

# FB40-FB380/C1500RG

# FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS

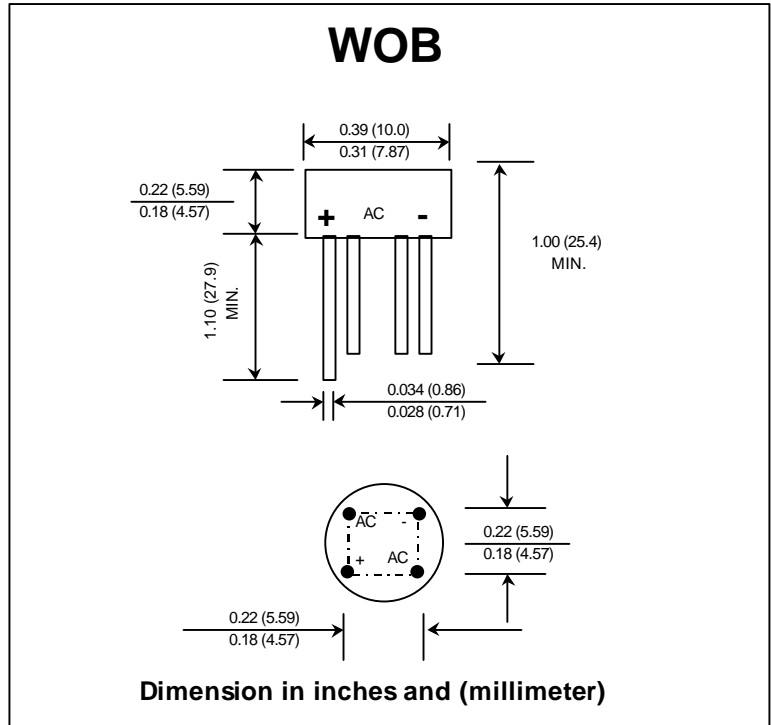
**PRV : 100 - 900 Volts**  
**Io : 1.5 Amperes**

### 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

### 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 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	Volts
Maximum RMS Input Voltage R+C -Load	$V_{RMS}$	40	80	125	250	380	Volts
Maximum DC Blocking Voltage	$V_{DC}$	100	200	300	600	900	Volts
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					Amps.
Peak Forward Surge Current Single half sine wave on rated load (JEDEC Method) at $T_J = 125^\circ\text{C}$	$I_{FSM}$	30					Amps.
Rating for fusing at $T_J = 125^\circ\text{C}$ ( $t < 100$ ms. )	$I^2t$	10					A <sup>2</sup> S
Maximum Series Resistor C-Load $V_{RMS} = \pm 10\%$	$R_t$	1.0	2.0	4.0	8.0	12.0	$\Omega$
Maximum load Capacitance + 50% -10%	$C_L$	5000	2500	1000	500	200	$\mu\text{F}$
Maximum Forward Voltage per Diode at $I_F = 1.5$ Amps.	$V_F$	1.4					Volts
Maximum Reverse Current at Rated Repetitive Peak Voltage per Diode	$I_R$	10					$\mu\text{A}$
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					$^\circ\text{C}$

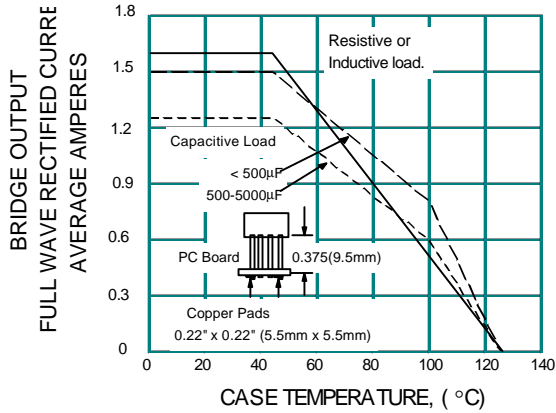
**Notes :** 1 ) Measured with  $I_F = 0.5$  Amp.,  $I_R = 1$  Amp.,  $I_{rr} = 0.25$  Amp.

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.

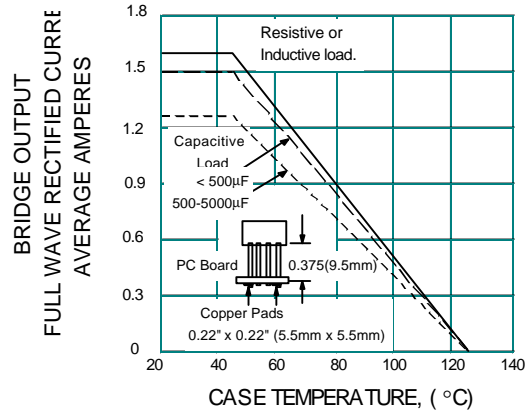
**UPDATE : APRIL 23,1998**

## RATING AND CHARACTERISTIC CURVES ( FB40 - FB380/C1500RG )

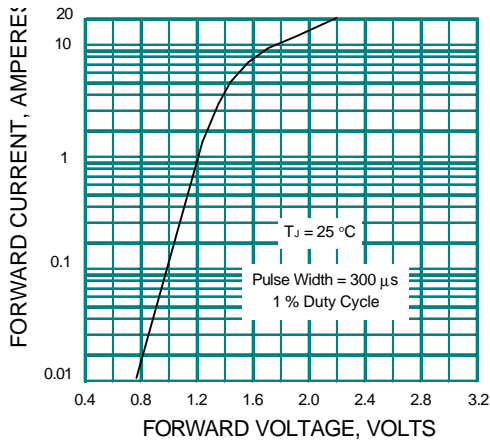
**FIG.1 - DERATING CURVE  
FOR OUTPUT RECTIFIED CURRENT  
FB40 C1500RG - FB125 C1500RG**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

