

Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier



PRIMARY CHARACTERISTICS								
I _{F(AV)}	2.0 A							
V _{RRM}	50 V to 1000 V							
I _{FSM}	60 A							
I _R	5.0 μΑ							
V _F	1.1 V							
T _J max.	150 °C							

FEATURES





· Ideal for printed circuit boards



• Typical I_R less than 0.5 μA

RoHS

High case dielectric strength

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

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ELECTRICAL CHARACTERISTICS (T _A = 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 _F	1.1				٧			
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25 °C T _A = 125 °C	I _R	5.0 500				μΑ			
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	40 20				pF			

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	METER 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) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE								
2W06G-E4/51	1.12	51	100	Plastic bag				

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

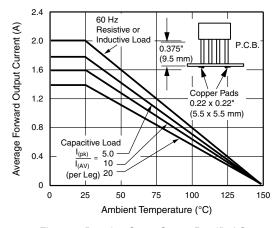


Figure 1. Derating Curve Output Rectified Current

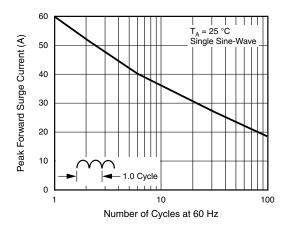


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

 $T_J = 25$ °C f = 1.0 MHz



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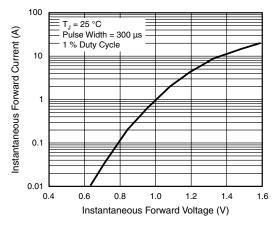
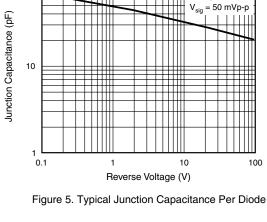


Figure 3. Typical Forward Characteristics Per Diode



100

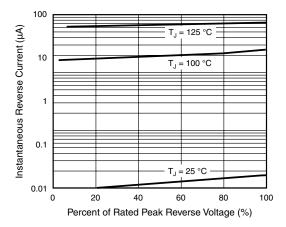


Figure 4. Typical Reverse Leakage Characteristics Per Diode

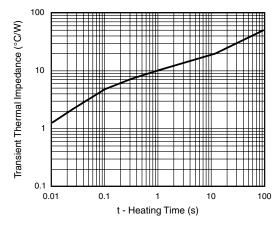
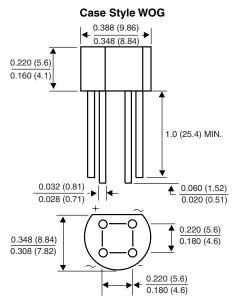


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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