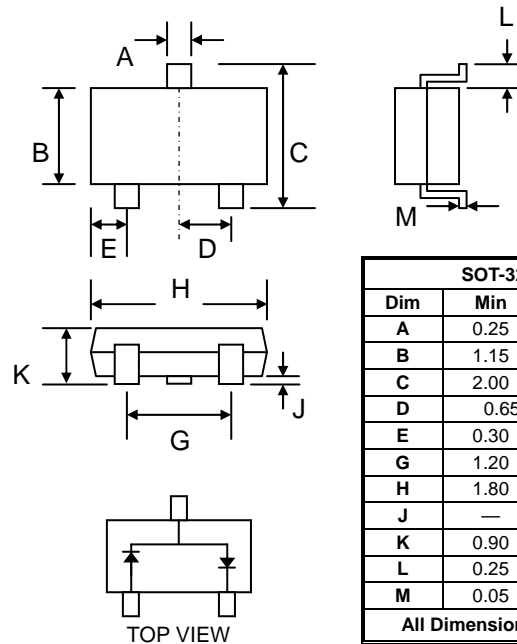


### Features

- Low Forward Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0

### 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: 3J
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| SOT-323              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 0.25         | 0.40 |
| B                    | 1.15         | 1.35 |
| C                    | 2.00         | 2.40 |
| 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 |              |      |

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

| Characteristic   | Symbol                          | Value       | Unit               |
|--|---------------------------------|-------------|--------------------|
| Non-Repetitive Peak Reverse Voltage  | $V_{RM}$                        | 45          | V                  |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 40          | V                  |
| Average Rectified Output Current   | $I_o$                           | 30          | mA                 |
| Non-Repetitive Peak Forward Surge Current, 60Hz  | $I_{FSM}$                       | 200         | mA                 |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$                  | -40 to +125 | $^{\circ}\text{C}$ |

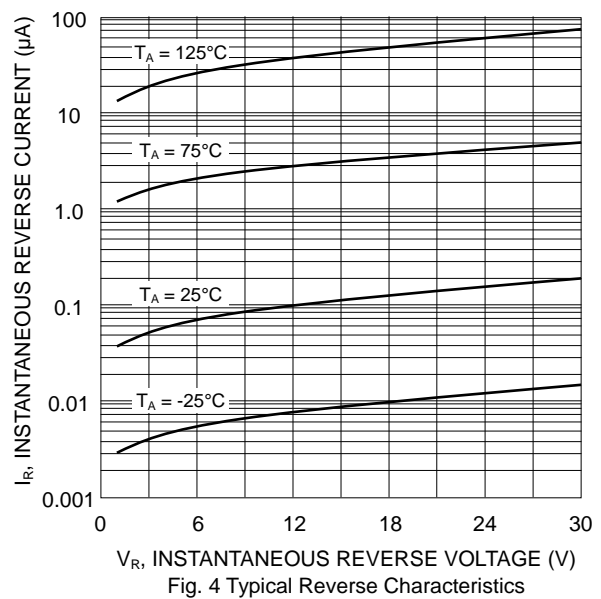
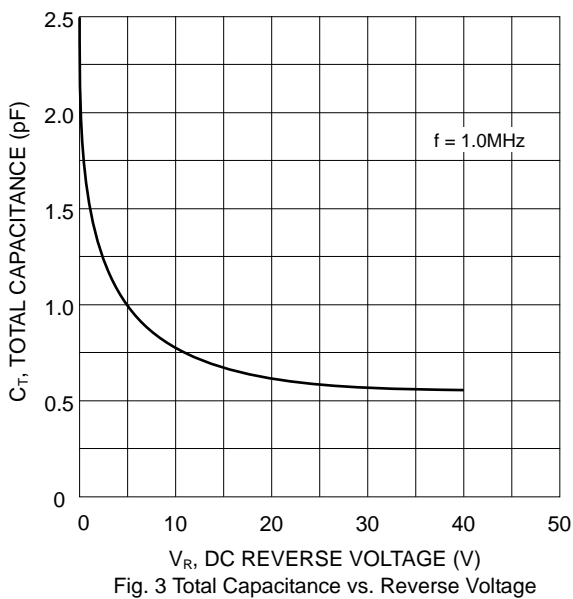
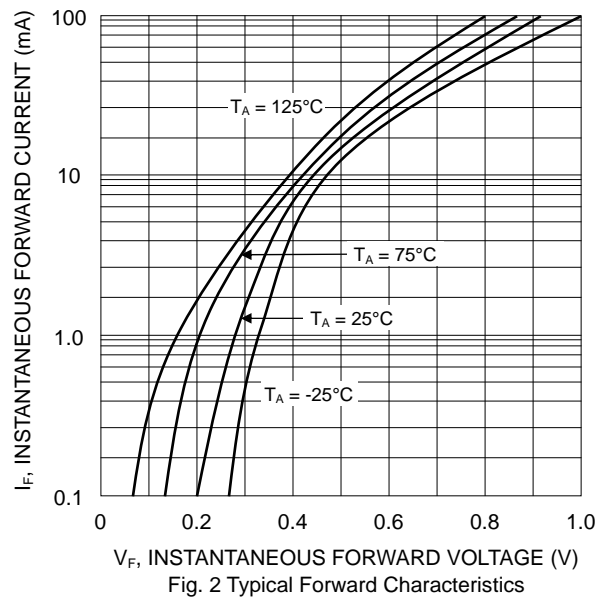
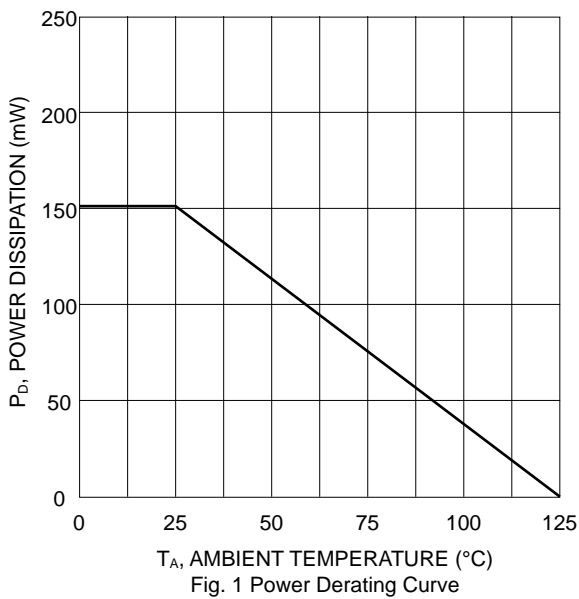
### Thermal Characteristics

