

## FEATURES

- | Ideal For Surface Mount Application
- | The Plastic Material Used Carries Underwriters Laboratory Flammability Recognition 94V-0
- | Surge Overload Ratings to 30 Amperes



MBF

## MECHANICAL DATA

- | Case: Molded Plastic
- | Polarity: Marked On Body
- | Mounting Position: Any

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

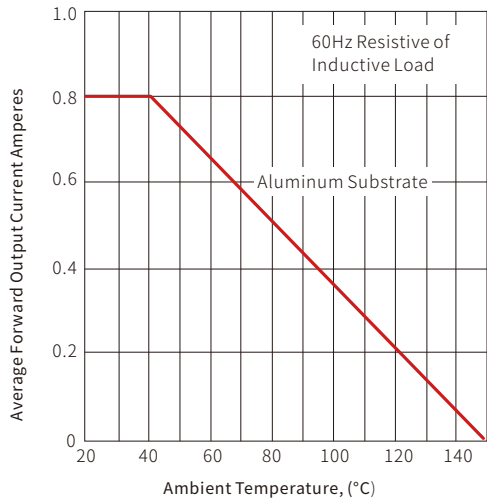
## MAXIMUM RATINGS AND CHARACTERISTICS (T<sub>A</sub>=25°C)

Parameter	Symbol	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Unit
Marking		MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum Rms Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	
Maximum Dc Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Output Current at T <sub>a</sub> =40°C	I <sub>F(AV)</sub>	0.8							A
Peak Forward Surge Current Single Sine-wave Superimposed On Rated Load (Jedec Method)	I <sub>FSM</sub>	30							
Maximum Instantaneous Forward Voltage Drop Per Leg at 0.5A	V <sub>F</sub>	1.1							V
Maximum Dc Reverse Current At Rated DC Blocking Voltage Per Element	I <sub>R</sub>	T <sub>A</sub> =25°C						10	μA
		T <sub>A</sub> =125°C						500	
Typical Thermal Resistance Per Element (1)	R <sub>θJA</sub>	110							°C/W
Rating For Fusing ( T<8.3ms)	I <sup>2</sup> t	10							A <sup>2</sup> sec
Typical Junction Capacitance Per Element (2)	C <sub>J</sub>	25.0							pF
Operating Junction And Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150							°C

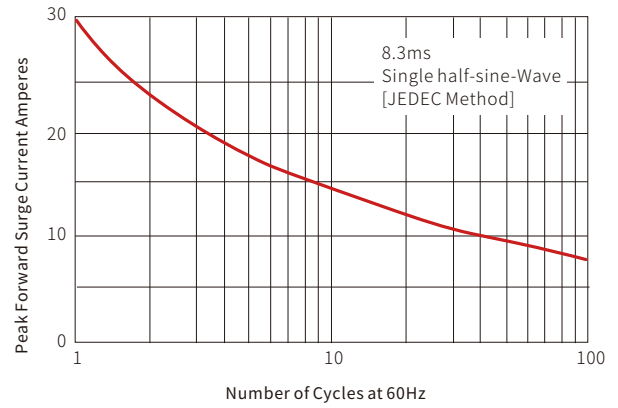
Notes: (1)Thermal Resistance From Junction To Ambient On P.C.Board Mounting.  
 (2)Measured At 2.0mhz And Applied Reverse Voltage Of 4.0 Volts.

# CHARACTERISTIC CURVES

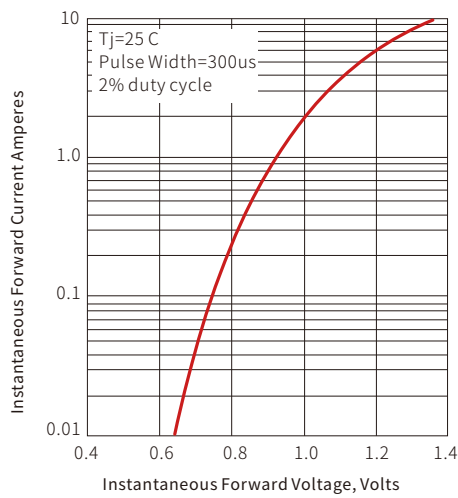
**Fig. 1- Derating Curve for Output Rectified Current**



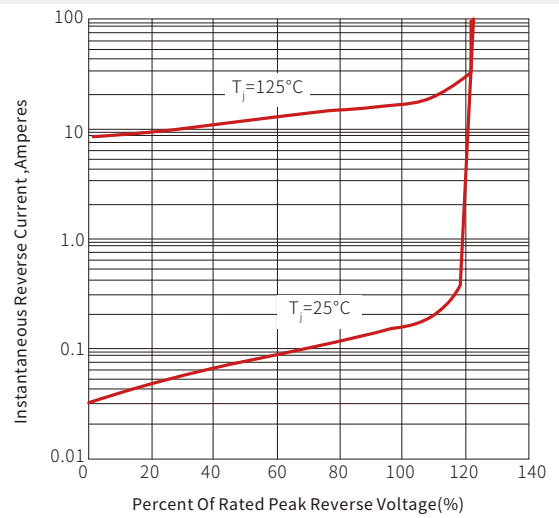
**Fig. 2- Maximum Non-repetitive Peak Forward Surge Current**

