# 1N400X SERIES

# GENERAL PURPOSE PLASTIC SILICON RECTIFIER

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# 1N4001 THRU 1N4007

## GENERAL PURPOSE PLASTIC SILICON RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS FORWARD CURRENT: 1.0 AMPERE

#### **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

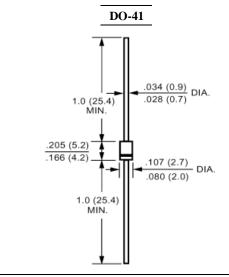
Epoxy: UL 94V-O rate flame retardant

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%.

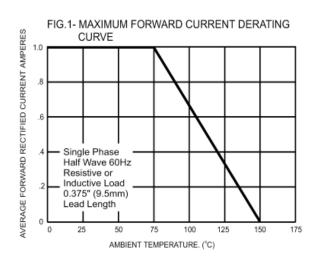
	Symbols	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	T	I <sub>(AV)</sub> 1.0							<b>A</b>
.375"(9.5mm) Lead Length at T <sub>A</sub> =75℃	I(AV)							Amp	
Peak Forward Surge Current,									
8.3ms single half-sine-wave	$I_{FSM}$	I <sub>FSM</sub> 30							Amp
superimposed on rated load (JEDEC method)									
Maximum Forward Voltage	N/	V <sub>F</sub> 1.1							Volts
at 1.0A DC and 25℃	v <sub>F</sub>	1.1							voits
Maximum Full Load Reverse Current		30							4
Full Cycle Average at 75℃ Ambient		30							uAmp
Maximum Reverse Current at T <sub>A</sub> =25℃	т	5.0 50							uAmp
at Rated DC Blocking Voltage T <sub>A</sub> =100℃	$I_R$								
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							°C/W
Operating Junction Temperature Range	$T_{\mathrm{J}}$	-55 to +150							r
Storage Temperature Range	Tstg	-55 to +150							င

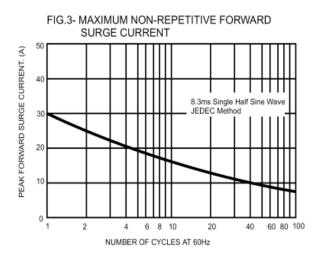
#### **NOTES:**

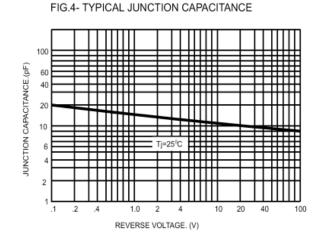
- 1- Measured at 1 MH<sub>Z</sub> and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.



#### RATINGS AND CHARACTERISTIC CURVES







1.0 Tj=100°C

1.0 Tj=25°C

1.0 Tj=25°C

PERCENT OF RATED PEAK REVERSE VOLTAGE. (%)

.01

FIG.5- TYPICAL REVERSE CHARACTERISTICS