

# BAW56 / BAV70 / BAV99 / BAL99

## Surface Mount Switching Diodes

**VOLTAGE** 100 Volt **POWER** 250 mWatt

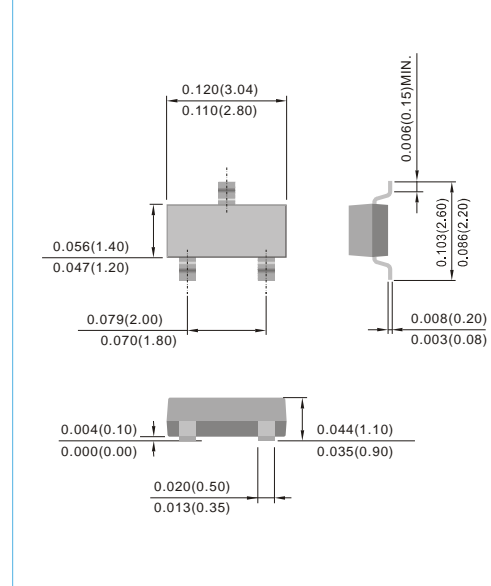
**SOT-23** Unit : inch(mm)

### FEATURES

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion
- Electrically identical to Standard JEDEC
- High Conductance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOT-23, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Apporx. Weight : 0.0084 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	BAW56	BAV70	BAV99	BAL99	UNITS
Marking Code	-	JC	JA	JB	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	$I_O$	150				mA
Peak Forward Surge Current, 0.001ms	$I_{FSM}$	4.0				A
Power Dissipation Derate Above 25°C	$P_{TOT}$	250				mW
Maximum Forward Voltage	$V_F$	0.715 @ $I_F=1mA$ 0.855 @ $I_F=10mA$ 1.0 @ $I_F=50mA$ 1.25 @ $I_F=150mA$				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
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$	360 205				$^{\circ}C / W$
Junction Temperature Range	$T_J$	-55 to +150				$^{\circ}C$
Circuit Figure	-	Common Anode	Common Cathode	Series	Single(Alt)	-

#### NOTES :

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

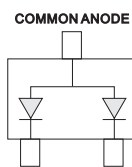


Fig.15

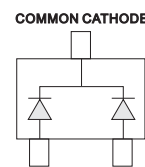


Fig.16

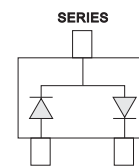


Fig.17

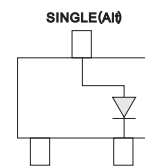
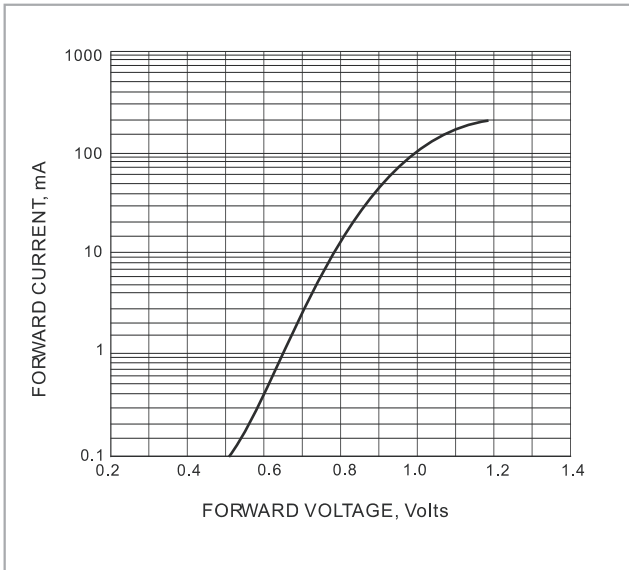
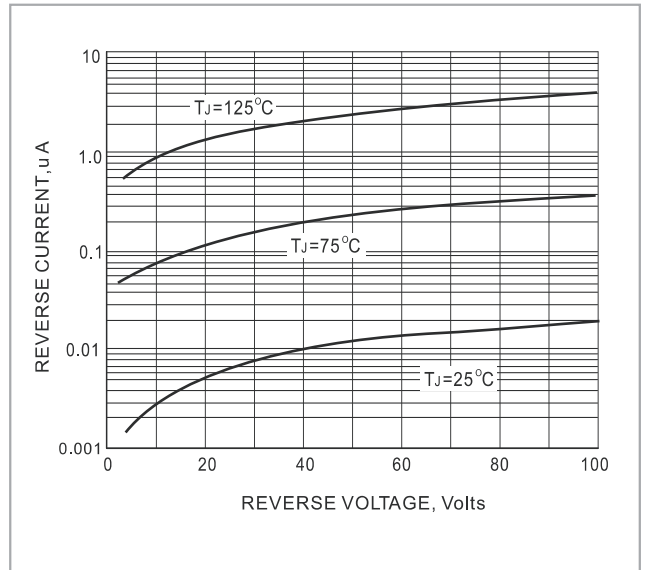


