



BAW56 / BAV70 / BAV99

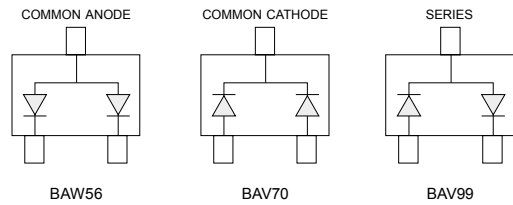
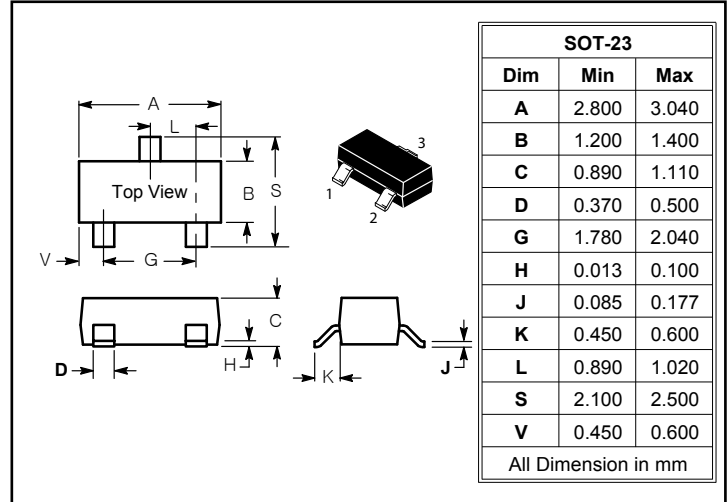
SURFACE MOUNT FAST SWITCHING DIODE

Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Application
- Plastic Material – UL Recognition Flammability Classification 94V-0

Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)



Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

PARAMETER	SYMBOL	BAW56	BAV70	BAV99	UNITS
Reverse Voltage	V_R		75		V
Peak Reverse Voltage	V_{RM}		100		V
Rectified Current (Average), Half Wave Rectification With Resistive Load and $f \geq 50\text{Hz}$	I_O		150		mA
Peak Forward Surge Current, 1.0 μs	I_{FSM}		2.0		A
Power Dissipation Derate Above 25 $^\circ\text{C}$	P_{TOT}		350		mW
Maximum Forward Voltage	V_F		0.715 @ $I_F = 0.001\text{A}$ 0.855 @ $I_F = 0.01\text{A}$ 1.0 @ $I_F = 0.05\text{A}$ 1.25 @ $I_F = 0.15\text{A}$		V
Maximum DC Reverse Current at 25V	I_R		2.5		μA
Maximum Junction Capacitance (Note 1)	C_J		4.0		pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}		4.0		ns
Typical Thermal Resistance	$R_{\theta JA}$		357		$^\circ\text{C} / \text{W}$
Junction Temperature Range	T_J		-55 to +125		$^\circ\text{C}$

NOTE : 1. Reverse Bias Voltage = 0. $f=1\text{MHz}$
2. $I_F=10\text{mA}$ to $I_R=1\text{mA}$. $V_R=6\text{V}$. Load=100 Ω



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RATINGS AND CHARACTERISTIC CURVES

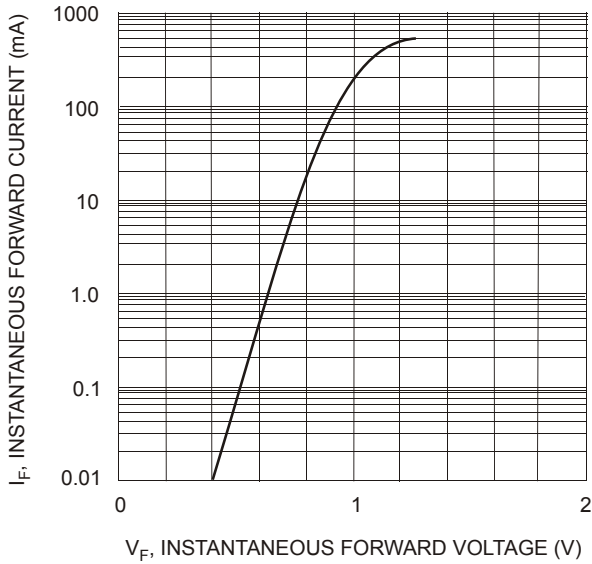


Fig. 1 Forward Characteristics

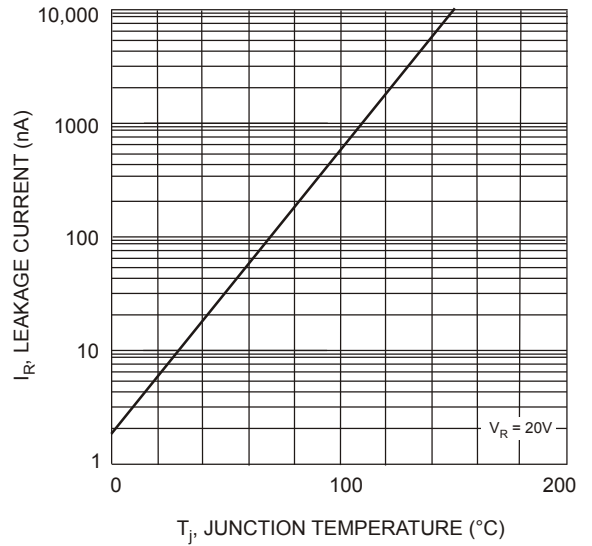


Fig. 2 Leakage Current vs Junction Temperature

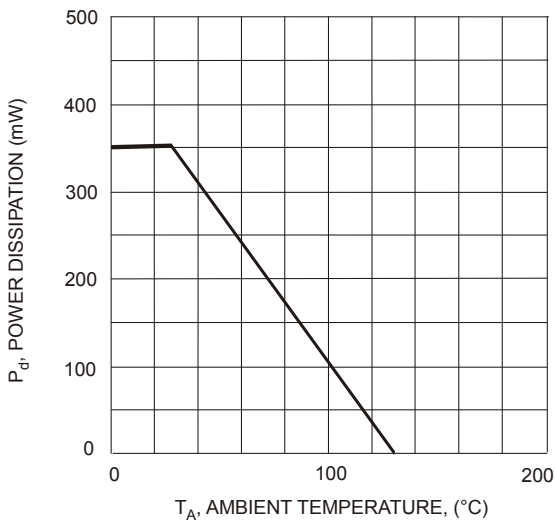
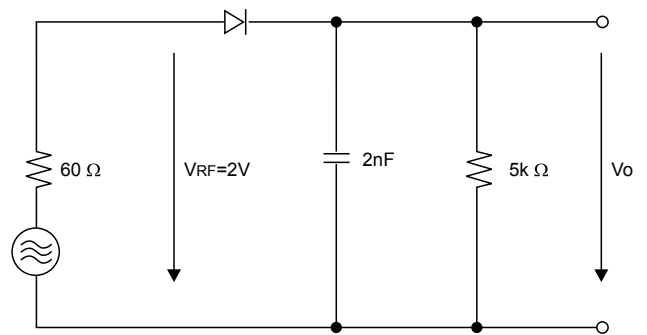


Fig. 3 Power Derating Curve, total package



RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT