

# 2W005 thru 2W10

## 2.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

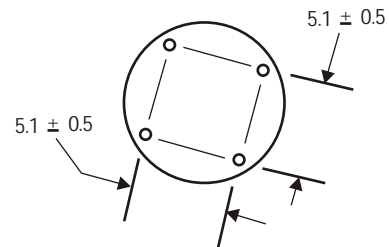
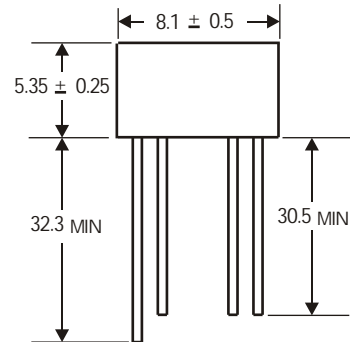


### Features

- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Ideal for printed circuit board mounting
- High surge current capability
- High temperature soldering guaranteed 265 °C/10 seconds at 5 lbs (2.3kg) tension

### Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Mounting Position: Any  
 Weight: 0.05 ounce, 1.3 grams (approx)



Dimensions in millimeters(1mm =0.0394")

### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

| Parameter   | Symbol           | 2W005        | 2W01 | 2W02 | 2W04 | 2W06 | 2W08 | 2W10 | unit               |
|---|------------------|--------------|------|------|------|------|------|------|--------------------|
| Maximum repetitive peak reverse voltage   | VRRM             | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum RMS bridge input voltage  | VRMS             | 35           | 70   | 140  | 280  | 420  | 560  | 700  | V                  |
| Maximum DC blocking voltage   | VDC              | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum average forward rectified output current at TA=25°C                           | IF(AV)           | 2.0          |      |      |      |      |      |      | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 60           |      |      |      |      |      |      | A                  |
| Rating for fusing ( t<8.3ms)  | I <sup>2</sup> t | 15           |      |      |      |      |      |      | A <sup>2</sup> sec |
| Typical thermal resistance per element (1)  | ReJA             | 50.0         |      |      |      |      |      |      | °C / W             |
| Typical junction capacitance per element (2)  | Cj               | 30           |      |      |      |      |      |      | pF                 |
| Operating junction and storage temperature range                                      | TJ, TSTG         | -55 to + 150 |      |      |      |      |      |      | °C                 |

### Electrical Characteristics

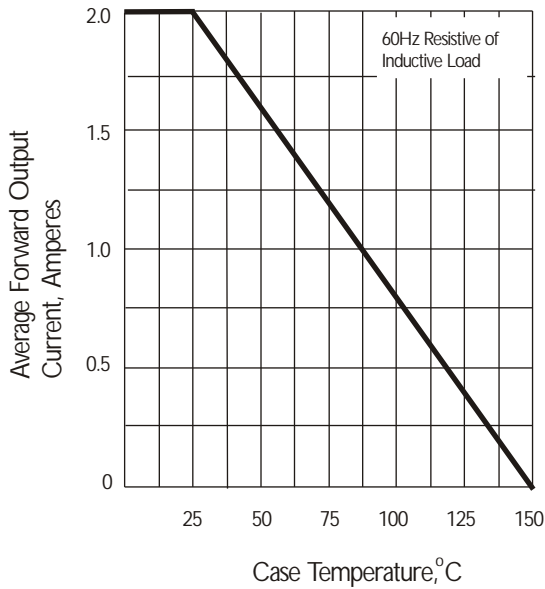
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|---|--------|------------|------|------|------|------|------|------|------|
| Maximum instantaneous forward voltage drop per leg at 2.0A          | VF     | 1.1        |      |      |      |      |      |      | V    |
| Maximum DC reverse current at rated DC blocking voltage per element | IR     | 10<br>1000 |      |      |      |      |      |      | μA   |

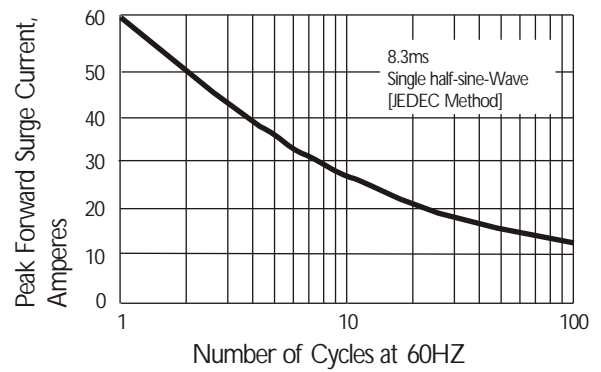
**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.  
 (2)Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

# Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted ) 2W005 thru 2W10

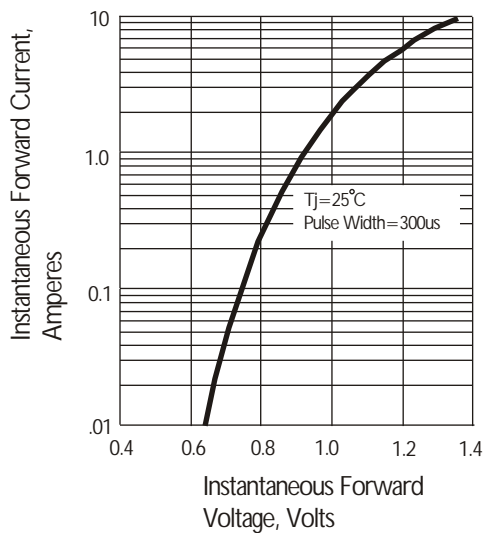
**Fig. 1 Derating Curve for Output Rectified Current**



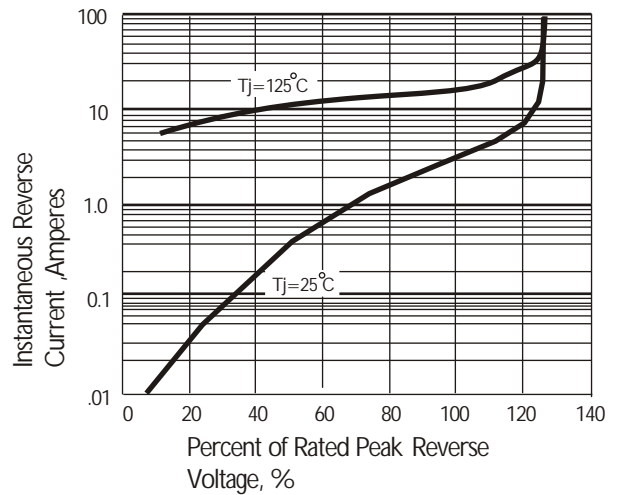
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**

