

# 1N4001S -1N4007S

1.0 AMP. Silicon Rectifiers

**A-405**

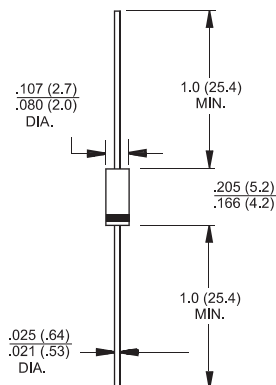


## Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧  $\varphi$ 0.6mm leads

## 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
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.22 gram



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

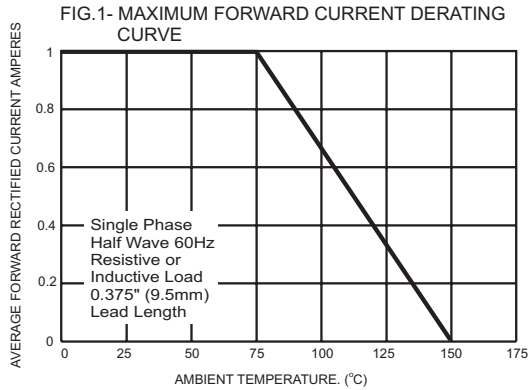
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

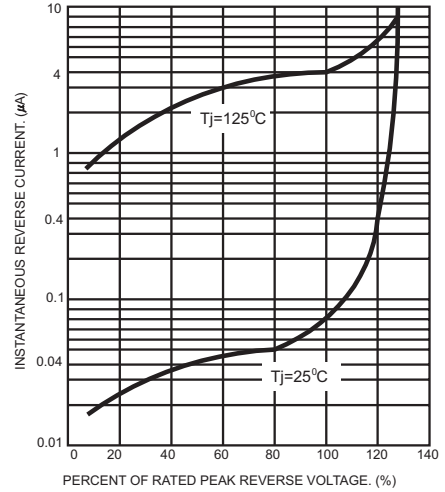
Type Number	Symbol	1N	1N	1N	1N	1N	1N	1N	Units
		4001S	4002S	4003S	4004S	4005S	4006S	4007S	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum 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 50							$\mu A$ $\mu A$
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_A=75^\circ C$	$HT_{IR}$	30							$\mu A$
Typical Junction Capacitance ( Note 1 )	$C_j$	15							pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta JA}$	50							$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150							$^\circ C$

- 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.

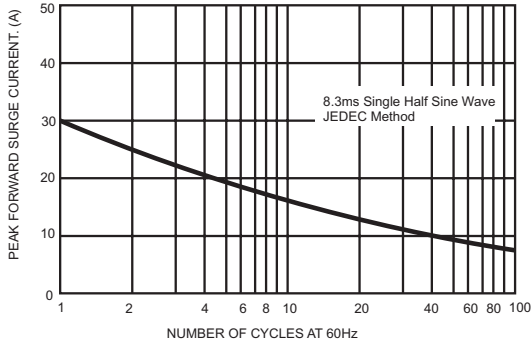
## RATINGS AND CHARACTERISTIC CURVES (1N4001S THRU 1N4007S)



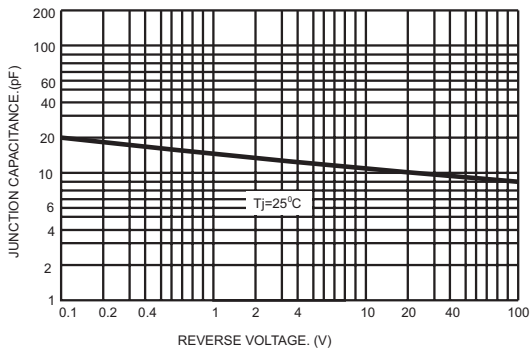
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS**



**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



**FIG. 5- TYPICAL FORWARD CHARACTERISTICS**

