

Bridge Rectifiers

Features

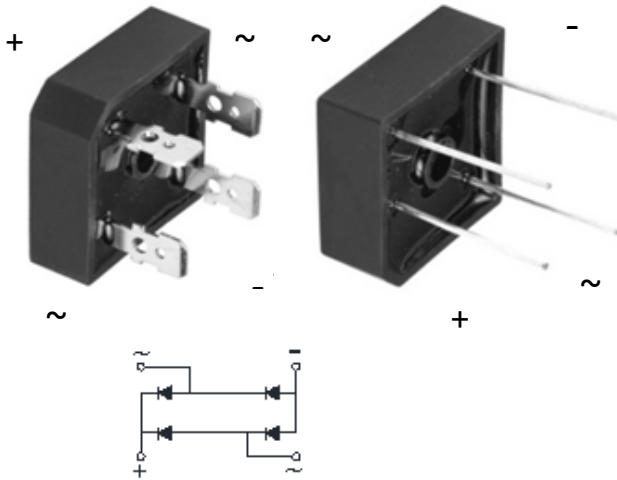
- UL recognition, file #E230084
Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

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. BR2510W)



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

| PARAMETER | SYMBOL | UNIT | BR25005 | BR2501 | BR2502 | BR2504 | BR2506 | BR2508 | BR2510 |
|--|--------|----------------------|-----------|--------|--------|--------|--------|--------|--------|
| Device marking code | | | BR25005 | BR2501 | BR2502 | BR2504 | BR2506 | BR2508 | BR2510 |
| Repetitive Peak Reverse Voltage | VRRM | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$ | IO | A | 25 | | | | | | |
| Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$ | IFSM | A | 400 | | | | | | |
| Current Squared Time @ $1\text{ms}\leq t\leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$, Rating of per diode | I^2t | A^2S | 660 | | | | | | |
| Storage Temperature | Tstg | $^\circ\text{C}$ | -55 ~+150 | | | | | | |
| Junction Temperature | T_j | $^\circ\text{C}$ | -55 ~+150 | | | | | | |
| Dielectric Strength, Terminals to case, AC 1 minute | Vdis | KV | 2.5 | | | | | | |
| Mounting Torque | TOR | kg-cm | 10 | | | | | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | BR25005 | BR2501 | BR2502 | BR2504 | BR2506 | BR2508 | BR2510 |
|---|--------|---------------|-----------------|---------|--------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=12.5A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | IRRM | μA | VRM=VRRM | 10 | | | | | | |



BR25005(W) THRU BR2510(W)

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

| PARAMETER | | SYMBOL | UNIT | BR25005 | BR2501 | BR2502 | BR2504 | BR2506 | BR2508 | BR2510 |
|--------------------|--|------------------|--------------------|---------|--------|--------|--------|--------|--------|--------|
| Thermal Resistance | Between junction and case, With heatsink | $R_{\theta J-C}$ | $^\circ\text{C/W}$ | 2.1 | | | | | | |

■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| BR25005~BR2510 | A1 | Approximate 18.6 | 50 | 50 | 500 | Paper Box |
| BR25005W~BR2510W | A1 | Approximate 16.5 | 50 | 50 | 500 | Paper Box |

■ Characteristics (Typical)

