



# THE DATASHEET OF BAV20WS-TP



# BAV19WS THRU BAV21WS

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

## 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

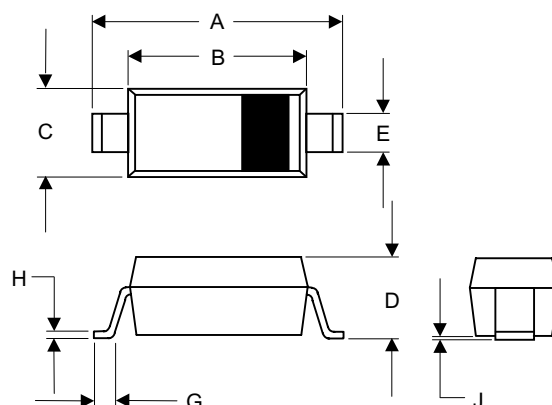
Symbol	Parameters	Rating	Unit	
$V_R$	Continuous Reverse Voltage	BAV19WS BAV20WS BAV21WS	100 150 200	V
	Repetitive Peak Reverse Voltage	BAV19WS BAV20WS BAV21WS	120 200 250	
	Non-Repetitive Peak Forward Surge Current @ $t=1\mu s$ @ $t=1s$	2.5 0.5	A	
$I_{FM}$	Forward Continuous Current (Note1)	400	mA	
$I_O$	Average Rectified Out put 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	V
		---	---	1.25	
$I_R$	Leakage Current ( $V_R=100V$ ) ( $V_R=100V, T_J=100^{\circ}C$ ) ( $V_R=150V$ ) ( $V_R=150V, T_J=100^{\circ}C$ ) ( $V_R=200V$ ) ( $V_R=200V, T_J=100^{\circ}C$ )	BAV19WS	---	100	nA
		BAV19WS	---	15	uA
		BAV20WS	---	100	nA
		BAV20WS	---	15	uA
		BAV21WS	---	100	nA
		BAV21WS	---	15	uA
$C_{tot}$	Capacitance ( $V_R=0, f=1.0MHz$ )	---	1.5	---	pF
$t_{rr}$	Reverse Recovery Time ( $I_F=30mA, I_R=30mA$ ) ( $I_{rr}=3.0mA, R_L=100\Omega$ )	---	---	50	ns

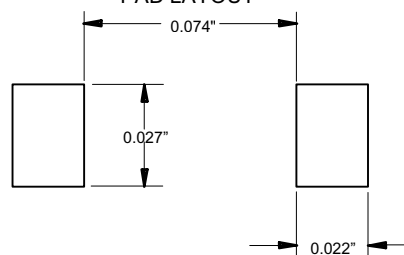
Notes: 1. Valid provided that leads are kept at ambient temperature

## SOD-323



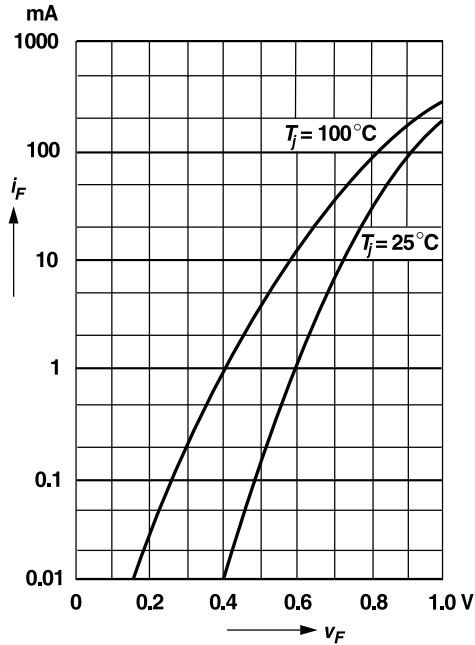
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	----	.006	----	0.15	

