

**WSB5523M**

**Ultra Low Forward Voltage,  
Schottky Barrier Diode**

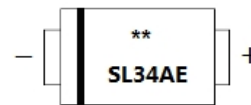
[Http://www.sh-willsemi.com](http://www.sh-willsemi.com)

**Features**

- Schottky barrier rectifier
- Guarding protection
- Ultra Low forward voltage
- Reverse energy tested
- High current capability
- Extremely low thermal resistance
- Standard products are Pb-free and Halogen-free



**SMA (DO-214AC)**



**\*\* = Date Code(YM)**

**SL34AE = Device code**

**Pin configuration and Marking**

**MECHANICAL DATA**

- Case: SMA molded plastic body
- Polarity: Color band denotes cathode end
- Mounting position: ANY

**Order information**

| Device        | Package        | Shipping       |
|---------------|----------------|----------------|
| WSB5523M-2/TR | SMA (DO-214AC) | 5000/Tape&Reel |

**Absolute maximum ratings**

| Parameter   | Symbol      | Value     | Unit        |
|---|-------------|-----------|-------------|
| Maximum Repetitive Peak Reverse Voltage                         | $V_{RRM}$   | 40        | V           |
| Maximum RMS voltage   | $V_{RWS}$   | 28        | V           |
| Maximum DC blocking voltage                                     | $V_{DC}$    | 40        | V           |
| Maximum average forward rectified current at $T_L=100^{\circ}C$ | $I_{F(AV)}$ | 3.0       | A           |
| Peak forward surge current 8.3ms single half-sine-wave          | $I_{FSM}$   | 80        | A           |
| Operating junction temperature range                            | $T_J$       | -55 - 125 | $^{\circ}C$ |
| Storage temperature range                                       | $T_{STG}$   | -55 - 150 | $^{\circ}C$ |

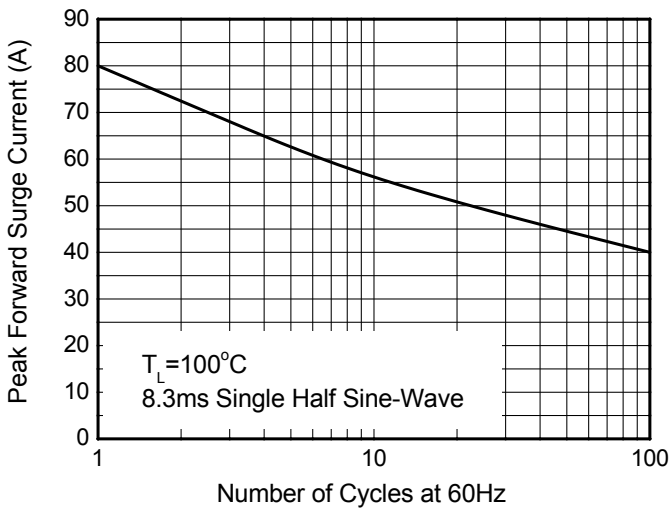
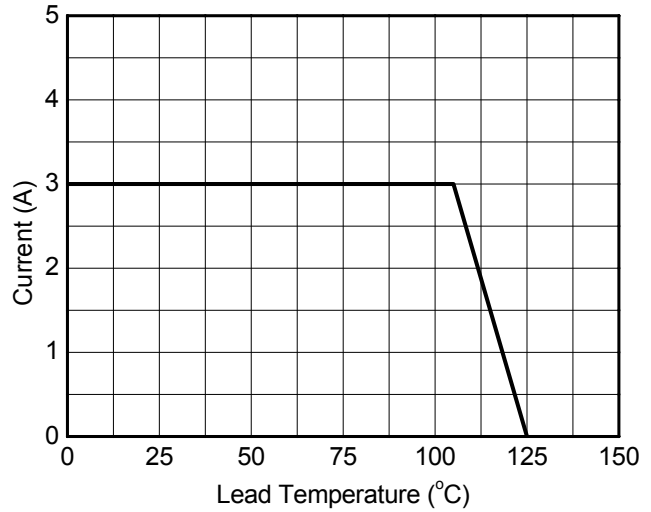
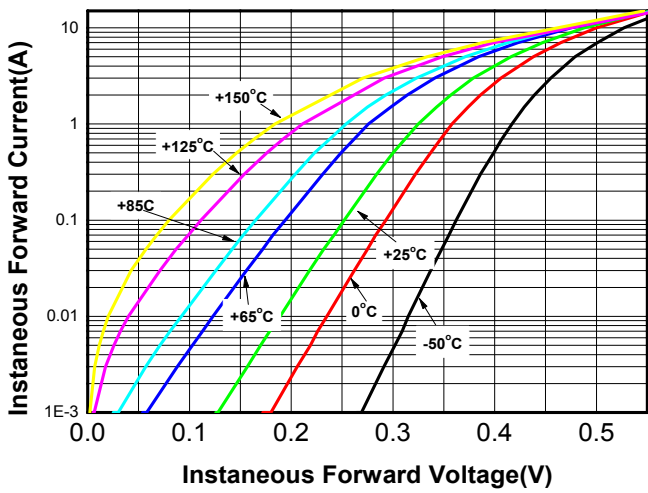
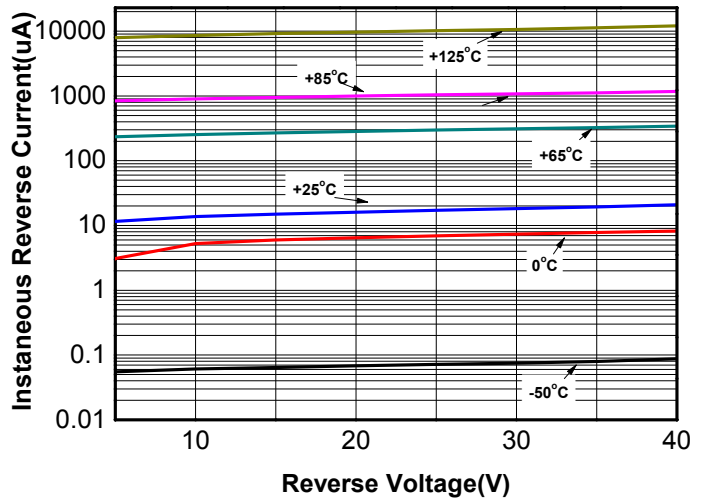
**Thermal Characteristics**

