

FB40-FB380/C1500RG

PRV : 100 - 900 Volts
Io : 1.5 Amperes

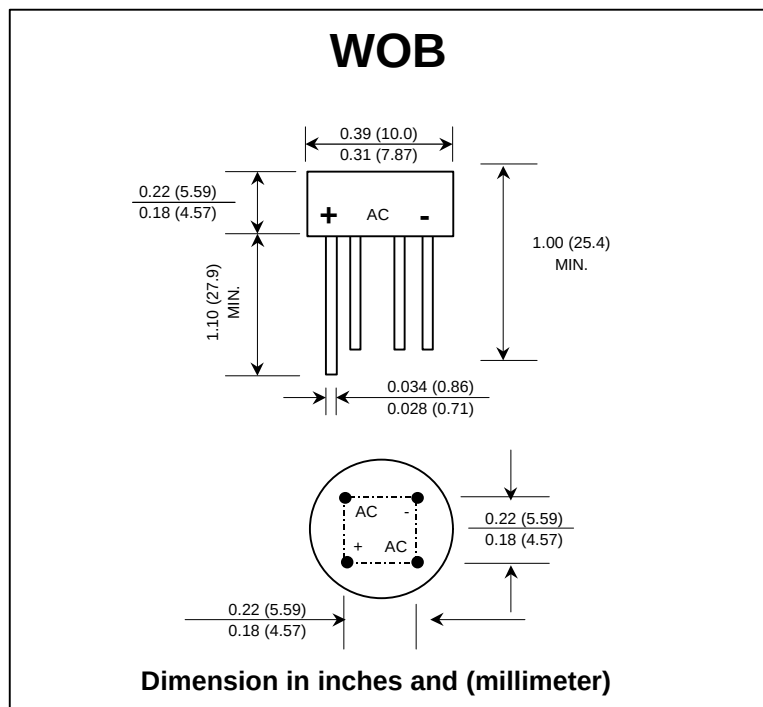
FEATURES :

- * 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%.

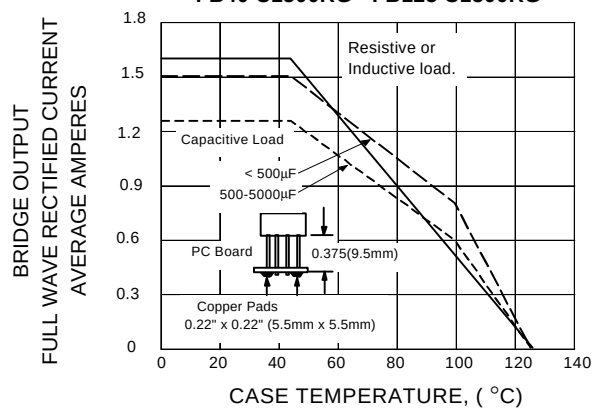
RATING	SYMBOL	FB40-C 1500RG	FB80-C 1500RG	FB125-C 1500RG	FB250-C 1500RG	FB380-C 1500RG	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	300	600	900	V
Maximum RMS Input Voltage R+C -Load	V_{RMS}	40	80	125	250	380	V
Maximum DC Blocking Voltage	V_{DC}	100	200	300	600	900	V
Maximum Average Forward Current For Free Air Operation at $T_c = 45^\circ\text{C}$ R+L -Load C -Load	$I_{F(AV)}$	1.6 1.5					A
Peak Forward Surge Current Single half sine wave on rated load (JEDEC Method) at $T_J = 125^\circ\text{C}$	I_{FSM}	30					A
Rating for fusing at $T_J = 125^\circ\text{C}$ ($t < 100$ ms.)	I^2t	10					A ² S
Maximum Series Resistor C-Load $V_{RMS} = \pm 10\%$	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 $I_F = 1.5$ A	V_F	1.4					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)	$R_{\theta JA}$	36					$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 50 to + 125					$^\circ\text{C}$
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) 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/C1500RG)

