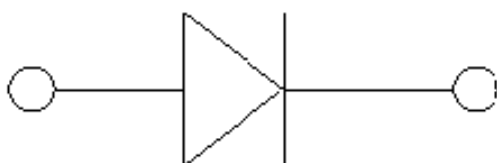


## High Speed Switching Diode



## Features

- $V_R$  75V
- $I_{FAV}$  150mA

## Typical Applications

- Extreme fast switches

## Mechanical Data

- **Package:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Epoxy meets UL-94 V-0 flammability rating, halogen-free
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** T4

■Maximum Ratings ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

| PARAMETER                                  | SYMBOL          | UNIT               | Conditions         | VALUE       |
|--------------------------------------------|-----------------|--------------------|--------------------|-------------|
| Repetitive peak reverse voltage            | $V_{RRM}$       | V                  |                    | 100         |
| Peak forward surge current                 | $I_{FSM}$       | A                  | $t_p=1\mu\text{s}$ | 2           |
| Average forward current                    | $I_{FAV}$       | mA                 |                    | 150         |
| Power dissipation                          | $P_D$           | mW                 |                    | 200         |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | $^\circ\text{C/W}$ |                    | 625         |
| Maximum junction temperature               | $T_J$           | $^\circ\text{C}$   |                    | -55 to +150 |
| Storage temperature range                  | $T_{stg}$       | $^\circ\text{C}$   |                    | -55 to +150 |

■Electrical Characteristics ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

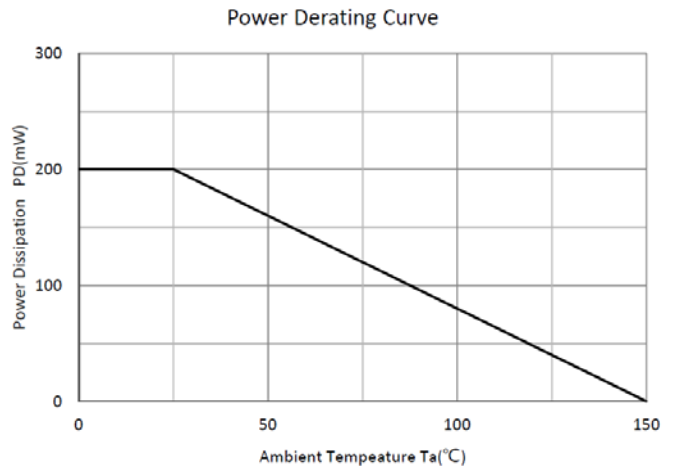
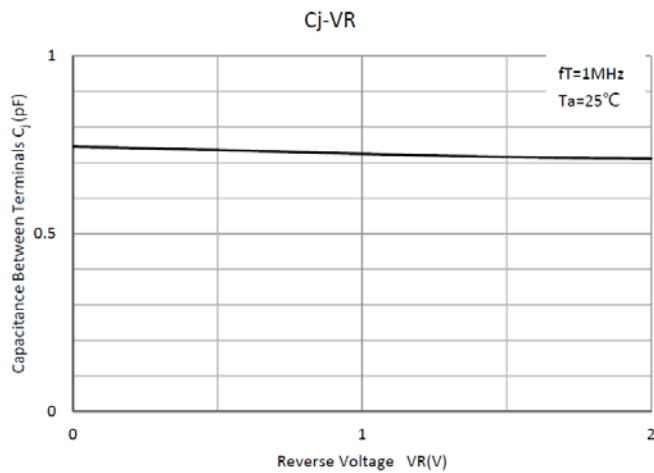
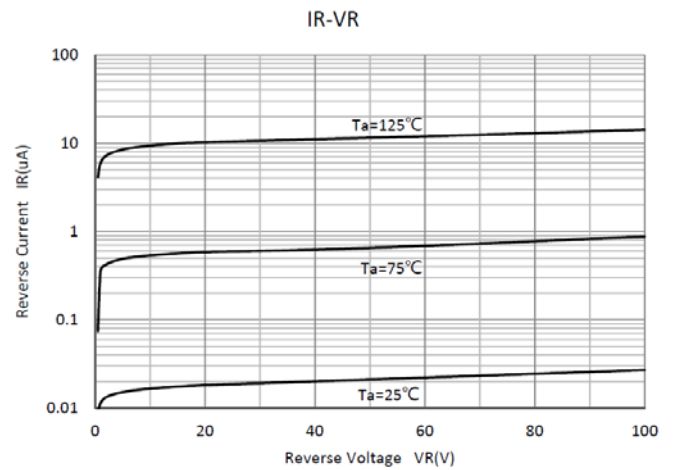
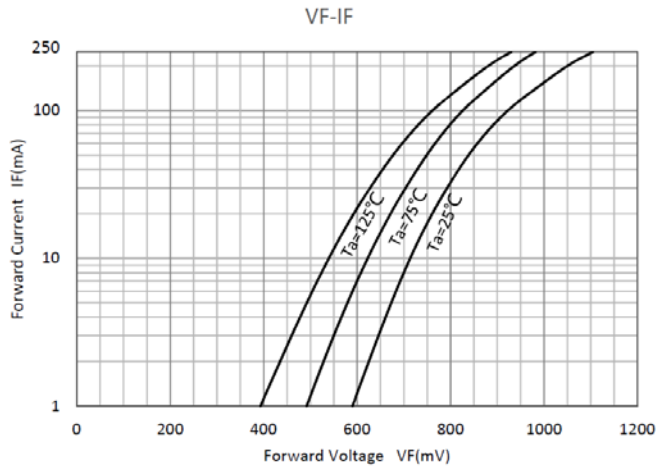
| PARAMETER                     | SYMBOL   | UNIT          | Conditions                                                                  | VALUE |
|-------------------------------|----------|---------------|-----------------------------------------------------------------------------|-------|
| Maximum Forward voltage       | $V_F$    | V             | $I_F=10\text{mA}$                                                           | 1.0   |
| Maximum Reverse current       | $I_R$    | nA            | $V_R=20\text{V}$                                                            | 25    |
|                               | $I_R$    | $\mu\text{A}$ | $V_R=75\text{V}$                                                            | 1.0   |
| Minimum Breakdown voltage     | $V_R$    | V             | $I_R=1\mu\text{A}$                                                          | 75    |
| Maximum Diode capacitance     | $C_D$    | pF            | $V_R=0\text{V}$ , $f=1\text{MHz}$                                           | 4     |
| Maximum Reverse recovery time | $t_{rr}$ | ns            | $I_F=10\text{mA}$ , $V_R=6\text{V}$ , $I_{rr}=1\text{mA}$ , $R_L=100\Omega$ | 4     |

