

FEATURES:

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

MECHANICAL DATA

Case : Molded plastic

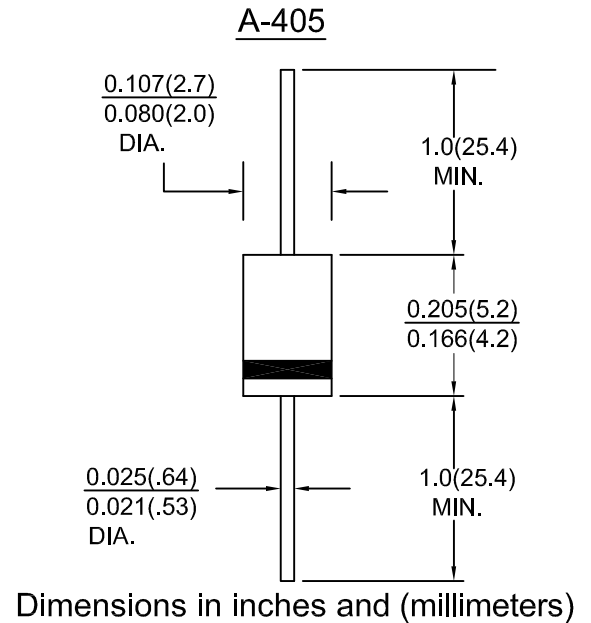
Epoxy : UL 94V-0 rate flame retardant

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

Polarity : Color band denotes cathode end

Mounting Position : Any

Weight : 0.22 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.

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

For capacitive load, derate current by 20 %.

| Characteristic | Symbol | 1N | 1N | 1N | 1N | 1N | 1N | 1N | Units |
|---|----------------|---------------------------------|-------|-------|-------|-------------|-------|-------|--------------------|
| | | 4001S | 4002S | 4003S | 4004S | 4005S | 4006S | 4007S | |
| 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_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current .375"(9.5mm) lead length at $T_a=75^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | Amps |
| Peak forward surge current ,8.3ms single half sine-wave superimposed on rated load(JEDEC Method) | I_{FSM} | 30.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0 A | V_F | 1.0 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage | I_R | $T_a=25^\circ\text{C}$ 5.0 | | | | | | | μA |
| | | $T_a=100^\circ\text{C}$ 50.0 | | | | | | | |
| Typical junction capacitance (note 1) | C_J | 15 | | | | | | | pF |
| Typical thermal resistance (note 2) | R_{th-JA} | 50 | | | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_j, T_{stg} | -65 to +125 | | | | -65 to +150 | | | $^\circ\text{C}$ |

NOTES:1. Measured at 1MHz and Applied reverse voltage of 4.0V DC
2. Thermal Resistance from junction to ambient .375"(9.5mm) lead length.

