



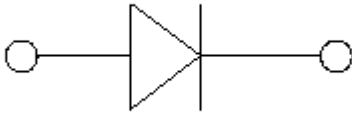
**THE DATASHEET OF
B5817WS**



Schottky Barrier Rectifier

Features

- V_R 20V/30V/40V
- I_{FAV} 1A



Typical Applications

- Extreme fast switches

Mechanical Data

- **Package:** SOD-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

| | Marking |
|---------|---------|
| B5817WS | SJ |
| B5818WS | SK |
| B5819WS | SL |

■ Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | VALUE | |
|--|-----------------|-------|-------------------------|-------------|----|
| | | | | | |
| Repetitive peak reverse voltage | V_{RRM} | V | | B5817WS | 20 |
| | | | | B5818WS | 30 |
| | | | | B5819WS | 40 |
| Reverse voltage | V_R | V | $I_R=1mA$ | B5817WS | 20 |
| | | | | B5818WS | 30 |
| | | | | B5819WS | 40 |
| Peak forward surge current | I_{FSM} | A | $t_p=8.3ms$, half sine | 10 | |
| Average forward current | I_{FAV} | A | $T_c=90^\circ C$ | 1 | |
| Maximum junction temperature | T_j | °C | | -65 to +125 | |
| Storage temperature range | T_{stg} | °C | | -65 to +150 | |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | °C /W | | 500 | |



B5817WS THRU B5819WS

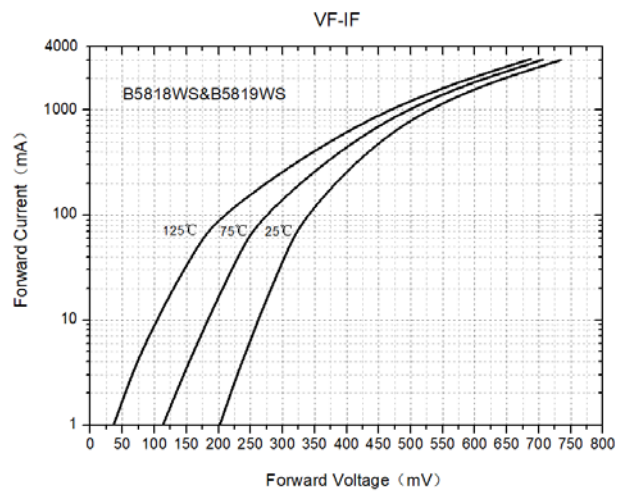
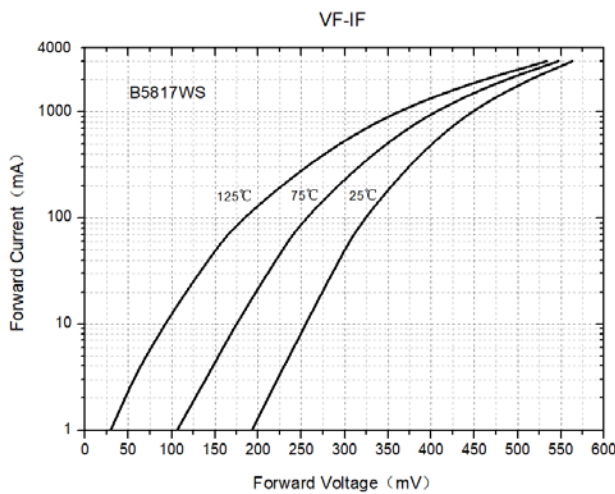
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | | VALUE | |
|---------------------------|-------------------|------|--|---|-------|--|
| Maximum Forward voltage | V _F | V | I _F =1A, T _J =25°C | B5817WS | 0.45 | |
| | | | | B5818WS | 0.55 | |
| | | | | B5819WS | 0.60 | |
| | V _F | V | I _F =3A, T _J =25°C | B5817WS | 0.75 | |
| | | | | B5818WS | 0.875 | |
| | | | | B5819WS | 0.90 | |
| Maximum Reverse current | I _R | μA | B5817WS | V _R =20V, T _A =25°C | 200 | |
| | | | B5818WS | V _R =30V, T _A =25°C | 40 | |
| | | | B5819WS | V _R =40V, T _A =25°C | 40 | |
| Minimum Breakdown voltage | V _(BR) | V | I _R =1mA | B5817WS | 20 | |
| | | | | B5818WS | 30 | |
| | | | | B5819WS | 40 | |
| Maximum Diode capacitance | C _D | pF | V _R =4V, f =1MHz | | 120 | |

