

0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

FEATURES:

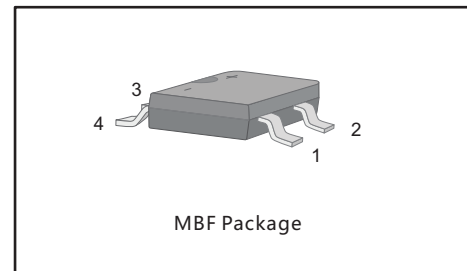
Glass Passivated Chip Junction
Reverse Voltage - 100 to 1000 V
Forward Current - 0.5 A
High Surge Current Capability
Designed for Surface Mount Application

MECHANICAL DATA

- Case: MBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg 0.0024oz

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 derate by 20 %.

Parameter	Symbols	MB1F-05	MB2F-05	MB4F-05	MB6F-05	MB8F-05	MB10F-05	Units
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
Average Rectified Output Current at $T_a = 40\text{ }^{\circ}\text{C}$	I_O	0.5						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	20						A
Maximum Forward Voltage at 0.5 A	V_F	1.1						V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	I_R	5.0 100						μA
Typical Junction Capacitance (Note1)	C_j	13						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JL}$	60 16						$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^{\circ}\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 1.3mm² copper pad.



Fig.1 Average Rectified Output Current Derating Curve

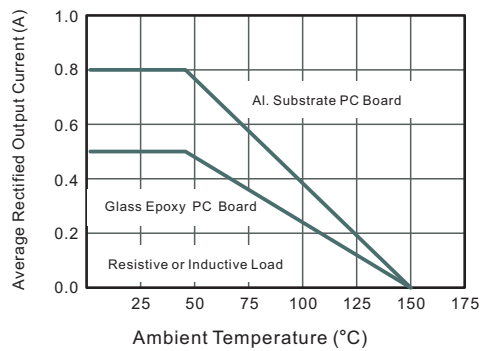


Fig.2 Typical Reverse Characteristics

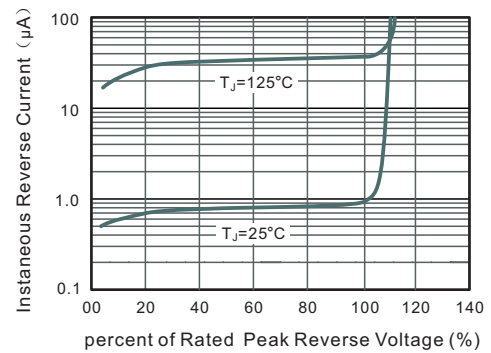


Fig.3 Typical Instantaneous Forward Characteristics

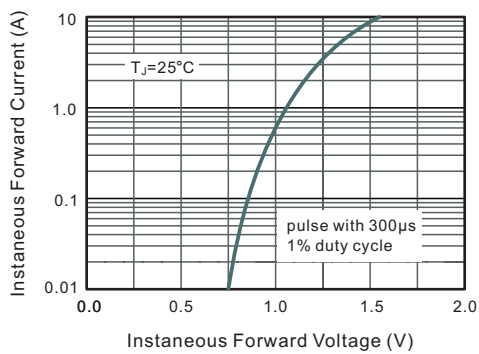


Fig.4 Typical Junction Capacitance

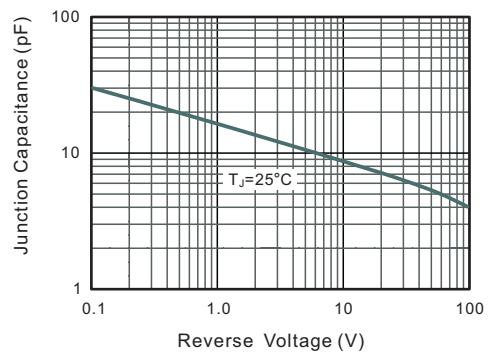
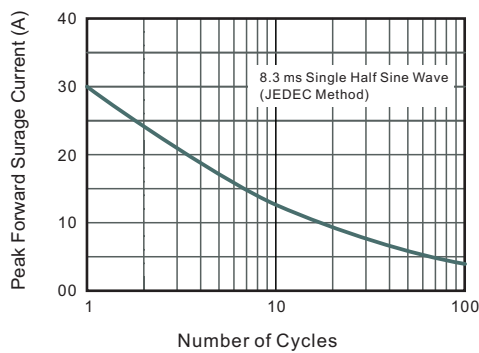


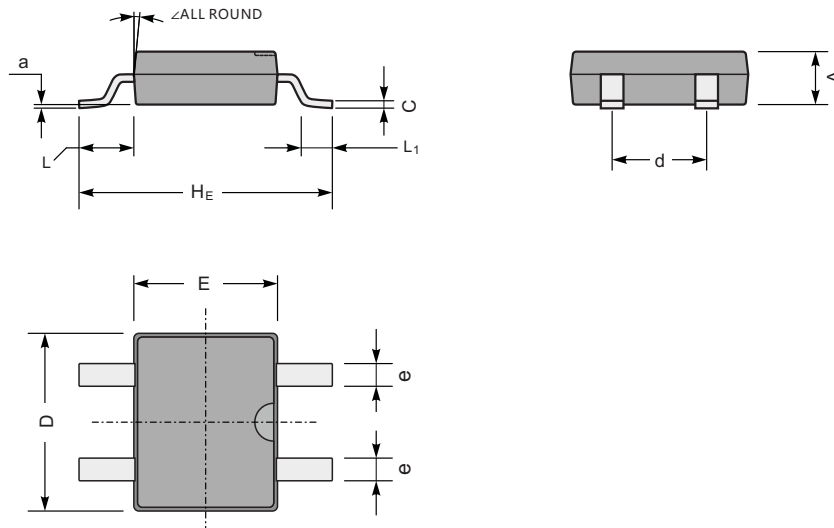
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

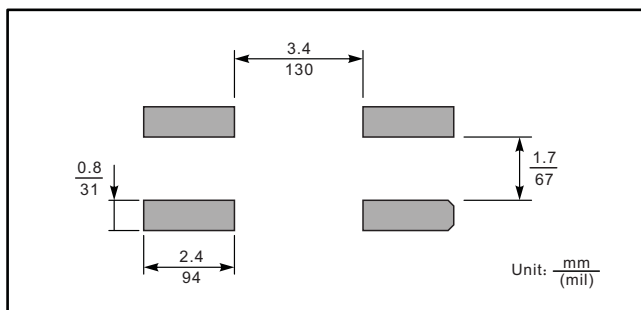
MBF



MBF mechanical data

UNIT		A	C	D	E	H _E	d	e	L	L ₁	a	∠
mm	max	1.6	0.22	5.0	4.1	7.0	2.7	0.7	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	28	67	43	8	
	min	47	5.9	177	142	252	91	20	51	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
MB1F-05	05M1
MB2F-05	05M2
MB4F-05	05M4
MB6F-05	05M6
MB8F-05	05M8
MB10F-05	05M10

