD-323)**



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	1.200	1.400	0.047	0.055
B	1.600	1.800	0.063	0.071
C	0.800	0.900	0.031	0.035
D	0.250	0.350	0.010	0.014
E	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004
J	0.100 TYP		0.004 TYP	
K	2.500	2.700	0.098	0.106

**Order Information**

Device	Package	Marking	Carrier	Quantity
BAV19WS	SOD-323	A8	Tape & Reel	3,000 pcs / Reel
BAV20WS	SOD-323	T2	Tape & Reel	3,000 pcs / Reel
BAV21WS	SOD-323	T3	Tape & Reel	3,000 pcs / Reel