**FIG.1 - DERATING CURVE
FOR OUTPUT RECTIFIED CURRENT
FB40 C1500RG - FB125 C1500RG**



**FIG.1 - DERATING CURVE
FOR OUTPUT RECTIFIED CURRENT
FB250 C1500RG - FB380 C1500RG**

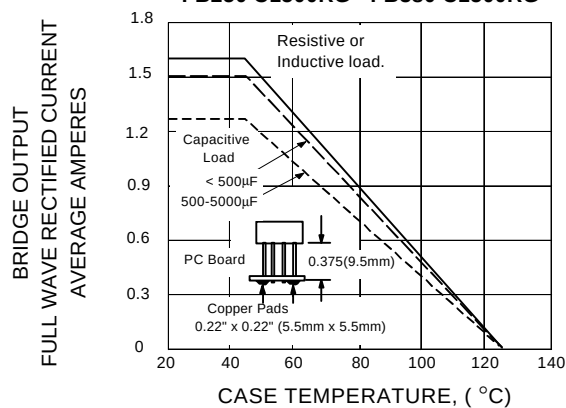


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

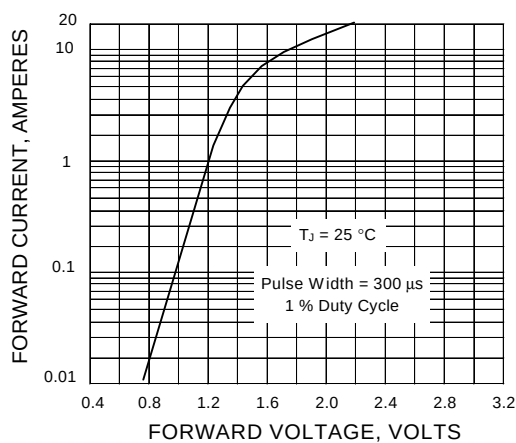
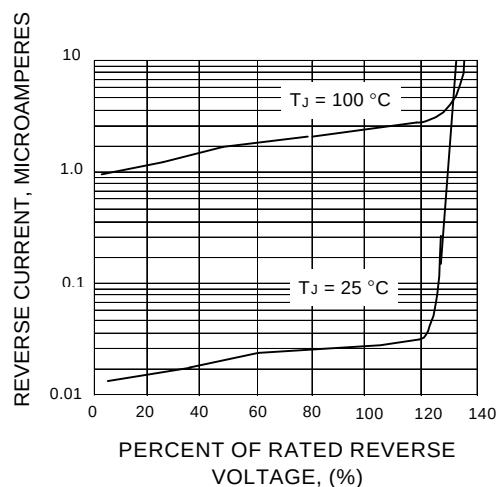
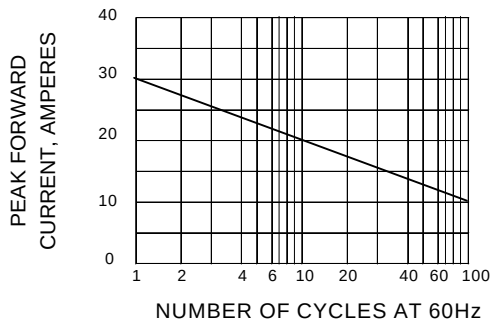


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



RATING AND CHARACTERISTIC CURVES (FB40 - FB380/C1500RG)

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



**FIG.6 - TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT**

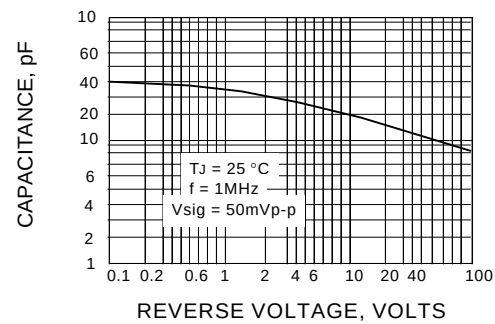
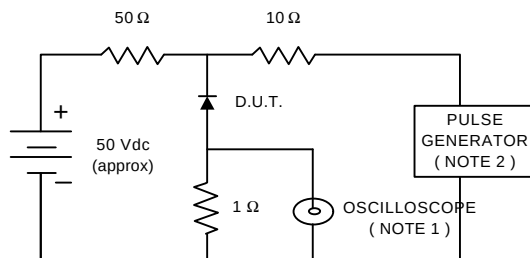


FIG.7 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



- 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.

