

Single Phase 0.8Amp Super Fast Recovery Bridge Rectifiers

Features

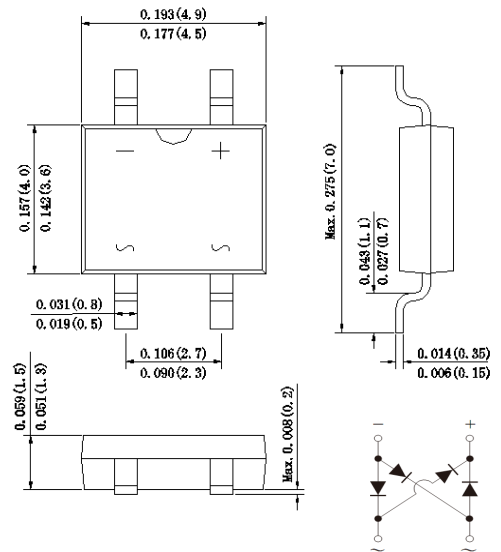
MBF



- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds at terminals

Mechanical Data

- Case :** Molded plastic body
- Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity :** Polarity symbol marking on body
- Mounting Position :** Any
- Weight :** 0.0027 ounce, 0.078 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	EMB1F	EMB2F	EMB3F	EMB4F	EMB5F	EMB6F	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_L=100^\circ C$ On glass-epoxy P.C.B (Note 1)	I_{AV}	0.8						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0						A
Rating for fusing ($t=8.3ms, T_a=25^\circ C$)	I_t^2	3.7						A^2s
Maximum instantaneous forward voltage at 1.0A	V_F	1.00		1.30		1.70		V
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$	I_R	5.0 500						μA
Maximum reverse recovery time (Note 2)	T_{rr}	35						ns
Typical junction capacitance (Note 3)	C_j	16.0						pF
Typical thermal resistance	R_{qJA}	85.0						$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150						$^\circ C$

- Note:**
1. Mounted on glass epoxy PC board with 1.3*1.3mm solder pad
 2. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

