

**REVERSE VOLTAGE: 20 - 80 V**  
**CURRENT: 0.5 A**  
 SOD-123FL

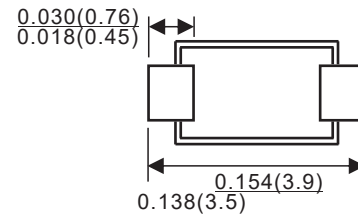
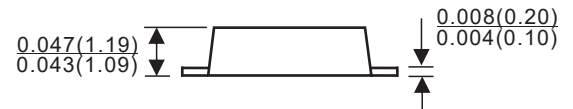
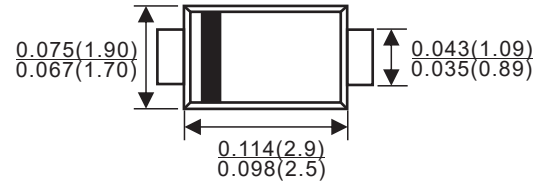


## Features

- ✧ Low forward surge current
- ✧ Ideal for surface mouted applications
- ✧ Low leakage current

## Mechanical Data

- ✧ Case:JEDEC SOD-123FL,molded plastic over passivated chip
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.0008 ounces, 0.022 gram
- ✧ Mounting position: Any



Dimensions in inches and(millimeters)

## Absolute Maximum Ratings (Ta = 25 °C)

| Symbol           | Parameter                                   | Value       |    |    |    |    | Units |
|------------------|---------------------------------------------|-------------|----|----|----|----|-------|
| V <sub>RRM</sub> | Maximum recurrent peak reverse voltage      | 20          | 30 | 40 | 60 | 80 | V     |
| V <sub>RMS</sub> | Maximum RMS voltage                         | 14          | 21 | 28 | 42 | 56 |       |
| I <sub>O</sub>   | Continuous Forward Current                  | 0.5         |    |    |    |    | A     |
| I <sub>FSM</sub> | Non-repetitive Peak Forward Surge Current*1 | 15          |    |    |    |    | A     |
| Pd               | Power Dissipation                           | 410         |    |    |    |    | mW    |
| T <sub>J</sub>   | Operating temperature range                 | -55 to +175 |    |    |    |    | °C    |
| T <sub>STG</sub> | Storage Temperature                         | -55 to +150 |    |    |    |    | °C    |

\*1 8.3 ms single half sine-wave

## Electrical Characteristics (Ta = 25 °C)

| Device     | Symbol         | Parameter       | Conditions                    | Min | Typ | Max  | Units |
|------------|----------------|-----------------|-------------------------------|-----|-----|------|-------|
| MBR0520    | V <sub>F</sub> | Forward Voltage | I <sub>F</sub> = 0.5A         |     |     | 0.45 | V     |
| MBR0530    |                |                 |                               |     |     | 0.55 |       |
| MBR0540    |                |                 |                               |     |     | 0.55 |       |
| MBR0560    |                |                 |                               |     |     | 0.70 |       |
| MBR0580    |                |                 |                               |     |     | 0.80 |       |
| MBR0520    | I <sub>R</sub> | Reverse Current | V <sub>R</sub> = 20V          |     |     | 20   | μA    |
| MBR0530    |                |                 | V <sub>R</sub> = 30V          |     |     |      |       |
| MBR0540    |                |                 | V <sub>R</sub> = 40V          |     |     |      |       |
| MBR0560    |                |                 | V <sub>R</sub> = 60V          |     |     |      |       |
| MBR0580    |                |                 | V <sub>R</sub> = 80V          |     |     |      |       |
| MBR series | C <sub>T</sub> | Capacitance     | V <sub>R</sub> = 4V, f = 1MHz |     | 30  |      | pF    |

### Typical Characteristics

