

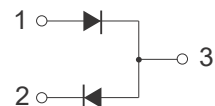
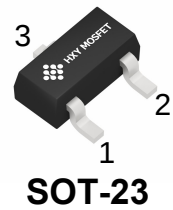


## Features

- Average Rectified Output Current: $I_O=215\text{mA}$
- Power Dissipation of 200mw

## Package Marking and Ordering Information

| Product ID | Pack   | Marking | Qty(PCS) |
|------------|--------|---------|----------|
| BAV199     | SOT-23 | JY      | 3000     |



## Maxmim Ratings (Ta=25°C unless otherwise noted)

| Parameter                                             | Symbol    | Limit    | Unit |
|-------------------------------------------------------|-----------|----------|------|
| Non-Repetitive Peak Reverse Voltage                   | $V_{RM}$  | 70       | V    |
| DC Blocking Voltage                                   | $V_R$     | 70       | V    |
| Forward Continuous Current                            | $I_{FM}$  | 500      | mA   |
| Average Rectified Output Current                      | $I_O$     | 215      | mA   |
| Non-Repetitive Peak Forward Surge Current<br>@t=8.3ms | $I_{FSM}$ | 1.0      | A    |
| Power Dissipation                                     | $P_D$     | 200      | mW   |
| Junction Temperature                                  | $T_J$     | 150      | °C   |
| Storage Temperature Range                             | $T_{STG}$ | -55~+150 | °C   |

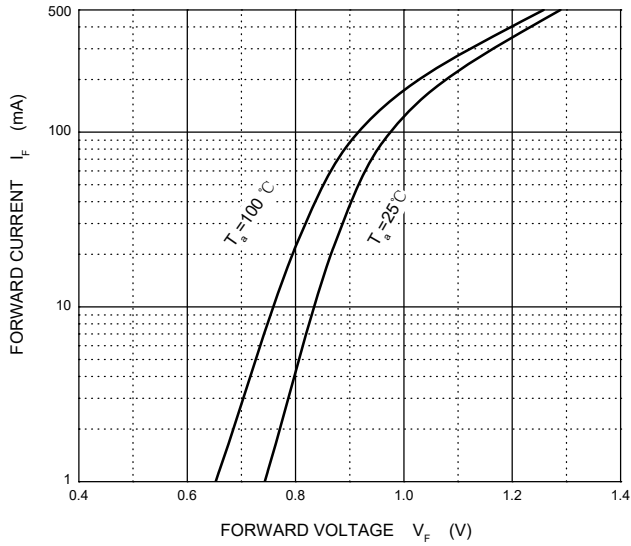
## Electrcal Charcteristics (Ta=25°C unless otherwise specified)

| Parameter                       | Symbol     | Test conditions                                      | Min | Max                         | Unit    |
|---------------------------------|------------|------------------------------------------------------|-----|-----------------------------|---------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R=100\mu A$                                       | 70  |                             | V       |
| Reverse voltage leakage current | $I_R$      | $V_R=70V$                                            |     | 5                           | nA      |
| Forward voltage                 | $V_F$      | $I_F=1mA$<br>$I_F=10mA$<br>$I_F=50mA$<br>$I_F=150mA$ |     | 900<br>1000<br>1100<br>1250 | mV      |
| Diode capacitance               | $C_D$      | $V_R=0, f=1MHz$                                      |     | 2                           | pF      |
| Reverse recovery time           | $t_{rr}$   | $I_F = I_R=10mA$                                     |     | 3                           | $\mu s$ |

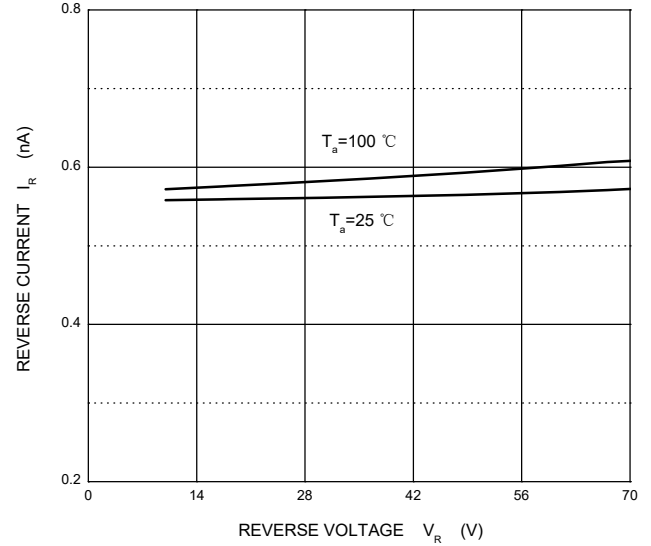


## Typical Characteristics

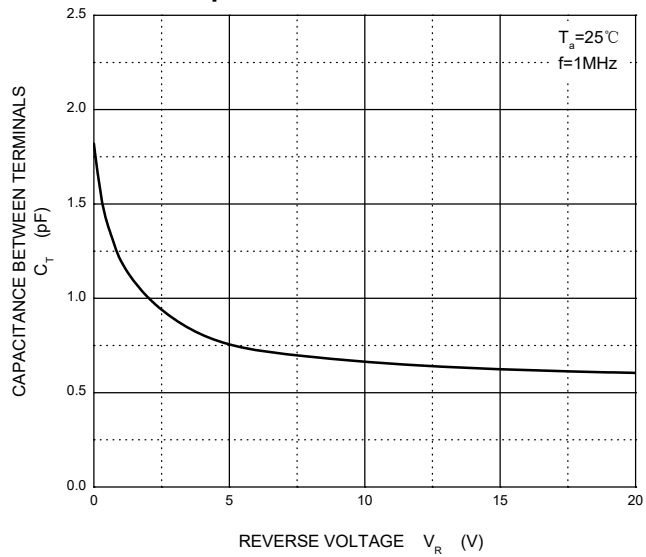
### Forward Characteristics



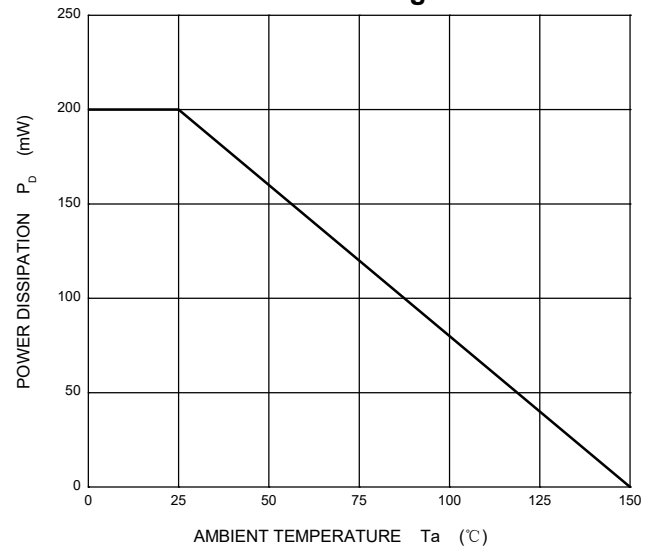
### Reverse Characteristics



### Capacitance Characteristics



### Power Derating Curve





## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout



Note:  
1. Controlling dimension: in millimeters.  
2. General tolerance:  $\pm 0.05\text{mm}$ .  
3. The pad layout is for reference purposes only.



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