



## Features

- Halogen free available upon request by adding suffix "-HF"
- Silicon Epitaxial Planar Diodes
- For General Purpose
- This diode is also available in other case.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

## Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking code: BAV19WS=A8  
BAV20WS=T2  
BAV21WS=T3

## Maximum Ratings

Symbol	Parameters	Rating	Unit
$V_R$	Continuous Reverse Voltage	BAV19WS	100
		BAV20WS	150
		BAV21WS	200
$V_{RRM}$	Repetitive Peak Reverse Voltage	BAV19WS	120
		BAV20WS	200
		BAV21WS	250
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current@ $t=1\mu s$ @ $t=1s$	2.5 0.5	A
$I_{FM}$	Forward Continuous Current (Note1)	400	mA
$I_0$	Average Rectified Output Current (Note1)	200	mA
$I_{FRM}$	Repetitive Peak Forward Current at $f>50Hz$ , $T_{amb}=25^{\circ}C^{(1)}$	625	mA
$P_{tot}$	Power Dissipation at $T_{amb}=25^{\circ}C^{(1)}$	250	mW
$R_{thJA}$	Thermal Resistance Junction to Ambient Air	500	KW
$T_J$	Operating Junction Temperature	-65 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-65 to +150	$^{\circ}C$

## Electrical Characteristics @ 25°C Unless Otherwise Specified

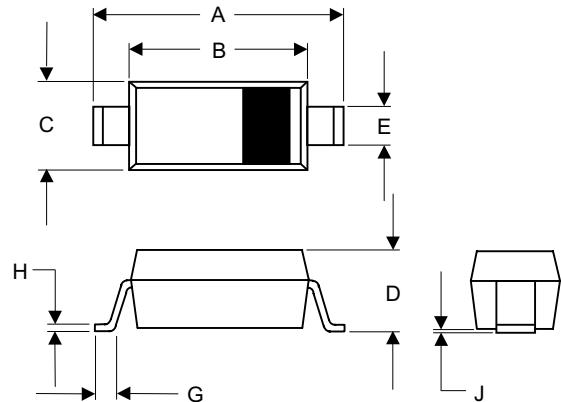
Symbol	Parameter	Min	Typ	Max	Units
$V_F$	Forward Voltage ( $I_F=100mA$ ) ( $I_F=200mA$ )	---	---	1.00 1.25	V
$I_R$	Leakage Current ( $V_R=100V$ )	BAV19WS	---	100	nA
	( $V_R=100V$ , $T_J=100^{\circ}C$ )	BAV19WS	---	15	uA
	( $V_R=150V$ )	BAV20WS	---	100	nA
	( $V_R=150V$ , $T_J=100^{\circ}C$ )	BAV20WS	---	15	uA
	( $V_R=200V$ )	BAV21WS	---	100	nA
	( $V_R=200V$ , $T_J=100^{\circ}C$ )	BAV21WS	---	15	uA
$C_{tot}$	Capacitance ( $V_R=0$ , $f=1.0MHz$ )	---	1.5	---	pF
$t_{rr}$	Reverse Recovery Time ( $I=30mA$ , $I_R=30mA$ ) ( $I_{rr}=3.0mA$ , $R_L=100OHMS$ )	---	---	50	ns

Notes: 1. Valid provided that leads are kept at ambient temperature

**BAV19WS**  
**THRU**  
**BAV21WS**

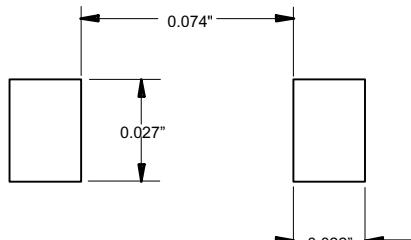
**250mW**  
**Small Signal**  
**Diodes**  
**120 to 250 Volts**

