

FB40 - FB380/C 1000G

PRV : 100 - 900 Volts
Io : 1.0 Amperes

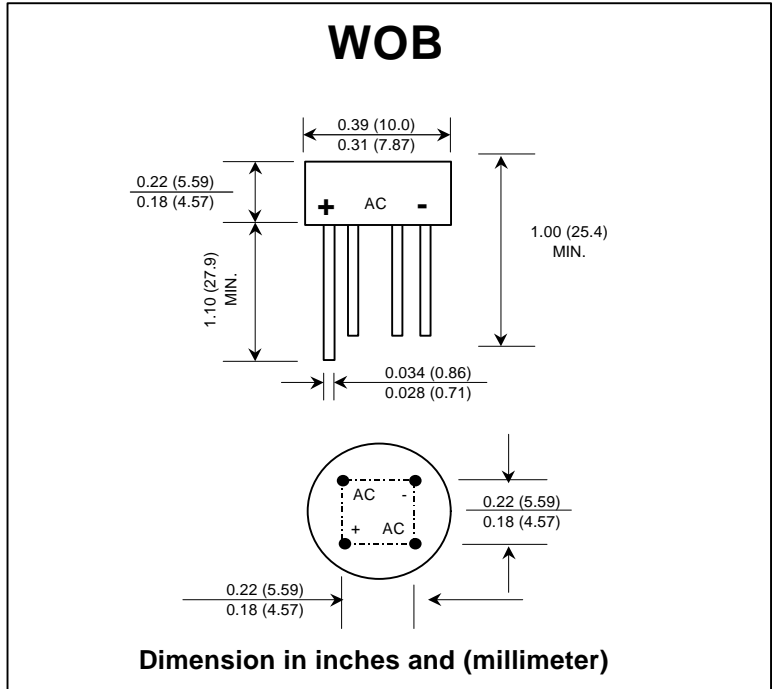
FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

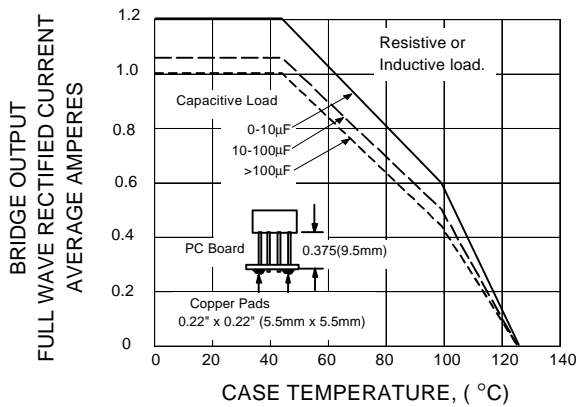
Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

RATING	SYMBOL	FB40-C 1000G	FB80-C 1000G	FB125-C 1000G	FB250-C 1000G	FB380-C 1000G	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	200	300	600	900	V
Maximum RMS Input Voltage R+C -Load	V _{RMS}	40	80	125	250	380	V
Maximum DC Blocking Voltage	V _{DC}	100	200	300	600	900	V
Maximum Average Forward Current For Free Air Operation at T _c = 45°C R+L -Load C -Load	I _{F(AV)}	1.2 1.0					A
Peak Forward Surge Current Single half sine wave on rated load (JEDEC Method) at T _J = 125 °C	I _{FSM}	30					A
Rating for fusing at T _J = 125°C (t < 100 ms.)	I ² t	10					A ² S
Maximum Series Resistor C-Load V _{RMS} = ± 10%	R _t	1.0	2.0	4.0	8.0	12.0	Ω
Maximum load Capacitance + 50% -10%	C _L	5000	2500	1000	500	200	μF
Maximum Forward Voltage per Diode at I _F = 1.0 A	V _F	1.3					V
Maximum Reverse Current at Rated Repetitive Peak Voltage per Diode	I _R	10					μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150		250	500		ns
Typical Thermal Resistance (Note 2)	R _{θJA}	36					°C/W
Operating Junction Temperature Range	T _J	- 50 to + 125					°C
Storage Temperature Range	T _{STG}	- 50 to + 125					°C

Notes : 1) Measured with I_F = 0.5 Amp., I_R = 1 Amp., I_{rr} = 0.25 Amp.
 2) 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 (FB40 - FB380/C1000G)

