

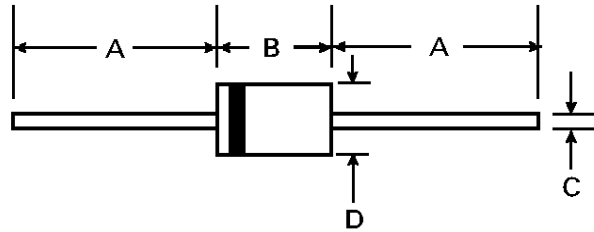


FR301 - FR307

3.0A FAST RECOVERY RECTIFIER

Features

- Low Reverse Recovery Time (T_{rr})
- Low Reverse Current
- Low Forward Voltage Drop
- High Current Capability
- Plastic Material - UL Recognition 94V-0



Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202 Method 208
- Polarity: Color Band Denotes Cathode
- Approx. Weight: 1.1 grams
- Mounting Position: Any

| DO-201AD | | |
|----------------------|------|-----|
| Dim | Min | Max |
| A | 25.4 | — |
| B | 7.2 | 9.5 |
| C | 1.2 | 1.3 |
| D | 4.8 | 5.3 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics

Ratings at 25° C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.

| Characteristic | Symbol | FR 301 | FR 302 | FR 303 | FR 304 | FR 305 | FR 306 | FR 307 | Unit |
|---|----------------|-------------|--------|--------|--------|--------|--------|--------|------------------|
| 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 (9.5mm) Lead Length @ $T_A=75^\circ\text{C}$ | $I_{(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 150 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0A DC | V_F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current | I_R | 10 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 150 | | | | 250 | 500 | | ns |
| Typical Junction Capacitance (Note 2) | C_J | 70 | | | | 50 | | | pF |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +175 | | | | | | | $^\circ\text{C}$ |

NOTES: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{ A}$, $I_R=1.0\text{ A}$, $I_{RR}=0.25\text{ A}$
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

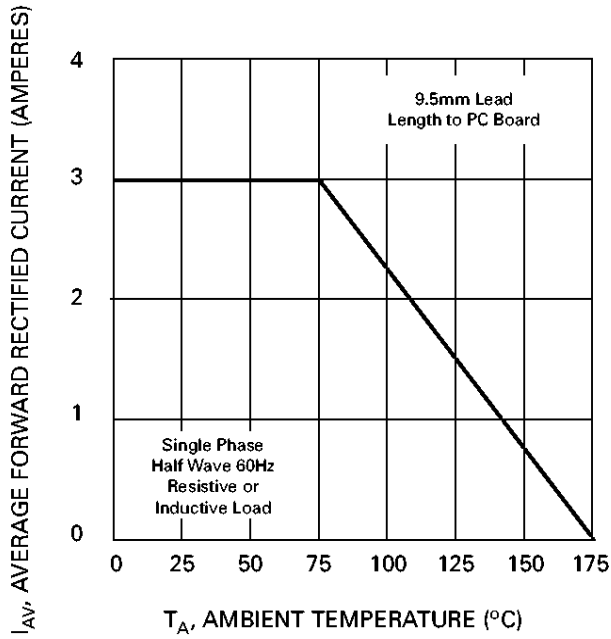


Fig. 1, Forward Derating Curve

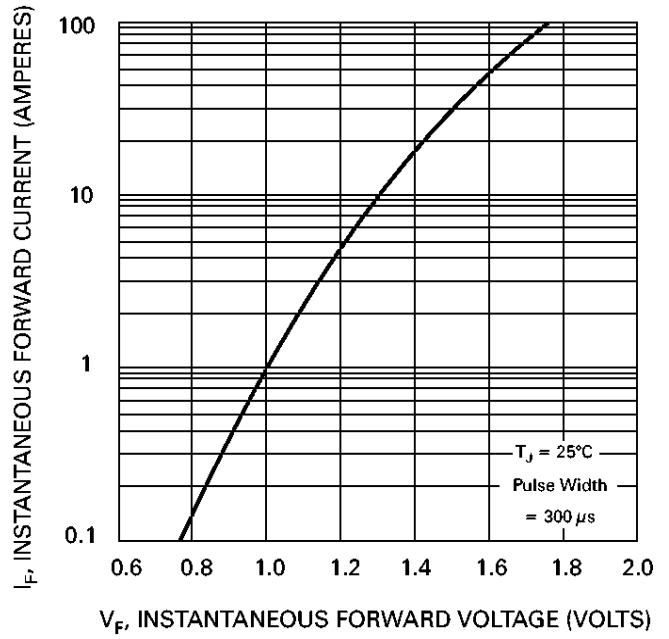


Fig. 2, Typical Forward Characteristics

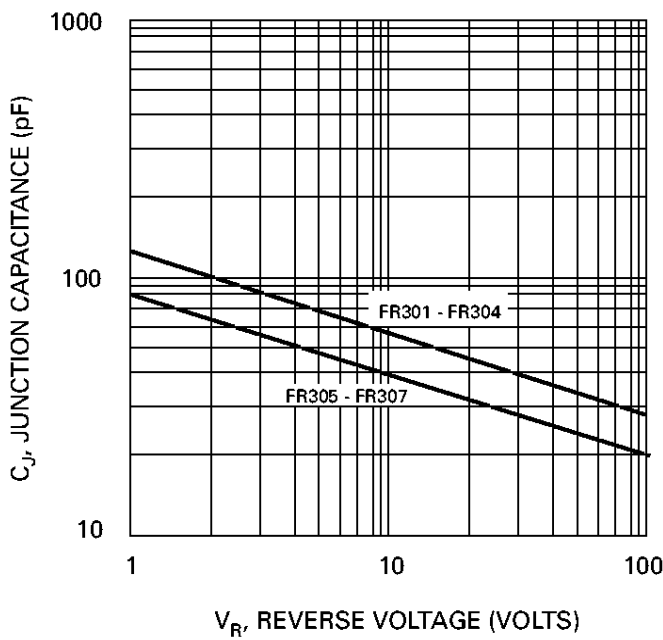


Fig. 3, Typical Junction Capacitance

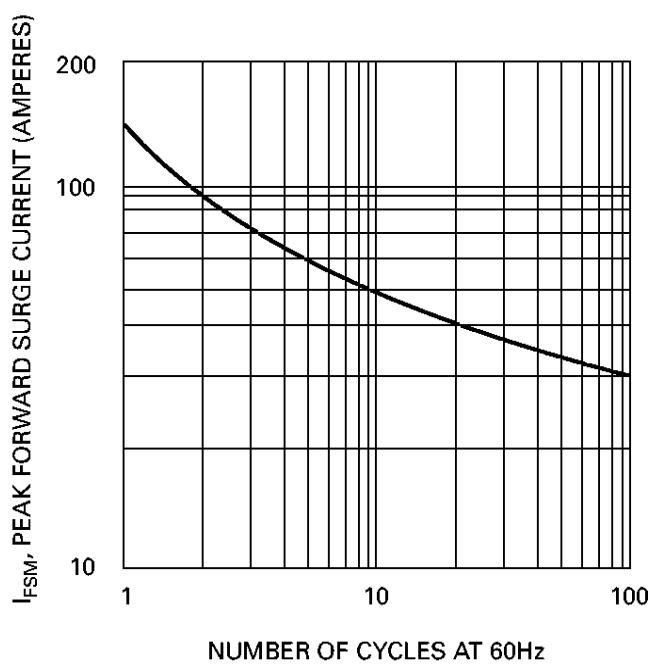


Fig. 4, Maximum Non-Repetitive Surge Current