

0.8A Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers-50-1000V

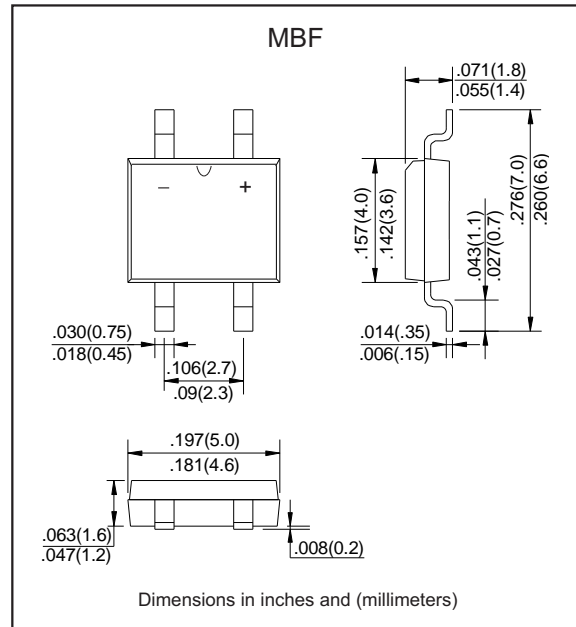
Features

- Surge overload ratings to 30 amperes peak.
- Save space on printed circuit board.
- Ideal for automated replacement.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free part, ex. MB05F-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, MBF
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_a=25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_J=25^\circ\text{C}$	$I_{(AV)}$	0.8							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 0.8A DC	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$	I_R	10							μA
		500							
$I^2 t$ Rating for Fusing($t<8.3\text{ms}$)	$I^2 t$	3.74							A^2s
Typical Junction Capacitance Per Element(Note1)	C_J	15							pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	65							$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note:1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC

2. Thermal resistance from junction to ambient mounted on P.C.B with 0.5*0.5"(13*13mm)copper pads.

Rating and characteristic curves

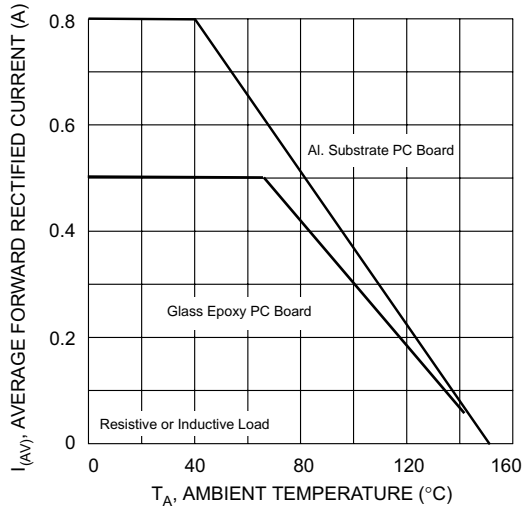


Fig. 1 Output Current Derating Curve

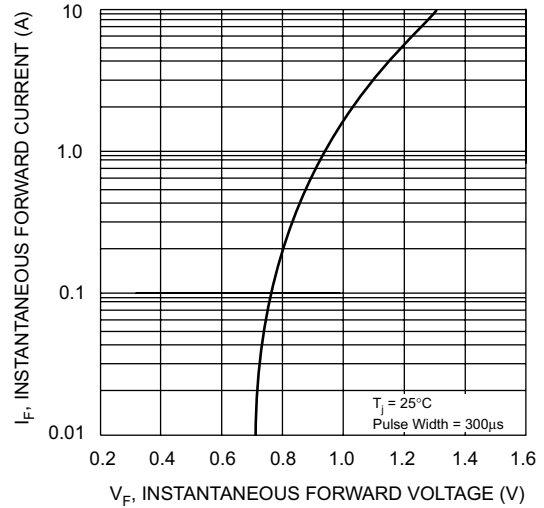


Fig. 2 Typical Forward Characteristics (per leg)

