

### Features

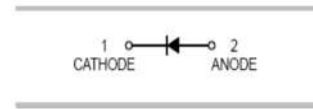
- Low reverse current and low forward voltage.
- High reliability.
- Small surface mounting type.



SOD-123



SOD323



### Typical Applications

- For general purpose applications

### Mechanical Data

- Case: SOD-123,SOD-323
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208.

### Ordering Information

| Part Number | Package | Shipping       | Marking Code |
|-------------|---------|----------------|--------------|
| B5818WH□    | SOD-123 | 3000/Tape Reel | SKH          |
| B5818WSH□   | SOD-323 | 3000/Tape Reel | SKH          |
| B5819WH□    | SOD-123 | 3000/Tape Reel | SLH          |
| B5819WSH□   | SOD-323 | 3000/Tape Reel | SLH          |

□: none is for Lead Free package;

“G” is for Halogen Free package.

### Maximum Ratings (@T<sub>A</sub>=25°C unless otherwise specified)

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

### Thermal Characteristics

| Parameter                            | Symbol             | B5818WH/B5819WH | B5818WSH/B5819WSH | Units |
|--------------------------------------|--------------------|-----------------|-------------------|-------|
| Power Dissipation                    | P <sub>D</sub>     | 500             | 250               | mW    |
| Typical Thermal Resistance per leg   | R <sub>θJA</sub> * | 250             | 500               | °C/W  |
| Operating Junction Temperature Range | T <sub>J</sub>     | 150             |                   | °C    |
| Storage Temperature Range            | T <sub>STG</sub>   | -55 to +150     |                   | °C    |

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

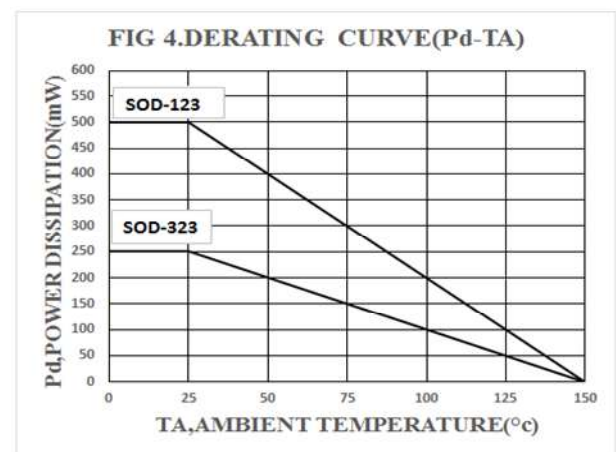
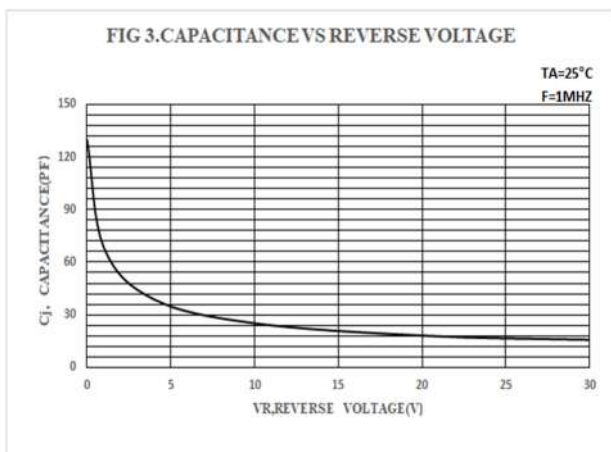
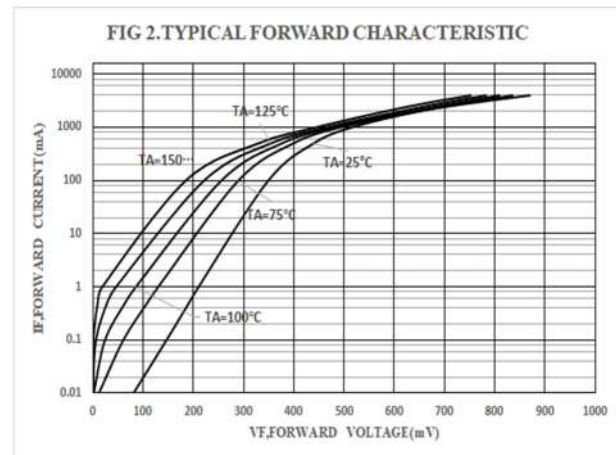
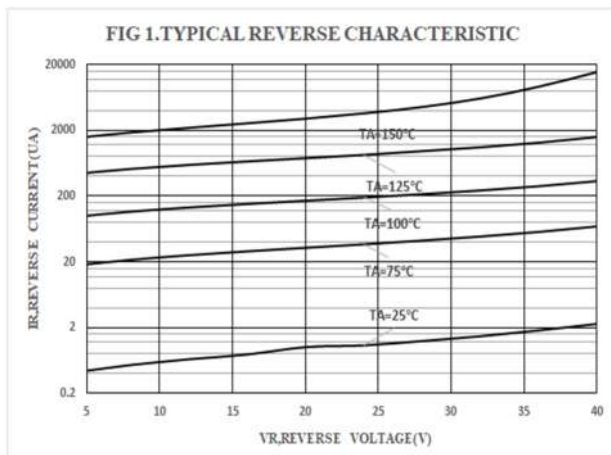
### Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter                     | Symbol     | Test conditions  | Min. | Typ. | Max.  | Units |
|-------------------------------|------------|--|------|------|-------|-------|
| Forward Voltage               | $V_F^*$    | $I_F=1\text{A}$ B5818W(S)H                                 | -    | -    | 0.55  | V     |
|                               |            | $I_F=1\text{A}$ B5819W(S)H                                 | -    | -    | 0.60  |       |
|                               |            | $I_F=3\text{A}$ B5818W(S)H                                 | -    | -    | 0.875 |       |
|                               |            | $I_F=3\text{A}$ B5819W(S)H                                 | -    | -    | 0.90  |       |
| Maximum Peak Reverse Current  | $I_R^{**}$ | $V_R=30\text{V}$ B5818W(S)H<br>$V_R=40\text{V}$ B5819W(S)H | -    | -    | 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  $< 2\%$

