# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**BR805 THRU BR810**

## TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

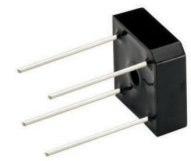
*VOLTAGE RANGE - 50 to 1000 Volts* *CURRENT - 8.0 Amperes*

### FEATURES

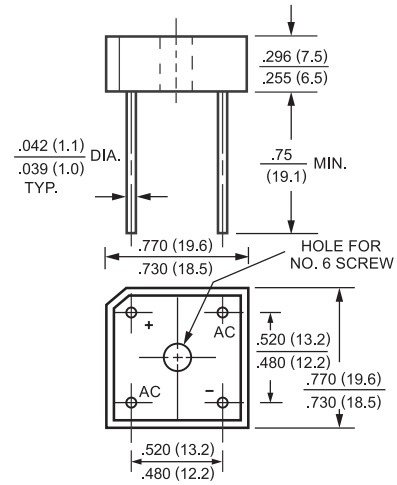
* Surge overload rating: 125 Amperes peak
* Low forward voltage drop

### MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 6.9 grams



BR-8/10




Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

| | | SYMBOL | BR805 | BR81 | BR82 | BR84 | BR86 | BR88 | BR810 | 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 Rectified Output Current at Tc = 50°C | | $I_O$ | 8.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | $I_{FSM}$ | 125 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 4.0A DC | | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | @TA = 25°C | $I_R$ | 10 | | | | | | | uAmps |
| | @TC = 100°C | | 500 | | | | | | | |
| $I^2t$ Rating for Fusing (t<8.3ms) | | $I^2t$ | 166 | | | | | | | $A^2Sec$ |
| Typical Junction Capacitance ( Note1) | | $C_J$ | 200 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | | RθJA | 21 | | | | | | | °C/W |
| Operating Temperature Range | | $T_J$ | -55 to + 125 | | | | | | | °C |
| Storage Temperature Range | | $T_{STG}$ | -55 to + 150 | | | | | | | °C |

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.



NEXT BACK EXIT

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

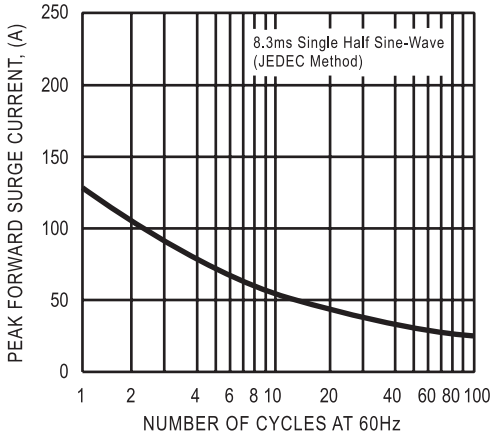



FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

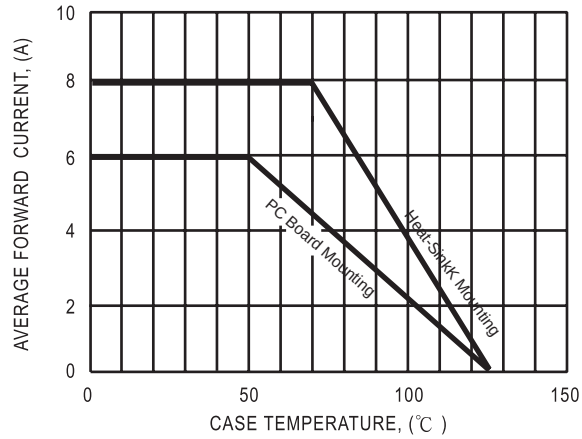



FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

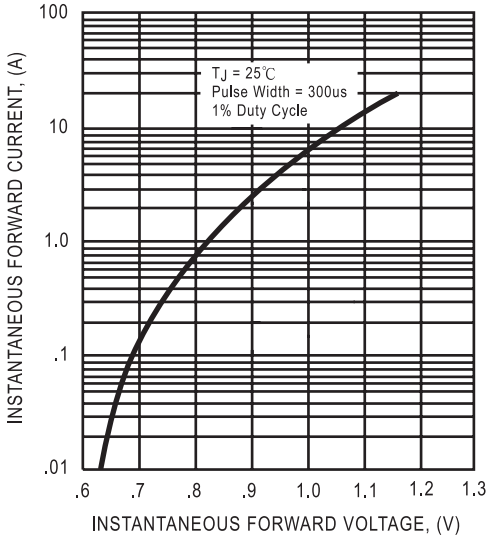



FIG. 4 - TYPICAL REVERSE CHARACTERISTICS