

# 1N4148WS-CH

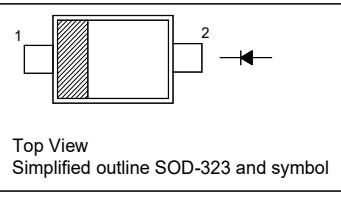
## Silicon Epitaxial Planar Switching Diode

### Features

- AEC-Q101 Qualified
- Fast switching
- Halogen and Antimony Free(HAF), RoHS compliant

### PINNING

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



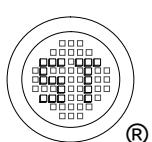
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter   | Symbol      | Value         | Unit |
|---|-------------|---------------|------|
| Peak Reverse Voltage  | $V_{RM}$    | 100           | V    |
| Reverse Voltage   | $V_R$       | 75            | V    |
| Average Rectified Forward Current                                       | $I_{F(AV)}$ | 150           | mA   |
| Forward Continuous Current  | $I_{FM}$    | 300           | mA   |
| Surge Forward Current<br>at $t < 1 \mu\text{s}$<br>at $t < 1 \text{ s}$ | $I_{FSM}$   | 2<br>1        | A    |
| Power Dissipation   | $P_D$       | 200           | mW   |
| Junction Temperature  | $T_j$       | 150           | °C   |
| Storage Temperature Range   | $T_{stg}$   | - 65 to + 150 | °C   |

### Thermal Characteristics

| Parameter   | Symbol          | Max. | Unit |
|---|-----------------|------|------|
| Thermal Resistance from Junction to Ambient <sup>1)</sup> | $R_{\theta JA}$ | 625  | °C/W |

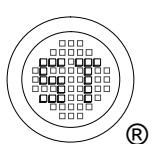
<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

| Parameter  | Symbol             | Min.             | Max.                        | Unit  |
|--|--------------------|------------------|-----------------------------|---|
| Reverse Breakdown Voltage<br>at $I_R = 1 \mu\text{A}$  | $V_{(\text{BR})R}$ | 75               | -                           | V   |
| Forward Voltage<br>at $I_F = 1 \text{ mA}$<br>at $I_F = 10 \text{ mA}$<br>at $I_F = 50 \text{ mA}$<br>at $I_F = 150 \text{ mA}$  | $V_F$              | -<br>-<br>-<br>- | 0.715<br>0.855<br>1<br>1.25 | V   |
| Peak Reverse Current<br>at $V_R = 75 \text{ V}$<br>at $V_R = 20 \text{ V}$<br>at $V_R = 75 \text{ V}, T_J = 150^\circ\text{C}$<br>at $V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$ | $I_R$              | -<br>-<br>-<br>- | 1<br>25<br>50<br>30         | $\mu\text{A}$<br>nA<br>$\mu\text{A}$<br>$\mu\text{A}$ |
| Total Capacitance<br>at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$   | $C_T$              | -                | 2                           | pF  |
| Reverse Recovery Time<br>at $I_{rr} = 0.1 \times I_R, I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 100 \Omega$  | $t_{rr}$           | -                | 4                           | ns  |