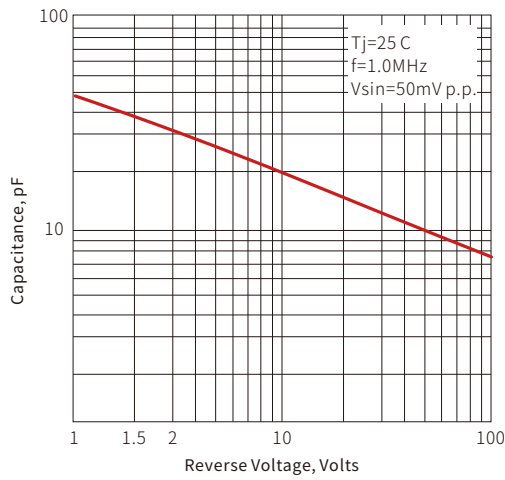


**Fig. 3- Typical Instantaneous Forward Characteristics**



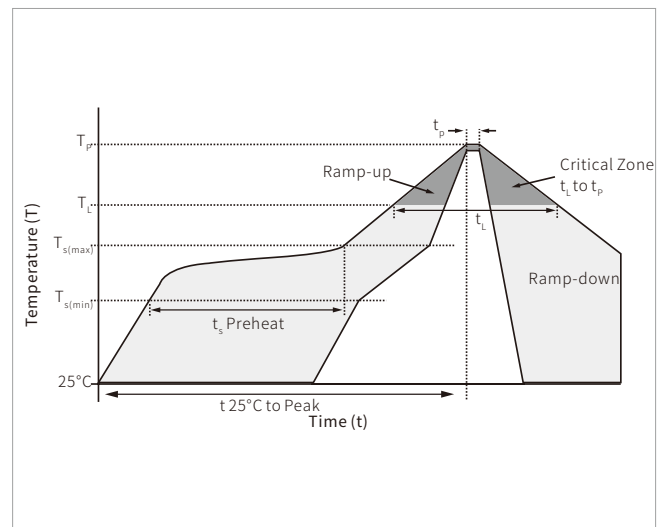
**Fig. 4- Typical Revers Characteristics**



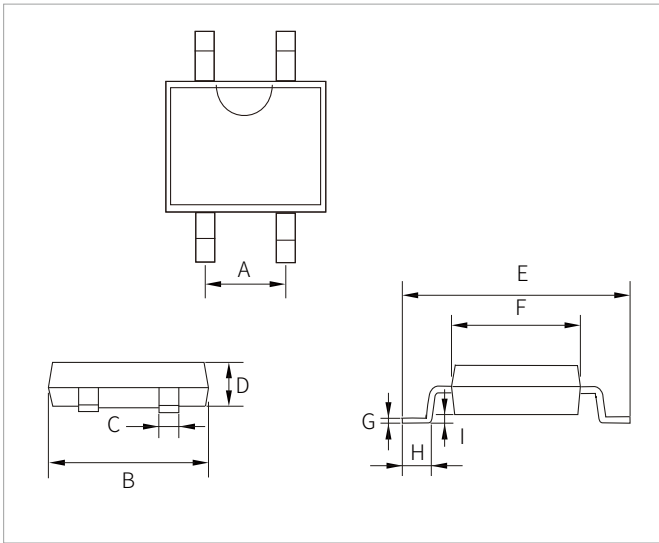
**Fig. 5-Typical Junction Capacitance**


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(\text{min})}$ )	150°C
	Temperature Max ( $T_{s(\text{max})}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(\text{max})}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C



## MBF PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.30	2.70	0.091	0.106
B	4.50	4.90	0.177	0.193
C	0.50	0.70	0.020	0.028
D	1.20	1.60	0.047	0.063
E	7.00Max		0.276Max.	
F	3.60	4.00	0.142	0.157
G	0.10	0.30	0.004	0.012
H	0.70	1.10	0.028	0.043
I	0.2 Max.		0.008Max.	

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
MB05F-MB10F	MBF	5000PCS	13"

**Headquarters**

No.3387 Shendu Road  
Pujiang I&E Park  
Minhang Shanghai China  
201000

**Hotline**

400-021-5756

**Web**

<https://www.semiware.com>

**Sales Center**

Tel: 86-21-3463-7458  
Email: [sales18@semiware.com](mailto:sales18@semiware.com)

**Customer Service**

Tel: 86-21-5484-1001  
Email: [sales17@semiware.com](mailto:sales17@semiware.com)

**Technical Support**

Tel: 86-21-3463-7654  
Email: [fae01@semiware.com](mailto:fae01@semiware.com)

**Complaint & Suggestions**

Tel: 86-21-3463-7172  
Ext: 8868  
Email: [cs03@semiware.com](mailto:cs03@semiware.com)

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