



BAS21H



Plastic-Encapsulate Diodes



SOD-323



| Features |
|---|
| ·Small plastic SMD package |
| ·Continuous reverse voltage: max. 250 V |
| ·Pb-Free package is available |
| ·Moisture Sensitivity Level 1 |
| ·Polarity: Color band denotes cathode end |
| ·Marking : JS |

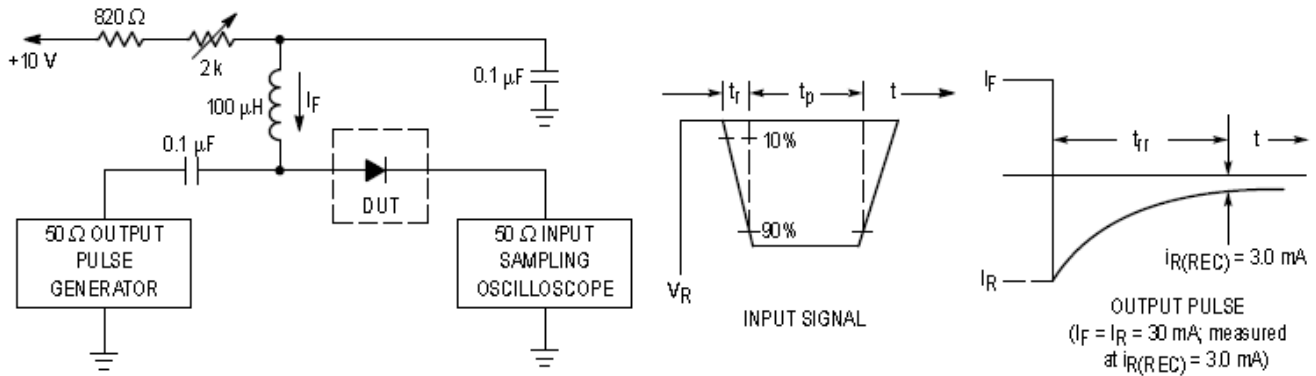
| Ordering Information | | | |
|----------------------|--------------------|---------|--------------------|
| Part No. | Remark | Package | Packing |
| BAS21H | General | SOD-323 | 3000 / Tape & Reel |
| BAS21H-H | Halogen Free | | |
| BAS21H-Q | AEC-Q101 qualified | | |

| Maximum Ratings (T _A =25°C unless otherwise specified) | | | |
|---|------------------------|-------|------|
| Rating | Symbol | Value | Unit |
| Continuous Reverse Voltage | V _R | 250 | Vdc |
| Peak Forward Current | I _F | 200 | mAdc |
| Peak Forward Surge Current | I _{FM(surge)} | 625 | mAdc |

| Thermal Characteristics (T _A =25°C unless otherwise specified) | | | |
|---|-----------------------------------|----------|-------|
| Characteristic | Symbol | Max | Unit |
| Total Device Dissipation | P _D | 200 | mW |
| FR-5 Board ⁽¹⁾ Derate above 25°C | T _A = 25°C | 1.57 | mW/°C |
| Thermal Resistance from Junction to Ambient | R _{θJA} | 635 | °C/W |
| Operating/ Junction and Storage Temperature Range | T _J , T _{STG} | -55~+150 | °C |

1. FR-5 Minimum Pad

| Electrical Characteristics (T _A =25°C unless otherwise specified) | | | | |
|--|-------------------|------|------|------|
| Characteristic | Symbol | Min. | Max. | Unit |
| OFF Characteristics | | | | |
| Reverse Breakdown Voltage (I _{BR} = 100 μAdc) | V _(BR) | 250 | - | V |
| Reverse Voltage Leakage Current (V _R = 200 V) (V _R = 200 V, T _J = 150°C) | I _R | - | 0.1 | μA |
| | | - | 100 | |
| Forward Voltage (I _F = 100 mAdc) (I _F = 200 mAdc) | V _F | - | 1000 | mV |
| | | - | 1250 | |
| Diode Capacitance (V _R = 0, f = 1.0 MHz) | C _D | - | 5 | pF |
| Reverse Recovery Time (I _F = I _R = 30 mA, R _L = 100 Ω) | t _{rr} | - | 50 | ns |
| | | - | | |



- Notes: 1. A 2.0 kΩ 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. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

