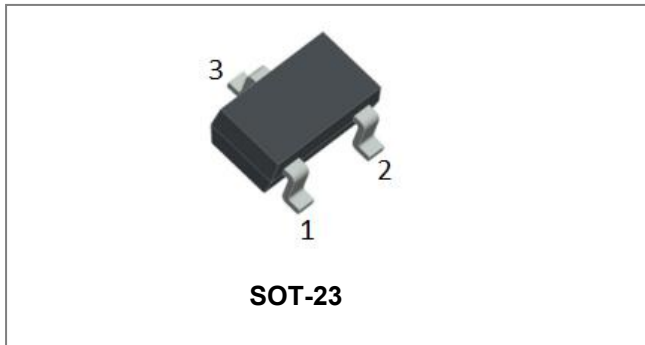


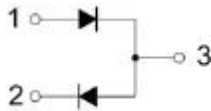
## BAV99 SWITCHING DIODE



### 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-O
- 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: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Marking Code: A7

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

Characteristic	Symbol	Limits	Unit
Reverse Voltage	V <sub>R</sub>	70	V
Forward Current	I <sub>F</sub>	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I <sub>FSM</sub>	2.0	A
Power Dissipation	P <sub>D</sub>	225	mW
Typical Thermal Resistance, Junction to Ambient Air	R <sub>θJA</sub>	556	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

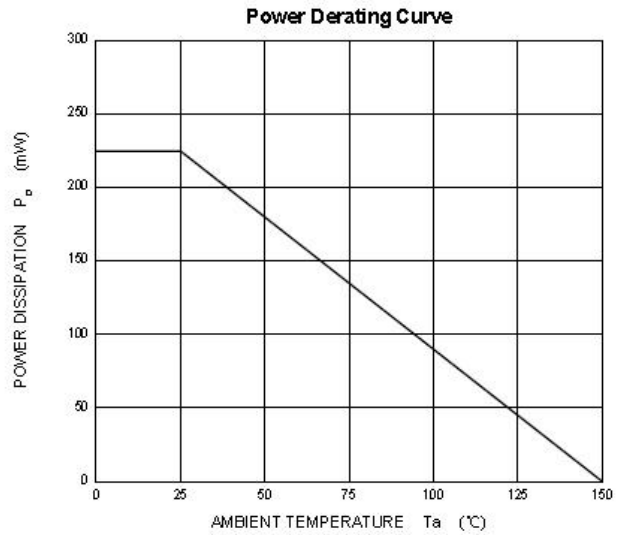
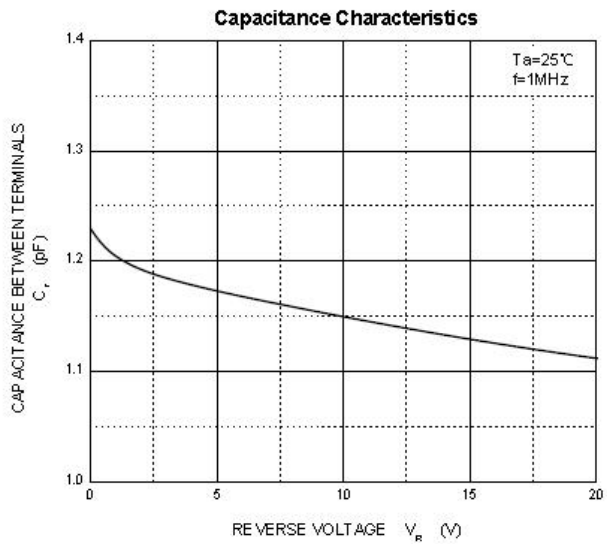
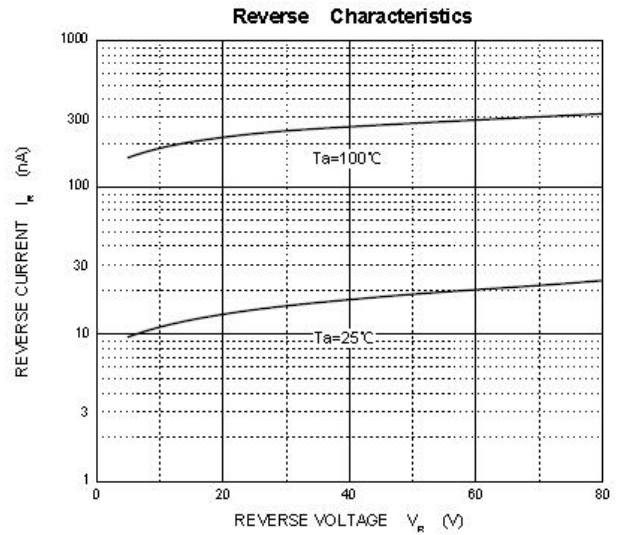
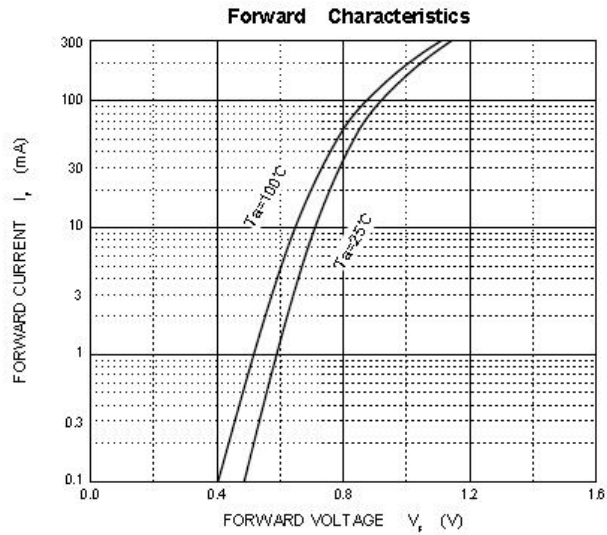
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage*	V <sub>R</sub>	70	-	V	@I <sub>F</sub> =100uA
Forward Voltage*	V <sub>F</sub>	-	0.715 0.855 1 1.25	V	@I <sub>F</sub> =1mA @I <sub>F</sub> =10mA @I <sub>F</sub> =50mA @I <sub>F</sub> =150mA
Reverse Leakage Current*	I <sub>R</sub>	-	2.5	uA	@V <sub>R</sub> =70V
Capacitance between terminals	C <sub>T</sub>	-	1.5	pF	V <sub>R</sub> =0V, f=1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	-	6.0	ns	I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>RR</sub> =0.1 × I <sub>R</sub> , R <sub>L</sub> =100Ω

