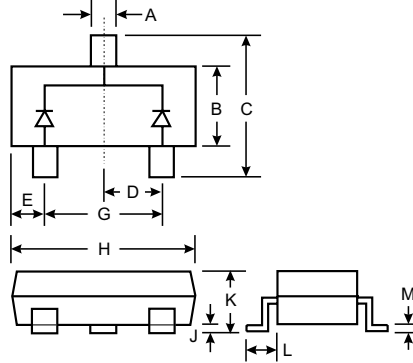


Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOT-323, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: KJA
- Weight: 0.006 grams (approx.)



| 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 | | |

Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | BAV70W | Unit |
|--|--|-------------|------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 75 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 53 | V |
| Forward Continuous Current | I _{FM} | 300 | mA |
| Average Rectified Output Current | I _O | 150 | mA |
| Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s | I _{FSM} | 2.0 1.0 | A |
| Power Dissipation | P _d | 200 | mW |
| Thermal Resistance Junction to Ambient Air | R _{θJA} | 625 | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|-------------------------------|----------------------|--|
| Reverse Breakdown Voltage (Note 1) | V _{BR(R)} | 75 | — | V | I _R = 100μA |
| Forward Voltage (Note 1) | V _{FM} | — | 0.715 0.855 1.0 1.25 | V | I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA |
| Peak Reverse Current (Note 1) | I _{RM} | — | 2.5 50 30 25 | μA μA μA nA | V _R = 75V V _R = 75V, T _j = 150°C V _R = 25V, T _j = 150°C V _R = 20V |
| Junction Capacitance | C _j | — | 2.0 | pF | V _R = 0, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 4.0 | ns | I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

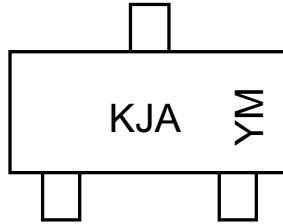
Note: 1. Short duration test pulse used to minimize self-heating effect.

Ordering Information (Note 2)

| Device | Packaging | Shipping |
|----------|-----------|------------------|
| BAV70W-7 | SOT-323 | 3000/Tape & Reel |

Notes: 2. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



KJA = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

| Year | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|------|------|------|------|------|------|------|------|
| Code | J | K | L | M | N | O | P |

| Month | Jan | Feb | March | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

