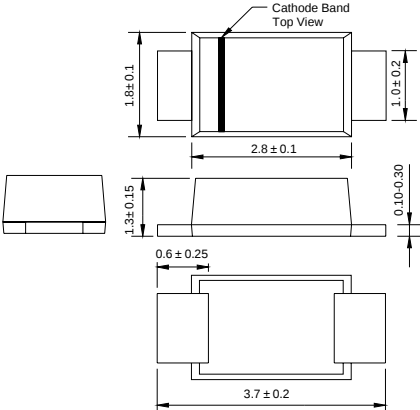


Reverse Voltage - 20 to 100 Volts    Forward Current - 2.0 Ampere

## SOD-123FL



Dimensions in millimeters

## FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

## MECHANICAL DATA

**Case:** JEDEC SOD-123FL molded plastic body  
**Terminals:** Solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.0007 ounce, 0.02 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

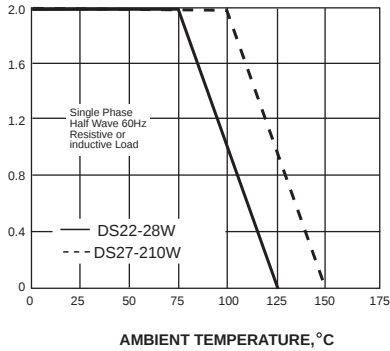
Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| MDD Catalog Number                                                                                            | SYMBOLS           | DS22W       | DS23W | DS24W | DS25W | DS26W | DS27W       | DS28W | DS29W | DS210W | UNITS |
|---------------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|
| Maximum repetitive peak reverse voltage                                                                       | V <sub>RRM</sub>  | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | VOLTS |
| Maximum RMS voltage                                                                                           | V <sub>RMS</sub>  | 14          | 21    | 28    | 35    | 42    | 49          | 56    | 63    | 70     | VOLTS |
| Maximum DC blocking voltage                                                                                   | V <sub>DC</sub>   | 20          | 30    | 40    | 50    | 60    | 70          | 80    | 90    | 100    | VOLTS |
| Maximum average forward rectified current                                                                     | I <sub>(AV)</sub> | 2.0         |       |       |       |       |             |       |       |        | Amp   |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)        | I <sub>FSM</sub>  | 40.0        |       |       |       |       |             |       |       |        | Amps  |
| Maximum instantaneous forward voltage at 2.0A                                                                 | V <sub>F</sub>    | 0.55        |       |       | 0.70  |       | 0.85        |       |       |        | 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         |       |       |       |       |             |       |       |        | mA    |
|                                                                                                               |                   | 10.0        |       |       |       |       | 5.0         |       |       |        |       |
| Typical junction capacitance (NOTE 1)                                                                         | C <sub>J</sub>    | 220         |       |       | 80    |       |             |       |       | pF     |       |
| Operating junction temperature range                                                                          | T <sub>J</sub>    | -50 to +125 |       |       |       |       | -50 to +150 |       |       |        | °C    |
| Storage temperature range                                                                                     | T <sub>STG</sub>  | -50 to +150 |       |       |       |       |             |       |       |        | °C    |

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

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

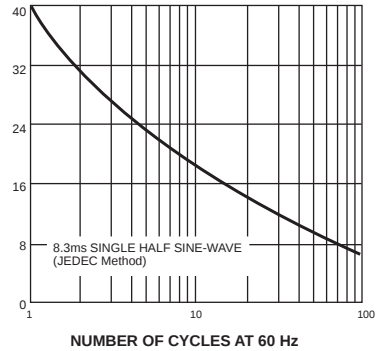
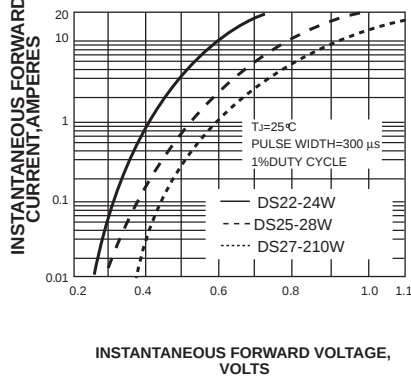


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

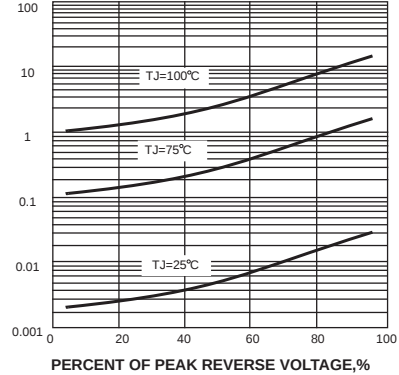


FIG. 5-TYPICAL JUNCTION CAPACITANCE

