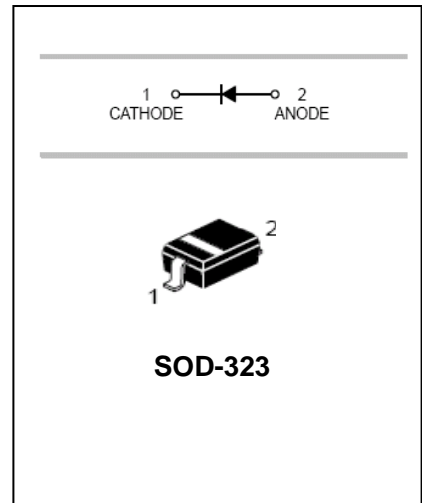


## Schottky Barrier Diode

## B5817WS-B5819WS

### FEATURES

- Extremely low  $V_F$ .
- Low stored charge, majority carrier conduction.
- Low power loss/high efficient



### APPLICATIONS

- For Use In Low Voltage, High Frequency Inverters.
- Free Wheeling, And Polarity Protection Applications.

### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| B5817WS  | SJ      | SOD-323      |
| B5818WS  | SK      | SOD-323      |
| B5819WS  | SL      | SOD-323      |

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Parameter                              | symbol          | B5817WS  | B5818WS | B5819WS | Unit |
|----------------------------------------|-----------------|----------|---------|---------|------|
| Non-Repetitive Peak reverse voltage    | $V_{RM}$        | 20       | 30      | 40      | V    |
| Peak repetitive Peak reverse voltage   | $V_{RRM}$       | 20       | 30      | 40      | V    |
| Working Peak Reverse voltage           | $V_{RWM}$       |          |         |         |      |
| DC Reverse Voltage                     | $V_R$           |          |         |         |      |
| RMS Reverse Voltage                    | $V_{R(RMS)}$    | 14       | 21      | 28      | V    |
| Average Rectified output Current       | $I_o$           | 1        |         |         | A    |
| Peak forward surge current@=8.3ms      | $I_{FSM}$       | 25       |         |         | A    |
| Repetitive Peak Forward Current        | $I_{FRM}$       | 625      |         |         | mA   |
| Power Dissipation                      | $P_d$           | 250      |         |         | mW   |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 500      |         |         | °C/W |
| Storage temperature                    | $T_{STG}$       | -65~+150 |         |         | °C   |

## Schottky Barrier Diode

## B5817WS-B5819WS

### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter                       | Symbol     | Test Condition   | MIN      | MAX   | UNIT |
|---------------------------------|------------|------------------|----------|-------|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R=1mA$        |          |       | V    |
|                                 |            | B5817WS          | 20       |       |      |
|                                 |            | B5818WS          | 30       |       |      |
| Reverse voltage leakage current | $I_R$      | $V_R=20V$        | B5817WS  |       | mA   |
|                                 |            | $V_R=30V$        | B5818WS  | 1     |      |
|                                 |            | $V_R=40V$        | B5819WS  |       |      |
| Forward voltage                 | $V_F$      | B5817WS          | $I_F=1A$ | 0.45  | V    |
|                                 |            |                  | $I_F=3A$ | 0.75  |      |
|                                 |            | B5818WS          | $I_F=1A$ | 0.55  |      |
|                                 |            |                  | $I_F=3A$ | 0.875 |      |
|                                 |            | B5819WS          | $I_F=1A$ | 0.6   |      |
|                                 |            |                  | $I_F=3A$ | 0.9   |      |
| Diode capacitance               | $C_D$      | $V_R=4V, f=1MHz$ |          | 120   | pF   |

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Fig. 1 - Forward Current Derating Curve

