

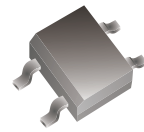
## B05S-HF Thru. B10S-HF

**Reverse Voltage: 50 to 1000 Volts**

**Forward Current: 0.8 A**

**RoHS Device**

**Halogen Free**

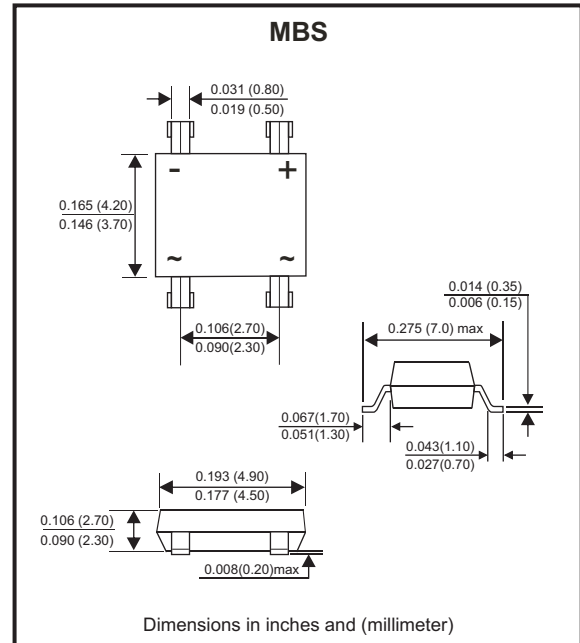


### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product.
- Pb free product.
- UL recognized file # E349301 

### Mechanical data

- Polarity: Symbol molded on body.
- Weight: 0.125 grams.
- Mounting position: Any.



### Maximum Rating And Electrical Characteristics

Rating at  $T_A=25^{\circ}\text{C}$ , unless otherwise noted.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Parameter                                                                                                  |                     | Symbol            | B05S-HF     | B1S-HF | B2S-HF | B4S-HF | B6S-HF | B8S-HF | B10S-HF | Unit |
|------------------------------------------------------------------------------------------------------------|---------------------|-------------------|-------------|--------|--------|--------|--------|--------|---------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                     |                     | V <sub>RRM</sub>  | 50          | 100    | 200    | 400    | 600    | 800    | 1000    | V    |
| Maximum RMS Voltage                                                                                        |                     | V <sub>RMS</sub>  | 35          | 70     | 140    | 280    | 420    | 560    | 700     | V    |
| Maximum DC Blocking Voltage                                                                                |                     | V <sub>DC</sub>   | 50          | 100    | 200    | 400    | 600    | 800    | 1000    | V    |
| Maximum Average Forward Rectified Current (Note 1)<br>@T <sub>A</sub> =40°C                                |                     | I <sub>(AV)</sub> | 0.8         |        |        |        |        |        |         | A    |
| Peak Forward Surge Current, 8.3mS single half sine-wave, superimposed on rated load (JEDEC Method)         |                     | I <sub>FSM</sub>  | 30          |        |        |        |        |        |         | A    |
| Peak Forward Voltage at 0.8A DC                                                                            |                     | V <sub>F</sub>    | 1.1         |        |        |        |        |        |         | V    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>@T <sub>J</sub> =25°C<br>@T <sub>J</sub> =125°C |                     | I <sub>R</sub>    | 5.0<br>500  |        |        |        |        |        |         | μA   |
| Typical Junction Capacitance per element (Note 2)                                                          |                     | C <sub>J</sub>    | 15          |        |        |        |        |        |         | pF   |
| Typical Thermal Resistance                                                                                 | Junction to ambient | R <sub>θJA</sub>  | 125         |        |        |        |        |        |         | °C/W |
|                                                                                                            | Junction to case    | R <sub>θJC</sub>  | 75          |        |        |        |        |        |         |      |
| Operating Temperature Range                                                                                |                     | T <sub>J</sub>    | -55 to +150 |        |        |        |        |        |         | °C   |
| Storage Temperature Range                                                                                  |                     | T <sub>STG</sub>  | -55 to +150 |        |        |        |        |        |         | °C   |

Notes: 1. Mounted on P.C. Board.  
2. Measured at 1.0MHz and applied reverse voltage of 4V DC.

