

MBXF SERIES

MINIATURE SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

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MB05F THRU MB10F

MINIATURE GLASS PASSIVATED SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS FORWARD CURRENT: 0.8 AMPERE

FEATURES

· Glass passivated chip junction

· Low forward voltage drop

· High surge overload rating of 30 Amperes peak

· Ideal for printed circuit board

· High temperature soldering guaranteed:

260°C for 10 seconds

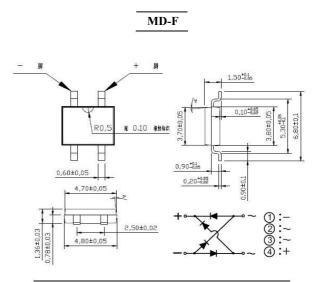
MECHANICAL DATA

Case: Molded plastic, MD-F

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202,

method 208 guaranteed Mounting position: Any Weight: 0.006ounce, 0.17gram



Dimensions in inches and (millimeters)

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	MB0 5F	MB1F	MB2F	MB4F	MB6F	MB8 F	MB10	<i>F</i> Units
Maximum Recurrent Peak Reverse Voltage	Vrrm	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	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current									
(see Fig. 1) on glass-epoxy P.C.B (Note 2)	I(AV)	$I_{(AV)}$ 0.5							Amp
on aluminum substrate (Note 3)	0.8								
Peak Forward Surge Current,									
8.3ms single half-sine-wave	Ifsm 30						Amp		
superimposed on rated load (JEDEC method)									
Maximum Forward Voltage at 0.4A DC and 25℃	VF				1.0				Volts
Maximum Reverse Current at T _A =25℃	IR	5.0							uAmp
at Rated DC Blocking Voltage TA=125°C	500								
Typical Junction Capacitance (Note 1)	Сл				13				pF
Typical Thermal Resistance (Note 3)	Rеја				70			·	°C/W
Typical Thermal Resistance (Note 2)	RөлL	·	•	•	20	•	•	·	°C/W
Operating and Storage Temperature Range	TJ, Tstg			-	55 to +150				${\mathbb C}$

NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- On glass epoxy P.C.B. mounted on 0.05×0.05 " (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



RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Derating Curve for Output **Rectified Current** Aluminum Substrate Glass Ероху P.C.B. Resistive or Inductive Load 0 20 40 60 80 100 140 160 120 Ambient Temperature (°C)

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg 35 Peak Forward Surge Current (A) TA = 40°C 30 Single Half Sine-Wave (JEDEC Method) 25 f = 60 Hz20 f = 50 Hz15 10 5.0 0 10 100 Number of Cycles

Fig. 3 - Typical Forward Voltage
Characteristics Per Leg

10

T_J = 150°C

T_J = 25°C

Pulse Width = 300µs

1% Duty Cycle

10.2 0.4 0.6 0.8 1.0 1.2 1.4

Instantaneous Forward Voltage (V)

