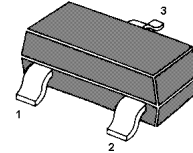
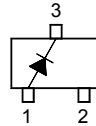


Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



Marking Code: **5D**
SOT-23 Plastic Package

Applications

- Ultra high speed switching application

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|-----------|----------------------|------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 85 | V |
| Continuous Reverse Voltage | V_R | 75 | V |
| Continuous Forward Current | I_F | 215 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 500 | mA |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | $t = 1\ \mu\text{s}$ | 4 |
| | | $t = 1\ \text{ms}$ | 1 |
| | | $t = 1\ \text{s}$ | 0.5 |
| Power Dissipation | P_{tot} | 350 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Min. | Max. | Unit |
|---------------------------|-------------|------|--|------|
| Forward Voltage | V_F | - | at $I_F = 1\ \text{mA}$ | 715 |
| | | | at $I_F = 10\ \text{mA}$ | 855 |
| | | | at $I_F = 50\ \text{mA}$ | 1 |
| | | | at $I_F = 150\ \text{mA}$ | 1.25 |
| Reverse Current | I_R | - | at $V_R = 25\ \text{V}$ | 30 |
| | | | at $V_R = 75\ \text{V}$ | 1 |
| | | | at $V_R = 25\ \text{V}, T_j = 150\text{ }^\circ\text{C}$ | 30 |
| | | | at $V_R = 75\ \text{V}, T_j = 150\text{ }^\circ\text{C}$ | 50 |
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 75 | - | V |
| Diode Capacitance | C_d | - | 2 | pF |
| Reverse Recovery Time | t_{rr} | - | 4 | ns |

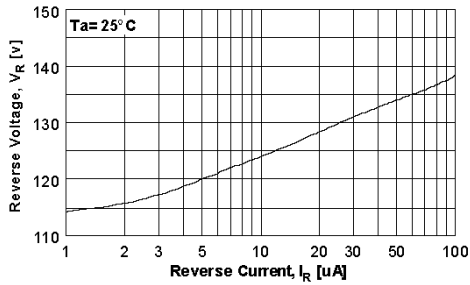


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

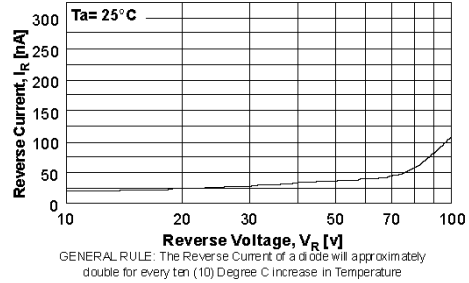


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

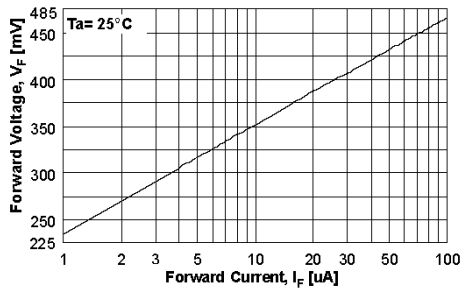


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

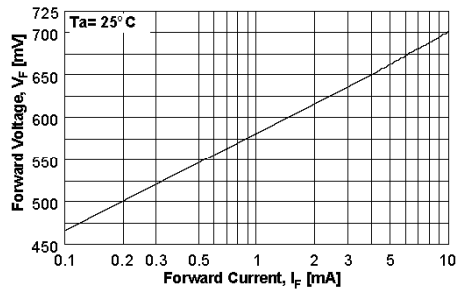


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

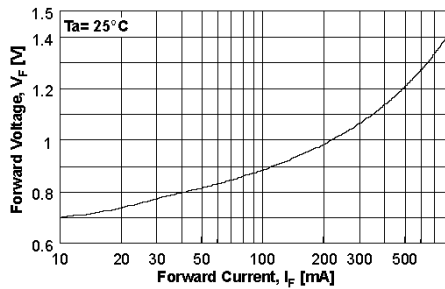


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

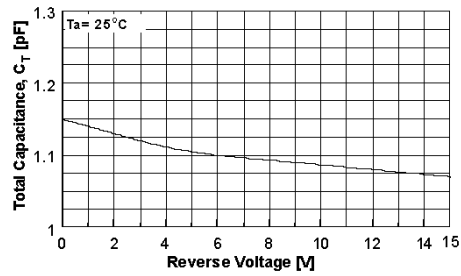


Figure 6. Total Capacitance