**SOD-123FL Plastic-Encapsulate Diodes****DSS32 THRU DSS320 Schottky Rectifier Diodes****Features**

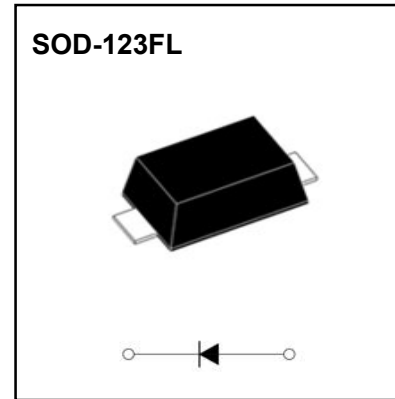
- $I_{F(AV)}$  3A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

**Applications**

- Rectifier

**Marking**

- DSS32-DSS320 : S32-S320

**Limiting Values (Absolute Maximum Rating)**

| Item                                 | Symbol             | Unit | Test Conditions                          | DSS3       |    |    |    |    |    |     |     |     |
|--------------------------------------|--------------------|------|------------------------------------------|------------|----|----|----|----|----|-----|-----|-----|
|                                      |                    |      |                                          | 2          | 3  | 4  | 5  | 6  | 8  | 10  | 15  | 20  |
| Repetitive Peak Reverse Voltage      | V <sub>RRM</sub>   | V    |                                          | 20         | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| MaximumRMS Voltage                   | V <sub>RMS</sub>   | V    |                                          | 14         | 21 | 28 | 35 | 42 | 56 | 70  | 105 | 140 |
| Average Forward Current              | I <sub>F(AV)</sub> | A    | 60Hz Half-sine wave,<br>Resistance load  | 3.0        |    |    |    |    |    |     |     |     |
| Surge(Non-repetitive)Forward Current | I <sub>FSM</sub>   | A    | 60Hz Half-sine wave,<br>1 cycle, Ta=25 C | 80         |    |    |    |    |    |     |     |     |
| Junction Temperature                 | T <sub>J</sub>     | ℃    |                                          | -55~+150   |    |    |    |    |    |     |     |     |
| Storage Temperature                  | T <sub>STG</sub>   | ℃    |                                          | -55 ~ +150 |    |    |    |    |    |     |     |     |

**Electrical Characteristics (T=25 °C Unless otherwise specified )**

| Item                           | Symbol            | Unit | Test Condition                                                   |           | DSS3 |   |   |     |     |      |    |      |    |  |
|--------------------------------|-------------------|------|------------------------------------------------------------------|-----------|------|---|---|-----|-----|------|----|------|----|--|
|                                |                   |      |                                                                  |           | 2    | 3 | 4 | 5   | 6   | 8    | 10 | 15   | 20 |  |
| Peak Forward Voltage           | V <sub>FM</sub>   | V    | I <sub>FM</sub> =3.0A                                            |           | 0.55 |   |   | 0.7 |     | 0.85 |    | 0.95 |    |  |
| Peak Reverse Current           | I <sub>RRM1</sub> | mA   | V <sub>RM</sub> =V <sub>RRM</sub>                                | Ta =25 °C | 0.5  |   |   |     | 0.1 |      |    |      |    |  |
|                                | Ta =100°C         |      |                                                                  | 10        |      |   |   | 5.0 |     |      |    |      |    |  |
| Thermal Resistance(Typical)    | R <sub>θJ-A</sub> | °C/W | Between junction and ambient                                     |           | 54   |   |   |     |     |      |    |      |    |  |
|                                | R <sub>θJ-L</sub> |      | Between junction and terminal                                    |           | 8.5  |   |   |     |     |      |    |      |    |  |
| Typical Junction Capacitance   | C <sub>J</sub>    | pF   | Measured at 1MHz and applied reverse voltage of 4.0V D.C.        |           | 146  |   |   | 117 |     | 85   |    | 66   | 57 |  |
| Reverse recovery time(Typical) | t <sub>rr</sub>   | ns   | I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A,I <sub>rr</sub> =0.25A |           | 7    |   |   |     |     |      |    |      |    |  |

