

**WSB5543W**
**Middle Power Schottky Barrier Diode**
[Http://www.sh-willsemi.com](http://www.sh-willsemi.com)
**Features**

- 1.0A Average rectified forward current
- Trench MOS Schottky technology
- Low forward voltage, low leakage current
- Small package SOD-323F


**SOD-323F**

**Circuit**
**Applications**

- Switching circuit
- Middle current rectification


**Marking**
**Absolute maximum ratings**

| Parameter  | Symbol    | Value     | Unit |
|--|-----------|-----------|------|
| Reverse voltage (repetitive peak)                | $V_{RM}$  | 40        | V    |
| Reverse voltage (DC)                             | $V_R$     | 40        | V    |
| Average rectified forward current <sup>(1)</sup> | $I_O$     | 1.0       | A    |
| Forward peak surge current <sup>(2)</sup>        | $I_{FSM}$ | 7         | A    |
| Junction temperature                             | $T_J$     | -55 ~ 150 | °C   |
| Operating temperature                            | $T_{opr}$ | -55 ~ 150 | °C   |
| Storage temperature                              | $T_{stg}$ | -55 ~ 150 | °C   |

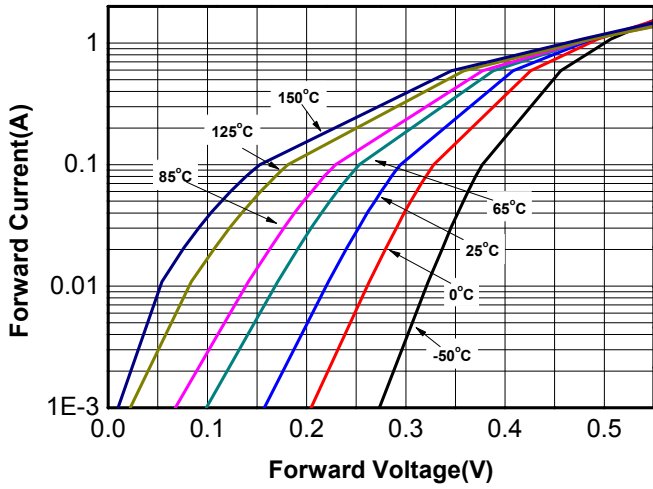
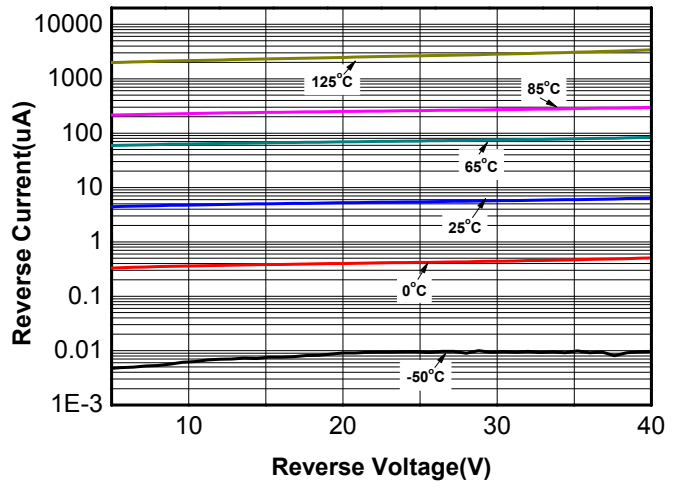
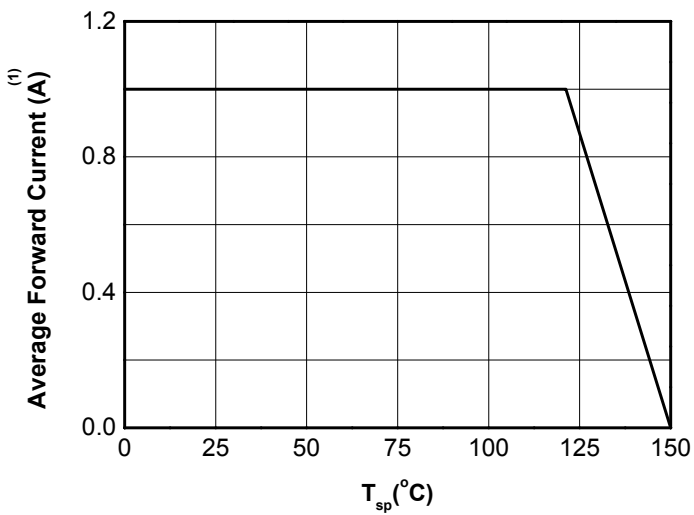
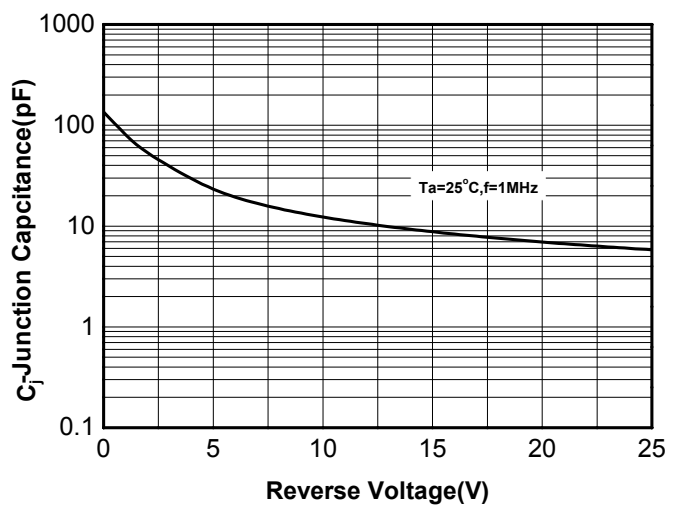
**Electronics characteristics (T<sub>A</sub>=25°C)**

