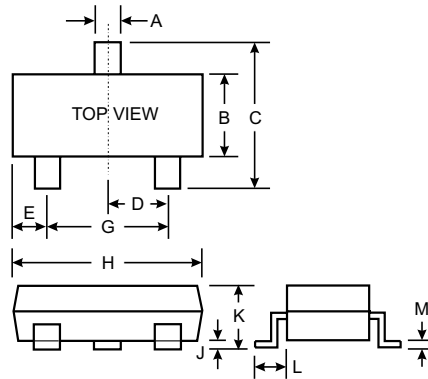


Features

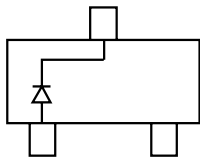
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Ultra-Small Surface Mount Package

Mechanical Data

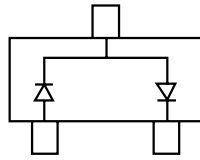
- Case: SOT-323, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams
- Marking: See Diagrams
- Mounting Position: Any
- Approx. Weight: 0.006 grams



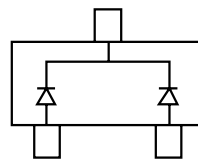
| SOT-323 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 0.30 | 0.40 |
| B | 1.15 | 1.35 |
| C | 2.00 | 2.20 |
| D | 0.65 Nominal | |
| E | 0.30 | 0.40 |
| G | 1.20 | 1.40 |
| H | 1.80 | 2.20 |
| J | 0.0 | 0.10 |
| K | 0.90 | 1.00 |
| L | 0.25 | 0.40 |
| M | 0.10 | 0.25 |
| All Dimensions in mm | | |



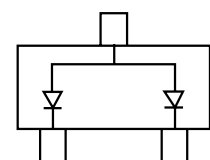
BAS70W Marking: K73



BAS70W-04 Marking: K74



BAS70W-05 Marking: K75



BAS70W-06 Marking: K76

Maximum Ratings and Electrical Characteristics, Single Diode @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | BAS70W | Unit |
|--|--|-------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 70 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 49 | V |
| Forward Continuous Current (Note 1) | I _F | 70 | mA |
| Non-Repetitive Peak Forward Surge Current @ t _p < 1.0s | I _{FSM} | 100 | mA |
| Power Dissipation (Note 1) | P _d | 200 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | R _{θJA} | 625 | K/W |
| Operating Junction Temperature Range | T _j | -55 to +125 | °C |
| Storage Temperature Range | T _{STG} | -65 to +150 | °C |

Electrical Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|-------------|------|---|
| Reverse Breakdown Voltage (Note 2) | V _{(BR)R} | 70 | — | — | I _R = 10μA |
| Forward Voltage | V _{FM} | — | 410 1000 | mV | t _p < 300μs, I _F = 1.0mA t _p < 300μs, I _F = 15mA |
| Peak Reverse Current | I _{RM} | — | 100 | nA | t _p < 300μs, V _R = 50V |
| Junction Capacitance | C _j | — | 2.0 | pF | V _R = 0V, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 5.0 | ns | I _F = I _R = 10mA to I _R = 1.0mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

- Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Test period < 3000μs.