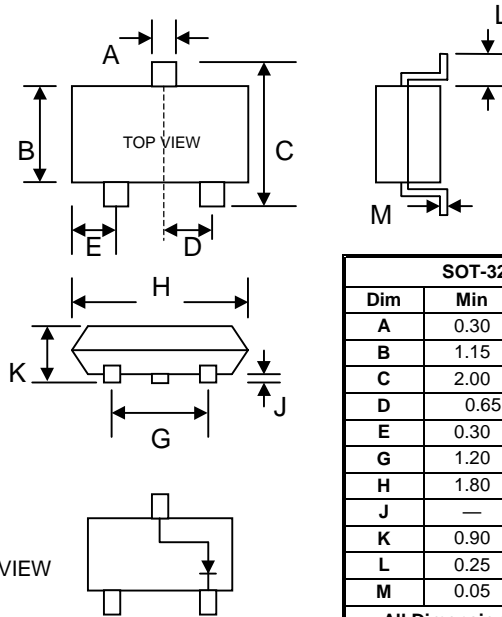


SURFACE MOUNT FAST SWITCHING DIODE

Features

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



| SOT-323 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 0.30 | 0.40 |
| B | 1.15 | 1.35 |
| C | 2.00 | 2.20 |
| D | 0.65 Nominal | |
| E | 0.30 | 0.40 |
| G | 1.20 | 1.40 |
| H | 1.80 | 2.20 |
| J | — | 0.10 |
| K | 0.90 | 1.10 |
| L | 0.25 | — |
| M | 0.05 | 0.15 |
| All Dimensions in mm | | |

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: JF

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

| Characteristic | Symbol | Value | Unit |
|--|-----------------|-------------|------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 75 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| Forward Continuous Current (Note 1) | I_F | 300 | mA |
| Average Rectified Output Current (Note 1) | I_O | 150 | mA |
| Peak Forward Surge Current (Note 1) | I_{FSM} | 2.0 | A |
| Power Dissipation (Note 1) | P_d | 200 | mW |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625 | K/W |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|-------------------------|----------|-----|--------------|---------------|--|
| Forward Voltage | V_F | — | 0.855 1.0 | V | @ $I_F = 10\text{mA}$ @ $I_F = 50\text{mA}$ |
| Reverse Leakage Current | I_R | — | 2.5 | μA | @ $V_R = 75\text{V}$ |
| Junction Capacitance | C_j | — | 2.0 | pF | $V_R = 0\text{V}, f = 1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | — | 6.0 | nS | $I_F = I_R = 10\text{mA},$ $I_{RR} = 0.1 \times I_R, R_L = 100\Omega$ |

Note: 1. Device mounted on fiberglass substrate 40 x 40 x 1.5mm.

ORDERING INFORMATION

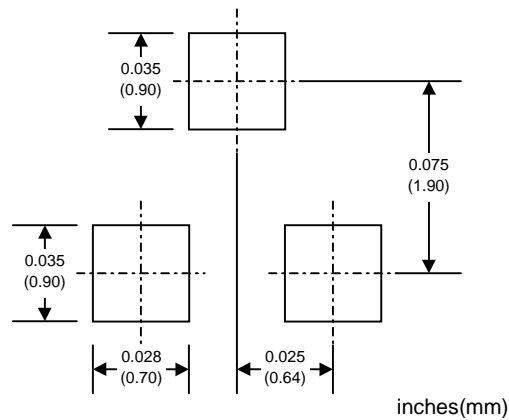
| Product No.♦ | Package Type | Shipping Quantity |
|------------------|--------------|-------------------|
| BAL99W-T1 | SOT-323 | 3000/Tape & Reel |
| BAL99W-T3 | SOT-323 | 10000/Tape & Reel |

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

RECOMMENDED FOOTPRINT



Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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We power your everyday.