

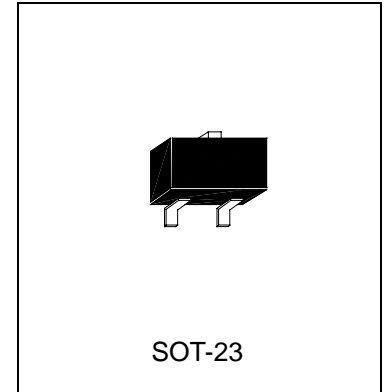


# HMBD4148

HIGH-SPEED SWITCHING DIODE

## Description

The HMBD4148 is designed for high-speed switching application in hybrid thick-and thin-film circuits. The devices is manufactured by the silicon epitaxial planar process and packed in plastic surface mount package.



## Features

- Small SMD Package (SOT-23)
- Ultra-high Speed
- Low Forward Voltage
- Fast Reverse Recovery Time

## Absolute Maximum Ratings

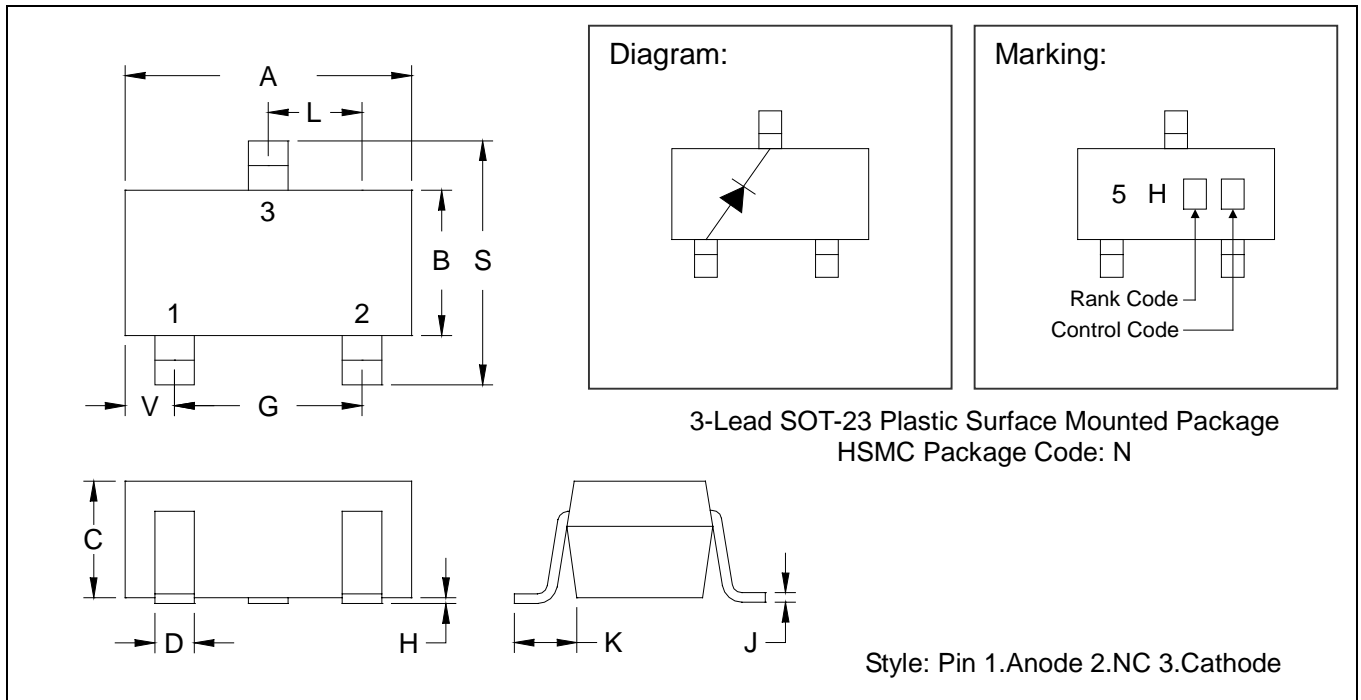
- Maximum Temperatures  
 Storage Temperature ..... -65 ~ +150 °C  
 Junction Temperature ..... +150 °C
- Maximum Power Dissipation  
 Total Power Dissipation (Ta=25°C)..... 225 mW
- Maximum Voltages and Currents (Ta=25°C)  
 Continuous Reverse Voltage ..... 70 V  
 Continuous Forward Current..... 200 mA  
 Peak Forward Surge Current ..... 500 mA

## Characteristics (Ta=25°C)

| Characteristic        | Symbol | Condition                                 | Min | Max | Unit |
|-----------------------|--------|---|-----|-----|------|
| Forward Voltage       | VF     | IF=10mA                                   | -   | 1   | V    |
| Reverse Breakdown     | VR     | IR=100uA                                  | 100 | -   | V    |
| Reverse Current       | IR     | VR=75V                                    | -   | 5   | uA   |
| Total Capacitance     | CT     | VR=0, F=1MHz                              | -   | 4   | pF   |
| Reverse Recovery Time | Trr    | IF=IR=10mA, RL=100Ω<br>Measured at IR=1mA | -   | 4   | nS   |



### SOT-23 Dimension



\*: Typical

| DIM | Inches |        | Millimeters |      | DIM | Inches |        | Millimeters |       |
|-----|--------|--------|-------------|------|-----|--------|--------|-------------|-------|
|     | Min.   | Max.   | Min.        | Max. |     | Min.   | Max.   | Min.        | Max.  |
| A   | 0.1102 | 0.1204 | 2.80        | 3.04 | J   | 0.0034 | 0.0070 | 0.085       | 0.177 |
| B   | 0.0472 | 0.0630 | 1.20        | 1.60 | K   | 0.0128 | 0.0266 | 0.32        | 0.67  |
| C   | 0.0335 | 0.0512 | 0.89        | 1.30 | L   | 0.0335 | 0.0453 | 0.85        | 1.15  |
| D   | 0.0118 | 0.0197 | 0.30        | 0.50 | S   | 0.0830 | 0.1083 | 2.10        | 2.75  |
| G   | 0.0669 | 0.0910 | 1.70        | 2.30 | V   | 0.0098 | 0.0256 | 0.25        | 0.65  |
| H   | 0.0005 | 0.0040 | 0.013       | 0.10 |     |        |        |             |       |

- Notes:**
- 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
  - 2.Controlling dimension: millimeters.
  - 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
  - 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

**Material:**

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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