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## SMD Glass Passivated Bridge Rectifiers

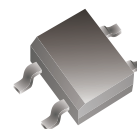


# B05S-G Thru. B10S-G


Reverse Voltage: 50 to 1000 Volts

Forward Current: 0.8 A

RoHS Device

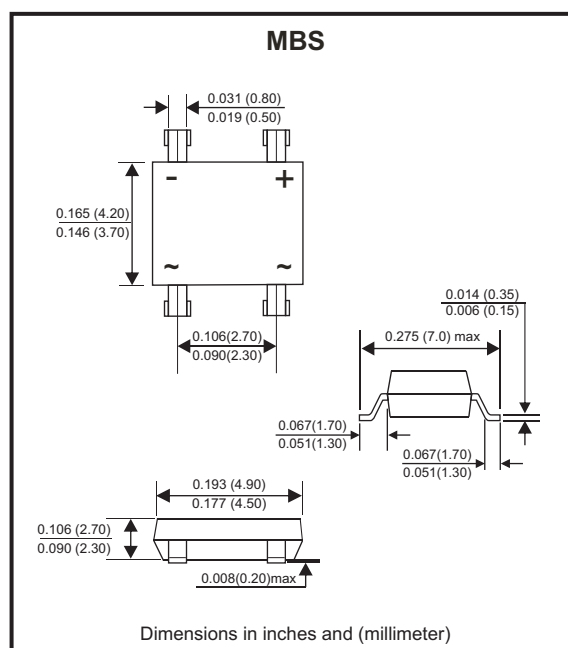


### Features

- 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-G          | B1S-G | B2S-G | B4S-G | B6S-G | B8S-G | B10S-G | Unit                 |
|--|---------------------|-----------------|-------|-------|-------|-------|-------|--------|----------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$           | 50              | 100   | 200   | 400   | 600   | 800   | 1000   | V                    |
| Maximum RMS Voltage  | $V_{RMS}$           | 35              | 70    | 140   | 280   | 420   | 560   | 700    | V                    |
| Maximum DC Blocking Voltage  | $V_{DC}$            | 50              | 100   | 200   | 400   | 600   | 800   | 1000   | V                    |
| Maximum Average Forward Rectified Current (Note 1) @ $T_A=40^{\circ}\text{C}$                                  | $I_{(AV)}$          | 0.8             |       |       |       |       |       |        | A                    |
| Peak Forward Surge Current, 8.3ms single half sine-wave, superimposed on rated load (JEDEC Method)             | $I_{FSM}$           | 30              |       |       |       |       |       |        | A                    |
| Peak Forward Voltage at 0.8A DC  | $V_F$               | 1.1             |       |       |       |       |       |        | V                    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^{\circ}\text{C}$ @ $T_J=125^{\circ}\text{C}$ | $I_R$               | 5.0<br>500      |       |       |       |       |       |        | $\mu\text{A}$        |
| Typical Junction Capacitance per element (Note 2)  | $C_J$               | 15              |       |       |       |       |       |        | pF                   |
| Typical Thermal Resistance   | Junction to ambient | $R_{\theta JA}$ |       |       |       |       |       |        | $^{\circ}\text{C/W}$ |
|  | Junction to case    | $R_{\theta JC}$ |       |       |       |       |       |        |                      |
| Operating Temperature Range  | $T_J$               | -55 to +150     |       |       |       |       |       |        | $^{\circ}\text{C}$   |
| Storage Temperature Range  | $T_{STG}$           | -55 to +150     |       |       |       |       |       |        | $^{\circ}\text{C}$   |

