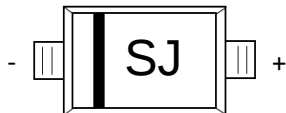
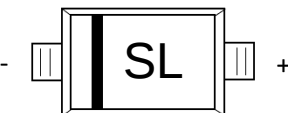


**Features**

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



SOD-323 top view

| B5817WSZ                                                                          | B5818WSZ                                                                          | B5819WSZ                                                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |
| Marking:SJ                                                                        | Marking:SK                                                                        | Marking:SL                                                                         |
|  |  |  |



Halogen-Free

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

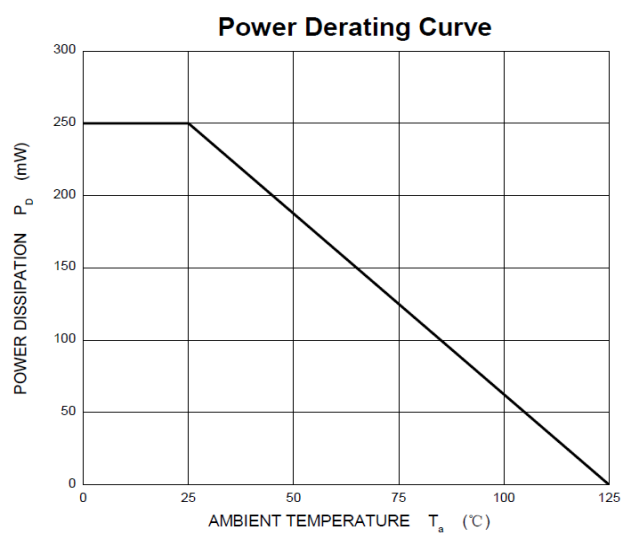
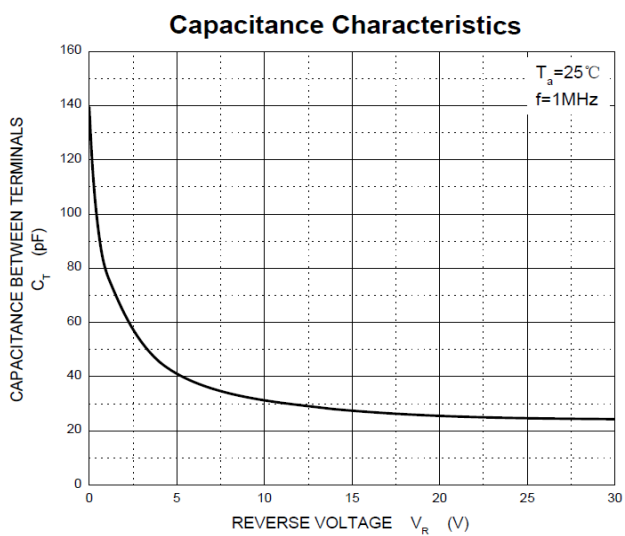
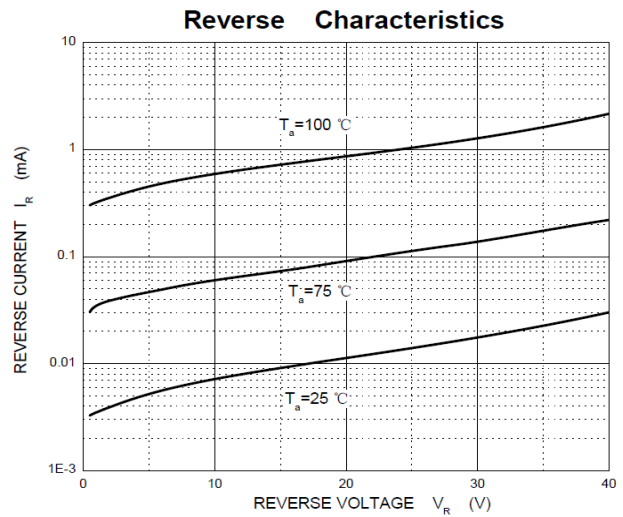
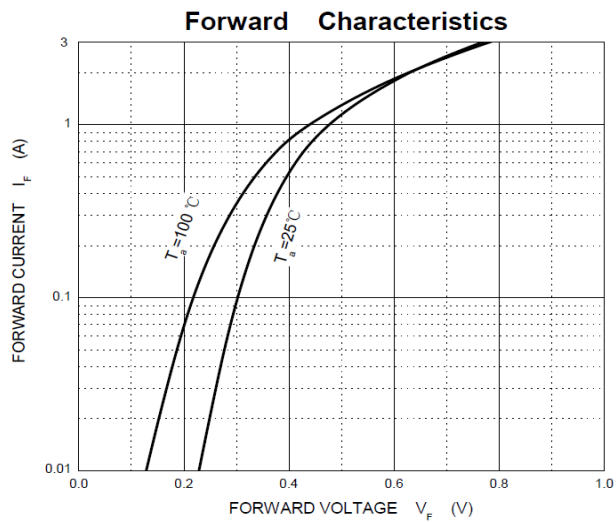
| Symbol          | Parameter                                          | B5817WSZ | B5818WSZ | B5819WSZ | Unit |
|-----------------|----------------------------------------------------|----------|----------|----------|------|
| $V_{RM}$        | Non-Repetitive Peak Reverse Voltage                | 20       | 30       | 40       | V    |
| $V_R$           | Reverse Voltage                                    | 20       | 30       | 40       | V    |
| $V_{RRM}$       | Peak Repetitive Reverse Voltage                    |          |          |          |      |
| $V_{RWM}$       | Working Peak Reverse Voltage                       |          |          |          |      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                                | 14       | 21       | 28       | V    |
| $I_O$           | Average Rectified Output Current                   | 1        |          |          | A    |
| $I_{FRM}$       | Repetitive peak forward current                    | 1.5      |          |          | A    |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current@t= 8.3ms | 9        |          |          | A    |
| $P_D$           | Power Dissipation                                  | 250      |          |          | mW   |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient        | 400      |          |          | °C/W |
| $T_J$           | OperationJunction temperature Range                | -40~+125 |          |          | °C   |
| $T_{stg}$       | Operation Junction and Storage Temperature Range   | -55~+150 |          |          | °C   |

