

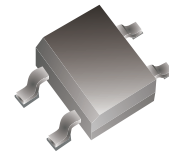
## ABS05-HF Thru. ABS10-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 A

RoHS Device

Halogen Free



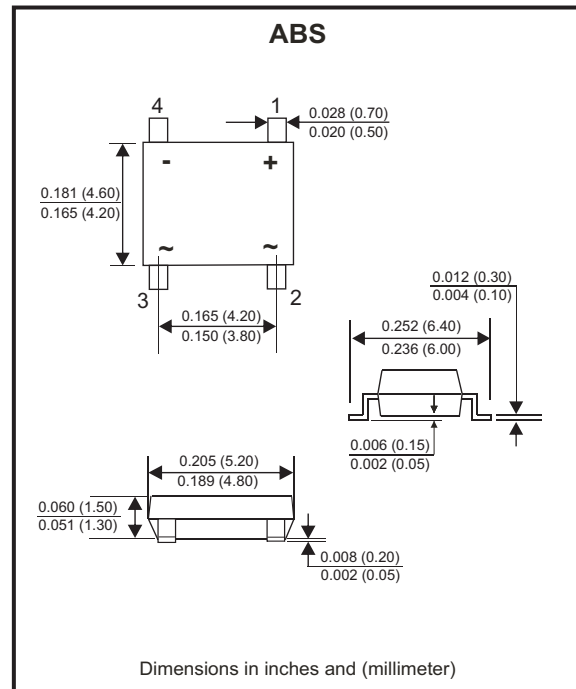
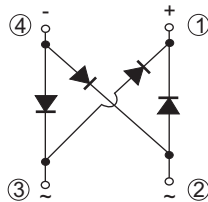
### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Lead tin plated copper.
- UL recognized file # E349301

### Mechanical data

- Polarity: Symbol molded on body.
- Mounting position: Any.
- Weight: 0.08 grams.

### Circuit Diagram



### 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          | ABS05-HF    | ABS1-HF | ABS2-HF | ABS4-HF | ABS6-HF | ABS8-HF | ABS10-HF | 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)<br>@ $T_A=40^{\circ}\text{C}$  | $I_{(AV)}$      | 1.0         |         |         |         |         |         |          | A                    |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Super Imposed on Rated Load (JEDEC Method)                     | $I_{FSM}$       | 30          |         |         |         |         |         |          | A                    |
| Maximum Forward Voltage at 1.0A DC  | $V_F$           | 1.1         |         |         |         |         |         |          | V                    |
| Maximum DC Reverse Current<br>@ $T_J=25^{\circ}\text{C}$<br>at Rated DC Blocking Voltage<br>@ $T_J=125^{\circ}\text{C}$ | $I_R$           | 5.0<br>500  |         |         |         |         |         |          | $\mu\text{A}$        |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 80          |         |         |         |         |         |          | $^{\circ}\text{C/W}$ |
| Typical Thermal Resistance  | $R_{\theta JC}$ | 12          |         |         |         |         |         |          | $^{\circ}\text{C/W}$ |
| 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. Thermal resistance junction to ambient.

