



UMB1F-10~UMB10F-10

Surface Mount Glass Passivated Bridge Rectifiers

Features

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

MBF



- 1.Input Pin(~) 2.Input Pin(~)
3.Output Anode(+) 4.Output Cathode (-)

Marking Code:

UMB1F-10: U10F1
 UMB2F-10: U10F2
 UMB4F-10: U10F4
 UMB6F-10: U10F6
 UMB8F-10: U10F8
 UMB10F-10: U10F10

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	UMB1F-10	UMB2F-10	UMB4F-10	UMB6F-10	UMB8F-10	UMB10F-10	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
Maximum Average Rectified Output Current at $T_C = 125^\circ\text{C}$	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 Instantaneous Forward Voltage at 1 A	V_F	1.0	1.3	1.5				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5						μA
	$T_A = 125^\circ\text{C}$	100						
Typical Junction Capacitance ^{Note1}	C_j	18						pF
Typical Thermal Resistance ^{Note2}	$R_{\theta JA}$	80						$^\circ\text{C/W}$
	$R_{\theta JC}$	25						
Maximum Reverse Recovery Time ^{Note3}	t_{rr}	50			75			nS
Junction Temperature	T_J	150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150						$^\circ\text{C}$

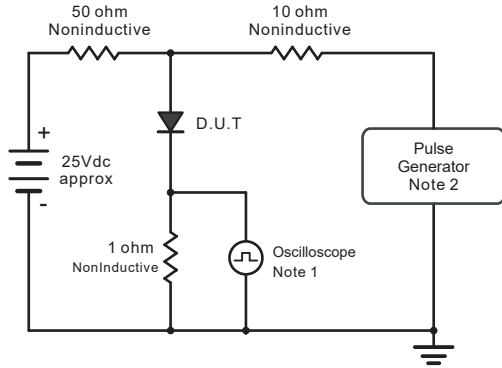
Note:

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

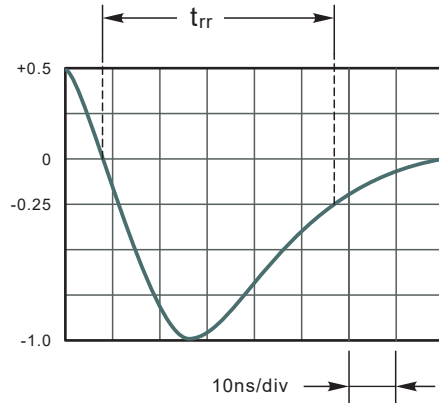


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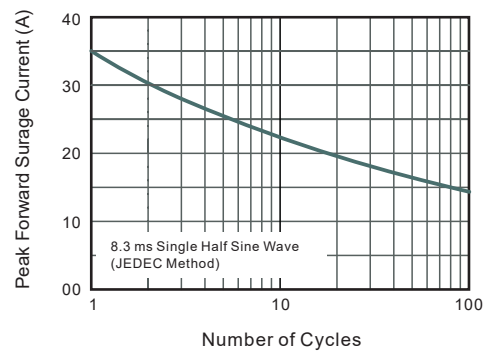
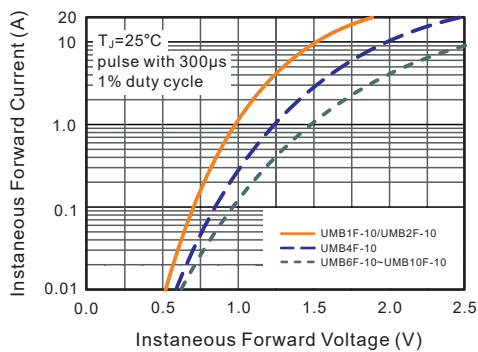
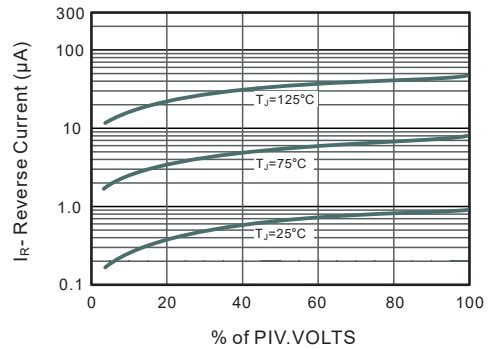
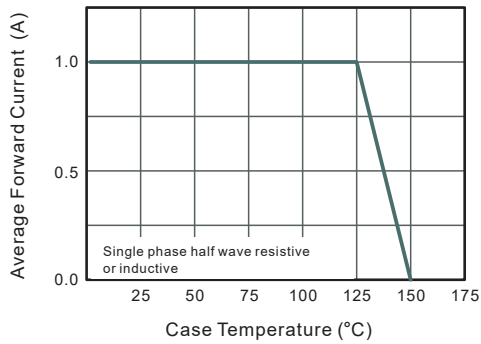
Typical Characteristic Curves