**FIG.1 - DERATING CURVE
FOR OUTPUT RECTIFIED CURRENT
FB40 C1000G - FB125 C1000G**



**FIG.2 - DERATING CURVE
FOR OUTPUT RECTIFIED CURRENT
FB250 C1000G - FB380 C1000G**

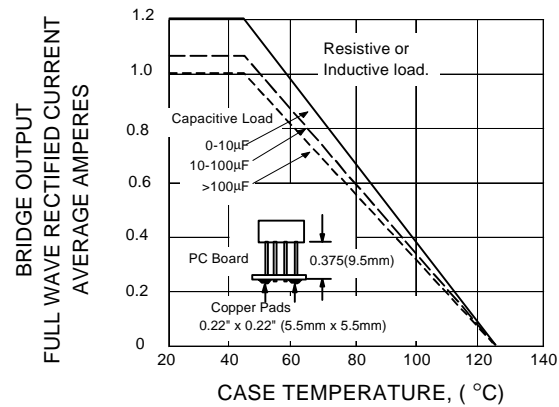


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

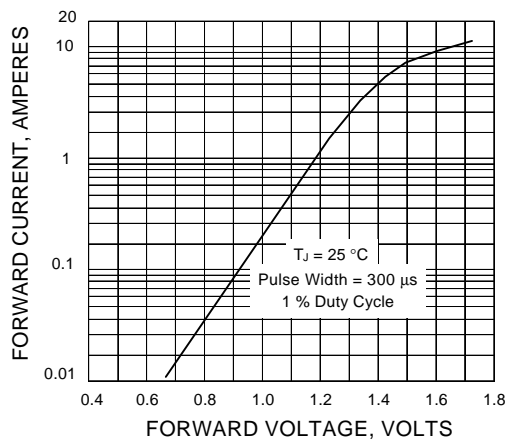
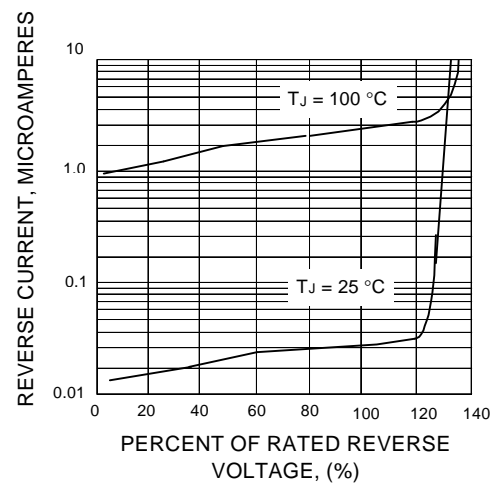


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



RATING AND CHARACTERISTIC CURVES (FB40 - FB380/C1000G)

FIG.5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

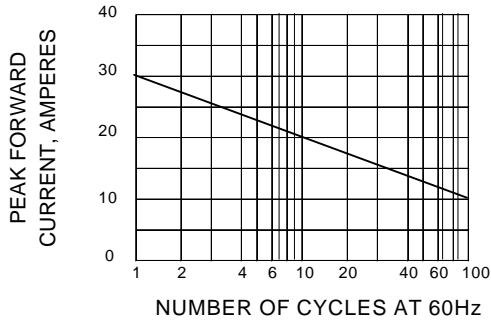


FIG.6 - TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

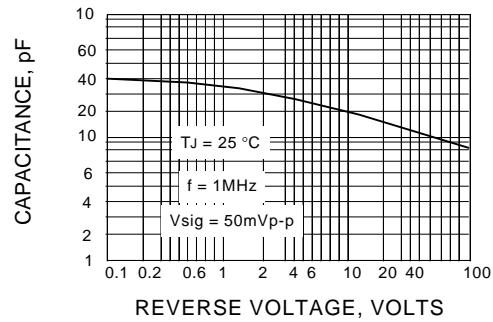
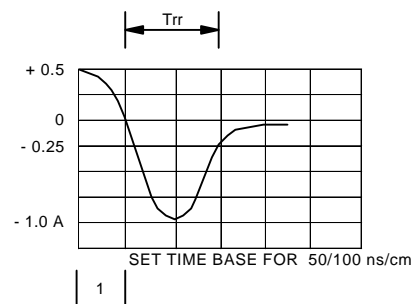
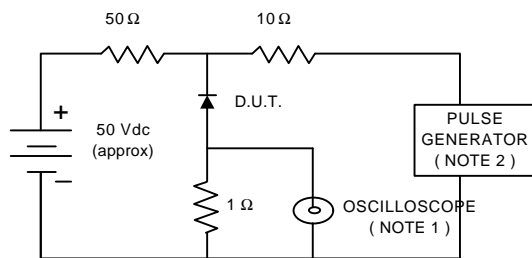


FIG.7 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



- 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.