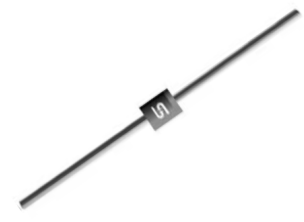


Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ $\phi 0.6\text{mm}$ leads
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode


Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Weight: 0.22 grams

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter | 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 | $I_{F(AV)}$ | 1 | | | | | | | 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 (Note 1) @ 1 A | V_F | 1.0 | | | | | | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | @ $T_A=25^\circ\text{C}$ | | | | | | | 5 | uA |
| | | @ $T_A=125^\circ\text{C}$ | | | | | | | 50 | uA |
| Maximum Full load Reverse Current, Full cycle Average .375"(9.5mm) Lead Length @ $T_A=75^\circ\text{C}$ | $I_{R(AV)}$ | 30 | | | | | | | uA | |
| Typical Junction Capacitance (Note 2) | C_j | 15 | | | | | | | pF | |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C/W}$ | |
| Operating and Storage Temperature Range | T_J, T_{STG} | - 55 to + 150 | | | | | | | $^\circ\text{C}$ | |

Note1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (1N4001S THRU 1N4007S)

FIG.1- MAXMUM FORWARD CURRENT DERATING CURVE

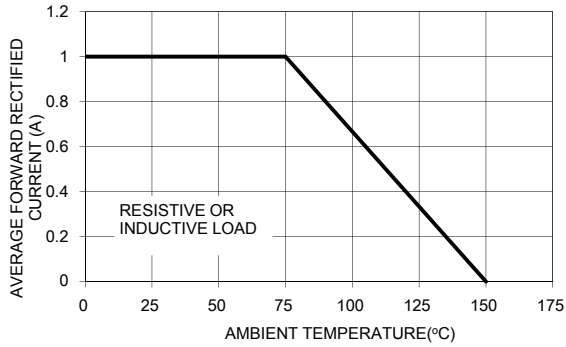


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

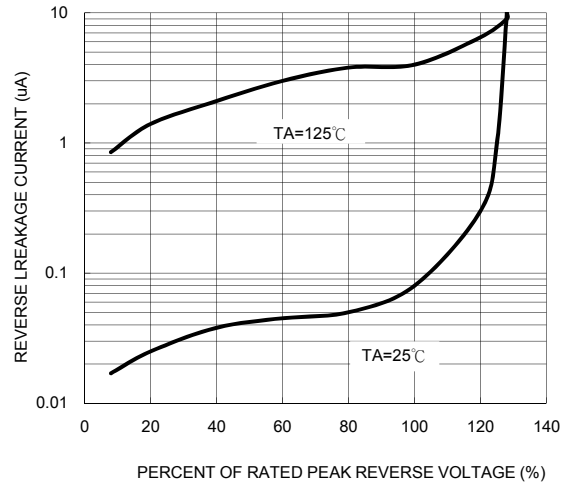


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

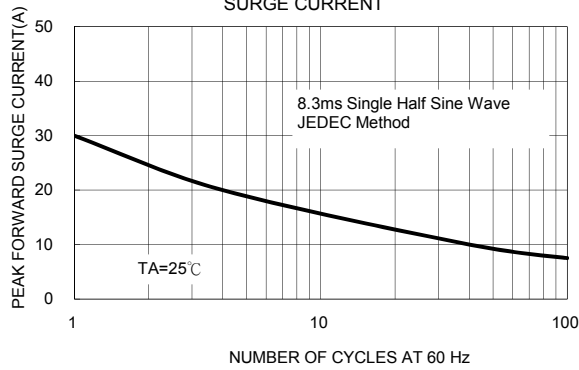


FIG. 4- TYPICAL JUNCTION CAPACITANCE

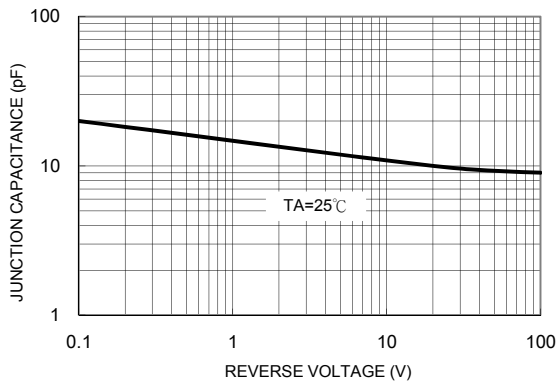
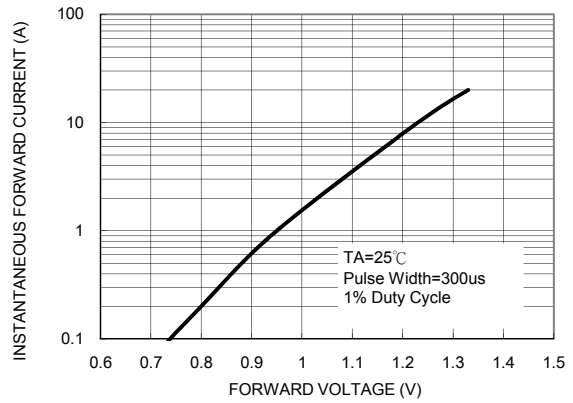


