

0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER
Reverse Voltage - 100 to 1000 V
Forward Current – 0.5A

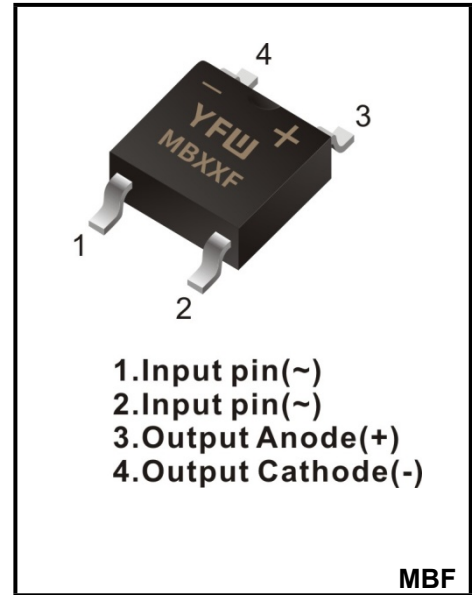
FEATURES

- ◆High current capability
- ◆Low forward voltage drop
- ◆Glass Passivated Chip Junction
- ◆Low power loss, high efficiency
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



MECHANICAL DATA

- ◆Case: MBF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 75mg / 0.0026oz



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 $T_c = 125\text{ }^\circ\text{C}$	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
Forward Voltage per element at 0.5A	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 40						μA
Typical Junction Capacitance (Note1)	C_j	11						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}, R_{\theta JC}$	110/35						$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^\circ\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

Fig.1 Average Rectified Output Current Derating Curve

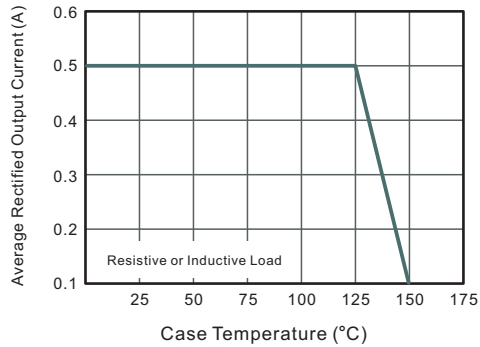


Fig.2 Typical Reverse Characteristics

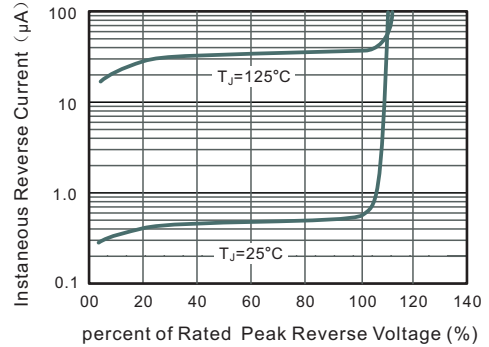


Fig.3 Typical Instantaneous Forward Characteristics

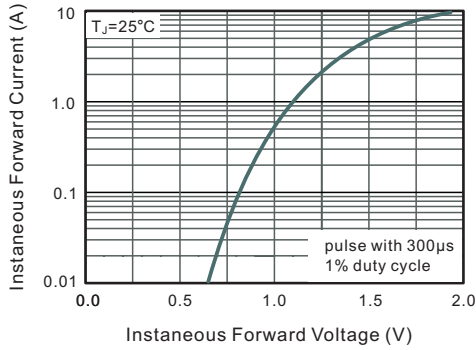


Fig.4 Typical Junction Capacitance

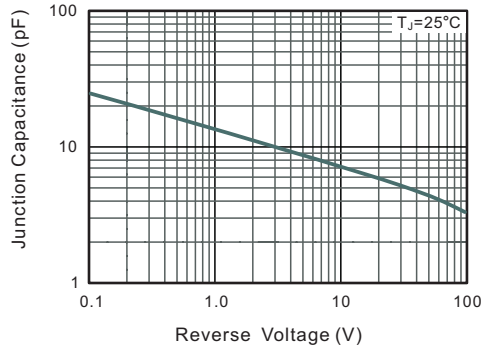
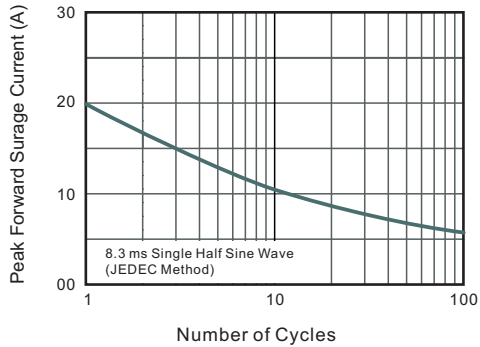


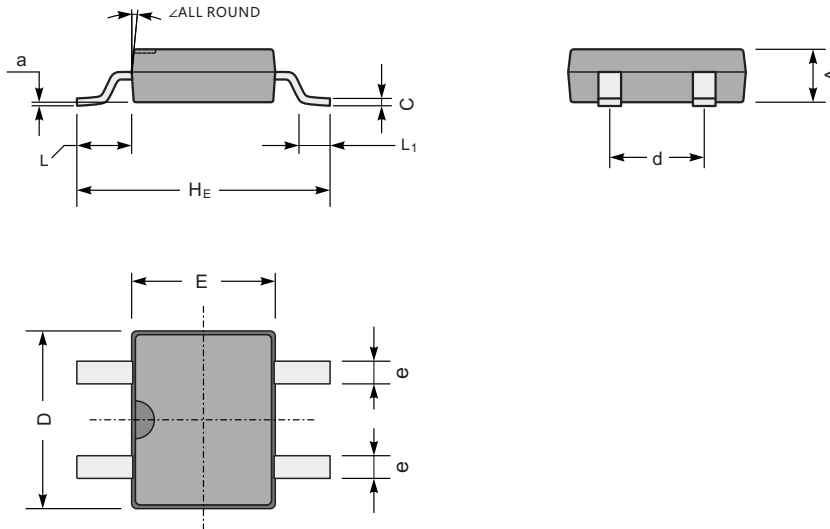
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

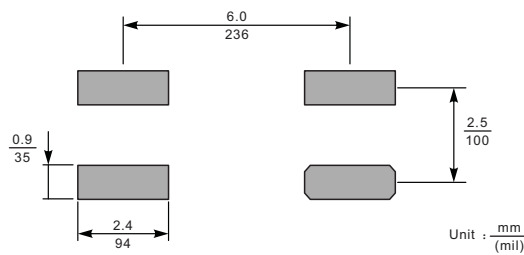
MBF

Plastic surface mounted package; 4 leads



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	0.8	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	—	

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
MBF	Tape/Reel, 13" reel	5000	EIA-481-1