

### LED lights dedicated high-speed switching diode

#### FEATURES

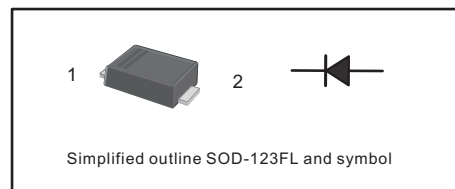
- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

#### MECHANICAL DATA

- Case: SOD-123FL
- Approx. Weight: 15mg 0.00053oz

#### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



#### Absolute Maximum Ratings at 25 °C

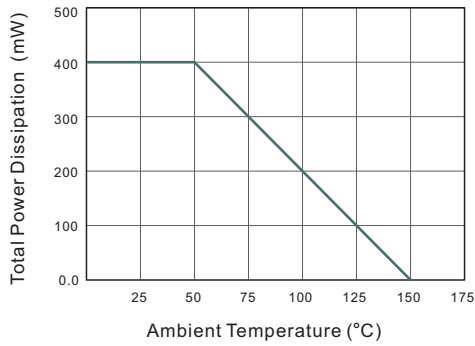
| Parameter                                       | Symbols         | 1N4148WL   | Units |
|---|-----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage         | $V_{RRM}$       | 100        | V     |
| Maximum RMS voltage                             | $V_{RMS}$       | 75         | V     |
| Continuous Forward Current                      | $I_F$           | 150        | mA    |
| Non-reptitive Peak Forward Surge Current at 1ms | $I_{FSM}$       | 4          | A     |
| Total Power Dissipation                         | $P_{tot}$       | 400        | mW    |
| Typical Thermal Resistance <sup>(1)</sup>       | $R_{\theta JA}$ | 450        | °C/W  |
| Operating and Storage Temperature Range         | $T_j, T_{stg}$  | -55 ~ +150 | °C    |

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

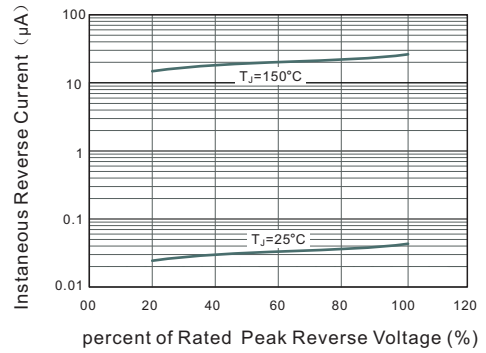
#### Characteristics at $T_a = 25\text{ °C}$

| Parameter  | Symbols             | 1N4148WL                       | Units         |
|--|---------------------|--------------------------------|---------------|
| Reverse Breakdown Voltage at $I_R = 1\text{ }\mu\text{A}$  | $V_{(BR)R}$         | 75                             | V             |
| Maximum Forward Voltage<br>at 1 mA<br>at 10 mA<br>at 50 mA<br>at 150 mA  | $V_F$               | 0.715<br>0.855<br>1.00<br>1.25 | V             |
| Peak Reverse Current<br>at $V_R = 20\text{V}$ $T_j = 25\text{ °C}$<br>at $V_R = 75\text{V}$ $T_j = 25\text{ °C}$<br>at $V_R = 25\text{V}$ $T_j = 150\text{ °C}$<br>at $V_R = 75\text{V}$ $T_j = 150\text{ °C}$ | $I_R$               | 0.025<br>1<br>30<br>50         | $\mu\text{A}$ |
| Typical Junction Capacitance   | $C_j$               | 5                              | pF            |
| Maximum Reverse Recovery Time  | $t_{rr}$<br>Typical | 8                              | ns            |

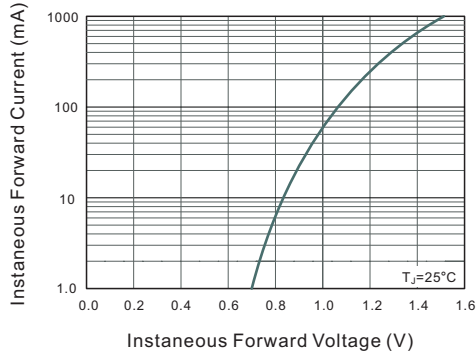
**Fig.1 Forward Current Derating Curve**



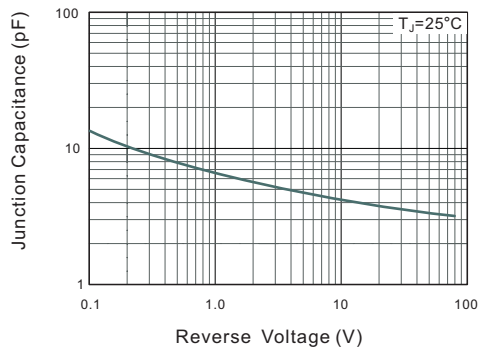
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Instantaneous Forward Characteristics**



