

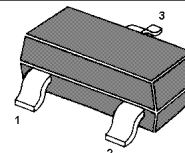
BAS70 / -04 / -05 / -06

Surface Mount Schottky Barrier Diode

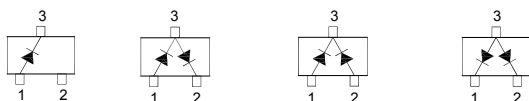


Features

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



BAS70 BAS70-04 BAS70-05 BAS70-06



SOT-23 Plastic Package

BAS70 Marking Code: **73**

BAS70-04 Marking Code: **74**

BAS70-05 Marking Code: **75**

BAS70-06 Marking Code: **76**

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

| Parameter | Symbol | Value | Unit |
|---|-----------------|---------------|--------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 70 | V |
| Non-Repetitive Peak Reverse Voltage | V_{RSM} | 70 | V |
| Maximum DC Blocking Voltage | V_R | 70 | V |
| Average Forward Rectified Current | $I_{F(AV)}$ | 70 | mA |
| Peak Forward Surge Current ($t < 10\text{ ms}$) | 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 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Min. | Max. | Unit |
|---|-------------|--------|-----------|------|
| Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 15\text{ mA}$ | V_F | - - | 0.41 1 | V |
| Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$ | $V_{(BR)R}$ | 70 | - | V |
| Reverse Current at $V_R = 50\text{ V}$ | I_R | - | 100 | nA |
| Total Capacitance at $V_R = 0$, $f = 1\text{ MHz}$ | C_T | - | 2 | pF |
| Reverse Recovery Time at $I_F = I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$ | t_{rr} | - | 5 | ns |

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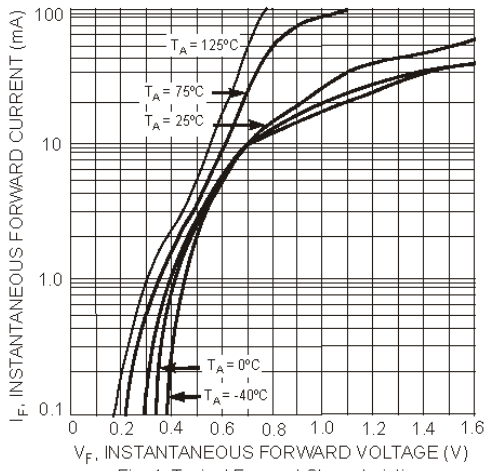


