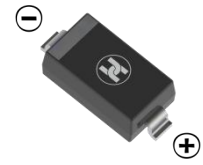
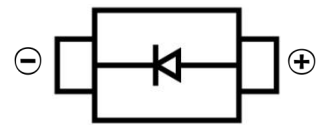


**GENERAL PURPOSE RECTIFIER DIODE****FEATURES**

- Surface Mount device
- Low Reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop

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

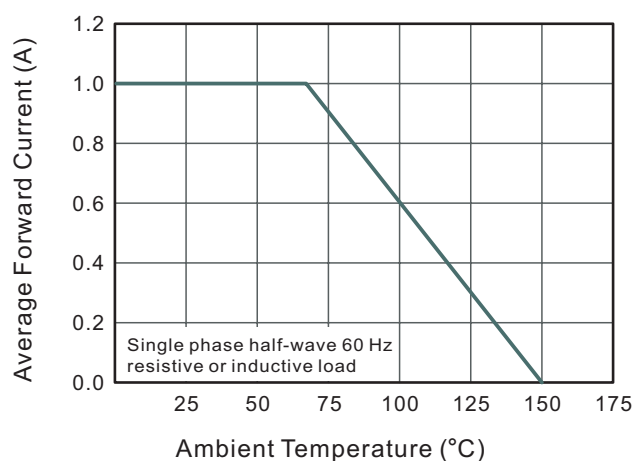
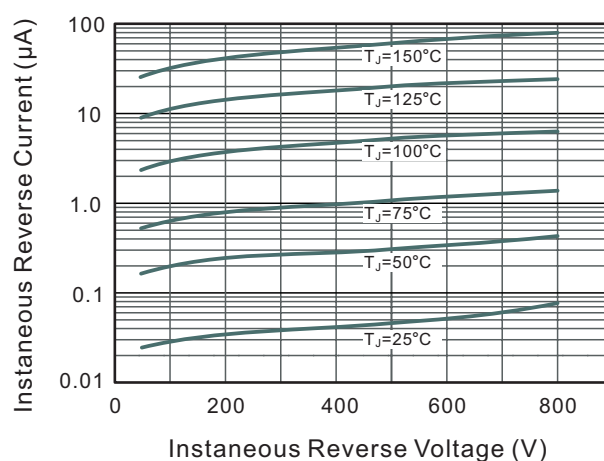
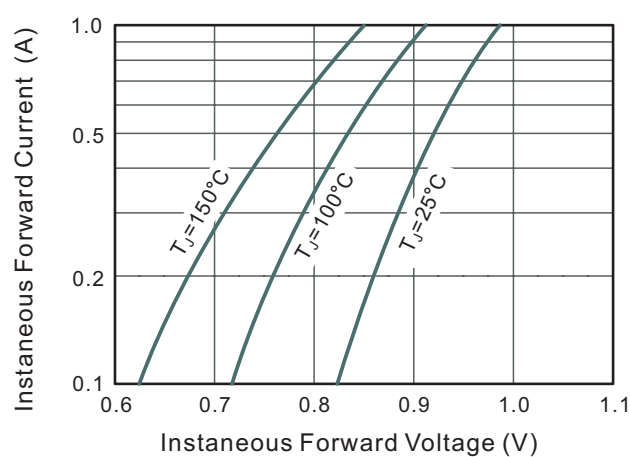
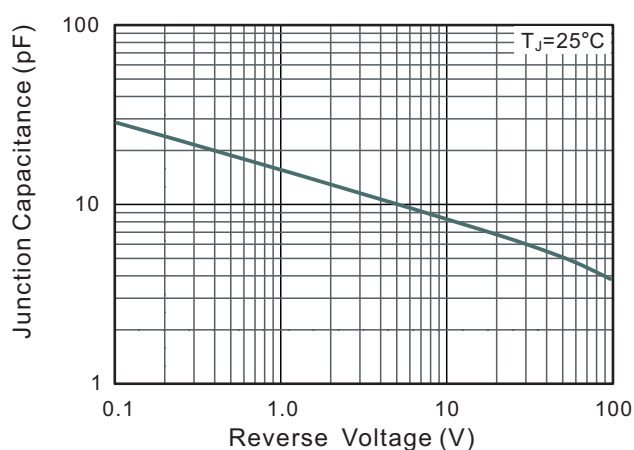
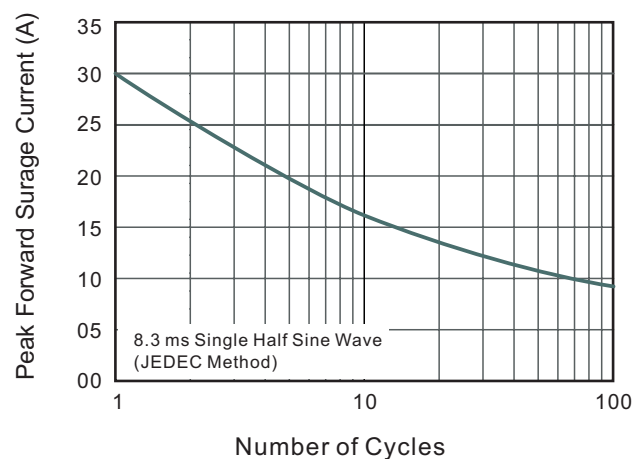
- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.0155 grams (approximate)

