

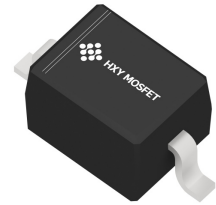


## Features

Fast Switching Speed:max.50nS.

Continuous Reverse Voltage:max.200V.

Low Leakage Current: 100nA at Room Temperature. Surface Mount Package Ideally Suited for Automatic Insertion.



SOD-323



## Package Marking and Ordering Information

| Product ID | Pack    | Marking | Qty(PCS) |
|------------|---------|---------|----------|
| BAS321-QF  | SOD-323 | A7      | 3000     |

## Maximum Ratings (Ta=25°C unless otherwise noted)

| Symbol          | Parameter                                           | Value    | Unit |
|-----------------|-----------------------------------------------------|----------|------|
| $V_{RM}$        | Non-repetitive Peak Reverse Voltage                 | 250      | V    |
| $V_{RRM}$       | Peak Repetitive Peak Reverse Voltage                | 200      | V    |
| $V_{RWM}$       | Working Peak Reverse Voltage                        |          |      |
| $V_R$           | DC Blocking Voltage                                 |          |      |
| $I_{FM}$        | Forward Continuous Current(Note 1)                  | 250      | mA   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current@t=1μS     | 4.5      | A    |
| $I_{FRM}$       | Repetitive Peak Forward Current(Note 1)             | 1        | A    |
| $P_d$           | Power Dissipation(Note 1)                           | 325      | mW   |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient(Note 1) | 385      | °C/W |
| $T_J$           | Operation Junction Temperature Range                | -40~+150 | °C   |
| $T_{STG}$       | Storage Temperature Range                           | -55~+150 | °C   |

## Electrical Characteristics(Ta=25°C unless otherwise specified)

| Symbol     | Parameter                         | Test conditions                                  | Min | Typ | Max  | Unit |
|------------|-----------------------------------|--------------------------------------------------|-----|-----|------|------|
| $V_{(BR)}$ | Reverse breakdown voltage(Note 2) | $I_R=100\mu A$                                   | 250 |     |      | V    |
| $I_R$      | Reverse current(Note 2)           | $V_R=200V$                                       |     |     | 100  | nA   |
|            |                                   | $V_R=200V, T_J=150^\circ C$                      |     |     | 100  | μA   |
| $V_F$      | Forward voltage                   | $I_F=100mA$                                      |     |     | 1.1  | V    |
|            |                                   | $I_F=100mA$                                      |     |     | 1.25 | V    |
| $C_T$      | Capacitance Between Terminals     | $V_R=0V, f=1MHz$                                 |     | 5   |      | pF   |
| $t_{rr}$   | Reverse recovery time             | $I_F=I_R=30mA$<br>$I_{rr}=0.1I_R, R_L=100\Omega$ |     |     | 50   | nS   |

Notes: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com>.

