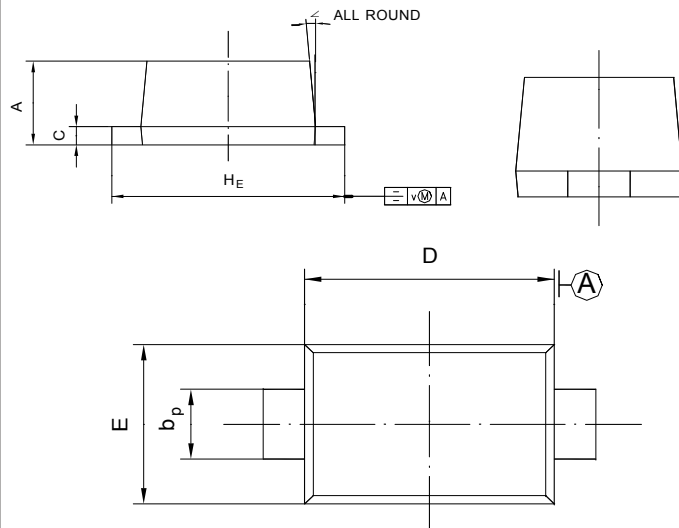


### FEATURES

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: SOD-523
- Terminals: Solderable per MIL-STD-750, Method 2026



| UNIT | A            | b <sub>p</sub> | C              | D            | E            | H <sub>E</sub> | V   | ∠  |
|------|--------------|----------------|----------------|--------------|--------------|----------------|-----|----|
| mm   | 0.70<br>0.60 | 0.4<br>0.3     | 0.135<br>0.100 | 1.25<br>1.15 | 0.85<br>0.75 | 1.7<br>1.5     | 0.1 | 5° |

### Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)

| Parameter  | Symbol                            | Value         | Unit |
|--|-----------------------------------|---------------|------|
| Peak Repetitive Reverse Voltage                      | V <sub>RRM</sub>                  | 40            | V    |
| Reverse Voltage                                      | V <sub>R</sub>                    | 40            | V    |
| Average Forward Rectified Current                    | I <sub>F(AV)</sub>                | 350           | mA   |
| Non-Repetitive Peak Forward Surge Current at t = 1 s | I <sub>FSM</sub>                  | 2             | A    |
| Power Dissipation                                    | P <sub>tot</sub>                  | 200           | mW   |
| Operating and Storage Temperature Range              | T <sub>j</sub> , T <sub>stg</sub> | - 65 to + 125 | °C   |

# B5819WT

## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter  | Symbol      | Min.   | Typ.        | Max.        | Unit          |
|--|-------------|--------|-------------|-------------|---------------|
| Reverse Breakdown Voltage<br>at $I_R = 10\text{ }\mu\text{A}$  | $V_{(BR)R}$ | 40     | -<br>-<br>- | -<br>-<br>- | V             |
| Reverse Leakage Current<br>at $V_R = 30\text{ V}$  | $I_R$       | -<br>- | -<br>-      | 5           | $\mu\text{A}$ |
| Forward Voltage<br>at $I_F = 20\text{ mA}$<br>at $I_F = 200\text{ mA}$                                   | $V_F$       | -<br>- | -<br>-      | 0.37<br>0.6 | V             |
| Total Capacitance<br>at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$  | $C_T$       | -      | 50          | -           | pF            |
| Reverse Recovery Time<br>at $I_F = I_R = 200\text{ mA}$ , $I_{rr} = 0.1 I_R$ , $R_L = 100\text{ }\Omega$ | $t_{rr}$    | -      | 10          | -           | ns            |

## RATING AND CHARACTERISTIC CURVES (B5819WT)

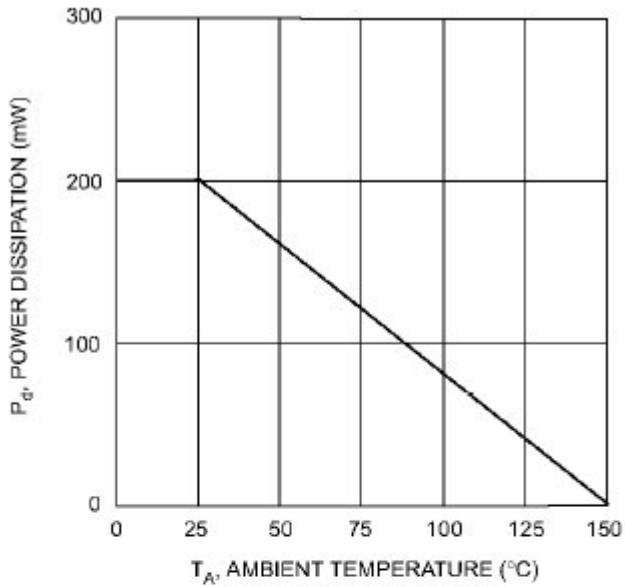


Fig. 1 Power Derating Curve

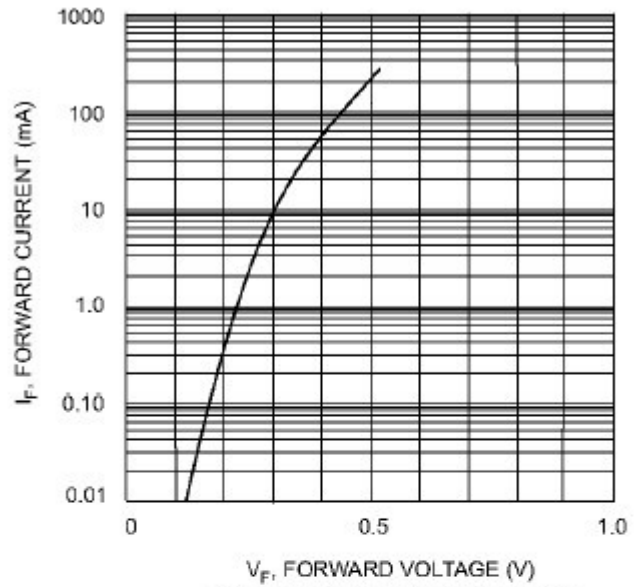


Fig. 2 Typical Forward Characteristics

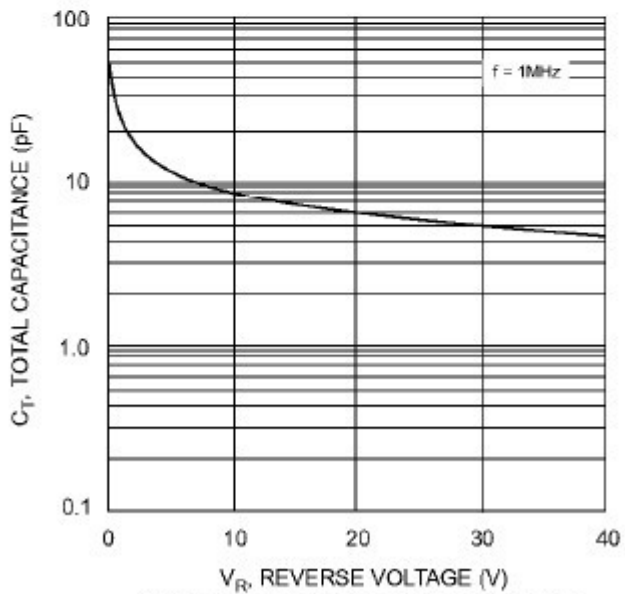


Fig. 3 Total Capacitance vs Reverse Voltage