## SUGGESTED SOLDER PAD LAYOUT



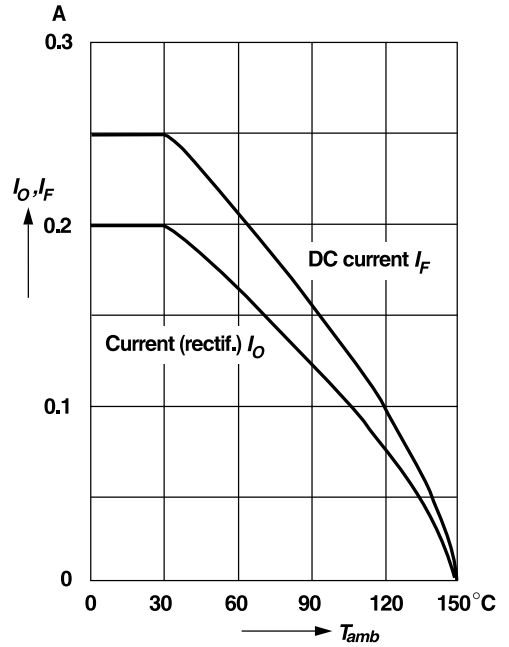
# BAV19WS thru BAV21WS

**Forward characteristics**



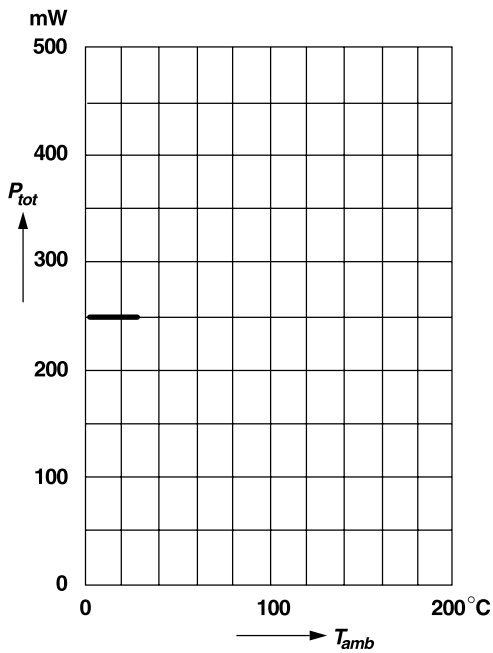
**Admissible forward current versus ambient temperature**

Valid provided that electrodes are kept at ambient temperature

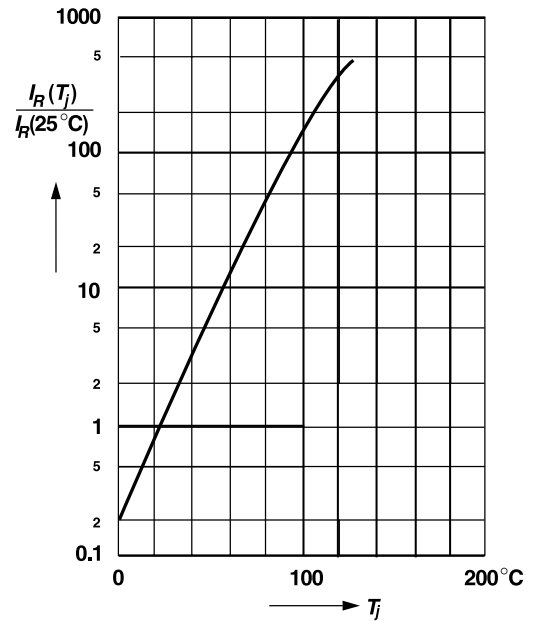


**Admissible power dissipation versus ambient temperature**

Valid provided that electrodes are kept at ambient temperature

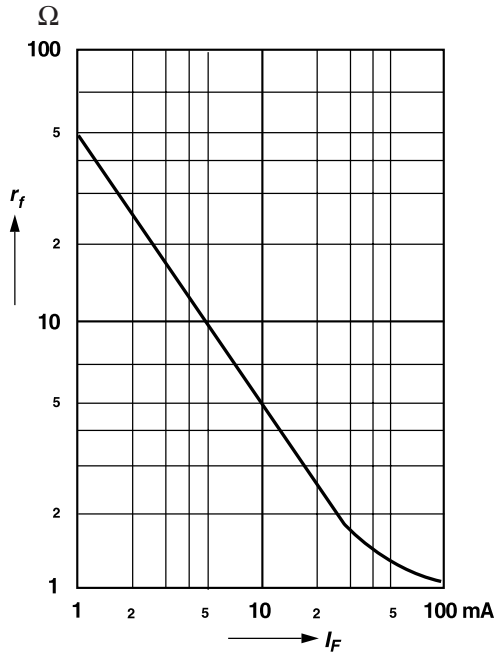


**Leakage current versus junction temperature**

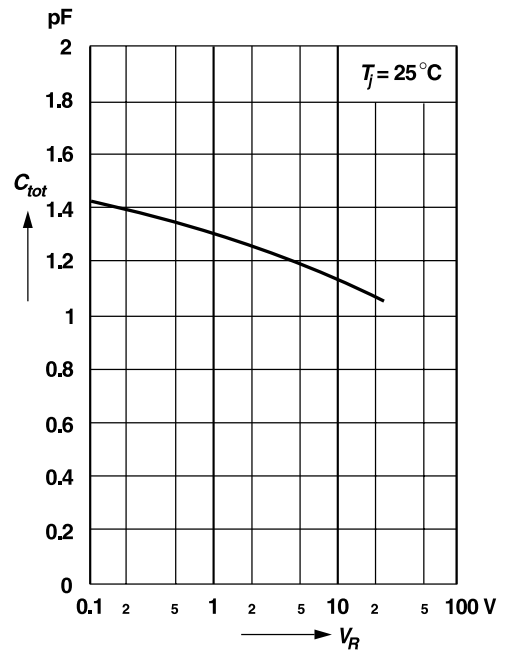


# BAV19WS thru BAV21WS

Dynamic forward resistance  
versus forward current



Capacitance  
versus reverse voltage





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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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