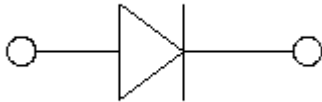


Schottky Barrier Rectifier

Features

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



Typical Applications

- Extreme fast switches

Mechanical Data

- **Package:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

| | Marking |
|--------|---------|
| B5817W | SJ |
| B5818W | SK |
| B5819W | SL |

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

| PARAMETER | SYMBOL | UNIT | Conditions | VALUE | |
|---|-----------------|-------|-------------------------|-------------|----|
| Repetitive peak reverse voltage | V_{RRM} | V | | B5817W | 20 |
| | | | | B5818W | 30 |
| | | | | B5819W | 40 |
| Reverse voltage | V_R | V | $I_R=1mA$ | B5817W | 20 |
| | | | | B5818W | 30 |
| | | | | B5819W | 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(*Note) | $R_{\theta JA}$ | °C /W | | 500 | |

*Note: Device mounted on PCB (7.6mm*9.4mm*0.87mm)



B5817W THRU B5819W

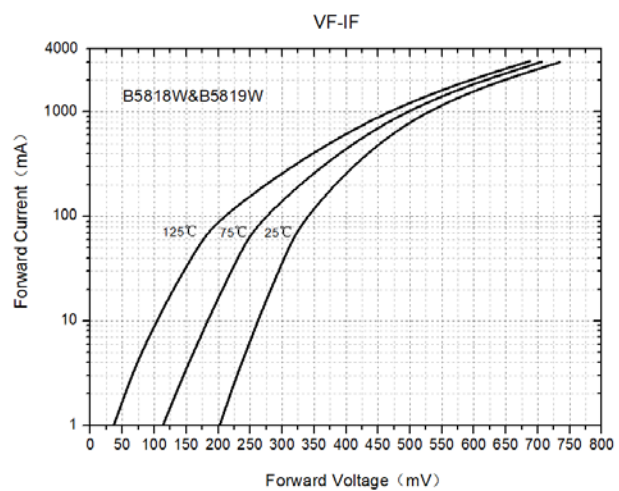
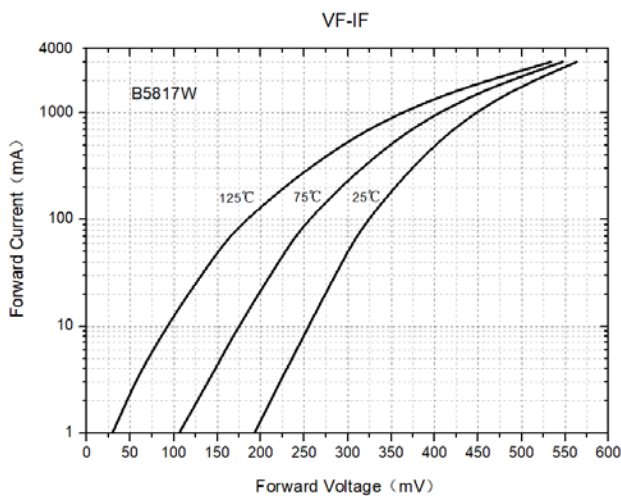
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | | VALUE | |
|---------------------------|-------------------|------|--|---|-------|--|
| Maximum Forward voltage | V _F | V | I _F =1A, T _J =25°C | B5817W | 0.45 | |
| | | | | B5818W | 0.55 | |
| | | | | B5819W | 0.60 | |
| | V _F | V | I _F =3A, T _J =25°C | B5817W | 0.75 | |
| | | | | B5818W | 0.875 | |
| | | | | B5819W | 0.90 | |
| Maximum Reverse current | I _R | uA | B5817W | V _R =20V, T _A =25°C | 200 | |
| | | | B5818W | V _R =30V, T _A =25°C | 40 | |
| | | | B5819W | V _R =40V, T _A =25°C | 40 | |
| Minimum Breakdown voltage | V _(BR) | V | I _R =1mA | B5817W | 20 | |
| | | | | B5818W | 30 | |
| | | | | B5819W | 40 | |
| Maximum Diode capacitance | C _D | pF | V _R =4V, f =1MHz | | 120 | |

■ Ordering Information (Example)

