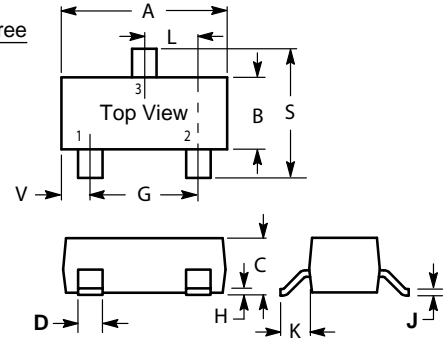
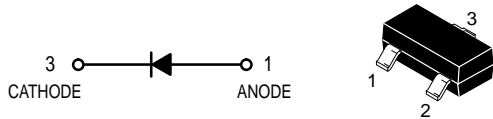


RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance



MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|----------------------------|------------------------|-------|------|
| Continuous Reverse Voltage | V_R | 120 | Vdc |
| Peak Forward Current | I_F | 200 | mAdc |
| Peak Forward Surge Current | $I_{FM}(\text{surge})$ | 500 | mAdc |

| SOT-23 | | |
|---------------------|-------|-------|
| Dim | Min | Max |
| A | 2.800 | 3.040 |
| B | 1.200 | 1.400 |
| C | 0.890 | 1.110 |
| D | 0.370 | 0.500 |
| G | 1.780 | 2.040 |
| H | 0.013 | 0.100 |
| J | 0.085 | 0.177 |
| K | 0.450 | 0.600 |
| L | 0.890 | 1.020 |
| S | 2.100 | 2.500 |
| V | 0.450 | 0.600 |
| All Dimension in mm | | |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|-----------------|-------------|---------------------------|
| Total Device Dissipation FR-5 Board ⁽¹⁾ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 225 | mW |
| | | 1.8 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ\text{C}/\text{W}$ |
| Total Device Dissipation Alumina Substrate, ⁽²⁾ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 300 | mW |
| | | 2.4 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 417 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

DEVICE MARKING

BAS19 = JP

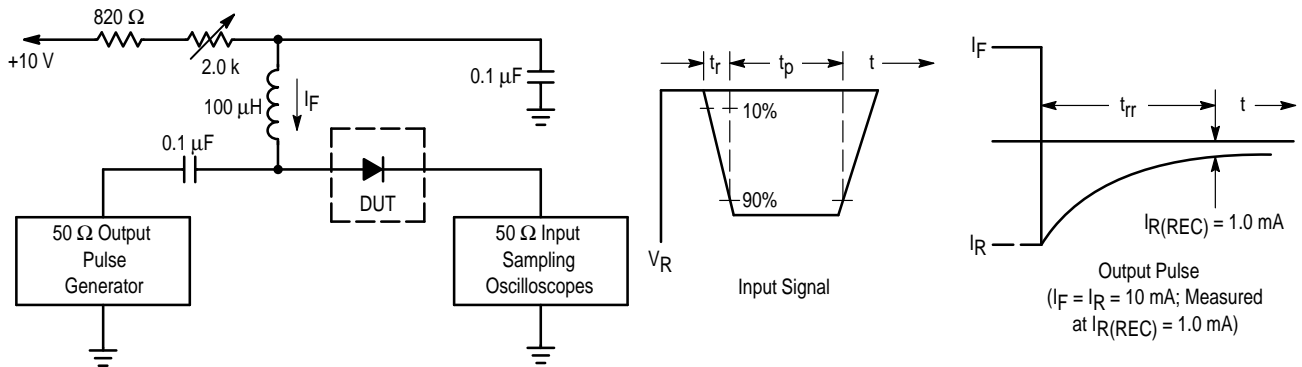
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Characteristic | Symbol | Min | Max | Unit |
|----------------|--------|-----|-----|------|
|----------------|--------|-----|-----|------|

OFF CHARACTERISTICS

| | | | | |
|---|------------|-----|----------------------------|-----------------|
| Reverse Voltage Leakage Current ($V_R = 100 \text{ Vdc}, T_J = 25^\circ\text{C}$) ($V_R = 100 \text{ Vdc}, T_J = 150^\circ\text{C}$) ($V_R = 25 \text{ Vdc}, T_J = 150^\circ\text{C}$) | I_R | — | 0.1 100 40 | μAdc |
| Reverse Breakdown Voltage ($I_{BR} = 100 \mu\text{Adc}$) | $V_{(BR)}$ | 120 | — | Vdc |
| Forward Voltage ($I_F = 1.0 \text{ mAdc}$) ($I_F = 10 \text{ mAdc}$) ($I_F = 100 \text{ mAdc}$) ($I_F = 200 \text{ mAdc}$) | V_F | — | 715 855 1000 1250 | mV |
| Diode Capacitance ($V_R = 0, f = 1.0 \text{ MHz}$) | C_D | — | 5.0 | pF |
| Reverse Recovery Time ($I_F = I_R = 30 \text{ mAdc}, R_L = 100 \Omega$) | t_{rr} | | 50 | ns |

1.FR-5 = 1.0 X 0.75 X 0.062 in. 2.Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_R(\text{peak})$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

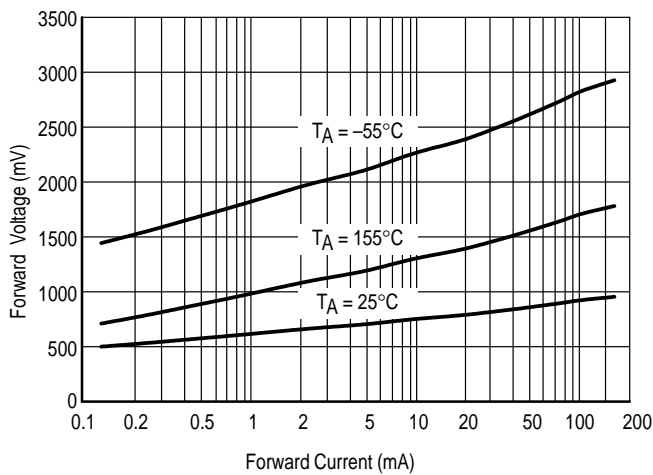


Figure 2. Forward Voltage

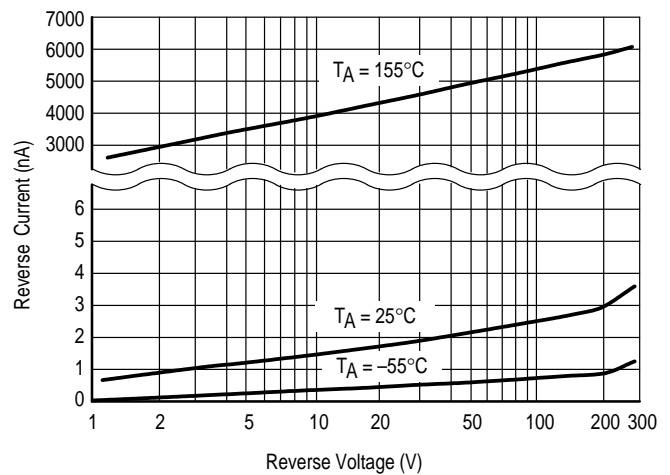


Figure 3. Reverse Leakage