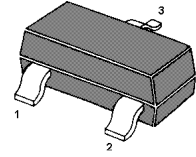


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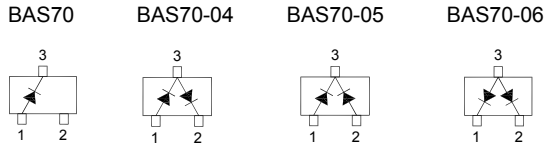
Surface Mount Schottky Barrier Diodes

Features

- Low turn-on voltage
- Fast switching



SOT-23 Plastic Package



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

| 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 ($t < 10$ ms) | I_{FSM} | 100 | mA |
| Power Dissipation | P_D | 200 | mW |
| Operating Junction Temperature Range | T_j | - 55 to + 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

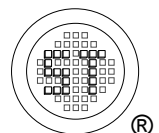
Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|---|-----------------|-------|--------------------|
| Typical Thermal Resistance from Junction to Ambient ¹⁾ | $R_{\theta JA}$ | 500 | $^\circ\text{C/W}$ |

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

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

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



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

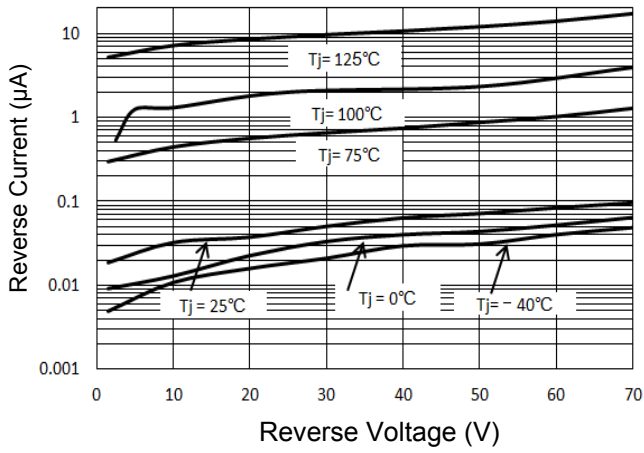


Fig 2. Forward Characteristics Curve

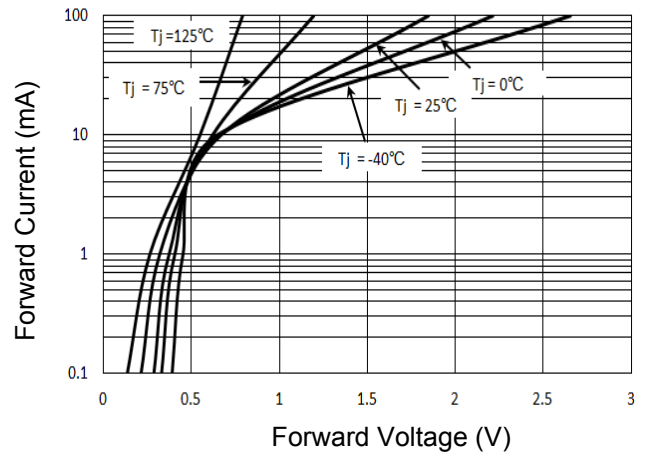


