RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

# EDB101 THRU EDB107

## GLASS PASSIVATED SUPER FAST SILICON SURFACE MOUNT BRIDGE RECTIFIER

*VOLTAGE RANGE 50 to 600 Volts CURRENT 1.0 Ampere*

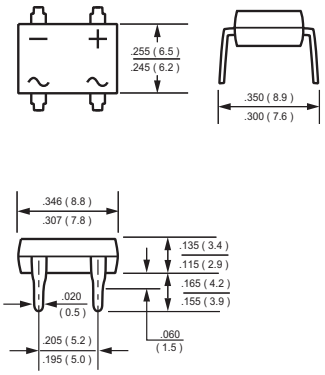
### FEATURES

* 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 recongnized 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.
resistive or inductive load.

MAXIMUM RATINGS (At $T_A$ = 25°C unless otherwise noted)

| RATINGS | SYMBOL | EDB101 | EDB102 | EDB103 | EDB104 | EDB105 | EDB106 | EDB107 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum RMS Bridge Input Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum Average Forward Output Current at $T_A$ = 55°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 Squarad Time | $I^2t$ | 3.7 | | | | | | | $A^2$/Sec |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 38 | | | | | | | °C/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 | | | | | | | °C |

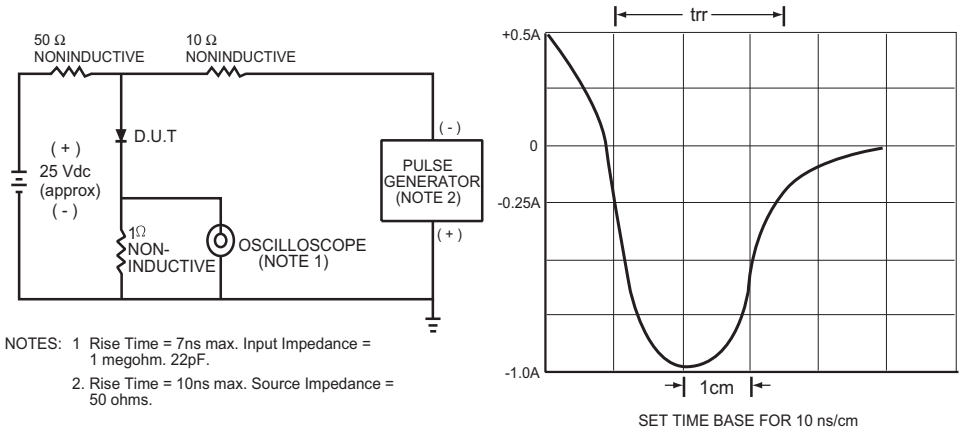
ELECTRICAL CHARACTERISTICS (At $T_A$ = 25°C unless otherwise noted)

| CHARACTERISTICS | | SYMBOL | EDB101 | EDB102 | EDB103 | EDB104 | EDB105 | EDB106 | EDB107 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Forward Voltage at 1.0A DC | | $V_F$ | 1.05 | | | | 1.35 | | 1.70 | Volts |
| Maximum Reverse Current at Rated | @$T_A$ = 25°C | $I_R$ | 5.0 | | | | | | | uAmps |
| DC Blocking Voltage per element | @$T_A$ = 100°C | | 100 | | | | | | | uAmps |
| Maximum Reverse Recovery Time (Note 1) | | trr | 50 | | | | | | | nSec |

