

# FW005G - FW10G

**PRV : 50 - 1000 Volts**  
**Io : 1.5 Amperes**

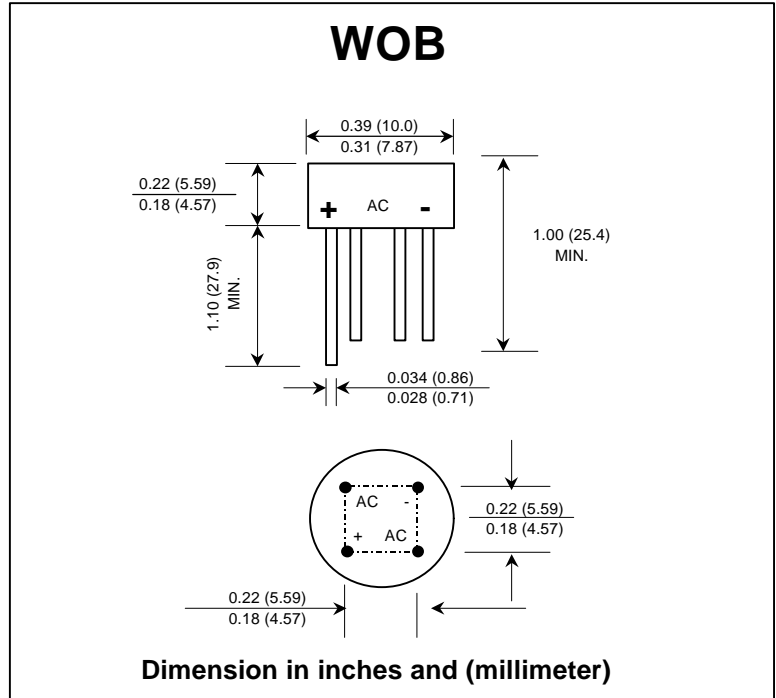
## FEATURES :

- \* Glass passivated chip
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Ideal for printed circuit board
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 1.29 grams

# FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

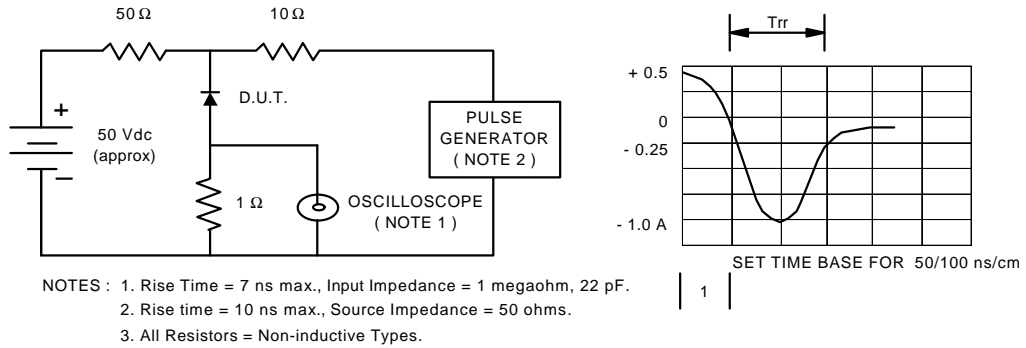
Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

RATING	SYMBOL	FW 005G	FW 01G	FW 02G	FW 04G	FW 06G	FW 08G	FW 10G	UNIT
Maximum Recurrent 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 Current 0.375" (9.5 mm) lead length $T_c = 25^\circ C$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Rating for fusing ( $t < 8.3$ ms. )	$I^2t$	10							A <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 1.0$ A	$V_F$	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ C$ $T_a = 100^\circ C$	$I_R$	10							$\mu A$
	$I_{R(H)}$	1.0							mA
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	150			250		500		ns
Typical Junction Capacitance per Diode (Note 2)	$C_J$	24							pf
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	36							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	- 50 to + 150							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 50 to + 150							$^\circ C$

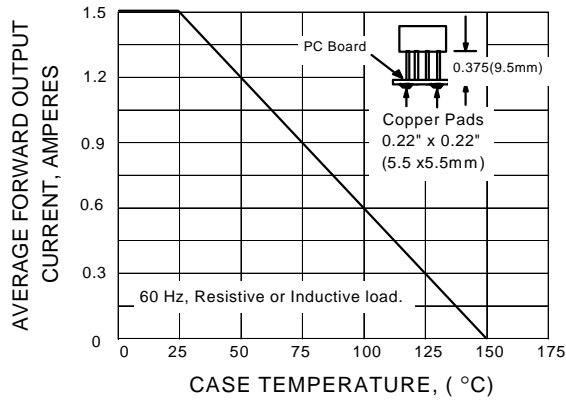
**Notes :** 1) Measured with  $I_F = 0.5$  Amp.,  $I_R = 1$  Amp.,  $I_{rr} = 0.25$  Amp.  
2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.  
3) Thermal resistance from Junction to Ambient at 0.375" (9.5 mm) lead length P.C. Board mounting.

## RATING AND CHARACTERISTIC CURVES ( FW005G - FW10G )

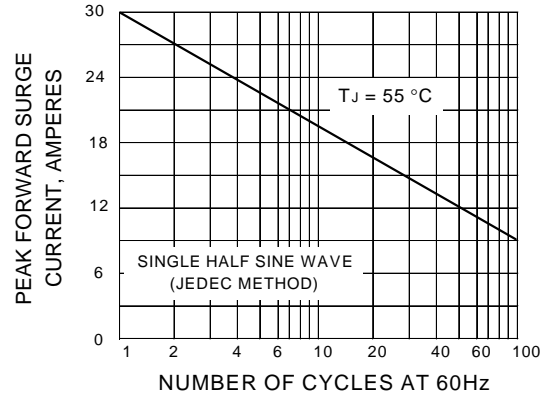
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



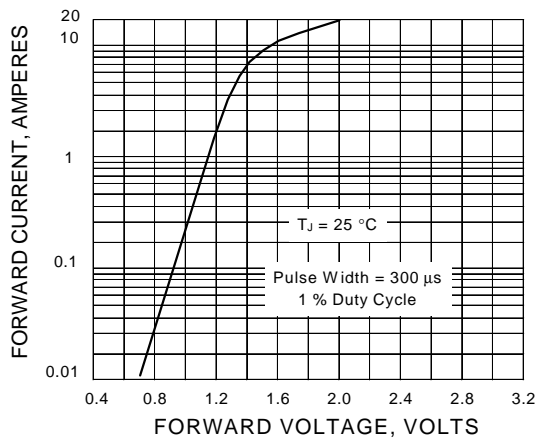
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

