

Bridge Rectifiers

Features

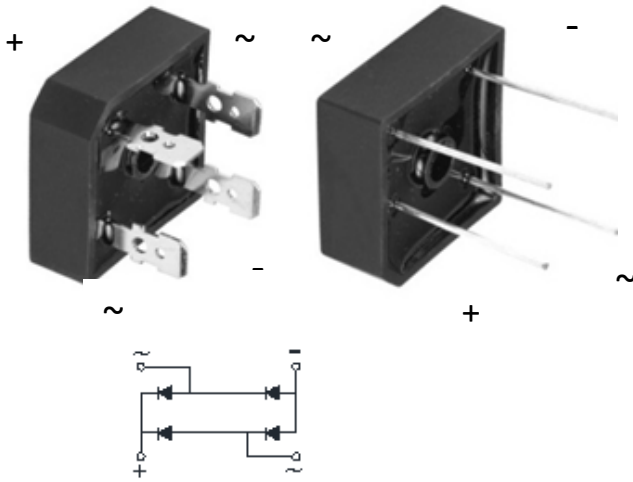
- UL recognition, file #E230084
Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

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

Mechanical Data

- Package:** BR, BR-W
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
Suffix letter "W" added to indicate wire leads(e.g. BR3510W).



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

| PARAMETER | SYMBOL | UNIT | BR35005 | BR3501 | BR3502 | BR3504 | BR3506 | BR3508 | BR3510 |
|-----------------------------------------------------------------------------------------------------|------------------|------------------|-----------|--------|--------|--------|--------|--------|--------|
| Device marking code | | | BR35005 | BR3501 | BR3502 | BR3504 | BR3506 | BR3508 | BR3510 |
| Repetitive Peak Reverse Voltage | VRRM | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, T _c =55°C | I _O | A | 35 | | | | | | |
| Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, T _a =25°C | IFSM | A | 400 | | | | | | |
| Current Squared Time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode | I ² t | A ² S | 660 | | | | | | |
| 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 | TOR | kg·cm | 10 | | | | | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | BR35005 | BR3501 | BR3502 | BR3504 | BR3506 | BR3508 | BR3510 |
|-------------------------------------------------------------------|------------------|------|-----------------------|---------|--------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode | V _{FM} | V | IFM=17.5A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM} | μA | V _{RM} =VRRM | 10 | | | | | | |



BR35005(W) THRU BR3510(W)

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | BR35005 | BR3501 | BR3502 | BR3504 | BR3506 | BR3508 | BR3510 |
|--------------------|------------------------------------------|------------------|---------------------------|---------|--------|--------|--------|--------|--------|--------|
| Thermal Resistance | Between junction and case, With heatsink | $R_{\theta J-C}$ | $^\circ\text{C}/\text{W}$ | 1.5 | | | | | | |

■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| BR35005~BR3510 | A1 | Approximate 18.6 | 50 | 50 | 500 | Paper Box |
| BR35005W~BR3510W | A1 | Approximate 16.5 | 50 | 50 | 500 | Paper Box |

