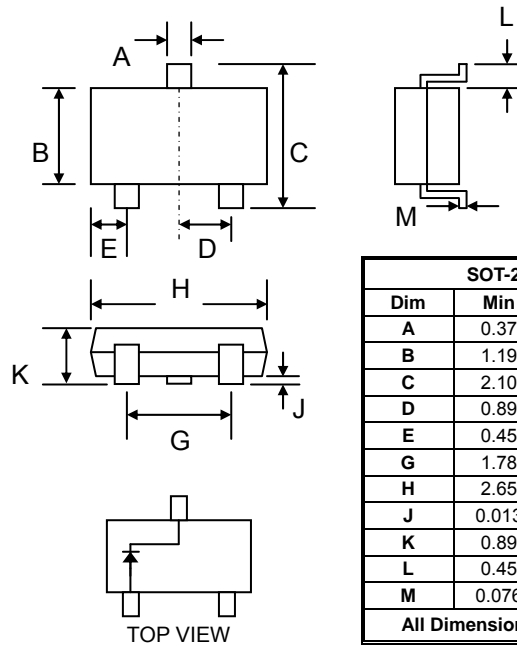


### Features

- **Very Low Leakage Current**
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0

### Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)
- Mounting Position: Any
- Marking: JV
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



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

| Characteristic   | Symbol   | Value       | Unit |
|--|--|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 85          | V    |
| Forward Continuous Current   | I <sub>F</sub>   | 215         | mA   |
| Repetitive Peak Forward Current  | I <sub>FRM</sub>                                       | 500         | mA   |
| Non-Repetitive Peak Forward Surge Current  | I <sub>FSM</sub>                                       | 4.0<br>0.5  | A    |
|  | @ t = 1.0μs<br>@ t = 1.0s                              |             |      |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub>                      | -55 to +150 | °C   |

