# WEITRON

# MMBL4148H

## Surface Mount Switching Diode

**Lead(Pb)-Free**

**SWITCHING DIODE**
**200mAMPERS**
**100VOLTS**

**Features:**

*High Speed≤4ns

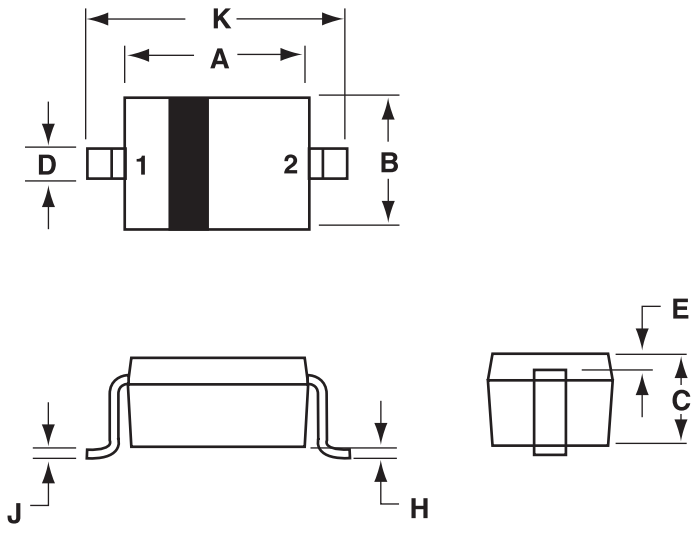
*Low Rever Leakage Current

*Small Outline Surface Mount SOD-323 Package


**SOD-323**

## SOD-323 Outline Dimensions

Unit:mm




| Dim | MILLMETERS | |
|---|---|---|
| | Min | Max |
| A | 1.60 | 1.80 |
| B | 1.15 | 1.35 |
| C | 0.80 | 1.00 |
| D | 0.25 | 0.40 |
| E | 0.15REF | |
| H | 0.00 | 0.10 |
| J | 0.089 | 0.377 |
| K | 2.30 | 2.70 |

**PIN 1.CATHODE**
**2.ANODE**

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## Maximum Ratings

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 100 | Vdc |
| Forward Current | $I_F$ | 200 | mAdc |
| Peak Forward Surge Current | $I_{FM(Surge)}$ | 500 | mAdc |

## Thermal Characteristics

| Characterictics | Symbol | Max | Unit |
|---|---|---|---|
| Total Device Dissipation FR-5 Board $T_A$=25°C | $P_D$ | 500 | mW |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 556 | °C/W |
| Junction and Storage Temperature | $T_J$, $T_{stg}$ | -55 to + 150 | °C |

## Electrical Characteristics ($T_A$=25°C Unless Otherwise note)

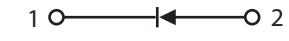
| Characterictics | Symbol | Min | Max | Unit |
|---|---|---|---|---|

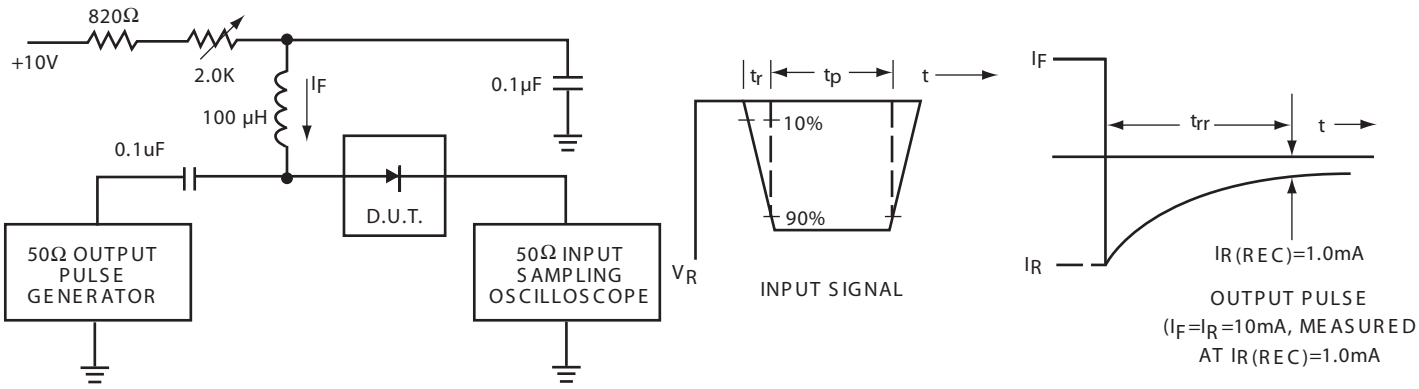
## Off Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Reverse Breakdown Votalge (IR=100uAdc) | | V(BR) | 100 | – | Vcc |
| Forward Voltage(IF=10mAdc) | | $V_F$ | – | 1000 | mVdc |
| Reverse Voltage Leakage Current | ($V_R$=20Vdc)<br>($V_R$=75Vdc) | $I_R$ | –<br>– | 0.025<br>5.0 | uAdc |
| Diode Capacitance ($V_R$=0, f=1.0MHz) | | $C_T$ | – | 4.0 | pF |
| Reverse Recover Time ($I_F$=$I_R$=10mAdc) | | trr | – | 4.0 | ns |

