## TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

## VOLTAGE RANGE - 50 to 1000 Volts

## FEATURES

* Good for automation insertion
* Surge overload rating - 50 Amperes peak
* Ideal for printed circuit board
* Reliable low cost construction
* Glass passivated junction


## MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 0.4 gram

CURRENT - 1.0 Ampere


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz , resistive or inductive load. For capacitive load, derate current by $20 \%$.

|  |  | SYMBOL | DB101 | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | UNITS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Recurrent Peak Reverse Voltage |  | Vrrm | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage |  | Vrms | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage |  | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Output Current at TA $=40^{\circ} \mathrm{C}$ |  | 10 | 1.0 |  |  |  |  |  |  | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |  | IFSM | 50 |  |  |  |  |  |  | Amps |
| Maximum Forward Voltage Drop per element at 1.0A DC |  | $V_{F}$ | 1.1 |  |  |  |  |  |  | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | $@ T_{A}=25^{\circ} \mathrm{C}$ | IR | 10 |  |  |  |  |  |  | uAmps |
|  | $@ T A=125^{\circ} \mathrm{C}$ |  |  |  |  | 500 |  |  |  |  |
| $\mathrm{I}^{2} \mathrm{t}$ Rating for Fusing (t<8.3ms) |  | $1^{2} \mathrm{t}$ | 10 |  |  |  |  |  |  | $\mathrm{A}^{2} \mathrm{Sec}$ |
| Typical Junction Capacitance ( Note1) |  | CJ | 25 |  |  |  |  |  |  | pF |
| Typical Thermal Resistance (Note 2) |  | R日JA | 40 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating and Storage Temperature Range |  | TJ,TSTG | -65 to +150 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C}$ |

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 $0.5 \times 0.5^{\prime \prime}(13 \times 13 \mathrm{~mm})$ copper pads.

EXIT

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS


DC COMPONENTS CO., LTD.

