

## VII. Switching Diode

### (c). SMD Type (SOD-323) BAV19WS~BAV21WS

(Package: SOD-323)

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Fast switching speed.</li> <li>• Ideally suited for automated assembly processes.</li> <li>• For general purpose switching applications.</li> <li>• High conductance.</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : Molded plastic, SOD-323</li> <li>• Mounting position : Any</li> <li>• Polarity : Color band denotes cathode</li> </ul> <p><b>DEVICE MARKING CODE</b></p> <ul style="list-style-type: none"> <li>• BAV19WS : A8</li> <li>• BAV20WS : T2</li> <li>• BAV21WS : T3</li> </ul>	<p>Case: SOD-323 Dimensions in millimeters</p>
--	--

### Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Peak repetitive reverse voltage	$V_{RRM}$	120	200	250	Volts
Working peak reverse voltage DC reverse voltage	$V_{RWM}$ $V_R$	100	150	200	Volts
RMS reverse voltage	$V_{R(RMS)}$	71	106	141	Volts
Forward voltage (Max)	$V_F$ $I_F=100mA$ $I_F=200mA$	1.00 1.25			Volts
Reverse breakdown voltage (Min) (@ $I_R=100\mu A$ )	$V_{(BR)R}$	120	200	250	Volts
Average rectified output current	$I_O$	200			mA
Non-repetitive peak forward surge current	$I_{FSM}$ @ $t=1.0\mu s$ @ $t=1.0s$	2.5 0.5			Amps
Repetitive peak forward current	$I_{FRM}$	625			mA
Maximum reverse leakage current	$I_R$ $V_R=100V$ $V_R=150V$ $V_R=200V$	0.1 - -	- 0.1 -	- - 0.1	$\mu A$
Power dissipation	$P_D$	200			mW
Capacitance between terminals (Max) $V_R=0V$ , $f=1.0MHz$	$C_T$	5			PF
Reverse recovery time (Max) $I_F=I_R=30mA$ , $I_{RR}=0.1 * I_R$ , $R_L=100$	$T_{rr}$	50			ns
Typical thermal resistance, junction to ambient air	$R_{th-JA}$	625			/W
Operating and storage temperature range	$T_j, T_{stg}$	-65 to +150			