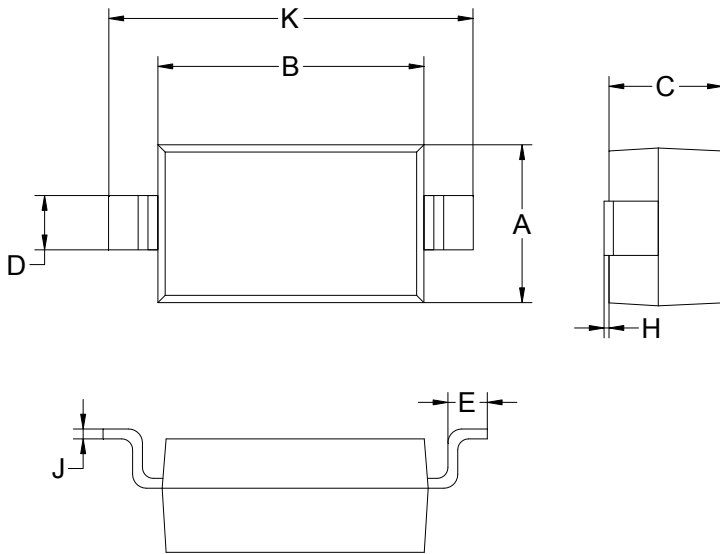
\*\*pulse test,  $t_p \leq 5\text{ms}$

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



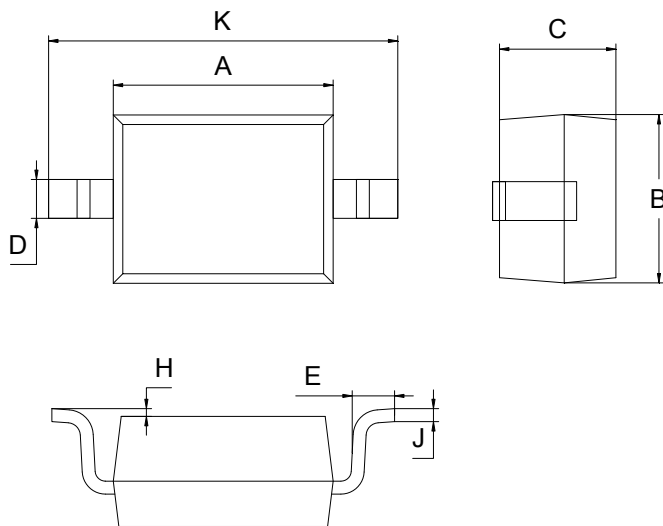
### Package Outline Dimensions (unit:mm)

#### 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 |

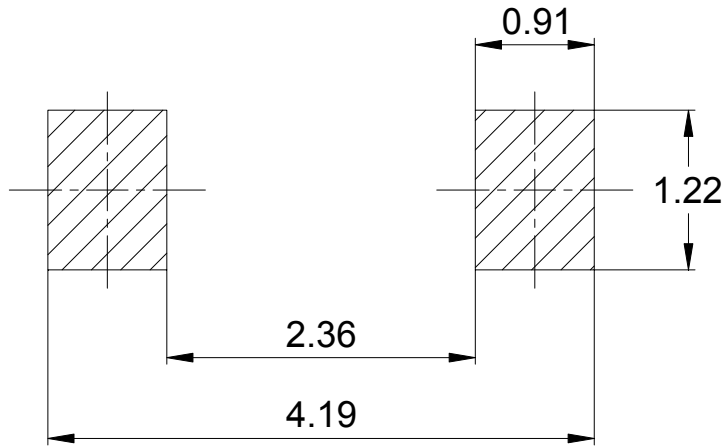
#### SOD-323



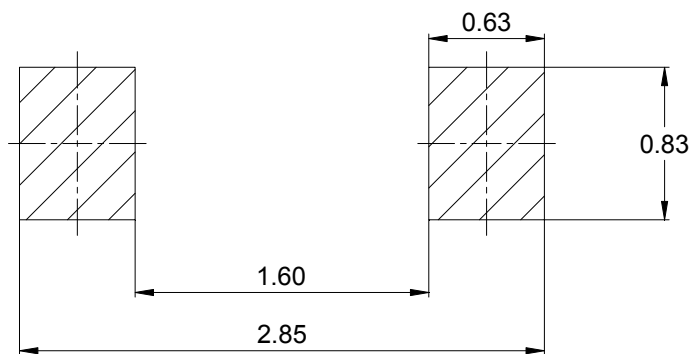
| SOD-323 |      |      |
|---------|------|------|
| Dim     | Min  | Max  |
| A       | 1.60 | 1.80 |
| B       | 1.20 | 1.40 |
| C       | 0.80 | 0.90 |
| D       | 0.25 | 0.35 |
| E       | 0.22 | 0.42 |
| H       | 0.02 | 0.10 |
| J       | 0.05 | 0.15 |
| K       | 2.55 | 2.75 |

Mounting Pad Layout(unit:mm)

SOD-123



SOD-323



IMPORTANT NOTICE

Galaxy Microelectronics (GME) reserves the right to make changes without further notice to any product herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.