

### Vishay General Semiconductor

# **Glass Passivated Single-Phase Bridge Rectifier**



PRIMARY CHARACTERISTICS							
I <sub>F(AV)</sub> 2.0 A							
$V_{RRM}$	50 V to 1000 V						
I <sub>FSM</sub>	60 A						
I <sub>R</sub>	5.0 μΑ						
V <sub>F</sub>	1.1 V						
T <sub>J</sub> max.	150 °C						

#### **FEATURES**





· Ideal for printed circuit boards



• Typical I<sub>R</sub> less than 0.5 μA

High case dielectric strength

COMPLIANT

· High surge current capability

Solder dip 260 °C, 40 s

 Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

#### **TYPICAL APPLICATIONS**

General purpose use in ac-to-dc bridge full wave rectification for power supply, adapter, charger, lighting ballaster on consumers and home appliances applications.

#### **MECHANICAL DATA**

Case: WOG

Epoxy meets UL 94V-0 flammability rating

Terminals: Silver plated leads, solderable per

J-STD-002 and JESD22-B102 E4 suffix for consumer grade **Polarity:** As marked on body

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	2W005G	2W01G	2W02G	2W04G	2W06G	2W08G	2W10G	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	٧
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at 0.375" (9.5 mm) lead length (Fig. 1)	I <sub>F(AV)</sub>	2.0						Α	
Peak forward surge current single sine-wave superimposed on rated load	I <sub>FSM</sub>	60					Α		
Rating for fusing (t < 8.3 ms)	I <sup>2</sup> t	15						A <sup>2</sup> s	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150					°C		

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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	2W005G	2W01G	2W02G	2W04G	2W06G	2W08G	2W10G	UNIT
Maximum instantaneous forward voltage drop per diode	2.0 A	V <sub>F</sub>	1.1				٧			
Maximum DC reverse current at rated DC blocking voltage per diode	T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub>	5.0 500					μΑ		
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	40 20				pF			

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL 2W005G 2W01G 2W02G 2W04G 2W06G 2W08G 2W10G UNIT						UNIT	
Typical thermal resistance (1)	$R_{ hetaJA} \ R_{ hetaJL}$	40 15				°C/W		

#### Note:

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length P.C.B. mounting

ORDERING INFORMATION (Example)									
PREFERRED P/N	UNIT WEIGHT (g)	EIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE							
2W06G-E4/51	1.12	51	100	Plastic bag					

#### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

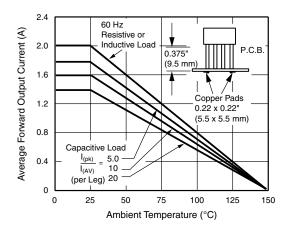


Figure 1. Derating Curve Output Rectified Current

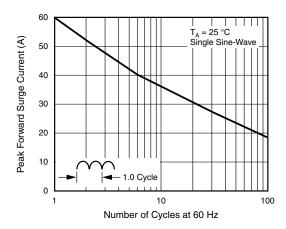


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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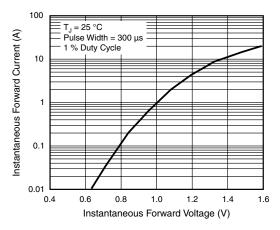


Figure 3. Typical Forward Characteristics Per Diode

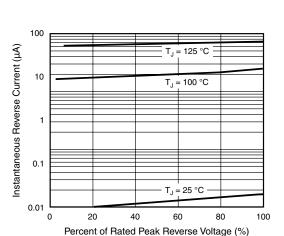


Figure 4. Typical Reverse Leakage Characteristics Per Diode

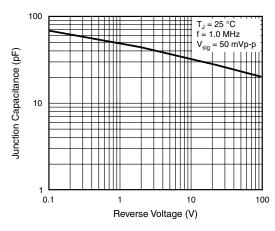


Figure 5. Typical Junction Capacitance Per Diode

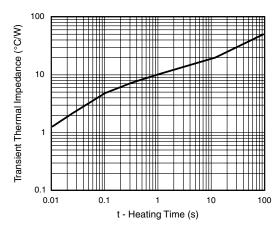
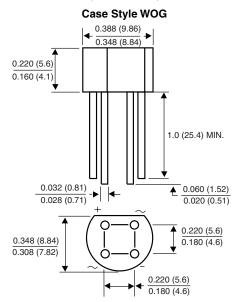


Figure 6. Typical Transient Thermal Impedance

### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)





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