**Notes:**

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

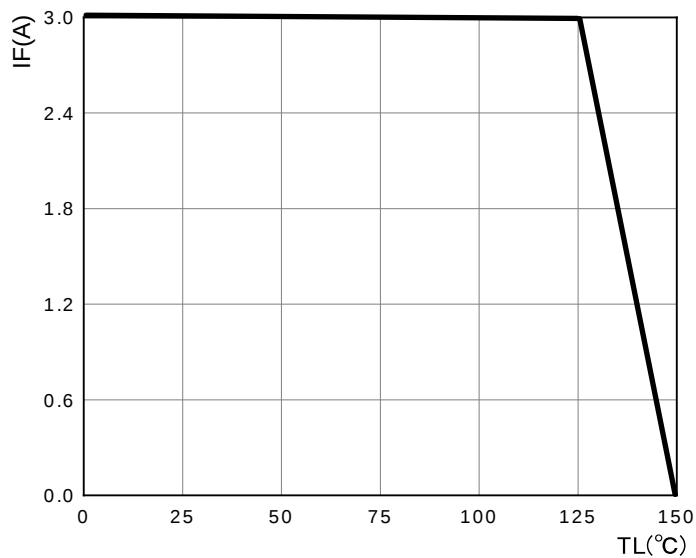
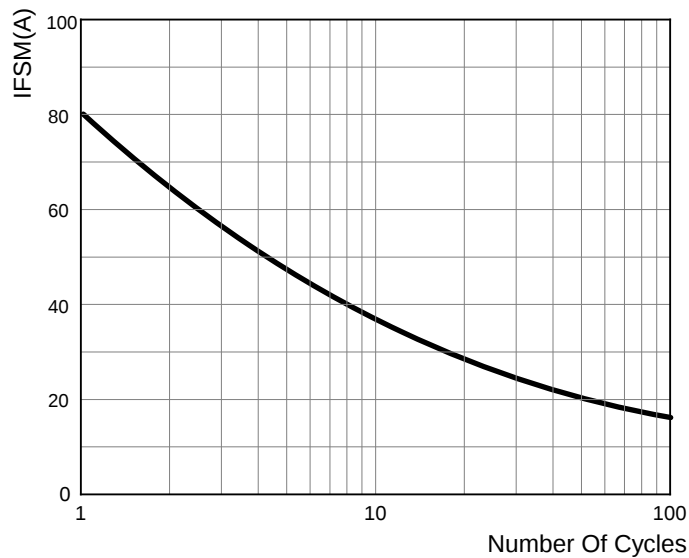
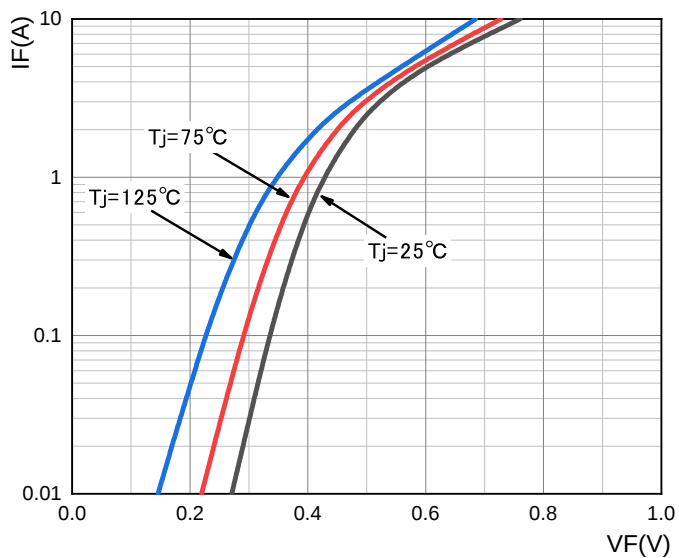


