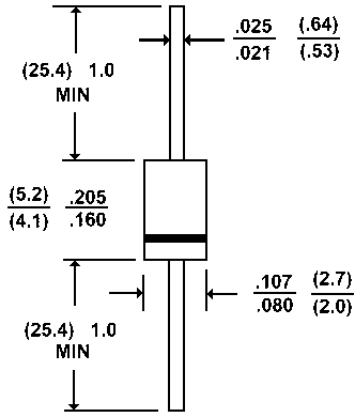
# 1N4001S-1N4007S

## PLASTIC SILICON RECTIFIER

**VOLTAGE - 50 to 1000 Volts**

**CURRENT - 1.0 Ampere**

**A-405**




Dimensions in inches and (millimeters)

### Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- £r 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

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J 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 ¢J | 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 ¢J<br>At Rated DC Blocking Voltage @$T_A$=100 ¢J | 5.0<br>500 | | | | | | | uA |
| Typical Junction capacitance (Note 1) | 15 | | | | | | | $_P$F |
| Typical Thermal Resistance (Note 2) R £KJA | 50 | | | | | | | ¢J/W |
| Typical Thermal resistance (NOTE 2) R £K JL | 25 | | | | | | | ¢J/W |
| Operating Temperature Range $T_J$ | -55 to +150 | | | | | | | ¢J |
| Storage Temperature Range $T_A$ | -55 to +150 | | | | | | | ¢J |

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

1N4001S THRU 1N4007S

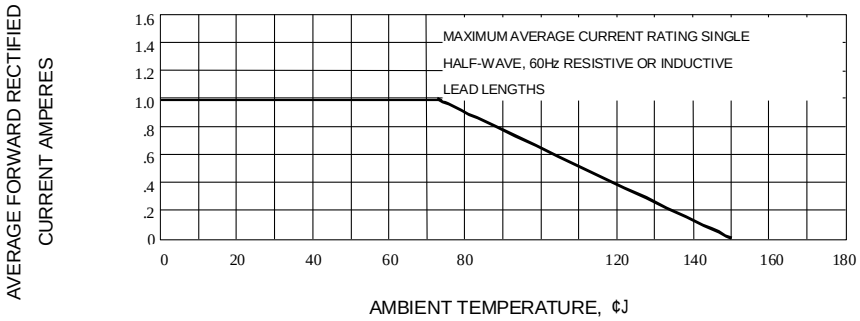



Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

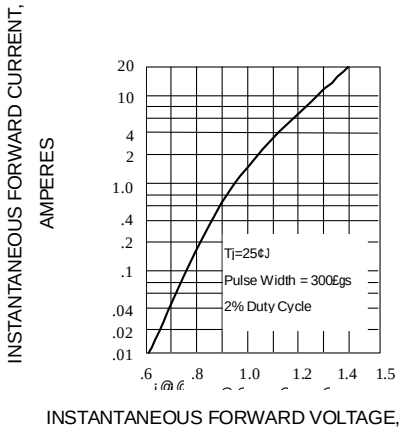



Fig. 2-TYPICAL FORWARD CHARACTERISTICS

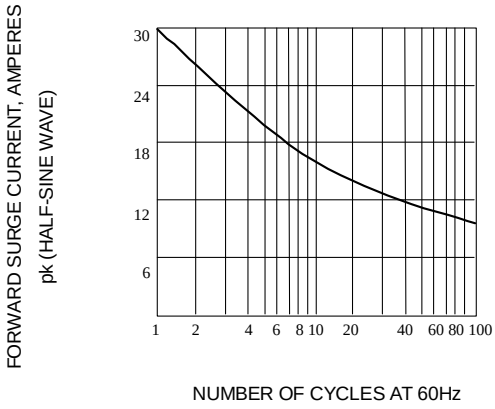



Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

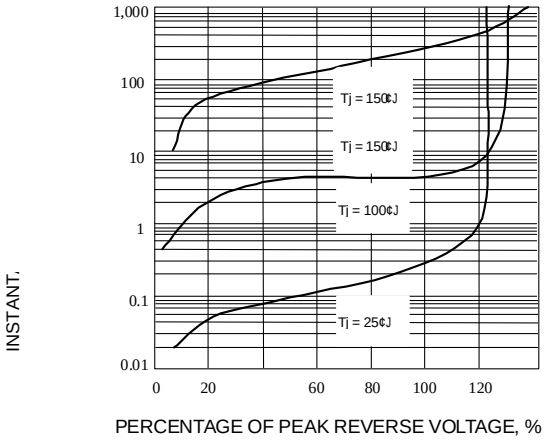



Fig. 4-TYPICAL REVERSE CHARACTERISTICS

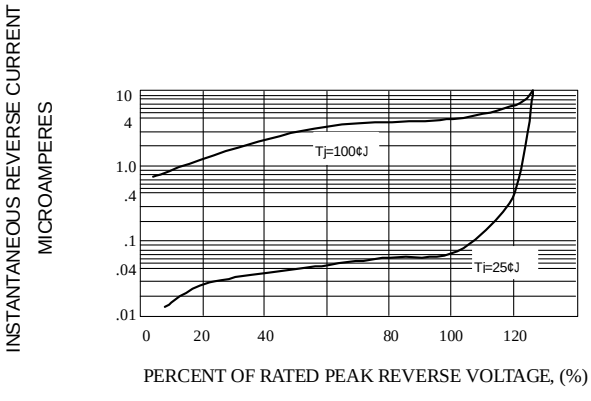



Fig. 5-TYPICAL REVERSE CHARACTERISTICS