

# 1N5819W

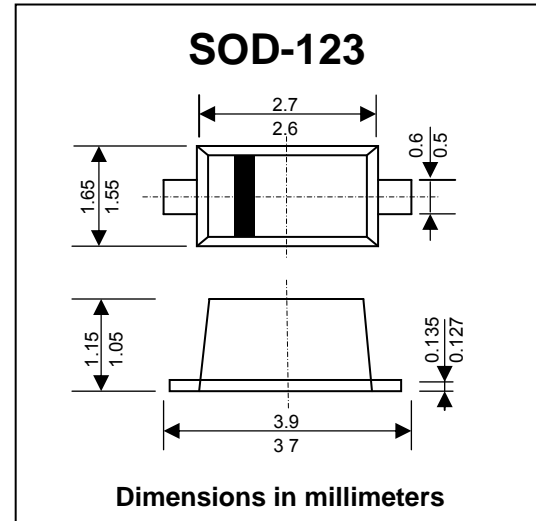
## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### FEATURES :

- \* Low Power Loss,
- \* Low Forward Voltage Drop
- \* High Efficiency
- \* High Surge Capability
- \* High Current Capability
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case: SOD-123, Plastic
- \* Terminals: Solderable per MIL-STD-202, Method 208
- \* Polarity: Cathode Band
- \* Weight: 0.01 grams (approx.)



### Absolute Maximum Ratings (Ta = 25 °C)

| Parameter   | Symbol          | Value        | Unit |
|---|-----------------|--------------|------|
| Maximum Peak Repetitive Reverse Voltage   | $V_{RRM}$       | 40           | V    |
| Maximum Working Peak Reverse Voltage at $I_R = 1$ mA  | $V_{RWM}$       | 40           | V    |
| Maximum DC Blocking Voltage   | $V_R$           | 40           | V    |
| Maximum RMS Reverse Voltage   | $V_{R(RMS)}$    | 28           | V    |
| Maximum Average Forward Current   | $I_F$           | 1            | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 25.0         | A    |
| Power Dissipation   | $P_{tot}$       | 450          | mW   |
| Typical Thermal Resistance Junction to Ambient  | $R_{\theta JA}$ | 222          | °C/W |
| Junction Temperature  | $T_J$           | 125          | °C   |
| Storage Temperature Range   | $T_{STG}$       | -55 to + 125 | °C   |

### Electrical Characteristics (Ta = 25 °C)

| Parameter                        | Symbol      | Test Condition               | Min. | Typ. | Max. | Unit |
|----------------------------------|-------------|------------------------------|------|------|------|------|
| Reverse Breakdown Voltage        | $V_{(BR)R}$ | $I_R = 1.0$ mA               | 40   | -    | -    | V    |
| Forward Voltage (Note 1)         | $V_F$       | $I_F = 0.1$ A                | -    | -    | 0.32 | V    |
|                                  |             | $I_F = 1.0$ A                | -    | -    | 0.45 |      |
|                                  |             | $I_F = 3.0$ A                | -    | -    | 0.75 |      |
| Reverse Leakage Current (Note 1) | $I_{RM}$    | $V_R = 40$ V                 | -    | -    | 1    | mA   |
|                                  |             | $V_R = 40$ V, $T_a = 100$ °C | -    | -    | 10.0 | mA   |
|                                  |             | $V_R = 4$ V                  | -    | 10.0 | 50.0 | µA   |
|                                  |             | $V_R = 4$ V, $T_a = 100$ °C  | -    | 1.0  | 2.0  | mA   |
|                                  |             | $V_R = 6$ V                  | -    | 15.0 | 75.0 | µA   |
|                                  |             | $V_R = 6$ V, $T_a = 100$ °C  | -    | 1.5  | 3.0  | mA   |
| Typical Junction Capacitance     | $C_J$       | at $V_R = 4$ V, $f = 1$ MHz  | -    | 110  | -    | pF   |

Note : (1) Pulse Test: Pulse width  $\leq 200$  µs, Duty Cycle  $\leq 2\%$ .