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



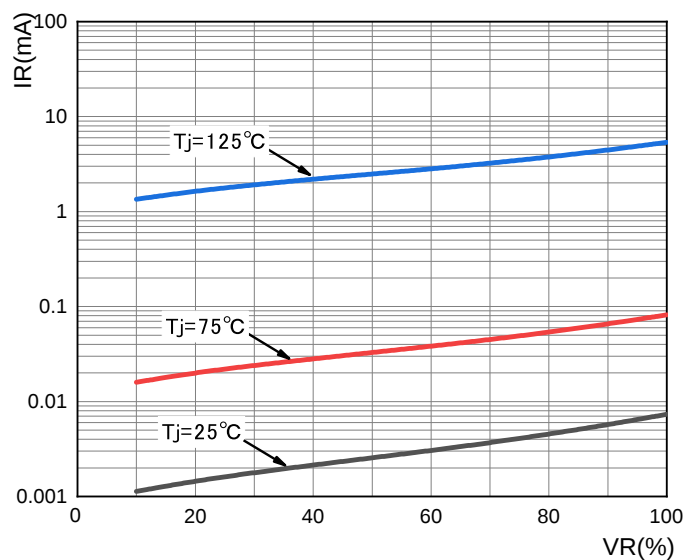
DSS32-DSS34

FIG.3: TYPICAL FORWARD CHARACTERISTICS



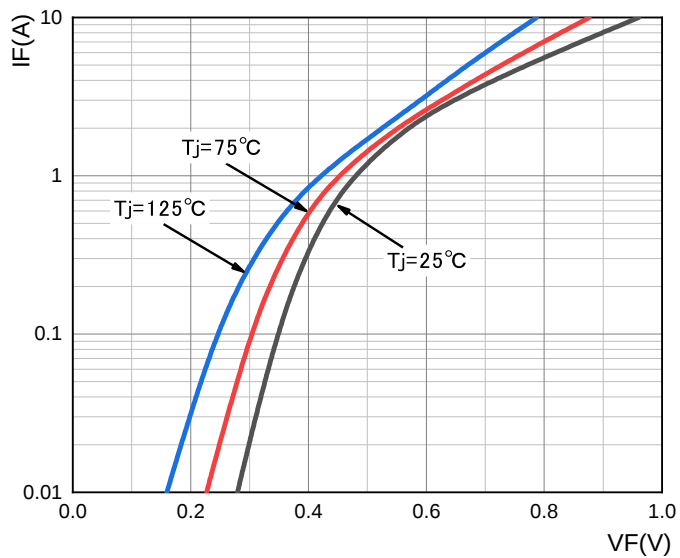
DSS32-DSS34

FIG.4: TYPICAL REVERSE CHARACTERISTICS



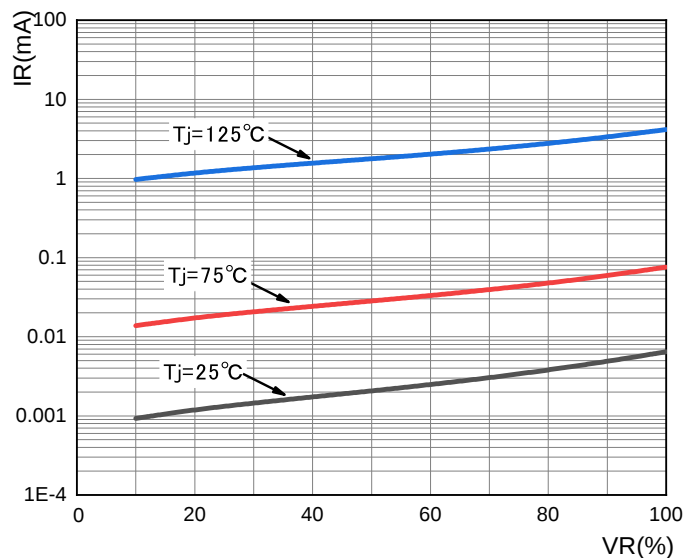
DSS35-DSS36

FIG.5: TYPICAL FORWARD CHARACTERISTICS



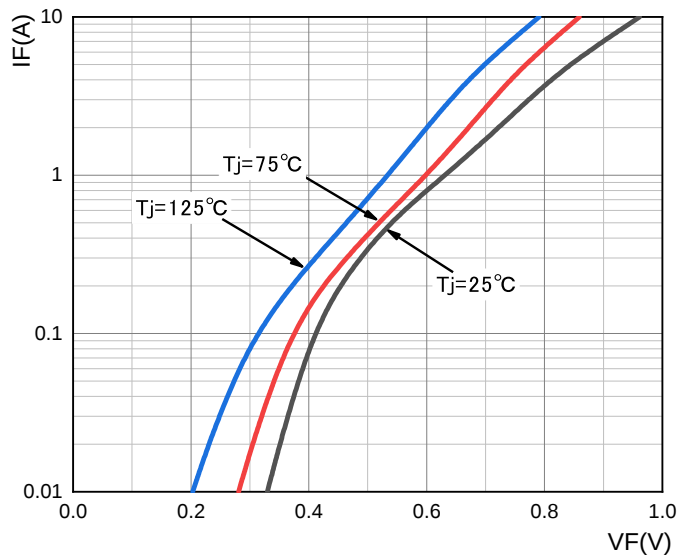
