

## Features

- Fast switching speed
- High conductance
- For general purpose switching applications
- Surface mount package ideally suited for automatic insertion

**HF**

1 CATHODE 2 ANODE

## Typical Applications

- Surface mount fast switching diode

## Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



**SOD-323**

## Ordering Information

| Part Number | Package | Shipping Quantity      | Marking Code |
|-------------|---------|------------------------|--------------|
| BL4120WS    | SOD-323 | 3000 pcs / Tape & Reel | 4120         |

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

| Parameter                                             | Symbol              | Value | Unit |
|-------------------------------------------------------|---------------------|-------|------|
| Non-Repetitive Peak Reverse Voltage                   | V <sub>RM</sub>     | 120   | V    |
| Peak Repetitive Peak Reverse Voltage                  | V <sub>RPM</sub>    |       |      |
| Working Peak Reverse Voltage                          | V <sub>RWM</sub>    | 120   | V    |
| DC Blocking Voltage                                   | V <sub>R</sub>      |       |      |
| RMS Reverse Voltage                                   | V <sub>R(RMS)</sub> | 84    | V    |
| Average Rectified Output Current                      | I <sub>O</sub>      | 200   | mA   |
| Peak Forward Surge Current, 1μs Single Half-sine-wave | I <sub>FSM</sub>    | 2     | A    |
| Peak Forward Surge Current, 1s Single Half-sine-wave  |                     | 1     | A    |
| Power Dissipation                                     | P <sub>D</sub>      | 200   | mW   |

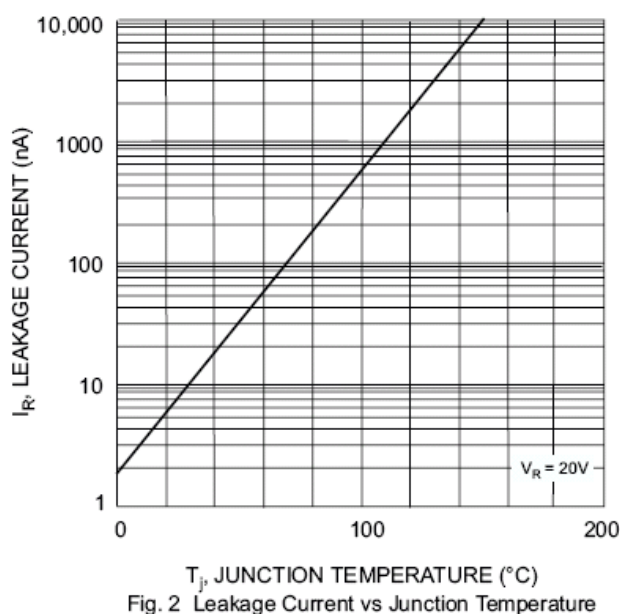
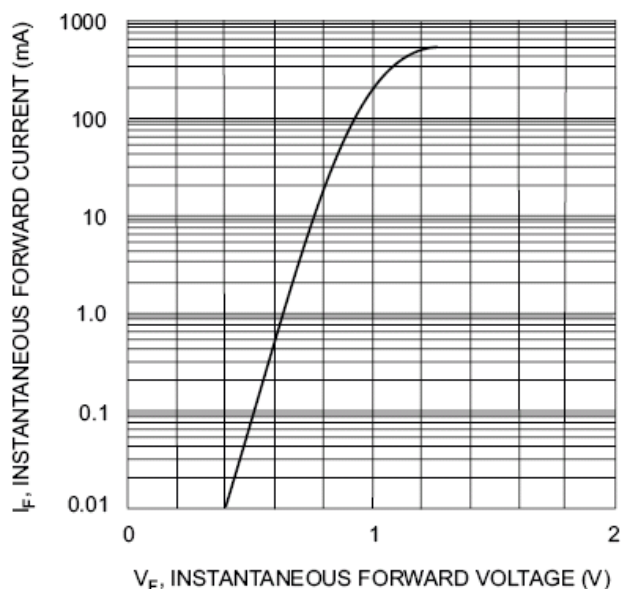
## Thermal Characteristics

