

OM SENI

MBF Plastic-Encapsulate Bridge Rectifier

Features

- Ideal for printed circuit board
- Small size, simple installation
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

Applications

General purpose 1 phase Bridge rectifier applications

Mechanical Data

- Case: MBF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

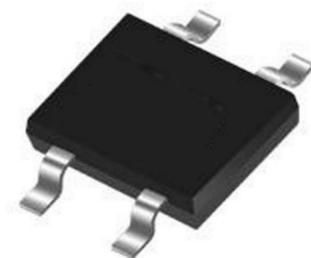
MB05F THRU MB10F

Reverse Voltage

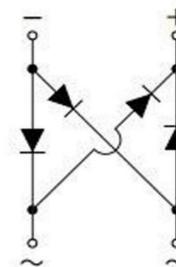
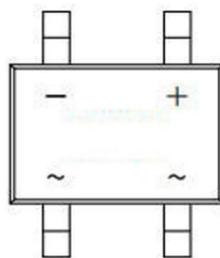
50-1000 V

Forward Current

1.0 Ampere



Function Diagram



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F
Device marking code			MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A ² S	3.7						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C/W	75						
	$R_{\theta J-L}$	°C/W	18						

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Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F
Maximum instantaneous forward voltage	$I_F=0.5A$	V_F	V				1.0			
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	μA				5.0			
	$V_R=V_{DC}, T_A=100^\circ C$	I_{R2}					500			
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF				12			

