

# 1N4001 - 1N4007

## 1.0 AMP. Silicon Rectifiers

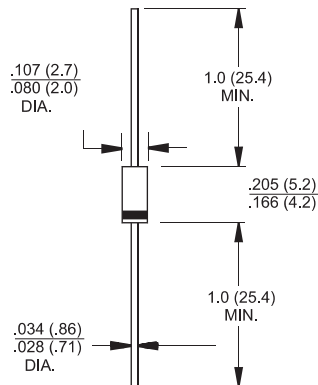
### DO-41

## Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss

## Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.35 gram



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

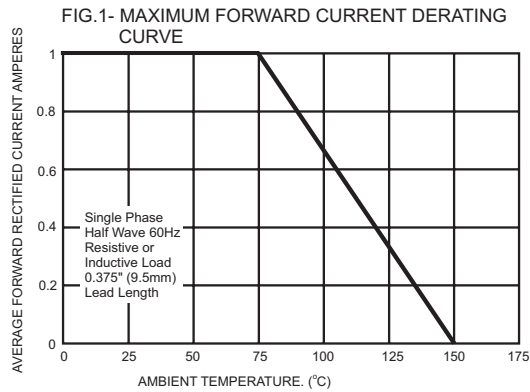
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

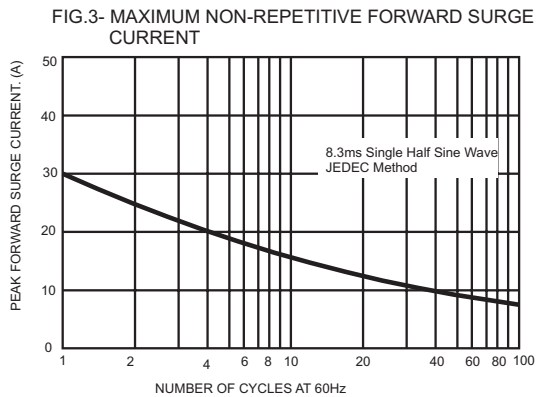
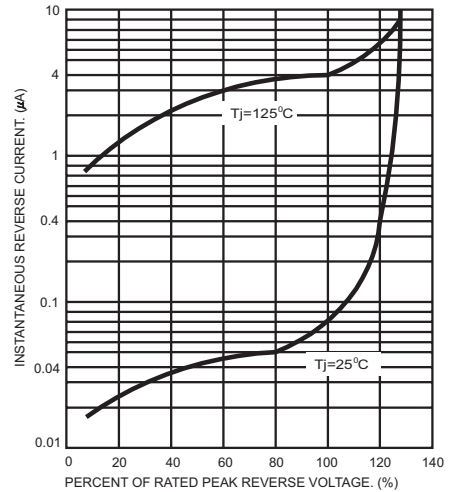
| Type Number                                                                                          | Symbol          | 1N 4001     | 1N 4002 | 1N 4003 | 1N 4004 | 1N 4005 | 1N 4006 | 1N 4007 | BY 133 | Units    |
|------------------------------------------------------------------------------------------------------|-----------------|-------------|---------|---------|---------|---------|---------|---------|--------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                               | $V_{RRM}$       | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | 1300   | V        |
| Maximum RMS Voltage                                                                                  | $V_{RMS}$       | 35          | 70      | 140     | 280     | 420     | 560     | 700     | 910    | V        |
| Maximum DC Blocking Voltage                                                                          | $V_{DC}$        | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | 1300   | V        |
| Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_A = 75^\circ C$             | $I_{(AV)}$      | 1.0         |         |         |         |         |         |         |        | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )  | $I_{FSM}$       | 30          |         |         |         |         |         |         |        | A        |
| Maximum Instantaneous Forward Voltage @ 1.0A                                                         | $V_F$           | 1.0         |         |         |         |         |         |         |        | V        |
| Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 125^\circ C$   | $I_R$           | 5.0<br>50   |         |         |         |         |         |         |        | uA<br>uA |
| Maximum Full Load Reverse Current ,Full Cycle Average .375" (9.5mm) Lead Length @ $T_A = 75^\circ C$ | $HT_{IR}$       | 30          |         |         |         |         |         |         |        | uA       |
| Typical Junction Capacitance ( Note 1 )                                                              | $C_j$           | 10          |         |         |         |         |         |         |        | pF       |
| Typical Thermal Resistance ( Note 2 )                                                                | $R_{\theta JA}$ | 65          |         |         |         |         |         |         |        | °C/W     |
| Operating and Storage Temperature Range                                                              | $T_J, T_{STG}$  | -65 to +150 |         |         |         |         |         |         |        | °C       |

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
  2. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

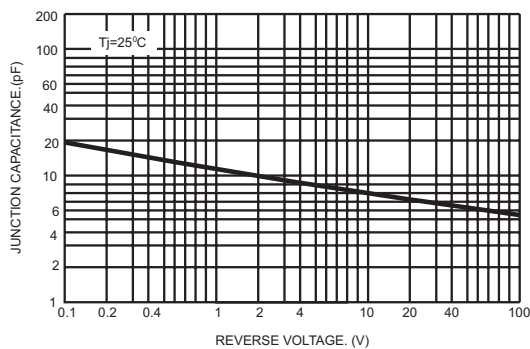
## RATINGS AND CHARACTERISTIC CURVES (1N4001 THRU 1N4007)



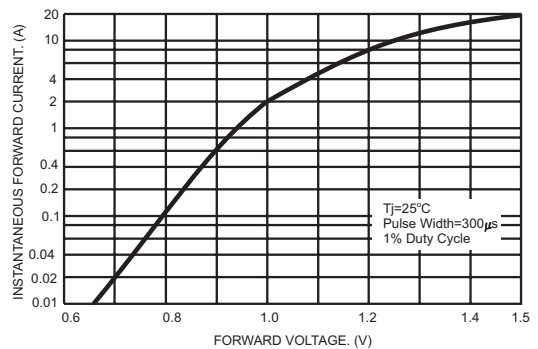
**FIG.2- TYPICAL REVERSE CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL FORWARD CHARACTERISTICS**



Factory Address: Taiguan Industrial zone, Yanjinyu Dongjin Rode No.1, XinXiang, HeNan, China