

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 4.0 Amperes

**FEATURES**

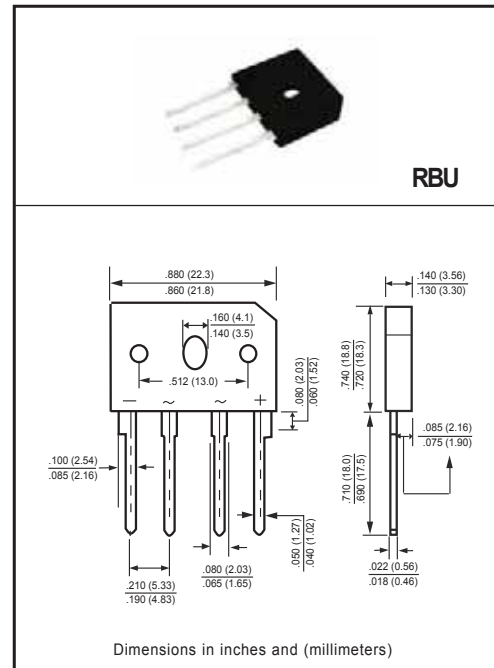
- \* Ideal for printed circuit board
- \* Surge overload rating: 150 amperes peak
- \* Mounting position: Any

**MECHANICAL DATA**

- \* UL listed the recognized component directory, file #E252754
- \* 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%.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

| RATINGS   | SYMBOL                            | RBU401M      | RBU402M | RBU403M | RBU404M | RBU405M | RBU406M | RBU407M | UNITS            |
|---|-----------------------------------|--------------|---------|---------|---------|---------|---------|---------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | Volts            |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 35           | 70      | 140     | 280     | 420     | 560     | 700     | Volts            |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                   | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | Volts            |
| Maximum RSM Voltage   | V <sub>RSM</sub>                  | 150          | 200     | 300     | 500     | 700     | 900     | 1100    | Volts            |
| Maximum Average Forward Rectified Current at T <sub>C</sub> = 100°C                               | I <sub>O</sub>                    | 4.0          |         |         |         |         |         |         | Amps             |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 150          |         |         |         |         |         |         | Amps             |
| Typical Current Squared Time  | I <sup>2</sup> t                  | 93.37        |         |         |         |         |         |         | A <sup>2</sup> S |
| Typical Junction Capacitance (Note 3)   | C <sub>J</sub>                    | 40           |         |         |         |         |         |         | pF               |
| Typical Thermal Resistance (Note 1)   | R <sub>θJC</sub>                  | 4.2          |         |         |         |         |         |         | °C/W             |
|   | R <sub>θJA</sub>                  | 22           |         |         |         |         |         |         |                  |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 150 |         |         |         |         |         |         | °C               |

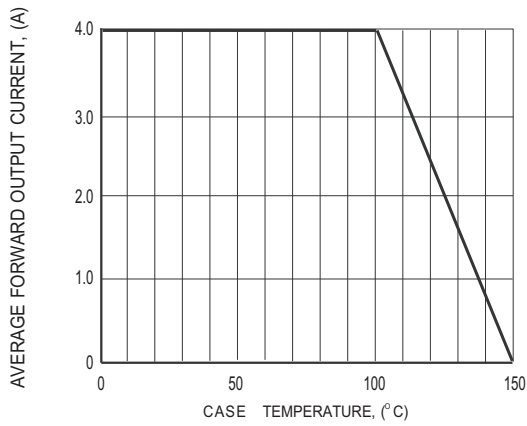
**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

| CHARACTERISTICS   | SYMBOL                  | RBU401M | RBU402M | RBU403M | RBU404M | RBU405M | RBU406M | RBU407M | UNITS |
|---|-------------------------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 4.0A DC        | V <sub>F</sub>          | 1.0     |         |         |         |         |         |         | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @T <sub>A</sub> = 25°C  | 1.0     |         |         |         |         |         |         | uAmps |
|   | @T <sub>A</sub> = 150°C | 1.0     |         |         |         |         |         |         | mAmps |

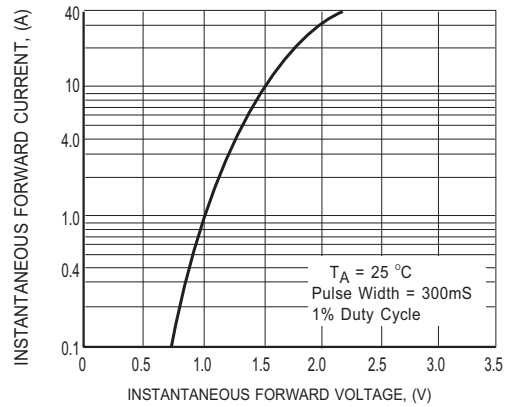
NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. " ROHS compliant".  
3. Measured at 1MHz and applied reverse voltage of 4.0 voltage.