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

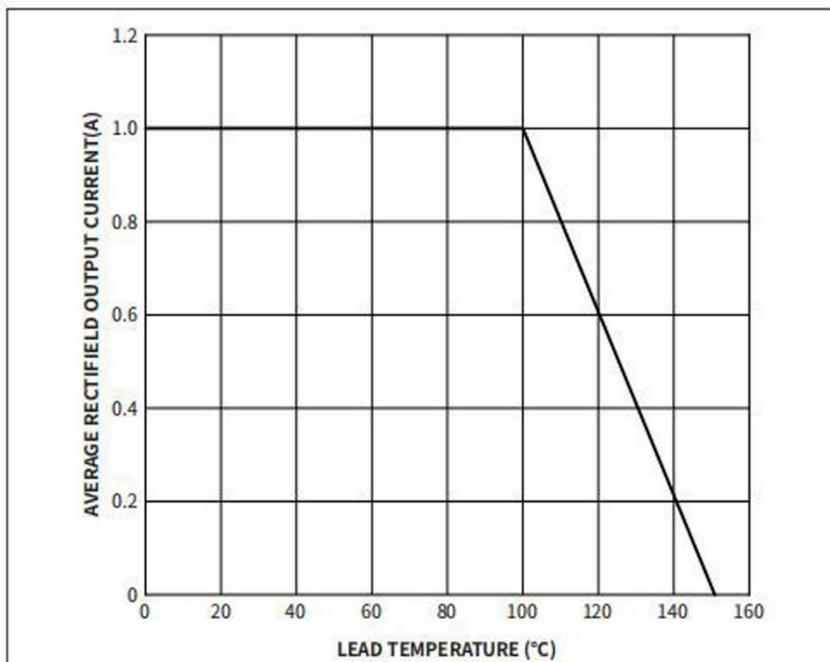


Fig.1 Forward Current Derating Curve

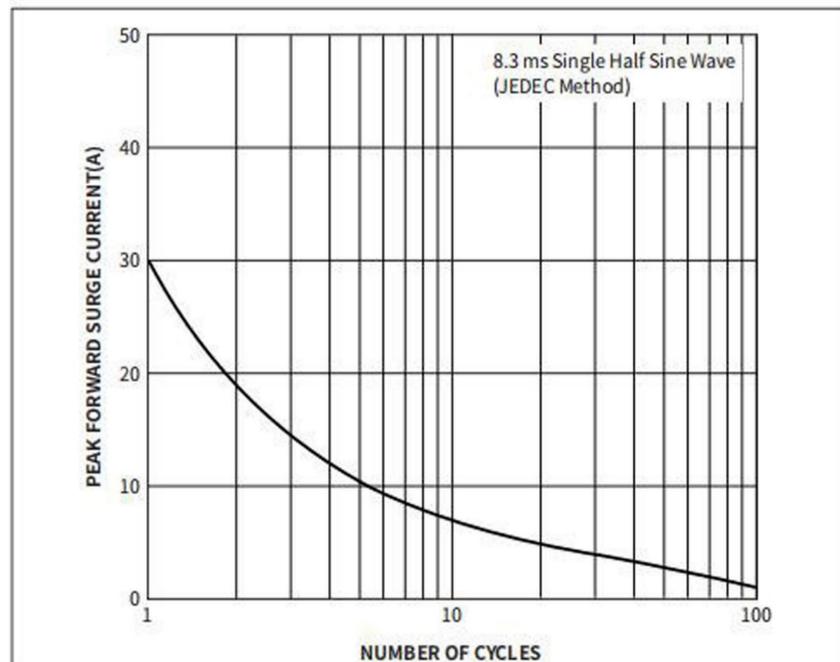


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

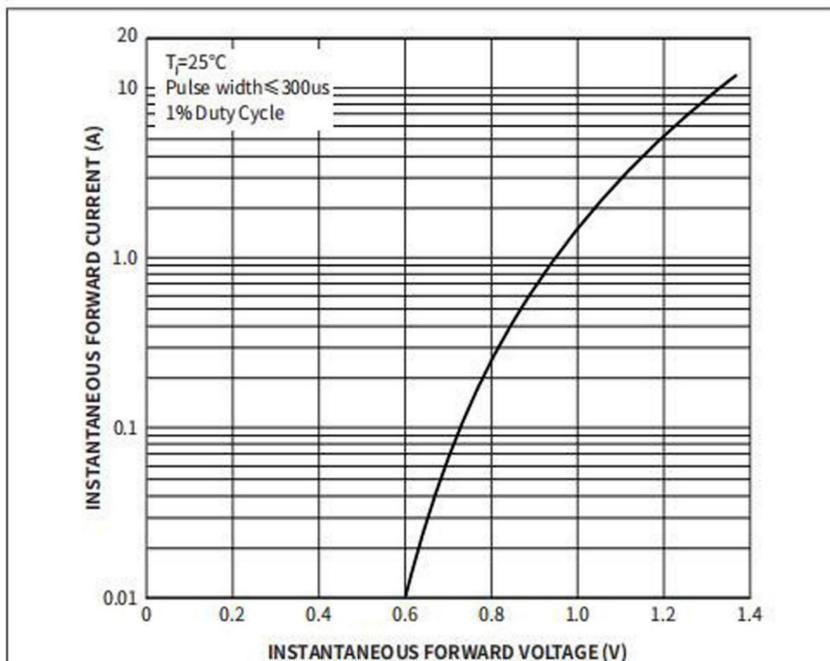


Fig.3 Typical Forward Voltage

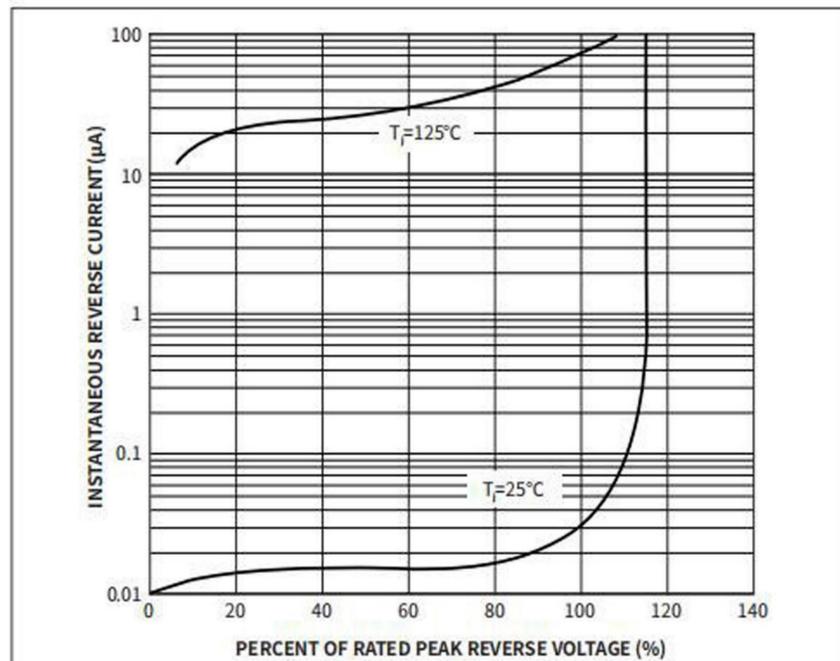


Fig.4 Typical Reverse Characteristics

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Ordering Information

PACKAGE	PACKAGE CODE	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
MBF	R3	5000	10000	50000	13"

Package Outline Dimensions (MBF)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.5	4.9	0.177	0.193
A1	-	0.2	-	0.008
B	1.35	1.45	0.053	0.057
C	-	7.0	-	0.275
E	3.6	4.0	0.141	0.157
L	0.7	1.1	0.027	0.043
N	0.15	0.35	0.006	0.014
b	0.6	0.8	0.023	0.031
e	2.3	2.7	0.09	0.106

Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	6.0	6.2	0.236	0.24
N	2.4	2.6	0.09	0.102
Y	1.84	2.0	0.072	0.079
X	1.2	1.4	0.047	0.055