

**GLASS PASSIVATED SUPER FAST  
SILICON SURFACE MOUNT BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

**FEATURES**

- \* Good for automatic 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**

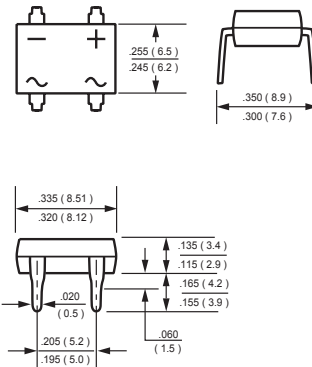
- \* UL listed the recognized component directory, file #94233
- \* Epoxy: Device has UL flammability classification 94V-O

**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-1



Dimensions in inches and (millimeters)

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

| RATINGS                                                                                           | SYMBOL              | EDB101       | EDB102 | EDB103 | EDB104 | EDB105 | EDB106 | UNITS |
|---------------------------------------------------------------------------------------------------|---------------------|--------------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub>    | 50           | 100    | 150    | 200    | 300    | 400    | Volts |
| Maximum RMS Bridge Input Voltage                                                                  | V <sub>RMS</sub>    | 35           | 70     | 105    | 140    | 210    | 280    | Volts |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>     | 50           | 100    | 150    | 200    | 300    | 400    | Volts |
| Maximum Average Forward Output Current at T <sub>A</sub> = 55°C                                   | I <sub>O</sub>      | 1.0          |        |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>    | 30           |        |        |        |        |        | Amps  |
| Typical Thermal Resistance (Note 3)                                                               | R <sub>θJA</sub>    | 38           |        |        |        |        |        | °C/W  |
|                                                                                                   | R <sub>θJL</sub>    | 12           |        |        |        |        |        |       |
| Typical Junction Capacitance (Note 2)                                                             | C <sub>J</sub>      | 15           |        |        |        | 10     |        | pF    |
| Operating and Storage Temperature Range                                                           | T <sub>J,TSTG</sub> | -55 to + 150 |        |        |        |        |        | °C    |

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

| CHARACTERISTICS                        |                         | SYMBOL         | EDB101 | EDB102 | EDB103 | EDB104 | EDB105 | EDB106 | UNITS |
|----------------------------------------|-------------------------|----------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Forward Voltage at 1.0A DC     |                         | V <sub>F</sub> | 1.05   |        |        |        | 1.35   | 1.70   | Volts |
| Maximum Reverse Current at Rated       | @T <sub>A</sub> = 25°C  | I <sub>R</sub> | 5.0    |        |        |        |        |        | μAmps |
| DC Blocking Voltage per element        | @T <sub>A</sub> = 100°C |                | 100    |        |        |        |        |        | μAmps |
| Maximum Reverse Recovery Time (Note 1) |                         | trr            | 50     |        |        |        | nSec   |        |       |

Note: 1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=-0.25\text{A}$ .  
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.  
3. Thermal Resistance : Mounted on PCB.

2006-11  
REV:B

RATING AND CHARACTERISTICS CURVES ( EDB101 THRU EDB106 )