■ Ordering Information (Example)

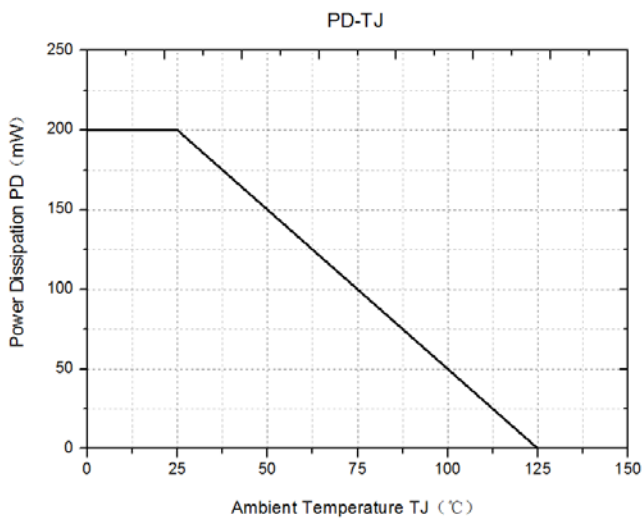
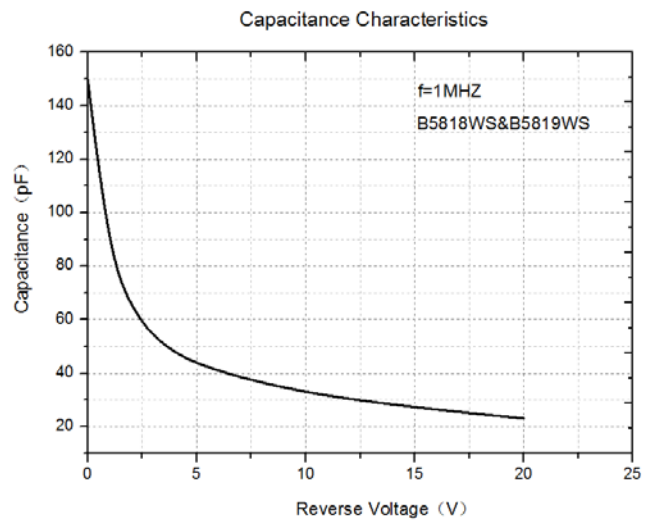
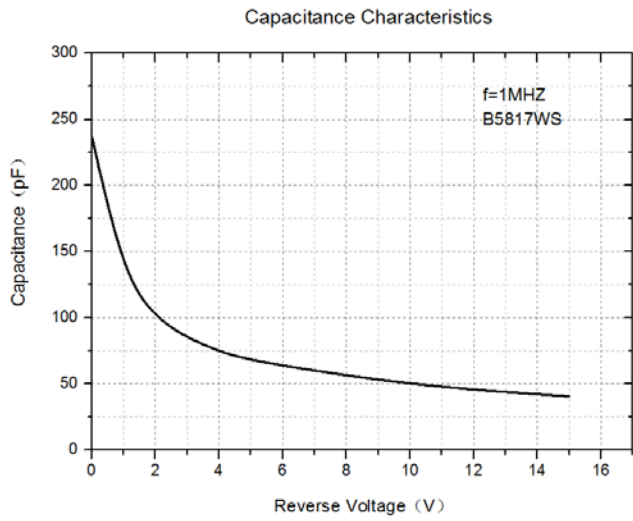
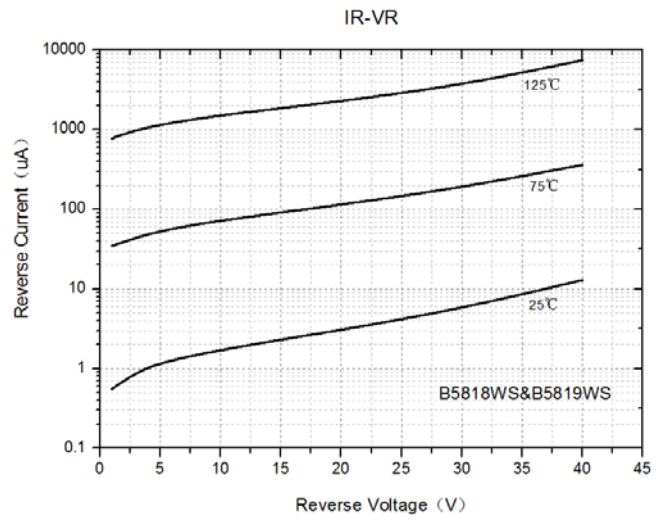
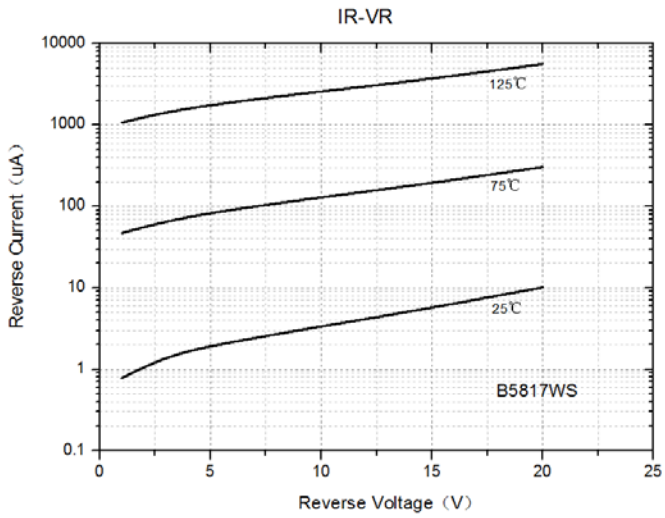
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| B5817WS Thru B5819WS | F2 | Approximate 0.004 | 3000 | 30000 | 120000 | 7" reel |

