

## 1N4148WSGH

### Silicon Epitaxial Planar Switching Diode

**Lead free product**

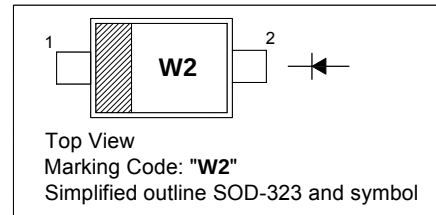
**Halogen-free type**

#### Features

- SOD-323 package
- Fast switching
- These diodes are also available in other case style including the DO-35 case with the type designation 1N4148, the MiniMELF case with the type designation LL4148 and the MicroMELF case with the type designation MCL4148.

#### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



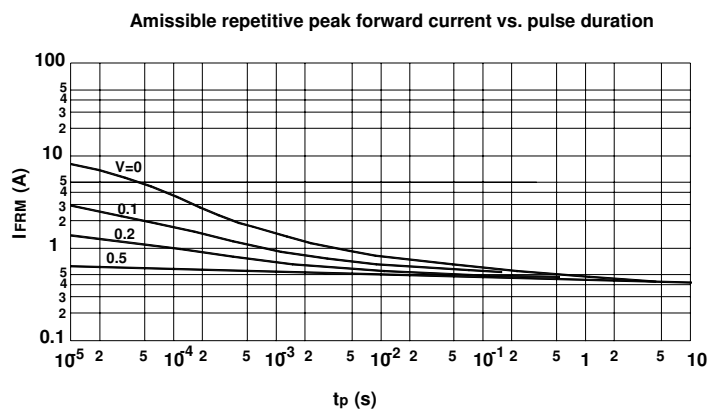
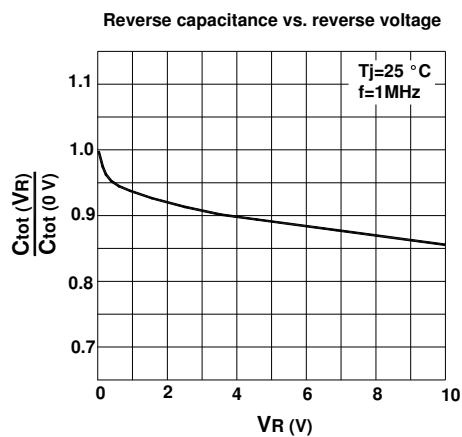
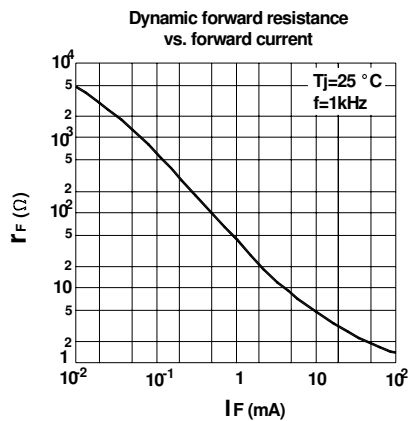
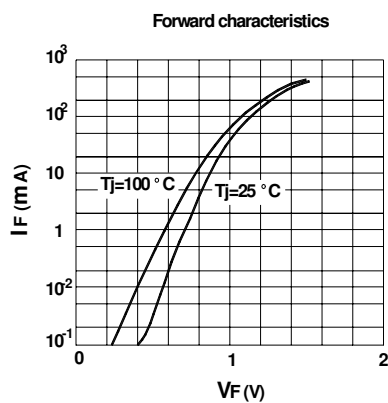
#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                                             | Symbol          | Value         | Unit               |
|-----------------------------------------------------------------------|-----------------|---------------|--------------------|
| Peak Reverse Voltage                                                  | $V_{RM}$        | 100           | V                  |
| Reverse Voltage                                                       | $V_R$           | 75            | V                  |
| Average Rectified Forward Current                                     | $I_{F(AV)}$     | 150           | mA                 |
| Surge Forward Current ( $t < 1\text{ s}$ , $T_j = 25^\circ\text{C}$ ) | $I_{FSM}$       | 350           | mA                 |
| Power Dissipation                                                     | $P_{tot}$       | 200           | mW                 |
| Thermal Resistance from Junction to Ambient Air                       | $R_{\theta JA}$ | 625           | $^\circ\text{C/W}$ |
| Junction Temperature                                                  | $T_j$           | 150           | $^\circ\text{C}$   |
| Storage Temperature Range                                             | $T_{stg}$       | - 65 to + 150 | $^\circ\text{C}$   |

