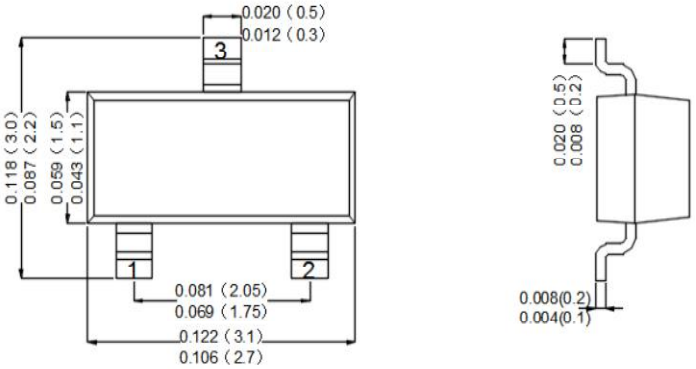
# BAT400D

## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

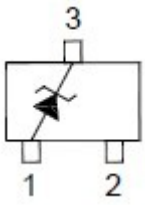
- Low Forward Voltage Drop
- High Conductance

SOT-23




### Mechanical Data

- Case:Molded Plastic,SOT-23
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable perMIL-STD-750,Method-2026.
- Mounting Position : Any.
- Equivalent Circuit:




Marking Code: PK

Dimensions in inches and (millimeters)

### Maximum Ratings Maximum Ratings (Rating at 25℃ ambient temperature unless otherwise specified.)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Peak Repetitive Reverse Voltage | $V_{RRM}$ | 40 | V |
| Working Peak Reverse Voltage | $V_{RWM}$ | 40 | V |
| DC Blocking Voltage | $V_R$ | 40 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 28 | V |
| Average Rectified Current | $I_O$ | 0.5 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 3 | A |
| Power Dissipation | $P_D$ | 480 | mW |
| Typicial Thermal Resistance, Junction to Ambient Air | $R_{\theta JA}$ | 208 | °C/W |
| Operating and Storage Temperature Range | $T_{opr}$ ,$T_s$ | - 40 to +125 | °C |

### Electrical Characteristics (Rating at 25℃ ambient temperature unless otherwise specified.)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Forward Voltage<br>at $I_F$ = 10 mA<br>at $I_F$ = 500 mA | $V_F$ | -<br>- | -<br>- | 0.3<br>0.55 | V |
| Reverse Breakdown Voltage<br>at $I_R$ = 1 mA | $V_{(BR)R}$ | 40 | - | - | V |
| Reverse Current<br>at $V_R$ = 10 V<br>at $V_R$ = 30 V | $I_R$ | -<br>- | -<br>- | 30<br>50 | μA |
| Total Capacitance<br>at $V_R$ = 0 V, f = 1 MHz<br>at $V_R$ = 10 V, f = 1 MHz | $C_{tot}$ | -<br>- | 125<br>20 | -<br>- | pF |

