

### Features

- For surface mounted applications
- Low reverse leakage
- High forward surge current capability
- Glass passivated Standard rectifiers
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

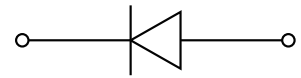
### Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication

### Mechanical Data

- Case: SOD-123FL  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

SOD-123FL



### Maximum Ratings (Ta=25°C Unless otherwise specified)

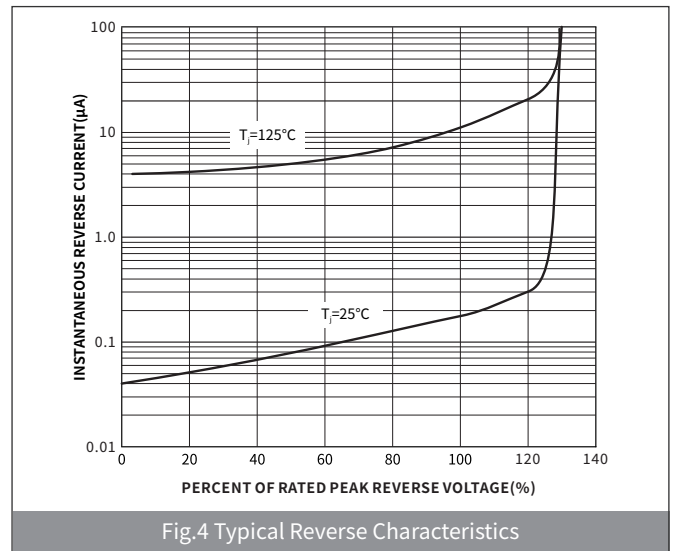
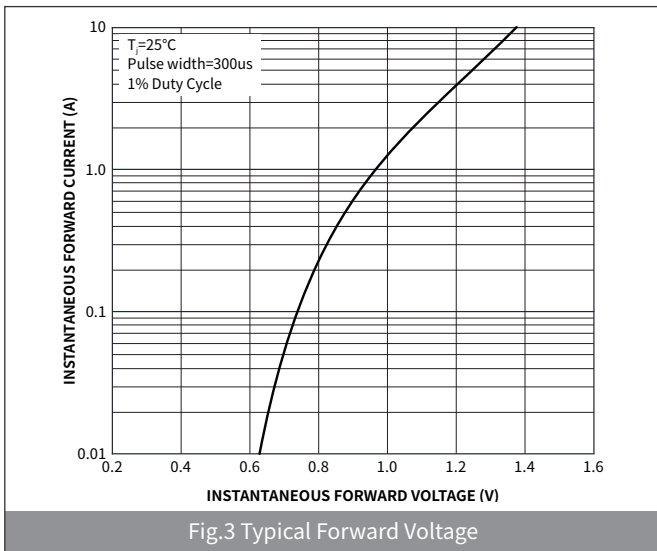
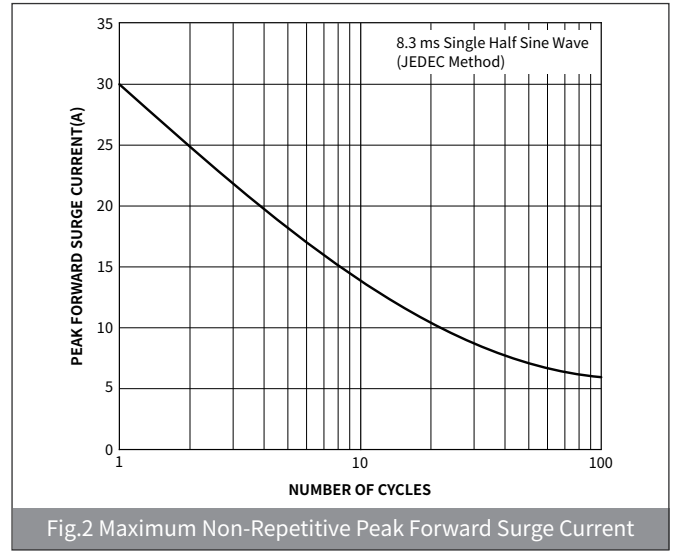
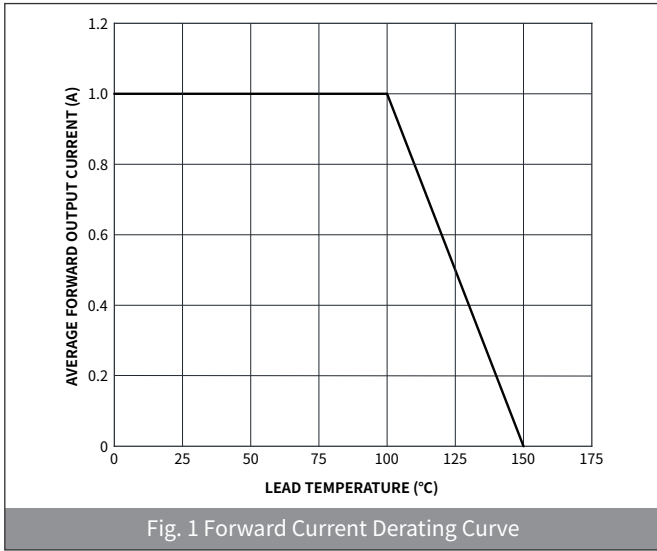
| PARAMETER  | SYMBOL                 | UNIT  | 1N4001W    | 1N4002W | 1N4003W | 1N4004W | 1N4005W | 1N4006W | 1N4007W |
|--|------------------------|-------|------------|---------|---------|---------|---------|---------|---------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$              | V     | 50         | 100     | 200     | 400     | 600     | 800     | 1000    |
| Maximum RMS Voltage  | $V_{RMS}$              | V     | 35         | 70      | 140     | 280     | 420     | 560     | 700     |
| Maximum DC blocking Voltage  | $V_{DC}$               | V     | 50         | 100     | 200     | 400     | 600     | 800     | 1000    |
| Maximum Average Forward Rectified Current @60Hz sine wave, Resistance load, TL (Fig.1) | $I_{F(AV)}$            | A     | 1.0        |         |         |         |         |         |         |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave                     | $I_{FSM}$              | A     | 30         |         |         |         |         |         |         |
| Storage temperature  | $T_{stg}$              | °C    | -55 ~ +150 |         |         |         |         |         |         |
| Junction temperature   | $T_j$                  | °C    | -55 ~ +150 |         |         |         |         |         |         |
| Typical Thermal Resistance   | $R_{\theta J-A}^{(1)}$ | °C /W | 85         |         |         |         |         |         |         |
|  | $R_{\theta J-L}^{(1)}$ | °C /W | 35         |         |         |         |         |         |         |