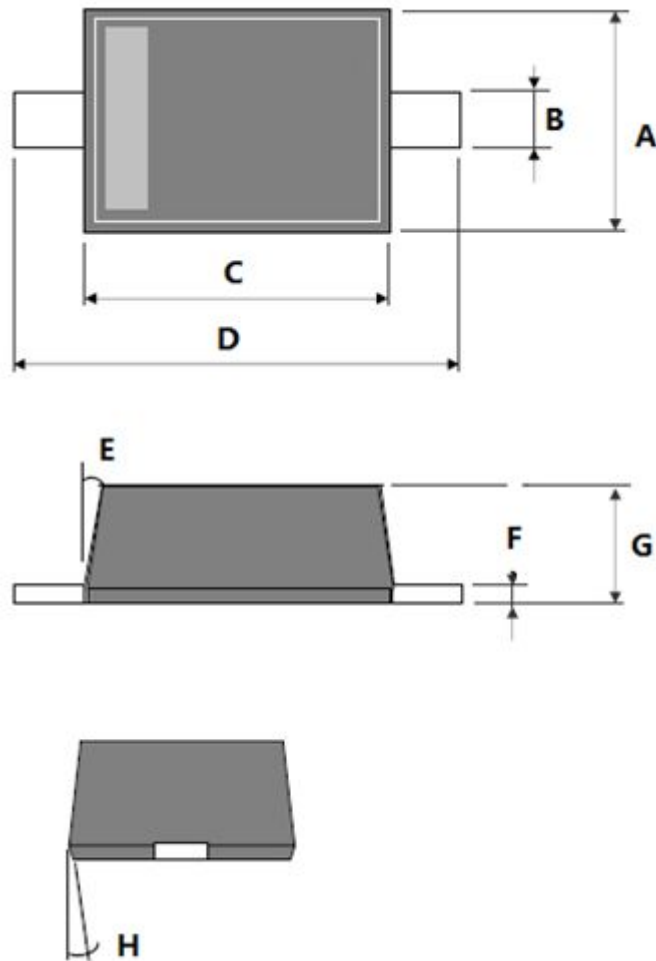
| Parameter                         | Symbol           | Condition                   | Min. | Typ. | Max. | Unit |
|-----------------------------------|------------------|-----------------------------|------|------|------|------|
| Forward voltage <sup>(3)</sup>    | $V_F$            | $I_F=1.0A$                  | -    | 0.48 | 0.57 | V    |
| Reverse current                   | $I_R$            | $V_R=V_R$                   | -    | 8    | 50   | uA   |
| Junction capacitance              | $C_J$            | $V_R=1V, F=1MHz$            | -    | 80   | -    | pF   |
| Thermal resistance <sup>(4)</sup> | $R_{\theta JSP}$ | Junction to Soldering point | -    | -    | 60   | K/W  |

**Order Informations**

| Device        | Package  | Marking            | Shipping       |
|---------------|----------|--------------------|----------------|
| WSB5543W-2/TR | SOD-323F | DA* <sup>(5)</sup> | 3000/Reel&Tape |

**Note 1: Duty cycle=0.5, f=20kHz, square wave;**
**Note 2: Pulse Width=8.3ms, Single sine Pulse**
**Note 3: Single Pulse test tp=380us;**
**Note 4: Soldering point of cathode tab;**
**Note 5: \* = Month code (A~Z); DA = Device code**

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

**Forward voltage vs. Forward current**

**Reverse current vs. Reverse voltage**

**Current Derating**

**Junction capacitance vs. Reverse voltage**

**Package outline dimensions**
**SOD-323F**


| Symbol | Dimensions in millimeter |      |      |
|--------|--------------------------|------|------|
|        | Min.                     | Typ. | Max. |
| A      | 1.15                     | 1.25 | 1.35 |
| B      | 0.25                     | 0.30 | 0.35 |
| C      | 1.60                     | 1.70 | 1.80 |
| D      | 2.38                     | 2.48 | 2.58 |
| E      | -                        | 7°   | -    |
| F      | 0.08                     | 0.13 | 0.18 |
| G      | 0.60                     | 0.65 | 0.70 |
| H      | -                        | 7°   | -    |