

UMB1F-10AT THRU UMB10F-10AT

SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS

Forward Current-1.0A

Reverse Voltage-100V to 1000V

FEATURES

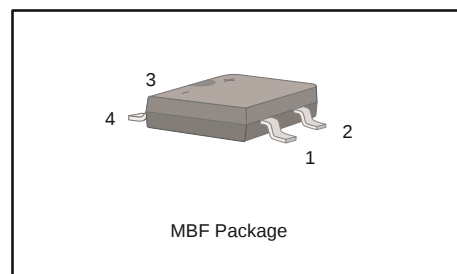
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Ultrafast reverse recovery time

MECHANICAL DATA

- ◆ Case: MBF molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750 , Method 2026
- ◆ Weight: Approximated 0.075 grams

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	UMB1F -10AT	UMB2F -10AT	UMB4F -10AT	UMB6F -10AT	UMB8F -10AT	UMB10F -10AT	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°C	I _{F(AV)}	1.0						A
Peak Forward Surge Current (Note1)	I _{FSM}	35						A
Maximum Forward Voltage at 1.0A	V _F	1.0		1.3	1.5			V
Maximum DC Reverse Current at Rated DC Blocking Voltage at T _A =25°C T _A =125°C	I _R	5.0 100						uA
Typical Junction Capacitance (Note2)	C _J	18						pF
Maximum Reverse Recovery Time (Note3)	T _{rr}	50			75			nS
Typical Thermal Resistance (Note4)	R _{θJA} R _{θJC}	80 25						°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150						°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.V.

3. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

4. Mounted on 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

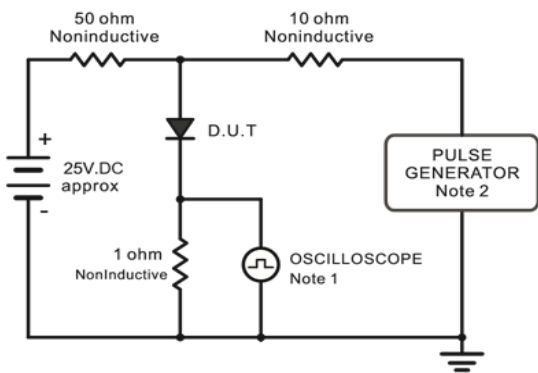
Dated: 06/2016

Rev:1.0

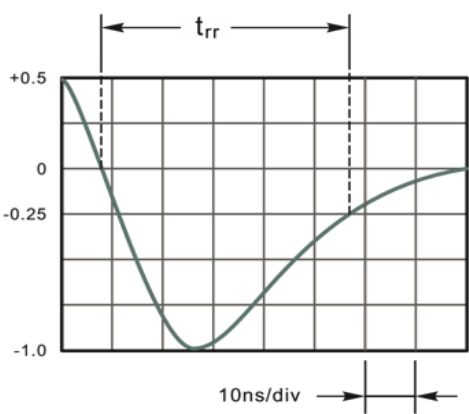
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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

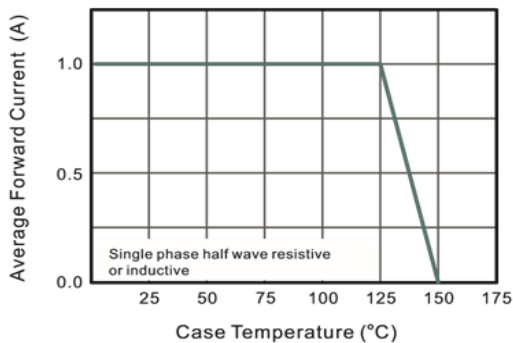


Fig.3 Typical Reverse Characteristics

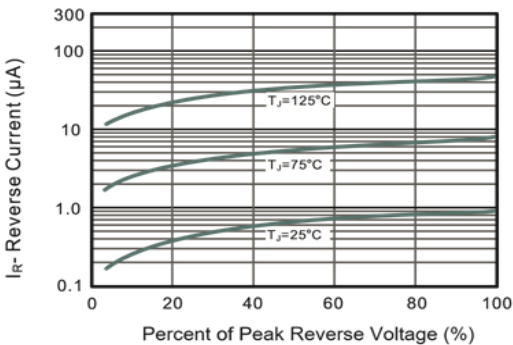


Fig.3 Typical Instantaneous Forward Characteristics

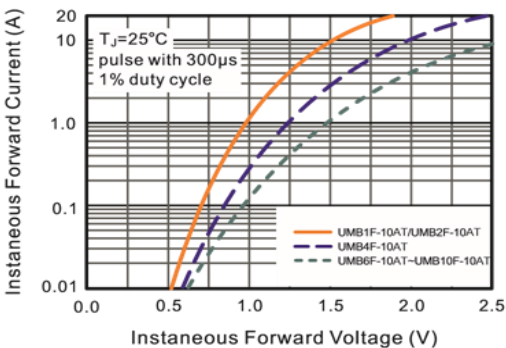
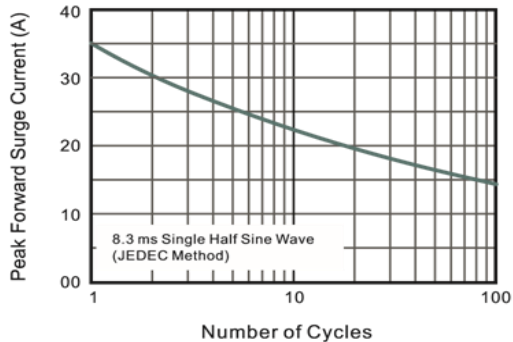


