

BAS21HT1

Preferred Device

High Voltage Switching Diode

- Device Marking: JS

MAXIMUM RATINGS

| Symbol | Rating | Value | Unit |
|-----------------|----------------------------|-------|------|
| V_R | Continuous Reverse Voltage | 250 | Vdc |
| I_F | Peak Forward Current | 200 | mAdc |
| $I_{FM(surge)}$ | Peak Forward Surge Current | 625 | mAdc |

THERMAL CHARACTERISTICS

| Symbol | Characteristic | Max | Unit |
|-----------------|--|----------------|----------------------------|
| P_D | Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$ Derate above 25°C | 200 1.57 | mW mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient | 635 | $^\circ\text{C}/\text{W}$ |
| T_J, T_{stg} | Junction and Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |

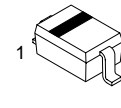
*FR-5 Minimum Pad



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HIGH VOLTAGE SWITCHING DIODE



SOD-323
CASE 477
PLASTIC

MARKING DIAGRAM



JS = Device Code



ORDERING INFORMATION

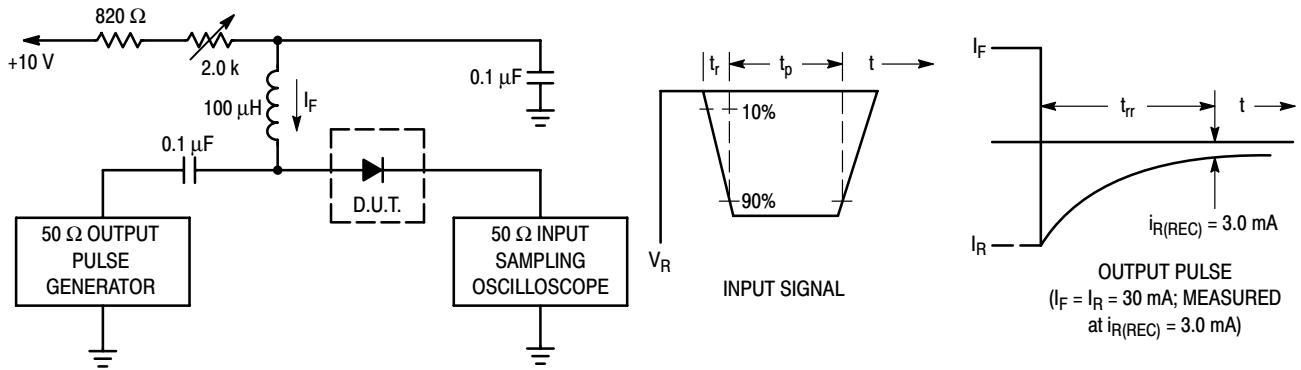
| Device | Package | Shipping |
|----------|---------|------------------|
| BAS21HT1 | SOD-323 | 3000/Tape & Reel |

Preferred devices are recommended choices for future use and best overall value.

BAS21HT1

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

| Characteristic | Symbol | Min | Max | Unit |
|---|-------------------|--------|--------------|---------------------------|
| OFF CHARACTERISTICS | | | | |
| Reverse Voltage Leakage Current ($V_R = 200\text{ Vdc}$) ($V_R = 200\text{ Vdc}$, $T_J = 150^\circ\text{C}$) | I_R | – | 0.1 100 | μA_{dc} |
| Reverse Breakdown Voltage ($I_{\text{BR}} = 100\ \mu\text{A}_{\text{dc}}$) | $V_{(\text{BR})}$ | 250 | – | Vdc |
| Forward Voltage ($I_F = 100\ \text{mA}_{\text{dc}}$) ($I_F = 200\ \text{mA}_{\text{dc}}$) | V_F | – – | 1000 1250 | mV |
| Diode Capacitance ($V_R = 0$, $f = 1.0\ \text{MHz}$) | C_D | – | 5.0 | pF |
| Reverse Recovery Time ($I_F = I_R = 30\ \text{mA}_{\text{dc}}$, $R_L = 100\ \Omega$) | t_{rr} | – | 50 | ns |



- Notes: 1. A 2.0 k Ω variable resistor adjusted for a Forward Current (I_F) of 30 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 30 mA.
 3. $t_p \gg t_{\text{rr}}$

