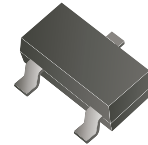


BAS70-xx-HF Series

RoHS Device
Halogen Free

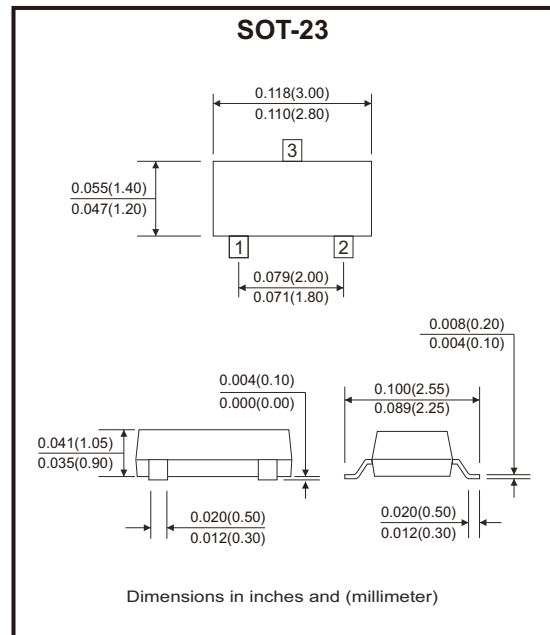


Features

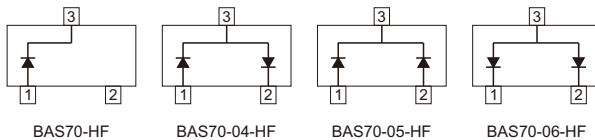
- Molding compound meets UL 94V-0 flammability rating.
- Low forward voltage.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|---------------------------|
| Continuous reverse voltage | V_R | 70 | V |
| Forward continuous current | I_F | 70 | mA |
| Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$ | I_{FSM} | 0.1 | A |
| Total power dissipation @ $T_A = 25^\circ\text{C}$ | P_D | 200 | mW |
| Thermal resistance, junction to ambient | $R_{\theta JA}$ | 500 | $^\circ\text{C}/\text{W}$ |
| Operation junction temperature range | T_J | -55 to +125 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +125 | $^\circ\text{C}$ |

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Conditions | Value | Unit |
|---------------------------------------|-----------------|--|-------|------|
| Maximum instantaneous forward voltage | V _F | I _{FM} = 1mA | 0.41 | V |
| | | I _{FM} = 15mA | 1 | |
| Continuous reverse voltage | V _R | I _R = 10μA | 70 | V |
| Maximum DC reverse current | I _R | V _R = 50V | 0.2 | μA |
| Maximum junction capacitance | C _J | f = 1MHz, V _R = 1V | 2 | pF |
| Maximum reverse recovery time | t _{rr} | I _F = I _R = 10mA, I _(REC) = 1mA | 5 | ns |

Typical Rating and Characteristic Curves (BAS70-xx-HF Series)