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

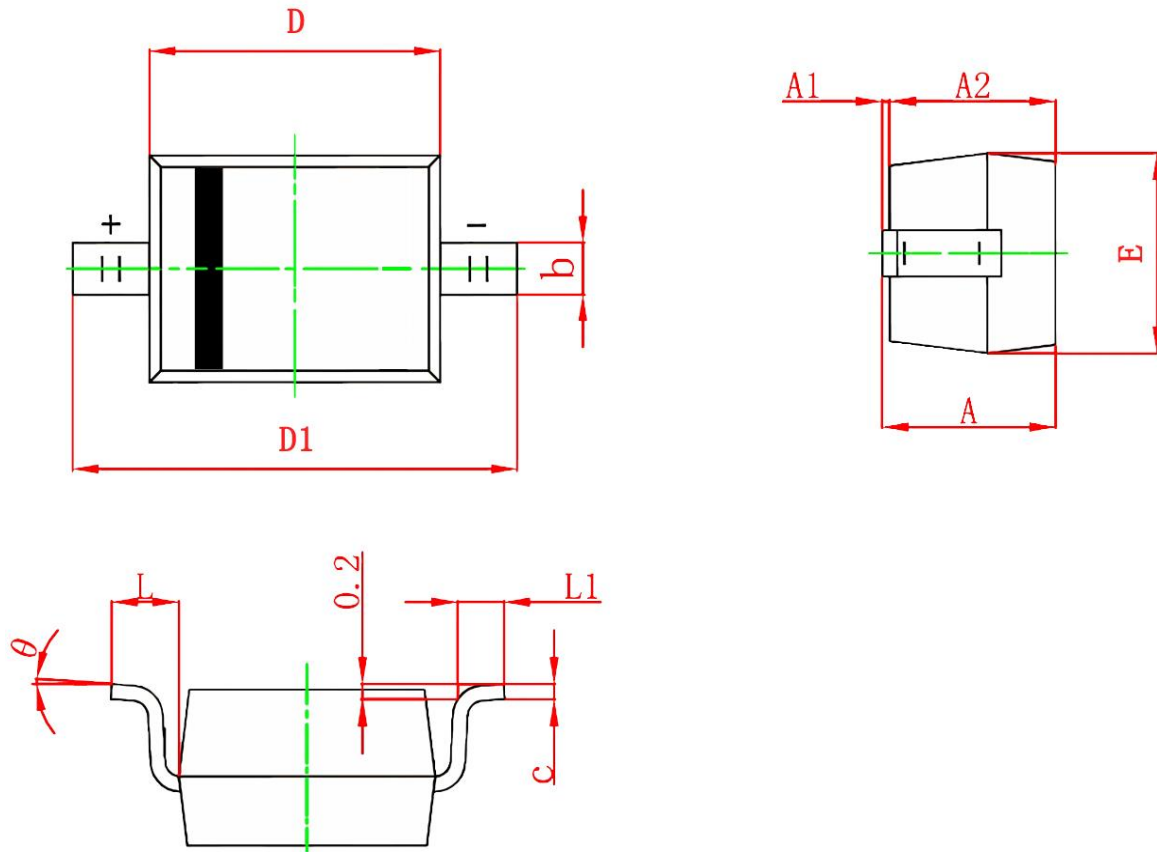
| Symbol     | Parameter                 | Condition          | Min | Typ | Max   | Unit |
|------------|---------------------------|--------------------|-----|-----|-------|------|
| $V_{(BR)}$ | Reverse breakdown voltage | $I_R=1mA$ B5817WSZ | 20  | --  | --    | V    |
|            |                           | $I_R=1mA$ B5818WSZ | 30  | --  | --    |      |
|            |                           | $I_R=1mA$ B5819WSZ | 40  | --  | --    |      |
| $I_R$      | Reverse current           | $V_R=20V$ B5817WSZ | --  | --  | 1     | mA   |
|            |                           | $V_R=30V$ B5818WSZ |     |     |       |      |
|            |                           | $V_R=40V$ B5819WSZ |     |     |       |      |
| $V_F$      | Forward voltage           | B5817WSZ $I_F=1A$  | --  | --  | 0.45  | V    |
|            |                           | B5817WSZ $I_F=3A$  | --  | --  | 0.75  |      |
|            |                           | B5818WSZ $I_F=1A$  | --  | --  | 0.55  | V    |
|            |                           | B5818WSZ $I_F=3A$  | --  | --  | 0.875 |      |
|            |                           | B5819WSZ $I_F=1A$  | --  | --  | 0.6   | V    |
|            |                           | B5819WSZ $I_F=3A$  | --  | --  | 0.9   |      |
| $C_D$      | Diode capacitance         | $V_R=4V, f=1MHz$   |     |     | 120   | pF   |

**Ordering Information (Example)**

| Type     | Package | Marking | Minimum | Inner Box | Outer   | Delivery |
