

## SCHOTTKY BARRIER RECTIFIERS

**Reverse Voltage - 40 V**

**Forward Current - 1 A**

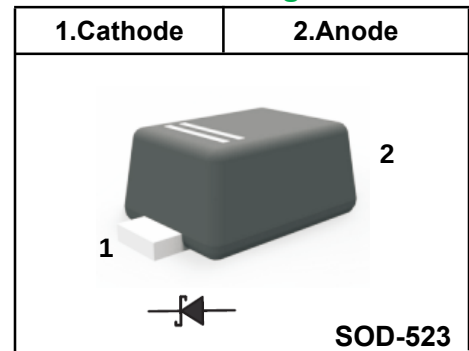
### FEATURES

- ◆Metal silicon junction, majority carrier conduction
- ◆Guarding for overvoltage protection
- ◆Low power loss, high efficiency
- ◆High current capability
- ◆low forward voltage drop
- ◆High surge capability
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- ◆Case: SOD-523
- ◆Terminals: Solderable per MIL-STD-750, Method 2026

### Pinning



### Marking Code

|                |           |
|----------------|-----------|
| <b>B5817WT</b> | <b>SL</b> |
|----------------|-----------|

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter                                                                                                     | Symbols         | B5817WT    | Units         |
|---------------------------------------------------------------------------------------------------------------|-----------------|------------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                                                       | $V_{RRM}$       | 40         | V             |
| Maximum RMS voltage                                                                                           | $V_{RMS}$       | 28         | V             |
| Maximum DC Blocking Voltage                                                                                   | $V_{DC}$        | 40         | V             |
| Maximum Average Forward Rectified Current                                                                     | $I_{F(AV)}$     | 1          | A             |
| Power dissipation                                                                                             | $P_D$           | 250        | mW            |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)             | $I_{FSM}$       | 5          | A             |
| Maximum Instantaneous Forward Voltage at 1 A                                                                  | $V_F$           | 0.6        | V             |
| Maximum Instantaneous Reverse Current at Rated $T_j = 25^{\circ}C$<br>DC Reverse Voltage $T_j = 100^{\circ}C$ | $I_R$           | 1<br>10    | mA            |
| Thermal Resistance, Junction to Ambient Air                                                                   | $R_{\theta JA}$ | 400        | $^{\circ}C/W$ |
| Typical Junction Capacitance                                                                                  | $C_j$           | 120        | pF            |
| Storage and Operating Junction Temperature Range                                                              | $T_j, T_{stg}$  | -55 ~ +125 | $^{\circ}C$   |

Typical Performance Characteristics

Fig.1 Power Derating Curve

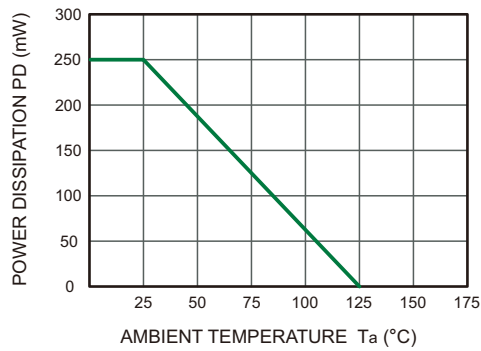


Fig.2 Typical Reverse Characteristics

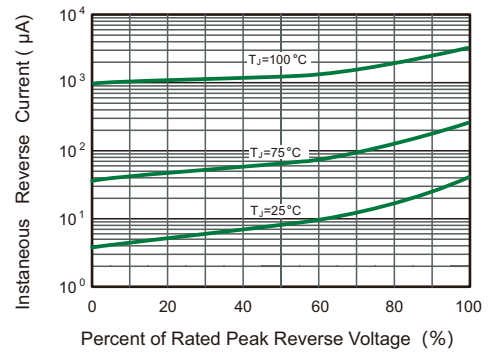


Fig.3 TYPICAL FORWARD VOLTAGE

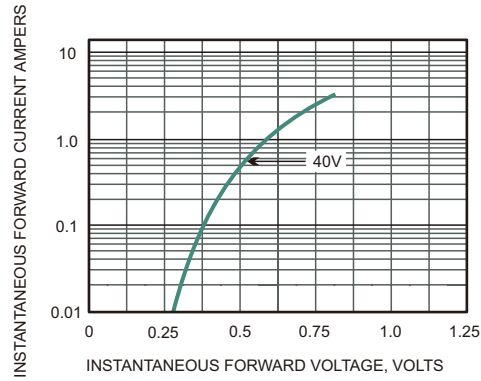
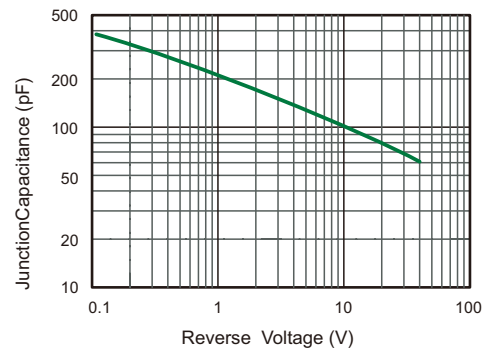


Fig.4 Typical Junction Capacitance



### Ordering information

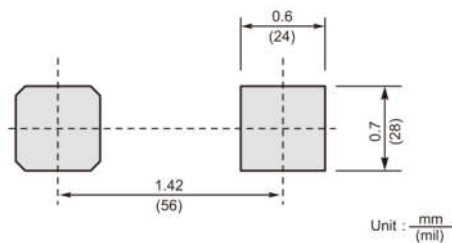
| Package | Packing Description | Packing Quantity              |
|---------|---------------------|-------------------------------|
| SOD-523 | Tape/Reel, 7" reel  | 3000PCS/Reel 120000PCS/Carton |

### Package Dimensions

#### SOD-523

| Dim. | Millimeter(mm) |      | mil            |      |
|------|----------------|------|----------------|------|
|      | Min.           | Max. | Min.           | Max. |
| A    | 0.51           | 0.77 | 20             | 30   |
| e    | 0.25           | 0.35 | 10             | 14   |
| C    | 0.08           | 0.15 | 3              | 6    |
| D    | 1.10           | 1.30 | 43             | 51   |
| E    | 0.75           | 0.99 | 30             | 39   |
| HE   | 1.50           | 1.70 | 59             | 67   |
| N    | 0.35ref        |      | 14ref          |      |
| L    | 0.2ref         |      | 8ref           |      |
| P    | R0.1 ALL ROUND |      | R4.0 ALL ROUND |      |
| ∠    | 10°            |      |                |      |

### The recommended mounting pad size



## Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.