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Parameter                                                                                                                   | Symbol    | Max.                        | Unit                                 |
|-----------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|--------------------------------------|
| Forward Voltage<br>at $I_F = 1\text{ mA}$<br>at $I_F = 10\text{ mA}$<br>at $I_F = 50\text{ mA}$<br>at $I_F = 150\text{ mA}$ | $V_F$     | 0.715<br>0.855<br>1<br>1.25 | V                                    |
| Reverse Current<br>at $V_R = 20\text{ V}$<br>at $V_R = 75\text{ V}$<br>at $V_R = 20\text{ V}$ , $T_j = 150^\circ\text{C}$   | $I_R$     | 25<br>5<br>50               | nA<br>$\mu\text{A}$<br>$\mu\text{A}$ |
| Total Capacitance<br>at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                                             | $C_{tot}$ | 4                           | pF                                   |
| Reverse Recovery Time<br>at $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$ , $V_R = 6\text{ V}$ , $R_L = 100\ \Omega$          | $t_{rr}$  | 4                           | ns                                   |

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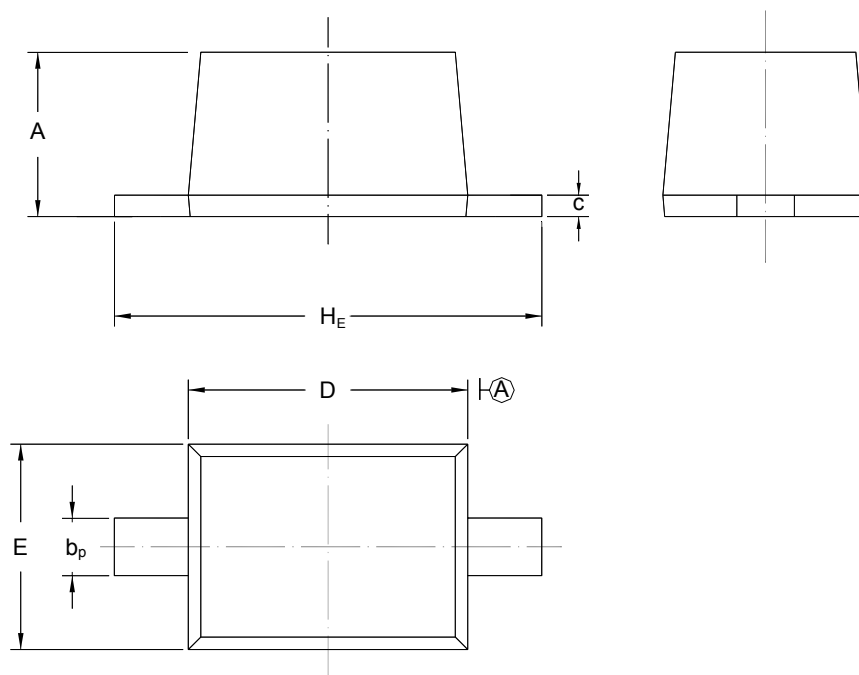


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### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A            | b <sub>p</sub> | C            | D            | E            | H <sub>E</sub> |
|------|--------------|----------------|--------------|--------------|--------------|----------------|
| mm   | 1.10<br>0.80 | 0.40<br>0.25   | 0.15<br>0.10 | 1.80<br>1.60 | 1.35<br>1.15 | 2.80<br>2.30   |