

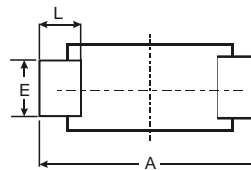
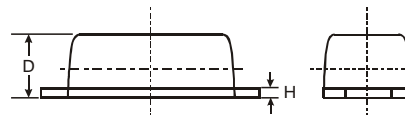
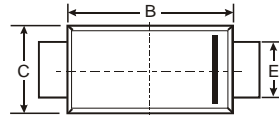
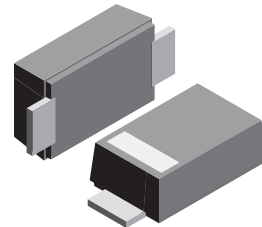
VOLTAGE RANGE: 40V
CURRENT: 1.0 A

Features

- Guard Ring Die Construction for
- Transient Protection
- Very Low Leakage Current
- Low Forward Voltage Drop

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 @ T_A = 25°C unless otherwise specified

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

| Characteristic | Symbol | Value | Unit |
|---|--|-------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 40 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | V |
| Average Forward Current (See Figure 1) | I _{F(AV)} | 1.0 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | 6.6 | A |
| Repetitive Peak Reverse Current t _p = 2μs square wave, f = 1KHz | I _{RRM} | 0.5 | A |
| Non-Repetitive Peak Reverse Current t _p = 100μs square wave | I _{RSM} | 1.0 | A |
| Power Dissipation | P _d | 350 410 | mW |
| Typical Thermal Resistance Junction to Ambient | R _{JA} | 360 305 | °C/W |
| Operating Temperature Range | T _j | -65 to +125 | °C |
| Storage Temperature Range | T _{STG} | -65 to +125 | °C |

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|------|---------------|----------------|---|
| Reverse Breakdown Voltage (Note 1) | V _{(BR)R} | 40 | | | V | I _R = 40μA |
| Forward Voltage | V _F | | 0.48 | 0.55 0.51 | V | I _F = 1A, T _J = 25°C I _F = 1A, T _J = 100°C |
| Leakage Current (Note 1) | I _R | | 0.2 | 10 40 5 | μA μA mA | V _R = 5V, T _J = 25°C V _R = 40V, T _J = 25°C V _R = 40V, T _A = 100°C |

