

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

**FEATURES**

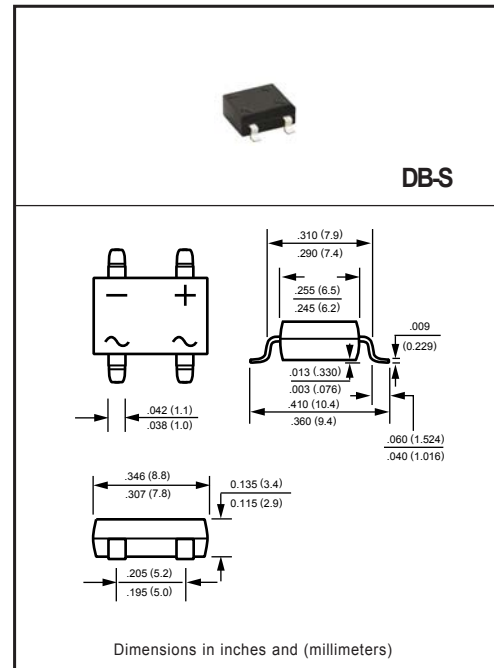
- \* Surge overload rating - 40 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* Weight: 1.0 gram

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0

**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	EDB101S	EDB102S	EDB103S	EDB104S	EDB105S	EDB106S	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	Volts
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	Volts
Maximum Average Forward Output Current at $T_A = 55^\circ\text{C}$	$I_O$	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 Thermal Resistance (Note 3)	$R_{\theta JA}$	38						$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	12						
Typical Junction Capacitance (Note 2)	$C_J$	15			10			pF
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	EDB101S	EDB102S	EDB103S	EDB104S	EDB105S	EDB106S	UNITS
Maximum Forward Voltage at 1.0A DC	$V_F$	1.05			1.35			Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@ $T_A = 25^\circ\text{C}$	5.0						uAmps
	@ $T_A = 100^\circ\text{C}$	100						
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	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.

