

## SOD-123FL Plastic-Encapsulate Diodes

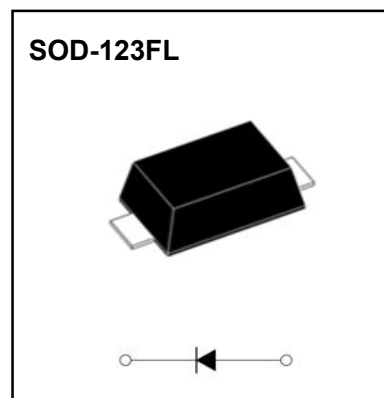
### Schottky Rectifier

#### Features

- $I_O$  1A
- $V_{RRM}$  40V
- High surge current capability
- Polarity: Color band denotes cathode
- High Operating Junction Temperature

#### Applications

- Rectifier



#### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol      | Unit             | Test Conditions                                            | DSS14LH    |
|--------------------------------------|-------------|------------------|------------------------------------------------------------|------------|
| Repetitive Peak Reverse Voltage      | $V_{RRM}$   | V                |                                                            | 40         |
| Maximum RMS Voltage                  | $V_{RMS}$   | V                |                                                            | 28         |
| Maximum DC Blocking Voltage          | $V_{DC}$    | V                |                                                            | 40         |
| Average Forward Current              | $I_{F(AV)}$ | A                | 60HZ Half-sine wave, Resistance load, TL(Fig.1)            | 1.0        |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$   | A                | 60Hz Half-sine wave ,1 cycle ,<br>$T_a = 25^\circ\text{C}$ | 30         |
| Junction Temperature                 | $T_J$       | $^\circ\text{C}$ |                                                            | -55 ~ +150 |
| Storage Temperature                  | $T_{STG}$   | $^\circ\text{C}$ |                                                            | -55 ~ +150 |

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless otherwise specified)

| Item                          | Symbol            | Unit | Test Condition                                               |                       | DSS14LH            |
|-------------------------------|-------------------|------|--------------------------------------------------------------|-----------------------|--------------------|
| Peak Forward Voltage          | V <sub>F</sub>    | V    | I <sub>F</sub> =1.0A                                         |                       | 0.42(typ) 0.5(max) |
| Peak Reverse Current          | I <sub>RRM1</sub> | mA   | V <sub>RM</sub> =V <sub>RRM</sub>                            | T <sub>J</sub> =25°C  | 0.01(typ) 0.1(max) |
|                               | I <sub>RRM2</sub> |      |                                                              | T <sub>J</sub> =125°C | 3(typ)             |
| Thermal Resistance(Typical)   | R <sub>θJA</sub>  | °C/W | Between junction and ambient                                 |                       | 85                 |
|                               | R <sub>θJL</sub>  |      | Between junction and terminal                                |                       | 23                 |
|                               | R <sub>θJC</sub>  |      | Between junction and case                                    |                       | 15                 |
| Juction Capacitance (Typical) | Cj                | pF   | Measured at 1.0MHz and applied reverse voltage of 4.0 volts. |                       | 42                 |

