

W005G, W01G, W02G, W04G, W06G, W08G, W10G

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Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier



PRIMARY CHARACTERISTICS						
Package	WOG					
I _{F(AV)}	1.5 A					
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V					
I _{FSM}	50 A					
I _R	5 μΑ					
V _F at I _F = 1.0 A	1.0 V					
T _J max.	150 °C					
Diode variations	Quad					

FEATURES





Typical I_R less than 0.1 μA

• High case dielectric strength

High surge current capability

High surge current capability

• Solder dip 275 °C max. 10 s, per JESD 22-B106

 Material categorization: For definitions of compliance please see www.vishav.com/doc?99912

e4)

ROHS

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for power supply, adapter, charger, lighting ballaster on consumers, and home appliances applications.

MECHANICAL DATA

Case: WOG

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable per

J-STD-002 and JESD22-B102 **Polarity:** As marked on body

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted) **SYMBOL** W005G **PARAMETER** W01G W02G W04G **W06G** W08G W10G UNIT Maximum repetitive peak reverse voltage 50 100 200 400 600 800 1000 V_{RRM} 35 70 140 280 560 700 ٧ Maximum RMS voltage V_{RMS} 420 50 100 1000 ٧ Maximum DC blocking voltage V_{DC} 200 400 600 800 Maximum average forward rectified current at 1.5 Α I_{F(AV)} 0.375" (9.5 mm) lead length at $T_A = 25$ °C Peak forward surge current single sine-wave 50 Α I_{FSM} superimposed on rated load Rating for fusing (t < 8.3 ms) I^2t 10 A^2s Operating junction and storage temperature range T_J, T_{STG} - 55 to + 150 °C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	VALUES	UNIT	
Maximum instantaneous forward voltage per diode	I _F = 1.0 A	V _F	1.0	V	
Maximum DC reverse current at rated	T _A = 25 °C	1	5.0		
DC blocking voltage per diode	T _A = 125 °C	I _R	500	μΑ	
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	14	pF	

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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	W005G	W01G	W02G	W04G	W06G	W08G	W10G	UNIT
Typical thermal resistance (1)	$R_{\theta JA}$	36					°C/W		
Typical thermal resistance (*)	$R_{\theta JL}$	11				•	O/VV		

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length PCB mounting. PCB size 0.22" x 0.22" (5.5 mm x 5.5 mm)

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

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

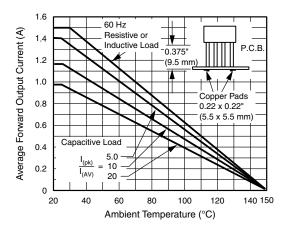


Fig. 1 - Derating Curve Output Rectified Current

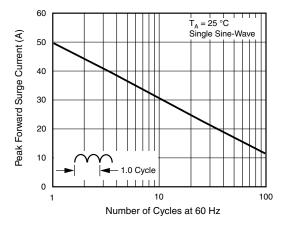


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

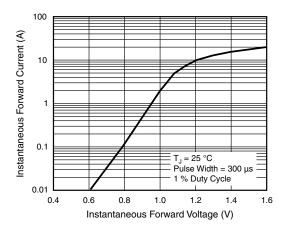


Fig. 3 - Typical Forward Characteristics Per Diode

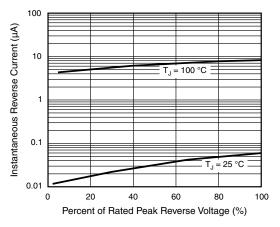


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode





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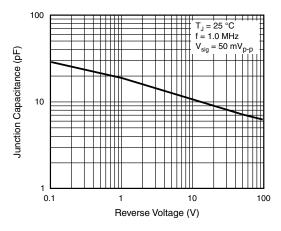


Fig. 5 - Typical Junction Capacitance Per Diode

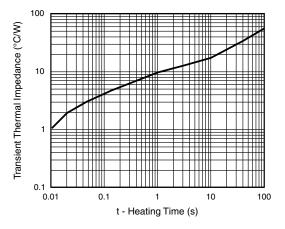
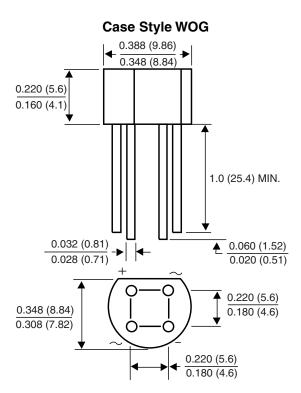


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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