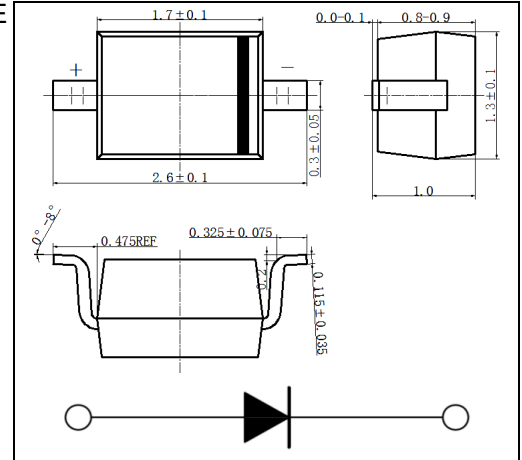




SOD-323 Plastic-Encapsulate Diodes

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
					@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$
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:
- 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>.
 - Short duration pulse test used to minimize self-heating effect.
 - No purposefully added lead. Halogen and Antimony Free.
 - 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

