

## 35.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V



### Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Integrally molded heat sinks provide low thermal resistance for maximum heat dissipation
- Surge overload ratings to 400 amperes
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Universal 4-way terminals, snap-on, wrap-around, solder or P.C. Board mounting
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

### Mechanical Data

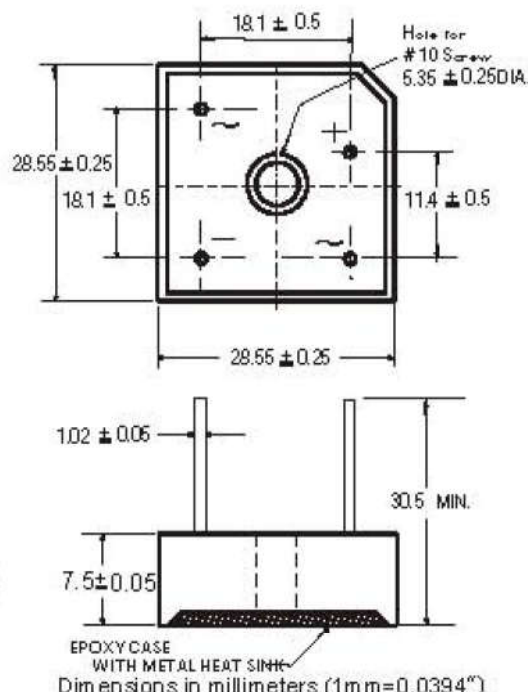
Case: Molded plastic with heat sink integrally mounted in the bridge encapsulation

Terminals: Plated copper leads .040" (1.02mm) diameter

Mounting Position: Bolt down on heat-sink with silicone thermal compound between bridges and mounting surface for maximum heat transfer efficiency

Mounting Position: Any

Weight: 0.706 ounce, 20 grams (approx)



### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
For Capacitive load derate current by 20%.

| Parameter                                                                             | Symbol           | BR 35005W    | BR 3501W | BR 3502W | BR 3504W | BR 3506W | BR 3508W | BR 3510W | unit               |
|---------------------------------------------------------------------------------------|------------------|--------------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum repetitive peak reverse voltage                                               | VRRM             | 50           | 100      | 200      | 400      | 600      | 800      | 1000     | V                  |
| Maximum RMS bridge input voltage                                                      | VRMS             | 35           | 70       | 140      | 280      | 420      | 560      | 700      | V                  |
| Maximum DC blocking voltage                                                           | VDC              | 50           | 100      | 200      | 400      | 600      | 800      | 1000     | V                  |
| Maximum average forward rectified output current at TA=55°C                           | IF(AV)           | 35           |          |          |          |          |          |          | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 400          |          |          |          |          |          |          | A                  |
| Rating for fusing (t<8.3ms)                                                           | I <sup>2</sup> t | 664          |          |          |          |          |          |          | A <sup>2</sup> sec |
| Typical thermal resistance per element(1)                                             | ReJA             | 2.1          |          |          |          |          |          |          | °C/W               |
| Operating junction and storage temperature range                                      | TJ, TSTG         | -55 to + 150 |          |          |          |          |          |          | °C                 |

### Electrical Characteristics

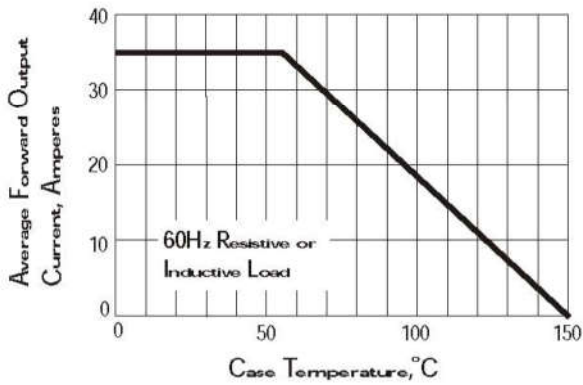
Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
For Capacitive load derate by 20 %.

| Parameter                                                                                   | Symbol | BR 35005W | BR 3501W | BR 3502W | BR 3504W | BR 3506W | BR 3508W | BR 3510W | Unit |
|---------------------------------------------------------------------------------------------|--------|-----------|----------|----------|----------|----------|----------|----------|------|
| Maximum instantaneous forward voltage drop per leg at 17.5A                                 | VF     | 1.0       |          |          |          |          |          |          | V    |
| Maximum DC reverse current at rated TA = 25°C<br>DC blocking voltage per element TA = 125°C | IR     | 10<br>500 |          |          |          |          |          |          | μA   |

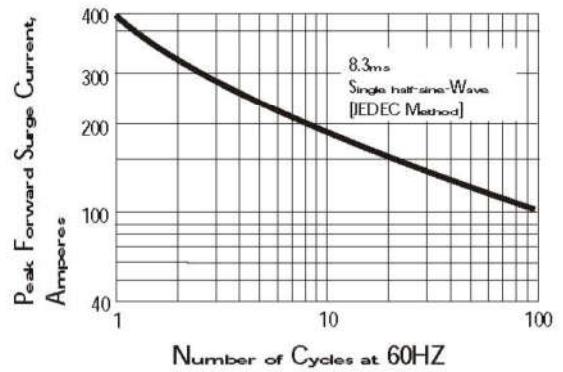
Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.

**Rating and Characteristic Curves (  $T_A = 25^{\circ}\text{C}$  Unless otherwise noted )**  
**BR35005W thru BR3510W**

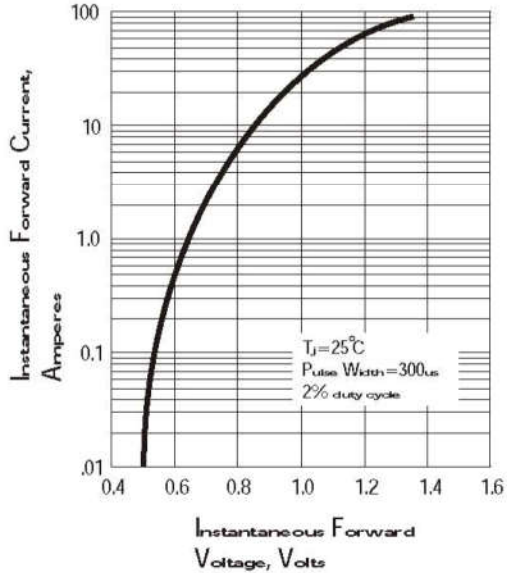
**Fig. 1 Derating Curve for Output Rectified Current**



**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at  $T_J = 25^{\circ}\text{C}$**

