

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

**FEATURES**

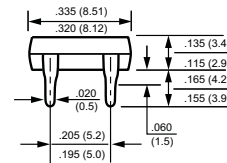
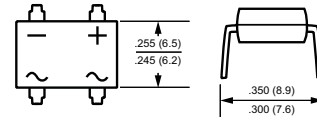
- \* Good for automation insertion
- \* Surge overload rating - 30 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* Weight: 1.0 gram

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0
- \* UL listed under the recognized component directory, file #E94233.



**DB-1**



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%.

**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

| RATINGS   | SYMBOL          | DB101        | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | UNITS                     |
|---|-----------------|--------------|-------|-------|-------|-------|-------|-------|---------------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | Volts                     |
| Maximum RMS Bridge Input 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 Output Current at $T_A = 40^\circ\text{C}$                                | $I_O$           | 1.0          |       |       |       |       |       |       | Amps                      |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 30           |       |       |       |       |       |       | Amps                      |
| Typical Current Squared Time  | $I^2T$          | 3.74         |       |       |       |       |       |       | $\text{A}^2\text{S}$      |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 40           |       |       |       |       |       |       | $^\circ\text{C}/\text{W}$ |
|   | $R_{\theta JL}$ | 15           |       |       |       |       |       |       |                           |
| Operating and Storage Temperature Range   | $T_J, T_{STG}$  | -55 to + 150 |       |       |       |       |       |       | $^\circ\text{C}$          |

**ELECTRICAL CHARACTERISTICS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

| CHARACTERISTICS  | SYMBOL                      | DB101 | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | UNITS |
|--|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Forward Voltage Drop per Bridge Element at 1.0A DC       | $V_F$                       | 1.0   |       |       |       |       |       |       | Volts |
| Maximum Reverse Current at Rated DC Blocking Voltage per element | @ $T_A = 25^\circ\text{C}$  | 1.0   |       |       |       |       |       |       | uAmps |
|  | @ $T_A = 125^\circ\text{C}$ | 0.05  |       |       |       |       |       |       |       |

Note: 1. "Fully ROHS compliant", "100% Sn plating(Pb-free).  
2. Thermal Resistance: PCB mounted.

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REV.A

## RATING AND CHARACTERISTICS CURVES ( DB101 THRU DB107 )

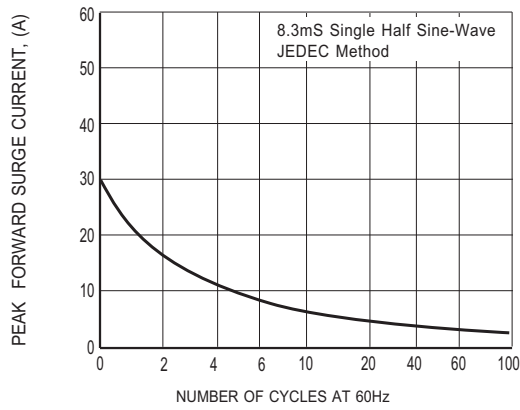


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

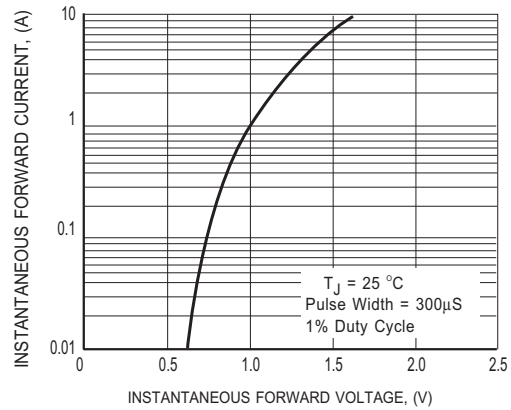


FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

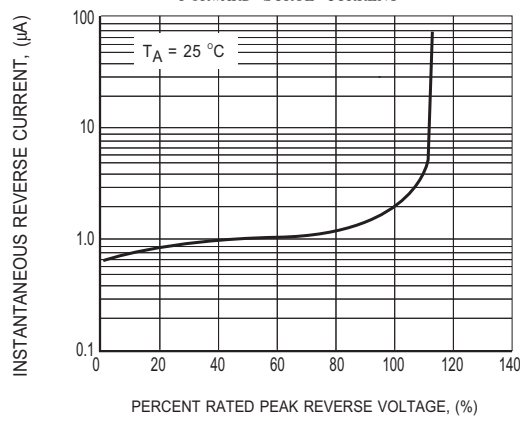


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

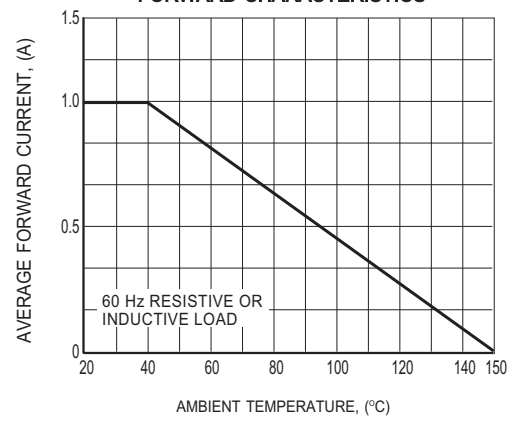


FIG. 4 TYPICAL FORWARD CURRENT DERATING CURVE

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### TUBE PACK

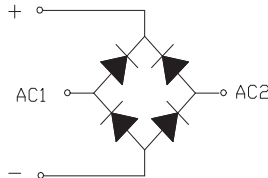
| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE<br>(mm) | CARTON SIZE<br>(mm) | EA PER CARTON | WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|------------|
| DB-1    | -C           | 2,500      | 450*140*84             | 464*305*283         | 15,000        | 14.30      |



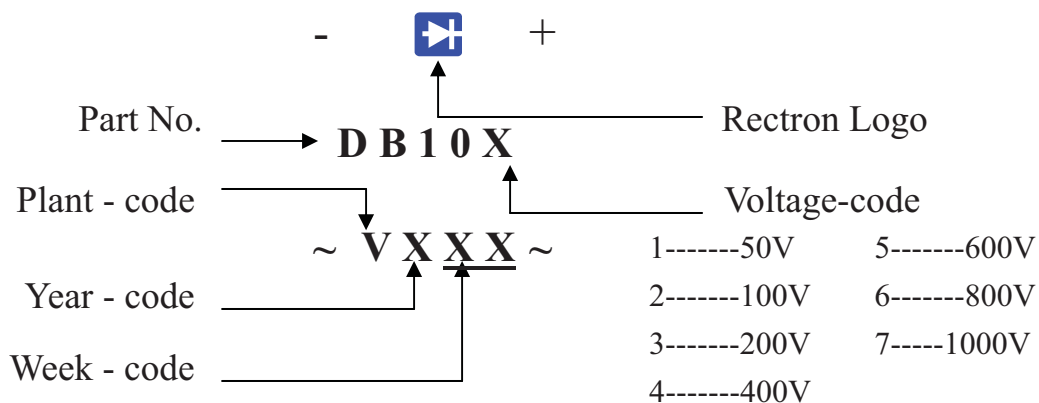
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## Attachment information about DB10X

### 1. Internal Circuit



### 2. Marking on the body



### 3. Items marked on the inner box and carton

#### 3.1 On the box (for -C)

**CUSTOMER**  
**TYPE**  
**LOT NO.**  
**QUANTITY**  
**Q.A.**  
**DATE**

#### 3.2 On the carton

**CUSTOMER**  
**TYPE**  
**QUANTITY**  
**LOT NO.**  
**REMARK**

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