



# DATA SHEET

## BAW56,BAV70,BAV99,BAL99

### SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volts **POWER** 250mWatts

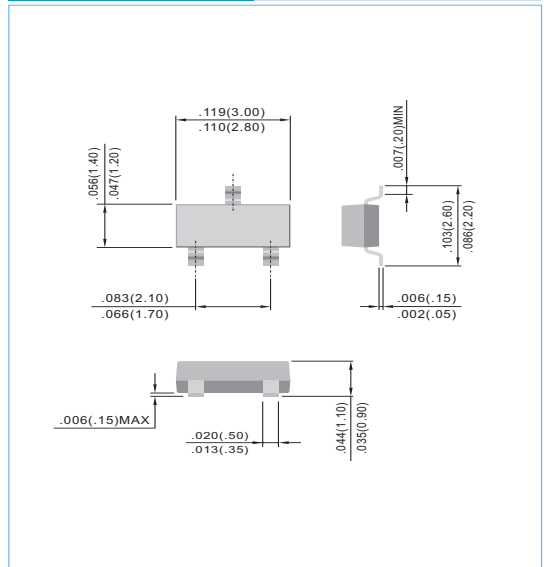
**SOT-23** Unit: inch (mm)

#### FEATURES

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

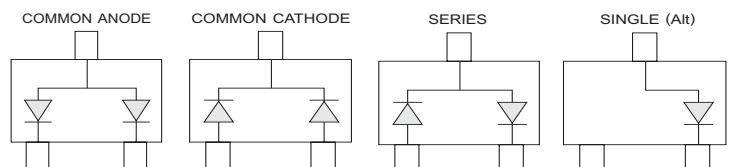
Case: SOT-23, Plastic  
Terminals: Solderable per MIL-STD-202, Method 208  
Approx. Weight: 0.008 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	BAW 56	BAV 70	BAV 99	BAL99	UNITS
Marking Code		JC	JA	JG	JF	
Reverse Voltage	$V_R$	75				V
Peak Reverse Voltage	$V_{RM}$	100				V
Rectified Current (Average), Half Wave Rectification with Resistive Load and $f \geq 50$ Hz	$I_D$	150				mA
Peak Forward Surge Current, 1.0us	$I_{FSM}$	2.0				A
Power Dissipation Derate Above 25°C	$P_{TOT}$	250				mW
Maximum Forward Voltage	$V_F$	0.715 @ $I_F=0.001A$ 0.855 @ $I_F=0.01A$ 1.0 @ $I_F=0.05A$ 1.25 @ $I_F=0.15A$				V
Maximum DC Reverse Current at 25V 75V	$I_R$	0.03 2.5				$\mu A$
Maximum Junction Capacitance (Notes 1)	$C_J$	1.5				pF
Maximum Reverse Recovery Time (Notes 2)	$T_{RR}$	4.0				ns
Maximum Thermal Resistance	$R_{\theta JA}$	625				°C / W
Junction Temperature Range	$T_J$	-55 TO +150				°C
Circuit Figure		Common Anode	Common Cathode	Series	Single (Alt)	



**NOTE:**

1.  $C_J$  at  $V_R=0$ ,  $f=1$ MHZ
2. From  $I_F=10$ mA to  $I_R=1$ mA,  $V_R=6$ Volts,  $R_L=100\Omega$

