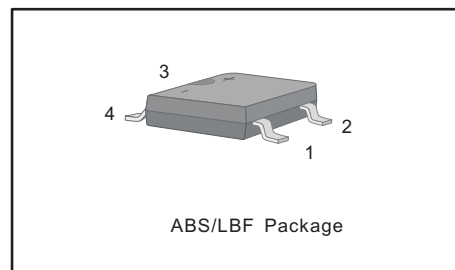


**0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER**
**FEATURES:**

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 0.5 A
- High Surge Current Capability
- Designed for Surface Mount Application

**PINNING**

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


**MECHANICAL DATA**

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

**Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified.

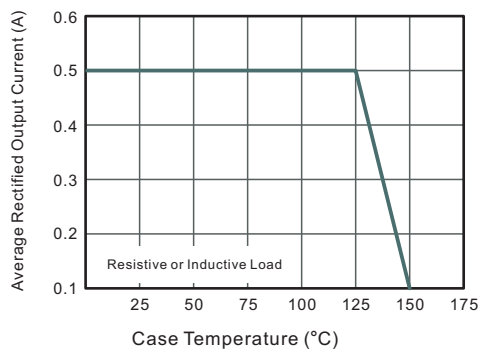
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                                             | Symbols                            | TB1S-05    | TB2S-05 | TB4S-05 | TB6S-05 | TB8S-05 | TB10S-05 | 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<br>at $T_c = 125\text{ }^{\circ}\text{C}$                                                            | $I_O$                              | 0.5        |         |         |         |         |          | A                    |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine Wave Superimposed on Rated Load<br>(JEDEC Method)                               | $I_{FSM}$                          | 20         |         |         |         |         |          | A                    |
| Forward Voltage per element @ $I_F = 0.5\text{ A}$                                                                                    | $V_F$                              | 1.0        |         |         |         |         |          | V                    |
| Maximum DC Reverse Current @ $T_A = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage @ $T_A = 125\text{ }^{\circ}\text{C}$ | $I_R$                              | 5.0<br>100 |         |         |         |         |          | $\mu\text{A}$        |
| Typical Junction Capacitance ( Note1 )                                                                                                | $C_j$                              | 9          |         |         |         |         |          | pF                   |
| Typical Thermal Resistance ( Note2 )                                                                                                  | $R_{\theta JA}$<br>$R_{\theta JC}$ | 100<br>30  |         |         |         |         |          | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                               | $T_j, T_{stg}$                     | -55 ~ +150 |         |         |         |         |          | $^{\circ}\text{C}$   |

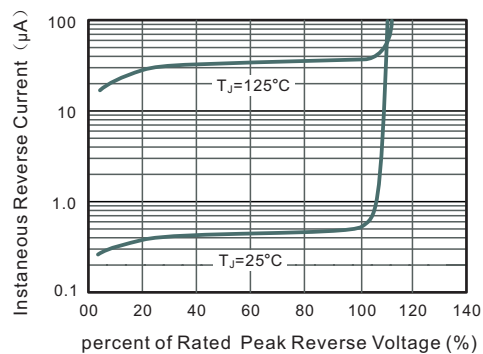
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81 cm ) copper pad.

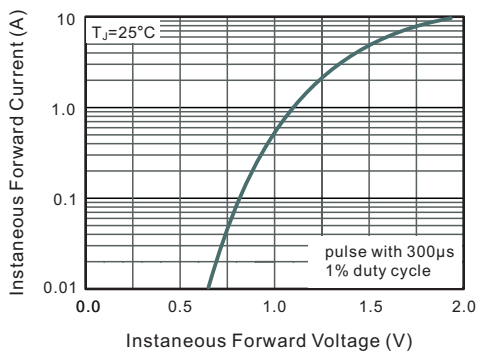
**Fig.1 Average Rectified Output Current Derating Curve**



