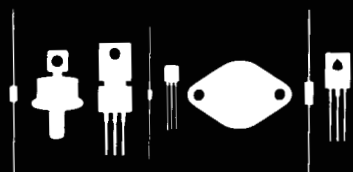


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145 Adams Avenue  
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1N4446 THRU 1N4449

SILICON SWITCHING DIODE

JEDEC DO-35 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 1N4446 series types are very high speed Silicon Switching Diodes designed for computer and general purpose applications.

## MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ )

|                                                | SYMBOL         |             | UNIT               |
|------------------------------------------------|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage                | $V_{RRM}$      | 100         | V                  |
| Peak Working Reverse Voltage                   | $V_{RWM}$      | 75          | V                  |
| Average Forward Current                        | $I_O$          | 150         | mA                 |
| Forward Steady-State Current                   | $I_F$          | 200         | mA                 |
| Peak Forward Surge Current (1.0 $\mu$ s pulse) | $I_{FSM}$      | 2000        | mA                 |
| Power Dissipation                              | $P_D$          | 500         | mW                 |
| Operating and Storage                          | $T_J, T_{stg}$ | -65 TO +200 | $^{\circ}\text{C}$ |

## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| SYMBOL               | TEST CONDITIONS                                                             | 1N4446 |     | 1N4447 |     | 1N4448 |      | 1N4449 |      | UNIT          |
|----------------------|-----------------------------------------------------------------------------|--------|-----|--------|-----|--------|------|--------|------|---------------|
|                      |                                                                             | MIN    | MAX | MIN    | MAX | MIN    | MAX  | MIN    | MAX  |               |
| $BV_R$               | $I_R=5\mu\text{A}$                                                          | 75     |     | 75     |     | 75     |      | 75     |      | V             |
| $BV_R$               | $I_R=100\mu\text{A}$                                                        | 100    |     | 100    |     | 100    |      | 100    |      | V             |
| $I_R$                | $V_R=20\text{V}$                                                            |        | 25  |        | 25  |        | 25   |        | 25   | nA            |
| $I_R$                | $V_R=20\text{V}, T_A=100^{\circ}\text{C}$                                   |        | -   |        | -   |        | 3.0  |        | 3.0  | $\mu\text{A}$ |
| $I_R$                | $V_R=20\text{V}, T_A=150^{\circ}\text{C}$                                   |        | 50  |        | 50  |        | 50   |        | 50   | $\mu\text{A}$ |
| $V_F$                | $I_F=5.0\text{mA}$                                                          | -      | -   | -      | -   | 0.62   | 0.72 | 0.63   | 0.73 | V             |
| $V_F$                | $I_F=20\text{mA}$                                                           |        | 1.0 |        | 1.0 |        | -    |        | -    | V             |
| $V_F$                | $I_F=30\text{mA}$                                                           |        | -   |        | -   |        | -    |        | 1.0  | V             |
| $V_F$                | $I_F=100\text{mA}$                                                          |        | -   |        | -   |        | 1.0  |        | -    | V             |
| $C_T$                | $V_R=0, f=1.0\text{ MHz}$                                                   |        | 4.0 |        | 2.0 |        | 4.0  |        | 2.0  | pF            |
| $t_{rr}$             | $V_R=6.0\text{V}, I_F=10\text{mA},$<br>$I_{rr}=1.0\text{mA}, R_L=100\Omega$ |        | 4.0 |        | 4.0 |        | 4.0  |        | 4.0  | nS            |
| $V_{FM}(\text{REC})$ | $I_F=50\text{mA}, R_L=50\Omega$                                             |        | -   |        | -   |        | 2.5  |        | 2.5  | V             |