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

REV: D

## RATING AND CHARACTERISTIC CURVES (ABS05-HF thru ABS10-HF)

Fig.1 - Forward Current Derating Curve

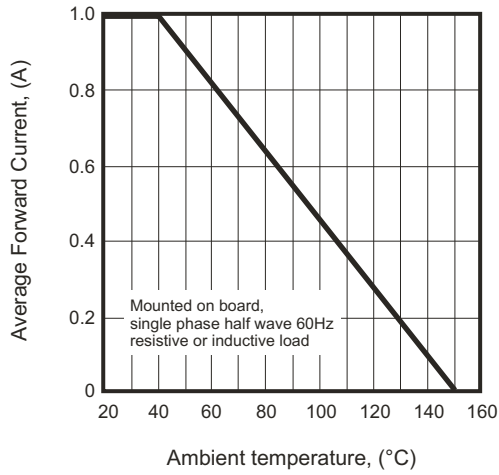


Fig.2 - Maximum Non-Repetitive Surge Current

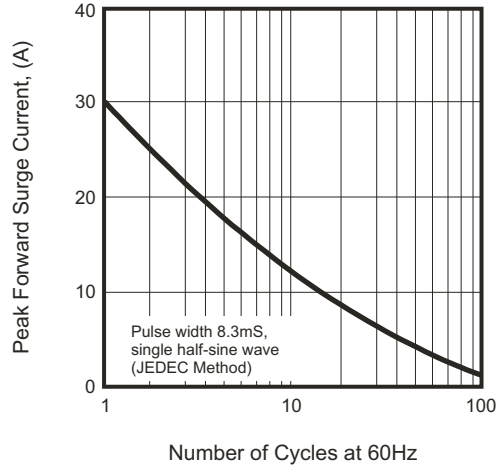


Fig.3 - Typical Reverse Characteristics

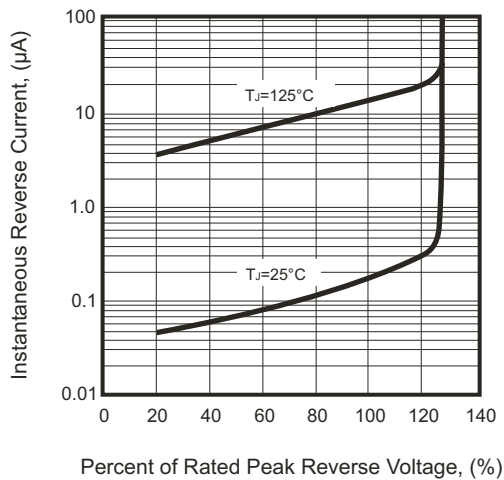
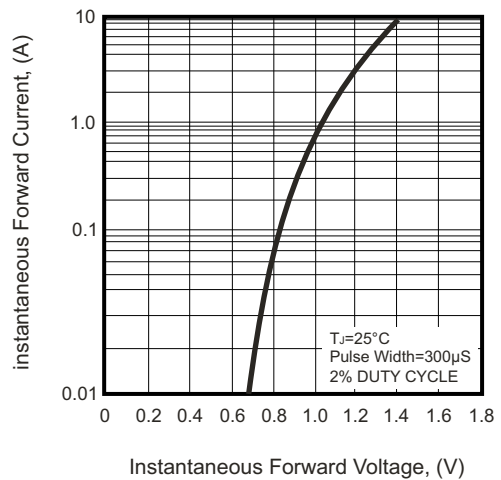
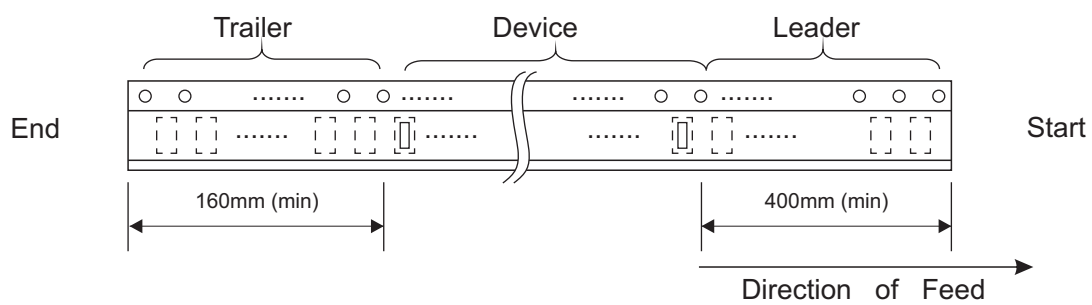
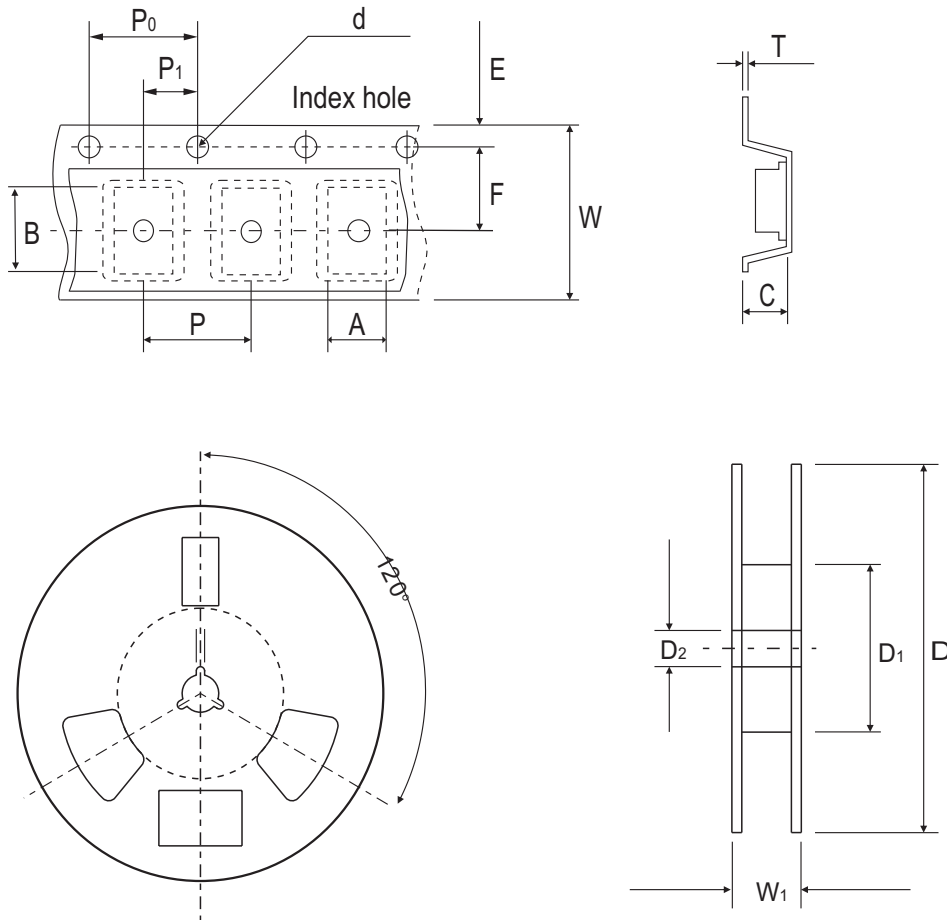


