



**THE DATASHEET OF  
BAV19WS\_R1\_00001**





# BAV19WS~BAV21WS

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 120-250 Volt    **POWER** 200mWatt

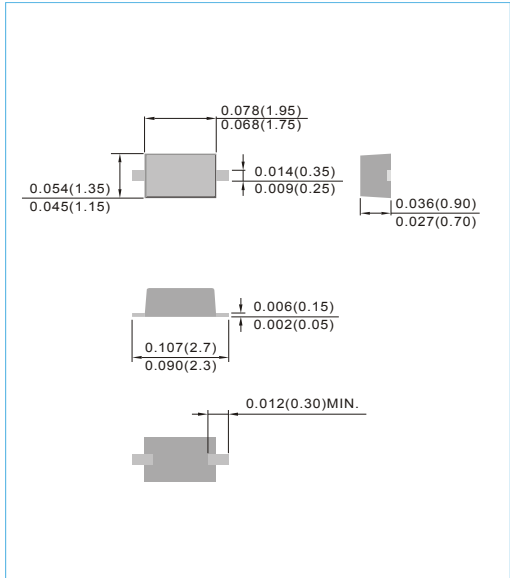
**SOD-323**    Unit : inch(mm)

### FEATURES

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion
- Electrically identical to Standard JEDEC
- High conductance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

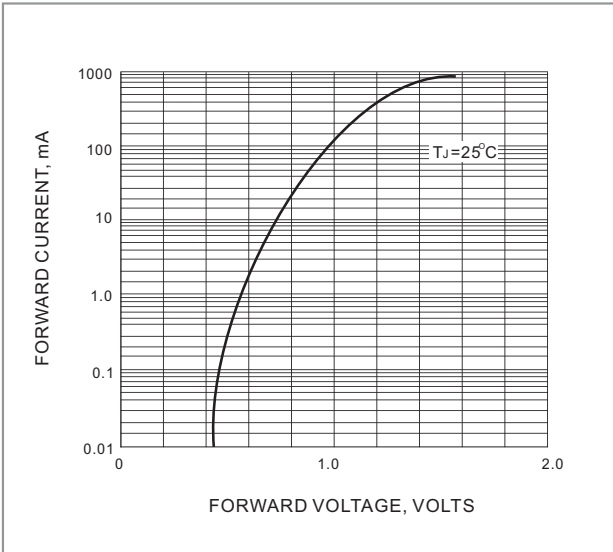
PARAMETER	SYMBOL	BAV19WS	BAV20WS	BAV21WS	UNITS
Marking Code		A8	A80	A82	
Reverse Voltage	$V_R$	100	150	200	V
Peak Reverse Voltage	$V_{RM}$	120	200	250	V
Rectified Current (Average), Half Wave Rectification with Resistive Load and $f \geq 50$ Hz	$I_O$	200			mA
Peak Forward Surge Current, 0.001ms	$I_{FSM}$	4			A
Repetitive Peak Forward Current at $f \geq 50$ Hz, $\theta = 180^\circ$ , $T_{amb} = 25^\circ C$	$I_{FRM}$	625			mA
Power Dissipation Derate Above 25°C	$P_{TOT}$	200			mW
Maximum Forward Voltage at 0.1A	$V_F$	1			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ C$	$I_R$	0.1			$\mu A$
Typical Junction Capacitance (Note 1)	$C_J$	5			pF
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	50			ns
Maximum Thermal Resistance (Note 3) (Note 4)	$R_{\theta JA}$ $R_{\theta JC}$	640 260			$^\circ C / W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150			$^\circ C$

NOTE :

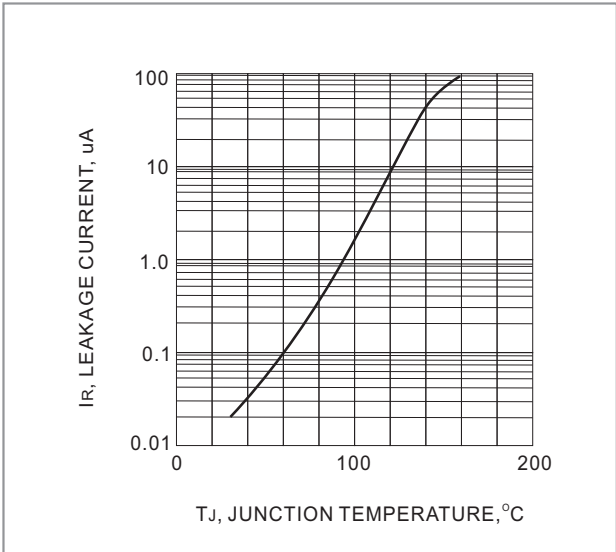
1.  $C_J$  at  $V_R = 0$ ,  $f = 1$  MHz
2. From  $I_F = 10$  mA to  $I_R = 1$  mA,  $V_R = 6$  Volts,  $R_L = 100 \Omega$
3. Mounted with minimum recommended package size, PC Board FR4
4. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area



