

**Single Phase Glass Passivated Bridge Rectifier**

**Reverse Voltage - 800V to 1600V**

**Forward Current - 75 A**

**FEATURES**

- ◆Glass passivated chip
- ◆Low reverse leakage current
- ◆High surge current capability

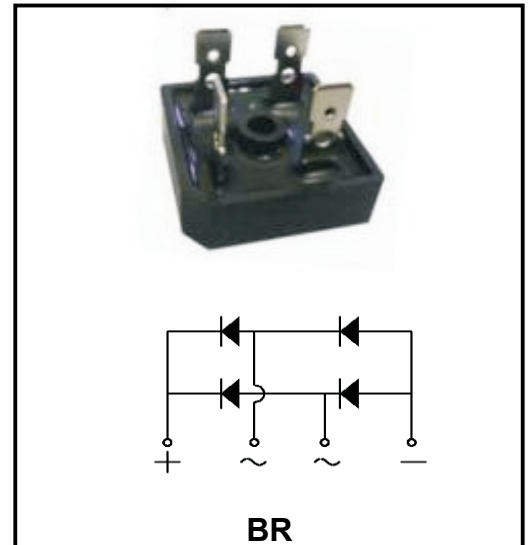
**Applications**

- ◆Electric welder
- ◆Industrial power supply
- ◆Inverter
- ◆Uninterruptible power supply

**MECHANICAL DATA**

- ◆Case:BR
- ◆Polarity: Polarity symbols being marked on body
- ◆Mounting torque: 12.0 kgf.cm max
- ◆Weight: About20 grams

**Maximum Ratings @ Ta = 25°C unless otherwise noted**



| Parameter                                                                          | Symbols         | BR7508     | BR7510 | BR7512 | BR7514 | BR7516 | Units            |
|------------------------------------------------------------------------------------|-----------------|------------|--------|--------|--------|--------|------------------|
| Maximum Repetitive Peak Reverse Voltage                                            | $V_{RRM}$       | 800        | 1000   | 1200   | 1400   | 1600   | V                |
| Maximum RMS voltage                                                                | $V_{RMS}$       | 560        | 700    | 840    | 980    | 1120   | V                |
| Maximum DC Blocking Voltage                                                        | $V_{DC}$        | 800        | 1000   | 1200   | 1400   | 1600   | V                |
| Average rectified output current with heatsink $T_c=85^{\circ}C$                   | $I_{(AV)}$      | 75         |        |        |        |        | A                |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 750        |        |        |        |        | A                |
| Rating for fusing $1ms < t < 8.3ms$ $T_j=25^{\circ}C$ , Rating of per diode        | $I^2t$          | 2250       |        |        |        |        | A <sup>2</sup> s |
| Forward Voltage $I_F=37.5A$                                                        | $V_F$           | 1.1        |        |        |        |        | V                |
| Peak Reverse Current<br>$V_R=V_{RRM}$ , Pulse measurement<br>Rating of per diode   | $I_R$           | 5<br>500   |        |        |        |        | $\mu A$          |
| Dielectric strength terminals to case AC 1 minute                                  | $V_{dis}$       | 2.5        |        |        |        |        | KV               |
| Junction to ambient thermal resistance, without heatsink                           | $R_{\theta JA}$ | 18         |        |        |        |        | $^{\circ}C/W$    |
| Junction to case thermal resistance, with heatsink                                 | $R_{\theta JC}$ | 0.8        |        |        |        |        | $^{\circ}C/W$    |
| Storage Temperature                                                                | $T_{stg}$       | -55 ~ 150  |        |        |        |        | $^{\circ}C$      |
| Operating junction Temperature                                                     | $T_j$           | -55 ~ +150 |        |        |        |        | $^{\circ}C$      |