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

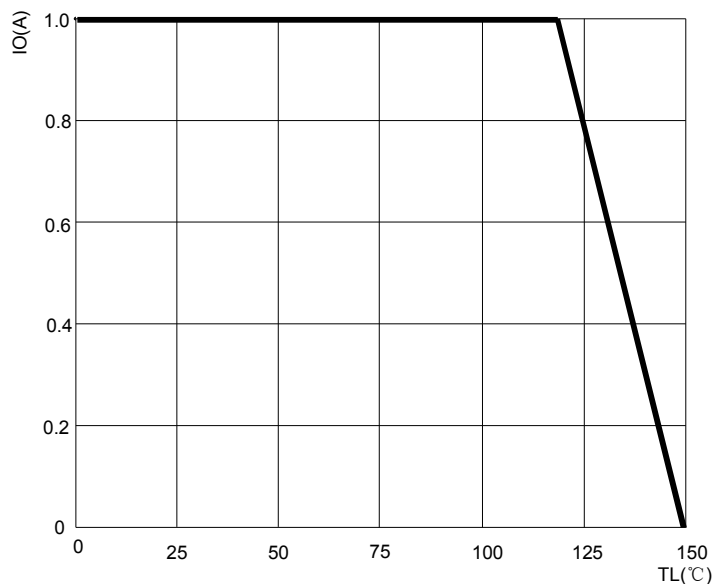


FIG2: Surge Forward Current Capability

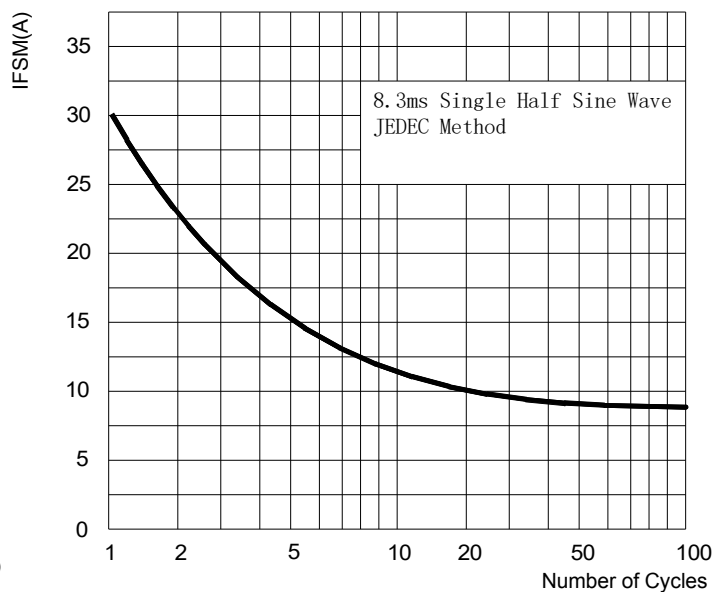


FIG.3: TYPICAL FORWARD CHARACTERISTICS

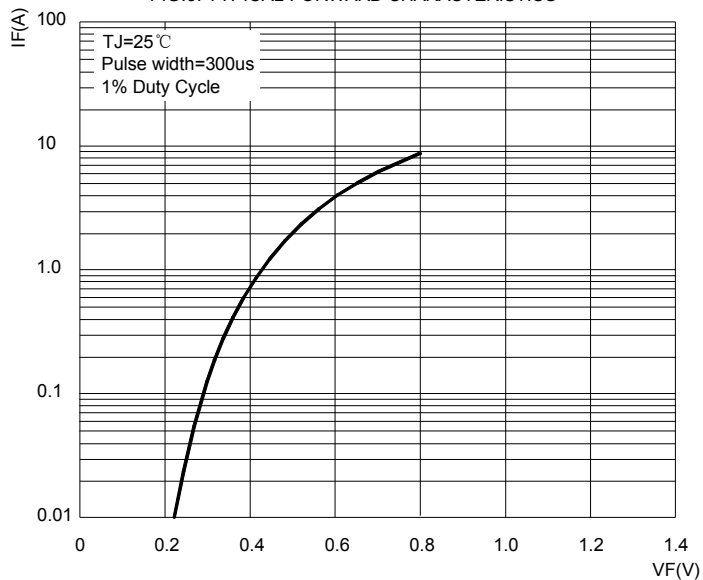
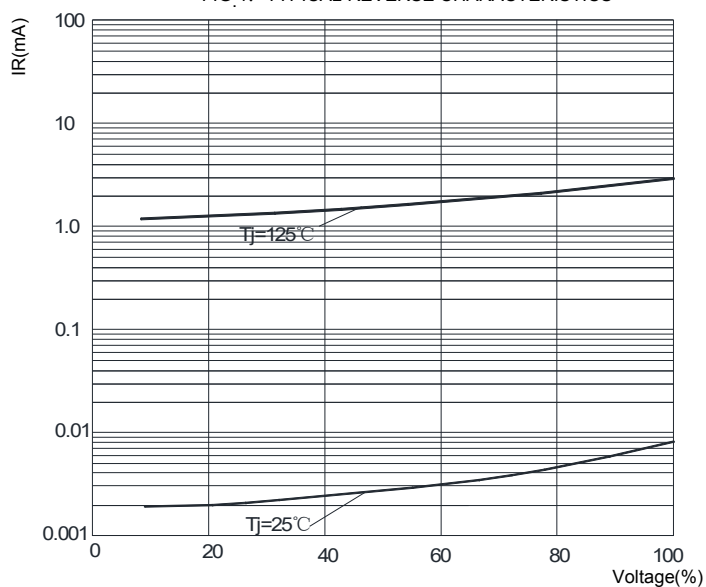