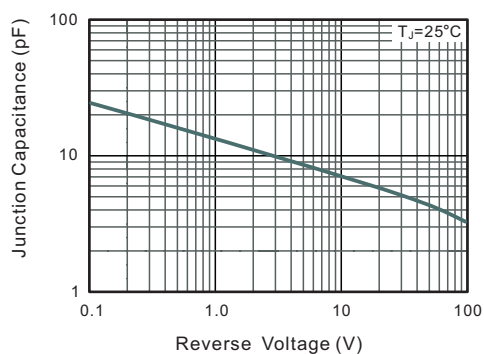
**Fig.2 Typical Reverse Characteristics**



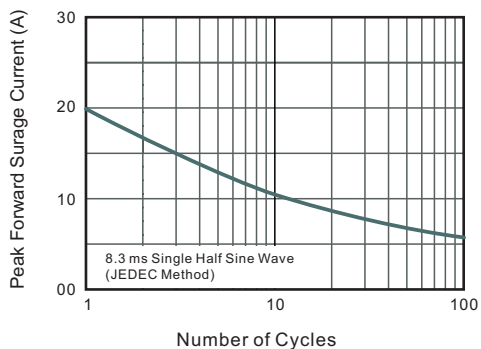
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



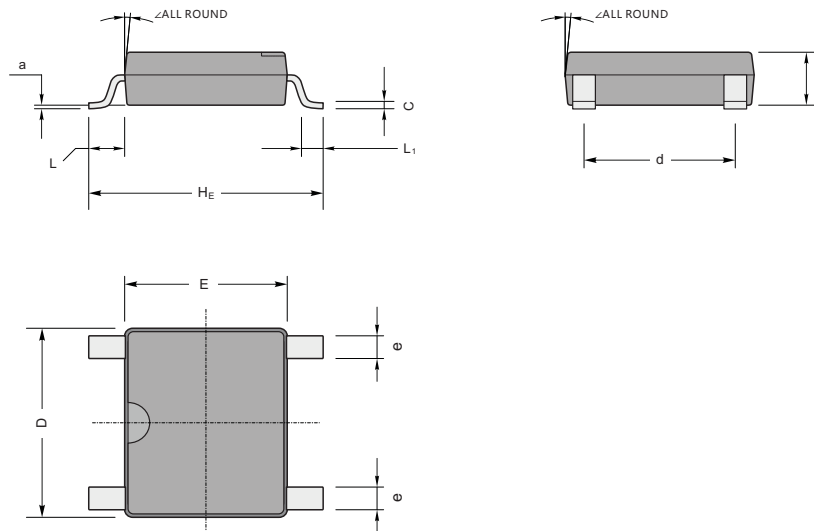
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

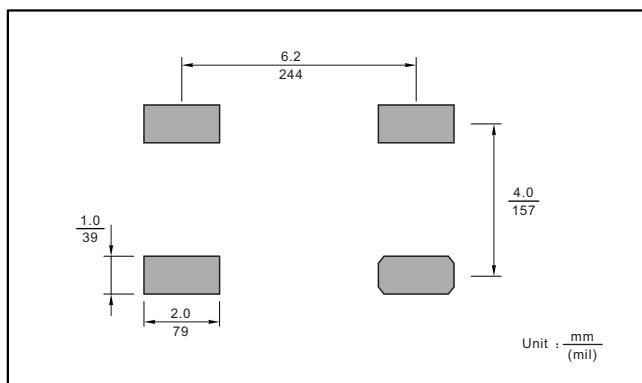
ABS/LBF



ABS/LBF mechanical data

| UNIT |     | A   | C    | D   | E   | H <sub>E</sub> | d   | e   | L    | L <sub>1</sub> | 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 |
|-------------|--------------|
| TB1S-05     | 05T1         |
| TB2S-05     | 05T2         |
| TB4S-05     | 05T4         |
| TB6S-05     | 05T6         |
| TB8S-05     | 05T8         |
| TB10S-05    | 05T10        |