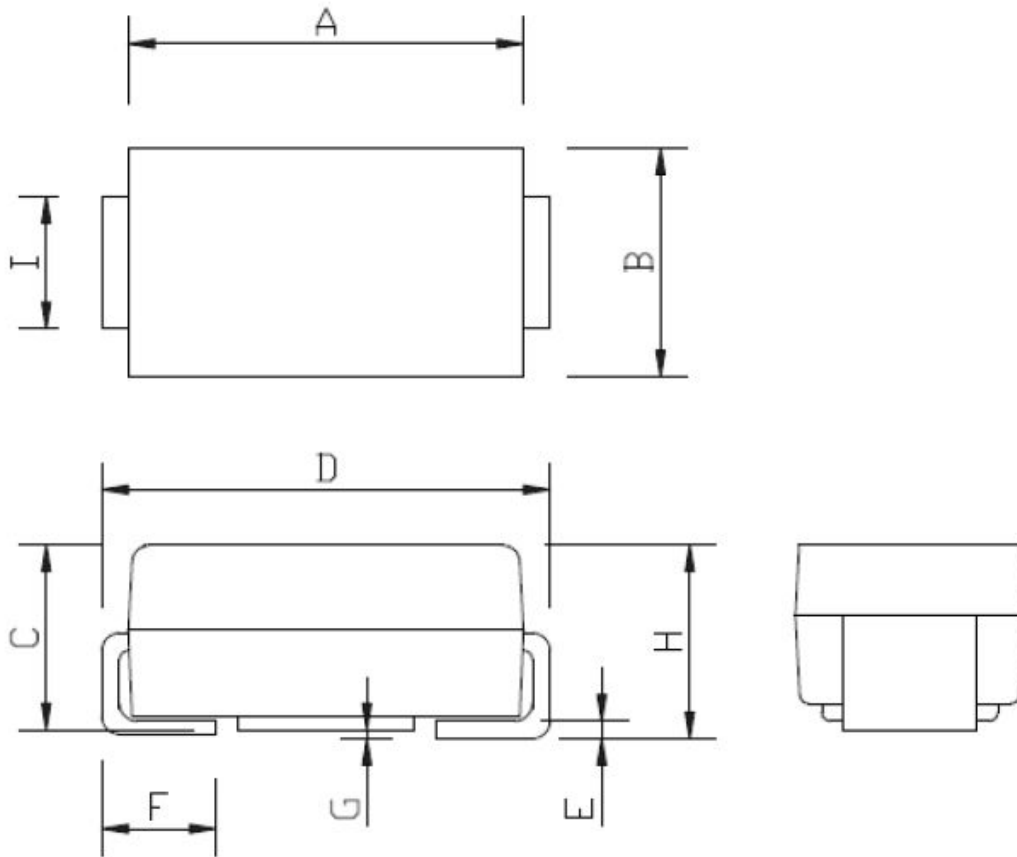
| Parameter  | Symbol          | Value | Unit          |
|--|-----------------|-------|---------------|
| Maximum thermal resistance (Junction to Lead)    | $R_{\theta JL}$ | 20    | $^{\circ}C/W$ |
| Maximum thermal resistance (Junction to Ambient) | $R_{\theta JA}$ | 80    | $^{\circ}C/W$ |

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

| Parameter  | Symbol | Value | Unit |
|--|--------|-------|------|
| Maximum instantaneous forward voltage @ $I_F=3.0A$ *                     | $V_F$  | 0.4   | V    |
| Maximum DC reverse current at rated reverse voltage @ $T_J=25^{\circ}C$  | $I_R$  | 0.2   | mA   |
| Maximum DC reverse current at rated reverse voltage @ $T_J=125^{\circ}C$ | $I_R$  | 50    | mA   |

\*: Pulse test, Pulse width 300us, duty cycle 1%, Typical Value is 0.36V

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

**Peak Forward Surge Current**

**Forward Derating Curve**

**Typical Forward Characteristics**

**Typical Reverse Characteristics**

**Package outline dimensions**
**SMA (DO-214AC)**


| Symbol | Dimensions in millimeter |      |
|--------|--------------------------|------|
|        | Min.                     | Max. |
| A      | 4.25                     | 4.65 |
| B      | 2.40                     | 2.80 |
| C      | 1.85                     | 2.15 |
| D      | 4.85                     | 5.35 |
| E      | 0.10                     | 0.30 |
| F      | 0.90                     | 1.50 |
| G      | 0.20 Max.                |      |
| H      | 1.90                     | 2.30 |
| I      | 1.35                     | 1.65 |