## SOD-323

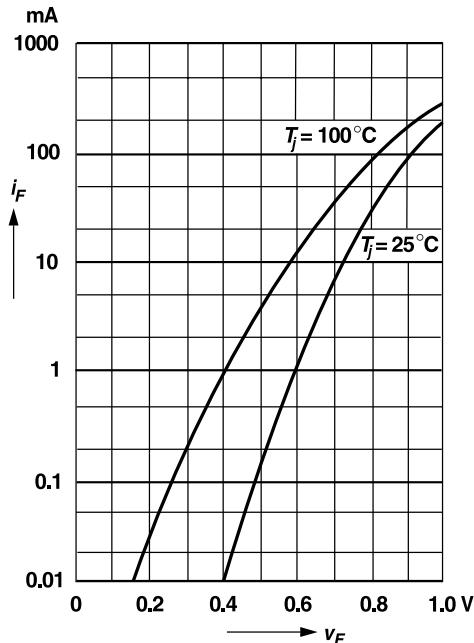


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	-----	.006	-----	0.15	

## SUGGESTED SOLDER PAD LAYOUT

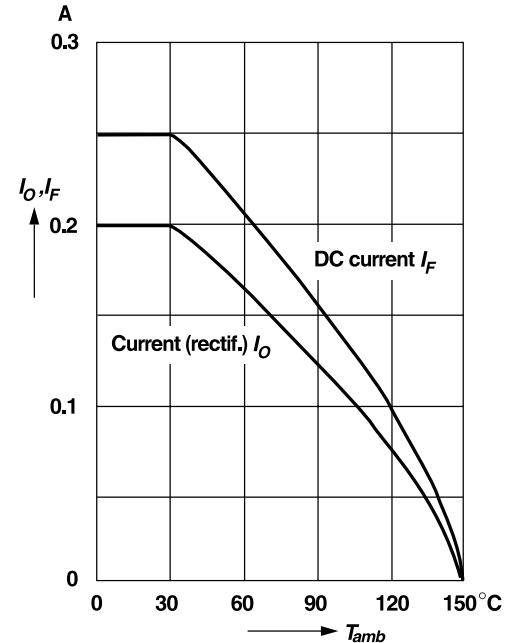


## Forward characteristics



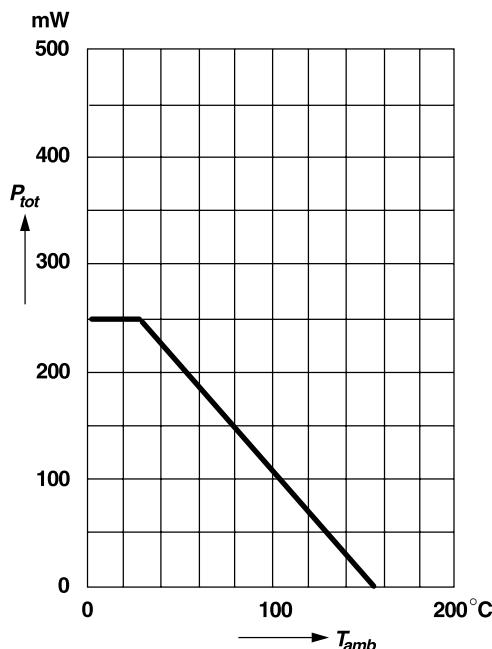
## Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

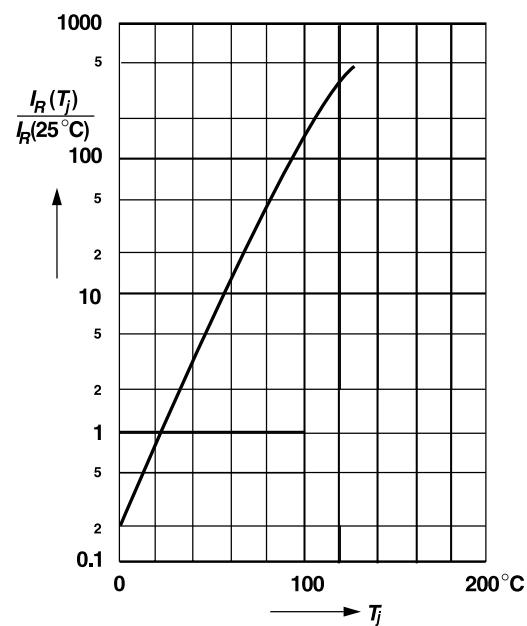


## Admissible power dissipation versus ambient temperature

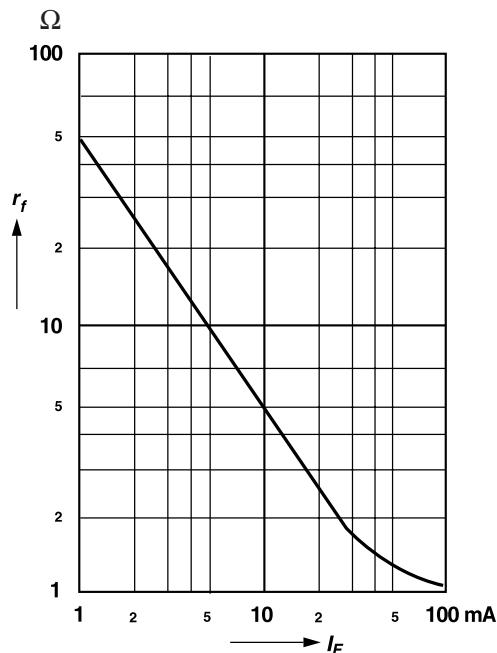
Valid provided that electrodes are kept at ambient temperature



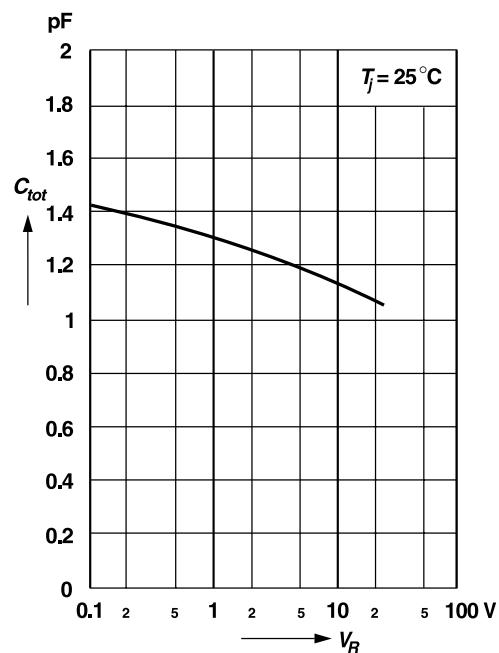
## Leakage current versus junction temperature



Dynamic forward resistance  
versus forward current



Capacitance  
versus reverse voltage



<sup>TM</sup>

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## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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