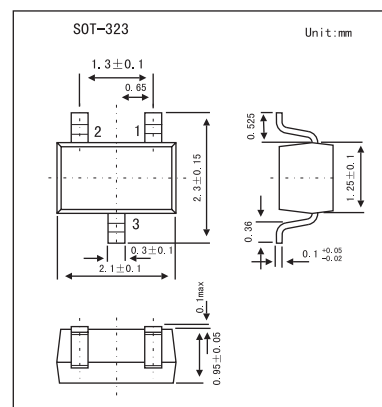


## ULTRA HIGH SPEED SWITCHING APPLICATIONS

## 1SS301

## ■ Features

- Low forward voltage:  $V_{F(3)} = 0.90 \text{ V(Typ)}$
- Fast reverse recovery time:  $t_{rr} = 1.6 \text{ ns (Typ)}$
- Small total capacitance:  $C_T = 0.9 \text{ pF(Typ)}$

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

| Parameter                      | Symbol    | Rating      | Unit             |
|--------------------------------|-----------|-------------|------------------|
| Maximum (peak) reverse voltage | $V_{RM}$  | 85          | V                |
| Reverse voltage                | $V_R$     | 80          | V                |
| Maximum (peak) forward current | $I_{FM}$  | 300(*)      | mA               |
| Average forward current        | $I_o$     | 100(*)      | mA               |
| Surge current (10 ms)          | $I_{FSM}$ | 2(*)        | A                |
| Power dissipation              | $P$       | 100         | mW               |
| Junction Temperature           | $T_j$     | 125         | $^\circ\text{C}$ |
| Storage Temperature            | $T_{stg}$ | -55 to +125 | $^\circ\text{C}$ |

(\*) Unit rating.Total rating = Unit rating  $\times 1.5$

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

| Parameter             | Symbol     | Test Conditions                | Min | Typ  | Max | Unit          |
|-----------------------|------------|--------------------------------|-----|------|-----|---------------|
| Forward voltage       | $V_{F(1)}$ | $I_F = 1 \text{ mA}$           |     | 0.60 |     | V             |
|                       | $V_{F(2)}$ | $I_F = 10 \text{ mA}$          |     | 0.72 |     |               |
|                       | $V_{F(3)}$ | $I_F = 100 \text{ mA}$         |     | 0.90 | 1.2 |               |
| Reverse current       | $I_{R(1)}$ | $V_R = 30 \text{ V}$           |     |      | 0.1 | $\mu\text{A}$ |
|                       | $I_{R(2)}$ | $V_R = 80 \text{ V}$           |     |      | 0.5 |               |
| Total capacitance     | $C_t$      | $V_R = 0, f = 1.0 \text{ MHz}$ |     | 0.9  | 3.0 | pF            |
| Reverse recovery time | $t_{rr}$   | $I_F = 10 \text{ mA}$          |     | 1.6  | 4.0 | ns            |

## ■ Marking

|         |    |
|---------|----|
| Marking | B3 |
|---------|----|