



UMB1FK THRU UMB10FK

1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

FEATURES:

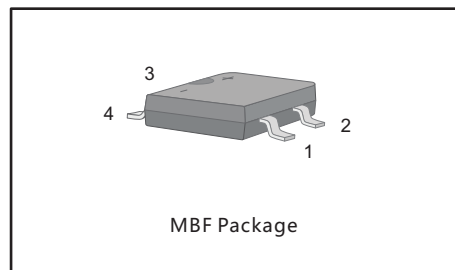
- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1.0 A
- Fast reverse recovery time
- Designed for Surface Mount Application

MECHANICAL DATA

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

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	UMB1FK	UMB2FK	UMB4FK	UMB6FK	UMB8FK	UMB10FK	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 125 °C	I _O	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	35						A
Maximum Forward Voltage at 1.5 A	V _F	1.0		1.3	1.5			V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5.0 100						μA
Typical Junction Capacitance ¹⁾	C _j	18						pF
Maximum Reverse Recovery Time ²⁾	t _{rr}	50			75			ns
Typical Thermal Resistance ³⁾	R _{θJA} R _{θJC}	80 25						°C/W
Operating and Storage Temperature Range	T _j T _{stg}	-55 ~ +150						°C

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

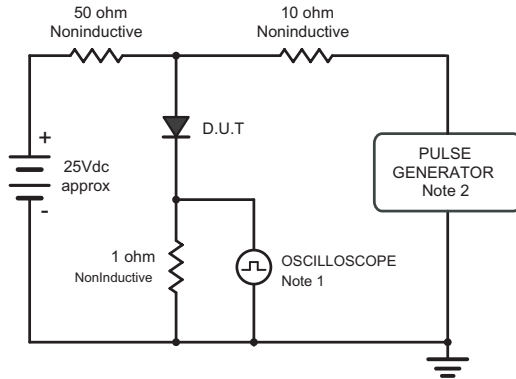
2. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $t_{rr} = 0.25\text{ A}$.

3. Mounted on glass epoxy PC board with $4 \times 1.5 \times 1.5$ (3.81×3.81 cm) copper pad.

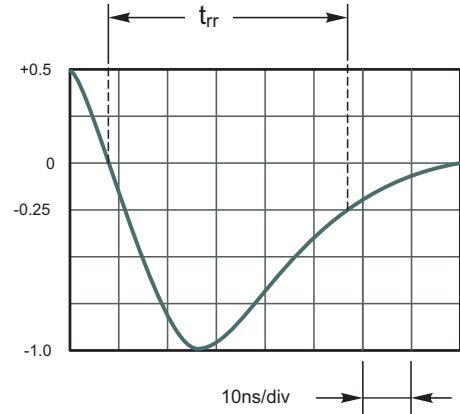


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Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. t_{rr} Time = 10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