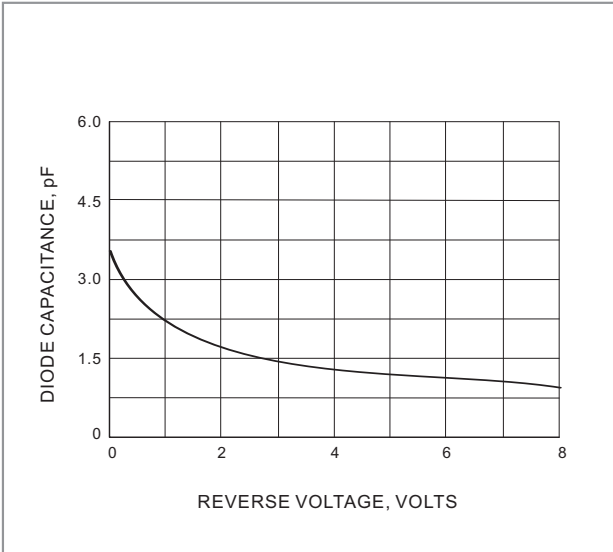
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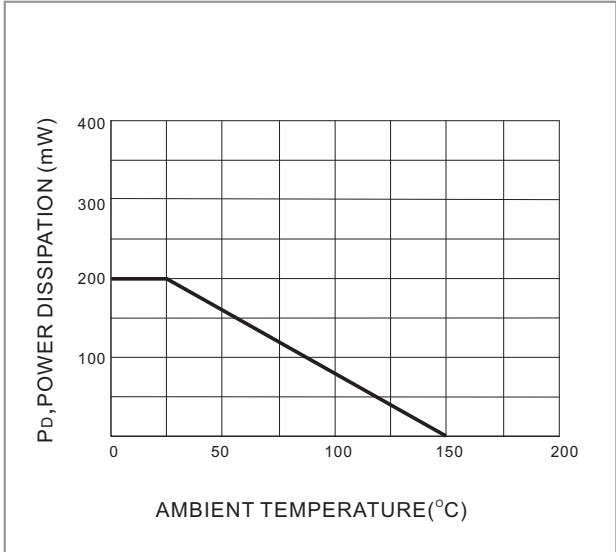
**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**Fig.2 LEAKAGE CURRENT vs JUNCTION TEMPERATURE**



**FIG. 3 TYPICAL JUNCTION CAPACITANCE**

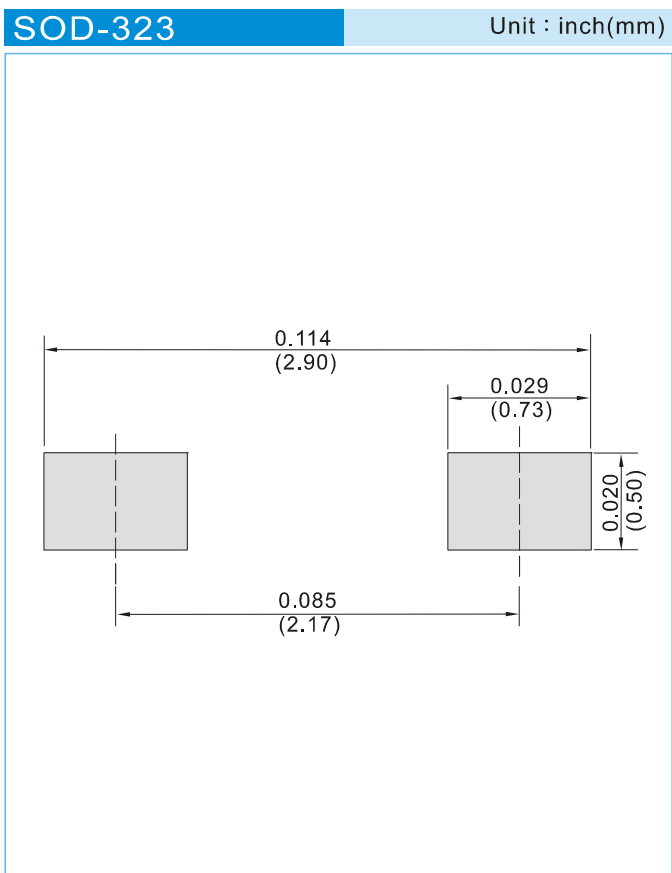


**FIG. 4 POWER DERATING CURVE**



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information  
T/R - 12K per 13" plastic Reel  
T/R - 5K per 7" plastic Reel



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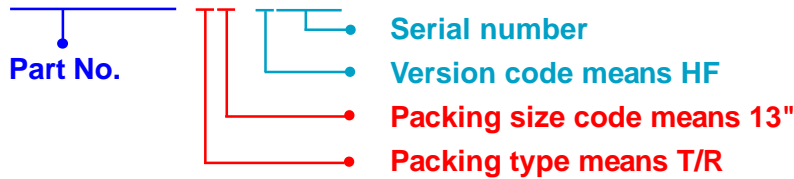
**Part No\_packing code\_Version**

BAV19WS\_R1\_00001

BAV19WS\_R2\_00001

**For example :**

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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