## Electrical Characteristics Curves

Fig. 1 Power Derating Curve

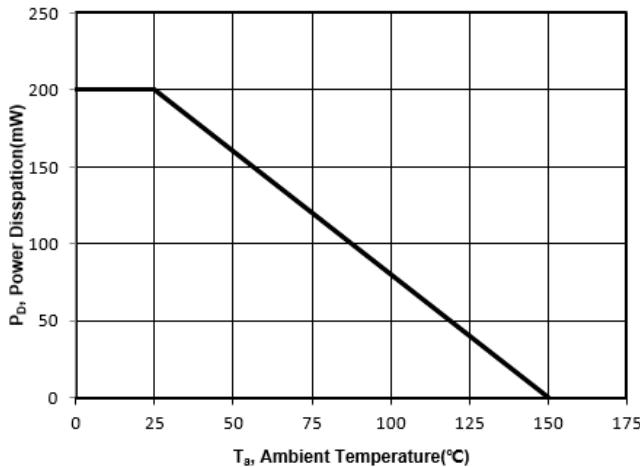


Fig. 2 Capacitance Characteristics

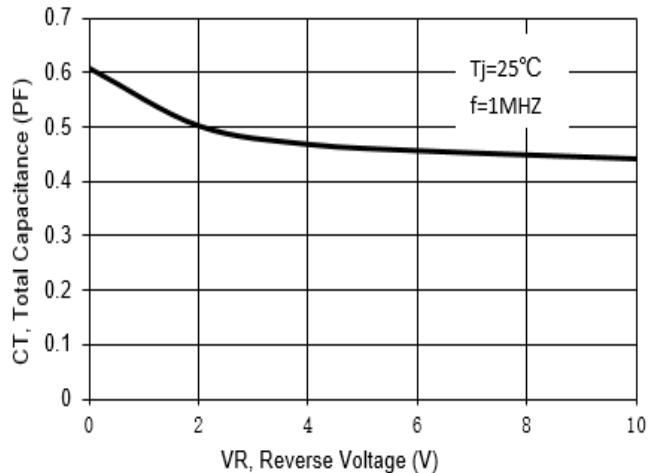


Fig. 3 Reverse Characteristics

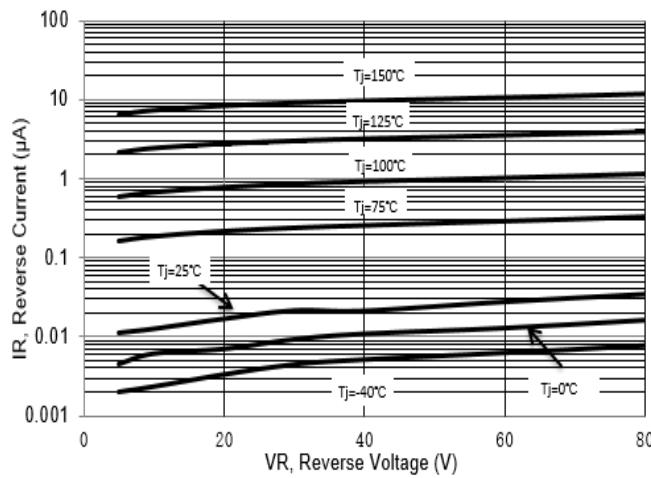
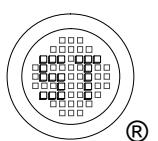
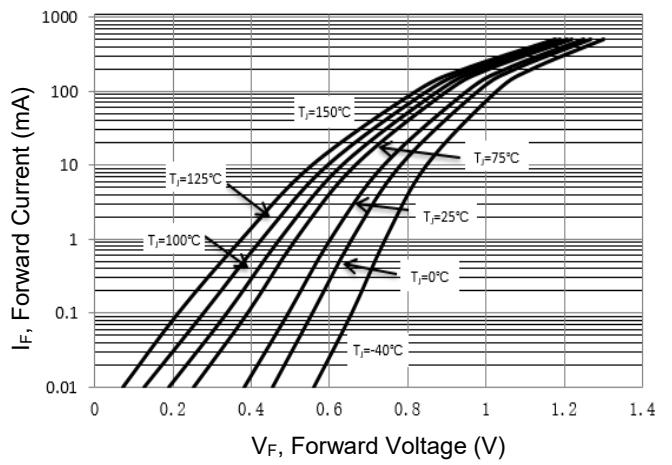


Fig. 4 Forward Characteristics

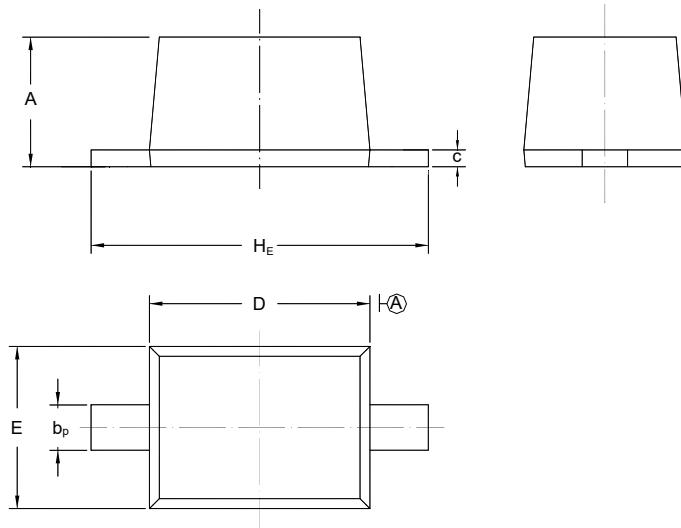


# 1N4148WS-CH

## PACKAGE OUTLINE

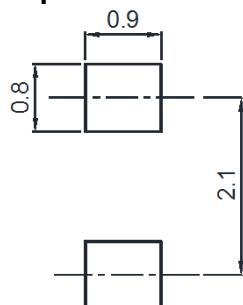
Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A            | $b_p$        | C            | D            | E            | $H_E$        |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| mm   | 1.10<br>0.80 | 0.40<br>0.25 | 0.15<br>0.10 | 1.80<br>1.60 | 1.35<br>1.15 | 2.80<br>2.30 |

## Recommended Soldering Footprint



## Packing information

| Package | Tape Width<br>(mm) | Pitch       |                   | Reel Size |      | Per Reel Packing Quantity |
|---------|--------------------|-------------|-------------------|-----------|------|---------------------------|
|         |                    | mm          | inch              | mm        | inch |                           |
| SOD-323 | 8                  | $4 \pm 0.1$ | $0.157 \pm 0.004$ | 178       | 7    | 3,000                     |

## Marking information

" W2 " = Part No

" III " = Cathode line

" • " = HAF (Halogen and Antimony Free)

Font type: Arial



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