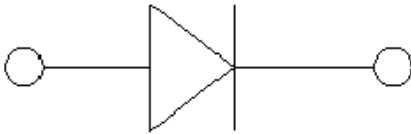


## High Speed Switching Diode



### Features

- $V_R$  300V
- $I_{FAV}$  225mA

### Typical Applications

- Extreme fast switches

### Mechanical Data

- **Package:** SOD-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** 4P

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER                                   | SYMBOL          | UNIT               | Conditions  | VALUE           |
|---|-----------------|--------------------|---|-----------------|
| Repetitive peak reverse voltage             | $V_{RRM}$       | V                  |   | 300             |
| Non-Repetitive Peak forward surge current   | $I_{FSM}$       | A                  | $t_p=1\mu\text{s}$<br>$t_p=1\text{ms}$<br>$t_p=10\text{ms}$ | 4<br>2.3<br>1.7 |
| Average forward current                     | $I_{FAV}$       | mA                 |   | 225             |
| Power dissipation                           | $P_D$           | mW                 |   | 200             |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | $^\circ\text{C/W}$ |   | 625             |
| Junction temperature                        | $T_j$           | $^\circ\text{C}$   |   | -55 to +150     |
| Storage temperature range                   | $T_{stg}$       | $^\circ\text{C}$   |   | -55 to +150     |

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER                     | SYMBOL   | UNIT | Conditions                                      | VALUE |
|-------------------------------|----------|------|---|-------|
| Maximum Forward voltage       | $V_F$    | V    | $I_F=100\text{mA}$                              | 1     |
| Maximum Reverse current       | $I_R$    | nA   | $V_R=240\text{V}$                               | 100   |
|                               |          | uA   | $V_R=240\text{V}, T_j = 150^\circ\text{C}$      | 100   |
| Minimum Breakdown voltage     | $V_R$    | V    | $I_R=100\mu\text{A}$                            | 300   |
| Maximum Diode capacitance     | $C_D$    | pF   | $V_R=0\text{V}, f=1\text{MHz}$                  | 5     |
| Maximum Reverse recovery time | $t_{rr}$ | ns   | $I_F=30\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$ | 50    |

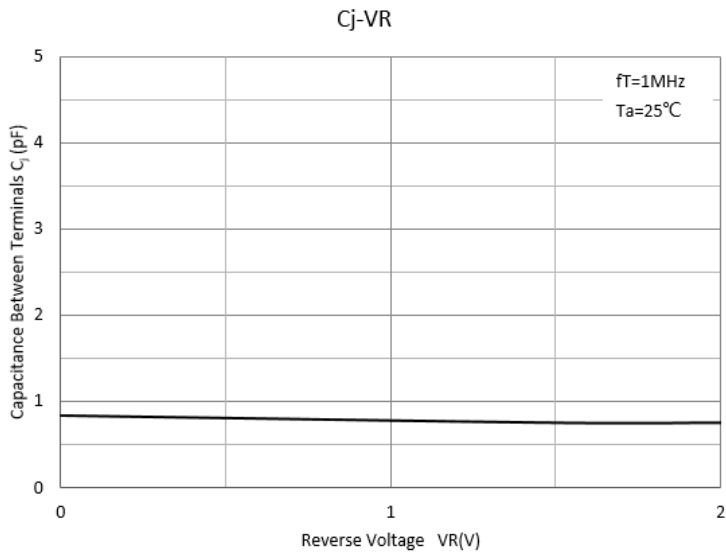
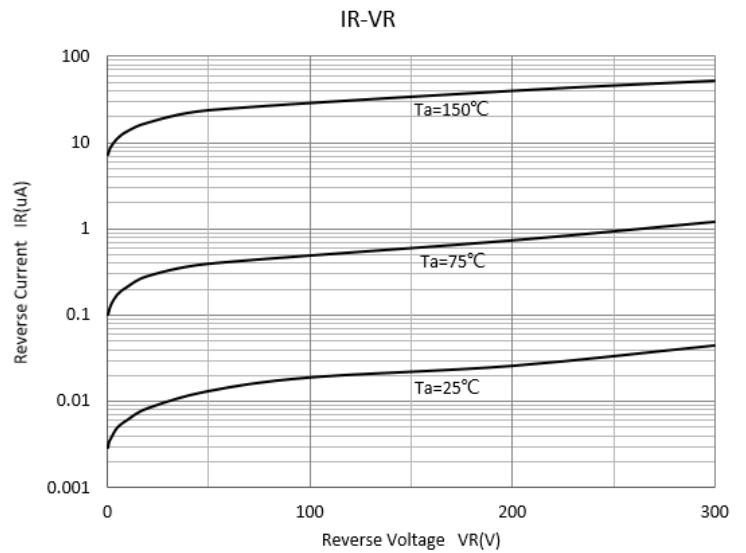
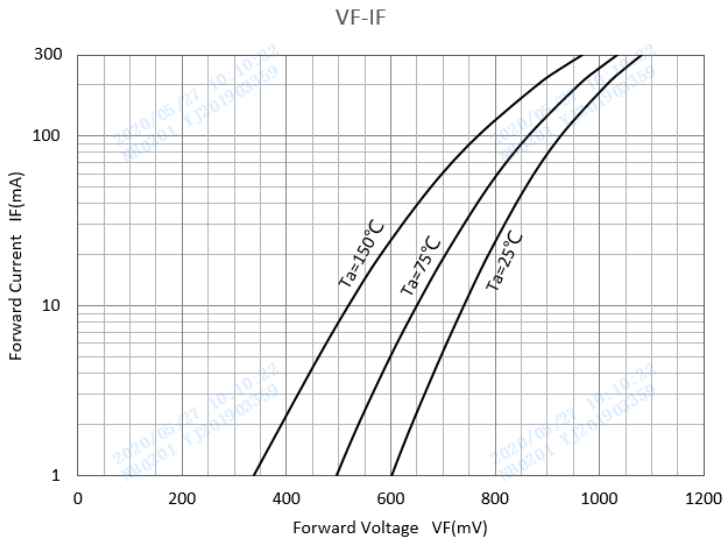


