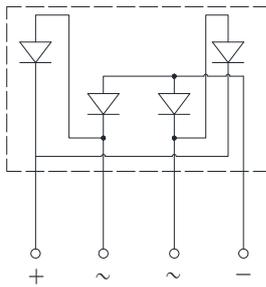
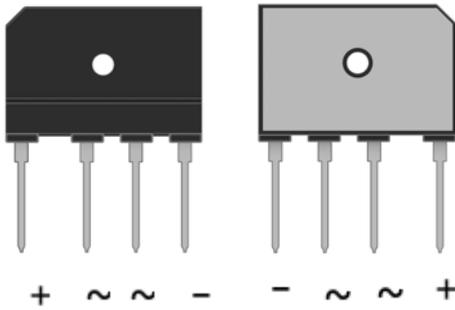


Bridge Rectifiers



Features

- UL recognition, file #E230084
- Glass passivated chip junction
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package:** PB
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | PBA3516A |
|---|------------------|------------------|--|
| Device marking code | | | PBA3516A |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | V | 1600 |
| Maximum RMS Voltage | V _{RMS} | V | 1120 |
| Maximum DC blocking Voltage | V _{DC} | V | 1600 |
| Average rectified output current @60Hz sine wave, R-load | I _o | A | With heatsink T _c =90°C |
| | | | Without heatsink T _a =25°C |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C | I _{FSM} | A | 450 |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C | | | 900 |
| Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode | I ² t | A ² s | 840 |
| Storage temperature | T _{stg} | °C | -55 ~ +150 |
| Junction temperature | T _j | °C | -55 ~ +150 |
| Dielectric strength @ Terminals to case, AC 1 minute | V _{dis} | KV | 2.5 |
| Mounting torque @Recommend torque: 5kg·cm | Tor | kg·cm | 8 |

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | PBA3516A |
|---|----------------|------|---|----------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =17.5A | 1.1 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _R | μA | T _j =25°C | 5 |
| | | | T _j =125°C | 200 |
| Typical junction capacitance | C _j | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 173 |



PBA3516A

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | PBA3516A |
|----------------------------|--|-------------------|------|----------|
| Typical Thermal Resistance | Between junction and ambient, Without heatsink | R _{θJ-A} | °C/W | 15 |
| | Between junction and case, With heatsink | R _{θJ-C} | | 0.8 |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| PBA3516A | B1 | Approximate 7.5 | 15 | 750 | 1500 | TUBE |

■ Characteristics (Typical)

