

■ Switching Diodes

**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-323FL
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 4.5mg /0.00016oz



**Pinning**

| 1.Cathode        | 2.Anode |
|------------------|---------|
|                  |         |
| <b>SOD-323FL</b> |         |

**Marking Code**

|                  |           |
|------------------|-----------|
| <b>1N4148WSL</b> | <b>T4</b> |
|------------------|-----------|

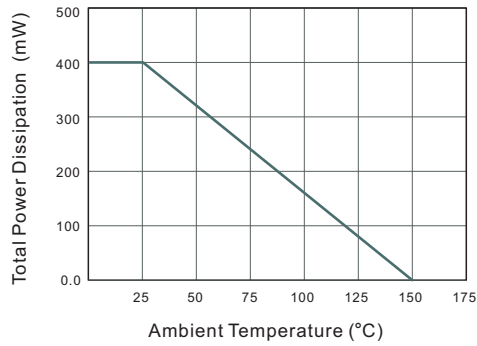
**Absolute Maximum Ratings at 25 °C**

| Parameter                                | Symbols        | 1N4148WSL  | 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 1s          | 0.5        | A     |
|                                          | at 1ms         | 1          |       |
|                                          | at 1us         | 4          |       |
| Total Power Dissipation                  | $P_{tot}$      | 400        | mA    |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$ | -55 ~ +150 | °C    |

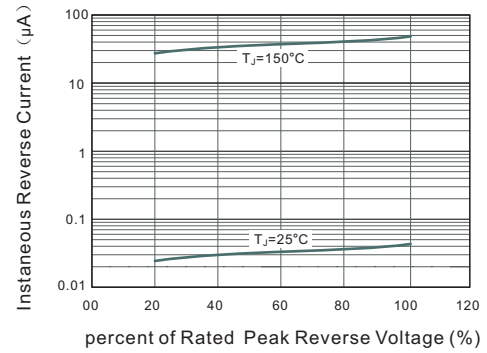
**Characteristics at  $T_a = 25\text{ °C}$**

| Parameter                                     | Symbols                         | 1N4148WSL | Units |
|-----------------------------------------------|---------------------------------|-----------|-------|
| Reverse Breakdown Voltage at $I_R=1\mu A$     | $V_{(BR)R}$                     | 75        | V     |
| Maximum Forward Voltage                       | at 1 mA                         | 0.715     | V     |
|                                               | at 10 mA                        | 0.855     |       |
|                                               | at 50 mA                        | 1.00      |       |
|                                               | at 150 mA                       | 1.25      |       |
| Peak Reverse Current                          | at $V_R=20V\ T_j=25\text{ °C}$  | 0.025     | uA    |
|                                               | at $V_R=75V\ T_j=25\text{ °C}$  | 1         |       |
|                                               | at $V_R=25V\ T_j=150\text{ °C}$ | 30        |       |
|                                               | at $V_R=75V\ T_j=150\text{ °C}$ | 50        |       |
| Typical Junction Capacitance $f=1MHz, V_R=4V$ | $C_j$                           | 2         | pF    |
| Maximum Reverse Recovery Time                 | $T_{rr}$<br>Typical             | 4         | nS    |

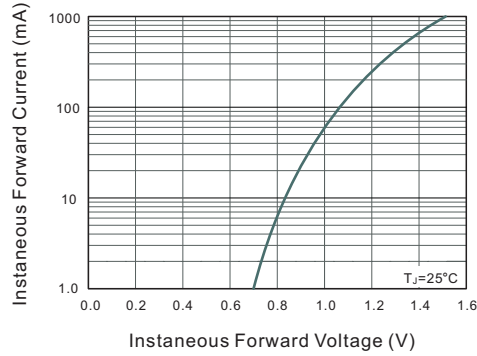
**Fig.1 Power Derating Curve**



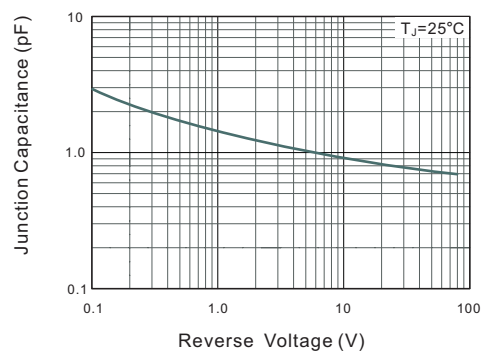
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Instaneous Forward Characteristics**



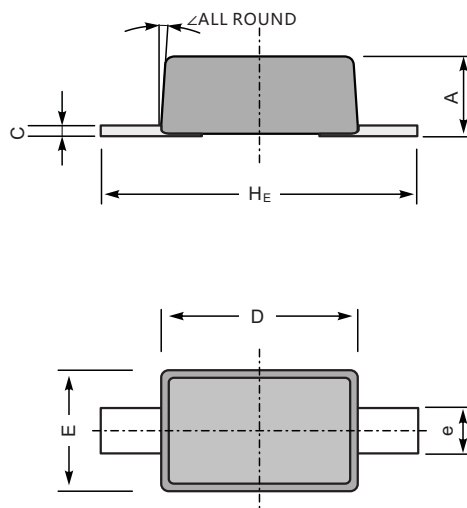
**Fig.4 Typical Junction Capacitance**



## Package Outline

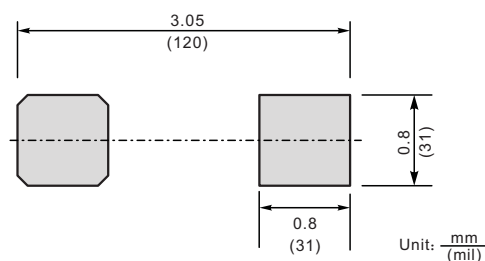
## SOD-323FL

Plastic surface mounted package; 2 leads



| UNIT |     | A   | C    | D   | E    | e    | H <sub>E</sub> | ∠  |
|------|-----|-----|------|-----|------|------|----------------|----|
| mm   | max | 1.0 | 0.25 | 1.8 | 1.35 | 0.4  | 2.7            | 8° |
|      | min | 0.8 | 0.05 | 1.6 | 1.15 | 0.25 | 2.3            |    |
| mil  | max | 39  | 9.8  | 71  | 53   | 18   | 106            |    |
|      | min | 31  | 2.0  | 63  | 45   | 10   | 91             |    |

## The recommended mounting pad size



## Summary of Packing Options

| Package   | Packing Description | Packing Quantity | Industry Standard |
|-----------|---------------------|------------------|-------------------|
| SOD-323FL | Tape/Reel, 7" reel  | 3000             | EIA-481-1         |