



# BAV19WS THRU BAV21WS

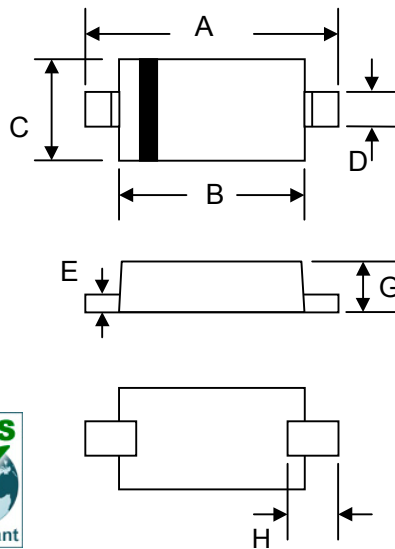
## SURFACE MOUNT FAST SWITCHING DIODE

### Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Application
- Plastic Material – UL Recognition Flammability Classification 94V-O

### 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.)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.75	1.95
C	1.15	1.35
D	0.25	0.35
E	0.05	0.15
G	0.70	0.95
H	0.30	—
All Dimensions in mm		

### Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	120	200	250	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	105	140	V
Forward Continuous Current (Note 1)	$I_F$	400			mA
Average Rectified Output Current (Note 1)	$I_o$	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
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625			K/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 specified

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Forward Voltage Drop @ $I_F = 100\text{mA}$	$V_{FM}$	1.0			V
Peak Reverse Leakage Current @ Rated DC Blocking Voltage	$I_{RM}$	100			nA
Typical Junction Capacitance ( $V_R = 0\text{V DC}, f = 1.0\text{MHz}$ )	$C_j$	5.0			pF
Reverse Recovery Time (Note 2)	$t_{rr}$	50			nS

- Note: 1. Valid provided that terminals are kept at ambient temperature.  
2. Measured with  $I_F = I_R = 30\text{mA}$ ,  $I_{RR} = 0.1 \times I_R$ ,  $R_L = 100\Omega$ .



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## RATINGS AND CHARACTERISTIC CURVES