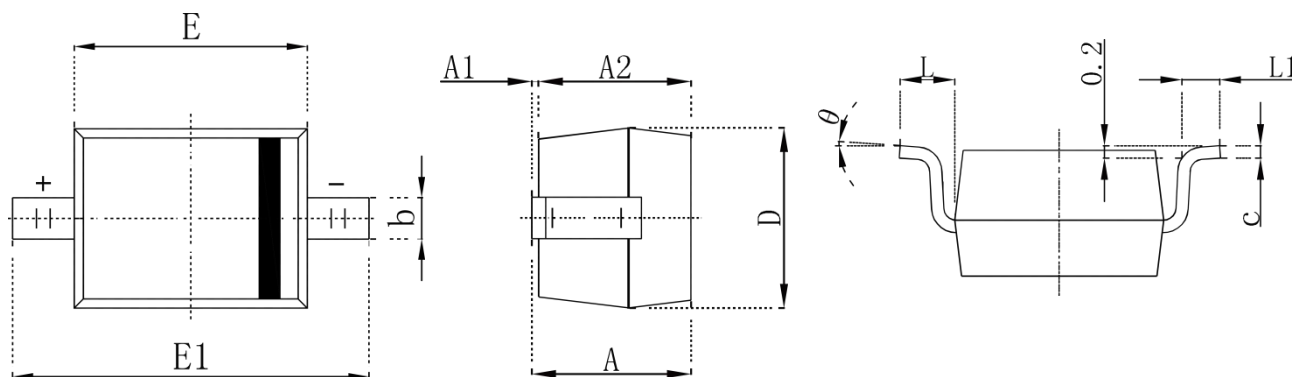
**MARKING:T1-T7****MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

| Parameter                                            | Symbol                            | 1N4001W    | 1N4002W | 1N4003W | 1N4004W | 1N4005W | 1N4006W | 1N4007W | Unit |
|------------------------------------------------------|-----------------------------------|------------|---------|---------|---------|---------|---------|---------|------|
| Maximum Recurrent Peak Reverse Voltage               | V <sub>RRM</sub>                  | 50         | 100     | 200     | 400     | 600     | 800     | 1000    | V    |
| RMS Reverse Voltage                                  | V <sub>R(RMS)</sub>               | 35         | 70      | 140     | 280     | 420     | 560     | 700     | V    |
| DC Blocking Reverse Voltage                          | V <sub>R</sub>                    | 50         | 100     | 200     | 400     | 600     | 800     | 1000    | V    |
| Maximum Average Forward Rectified Current            | I <sub>F</sub>                    | 1          |         |         |         |         |         |         | A    |
| Non-Repetitive Peak Forward Surge Current (@t=8.3ms) | I <sub>FSM</sub>                  | 30         |         |         |         |         |         |         | A    |
| Thermal Resistance From Junction To Ambient          | R <sub>θJA</sub>                  | 120        |         |         |         |         |         |         | °C/W |
| Junction and Storage Temperature Range               | T <sub>J</sub> , T <sub>STG</sub> | -50 ~ +150 |         |         |         |         |         |         | °C   |

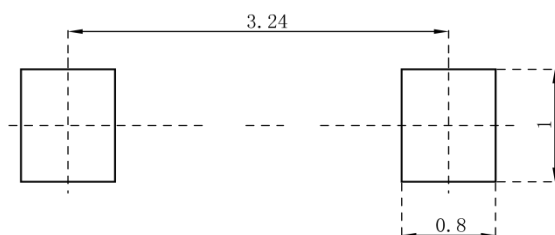
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

| Parameter         | Symbol         | Min | Typ | Max | Unit | Conditions                                |
|-------------------|----------------|-----|-----|-----|------|-------------------------------------------|
| Forward voltage   | V <sub>F</sub> |     |     | 1.1 | V    | I <sub>F</sub> =1A                        |
| Reverse current   | I <sub>R</sub> |     |     | 5   | uA   | V=V <sub>R</sub>                          |
|                   |                |     |     | 50  |      | V=V <sub>R</sub> , T <sub>a</sub> =125°C  |
| Diode capacitance | C <sub>D</sub> |     | 9   |     | pF   | V <sub>R</sub> =4V <sub>DC</sub> , f=1MHz |

