

1A Surface Mount Glass Passivated Bridge Rectifier

Features

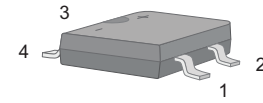
- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1.0 A
- Fast reverse recovery time
- Designed for Surface Mount Application

Mechanical Data

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

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.



PINNING

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

Parameter	Symbols	LTUM1F-10	LTUM2F-10	LTUM4F-10	LTUM6F-10	LTUM8F-10	LTUM10F-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
Average Rectified Output Current at $T_c = 125\text{ }^\circ\text{C}$	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 Forward Voltage at 1.0 A	V_F	1.0	1.3	1.5				V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 125\text{ }^\circ\text{C}$	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⁾	$R_{\theta JA}$ $R_{\theta JC}$	80 25						$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^\circ\text{C}$

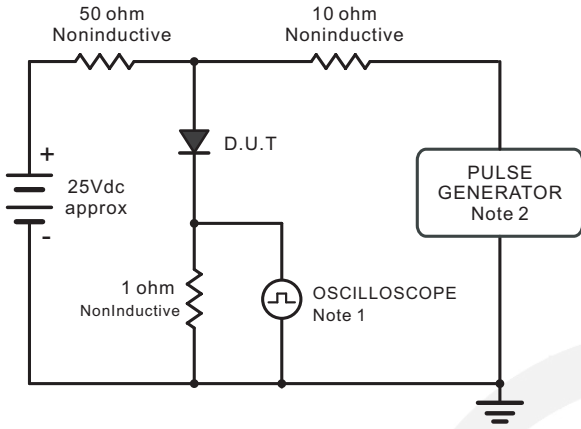
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

