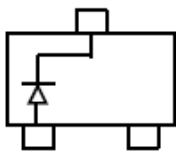
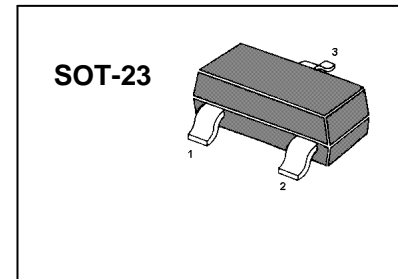


## SWITCHING DIODE

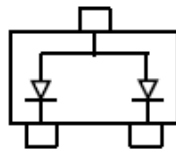
### FEATURES

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



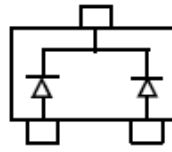
**BAS21**

Marking: JS



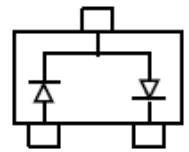
**BAS21A**

Marking: JS2



**BAS21C**

Marking: JS3



**BAS21S**

Marking: JS4

### Maximum Ratings @ $T_A=25^\circ\text{C}$

| Parameter  | Symbol          | Limits  | Unit                      |
|--|-----------------|---------|---------------------------|
| Repetitive peak reverse voltage                                  | $V_{RRM}$       | 250     | V                         |
| Working Peak reverse voltage                                     | $V_{RWM}$       |         |                           |
| DC Blocking Voltage  | $V_R$           |         |                           |
| Forward Continuous Current                                       | $I_{FM}$        | 400     | mA                        |
| Average Rectified Output Current                                 | $I_O$           | 200     | mA                        |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ | $I_{FSM}$       | 2.5     | A                         |
| @ $t = 1.0\text{s}$  |                 | 0.5     |                           |
| Repetitive Peak Forward Surge Current                            | $I_{FRM}$       | 625     | mA                        |
| Power Dissipation  | $P_D$           | 225     | mW                        |
| Thermal Resistance. Junction to Ambient Air                      | $R_{\theta JA}$ | 556     | $^\circ\text{C}/\text{W}$ |
| Junction temperature   | $T_J$           | 150     | $^\circ\text{C}$          |
| Storage temperature range  | $T_{STG}$       | -65-150 | $^\circ\text{C}$          |

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

| Parameter                       | Symbol     | Test conditions   | MIN | MAX          | UNIT          |
|---------------------------------|------------|---|-----|--------------|---------------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 100\mu\text{A}$  | 250 |              | V             |
| Reverse voltage leakage current | $I_R$      | $V_R = 200\text{V}$   |     | 1            | $\mu\text{A}$ |
| Forward voltage                 | $V_F$      | $I_F = 100\text{mA}$<br>$I_F = 200\text{mA}$                              |     | 1000<br>1250 | mV            |
| Diode capacitance               | $C_D$      | $V_R = 0\text{V}$ , $f = 1\text{MHz}$                                     |     | 5            | pF            |
| Reveres recovery time           | $t_{rr}$   | $I_F = I_R = 30\text{mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$ |     | 50           | nS            |

