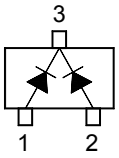
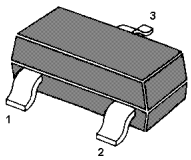
BAV170

Silicon Epitaxial Planar Diode

Low leakage switching double diode

For low leakage current applications





Marking Code: **C7**
SOT-23 Plastic Package

Feature

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

Absolute Maximum Ratings (T_a = 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	$I_{F(AV)}$	215 125	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_{tot}	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 (T_a = 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 at I_F = 10 mA at I_F = 50 mA at I_F = 150 mA	V_F	 - - - -	 - - - -	 0.9 1 1.1 1.25	V
Reverse Current at V_R = 75 V at V_R = 75 V, T_j = 150 °C	I_R	 - -	 - -	 5 80	nA
Total Capacitance at V_R = 0, f = 1 MHz	C_{tot}	-	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

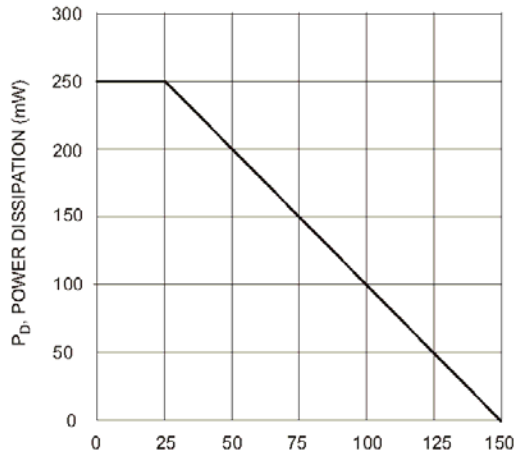


Fig. 1 Power Derating Curve

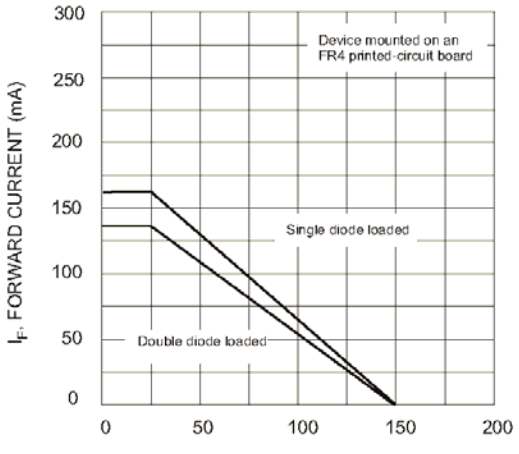


Fig. 2 Current Derating Curve

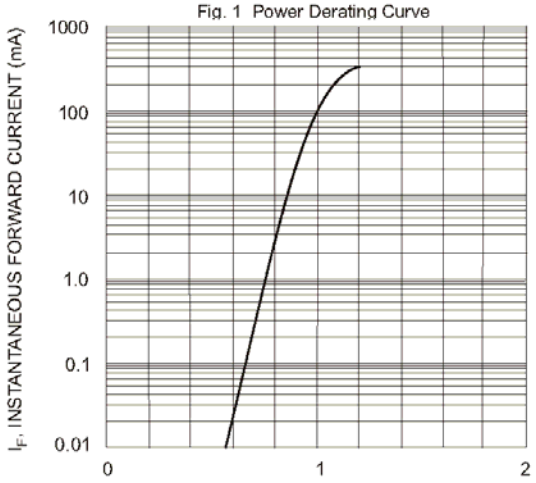


Fig. 3 Typical Forward Characteristics

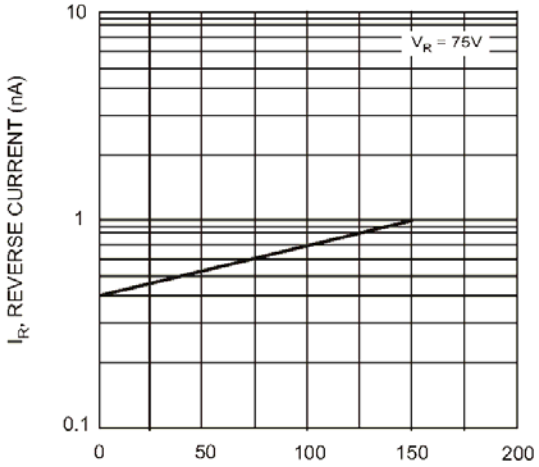
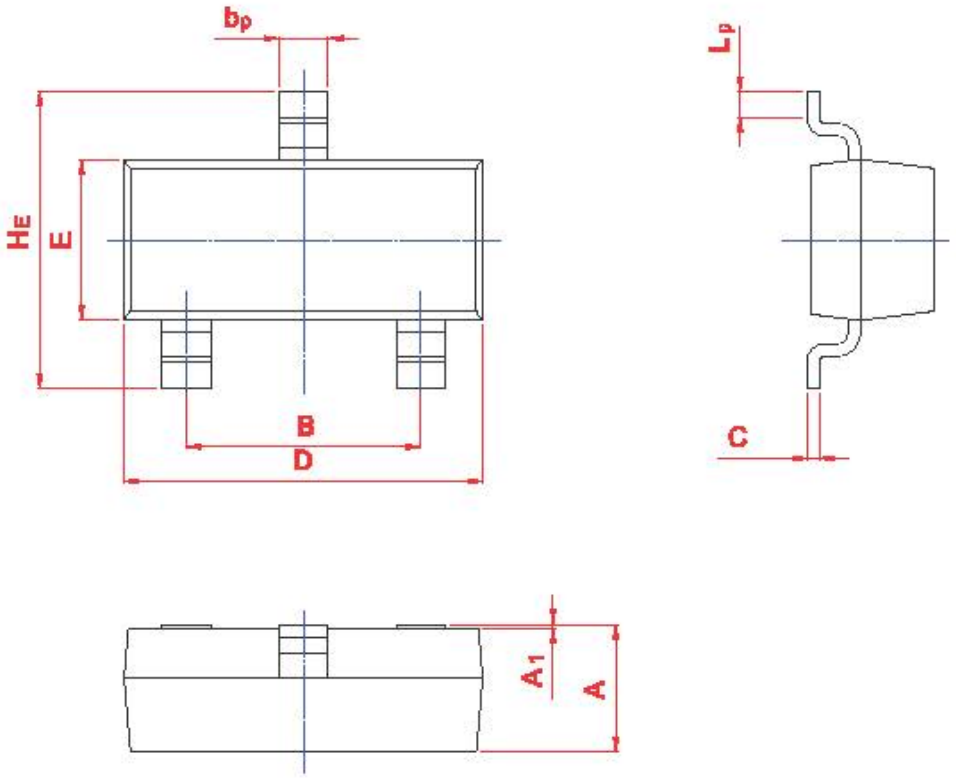


Fig. 4 Typical Reverse Characteristics

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20