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

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

Fig.1 - Forward Current Derating Curve

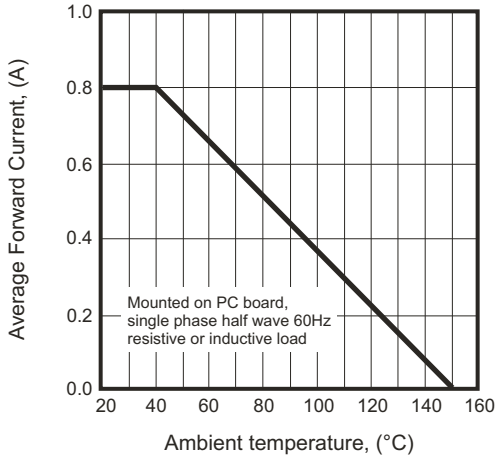


Fig.2 - Maximum Non-Repetitive Surge Current

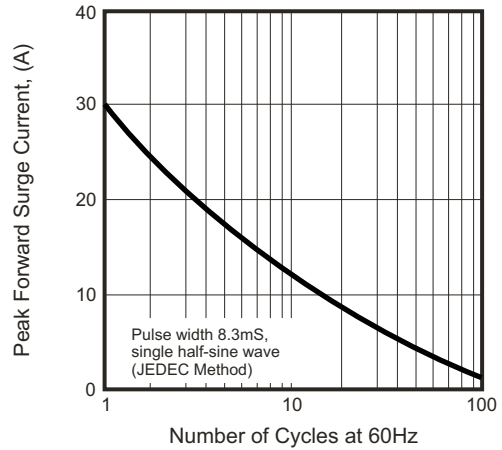


Fig.3 - Typical Reverse Characteristics

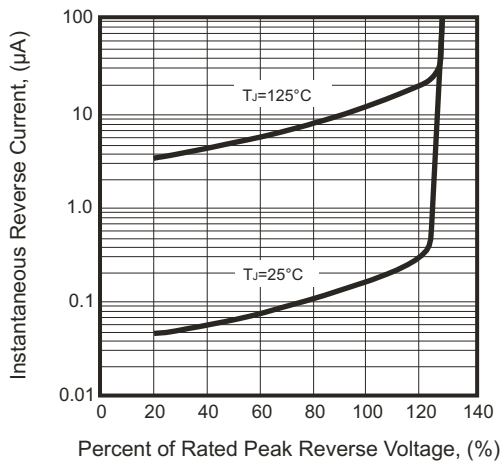


Fig.4 - Typical Forward Characteristics

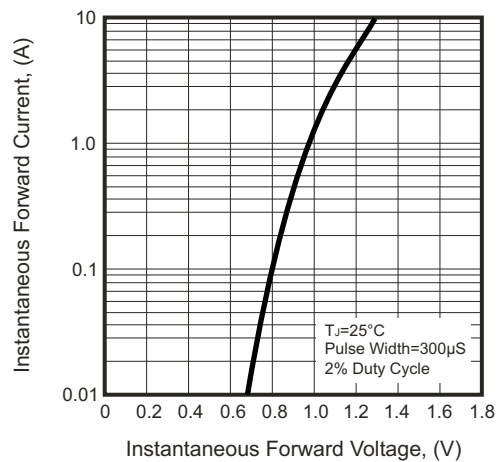
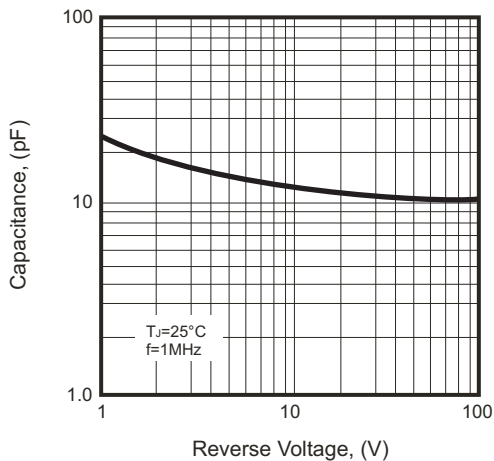