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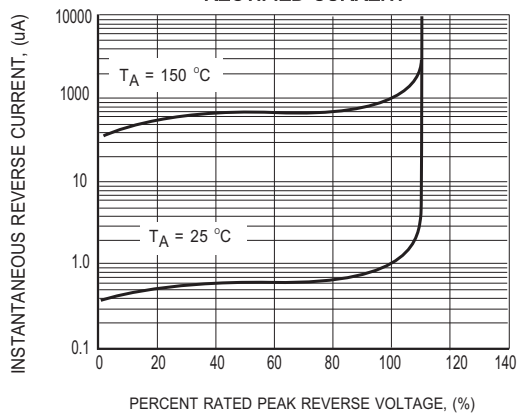
# RATING AND CHARACTERISTICS CURVES ( RBU401M THRU RBU407M )



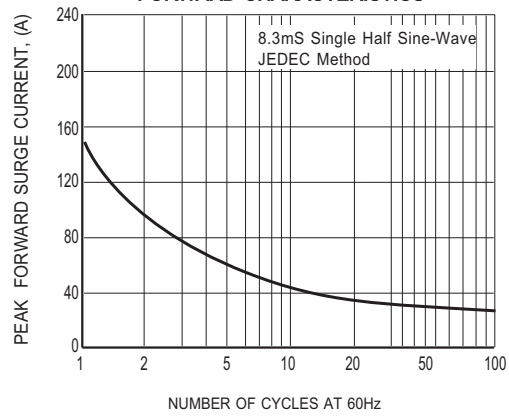
**FIG.1 DERATING CURVE OUTPUT RECTIFIED CURRENT**



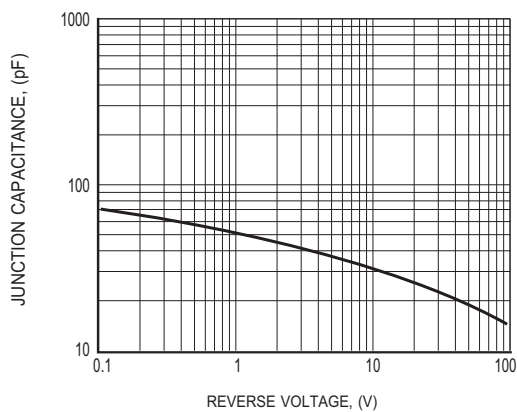
**FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



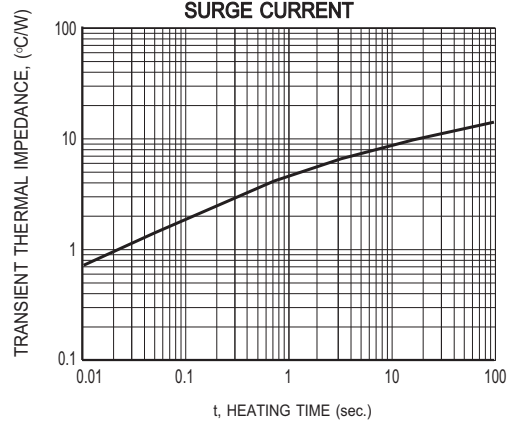
**FIG.3 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

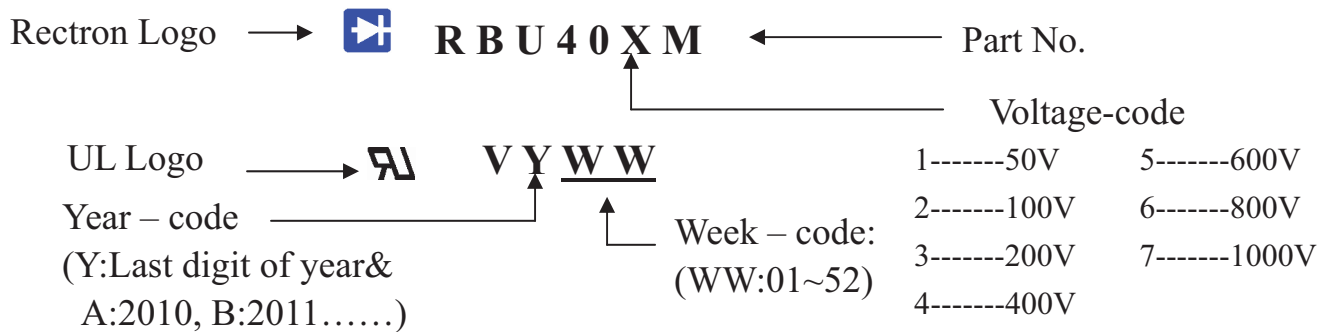


**FIG.5 TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE**

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE<br>(mm) | CARTON SIZE<br>(mm) | EA PER CARTON | WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|------------|
| RBU     | -C           | 1,000      | 490*135*110            | 510*293*131         | 2,000         | 13.62      |



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