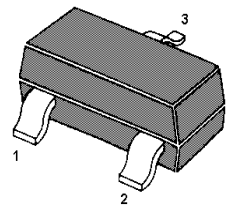
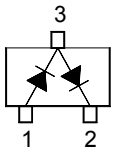
Silicon Epitaxial Planar Diode





SOT-23

FEATURES

- Very low leakage current
- Medium speed switching times
- Series pair configuration

Application

- Low leakage switching double diode
- For low leakage current applications

Product Specification Classification

Part Number	Package	Marking	Pack
BAV199	SOT-23	JY	3000PCS/Tape

Absolute Maximum Ratings (Ta = 25 °C)

Parameter		Symbol	Value	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	85	V
Continuous Reverse Voltage		V_R	85	V
Continuous Forward Current	Single Diode Double Diode	I_F	160 140	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	at t = 1 μs at t = 1 ms at t = 1 s	I_{FSM}	4 1 0.5	A
Power Dissipation		P_D	250	mW
Thermal Resistance Junction to Ambient Air		$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range		T_j, T_{stg}	- 65 to + 150	°C

Electrical Characteristics (Ta =25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	85	-	-	V
Forward Voltage					
at I_F = 1 mA	V_F	-	-	0.9	V
at I_F = 10 mA		-	-	1	
at I_F = 50 mA		-	-	1.1	
at I_F = 150 mA		-	-	1.25	
Reverse Current at V_R = 75 V	I_R	-	-	5	nA
at V_R = 75 V, T_j = 150 °C	I_R	-	-	80	
Total Capacitance at V_R = 0, f = 1 MHz	C_T	-	2	-	pF
Reverse Recovery Time at I_F = I_R = 10 mA, I_{rr} = 0.1 X I_R, R_L = 100 Ω	t_{rr}	-	-	3	μs

