# 1N400XW SERIES

# SURFACE MOUNT GENERAL PURPOSE RECTIFIERS

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## 1N4001W THRU 1N4007W

#### SURFACE MOUNT GENERAL PURPOSE RECTIFIERS



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

#### **FEATURES**

· Plastic package has Underwriters Laboratory Flammability Classification 94V-O

- · For surface mounted applications
- · Low profile package
- · Easy pick and place
- · Built-in strain relief
- · Low forward voltage drop
- · High temperature soldering: 250°C /10 seconds at terminals

#### **MECHANICAL DATA**

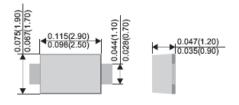
Case: Molded plastic, SOD-123FL

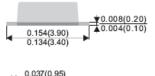
Terminals: Solder plated, solderable per MIL-STD-750,

method 2026 guaranteed

Polarity: Color band denotes cathode end Packaging: 12mm tape per EIA STD RS-481

#### SOD-123FL







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	1N4001W	1N4002W	1N4003W	1N4004W	1N4005W	1N4006W	1N4007W	Units
Marking Code		A1	A2	A3	A4	A5	A6	A7	
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 <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	I <sub>(AV)</sub>	1.0							Amp
Peak Forward Surge Current,									
8.3ms single half-sine-wave	$I_{FSM}$	25							Amp
superimposed on rated load (JEDEC method)									
Maximum Forward Voltage at 1.0A	$V_{\rm F}$	1.1							Volts
Maximum Reverse Current at T <sub>A</sub> =25℃	5.0								μАтр
at Rated DC Blocking Voltage T <sub>A</sub> =125℃	1 <sub>R</sub>	$I_R$ 100							
Typical Junction Capacitance (Note 1)	$C_{J}$	4							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	65							°C/W
Operating Junction Temperature Range	$T_{\mathbf{J}}$	-55 to +150							r
Storage Temperature Range	Tstg	-55 to +150							ъ

#### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal resistance from junction to ambient mounted on P.C.B. with 8.0 x 8.0mm copper pad areas

## 1N4001W THRU 1N4007W





#### RATINGS AND CHARACTERISTIC CURVES

Fig. 1 FORWARD CURRENT DERATING CURVE

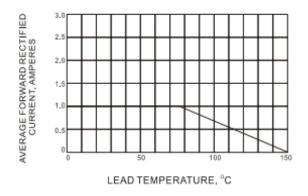


Fig. 2 TYPICAL JUNCTION CAPACITANCE

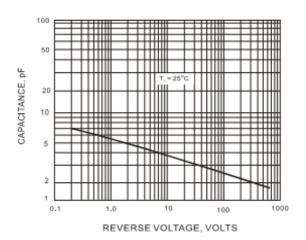


Fig.3 TYPICAL REVERSE CHARACTERISTICS

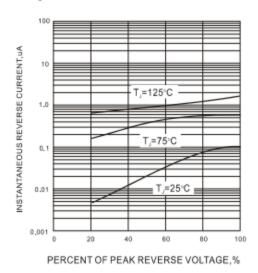
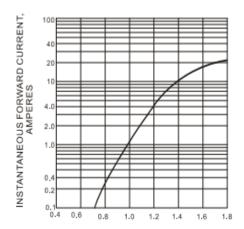


Fig. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

Fig.5- MAXIMUM NON - REPETITIVE SURGE CURRENT

