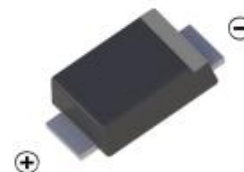
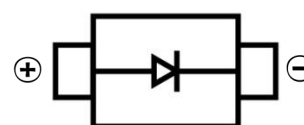


**SCHOTTKY BARRIER DIODE**
**FEATURES**

- Small Surface Mount device
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications


**SOD-123FL**
**MECHANICAL DATA**

- Case: SOD-123FL
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.0155 grams (approximate)


**MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

| Parameter                                                        | Symbol          | SS32L      | SS33L | SS34L | SS36L | SS38L | SS310L | SS315L | SS320L | Unit               |
|------------------------------------------------------------------|-----------------|------------|-------|-------|-------|-------|--------|--------|--------|--------------------|
| Repetitive peak reverse voltage                                  | $V_{RRM}$       | 20         | 30    | 40    | 60    | 80    | 100    | 150    | 200    | V                  |
| DC Reverse Voltage                                               | $V_R$           | 20         | 30    | 40    | 60    | 80    | 100    | 150    | 200    | V                  |
| RMS Reverse Voltage                                              | $V_{RMS}$       | 14         | 21    | 28    | 42    | 56    | 70     | 105    | 140    | V                  |
| Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$ | $I_{FSM}$       | 70         |       |       |       |       |        |        |        | A                  |
| Mean rectifying current                                          | $I_F$           | 3.0        |       |       |       |       |        |        |        | A                  |
| Thermal Resistance                                               | $R_{\theta JA}$ | 70         |       |       |       |       |        |        |        | $^\circ\text{C/W}$ |
| Junction Temperature                                             | $T_J$           | 150        |       |       |       |       |        |        |        | $^\circ\text{C}$   |
| Storage Temperature                                              | $T_{STG}$       | -55 ~ +175 |       |       |       |       |        |        |        | $^\circ\text{C}$   |

**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise specified)**

| Parameter               | Symbol         | SS32L | SS33L | SS34L | SS36L | SS38L | SS310L | SS315L | SS320L | Unit | Conditions         |
|-------------------------|----------------|-------|-------|-------|-------|-------|--------|--------|--------|------|--------------------|
| Forward voltage         | V <sub>F</sub> | 0.55  |       |       | 0.7   | 0.85  |        | 0.95   |        | V    | I <sub>F</sub> =3A |
| Reverse current T=25°C  | I <sub>R</sub> | 0.5   |       |       |       |       |        |        |        | mA   | V=V <sub>R</sub>   |
| Reverse current T=100°C | I <sub>R</sub> | 20    |       |       |       |       |        |        |        | mA   |                    |
| Junction capacitance    | C <sub>J</sub> | 160   |       |       |       |       |        |        |        | pF   | V=4V,f=1MHz        |

