

# 1N4001 THRU 1N4007

## GENERAL PURPOSE SILICON RECTIFIER

# Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

## **FEATURES**

• The plastic package carries Underwriters Laboratory

Flammability Classification 94V-0

Construction utilizes void-free molded plastic technique

•Low reverse leakage

• High forward surge current capability

• High temperature soldering guaranteed:

250°C/10 seconds,0.375"(9.5mm) lead length,

5 lbs. (2.3kg) tension

## **MECHANICAL DATA**

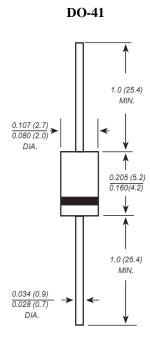
Case: JEDEC DO-41 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

**Mounting Position**: Any

Weight: 0.26 grams



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 current derate by 20%.

	SYMBOLS	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNITS
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current 0.375"(9.5mm) lead length at TA=75°C	I(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	VF	1.1							Volts
Maximum DC reverse current $TA=25^{\circ}C$ at rated DC blocking voltage $TA=100^{\circ}C$	IR	5.0 50.0							uA
Typical junction capacitance (NOTE 1)	CJ	15.0							pF
Typical thermal resistance (NOTE 2)	RqJA	50.0							°C/W
Operating junction and storage temperature range	TJ,TSTG	-65 to +175							$^{\circ}\!\mathbb{C}$

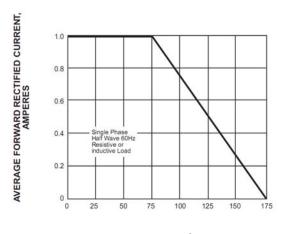
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length, P.C.B. mounted



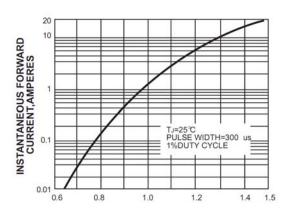
# RATINGS AND CHARACTERISTIC CURVES 1N4001 THRU 1N4007

### FIG. 1- FORWARD CURRENT DERATING CURVE



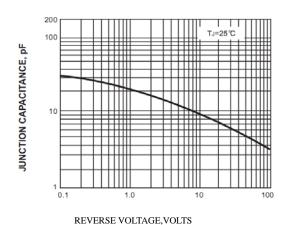
### AMBIENT TEMPERATURE, ℃

### FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



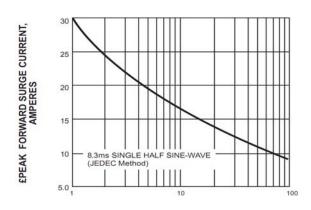
INSTANTANEOUS FORWARD VOLEAGE, VOLTS

### FIG. 5-TYPICAL JUNCTION CAPACITANCE



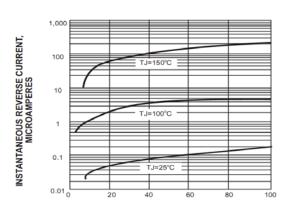
### FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD

#### SURGE CURRENTFORWARD



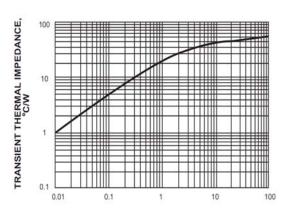
NUMBER OF CYCLES AT 60 Hz

#### FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE,%

## FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.

Note: Specification are subject to change without notice. For more detail and update, please visit our website.