

## Surface mount switching diode

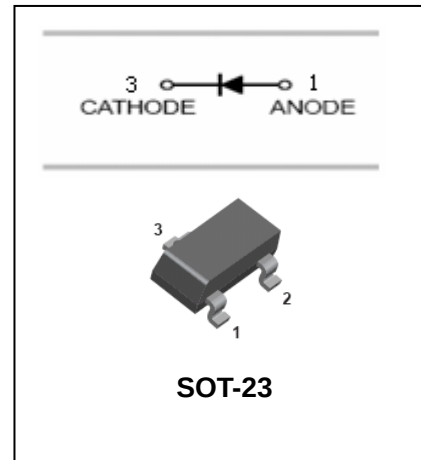
## BAS116

### FEATURES

- Low leakage current applications.
- Medium speed switching times.
- Surface mount package ideally suited for automatic Insertion.



Lead-free



### APPLICATIONS

- High speed switching application.

### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAS116   | JV      | SOT-23       |

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Characteristic                                                               | Symbol          | Limits            | Unit |
|------------------------------------------------------------------------------|-----------------|-------------------|------|
| Peak Repetitive Reverse Voltage                                              | $V_{RRM}$       | 85                | V    |
| Working Peak Reverse Voltage                                                 | $V_{RWM}$       |                   |      |
| DC Reverse Voltage                                                           | $V_R$           |                   |      |
| RMS Reverse Voltage                                                          | $V_{R(RMS)}$    | 60                | V    |
| Forward Continuous Current                                                   | $I_{FM}$        | 215               | mA   |
| Repetitive Peak Forward Current                                              | $I_{FRM}$       | 500               | mA   |
| Non-Repetitive Peak Forward Surge Current<br>@t=1.0μs<br>@t=1.0ms<br>@t=1.0s | $I_{FSM}$       | 4.0<br>1.0<br>0.5 | A    |
| Power Dissipation                                                            | $P_d$           | 250               | mW   |
| Thermal Resistance Junction to Ambient Air                                   | $R_{\theta JA}$ | 500               | °C/W |
| Operating Junction Temperature Range                                         | $T_j$           | 150               | °C   |
| Storage Temperature Range                                                    | $T_{STG}$       | -65 to +150       | °C   |

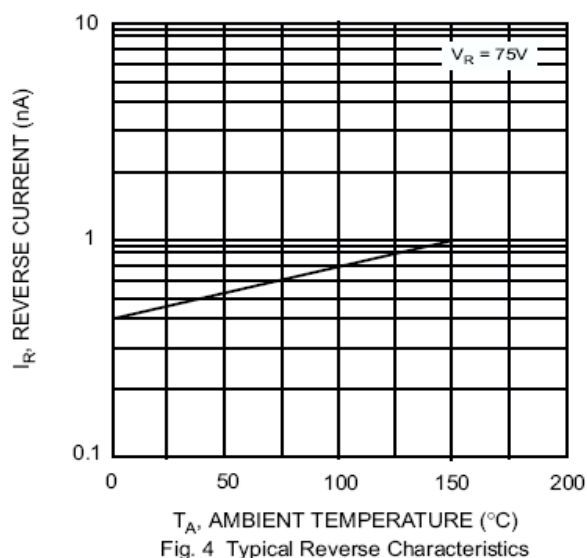
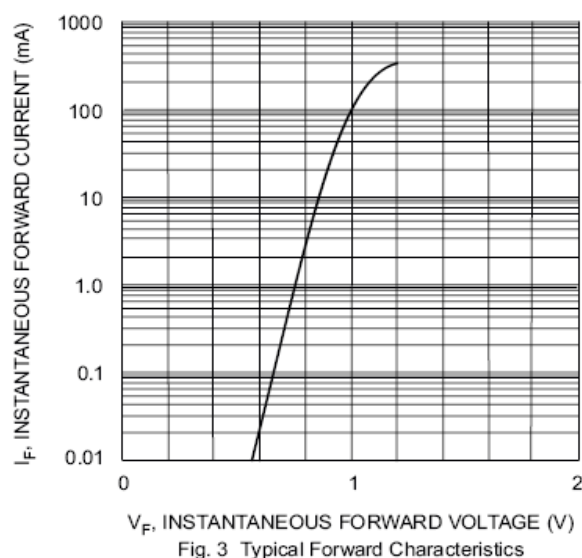
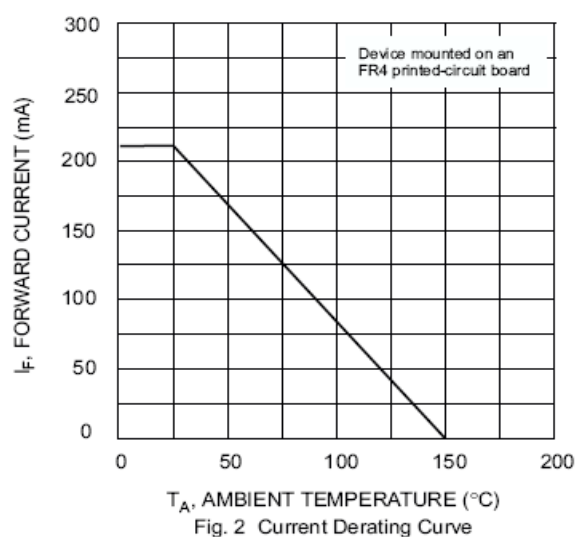
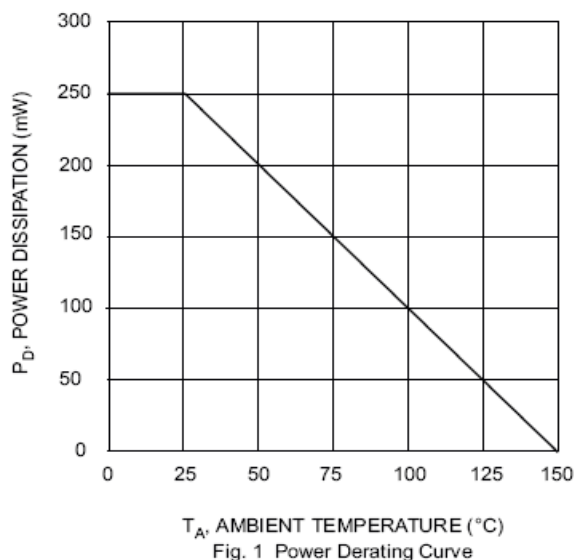
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### ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Characteristic            | Symbol      | Min | Typ | MAX                       | UNIT | Test Condition                                                                   |
|---------------------------|-------------|-----|-----|---------------------------|------|----------------------------------------------------------------------------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 85  | -   | -                         | V    | $I_R=100\mu\text{A}$                                                             |
| Forward Voltage           | $V_{FM}$    | -   | -   | 0.9<br>1.0<br>1.1<br>1.25 | V    | $I_F=1\text{mA}$<br>$I_F=10\text{mA}$<br>$I_F=50\text{mA}$<br>$I_F=150\text{mA}$ |
| Reverse Leakage Current   | $I_R$       | -   | -   | 5.0                       | nA   | $V_R=75\text{V}$                                                                 |
| Junction Capacitance      | $C_j$       | -   | 2   | -                         | pF   | $V_R=0\text{V}, f=1.0\text{MHz}$                                                 |
| Reverse Recovery Time     | $t_{rr}$    | -   | -   | -                         | ns   | $I_F=I_R=10\text{mA}, I_R=0.1*I_R$                                               |

### TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



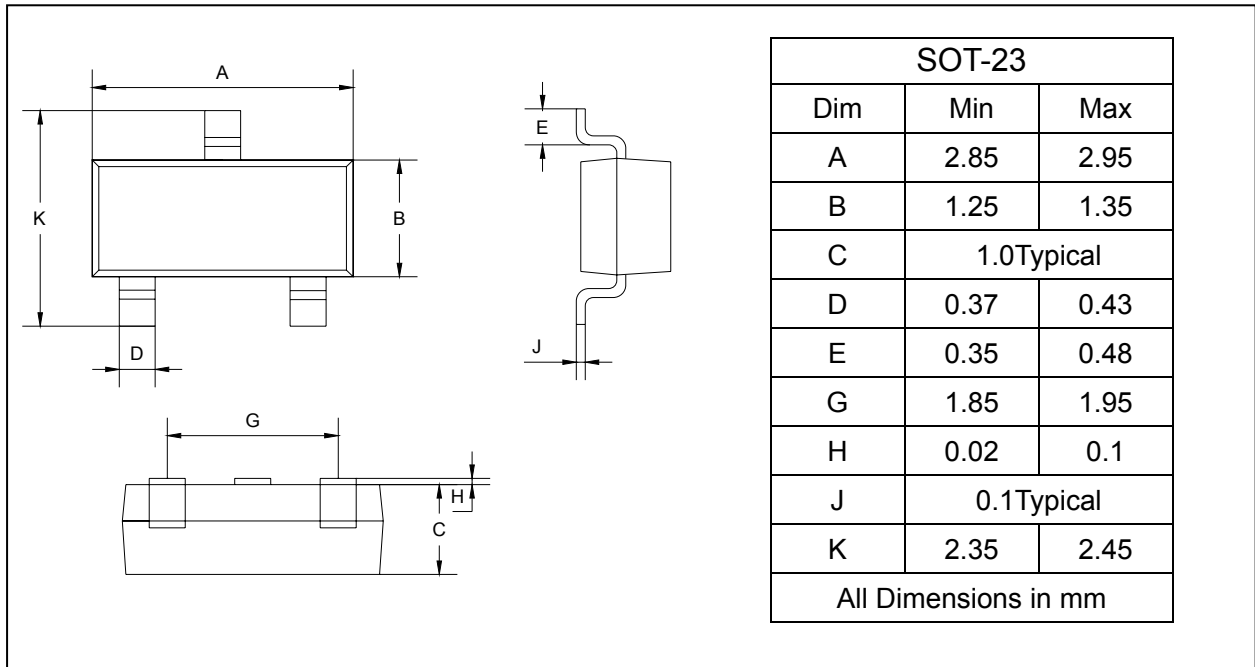
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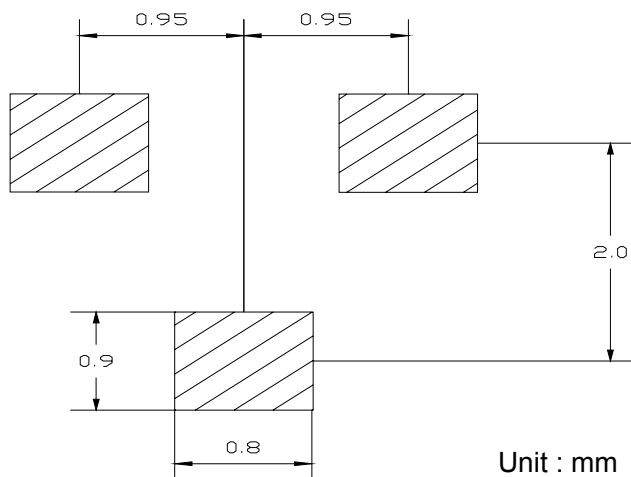
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

| Device | Package | Shipping       |
|--------|---------|----------------|
| BAS116 | SOT-23  | 3000/Tape&Reel |