

BR1500 - BR1510

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

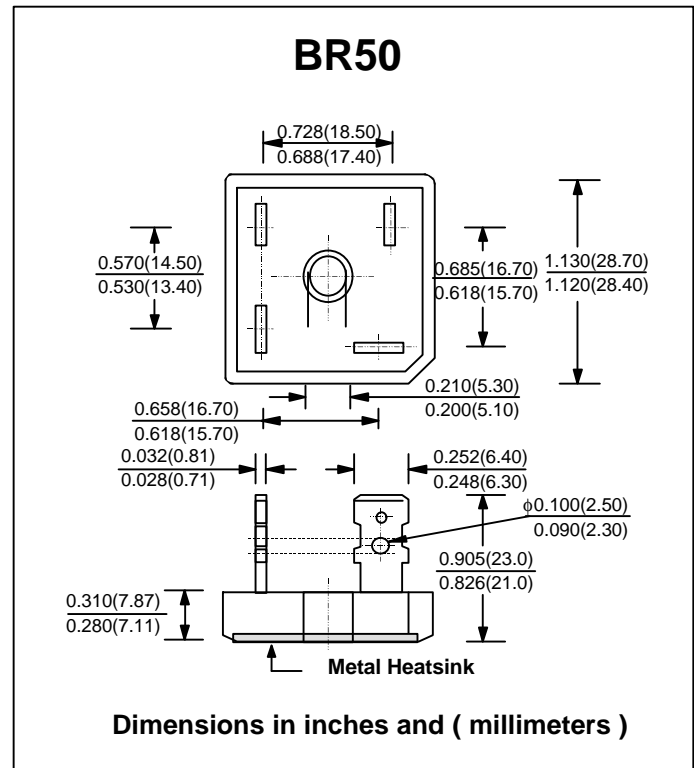
Io : 15 Amperes

FEATURES :

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

MECHANICAL DATA :

- * Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : plated .25" (6.35 mm). Faston
- * 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 : 17.1 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%.

| TYPE NUMBER | SYMBOL | BR1500 | BR1501 | BR1502 | BR1504 | BR1506 | BR1508 | BR1510 | UNITS |
|---|-----------------|---------------|--------|--------|--------|--------|--------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Current $T_c = 55^\circ C$ | $I_{F(AV)}$ | 15 | | | | | | | Amps. |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I_{FSM} | 300 | | | | | | | Amps. |
| Current Squared Time at $t < 8.3$ ms. | $I^2 t$ | 375 | | | | | | | A ² S |
| Maximum Forward Voltage per Diode at $I_F = 7.5$ Amp. | V_F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current $T_a = 25^\circ C$ | I_R | 10 | | | | | | | μA |
| at Rated DC Blocking Voltage $T_a = 100^\circ C$ | $I_{R(H)}$ | 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

UPDATE : APRIL 23, 1998

RATING AND CHARACTERISTIC CURVES (BR1500 - BR1510)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

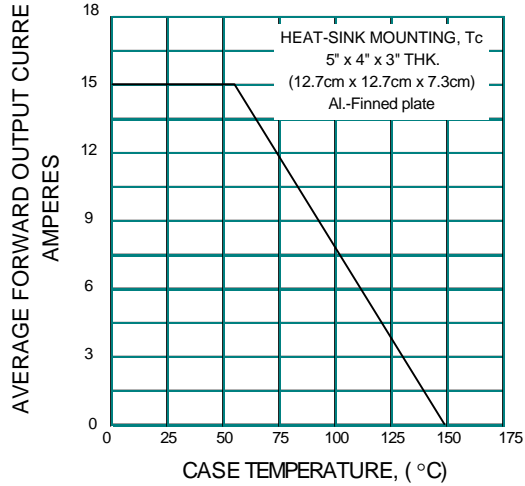


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

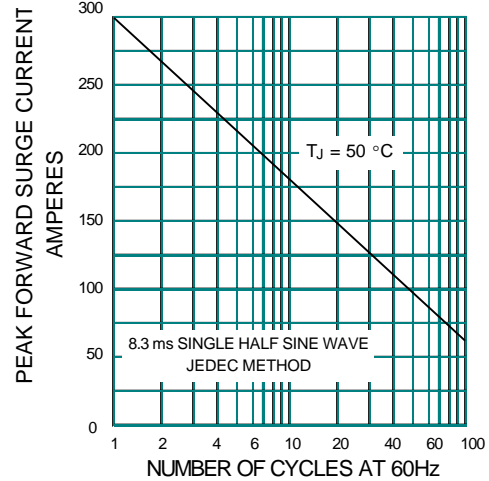


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

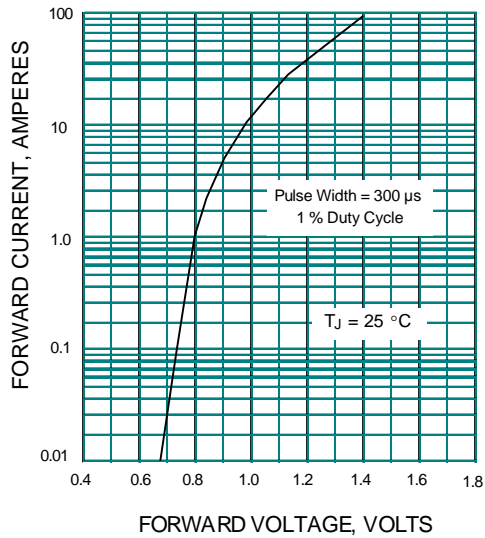


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

