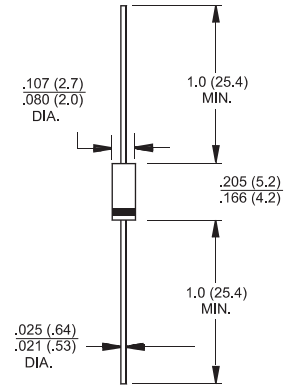




A-405



Features

- ✦ High efficiency, Low VF
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Low power loss
- ✦ ψ 0.6mm leads

Mechanical Data

- ✦ Cases: Molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Polarity: Color band denotes cathode
- ✦ High temperature soldering guaranteed:
260°C/10 seconds/.375", (9.5mm) lead lengths
at 5 lbs., (2.3kg) tension
- ✦ Weight: 0.22 gram

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number | 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 | 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 Rectified Current .375"(9.5mm) Lead Length @ $T_A = 75^\circ C$ | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @1.0A | V_F | 1.0 | | | | | | | V |
| Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$ | I_R | 5.0 50 | | | | | | | μA μA |
| Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_A=75^\circ C$ | HT_{IR} | 30 | | | | | | | μA |
| Typical Junction Capacitance (Note 1) | C_j | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +150 | | | | | | | $^\circ C$ |

- Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4..0 Volts D.C.
2. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.



RATINGS AND CHARACTERISTIC CURVES (1N4001S THRU 1N4007S)

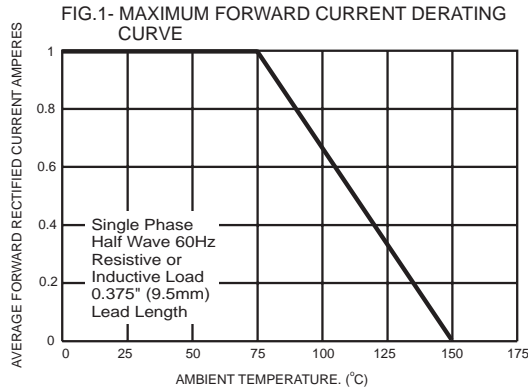


FIG.2- TYPICAL REVERSE CHARACTERISTICS

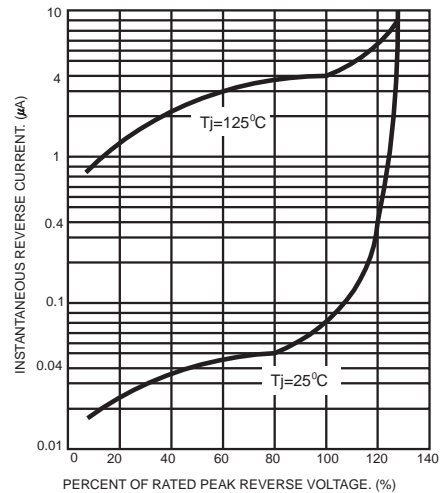


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

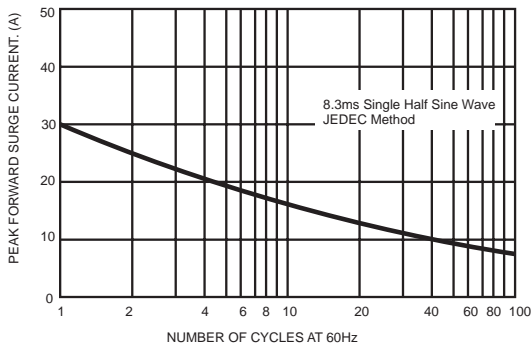


FIG.4- TYPICAL JUNCTION CAPACITANCE

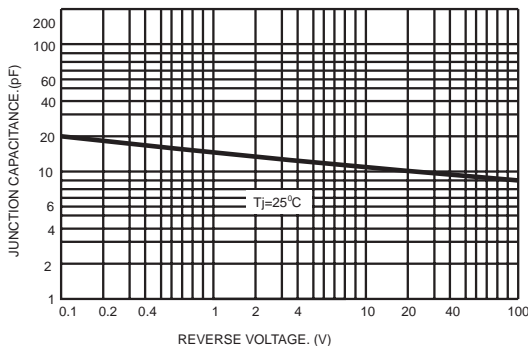
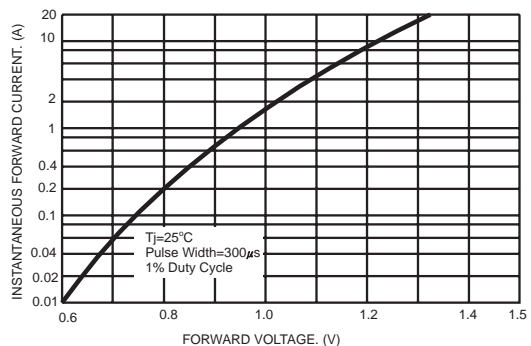


FIG.5- TYPICAL FORWARD CHARACTERISTICS



| PACKAGE | SPQ/PCS | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| A-405 | 5000/AMMO | 50000 | 42X28X31 | 13.00 | 11.00 |