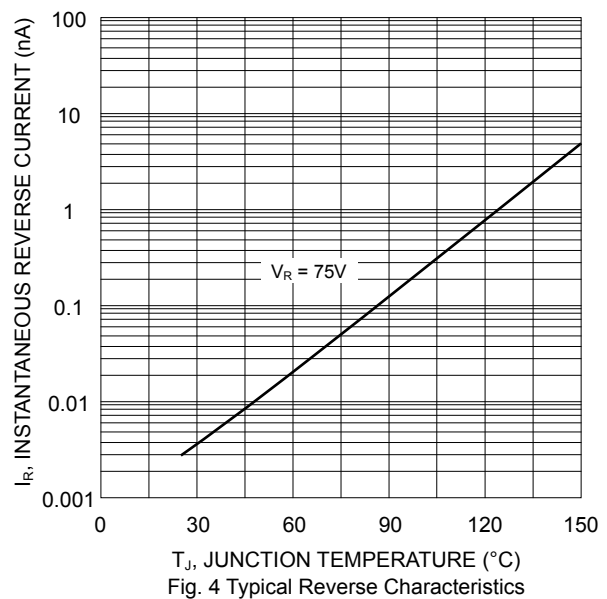
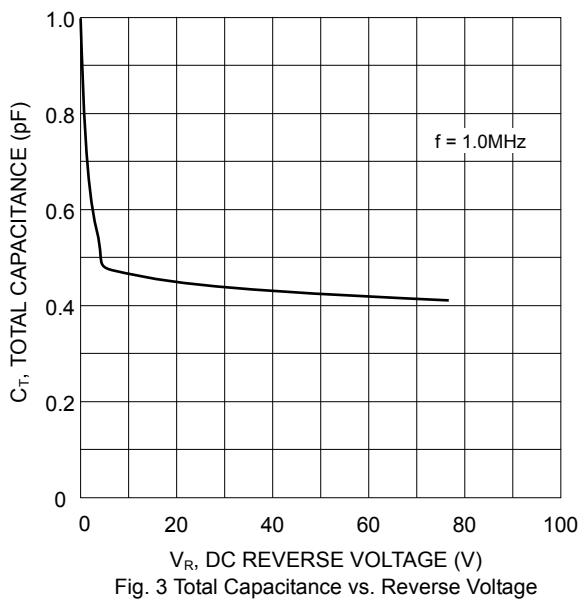
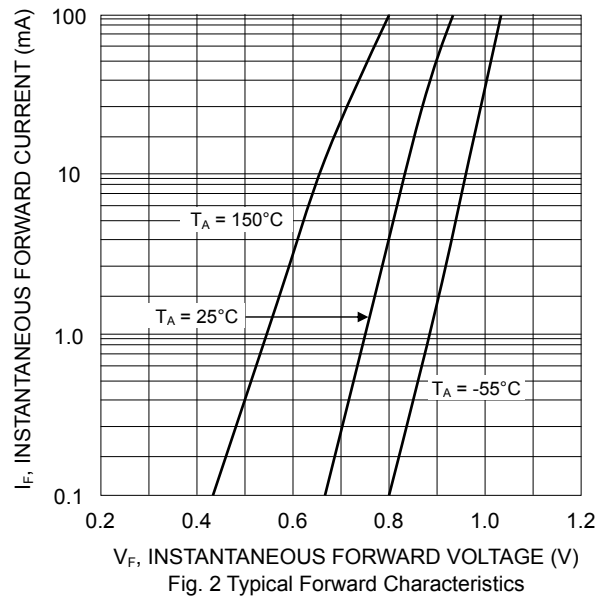
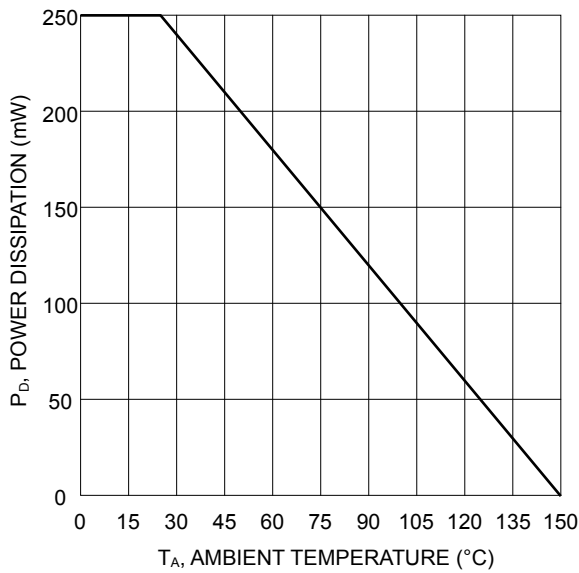
### Thermal Characteristics

| Characteristic                                   | Symbol          | Value | Unit |
|--|-----------------|-------|------|
| Power Dissipation (Note 1)                       | P <sub>D</sub>  | 250   | mW   |
| Thermal Resistance, Junction to Ambient (Note 1) | R <sub>JA</sub> | 500   | °C/W |

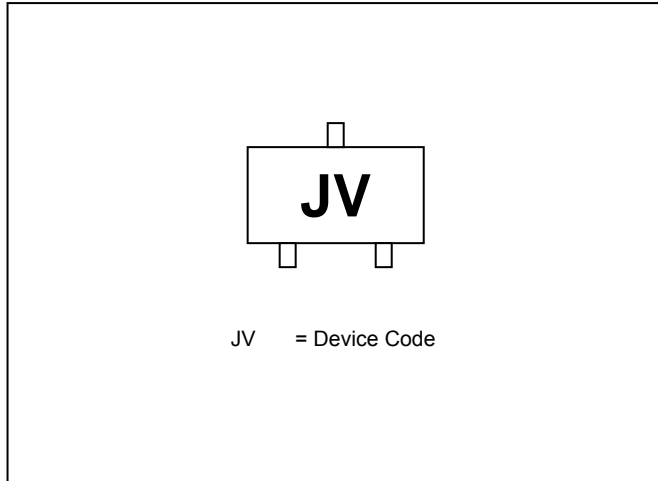
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