\* Pulse width < 300 μs, duty cycle < 2%

Note: 1. Device mounted on fiberglass substrate 40×40×1.5mm

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

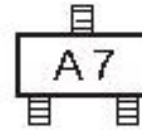
**Ratings and Characteristics Curves**



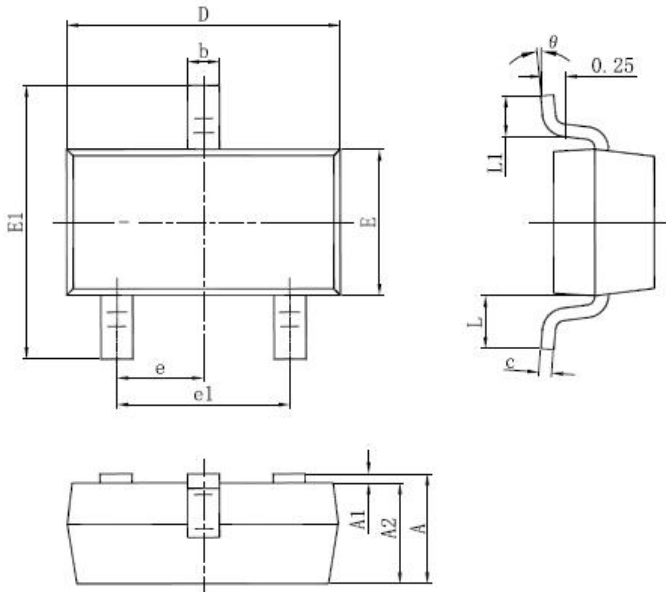
**Ordering Information**

Device	Package	Shipping
BAV99	SOT-23 (Pb-Free)	3000pcs / reel

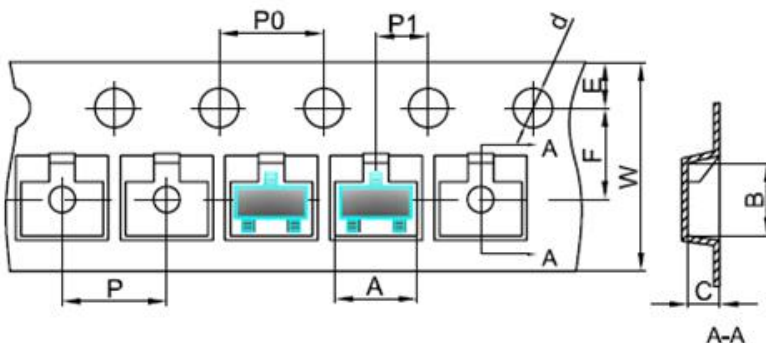
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


A7 = Marking Code

**Mechanical Dimensions SOT-23**


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**Carrier Tape Specification SOT-23**


SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
d	1.40	1.60
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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