**SCHOTTKY BARRIER DIODE**

**Typical Characteristics**

FIG.1: FORWARD CURRENT DERATING CURVE

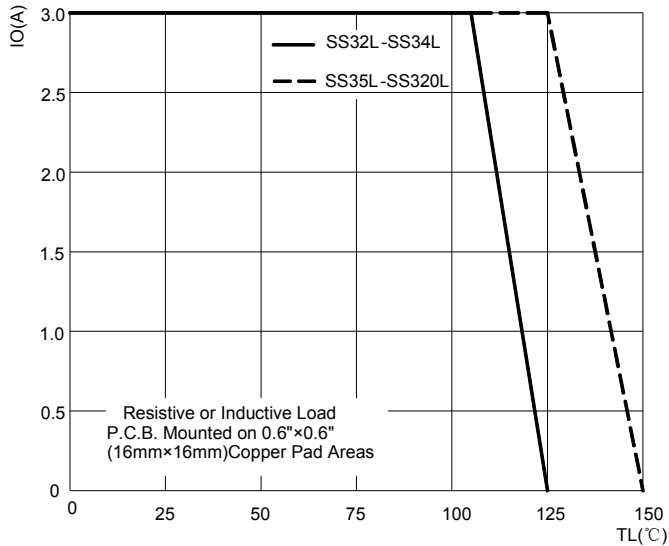


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

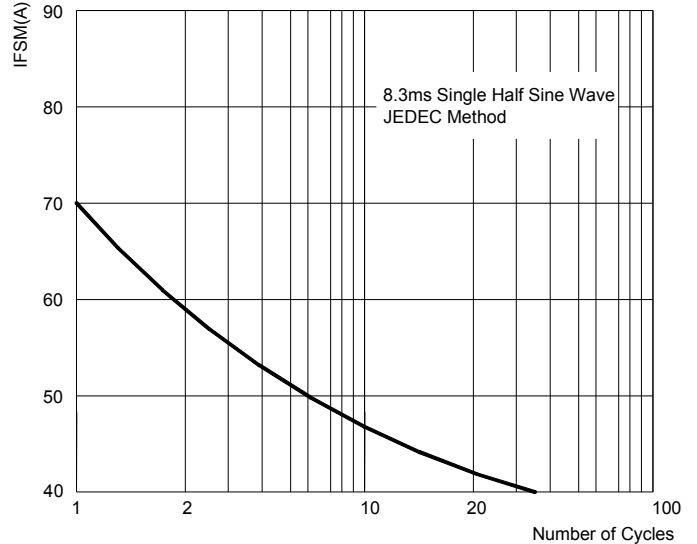


FIG.3: TYPICAL FORWARD CHARACTERISTICS

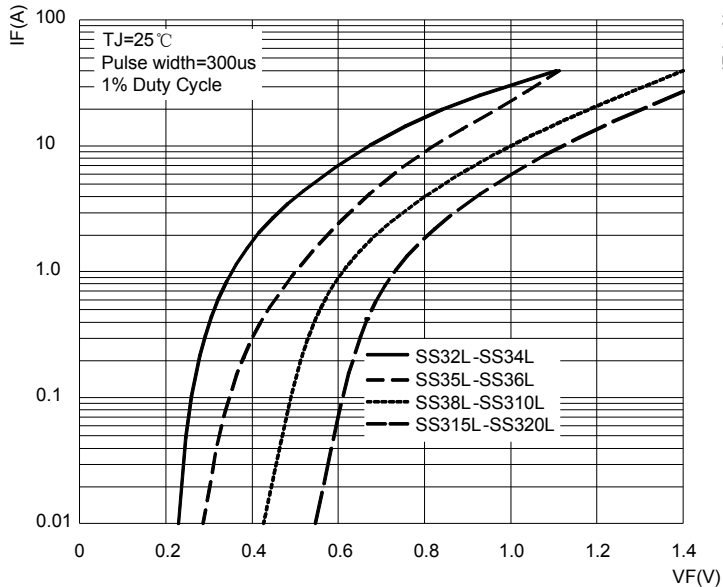
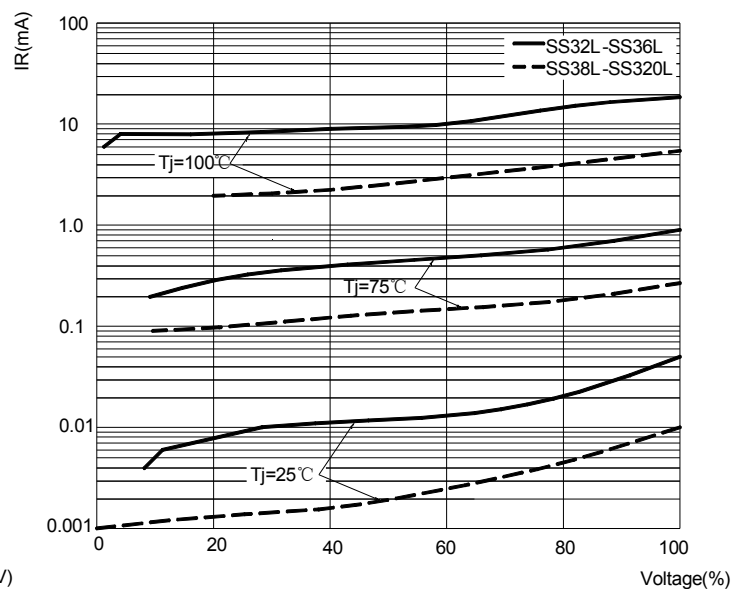
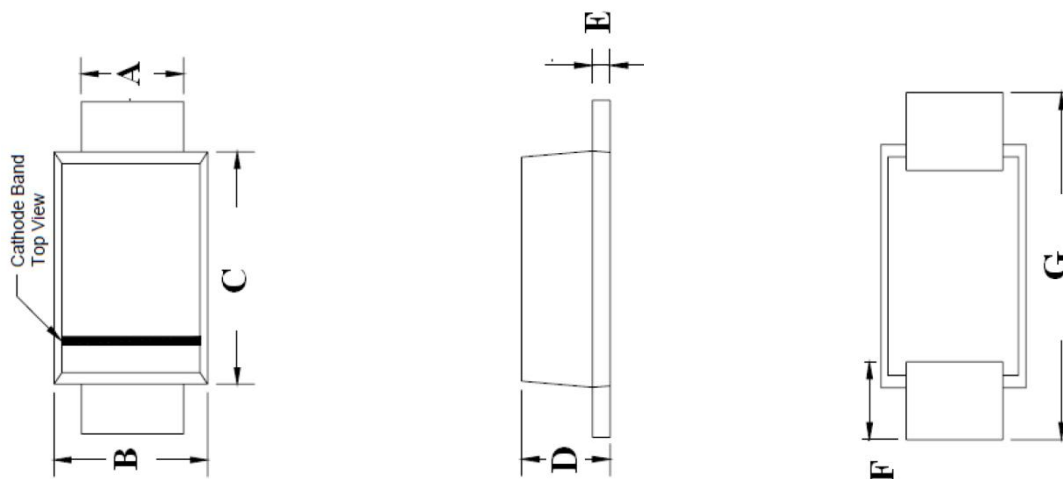