| Parameter                            | Symbol          | Value      | Unit                        |
|--------------------------------------|-----------------|------------|-----------------------------|
| Thermal Resistance Junction-to-Air   | $R_{\theta JA}$ | 625        | $^{\circ}\text{C}/\text{W}$ |
| Thermal Resistance Junction-to-Case  | $R_{\theta JC}$ | 350        | $^{\circ}\text{C}/\text{W}$ |
| Operating Junction Temperature Range | $T_J$           | -55 ~ +150 | $^{\circ}\text{C}$          |
| Storage Temperature Range            | $T_{STG}$       | -65 ~ +150 | $^{\circ}\text{C}$          |

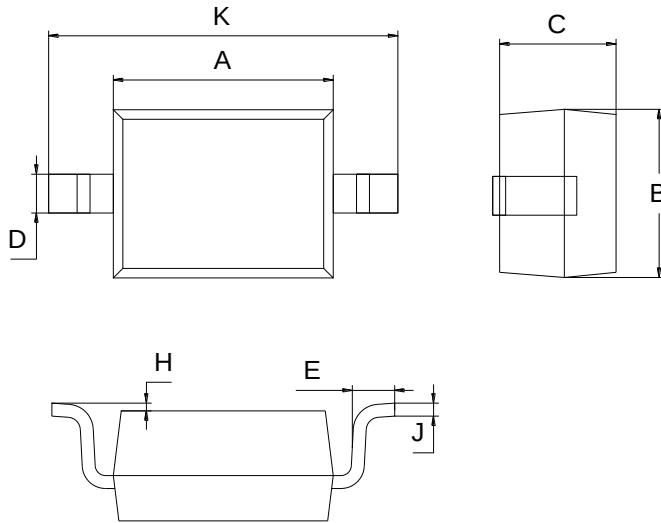
## Electrical Characteristics (@ $T_A = 25^{\circ}\text{C}$ unless otherwise specified)

| Parameter                    | Symbol   | Test Condition                                                                             | Min. | Typ. | Max.                          | Unit |
|------------------------------|----------|--------------------------------------------------------------------------------------------|------|------|-------------------------------|------|
| Reverse Breakdown Voltage    | $V_R$    | $I_R = 1\mu\text{A}$                                                                       | 120  | -    | -                             | V    |
| Forward Voltage              | $V_F$    | $I_F = 1.0\text{mA}$<br>$I_F = 10\text{mA}$<br>$I_F = 50\text{mA}$<br>$I_F = 150\text{mA}$ | -    | -    | 0.715<br>0.855<br>1.0<br>1.25 | V    |
| Maximum Peak Reverse Current | $I_R$    | $V_R = 120\text{V}$                                                                        | -    | -    | 100                           | nA   |
| Total Capacitance            | $C_J$    | $V_R = 0, f = 1.0\text{MHz}$                                                               | -    | -    | 2                             | pF   |
| Reverse Recovery Time        | $t_{rr}$ | $I_F = I_R = 10\text{mA}$ ,<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$                  | -    | -    | 4                             | ns   |

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



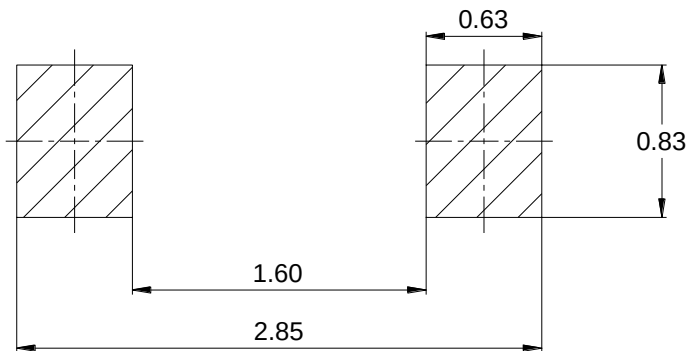
## Package Outline Dimensions (Unit: mm)



| SOD-323   |      |      |
|-----------|------|------|
| Dimension | 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-323



## Important Notice

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) 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.