# High-speed Switching Diode

## Description

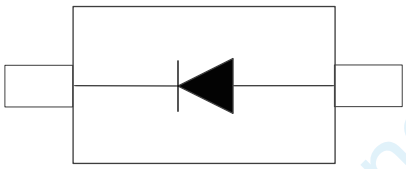
The OVW4148D1 is a high-speed switching diode fabricated in planar technology, and encapsulated in a small SOD323 plastic SMD package.

## Features

- ✧ High switching speed: max. 6 ns
- ✧ Continuous reverse voltage: max. 75 V
- ✧ Repetitive peak reverse voltage: max. 100 V
- ✧ Repetitive peak forward current: max. 300 mA.

## Applications

- ✧ High-speed switching in hybrid thick and thin-film circuits.



Circuit Diagram



SOD323

## Absolute Maximum Rating（$T_A$ = 25 °C, unless otherwisespecified）

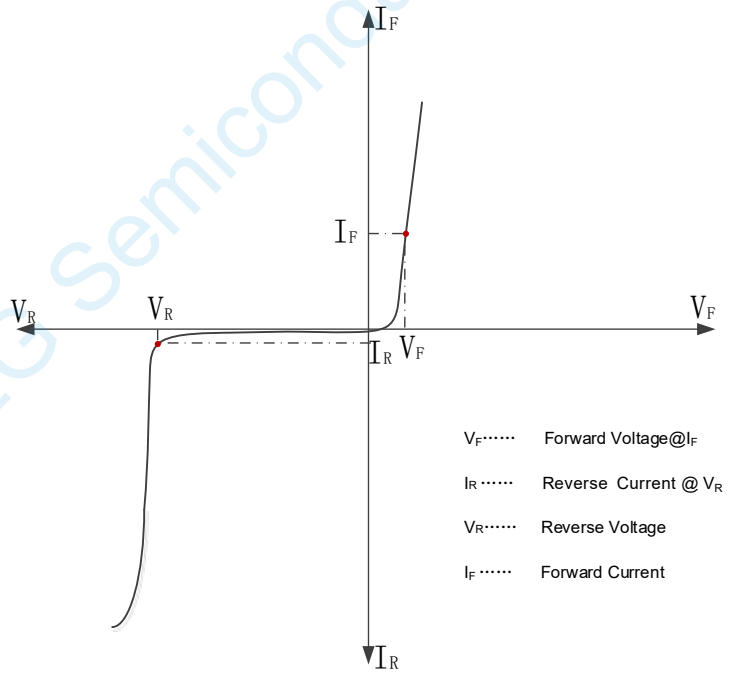
| Rating | Symbol | Value | Units |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 100 | V |
| Continuous Forward Current | $I_F$ | 300 | mA |
| Junction temperature | Tj | 150 | ℃ |
| Storage temperature | $T_{stg}$ | -55~+150 | ℃ |

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## Electrical Characteristics（$T_A$ = 25 °C, unless otherwisespecified）

| Parameter | Symbol | Conditions | Min. | Typical | Max. | Units |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R$=0.1mA | 100 | 140 | | V |
| Reverse Current | $I_{R1}$<br>$I_{R2}$ | $V_{R1}$ =20V<br>$V_{R2}$ =75V | | 10<br>20 | 25<br>500 | nA |
| Forward Voltage | $V_F$ | $I_F$=5mA<br>$I_F$=10mA<br>$I_F$=100mA<br>$I_F$=150mA | | | 0.72<br>0.86<br>1.00<br>1.25 | V |
| Total Capacitance | $C_T$ | $V_R$=0V,f=1MHz | | | 2 | pF |
| Reverse Recovery Time | $t_{rr}$ | $I_F$ = $I_R$ = 10mAdc<br>$I_{R(REC)}$ = 1.0 mAdc | | | 6 | ns |

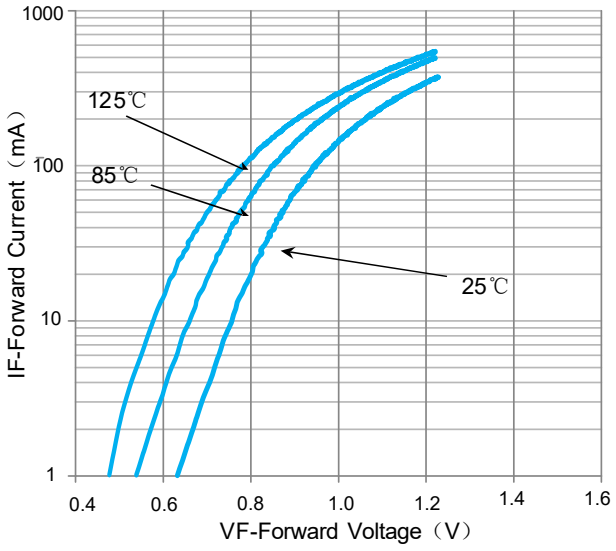
## Electrical Parameters（$T_A$ = 25 °C, unless otherwisespecified）



