

BY251 THRU BY255

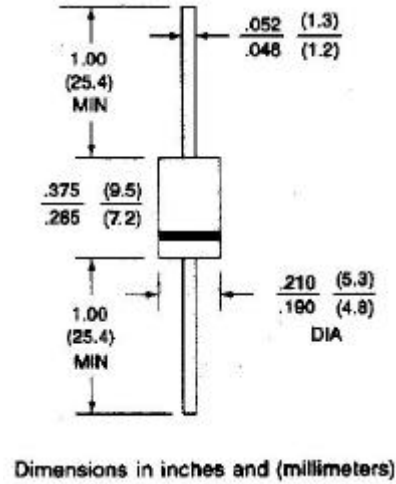
MEDIUM CURRENT PLASTIC RECTIFIER

VOLTAGE - 200 to 1300 Volts CURRENT - 3.0 Amperes

FEATURES

- 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 $T_A=95$ with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228

DO-201AD



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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| | 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 $T_A=95$ | $I_{(AV)}$ | 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 $T_J=25$ at 3.0A | V_F | 1.1 | | | | | Volts |
| | | 1.0 | | | | | Volts |
| Maximum DC Reverse Current $T_A=25$ at Rated DC Blocking Voltage $T_A=100$ | I_R | 5.0 | | | | | A |
| | | 1000 | | | | | A |
| Typical Junction capacitance (Note 2) $T_J=25$ | C_J | 40 | | | | | pF |
| Typical Reverse Recovery Time (Note 3) | T_{RR} | 2.5 | | | | | A |
| Typical Thermal Resistance (Note 1) | R_{JA} | 15.0 | | | | | /W |
| Operating Junction Temperature Range | T_J | -50 to +150 | | | | | |
| Storage Temperature Range | T_{STG} | -50 to +150 | | | | | |

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: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$.

RATING AND CHARACTERISTIC CURVES BY251 THRU BY255

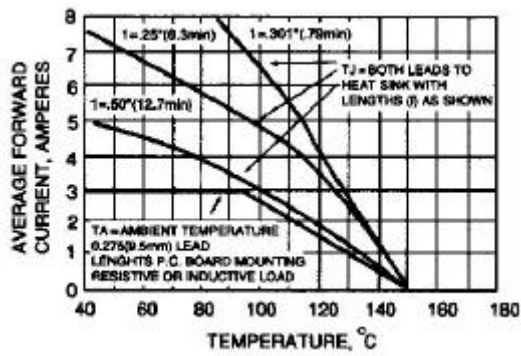


Fig. 1-FORWARD CURRENT DERATING CURVE

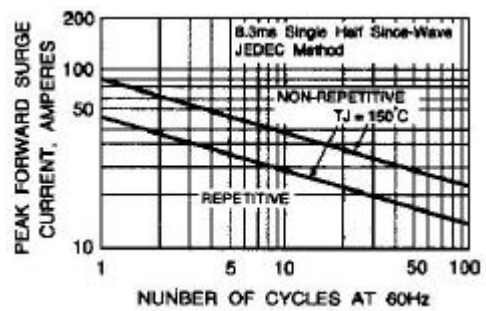


Fig. 2-MAXIMUM PEAK FORWARD SURGE CURRENT

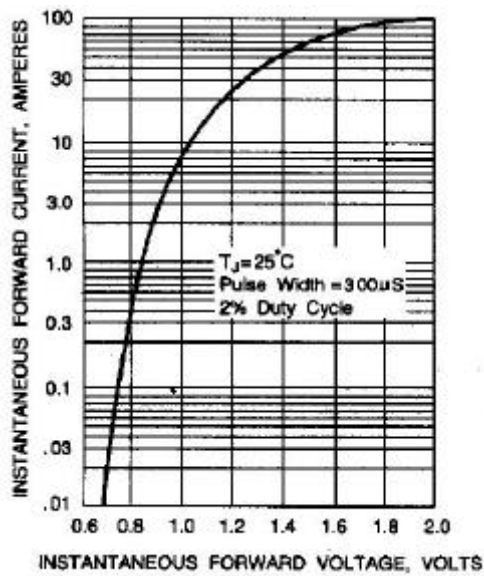


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

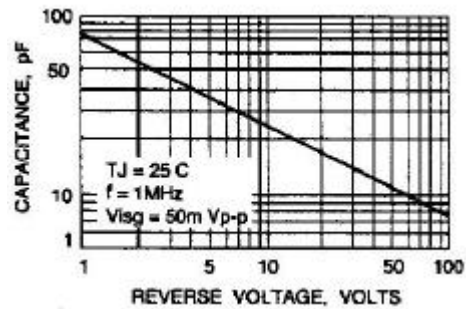


Fig. 4-TYPICAL JUNCTION CHARACTERISTICS

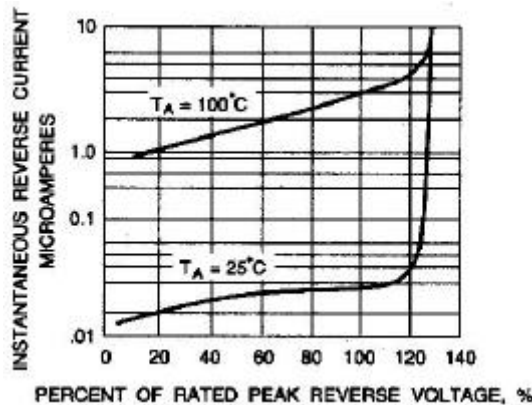


Fig. 5-TYPICAL REVERSE CHARACTERISTICS