Company reserves the right to improve product design , functions and reliability without notice.

REV:C

## RATING AND CHARACTERISTIC CURVES (B05S-HF thru. B10S-HF)

Fig.1 - Forward Current Derating Curve

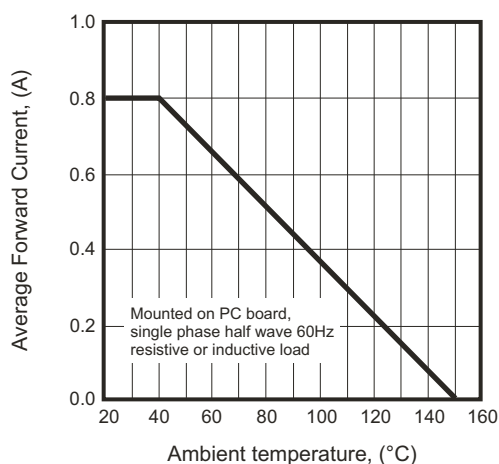


Fig.2 - Maximum Non-Repetitive Surge Current

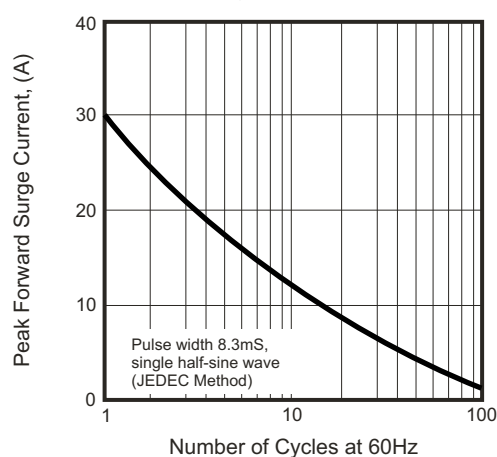


Fig.3 - Typical Reverse Characteristics

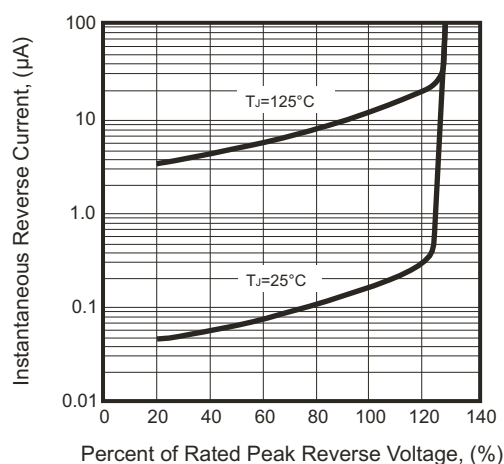


Fig.4 - Typical Forward Characteristics

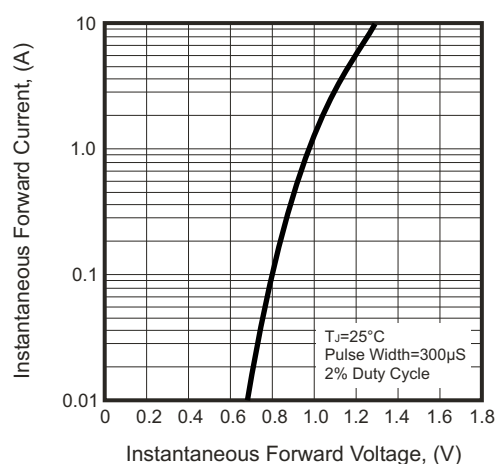
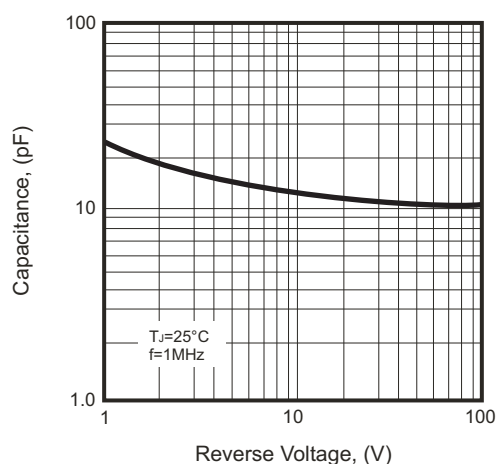