■ Characteristics (Typical)





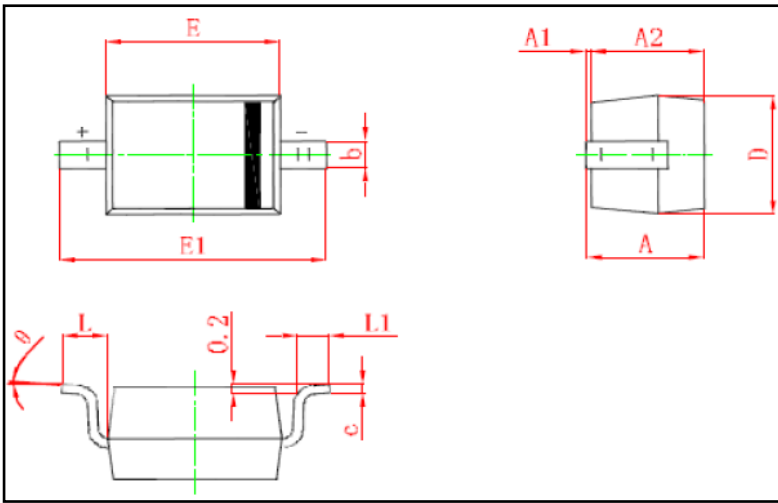
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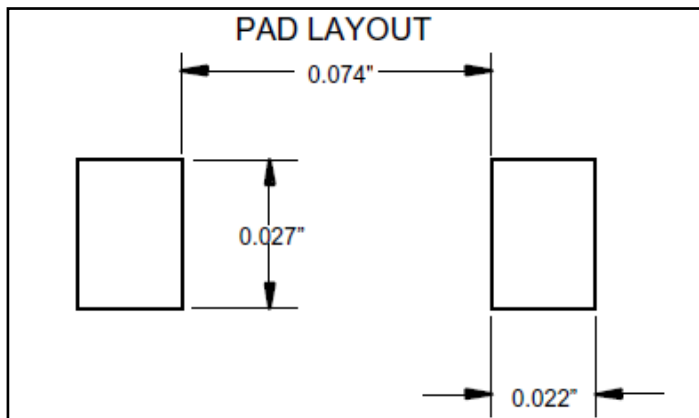
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■ Outline Dimensions



| Symbol | Min. (mm) | Max. (mm) |
|----------|-----------|-----------|
| A | | 1.000 |
| A1 | 0.000 | 0.100 |
| A2 | 0.800 | 0.900 |
| b | 0.250 | 0.400 |
| c | 0.080 | 0.150 |
| D | 1.200 | 1.400 |
| E | 1.600 | 1.800 |
| E1 | 2.500 | 2.700 |
| L | 0.475REF | |
| L1 | 0.250 | 0.400 |
| θ | 0° | 8° |

■ Soldering Footprint



Unit: inches



B5817WS THRU B5819WS

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