Fig 3. Junction Capacitance

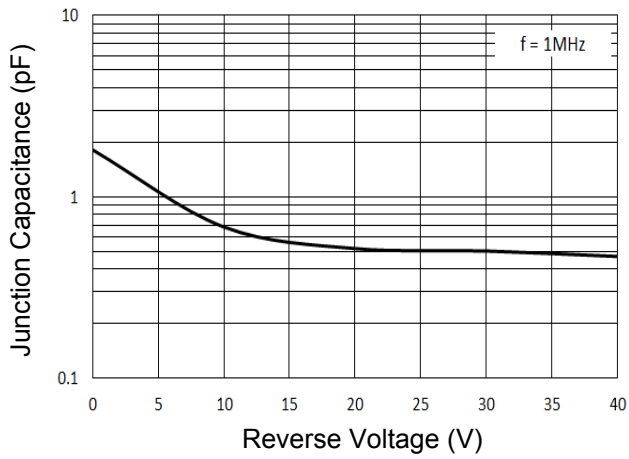
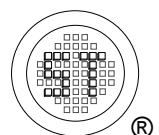
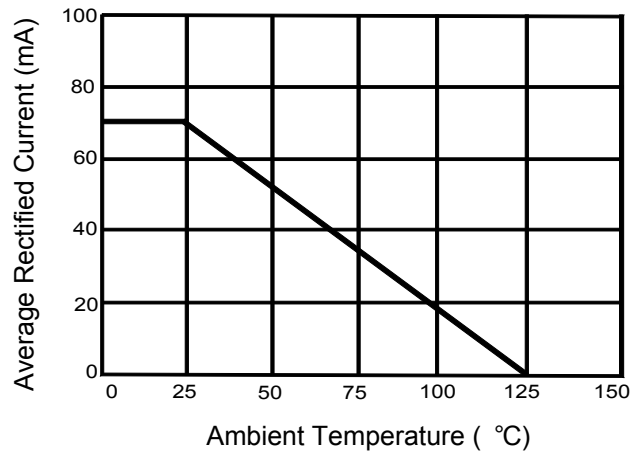


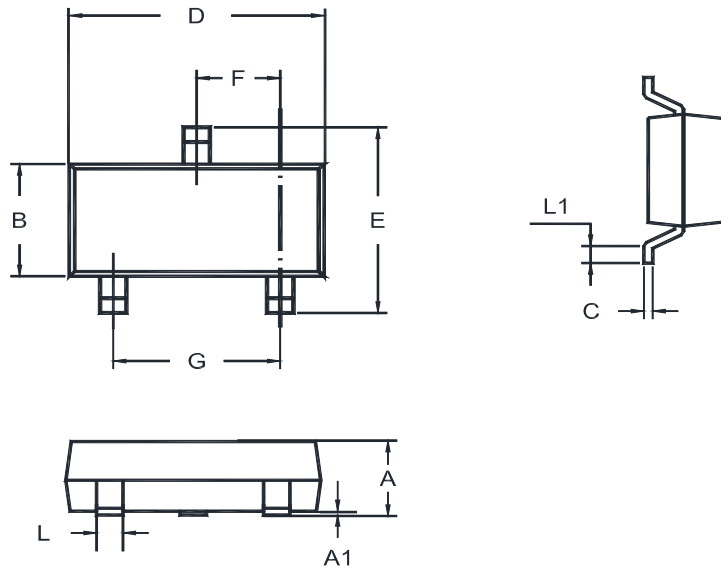
Fig 4. Average Rectified Current Derating Curve



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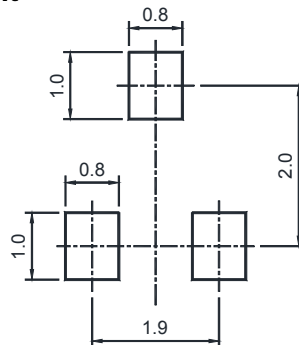
Package Outline (Dimensions in mm)

SOT-23



| Unit | A | A1 | B | C | D | E | F | G | L | L1 |
|------|------|-------|------|------|------|-----|------|------|------|-----|
| mm | 1.20 | 0.100 | 1.40 | 0.19 | 3.04 | 2.6 | 1.02 | 2.04 | 0.51 | 0.2 |
| | 0.89 | 0.013 | 1.20 | 0.08 | 2.80 | 2.2 | 0.89 | 1.78 | 0.37 | MIN |

Recommended Soldering Footprint



Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---------|-----------------|---------|---------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOT-23 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

Marking information

" ** " = Part No.

| Type | Marking | Type | Marking |
|----------|---------|----------|---------|
| BAS70 | 73 | BAS70-04 | 74 |
| BAS70-05 | 75 | BAS70-06 | 76 |

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

