

# Standard Diode



## Features:

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

## Specifications:

### Mechanical Data:

|                                       |                                                                           |
|---------------------------------------|---------------------------------------------------------------------------|
| Cases                                 | : Moulded plastic                                                         |
| Lead                                  | : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed          |
| Polarity                              | : Colour band denotes cathode end                                         |
| High temperature soldering guaranteed | : 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension |
| Weight                                | : 0.4g                                                                    |

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Type Number                                                                                                | Symbol            | 1N5391  | 1N5392 | 1N5393 | 1N5395 | 1N5397 | 1N5398 | 1N5399 | Units    |
|------------------------------------------------------------------------------------------------------------|-------------------|---------|--------|--------|--------|--------|--------|--------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                     | V <sub>RRM</sub>  | 50      | 100    | 200    | 400    | 600    | 800    | 1,000  | V        |
| Maximum RMS Voltage                                                                                        | V <sub>RMS</sub>  | 35      | 70     | 140    | 280    | 420    | 560    | 700    |          |
| Maximum DC Blocking Voltage                                                                                | V <sub>DC</sub>   | 50      | 100    | 200    | 400    | 600    | 800    | 1,000  |          |
| Maximum Average Forward Rectified Current 0.375 (9.5mm) Lead Length at T <sub>A</sub> = 75°C               | I <sub>(AV)</sub> | 1.5     |        |        |        |        |        |        | A        |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )         | I <sub>FSM</sub>  | 50      |        |        |        |        |        |        |          |
| Maximum Instantaneous Forward Voltage at 1.5A                                                              | V <sub>F</sub>    | 1.1     | 10     |        |        |        |        |        | V        |
| Maximum DC Reverse Current at T <sub>A</sub> = 25°C at Rated DC Blocking Voltage at T <sub>A</sub> = 100°C | I <sub>R</sub>    | 5<br>50 |        |        |        |        |        |        | μA<br>μA |

# Standard Diode

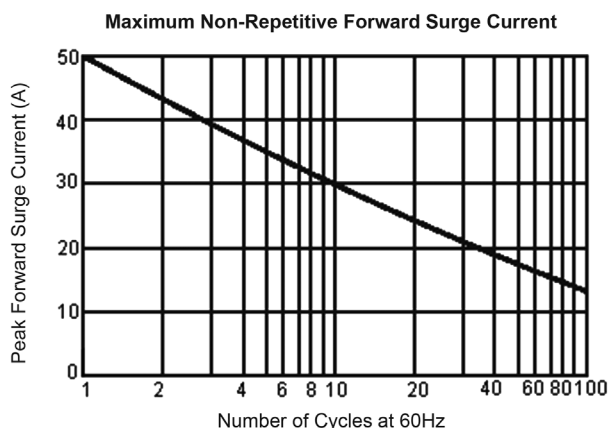
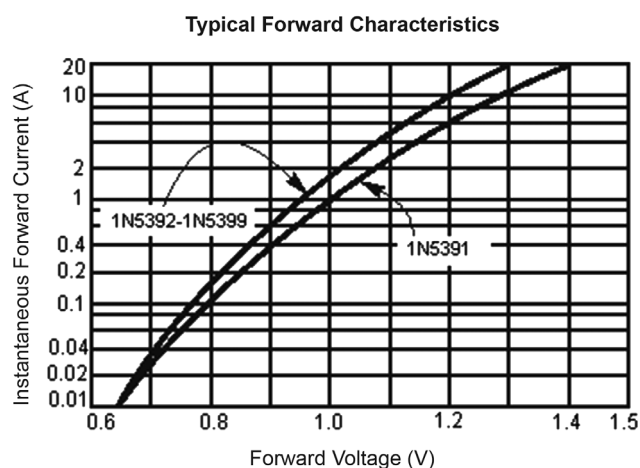
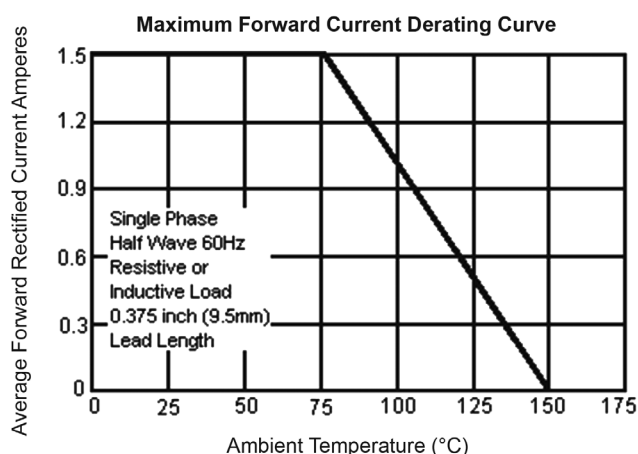