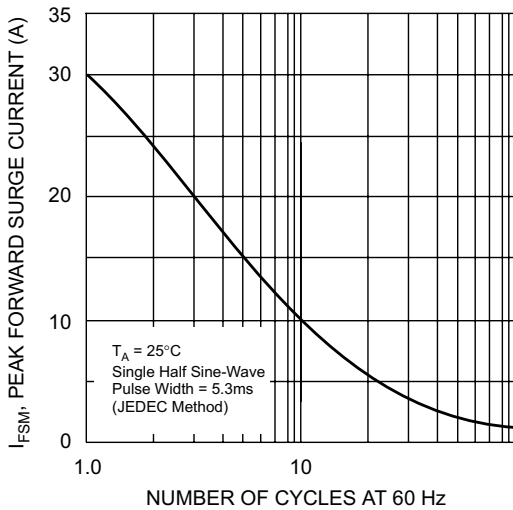


Fig. 3 Maximum Peak Forward Surge Current (per leg)

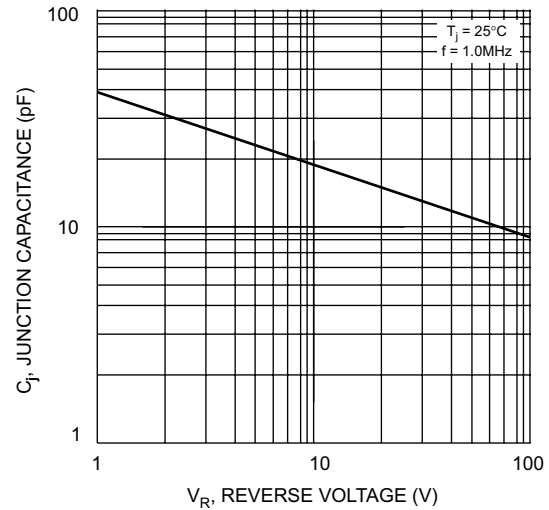


Fig. 4 Typical Junction Capacitance

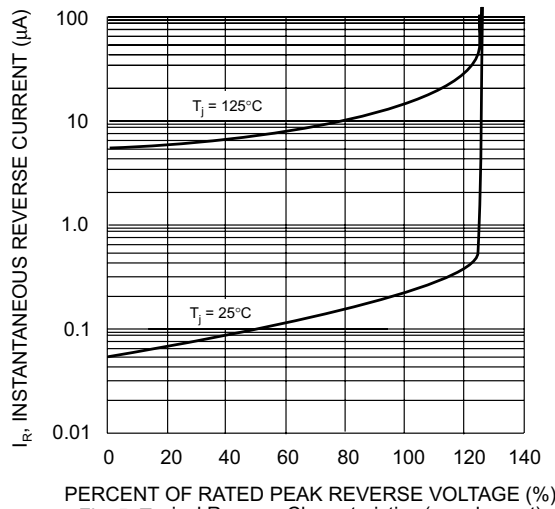

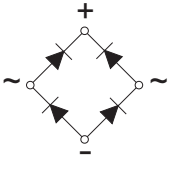

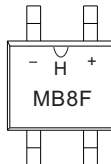


Fig. 5 Typical Reverse Characteristics (per element)

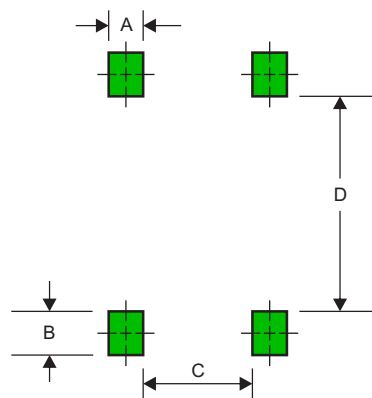
Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code	Example	
MB05F	MB05F	1. For Halogen Device	2. For Halogen-free Device
MB1F	MB1F		
MB2F	MB2F		
MB4F	MB4F		
MB6F	MB6F		
MB8F	MB8F		
MB8F	MB8F		
MB10F	MB10F		