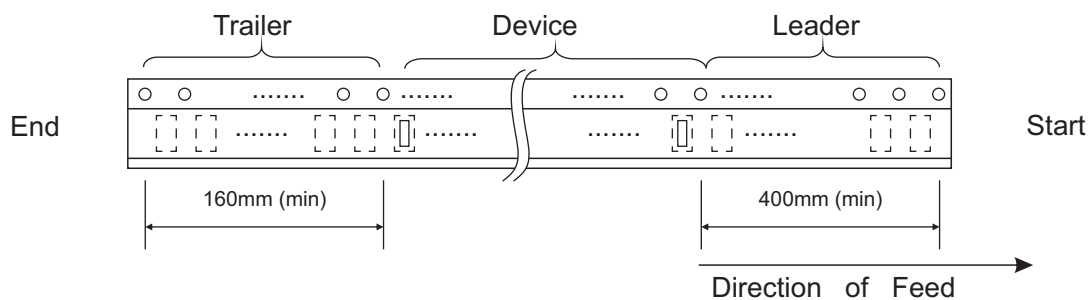
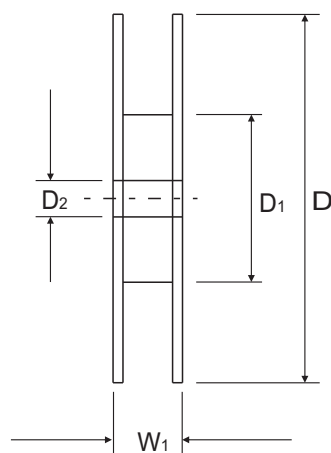
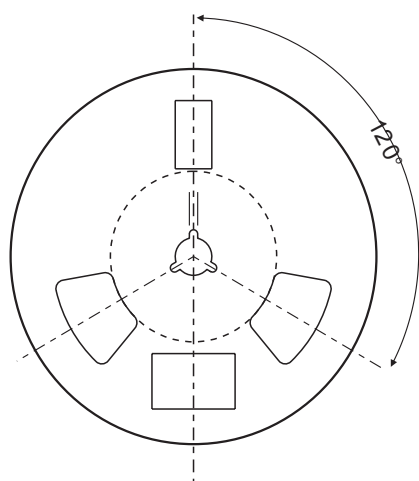
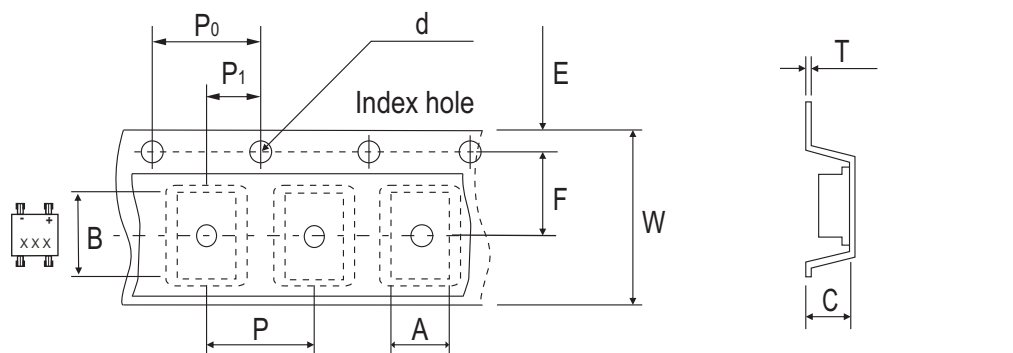
Fig.5 - Typical Junction Capacitance



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## Reel Taping Specification



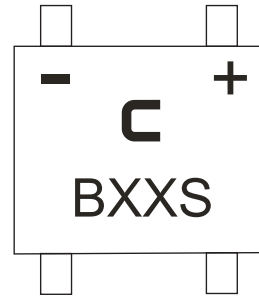
| MBS | SYMBOL | A             | B             | C             | d             | D   | D1         | D2            |
|-----|--------|---------------|---------------|---------------|---------------|-----|------------|---------------|
|     | (mm)   | 4.90 ± 0.10   | 7.24 ± 0.10   | 3.33 ± 0.10   | 1.55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

| MBS | SYMBOL | E             | F             | P             | P0            | P1            | T     | W             | W1          |
|-----|--------|---------------|---------------|---------------|---------------|---------------|-------|---------------|-------------|
|     | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 0.30  | 12.00 ± 0.30  | 12.00~14.40 |
|     | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.012 | 0.472 ± 0.012 | 0.472~0.657 |

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### Marking Code

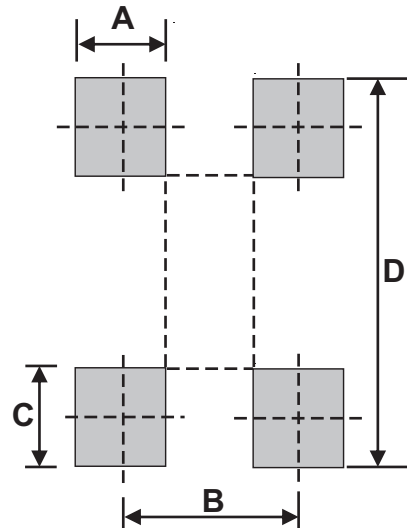
| Part Number | Marking code |
|-------------|--------------|
| B05S-G      | B05S         |
| B1S-G       | B1S          |
| B2S-G       | B2S          |
| B4S-G       | B4S          |
| B6S-G       | B6S          |
| B8S-G       | B8S          |
| B10S-G      | B10S         |



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 ( pcs ) | Reel Size (inch) |
| MBS       | 3,000        | 13               |