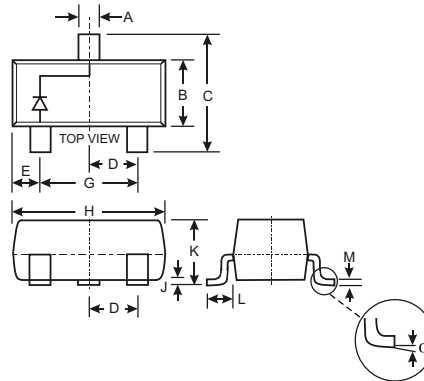


### Features

- Low Forward Voltage Drop
- High Conductance

### Mechanical Data

- Case: SOT-23, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)
- Marking: KSJ and Date Code, See Page 3
- Ordering Information: See Page 3



| SOT-23               |       |      |
|----------------------|-------|------|
| Dim                  | Min   | Max  |
| A                    | 0.37  | 0.51 |
| B                    | 1.20  | 1.40 |
| C                    | 2.30  | 2.50 |
| D                    | 0.89  | 1.03 |
| E                    | 0.45  | 0.60 |
| G                    | 1.78  | 2.05 |
| H                    | 2.80  | 3.00 |
| J                    | 0.013 | 0.10 |
| K                    | 0.903 | 1.10 |
| L                    | 0.45  | 0.61 |
| M                    | 0.85  | 0.80 |
| $\alpha$             | 0°    | 8°   |
| All Dimensions in mm |       |      |

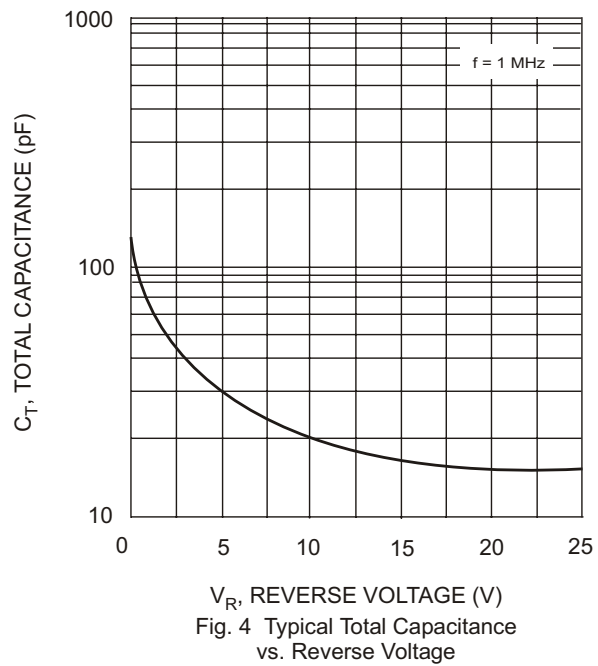
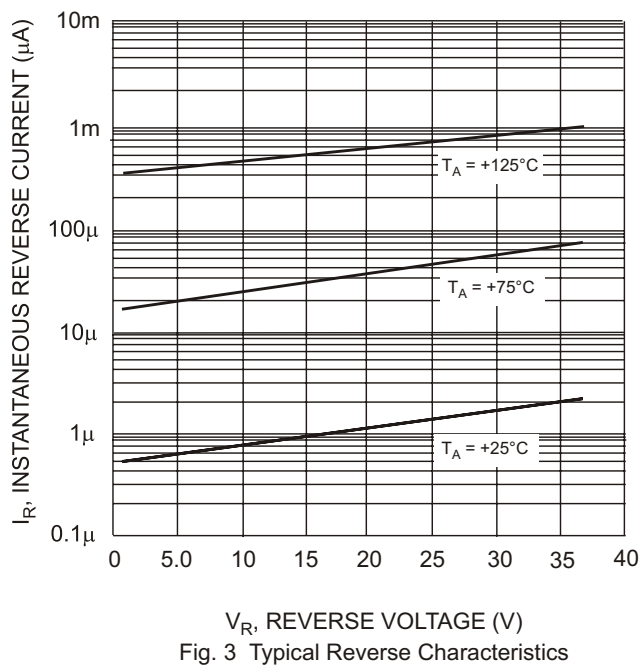
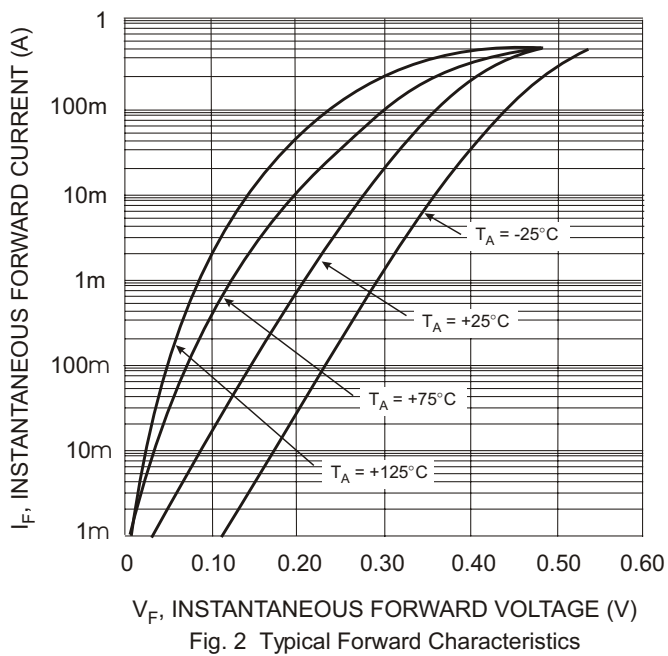
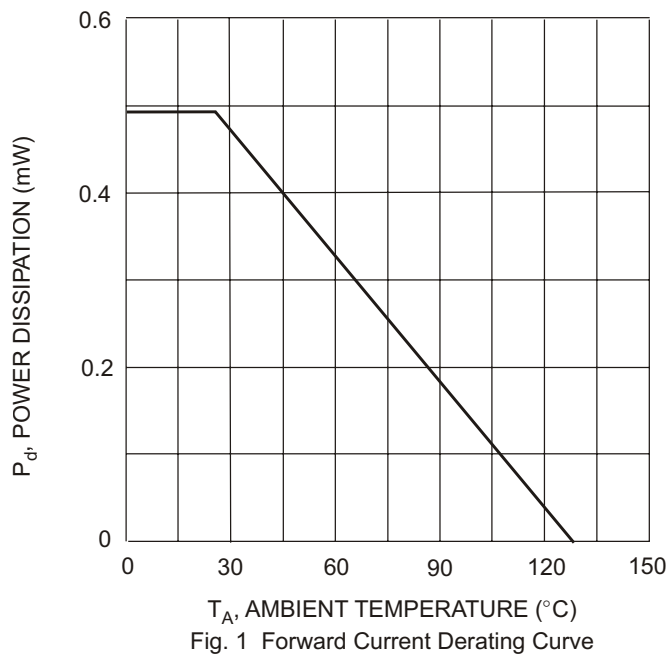
### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic                                                                                                        | Symbol                          | Value       | Unit               |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 40          | V                  |
| RMS Reverse Voltage                                                                                                   | $V_{R(RMS)}$                    | 28          | V                  |
| Average Rectified Current (Note 2)                                                                                    | $I_O$                           | 0.5         | A                  |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$                       | 3           | A                  |
| Power Dissipation (see Figure 1) (Note 2)                                                                             | $P_d$                           | 480         | mW                 |
| Typical Thermal Resistance, Junction to Ambient Air (Note 2)                                                          | $R_{\theta JA}$                 | 286         | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                                                                               | $T_j, T_{STG}$                  | -40 to +125 | $^\circ\text{C}$   |

