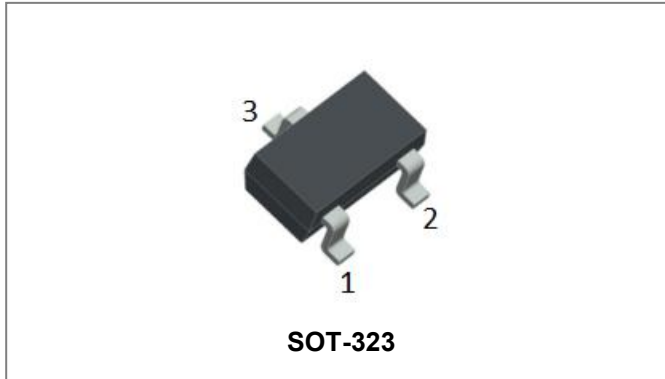


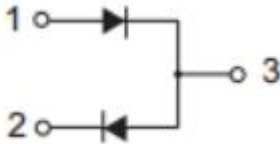
## BAV99W SURFACE MOUNT FAST SWITCHING DIODE



### Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material - UL Recognition Flammability Classification 94V-0
- Terminals finish: 100% Pure Tin
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



### Mechanical Characteristics

- Case: SOT-323, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Weight: 0.0052g
- Mounting Position: Any

### Maximum Ratings@ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	85	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	mA
Non-Repetitive Peak Forward Surge Current @ $t < 1.0\mu\text{s}$	$I_{FSM}$	2.0	A
Power Dissipation	$P_D$	200	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^{\circ}\text{C}$

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

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	$V_F$	@ 10mA, Pulse, $T_J = 25^\circ\text{C}$ @ 50mA, Pulse, $T_J = 25^\circ\text{C}$	0.855 1.0	V
Reverse Current*	$I_{R1}$	@ $V_R = 75\text{V}$ , Pulse, $T_J = 25^\circ\text{C}$	2.5	$\mu\text{A}$
Junction Capacitance	$C_T$	@ $V_R = 0\text{V}$ , $T_c=25^\circ\text{C}$ , $f_{\text{SIG}} = 1\text{MHz}$	2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=10\text{mA}=I_R = 10\text{mA}$ , $I_{rr} = 1\text{mA}$ $R_L=100\Omega$	6	ns

