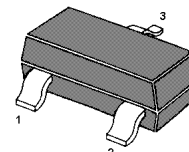
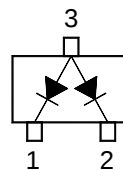


# 1SS181

## Silicon Epitaxial Planar Switching Diode

### Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



Marking Code: **A1**  
SOT-23 Plastic Package

### Applications

- Ultra high speed switching application

### Absolute Maximum Ratings ( $T_a = 25\text{ }^{\circ}\text{C}$ )

| Parameter                                         | Symbol      | Value         | Unit               |
|---------------------------------------------------|-------------|---------------|--------------------|
| Maximum Peak Reverse Voltage                      | $V_{RM}$    | 85            | V                  |
| Reverse Voltage                                   | $V_R$       | 80            | V                  |
| Average Rectified Forward Current                 | $I_{F(AV)}$ | 100           | mA                 |
| Maximum Peak Forward Current                      | $I_{FM}$    | 300           | mA                 |
| Non-repetitive Peak Forward Surge Current (10 ms) | $I_{FSM}$   | 2             | A                  |
| Power Dissipation                                 | $P_{tot}$   | 350           | mW                 |
| Junction Temperature                              | $T_j$       | 150           | $^{\circ}\text{C}$ |
| Storage Temperature Range                         | $T_{stg}$   | - 55 to + 150 | $^{\circ}\text{C}$ |

### Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

| Parameter                                                           | Symbol   | Max.       | Unit          |
|---------------------------------------------------------------------|----------|------------|---------------|
| Forward Voltage<br>at $I_F = 100\text{ mA}$                         | $V_F$    | 1.2        | V             |
| Reverse Current<br>at $V_R = 30\text{ V}$<br>at $V_R = 80\text{ V}$ | $I_R$    | 0.1<br>0.5 | $\mu\text{A}$ |
| Total Capacitance<br>at $V_R = 0$ , $f = 1\text{ MHz}$              | $C_T$    | 4          | pF            |
| Reverse Recovery Time<br>at $I_F = 10\text{ mA}$                    | $t_{rr}$ | 4          | ns            |

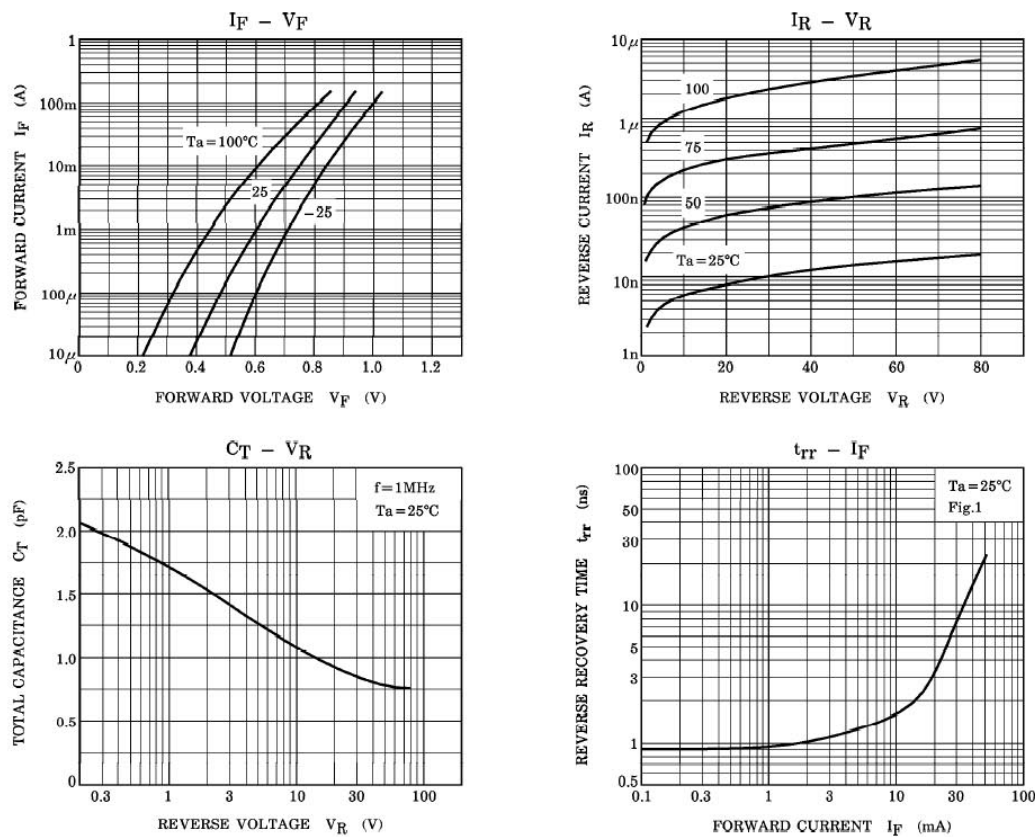


Fig.1 Reverse recovery time ( $t_{rr}$ ) test circuit