2. Short duration pulse test used to minimize self-heating effect.



## Typical Characteristics

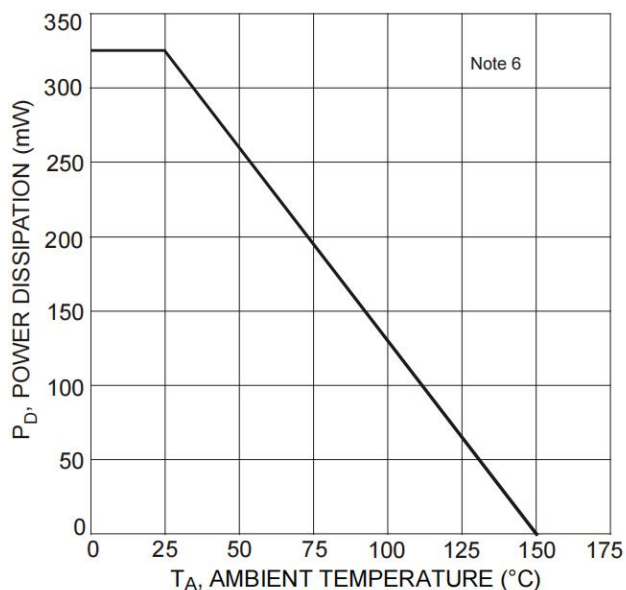


Fig 1. Power Derating Curve

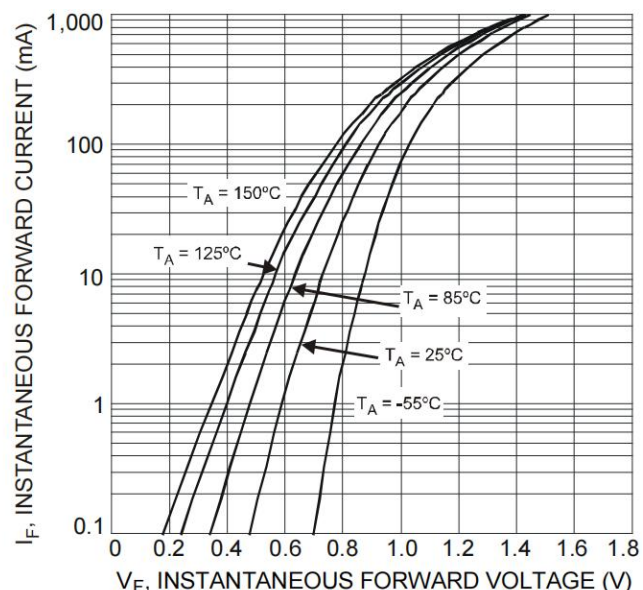


Fig 2. Typical Forward Characteristics

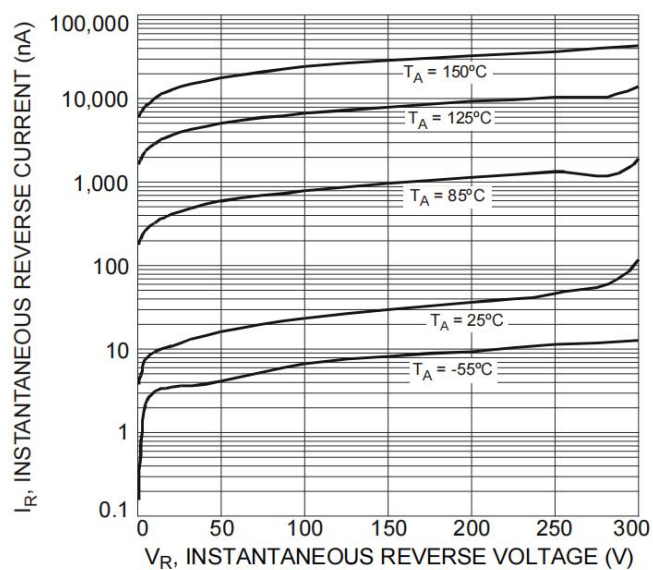


Fig 3. Typical Reverse Characteristics

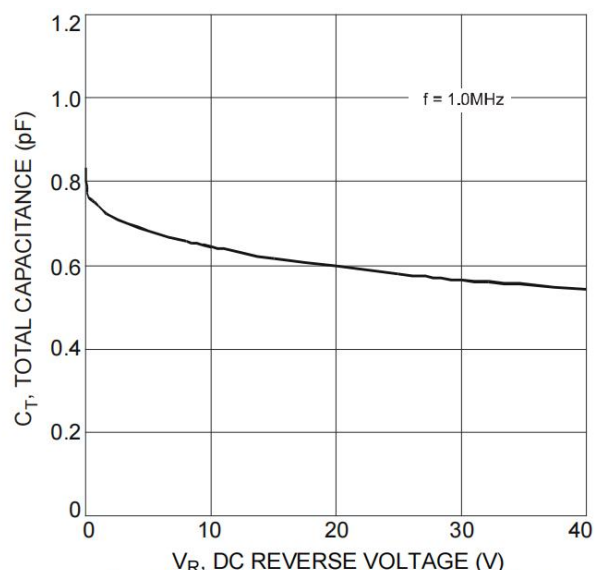
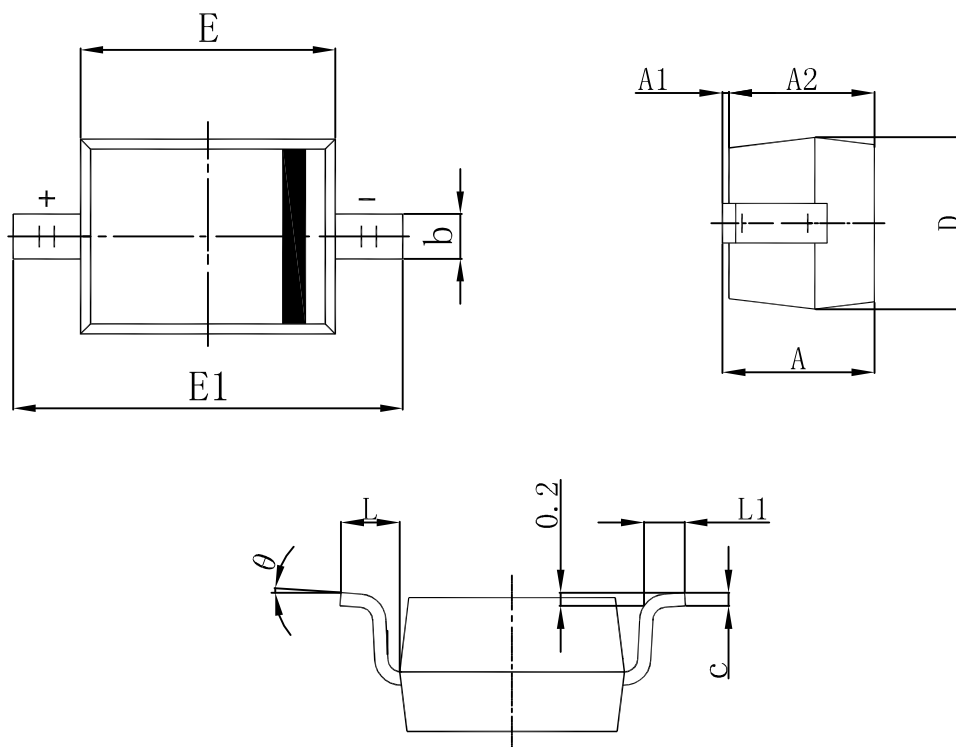


Fig 4. Total Capacitance vs. Reverse Voltage



## SOD-323 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      |                           | 1.100 |                      | 0.043 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.800                     | 1.000 | 0.031                | 0.039 |
| b      | 0.250                     | 0.350 | 0.010                | 0.014 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E      | 1.600                     | 1.800 | 0.063                | 0.071 |
| E1     | 2.500                     | 2.750 | 0.098                | 0.108 |
| L      | 0.475 REF                 |       | 0.019 REF            |       |
| L1     | 0.250                     | 0.400 | 0.010                | 0.016 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |



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