

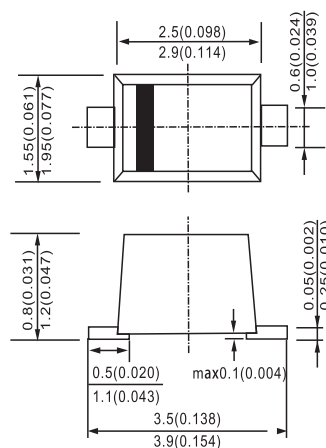
## FEATURES

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Classification 94V-O

## Mechanical Data

- Case: SOD-123FL, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.017 grams (approx.)

## SOD-123FL



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

| MDD Catalog Number                                                                                          | SYMBOLS           | DSK12       | DSK13 | DSK14 | DSK15 | DSK16 | DSK17       | DSK18 | DSK19 | DSK110 | DSK115 | DSK120 | UNITS |    |
|-------------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|-------------|-------|-------|--------|--------|--------|-------|----|
| Maximum repetitive peak reverse voltage                                                                     | V <sub>RRM</sub>  | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | 150    | 200    | VOLTS |    |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>  | 14          | 21    | 28    | 35    | 42    | 49          | 56    | 63    | 70     | 105    | 140    | VOLTS |    |
| Maximum DC blocking voltage                                                                                 | V <sub>DC</sub>   | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | 150    | 200    | VOLTS |    |
| Maximum average forward rectified current                                                                   | I <sub>(AV)</sub> | 1.0         |       |       |       |       |             |       |       |        |        |        | Amp   |    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)      | I <sub>FSM</sub>  | 25.0        |       |       |       |       |             |       |       |        |        |        | Amps  |    |
| Maximum instantaneous forward voltage at 1.0A                                                               | V <sub>F</sub>    | 0.55        |       |       | 0.70  |       | 0.85        |       |       |        |        | 0.95   | Volts |    |
| Maximum DC reverse current    T <sub>A</sub> =25°C<br>at rated DC blocking voltage    T <sub>A</sub> =100°C | I <sub>R</sub>    | 0.5         |       |       |       |       |             |       |       |        | 0.2    |        | mA    |    |
|                                                                                                             |                   | 10.0        |       |       |       | 5.0   |             |       |       | 2.0    |        |        |       |    |
| Typical junction capacitance (NOTE 1)                                                                       | C <sub>J</sub>    | 110         |       |       | 80    |       |             |       |       |        |        |        |       | pF |
| Operating junction temperature range                                                                        | T <sub>J</sub>    | -65 to +125 |       |       |       |       | -65 to +150 |       |       |        |        |        |       | °C |
| Storage temperature range                                                                                   | T <sub>STG</sub>  | -65 to +150 |       |       |       |       |             |       |       |        |        |        | °C    |    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES DSK12 THRU DSK120

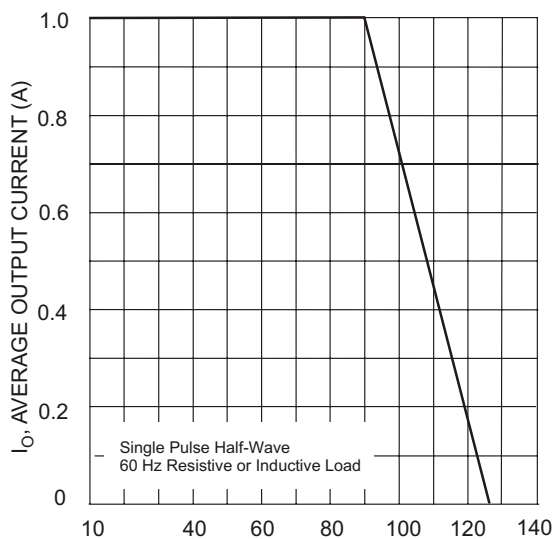


Fig. 1 Forward Current Derating Curve

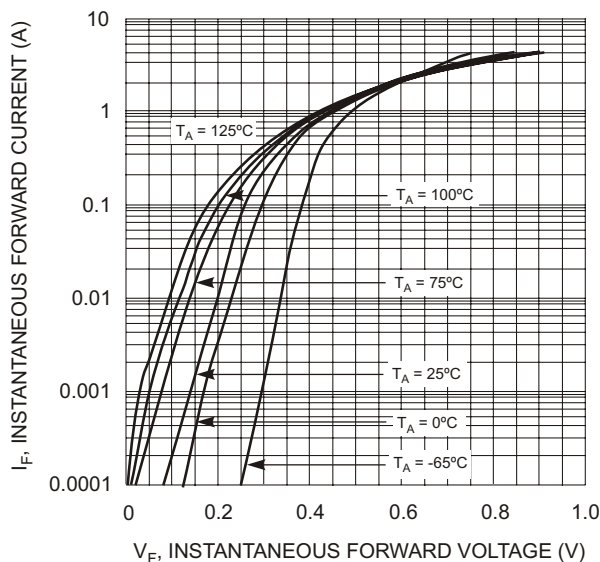


Fig. 2 Typical Forward Characteristics

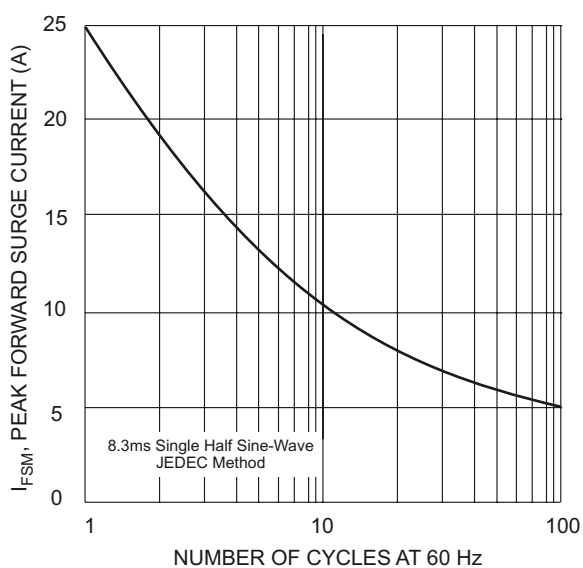


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

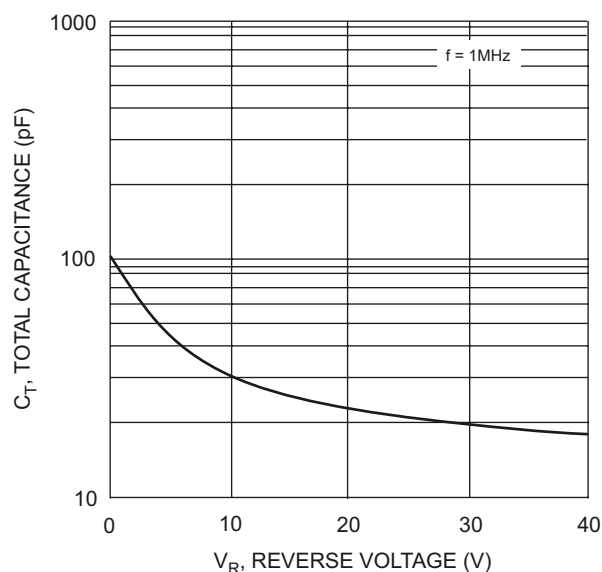


Fig. 4 Typical Total Capacitance