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

| Characteristic                     | Symbol      | Min | Typ        | Max        | Unit          | Test Condition                                                                |
|------------------------------------|-------------|-----|------------|------------|---------------|-------------------------------------------------------------------------------|
| Reverse Breakdown Voltage (Note 1) | $V_{(BR)R}$ | 40  | —          | —          | V             | $I_R = 1\text{mA}$                                                            |
| Forward Voltage (Note 1)           | $V_F$       | —   | 285<br>480 | 300<br>550 | mV            | $I_F = 10\text{mA}$<br>$I_F = 500\text{mA}$                                   |
| Reverse Current (Note 1)           | $I_R$       | —   | 1.0<br>2.0 | 30<br>50   | $\mu\text{A}$ | $V_R = 10\text{V}$<br>$V_R = 30\text{V}$                                      |
| Total Capacitance                  | $C_T$       | —   | 125<br>20  | —          | pF            | $V_R = 0\text{V}, f = 1.0\text{MHz}$<br>$V_R = 10\text{V}, f = 1.0\text{MHz}$ |

Notes: 1. Short duration test pulse used to minimize self-heating effect.  
 2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

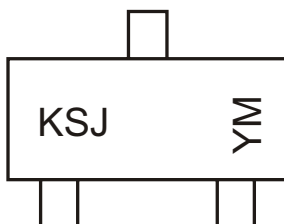


## Ordering Information (Note 3)

| Device    | Packaging | Shipping         |
|-----------|-----------|------------------|
| BAT400D-7 | SOT-23    | 3000/Tape & Reel |

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



KSJ = Product Type Marking Code  
YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September

### Date Code Key

| Year | 2001 | 2002 | 2003 | 2004 | 2005 |
|------|------|------|------|------|------|
| Code | M    | N    | P    | R    | S    |

| Month | Jan | Feb | March | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code  | 1   | 2   | 3     | 4   | 5   | 6   | 7   | 8   | 9   | O   | N   | D   |