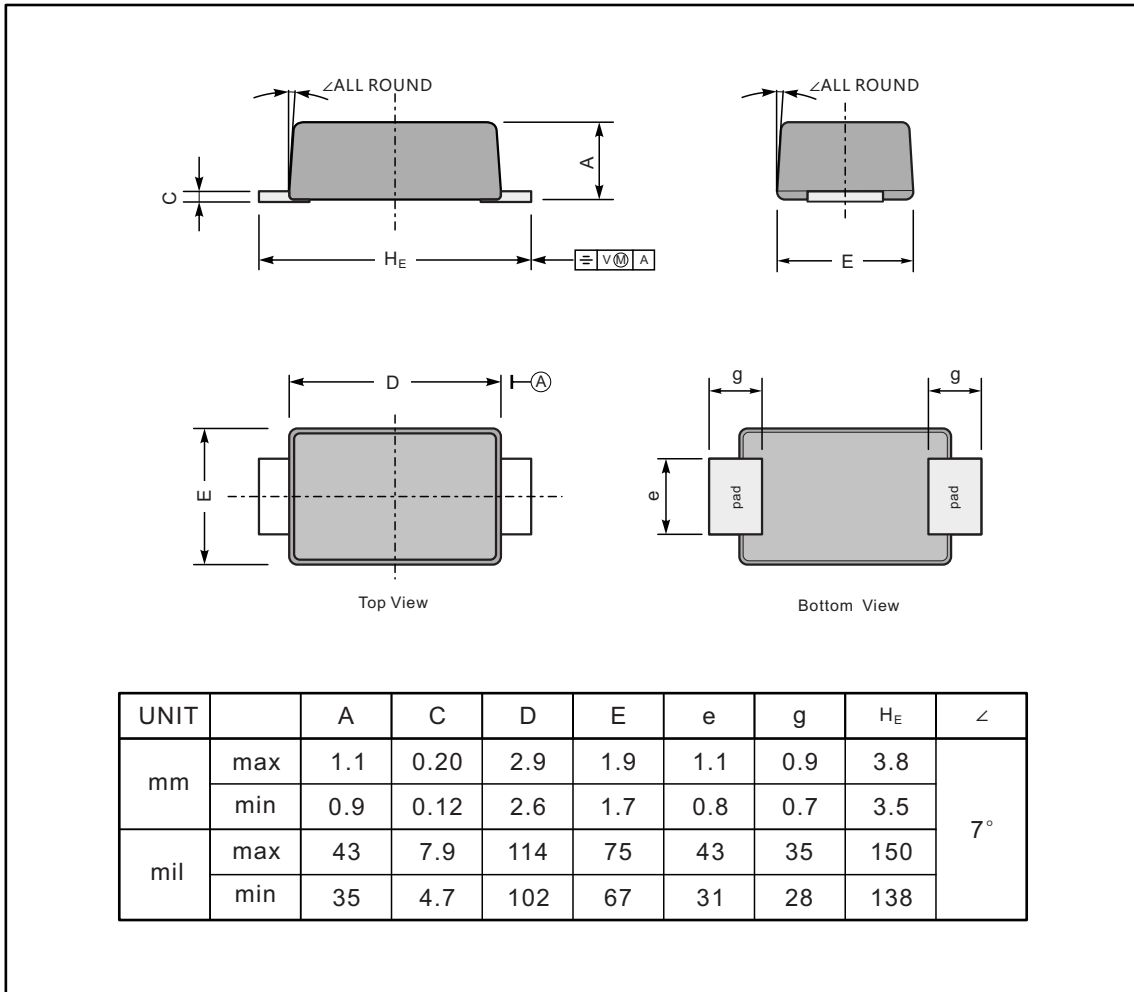
**Fig.4 Typical Junction Capacitance**



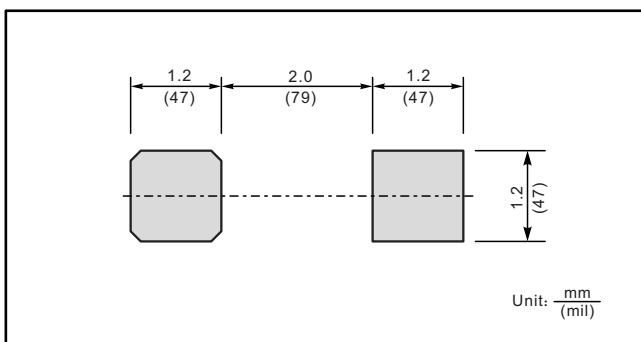
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



### The recommended mounting pad size



### Marking

| Type number | Marking code |
|-------------|--------------|
| 1N4148WL    | W1           |