Fig. 1 Typical Forward Characteristics

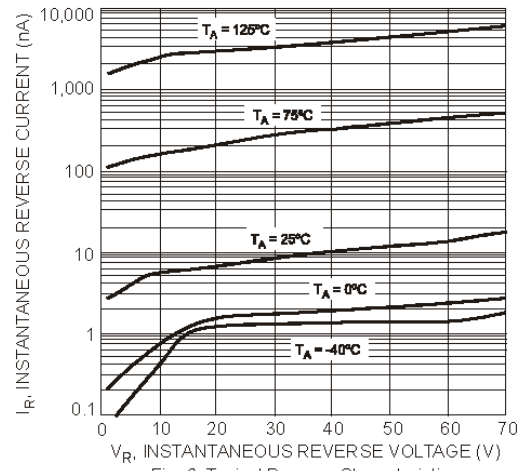


Fig. 2 Typical Reverse Characteristics

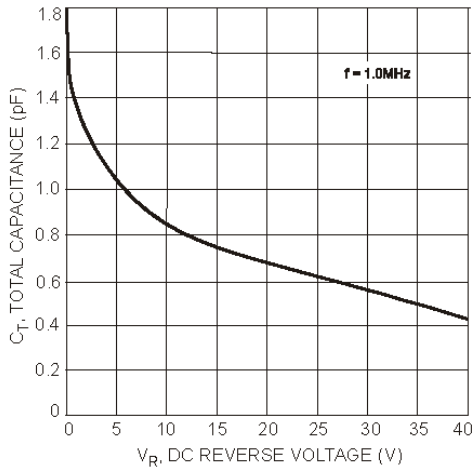


Fig. 3 Total Capacitance vs. Reverse Voltage

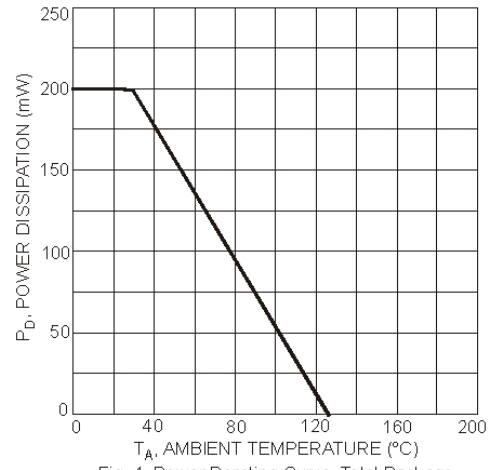
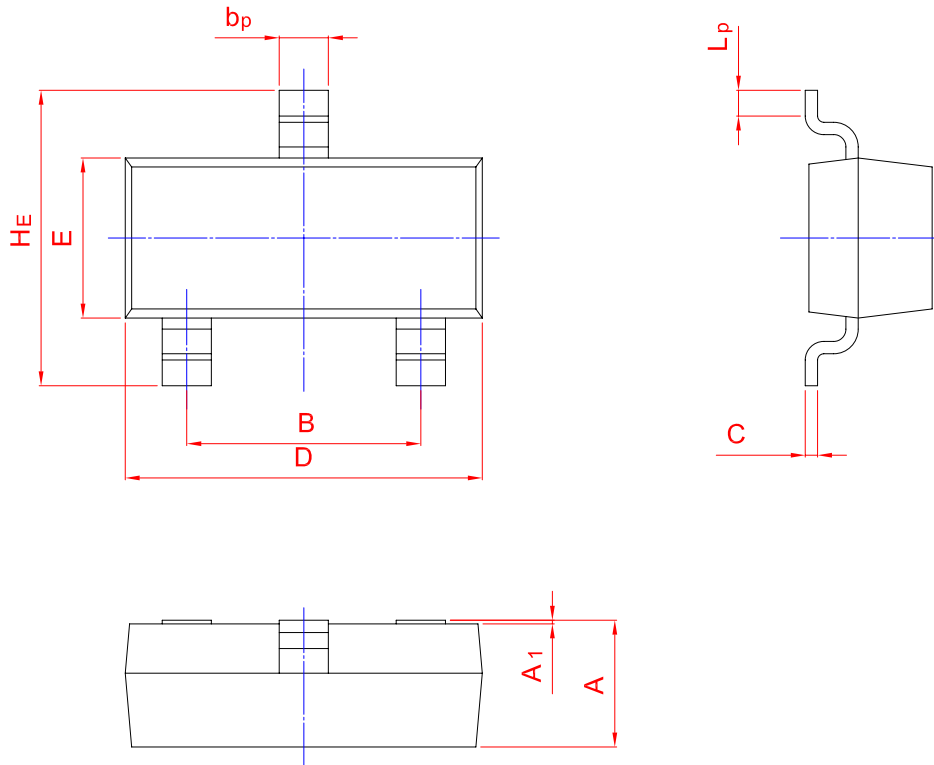
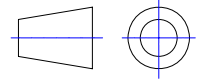


Fig. 4 Power Derating Curve, Total Package

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



| UNIT | A | B | b _p | C | D | E | H _E | A ₁ | L _p |
|------|------|------|----------------|------|------|------|----------------|----------------|----------------|
| mm | 1.40 | 2.04 | 0.50 | 0.19 | 3.10 | 1.65 | 3.00 | 0.100 | 0.50 |
| | 0.95 | 1.78 | 0.35 | 0.08 | 2.70 | 1.20 | 2.20 | 0.013 | 0.20 |