



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

DB101S  
THRU  
DB107S

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

## FEATURES

- \* Surge overload rating - 30 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: 0.38 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

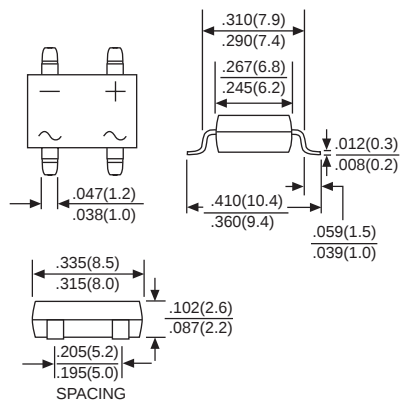
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



DB-1S



Dimensions in inches and (millimeters)

|                                                                                                   |              | SYMBOL  | DB101S       | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | 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°C                                               |              | IO      | 1.0          |        |        |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |              | IFSM    | 30           |        |        |        |        |        |        | Amps  |
| Maximum Forward Voltage Drop per element at 1.0A DC                                               |              | VF      | 1.1          |        |        |        |        |        |        | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | @ TA = 25°C  | IR      | 10           |        |        |        |        |        |        | uAmps |
|                                                                                                   | @ TA = 125°C |         | 500          |        |        |        |        |        |        |       |
| I²t Rating for Fusing (t<8.3ms)                                                                   |              | I²t     | 10.4         |        |        |        |        |        |        | A²Sec |
| Typical Junction Capacitance ( Note1)                                                             |              | CJ      | 25           |        |        |        |        |        |        | pF    |
| Typical Thermal Resistance (Note 2)                                                               |              | RθJA    | 40           |        |        |        |        |        |        | °C/W  |
| Operating and Storage Temperature Range                                                           |              | TJ,TSTG | -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.

# RATING AND CHARACTERISTIC CURVES (DB101S THRU DB107S)

FIG. 1 -MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

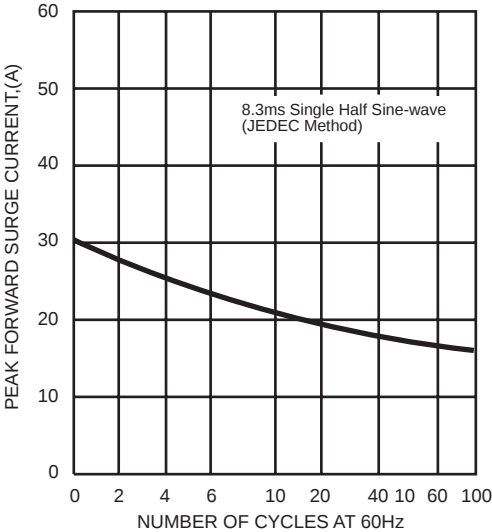


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

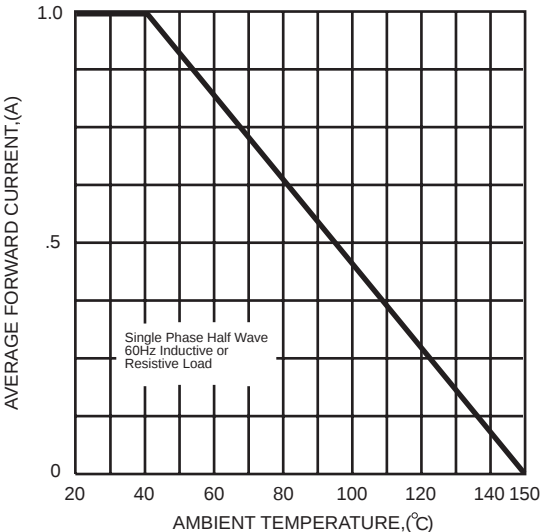


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

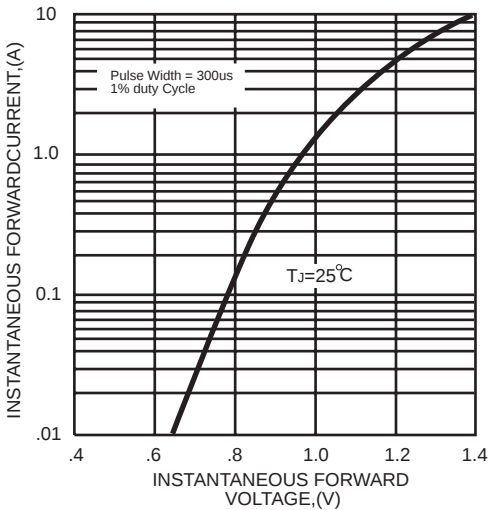
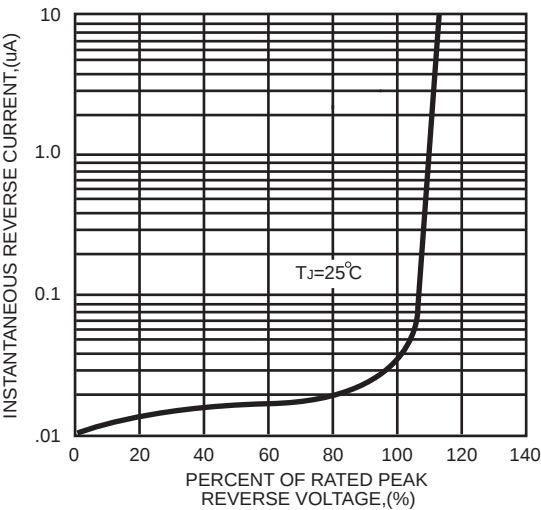


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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