Fig.18

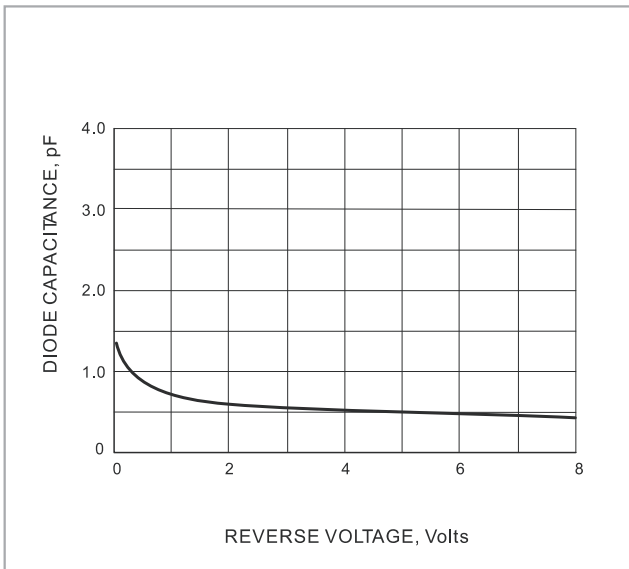
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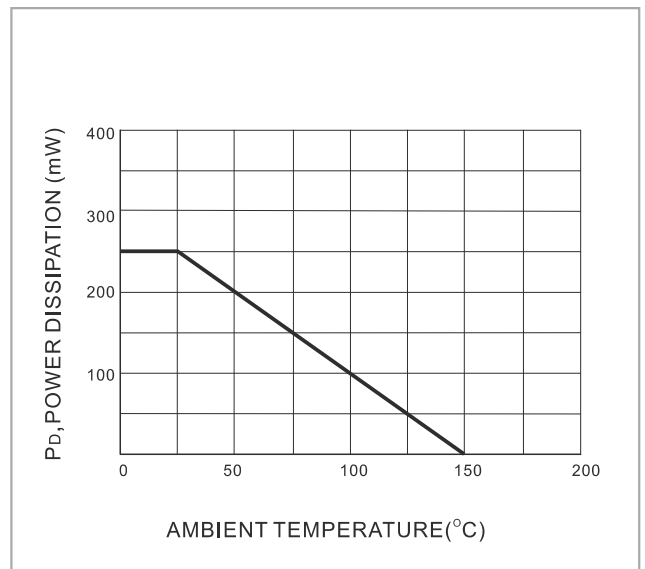
**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**FIG. 2-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 3 TYPICAL JUNCTION CAPACITANCE**



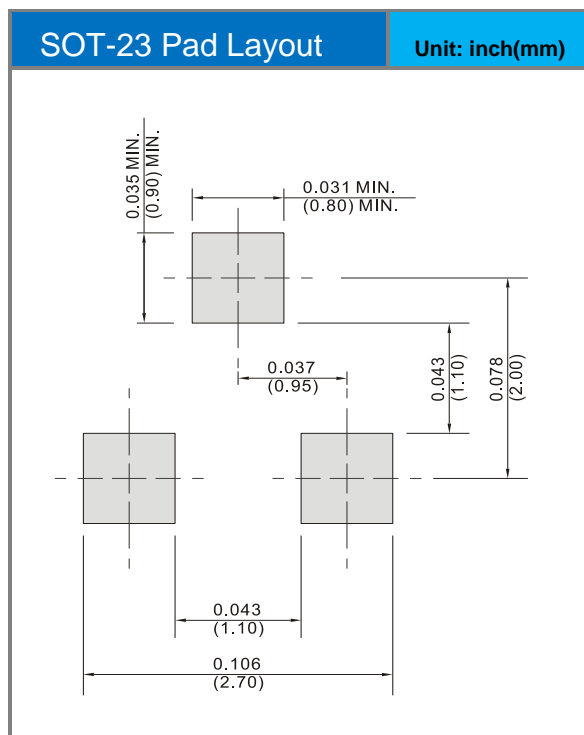
**FIG. 4 POWER DERATING CURVE**

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### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAW56	SOT-23	3K pcs / 7" reel	JC
BAV70	SOT-23	3K pcs / 7" reel	JA
BAV99	SOT-23	3K pcs / 7" reel	JB
BAL99	SOT-23	3K pcs / 7" reel	JF

### Mounting Pad Layout



## **BAW56 / BAV70 / BAV99 / BAL99**

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