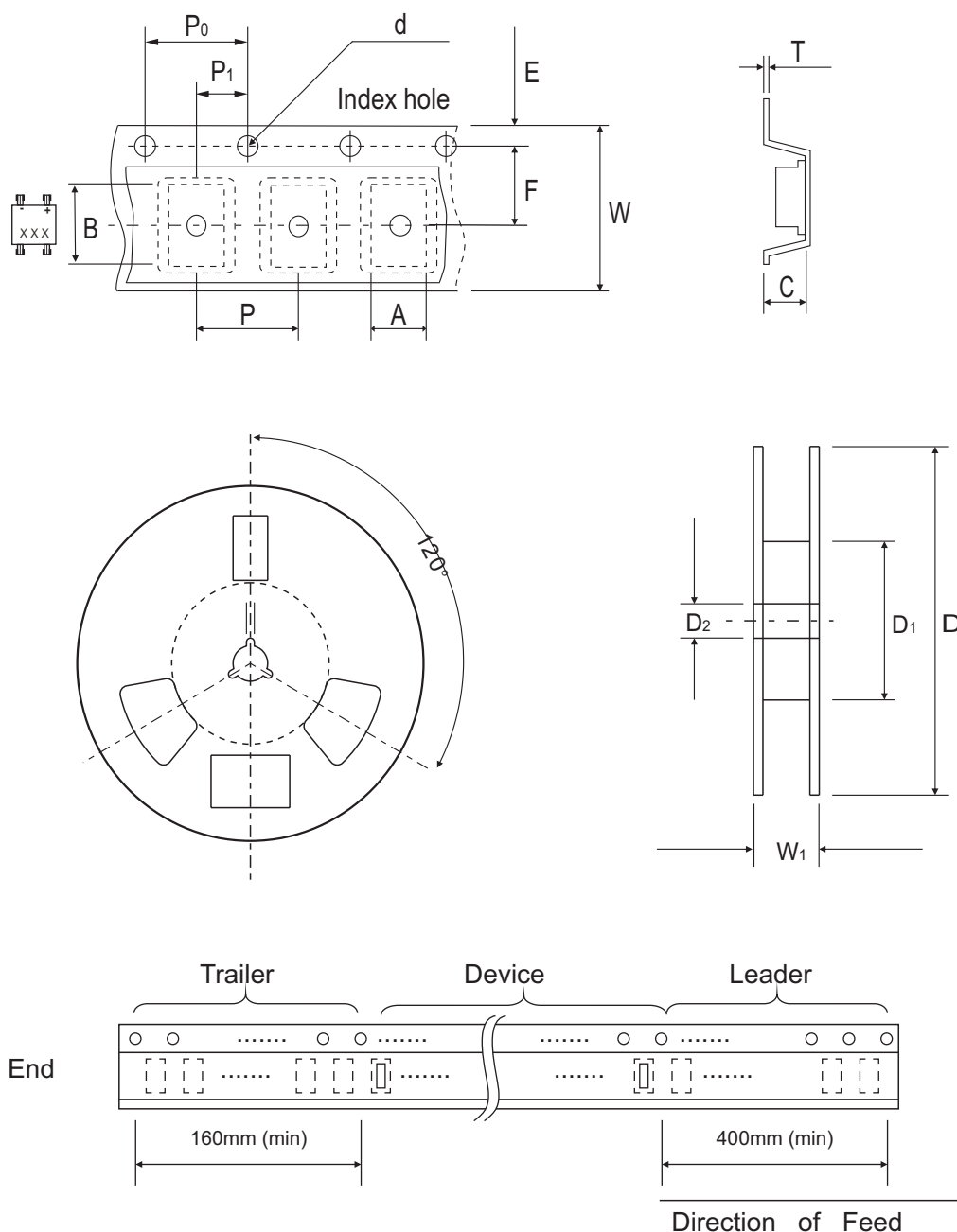
Fig.5 - Typical Junction Capacitance



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## Reel Taping Specification



| MBS | SYMBOL | A                 | B                 | C                 | d                 | D   | D1         | D2                |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-----|------------|-------------------|
|     | (mm)   | $4.90 \pm 0.10$   | $7.24 \pm 0.10$   | $3.33 \pm 0.10$   | $1.55 \pm 0.05$   | 330 | 50.0 MIN.  | $13.00 \pm 0.20$  |
|     | (inch) | $0.193 \pm 0.004$ | $0.285 \pm 0.004$ | $0.131 \pm 0.004$ | $0.061 \pm 0.002$ | 13  | 1.969 MIN. | $0.512 \pm 0.008$ |

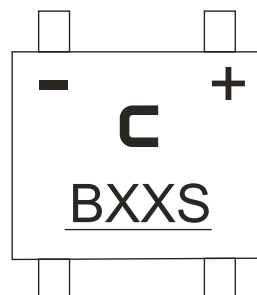
| MBS | SYMBOL | E                 | F                 | P                 | $P_0$             | $P_1$             | T     | W                 | $W_1$       |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|-------------------|-------------|
|     | (mm)   | $1.75 \pm 0.10$   | $5.50 \pm 0.05$   | $8.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.05$   | 0.30  | $12.00 \pm 0.30$  | 12.00~14.40 |