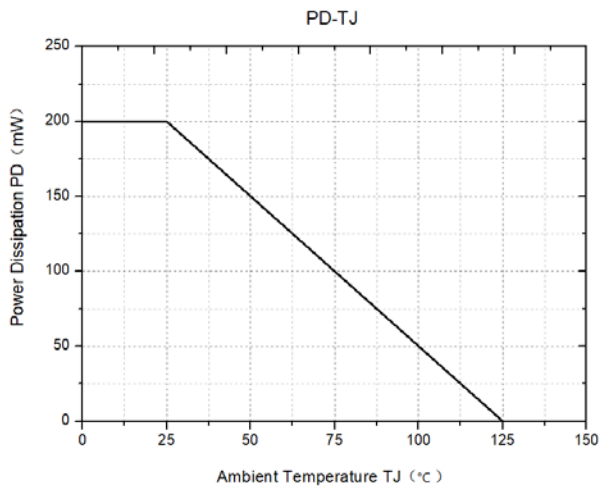
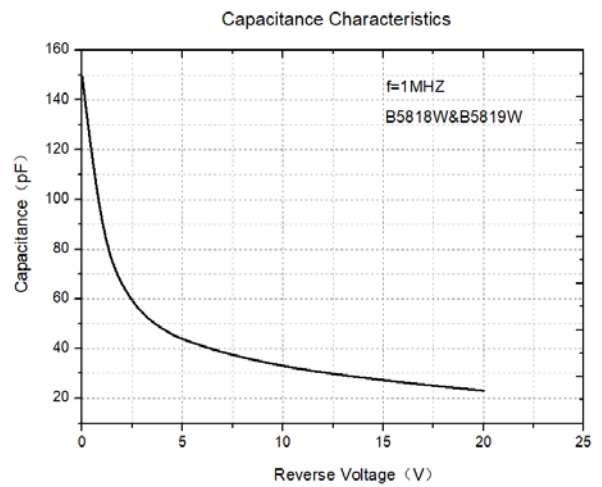
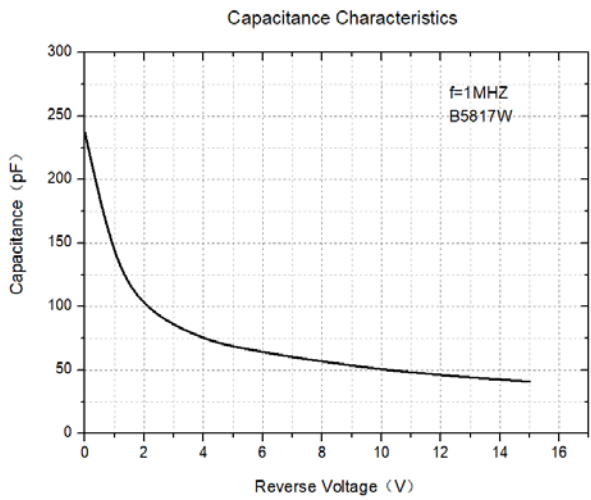
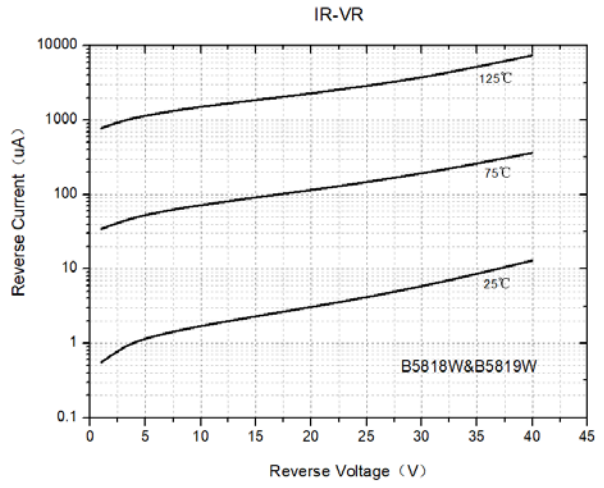
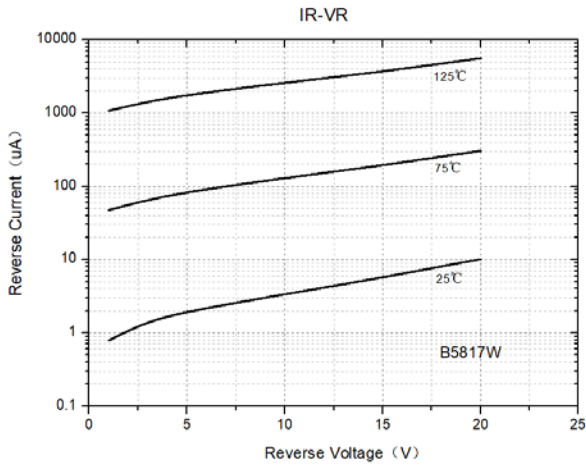
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| B5817W Thru B5819W | F2 | Approximate 0.011 | 3000 | 30000 | 120000 | 7" reel |

■ Characteristics (Typical)





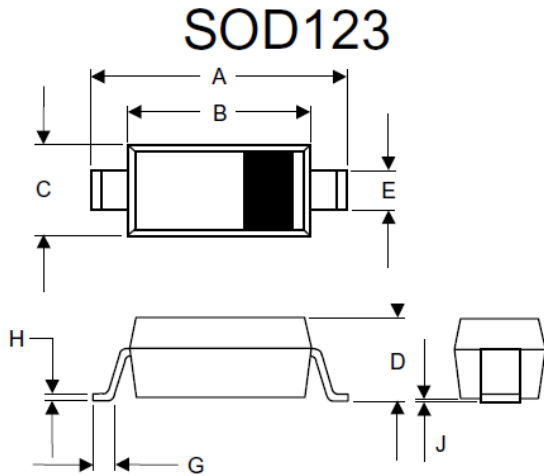
B5817W THRU B5819W





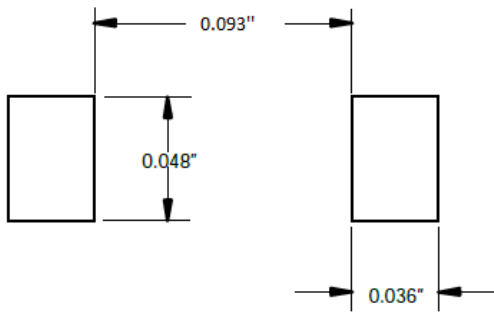
B5817W THRU B5819W

■ SOD-123 Package Outline Dimensions



| DIM | DIMENSIONS | | | |
|-----|------------|-------|------|------|
| | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | 0.140 | 0.152 | 3.55 | 3.85 |
| B | 0.100 | 0.112 | 2.55 | 2.85 |
| C | 0.055 | 0.071 | 1.40 | 1.80 |
| D | -- | 0.053 | -- | 1.35 |
| E | 0.012 | 0.031 | 0.30 | 0.78 |
| G | 0.006 | -- | 0.15 | -- |
| H | -- | 0.010 | -- | 0.25 |
| J | -- | 0.006 | -- | 0.15 |

■ SOD-123 Soldering Footprint



Unit: inches



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