F2W005G - F2W10G

FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts
Io : 2.0 Amperes

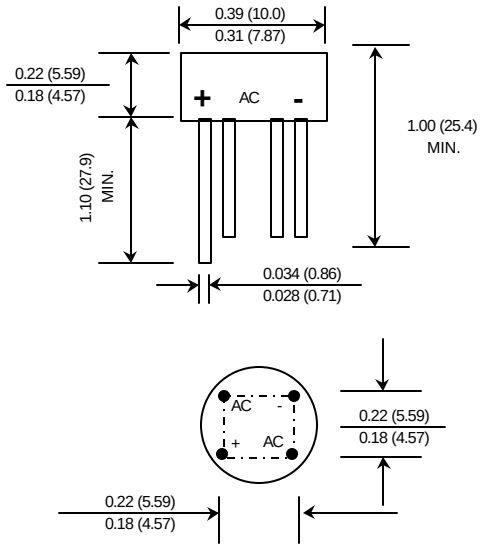
FEATURES :

* 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

WOB



Dimension in inches and (millimeter)

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%.

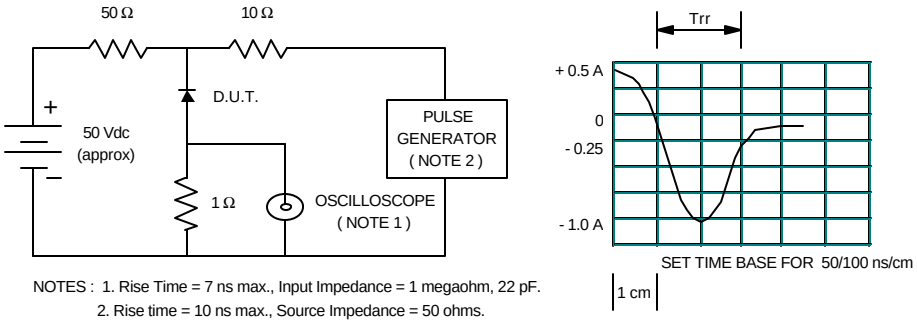
RATING	SYMBOL	F2W 005G	F2W 01G	F2W 02G	F2W 04G	F2W 06G	F2W 08G	F2W 10G	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Current 0.375" (9.5 mm) lead length Tc = 50°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							A^2S
Maximum Forward Voltage per Diode at I_F = 1.0 Amp.	V_F	1.3							Volts
Maximum DC Reverse Current Ta = 25 °C	I_R	10							µA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	1.0							mA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		ns
Typical Junction Capacitance per Diode (Note 2)	C_J	24							pf
Typical Thermal Resistance (Note 3)	RθJA	36							°C/W
Operating Junction Temperature Range	T_J	- 50 to + 150							°C
Storage Temperature Range	T_{STG}	- 50 to + 150							°C

Notes : 1) Measured with I_F = 0.5 Amp., I_R = 1 Amp., Irr = 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.

UPDATE : AUGUST 23.1998

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

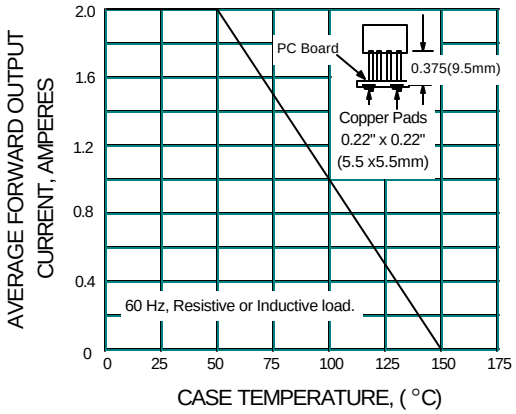


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

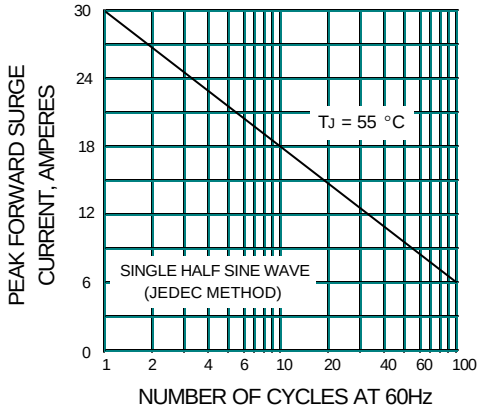


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

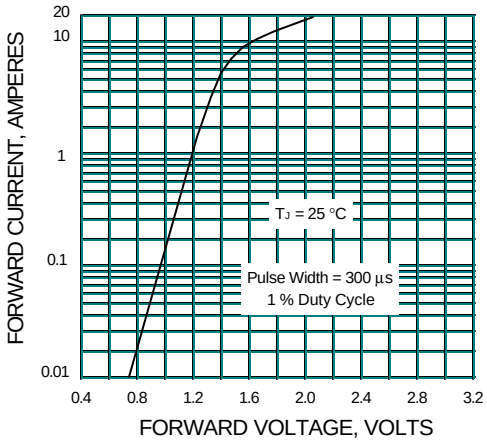


FIG.5 - TYPICAL REVERSE CHARACTERISTICS