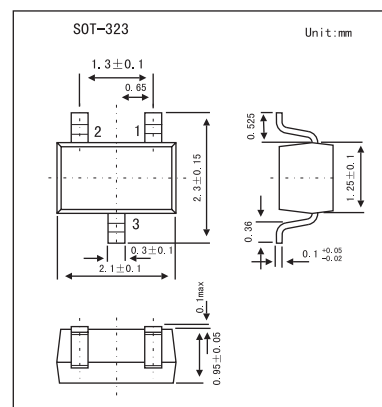


## HIGH SPEED SWITCHING SILICON EPITAXIAL DOUBLE DIODE

## 1SS304

## ■ Features

- Low capacitance:  $C_t = 1.1 \text{ pF TYP.}$
- High speed switching:  $t_{rr} = 3.0 \text{ ns MAX.}$
- Wide applications including switching, limiter, clipper.
- Double diode configuration assures economical use.

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

| Parameter                          | Symbol        | Rating      | Unit                |
|------------------------------------|---------------|-------------|---------------------|
| Peak Reverse Voltage               | $V_{RM}$      | 75          | V                   |
| DC Reverse Voltage                 | $V_R$         | 50          | V                   |
| Surge Current (1 □s) Note 1        | $I_{FSM}$     | 6.0         | A                   |
| Surge Current (1 □s)               | $I_{FSM}$     | 4.0         | A                   |
| Peak Forward Current Note 1        | $I_{FM}$      | 450         | mA                  |
| Peak Forward Current               | $I_{FM}$      | 300         | mA                  |
| Average Rectified Current (Note 1) | $I_o$         | 150         | mA                  |
| Average Rectified Current          | $I_o$         | 100         | mA                  |
| Junction Temperature               | $T_j$         | 150         | $^\circ\text{C}$    |
| Storage Temperature Range          | $T_{stg}$     | -55 to +150 | $^\circ\text{C}$    |
| Junction to Ambient (Note 1)       | $R_{th(j-a)}$ | 1.0         | $^\circ\text{C mW}$ |
| Junction to Ambient                | $R_{th(j-a)}$ | 0.85        | $^\circ\text{C mW}$ |

Note

1.Both diodes loaded simultaneously.

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

| Parameter             | Symbol     | Test Conditions                | Min | Typ  | Max | Unit          |
|-----------------------|------------|--------------------------------|-----|------|-----|---------------|
| Forward voltage       | $V_{F(1)}$ | $I_F = 10 \text{ mA}$          |     | 0.67 | 1.0 | V             |
|                       | $V_{F(2)}$ | $I_F = 50 \text{ mA}$          |     | 0.75 | 1.1 |               |
|                       | $V_{F(3)}$ | $I_F = 100 \text{ mA}$         |     | 0.85 | 1.2 |               |
| Reverse current       | $I_{R(1)}$ | $V_R = 50 \text{ V}$           |     |      | 0.1 | $\mu\text{A}$ |
| Capacitance           | $C_t$      | $V_R = 0, f = 1.0 \text{ MHz}$ |     | 1.1  | 4.0 | pF            |
| Reverse recovery time | $t_{rr}$   |                                |     |      | 3.0 | ns            |

## ■ Marking

|         |    |
|---------|----|
| Marking | A6 |
|---------|----|