

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

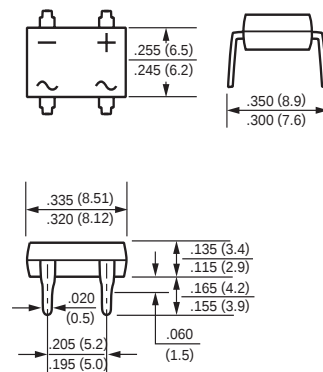
**FEATURES**

- \* Good for automatic insertion
- \* Surge overloading rating - 50 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

**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 TA = 25°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 Volts                                                                                                            | 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 Current<br>at T <sub>A</sub> = 55°C                                                                  | I <sub>O</sub>                    | 1.0          |        |        |        |        |        | Amps  |
| Peak Forward Surge Current I <sub>FM</sub> (surge):8.3 ms single half<br>sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 30           |        |        |        |        |        | Amps  |
| Typical Junction Capacitance (Note 2)                                                                                        | C <sub>J</sub>                    | 15           |        |        |        | 10     |        | pF    |
| Operating and Storage Temperature Range                                                                                      | T <sub>J</sub> , T <sub>STG</sub> | -65 to + 150 |        |        |        |        |        | °C    |

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS                        |                        | SYMBOL         | EDB101 | EDB102 | EDB103 | EDB104 | EDB105 | EDB106 | UNITS |
|----------------------------------------|------------------------|----------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Forward Voltage at 1.0A DC     |                        | V <sub>F</sub> | 1.0    |        |        |        | 1.25   |        | Volts |
| Maximum DC Reverse Current             | @T <sub>A</sub> = 25°C | I <sub>R</sub> | 5.0    |        |        |        |        |        | uAmps |
| at Rated DC Blocking Voltage           | @T <sub>A</sub> =150°C |                | 50     |        |        |        |        |        |       |
| Maximum Reverse Recovery Time (Note 1) |                        | trr            | 50     |        |        |        |        |        | nSec  |

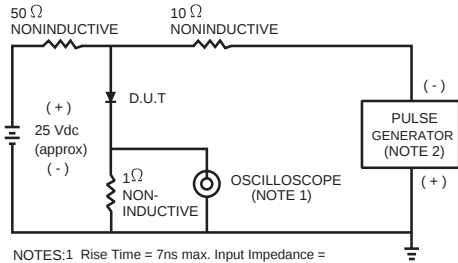
NOTES : 1. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

2001-5

## RATING AND CHARACTERISTIC CURVES ( EDB101 THRU EDB106 )

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

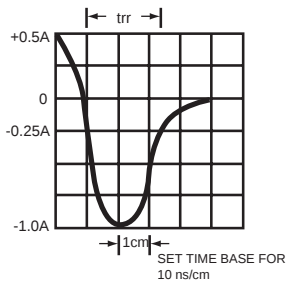


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

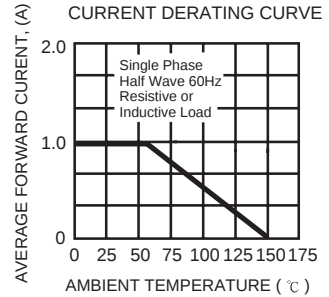


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

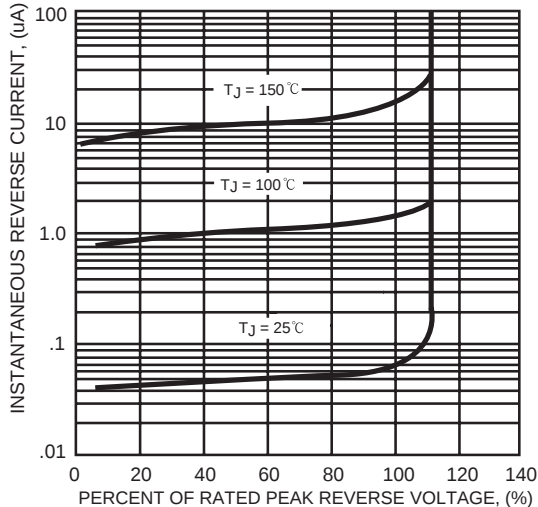


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

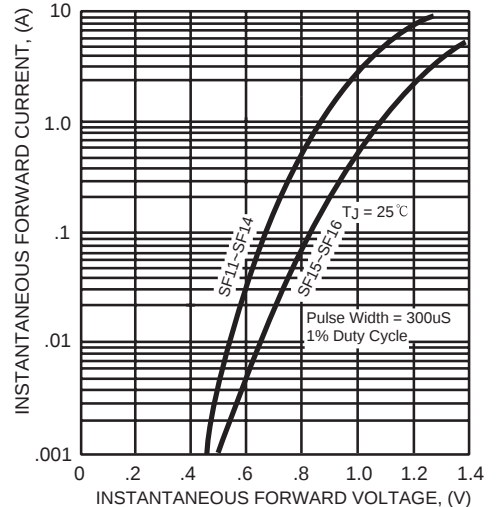


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

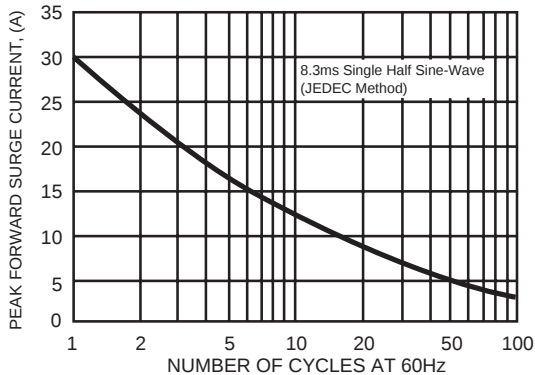


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

