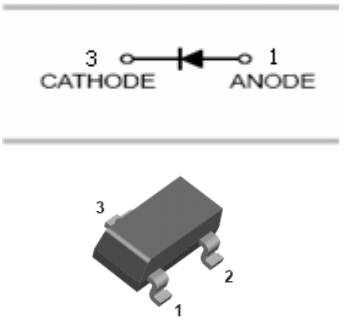
## Surface mount switching diode **1SS193**

## FEATURES

- Low forward voltage $V_{F(3)}$=0.9V(typ).
- Fast switching.
- Fast reverse recovery time:$t_{rr}$=1.6ns(typ)

Lead-free




**SOT-23**

## APPLICATIONS

- High speed switching application.

## ORDERING INFORMATION

| Type No. | Marking | Package Code |
|---|---|---|
| 1SS193 | F3 | SOT-23 |

## MAXIMUM RATING @ Ta=25℃ unless otherwise specified

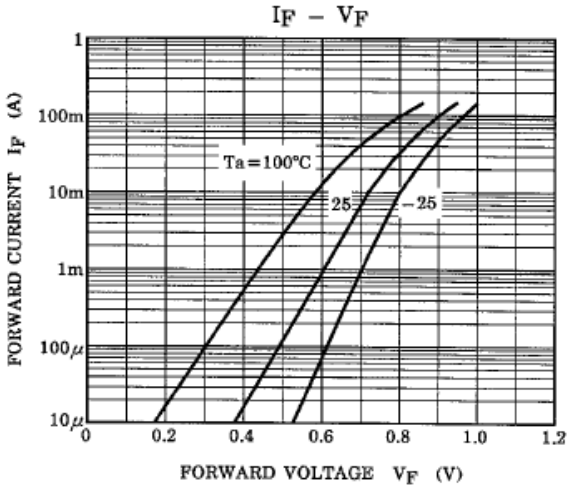
| Characteristic | Symbol | Limits | Unit |
|---|---|---|---|
| Non-Repetitive Peak Reverse Voltage | $V_{RM}$ | 85 | V |
| DC Reverse Voltage | $V_R$ | 80 | V |
| Forward Current(max) | $I_{FM}$ | 300 | mA |
| Forward Output current | $I_o$ | 100 | mA |
| Surge current | $I_{FSM}$ | 2 | A |
| Power Dissipation | $P_d$ | 150 | mW |
| Operating Junction Temperature Range | $T_j$ | 125 | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +125 | ℃ |

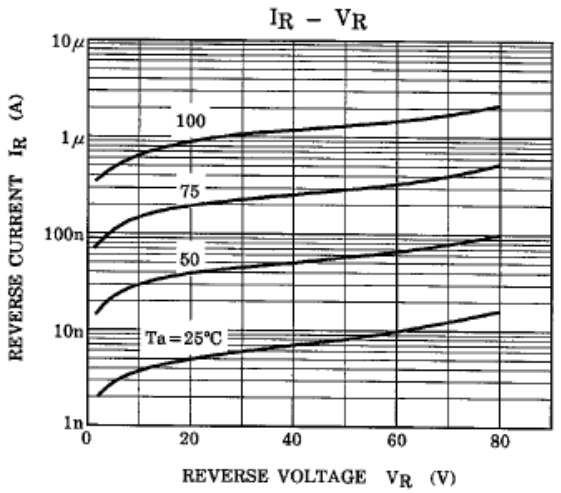
## ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

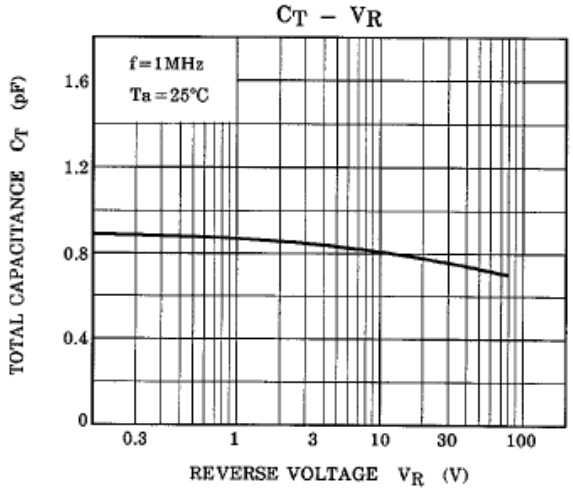
| Characteristic | Symbol | Min | Typ | MAX | UNIT | Test Condition |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 80 | - | - | V | $I_R$= 100μA |
| Forward Voltage | $V_F$ | - | 0.60<br>0.72<br>0.90 | <br><br>1.2 | V | $I_F$=1mA<br>$I_F$=10mA<br>$I_F$=100mA |
| Reverse Leakage Current | $I_R$ | - | | 0.1<br>0.5 | μA | $V_R$=30V<br>$V_R$=80V |
| Total Capacitance | $C_T$ | - | 0.90 | 3.0 | pF | $V_R$=0V,f=1.0MHz |
| Reverse Recovery Time | $t_{rr}$ | - | 1.6 | 4.0 | ns | $I_F$=$I_R$=10mA$I_{rr}$=0.1*$I_R$ |