|----------|---------|---------|---------|-----------|---------|----------|
| B5817WSZ | SOD-323 | SJ      | 3,000   | 45,000    | 180,000 | 7"reel   |
| B5818WSZ | SOD-323 | SK      | 3,000   | 45,000    | 180,000 | 7"reel   |
| B5819WSZ | SOD-323 | SL      | 3,000   | 45,000    | 180,000 | 7"reel   |

**Typical Operating Characteristics**


SOD-323 Package information



| Symbol | Dimensions in Millimeters(mm) |       | Dimensions In Inches |       |
|--------|-------------------------------|-------|----------------------|-------|
|        | Min                           | Max   | Min                  | Max   |
| A      | -                             | 1.100 | -                    | 0.043 |
| A1     | 0.000                         | 0.100 | 0.000                | 0.004 |
| A2     | 0.800                         | 1.000 | 0.031                | 0.039 |
| b      | 0.250                         | 0.350 | 0.010                | 0.014 |
| c      | 0.080                         | 0.150 | 0.003                | 0.006 |
| D      | 1.600                         | 1.800 | 0.063                | 0.071 |
| D1     | 2.500                         | 2.750 | 0.098                | 0.108 |
| E      | 1.200                         | 1.400 | 0.047                | 0.055 |
| L      | 0.475 REF                     |       | 0.019 REF            |       |
| L1     | 0.250                         | 0.400 | 0.010                | 0.016 |
| θ      | 0°                            | 8°    | 0°                   | 8°    |