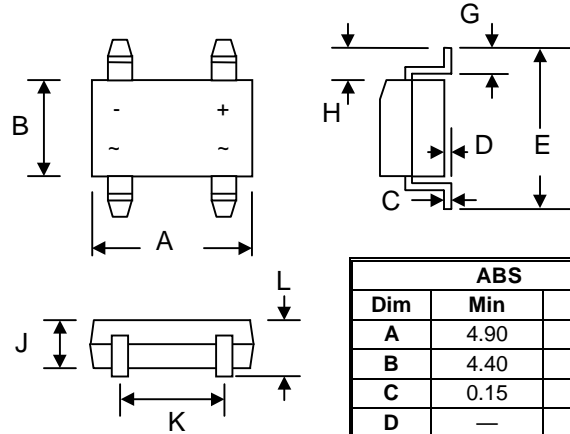


#### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-0



| ABS                  |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 4.90 | 5.10 |
| B                    | 4.40 | 4.60 |
| C                    | 0.15 | 0.25 |
| D                    | —    | 0.15 |
| E                    | 6.00 | 6.40 |
| G                    | 0.30 | 0.70 |
| H                    | 0.90 | 1.10 |
| J                    | —    | 1.40 |
| K                    | 2.40 | 2.67 |
| L                    | 1.40 | 1.60 |
| All Dimensions in mm |      |      |

#### Mechanical Data

- Case: ABS, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                             | AB05S       | AB1S | AB2S | AB4S | AB6S | AB8S | AB10S | Unit                 |
|---|------------------------------------|-------------|------|------|------|------|------|-------|----------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                          | 50          | 100  | 200  | 400  | 600  | 800  | 1000  | V                    |
| Working Peak Reverse Voltage  | $V_{RWM}$                          |             |      |      |      |      |      |       |                      |
| DC Blocking Voltage   | $V_R$                              |             |      |      |      |      |      |       |                      |
| RMS Reverse Voltage   | $V_{R(RMS)}$                       | 35          | 70   | 140  | 280  | 420  | 560  | 700   | V                    |
| Average Rectified Output Current (Note 1) @ $T_A = 40^\circ\text{C}$  | $I_O$                              | 0.5         |      |      |      |      |      |       | A                    |
| Average Rectified Output Current (Note 2) @ $T_A = 40^\circ\text{C}$  |                                    | 0.8         |      |      |      |      |      |       |                      |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$                          | 30          |      |      |      |      |      |       | A                    |
| $I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )   | $I^2t$                             | 5.0         |      |      |      |      |      |       | $\text{A}^2\text{s}$ |
| Forward Voltage per element @ $I_F = 0.5\text{A}$   | $V_{FM}$                           | 1.0         |      |      |      |      |      |       | V                    |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$   | $I_{RM}$                           | 5.0         |      |      |      |      |      |       | $\mu\text{A}$        |
| At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$  |                                    | 150         |      |      |      |      |      |       |                      |
| Typical Junction Capacitance per leg (Note 3)   | $C_j$                              | 13          |      |      |      |      |      |       | pF                   |
| Typical Thermal Resistance per leg (Note 1)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 62.5<br>20  |      |      |      |      |      |       | $^\circ\text{C/W}$   |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$                     | -55 to +150 |      |      |      |      |      |       | $^\circ\text{C}$     |

Note: 1. Mounted on glass epoxy PC board with  $1.3\text{mm}^2$  solder pad.  
2. Mounted on aluminum substrate PC board with  $1.3\text{mm}^2$  solder pad.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