Fig.4 - Typical Forward Characteristics



## Reel Taping Specification



| ABS | SYMBOL | A             | B             | C             | d             | D      | D <sub>1</sub> | D <sub>2</sub> |
|-----|--------|---------------|---------------|---------------|---------------|--------|----------------|----------------|
|     | (mm)   | 5.31 ± 0.10   | 6.68 ± 0.10   | 1.59 ± 0.20   | 1.55 ± 0.05   | 330    | 50.00 (min)    | 13.00 ± 0.20   |
|     | (inch) | 0.209 ± 0.004 | 0.263 ± 0.004 | 0.063 ± 0.008 | 0.061 ± 0.002 | 13.000 | 1.969 (min)    | 0.512 ± 0.008  |

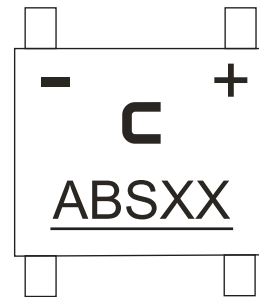
| ABS | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T     | W             | W <sub>1</sub> |
|-----|--------|---------------|---------------|---------------|----------------|----------------|-------|---------------|----------------|
|     | (mm)   | 1.75 ± 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    |

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## Marking Code

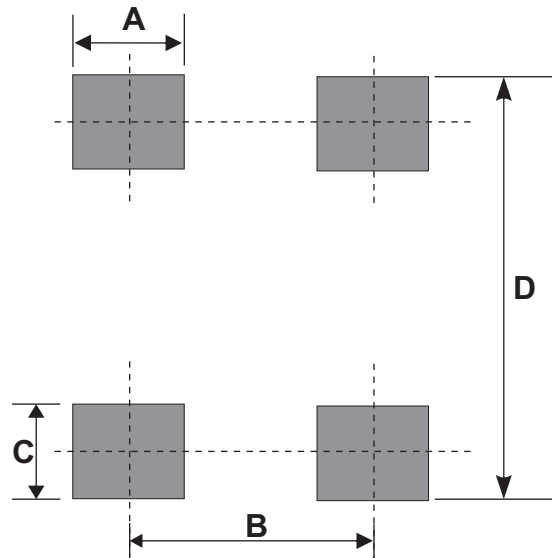
| Part Number | Marking code |
|-------------|--------------|
| ABS05-HF    | ABS05        |
| ABS1-HF     | ABS1         |
| ABS2-HF     | ABS2         |
| ABS4-HF     | ABS4         |
| ABS6-HF     | ABS6         |
| ABS8-HF     | ABS8         |
| ABS10-HF    | ABS10        |



XX = Product type marking code

## Suggested PAD Layout

| SIZE | ABS      |           |
|------|----------|-----------|
|      | (mm)     | (inch)    |
| A    | 0.80 Min | 0.031 Min |
| B    | 4.00 REF | 0.157 REF |
| C    | 0.60 Min | 0.024 Min |
| D    | 6.20 Max | 0.244 Max |



## Standard Packaging

| Case Type | REEL PACK    |                  |
|-----------|--------------|------------------|
|           | REEL ( pcs ) | Reel Size (inch) |
| ABS       | 5,000        | 13               |