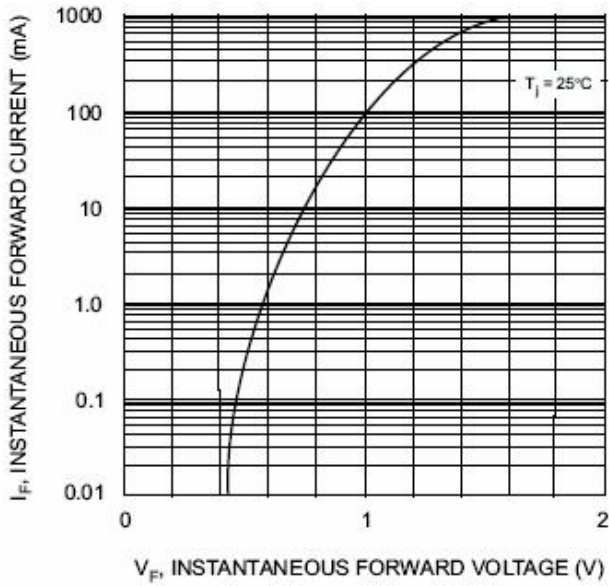


Fig. 1 Forward Characteristics

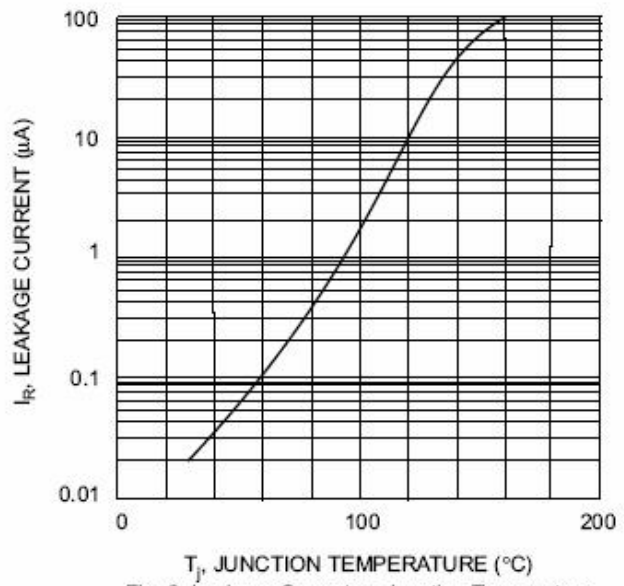


Fig. 2 Leakage Current vs Junction Temperature



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INTERNATIONAL

**SOT-23**



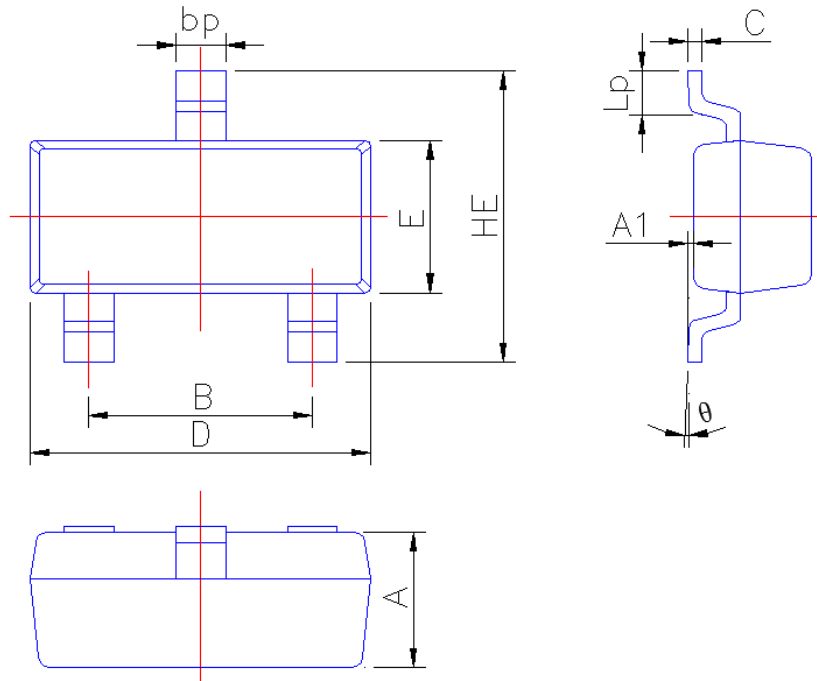
**BAS21/A/C/S**

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**PACKAGE OUTLINE**

Plastic surface mounted package; 3 leads

SOT-23



| Symbol   | Dimension in Millimeters |       |
|----------|--------------------------|-------|
|          | Min                      | Max   |
| A        | 0.90                     | 1.10  |
| A1       | 0.013                    | 0.100 |
| B        | 1.80                     | 2.00  |
| bp       | 0.35                     | 0.50  |
| C        | 0.09                     | 0.150 |
| D        | 2.80                     | 3.00  |
| E        | 1.20                     | 1.40  |
| HE       | 2.20                     | 2.80  |
| Lp       | 0.20                     | 0.50  |
| $\theta$ | 0°                       | 5°    |