

# 2W005M thru 2W10M

## 2.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

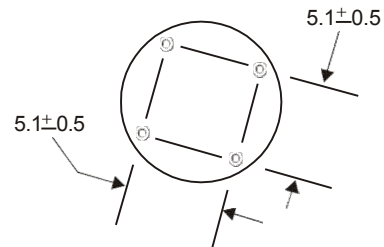
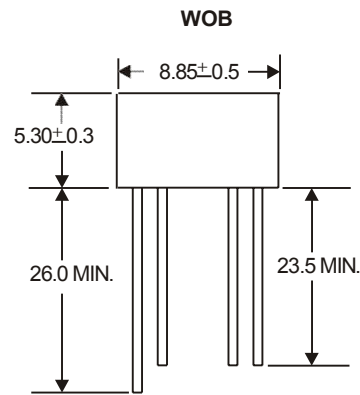


### Features

- 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	2W005M	2W01M	2W02M	2W04M	2W06M	2W08M	2W10M	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)	RthJA	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

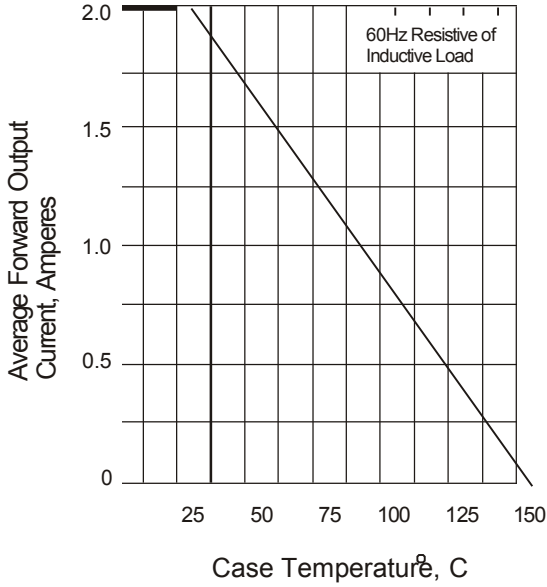
Rating at 25 °C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

Parameter	Symbol	2W005M	2W01M	2W02M	2W04M	2W06M	2W08M	2W10M	Unit
Maximum instantaneous forward voltage drop per leg at 2.0A	VF	1.1							V
Maximum DC reverse current at rated TA = 25 °C / DC blocking voltage per element TA = 100 °C	IR	10 / 1000							mA

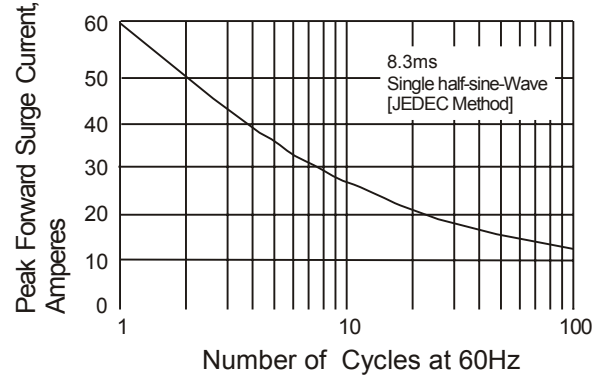
Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.  
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

**Rating and Characteristic Curves** (  $T_A=25\text{ }^{\circ}\text{C}$  Unless otherwise noted )  
**2W005M thru 2W10M**

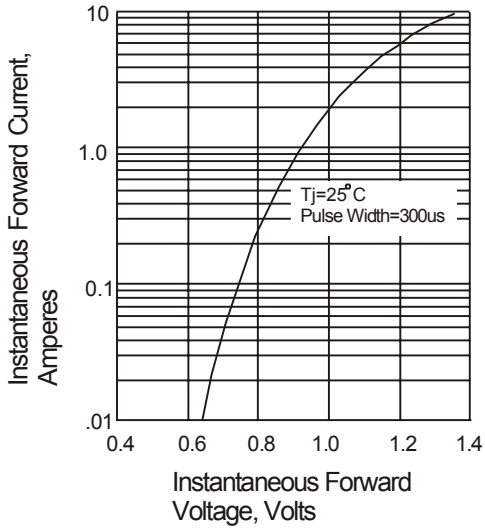
**Fig. 1 Derating Curve for Output Rectified Current**



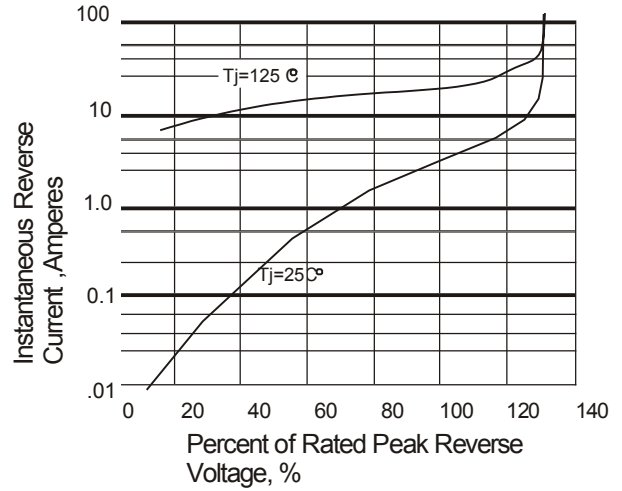
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**