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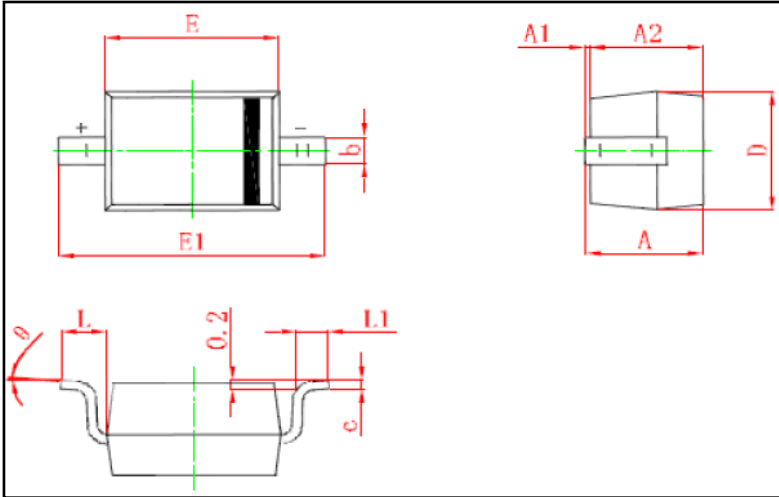
## Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAS21J        | F2           | Approximate 0.004 | 3000                 | 30000                   | 120000                     | 7" reel       |

## Characteristics (Typical)

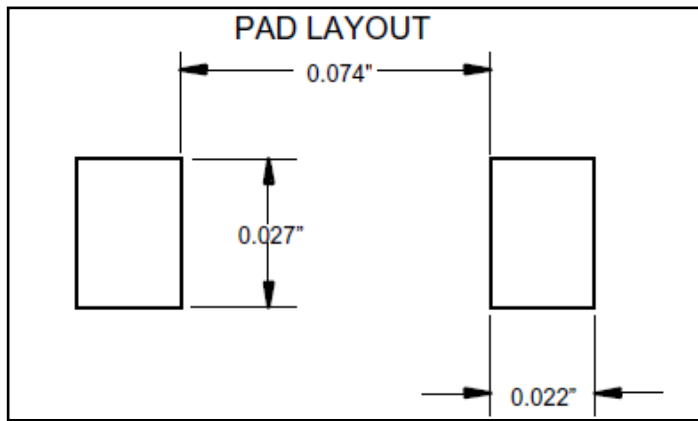


## ■ SOD-323 Package Outline Dimensions



| Symbol   | Min. (mm) | Max. (mm) |
|----------|-----------|-----------|
| A        |           | 1.000     |
| A1       | 0.000     | 0.100     |
| A2       | 0.800     | 0.900     |
| b        | 0.250     | 0.400     |
| c        | 0.080     | 0.150     |
| D        | 1.200     | 1.400     |
| E        | 1.600     | 1.800     |
| E1       | 2.500     | 2.700     |
| L        | 0.475REF  |           |
| L1       | 0.250     | 0.400     |
| $\theta$ | 0°        | 8°        |

## ■ SOD-323 Soldering Footprint



Unit: inches



## BAS21J

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