| Type Number                                                                                                      | Symbol          | 1N5391      | 1N5392 | 1N5393 | 1N5395 | 1N5397 | 1N5398 | 1N5399 | Units              |
|------------------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Full Load Reverse Current, Full Cycle Average 0.375 inch (9.5mm) Lead Length at $T_A = 75^\circ\text{C}$ | $HT_{IR}$       | 30          |        |        |        |        |        |        | $\mu\text{A}$      |
| Typical Junction Capacitance ( Note 1 )                                                                          | $C_j$           | 50          |        |        |        |        |        |        | pF                 |
| Typical Thermal Resistance ( Note 2 )                                                                            | $R_{\theta JA}$ | 60          |        |        |        |        |        |        | $^\circ\text{C/W}$ |
| Operating Temperature Range                                                                                      | $T_J$           | -65 to +150 |        |        |        |        |        |        | $^\circ\text{C}$   |
| Storage Temperature Range                                                                                        | $T_{STG}$       |             |        |        |        |        |        |        |                    |

**Note 1:** Measured at 1MHz and Applied Reverse Voltage of 4V DC.

**Note 2:** 2. Mount on Cu-Pad Size 10mm × 10mm on PCB.

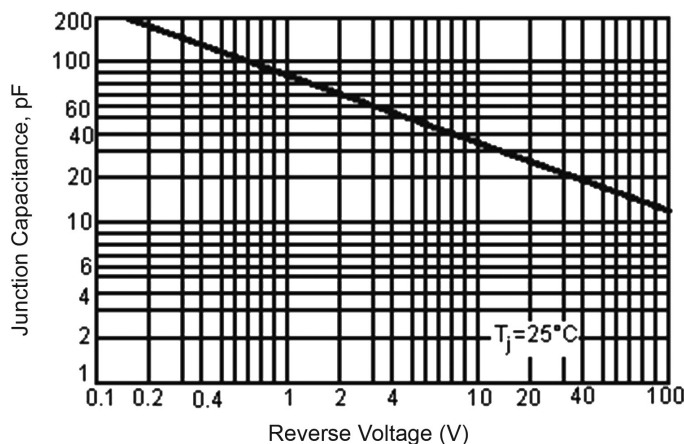
## Ratings and Characteristic Curves (1N5391 thru 1N5399)



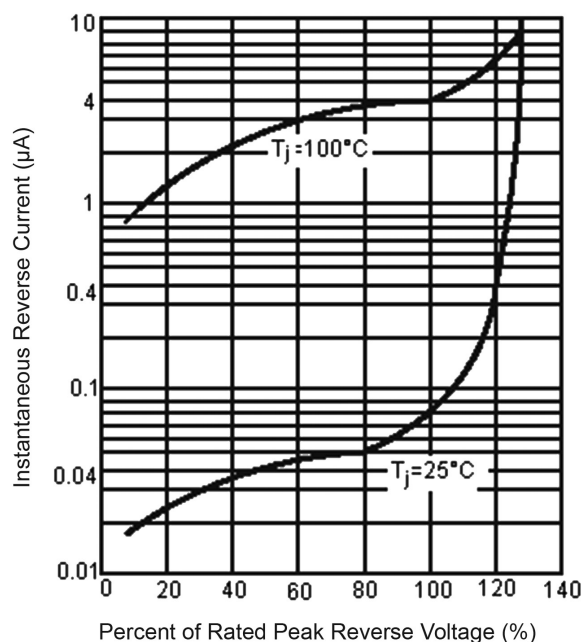
# Standard Diode



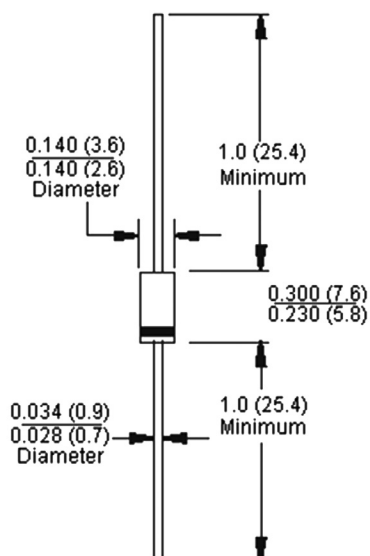
Typical Junction Capacitance



Typical Reverse Characteristics



## DO-15



Dimensions : Inches (Millimetres)

Part Number Table

| Description                   | Part Number |
|-------------------------------|-------------|
| Diode, Standard, 1.5A, 50V    | 1N5391      |
| Diode, Standard, 1.5A, 100V   | 1N5392      |
| Diode, Standard, 1.5A, 200V   | 1N5393      |
| Diode, Standard, 1.5A, 400V   | 1N5395      |
| Diode, Standard, 1.5A, 600V   | 1N5397      |
| Diode, Standard, 1.5A, 800V   | 1N5398      |
| Diode, Standard, 1.5A, 1,000V | 1N5399      |

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