

# MB1FAT THRU MB10FAT

## SURFACE MOUNT BRIDGE RECTIFIERS

Forward Current-0.8A Reverse Voltage-100V to 1000V

### FEATURES

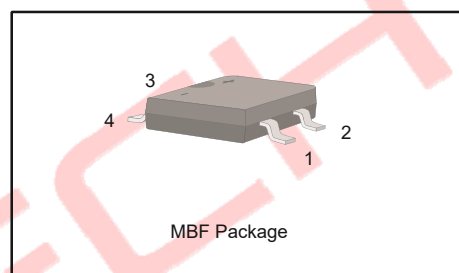
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Reverse voltage: 100V to 1000V
- ◆ Forward current: 0.8A
- ◆ High surge current capability

### 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	MB1FAT	MB2FAT	MB4FAT	MB6FAT	MB8FAT	MB10FAT	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 $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	0.8						A
Peak Forward Surge Current(Note1)	$I_{FSM}$	30						A
Maximum Forward Voltage at 0.8 A	$V_F$	1.1						V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$	$I_R$	5 40						$\mu\text{A}$
Typical Junction Capacitance(Note2)	$C_J$	13						pF
Typical Thermal Resistance(Note3)	$R_{\theta JA}$ $R_{\theta Jc}$	90 30						$^\circ\text{C/W}$
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 .

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## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Average Rectified Output Current Derating Curve

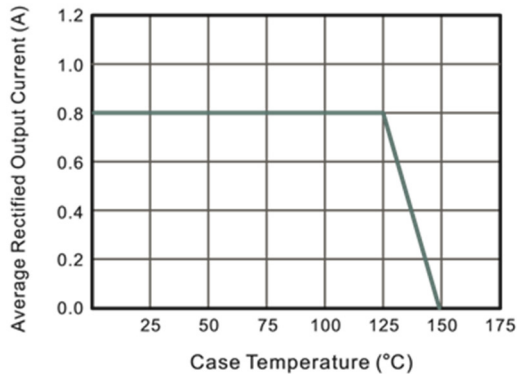


Fig.2 Typical Reverse Characteristics

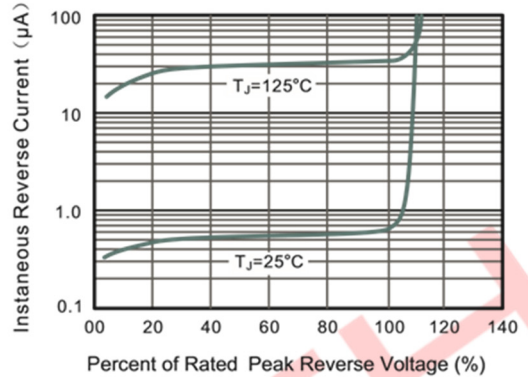


Fig.3 Typical Instantaneous Forward Characteristics

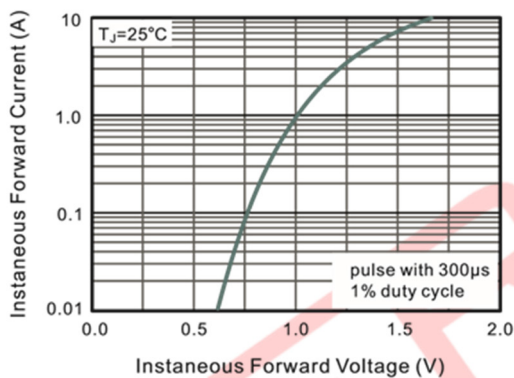


Fig.4 Typical Junction Capacitance

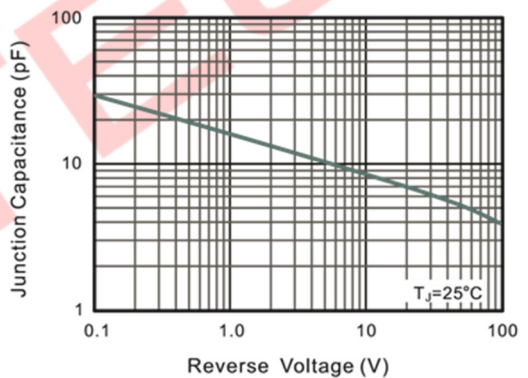
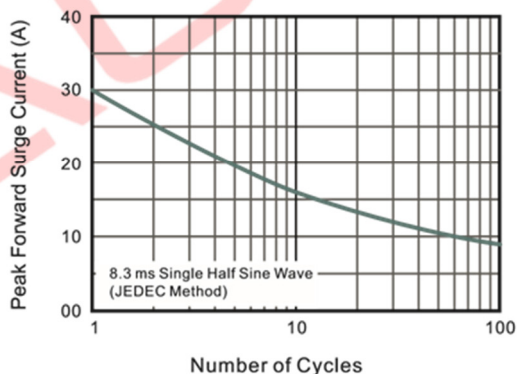


