



## BAV99 SURFACE MOUNT SWITCHING DIODE

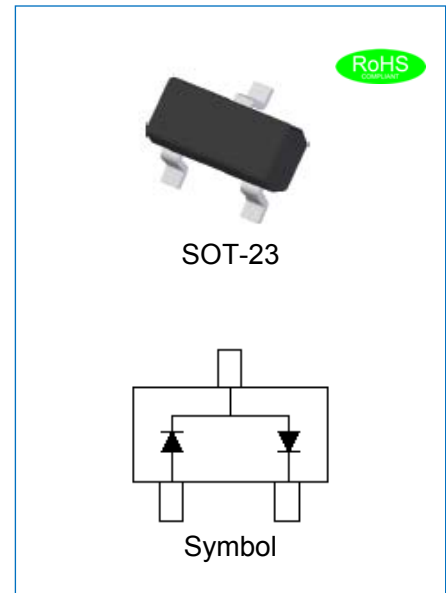
Rev.1.2

### FEATURES

- ✧ Fast Switching Speed
- ✧ Surface Mount Package Ideally Suited for Automatic Insertion
- ✧ For Surface Mounted Applications
- ✧ Halogen free and RoHS compliant
- ✧ For General Purpose Switching Applications
- ✧ High Conductance
- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ✧ Meets MSL level 3

### MECHANICAL DATA

- ✧ Case: SOT-23, Plastic
- ✧ Polarity: Cathode Band
- ✧ Weight: 0.004grams(approx.)
- ✧ Quantity Per Reel:3,000pcs
- ✧ Type Code: A7



### ABSOLUTE MAXIMUM RATING CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.)

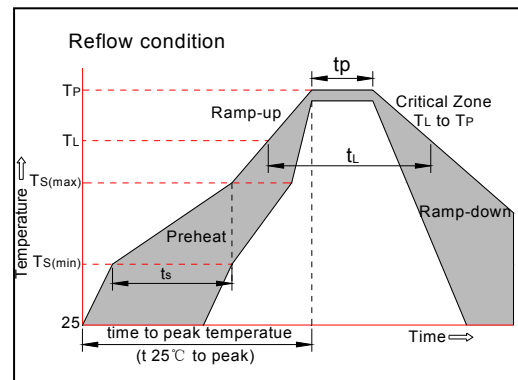
Parameter	Symbol	BAV99	Unit
Continuous Reverse Voltage	$V_R$	75	V
Peak Repetitive Reverse Voltage	$V_{RM}$	100	V
Average Rectified Output Current	$I_O$	215	mA
Non-repetitive Peak Forward Surge Current	$t_P=1\text{s}$	1	A
	$t_P=1\mu\text{s}$	4	
Power Dissipation at $T_A=25^\circ\text{C}$	$P_D$	350	mW
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

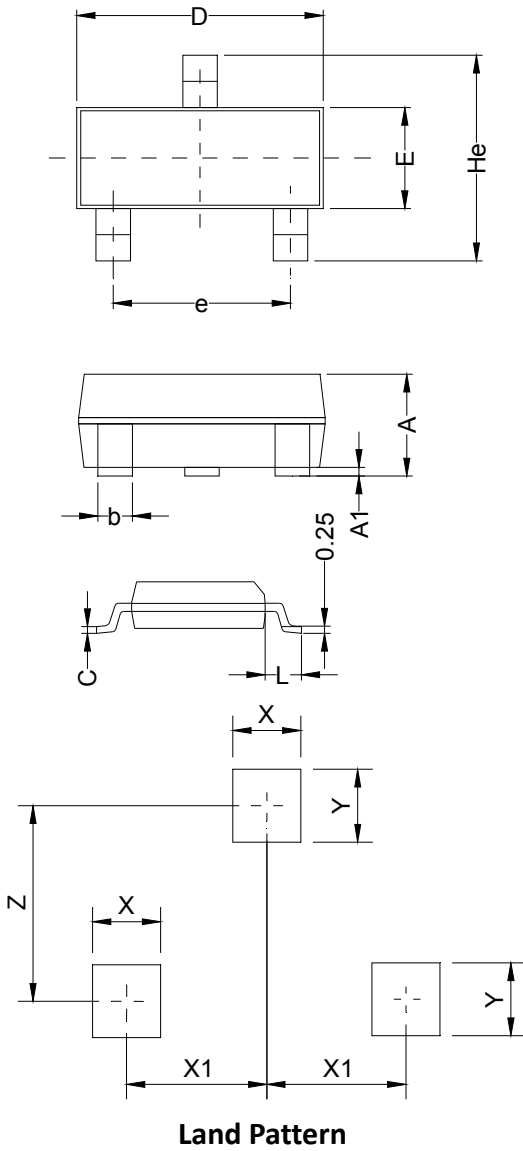
Symbol	Parameter	Conditions	Value			Unit
			Min.	Typ.	Max.	
$V_{(BR)R}$	Breakdown Voltage	$I_R=100\mu A$	100	-	-	V
$V_F$	Forward Voltage	$I_F=1mA$	-	-	0.715	V
		$I_F=10mA$	-	-	0.855	V
		$I_F=50mA$	-	-	1.00	V
		$I_F=150mA$	-	-	1.25	V
$I_R$	Reverse Current	$V_R=25V, T_j=150^\circ C$	-	-	30	$\mu A$
		$V_R=75V, T_j=25^\circ C$	-	-	2.5	$\mu A$
		$V_R=75V, T_j=150^\circ C$	-	-	50	$\mu A$
$C_T$	Capacitance	$V_R=0V, f=1MHz$	-	2.0	-	pF
$T_{rr}$	Reverse Recovery Time	$I_F=10mA, V_R=6V$ $I_{RR}=1mA, R_L=100\Omega$	-	-	4	ns

