



# 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.
- 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

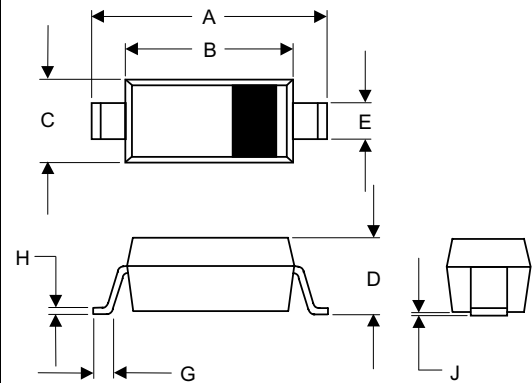
Symbol	Rating	Rating	Unit	
$V_R$	Continuous Reverse Voltage	BAV19W BAV20W BAV21W	100 150 200	V
	Repetitive Peak Reverse Voltage	BAV19W	120	V
		BAV20W	200	
BAV21W		250		
$I_F$	Forward DC Current at $T_{amb}=25^\circ C^{(1)}$		250	mA
$I_{F(AV)}$	Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb}=25^\circ C^{(1)}$	BAV19W	200	mA
		BAV20W	250	
		BAV21W	250	
$I_{FRM}$	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	V
		---	---	1.25	
		---	---	1.25	
$I_R$	Leakage Current ( $V_R=100V$ ) ( $V_R=100V, T_j=100^\circ C$ ) ( $V_R=150V$ ) ( $V_R=150V, T_j=100^\circ C$ ) ( $V_R=200V$ ) ( $V_R=200V, T_j=100^\circ C$ )	BAV19W	---	100	nA
		BAV19W	---	15	uA
		BAV20W	---	100	nA
		BAV20W	---	15	uA
		BAV21W	---	100	nA
		BAV21W	---	15	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 ( $I_F=30mA, I_R=30mA$ ) ( $I_{rr}=3.0mA, R_s=100OHMS$ )	---	---	50	ns

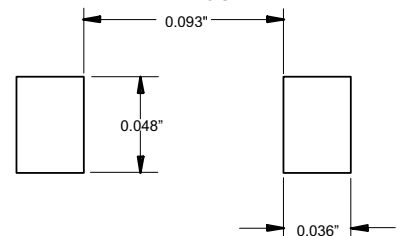
Notes: 1. Valid provided that leads are kept at ambient temperature

