

FW005G - FW10G

FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS

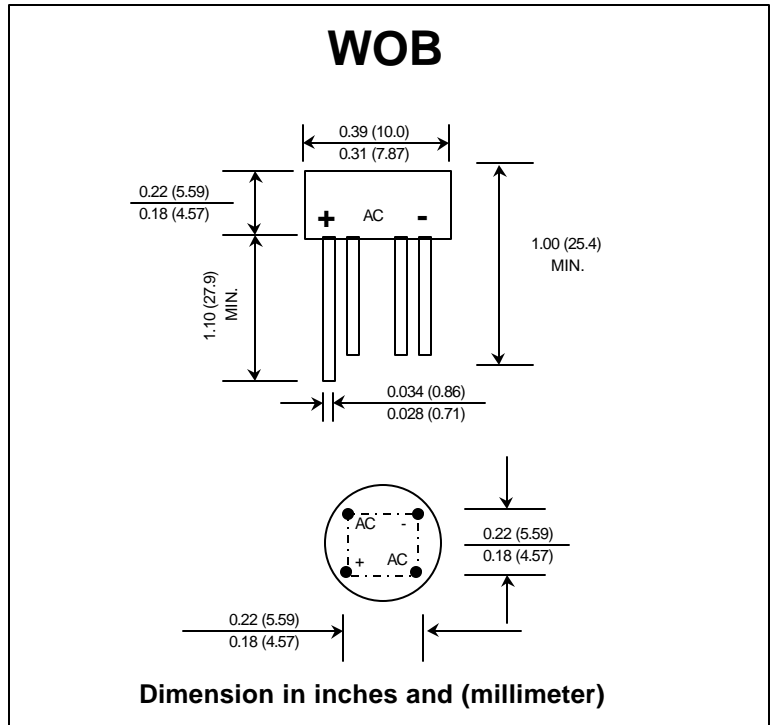
PRV : 50 - 1000 Volts
Io : 1.5 Amperes

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

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

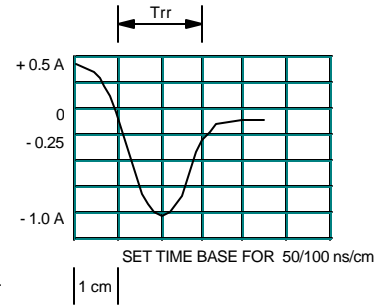
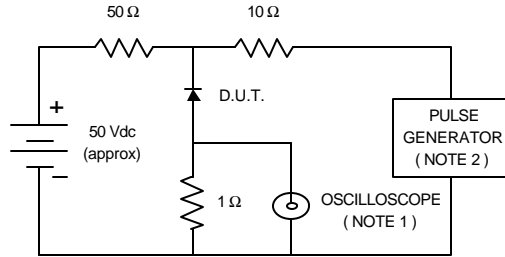
Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| RATING | SYMBOL | FW | FW | FW | FW | FW | FW | FW | UNIT |
|---|-----------------|---------------|-----|-----|-----|-----|-----|------|------------------|
| | | 005G | 01G | 02G | 04G | 06G | 08G | 10G | |
| 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 $T_c = 25^\circ C$ | $I_{F(AV)}$ | 1.5 | | | | | | | 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 | | | | | | | A ² S |
| Maximum Forward Voltage per Diode at $I_F = 1.0$ Amp. | V_F | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$ | I_R | 10 | | | | | | | μA |
| | $I_{R(H)}$ | 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



- 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

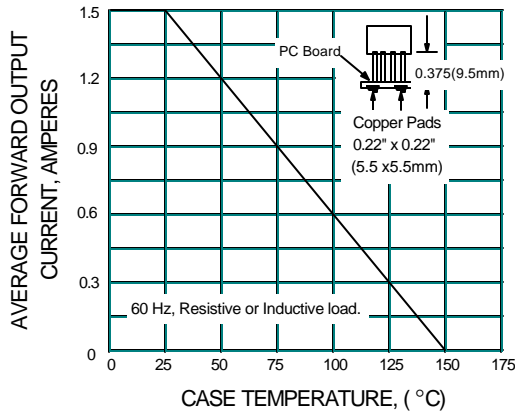


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

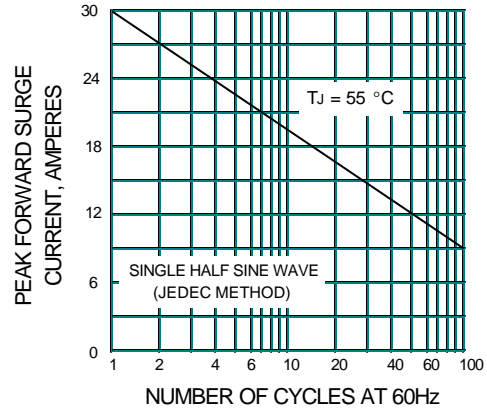


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

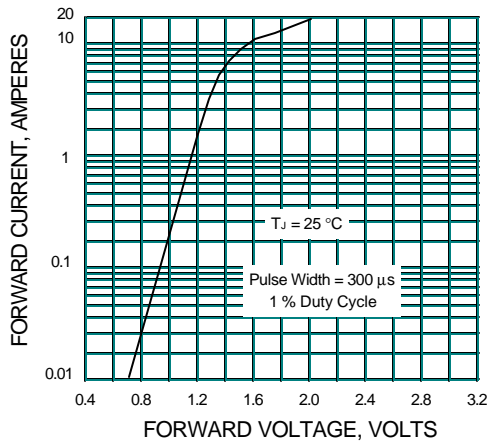


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