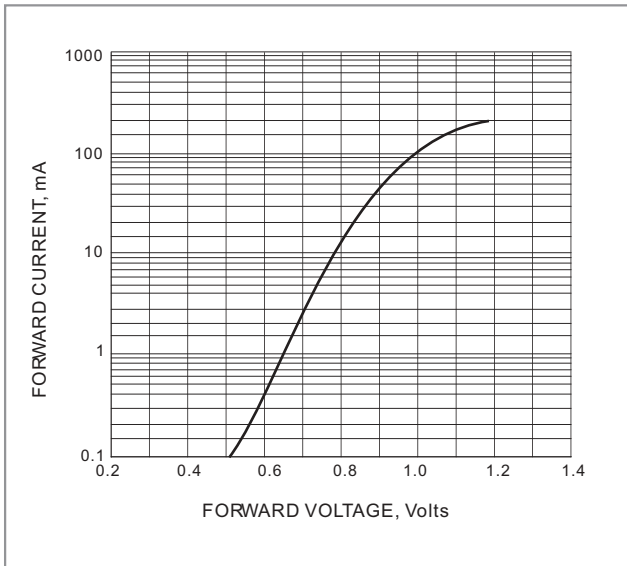


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

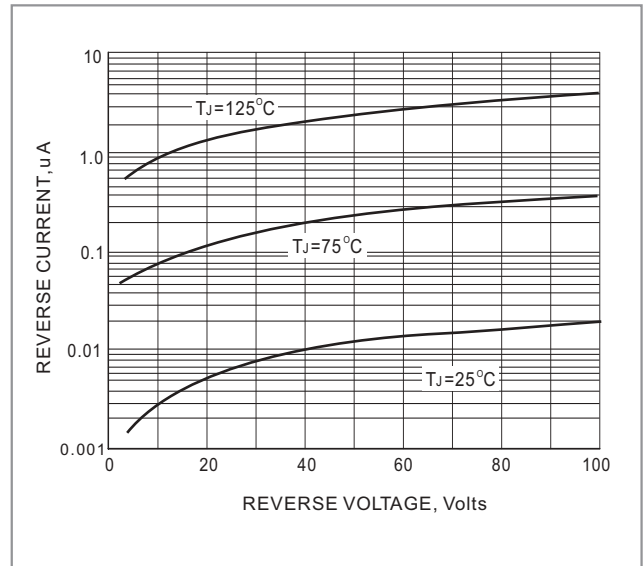


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

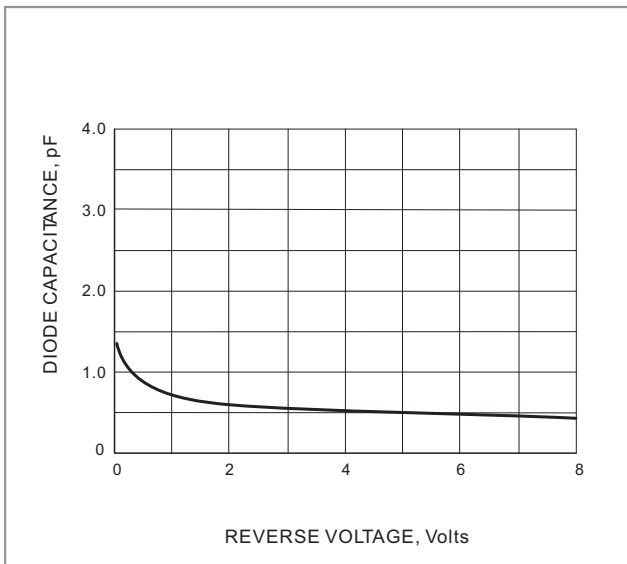


FIG. 3 TYPICAL JUNCTION CAPACITANCE

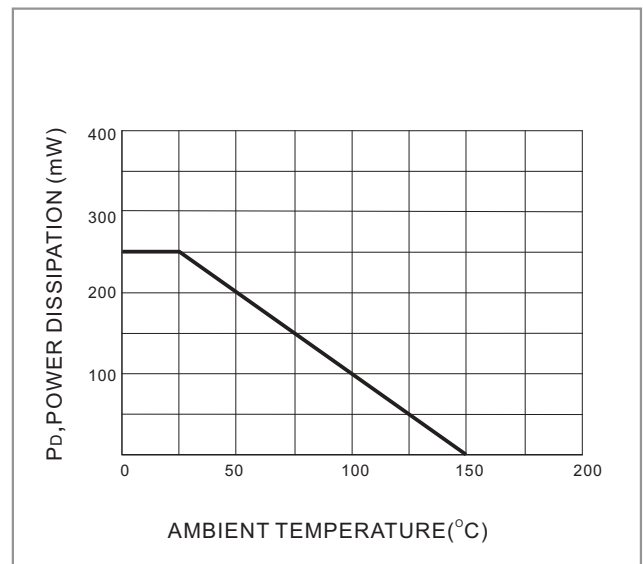


FIG. 4 POWER DERATING CURVE