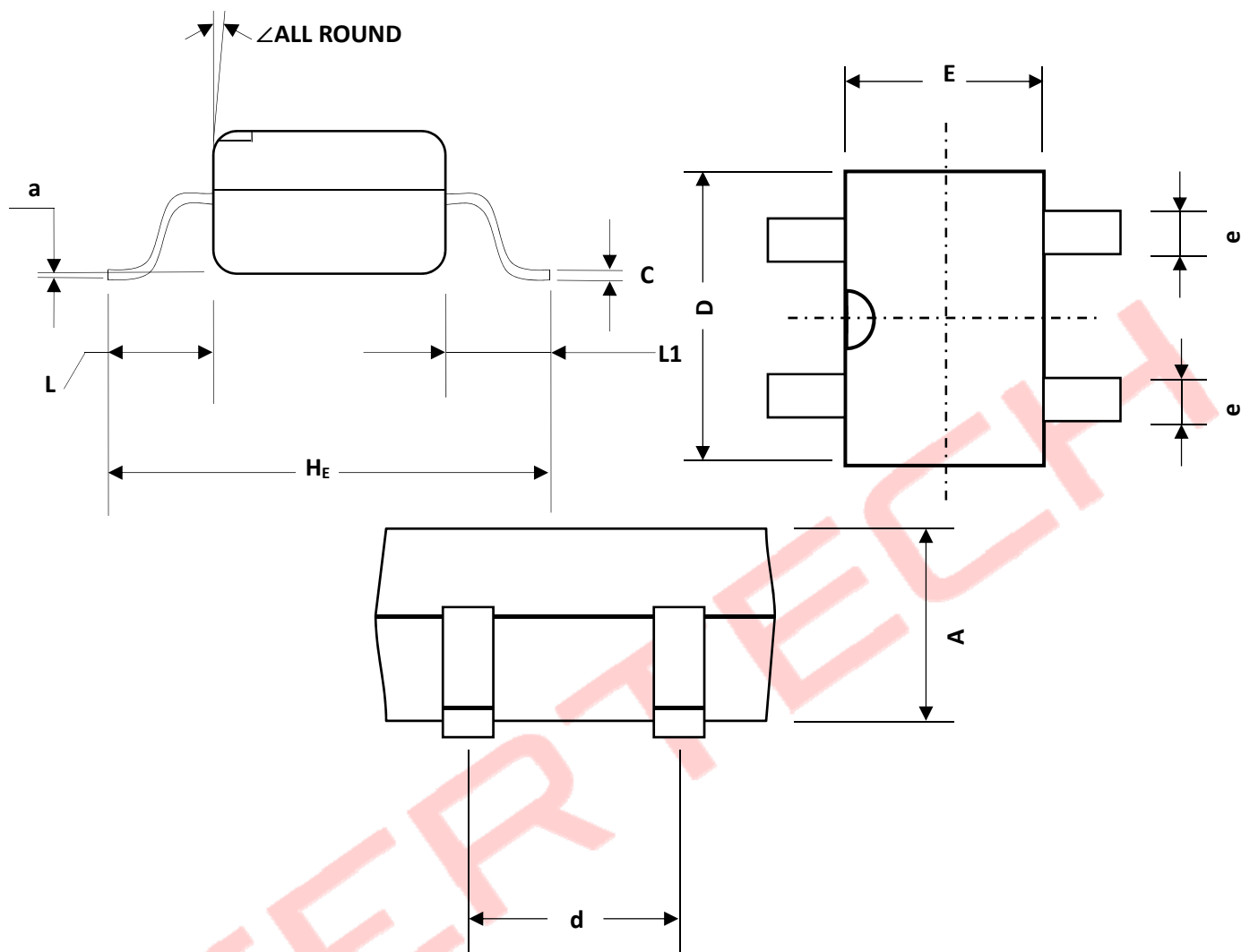
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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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	$7^\circ$
	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
MB1FAT thru MB10FAT	MBF	3,000/Tape & Reel (11 inches)
		5,000/Tape & Reel (13 inches)

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