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

2016-04
REV:D

# RATING AND CHARACTERISTICS CURVES ( EDB101 THRU EDB107 )




NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

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

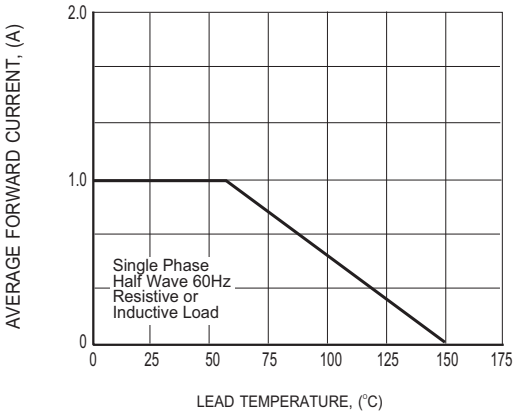



**FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE**

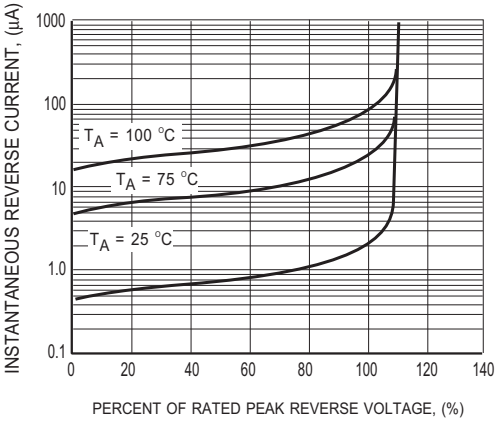



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**

# RATING AND CHARACTERISTICS CURVES ( EDB101 THRU EDB107 )

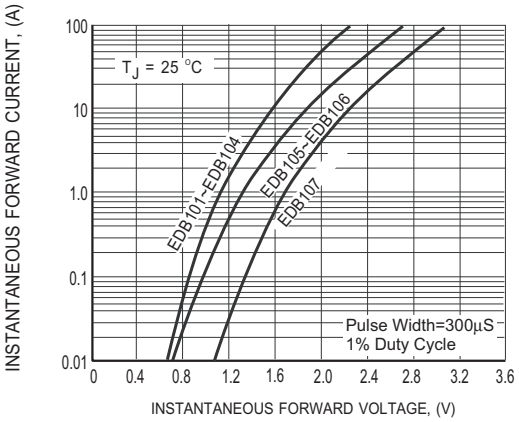



FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

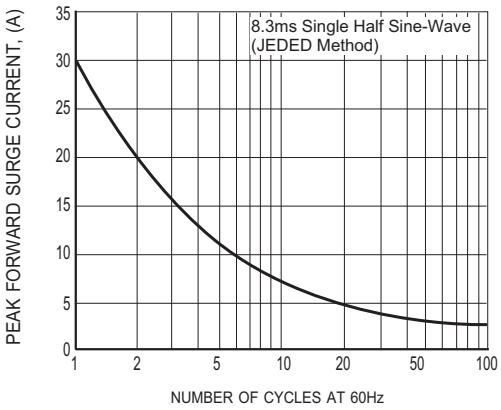



FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

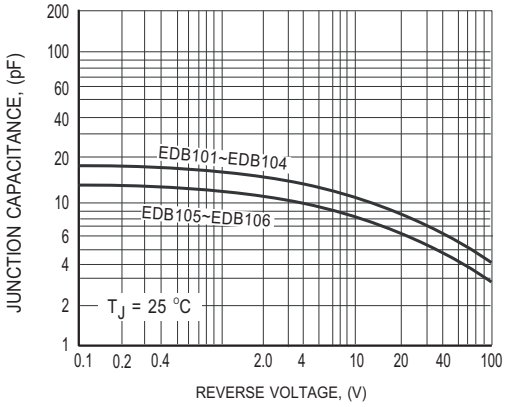
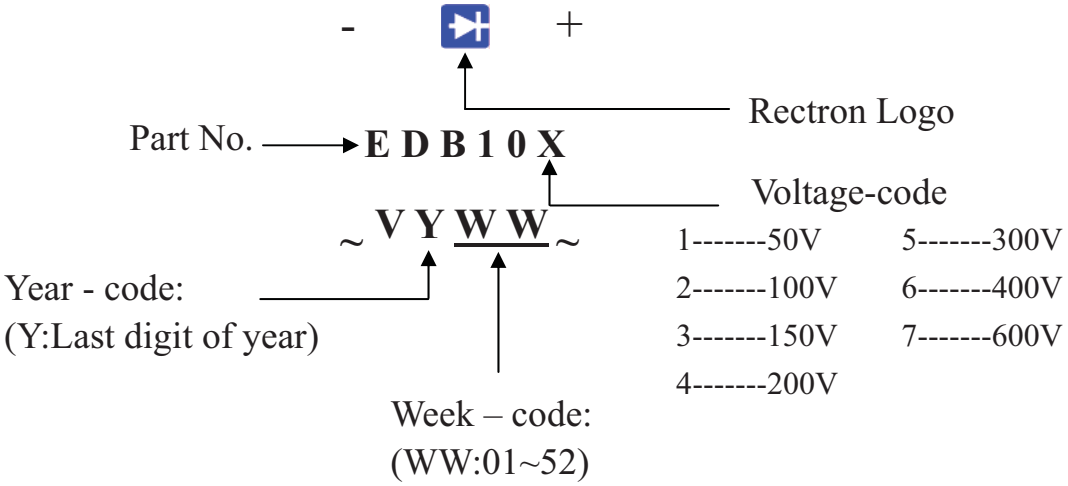



FIG.6 TYPICAL JUNCTION CAPACITANCE

## Marking Description



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (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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