Ratings and Characteristic Curves

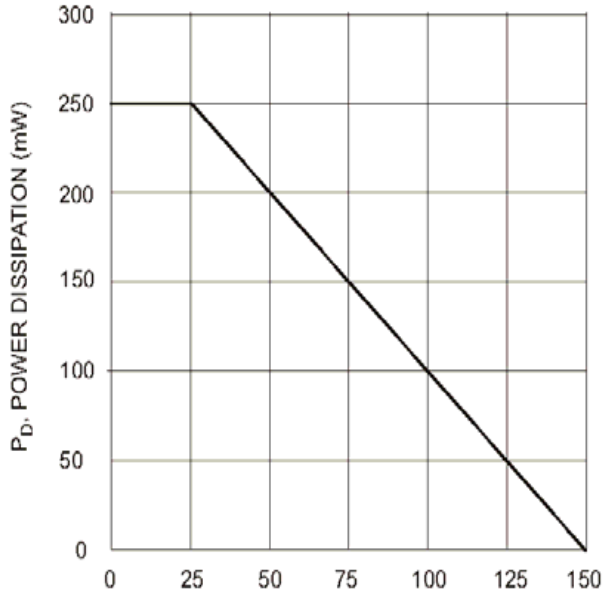


Fig. 1 Power Derating Curve

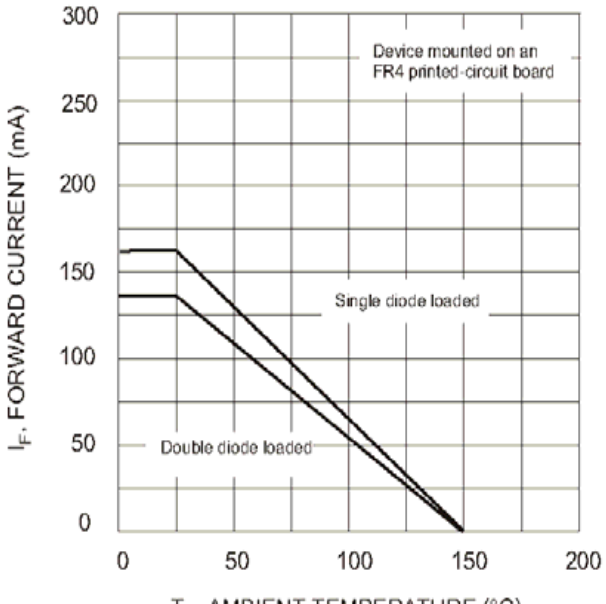


Fig. 2 Current Derating Curve

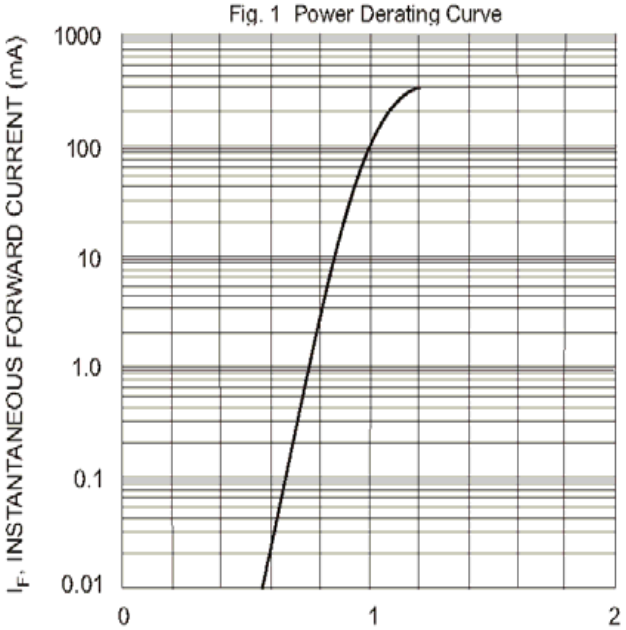


Fig. 3 Typical Forward Characteristics

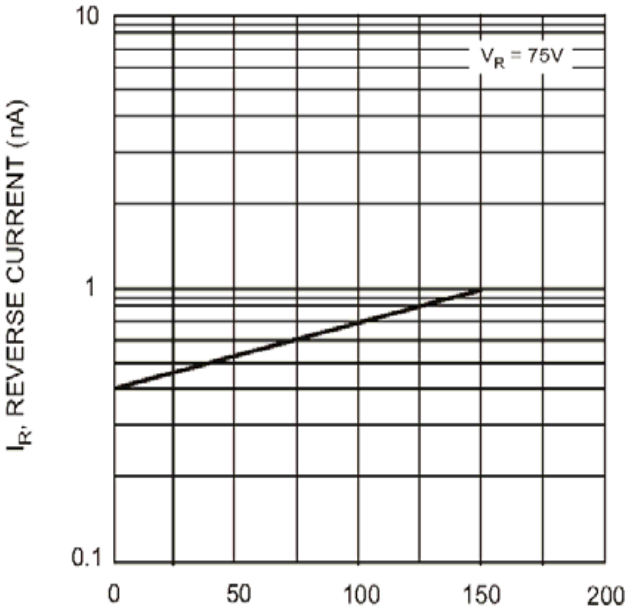
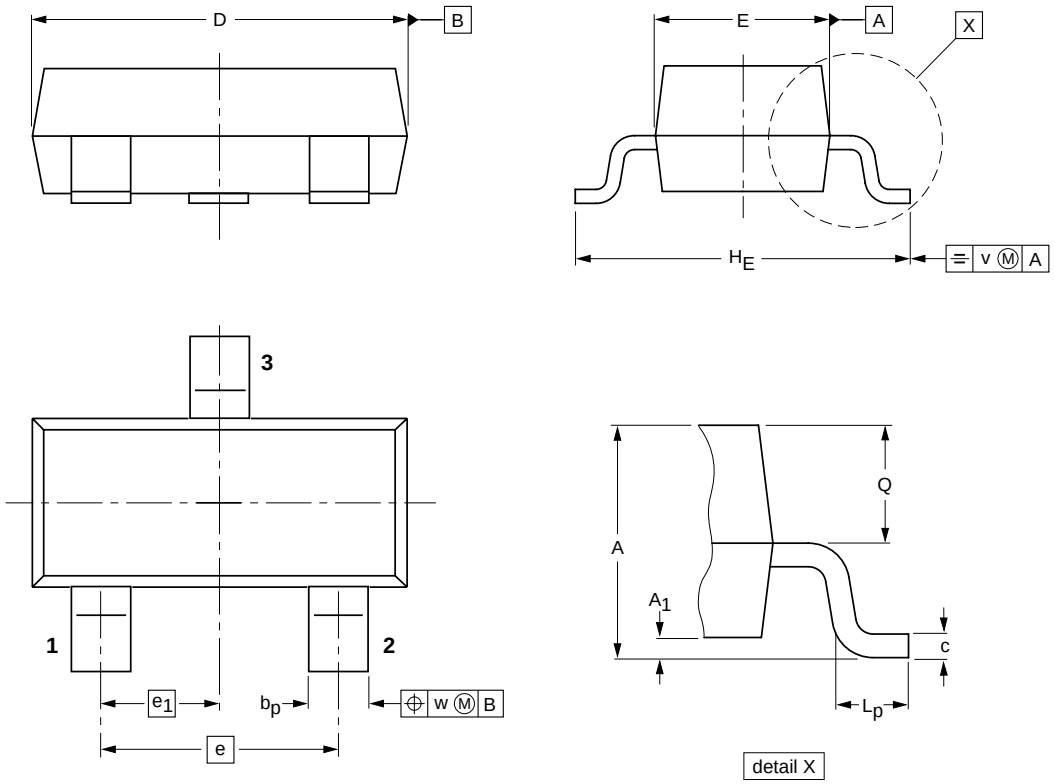


Fig. 4 Typical Reverse Characteristics

Package Outline SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1