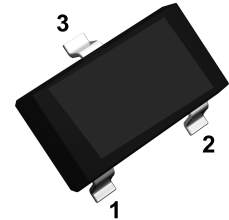


Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection

Applications

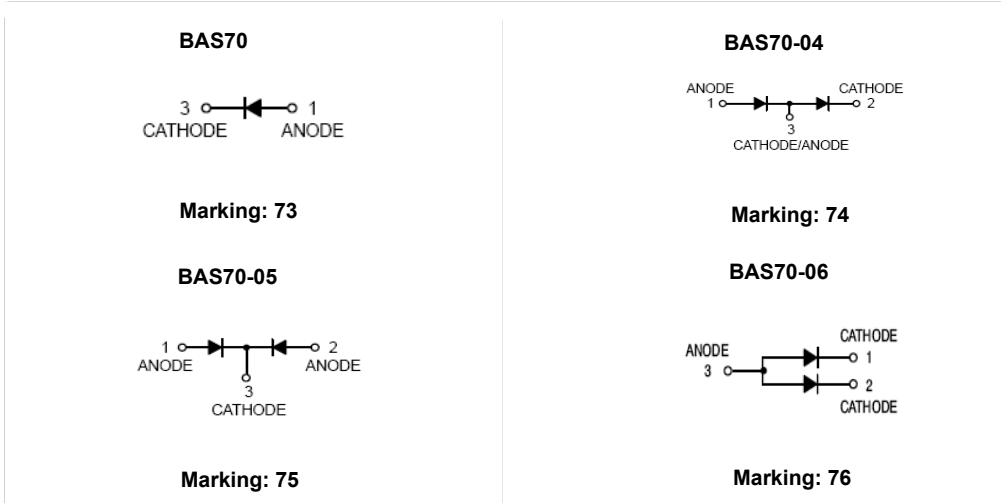
- High speed switching applications
- Circuit protecting
- Voltage clamping



SOT-23



Schematic Diagram and Marking



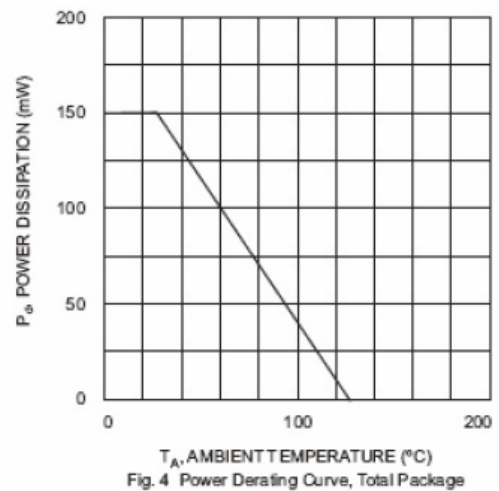
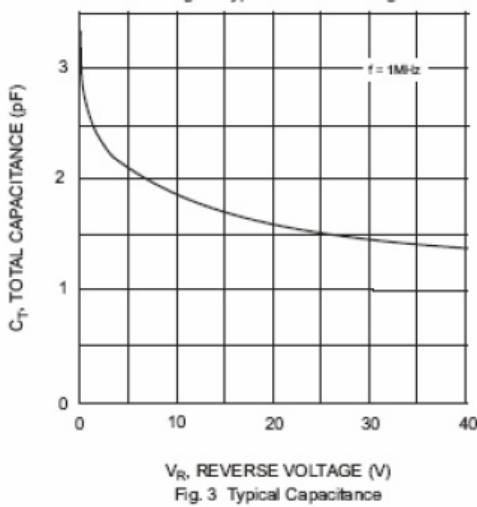
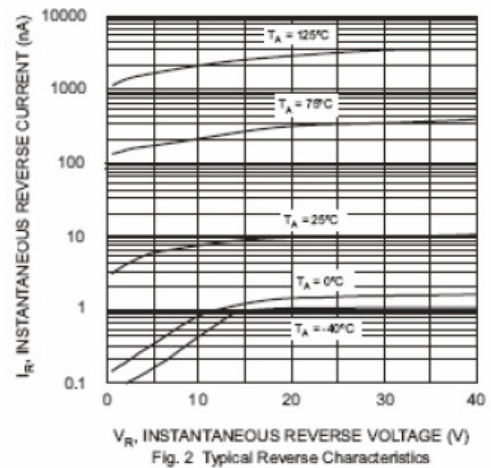
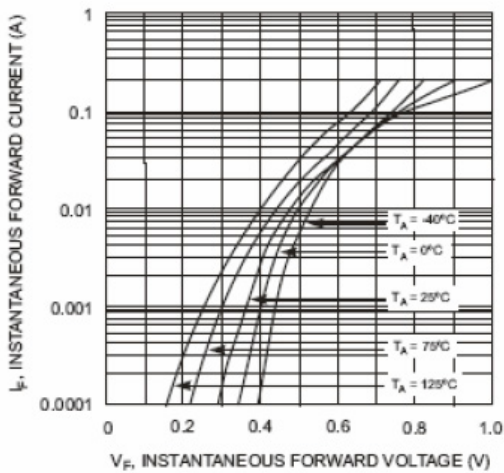
Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Working Peak Reverse Voltage | V_{RWM} | 70 | V |
| DC Reverse Voltage | V_R | | |
| RMS Reverse voltage | $V_{R(RMS)}$ | 49 | V |
| Forward Continuous Current | I_F | 70 | mA |
| Non-Repetitive Peak Forward Surge Current @ $t_p < 1.0\text{s}$ | I_{FSM} | 100 | mA |
| Power Dissipation | P_d | 200 | mW |
| Thermal Resistance, Junction to Ambient Air | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_j | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

