

## Surface Mount Switching Diode

**1SS187**

### FEATURES

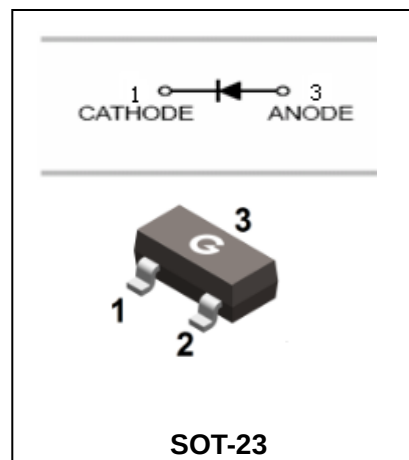
- Low forward voltage  $V_F = 0.92V$  (typ.)
- Small total capacitance:  $C_T = 2.2Pf$  (typ.)
- Fast reverse recovery time:  $t_{rr} = 1.6ns$ (typ.)
- RoHS compliant with Halogen-free

### APPLICATIONS

- High speed switching application

### ORDERING INFORMATION

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



### MAXIMUM RATING @ Ta=25°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                    | $P_d$     | 350         | mW   |
| Operating Junction Temperature Range | $T_j$     | 150         | °C   |
| Storage Temperature Range            | $T_{STG}$ | -55 to +150 | °C   |

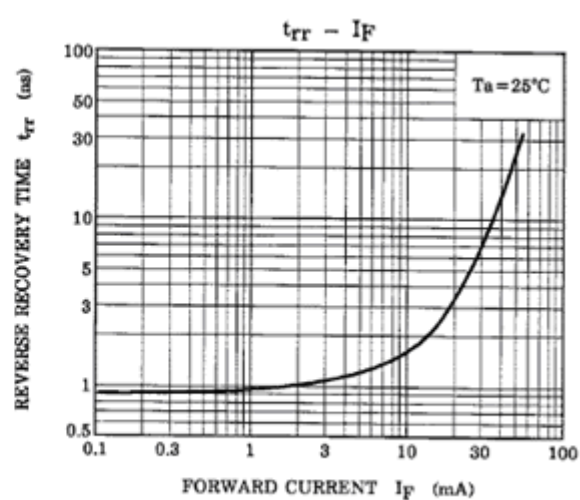
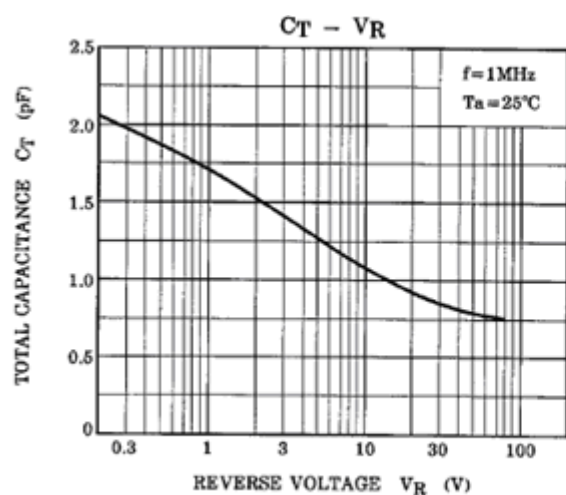
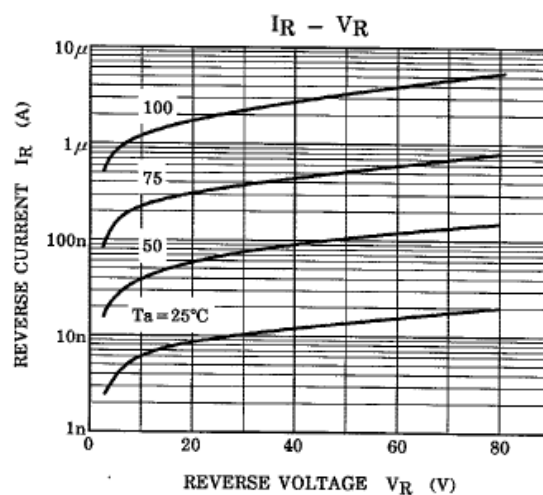
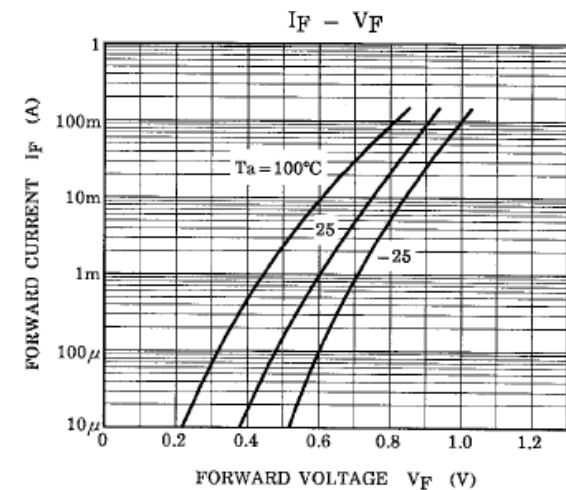
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