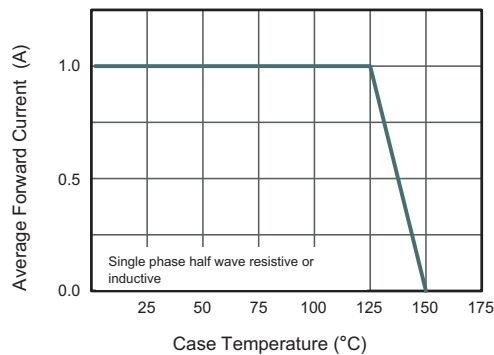


Fig.3 Typical Reverse Characteristics

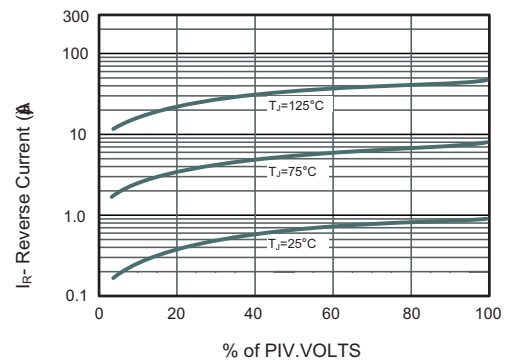


Fig.3 Typical Instaneous Forward Characteristics

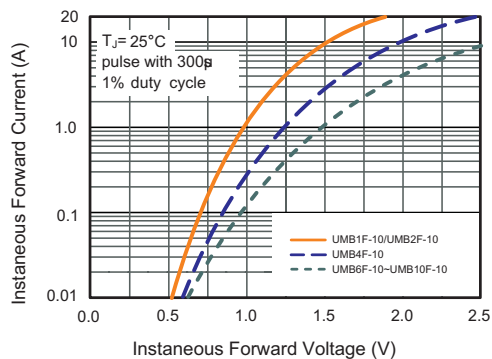
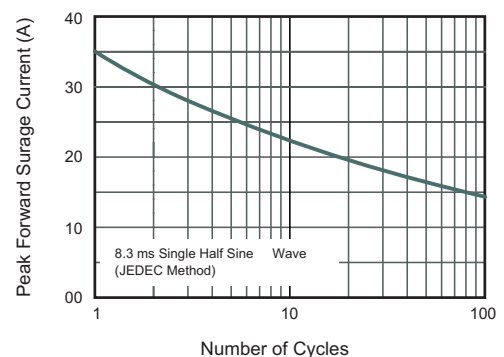


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



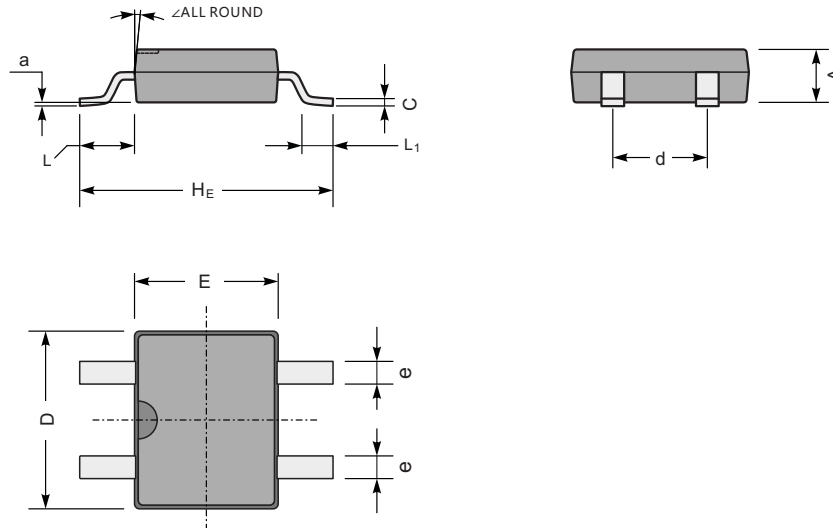


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PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

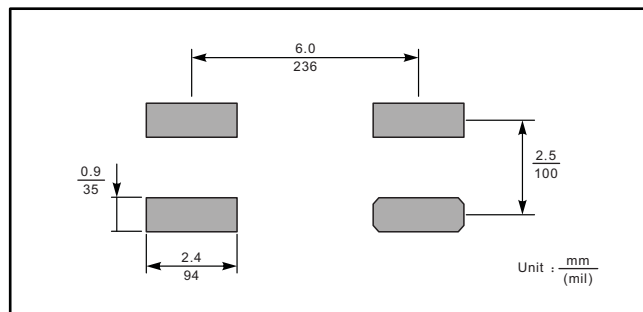
MBF



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	0.8	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



Marking

Type number	Marking code
UMB1FK	U10F1
UMB2FK	U10F2
UMB4FK	U10F4
UMB6FK	U10F6
UMB8FK	U10F8
UMB10FK	U10F10