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

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

Ratings and characteristics Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

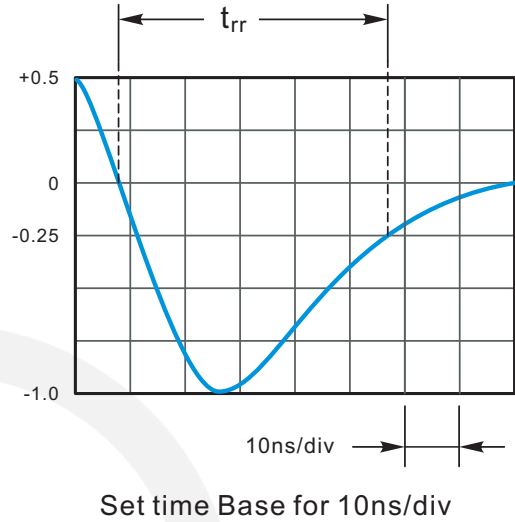


Fig.2 Maximum Average Forward Current Rating

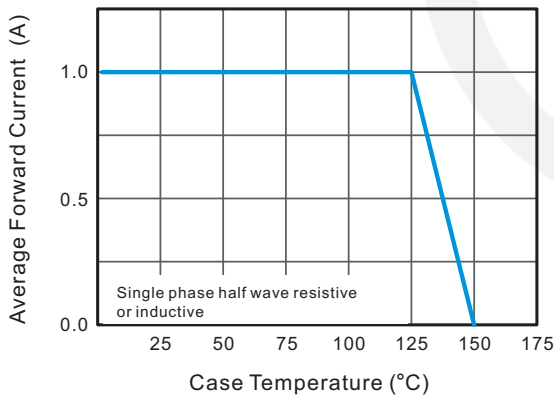


Fig.3 Typical Reverse Characteristics

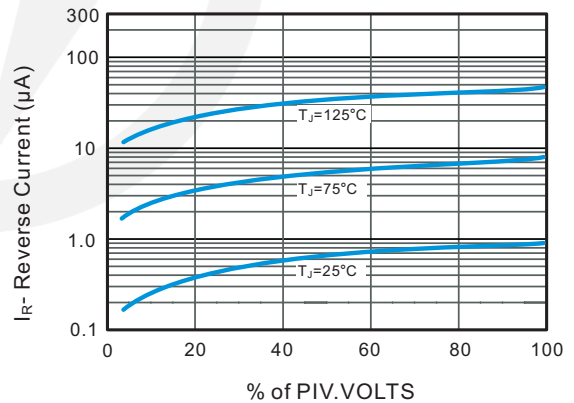


Fig.3 Typical Instaneous Forward Characteristics

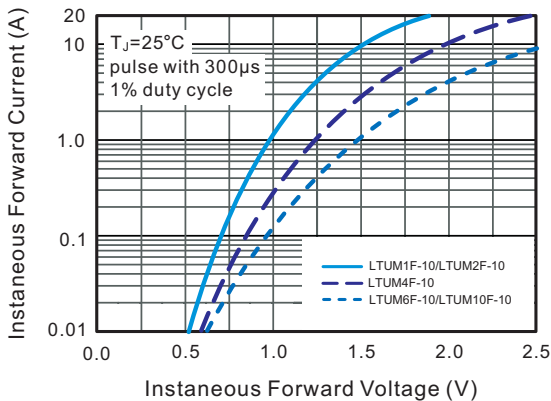
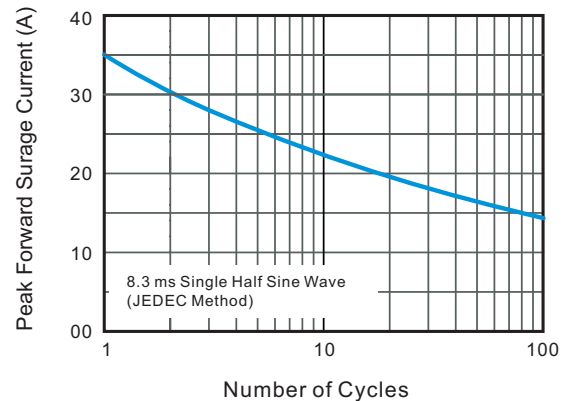
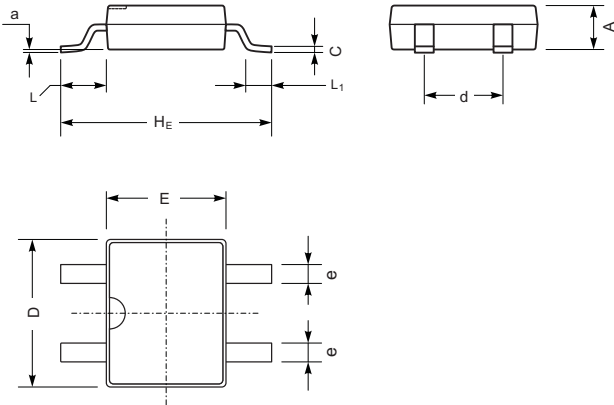


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



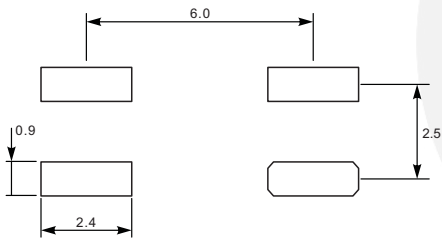
MBF Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.20	1.60
C	0.15	0.22
D	4.50	5.00
E	3.60	4.10
HE	6.40	7.00
d	2.30	2.70
e	0.50	0.80
L	1.30	1.70
L1	0.50	1.10
a	0.20 MAX.	

MBF Suggested Pad Layout

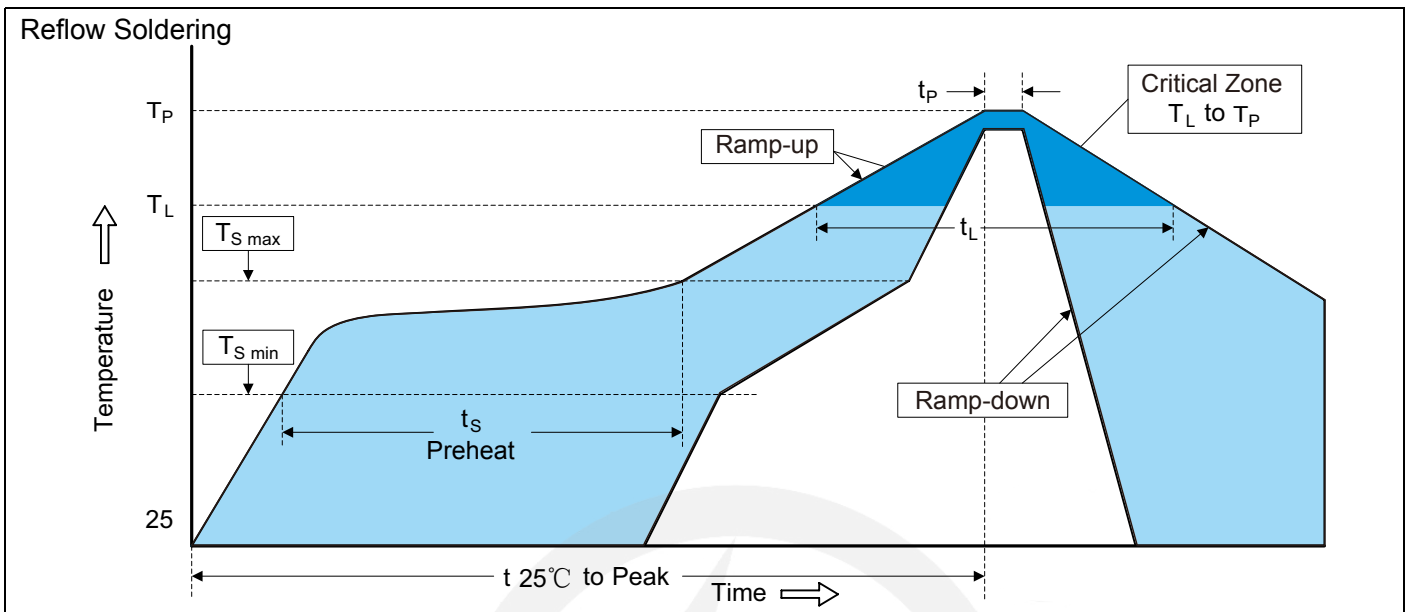


- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LTUM1F-10	U10F1
LTUM2F-10	U10F2
LTUM4F-10	U10F4
LTUM6F-10	U10F6
LTUM8F-10	U10F8
LTUM10F-10	U10F10

Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Packaging

13" Reel



D5 Φ330.0±2.0

D6 Φ13.5±0.5

H 2.5±1.0

W2 16.0±2.0

Quantity: 5000PCS