

# Standard Diode



RoHS  
Compliant



## Features:

- Glass passivated chip junction
- High efficiency, Low  $V_F$
- High current capability
- High reliability
- High surge current capability
- Low power loss

## Specifications:

### Mechanical Data:

|                                       |                                                                                 |
|---------------------------------------|---------------------------------------------------------------------------------|
| Cases                                 | : Moulded plastic                                                               |
| Lead                                  | : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed |
| Polarity                              | : Colour band denotes cathode                                                   |
| High temperature soldering guaranteed | : 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension       |
| Weight                                | : 1.2g                                                                          |

## 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     | 1N5402G | 1N5406G | 1N5408G | Units |
|------------------------------------------------------------------------------------------------------|------------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                               | $V_{RRM}$  | 200     | 600     | 1,000   |       |
| Maximum RMS Voltage                                                                                  | $V_{RMS}$  | 140     | 420     | 700     | V     |
| Maximum DC Blocking Voltage                                                                          | $V_{DC}$   | 200     | 600     | 1,000   |       |
| Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length at $T_A = 60^\circ\text{C}$ | $I_{(AV)}$ | 3       |         |         | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)    | $I_{FSM}$  | 125     |         |         |       |
| Maximum Instantaneous Forward Voltage at 3.0A                                                        | $V_F$      | 1       |         |         | V     |

# Standard Diode



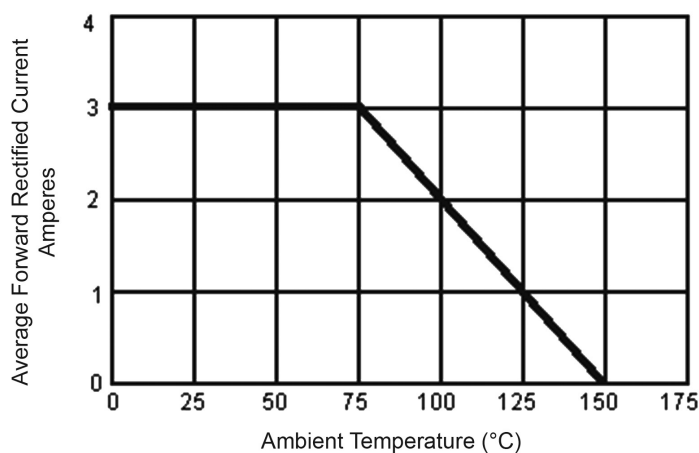
| Type Number                                                                                                         | Symbol          | 1N5402G     | 1N5406G | 1N5408G                        | Units              |
|---------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---------|--------------------------------|--------------------|
| Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$<br>at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$ | $I_R$           | 5<br>100    |         | $\mu\text{A}$<br>$\mu\text{A}$ |                    |
| Typical Junction Capacitance ( Note 1 )                                                                             | $C_j$           | 25          |         |                                | pF                 |
| Typical Thermal Resistance ( Note 2 )                                                                               | $R_{\theta JA}$ | 45          |         |                                | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                                                                             | $T_J, T_{STG}$  | -65 to +150 |         |                                | $^\circ\text{C}$   |

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

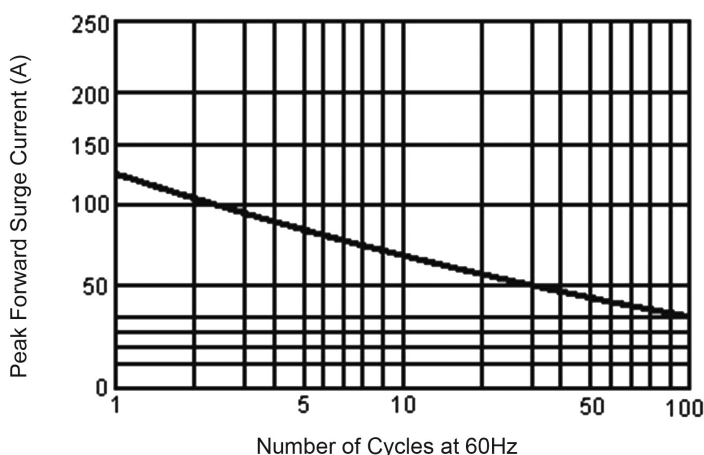
**Notes 2:** Mount on Cu-Pad Size 16mm  $\times$  16mm on PCB.