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

**Ratings and Characteristics Curves**

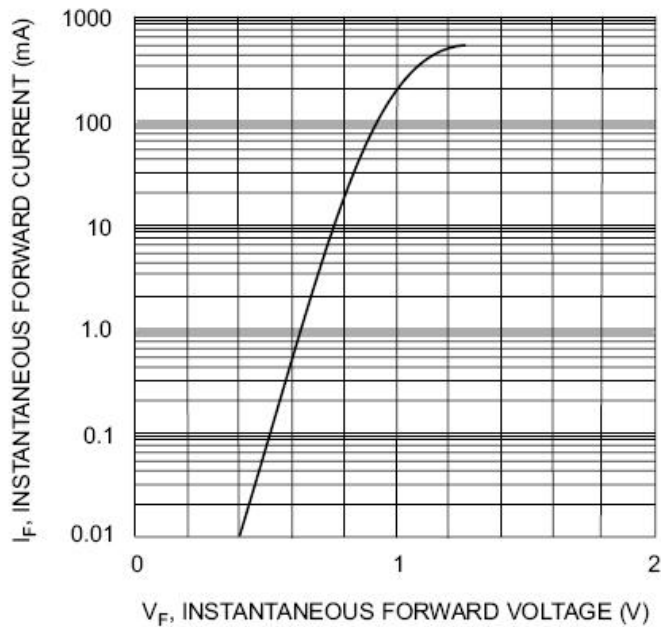


Fig. 1 Forward Characteristics

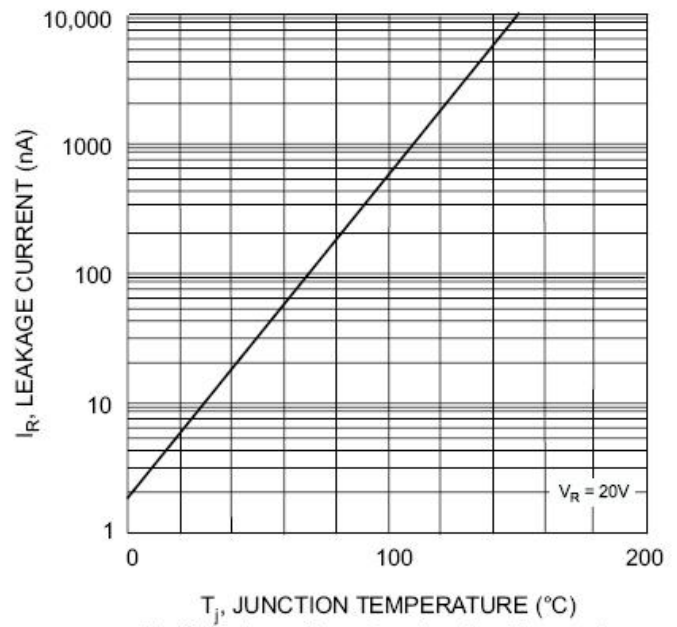


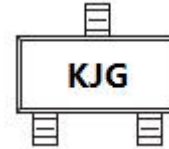
Fig. 2 Leakage Current vs Junction Temperature

Ordering Information

Device	Package	Shipping
BAV99W	SOT-323	3000pcs / reel
BAV99WTR	SOT-323	3000pcs / reel

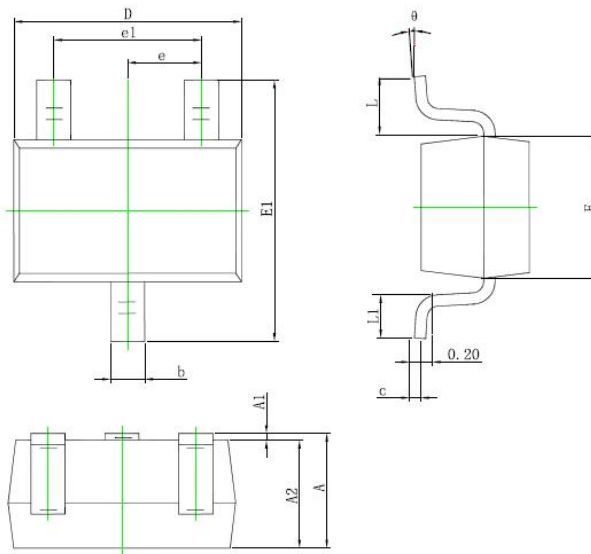
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



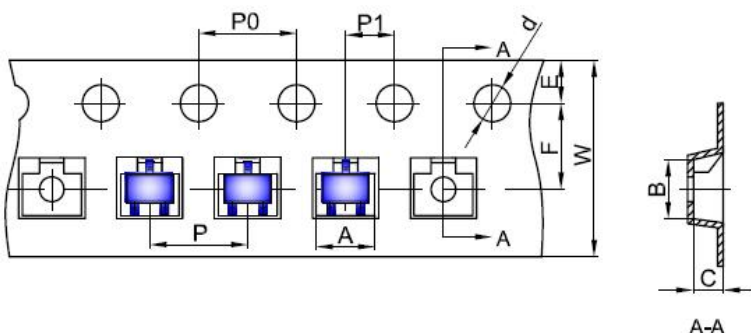
KJG = Marking Code

Mechanical Dimensions SOT-323



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Carrier Tape Specification SOT-323



SYMBOL	Millimeters	
	Min.	Max.
A	2.20	2.30
B	2.50	2.60
C	1.14	1.24
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

**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..