

# 1N4001 THRU 1N4007

## GENERAL PURPOSE PLASTIC SILICON RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

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### FEATURES

- Low forward voltage drop
- High current capability
- High capability
- High surge current capability
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, DO-41

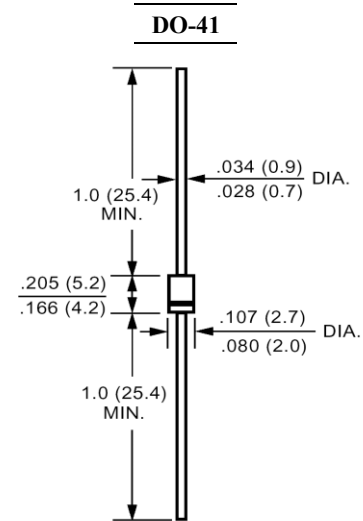
Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.012ounce, 0.33gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	Symbols	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=75$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amp
Maximum Forward Voltage at 1.0A DC and 25	$V_F$	1.1							Volts
Maximum Full Load Reverse Current Full Cycle Average at 75 °C Ambient		30							uAmp
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	5.0							uAmp
		500							uAmp
Typical Junction Capacitance (Note 1)	$C_J$	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							/W
Operating Junction Temperature Range	$T_J$	-55 to +150							
Storage Temperature Range	$T_{stg}$	-55 to +150							

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.

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### RATINGS AND CHARACTERISTIC CURVES

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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

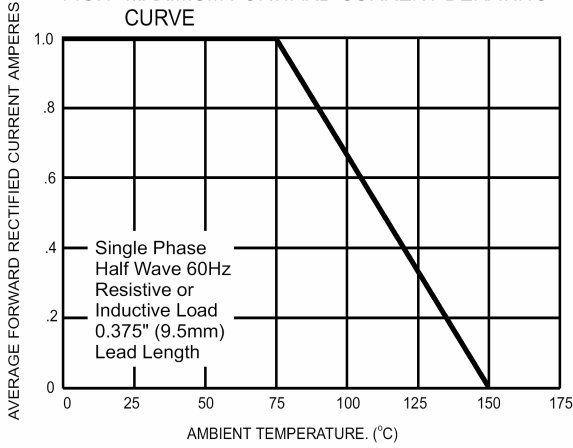


FIG.2- TYPICAL FORWARD CHARACTERISTICS

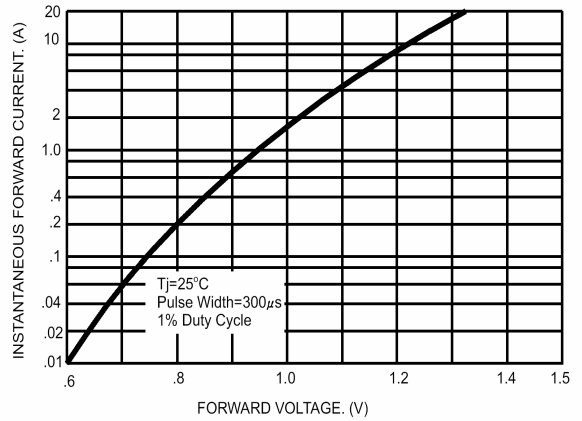


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

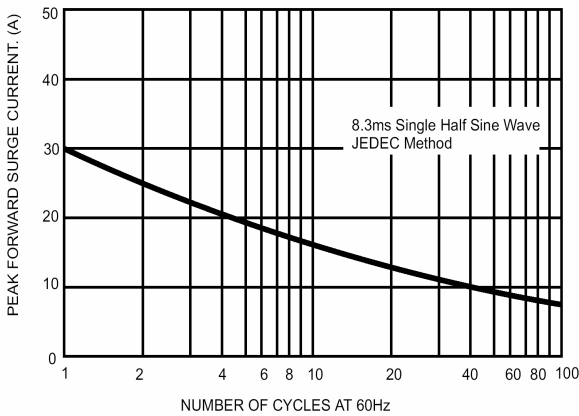


FIG.4- TYPICAL JUNCTION CAPACITANCE

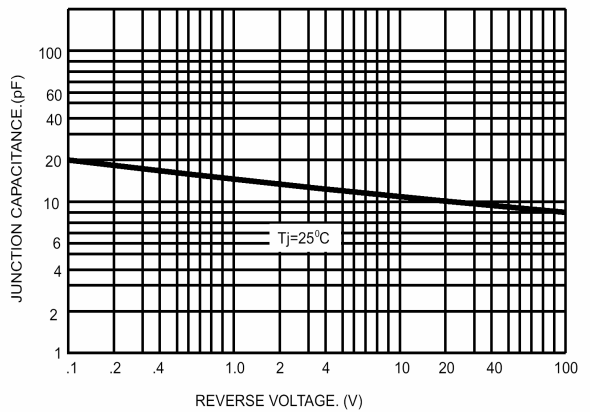


FIG.5- TYPICAL REVERSE CHARACTERISTICS

