

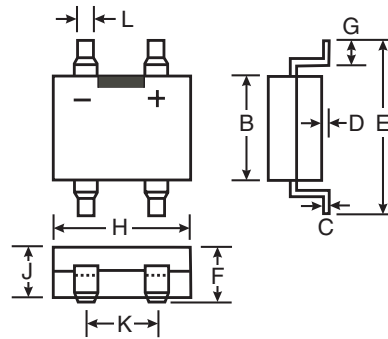
## 0.5A SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY BRIDGE RECTIFIER

### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automatic Assembly
- Miniature Package Saves Space on PC Boards
- **Lead Free Finish, RoHS Compliant (Note 4)**

### Mechanical Data

- Case: MiniDIP
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Finish — Bright Tin. Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Marking: Type Number
- Weight: 0.125 grams (approx.)



| MiniDIP              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| B                    | 3.6  | 4.0  |
| C                    | 0.15 | 0.35 |
| D                    | —    | 0.20 |
| E                    | —    | 7.0  |
| F                    | —    | 3.00 |
| G                    | 0.70 | 1.10 |
| H                    | 4.5  | 4.9  |
| J                    | 2.3  | 2.7  |
| K                    | 2.3  | 2.7  |
| L                    | 0.50 | 0.80 |
| All Dimensions in mm |      |      |

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic  | Symbol  | RH02        | RH04 | RH06 | Unit |
|---|---|-------------|------|------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                  | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>DC</sub> | 200         | 400  | 600  | V    |
| RMS Reverse Voltage   | V <sub>RMS</sub>  | 140         | 280  | 420  | V    |
| Average Forward Rectified Current (Note 1) T <sub>A</sub> = @ 40°C  | I <sub>O</sub>  | 0.5         |      |      | A    |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms<br>Single half-sine-wave Superimposed on Rated Load<br>(JEDEC method) | I <sub>FSM</sub>  | 30          |      |      | A    |
| Instantaneous Voltage Drop @ 0.4A (per element)   | V <sub>F</sub>  | 1.15        |      |      | V    |
| Peak Reverse Current at Rated<br>DC Blocking Voltage (per element)  | I <sub>R</sub>  | 5.0<br>100  |      |      | μA   |
| Maximum Reverse Recovery Time (Note 3)  | t <sub>rr</sub>   | 150         |      | 250  | ns   |
| Typical Junction Capacitance (per element) (Note 2)   | C <sub>j</sub>  | 13.0        |      |      | pF   |
| Typical Thermal Resistance, Junction to Ambient (Note 1)  | R <sub>θJA</sub>  | 85          |      |      | K/W  |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub>                       | -55 to +150 |      |      | °C   |

- Notes:
1. Mounted on Glass Epoxy PC Board.
  2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 V.
  3. t<sub>rr</sub> test conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.
  4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

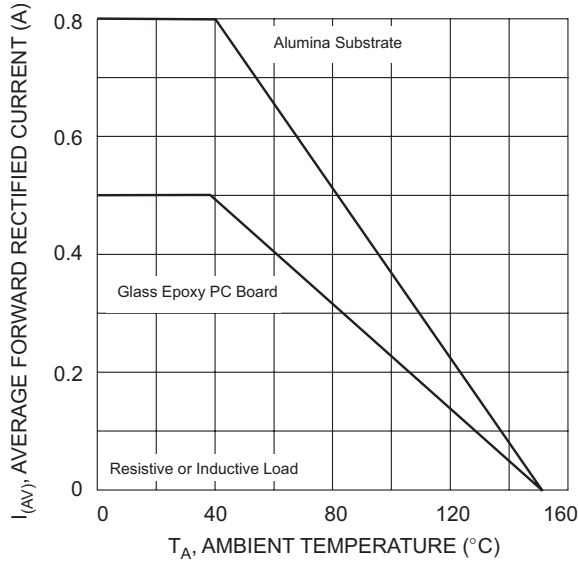


Fig. 1 Output Current Derating Curve

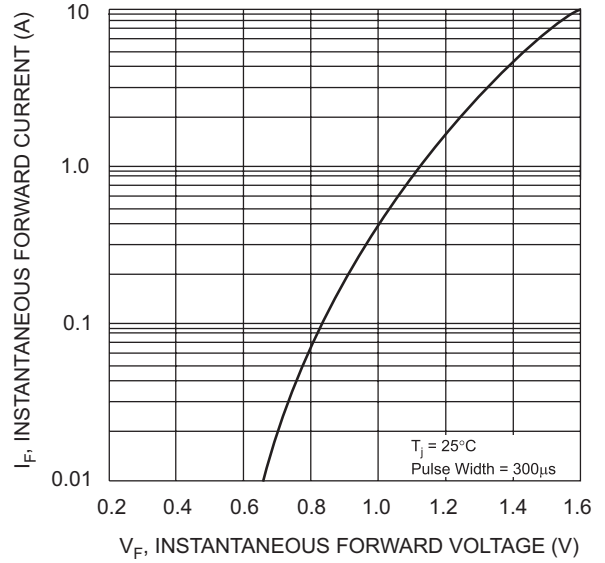


Fig. 2 Typical Forward Characteristics (per leg)

