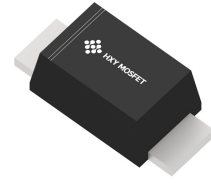




## Features

- Average Forward Current:  $I_{F(AV)}=1A$
- Polarity: Color band denotes cathode



## Package Marking and Ordering Information

| Product ID | Pack      | Marking | Qty(PCS) |
|------------|-----------|---------|----------|
| FR10xW     | SOD-123FL | Fx      | 3000     |

x: From 1-7

SOD-123FL



## Maximum Ratings (Ta=25°C unless otherwise noted)

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | F1         | F2  | F3  | F4  | F5  | F6  | F7   | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum Average Forward Rectified Current<br>at Ta=25°C                                               | 1.0        |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 30         |     |     |     |     |     |      | A     |
| Maximum Instantaneous Forward Voltage at 1.0A                                                         | 1.3        |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current Ta=25°C                                                                    | 5.0        |     |     |     |     |     |      | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                                 | 100        |     |     |     |     |     |      | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 150        |     |     |     | 250 | 500 |      | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 15         |     |     |     |     |     |      | pF    |
| Typical Thermal Resistance R JA (Note 3)                                                              | 80         |     |     |     |     |     |      | °C/W  |
| Operating and Storage Temperature Range Tj, TSTG                                                      | -65 — +150 |     |     |     |     |     |      | °C    |

### NOTES:

1. Reverse Recovery Time test condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $IRR=0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance from Junction to Ambient.



## Typical Characteristics

FIG.1-TYPICAL FORWARD CHARACTERISTICS

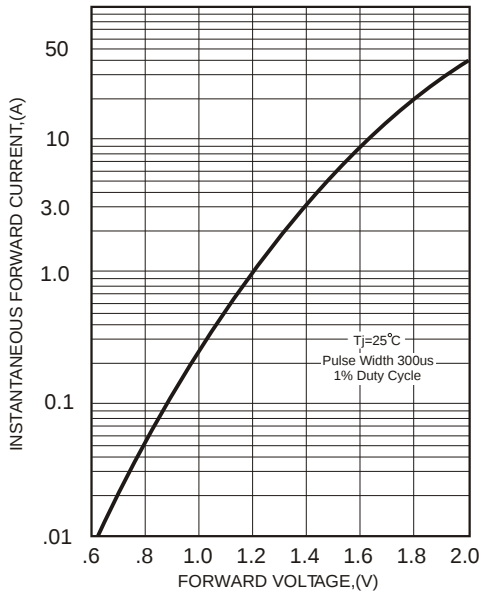


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

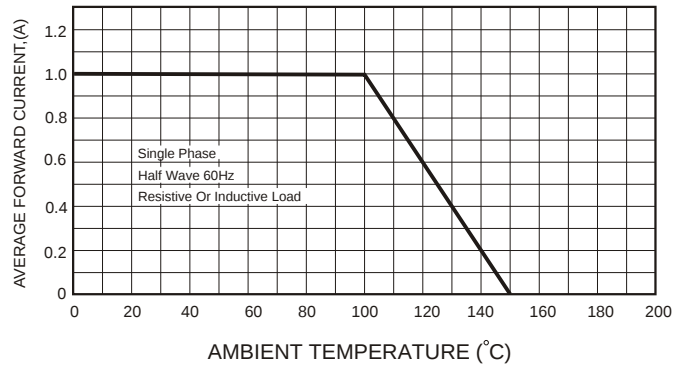
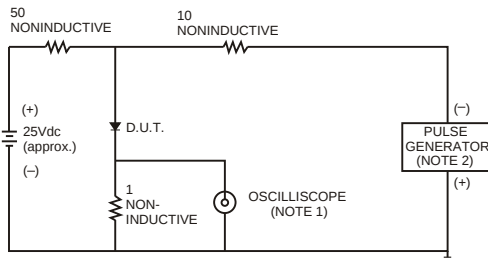