# 1N4148WS

## ■ Ordering Information (Example)

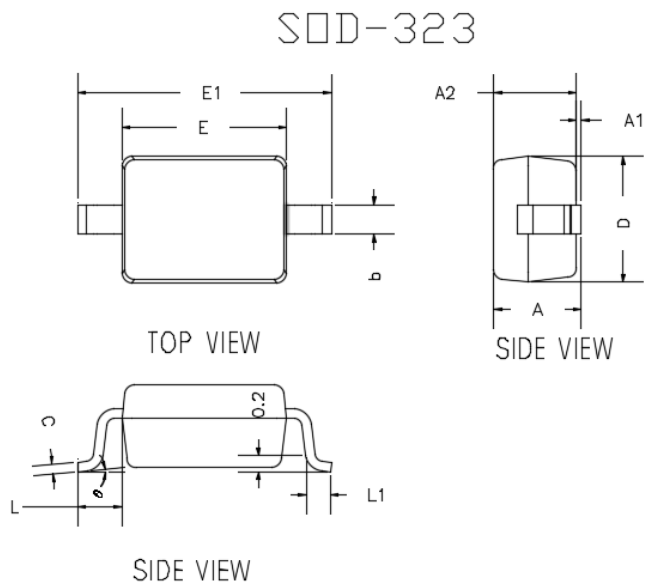
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)     | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|--------------------|----------------------|-------------------------|----------------------------|---------------|
| 1N4148WS      | F2           | Approximate 0.0048 | 3000                 | 30000                   | 120000                     | 7" reel       |

## ■ Characteristics (Typical)



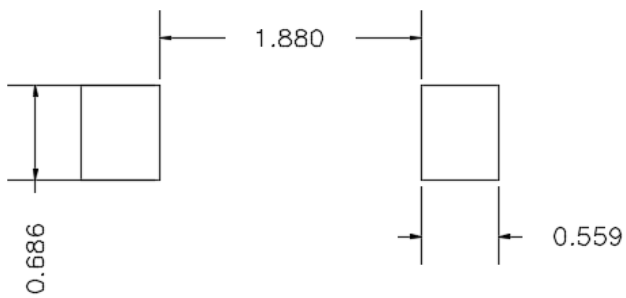
# 1N4148WS

## ■Outline Dimensions



| DIMENSIONS |           |        |          |        |
|------------|-----------|--------|----------|--------|
| DIM        | INCHES    |        | MM       |        |
|            | MIN       | MAX    | MIN      | MAX    |
| A          | ---       | 0.0393 | ---      | 1.0000 |
| A1         | 0.0000    | 0.0039 | 0.0000   | 0.1000 |
| A2         | 0.0314    | 0.0354 | 0.8000   | 0.9000 |
| b          | 0.0098    | 0.0157 | 0.2500   | 0.4000 |
| c          | 0.0031    | 0.0059 | 0.0800   | 0.1500 |
| D          | 0.0472    | 0.0551 | 1.2000   | 1.4000 |
| E          | 0.0629    | 0.0709 | 1.6000   | 1.8000 |
| E1         | 0.0984    | 0.1063 | 2.5000   | 2.7000 |
| L          | 0.0187TYP |        | 0.475TYP |        |
| L1         | 0.0098    | 0.0157 | 0.250    | 0.400  |
| θ          | 0°        | 8°     | 0°       | 8°     |

## ■Soldering Footprint



UNIT : mm

SUGGESTED SOLDER PAD LAYOUT