

# UTB1S-10AT THRU UTB10S-10AT

## SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS

Forward Current-1.0A

Reverse Voltage-100V to 1000V

### FEATURES

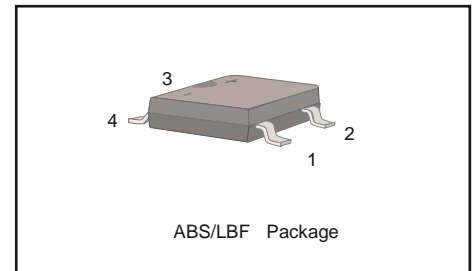
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Ultrafast reverse recovery time

### PINNING

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

### MECHANICAL DATA

- ◆ Case: ABS/LBF molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750 , Method 2026
- ◆ Weight: Approximated 0.088 grams



### 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	UTB1S -10AT	UTB2S -10AT	UTB4S -10AT	UTB6S -10AT	UTB8S -10AT	UTB10S -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 $T_C=125^\circ\text{C}$	$I_{F(AV)}$	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 $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5 100						$\mu\text{A}$
Typical Junction Capacitance (Note2)	$C_J$	18						pF
Maximum Reverse Recovery Time (Note3)	$T_{rr}$	50			75			nS
Typical Thermal Resistance (Note4)	$R_{\theta JA}$ $R_{\theta JC}$	72 20						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

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

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

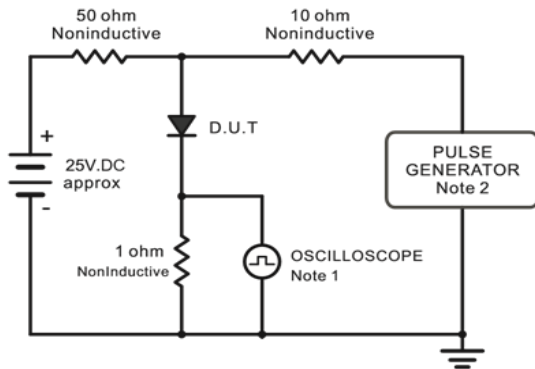
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Rev:1.0

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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 = 1 megohm, 22pF.  
2. Rises Time = 10ns, max.  
Source Impedance = 50 ohms.

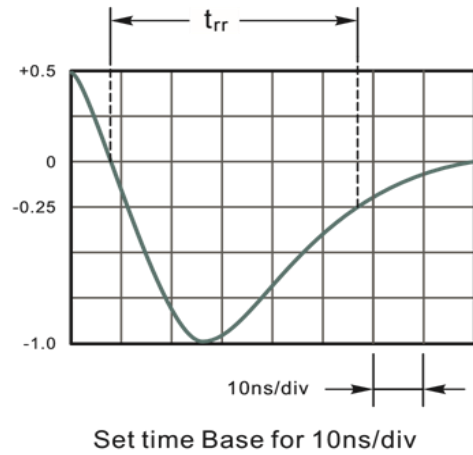


Fig.2 Maximum Average Forward Current Rating

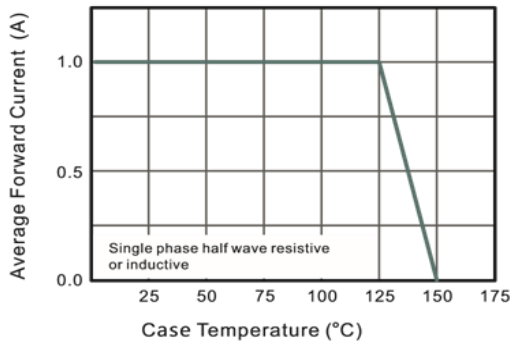


Fig.3 Typical Reverse Characteristics

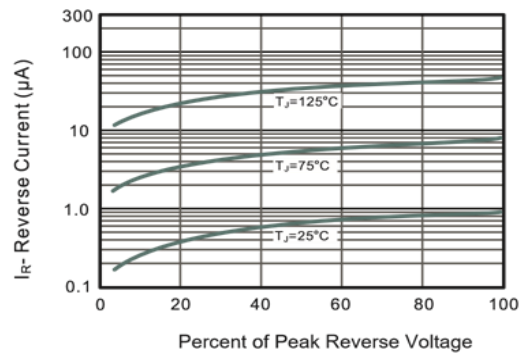


Fig.3 Typical Instaneous Forward Characteristics

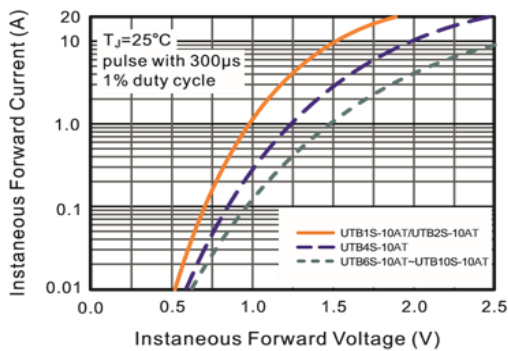
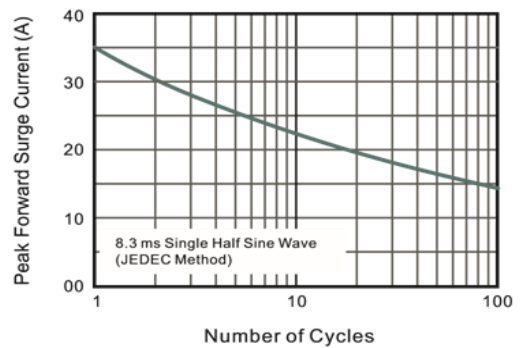