**Ratings and Characteristic Curves of BAV19WS/ BAV20WS/ BAV21WS**

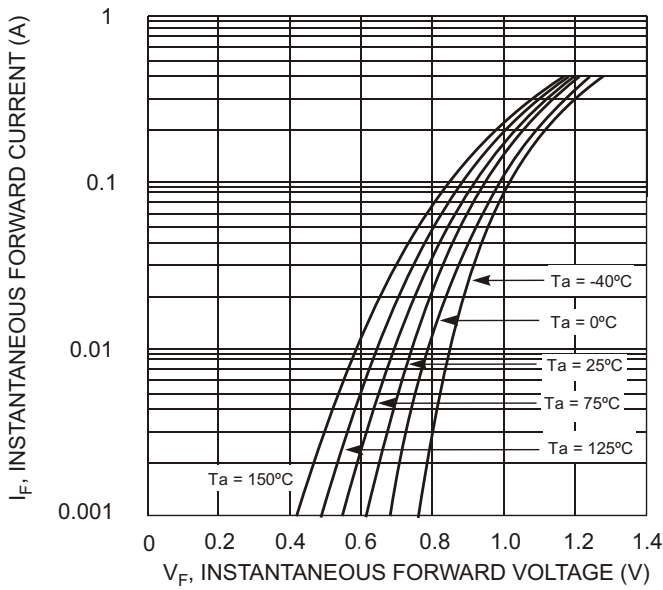


Fig. 1 Typical Forward Characteristics

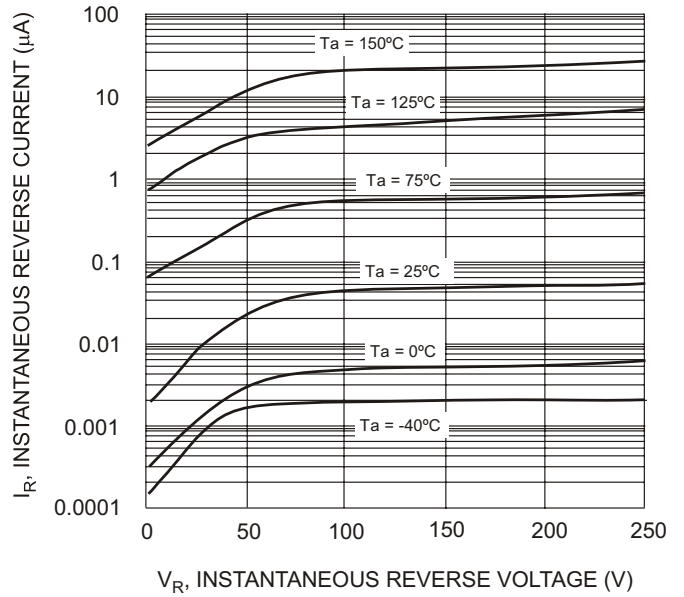


Fig. 2 Typical Reverse Characteristics

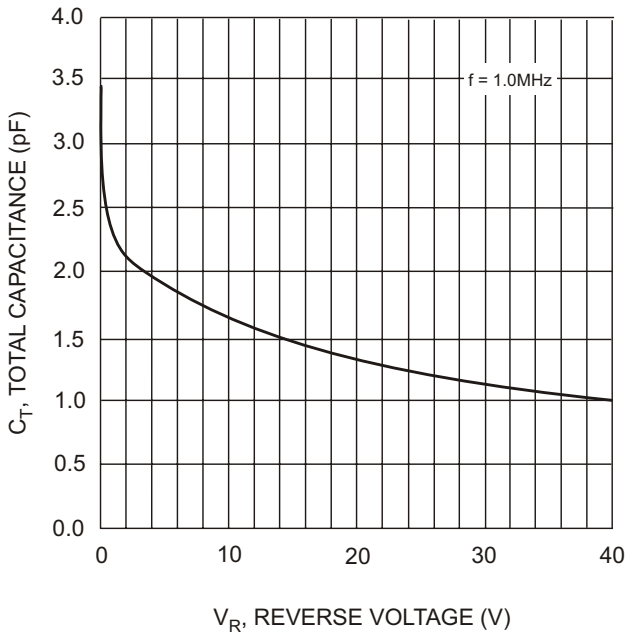


Fig. 3 Typical Capacitance vs. Reverse Voltage

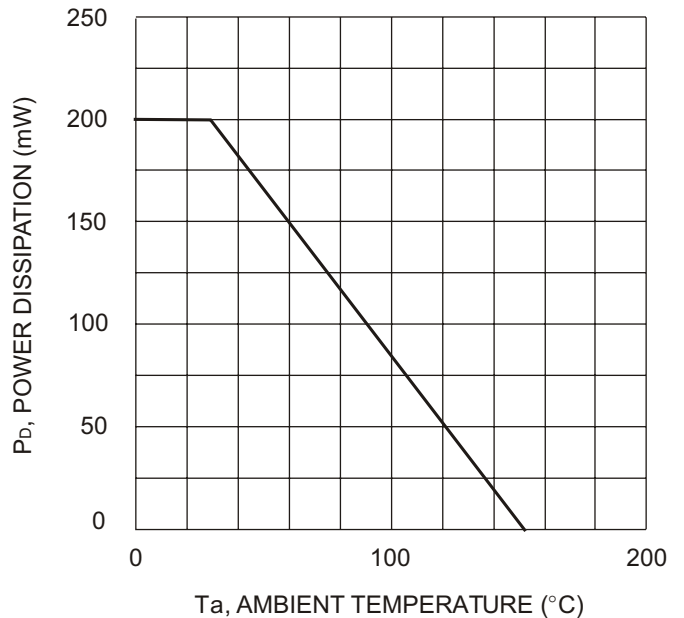


Fig. 4 Power Derating Curve, Total Package