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

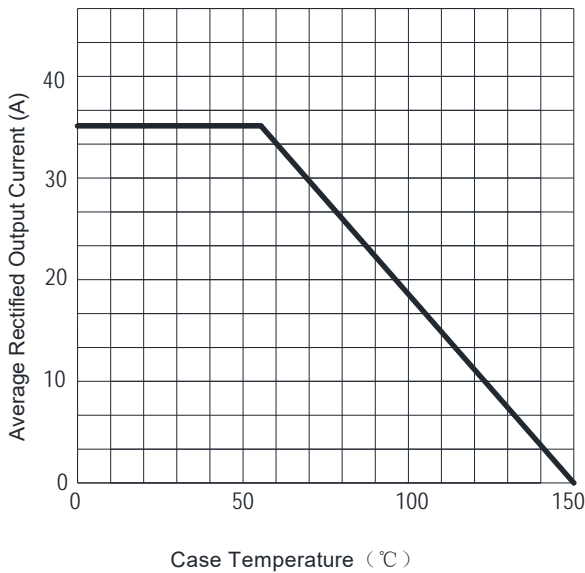


FIG2: Surge Forward Current Capability

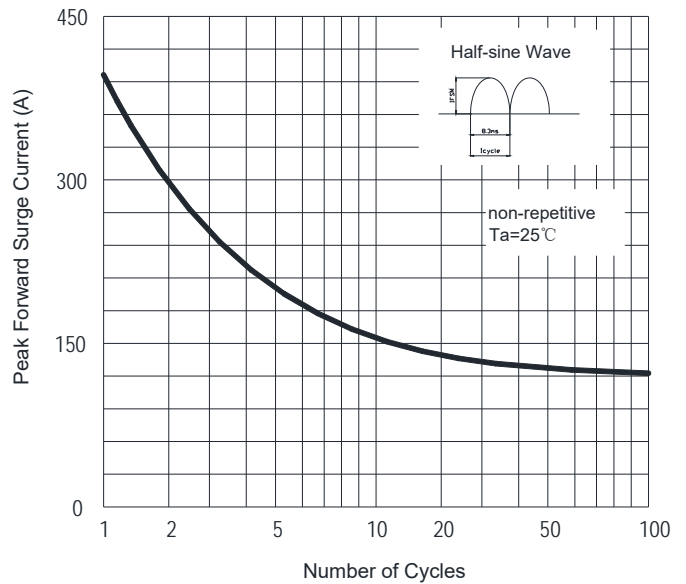


FIG3: Instantaneous Forward Voltage

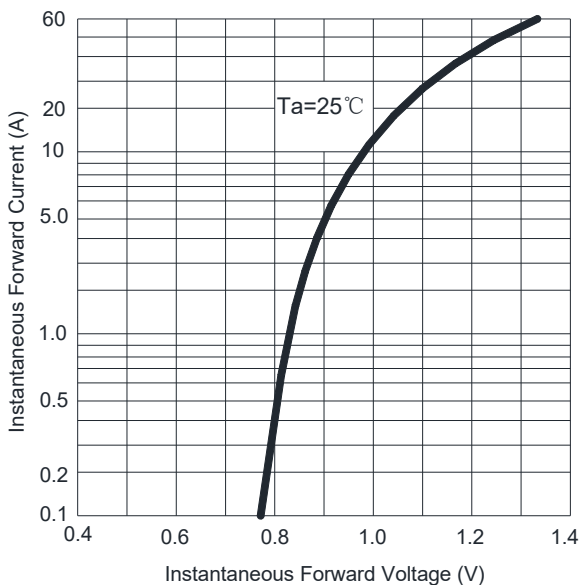
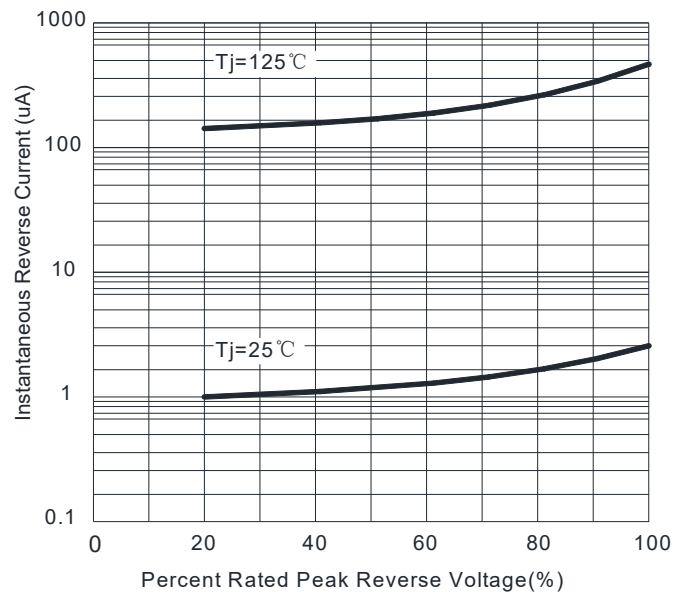


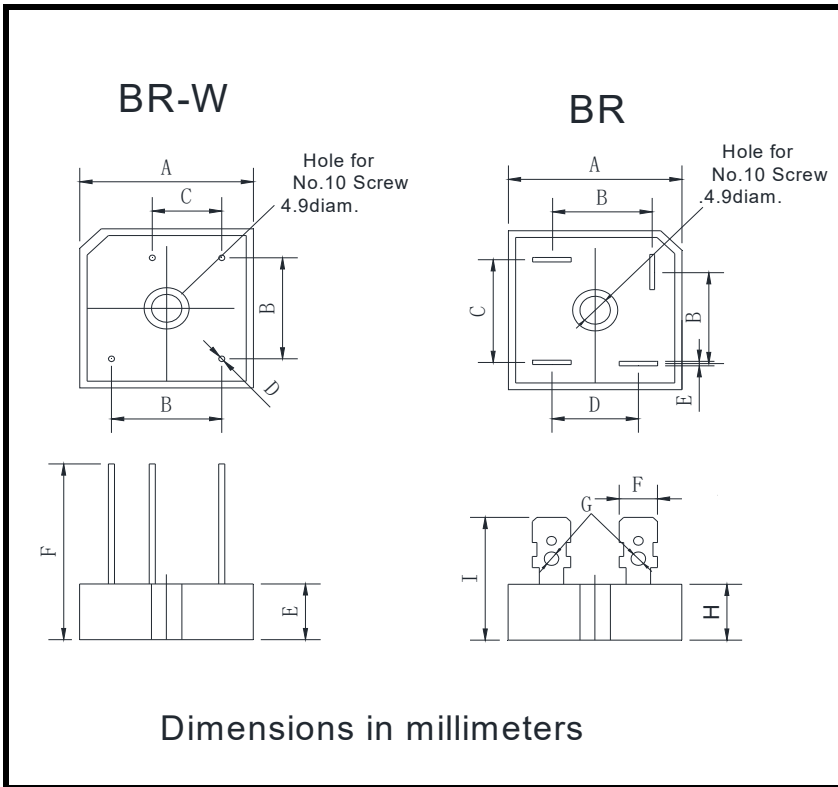
FIG4: Typical Reverse Characteristics





BR35005(W) THRU BR3510(W)

■ Outline Dimensions



| BR-W | | |
|------|------|------|
| Dim | Min | Max |
| A | 28.2 | 28.8 |
| B | 17.1 | 19.1 |
| C | 10.4 | 12.4 |
| D | 0.95 | 1.05 |
| E | 10.8 | 11.2 |
| F | 30 | / |

| BR | | |
|-----|------|------|
| Dim | Min | Max |
| A | 28.2 | 28.8 |
| B | 15.3 | 17.3 |
| C | 17.1 | 19.1 |
| D | 13.2 | 15.2 |
| E | 0.75 | 0.85 |
| F | 6.2 | 6.4 |
| G | 2.3 | 2.5 |
| H | 10.8 | 11.2 |
| I | 19 | / |



BR35005(W) THRU BR3510(W)

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