

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

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=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 _{RRM}	50	100	200	400	600	800	1000	V
Maximum Rms Bridge Input Voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum Dc Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Output Current at T _a =40°C	I _{F(AV)}	0.8						A	
Peak Forward Surge Current Single Sine-wave Superimposed On Rated Load (Jedec Method)	I _{FSM}	30						A	
Maximum Instantaneous Forward Voltage Drop Per Leg at 0.5A	V _F	1.1						V	
Maximum Dc Reverse Current At Rated DC Blocking Voltage Per Element	T _A =25°C	10						μA	
	T _A =125°C	500							
Typical Thermal Resistance Per Element (1)	R _{θJA}	110						°C/W	
Rating For Fusing (T<8.3ms)	I ² t	10						A ² sec	
Typical Junction Capacitance Per Element (2)	C _J	25.0						pF	
Operating Junction And Storage Temperature Range	T _J ,T _{STG}	-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

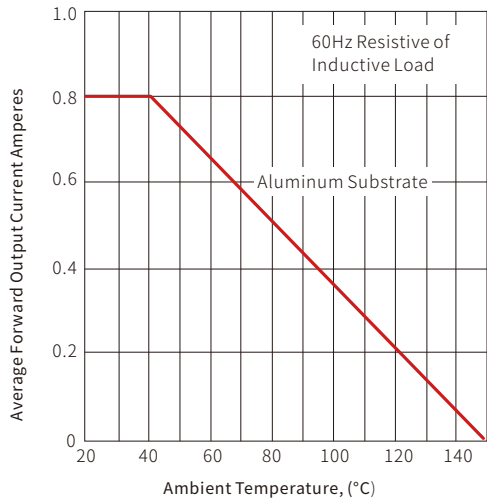


Fig. 2- Maximum Non-repetitive Peak Forward Surge Current

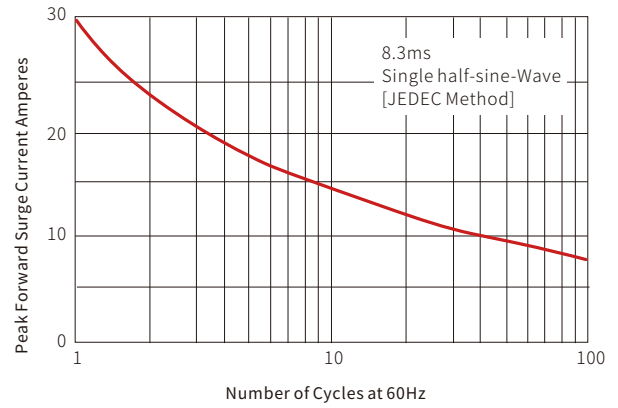


Fig. 3- Typical Instantaneous Forward Characteristics

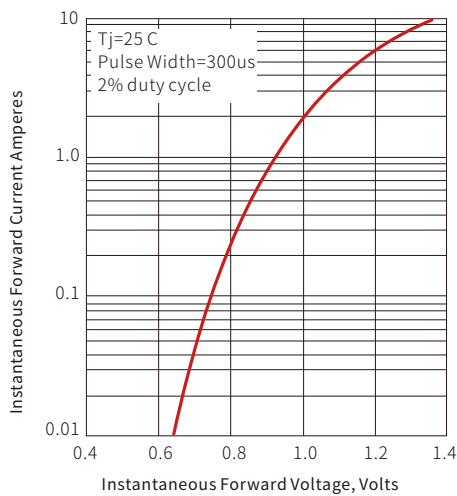


Fig. 4- Typical Revers Characteristics

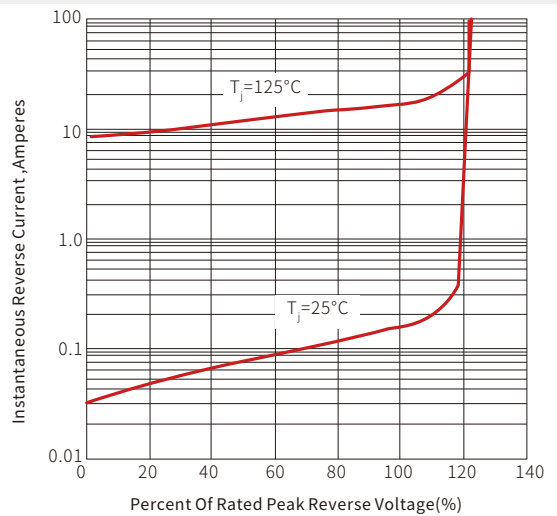
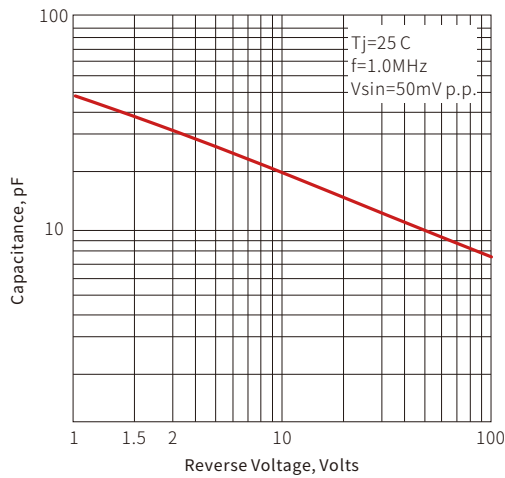
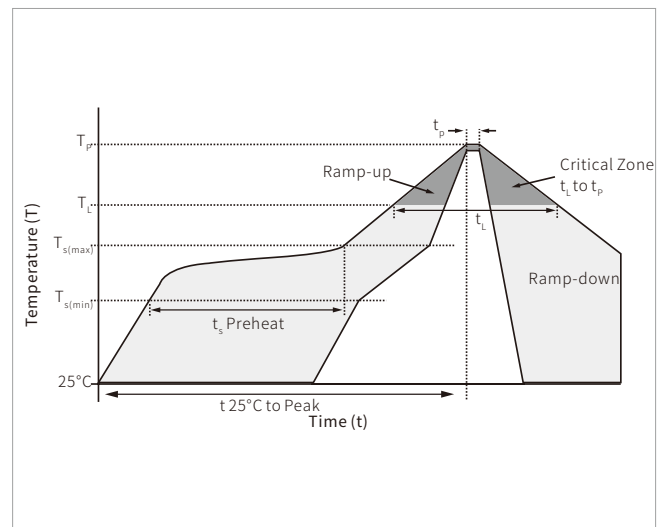


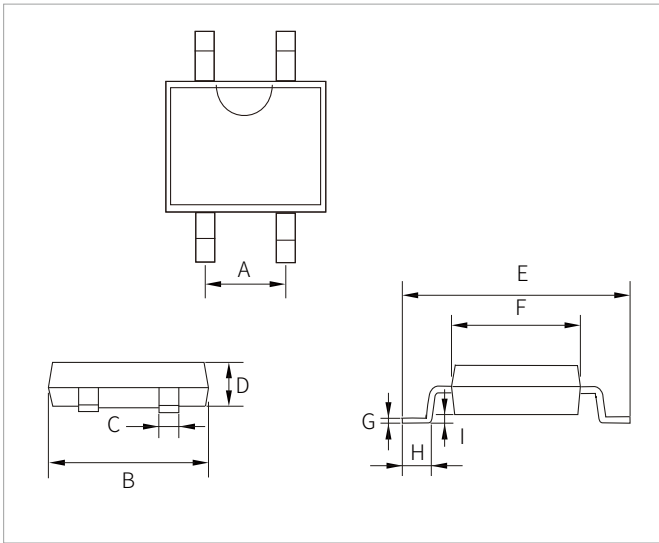
Fig. 5-Typical Junction Capacitance


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

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

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