

# BAV19W THRU BAV21W

**410mW  
Small Signal  
Diodes  
120 to 250 Volts**

## Features

- Silicon Epitaxial Planar Diodes
- For General Purpose
- This diode is also available in other case.
- Halogen free available upon request by adding suffix "-HF"
- 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: BAV19W=A8  
 BAV20W=T2 or A80  
 BAV21W=T3 or A82

## Maximum Ratings

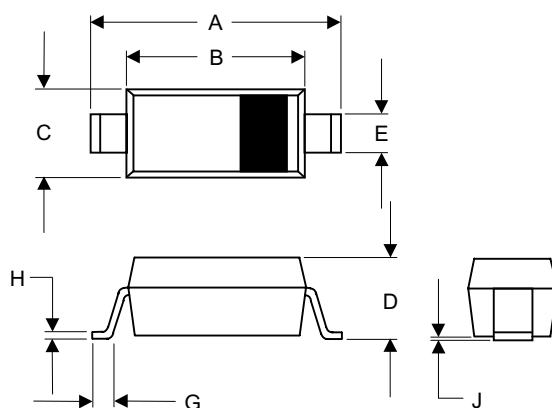
Symbol	Rating	Rating	Unit	
$V_R$	Continuous Reverse Voltage	BAV19W BAV20W BAV21W	100 150 200	V
$V_{RRM}$	Repetitive Peak Reverse Voltage	BAV19W BAV20W BAV21W	120 200 250	V
$I_F$	Forward DC Current at $T_{amb}=25^{\circ}C^{(1)}$		250	mA
$I_{F(AV)}$	Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb}=25^{\circ}C^{(1)}$		200	mA
$I_{FRM}$	Repetitive Peak Forward Current at $f>50Hz$ , $T_{amb}=25^{\circ}C^{(1)}$		625	mA
$I_{FSM}$	Surge Forward Current at $t<1s$ , $T_j=25^{\circ}C$		1.0	A
$P_{tot}$	Power Dissipation at $T_{amb}=25^{\circ}C^{(1)}$		410	mW
$R_{JA}$	Thermal Resistance Junction to Ambient Air		305	$^{\circ}C/W$
$T_j$	Junction Temperature		-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature		-55 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 ( $V_R=100V$ ) ( $V_R=100V, T_j=100^{\circ}C$ ) ( $V_R=150V$ ) ( $V_R=150V, T_j=100^{\circ}C$ ) ( $V_R=200V$ ) ( $V_R=200V, T_j=100^{\circ}C$ )	---	---	100 15 100 15 100 15	nA uA nA uA nA uA
$r_f$	Dynamic Forward Resistance ( $I_F=10mA$ )	---	5.0	---	OHM
$C_{tot}$	Capacitance ( $V_R=0, f=1.0MHz$ )	---	1.5	---	pF
$t_{rr}$	Reverse Recovery Time ( $I_F=30mA, I_R=30mA$ ) ( $I_{rr}=3.0mA, R_f=100OHMS$ )	---	---	50	ns

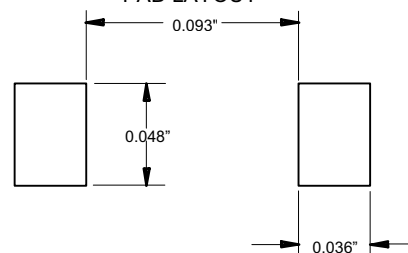
Notes: 1. Valid provided that leads are kept at ambient temperature

## SOD123



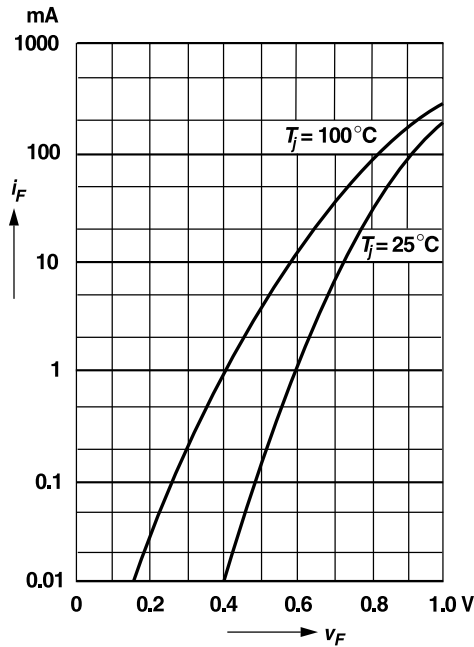
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	----	.053	----	1.35	
E	.012	.031	0.30	.78	
G	.006	----	0.15	----	
H	----	.01	----	.25	
J	----	.006	----	.15	

