

# 1N4001 THRU 1N4007



## 1.0 AMP SILICON RECTIFIERS



### FEATURES

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

### MECHANICAL DATA

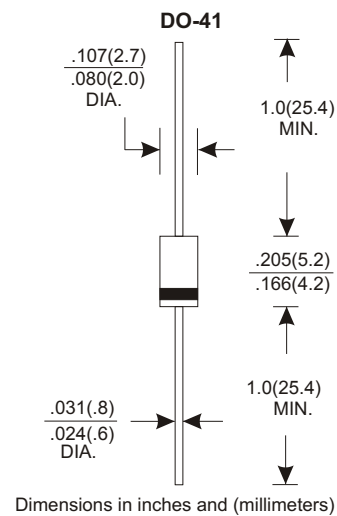
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- Weight: 0.34 grams
- \* Both normal and Pb free product are available:
- \* Normal:80~95%Sn,5~20%Pb
- \* Pb free:99 Sn above can meet Rohs enviroment substance directive request

### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

1.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unies otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75°C								1.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								30	A
Maximum Instantaneous Forward Voltage at 1.0A								1.0	V
Maximum DC Reverse Current Ta=25°C								5.0	uA
at Rated DC Blocking Voltage Ta=100°C								50	uA
Typical Junction Capacitance (Note 1)								15	pF
Maximum Reverse Recovery Time (Note 2)								2000	nS
Typical Thermal Resistance R JA (Note 3)								50	°C/W
Operating and Storage Temperature Range Tj, TSTG								-65 — +175	°C

#### NOTES:

2. Reverse Recovery Time test condition:IF=1.0A, VR=30V.
3. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

FIG.1-TYPICAL FORWARD CHARACTERISTICS

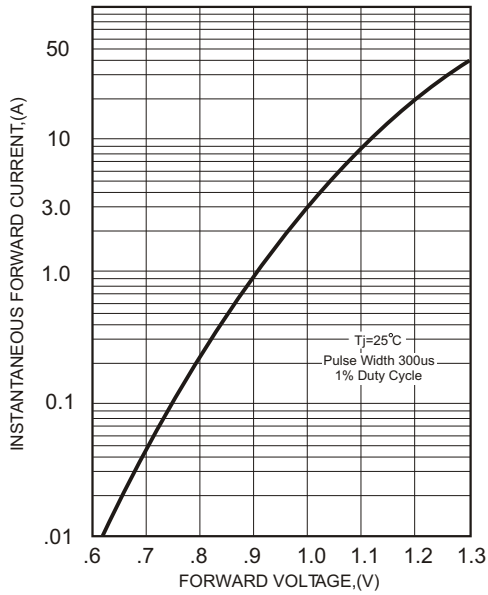


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

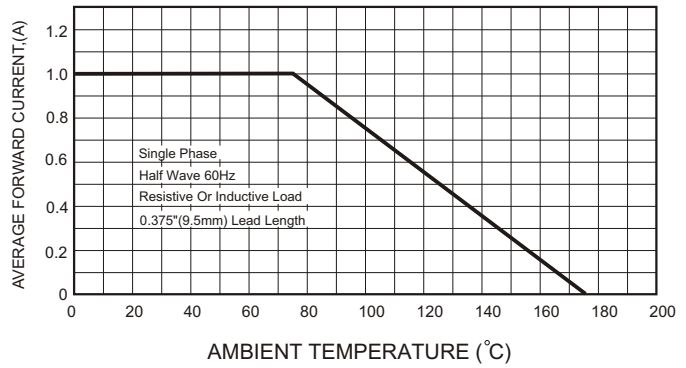


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

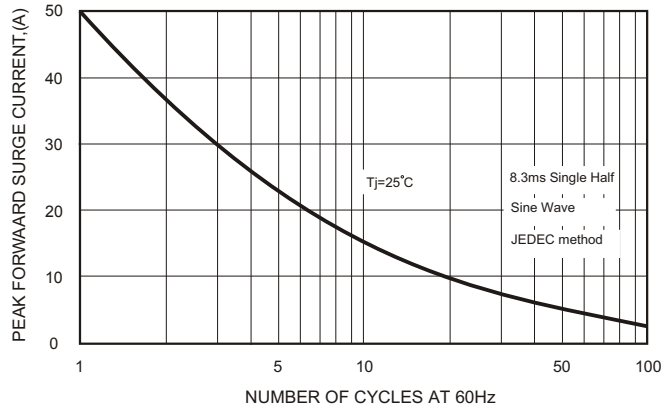


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

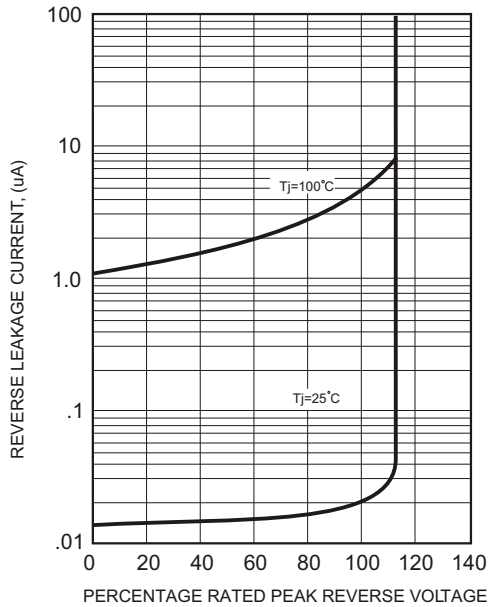


FIG.5-TYPICAL JUNCTION CAPACITANCE