| Characteristic             | Symbol | Value | Unit |
|----------------------------|--------|-------|------|
| Power Dissipation (Note 1) | $P_D$  | 150   | mW   |

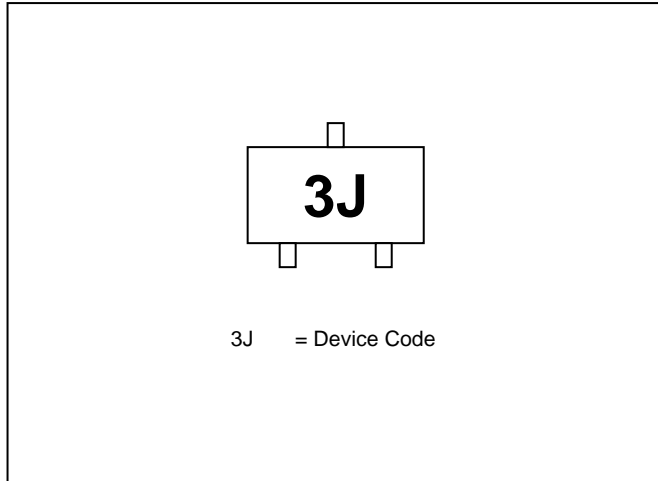
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

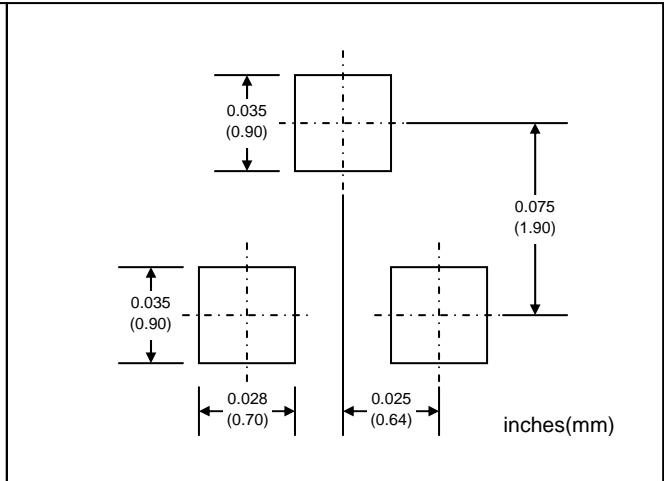
| Characteristic  | Symbol | Min. | Typ. | Max. | Unit          |
|---|--------|------|------|------|---------------|
| Forward Voltage Drop @ $I_F = 1.0\text{mA}$                     | $V_F$  |      | 0.26 | 0.37 | V             |
| Reverse Leakage Current @ $V_R = 10\text{V}$                    | $I_R$  |      | 0.05 | 1.0  | $\mu\text{A}$ |
| Diode Capacitance ( $V_R = 1.0\text{V}$ , $f = 1.0\text{MHz}$ ) | $C_D$  |      | 2.0  |      | pF            |



## MARKING INFORMATION

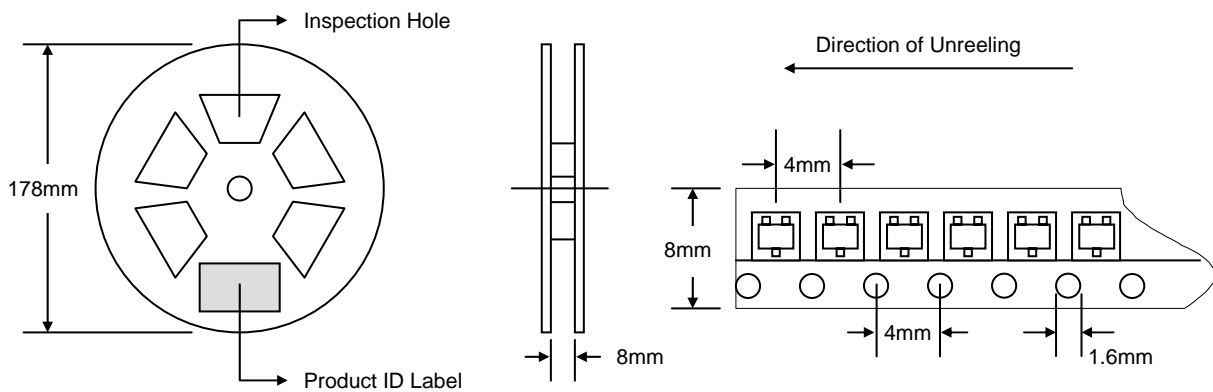


## RECOMMENDED FOOTPRINT



## 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 |
|--------------|--------------|-------------------|
| RB706F-40-T1 | SOT-323      | 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, RB706F-40-T1-LF.**

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**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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