



## FEATURES

- Average Rectified Output Current:  $I_O=1$  A
- Power Dissipation of 500mw

## Package Marking and Ordering Information

| Product ID | Pack    | Marking | Qty(PCS) |
|------------|---------|---------|----------|
| B5817W     | SOD-123 | SJ      | 3000     |
| B5818W     | SOD-123 | SK      | 3000     |
| B5819W     | SOD-123 | SL      | 3000     |



SOD-123



## MAXIMUM RATINGS (Ta=25 unless otherwise noted)

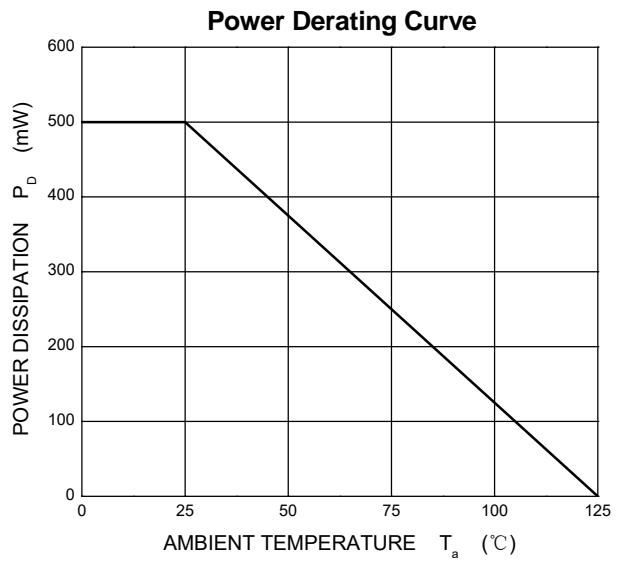
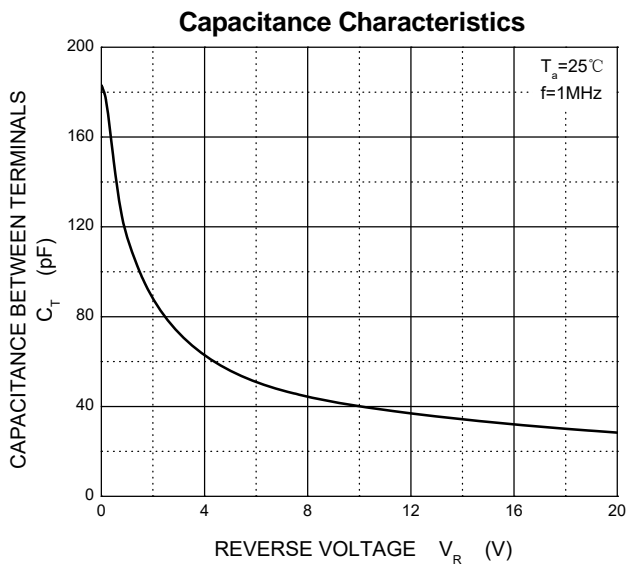
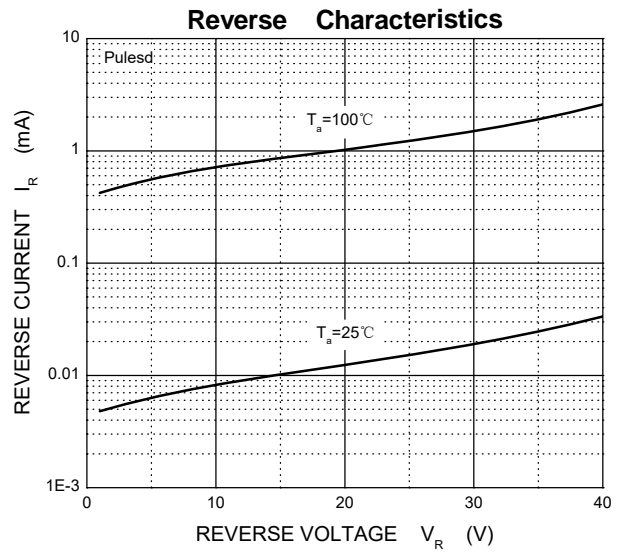
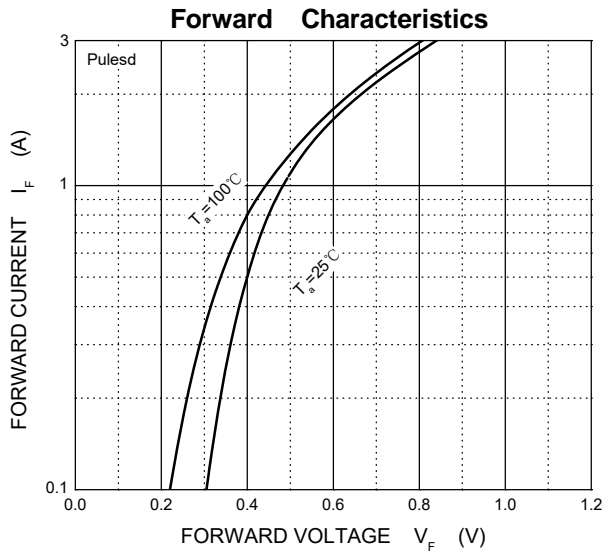
| Parameter  | Symbol          | B5817W   | B5818W | B5819W | Unit |
|--|-----------------|----------|--------|--------|------|
| Non-Repetitive Peak Reverse Voltage                | $V_{RM}$        | 20       | 30     | 40     | V    |
| Peak Repetitive Peak Reverse Voltage               | $V_{RRM}$       | 20       | 30     | 40     | V    |
| Working Peak Reverse Voltage                       | $V_{RWM}$       |          |        |        |      |
| DC Blocking Voltage                                | $V_R$           |          |        |        |      |
| RMS Reverse Voltage                                | $V_{R(RMS)}$    | 14       | 21     | 28     | V    |
| Average Rectified Output Current                   | $I_O$           | 1        |        |        | A    |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | $I_{FSM}$       | 9        |        |        | A    |
| Repetitive Peak Forward Current                    | $I_{FRM}$       | 1.5      |        |        | A    |
| Power Dissipation                                  | $P_D$           | 500      |        |        | mW   |
| Thermal Resistance Junction to Ambient             | $R_{\theta JA}$ | 200      |        |        | °C/W |
| Operation Junction temperature Range               | $T_J$           | -40~+125 |        |        | °C   |
| Storage Temperature Range                          | $T_{STG}$       | -55~+150 |        |        | °C   |

