

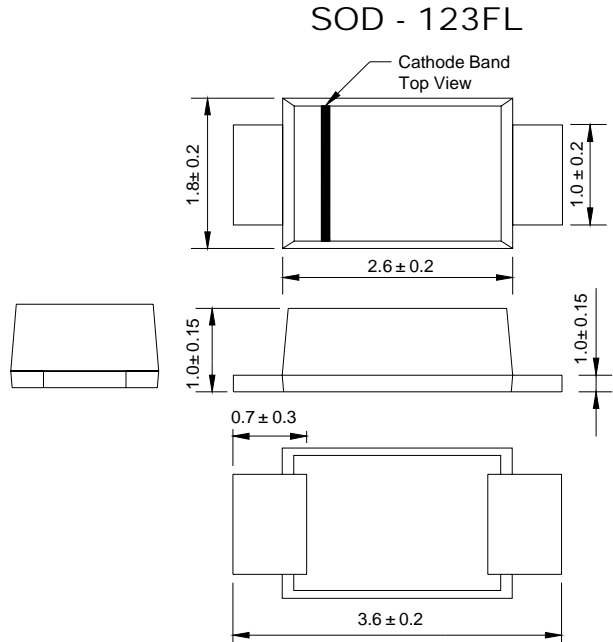
### 3.0A SURFACE MOUNT SCHOTTKY BARRIER DIODE

#### Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 80A Peak
- 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, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.01 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**



Dimensions in millimeters

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

| Characteristic  | Symbol                               | DSK32       | DSK33 | DSK34 | DSK35 | DSK36 | DSK38     | DSK310 | DSK315 | DSK320 | Unit |      |
|---|--------------------------------------|-------------|-------|-------|-------|-------|-----------|--------|--------|--------|------|------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                     | 20          | 30    | 40    | 50    | 60    | 80        | 100    | 150    | 200    | V    |      |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                     |             |       |       |       |       |           |        |        |        |      |      |
| DC Blocking Voltage   | V <sub>R</sub>                       |             |       |       |       |       |           |        |        |        |      |      |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                  | 14          | 21    | 28    | 35    | 42    | 56        | 70     | 105    | 140    | V    |      |
| Average Rectified Output Current @T <sub>L</sub> = 75°C   | I <sub>O</sub>                       | 3.0         |       |       |       |       |           |        |        |        | A    |      |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>                     | 80          |       |       |       |       |           |        |        |        | A    |      |
| Forward Voltage @I <sub>F</sub> = 3.0A  | V <sub>FM</sub>                      | 0.55        |       |       | 0.65  |       |           | 0.85   |        |        | V    |      |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C                   | I <sub>RM</sub>                      | 0.08<br>10  |       |       |       |       | 0.05<br>5 |        |        |        |      | mA   |
| Typical Thermal Resistance (Note 1)   | R <sub>θJL</sub><br>R <sub>θJA</sub> | 28<br>110   |       |       |       |       |           |        |        |        |      | °C/W |
| Typical Junction Capacitance  | C <sub>j</sub>                       | 250         |       |       |       | 160   |           |        |        |        |      | pF   |
| Operating Temperature Range   | T <sub>j</sub>                       | -55 to +150 |       |       |       |       |           |        |        |        | °C   |      |
| Storage Temperature Range   | T <sub>STG</sub>                     | -55 to +150 |       |       |       |       |           |        |        |        | °C   |      |

Note: 1. Mounted on P.C. Board with 5.0mm<sup>2</sup> copper pad area.

