

SWITCHING DIODE

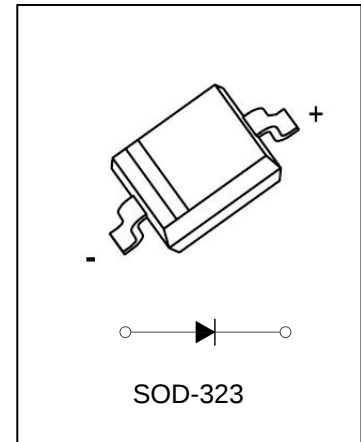
FEATURES

- Low Reverse Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Fast Switching Speed
- For General Purpose Switching Applications
- AEC-Q101 qualified (Automotive grade with suffix "Q")
- Expsemi electronics

MARKING:

BAV19WS	BAV20WS	BAV21WS
A8	T2	T3

The marking bar indicates the cathode
 Solid dot = Green molding compound device,
 if none, the normal device.



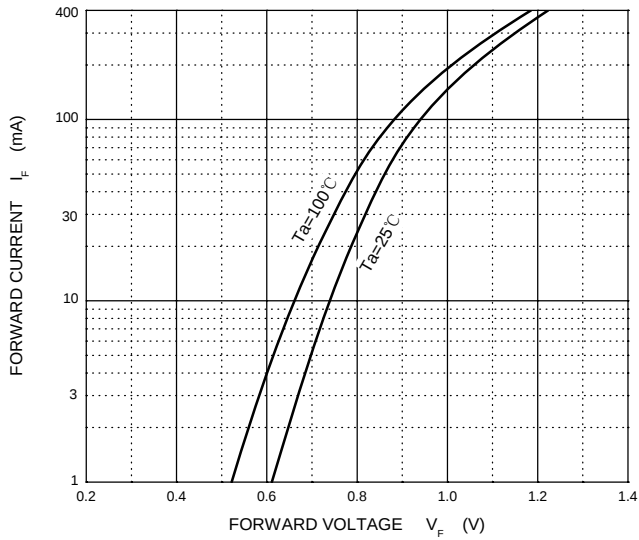
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value			Unit
		BAV19WS	BAV20WS	BAV21WS	
V_{RM}	Non-Repetitive Peak Reverse Voltage	120	200	250	V
V_{RRM}	Peak Repetitive Reverse Voltage	100	150	200	V
V_{RWM}	Working Peak Reverse Voltage				
$V_{R(RMS)}$	RMS Reverse Voltage	71	106	141	V
I_O	Average Rectified Output Current	200			mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	2.0			A
P_D	Power Dissipation	250			mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500			$^{\circ}\text{C/W}$
T_j	Junction Temperature	150			$^{\circ}\text{C}$
T_{stg}	Storage Temperature	$-55\sim+150$			$^{\circ}\text{C}$

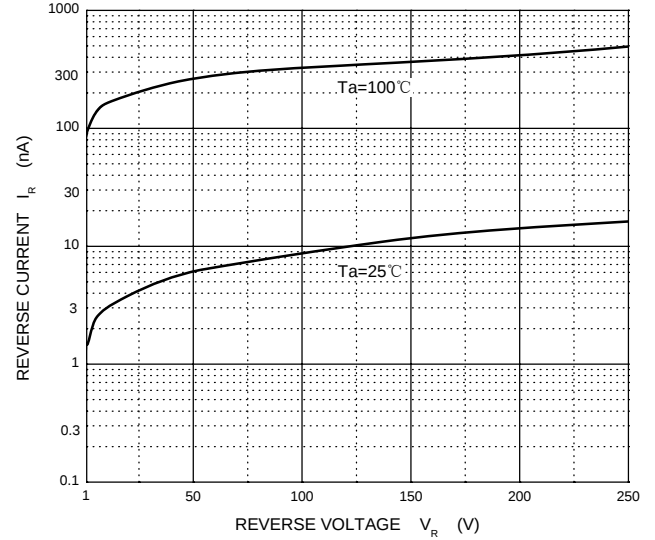
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reverse current	I_R	$V_R=100\text{V}$	BAV19WS			0.1	μA
		$V_R=150\text{V}$	BAV20WS			0.1	
		$V_R=200\text{V}$	BAV21WS			0.1	
Forward voltage	V_F	$I_F=100\text{mA}$				1	V
		$I_F=200\text{mA}$				1.25	
Total capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$				5	pF
Reverse recovery time	t_{rr}	$I_F=I_R=30\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$				50	ns

