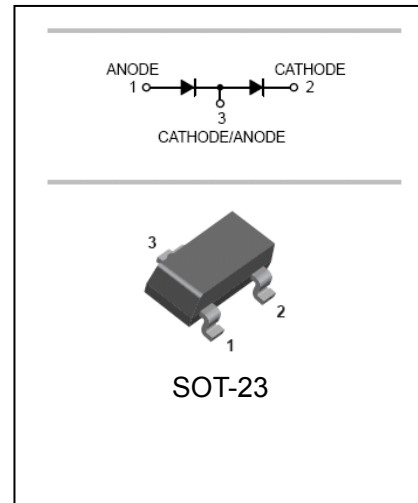


## Dual surface mount low leakage diode

## BAV199

### FEATURES

- Medium speed current applications.
- Very low leakage current.
- Surface mount package ideally suited for automatic insertion



### APPLICATIONS

- Small signal switching

### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAV199   | JY      | SOT-23       |

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

| Parameter                                  | Symbol          | Value               | Unit |
|--|-----------------|---------------------|------|
| Repetitive peak 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    |
| Peak forward surge current                 | $I_{FSM}$       | @t=1.0μs<br>4.0     | A    |
|  |                 | @t=1.0ms<br>1.0     |      |
|  |                 | @t=1.0s<br>0.5      |      |
| Forward continuous current                 | $I_{FM}$        | single diode<br>160 | mA   |
|  |                 | double diode<br>140 |      |
| Repetitive Peak Forward Current            | $I_{FRM}$       | 500                 | mA   |
| Power dissipation                          | $P_d$           | 250                 | mW   |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 500                 | °C/W |
| Operating and Storage Temperature Range    | $T_j, T_{STG}$  | -65-150             | °C   |

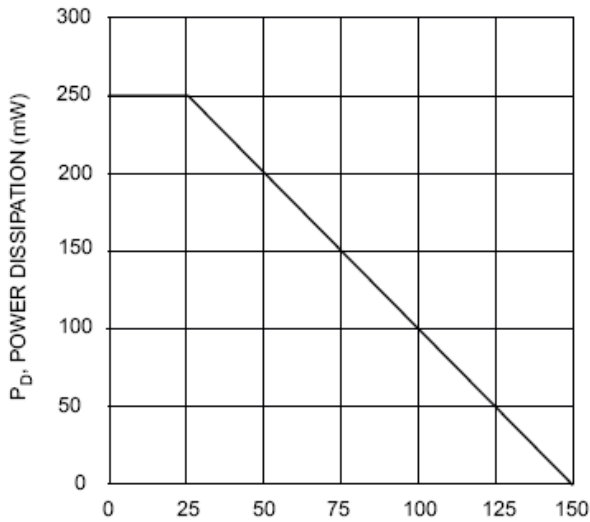
## Dual surface mount low leakage diode

## BAV199

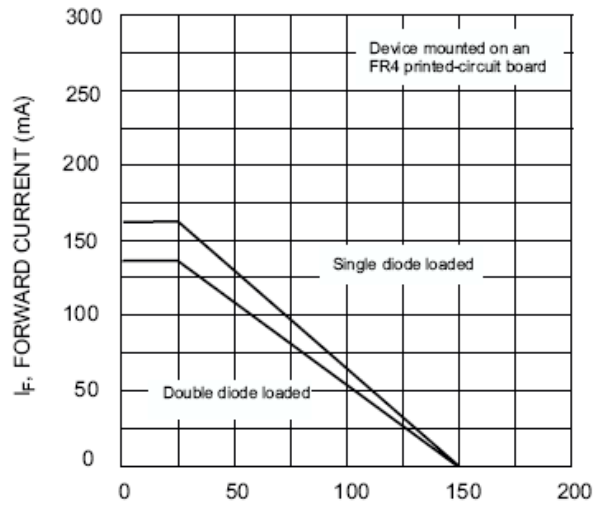
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter                       | Symbol     | Test conditions  | MIN | MAX  | UNIT    |
|---------------------------------|------------|--|-----|------|---------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 100\mu A$   | 85  |      | V       |
| Reverse voltage leakage current | $I_R$      | $V_R = 75V$  |     | 5.0  | nA      |
|                                 |            | $V_R = 75V$ $T_j = 150^\circ C$                                  |     | 80   | nA      |
| Forward voltage                 | $V_F$      | $I_F = 1mA$  |     | 900  | mV      |
|                                 |            | $I_F = 10mA$   |     | 1000 |         |
|                                 |            | $I_F = 50mA$   |     | 1100 |         |
|                                 |            | $I_F = 150mA$  |     | 1250 |         |
| Junction capacitance            | $C_j$      | $V_R = 0V$ $f = 1MHz$  |     | 2.0  | pF      |
| Reverse recovery time           | $t_{rr}$   | $I_F = I_R = 10mA$ $I_{rr} = 0.1 \cdot I_R$<br>$R_L = 100\Omega$ |     | 3.0  | $\mu S$ |

