

## Glass Passivated Single-Phase Bridge Rectifier



Case Style WOG

### FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Typical  $I_R$  less than 0.1  $\mu$ A
- 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


**RoHS**  
COMPLIANT

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.5 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	50 A
$I_R$	5 $\mu$ A
$V_F$	1.0 V
$T_J$ max.	150 °C

### 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	W005G	W01G	W02G	W04G	W06G	W08G	W10G	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	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 at $T_A = 25$ °C	$I_{F(AV)}$	1.5							A
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	50							A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	10							A <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150							°C

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	W005G	W01G	W02G	W04G	W06G	W08G	W10G	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	$V_F$	1.0							V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
Typical junction capacitance per diode	4.0V, 1 MHz	$C_J$	14							pF

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)											
PARAMETER	SYMBOL	W005G	W01G	W02G	W04G	W06G	W08G	W10G	UNIT		
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	36 11									$^\circ\text{C/W}$

**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. P.C.B. size 0.22 x 0.22" (5.5 x 5.5 mm)

<b>ORDERING INFORMATION</b> (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

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

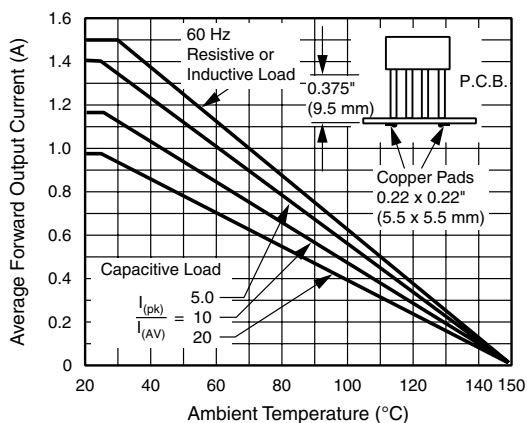


Figure 1. Derating Curve Output Rectified Current



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



Figure 3. Typical Forward Characteristics Per Diode



Figure 5. Typical Junction Capacitance Per Diode



Figure 4. Typical Reverse Leakage Characteristics Per Diode



Figure 6. Typical Transient Thermal Impedance

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





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