

### 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		

### Vishay General Semiconductor



<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)

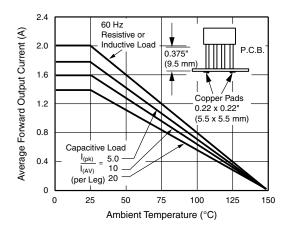


Figure 1. Derating Curve Output Rectified Current

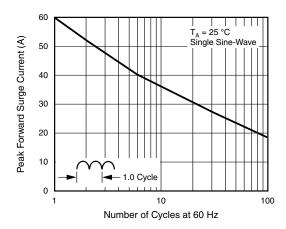


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode



### Vishay General Semiconductor

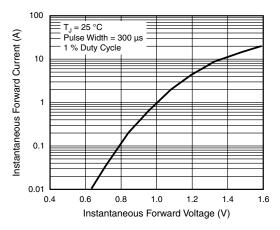


Figure 3. Typical Forward Characteristics Per Diode

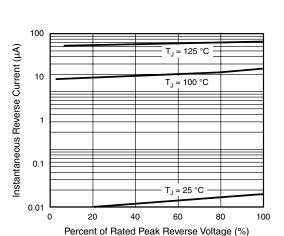


Figure 4. Typical Reverse Leakage Characteristics Per Diode

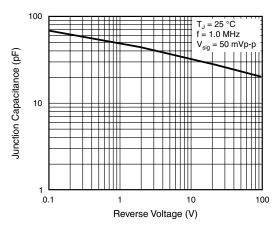


Figure 5. Typical Junction Capacitance Per Diode

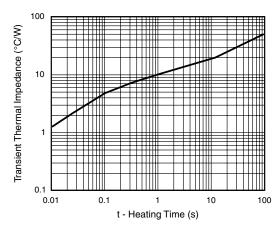
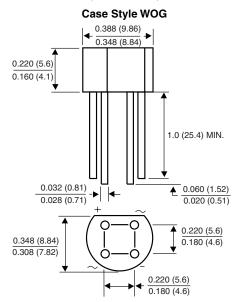


Figure 6. Typical Transient Thermal Impedance

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





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