

# 1N4148WT

## DATASHEET

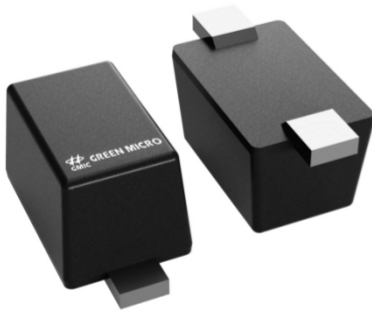
### Specification Revision History:

| Version | Date    | Description                                          |
|---------|---------|------------------------------------------------------|
| V1.0    | 2021/06 | New                                                  |
| V1.1    | 2023/09 | Modify Ordering Information                          |
| V1.2    | 2024/02 | Modify Ordering Information                          |
| V1.3    | 2025/05 | Add application precautions and overall typesetting. |

## Features

- ※ Switching Diodes
- ※ For surface mounted applications
- ※ Fast reverse recovery time
- ※ Ideal for automated placement

## Top View And Pinning



1、Cathode

2、Anode

SOD-523

## Ordering Information

| Product Model  | Package Type | Packing | Packing Qty  |
|----------------|--------------|---------|--------------|
| 1N4148WT(GMIC) | SOD-523      | REEL    | 3000PCS/REEL |
| 1N4148WT       | SOD-523      | REEL    | 3000PCS/REEL |

## Maximum Ratings at 25°C

| Parameter                                            | Symbols      | 1N4148WT   | Units |
|------------------------------------------------------|--------------|------------|-------|
| Non-Repetitive Peak Reverse Voltage                  | $V_{RM}$     | 100        | V     |
| Reverse Voltage                                      | $V_R$        | 75         | V     |
| Peak Repetitive Reverse Voltage                      | $V_{RRM}$    |            | V     |
| Working Peak Reverse Voltage                         | $V_{RWM}$    |            | V     |
| RMS Reverse Voltage                                  | $V_{R(RMS)}$ | 53         | V     |
| Average Rectified Output Current                     | $I_O$        | 150        | mA    |
| Non-repetitive Peak Forward Surge Current@t = 8.3 ms | $I_{FSM}$    | 0.8        | A     |
| Power Dissipation                                    | $P_D$        | 150        | mW    |
| Junction Temperature                                 | $T_j$        | 150        | °C    |
| Storage Temperature                                  | $T_{stg}$    | -55 ~ +150 | °C    |

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

| Parameter             | Symbols    | Test conditions                                                   | Min | Typ | Max   | Units   |
|-----------------------|------------|-------------------------------------------------------------------|-----|-----|-------|---------|
| Reverse voltage       | $V_{(BR)}$ | $I_R = 1\mu A$                                                    | 75  |     |       | V       |
| Reverse current       | $I_R$      | $V_R = 75V$                                                       |     |     | 1     | $\mu A$ |
|                       |            | $V_R = 20V$                                                       |     |     | 25    | nA      |
| Forward voltage       | $V_F$      | $I_F = 1\text{ m A}$                                              |     |     | 0.715 | V       |
|                       |            | $I_F = 10\text{ m A}$                                             |     |     | 0.855 | V       |
|                       |            | $I_F = 50\text{ m A}$                                             |     |     | 1     | V       |
|                       |            | $I_F = 150\text{ m A}$                                            |     |     | 1.25  | V       |
| Total capacitance     | $C_{tot}$  | $V_R = 0V, f = 1\text{ MHz}$                                      |     |     | 2     | pF      |
| Reverse recovery time | $t_{rr}$   | $I_F = I_R = 10\text{ mA}, I_{rr} = 0.1 * I_R, R_L = 100\ \Omega$ |     |     | 4     | ns      |

