

# MB1F-12AT THRU MB10F-12AT

## SURFACE MOUNT BRIDGE RECTIFIERS

Forward Current-1.2A Reverse Voltage-100V to 1000V

### FEATURES

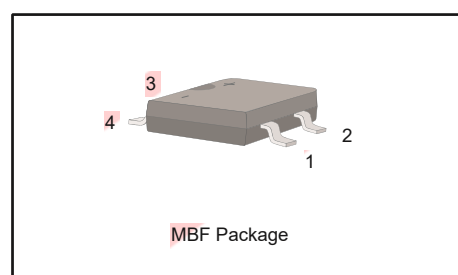
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Reverse voltage: 100V to 1000V
- ◆ Forward current: 1.2A
- ◆ High surge current capability

### MECHANICAL DATA

- ◆ Case: MBF molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Weight: Approximated 0.075grams

### PINNING

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



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

PARAMETER	SYMBOL	MB1F-12AT	MB2F-12AT	MB4F-12AT	MB6F-12AT	MB8F-12AT	MB10F-12AT	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	1.2						A
Peak Forward Surge Current (Note1)	$I_{FSM}$	40						A
Maximum Forward Voltage at 1.2 A	$V_F$	1.1						V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5 80						$\mu\text{A}$
Typical Junction Capacitance (Note2)	$C_J$	18						pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$ $R_{\theta Jc}$	75 22						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

- Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).  
2. Measured at 1MHz and applied reverse voltage of 4 V D.C.  
3. Mounted on glass epoxy PC board with 1.5"×1.5" (3.81×3.81 cm) copper pad .

Dated: 07/2016  
Rev:1.0

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## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Average Rectified Output Current Derating Curve

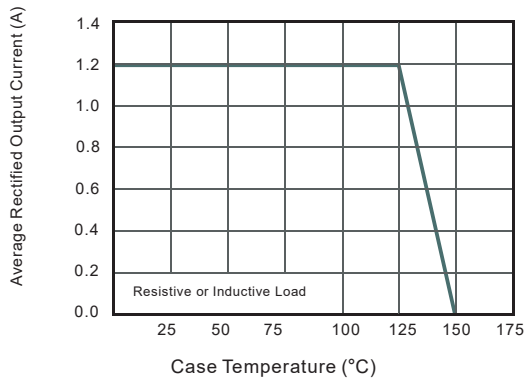


Fig.2 Typical Reverse Characteristics

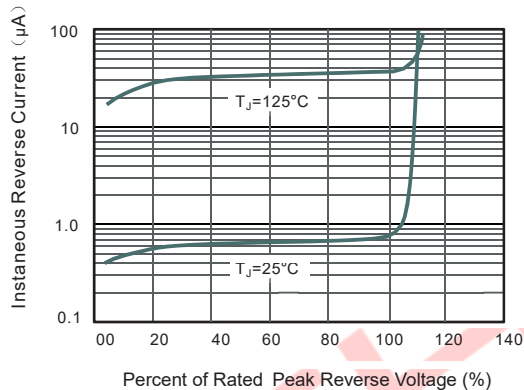


Fig.3 Typical Instantaneous Forward Characteristics

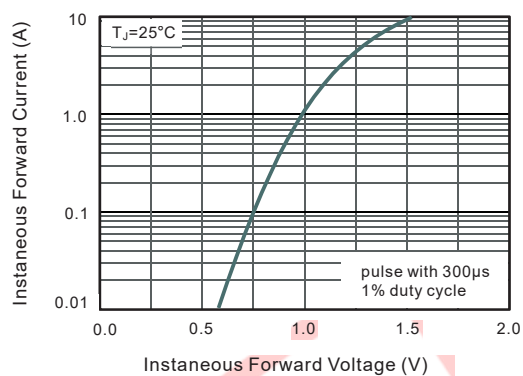


Fig.4 Typical Junction Capacitance

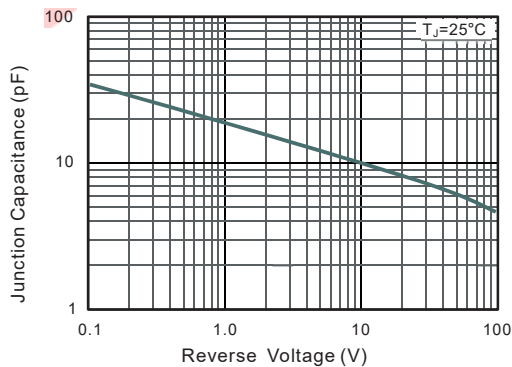
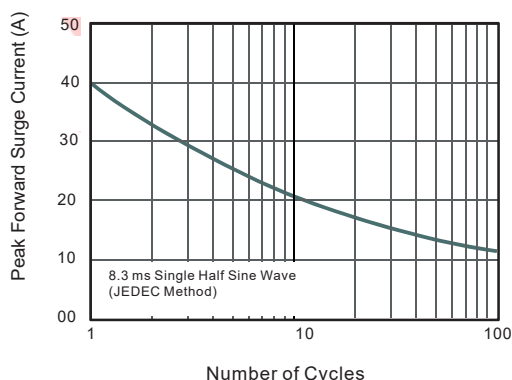


