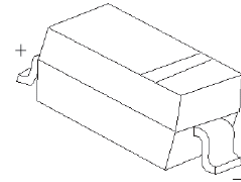




## B5817WS- B5819WS

### SOD-323 Plastic-Encapsulate Schottky Barrier Diode

SOD-323



#### FEATURES

For use in low voltage, high frequency inverters  
Free wheeling, and polarity protection applications.

#### MARKING:

B5817WS: SJ

B5818WS:SK

B5819WS: SL

#### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

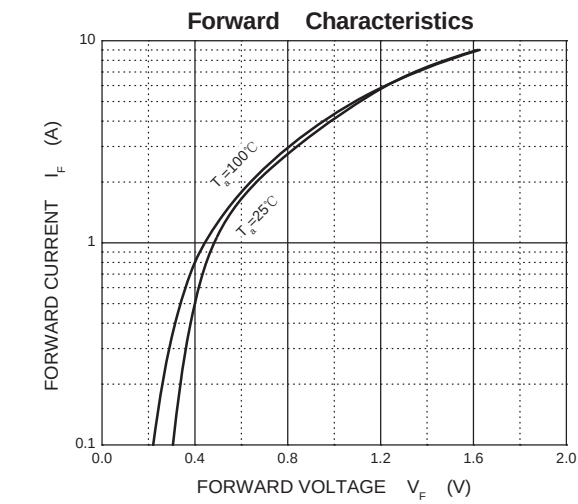
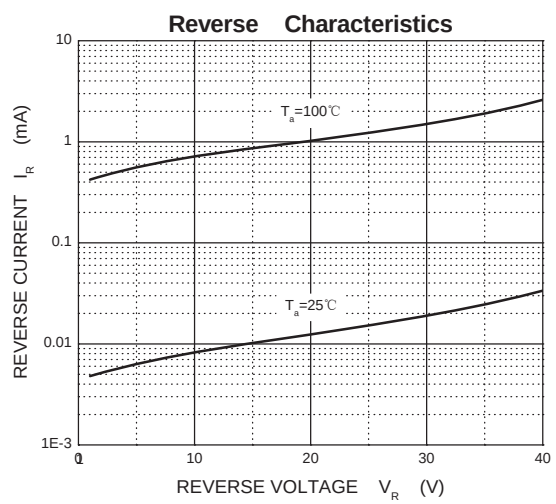
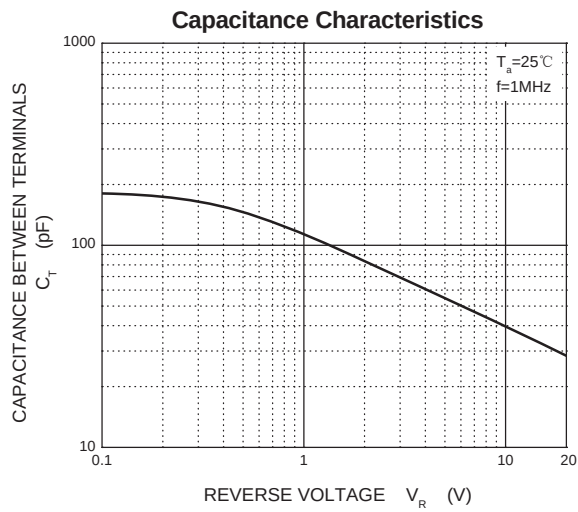
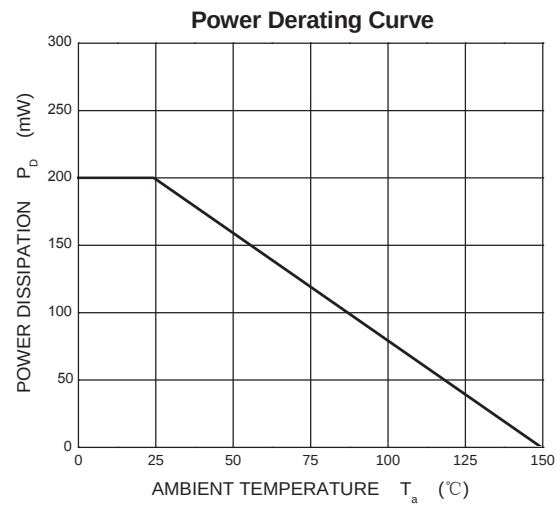
| Parameter                                                                                   | Symbol                          | B5817WS  | B5818WS | B5819WS | Unit |
|---------------------------------------------------------------------------------------------|---------------------------------|----------|---------|---------|------|
| Non-Repetitive Peak Reverse Voltage                                                         | $V_{RM}$                        | 20       | 30      | 40      | V    |
| Peak Repetitive Peak Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20       | 30      | 40      | V    |
| RMS Reverse Voltage                                                                         | $V_{R(RMS)}$                    | 14       | 21      | 28      | V    |
| Average Rectified Output Current                                                            | $I_O$                           | 1        |         |         | A    |
| Peak Forward Surge Current @t=8.3ms                                                         | $I_{FSM}$                       | 25       |         |         | A    |
| Repetitive Peak Forward Current                                                             | $I_{FRM}$                       | 1.5      |         |         | A    |
| Power Dissipation                                                                           | $P_d$                           | 200      |         |         | mW   |
| Thermal Resistance Junction to Ambient                                                      | $R_{\theta JA}$                 | 625      |         |         | °C/W |
| Storage Temperature                                                                         | $T_{STG}$                       | -55~+150 |         |         | °C   |

#### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

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

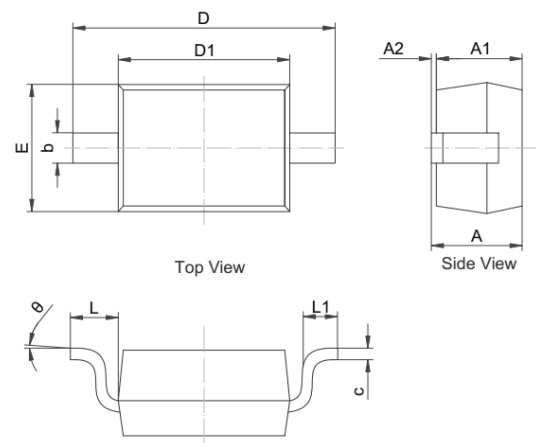
# Typical Characteristics

## B5817WS- B5819WS



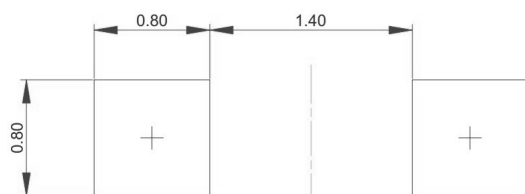
## PACKAGE OUTLINE

### SOD-323 Package Outline Drawing



|          | MILLIMETERS |       |       |
|----------|-------------|-------|-------|
|          | MIN         | NOM   | MAX   |
| A        | 0.800       | --    | 1.100 |
| A1       | 0.800       | --    | 0.900 |
| A2       | 0.000       | --    | 0.100 |
| b        | 0.250       | --    | 0.400 |
| c        | 0.080       | --    | 0.177 |
| D1       | 1.600       | 1.700 | 1.800 |
| D        | 2.300       | --    | 2.800 |
| E        | 1.150       | --    | 1.400 |
| L        | 0.475REF    |       |       |
| L1       | 0.100       | --    | 0.500 |
| $\theta$ | 0°          | --    | 8°    |

### Suggested Land Pattern



Unit: mm