

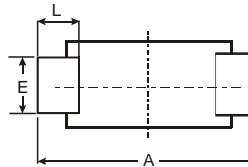
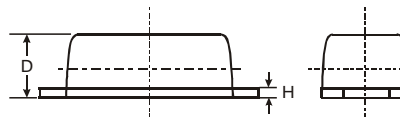
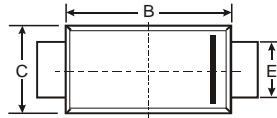
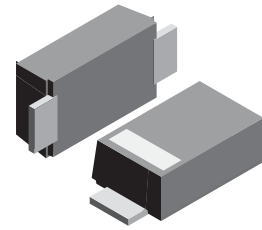
**VOLTAGE RANGE: 100 - 600V**  
**CURRENT: 1.0A**

### Features

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### 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<sub>A</sub> = 25°C unless otherwise specified

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

| Characteristic   | Symbol           | ES1001FL     | ES1002FL | ES1003FL | ES1004FL | ES1006FL | Unit  |
|--|------------------|--------------|----------|----------|----------|----------|-------|
| Maximum repetitive peak reverse voltage  | VRRM             | 100          | 200      | 300      | 400      | 600      | VOLTS |
| Maximum RMS voltage  | VRMS             | 70           | 140      | 210      | 280      | 420      | VOLTS |
| Maximum DC blocking voltage  | V <sub>DC</sub>  | 100          | 200      | 300      | 400      | 600      | VOLTS |
| Maximum average forward rectified current  | I(AV)            | 1.0          |          |          |          |          | Amp   |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) | IFSM             | 25.0         |          |          |          |          | Amps  |
| Maximum instantaneous forward voltage at 1.0A  | VF               | 0.95         | 1.25     |          | 1.7      |          | Volts |
| Maximum DC reverse current<br>at rated DC blocking voltage   | IR               | 5.0<br>100.0 |          |          |          |          | μA    |
| Maximum reverse recovery time (NOTE 1)   | trr              | 35           |          |          |          |          | ns    |
| Typical junction capacitance (NOTE 2)  | CJ               | 10           |          |          |          |          | pF    |
| Typical thermal resistance (NOTE 3)  | R <sub>θJA</sub> | 85           |          |          |          |          | K/W   |
| Operating junction and storage temperature range   | TJTSTG           | -55 to +150  |          |          |          |          | °C    |

**Note:** 1. Measured with IF=0.5A, IR=1A, Irr=0.25A.  
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. PCB mounted on 0.2\*0.2" (5.0\*5.0mm) copper pad area.



## RATINGS AND CHARACTERISTIC CURVES ES1001FL THRU ES1006FL

FIG. 1- FORWARD CURRENT DERATING CURVE

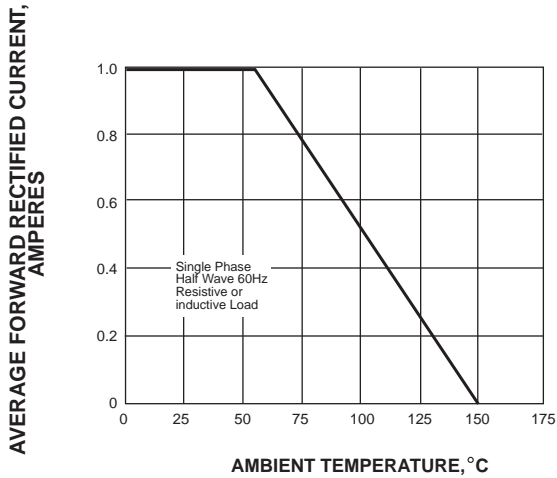


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

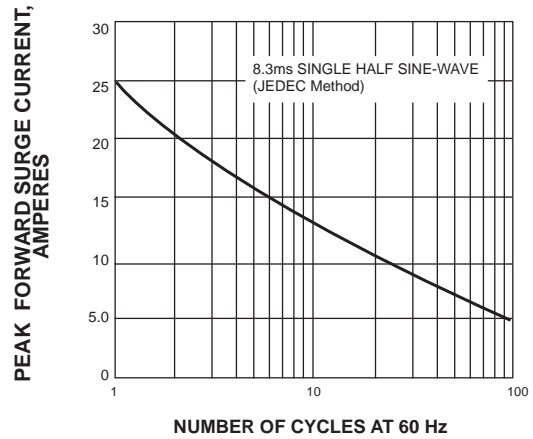


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

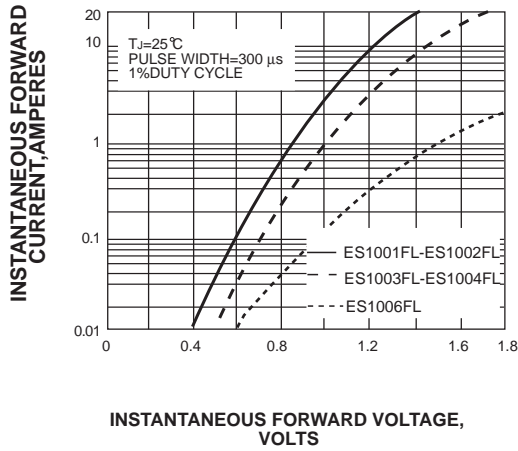


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

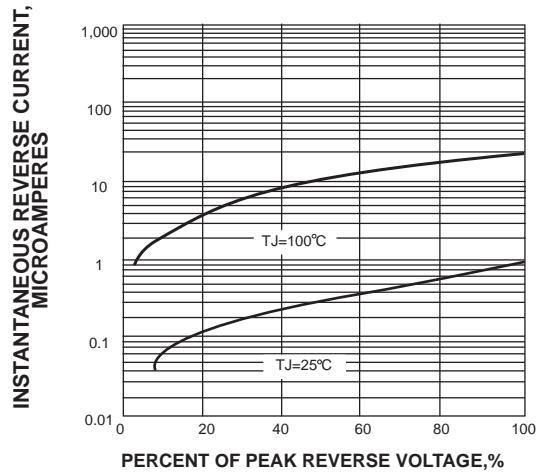


FIG. 5-TYPICAL JUNCTION CAPACITANCE

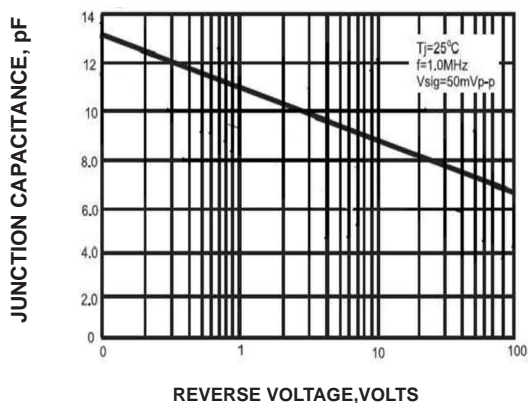


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