Figure 1. Recovery Time Equivalent Test Circuit

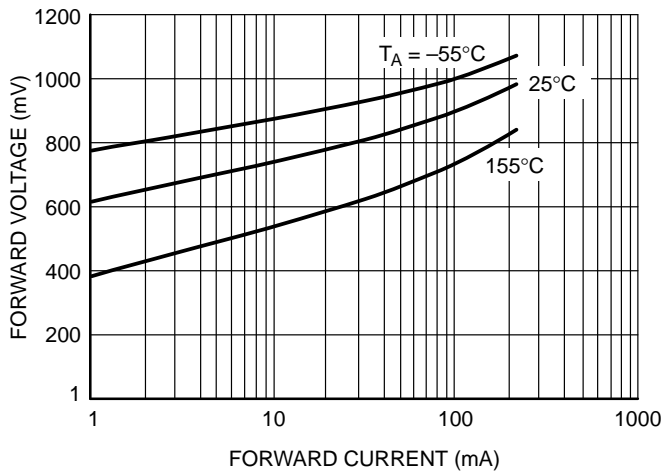


Figure 2. Forward Voltage

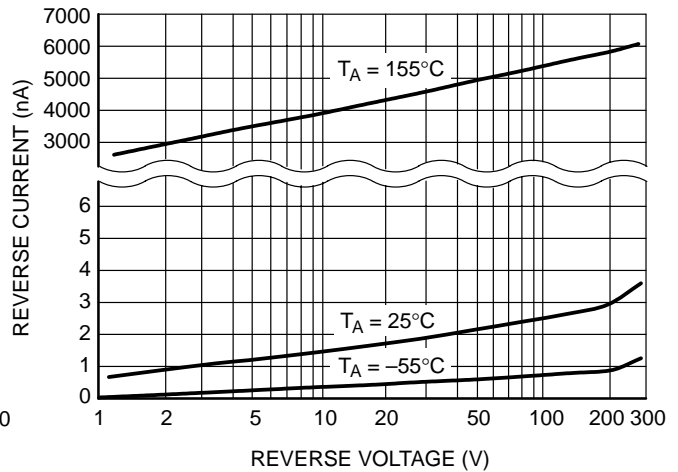
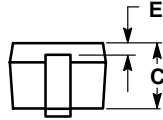
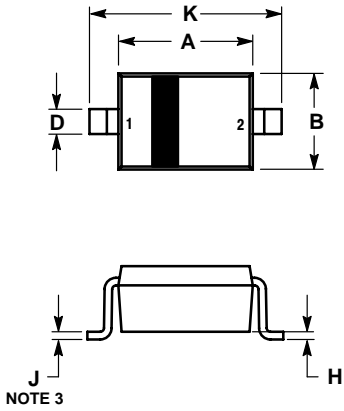


Figure 3. Reverse Leakage

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PACKAGE DIMENSIONS

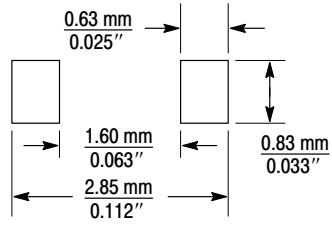
SOD-323
 PLASTIC PACKAGE
 CASE 477-02
 ISSUE A



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: MILLIMETERS.
 3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|-------|-----------|--------|
| | MIN | MAX | MIN | MAX |
| A | 1.60 | 1.80 | 0.063 | 0.071 |
| B | 1.15 | 1.35 | 0.045 | 0.053 |
| C | 0.80 | 1.00 | 0.031 | 0.039 |
| D | 0.25 | 0.40 | 0.010 | 0.016 |
| E | 0.15 REF | | 0.006 REF | |
| H | 0.00 | 0.10 | 0.000 | 0.004 |
| J | 0.089 | 0.177 | 0.0035 | 0.0070 |
| K | 2.30 | 2.70 | 0.091 | 0.106 |


- STYLE 1:
 PIN 1. CATHODE
 2. ANODE



($\frac{\text{mm}}{\text{inches}}$)

SOD-323
 Soldering Footprint

BAS21HT1

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