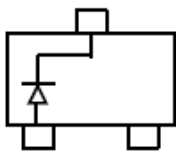
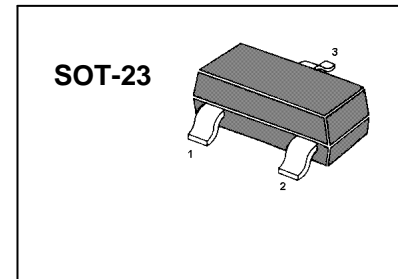


SWITCHING DIODE

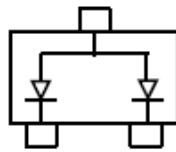
FEATURES

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



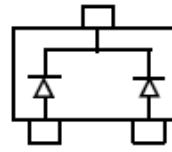
BAS21

Marking: JS



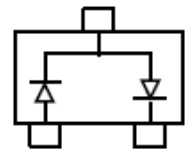
BAS21A

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 | μA |
| Forward voltage | V_F | $I_F = 100\text{mA}$ $I_F = 200\text{mA}$ | | 1000 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 |

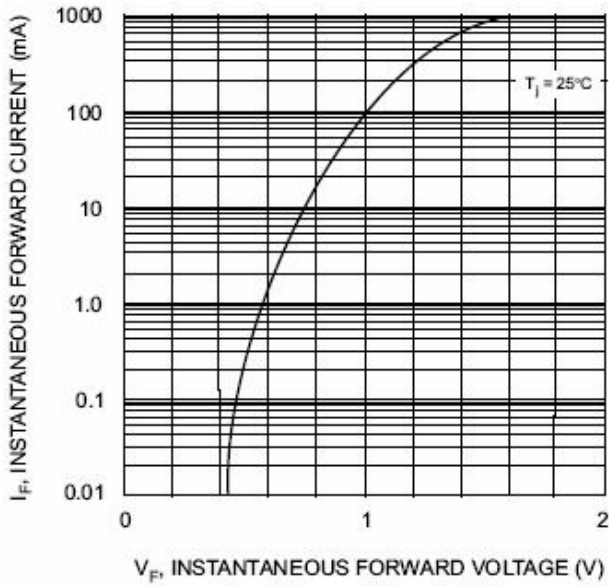


Fig. 1 Forward Characteristics

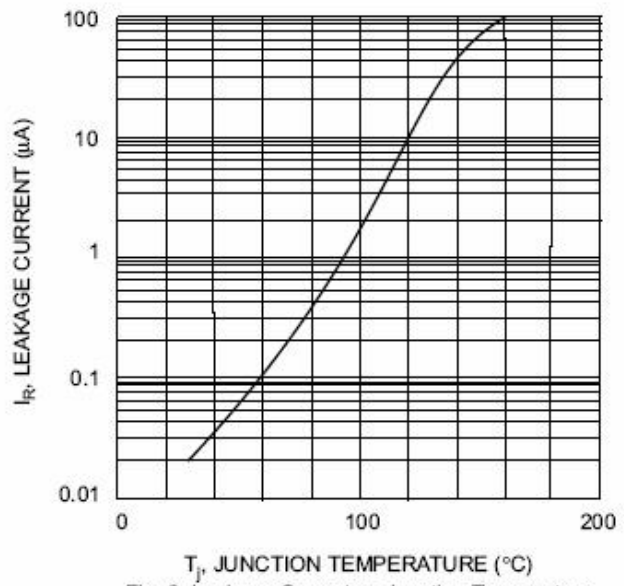


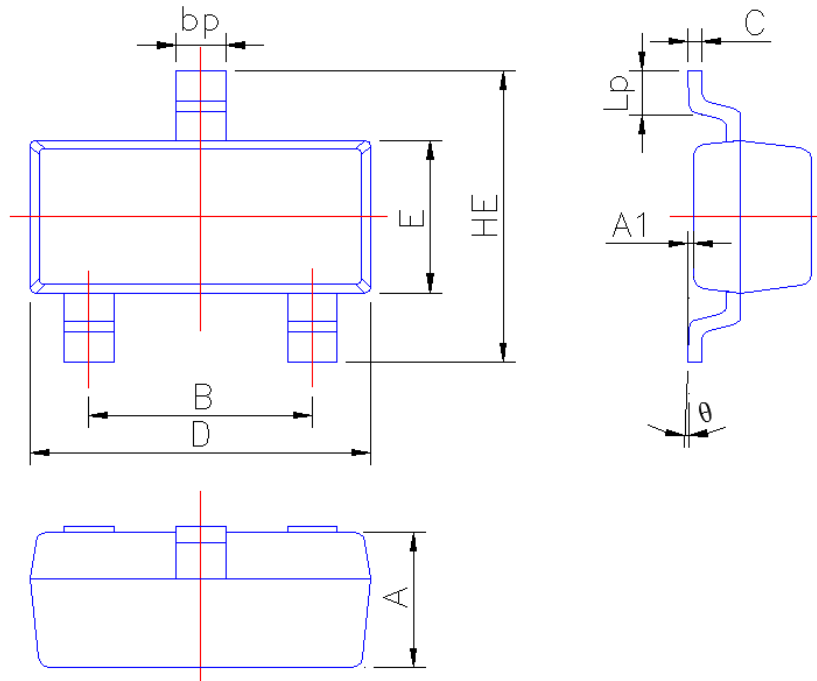
Fig. 2 Leakage Current vs Junction Temperature



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 |
| θ | 0° | 5° |