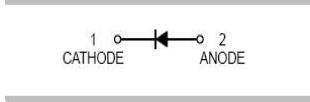


| | |
|---|--|
| <p>Features</p> <ul style="list-style-type: none"> ● Low reverse current and low forward voltage ● High reliability ● Small surface mounting type <p>Typical Applications</p> <ul style="list-style-type: none"> ● For general purpose applications <p>Mechanical Data</p> <ul style="list-style-type: none"> ● Case: SOD-123,SOD-323 ● Molding compound, UL flammability classification rating 94V-0 ● Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208 | <p>SOD-123 SOD323</p>  |
|---|--|

Ordering Information

| Part Number | Package | Shipping | Marking Code |
|-------------|---------|-----------------------|--------------|
| B5818W | SOD-123 | 3000pcs / Tape & Reel | SK |
| B5818WS | SOD-323 | 3000pcs / Tape & Reel | SK |
| B5819W | SOD-123 | 3000pcs / Tape & Reel | SL |
| B5819WS | SOD-323 | 3000pcs / Tape & Reel | SL |

Maximum Ratings (@T_A=25°C unless otherwise specified)

| Parameter | Symbol | B5818W(S) | B5819W(S) | Units |
|---|--------------------|-----------|-----------|-------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 30 | 40 | V |
| RMS Reverse Voltage | V _{RMS} | 21 | 28 | V |
| Maximum Average Forward Output Current | I _{F(AV)} | 1 | | A |
| Peak Forward Surge Current, 8.3ms Single Half-sine-wave | I _{FSM} | 10 | | A |

Thermal Characteristics

| Parameter | Symbol | B5818W/B5819W | B5818WS/B5819WS | Units |
|--------------------------------------|--------------------|---------------|-----------------|--------|
| Power Dissipation | P _D | 500 | 250 | mW |
| Typical Thermal Resistance per leg | R _{θJA} * | 200 | 400 | °C / W |
| Operating Junction Temperature Range | T _J | 125 | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | °C |

* Part mounted on FR-4 board with recommended pad layout

Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | | Min. | Typ. | Max. | Units |
|-------------------------------|------------|--------------------------------------|------------------------|------|------|-------|-------|
| Forward Voltage | V_F^* | $I_F=1\text{A}$ | B5818W(S) | - | - | 0.55 | V |
| | | $I_F=1\text{A}$ | B5819W(S) | | | 0.60 | |
| | | $I_F=3\text{A}$ | B5818W(S) | | | 0.875 | |
| | | $I_F=3\text{A}$ | B5819W(S) | - | - | 0.90 | |
| Maximum Peak Reverse Current | I_R^{**} | $V_R=30\text{V}$ $V_R=40\text{V}$ | B5818W(S) B5819W(S) | - | - | 1 | mA |
| Capacitance Between Terminals | C_T | $V_R=4\text{V}, f=1\text{MHz}$ | | - | 39 | 120 | pF |

*Pulse width $\leq 380\ \mu\text{s}$, Duty cycle $< 2\%$
 **pulse test, $t_p \leq 5\text{ms}$

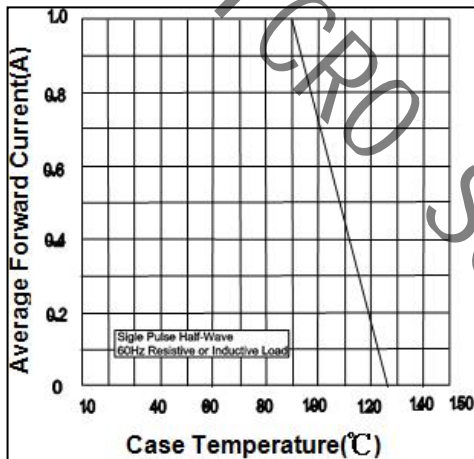
Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)


