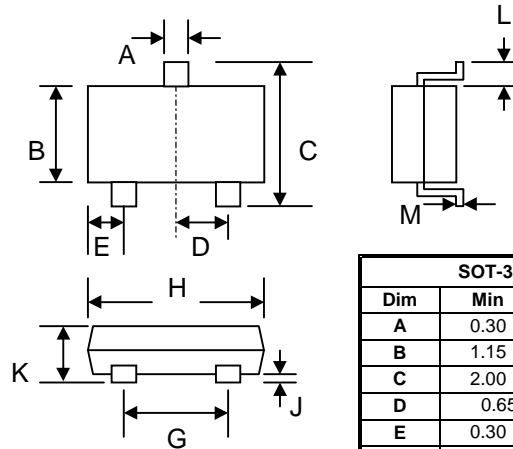


Features

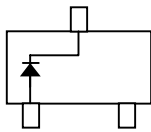
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



| 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 | — | 0.10 |
| K | 0.90 | 1.10 |
| L | 0.25 | — |
| M | 0.05 | 0.15 |
| All Dimensions in mm | | |

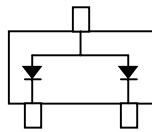
Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 5**



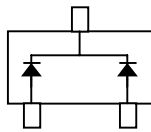
TOP VIEW

BAS70W Marking: A70



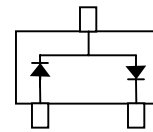
TOP VIEW

BAS70AW Marking: A72



TOP VIEW

BAS70CW Marking: A73



TOP VIEW

BAS70SW Marking: A74

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|---------------------------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 70 | V |
| Forward Continuous Current (Note 1) | I_F | 200 | mA |
| Forward Surge Current (Note 1) @ $t < 1.0\text{s}$ | I_{FSM} | 600 | mA |
| Power Dissipation (Note 1) | P_d | 200 | mW |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -55 to +125 | $^\circ\text{C}$ |

Note: 1. Device on fiberglass substrate.

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|---------------------------|-------------|-----|-----|--------------------|------|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 70 | — | — | V | @ $I_R = 10\mu\text{A}$ |
| Forward Voltage | V_F | — | — | 410 750 1000 | mV | @ $I_F = 1.0\text{mA}$, $t_p < 300\mu\text{s}$ @ $I_F = 10\text{mA}$, $t_p < 300\mu\text{s}$ @ $I_F = 15\text{mA}$, $t_p < 300\mu\text{s}$ |
| Reverse Leakage Current | I_R | — | 20 | 100 | nA | @ $V_R = 50\text{V}$, $t_p < 300\mu\text{s}$ |
| Junction Capacitance | C_j | — | 1.5 | 2.0 | pF | $V_R = 0\text{V}$, $f = 1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | — | — | 5.0 | nS | $I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$, $R_L = 100\Omega$ |