Fig.1 - Power Derating Curve

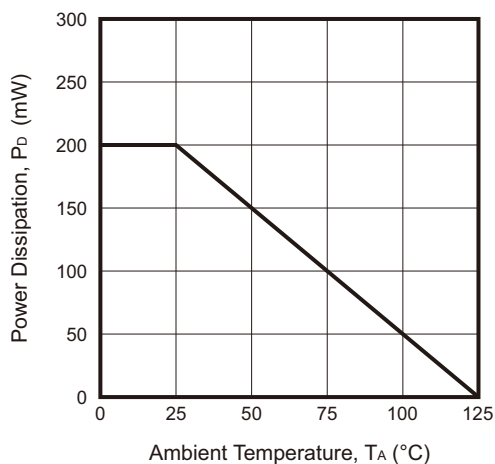


Fig.2 - Forward Characteristics

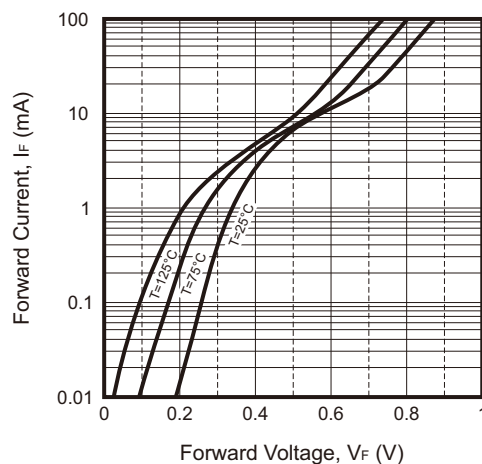


Fig.3 - Reverse Characteristics

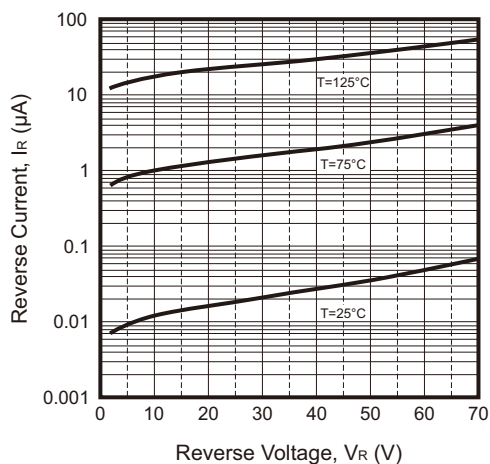
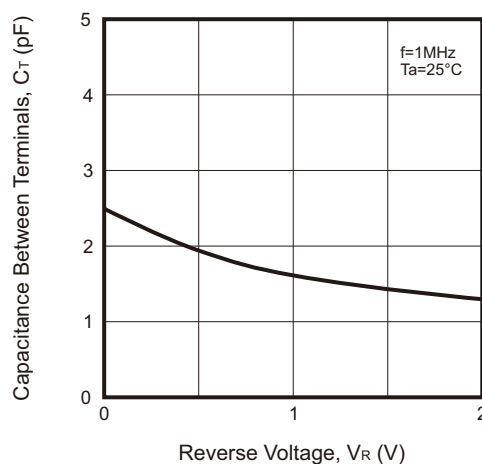
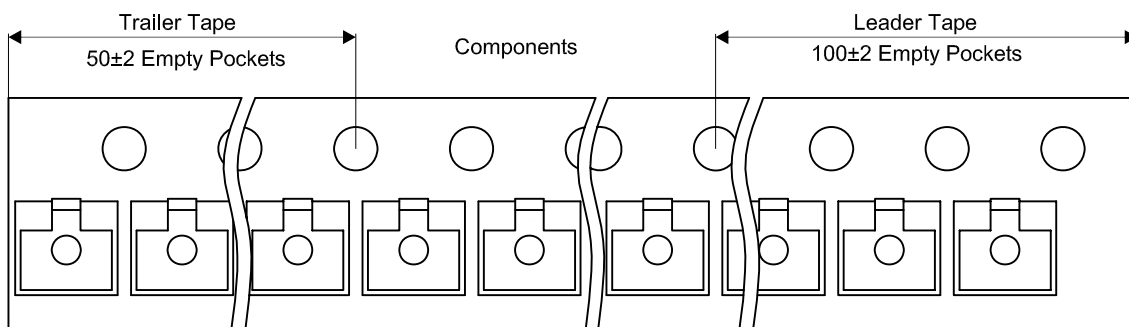
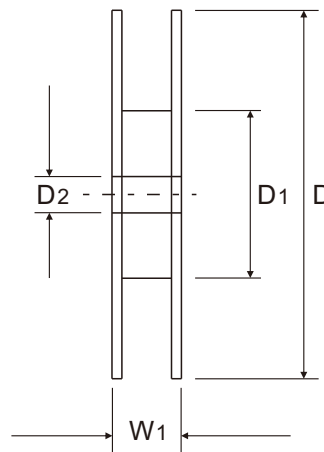
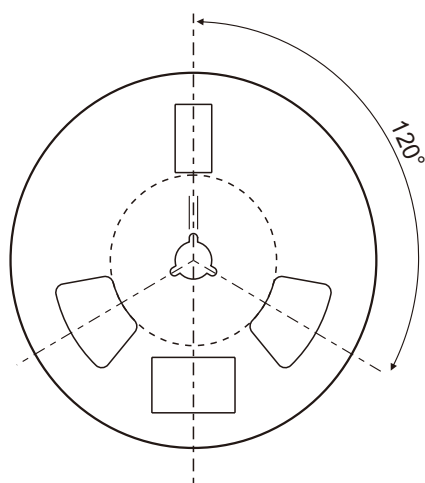
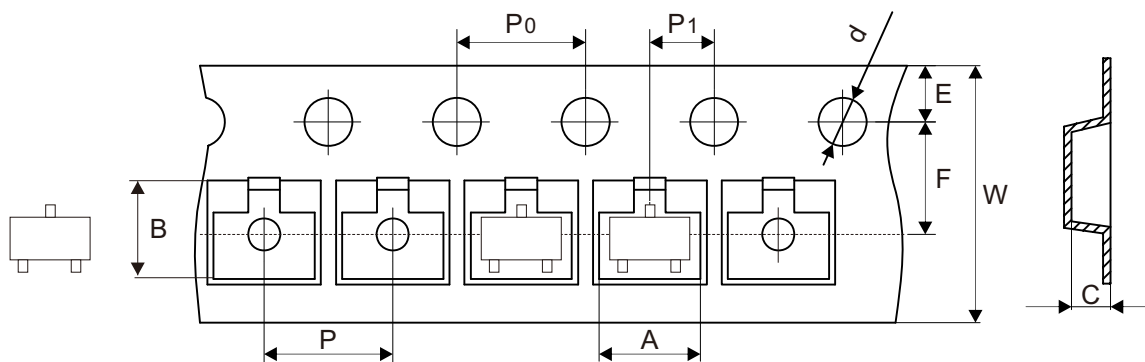


