



## Features

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

## Package Marking and Ordering Information

| Product ID | Pack    | Marking | Qty(PCS) |
|------------|---------|---------|----------|
| 1N5817W    | SOD-123 | SJ      | 3000     |



SOD-123



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

| Parameter                                                                                   | Symbol                          | Value    | Unit |
|---------------------------------------------------------------------------------------------|---------------------------------|----------|------|
| Non-Repetitive Peak Reverse Voltage                                                         | $V_{RM}$                        | 20       | V    |
| Peak Repetitive Peak Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20       | V    |
| RMS Reverse Voltage                                                                         | $V_{R(RMS)}$                    | 14       | V    |
| Average Rectified Output Current                                                            | $I_O$                           | 1        | A    |
| Non-repetitive Peak Forward Surge Current<br>@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   |

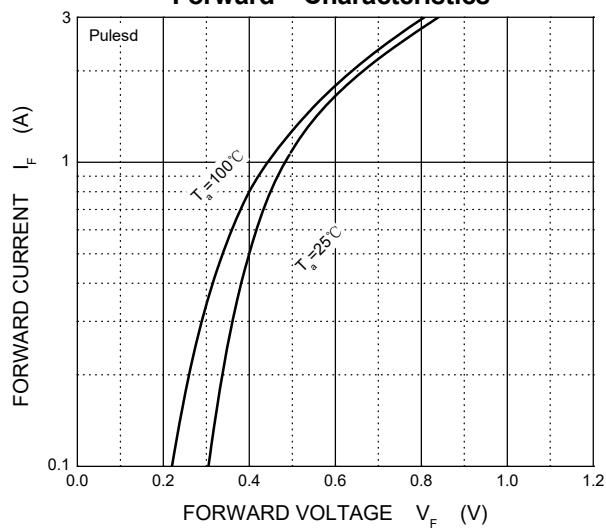
## Electrical Characteristics (Ta=25°C unless otherwise specified)

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

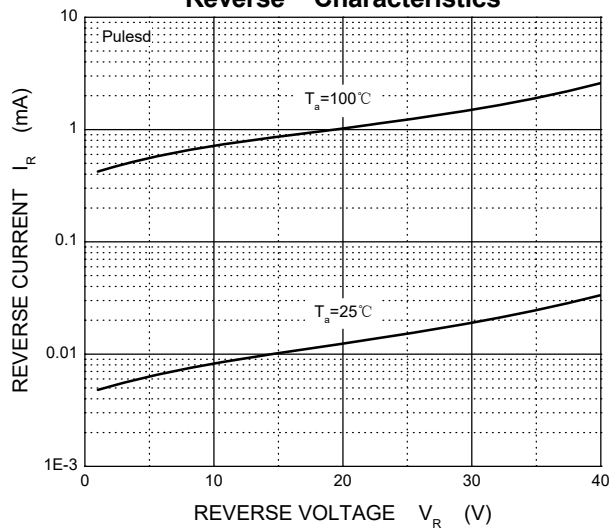


## Typical Characteristics

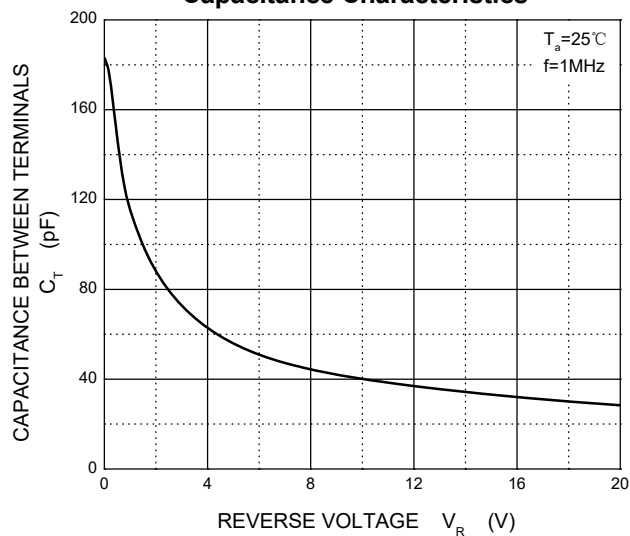
Forward Characteristics



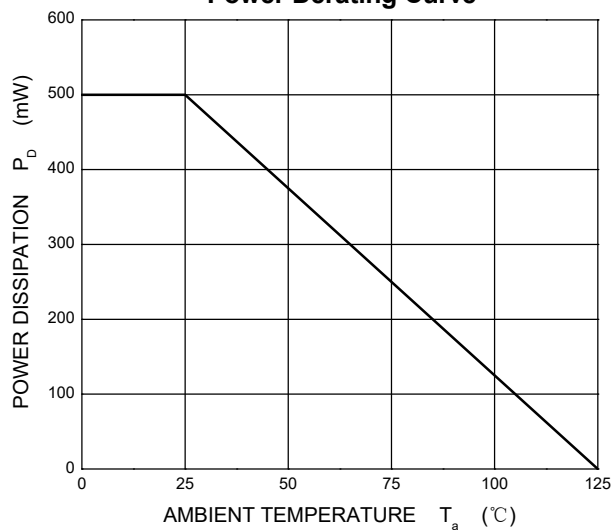
Reverse Characteristics



Capacitance Characteristics

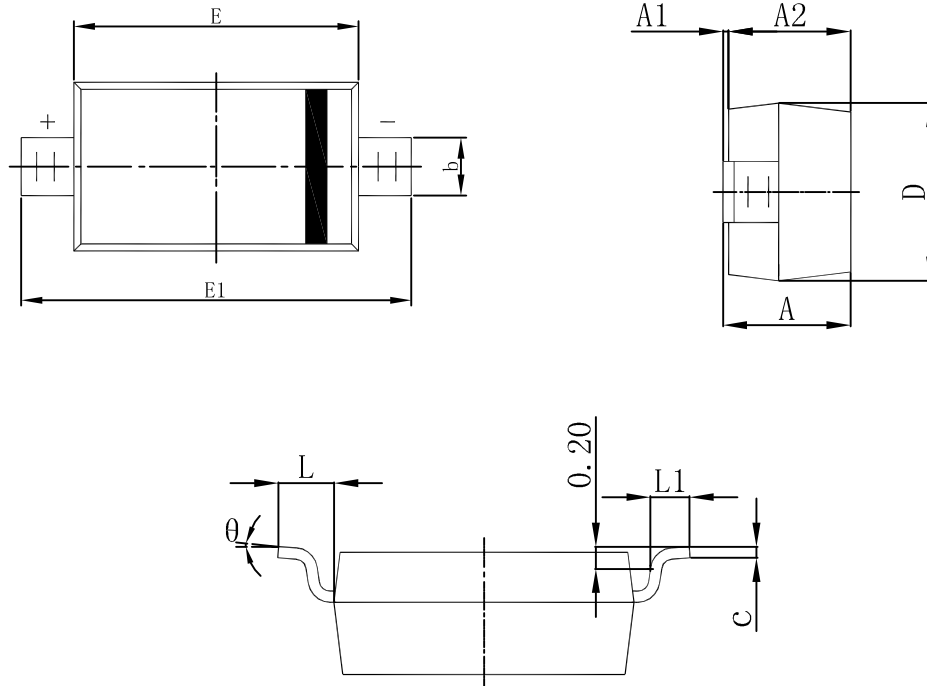


Power Derating Curve





## 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 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |



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