

## FTB1ST THRU FTB10ST

### 2A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

#### FEATURES:

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 2.0 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

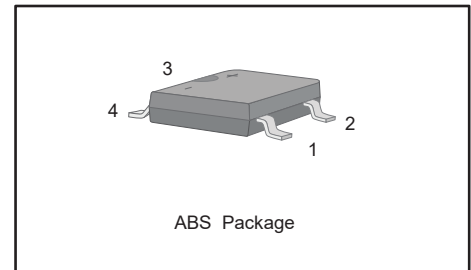
#### Maximum Ratings and Electrical characteristics

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 %.

#### PINNING

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

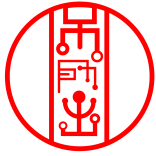


| Parameter                                                                                                                               | Symbols         | FTB1ST          | FTB2ST | FTB4ST | FTB6ST | FTB8ST | FTB10ST | Units                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|--------|--------|--------|--------|---------|-----------------------------|
| 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<br>$T_c = 115\text{ }^{\circ}\text{C}$                                                              | $I_o$           | 2.0             |        |        |        |        |         | A                           |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine Wave Superimposed on Rated Load (JEDEC<br>Method)                                 | $I_{FSM}$       | 50              |        |        |        |        |         | A                           |
| $I^2t$ Rating for Fusing ( $1\text{ms} \leq t < 8.3\text{ms}$ )                                                                         | $I^2t$          | 10.4            |        |        |        |        |         | $\text{A}^2\text{S}$        |
| Maximum Forward Voltage at 2.0 A                                                                                                        | $V_F$           | 1.3             |        |        |        |        |         | V                           |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>$T_a = 25\text{ }^{\circ}\text{C}$<br>$T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$           | 5.0<br>200      |        |        |        |        |         | $\mu\text{A}$               |
| Typical Junction Capacitance ( Note1 )                                                                                                  | $C_j$           | 30              |        |        |        |        |         | pF                          |
| Typical Thermal Resistance ( Note2 )                                                                                                    | $R_{\theta JA}$ | 50              |        |        |        |        |         | $^{\circ}\text{C}/\text{W}$ |
| Maximum Reverse Recovery Time ( Note3 )                                                                                                 | $t_{rr}$        | 350             |        |        |        |        |         | ns                          |
| Operating and Storage Temperature Range                                                                                                 | $T_J, T_{stg}$  | $-55 \sim +150$ |        |        |        |        |         | $^{\circ}\text{C}$          |

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

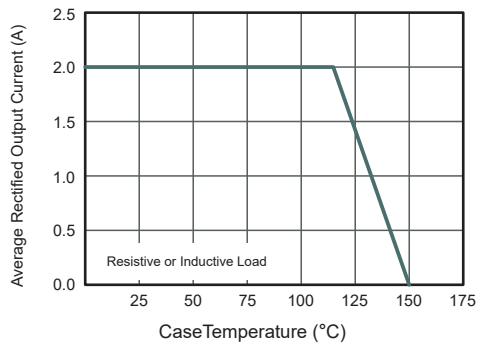
2. Mounted on glass epoxy PC board with  $4 \times 1.5'' \times 1.5''$  (  $3.81 \times 3.81$  cm ) copper pad.

3 Measured with  $I = 0.5\text{ A}$ ,  $I = 1\text{ A}$ ,  $I = 0.25\text{ A}$

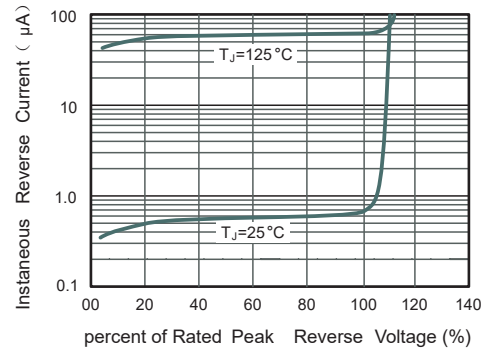


## FTB1ST THRU FTB10ST

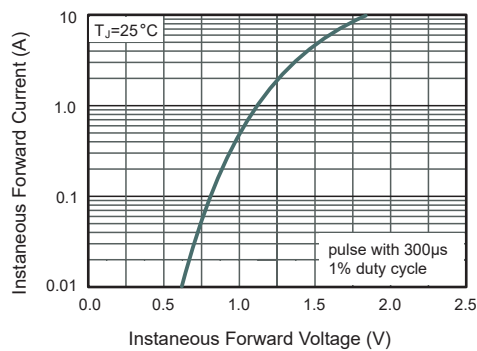
**Fig.1 Average Rectified Output Current Derating Curve**



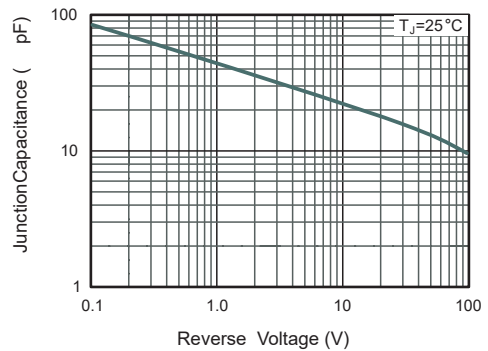
**Fig.2 Typical Reverse Characteristics**



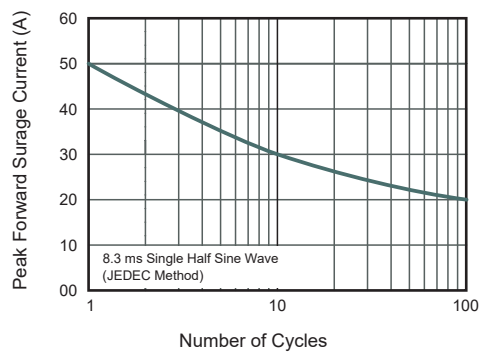
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



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



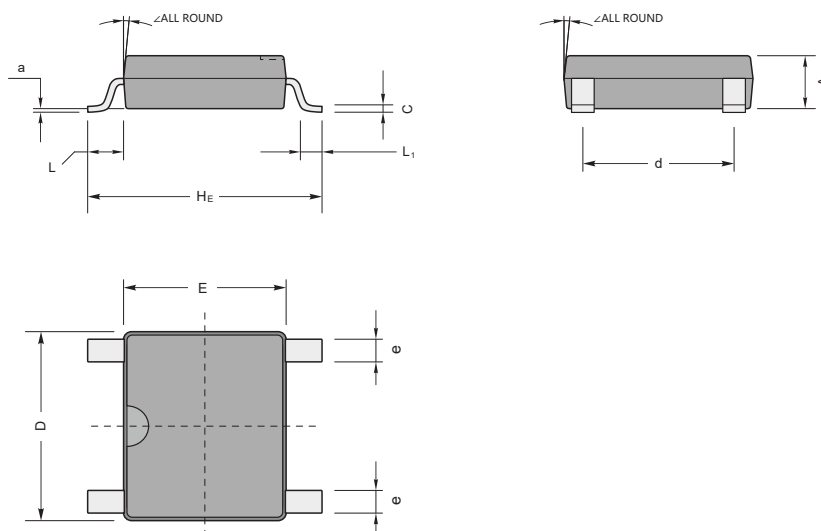


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## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

ABS



ABS 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             | 8   |    |
|      | min | 51  | 5.9  | 193 | 166 | 236            | 150 | 20  |      |                |     |    |

The recommended mounting pad size

