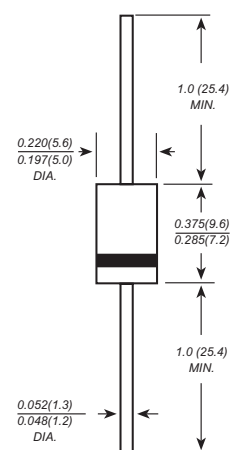


III. Fast / Ultra Fast / Super Fast Recovery Rectifier

5.0A Super Fast Recovery Rectifier SF51~SF58

(Package: DO-201AD)

| | |
|--|---|
| <p><u>FEATURES</u></p> <ul style="list-style-type: none"> • The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 • Super fast switching for high efficiency • Low reverse leakage • High forward surge current capability • High temperature soldering guaranteed: 250 /10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3 kg) tension <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> • Case : JEDEC DO-201AD molded plastic body • Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.04 ounce, 1.10 grams |  <p>Case: DO-201AD Dimensions in inches and (millimeters)</p> |
|--|---|

Ratings & Electrical Characteristics

| Characteristic | Symbol | SF51 | SF52 | SF53 | SF54 | SF55 | SF56 | SF58 | Units |
|---|----------------|--------------|------|-------|------|------|------|------|---------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_a = 55$ | I_O | 5.0 | | | | | | | Amps |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 150.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 5.0A | V_F | 0.97 | | | 1.30 | | 1.70 | | Volts |
| Maximum DC reverse current at rated DC blocking voltage | I_R | $T_a = 25$ | | 10.0 | | | | | μA |
| | | $T_a = 100$ | | 300.0 | | | | | |
| Maximum reverse recovery time (Note 1) | T_{rr} | 35 | | | | | | | ns |
| Typical junction capacitance (Note 2) | C_j | 100.0 | | | | 50.0 | | | PF |
| Typical thermal resistance (Note 3) | R_{th-JA} | 30.0 | | | | | | | / W |
| Operating junction and storage temperature range | T_j, T_{stg} | -65 to + 150 | | | | | | | |

Note :

1. Reverse recovery conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts DC
3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings and Characteristic Curves of SF51~SF58

