

1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER UTB1S-10 THRU UTB10S-10

FEATURES:

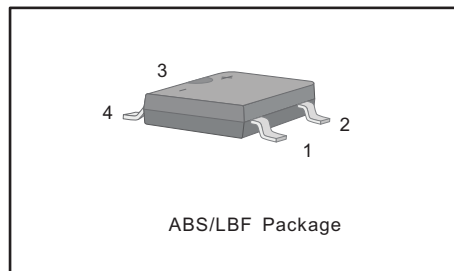
- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1.0 A
- Fast reverse recovery time
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: ABS/LBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 88mg 0.0031oz

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 %.

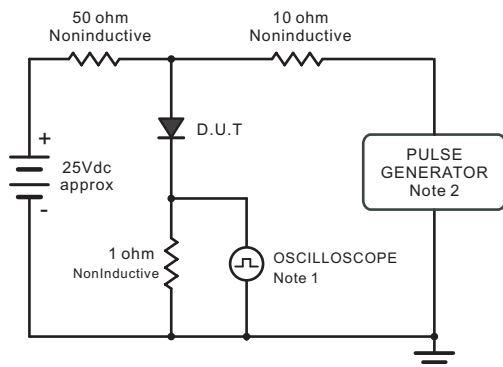
Parameter	Symbols	UTB1S-10	UTB2S-10	UTB4S-10	UTB6S-10	UTB8S-10	UTB10S-10	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Average Rectified Output Current 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 $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	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⁾	$R_{\theta JA}$ $R_{\theta JC}$	72 20						$^{\circ}\text{C/W}$
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

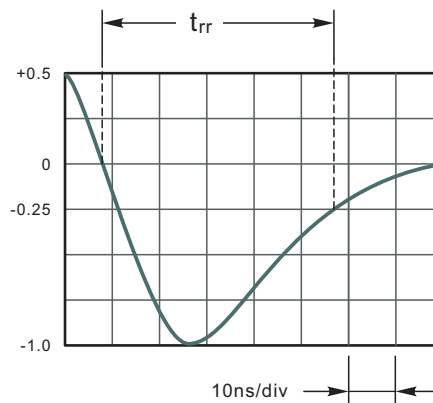
2) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $t_r = 0.25\text{ A}$

3) P.C.B. mounted with $4 \times 1.5'' \times 1.5''$ (3.81 $\times$ 3.81 cm) copper pad areas.

