

**SCHOTTKY BARRIER DIODE**

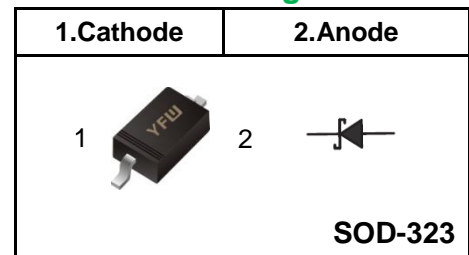
**Features**

- ◆ Low forward voltage
- ◆ Guard ring protected
- ◆ Small plastic SMD SOD-323 package

**Applications**

- ◆ Ultra high-speed switching
- ◆ Voltage clamping
- ◆ Protection circuits

**Pinning**



**Marking Code**

|                |           |
|----------------|-----------|
| <b>BAT54WS</b> | <b>S1</b> |
|----------------|-----------|

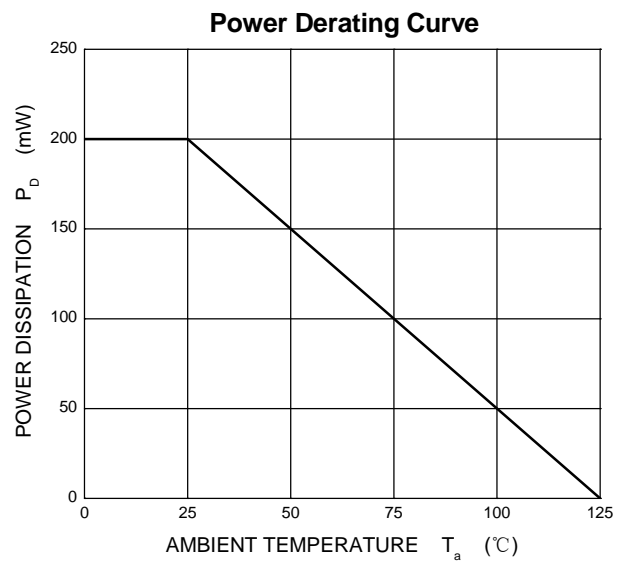
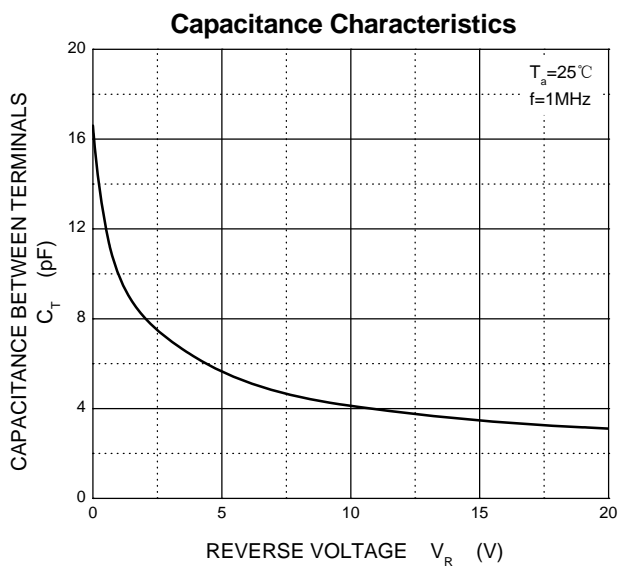
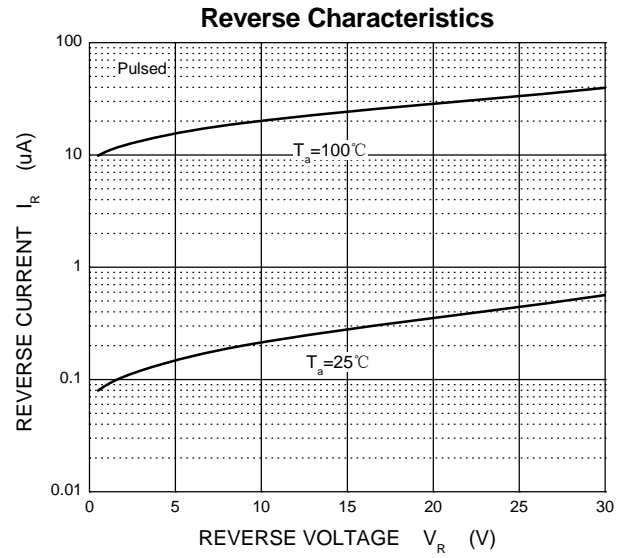
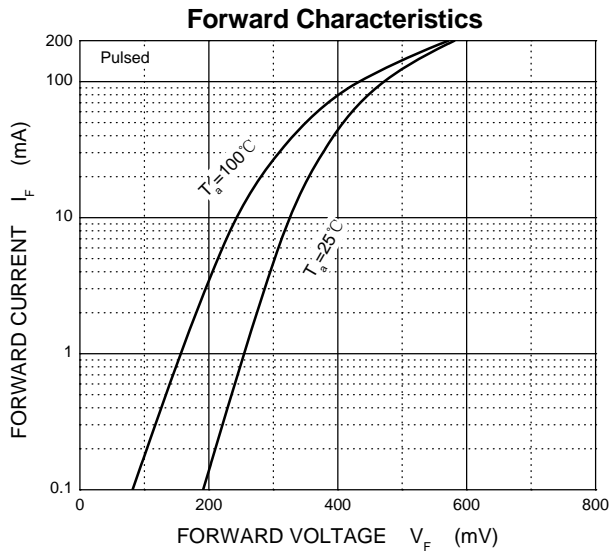
**Absolute Maximum Ratings (Ta=25°C)**

