



## MASTER INSTRUMENT CORPORATION

**SINGLE-PHASE BRIDGE RECTIFIER  
BR1505W THRU BR1510W**

**VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 15 Amperes**

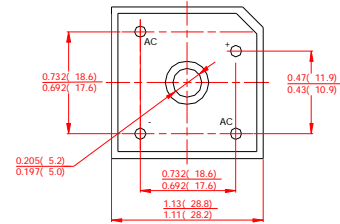
**FEATURES**

- I Low cost
- I This series is UL recognized under component index, file number E127707
- I High forward surge current capability
- I Integrally molded heatsink provide very low thermal resistance
- I High isolation voltage from case to lugs
- I High temperature soldering guaranteed: 260°C/10 second, at 5 lbs. (2.3kg) tension.

**MECHANICAL DATA**

- I Case: Molded plastic body
- I Terminal: Lead solderable per MIL-STD-202E method 208C.
- I Polarity: Polarity symbols molded on case
- I Mounting: Thru hole for #6 screw, 5.0 in.-lbs torque max.
- I Weight: 0.20ounce, 5.62 grams

**BR-35W**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load derate current by 20%.

|  | SYMBOLS           | BR1505W               | BR151W | BR152W | BR154W | BR156W | BR158W | BR1510W | UNITS            |       |
|--|-------------------|-----------------------|--------|--------|--------|--------|--------|---------|------------------|-------|
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>  | 50                    | 100    | 200    | 400    | 600    | 800    | 1000    | Volts            |       |
| Maximum RMS Voltage  | V <sub>RMS</sub>  | 35                    | 70     | 140    | 280    | 420    | 560    | 700     | Volts            |       |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>   | 50                    | 100    | 200    | 400    | 600    | 800    | 1000    | Volts            |       |
| Maximum Average Forward Rectified Output Current, at T <sub>C</sub> =55°C (Note 1, 2)            | I <sub>(AV)</sub> | 15                    |        |        |        |        |        |         | Amps             |       |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>  | 300                   |        |        |        |        |        |         | Amps             |       |
| Rating for Fusing (t<8.3ms)  | I <sup>2</sup> T  | 373                   |        |        |        |        |        |         | A <sup>2</sup> S |       |
| Maximum Instantaneous Forward Voltage at 7.5A  | V <sub>F</sub>    | 1.1                   |        |        |        |        |        |         | Volts            |       |
| Maximum DC Reverse Current at rated DC blocking voltage  | I <sub>R</sub>    | T <sub>A</sub> =25°C  | 10     |        |        |        |        |         |                  | μAmps |
|  |                   | T <sub>A</sub> =150°C | 1.0    |        |        |        |        |         |                  | mAmps |
| Isolation Voltage from case to lug   | V <sub>ISO</sub>  | 2500                  |        |        |        |        |        |         | V <sub>AC</sub>  |       |
| Typical Thermal Resistance (Note 1,2)  | R <sub>θJC</sub>  | 2.0                   |        |        |        |        |        |         | °C/W             |       |
| Operating Temperature Range  | T <sub>J</sub>    | -55 to +150           |        |        |        |        |        |         | °C               |       |
| Storage Temperature Range  | T <sub>STG</sub>  | -55 to +150           |        |        |        |        |        |         | °C               |       |

**NOTES:**

1. Unit mounted on 5"×4"×3" thick (12.8mm×10.2mm×7.3mm) Al. plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.



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RATINGS AND CHARACTERISTIC CURVES BR1505W THRU BR1510W

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

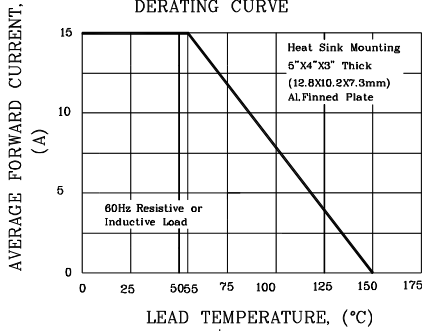


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

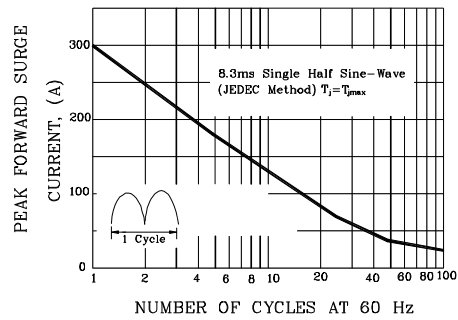


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

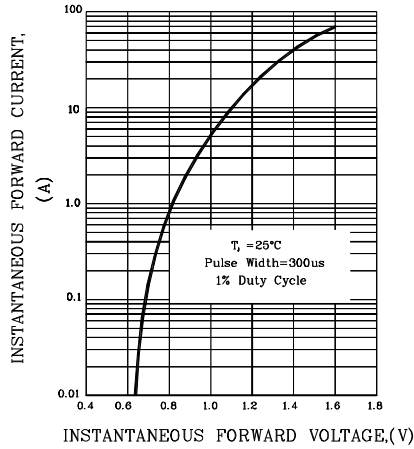


FIG.4-TYPICAL REVERSE CHARACTERISTICS



FIG.5-TYPICAL JUNCTION CAPACITANCE

