

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
- ϵ 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

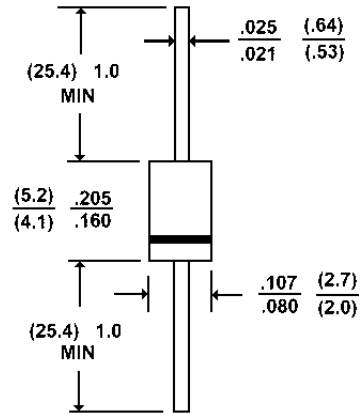
Lead: Axial leads, solderable per MIL-STD-202,
method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

A-405



Dimensions in inches and (millimeters)

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%.

| | 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 @ $T_A=75$ °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 @ $T_A=25$ °C | 5.0 | | | | | | | ϵ g A |
| At Rated DC Blocking Voltage @ $T_A=100$ °C | 500 | | | | | | | ϵ g A |
| Typical Junction capacitance (Note 1) | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) R θ KJA | 50 | | | | | | | °C/W |
| Typical Thermal resistance (NOTE 2) R θ K JL | 25 | | | | | | | °C/W |
| Operating Temperature Range T_J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range T_A | -55 to +150 | | | | | | | °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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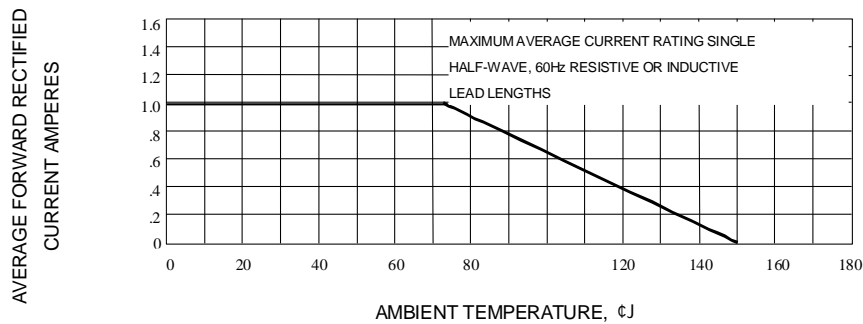


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

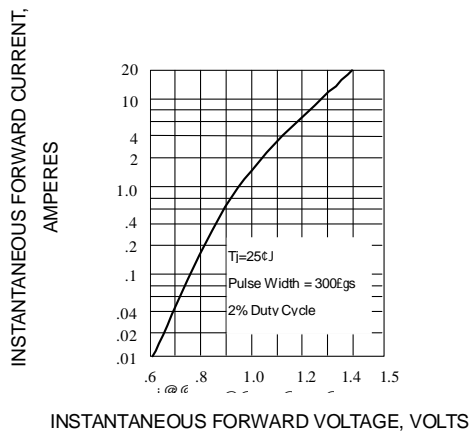


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

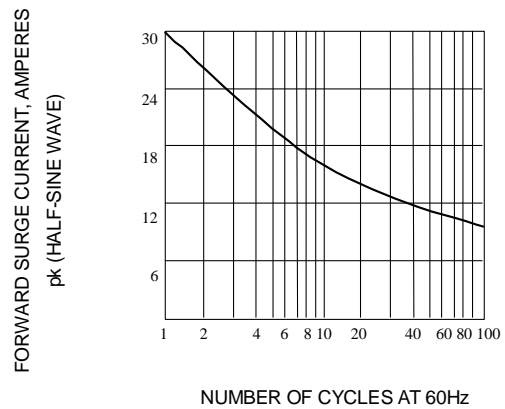


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

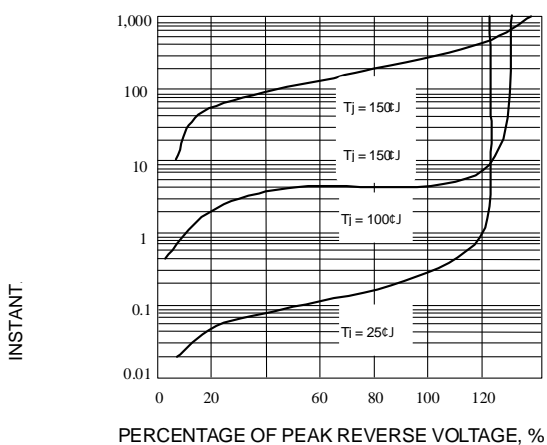


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

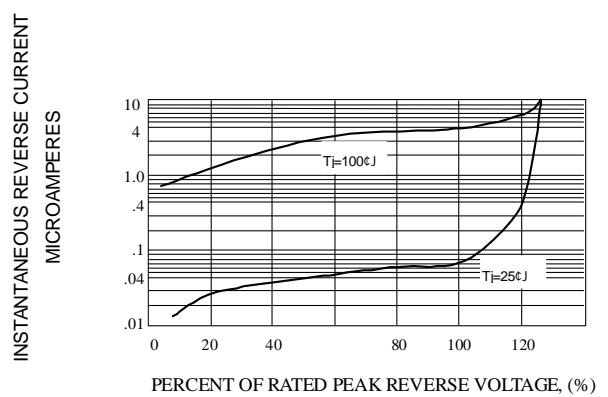


Fig. 5-TYPICAL REVERSE CHARACTERISTICS