DSS35-DSS36

FIG.6: TYPICAL REVERSE CHARACTERISTICS



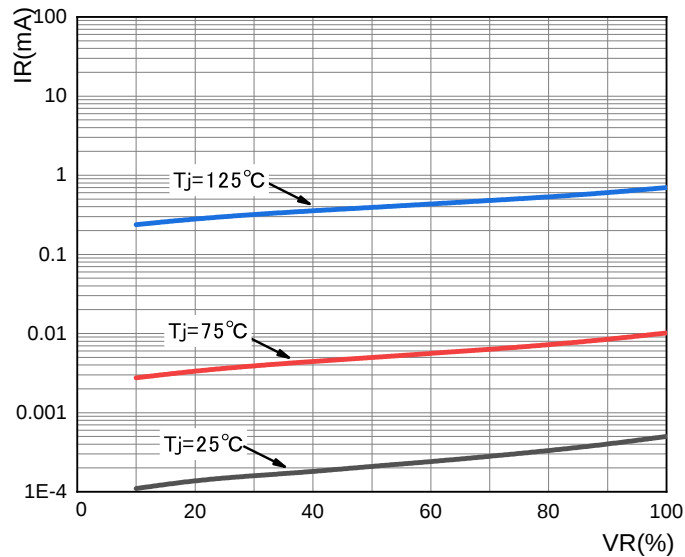
DSS38-DSS310

FIG.7: TYPICAL FORWARD CHARACTERISTICS



DSS38-DSS310

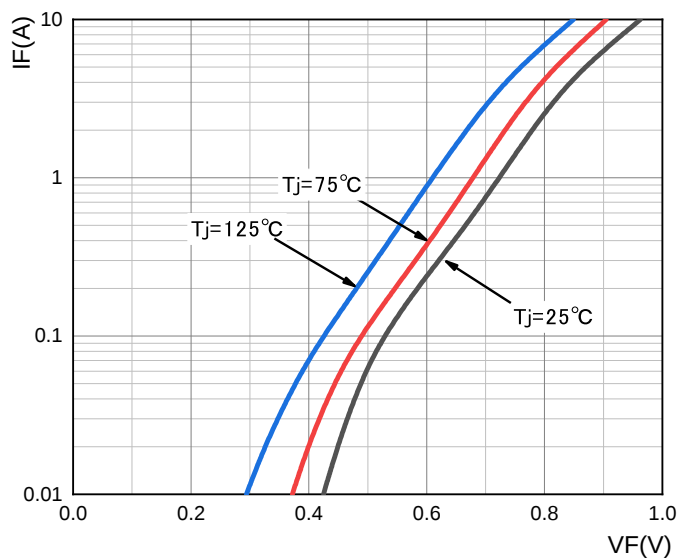
FIG.8: TYPICAL REVERSE CHARACTERISTICS



## Typical Characteristics

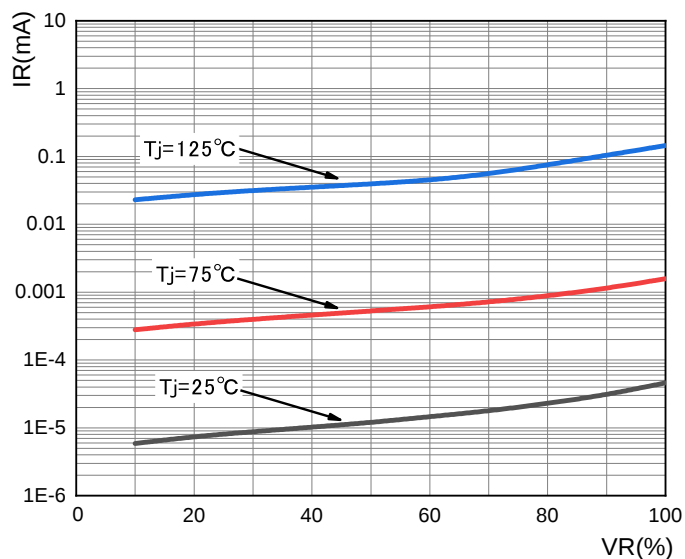
DSS315

FIG.9: TYPICAL FORWARD CHARACTERISTICS