1. FR-5=1.0x0.75x0.062 in 2.Alumina=0.4x0.3x0.024 in. 99.5% alumina.

## Device Marking

| Item | Marking | Eqivalent Circuitdiagram |
|---|---|---|
| MMBL4148H | 5D |  |




Notes:1. A 2.0 kΩ variable resistor for a Forward Current ($I_F$) 0f 10 mA

2. Input pules is adjusted so $I_R$(peak) is equal to 10 mA

3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

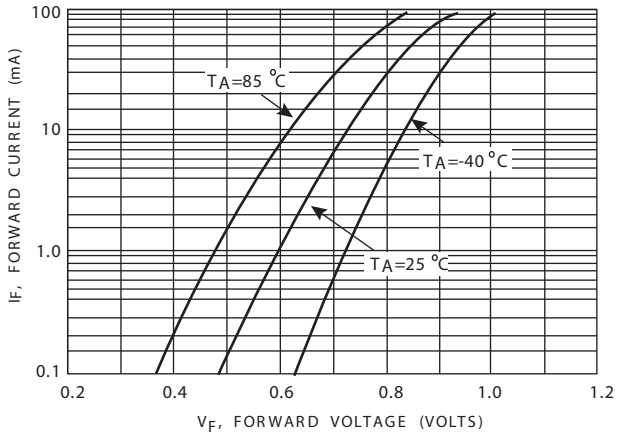



Figure 2. Forward Voltage

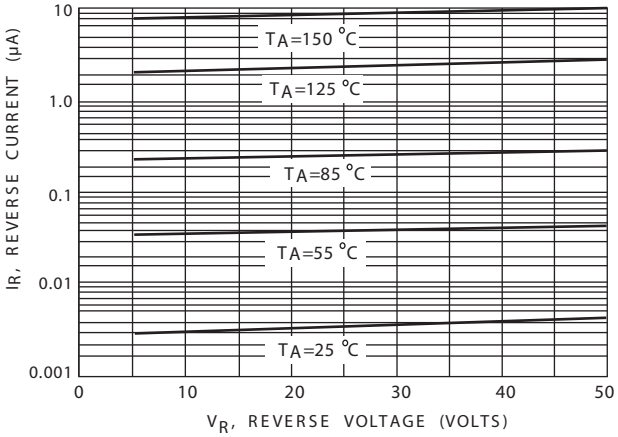



Figure 3. Leakage Current

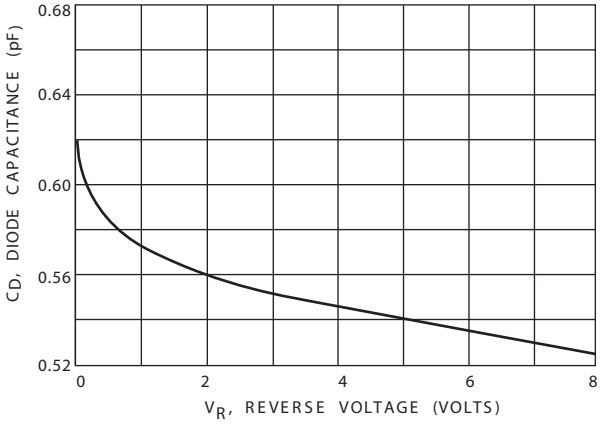



Figure 4. Capacitance