**SOLDERING PARAMETERS**

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquidus)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

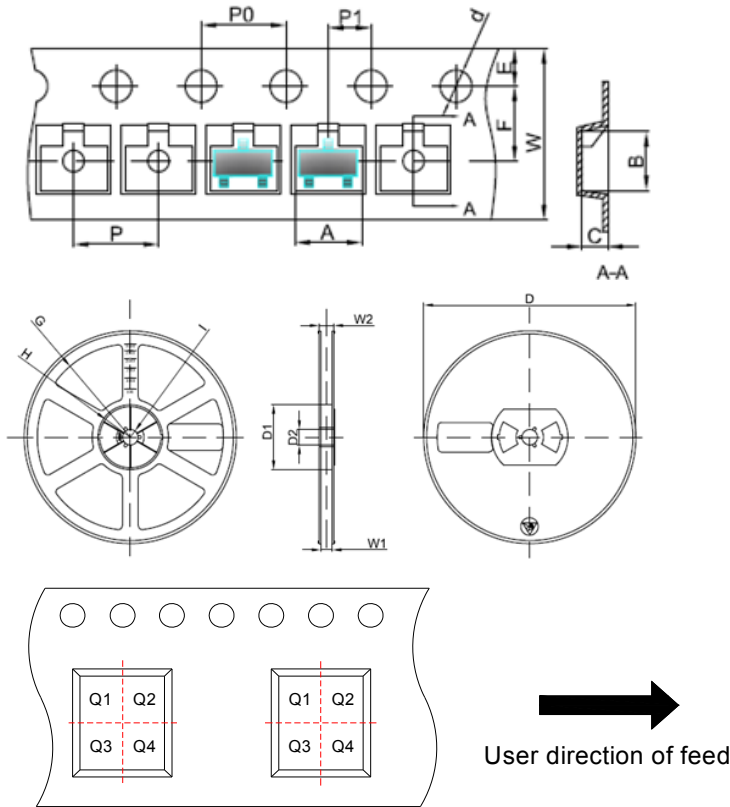


PACKAGE MECHANICAL DATA



Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.90	1.063	1.15	0.035	0.042	0.045
A1	0.00	0.075	0.14	0.000	0.003	0.006
b	0.30	0.40	0.50	0.012	0.016	0.020
C	0.07	0.10	0.15	0.003	0.004	0.006
D	2.80	2.90	3.00	0.110	0.114	0.118
e	1.80	1.90	2.00	0.071	0.075	0.079
E	1.20	1.30	1.40	0.047	0.051	0.055
L	0.55REF			0.022REF		
He	2.25	2.40	2.55	0.089	0.094	0.100
X	0.80			0.031		
X1	0.95			0.037		
Y	0.80			0.031		
Z	2.02			0.080		

TAPE AND REEL SPECIFICATION-SOT-23



Pin 1 quadrant: Q3

Packaging Description:

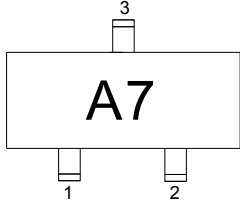
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Symbol	Millimeters	Inches
	Typ.	Typ.
A	3.15	0.124
B	2.77	0.109
C	1.22	0.048
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