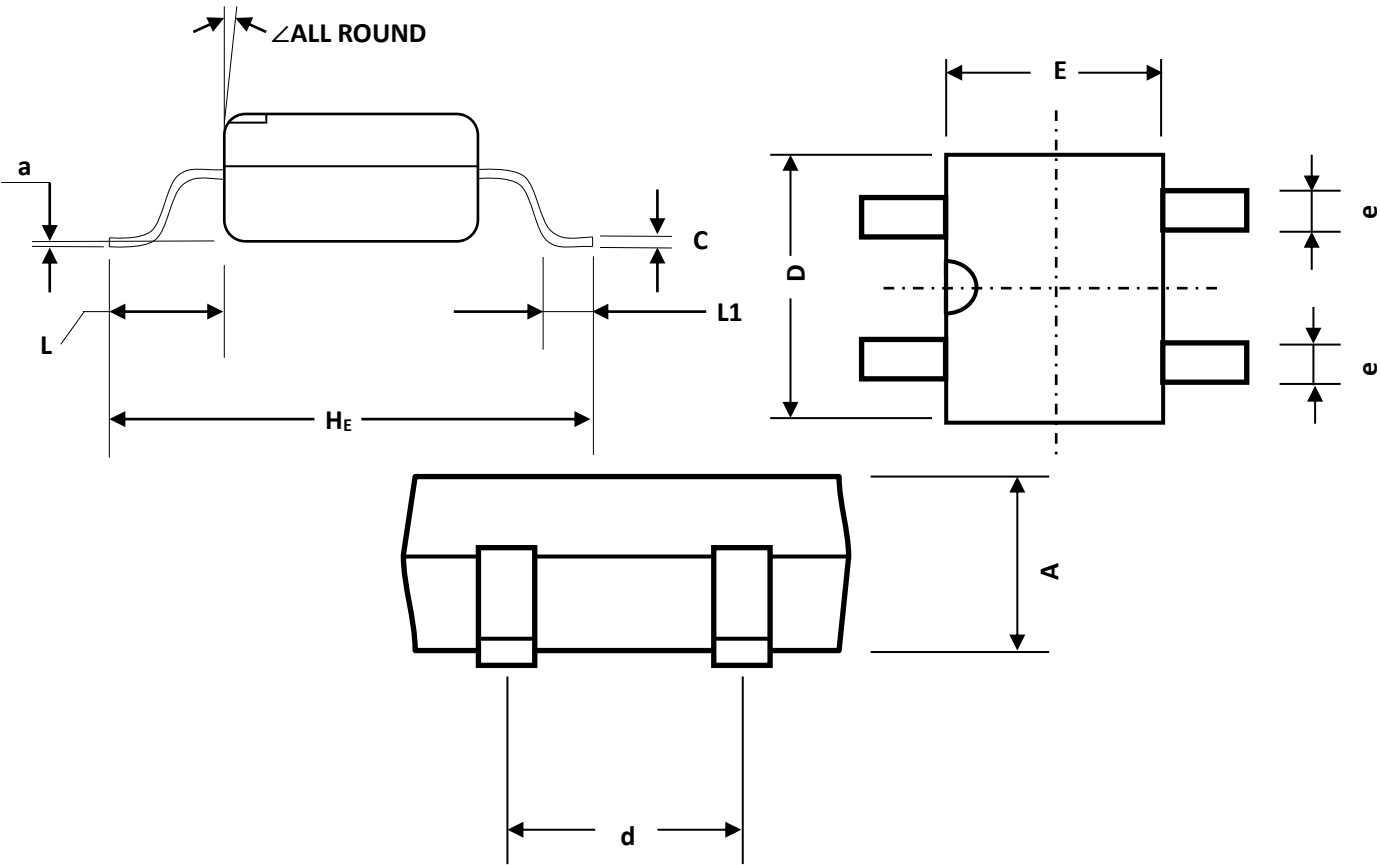
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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PACKAGE OUTLINE

MBF



MBF mechanical data

UNIT		A	C	D	E	HE	d	e	L	L1	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	—	

ORDERING INFORMATION

Device	Package	Shipping
UMB1F-10AT thru UMB10F-10AT	MBF	3,000/Tape & Reel (11 inches)
		5,000/ Tape & Reel (13 inches)