

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE 50 to 1200 Volts CURRENT 1.0 Ampere**

**FEATURES**

- \* Surge overload rating - 40 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**

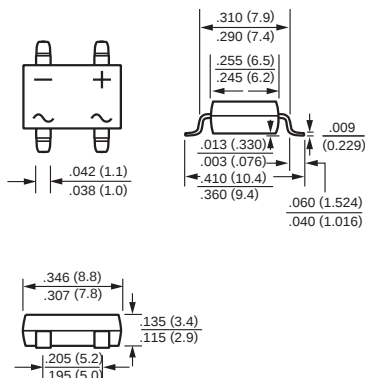
- \* Epoxy : Device has UL flammability classification 94V-0
- \* UL listed the recognized component directory, file #E94233

**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-S**



Dimensions in inches and (millimeters)

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

| RATINGS                                                                                           | SYMBOL  | DB101S       | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | DB1012S | UNITS |
|---------------------------------------------------------------------------------------------------|---------|--------------|--------|--------|--------|--------|--------|--------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM    | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | 1200    | Volts |
| Maximum RMS Bridge Input Voltage                                                                  | VRMS    | 35           | 70     | 140    | 280    | 420    | 560    | 700    | 840     | Volts |
| Maximum DC Blocking Voltage                                                                       | VDC     | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | 1200    | 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    | 40           |        |        |        |        |        |        |         | Amps  |
| Typical Thermal Resistance<br>(Note 1)                                                            | RθJA    | 40           |        |        |        |        |        |        |         | °C/W  |
|                                                                                                   | RθJC    | 9            |        |        |        |        |        |        |         |       |
| Operating and Storage Temperature Range                                                           | TJ,TSTG | -55 to + 150 |        |        |        |        |        |        |         | °C    |

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

| CHARACTERISTICS                                            | SYMBOL | DB101S | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | DB1012S | UNITS            |
|------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|------------------|
| Maximum Forward Voltage Drop per Bridge Element at 1.0A DC | $V_F$  | 1.1    |        |        |        |        |        |        |         | Volts            |
| Maximum Reverse Current at rated                           | $I_R$  | 5.0    |        |        |        |        |        |        |         | $\mu\text{Amps}$ |
| DC Blocking Voltage per element                            |        | 0.5    |        |        |        |        |        |        |         | mAmps            |

NOTE: 1. Suffix "-s" Surface Mount for Dip Bridge.  
 2. Units mounted on P.C.B. with 0.5x0.5" (13x13mm) copper pads.  
 3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2005-2

REV:A

# RATING AND CHARACTERISTIC CURVES ( DB101S THRU DB1012S )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

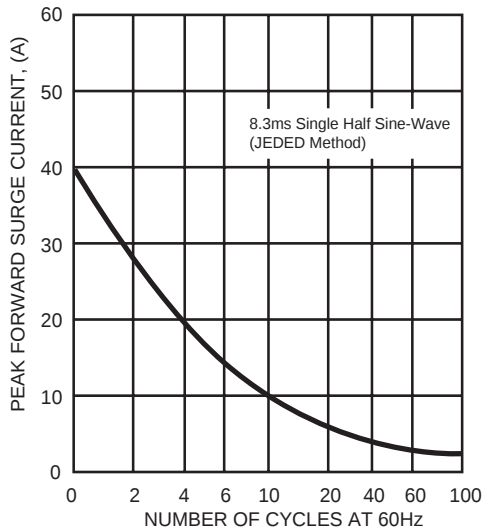


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

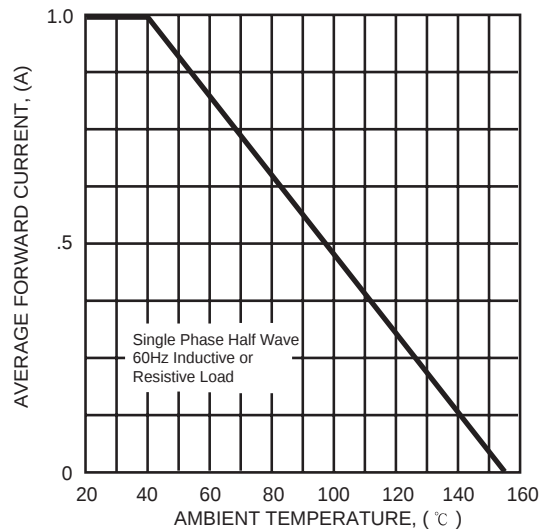


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

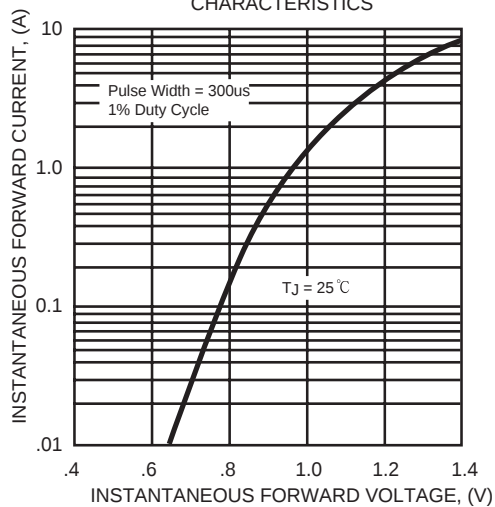
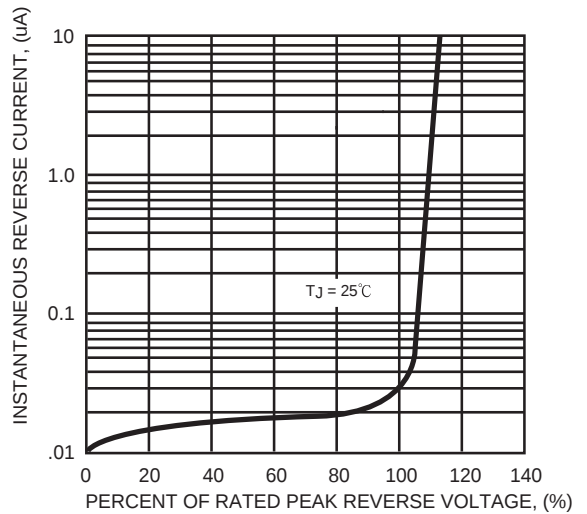
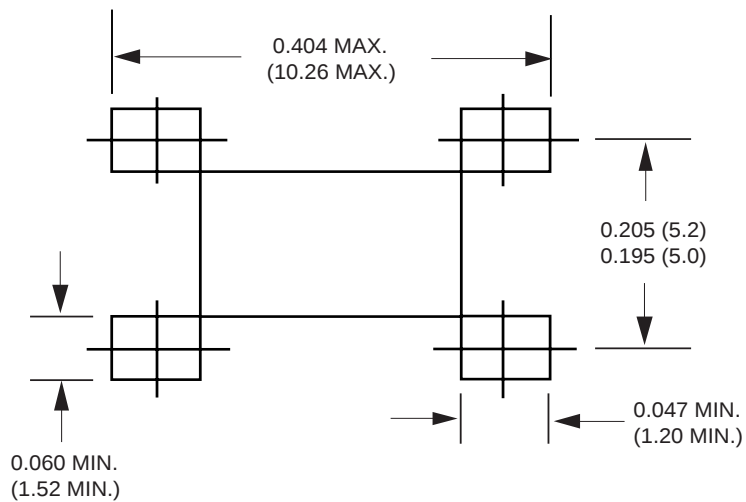


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



## Mounting Pad Layout



Dimensions in inches and (millimeters)