| Parameter                                   | Symbol     | Value         | Unit |
|---|------------|---------------|------|
| Reverse Voltage                             | $V_R$      | 30            | V    |
| Forward Current                             | $I_F$      | 200           | mA   |
| Repetitive Peak Forward Current             | $I_{FRM}$  | 300           | mA   |
| Peak Forward Surge Current ( $t_p = 10$ ms) | $I_{FSM}$  | 600           | mA   |
| Power Dissipation                           | $P_D$      | 230           | mW   |
| Thermal Resistance from Junction Ambient    | $R_{thJA}$ | 500           | K/W  |
| Junction Temperature                        | $T_J$      | 125           | °C   |
| Storage Temperature Range                   | $T_{stg}$  | - 65 to + 150 | °C   |

**Characteristics at Ta=25°C**

| Parameter  | Symbol   | Max.                            | Unit |
|--|----------|---------------------------------|------|
| Forward Voltage<br>at $I_F = 0.1$ mA<br>at $I_F = 1$ mA<br>at $I_F = 10$ mA<br>at $I_F = 30$ mA<br>at $I_F = 100$ mA | $V_F$    | 240<br>320<br>400<br>500<br>800 | mV   |
| Reverse Current<br>at $V_R = 25$ V   | $I_R$    | 2                               | μA   |
| Total Capacitance<br>at $V_R = 1$ V, $f = 1$ MHz   | $C_T$    | 10                              | pF   |
| Reverse Recovery Time<br>at $I_F = 10$ mA, $V_R = 6$ V, $I_R = 10$ mA, $R_L = 100$ Ω                                 | $t_{rr}$ | 6                               | ns   |

Typical Characteristics



**Ordering information**

| Package | Packing Description | Packing Quantity              |
|---------|---------------------|-------------------------------|
| SOD-323 | Tape/Reel, 7" reel  | 3000PCS/Reel 120000PCS/Carton |

**Package Dimensions**

**SOD-323**

| Dim. | Millimeter(mm) |      | mil  |      |
|------|----------------|------|------|------|
|      | Min.           | Max. | Min. | Max. |
| A    | 0.8            | 1.1  | 32   | 43   |
| C    | 0.08           | 0.15 | 3.1  | 5.9  |
| D    | 1.2            | 1.4  | 47   | 55   |
| E    | 1.4            | 1.8  | 63   | 70   |
| E1   | 2.55           | 2.75 | 100  | 108  |
| b    | 0.25           | 0.4  | 9.8  | 16   |
| L1   | 0.2            | 0.45 | 7.9  | 16   |
| A1   | -              | 0.2  | -    | 8    |
| ∠    | 9°             |      |      |      |

**The recommended mounting pad size**



Unit:  $\frac{\text{mm}}{\text{mil}}$

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