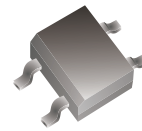


# B05S-G Thru B10S-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 0.8 A

RoHS Device

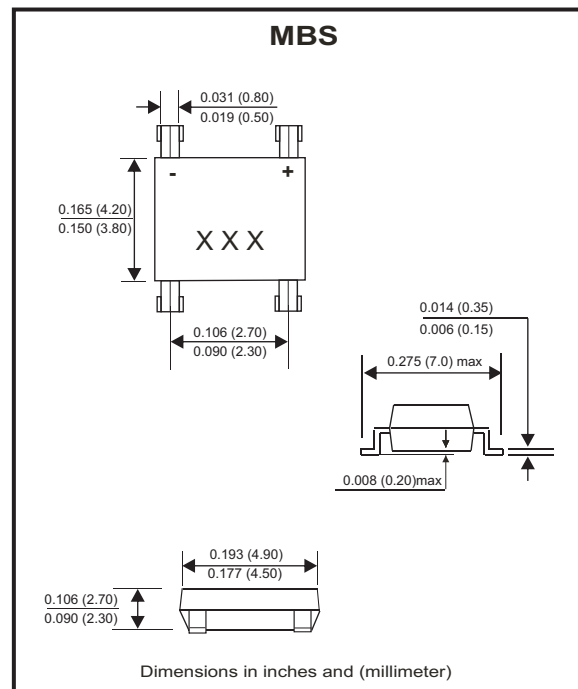


## Features

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

## 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                 |
|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------|-------|-------|-------|-------|-------|--------|----------------------|
|                                                                                                                      | Marking         | B05S        | B1S   | B2S   | B4S   | B6S   | B8S   | B10S   |                      |
| 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)<br>@ $T_A=40^{\circ}\text{C}$                                     | $I_{(AV)}$      | 0.8         |       |       |       |       |       |        | A                    |
| Peak Forward Surge Current, 8.3ms single half sine-wave, superimposed on rated load (JEDEC Method)                   | $I_{FSM}$       | 30          |       |       |       |       |       |        | A                    |
| Maximum Forward Voltage at 0.8A DC                                                                                   | $V_F$           | 1.1         |       |       |       |       |       |        | V                    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>@ $T_J=25^{\circ}\text{C}$<br>@ $T_J=125^{\circ}\text{C}$ | $I_R$           | 5.0<br>500  |       |       |       |       |       |        | $\mu\text{A}$        |
| Typical Junction Capacitance per element (Note 2)                                                                    | $C_J$           | 15          |       |       |       |       |       |        | pF                   |
| Typical Thermal Resistance (Note 3)                                                                                  | $R_{\theta JA}$ | 75          |       |       |       |       |       |        | $^{\circ}\text{C/W}$ |
| 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 1MHz and applied reverse voltage of 4V DC.  
 3. Thermal resistance: Junction to Ambient.