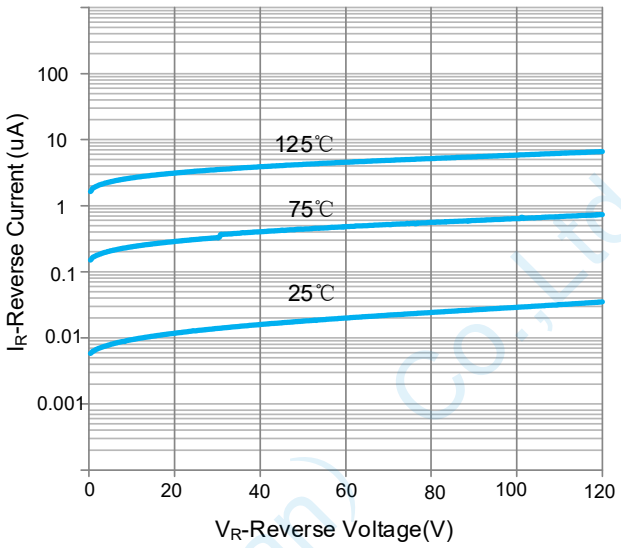

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# Typical Characteristics（$T_A$ = 25 °C, unless otherwisespecified）

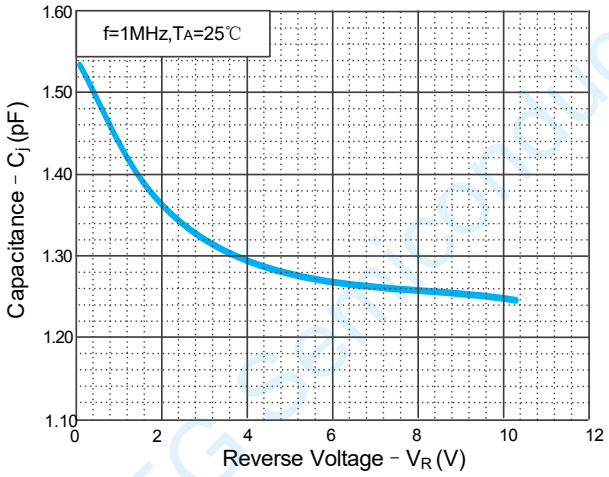
**Forward Current vs. Forward Voltage**




**Reverse Characteristic**

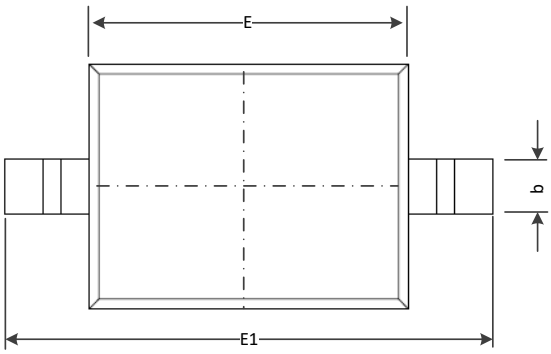


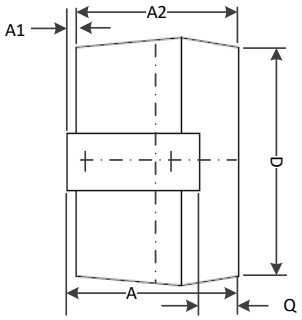

**Capacitor Characteristics**

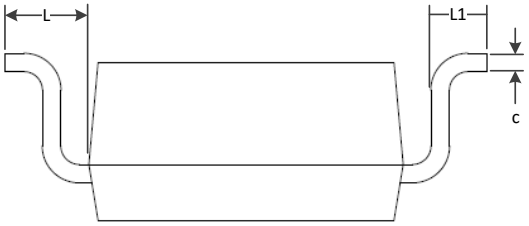



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# Package Information

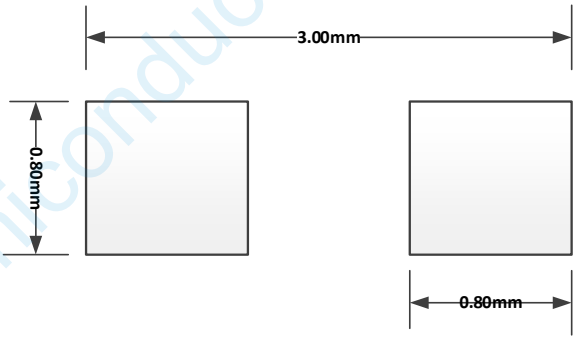


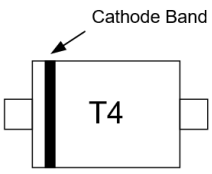

| COMMOM DIMENSION (MM) | | | |
|---|---|---|---|
| PKG | SOD323 | | |
| Symbol | MIN. | NOM. | MAX. |
| A | 0.800 | 0.900 | 1.000 |
| A1 | 0.000 | 0.050 | 0.100 |
| A2 | 0.800 | 0.850 | 0.900 |
| b | 0.250 | 0.300 | 0.350 |
| c | 0.080 | - | 0.150 |
| D | 1.200 | 1.300 | 1.400 |
| E | 1.600 | 1.700 | 1.800 |
| E1 | 2.500 | 2.600 | 2.700 |
| L | 0.475 REF | | |
| L1 | 0.250 | 0.260 | 0.270 |
| Q | 0.250 REF | | |

# Recommend PCB Layout




Notes: This Pcb Layout Is For Reference Purposes Only

# Marking




# Ordering Information

| Part number | Material | Type | Reel size | MOQ | MOQ/internal box | MOQ/carton |
|---|---|---|---|---|---|---|
| OVW4148D1 | GREEN | T/R | 7 inch | 3k/reel | 10reel= 30k/box | 4boxes=120k/carton |

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