



## SOT-23 Plastic-Encapsulate Diodes

**1SS1 81** Switching DIODES**SOT-23**

1. CATHODE
2. CATHODE
3. ANODE

**FEATURES**

- Low forward voltage :  $V_{F(3)}=0.92V(\text{typ.})$
- Fast reverse recovery time :  $t_{rr}=1.6ns(\text{typ.})$

**Maximum Ratings @ $T_A=25^\circ\text{C}$** 

| Parameter                           | Symbol    | Limits  | Unit             |
|-------------------------------------|-----------|---------|------------------|
| Non-Repetitive Peak reverse voltage | $V_{RM}$  | 85      | V                |
| DC Blocking Voltage                 | $V_R$     | 80      | V                |
| Forward Continuous Current          | $I_{FM}$  | 300     | mA               |
| Average Rectified Output Current    | $I_O$     | 100     | mA               |
| Power Dissipation                   | $P_D$     | 150     | mW               |
| Junction temperature                | $T_J$     | 125     | $^\circ\text{C}$ |
| Storage temperature range           | $T_{STG}$ | -55-125 | $^\circ\text{C}$ |

**Electrical Characteristics @ $T_A=25^\circ\text{C}$** 

| Parameter                     | Symbol      | Min. | Typ. | Max. | Unit          | Conditions                                  |
|-------------------------------|-------------|------|------|------|---------------|---|
| Reverse Breakdown Voltage     | $V_{(BR)R}$ | 80   |      |      | V             | $I_R=100\mu\text{A}$                        |
| Forward voltage               | $V_{F1}$    |      | 0.61 |      | V             | $I_F=1\text{mA}$                            |
|                               | $V_{F2}$    |      | 0.74 |      | V             | $I_F=10\text{mA}$                           |
|                               | $V_{F3}$    |      | 0.92 | 1.2  | V             | $I_F=100\text{mA}$                          |
| Reverse current               | $I_{R1}$    |      |      | 0.1  | $\mu\text{A}$ | $V_R=30\text{V}$                            |
|                               | $I_{R2}$    |      |      | 0.5  | $\mu\text{A}$ | $V_R=80\text{V}$                            |
| Capacitance between terminals | $C_T$       |      | 2.2  | 4.0  | pF            | $V_R=0, f=1\text{MHz}$                      |
| Reverse recovery time         | $t_{rr}$    |      | 1.6  | 4.0  | ns            | $I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R$ |

# Typical Characteristics

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