

BR5000W - BR5010W

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

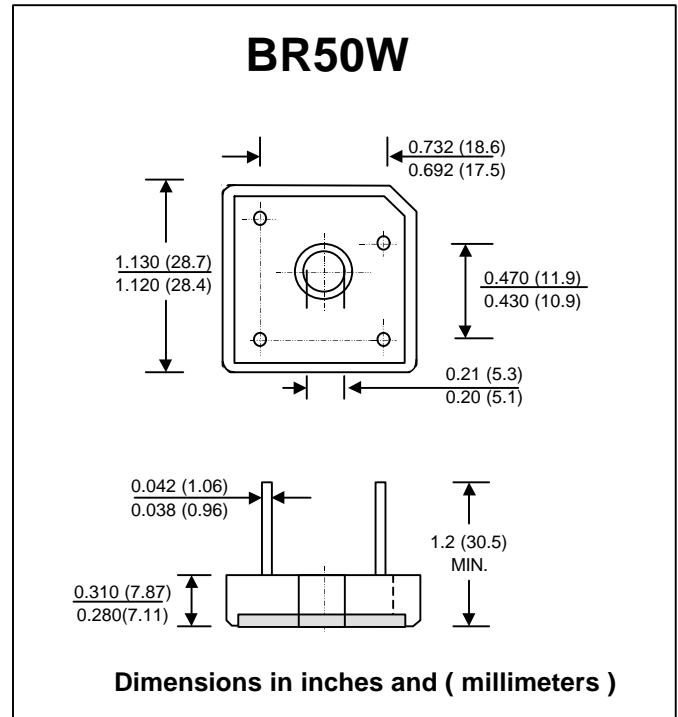
Io : 50 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * High case dielectric strength
- * **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 5000W | BR 5001W | BR 5002W | BR 5004W | BR 5006W | BR 5008W | BR 5010W | 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°C | I _{F(AV)} | 50 | | | | | | | A |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I _{FSM} | 400 | | | | | | | A |
| Current Squared Time at t < 8.3 ms. | I ² t | 664 | | | | | | | A ² S |
| Maximum Forward Voltage per Diode at I _F = 25 A | V _F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C | I _R | 10 | | | | | | | μA |
| | I _{R(H)} | 200 | | | | | | | μA |
| Typical Thermal Resistance at Junction to Case (Note 1) | R _{θJC} | 1.0 | | | | | | | °C/W |
| Operating Junction Temperature Range | T _J | - 40 to + 150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | - 40 to + 150 | | | | | | | °C |

Notes :

- 1) Thermal resistance from Junction to Case with units mounted on heat sink.

RATING AND CHARACTERISTIC CURVES (BR5000W - BR5010W)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

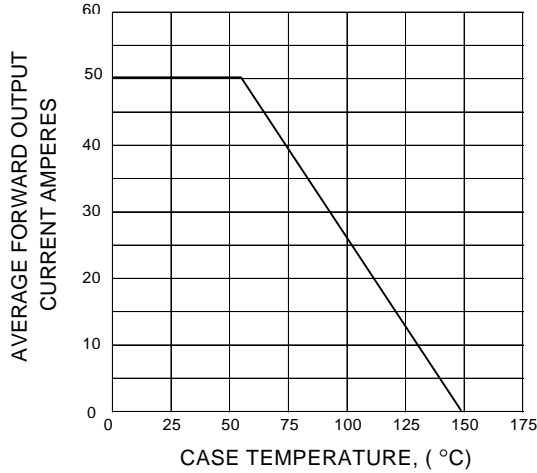


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

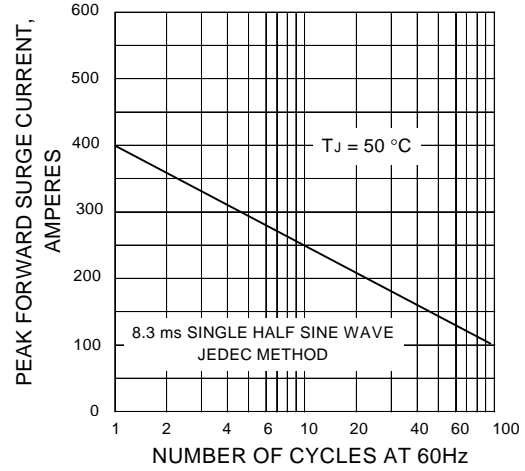


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

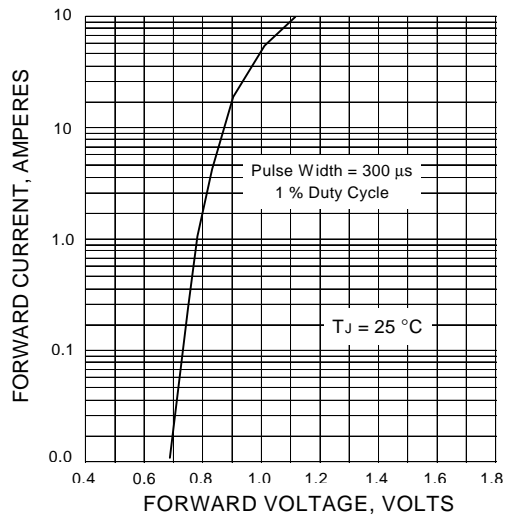


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