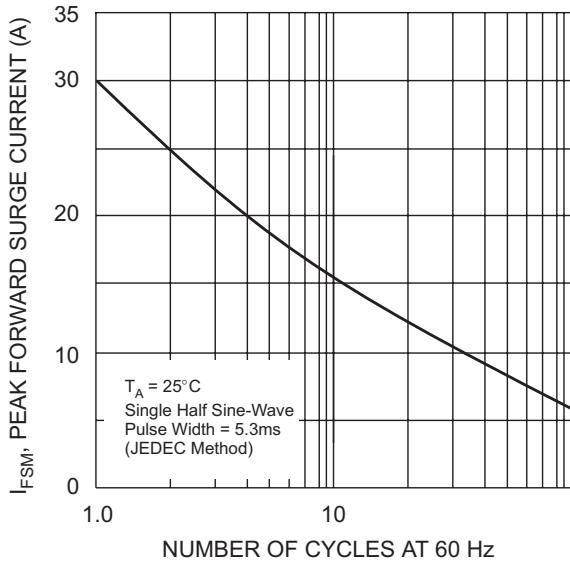


Fig. 3 Maximum Peak Forward Surge Current (per leg)

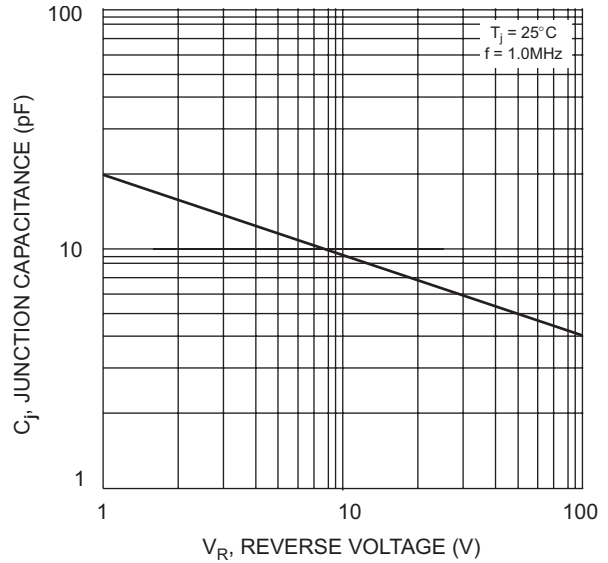


Fig. 4 Typical Junction Capacitance

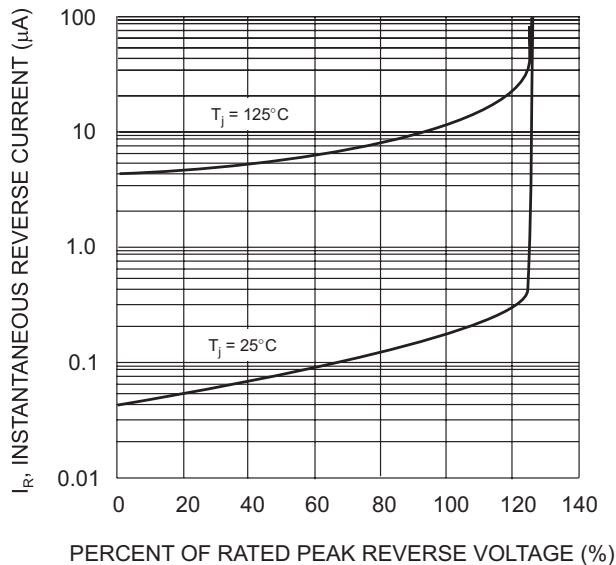


Fig. 5 Typical Reverse Characteristics (per element)

**Ordering Information** (Note 5)

| <b>Device</b> | <b>Packaging</b> | <b>Shipping</b>  |
|---------------|------------------|------------------|
| RH0x-T        | MiniDIP          | 3000/Tape & Reel |

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.