Suggested solder pad layout

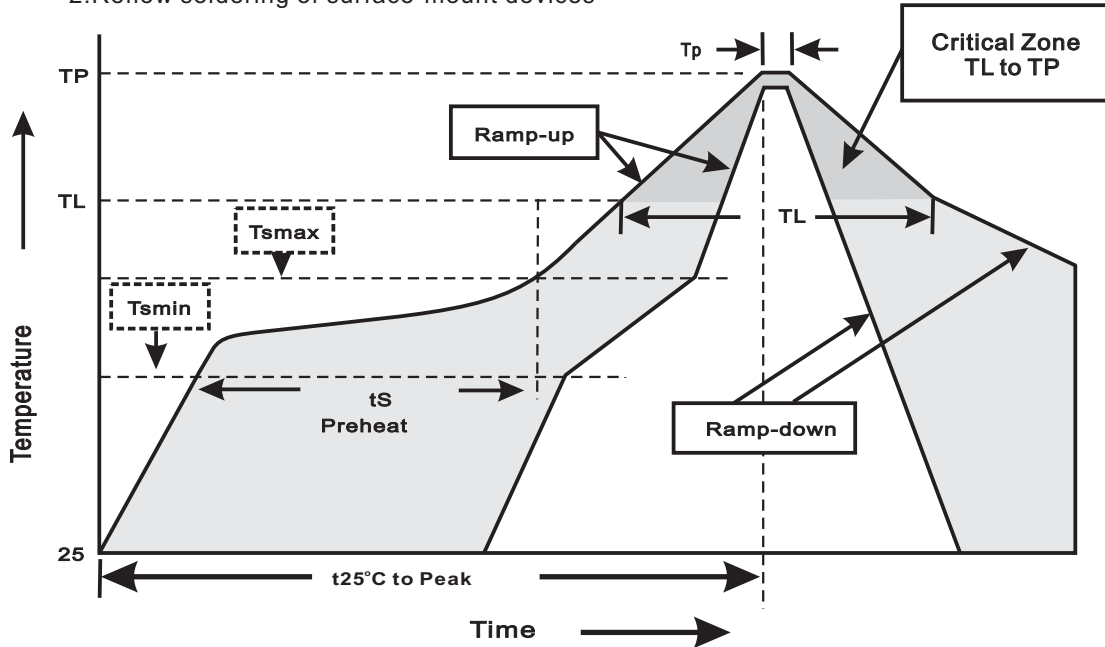


Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D
MBF	0.023 (0.58)	0.030 (0.76)	0.070 (1.78)	0.226 (5.75)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bridge Rectifiers](#) category:

Click to view products by [FUXINSEMI](#) manufacturer:

Other Similar products are found below :

[MB252](#) [MB356G](#) [MB358G](#) [MP358-BP](#) [90MT160KPBF](#) [GBJ1504-BP](#) [GBU10B-BP](#) [GBU15J-BP](#) [GBU15K-BP](#) [GBU4A-BP](#) [GBU4D-BP](#)
[GSIB680-E3/45](#) [DB101-BP](#) [DF01](#) [DF10SA-E345](#) [BU1508-E3/45](#) [BU1510-E3/45](#) [KBPC50-10S](#) [RS405GL-BP](#) [26MT120](#) [G5SBA60-E3/51](#)
[GBJ1502-BP](#) [GBU10J-BP](#) [GBU4J-BP](#) [GBU6M](#) [GBU8D-BP](#) [GBU8J-BP](#) [GSIB1520-E3/45](#) [TB102M](#) [MB1510](#) [MB6M-G](#) [MB86](#) [TL401G](#)
[MDA920A2](#) [TU602](#) [TU810](#) [MP501W-BP](#) [MP502-BP](#) [BR1005-BP](#) [BR101-BP](#) [BR84DTP204](#) [BU1010A-E3/51](#) [BU1508-E3/51](#) [BU2006-](#)
[E3/45](#) [BU2008-E3/51](#) [US15KB80R-7000](#) [KBPC25-02](#) [VS-60MT120KPBF](#) [DB105-BP](#) [DF1510S](#)