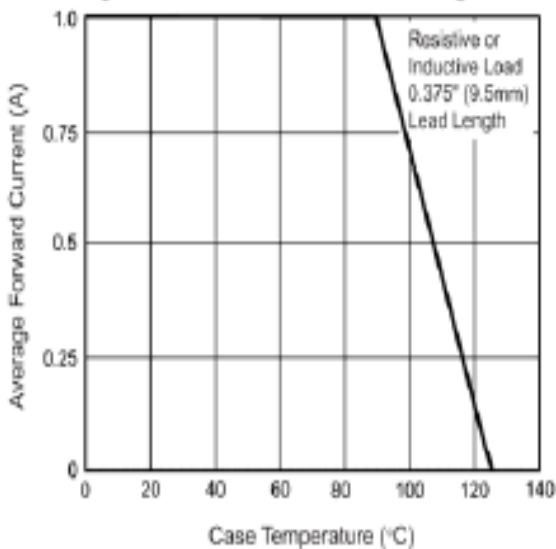
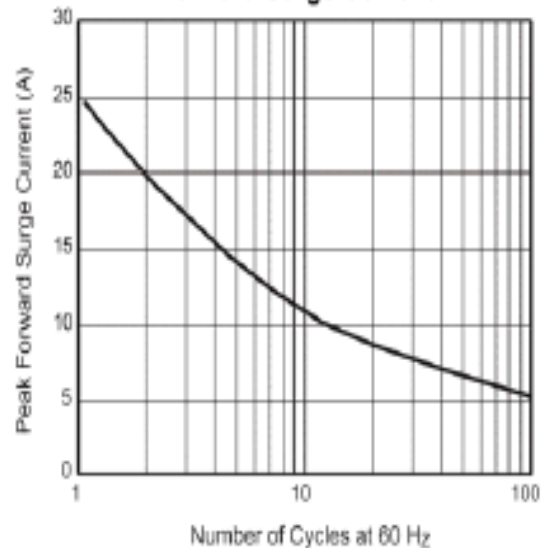


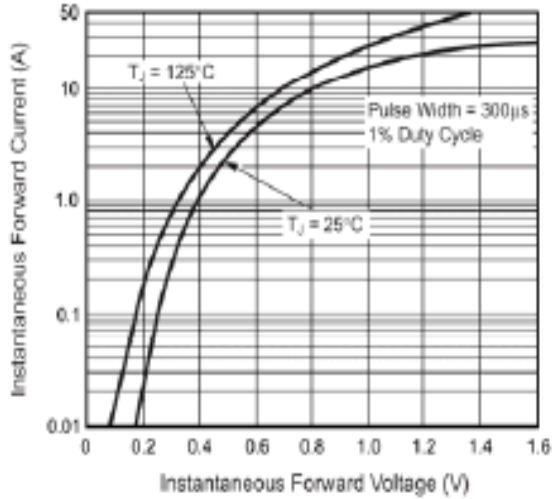
Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current



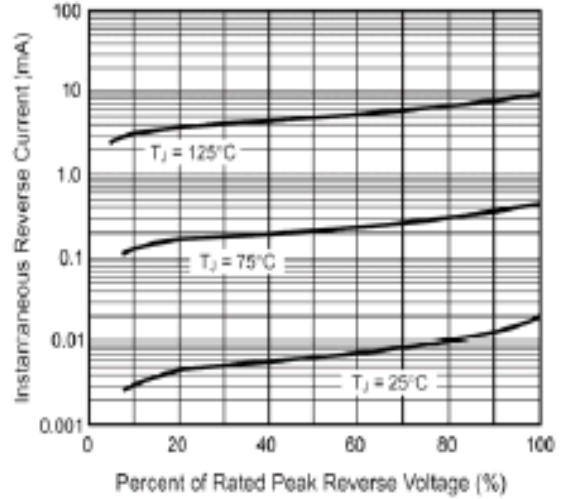
## Schottky Barrier Diode

## B5817WS-B5819WS

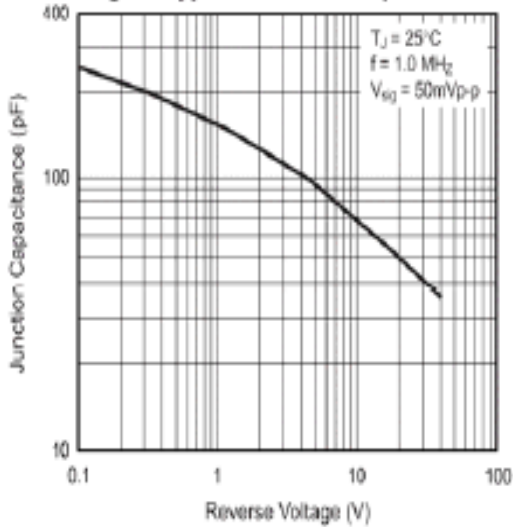
**Fig. 3 - Typical Instantaneous Forward Characteristics**