## Rating And Characteristic Curves

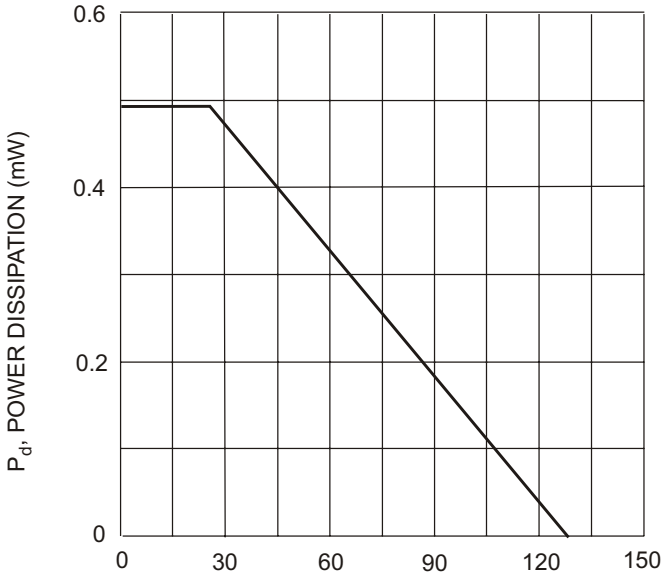



Fig. 1 Forward Current Derating Curve

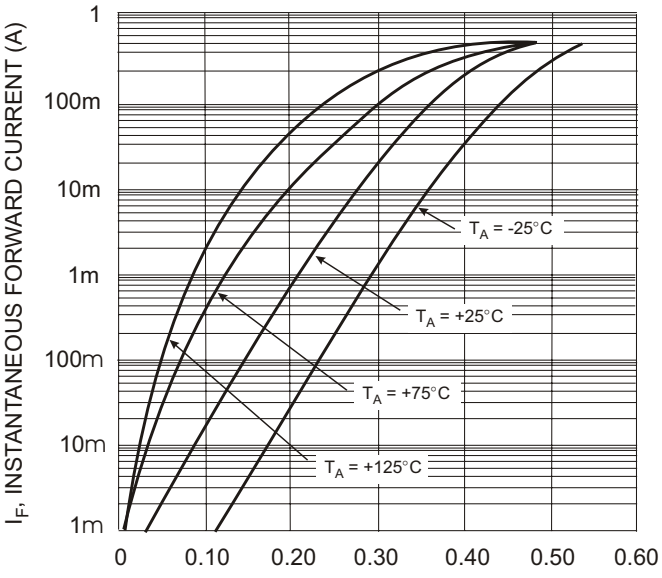



Fig. 2 Typical Forward Characteristics

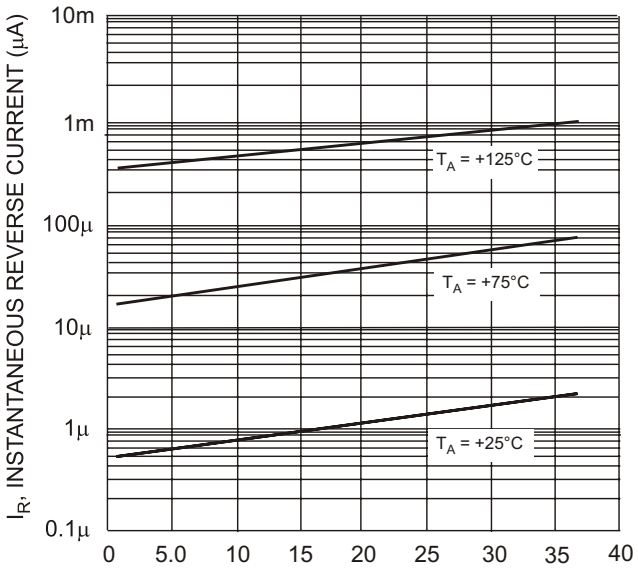



Fig. 3 Typical Reverse Characteristics

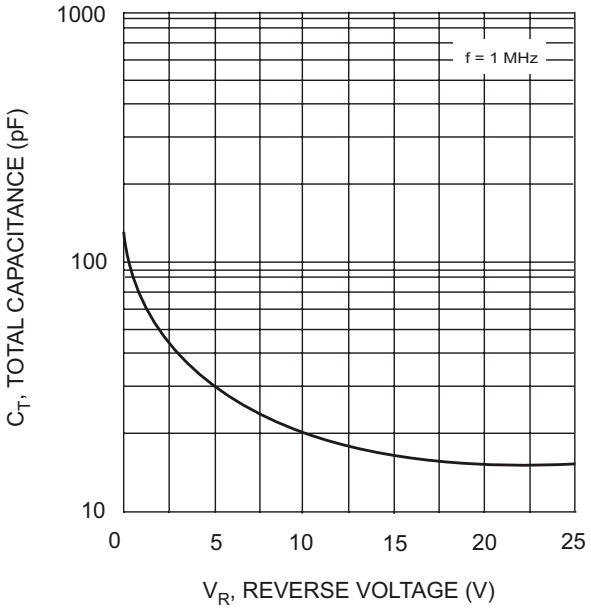



Fig. 4 Typical Total Capacitance vs. Reverse Voltage

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