## ELECTRICAL CHARACTERISTICS (Ta=25 unless otherwise specified)

| Parameter                       | Symbol     | Test conditions   | Min            | Max   | Unit |
|---------------------------------|------------|---|----------------|-------|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R=1$ mA<br>B5817W<br>B5818W<br>B5819W                    | 20<br>30<br>40 |       | V    |
| Reverse voltage leakage current | $I_R$      | $V_R=20$ V B5817W<br>$V_R=30$ V B5818W<br>$V_R=40$ V B5819W |                | 1     | mA   |
| Forward voltage                 | $V_F$      | B5817W $I_F=1$ A  |                | 0.45  | V    |
|                                 |            | $I_F=3$ A   |                | 0.75  |      |
|                                 |            | B5818W $I_F=1$ A  |                | 0.55  | V    |
|                                 |            | $I_F=3$ A   |                | 0.875 |      |
|                                 |            | B5819W $I_F=1$ A  |                | 0.6   | V    |
|                                 |            | $I_F=3$ A   |                | 0.9   |      |
| Diode capacitance               | $C_D$      | $V_R=4$ V, $f=1$ MHz  |                | 120   | pF   |

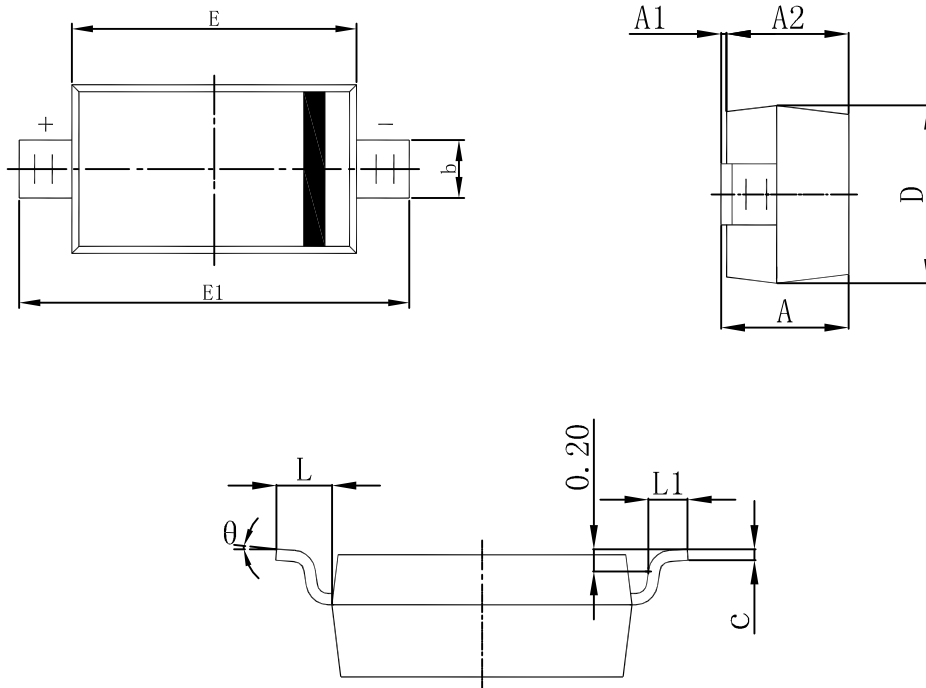


### Typical Characteristics





**SOD-123 Package Outline Dimensions**



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 1.050                     | 1.250 | 0.041                | 0.049 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 1.050                     | 1.150 | 0.041                | 0.045 |
| b        | 0.450                     | 0.650 | 0.018                | 0.026 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 1.500                     | 1.700 | 0.059                | 0.067 |
| E        | 2.600                     | 2.800 | 0.102                | 0.110 |
| E1       | 3.550                     | 3.850 | 0.140                | 0.152 |
| L        | 0.500 REF                 |       | 0.020 REF            |       |
| L1       | 0.250                     | 0.450 | 0.010                | 0.018 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |



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