RATINGS AND CHARACTERISTIC CURVES 1N4001S THRU 1N4007S

FIG.1-TYPICAL FORWARD CHARACTERISTICS

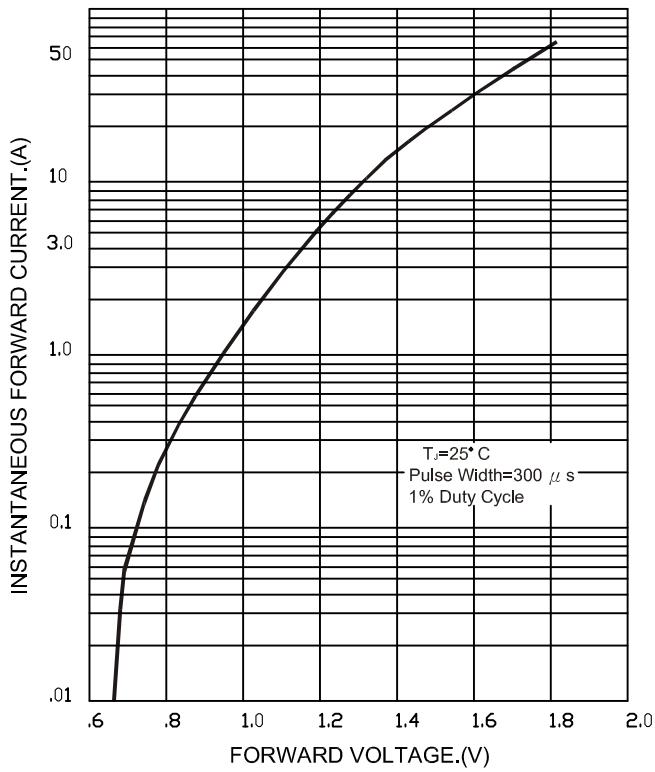


FIG.2 - TYPICAL FORWARD CURRENT DERATING CURVE

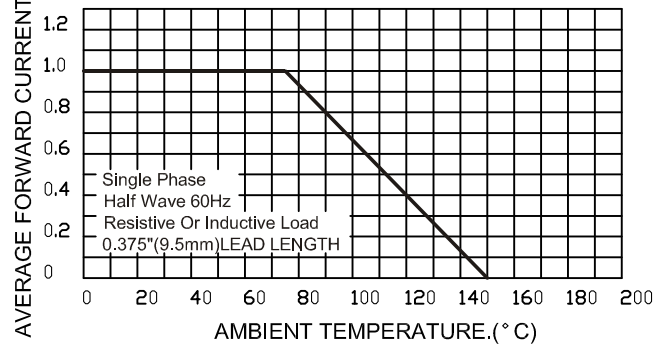


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

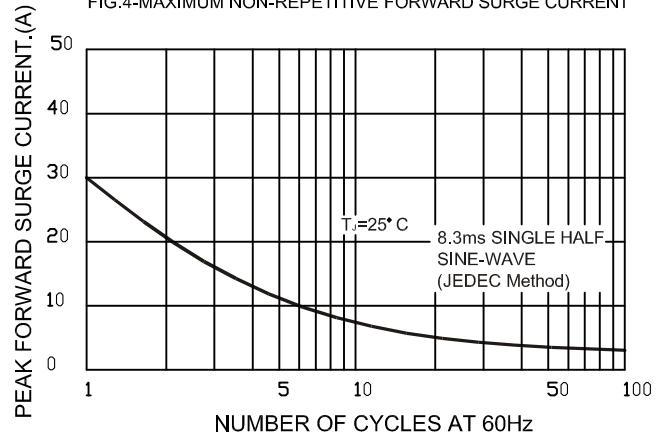


FIG.3-TYPICAL FORWARD CHARACTERISTICS

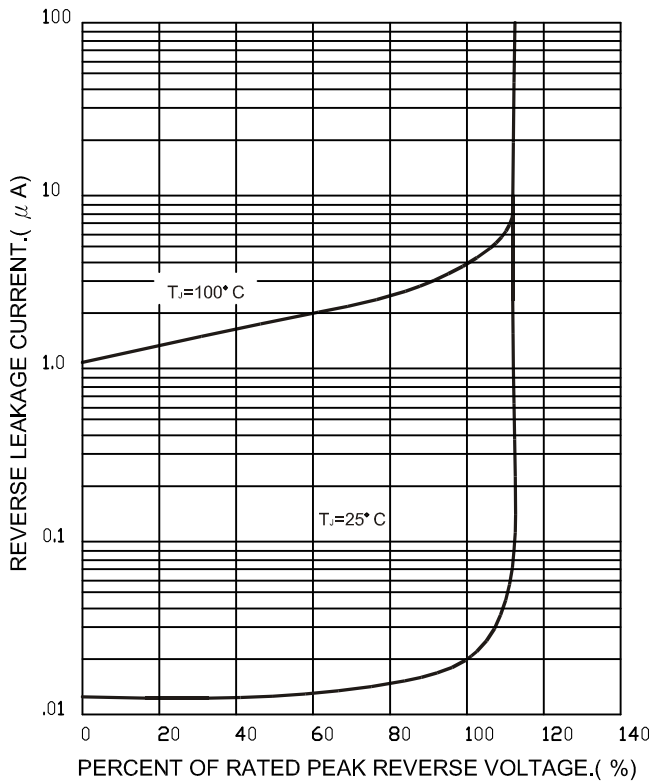


FIG.5-TYPICAL JUNCTION CAPACITANCE

