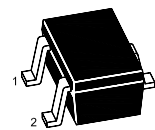
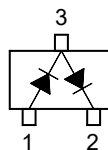


# BAV99SEW

## Silicon Epitaxial Planar Switching Diode



SOT-323 Plastic Package

1. Anode 2. Cathode 3. Cathode / Anode

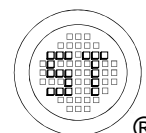
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	100	V
Continuous Forward Current	$I_F$	150	mA
Single Diode Load Double Diode Load		130	
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	4	A
at $t = 1 \mu\text{s}$		1	
at $t = 1 \text{ms}$ at $t = 1 \text{s}$		0.5	
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	625	$^\circ\text{C/W}$

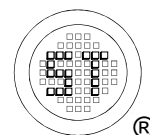
<sup>1)</sup> Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



# BAV99SEW

## Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$	$V_{BR(R)}$	100	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Reverse Current at $V_R = 25 \text{ V}$ at $V_R = 80 \text{ V}$ at $V_R = 25 \text{ V}, T_j = 150^\circ\text{C}$ at $V_R = 80 \text{ V}, T_j = 150^\circ\text{C}$	$I_R$	- - - -	30 0.5 30 50	nA $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Diode Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_d$	-	1.5	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 100 \Omega, I_{RR} = 0.1 \times I_R$	$t_{rr}$	-	4	ns



# BAV99SEW

## Electrical Characteristics Curves

Fig 1. Power Derating Curve

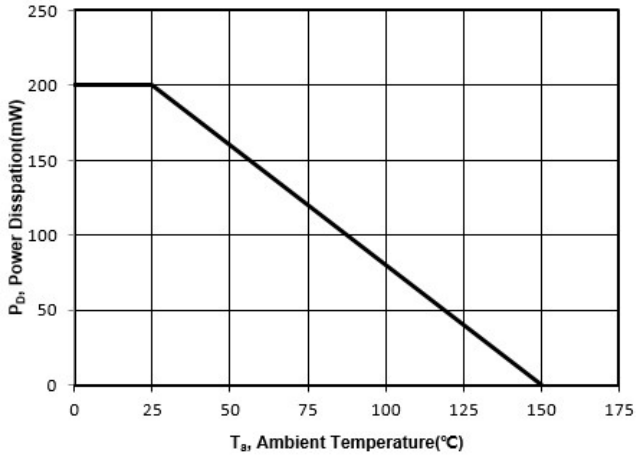


Fig 2. Forward Characteristics

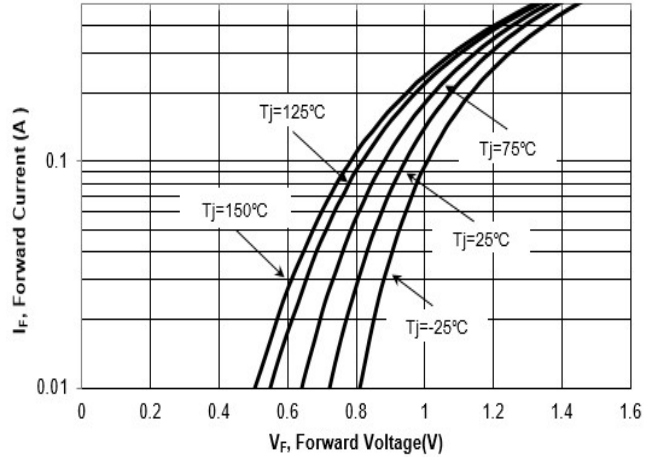


Fig 3. Reverse Current vs. Reverse Voltage

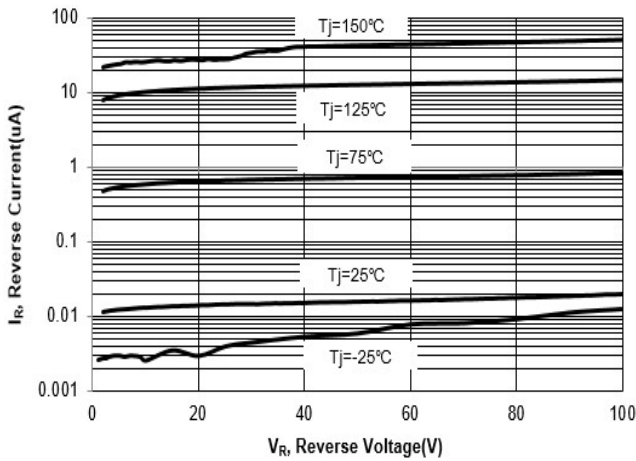
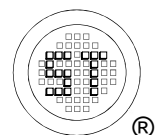
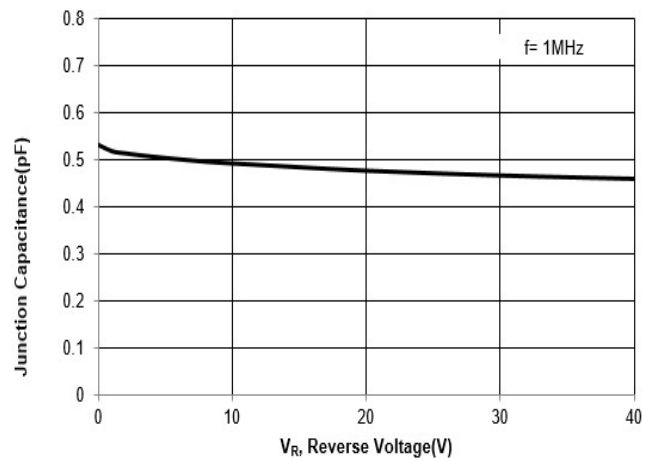


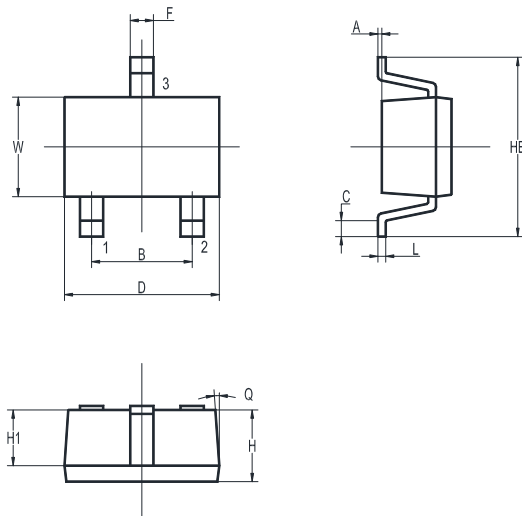
Fig 4. Total Capacitance vs. Reverse Voltage



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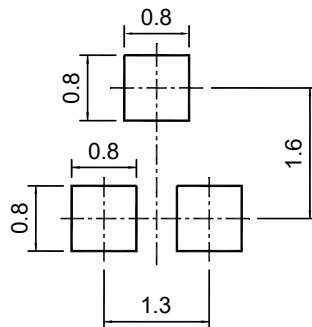
## Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

## Recommended Soldering Footprint



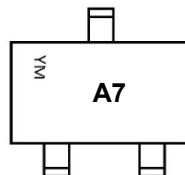
## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

- " A7 " = Part No.
- " YM " = Date Code Marking
- " Y " = Year
- " M " = Month

Font type: Arial



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