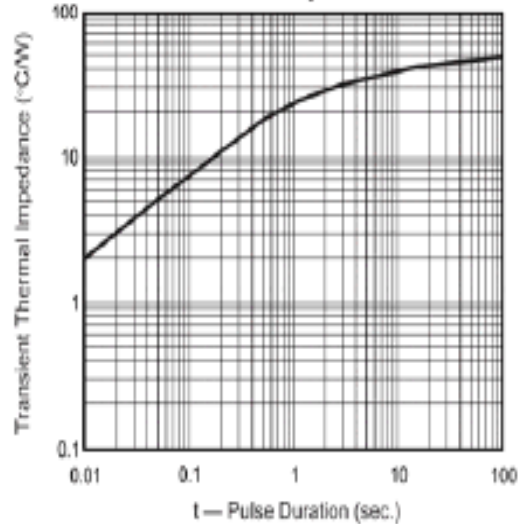
**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**



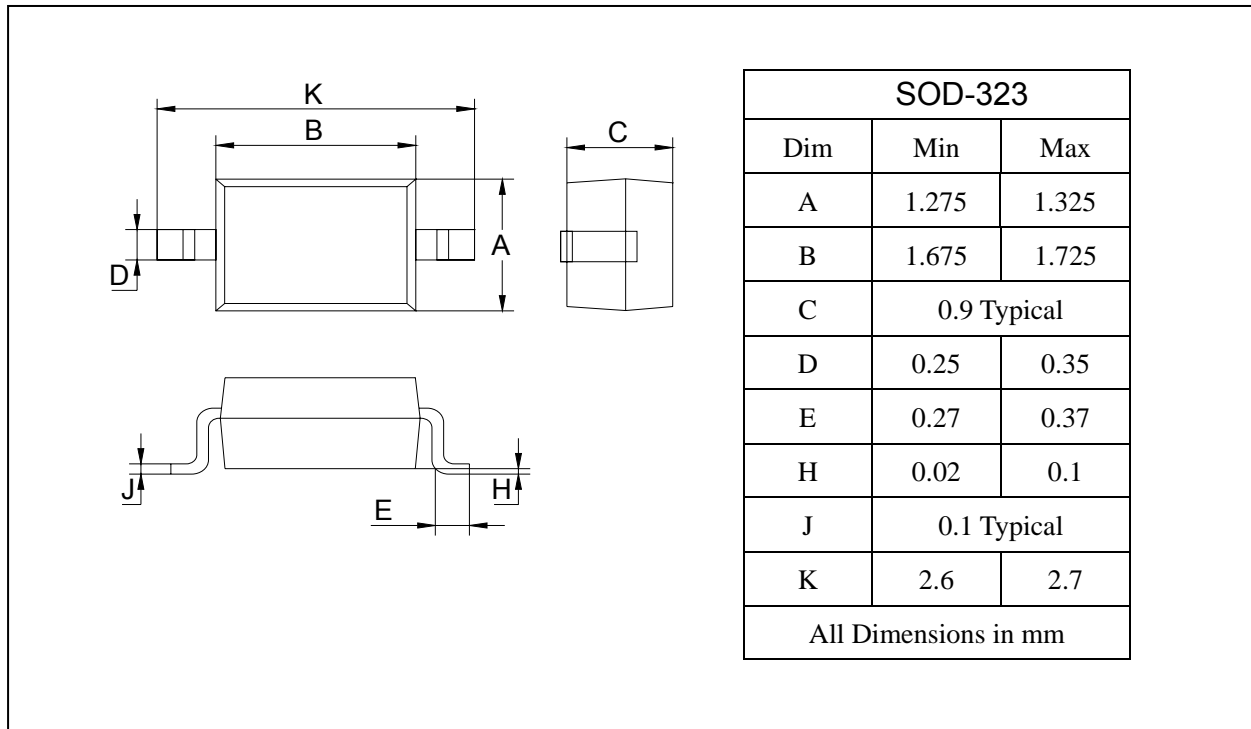
## Schottky Barrier Diode

## B5817WS-B5819WS

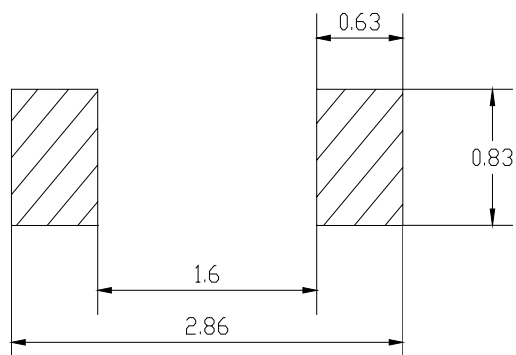
### PACKAGE OUTLINE

Plastic surface mounted package

SOD-323



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

| Device          | Package | Shipping       |
|-----------------|---------|----------------|
| B5817WS-B5819WS | SOD-323 | 3000/Tape&Reel |