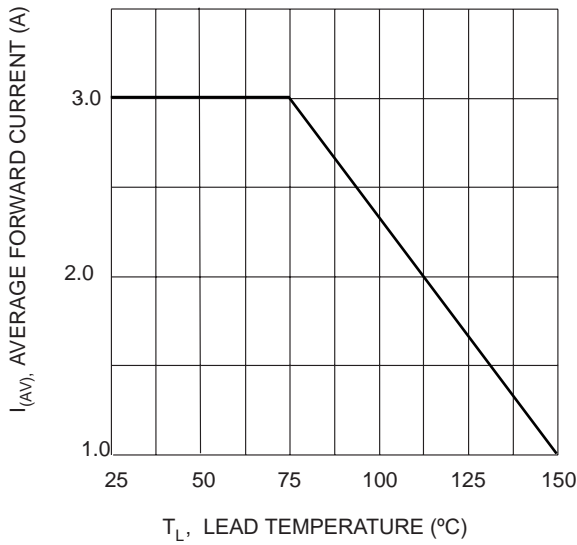


Fig. 1 Forward Current Derating Curve

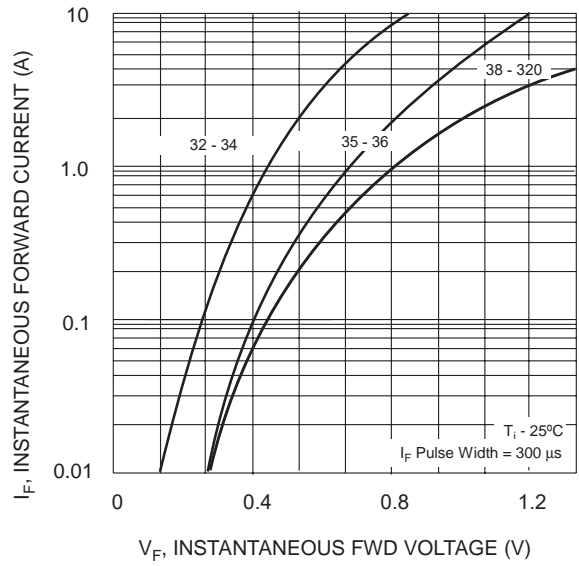


Fig. 2 Typ. Forward Characteristics

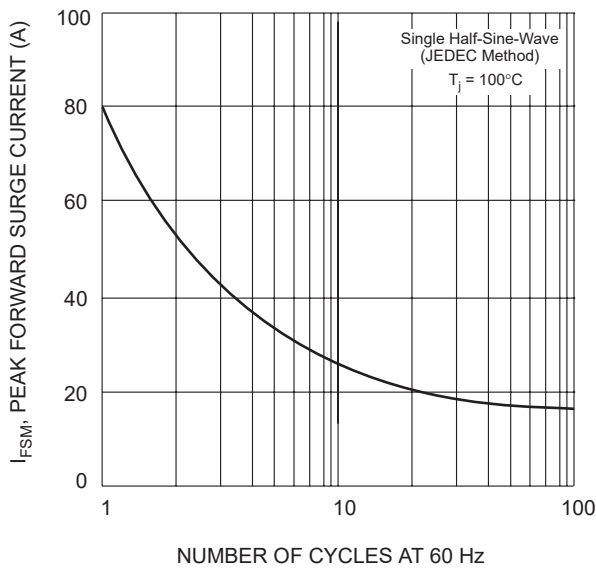


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

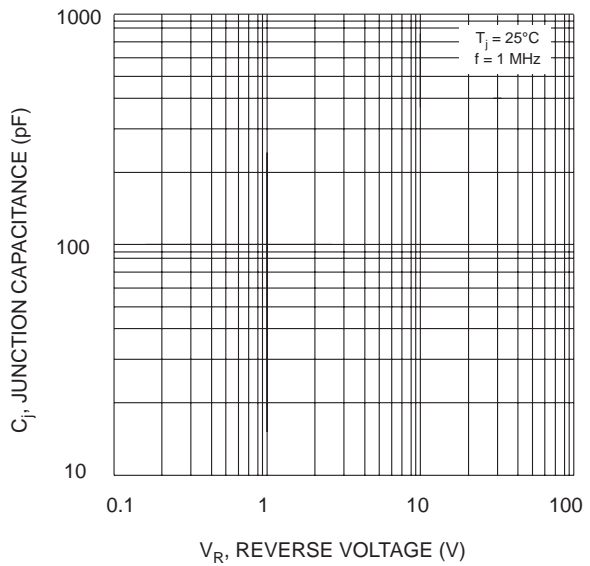


Fig. 4 Typical Junction Capacitance

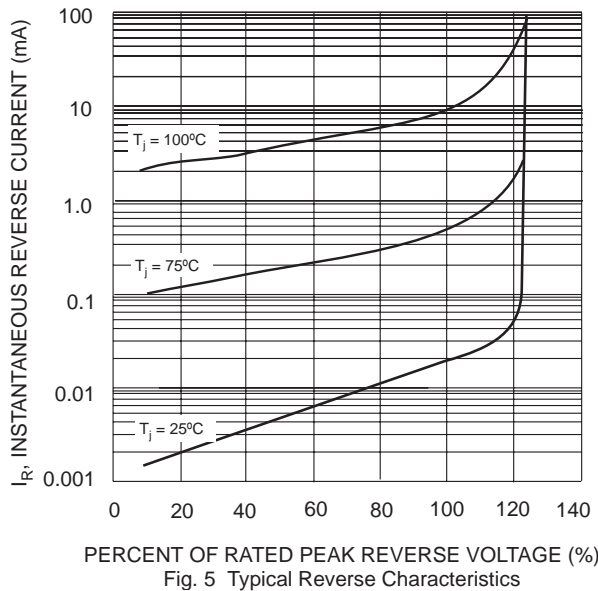


Fig. 5 Typical Reverse Characteristics