2007-08

# RATING AND CHARACTERISTICS CURVES ( EDB101S THRU EDB106S )

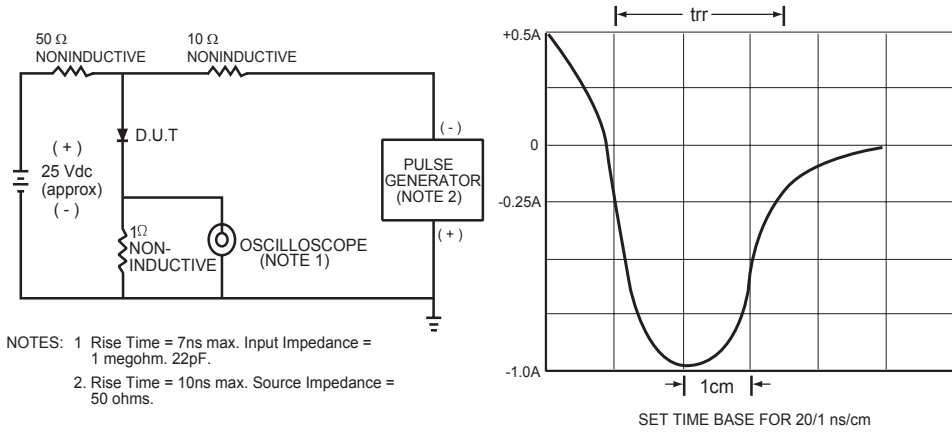


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

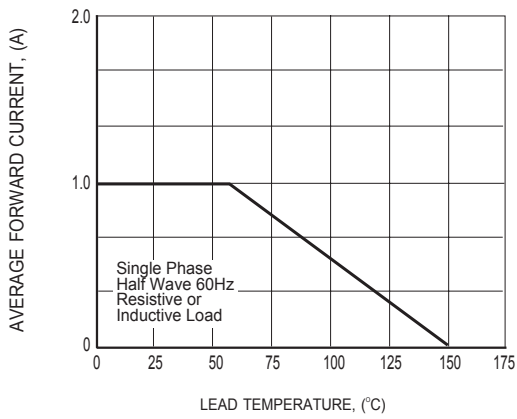


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

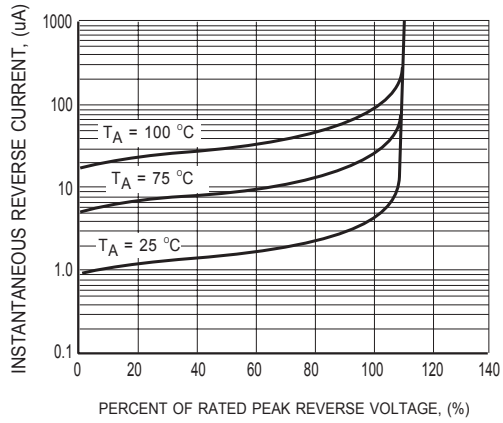


FIG.3 TYPICAL REVERSE CHARACTERISTICS

## RATING AND CHARACTERISTICS CURVES ( EDB101S THRU EDB106S )

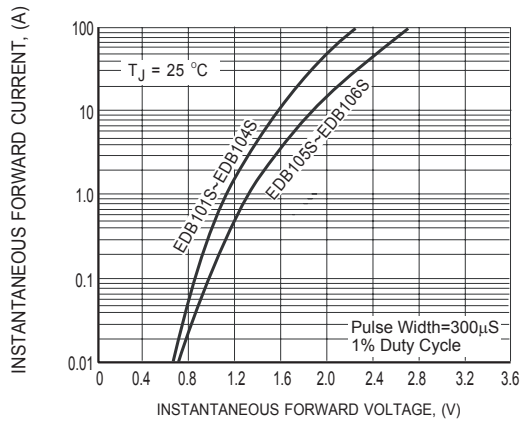


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

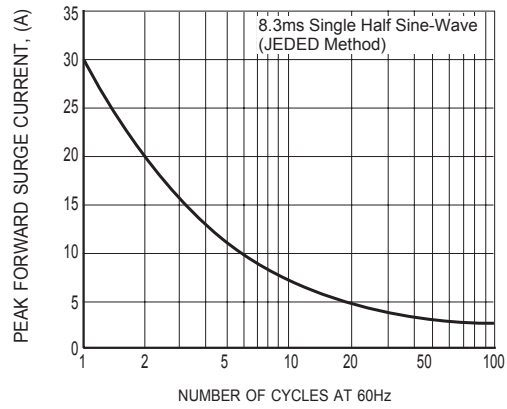


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

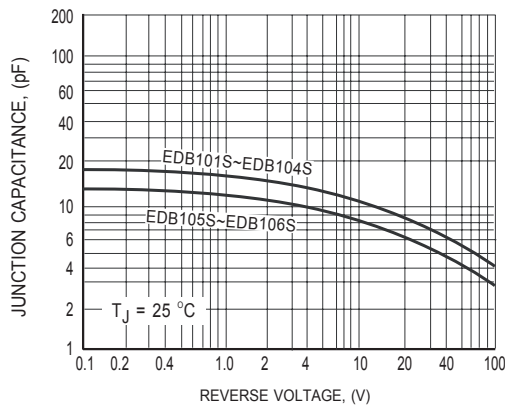
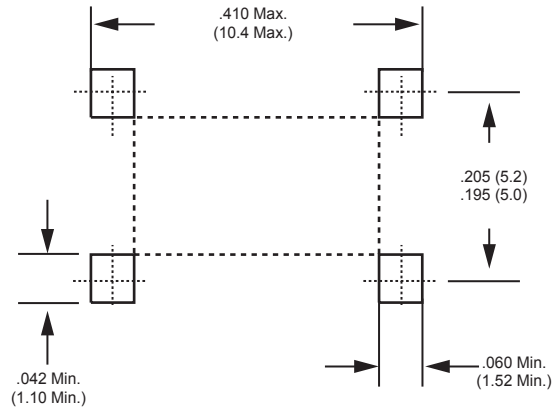


FIG.6 TYPICAL JUNCTION CAPACITANCE

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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