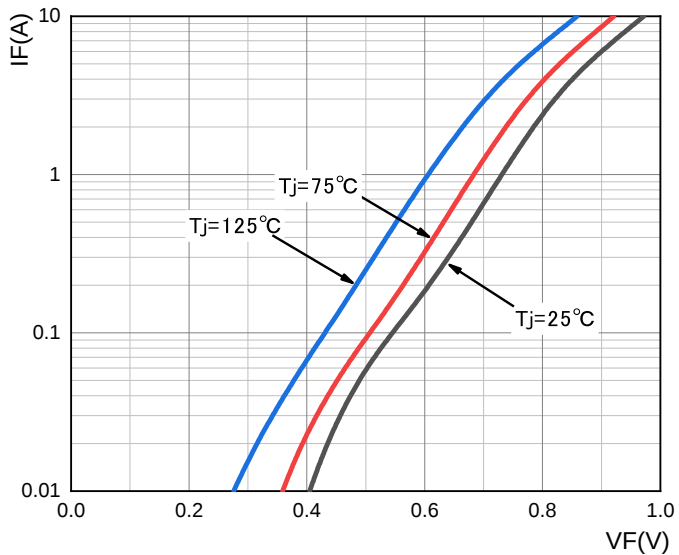
DSS315

FIG.10: TYPICAL REVERSE CHARACTERISTICS



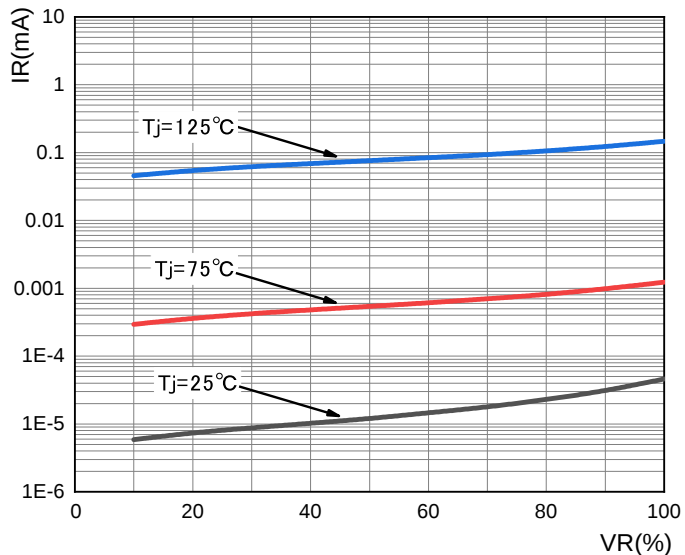
DSS320

FIG.11: TYPICAL FORWARD CHARACTERISTICS

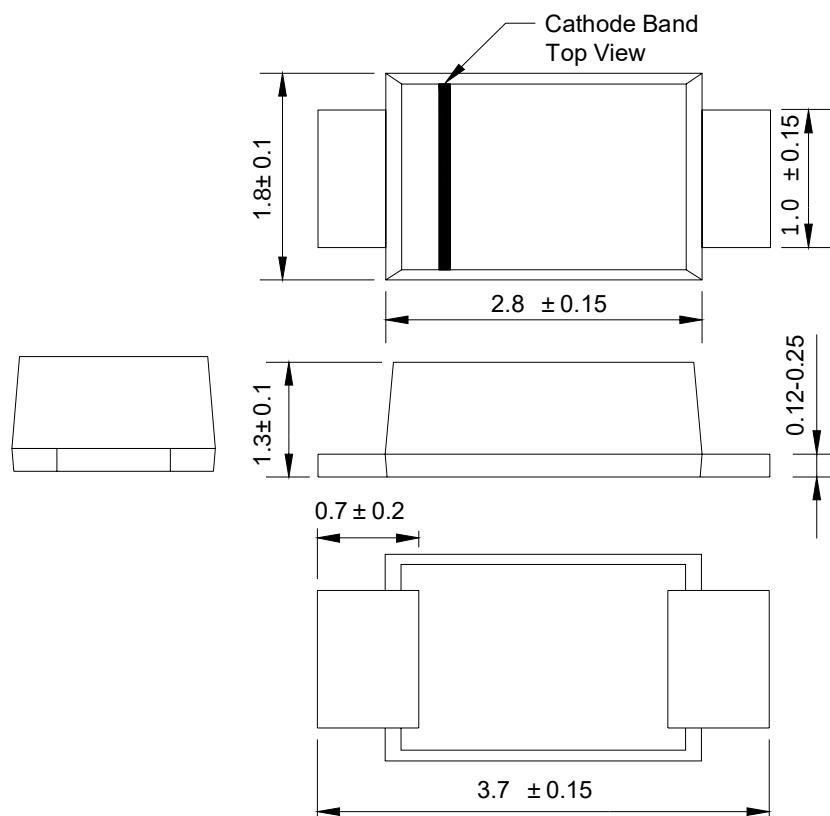


DSS320

FIG.12: TYPICAL REVERSE CHARACTERISTICS

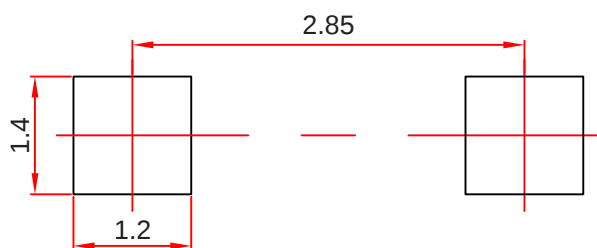


