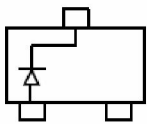
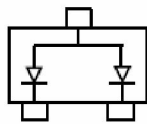
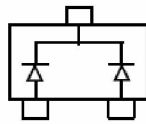
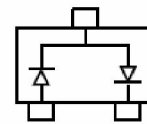


**WSB5519F/5520F/5521F/5522F**
[Http://www.willsemi.com](http://www.willsemi.com)
**Schottky Barrier Diode**

**SOT-23**
**Features**

- Extremely Fast Switching Speed
- Standard products are Pb-free and Halogen-free


 WSB5519F  
 MARKING:KL1

 WSB5520F  
 MARKING:KL2

 WSB5521F  
 MARKING:KL3

 WSB5522F  
 MARKING:KL4

**Order information**

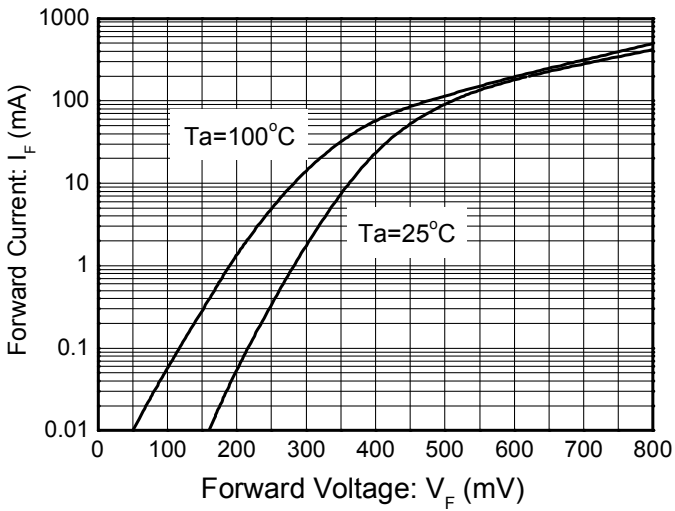
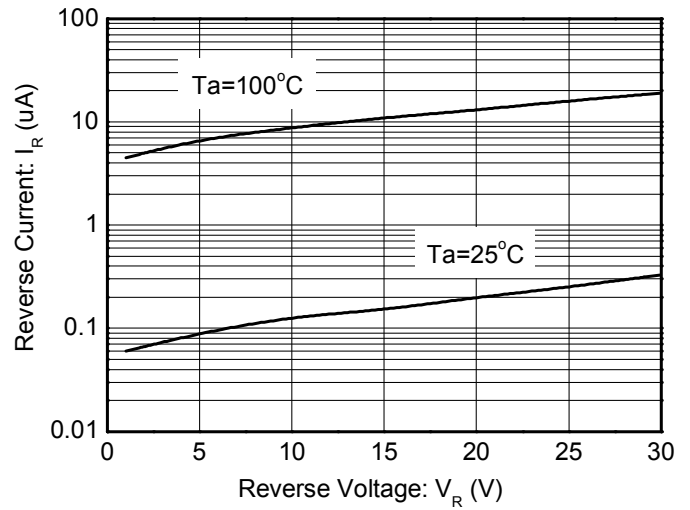
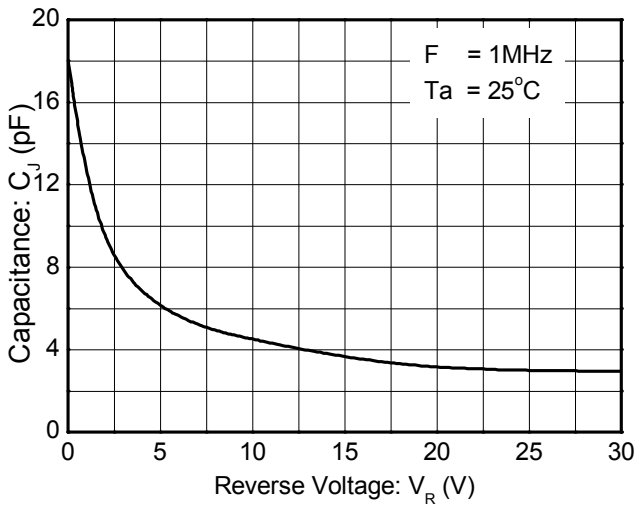
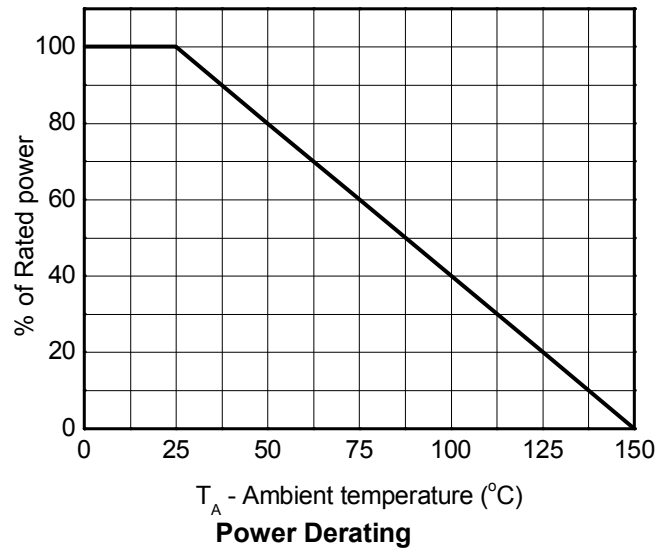
| Device        | Package | Shipping       |
|---------------|---------|----------------|
| WSB5519F-3/TR | SOT-23  | 3000/Tape&Reel |
| WSB5520F-3/TR | SOT-23  | 3000/Tape&Reel |
| WSB5521F-3/TR | SOT-23  | 3000/Tape&Reel |
| WSB5522F-3/TR | SOT-23  | 3000/Tape&Reel |