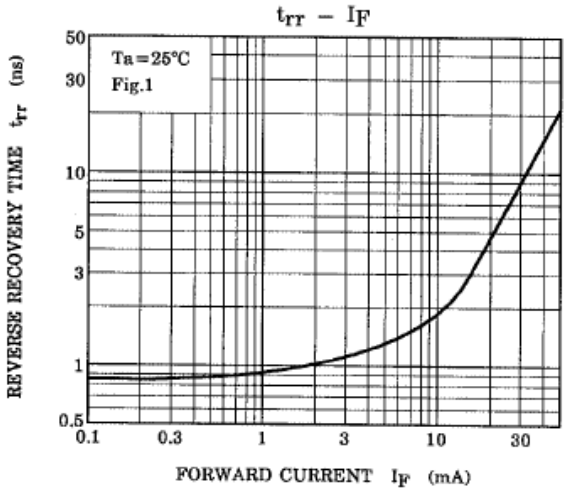
Surface mount switching diode **1SS193**

## TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



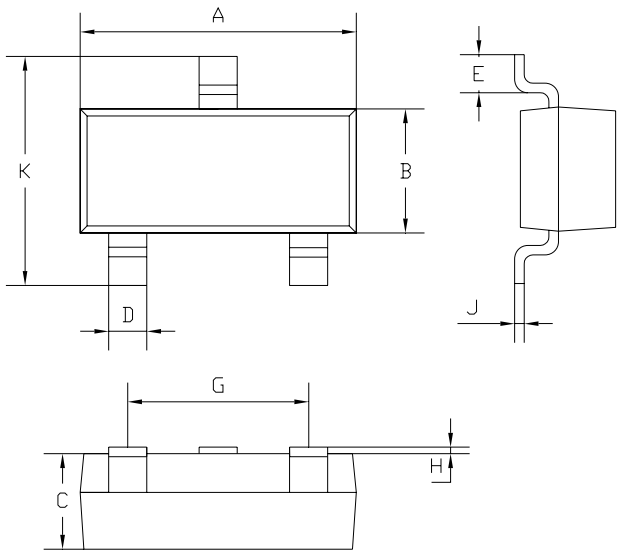



Surface mount switching diode **1SS193**

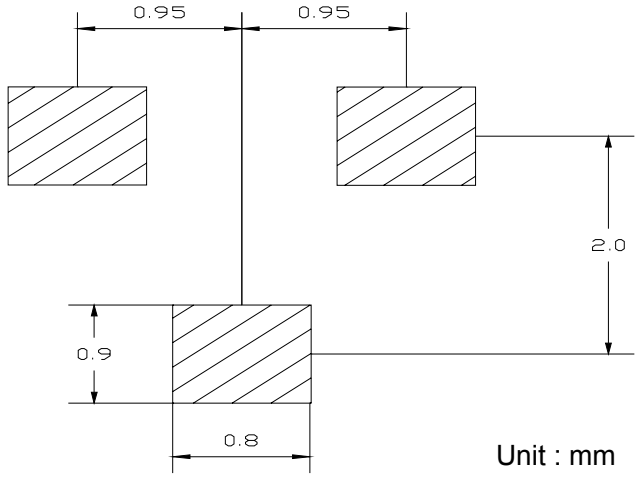
## PACKAGE OUTLINE

Plastic surface mounted package SOT-23




| SOT-23 | | |
|---|---|---|
| Dim | Min | Max |
| A | 2.85 | 2.95 |
| B | 1.25 | 1.35 |
| C | 1.0Typical | |
| D | 0.37 | 0.43 |
| E | 0.35 | 0.48 |
| G | 1.85 | 1.95 |
| H | 0.02 | 0.1 |
| J | 0.1Typical | |
| K | 2.35 | 2.45 |
| All Dimensions in mm | | |

## SOLDERING FOOTPRINT




Unit : mm

## PACKAGE INFORMATION

| Device | Package | Shipping |
|---|---|---|
| 1SS193 | SOT-23 | 3000/Tape&Reel |