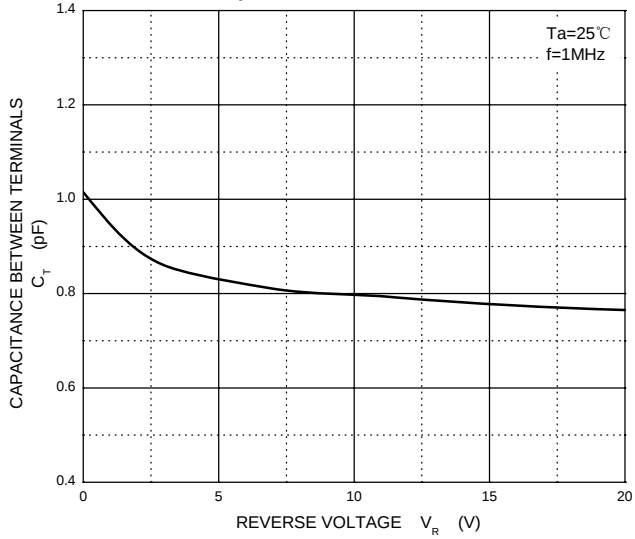
Forward Characteristics



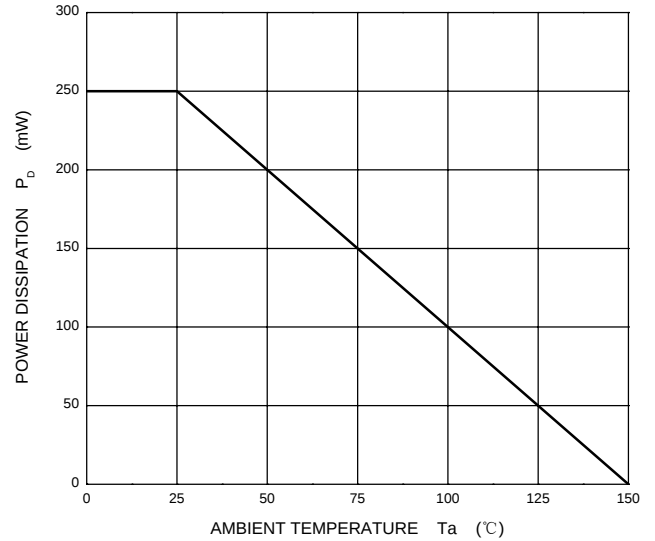
Reverse Characteristics



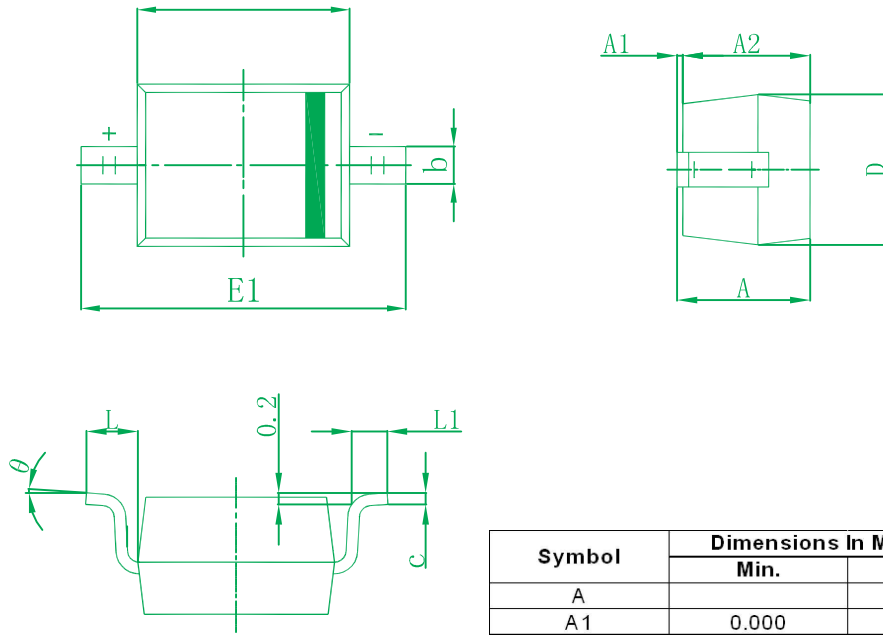
Capacitance Characteristics



Power Derating Curve

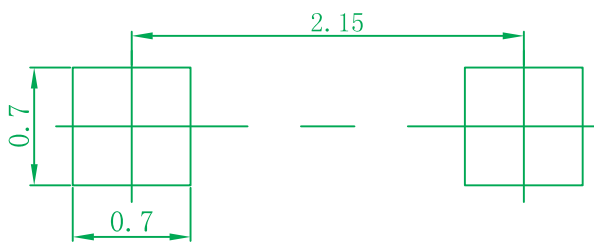


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Ordering information

Device	Package	Shipping
BAVXXWS	SOD-323	3000/Tape&Reel(7inches)