

# F2W005G - F2W10G

**PRV : 50 - 1000 Volts**  
**Io : 2.0 Amperes**

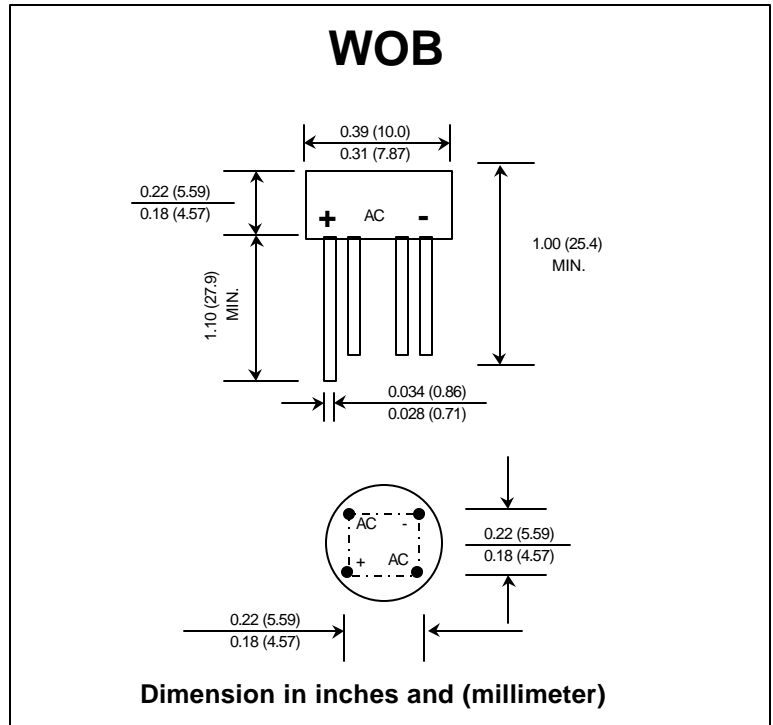
## FEATURES :

- \* 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

## 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

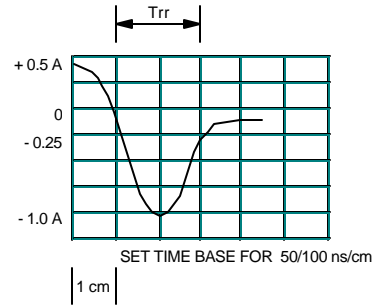
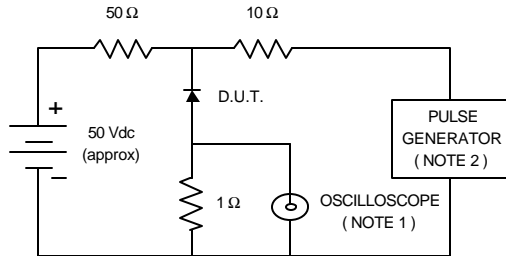
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	F2W 005G	F2W 01G	F2W 02G	F2W 04G	F2W 06G	F2W 08G	F2W 10G	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Current 0.375" (9.5 mm) lead length $T_c = 50^\circ\text{C}$	$I_{F(AV)}$	2.0							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							Amps.
Rating for fusing ( $t < 8.3$ ms. )	$I^2t$	10							$\text{A}^2\text{S}$
Maximum Forward Voltage per Diode at $I_F = 1.0$ Amp.	$V_F$	1.3							Volts
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$	$I_R$	10							$\mu\text{A}$
	$I_{R(H)}$	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							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	- 50 to + 150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 50 to + 150							$^\circ\text{C}$

- 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 with, 0.22" x 0.22" (5.5 x 5.5 mm) copper Pads.

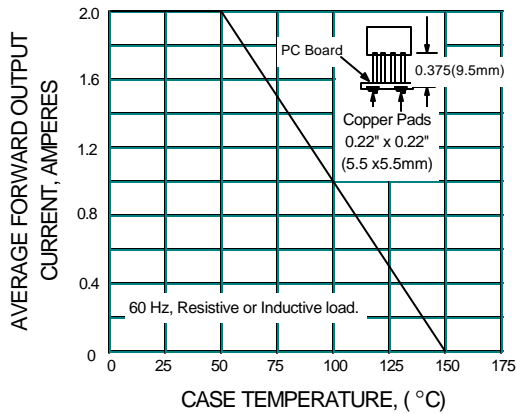
## RATING AND CHARACTERISTIC CURVES ( F2W005G - F2W10G )

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

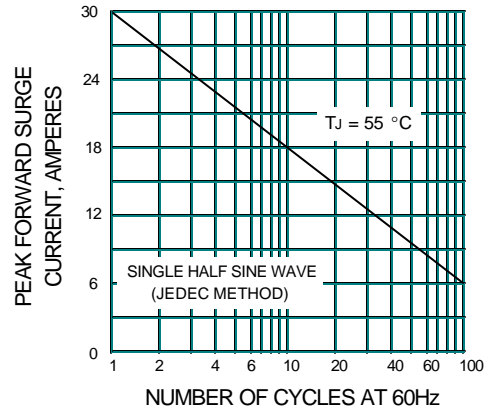


- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.

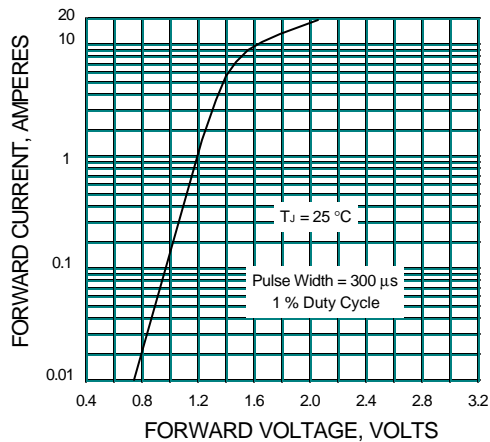
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

