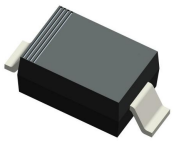
# THE DATASHEET OF

# B5819WS

Technical Data
Data Sheet N2030, Rev. -

# B5819WS SCHOTTKY BARRIER DIODE



SOD-323

## Features

- For use in low voltage, high frequency inverters
- Free wheeling, and polanty protection applications
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

## Circuit Diagram




## Mechanical Data

- Case: Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols marked on case
- Marking: B5819WS:SLS

## Maximum Ratings @$T_A$=25°C unless otherwise specified

| Parameter<br>Marking code | Symbol | B5819WS<br>SLS | Units |
|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 40 | V |
| Maximum DC blocking voltage | $V_R$ | | |
| Maximum RMS voltage | $V_{R(RMS)}$ | 28 | V |
| Average rectified output current | $I_O$ | 1.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 9 | A |
| Power Dissipation | $P_d$ | 250 | mW |
| Typical thermal resistance | $R_{\Theta JA}$ | 500 | °C/W |
| Operating junction and storage temperature range | $T_J$, $T_{STG}$ | -65 to +150 | °C |

## Electrical Characteristics @$T_A$=25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Units | Test Condition |
|---|---|---|---|---|---|
| Reverse Breakdown Voltage * | $V_{(BR)}$ | 40 | - | V | $I_R$=1mA |
| Forward Voltage * | $V_{FM}$ | - | 0.6 | V | $I_F$=1A |
| | | - | 0.9 | V | $I_F$=3A |
| Reverse Leakage Current * | $I_{RM}$ | - | 200 | μA | $V_R$=40V |
| Capacitance between terminals | $C_T$ | - | 120 | pF | $V_R$=4V,f=1.0MHz |