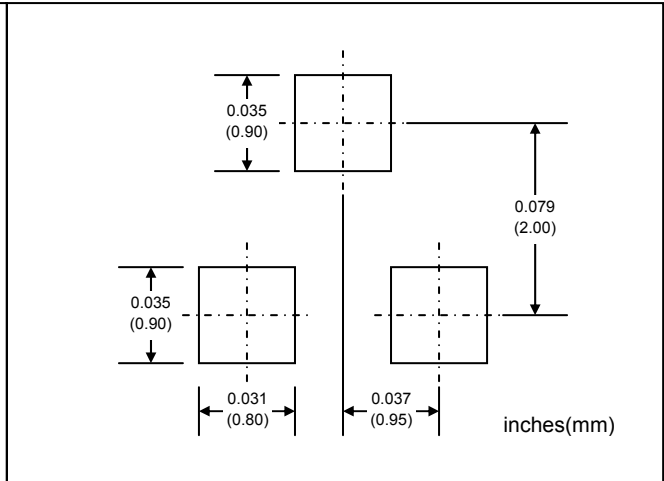
| Characteristic   | Symbol     | Min. | Typ. | Max.                      | Unit          |
|--|------------|------|------|---------------------------|---------------|
| Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$   | $V_{(BR)}$ | 85   |      |                           | V             |
| Forward Voltage Drop @ $I_F = 1.0\text{mA}$<br>@ $I_F = 10\text{mA}$<br>@ $I_F = 50\text{mA}$<br>@ $I_F = 150\text{mA}$    | $V_{FM}$   |      |      | 0.9<br>1.0<br>1.1<br>1.25 | V             |
| Peak Reverse Leakage Current @ $V_R = 75\text{V}, T_J = 25^\circ\text{C}$<br>@ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ | $I_{RM}$   |      |      | 5.0<br>80                 | nA            |
| Diode Capacitance ( $V_R = 0\text{V}, f = 1.0\text{MHz}$ )   | $C_D$      |      |      | 2.0                       | pF            |
| Reverse Recovery Time ( $I_F = I_R = 10\text{mA}, I_{RR} = 0.1 \times I_R, R_L = 100\Omega$ )                              | $t_{rr}$   |      |      | 3.0                       | $\mu\text{S}$ |



## MARKING INFORMATION

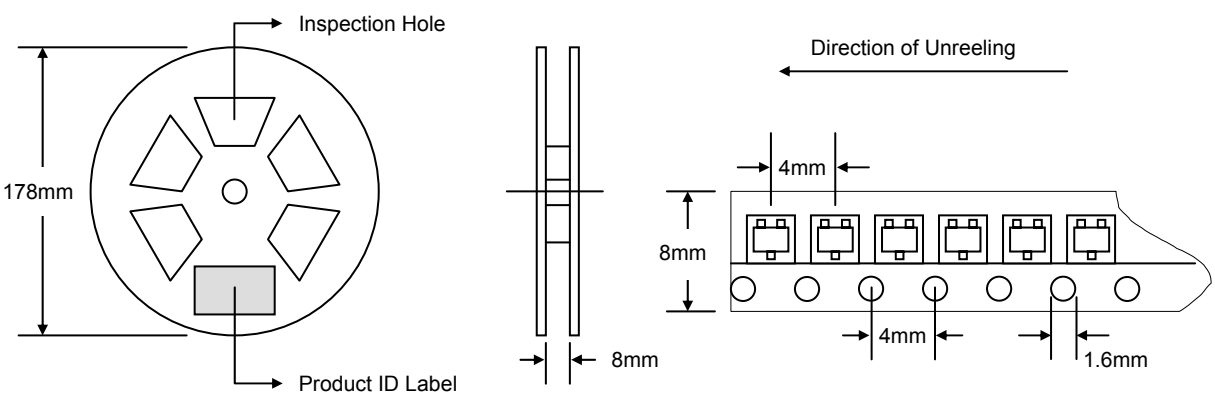


## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL




| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178                | 3,000          | 187 x 187 x 65                | 15,000         | 390 x 240 x 420            | 150,000        | 10.0                      |

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| BAS116-T1   | SOT-23       | 3000/Tape & Reel  |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS116-T1-LF.**

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