

BR1500W - BR1510W

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

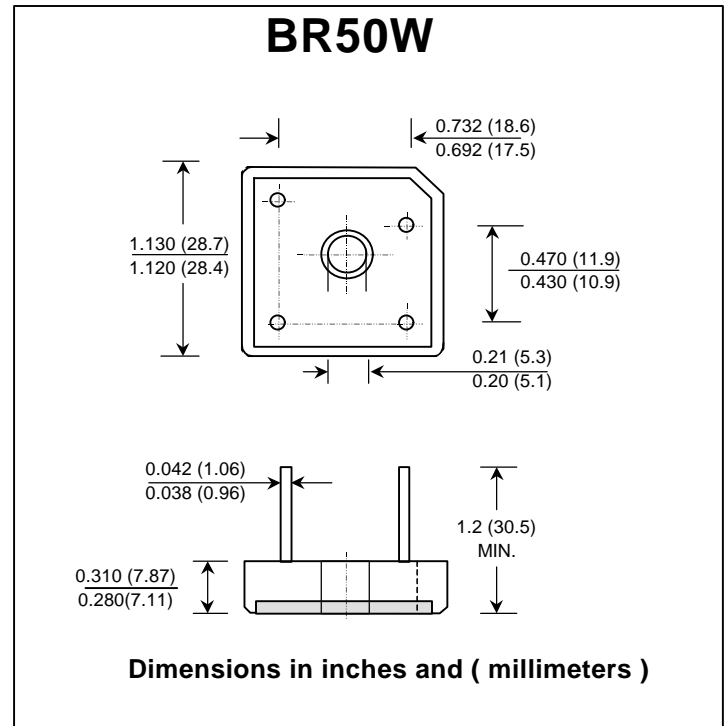
Io : 15 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Ideal for printed circuit board
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Polarity symbols marked on case
- * Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
- * Weight : 15.95 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING | SYMBOL | BR 1500W | BR 1501W | BR 1502W | BR 1504W | BR 1506W | BR 1508W | BR 1510W | UNIT |
|---|-----------------|---------------|----------|----------|----------|----------|----------|----------|--------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current $T_c = 55^\circ C$ | $I_{F(AV)}$ | 15 | | | | | | | A |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I_{FSM} | 300 | | | | | | | A |
| Current Squared Time at $t < 8.3$ ms. | $I^2 t$ | 375 | | | | | | | $A^2 S$ |
| Maximum Forward Voltage per Diode at $I_F = 7.5$ A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$ | I_R | 10 | | | | | | | μA |
| | $I_{R(H)}$ | 200 | | | | | | | μA |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 1.9 | | | | | | | $^\circ C/W$ |
| Operating Junction Temperature Range | T_J | - 40 to + 150 | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | - 40 to + 150 | | | | | | | $^\circ C$ |

Notes :

1. Thermal Resistance from junction to case with units mounted on a 5" x 4" x 3" (12.7cm.x 10.2cm.x 7.3cm.) Al.-Finned Plate

RATING AND CHARACTERISTIC CURVES (BR1500W - BR1510W)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

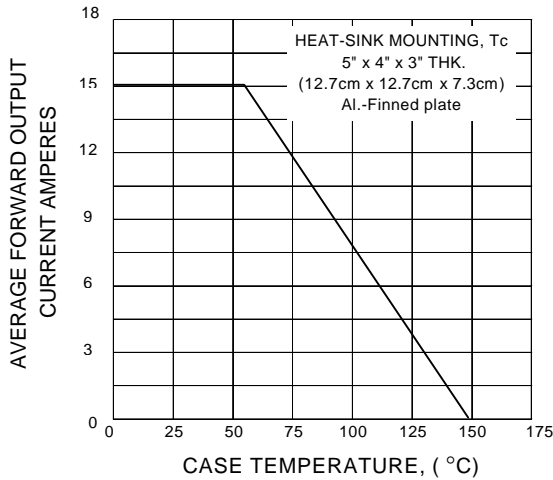


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

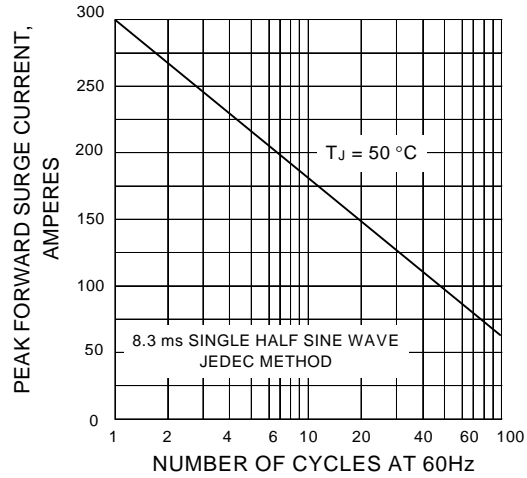


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

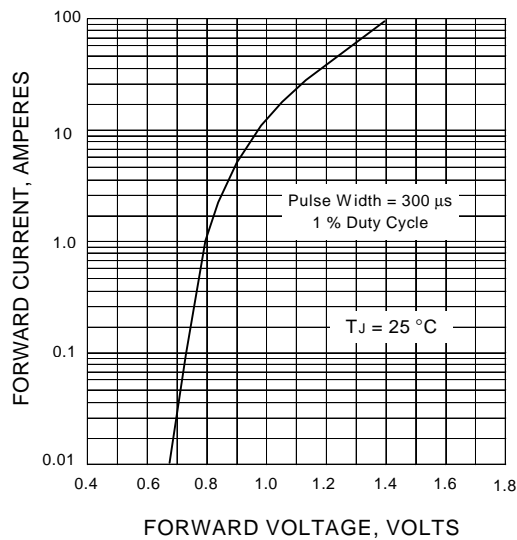


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