FIG.4: TYPICAL REVERSE CHARACTERISTICS

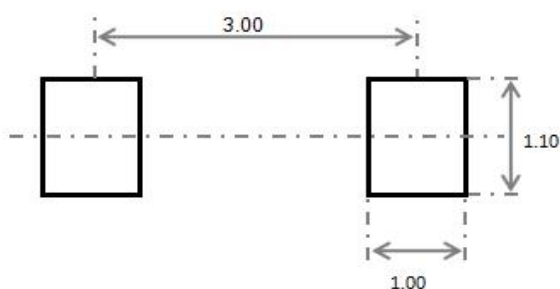


**SOD-123FL Package Outline Dimensions**



| Symbol | Dimensions In Millimeters |      | Dimensions In Inches |       |
|--------|---------------------------|------|----------------------|-------|
|        | Min.                      | Max. | Min.                 | Max.  |
| A      | 0.75                      | 0.95 | 0.029                | 0.037 |
| B      | 1.60                      | 2.00 | 0.063                | 0.079 |
| C      | 2.60                      | 3.00 | 0.103                | 0.119 |
| D      | 0.90                      | 1.20 | 0.036                | 0.047 |
| E      | 0.12                      | 0.22 | 0.005                | 0.009 |
| F      | 0.8Typ                    |      | 0.032Typ             |       |
| G      | 3.50                      | 3.90 | 0.138                | 0.159 |