## 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

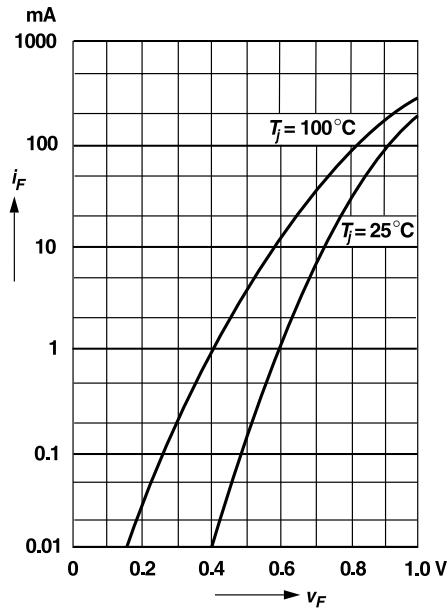


# BAV19W thru BAV21W



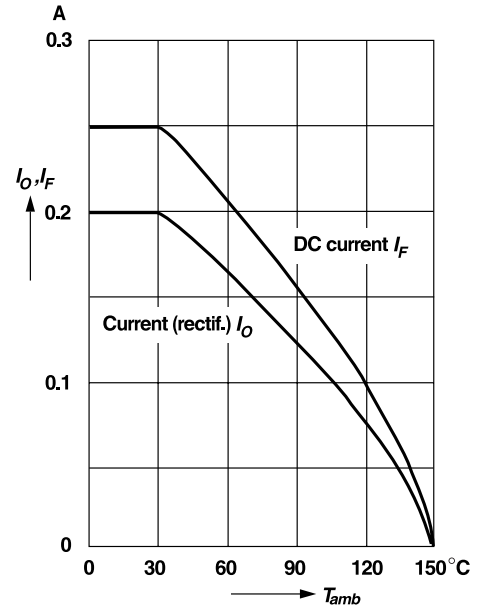
Micro Commercial Components

Forward characteristics



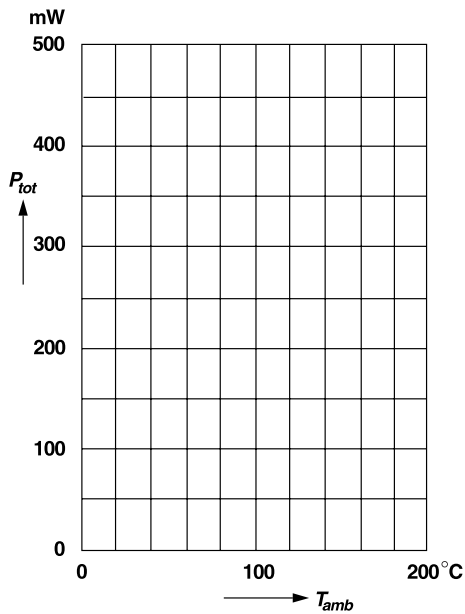
Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

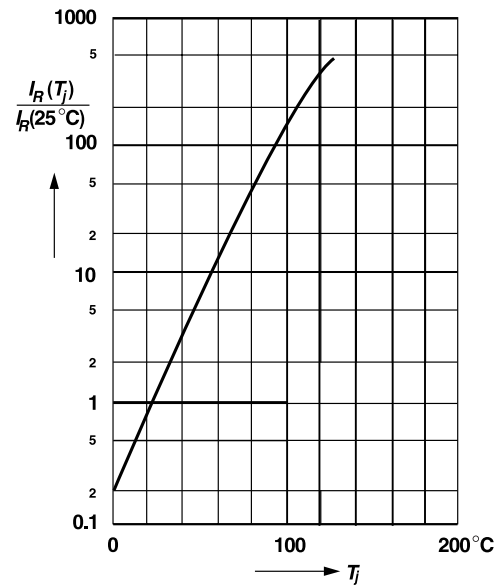


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

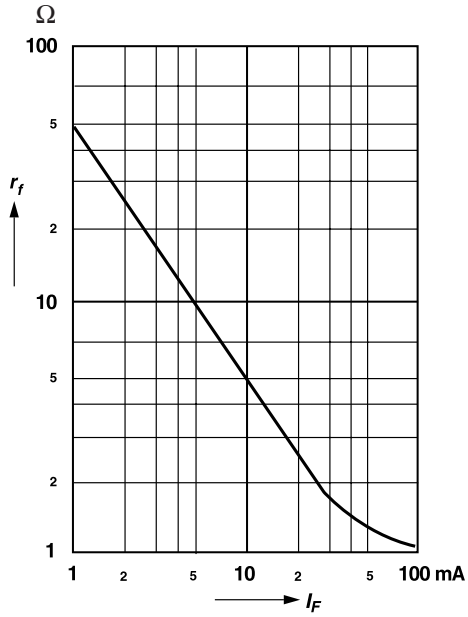


Leakage current versus junction temperature

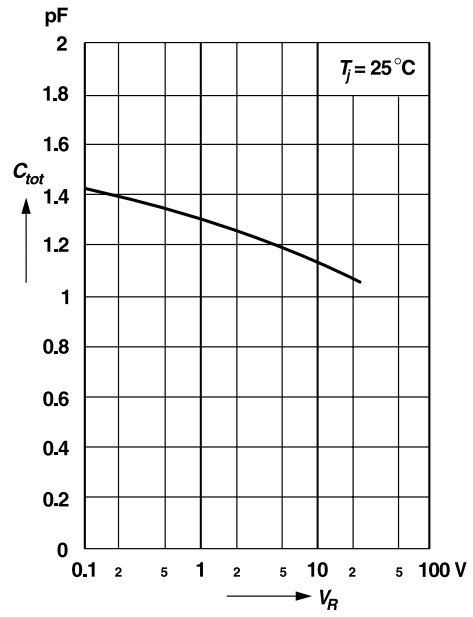


# BAV19W thru BAV21W

Dynamic forward resistance  
versus forward current



Capacitance  
versus reverse voltage





Micro Commercial Components

### Ordering Information :

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

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)