

**VOLTAGE RANGE: 50 - 1000V**

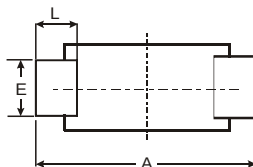
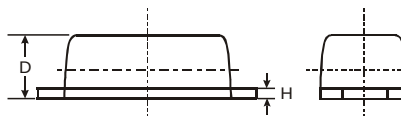
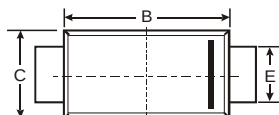
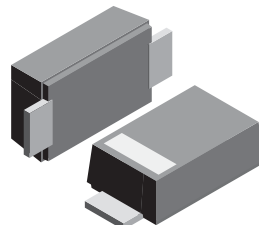
**CURRENT: 2.0 A**

### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SOD-123FL  
plastic body over passivated junction
- Terminals : Plated axial leads,
- solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight: 0.0007 ounce, 0.02 grams



| SOD-123FL            |       |      |      |
|----------------------|-------|------|------|
| Dim                  | Min   | Max  | Typ  |
| A                    | 3.58  | 3.72 | 3.65 |
| B                    | 2.72  | 2.78 | 2.75 |
| C                    | 1.77  | 1.83 | 1.80 |
| D                    | 1.02  | 1.08 | 1.05 |
| E                    | 0.097 | 1.03 | 1.00 |
| H                    | 0.13  | 0.17 | 0.15 |
| L                    | 0.53  | 0.57 | 0.55 |
| All Dimensions in mm |       |      |      |

### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic                                                                                                        | Symbol                          | FR2AL       | FR2BL | FR2DL | FR2GL | FR2JL | FR2KL | FR2ML | Unit               |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|-------|-------|-------|-------|-------|-------|--------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V                  |
| RMS Reverse Voltage                                                                                                   | $V_{R(RMS)}$                    | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V                  |
| Average Rectified Output Current @ $T_L = 90^\circ\text{C}$                                                           | $I_O$                           | 2.0         |       |       |       |       |       |       | A                  |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | $I_{FSM}$                       | 50          |       |       |       |       |       |       | A                  |
| Forward Voltage @ $I_F = 2.0\text{A}$                                                                                 | $V_{FM}$                        | 1.30        |       |       |       |       |       |       | V                  |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$           | $I_{RM}$                        | 5.0<br>300  |       |       |       |       |       |       | $\mu\text{A}$      |
| Reverse Recovery Time (Note 1)                                                                                        | $t_{rr}$                        | 150         |       |       |       | 250   | 500   |       | nS                 |
| Typical Junction Capacitance (Note 2)                                                                                 | $C_j$                           | 50          |       |       |       |       |       |       | pF                 |
| Typical Thermal Resistance (Note 3)                                                                                   | $R_{\theta JL}$                 | 20          |       |       |       |       |       |       | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                                                                               | $T_j, T_{STG}$                  | -50 to +150 |       |       |       |       |       |       | $^\circ\text{C}$   |

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ . See figure 5.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

## RATINGS AND CHARACTERISTIC CURVES FR2AL THRU FR2ML

