



SF51G THRU SF58G

5.0 AMPS. Glass Passivated Super Fast Rectifiers

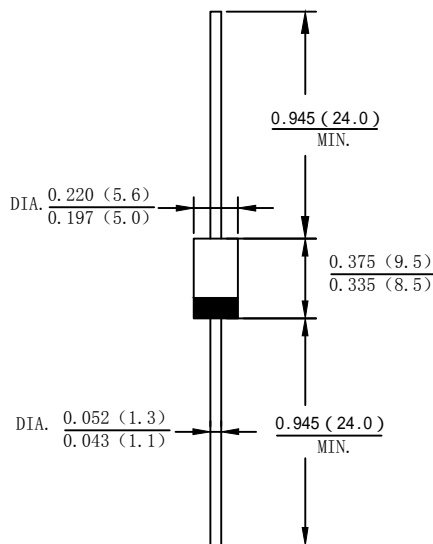
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Plastic material-UL flammability 94V-0

Mechanical Data

- Case: Molded plastic DO-201AD
- Terminals: Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number
- Lead Free: For RoHS/Lead Free Version

Case: DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

| Type Number | SYMBOL | SF51G | SF52G | SF53G | SF54G | SF55G | SF56G | SF58G | Unit |
|--|-----------------|-------------|-------|-------|-------|-------|-------|-------|---------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 104 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current. 375" (9.5mm) lead length @ $T_L=100^\circ\text{C}$ | $I_{F(AV)}$ | 5.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | | A |
| I^2t Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | 93.375 | | | | | | | A^2s |
| Forward Voltage @ $I_F=5.0\text{A}$ | V_{FM} | 0.95 | | | 1.30 | | 1.7 | | V |
| Peak Reverse Current @ $T_A=25^\circ\text{C}$ | | 5.0 | | | | | | | uA |
| At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$ | | 100 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C_J | 85 | | | 40 | | | | pF |
| Typical Thermal Resistance Junction to Ambient (Note 2) | $R_{\theta JA}$ | 45 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Maximum Reverse Recovery Time (Note 3) | T_{rr} | 35 | | | | | | | ns |
| Operating Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| /Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Leads maintained at ambient temperature at a distance of 9.5mm from the case

3. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$



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FIG. 1 – FORWARD CURRENT DERATING CURVE

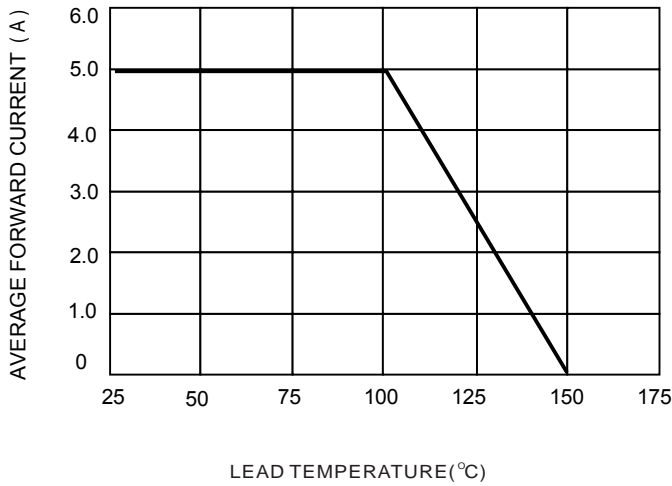


FIG.2-TYPICAL FORWARD CHARACTERISTICS

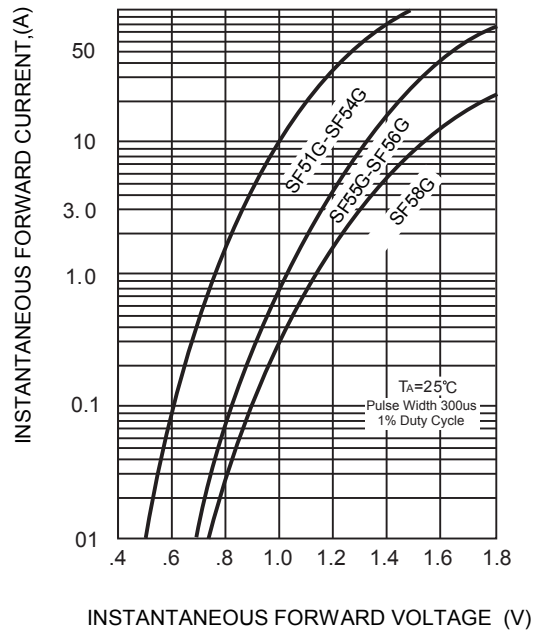


FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

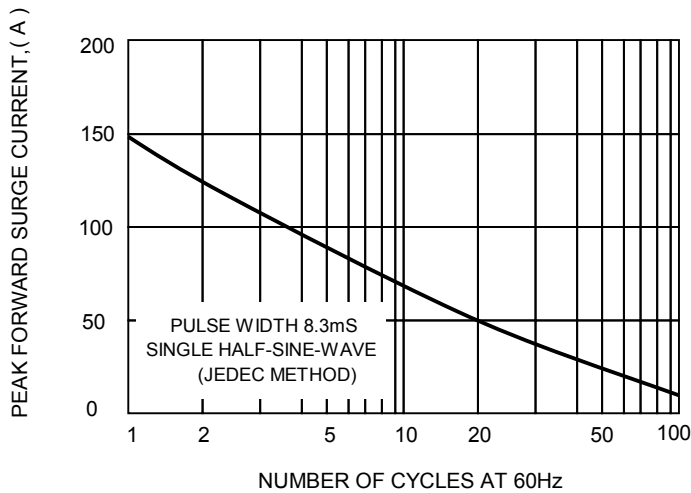
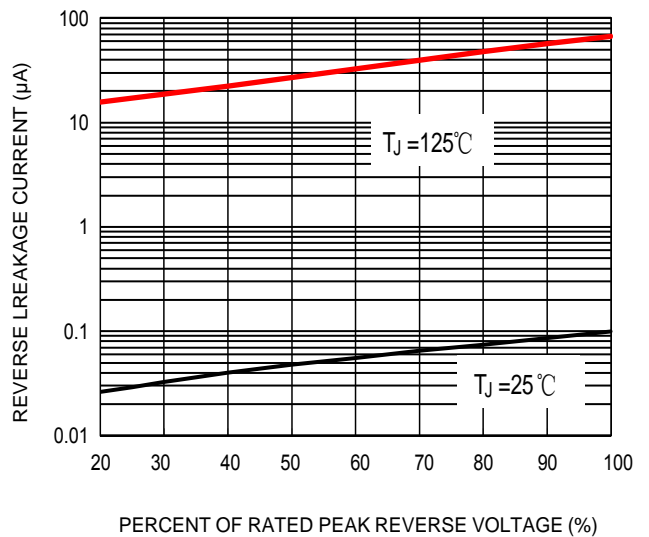


FIG. 4 TYPICAL REVERSE CHARACTERISTICS





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