

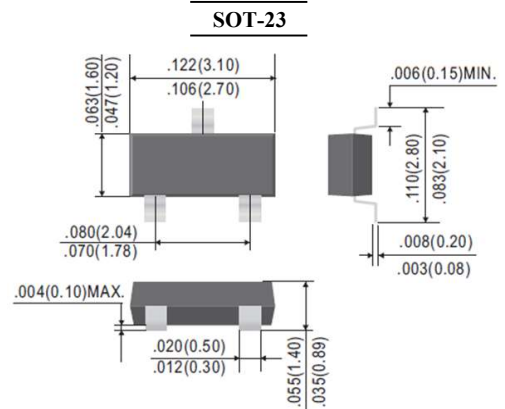
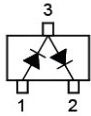


# BAV99H

## FAST SWITCHING DIODES

### FEATURES

- Fast Switching Speed
- High Conductance
- Suffix "H" indicates Halogen-free parts, ex. BAV99H



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	100	V
Continuous Forward Current	$I_F$	215	mA
Single Diode Load			
Double Diode Load		125	
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	0.5	A
at $t=1\text{s}$			
at $t=1\text{ms}$		1.0	
at $t=1\mu\text{s}$		2.0	
Power Dissipation	$P_D$	350	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics@ $T_A=25^\circ\text{C}$

Parameter	Conditions	Symbol	Min	Max	Unit
Forward Voltage	$I_F=1\text{mA}$	$V_F$	-	715	mV
	$I_F=10\text{mA}$		-	855	
	$I_F=50\text{mA}$		-	1000	
	$I_F=150\text{mA}$		-	1250	
Reverse current	$V_R=20\text{V}, T_J=25^\circ\text{C}$	$I_R$	-	0.03	$\mu\text{A}$
	$V_R=75\text{V}, T_J=25^\circ\text{C}$		-	1	
	$V_R=25\text{V}, T_J=150^\circ\text{C}$		-	30	
	$V_R=75\text{V}, T_J=150^\circ\text{C}$		-	50	
Total Capacitance	$V_R=0, f=1\text{MHz}$	$C_J$	-	1.5	pF
Reverse Recovery Time	$I_F=10\text{mA}, V_R=6\text{V}, I_{tr}=0.1 \times I_R, R_L=100\Omega$	$t_{rr}$	-	4	ns