## SOD-123FL Package Outline Dimensions



Dimensions in millimeters

## SOD-123FL Suggested Pad Layout



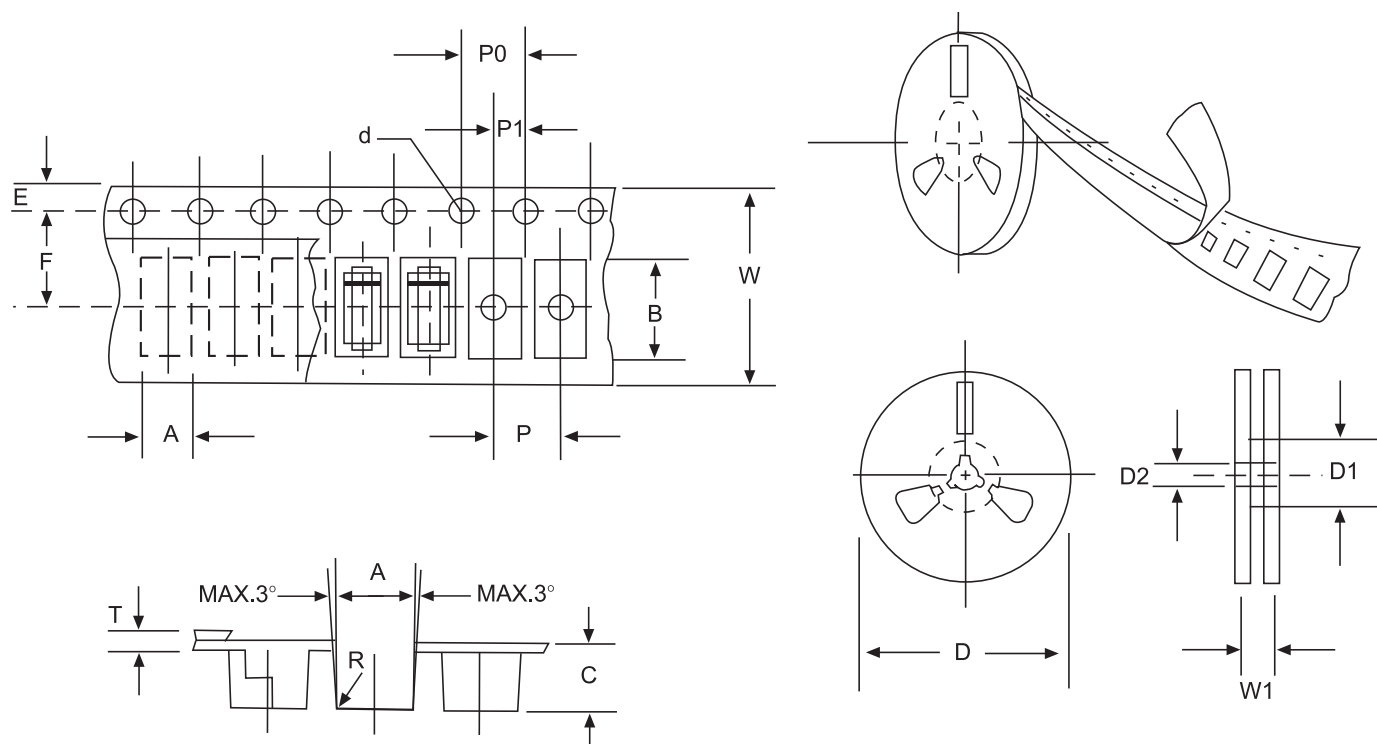
### Note:

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

### NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

## 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)   |
| Totall 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.