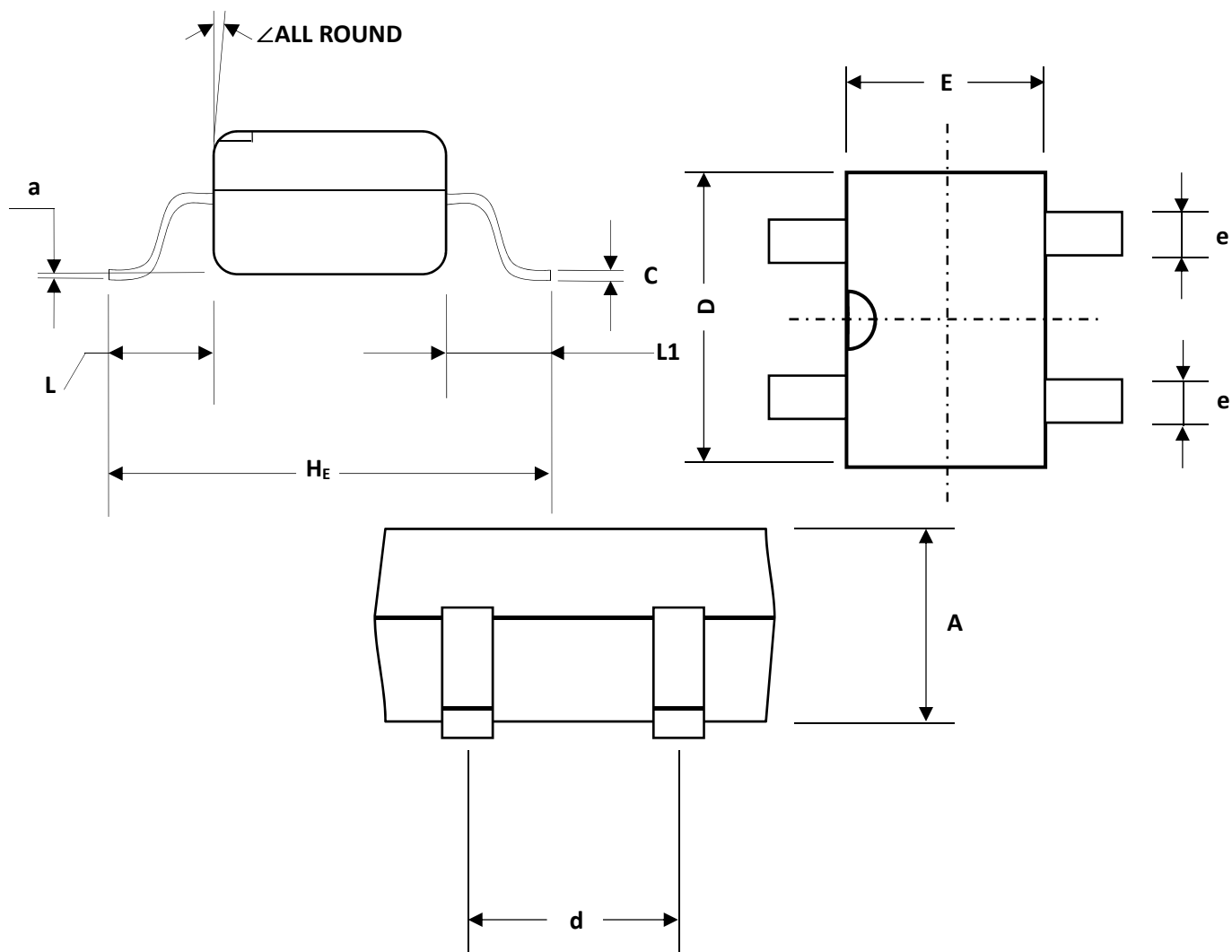
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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## PACKAGE OUTLINE

### MBF



MBF mechanical data

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	—	

### ORDERING INFORMATION

Device	Package	Shipping
MB1F-12AT thru MB10F-12AT	MBF	3,000/Tape & Reel (11 inches)
		5,000/Tape & Reel (13 inches)

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