# BAV99H

## FAST SWITCHING DIODES

### Typical Characteristics

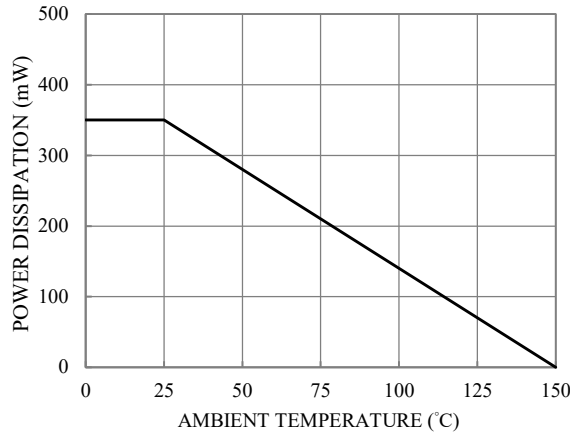


Fig.1-POWER DERATING CURVE

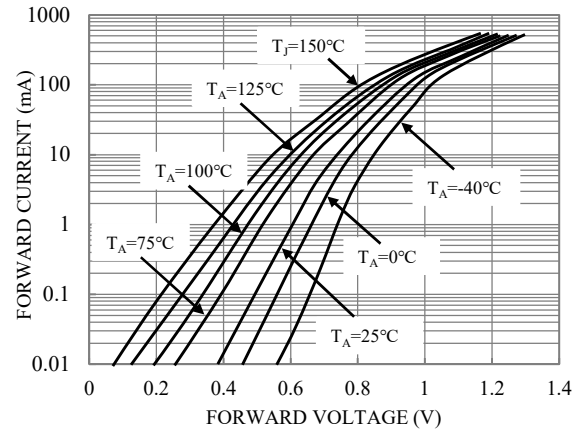


Fig.2-TYPICAL FORWARD CHARACTERISTICS

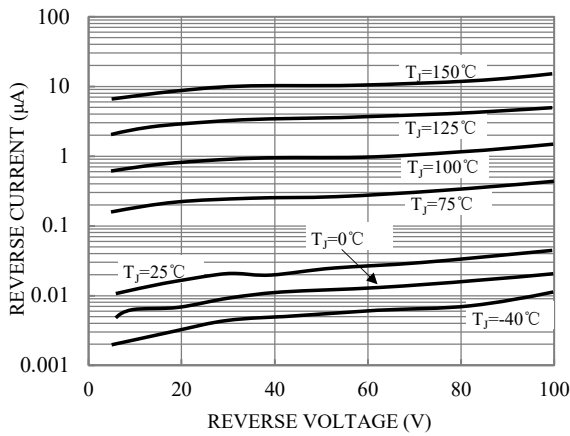


Fig.3-TYPICAL REVERSE CHARACTERISTICS

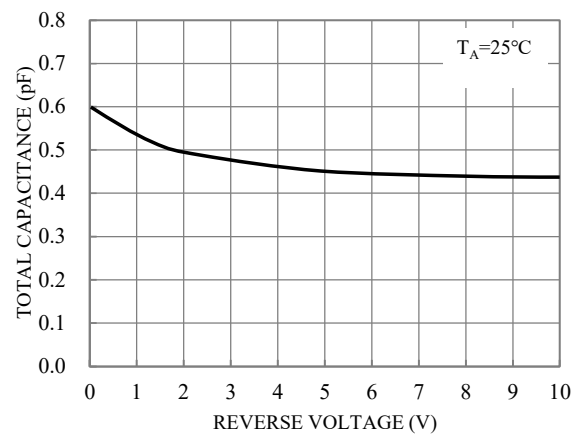


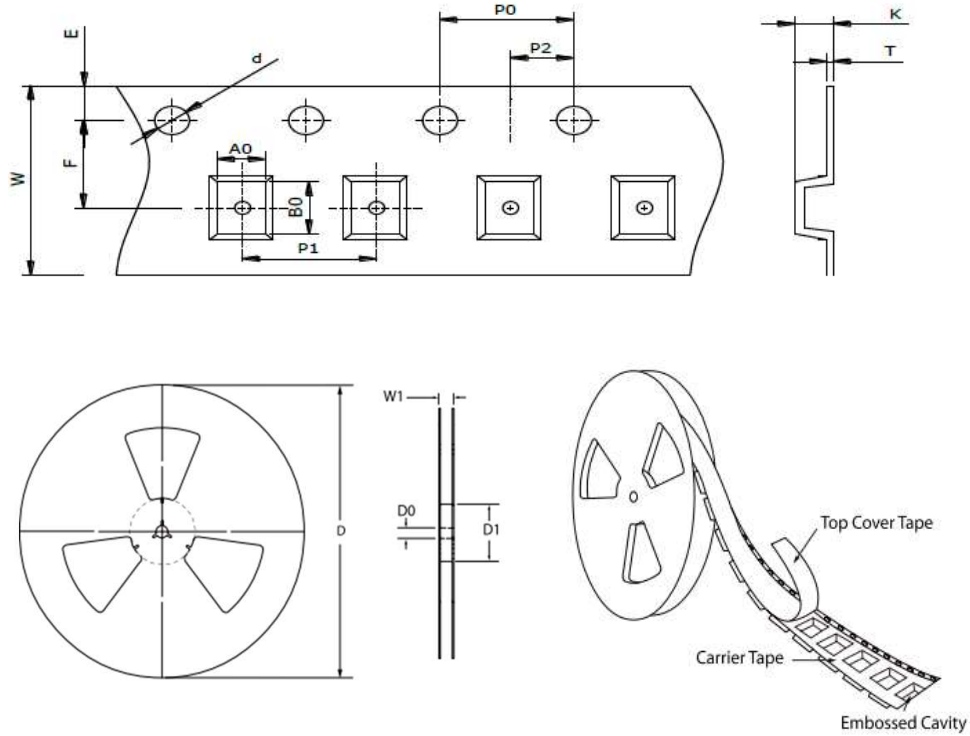
Fig.4-TOTAL CAPACITANCE VS REVERSE VOLTAGE



# BAV99H

## FAST SWITCHING DIODES

### TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A <sub>0</sub>	3.20 ± 0.10
Carrier length	B <sub>0</sub>	2.90 ± 0.10
Carrier depth	K	1.50 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D <sub>0</sub>	13.00 ± 0.50
Reel inner diameter	D <sub>1</sub>	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P <sub>0</sub>	4.00 ± 0.10
Punch hole pitch	P <sub>1</sub>	4.00 ± 0.10
Embossment center	P <sub>2</sub>	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W <sub>1</sub>	MAX. 14.50

### ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

### MARKING CODE

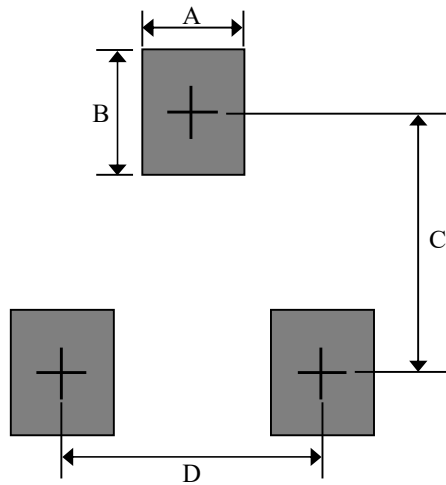
Part Number	Marking Code
BAV99	A7



# BAV99

## FAST SWITCHING DIODES

### SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23	0.80	1.00	2.40	1.90