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 2 Current Derating Curve

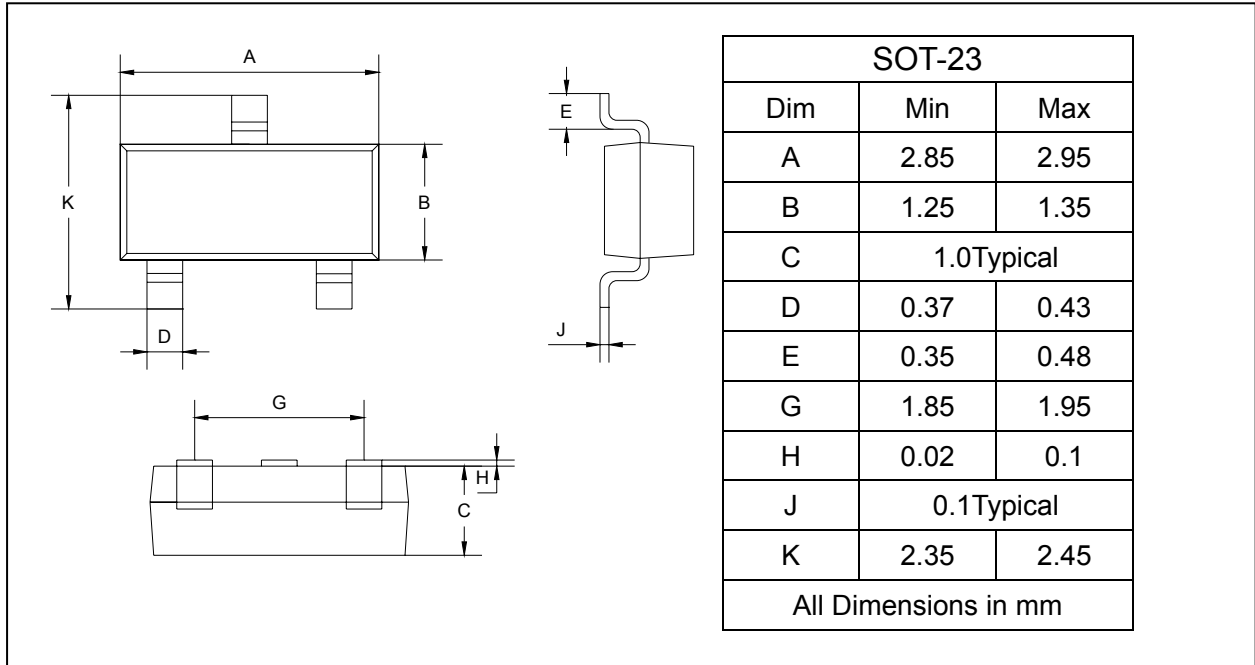
## Dual surface mount low leakage diode

## BAV199

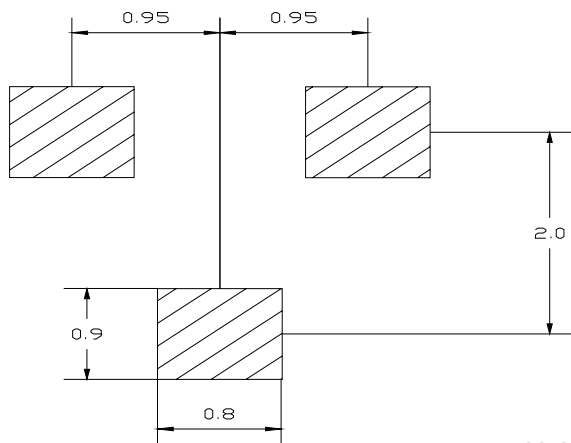
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

| Device | Package | Shipping       |
|--------|---------|----------------|
| BAV199 | SOT-23  | 3000/Tape&Reel |