## Ratings and Characteristic Curves (1N5402G, 1N5406G and 1N5408G)

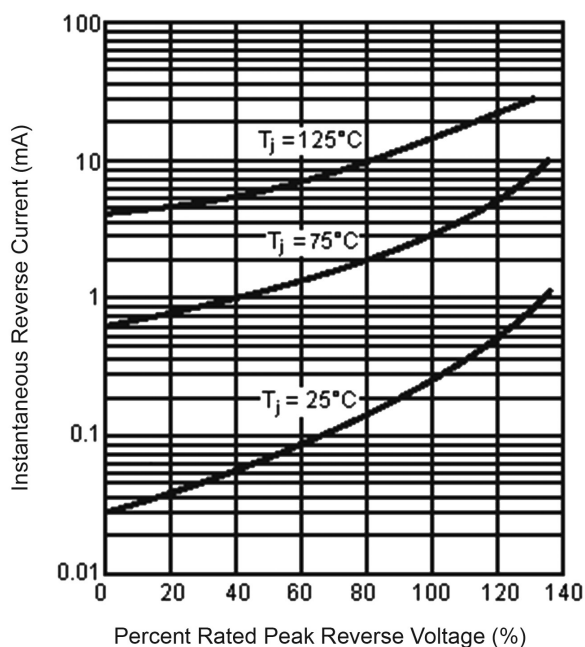
Maximum Forward Current Derating Curve



Maximum Non-Repetitive Forward Surge Current



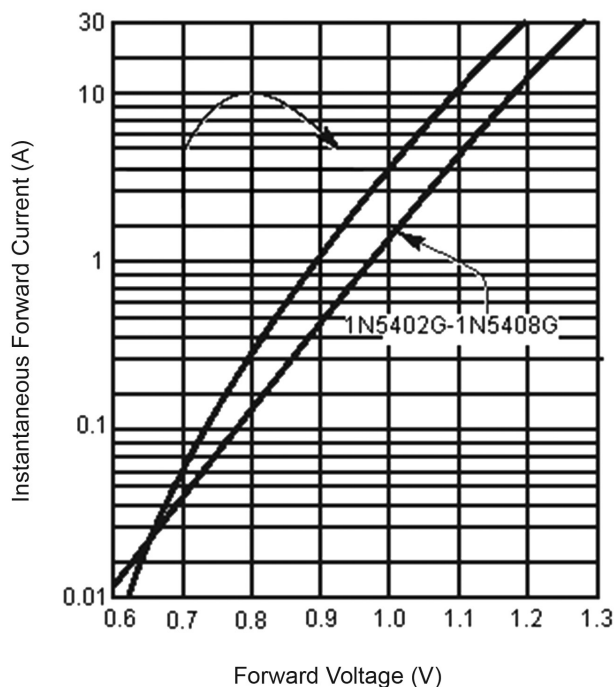
Typical Reverse Characteristics Per Leg



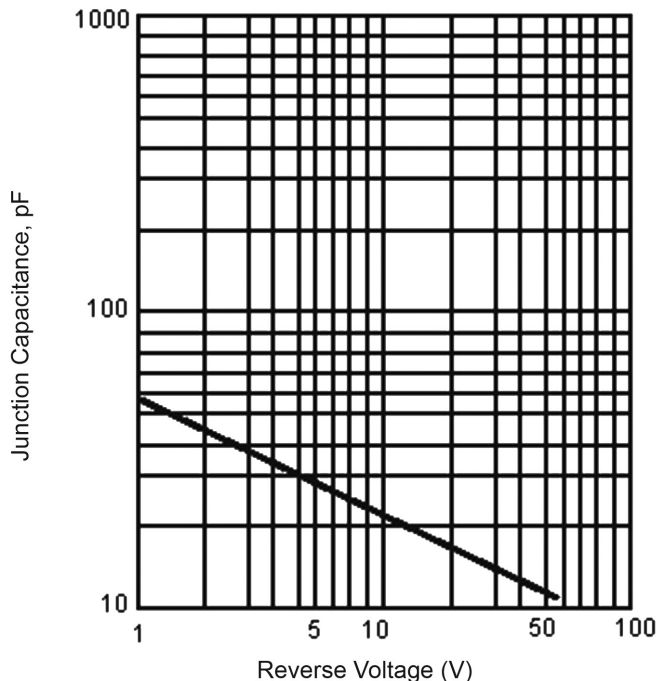
# Standard Diode



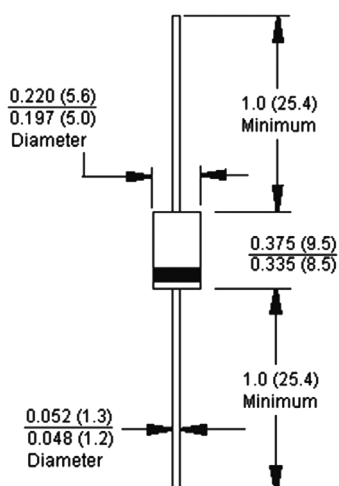
Typical Forward Voltage



Typical Junction Capacitance



## DO-201AD



Dimensions : Inches (Millimetres)

Part Number Table

| Description                 | Part Number |
|-----------------------------|-------------|
| Diode, Standard, 3A, 200V   | 1N5402G     |
| Diode, Standard, 3A, 600V   | 1N5406G     |
| Diode, Standard, 3A, 1,000V | 1N5408G     |

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