|     | (inch) | $0.069 \pm 0.004$ | $0.217 \pm 0.002$ | $0.315 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.002$ | 0.012 | $0.472 \pm 0.012$ | 0.472~0.657 |

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REV:C

## Marking Code

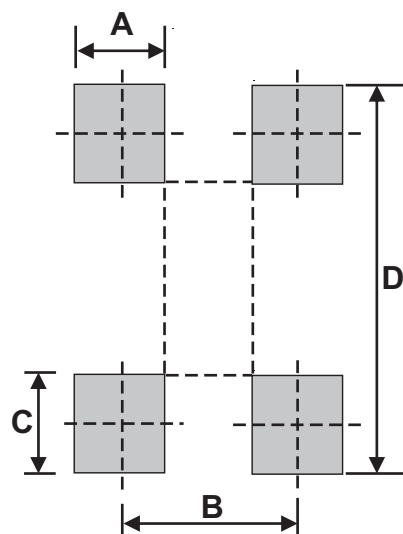
| Part Number | Marking code |
|-------------|--------------|
| B05S-HF     | B05S         |
| B1S-HF      | B1S          |
| B2S-HF      | B2S          |
| B4S-HF      | B4S          |
| B6S-HF      | B6S          |
| B8S-HF      | B8S          |
| B10S-HF     | B10S         |



X / XX = Product type marking code

## Suggested PAD Layout

| SIZE | MBS     |          |
|------|---------|----------|
|      | (mm)    | (inch)   |
| A    | 0.82MIN | 0.032MIN |
| B    | 2.55REF | 0.100REF |
| C    | 0.92MIN | 0.036MIN |
| D    | 7.00MAX | 0.276MAX |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| MBS       | 3,000           | 13                  |

# Mouser Electronics

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