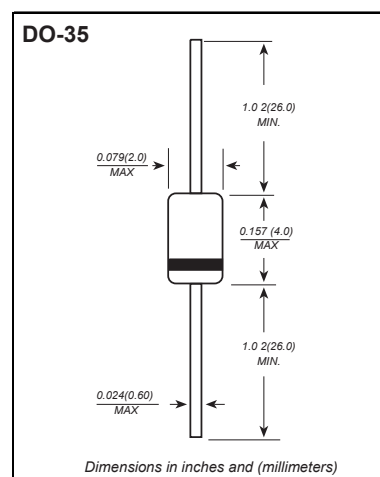


## Fast Switching Surface Mount Diodes

## 1N4148

## ■ Features

- Fast Switching Speed
- General Purpose Rectification
- Silicon Epitaxial Planar Construction

■ Absolute Maximum Ratings  $T_a = 25$ 

| Parameter                                                                  | Symbol          | Rating      | Unit |
|----------------------------------------------------------------------------|-----------------|-------------|------|
| Non-Repetitive Peak Reverse Voltage                                        | $V_{RM}$        | 100         | V    |
| Peak Repetitive Reverse Voltage                                            | $V_{RRM}$       | 75          | V    |
| Working Peak Reverse Voltage                                               | $V_{RWM}$       |             |      |
| DC Blocking Voltage                                                        | $V_R$           |             |      |
| RMS Reverse Voltage                                                        | $V_{R(RMS)}$    | 53          | V    |
| Forward Continuous Current *                                               | $I_{FM}$        | 300         | mA   |
| Average Rectified Output Current *                                         | $I_o$           | 150         | mA   |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu s$<br>@ $t = 1.0s$ | $I_{FSM}$       | 2.0         | A    |
|                                                                            |                 | 1.0         | A    |
| Power Dissipation *<br>Derate Above 25                                     | $P_D$           | 500         | mW   |
|                                                                            |                 | 1.68        | mW/  |
| Thermal Resistance Junction to Ambient Air *                               | $R_{\theta JA}$ | 300         | K/W  |
| Operating and Storage Temperature Range                                    | $T_j, T_{STG}$  | -65 to +175 |      |

\* Valid provided that device terminals are kept at ambient temperature.

■ Electrical Characteristics  $T_a = 25$ 

| Parameter             | Symbol   | Testconditions                                     | Min | Typ | Max | Unit    |
|-----------------------|----------|----------------------------------------------------|-----|-----|-----|---------|
| Forward voltage       | $V_F$    | $I_F = 10mA$                                       |     |     | 1.0 | V       |
| Peak Reverse Current  | $I_R$    | $V_R = 75V$                                        |     |     | 5   | $\mu A$ |
|                       |          | $V_R = 20V, T_j = 150$                             |     |     | 30  | $\mu A$ |
|                       |          | $V_R = 20V$                                        |     |     | 25  | nA      |
| Capacitance           | $C_J$    | $V_R = 0, f = 1.0MHz$                              |     |     | 4.0 | pF      |
| Reverse recovery time | $t_{rr}$ | $I_F = 10mA, I_R = 1mA, V_R = 6V, R_L = 100\Omega$ |     |     | 4.0 | ns      |

## ■ Marking

|         |        |
|---------|--------|
| Marking | 1N4148 |
|---------|--------|

**1N4148**

■ Typical Characteristics  $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

