



BAV19WS - BAV21WS

SURFACE MOUNT FAST SWITCHING DIODE

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

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band, See Page 2
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)



Top View

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Repetitive Peak Reverse Voltage		V _{RRM}	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage		V _{RWM} V _R	100	150	200	V
RMS Reverse Voltage		V _{R(RMS)}	71	106	141	V
Forward Continuous Current (Note 1)		IFM	250			mA
Average Rectified Output Current (Note 1)		lo		200		mA
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0s	I _{FSM}	2.5 0.5		А	
Repetitive Peak Forward Surge Current		I _{FRM}		625		mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation	PD	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ ext{ heta}JA}$	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	۵°

Electrical Characteristics @T_A = 25°C unless otherwise specified

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

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.

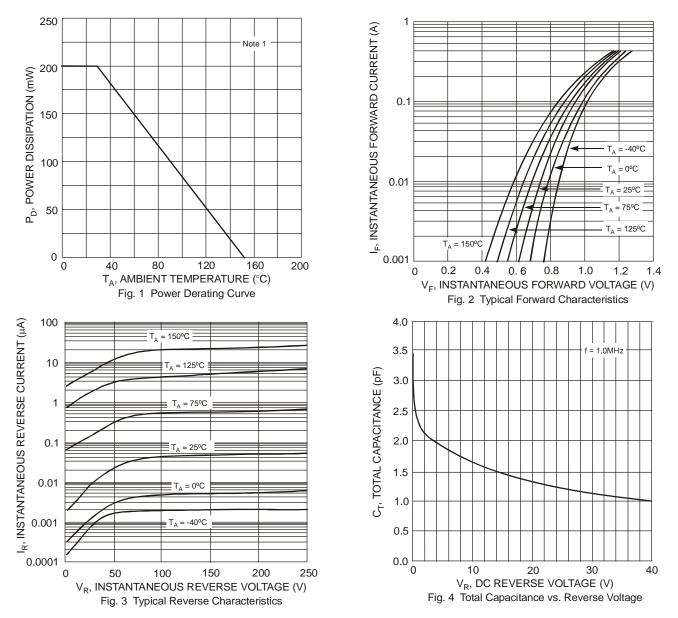
2. Short duration pulse test used to minimize self-heating effect.

3. No purposefully added lead. Halogen and Antimony Free.

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 Sb₂O₃ Fire Retardants.

Notes:





Ordering Information (Note 5)

Part Number	Case	Packaging
BAV19WS-7-F	SOD-323	3000/Tape & Reel
BAV20WS-7-F	SOD-323	3000/Tape & Reel
BAV21WS-7-F	SOD-323	3000/Tape & Reel

Notes:

5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

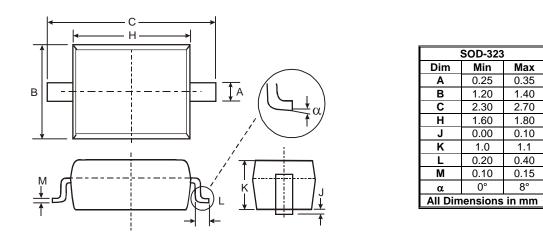
Marking Information



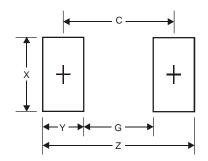
XX = Product Type Marking Code, See Page 1 BAV19WS Marking: T2 or T3 BAV20WS Marking: T2 or T3 BAV21WS Marking: T3



Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.75
G	1.05
Х	0.65
Y	1.35
С	2.40



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