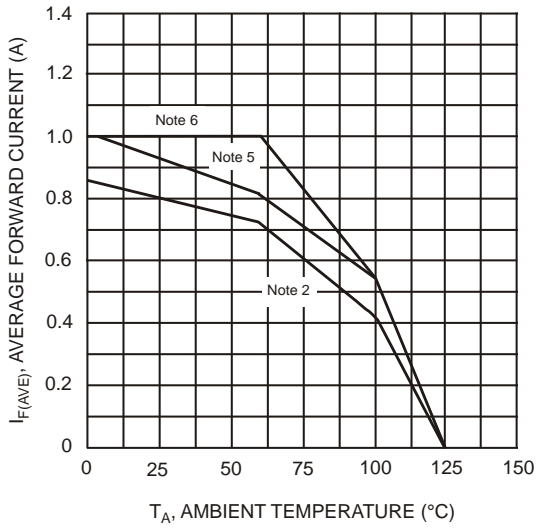


Fig. 1 Forward Current Derating

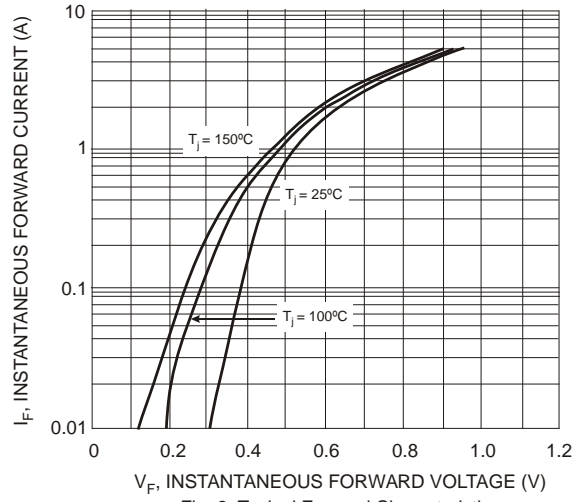


Fig. 2 Typical Forward Characteristics

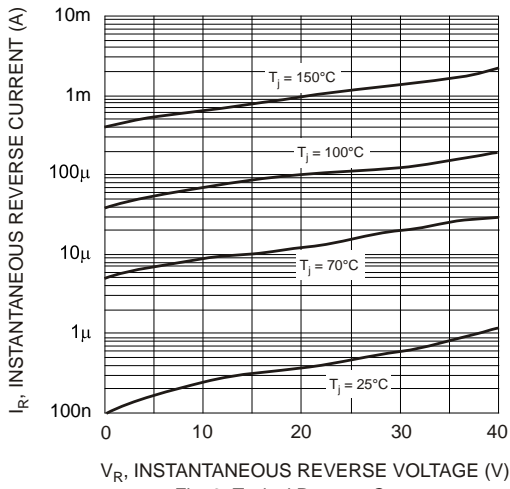


Fig. 3 Typical Reverse Current vs. Reverse Voltage

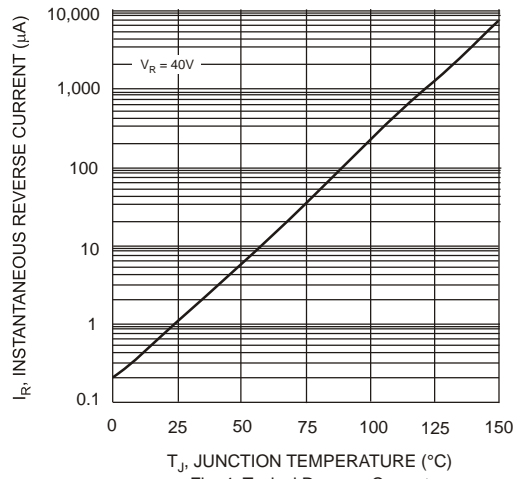


Fig. 4 Typical Reverse Current vs. Junction Temperature

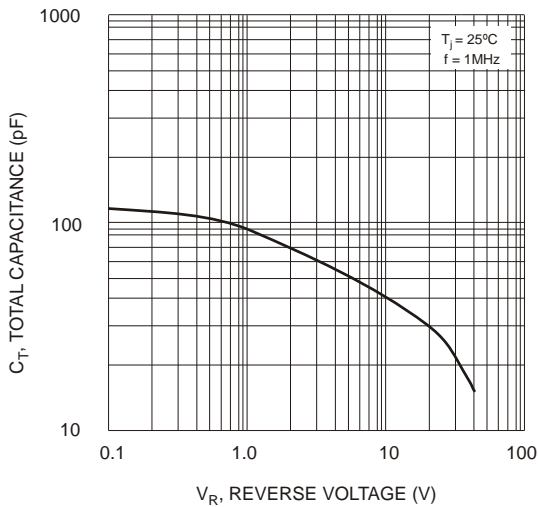


Fig. 5 Typical Total Capacitance vs. Reverse Voltage

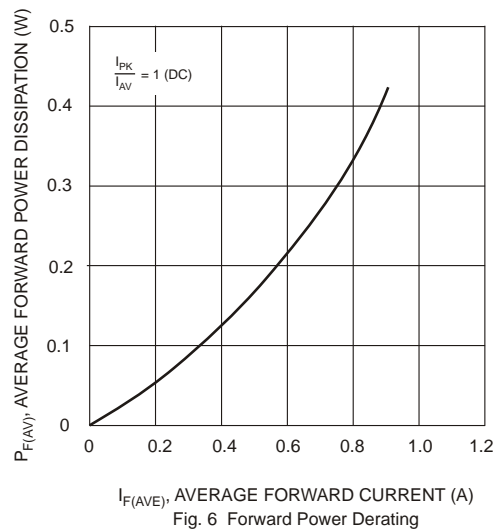


Fig. 6 Forward Power Derating