* Pulse width < 300 μs, duty cycle < 2%

## Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

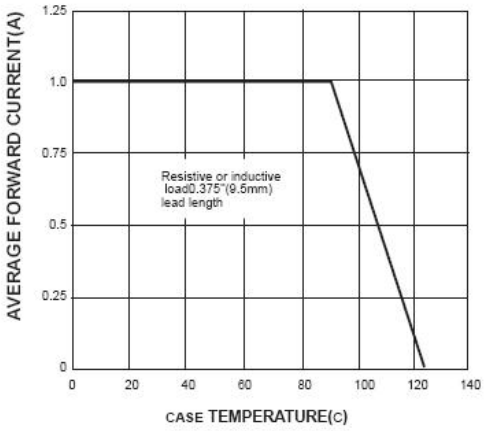



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

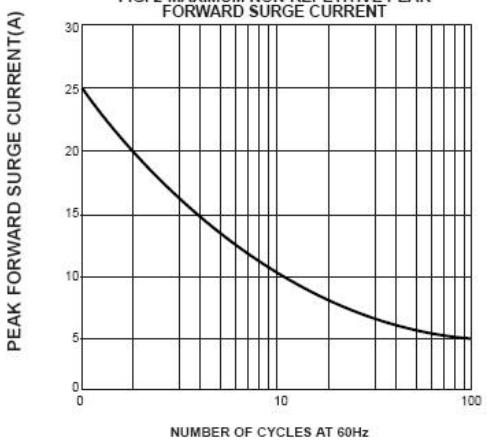



FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

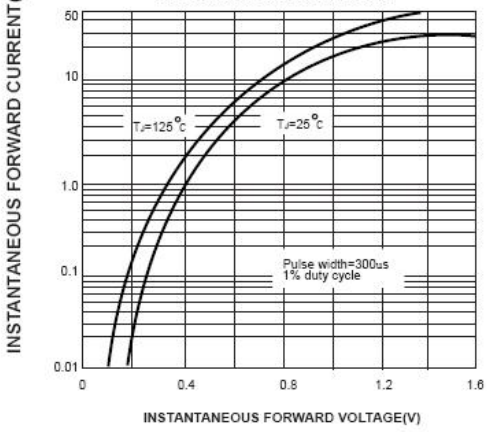



FIG. 4- TYPICAL REVERSE CHARACTERISTICS

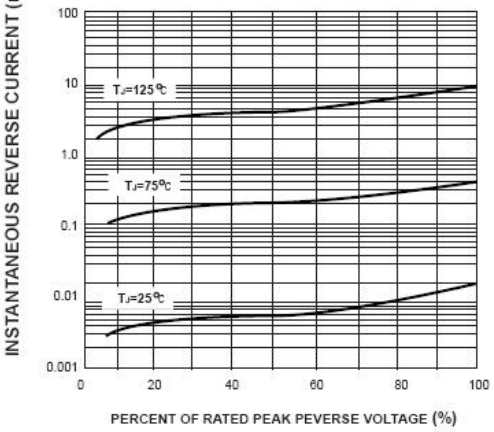



FIG. 5- TYPICAL JUNCTION CAPACITANCE

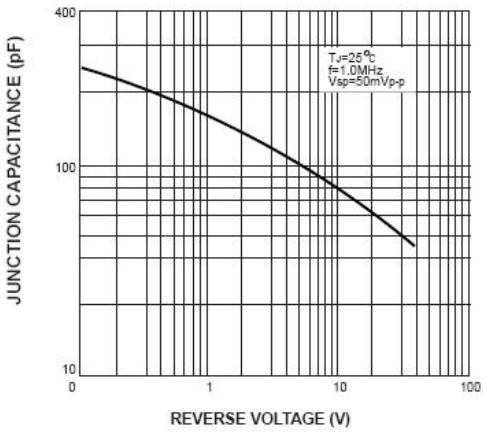
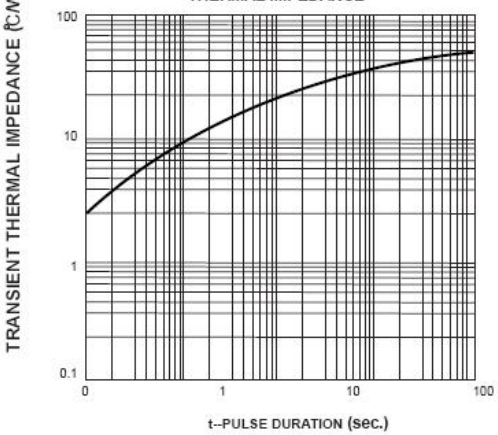


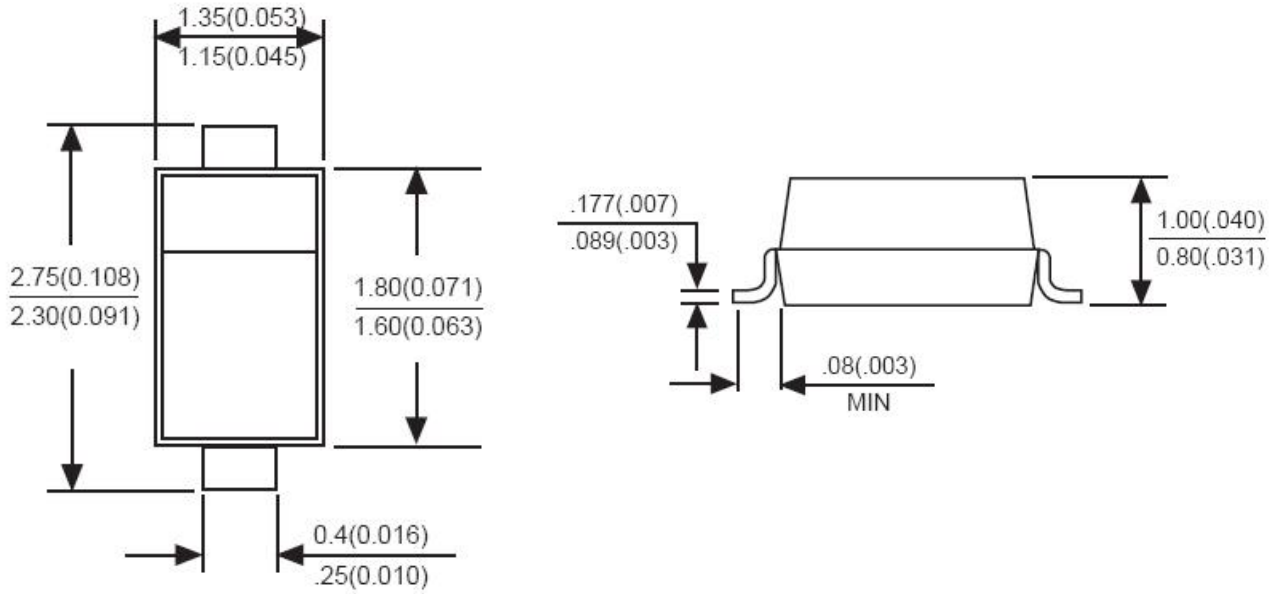

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



**Technical Data**
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RoHS

## Mechanical Dimensions SOD-323(Inches/Millimeters)




## Ordering Information

| Device | Package | Shipping |
|---|---|---|
| B5819WS | SOD-323 (Pb-Free) | 3000pcs / reel |

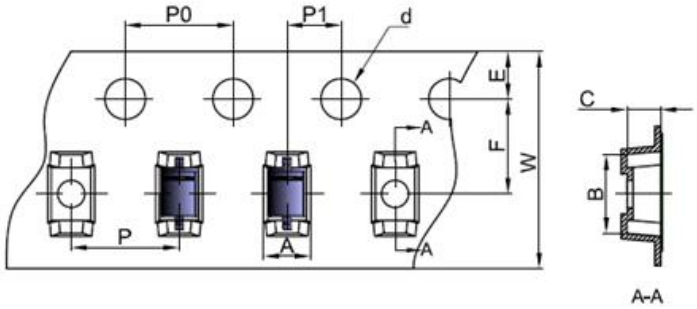
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram




SLS = Marking Code

## Carrier Tape Specification SOD-323




| SYMBOL | Millimeters | |
|---|---|---|
| | Min. | Max. |
| B | 2.85 | 2.95 |
| C | 1.20 | 1.30 |
| d | 1.40 | 1.60 |
| E | 1.65 | 1.85 |
| F | 3.40 | 3.60 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| W | 7.90 | 8.30 |

**Technical Data**
**Data Sheet N2030, Rev. -**

RoHS

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