

# 1N4001S THRU 1N4007S

## PLASTIC SILICON RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- $\leq$  0.6mm leads
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, A-405

Epoxy: UL 94V-O rate flame retardant

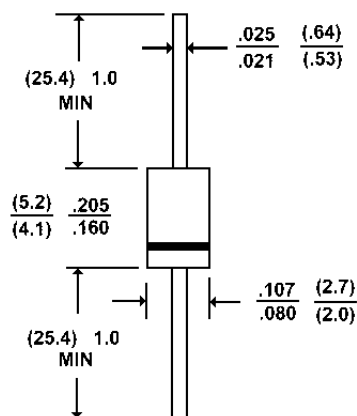
Lead: Axial leads, solderable per MIL-STD-202,  
method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

### A-405



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}$ C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	1N4001S	1N4002S	1N4003S	1N4004S	1N4005S	1N4006S	1N4007S	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	75	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_A=75^{\circ}$ C	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave $I_{FSM}$ superimposed on rated load	30							A
Maximum Forward Voltage at 1.0A DC	1.1							V
Maximum DC Reverse Current @ $T_A=25^{\circ}$ C	5.0							$\mu$ A
At Rated DC Blocking Voltage @ $T_A=100^{\circ}$ C	500							$\mu$ A
Typical Junction capacitance (Note 1)	15							pF
Typical Thermal Resistance (Note 2) R $\theta_{KJA}$	50							$^{\circ}$ C/W
Typical Thermal resistance (NOTE 2) R $\theta_{KJL}$	25							$^{\circ}$ C/W
Operating Temperature Range $T_J$	-55 to +150							$^{\circ}$ C
Storage Temperature Range $T_A$	-55 to +150							$^{\circ}$ C

### NOTES:

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

RATING AND CHARACTERISTIC CURVES

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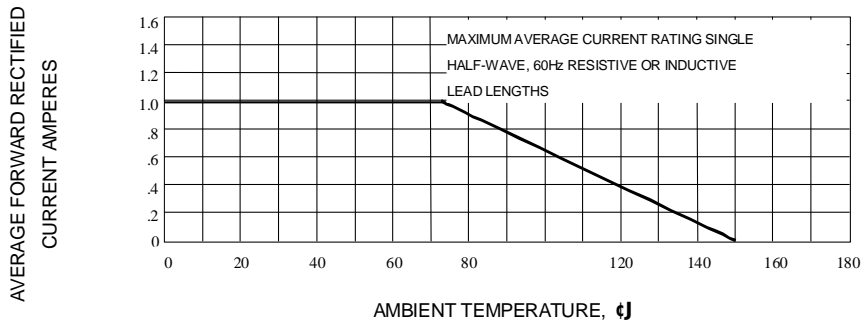


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

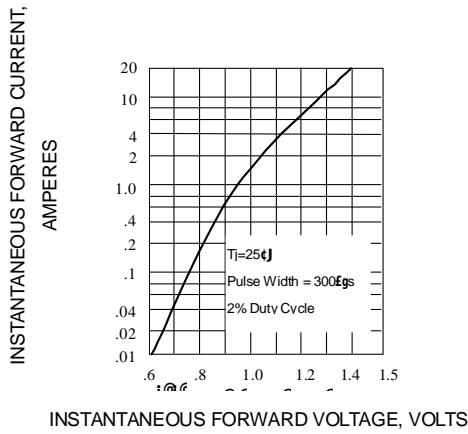


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

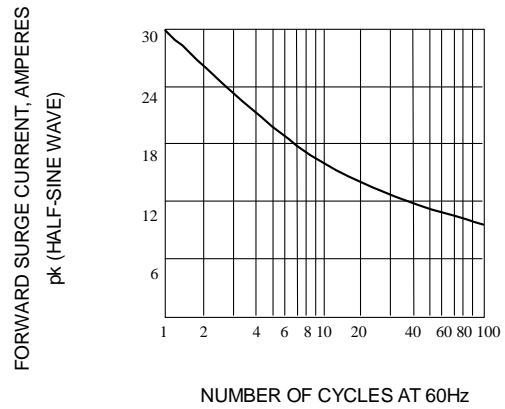


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

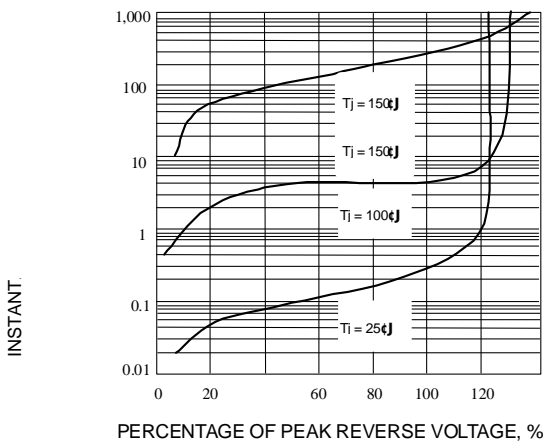


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

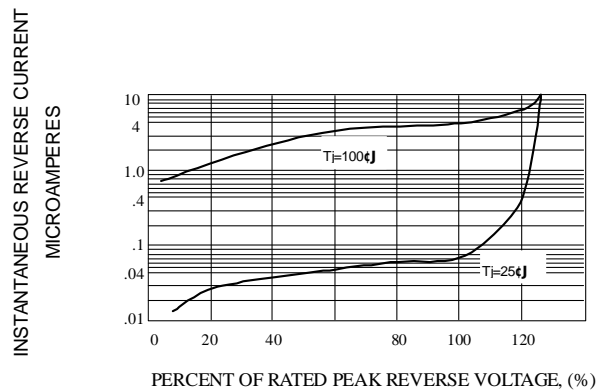


Fig. 5-TYPICAL REVERSE CHARACTERISTICS