**SOD-123FL Suggested Pad Layout**



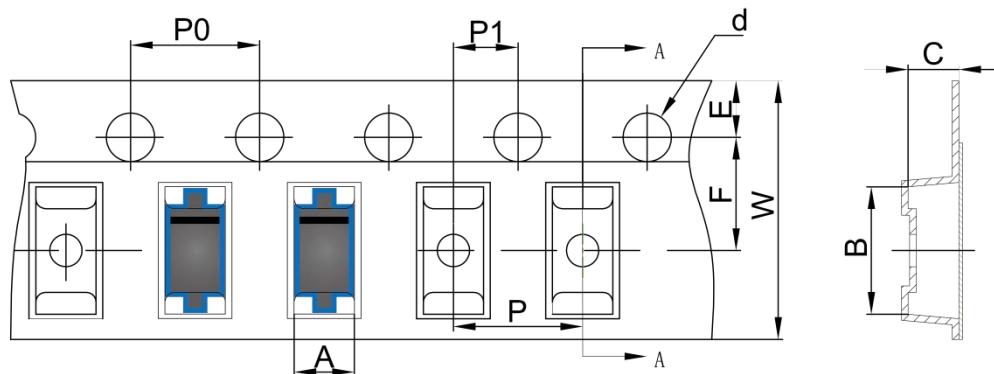
**Note:**

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

SCHOTTKY BARRIER DIODE

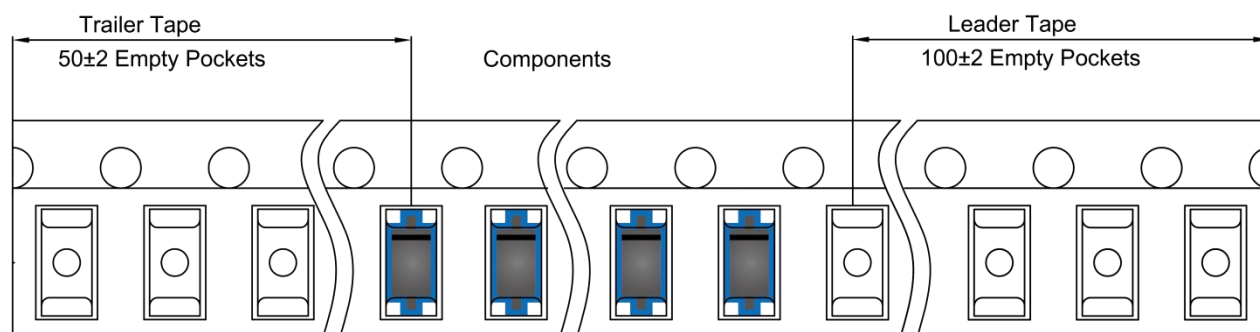
## SOD-123FL Tape and Reel

### SOD-123FL Embossed Carrier Tape

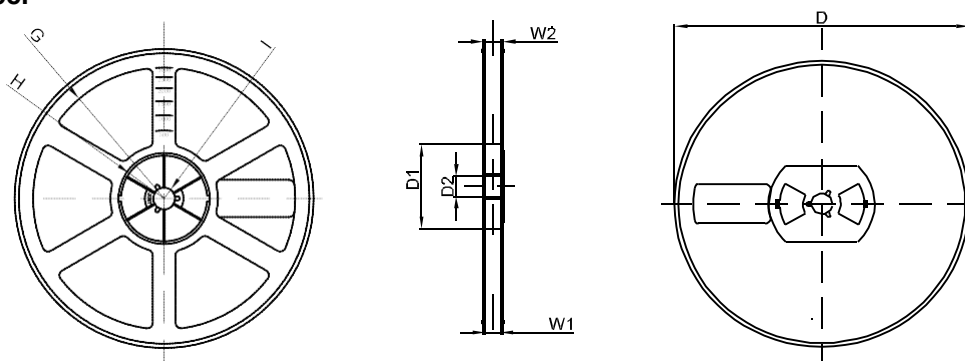


| DIMENSIONS ARE IN MILLIMETER |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| TYPE                         | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-123FL                    | 2.10 | 4.00 | 1.25 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |
| TOLERANCE                    | ±0.1 | ±0.1 | ±0.1 | ±0.1  | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

### SOD-123FL Tape Leader and Trailer



### SOD-123FL Reel



| DIMENSIONS ARE IN MILLIMETER |      |       |       |     |        |       |      |       |
|------------------------------|------|-------|-------|-----|--------|-------|------|-------|
| REEL OPTION                  | D    | D1    | D2    | G   | H      | I     | W1   | W2    |
| 7" DIA                       | Ø178 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE                    | ±2   | ±1    | ±1    | ±1  | ±1     | ±1    | ±1   | ±1    |