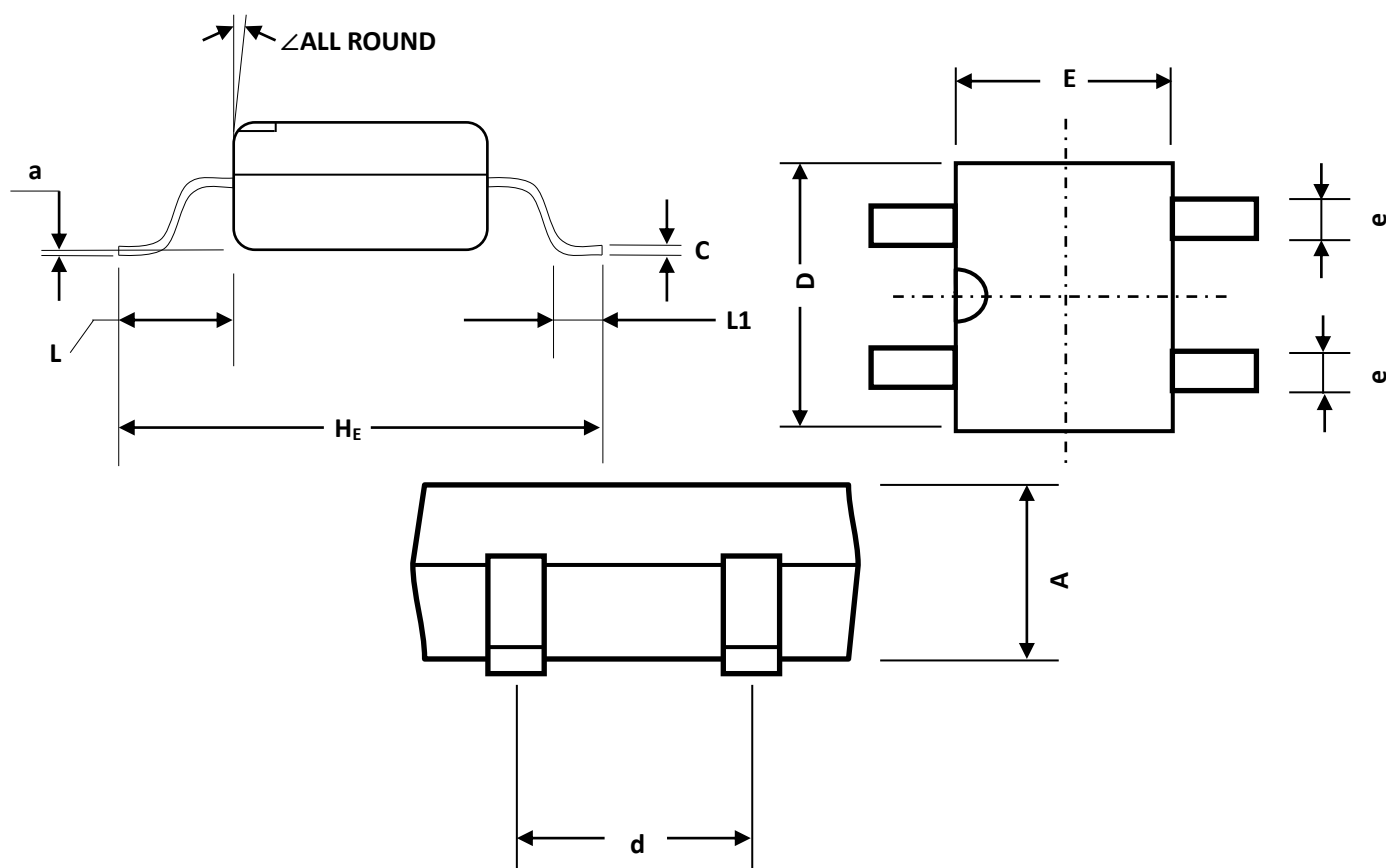
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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## PACKAGE OUTLINE

### ABS/LBF



### ABS/LBF mechanical data

UNIT		A	C	D	E	$H_E$	d	e	L	$L_1$	a	$\angle$
mm	max	1.5	0.22	5.2	4.5	6.4	4.2	0.7	0.95	0.6	0.2	$7^\circ$
	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	8	
	min	51	5.9	193	166	236	150	20				

### ORDERING INFORMATION

Device	Package	Shipping
UTB1S-10AT thru UTB10S-10AT	ABS/LBF	3,000/Tape & Reel (11 inches)
		5,000/ Tape & Reel (13 inches)

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