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

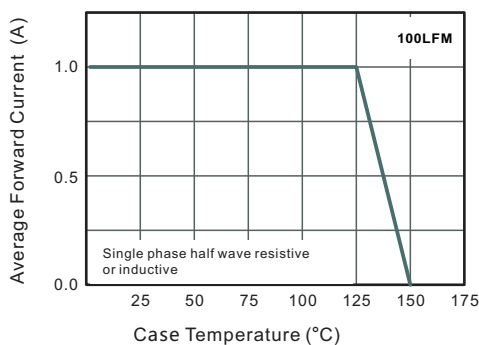


Fig.3 Typical Reverse Characteristics

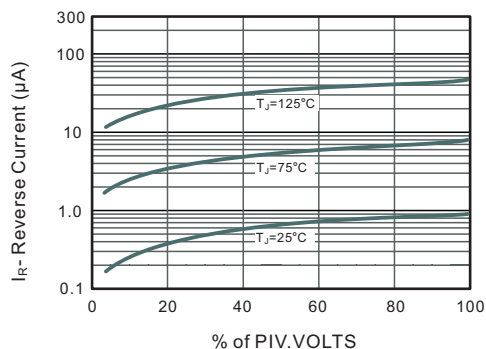


Fig.3 Typical Instantaneous Forward Characteristics

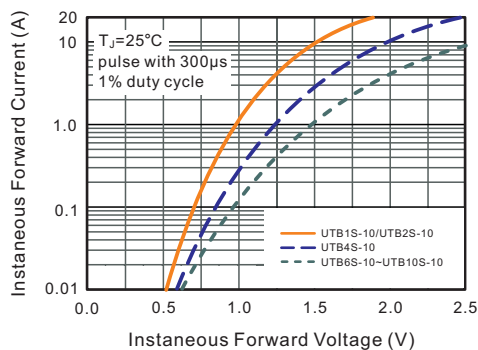
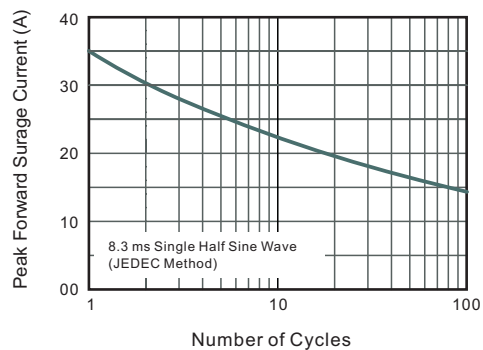


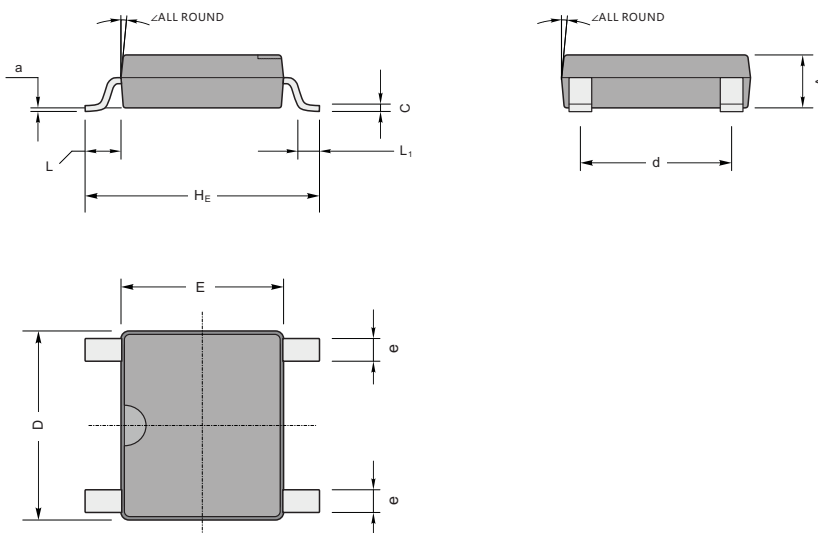
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

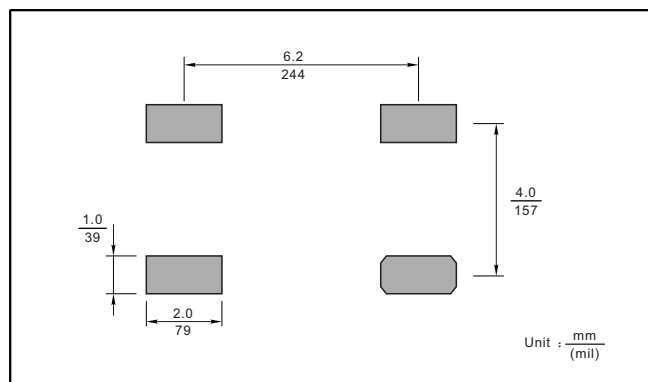
ABS/LBF



ABS/LBF mechanical data

UNIT		A	C	D	E	H _E	d	e	L	L ₁	a	∠
mm	max	1.5	0.22	5.2	4.5	6.4	4.2	0.7	0.95	0.6	0.2	7°
	min	1.3	0.15	4.9	4.2	6.0	3.8	0.5				
mil	max	59	8.7	205	177	252	165	28	37	24	4	
	min	51	5.9	193	166	236	150	20				

The recommended mounting pad size



Marking

Type number	Marking code
UTB1S-10	U10T01
UTB2S-10	U10T02
UTB4S-10	U10T04
UTB6S-10	U10T06
UTB8S-10	U10T08
UTB10S-10	U10T10