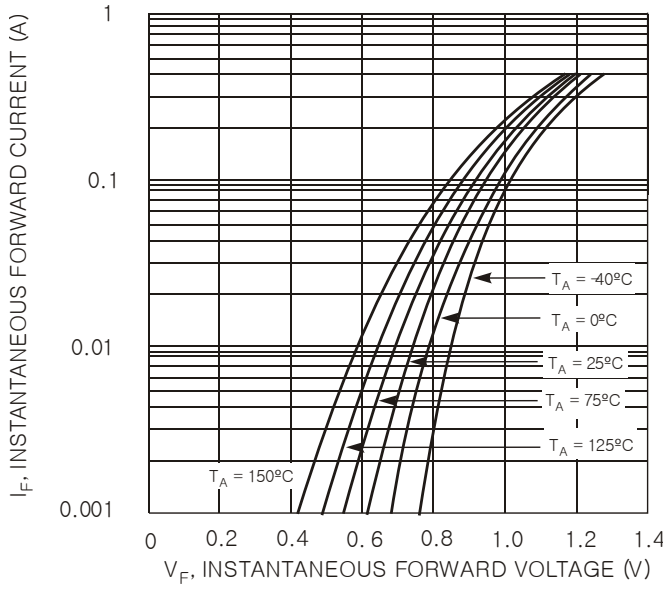


Fig. 1 Typical Forward Characteristics

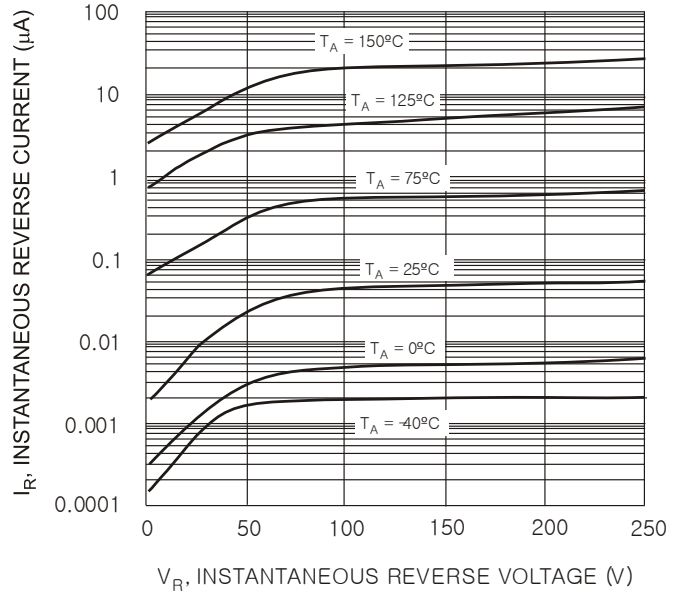


Fig. 2 Typical Reverse Characteristics

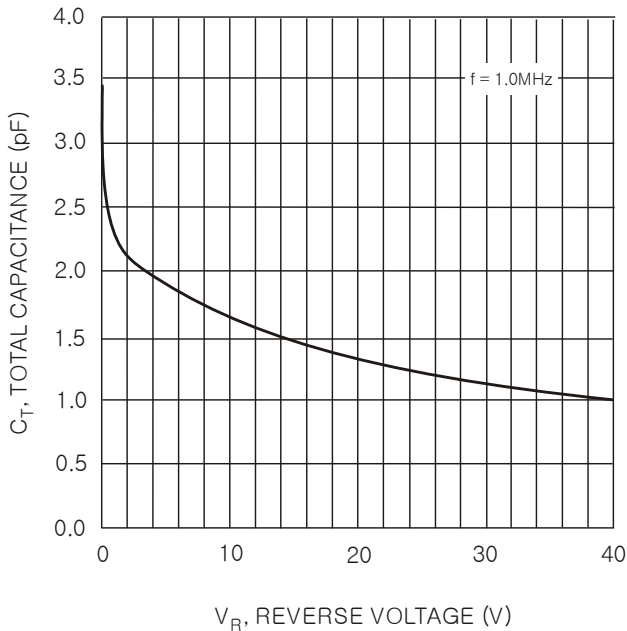


Fig. 3 Typical Capacitance vs. Reverse Voltage

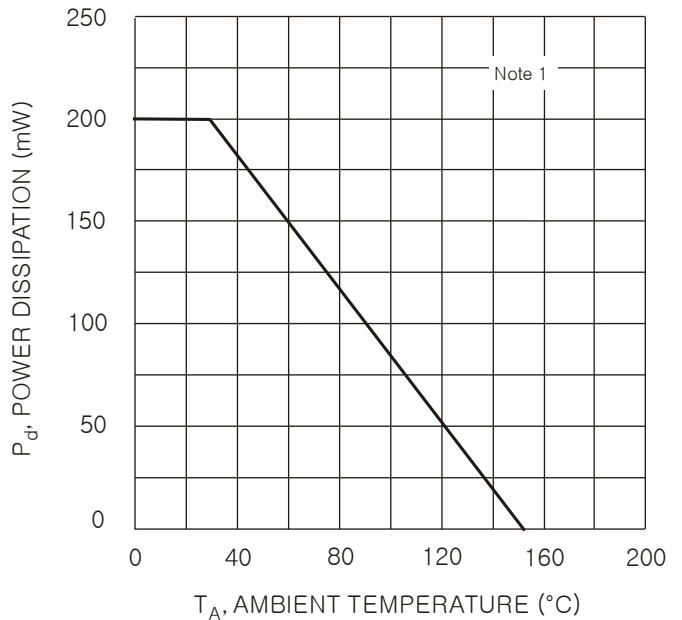


Fig. 4 Power Derating Curve