



THE DATASHEET OF BAL99-TP



Features

- Low Cost
- Low Current Leakage
- Small Outline Surface Mount Package
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

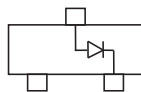
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 357°C/W Junction to Ambient

| MCC Part Number | Device Marking |
|-----------------|----------------|
| BL99 | JF |

| Parameter | Symbol | Value |
|---------------------------|-------------|-------|
| Reverse Breakdown Voltage | V_R | 70V |
| Average Forward Current | $I_{F(AV)}$ | 100mA |
| Power Dissipation | P_D | 350mW |

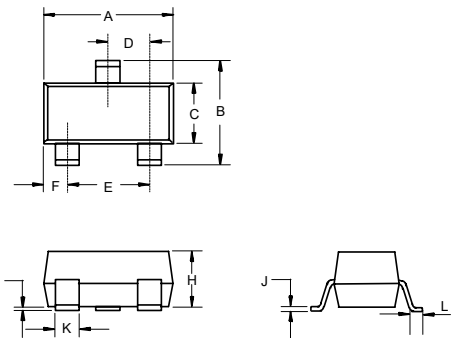
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



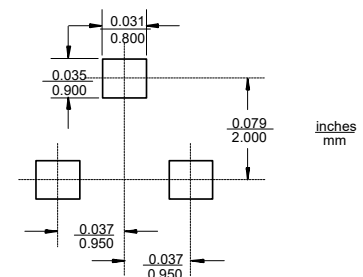
350mW 70Volt Switching Diode

SOT-23



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.110 | 0.120 | 2.80 | 3.04 | |
| B | 0.083 | 0.104 | 2.10 | 2.64 | |
| C | 0.047 | 0.055 | 1.20 | 1.40 | |
| D | 0.034 | 0.041 | 0.85 | 1.05 | |
| E | 0.067 | 0.083 | 1.70 | 2.10 | |
| F | 0.018 | 0.024 | 0.45 | 0.60 | |
| G | 0.0004 | 0.006 | 0.01 | 0.15 | |
| H | 0.035 | 0.043 | 0.90 | 1.10 | |
| J | 0.003 | 0.007 | 0.08 | 0.18 | |
| K | 0.014 | 0.020 | 0.35 | 0.51 | |
| L | 0.007 | 0.020 | 0.20 | 0.50 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|-----------------------|----------|--|------|------|-------|---------------|
| Forward Voltage | V_F | $I_F=1\text{mA}$ | | | 0.715 | V |
| | | $I_F=10\text{mA}$ | | | 0.855 | V |
| | | $I_F=50\text{mA}$ | | | 1 | V |
| | | $I_F=100\text{mA}$ | | | 1.2 | V |
| Reverse Current | I_R | $V_R=70\text{V}$ | | | 2.5 | μA |
| Junction Capacitance | C_J | $V_R = 0\text{V}, f = 1\text{MHz}$ | | 1.5 | | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10\text{mA},$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | | 6 | ns |

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

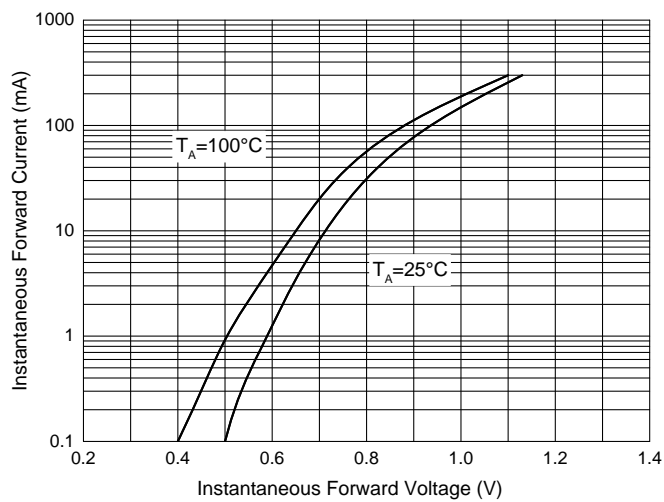


Fig. 2 - Typical Reverse Leakage Characteristics

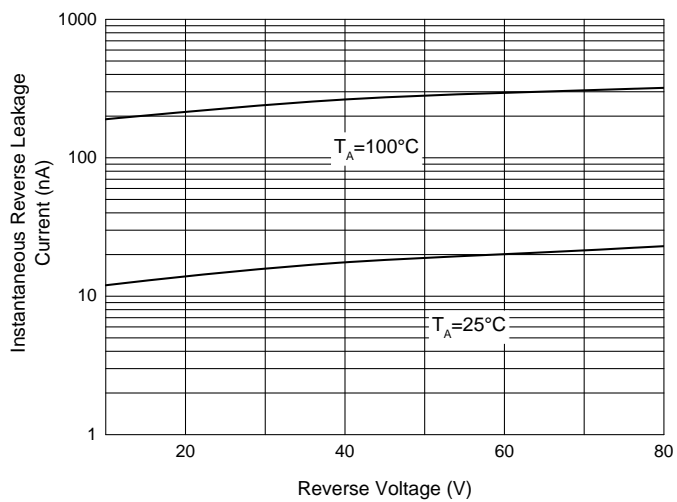
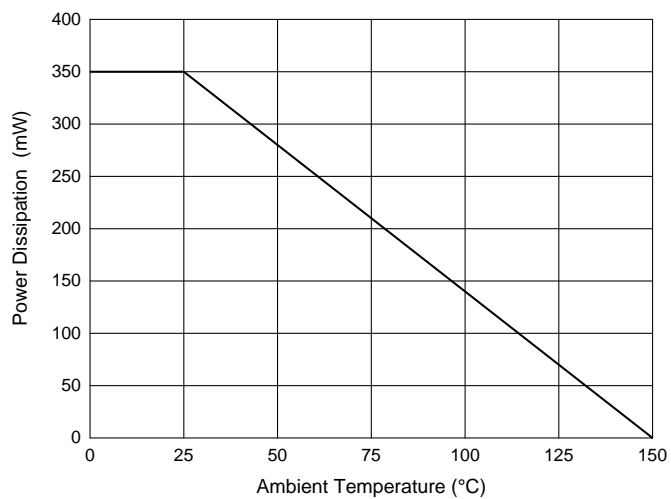


Fig. 3 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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