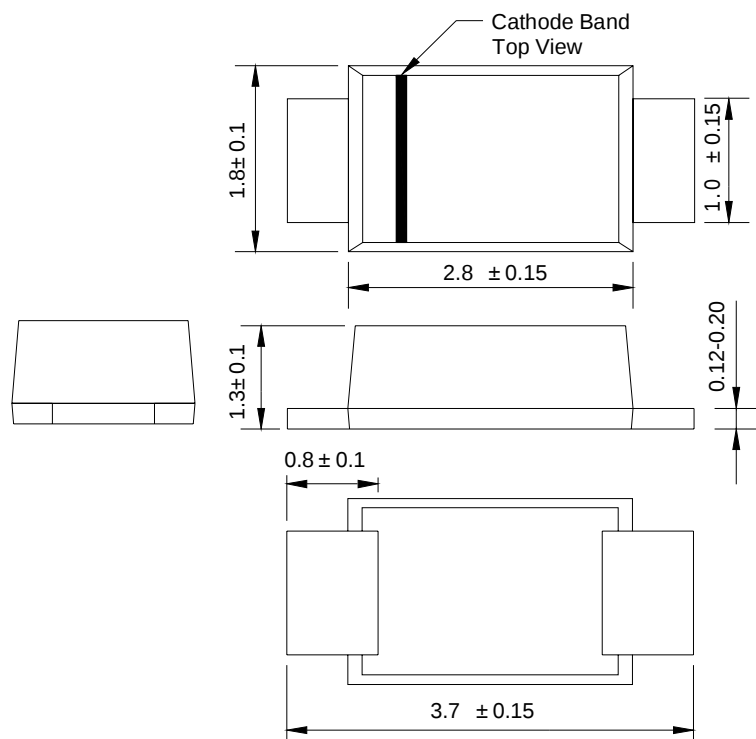


FIG.4: TYPICAL REVERSE CHARACTERISTICS

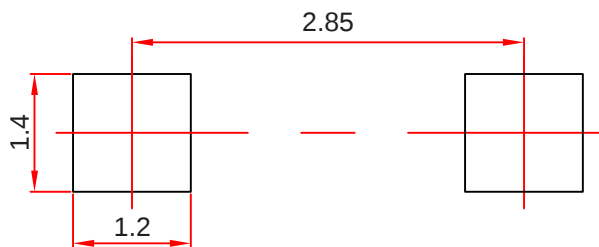


SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



**Note:**  
1. Controlling dimension: in millimeters.  
2. General tolerance:  $\pm 0.05$  mm.  
3. The pad layout is for reference purposes only.