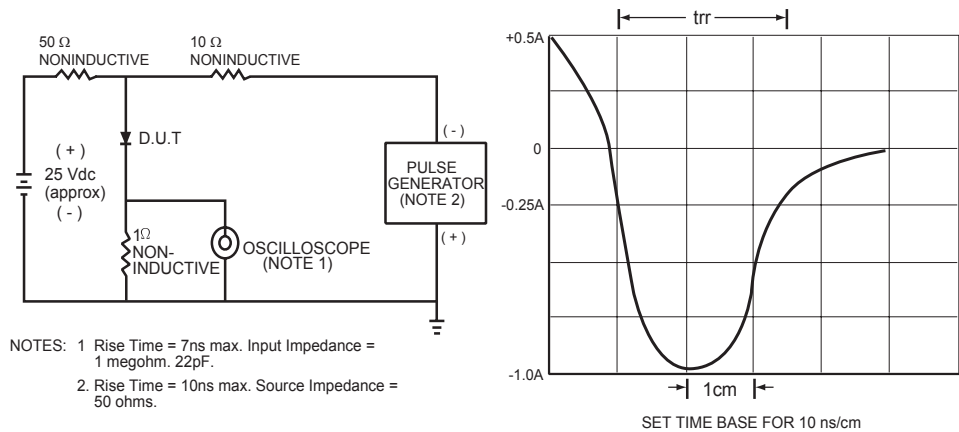


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

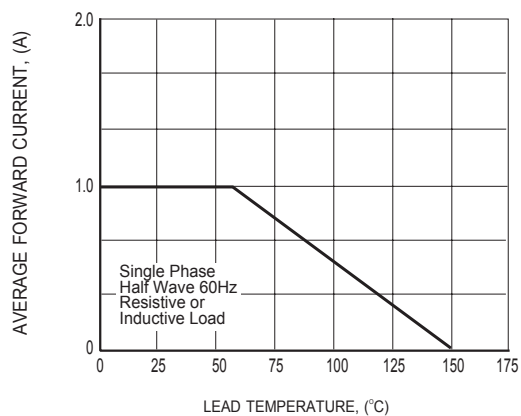


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

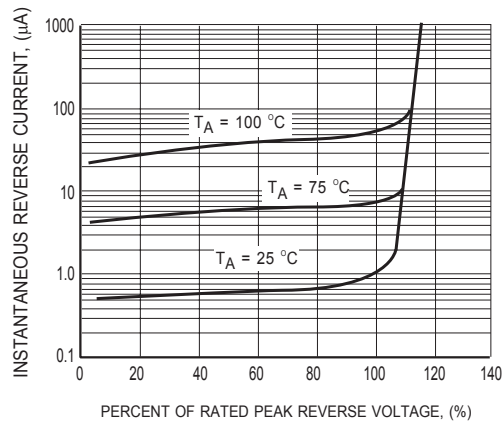
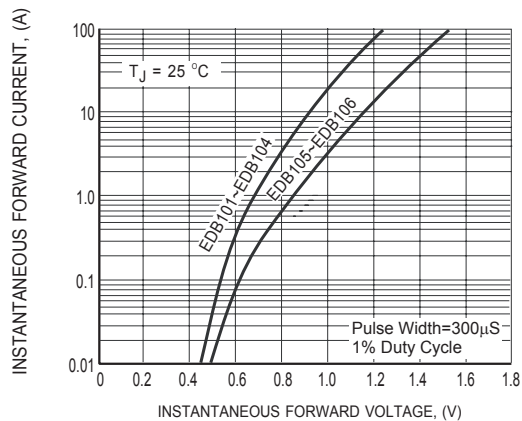
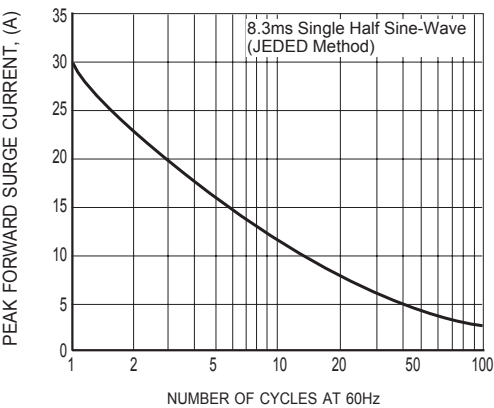


FIG.3 TYPICAL REVERSE CHARACTERISTICS

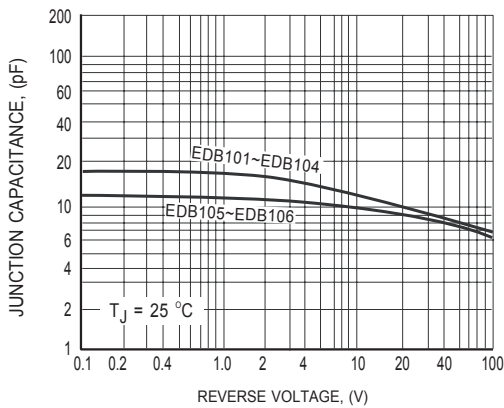
**RATING AND CHARACTERISTICS CURVES ( EDB101 THRU EDB106 )**



**FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.6 TYPICAL JUNCTION CAPACITANCE**

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