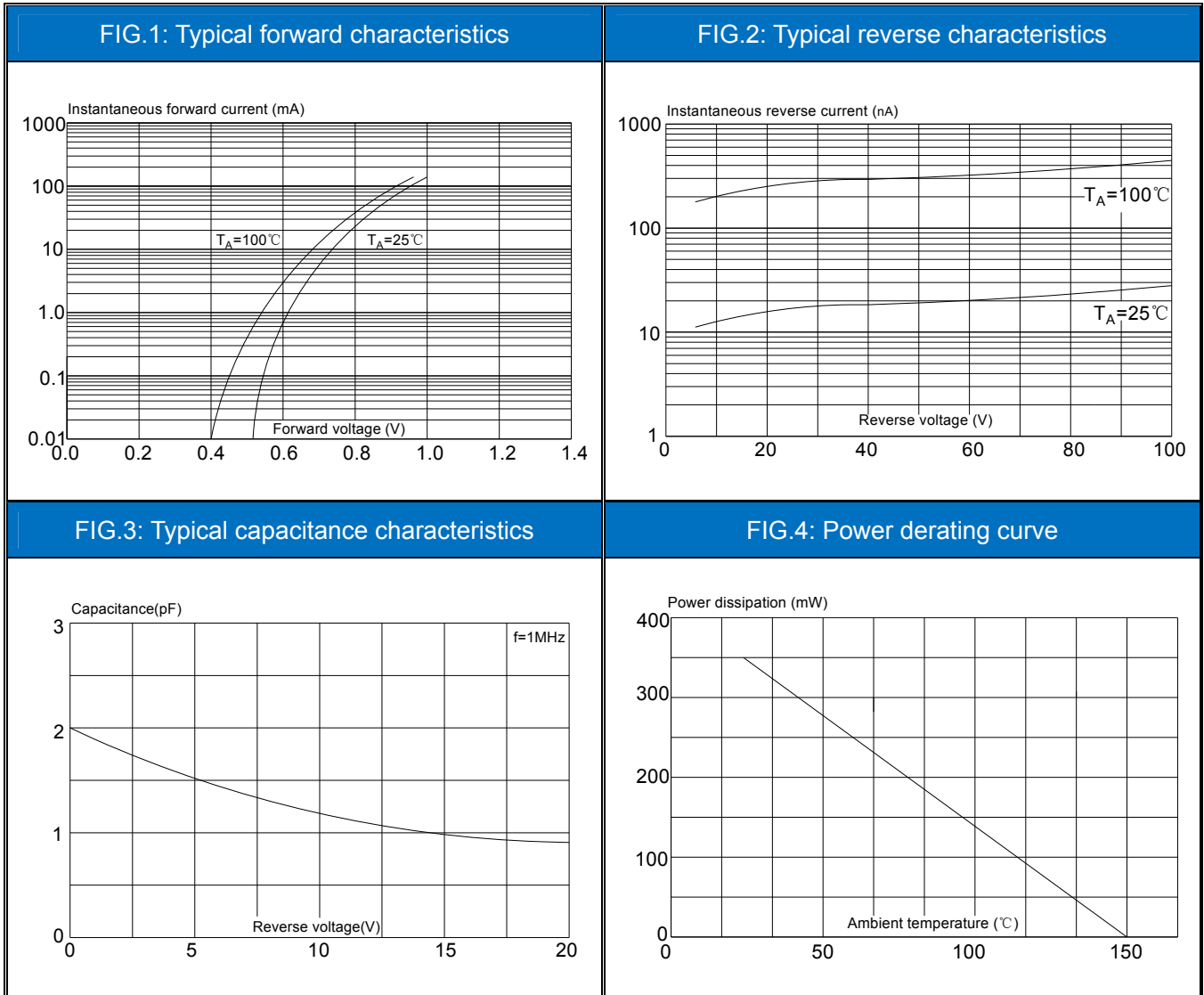
ORDERING INFORMATION

OUTLINE	UNIT WEIGHT (g/PCS) typ.	PACKAGE TYPE	QUANTITY REEL	DESCRIPTION
TAPING	0.004	SOT-23	3,000	7 inch reel pack

MARKING CODE

Part Number	Marking Code
BAV99	

CHARACTERISTICS CURVE




Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

This document is the 1.2nd version which is made in 17-Dec.-2020. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright ©2020 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JW\(捷捷微\)](#)