

MBXXF 0.5A SERIES

MINIATURE SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER



MB05F THRU MB10F

MINIATURE GLASS PASSIVATED SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

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

FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- High surge overload rating of 25 Amperes peak
- Ideal for printed circuit board
- High temperature soldering guaranteed:
260°C for 10 seconds

MECHANICAL DATA

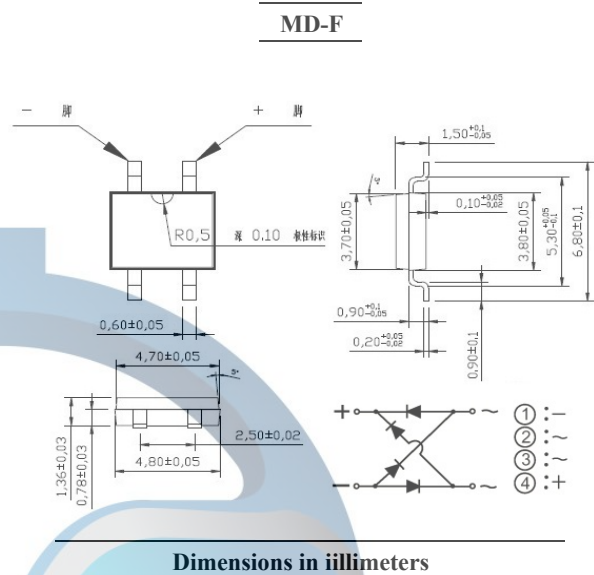
Case: Molded plastic, MD-F

Epoxy: UL 94V-0 rate flame retardant

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

Mounting position: Any

Weight: 0.006ounce, 0.17gram



Maximum Ratings and Electrical Characteristics

Ratings at 25 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	MB8 F	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}				0.3 0.5				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}				25				Amp
Maximum Forward Voltage at 0.4A DC and 25	V_F				1.0				Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=125$	I_R				5.0 500				uAmp
Typical Junction Capacitance (Note 1)	C_J				13				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$				70				/W
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$				20				/W
Operating and Storage Temperature Range	T_J, T_{stg}				-55 to +150				

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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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Derating Curve for Output Rectified Current

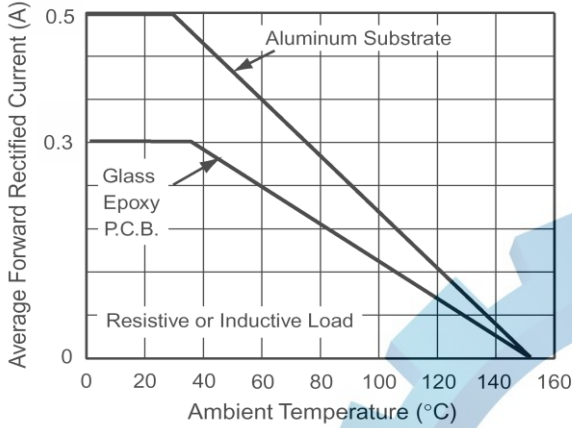


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

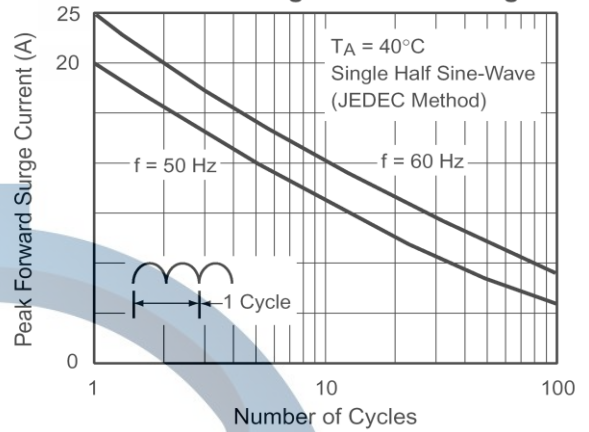


Fig. 3 - Typical Forward Voltage Characteristics Per Leg

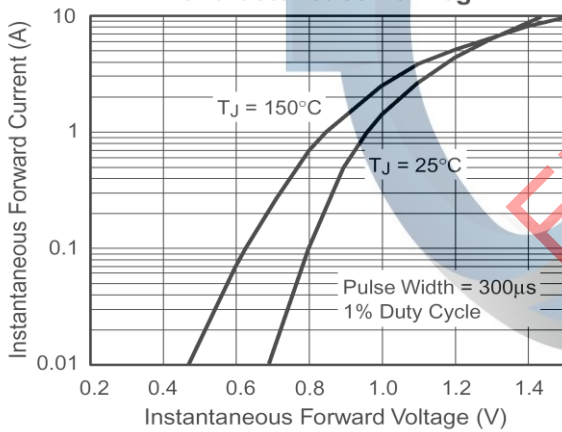


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

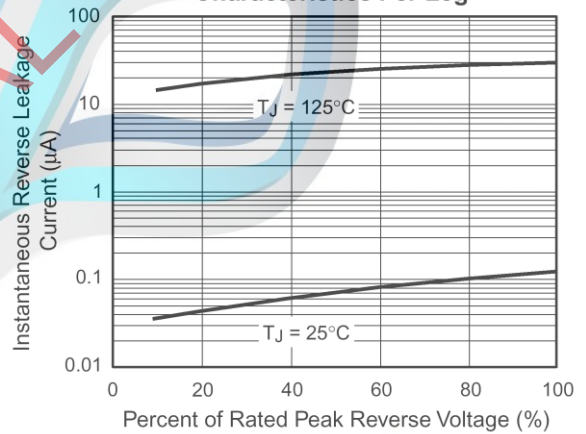


Fig. 5 - Typical Junction Capacitance Per Leg