Note : (1)Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B.with 0.2"× 0.2"(5.0mm x5.0 mm) copper pad areas

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER   | TEST CONDITIONS  | SYMBOL | UNIT | 1N4001W | 1N4002W | 1N4003W | 1N4004W | 1N4005W | 1N4006W | 1N4007W |
|---|------------------|--------|------|---------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage                   | $I_F=1.0A$       | $V_F$  | V    | 1.0     |         |         |         |         |         |         |
| Maximum DC reverse current at rated DC blocking voltage | $V_{RM}=V_{RRM}$ | $I_R$  | μA   | 2.0     |         |         |         |         |         |         |
|   |                  |        |      | 200     |         |         |         |         |         |         |
| Typical junction capacitance                            | 4.0V DC, 1MHz    | $C_j$  | pF   | 18      |         |         |         |         |         |         |

► **Ratings And Characteristics Curves** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)



### ▶ Ordering Information

| PACKAGE   | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|-----------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-123FL | R1           | 0.0169         | 3000      | 45000    | 180000      | 7"            |

### ▶ Package Outline Dimensions (SOD-123FL)

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| A      | 0.90        | 1.10 | 0.035  | 0.430 |
| B      | 2.55        | 2.85 | 0.100  | 0.111 |
| C      | 1.60        | 1.90 | 0.063  | 0.074 |
| D      | 3.60        | 3.90 | 0.031  | 0.043 |
| E      | 1.00        | 1.20 | 0.031  | 0.035 |
| F      | 0.40        | 0.90 | 0.047  | 0.055 |
| G      | 0.10        | 0.25 | 0.003  | 0.007 |

### ▶ Suggested Pad Layout

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| J      | 1.00        | -    | 0.040  | -     |
| K      | -           | 1.90 | -      | 0.074 |
| M      | 1.50        | -    | 0.059  | -     |

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