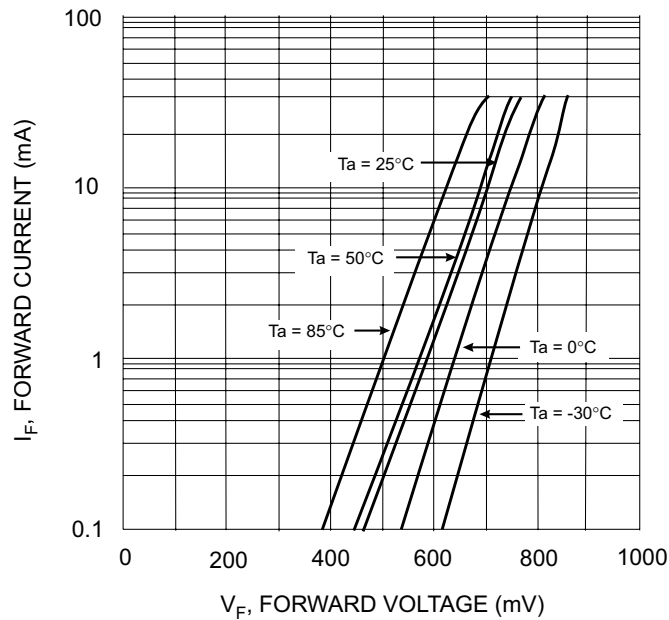


Fig. 1 Forward Current vs. Forward Voltage

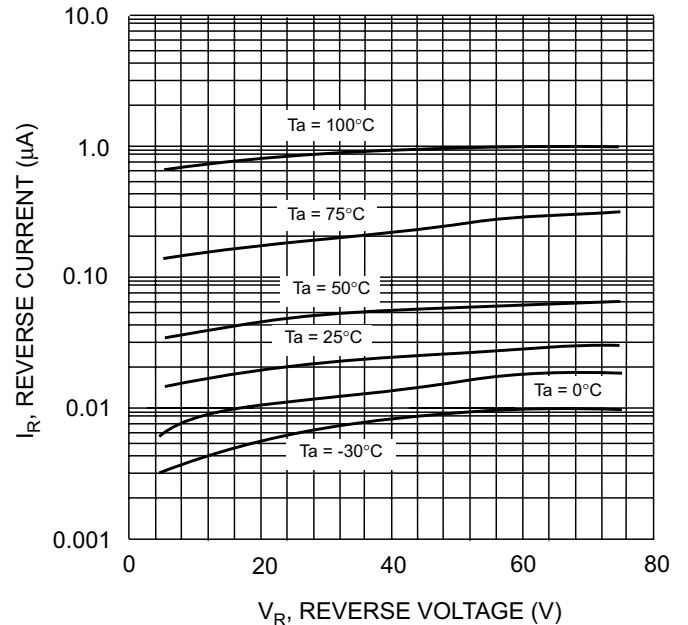
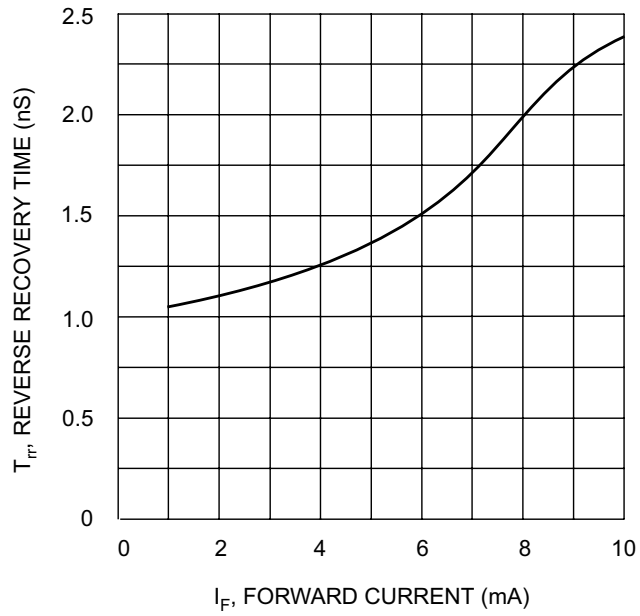
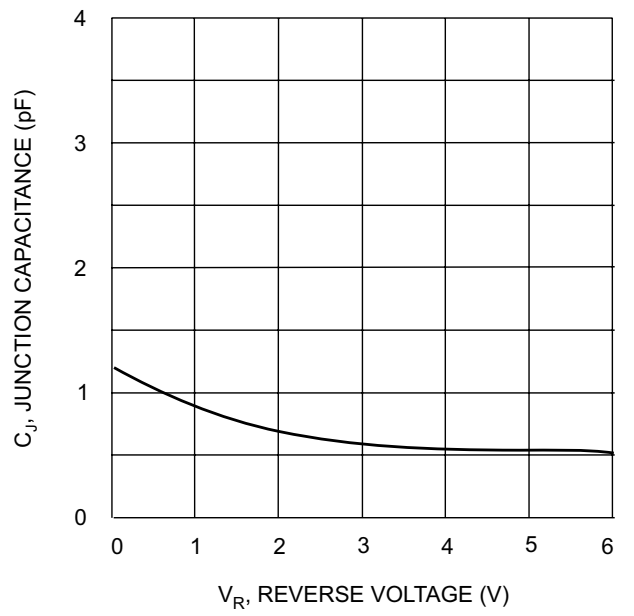


Fig. 2 Reverse Current vs. Reverse Voltage



I_F , FORWARD CURRENT (mA)
Fig. 3. Reverse Recovery Time vs. Forward Current



V_R , REVERSE VOLTAGE (V)
Fig. 4. Typical Junction Capacitance vs. Reverse Voltage