

## Surface mount switching diode

## 1SS187

### FEATURES

- Low forward voltage  
 $V_{F(3)}=0.92V(\text{typ})$ .
- Small total capacitance:  $C_T=2.2pF(\text{typ})$ .
- Fast reverse recovery time:  $t_{rr}=1.6ns(\text{typ})$ .



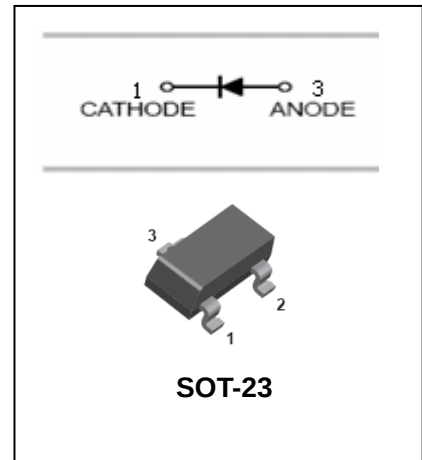
Lead-free

### APPLICATIONS

- High speed switching application.

### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| 1SS187   | D3      | SOT-23       |



### MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Characteristic                       | Symbol    | Limits      | Unit             |
|--------------------------------------|-----------|-------------|------------------|
| Non-Repetitive Peak Reverse Voltage  | $V_{RM}$  | 85          | V                |
| DC Reverse Voltage                   | $V_R$     | 80          | V                |
| Forward Output current               | $I_o$     | 100         | mA               |
| Surge current (10ms)                 | $I_{FSM}$ | 2           | A                |
| Power Dissipation                    | $P_d$     | 150         | mW               |
| Operating Junction Temperature Range | $T_j$     | 125         | $^\circ\text{C}$ |
| Storage Temperature Range            | $T_{STG}$ | -55 to +125 | $^\circ\text{C}$ |

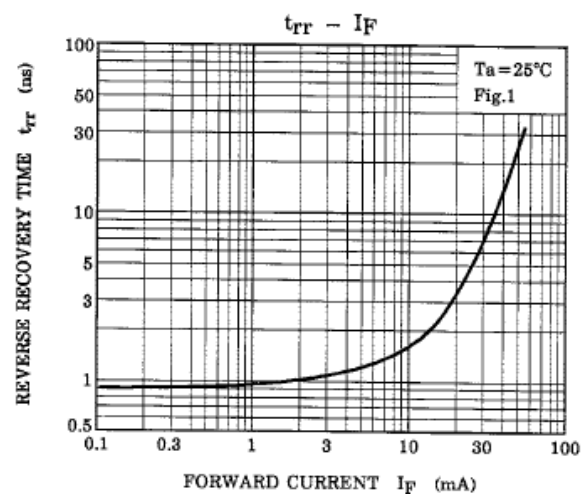
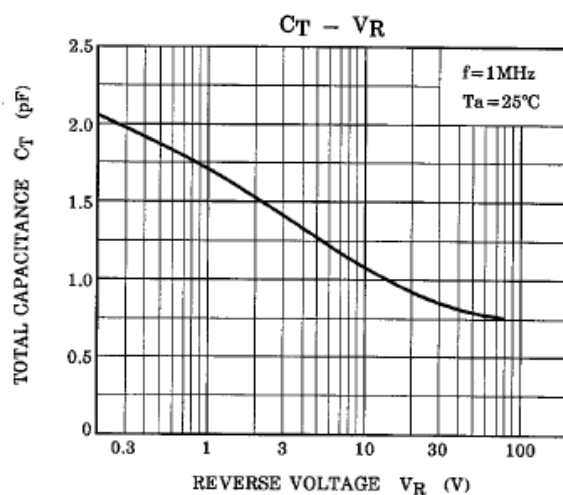
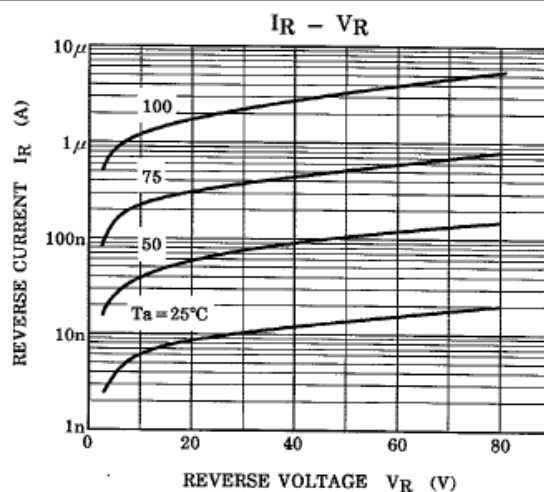
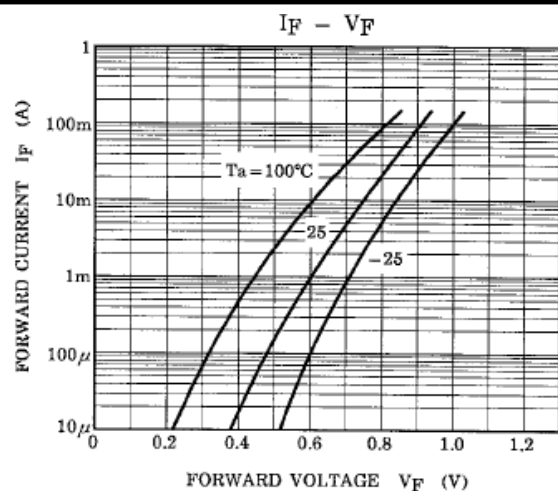
### ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Characteristic            | Symbol      | Min | Typ                  | MAX        | UNIT          | Test Condition                                              |
|---------------------------|-------------|-----|----------------------|------------|---------------|-------------------------------------------------------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 80  | -                    | -          | V             | $I_R=100\mu\text{A}$                                        |
| Forward Voltage           | $V_F$       | -   | 0.61<br>0.74<br>0.92 | 1.2        | V             | $I_F=1\text{mA}$<br>$I_F=10\text{mA}$<br>$I_F=100\text{mA}$ |
| Reverse Leakage Current   | $I_R$       | -   |                      | 0.1<br>0.5 | $\mu\text{A}$ | $V_R=30\text{V}$<br>$V_R=80\text{V}$                        |
| Total Capacitance         | $C_T$       | -   | 2.2                  | 4.0        | pF            | $V_R=0\text{V}, f=1.0\text{MHz}$                            |
| Reverse Recovery Time     | $t_{rr}$    | -   | 1.6                  | 4.0        | ns            | $I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R$                 |

### TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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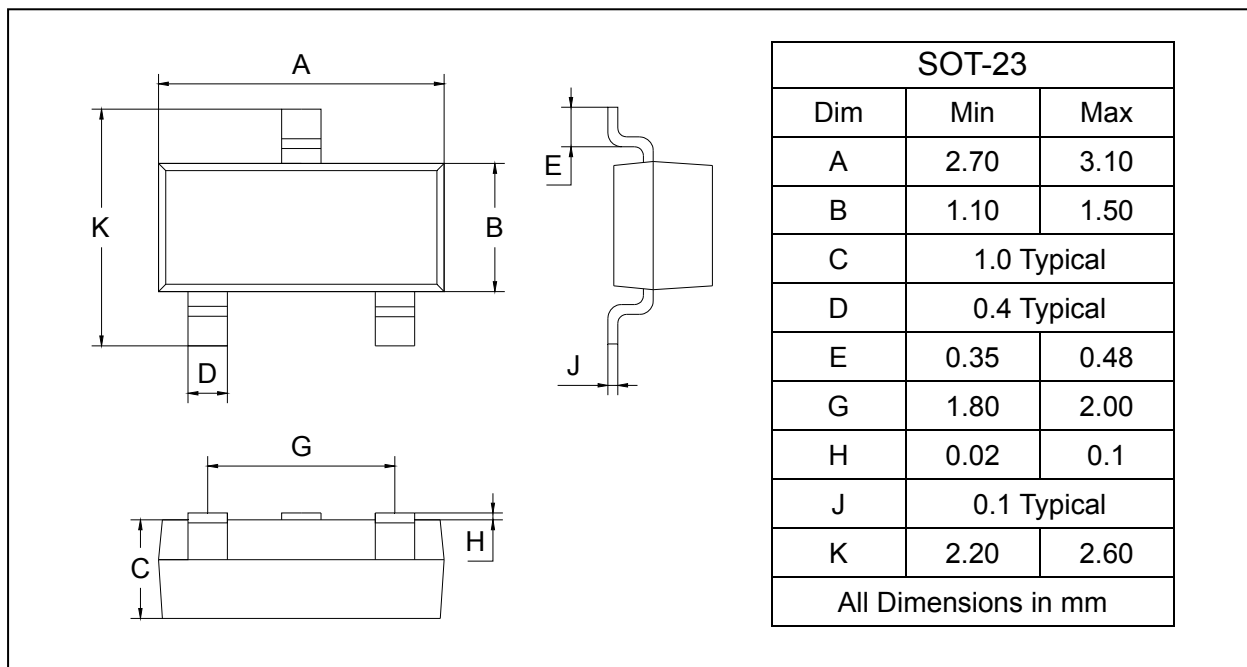
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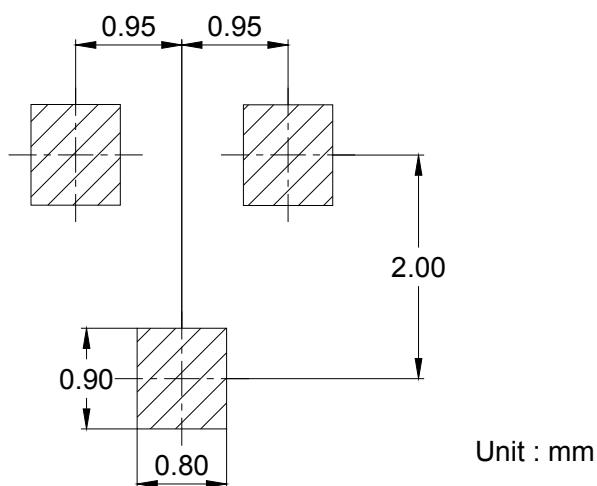
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

| Device | Package | Shipping       |
|--------|---------|----------------|
| 1SS187 | SOT-23  | 3000/Tape&Reel |