# 1N4148WT

# DATASHEET

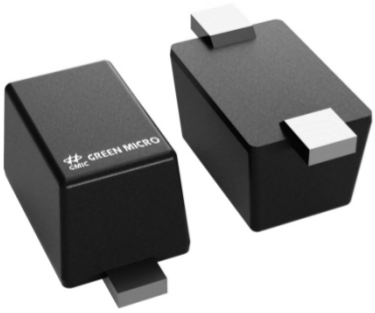
## Specification Revision History:

| 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 | $V_{(BR)}$ | $I_R$= 1uA | 75 | | | V |
| Reverse current | $I_R$ | $V_R$= 75V | | | 1 | uA |
| | | $V_R$= 20V | | | 25 | nA |
| Forward voltage | $V_F$ | $I_F$= 1 m A | | | 0.715 | V |
| | | $I_F$= 10 m A | | | 0.855 | V |
| | | $I_F$= 50 m A | | | 1 | V |
| | | $I_F$= 150 m A | | | 1.25 | V |
| Total capacitance | $C_{tot}$ | $V_R$=0V,f= 1 MHz | | | 2 | pF |
| Reverse recovery time | $t_{rr}$ | $I_F$= $I_R$= 10 mA , $I_{rr}$=0. 1* $I_R$ , $R_L$= 100 Ω | | | 4 | ns |

# Typical Performance Characteristics

Fig.1 Power Derating Curve

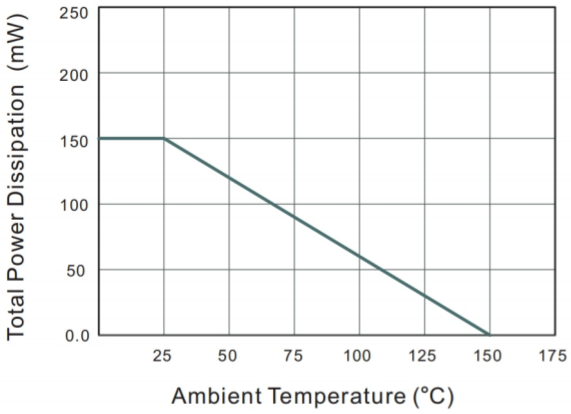



Fig.2 Typical Reverse Characteristics

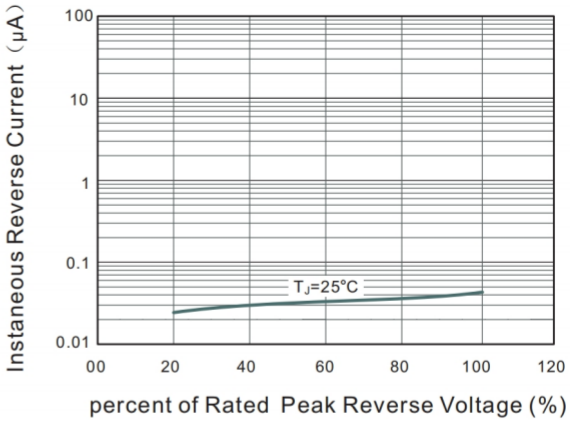



Fig.3 Typical Instaneous Forward Characteristics

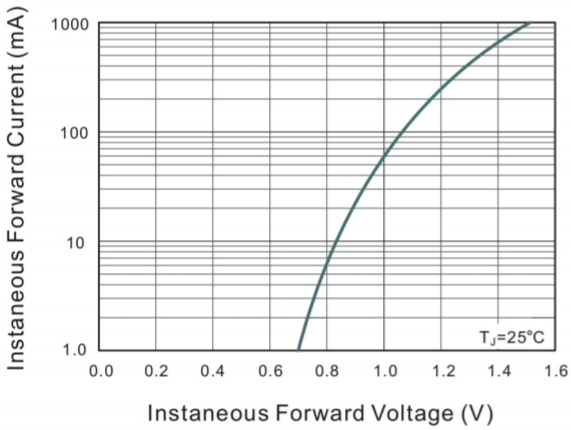
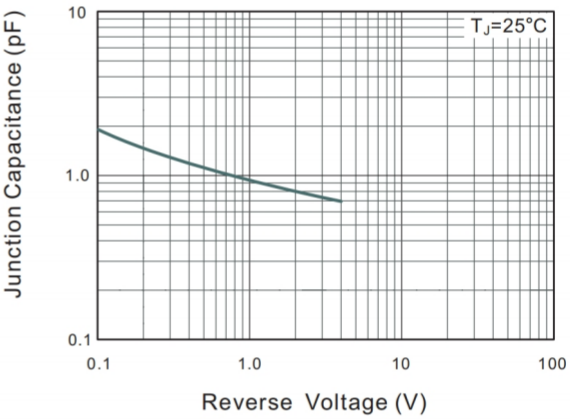
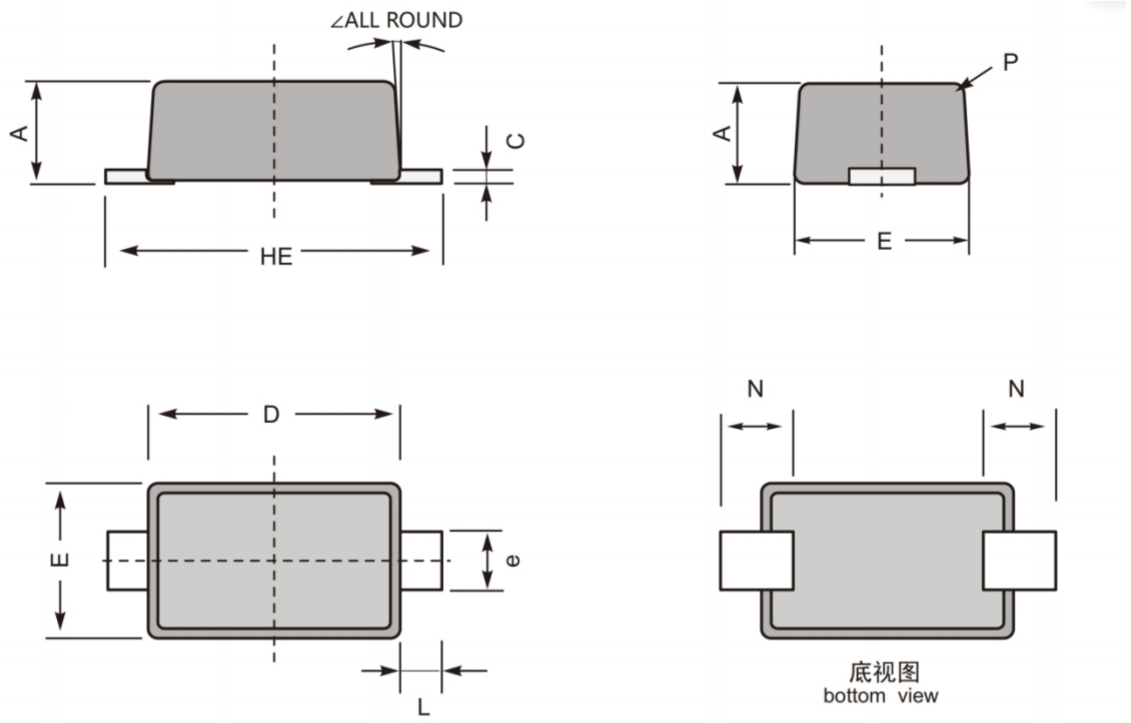



Fig.4 Typical Junction Capacitance



## 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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