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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## BAV19W-BAV21W SURFACE MOUNT FAST SWITCHING DIODE



### Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



### Mechanical Characteristics

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx)

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Units
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	120	200	250	V
Peak Repetitive Peak Reverse Voltage	V <sub>RPM</sub>	100	150	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	71	106	141	
Average Rectified Output Current	I <sub>O</sub>	200			mA
Forward continuous current	I <sub>FM</sub>	400			mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) @t=1.0ms @ t=1.0s	I <sub>FSM</sub>	2.5 0.5			A
Power Dissipation	P <sub>d</sub>	410			mW
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	500			°C/W
Junction Temperature Range	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150			°C

**Electrical Characteristics@ $T_A=25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Units
Forward Voltage*	$V_F$	$I_F=100\text{mA}$	-	-	1.0	V
Reverse Leakage Current*	$I_R$	$V_R=100\text{V}$ $V_R=150\text{V}$ $V_R=200\text{V}$	-	-	0.1 0.15 0.2	$\mu\text{A}$
Diode capacitance	$C_T$	$V_R=0\text{V}, f=1.0\text{MHz}$	-	-	5	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=30\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\ \Omega$	-	-	50	ns

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Ratings and Characteristics Curves**

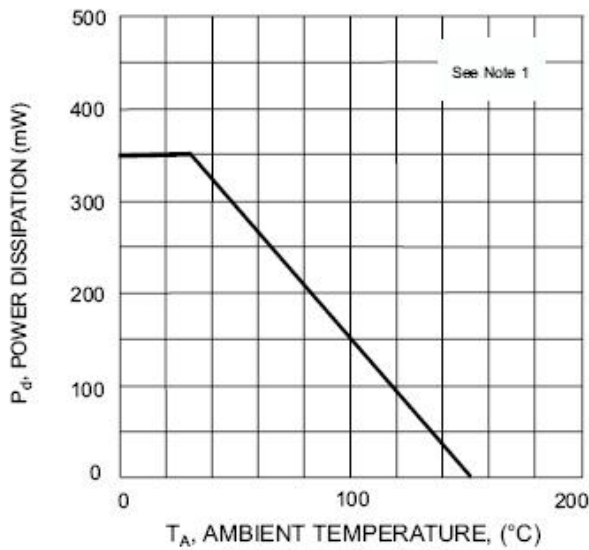


Fig. 1 Power Derating Curve

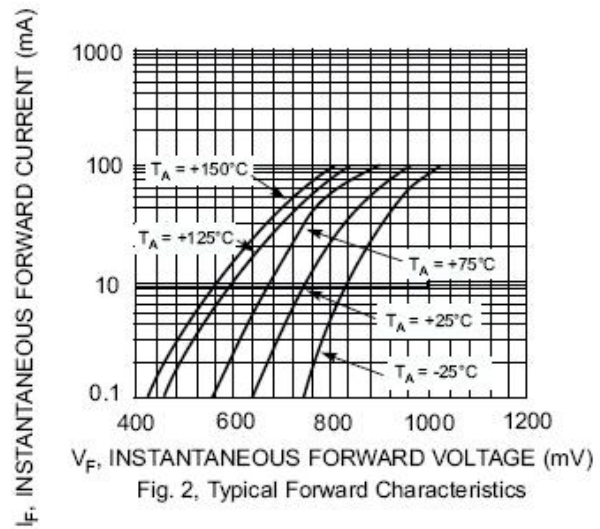


Fig. 2, Typical Forward Characteristics

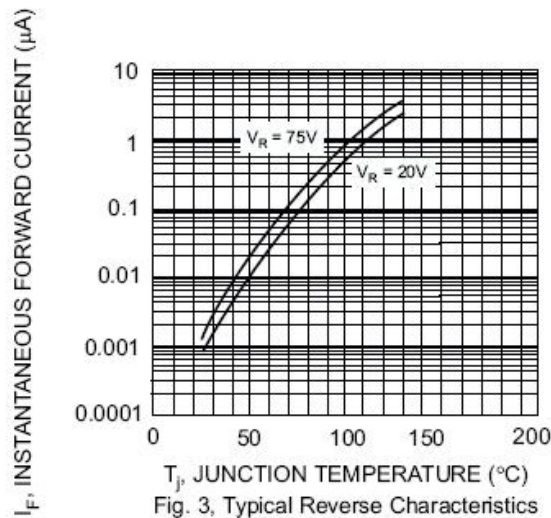


Fig. 3, Typical Reverse Characteristics

**Ordering Information**

Device	Package	Shipping
BAV19W-BAV21W	SOD-123 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

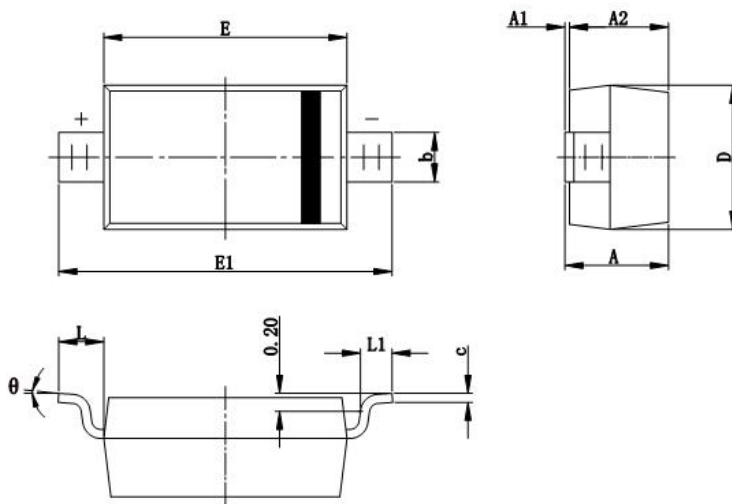
Marking before 16441(Date Code)

Part Number	Device Marking Code
BAV19W	A8
BAV20W	A80
BAV21W	A82

Marking from 16441(Date Code)

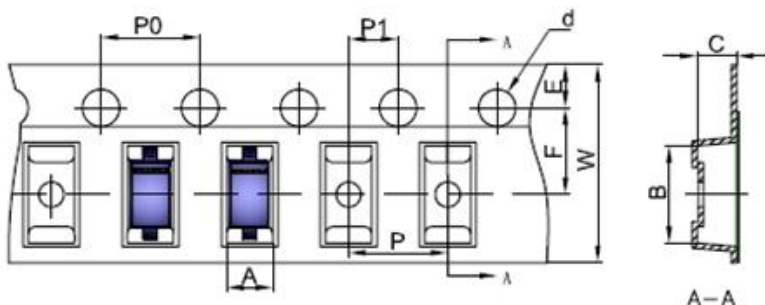
Part Number	Device Marking Code
BAV19W	A8
BAV20W	T2
BAV21W	T3

**Mechanical Dimensions SOD-123**



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

**Carrier Tape Specification SOD-123**



SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



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