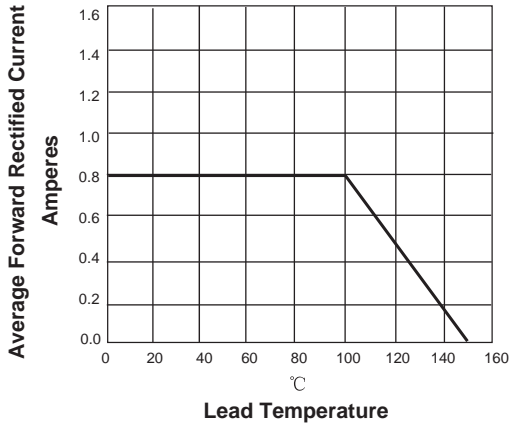


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

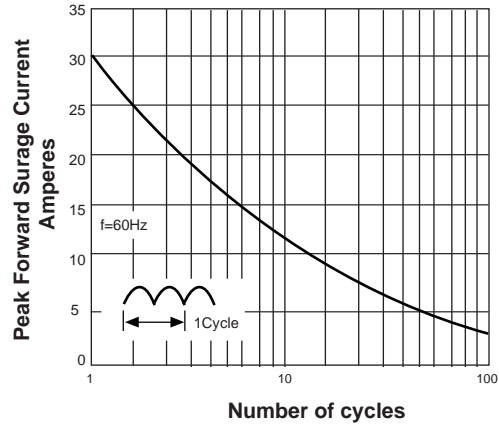


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

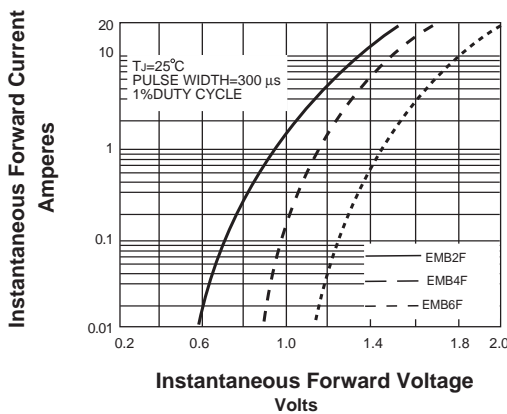
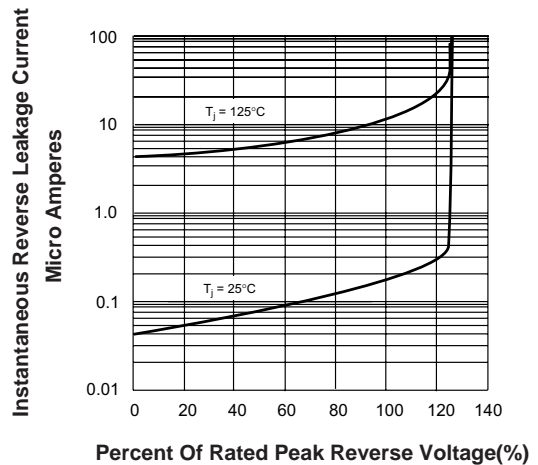
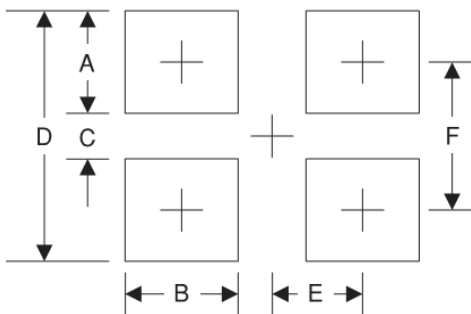


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



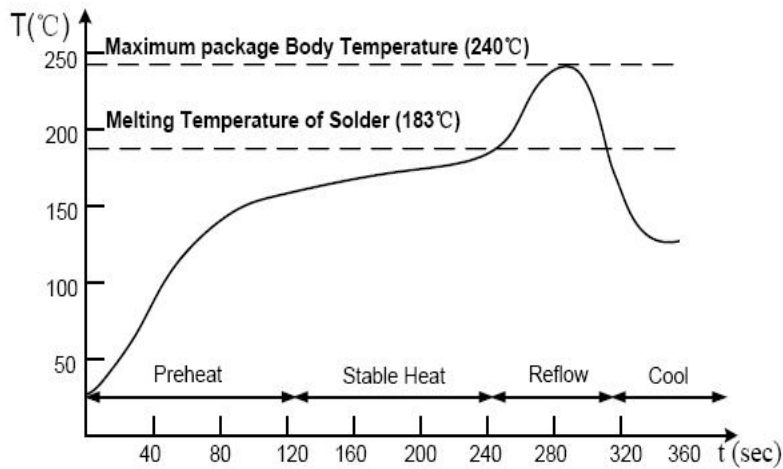
Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.7	0.067
B	1.0	0.039
C	4.40	0.173
D	8.10	0.319
E	1.25	0.049
F	6.30	0.248

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Suggested Soldering Temperature Profile

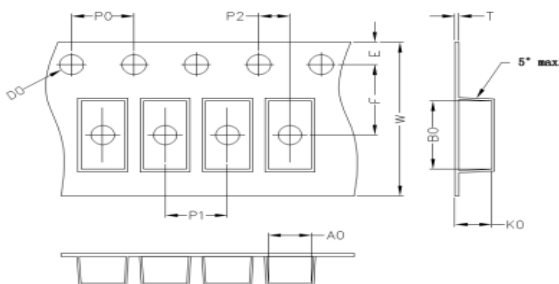


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
5.05	7.10	1.65	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
MBF	11'	278	3	280	6	355*310*310	48
	13'	330	5	338	10	365*365*360	80