

## SURFACE MOUNT SCHOTTKY BARRIER DIODES

VOLTAGE RANGE: 20 - 40V CURRENT: 1.0 A

## **Features**

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- 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

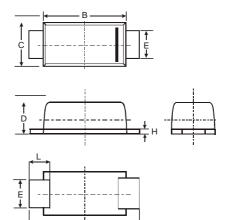
Polarity: Color band denotes cathode end

Mounting Position : Any

• Weight: 0.0007 ounce, 0.02 grams







| SOD-123FL            |      |      |       |  |  |  |
|----------------------|------|------|-------|--|--|--|
| Dim                  | Min  | Max  | Тур   |  |  |  |
| Α                    | 3.50 | 3.80 | 3.65  |  |  |  |
| В                    | 2.60 | 2.90 | 2.75  |  |  |  |
| С                    | 1.70 | 1.90 | 1.80  |  |  |  |
| D                    | 0.09 | 1.10 | 1.00  |  |  |  |
| Е                    | 0.08 | 1.10 | 0.095 |  |  |  |
| Н                    | 0.12 | 0.20 | 0.16  |  |  |  |
| L                    | 0.07 | 0.09 | 0.08  |  |  |  |
| All Dimensions in mm |      |      |       |  |  |  |

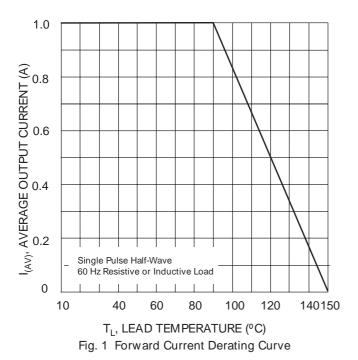
## Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

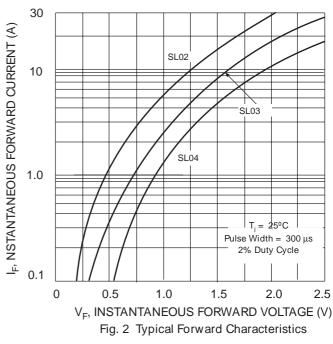
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

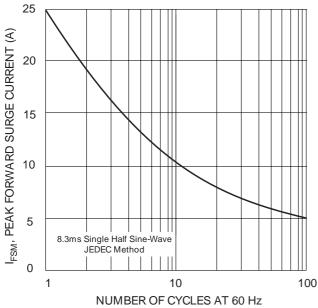
| Characteristic  | Symbol             | SL02        | SL03 | SL04 | Unit |
|---|--------------------|-------------|------|------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | Vrrm<br>Vrwm<br>Vr | 20          | 30   | 40   | V    |
| RMS Reverse Voltage   | VR(RMS)            | 14          | 21   | 28   | V    |
| Average Rectified Output Current @T <sub>L</sub> = 75°C   | lo                 | 1.0         |      | Α    |      |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | IFSM               | 30          |      |      | А    |
| Forward Voltage @I <sub>F</sub> = 1.0A  | VFM                | 0.38        | 0.38 | 0.40 | V    |
|   | IRM                | 0.5<br>20   |      | mA   |      |
| Typical Thermal Resistance Junction to Ambient (Note 1)   | RθJA               | 88          |      |      | K/W  |
| Operating Temperature Range   | Tj                 | -65 to +125 |      |      | °C   |
| Storage Temperature Range   | Tstg               | -65 to +150 |      |      | °C   |

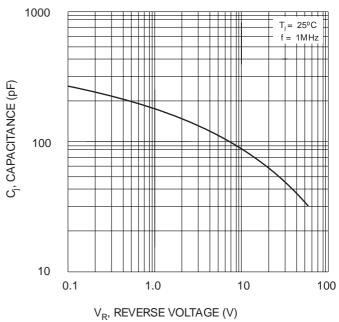
Note: 1. Mounted on P.C. Board with 5.0mm<sup>2</sup> (0.13mm thick) copper pad areas











NUMBER OF CYCLES AT 60 Hz Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

Fig. 4 Typical Junction Capacitance