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

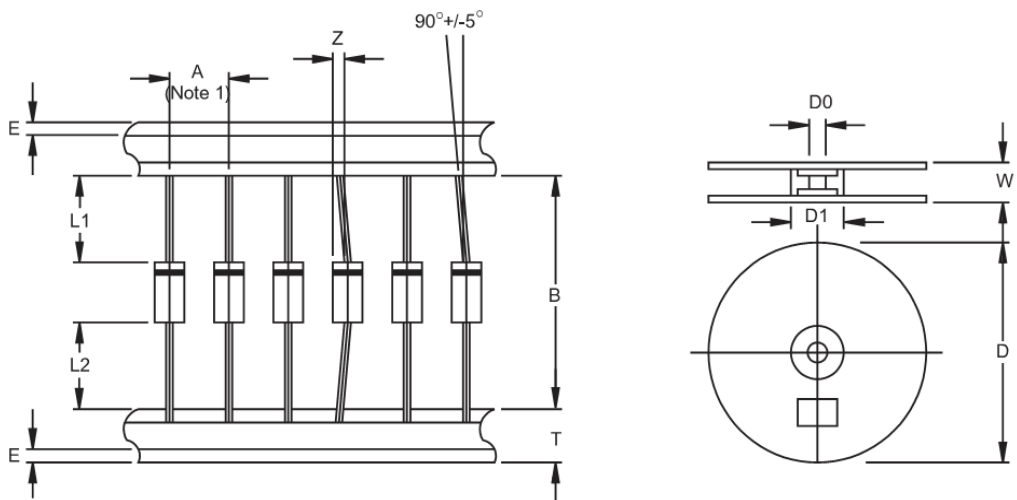


Ordering information

| Part No. | Package | Packing | INNER TAPE | Packing code | Packing code (Green) |
|-------------------|---------|-------------------|------------|--------------|----------------------|
| 1N400xS (Note) | A-405 | 2K / AMMO box | | P0 | P0G |
| | A-405 | 2K / AMMO box | | P1 | P1G |
| | A-405 | 5K / 13" Reel | 52mm | R0 | R0G |
| | A-405 | 1K / Bulk packing | | B0 | B0G |

Note: "x" is Device Code from "1" thru "7".

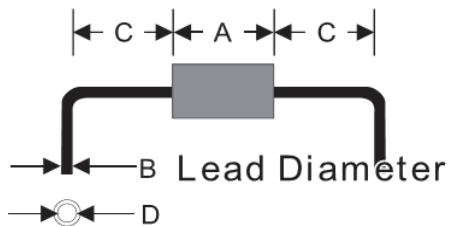
AXIAL LEAD TAPING SPECIFICATIONS



| Outline | A | B | Z | T | E | L1-L2 | D | D1 | D0 | W |
|---------|---|------|------|-----|------|-------|-----|------|------|------|
| | | ±0.5 | ±1.5 | MAX | ±0.4 | MAX | MAX | | ±0.3 | ±0.4 |
| A-405 | 5 | 52.4 | 1.2 | 6 | 0.8 | 1 | 330 | 85.7 | 16.6 | 76 |

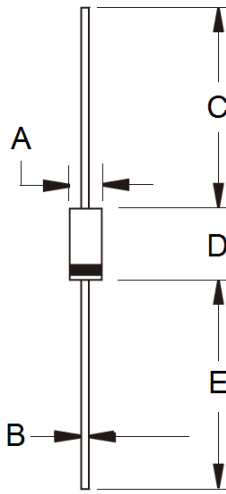
Unit (mm)

Suggested Mounting Hole Rule



| Symbol | Unit(mm) |
|--------|----------|
| A | 4.7 |
| B | 0.6 |
| C | 3.0 |
| D | 1 |

Dimensions



| DIM. | Unit(mm) | | Unit(inch) | |
|------|----------|------|------------|-------|
| | Min | Max | Min | Max |
| A | 2.00 | 2.70 | 0.079 | 0.106 |
| B | 0.53 | 0.64 | 0.021 | 0.025 |
| C | 25.40 | - | 1.000 | - |
| D | 4.20 | 5.20 | 0.165 | 0.205 |
| E | 25.40 | - | 1.000 | - |

Marking Diagram



- P/N = Specific Device Code
- G = Green Compound
- YW = Date Code
- F = Factory Code