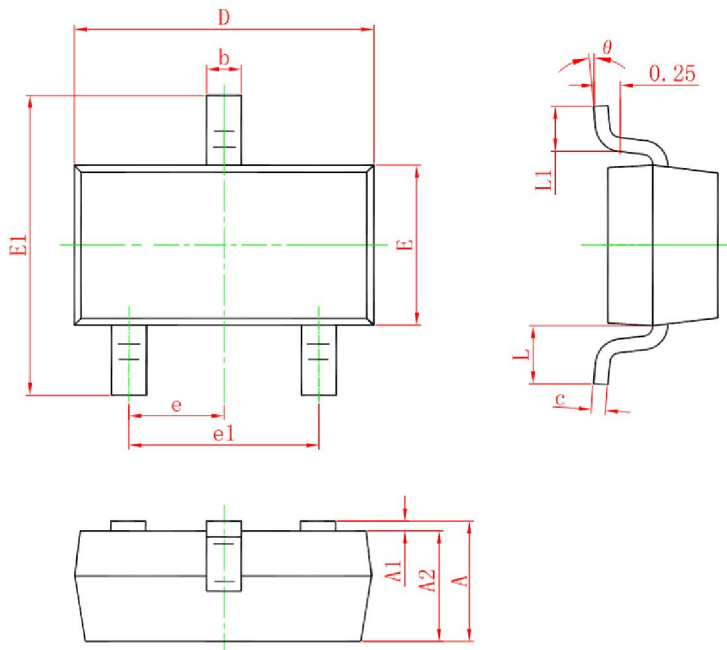
**Absolute maximum ratings**

| Parameter                              | Symbol          | Value     | Unit          |
|--|-----------------|-----------|---------------|
| Peak Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 30        | V             |
| Working Peak Reverse Voltage           | $V_{RWM}$       | 30        | V             |
| Blocking voltage (DC)                  | $V_R$           | 30        | V             |
| Forward Continuous Current             | $I_{FM}$        | 0.2       | A             |
| Power Dissipation                      | $P_D$           | 200       | mW            |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 500       | $^{\circ}C/W$ |
| Junction temperature                   | $T_J$           | 125       | $^{\circ}C$   |
| Storage temperature                    | $T_{STG}$       | -55 ~ 150 | $^{\circ}C$   |

**Electronics characteristics ( $T_A=25^{\circ}C$ )**

| Parameter                 | Symbol          | Condition  | Min.      | Typ. | Max. | Unit |
|---------------------------|-----------------|--|-----------|------|------|------|
| Reverse breakdown voltage | $V_{BR}$        | $I_R=100\mu A$   | 30        |      |      | V    |
| Forward voltage           | $V_{F1}$        | $I_F=0.1mA$  |           |      | 0.24 | V    |
|                           | $V_{F2}$        | $I_F=1mA$  |           |      | 0.32 | V    |
|                           | $V_{F3}$        | $I_F=10mA$   |           |      | 0.40 | V    |
|                           | $V_{F4}$        | $I_F=30mA$   |           |      | 0.50 | V    |
|                           | $V_{F5}$        | $I_F=100mA$  |           |      | 1    | V    |
|                           | Reverse current | $I_R$  | $V_R=25V$ |      |      | 2    |
| Diode capacitance         | $C_D$           | $V_R=1V, f=1MHz$   |           |      | 10   | pF   |
| Reverse recovery time     | $t_{rr}$        | $I_F=I_R=10mA$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |           |      | 5    | ns   |

**Typical characteristics (Ta=25°C, unless otherwise noted)**

**Forward voltage vs. Forward current**

**Reverse current vs. Reverse voltage**

**Junction capacitance vs. Reverse voltage**

**Power Derating**  
 $T_A$  - Ambient temperature ( $^\circ\text{C}$ )

**Package outline dimensions**
**SOT-23**


| Symbol   | Dimensions in millimeter |       |       |
|----------|--------------------------|-------|-------|
|          | Min.                     | Typ.  | Max.  |
| A        | 0.900                    | 1.025 | 1.150 |
| A1       | 0.000                    | 0.500 | 0.100 |
| A2       | 0.900                    | 0.975 | 1.050 |
| b        | 0.300                    | 0.400 | 0.500 |
| c        | 0.080                    | 0.115 | 0.150 |
| D        | 2.800                    | 2.900 | 3.000 |
| E        | 1.200                    | 1.300 | 1.400 |
| E1       | 2.250                    | 2.400 | 2.550 |
| e        | 0.950TYP                 |       |       |
| e1       | 1.800                    | 1.900 | 2.000 |
| L        | 0.500REF                 |       |       |
| L1       | 0.300                    | 0.400 | 0.500 |
| $\theta$ | 0°                       | 4°    | 8°    |

**Recommend PCB Layout (Unit: mm)**
