

# BAL99, BAW56, BAV70, BAV99

## SURFACE MOUNT SWITCHING DIODES

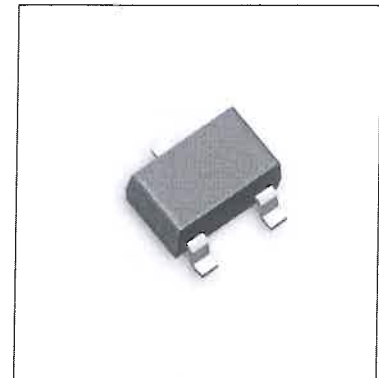
VOLTAGE 75 Volts

POWER 350 mWatts

PACKAGE SOT-23

### FEATURES

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance



### MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

Marking : JF, JC, JA, JG

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

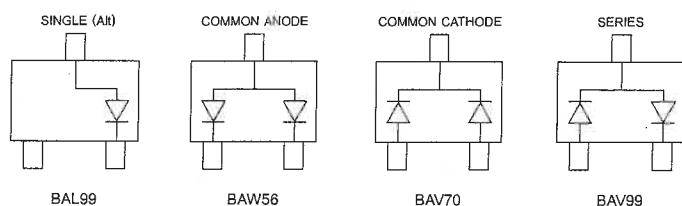
For capacitive load, derate current by 20%.

| PARAMETER   | SYMBOL           | BAL99 | BAW56       | BAV70 | BAV99 | UNITS  |
|---|------------------|-------|-------------|-------|-------|--------|
| Reverse Voltage   | V <sub>R</sub>   | 75    | 75          | 75    | 75    | V      |
| Peak Reverse Voltage  | V <sub>RM</sub>  | 100   | 100         | 100   | 100   | V      |
| Rectified Current (Average), Half Wave Rectification with Resistive Load and f >=50 Hz            | I <sub>o</sub>   | 150   | 150         | 150   | 150   | mA     |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 2.0   | 2.0         | 2.0   | 2.0   | A      |
| Power Dissipation Derate Above 25°C   | P <sub>TOT</sub> | 350   | 350         | 350   | 350   | mW     |
| Maximum Forward Voltage at I <sub>F</sub> =10mA   | V <sub>F</sub>   | 1.0   | 1.0         | 1.0   | 1.0   | V      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>J</sub> = 25°C                     | I <sub>R</sub>   | 2.5   | 2.5         | 2.5   | 2.5   | μA     |
| Typical Junction Capacitance( Notes1)   | C <sub>Jot</sub> | 4.0   | 4.0         | 4.0   | 4.0   | pF     |
| Maximum Reverse Recovery (Notes2)   | T <sub>RR</sub>  | 4.0   | 4.0         | 4.0   | 4.0   | ns     |
| Maximum Thermal Resistance  | RθJA             |       | 357         |       |       | °C / W |
| Storage Temperature Range   | T <sub>J</sub>   |       | -55 TO +125 |       |       | °C     |

NOTE:

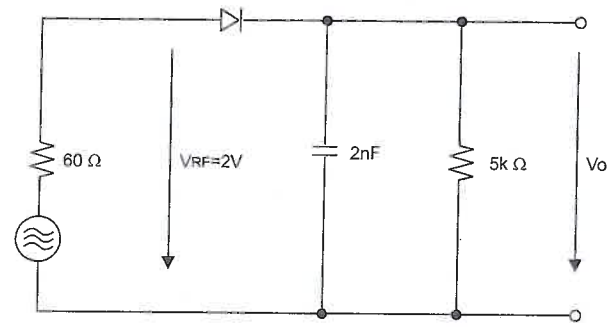
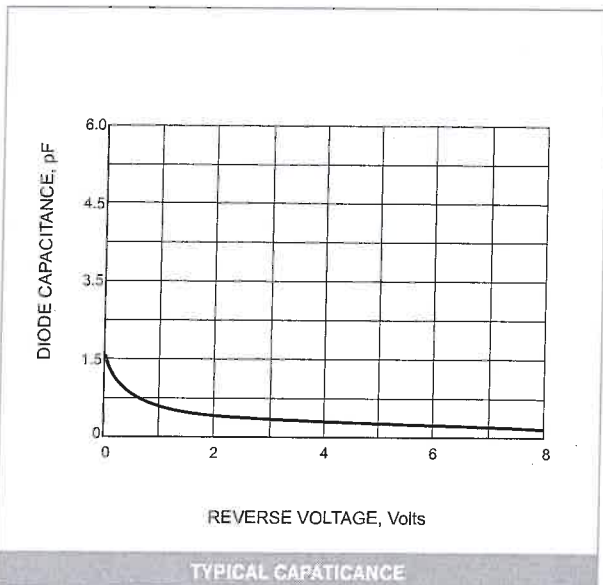
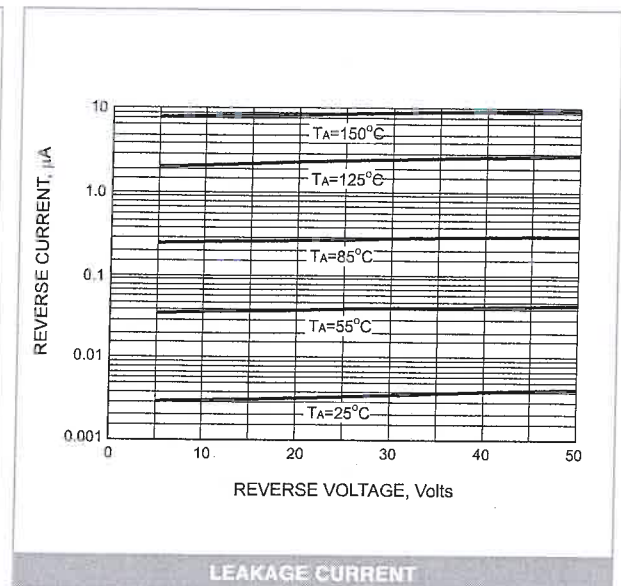
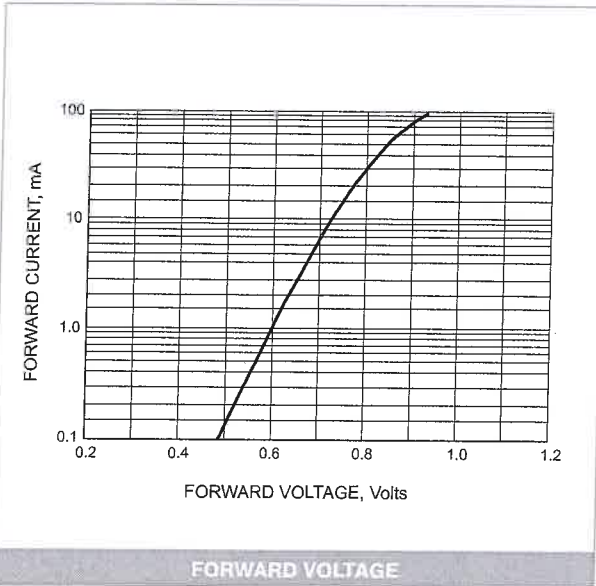
1. C<sub>J</sub> at V<sub>R</sub>=0, f=1MHZ

2. From I<sub>F</sub>=10mA to I<sub>R</sub>=1mA, V<sub>R</sub>=6Volts, R<sub>L</sub>=100Ω



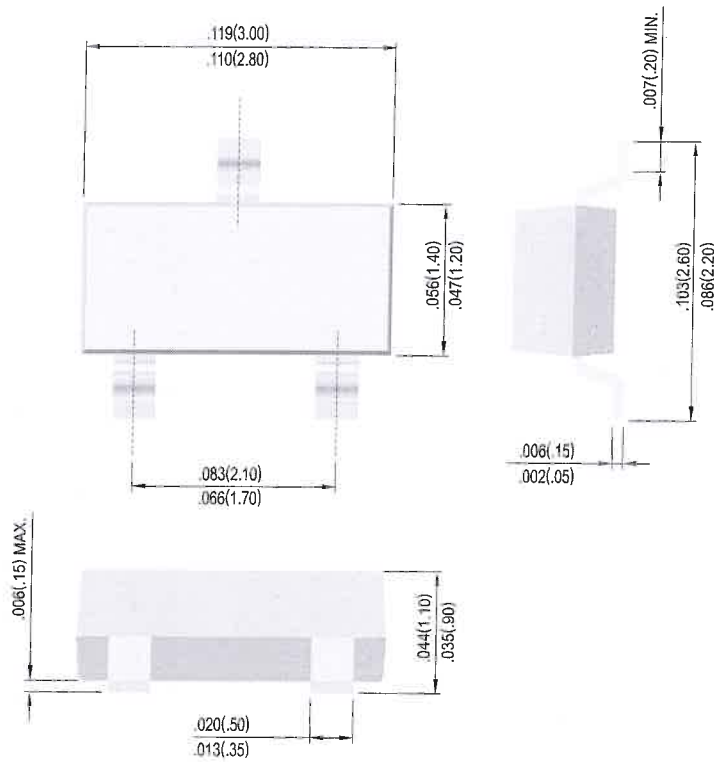


# RATING and CHARACTERISTIC CURVES



**RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT**

**SOT-23**



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