**Ratings And Characteristic Curves**

FIG1. Derating Curve For Output Rectified Current

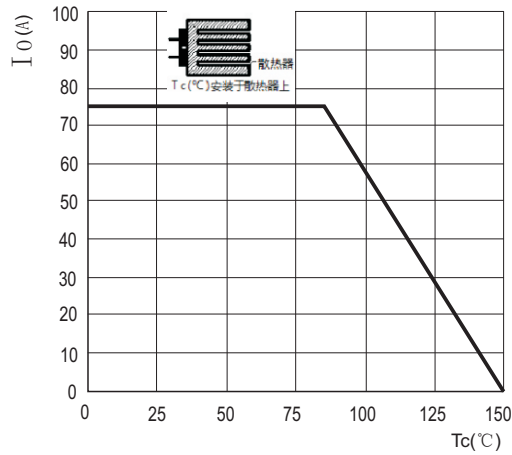


FIG2. Maximum NonRepetitive Peak Forward Surge Current Per Bridge Element

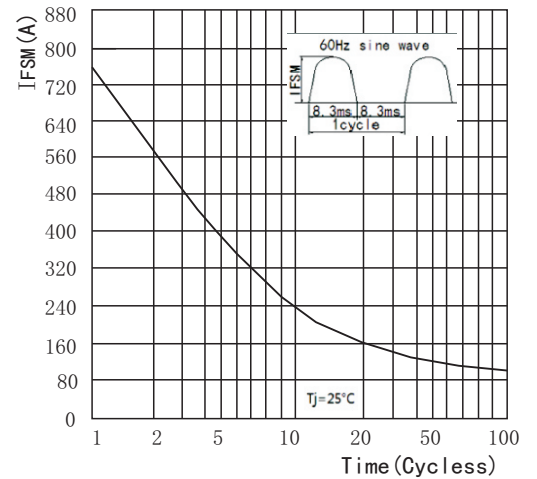


FIG3. Typical Reverse Characteristics Per Bridge Element

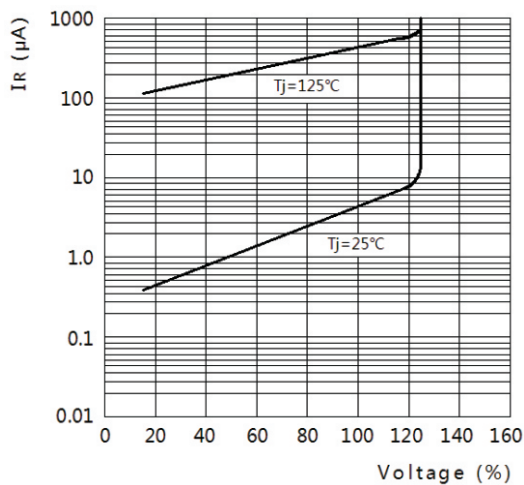
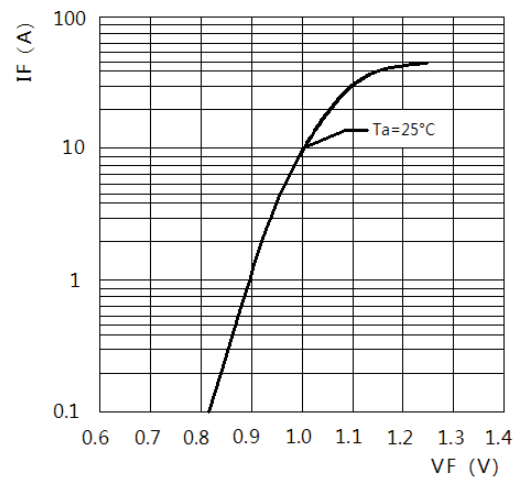
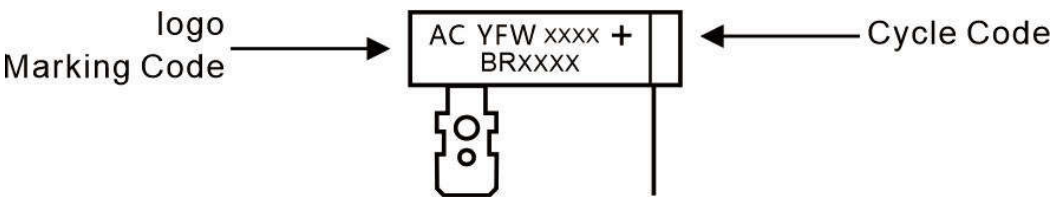


FIG4. Typical Forward Characteristics Per Bridge Element



Marking Diagram



Ordering information

| Package | Packing Description | Packing Quantity        |
|---------|---------------------|-------------------------|
| BR      | bulk                | 50PCS/Box 500PCS/Carton |

Package Dimensions

BR

| Dim. | Millimeter(mm) |       | Dimensions inInch |       |
|------|----------------|-------|-------------------|-------|
|      | Min.           | Max.  | Min.              | Max.  |
| A    | 13.90          | 14.90 | 0.547             | 0.587 |
| B    | 15.70          | 16.70 | 0.618             | 0.657 |
| C    | 4.50           | 5.50  | 0.177             | 0.217 |
| D    | 18.00          | 19.00 | 0.709             | 0.748 |
| E    | 15.70          | 16.70 | 0.618             | 0.657 |
| F    | 31.0           | 32.0  | 1.220             | 1.260 |
| G    | 0.60           | 1.00  | 0.024             | 0.256 |
| H    | 6.10           | 6.50  | 0.240             | 0.256 |
| I    | 8.50           | 9.50  | 0.335             | 0.374 |
| J    | 22.00          | 24.00 | 0.866             | 0.945 |

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