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

Fig.1 - Forward Current Derating Curve

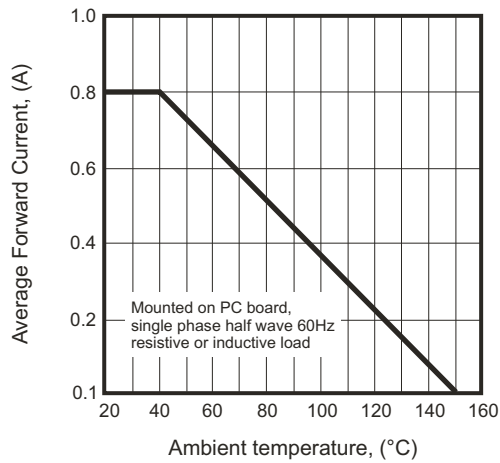


Fig.2 - Maximum Non-Repetitive Surge Current

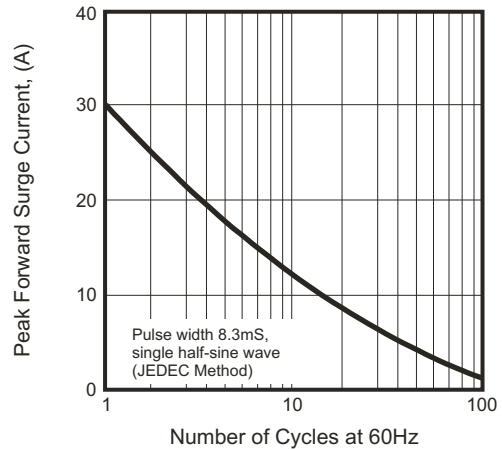


Fig.3 - Typical Reverse Characteristics

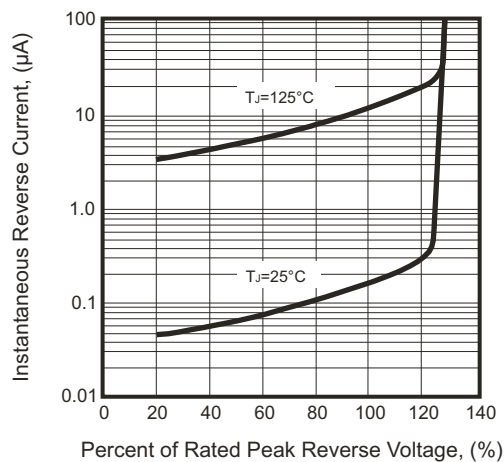


Fig.4 - Typical Forward Characteristics

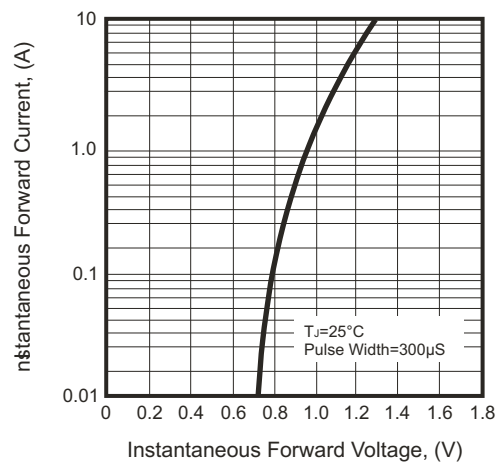
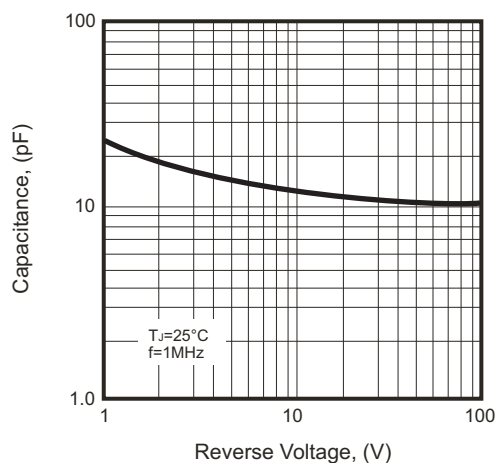
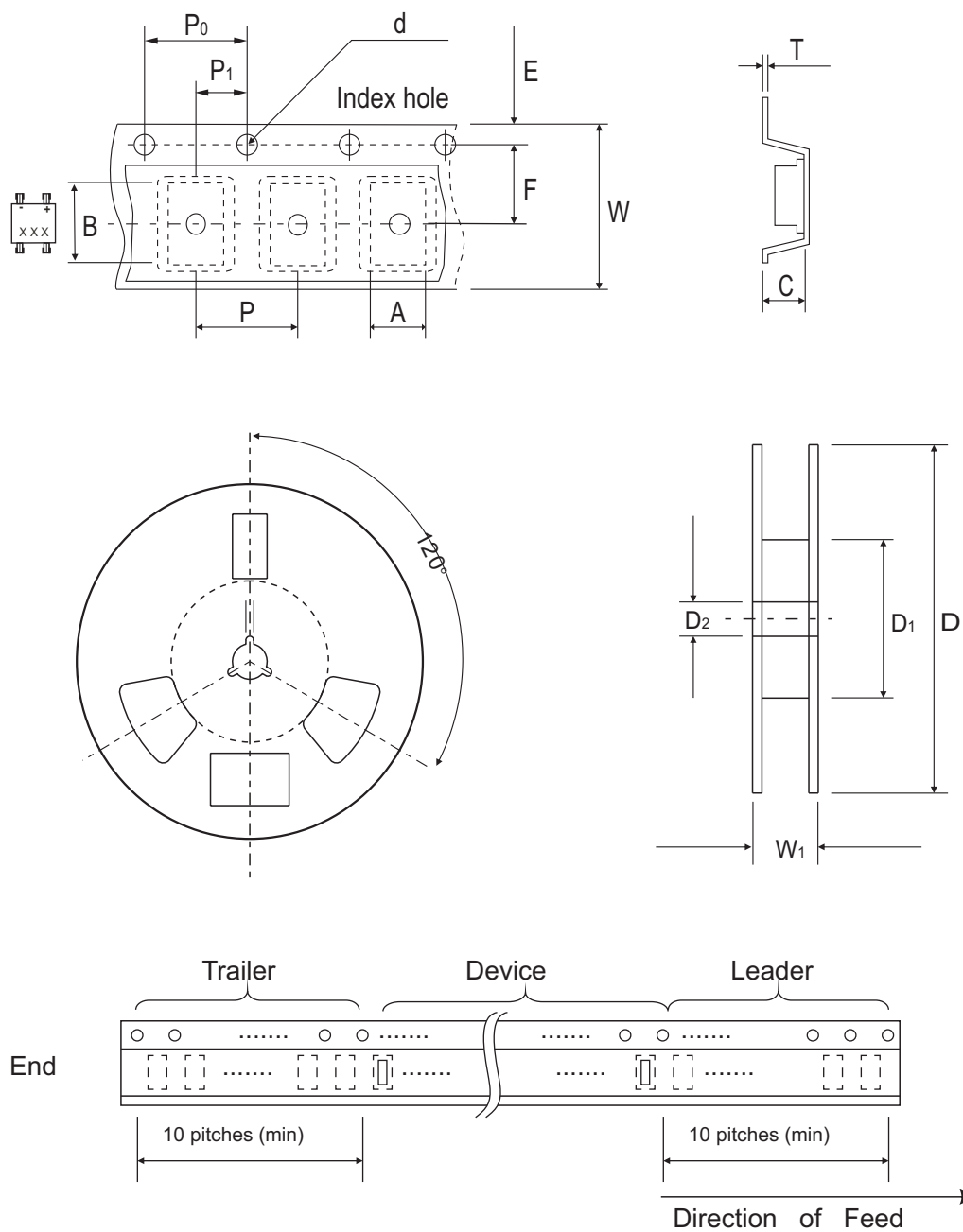