### SUGGESTED SOLDER PAD LAYOUT



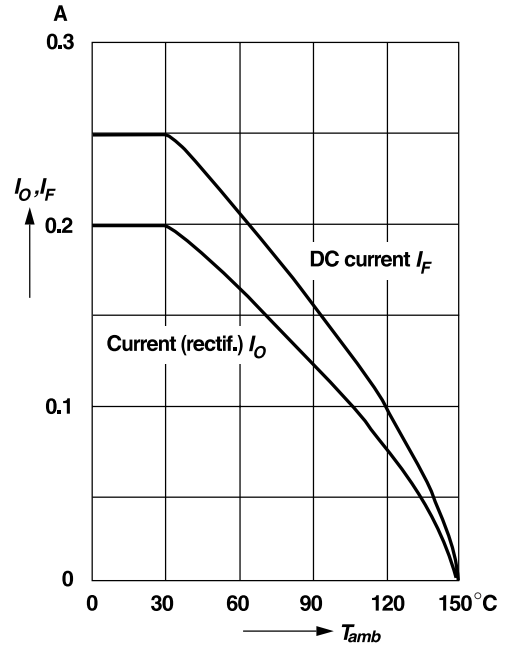
# BAV19W thru BAV21W

**Forward characteristics**



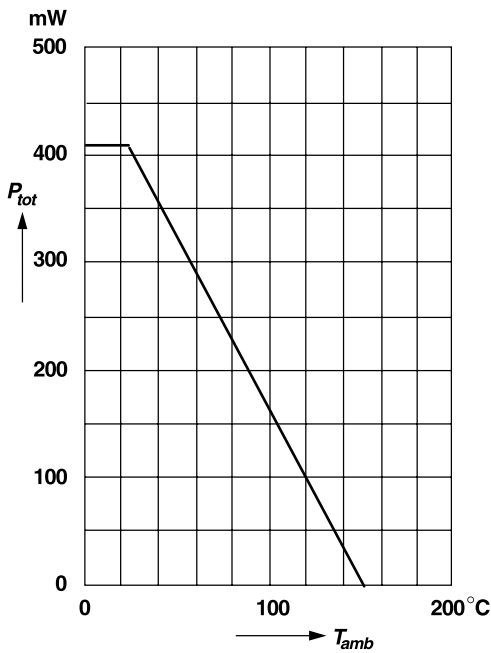
**Admissible forward current versus ambient temperature**

Valid provided that electrodes are kept at ambient temperature

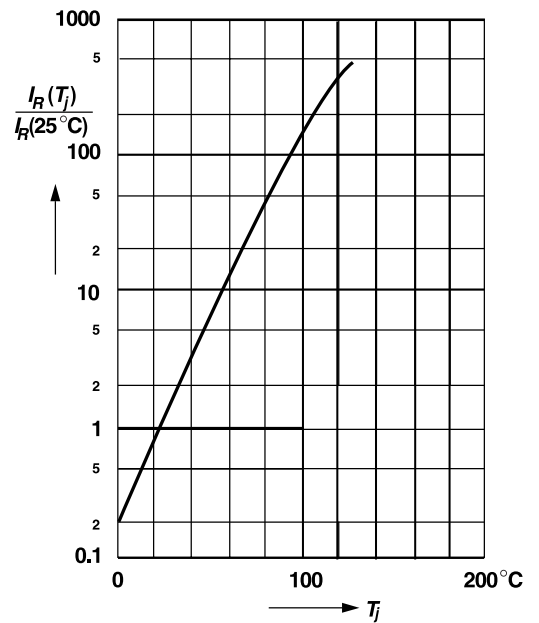


**Admissible power dissipation versus ambient temperature**

Valid provided that electrodes are kept at ambient temperature

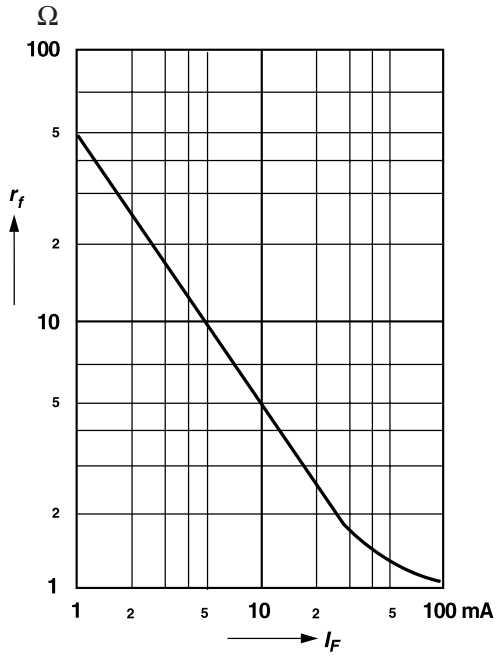


**Leakage current versus junction temperature**

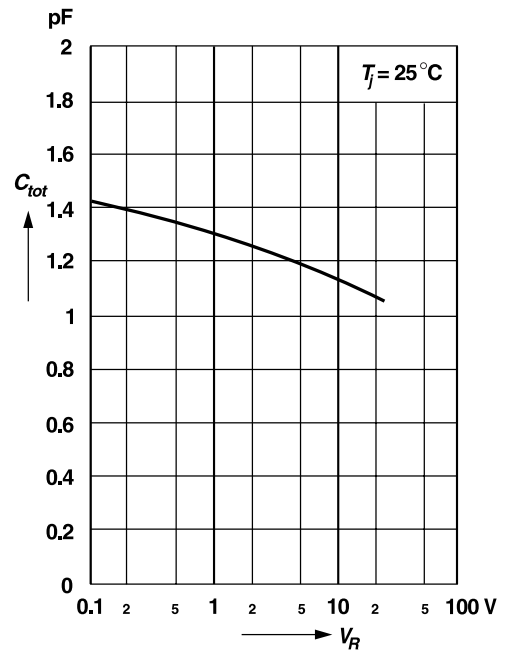


# BAV19W thru BAV21W

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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