



# 1N4001S~1N4007S

## PLASTIC SILICON RECTIFIERS

**VOLTAGE** 50 to 1000 Volts **CURRENT** 1.0 Amperes

A-405

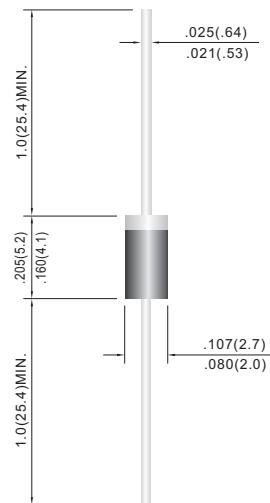
Unit: inch(mm)

### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Exceeds environmental standards of MIL-S-19500/228
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: A-405 Molded plastic
- Epoxy: UL 94V-O rate flame retardant.
- Lead: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.008 ounces, 0.22 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	1N4001S	1N4002S	1N4003S	1N4004S	1N4005S	1N4006S	1N4007S	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=75^\circ C$	$I_{F(AV)}$	1.0						A	
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30						A	
Maximum Forward Voltage at 1.0A	$V_F$	1.1						V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ C$ $T_J=100^\circ C$	$I_R$	5.0 500						$\mu A$	
Typical Junction capacitance (Note 1)	$C_J$	15						pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	50 25 17						$^\circ C / W$	
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ C$	

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Thermal Resistance from Junction to Ambient and from junction to lead at 0.375"(9.5mm)lead length P.C.B.mounted.



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## RATING AND CHARACTERISTIC CURVES

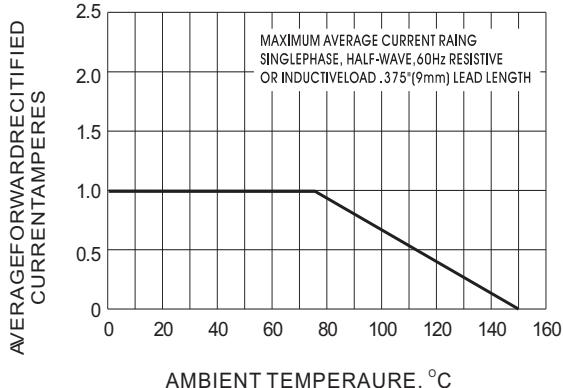


Fig.1-FORWARD CURRENT DERATING CURVE

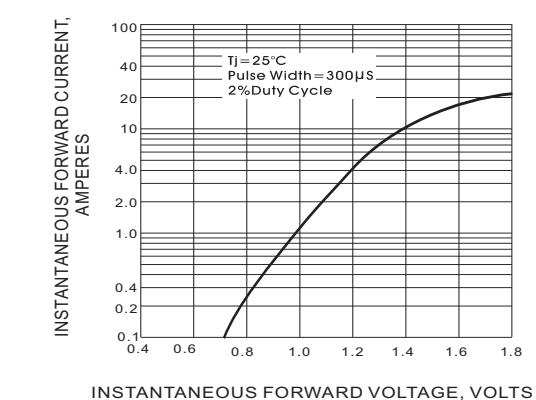


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

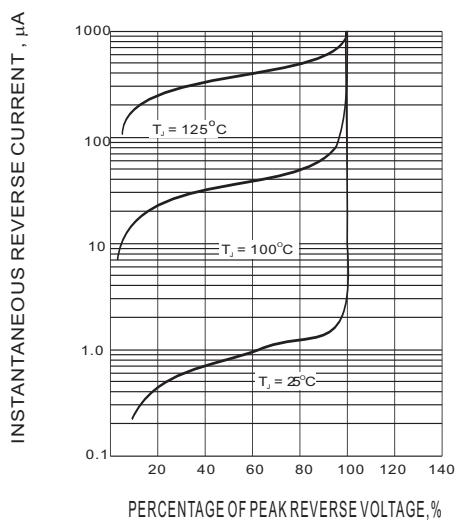


Fig.3-TYPICAL REVERSE CHARACTERISTIC

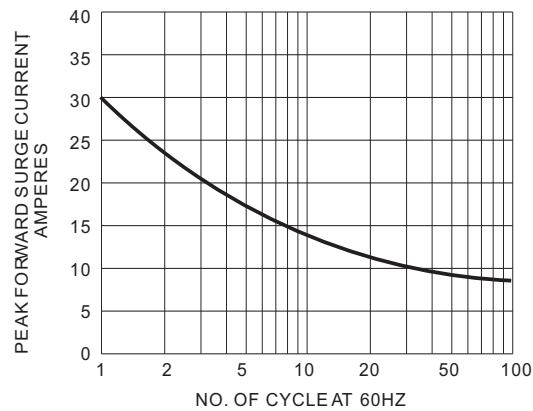


Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

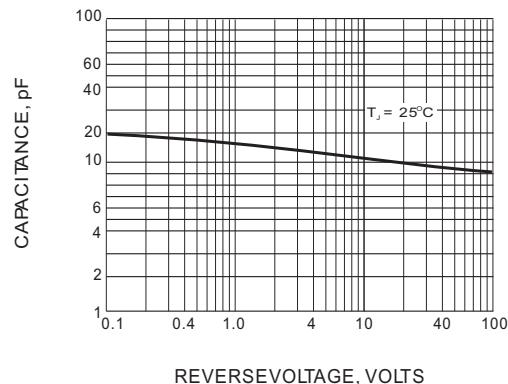


Fig.5-TYPICAL JUNCTION CAPACITANCE