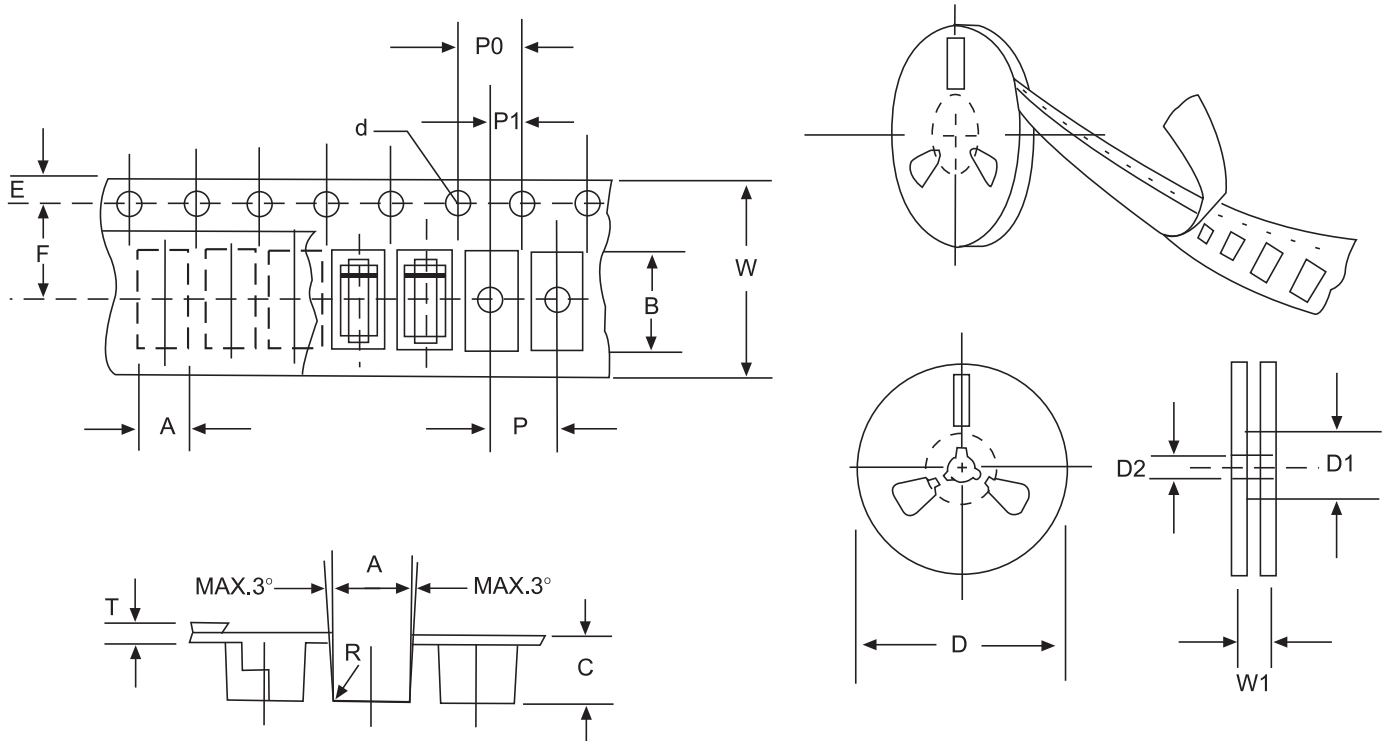
Ordering Information

| Part Number | Package   | Shipping Quantity |
|-------------|-----------|-------------------|
| DSS14LH     | SOD-123FL | 3000/tape&Reel    |

Marking Diagram



## Reel Taping Specifications For Surface Mount Devices–SOD-123FL



**FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING**

| ITEM                   | SYMBOL | SOD-123FLmm(inch)      |
|------------------------|--------|------------------------|
| Carrier width          | A      | 2.05±0.1(0.081±0.004)  |
| Carrier length         | B      | 3.95±0.1(0.156±0.004)  |
| Carrier depth          | C      | 1.45±0.1(0.057±0.004)  |
| Sprocket hole          | d      | 1.55±0.05(0.061±0.002) |
| Reel outside diameter  | D      | 178±2.0(7.0±0.079)     |
| Reel inner diameter    | D1     | 54±1.0(2.13±0.039)     |
| Feed hole diameter     | D2     | 13±0.5(0.512±0.020)    |
| Sprocket hole position | E      | 1.75±0.1(0.069±0.004)  |
| Punch hole position    | F      | 3.50±0.1(0.138±0.002)  |
| Punch hole pitch       | P      | 4.0±0.1(0.157±0.004)   |
| Sprocket hole pitch    | P0     | 4.0±0.1(0.157±0.004)   |
| Embossment center      | P1     | 2.0±0.1(0.079±0.004)   |
| Total tape thickness   | T      | 0.21±0.25(0.008±0.010) |
| Tape width             | W      | 8.0±0.2(0.315±0.008)   |
| Reel width             | W1     | 10.0±2.0(0.394±0.079)  |

NOTE: Devices are packde in accordance with EIA standard RS-481-A and specification given above.