Fig.5 - Typical Junction Capacitance



## Reel Taping Specification

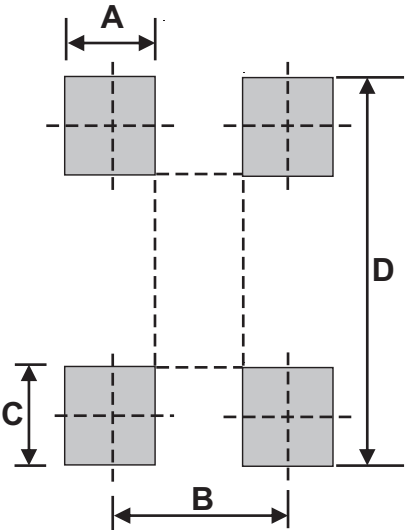


| MBS | SYMBOL | A             | B             | C             | d             | D   | D1         | D2            |
|-----|--------|---------------|---------------|---------------|---------------|-----|------------|---------------|
|     | (mm)   | 4.90 ± 0.10   | 7.24 ± 0.10   | 3.33 ± 0.10   | 1.55 ± 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             | P <sub>0</sub> | P <sub>1</sub> | T     | W             | W <sub>1</sub> |
|-----|--------|---------------|---------------|---------------|----------------|----------------|-------|---------------|----------------|
|     | (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    |

## 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                  |