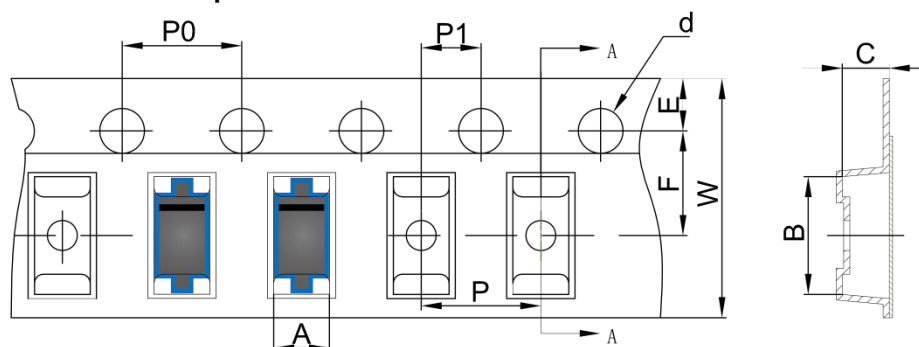
**GENERAL PURPOSE RECTIFIER DIODE****Typical Characteristics****Fig.1 Forward Current Derating Curve****Fig.2 Typical Instantaneous Reverse Characteristics****Fig.3 Typical Forward Characteristic****Fig.4 Typical Junction Capacitance****Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

**GENERAL PURPOSE RECTIFIER DIODE****SOD-123 Package Outline Dimensions**

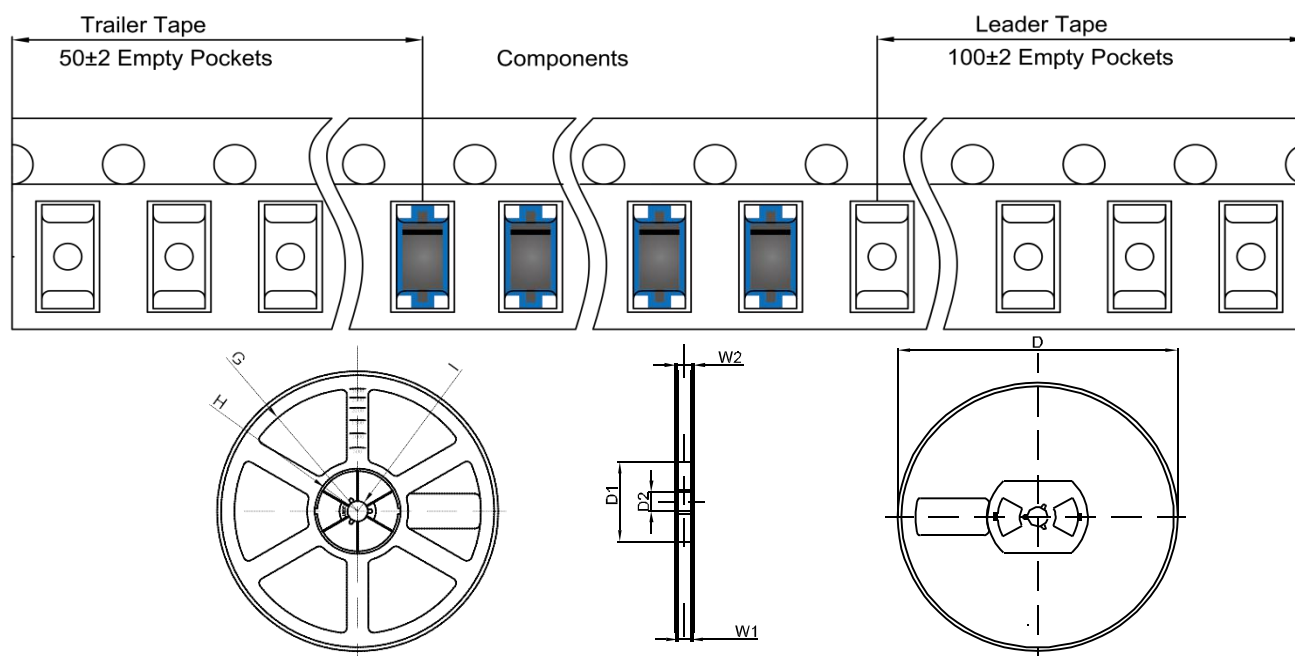
| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 1.050                     | 1.250 | 0.041                | 0.049 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 1.050                     | 1.150 | 0.041                | 0.045 |
| b      | 0.450                     | 0.650 | 0.018                | 0.026 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 2.600                     | 2.800 | 0.102                | 0.110 |
| E1     | 3.550                     | 3.850 | 0.140                | 0.152 |
| L      | 0.500 REF                 |       | 0.020 REF            |       |
| L1     | 0.250                     | 0.450 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

**SOD-123 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

**GENERAL PURPOSE RECTIFIER DIODE****SOD-123 Tape and Reel****SOD-123 Embossed Carrier Tape****SOD-123 Tape Leader and Trailer**

| DIMENSIONS ARE IN MILLIMETER |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| TYPE                         | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-123                      | 1.85 | 3.95 | 1.57 | Ø1.55 | 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-123 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    |