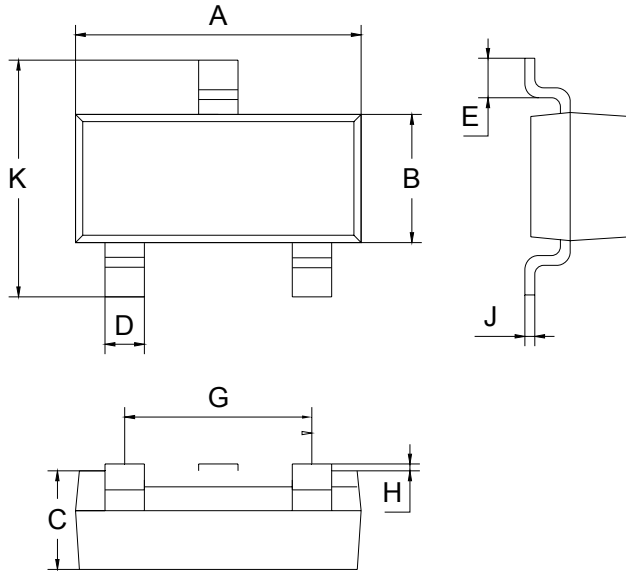
| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|---------------------------|-------------|-----|-------------|------|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 70 | | V | $I_{(BR)} = 10\mu\text{A}$ |
| Forward Voltage | V_F | - | 410 1000 | mV | $t_P < 300\mu\text{s}, I_F = 1.0\text{mA}$ $t_P < 300\mu\text{s}, I_F = 15\text{mA}$ |
| Reverse Leakage Current | I_R | - | 100 | nA | $t_P < 300\mu\text{s}, V_R = 50\text{V}$ |
| Junction Capacitance | C_j | - | 2.0 | pF | $V_R = 0\text{V}, f = 1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | - | 5.0 | ns | $I_F = I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100\Omega$ |

Typical Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)



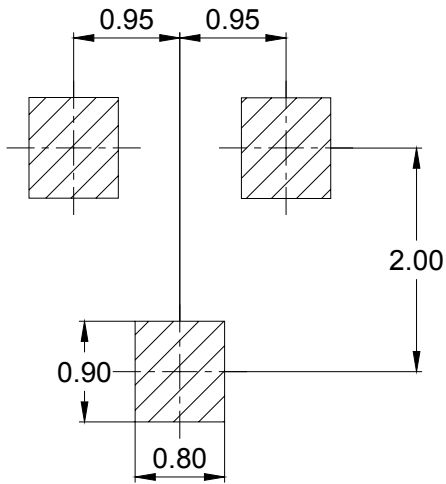
Package Outline Dimensions

SOT-23



| SOT-23 | | |
|----------------------|-------------|------|
| Dim | Min | Max |
| A | 2.70 | 3.10 |
| B | 1.10 | 1.50 |
| C | 1.0 Typical | |
| D | 0.4 Typical | |
| E | 0.35 | 0.48 |
| G | 1.80 | 2.00 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.20 | 2.60 |
| All Dimensions in mm | | |

Suggested Pad Layout



Unit : mm