## Typical Performance Characteristics

Fig.1 Power Derating Curve

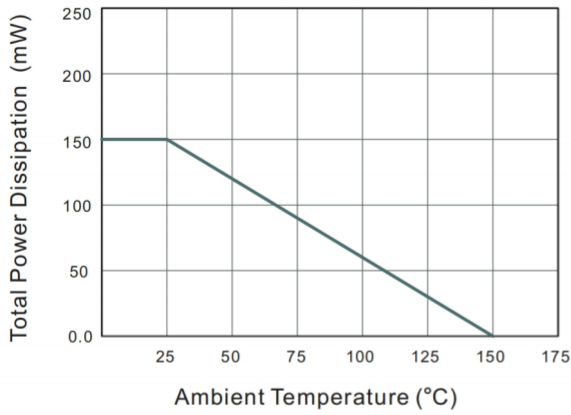


Fig.2 Typical Reverse Characteristics

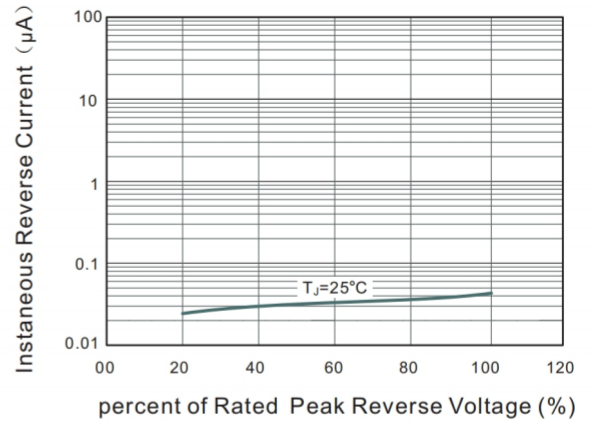


Fig.3 Typical Instantaneous Forward Characteristics

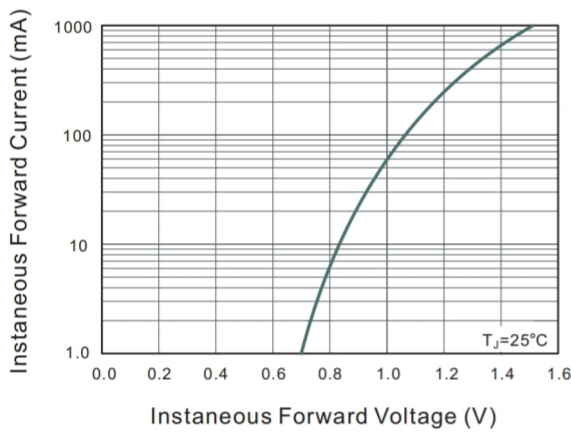
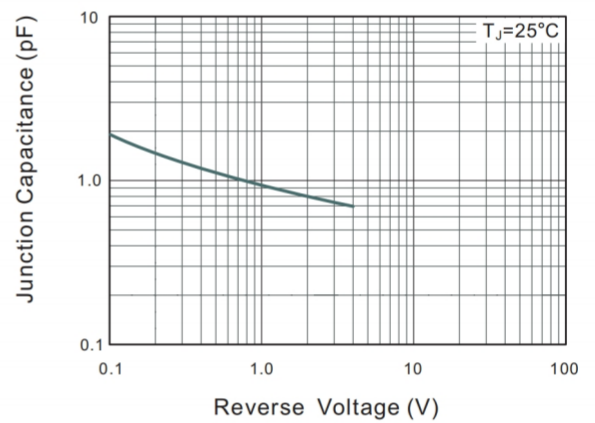
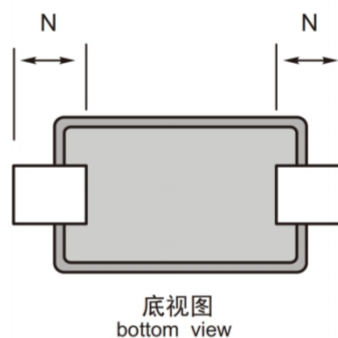
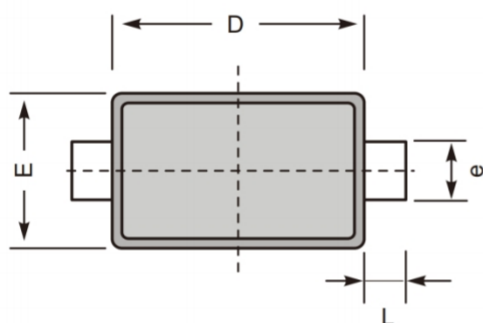
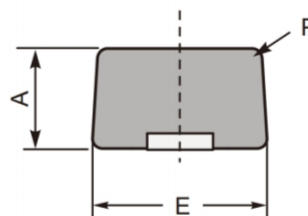
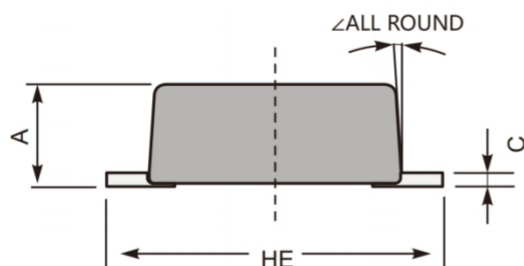


Fig.4 Typical Junction Capacitance



# Outline Dimensions

## SOD-523



| Symbol | Dimensions In Millimeters |      | Dimensions In Mil |     |
|--------|---------------------------|------|-------------------|-----|
|        | Min                       | Max  | Min               | Max |
| A      | 0.51                      | 0.77 | 20                | 30  |
| e      | 0.25                      | 0.35 | 10                | 14  |
| C      | 0.08                      | 0.15 | 3                 | 6   |
| D      | 1.10                      | 1.30 | 43                | 51  |
| E      | 0.75                      | 0.99 | 30                | 39  |
| HE     | 1.50                      | 1.70 | 59                | 67  |
| N      | 0.35 ref                  |      | 14 ref            |     |
| L      | 0.2 ref                   |      | 8.0 ref           |     |
| P      | R0.1 ALL ROUND            |      | R4.0 ALL ROUND    |     |
| ∠      | 10°±1°                    |      |                   |     |

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