



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**DB101S  
THRU  
DB107S**

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts** **CURRENT - 1.0 Ampere**

**FEATURES**

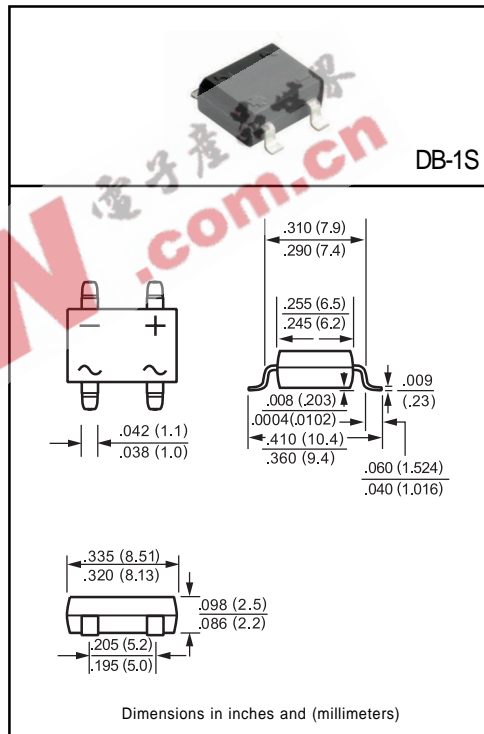
- \* Surge overload rating - 30 Amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction
- \* Glass passivated junction

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: 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%.



|   | 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 Bridge Element at 1.0A DC  | VF               | 1.1          |        |        |        |        |        |        | Volts              |
| Maximum DC Reverse Current at rated DC Blocking Voltage per element                               | @TA = 25°C       | 10           |        |        |        |        |        |        | uAmps              |
|   | @TA = 125°C      | 500          |        |        |        |        |        |        |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)  | I <sup>2</sup> t | 10           |        |        |        |        |        |        | A <sup>2</sup> Sec |
| 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

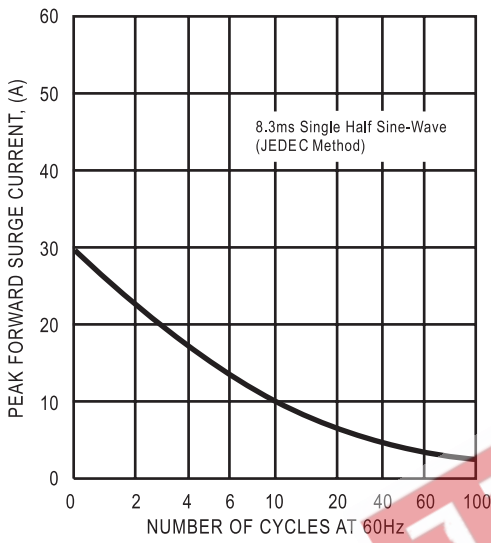


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

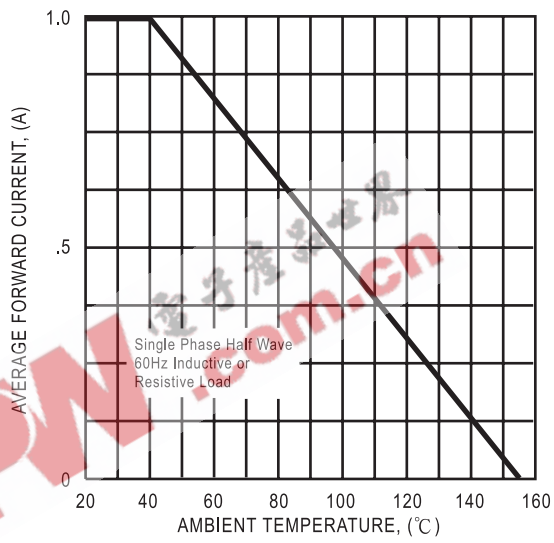


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

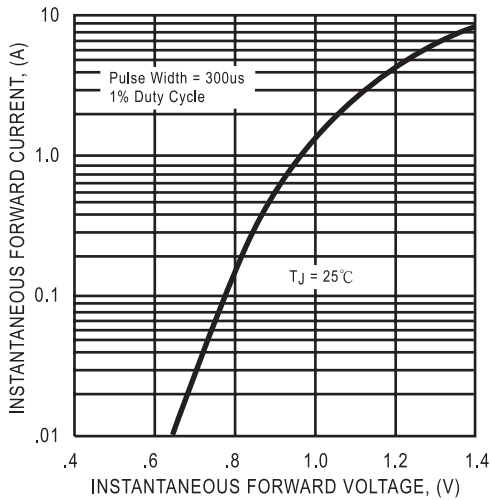


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