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

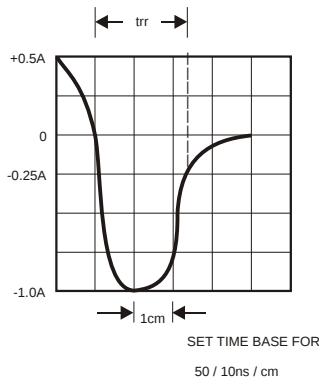


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

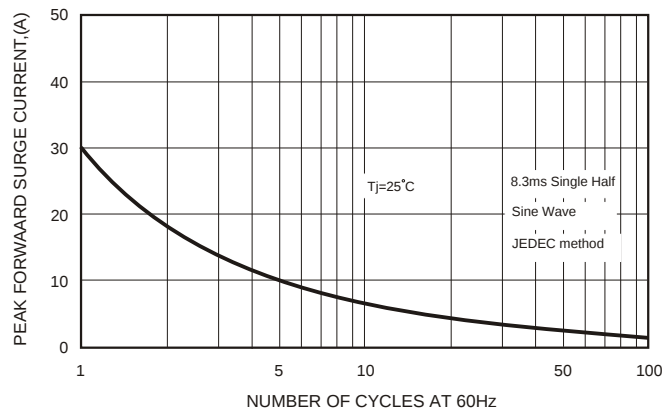
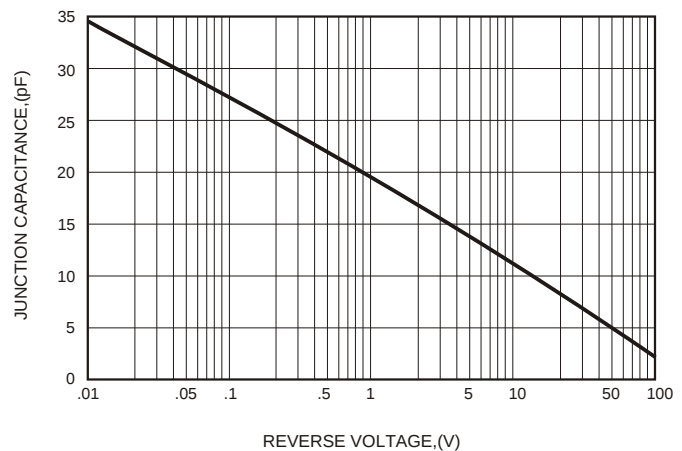
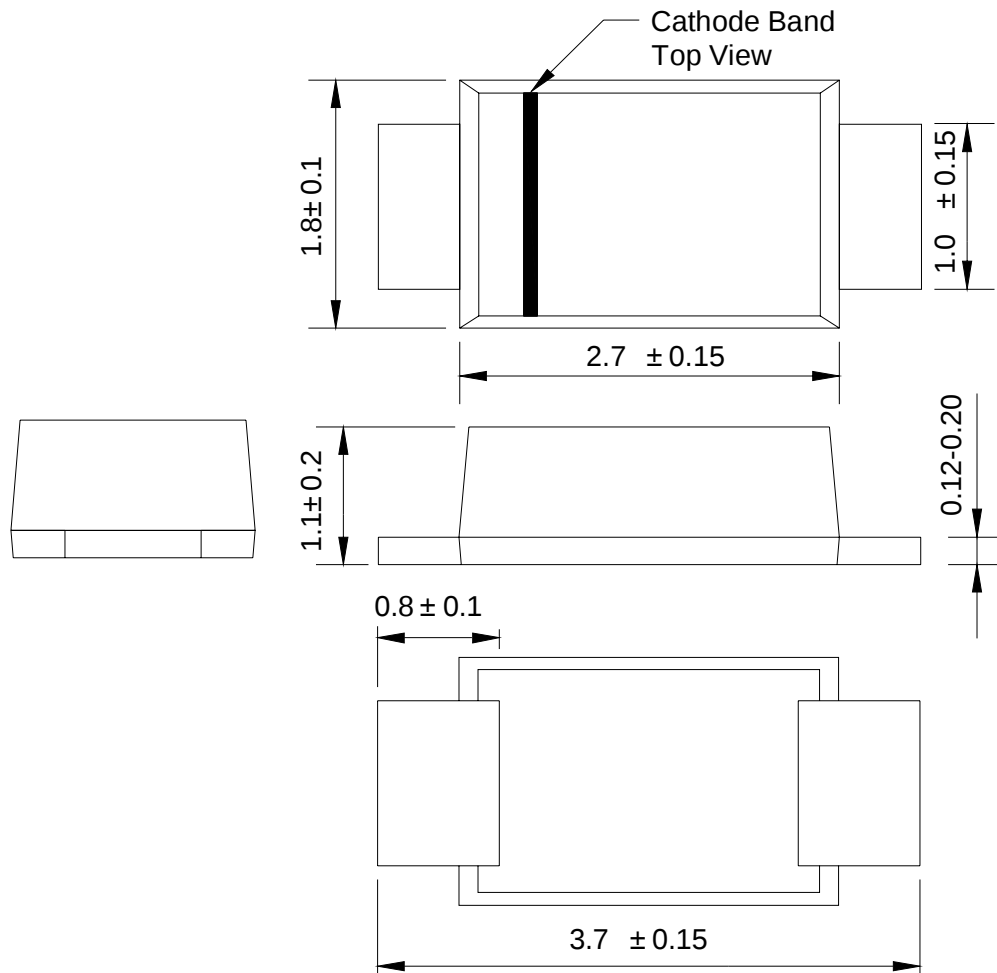


FIG.5-TYPICAL JUNCTION CAPACITANCE





**Package Outline Dimensions**  
**SOD-123FL**





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