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



Set time Base for 10ns/div





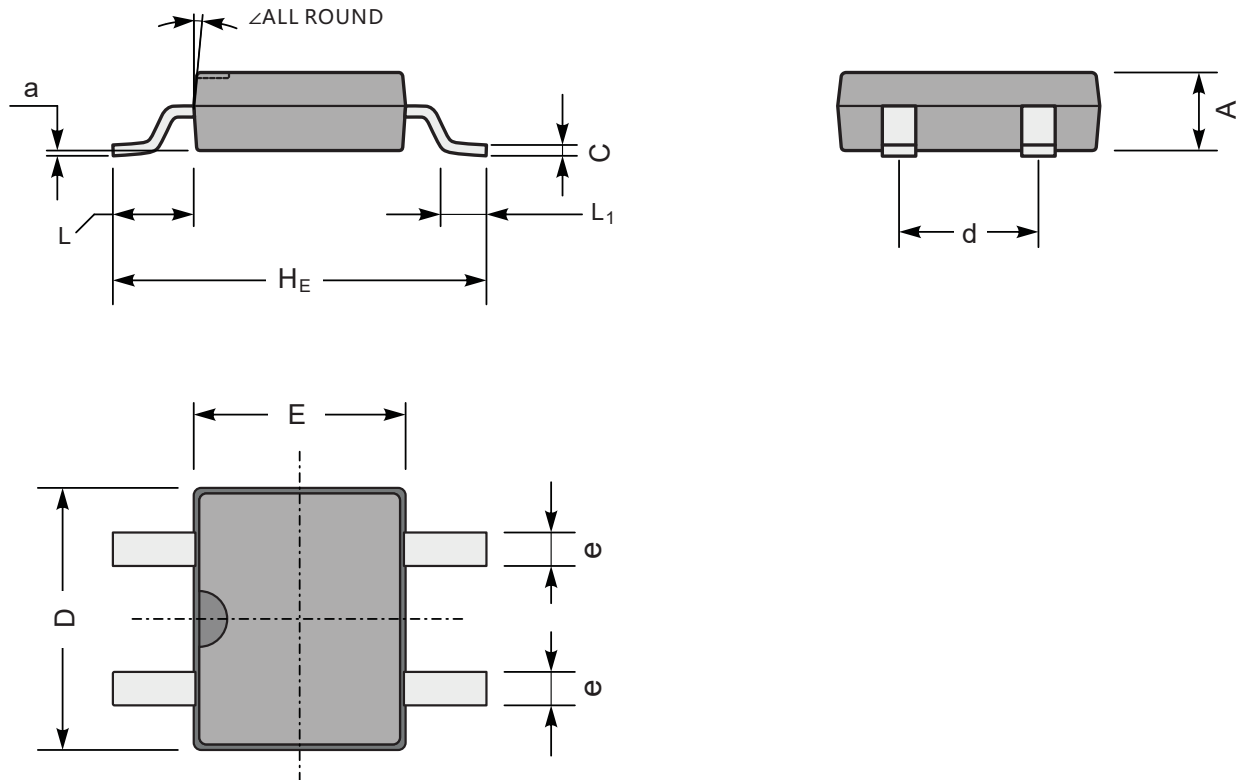
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Package Outline

MBF

Dimensions in mm



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	—	