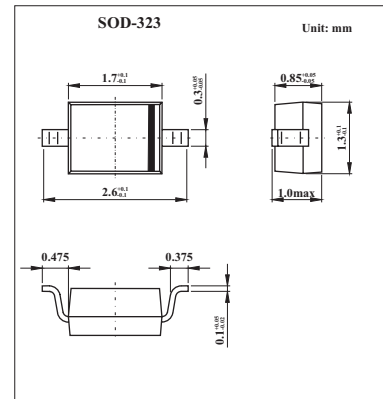


## SURFACE MOUNT SCHOTTKY BARRIER DIODE

## SD101CWS

## ■ Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Ultra-small Surface Mount Package

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                                                        | Symbol          | Value       | Unit               |
|------------------------------------------------------------------|-----------------|-------------|--------------------|
| Peak Repetitive Reverse voltage                                  | $V_{RRM}$       |             |                    |
| Working Peak Reverse Voltage                                     | $V_{RWM}$       | 40          | V                  |
| DC Blocking Voltage                                              | $V_R$           |             |                    |
| RMS Reverse Voltage                                              | $V_{R(RMS)}$    | 28          | V                  |
| Forward Continuous Current (Note 1)                              | $I_{FM}$        | 15          | mA                 |
| Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0\text{s}$ | $I_{FSM}$       | 50          | mA                 |
| @ $t = 10 \mu\text{s}$                                           |                 | 2.0         | A                  |
| Power Dissipation (Note1)                                        | $P_d$           | 200         | mW                 |
| Thermal Resistance, Junction to Ambient Air (Note 1)             | $R_{\theta JA}$ | 625         | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                          | $T_j, T_{STG}$  | -65 to +125 | $^\circ\text{C}$   |

Note:

1. Part mounted on FR-4 PC board with recommended pad layout.

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Characteristic                        | Symbol      | Test Condition                                                             | Min | Max  | Unit          |
|---------------------------------------|-------------|----------------------------------------------------------------------------|-----|------|---------------|
| Reverse Breakdown Voltage (Note 2)    | $V_{(BR)R}$ | $V_R = 10 \mu\text{A}$                                                     | 40  |      | V             |
| Forward Voltage Drop (Note 2)         | $V_{FM}$    | $I_F = 1.0 \text{mA}$                                                      |     | 0.39 | V             |
|                                       |             | $I_F = 15 \text{mA}$                                                       |     | 0.9  |               |
| Peak Reverse Leakage Current (Note 2) | $I_{RM}$    | $V_R = 30 \text{V}$                                                        |     | 200  | $\mu\text{A}$ |
| Total Capacitance                     | $C_T$       | $V_R = 0 \text{V}, f = 1.0 \text{MHz}$                                     |     | 2.2  | pF            |
| Reverse Recovery Time                 | $t_{rr}$    | $I_F = I_R = 5.0 \text{mA}$<br>$I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$ |     | 1.0  | ns            |

Note:

2. Short duration test pulse used to minimize self-heating effect.

## ■ Marking

|         |    |
|---------|----|
| Marking | S3 |
|---------|----|