

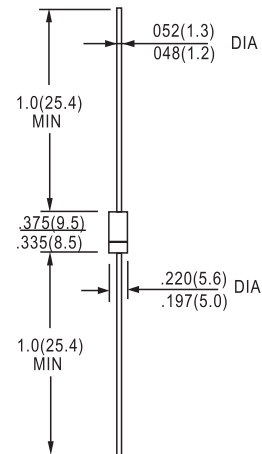
FEATURES

- Exce High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Low leakage
- Void-free molded in DO-201AD plastic package
- High current operation of 3 Amperes at $T_A=95\text{ }^{\circ}\text{C}$ with no thermal runaway
- eds environmental standards of MIL-S-19500/228

MECHANICAL DATA

- Case: JEDEC DO-201AD Molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 ounce, 1.1 gram

DO-27



Dimensions in inches and (milli)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}\text{C}$ ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| RANTINGS | SYMBOLS | BY251 | BY252 | BY253 | BY254 | BY255 | UNITS |
|--|-------------------|-------------|-------|-------|-------|-------|--------------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 200 | 400 | 600 | 800 | 1300 | Volts |
| Maximum RMS Voltage | V_{RMS} | 140 | 280 | 420 | 560 | 910 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 200 | 400 | 600 | 800 | 1300 | Volts |
| Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=95\text{ }^{\circ}\text{C}$ | $I_{(AV)}$ | 3.0 | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 100.0 | | | | | Amps |
| Maximum Instantaneous Forward Voltage $T_J=25\text{ }^{\circ}\text{C}$ at 3.0A $T_J=100\text{ }^{\circ}\text{C}$ | V_F | 1.1 1.0 | | | | | Volts Volts |
| Maximum DC Reverse Current $T_A=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$ | I_R | 5.0 1000 | | | | | Eg A Eg A |
| Typical Junction capacitance (Note 2) $T_J=25\text{ }^{\circ}\text{C}$ | C_J | 40 | | | | | μF |
| Typical Reverse Recovery Time (Note 3) | T_{RR} | 2.5 | | | | | Eg A |
| Typical Thermal Resistance (Note 1) | $R_{\text{E}KJA}$ | 15.0 | | | | | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range | T_J | -50 to +150 | | | | | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{STG} | -50 to +150 | | | | | $^{\circ}\text{C}$ |

NOTES:

1. Thermal Resistance From Junction to applied at Ambient 0.375"(9.5mm) lead length P.C.Board mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$.

RATINGS AND CHARACTERISTIC CURVES BY251 THRU BY255

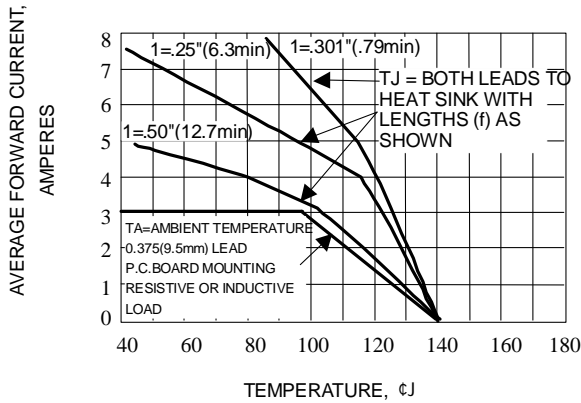


Fig. 1-FORWARD CURRENT DERATING CURVE

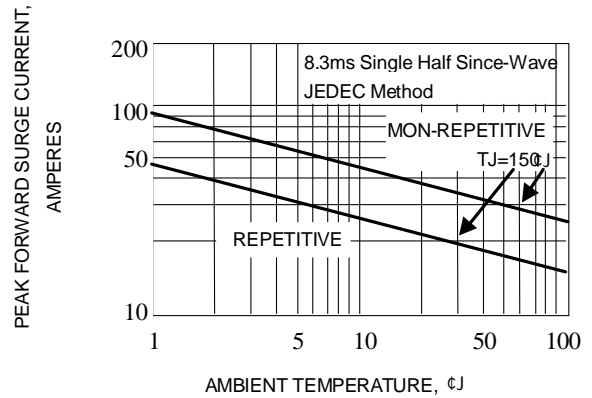


Fig. 2-MAXIMUM PEAK FORWARD SURGE CURRENT

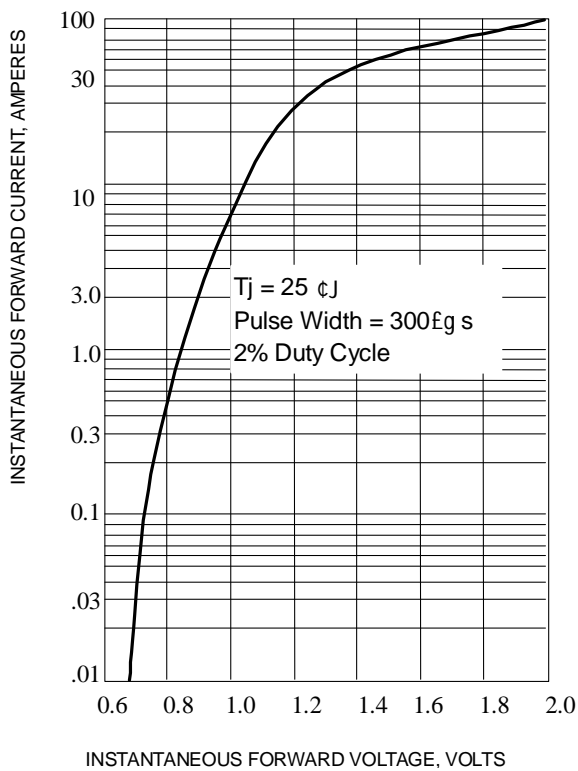


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

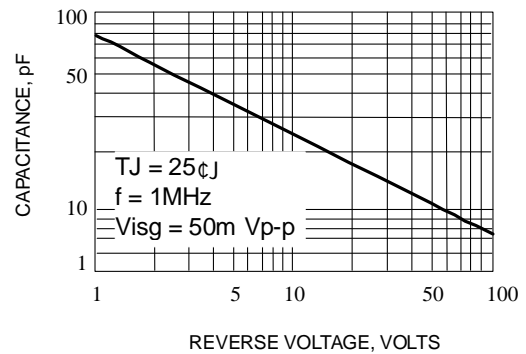


Fig. 4-TYPICAL JUNCTION CAPACITANCE

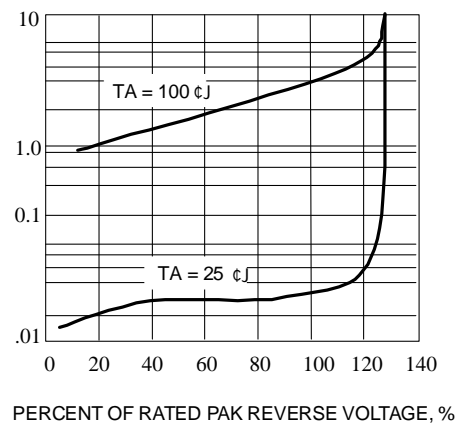


Fig. 5-TYPICAL REVERSE CHARACTERISTICS