FIG1: I_o-T_c Curve

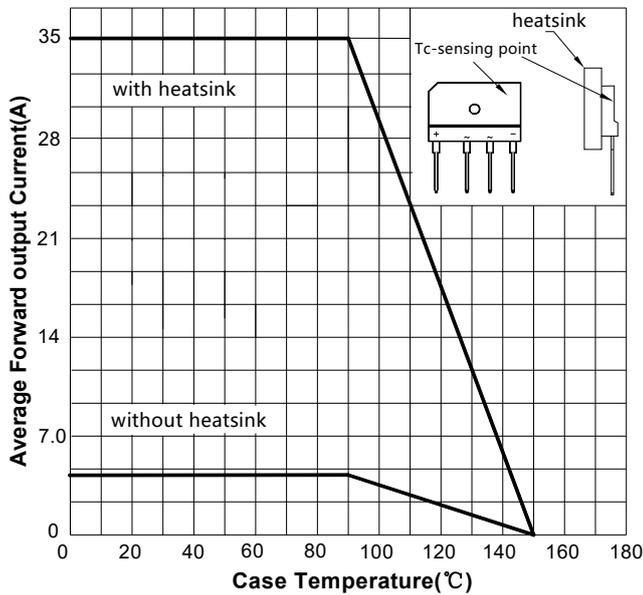


FIG2: Surge Forward Current Capability

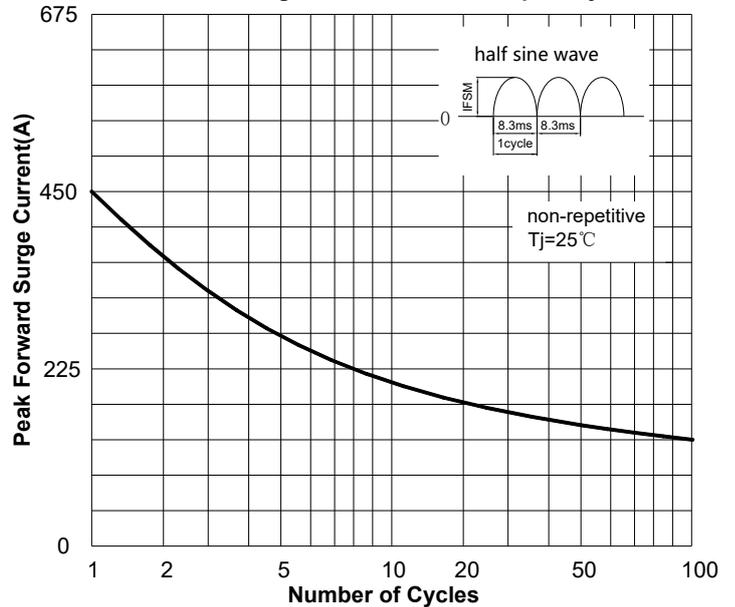


FIG3: Typical Forward Voltage

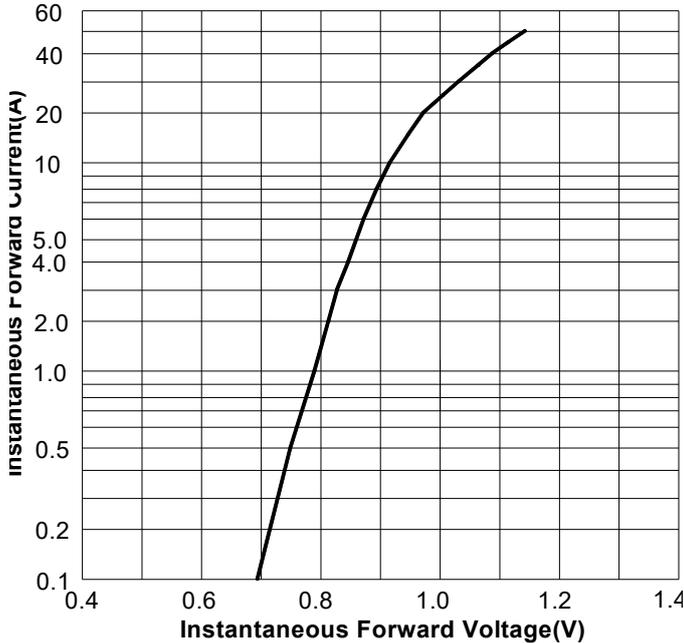
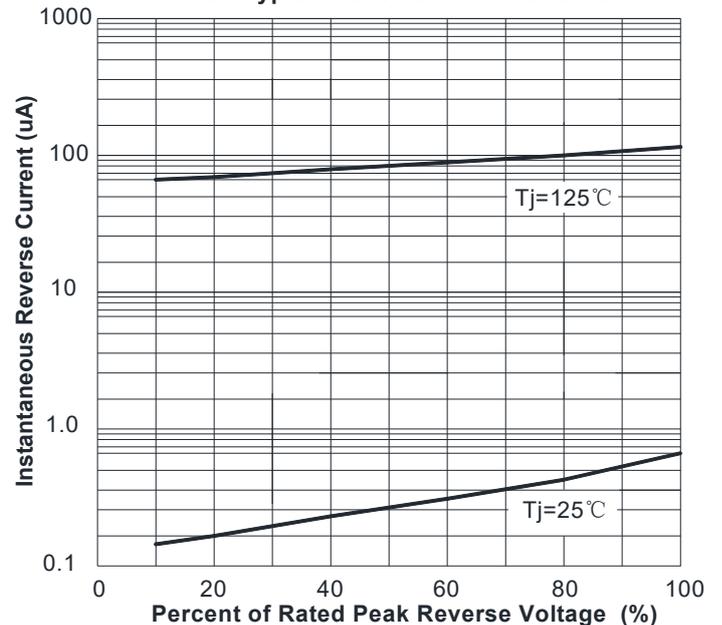


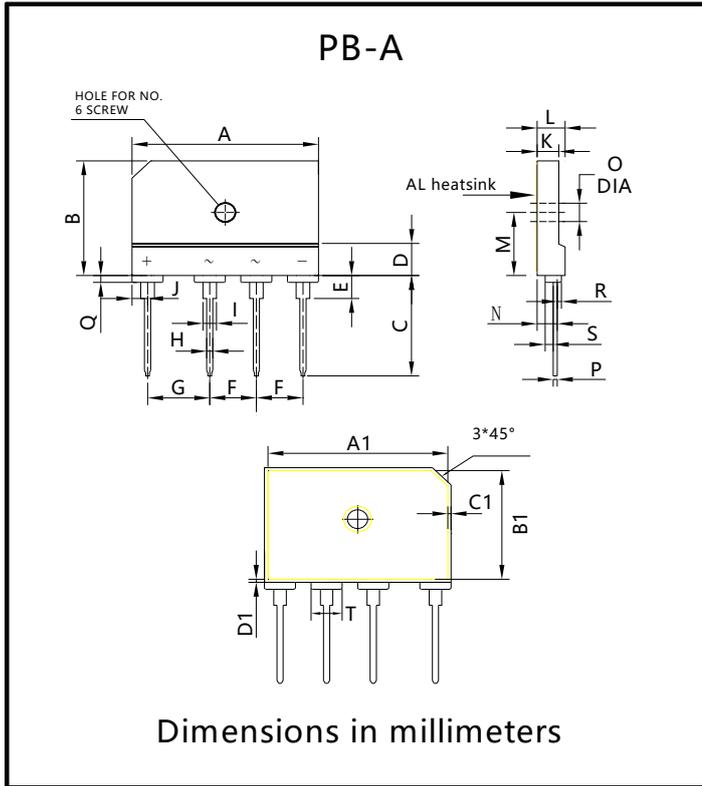
FIG4: Typical Reverse Characteristics





PBA3516A

■ Outline Dimensions



| PB-A | | |
|------|-------|-------|
| Dim | Min | Max |
| A | 29.7 | 30.3 |
| B | 19.7 | 20.3 |
| C | 17.0 | 18.0 |
| D | 4.8 | 5.8 |
| E | 3.8 | 4.2 |
| F | 7.3 | 7.7 |
| G | 9.8 | 10.2 |
| H | 0.9 | 1.1 |
| I | 2.0 | 2.4 |
| J | 2.3 | 2.7 |
| K | 3.6 | 4.0 |
| L | 4.6 | 5.0 |
| M | 10.8 | 11.2 |
| N | 3.1 | 3.7 |
| O | 3.1 | 3.4 |
| P | 0.4 | 0.8 |
| Q | 1.0 | 1.4 |
| R | 0.45 | 0.85 |
| S | 1.1 | 1.5 |
| T | 4.8 | 5.2 |
| A1 | 28.75 | 29.15 |
| B1 | 18.75 | 19.15 |
| C1 | 0.3 | 0.7 |
| D1 | 0.3 | 0.7 |



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