Fig.4 - Capacitance Characteristics



Reel Taping Specification

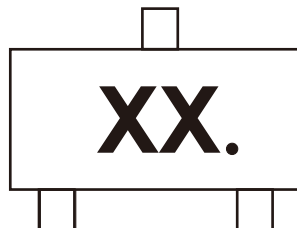


| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|--------------------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 + 0.10 - 0.00 | 178.00 ± 1.00 | 54.60 ± 1.00 | 13.30 ± 1.00 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | 0.059 + 0.004 - 0.000 | 7.008 ± 0.039 | 2.150 ± 0.039 | 0.524 ± 0.039 |

| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 + 0.30 - 0.10 | 11.10 ± 0.20 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 + 0.012 - 0.004 | 0.437 ± 0.008 |

Marking Code

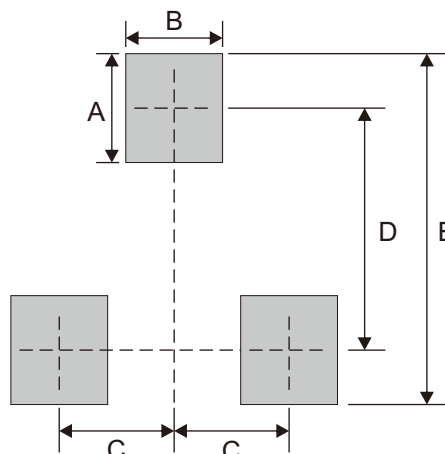
| Part Number | Marking Code |
|-------------|--------------|
| BAS70-HF | 73. |
| BAS70-04-HF | 74. |
| BAS70-05-HF | 75. |
| BAS70-06-HF | 76. |



xx = Product type marking code

Suggested P.C.B. PAD Layout

| SIZE | SOT-23 | |
|------|--------|--------|
| | (mm) | (inch) |
| A | 0.90 | 0.035 |
| B | 0.80 | 0.031 |
| C | 0.95 | 0.037 |
| D | 2.00 | 0.079 |
| E | 2.90 | 0.114 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOT-23 | 3,000 | 7 |