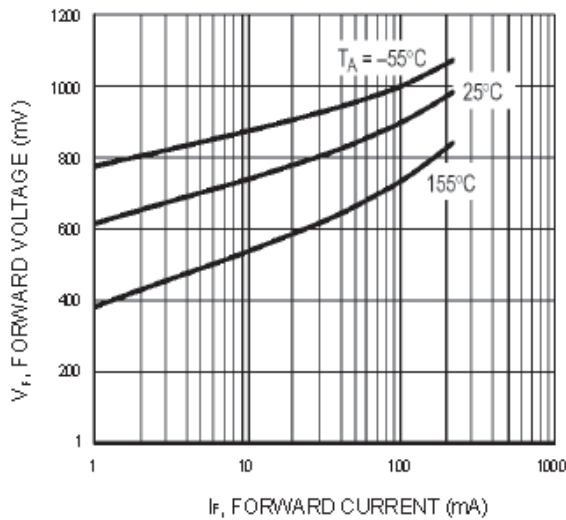


Figure 1. Forward Voltage

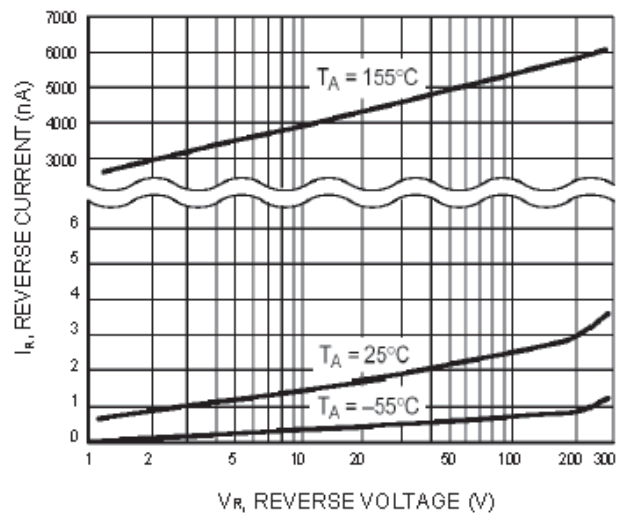
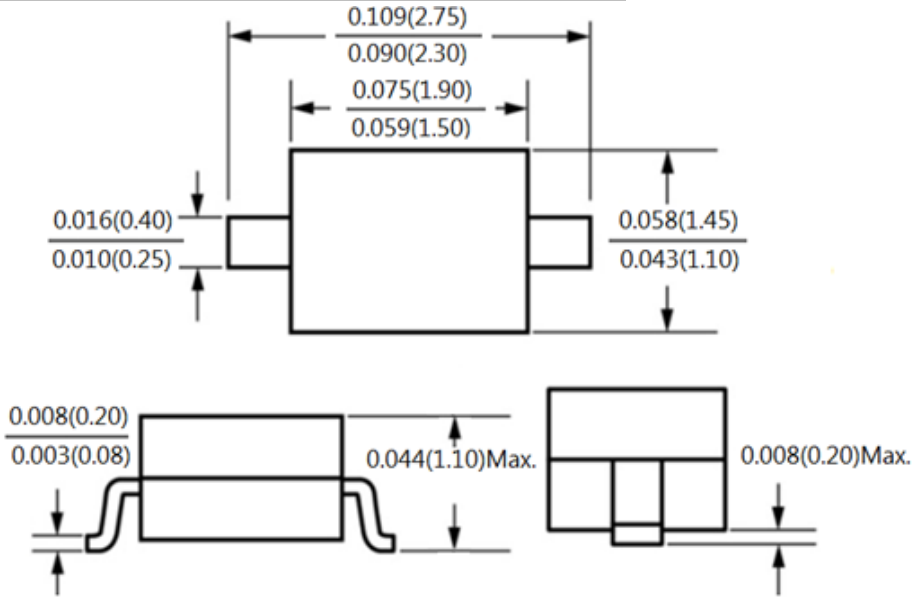


Figure 2. Reverse Leakage



Package Outline Dimensions

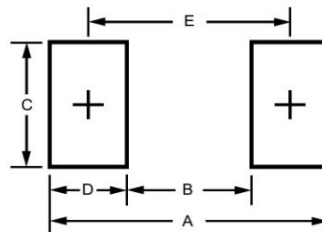


SOD-323

Dimensions in inches and (millimeters)

Suggested Pad Layout

| Symbol | Outline | SOD-323 millimeters |
|--------|---------|---------------------|
| A | | 2.85 |
| B | | 1.60 |
| C | | 0.83 |
| D | | 0.63 |
| E | | - |



Tap & Reel Specification

| Item | Symbol | SOD-323 (mm) |
|------------------------|--------|--------------|
| Carrier length | B | 4.55±0.10 |
| Carrier depth | C | 2.4 Max. |
| Sprocket hole | d | 1.0Min. |
| Reel outside diameter | D | 178 Max. |
| Reel inner diameter | D1 | 50 Min. |
| Feed hole width | D2 | 13.0 ±0.5 |
| Sprocket hole position | E | 1.75 ±0.10 |
| Punch hole position | F | 3.5 ±0.05 |
| Sprocket hole pitch | P0 | 4.0 ±0.10 |
| Embossment center | P1 | 2.0 ±0.10 |
| Tape width | W | 8.4 +1.5/-0 |
| Reel width | W1 | 10.9 Max. |