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

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



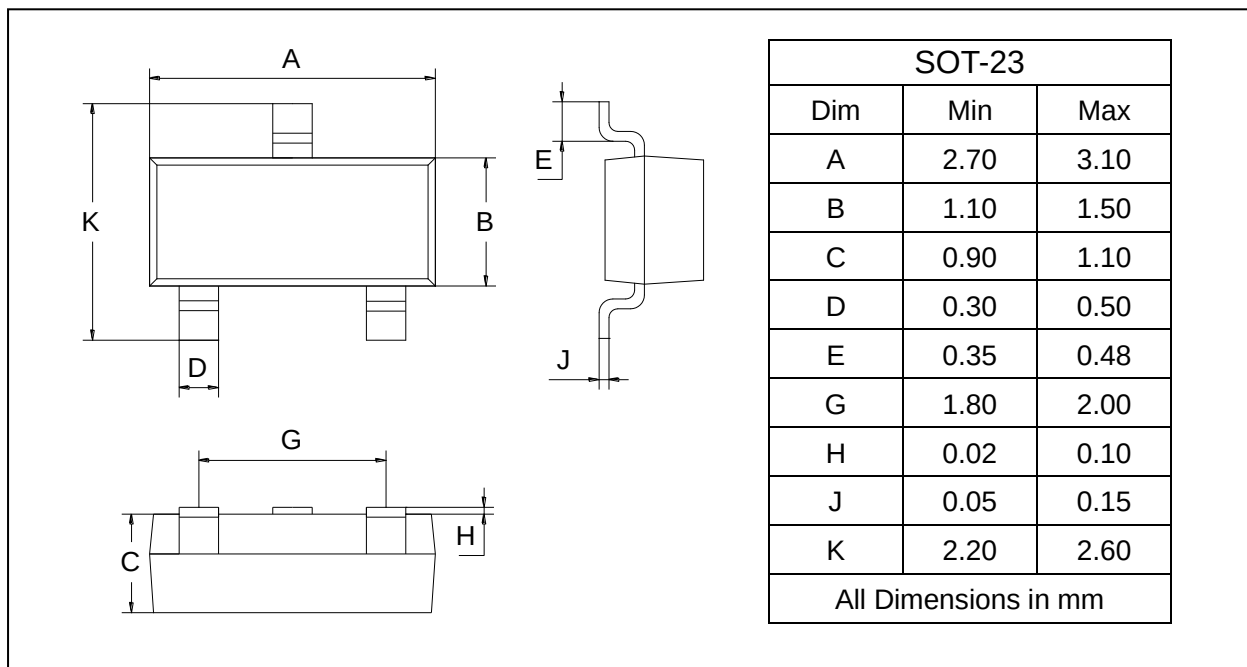
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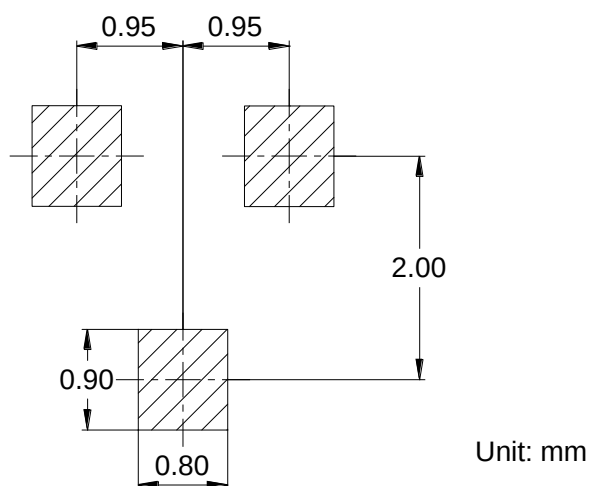
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

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