

# MB05F THRU MB10F

MINIATURE GLASS PASSIVATED SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER



**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 0.5 AMPERE

## FEATURES

- Surge overload rating: 30 amperes peak
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Low leakage
- Reliable low cost construction utilizing molded

## MECHANICAL DATA

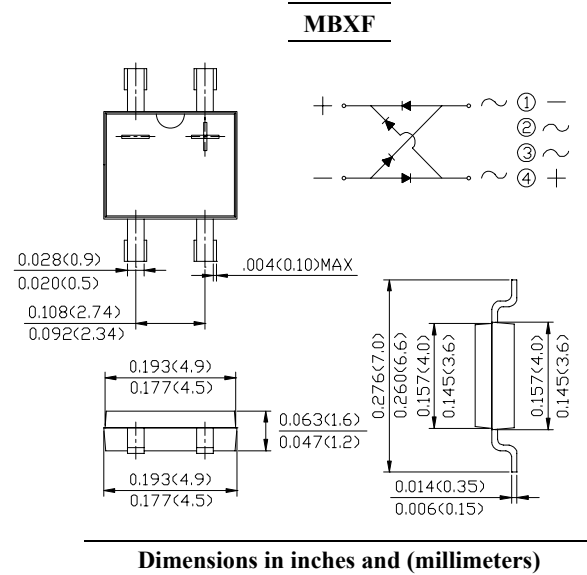
Case: Molded plastic, MBXF

Epoxy: UL 94V-0 rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.00528ounce, 0.134gram



## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Units
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 Rectified Current (see Fig. 1) on glass-epoxy P.C.B (Note 2) on aluminum substrate (Note 3)	$I_{(AV)}$	0.5 0.8							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amp
Maximum Forward Voltage at 0.4A DC and 25°C	$V_F$	1.0							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 500							uAmp
Typical Junction Capacitance (Note 1)	$C_J$	13							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	60							°C/W
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	16							°C/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							°C

## NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads

3- On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

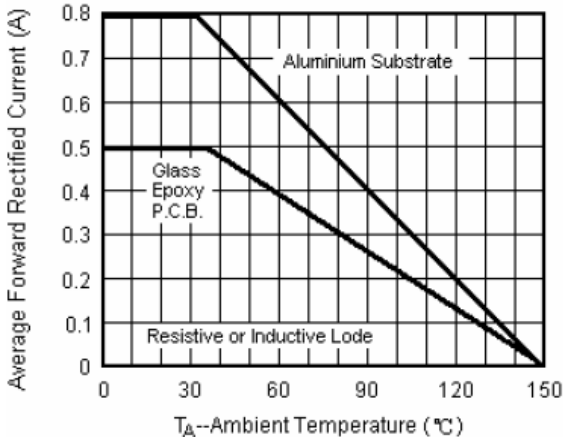
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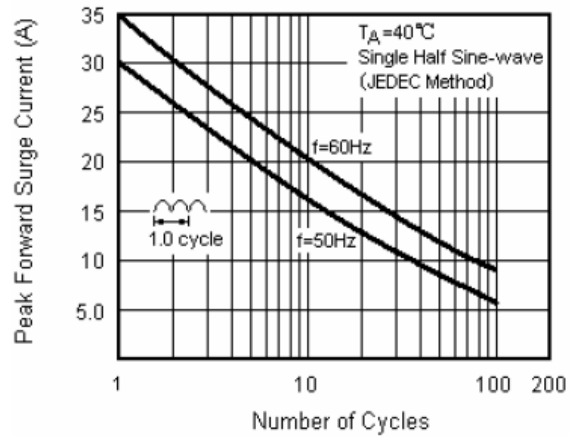


Characteristic Curves ( $T_A=25\text{ }^\circ\text{C}$  unless otherwise noted)

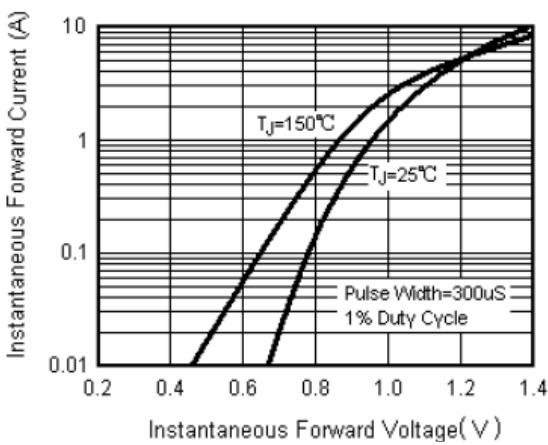
**Fig.1 Derating Curve For Output Rectified Current**



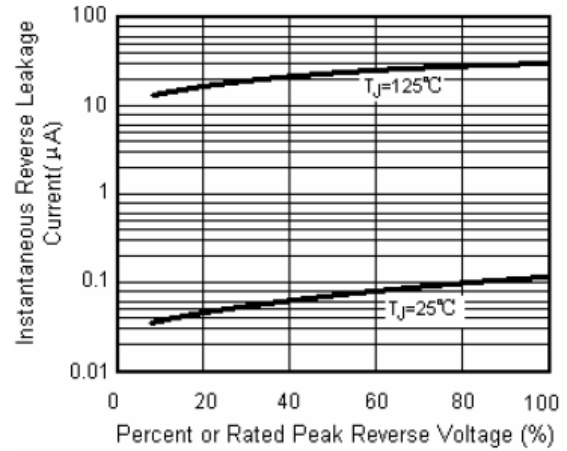
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



**Fig.3 Typical Forward Voltage Characteristics Per Leg**



**Fig.4 Typical Reverse Leakage Characteristics Per Leg**



**Fig.5 Typical Junction Capacitance Per Leg**