Fig.1 Forward Current Derating Curve

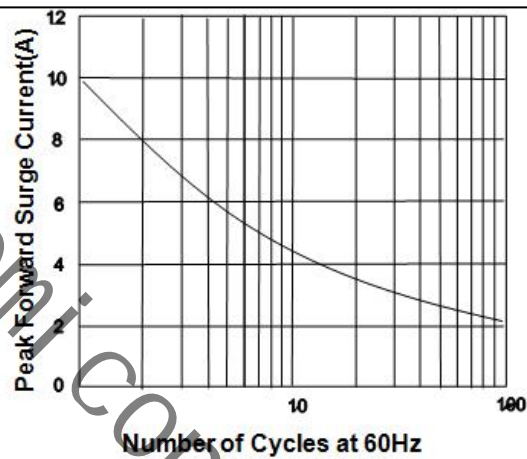


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

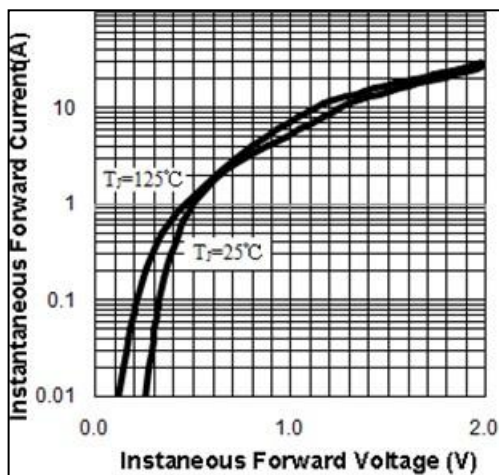


Fig.3 Typical Instantaneous Forward Characteristics

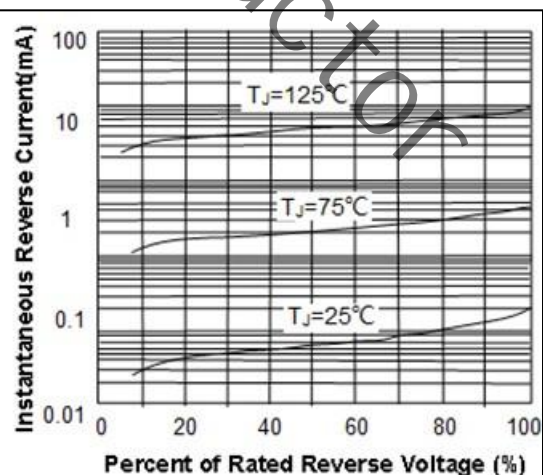
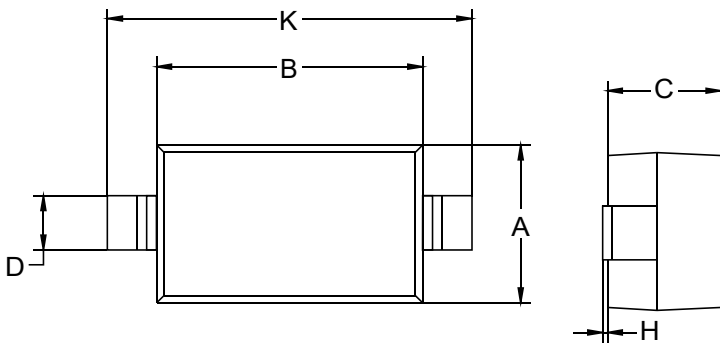
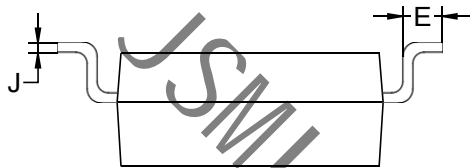
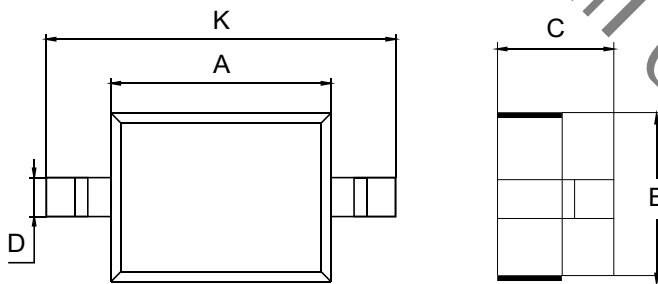


Fig.4 Typical Reverse Characteristics

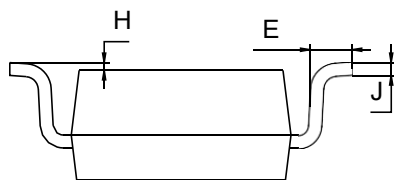
Package Outline Dimensions (unit: mm)

SOD-123


| SOD-123 | | |
|---------|------|------|
| Dim | Min | Max |
| A | 1.45 | 1.75 |
| B | 2.55 | 2.85 |
| C | 1.00 | 1.30 |
| D | 0.50 | 0.60 |
| E | 0.25 | 0.45 |
| H | 0.02 | 0.10 |
| J | 0.05 | 0.15 |
| K | 3.55 | 3.85 |

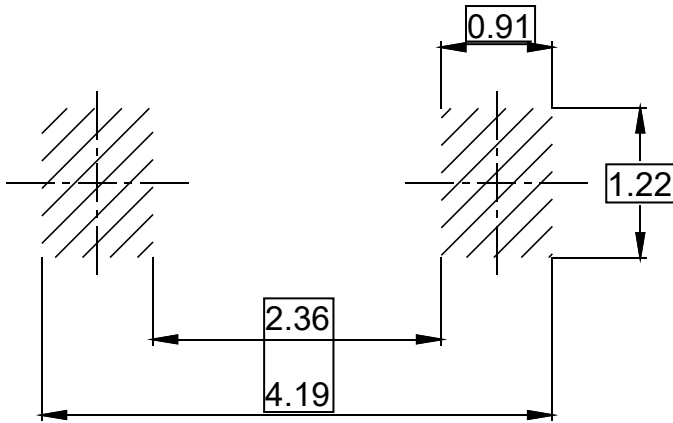

SOD-323


| SOD-323 | | |
|---------|------|------|
| Dim | Min | Max |
| A | 1.60 | 1.80 |
| B | 1.20 | 1.40 |
| C | 0.80 | 0.90 |
| D | 0.25 | 0.35 |
| E | 0.22 | 0.42 |
| H | 0.02 | 0.10 |
| J | 0.05 | 0.15 |
| K | 2.55 | 2.75 |



Mounting Pad Layout (unit: mm)

SOD-123



SOD-323

