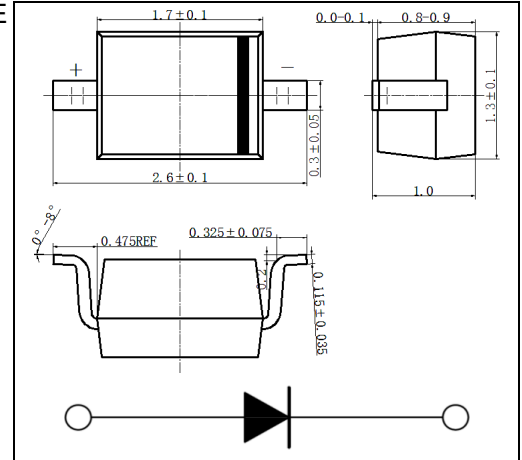




SOD-323 Plastic-Encapsulate Diodes

BAV19WS - BAV21WS SURFACE MOUNT FAST SWITCHING DIODE



Mechanical Data

- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- For General Purpose Switching Applications
- High Conductance
- Lead Free/RoHS Compliant (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability

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

Symbol	Characteristic	BAV19WS	BAV20WS	BAV21WS	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	120	200	250	V
V_{RWM} V_R	Working Peak Reverse Voltage DC Blocking Voltage	100	150	200	V
$V_{R(RMS)}$	RMS Reverse Voltage	71	106	141	V
I_{FM}	Forward Continuous Current (Note 1)		250		mA
I_O	Average Rectified Output Current (Note 1)		200		mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current		2.5 0.5		A
I_{FRM}	Repetitive Peak Forward Surge Current		625		mA

Thermal Characteristics

Symbol	Characteristic	Value	Unit
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient Air (Note 1)	625	$^\circ\text{C}/\text{W}$
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Characteristic	Test Condition	Min	Max	Unit
$V_{(BR)R}$	Reverse Breakdown Voltage (Note 2)	BAV19WS BAV20WS BAV21WS $I_R = 100\mu\text{A}$	120 200 250	—	V
V_F	Forward Voltage	$I_F = 100\text{mA}$ $I_F = 200\text{mA}$	—	1.0 1.25	V
I_R	Peak Reverse Current @ Rated DC Blocking Voltage (Note 2)	$T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	—	100 15	nA μA
C_T	Total Capacitance	$V_R = 0, f = 1.0\text{MHz}$	—	5.0	pF
t_{rr}	Reverse Recovery Time	$I_F = I_R = 30\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	—	50	ns

- Notes:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.
 3. No purposefully added lead. Halogen and Antimony Free.
 4. Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb_2O_3 Fire Retardants.

Typical Characteristics

