

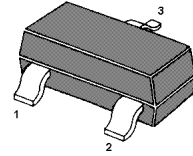
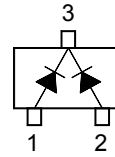
# BAV170

## Silicon Epitaxial Planar Diode

Low leakage switching double diode  
For low leakage current applications

### Feature

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



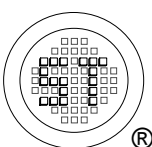
Marking Code: **C7**  
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	85	V
Continuous Reverse Voltage	$V_R$	85	V
Continuous Forward Current	$I_{F(AV)}$	215 125	mA
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	4 1 0.5	A
		at $t = 1\ \mu\text{s}$ at $t = 1\ \text{ms}$ at $t = 1\ \text{s}$	
Power Dissipation	$P_{tot}$	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

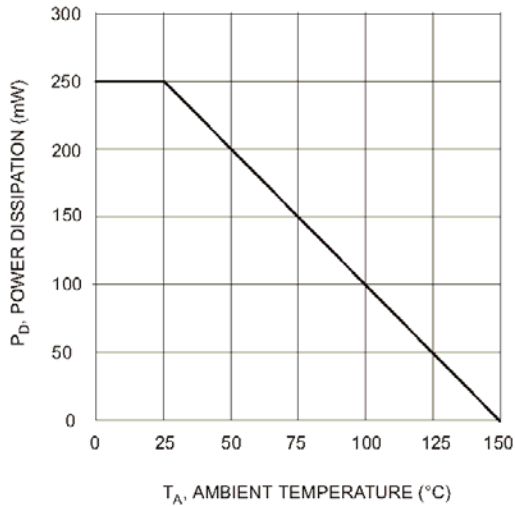
Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	85	-	-	V
Forward Voltage at $I_F = 1\ \text{mA}$ at $I_F = 10\ \text{mA}$ at $I_F = 50\ \text{mA}$ at $I_F = 150\ \text{mA}$	$V_F$	- - - -	- - - -	0.9 1 1.1 1.25	V
Reverse Current at $V_R = 75\ \text{V}$ at $V_R = 75\ \text{V}, T_j = 150^\circ\text{C}$	$I_R$	- -	- -	5 80	nA
Total Capacitance at $V_R = 0, f = 1\ \text{MHz}$	$C_{tot}$	-	2	-	pF
Reverse Recovery Time at $I_F = I_R = 10\ \text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\ \Omega$	$t_{rr}$	-	-	3	$\mu\text{s}$



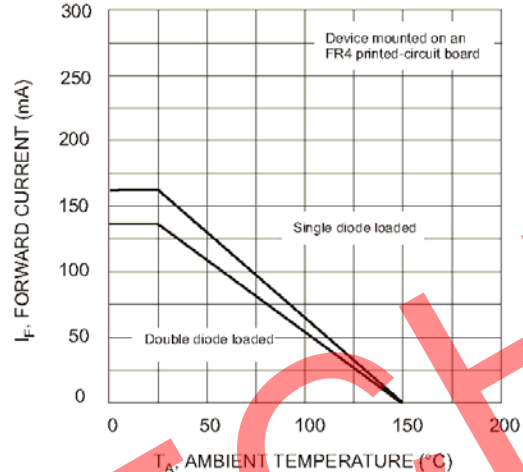
**SEMTECH ELECTRONICS LTD.**  
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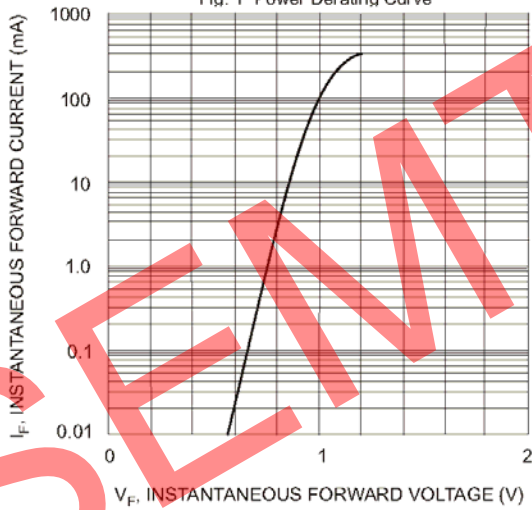
Dated : 08/01/2011 Rev:01



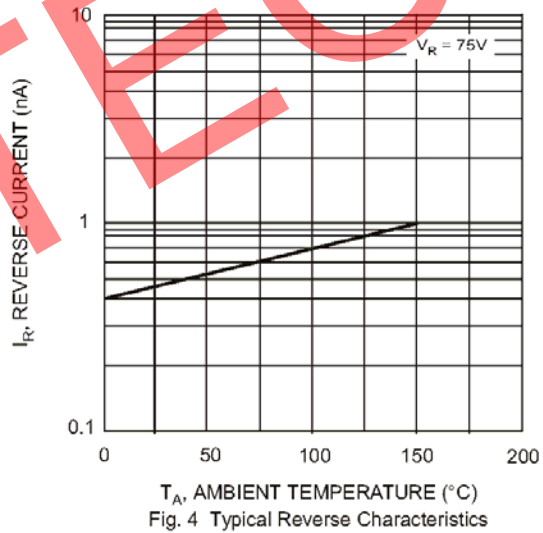
T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 2 Current Derating Curve



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 3 Typical Forward Characteristics



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 4 Typical Reverse Characteristics