FIG1:Io-Tc Curve

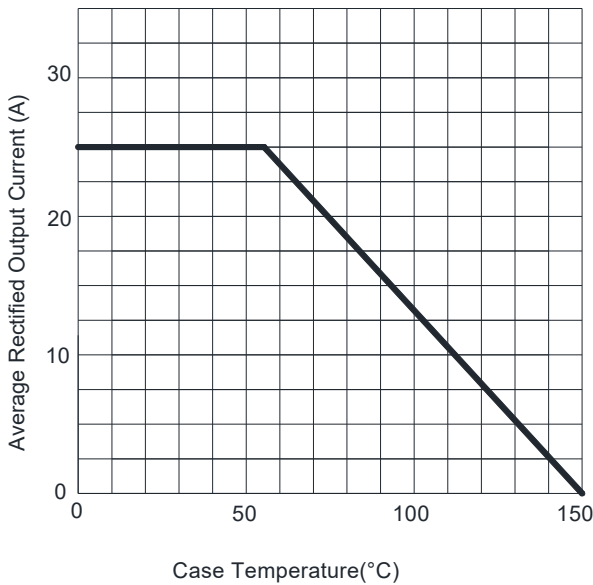


FIG2:Surge Forward Current Capability

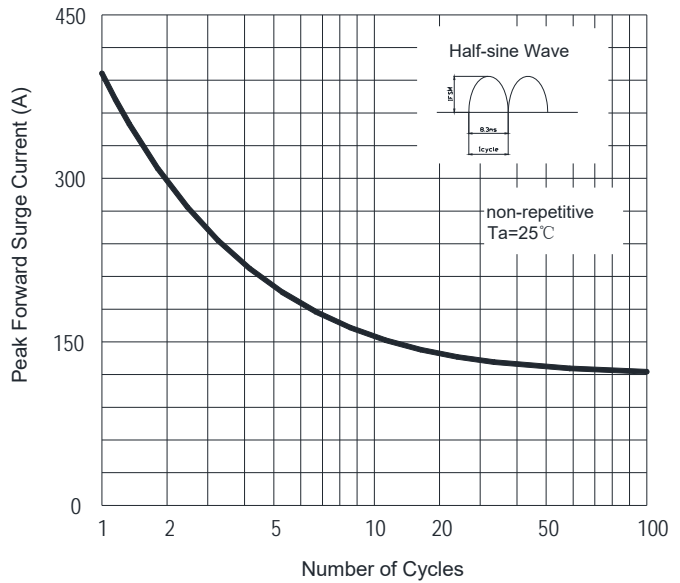


FIG3:Instantaneous Forward Voltage

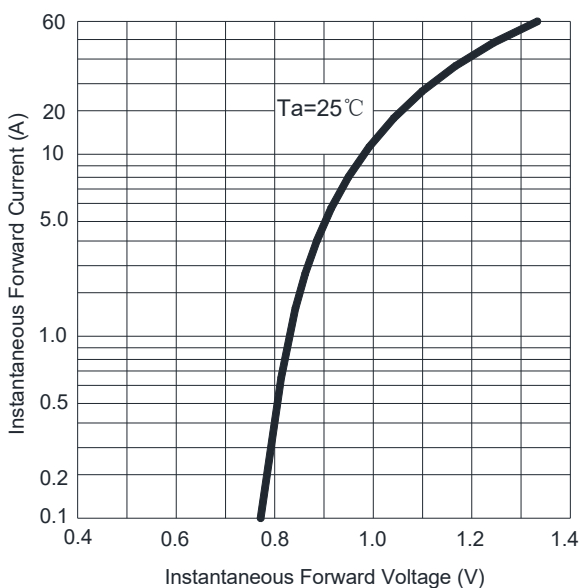
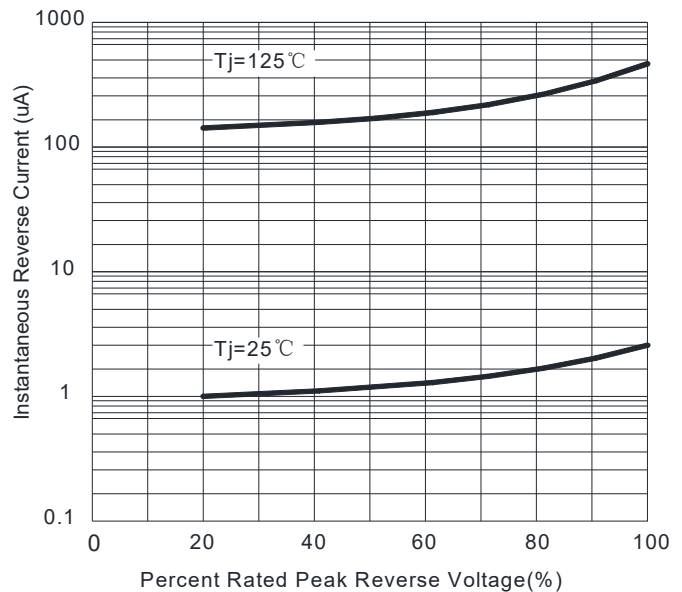


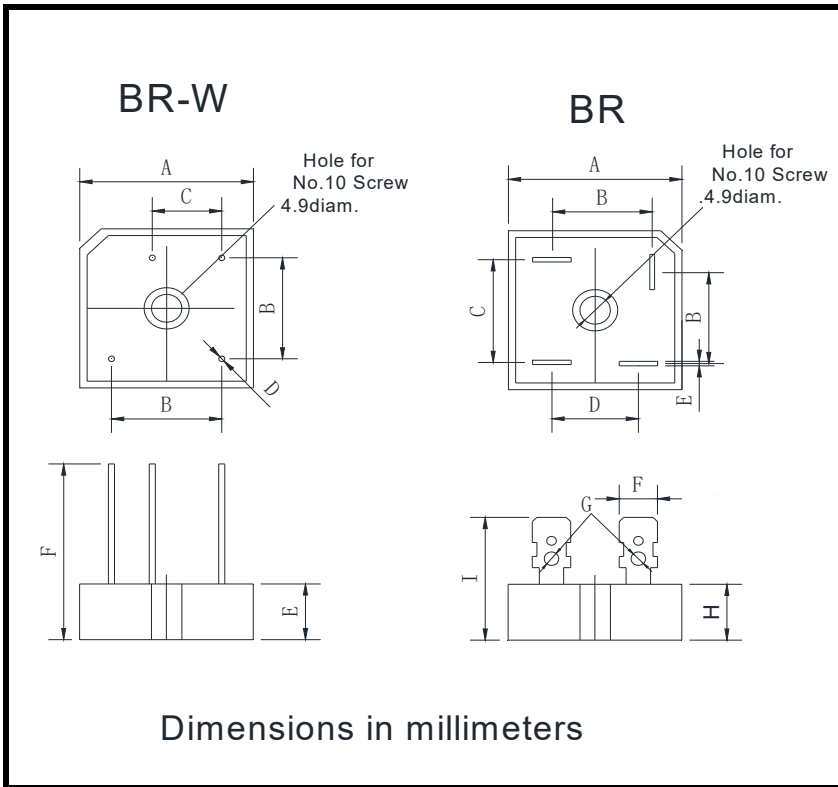
FIG4:Typical Reverse Characteristics





BR25005(W) THRU BR2510(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 | / |



BR25005(W) THRU BR2510(W)

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