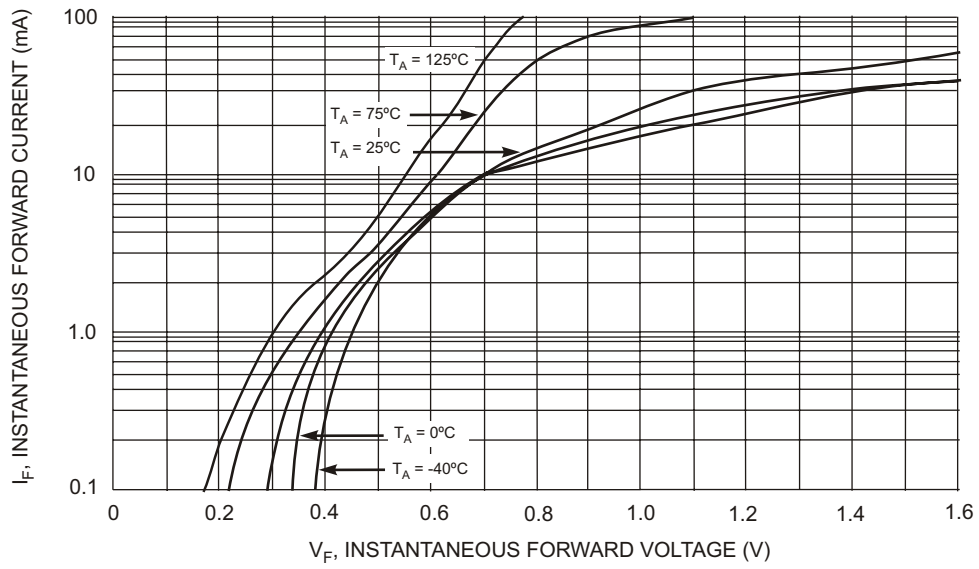


Fig. 1 Typical Forward Characteristics

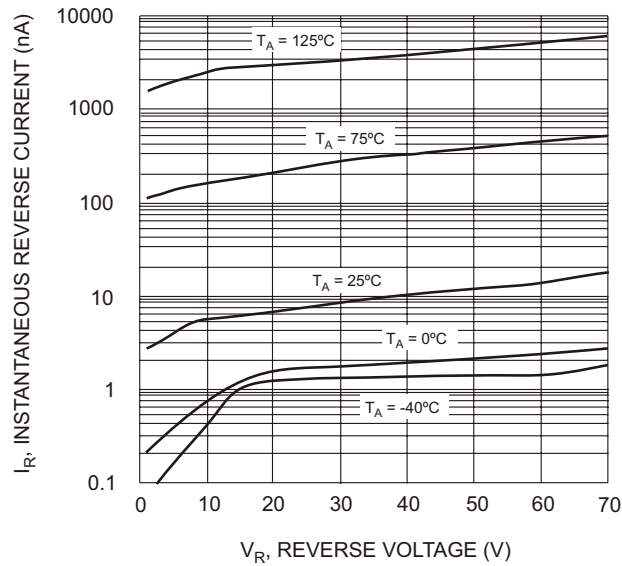


Fig. 2 Typical Reverse Characteristics

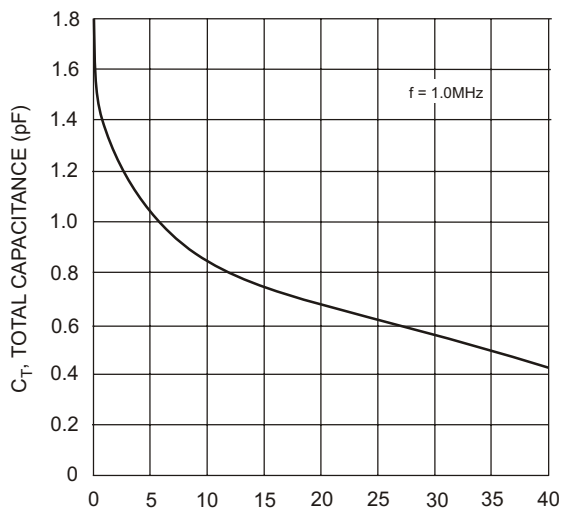


Fig. 3 Typical Capacitance

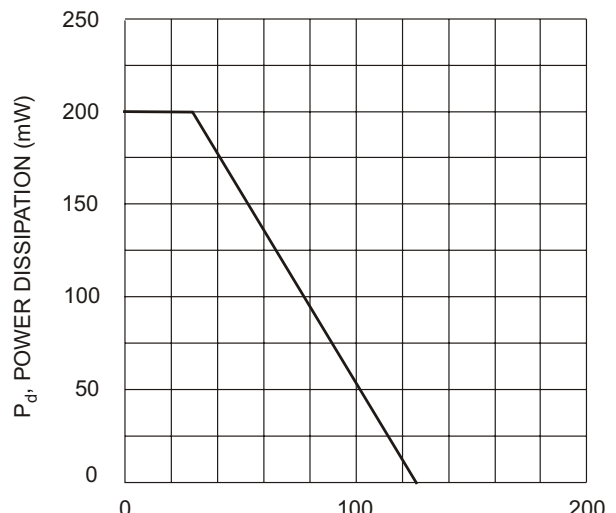
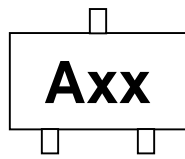


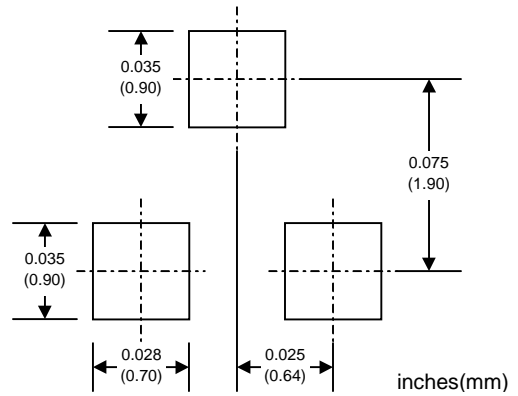
Fig. 4 Power Derating Curve, Total Package

MARKING INFORMATION



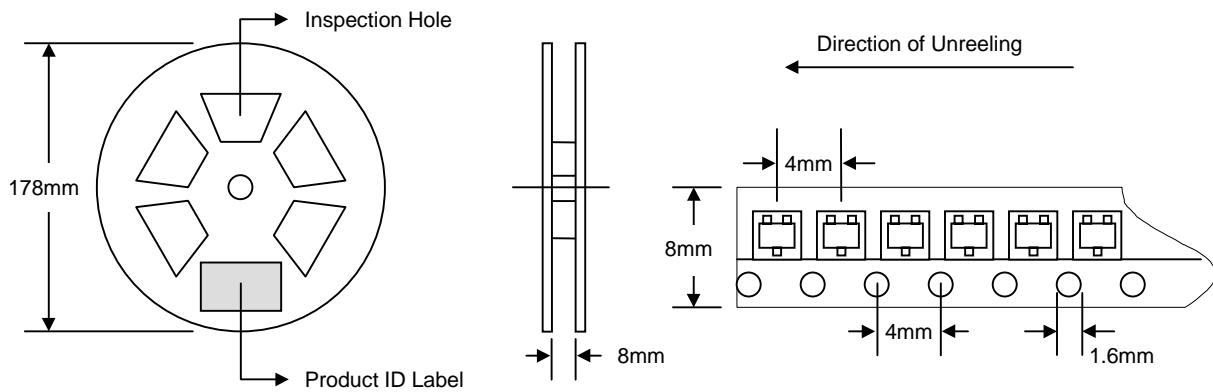
Axx = Device Code
 xx = 70 (BAS70W)
 72 (BAS70AW)
 73 (BAS70CW)
 74 (BAS70SW)

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178 | 3,000 | 187 x 187 x 65 | 15,000 | 390 x 240 x 420 | 150,000 | 10.0 |

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| BAS70W-T1 | SOT-323 | 3000/Tape & Reel |
| BAS70AW-T1 | SOT-323 | 3000/Tape & Reel |
| BAS70CW-T1 | SOT-323 | 3000/Tape & Reel |
| BAS70SW-T1 | SOT-323 | 3000/Tape & Reel |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS70W-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

Phone: 886-7-822-5408 or 886-7-822-5410

Fax: 886-7-822-5417

Email: sales@wontop.com

Internet: <http://www.wontop.com>

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