

# MB1F thru MB10F

Glass Passivated Bridge Rectifiers  
 Reverse Voltage 100 to 1000V Forward Current 1A

## Features

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1 A
- High Surge Current Capability
- Designed for Surface Mount Application



**MBF Package**

PIN	DESCRIPTION
1	Input Pin ( ~ )
2	Input Pin ( ~ )
3	Output Anode ( + )
4	Output Cathode ( - )

## Mechanical Data

- Case: MBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg (0.0026oz)

## Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

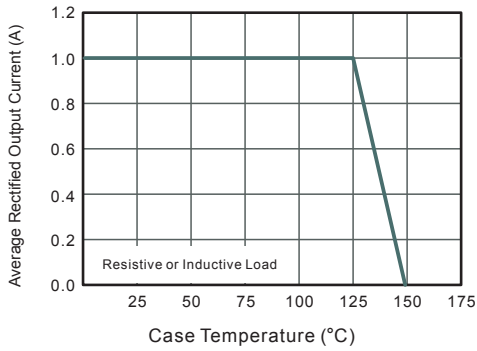
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbol	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Unit	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	600	800	1000	V	
Average Rectified Output Current at T <sub>c</sub> = 125 °C	I <sub>O</sub>	1.0						A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	35						A	
Maximum Forward Voltage at 1.0 A	V <sub>F</sub>	1.1						V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>A</sub> =25°C						5	μA
		T <sub>A</sub> =125°C						40	μA
Typical Junction Capacitance <sup>1</sup>	C <sub>J</sub>	13						pF	
Typical Thermal Resistance, Junction to Ambient <sup>2</sup>	R <sub>θJA</sub>	80						°C/W	
Typical Thermal Resistance, Junction to Case <sup>2</sup>	R <sub>θJC</sub>	25						°C/W	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150						°C	

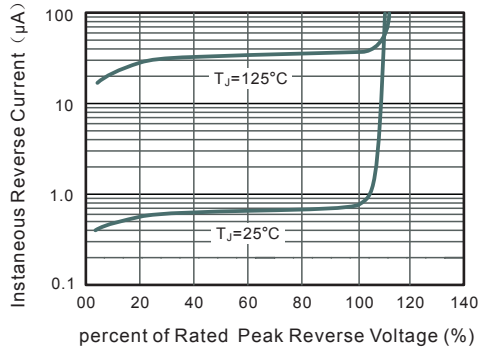
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81 cm ) copper pad.

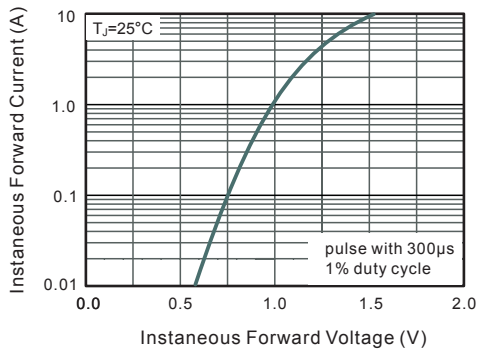
## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



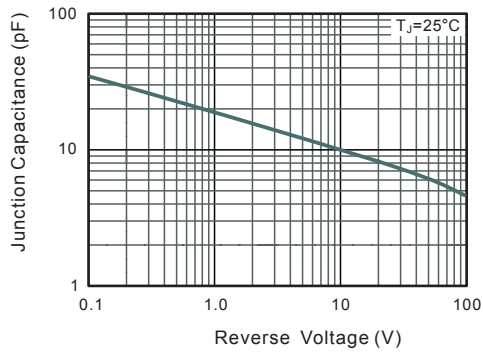
**Fig.1 Average Rectified Output Current Derating Curve**



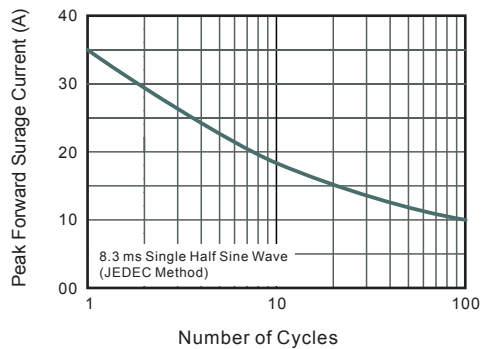
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Instantaneous Forward Characteristics**



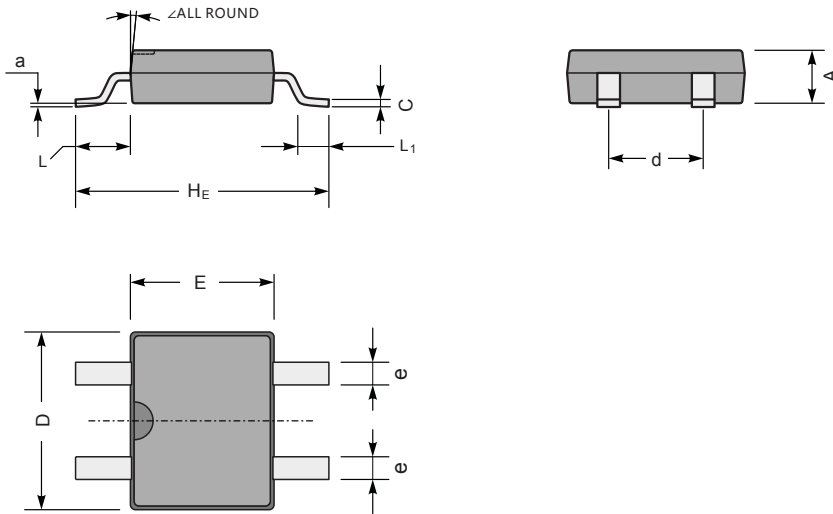
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Reprtitive Peak Forward Surge Current**

## Package Outline Dimensions

### MBF



Unit		A	C	D	E	$H_E$	d	e	L	$L_1$	a	$\angle$
mm	max	1.6	0.22	5.0	4.1	7.0	2.7	0.8	1.7	1.1	0.2	7°
	min	1.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	63	8.7	197	161	276	106	31	67	43	8	
	min	47	5.9	177	142	252	91	20	51	20	—	

## Suggested Pad Layout