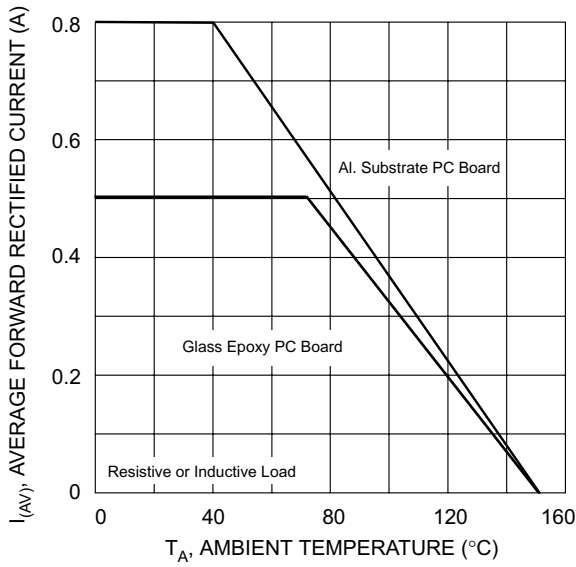


Fig. 1 Output Current Derating Curve

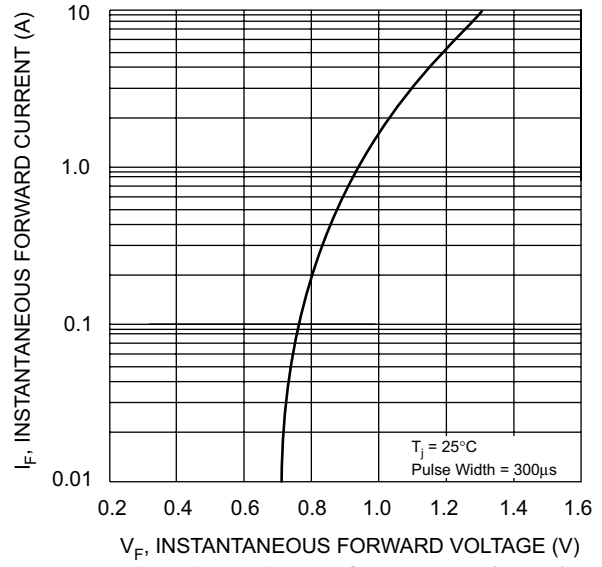


Fig. 2 Typical Forward Characteristics (per leg)

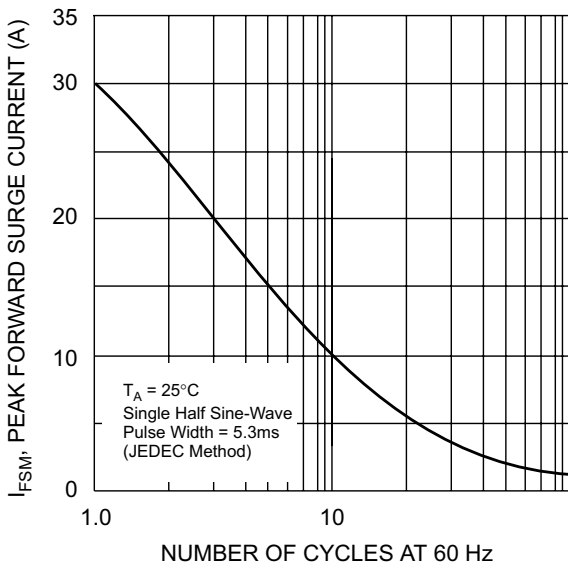


Fig. 3 Maximum Peak Forward Surge Current (per leg)

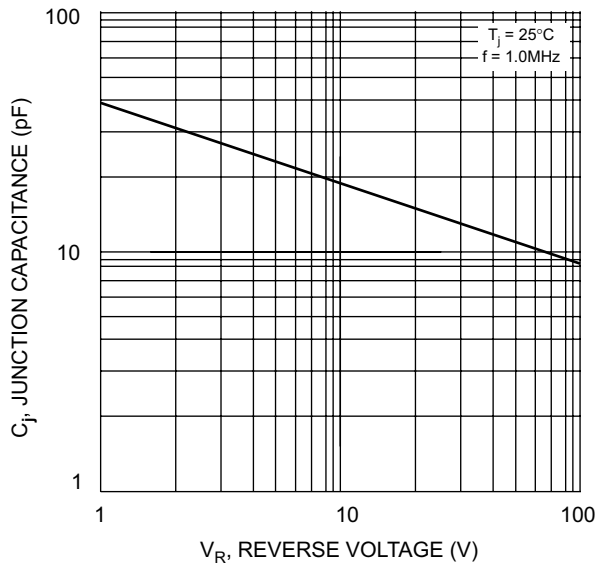


Fig. 4 Typical Junction Capacitance

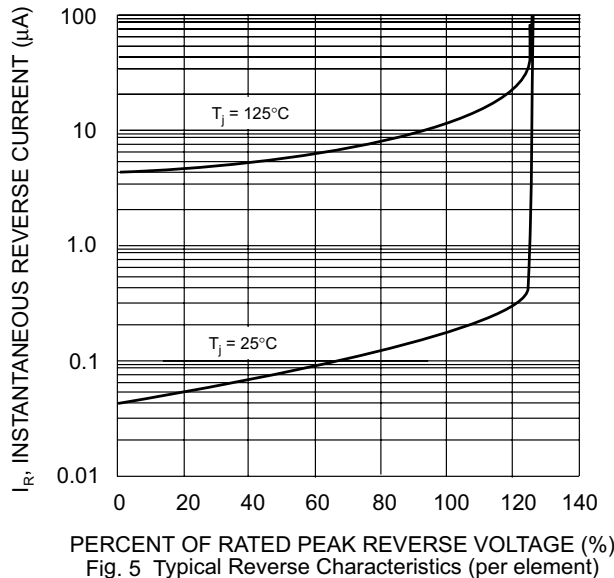


Fig. 5 Typical Reverse Characteristics (per element)