

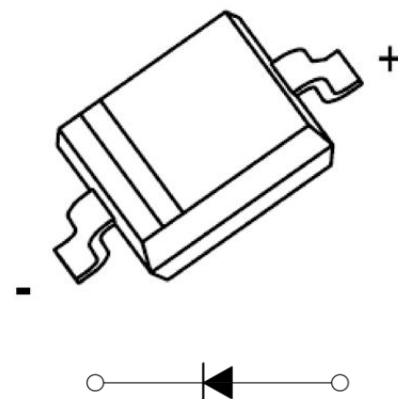
**GP5819W Schottky Barrier Diode**
**Feature**

- Small Power Mold Type
- Low VF
- Low IR
- High Reliability

**Application**

- High Frequency Inverters
- Free Wheeling
- Polarity Protection Applications

**MARKING:**

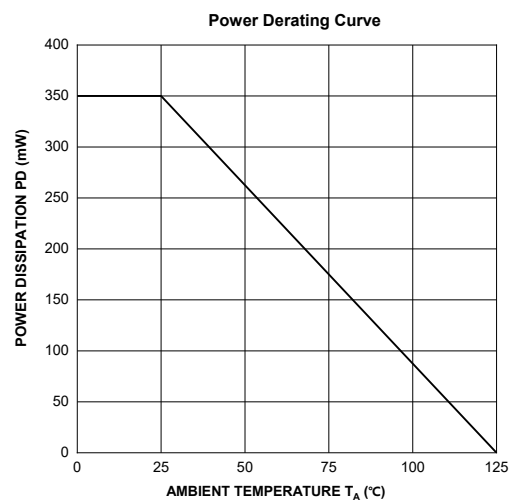
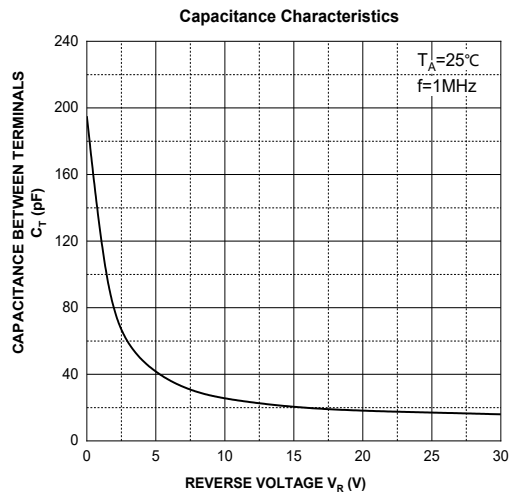
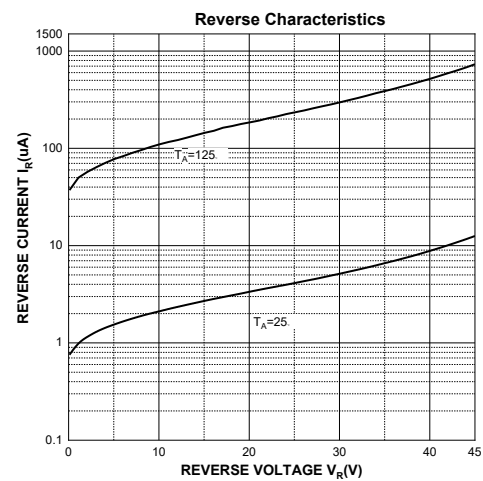
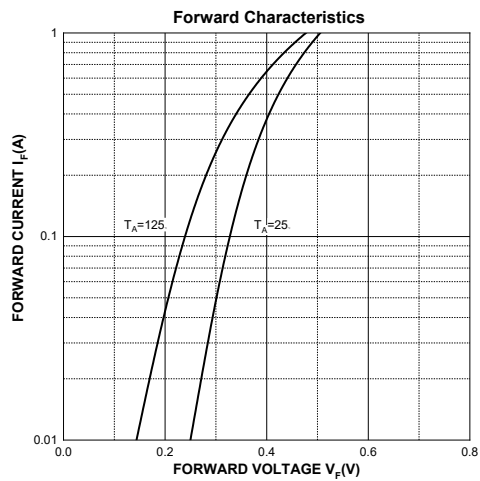
**SOD-123**

**ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

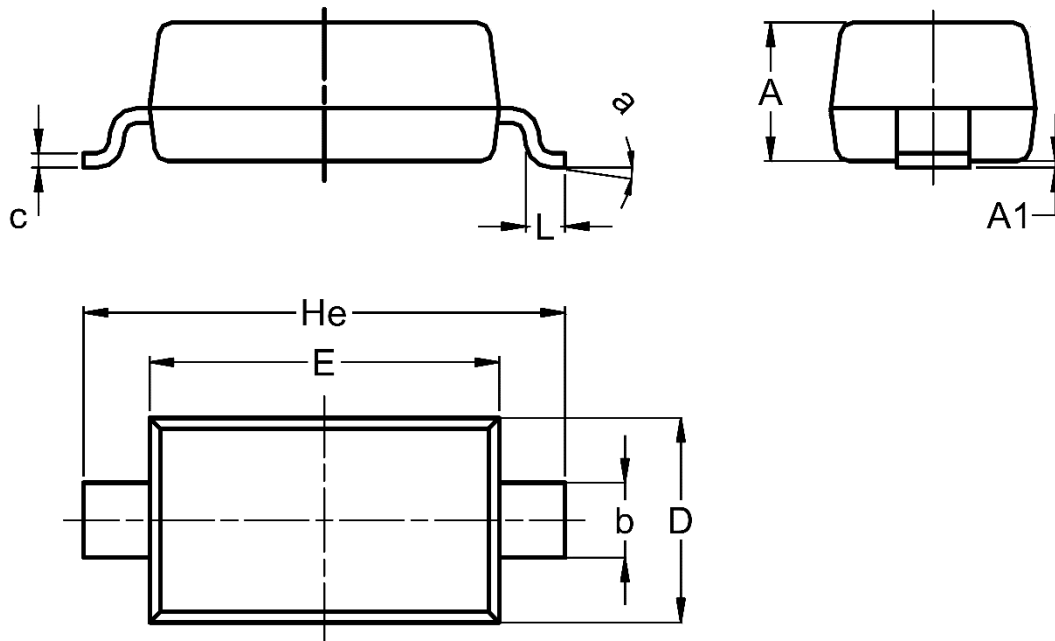
| Parameter                                           | Symbol           | Value      | Unit |
|-----------------------------------------------------|------------------|------------|------|
| DC Reverse Voltage                                  | V <sub>R</sub>   | 40         | V    |
| Mean Rectifying Current                             | I <sub>O</sub>   | 1          | A    |
| Non-Repetitive Peak Forward Surge Current @ T=8.3ms | I <sub>FSM</sub> | 15         | A    |
| Power Dissipation                                   | P <sub>D</sub>   | 0.35       | W    |
| Thermal Resistance from Junction to Ambient         | R <sub>θJA</sub> | 285        | °C/W |
| Operation Junction Temperature                      | T <sub>J</sub>   | -40~125    | °C   |
| Storage Temperature                                 | T <sub>STG</sub> | -55 ~ +150 | °C   |

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)**

| Parameter         | Symbol          | Test Condition                | Min | Type | Max  | Unit |
|-------------------|-----------------|-------------------------------|-----|------|------|------|
| Reverse Voltage   | V <sub>BR</sub> | I <sub>R</sub> = 250μA        | 40  | 50   |      | V    |
| Forward Voltage   | V <sub>F</sub>  | I <sub>F</sub> = 0.5A         | 0   | 0.45 | 0.50 | V    |
|                   |                 | I <sub>F</sub> = 1.0A         | 0   | 0.55 | 0.60 | V    |
|                   |                 | I <sub>F</sub> = 3.0A         | 0   | 0.80 | 0.90 | V    |
| Reverse Current   | I <sub>R</sub>  | V <sub>R</sub> = 40V          |     | 5    | 50   | μA   |
| Diode Capacitance | C <sub>D</sub>  | V <sub>R</sub> = 4V, f = 1MHz |     | 50   |      | pF   |

## Typical Characteristics



**SOD-123 Package Outline Dimensions**


| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 0.950                     | 1.350 | 0.037                | 0.053 |
| A1     | 0                         | 0.100 | 0                    | 0.004 |
| c      | 0.090                     | 0.120 | 0.004                | 0.005 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| b      | 0.450                     | 0.650 | 0.018                | 0.026 |
| He     | 3.450                     | 3.850 | 0.136                | 0.152 |
| E      | 2.550                     | 2.800 | 0.100                | 0.110 |
| L      | 0.200                     | 0.400 | 0.008                | 0.016 |
| a      | 0°                        | 8°    | 0°                   | 8°    |

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- GreenPower Electronics reserves the right to improve product design function and reliability without notice.
- Any and all semiconductor products have certain probability to fail or malfunction, which may result in personal injury, death or property damage. Customers are solely responsible for providing adequate safe measures when design their systems.
- GreenPower Electronics products belong to consumer electronics or other civilian electronic products.