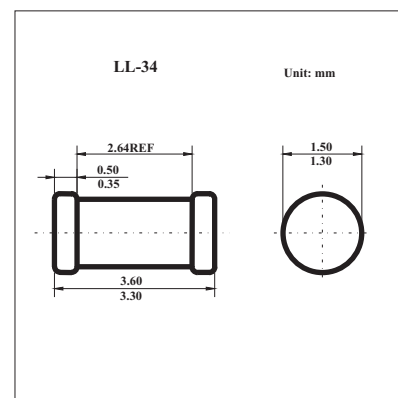


## Fast Switching Surface Mount Diodes

## KLL4148

## ■ Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- General Purpose Rectification
- Silicon Epitaxial Planar Construction

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| 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 @ $t = 1.0 \mu\text{s}$<br>@ $t = 1.0\text{s}$ | $I_{FSM}$       | 2.0         | A                    |
|                                                                                          |                 | 1.0         |                      |
| Power Dissipation (*)<br>Derate Above $25^\circ\text{C}$                                 | $P_D$           | 500         | mW                   |
|                                                                                          |                 | 1.68        | mW/ $^\circ\text{C}$ |
| Thermal Resistance Junction to Ambient Air (*)                                           | $R_{\theta JA}$ | 300         | K/W                  |
| Operating and Storage Temperature Range                                                  | $T_j, T_{STG}$  | -65 to +175 | $^\circ\text{C}$     |

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

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                    | Symbol   | Testconditions                                                                        | Min | Typ | Max | Unit          |
|------------------------------|----------|---------------------------------------------------------------------------------------|-----|-----|-----|---------------|
| Maximum Forward Voltage      | $V_{FM}$ | $I_F = 10\text{mA}$                                                                   |     |     | 1.0 | V             |
| Maximum Peak Reverse Current | $I_{RM}$ | $V_R = 75\text{V}$                                                                    |     |     | 5.0 | $\mu\text{A}$ |
|                              |          | $V_R = 70\text{V}, T_j = 150^\circ\text{C}$                                           |     |     | 50  |               |
|                              |          | $V_R = 20\text{V}, T_j = 150^\circ\text{C}$                                           |     |     | 30  |               |
|                              |          | $V_R = 20\text{V}$                                                                    |     |     | 25  | nA            |
| Capacitance                  | $C_j$    | $V_R = 0, f = 1.0\text{MHz}$                                                          |     |     | 4.0 | pF            |
| Reverse Recovery Time        | $t_{rr}$ | $I_F = 10\text{mA}$ to $I_R = 1.0\text{mA}$ ,<br>$V_R = 6.0\text{V}, R_L = 100\Omega$ |     |     | 4.0 | ns            |