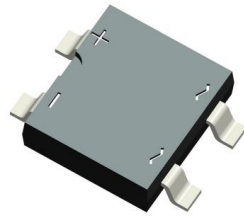


## FTB1F-15F THRU FTB10F-15F 1.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

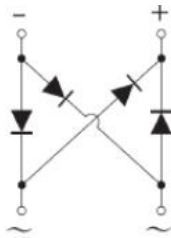


**ABF**

### Features

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1.5 A
- Designed for Surface Mount Application
- Fast reverse recovery time
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: ABF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 82 mg

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Single Phase half wave 60Hz, resistive or inductive load. For capacitive load current derate by 20%.

| Characteristic                                                                                                        | Symbol                                                 | FTB1F<br>-15F | FTB2F<br>-15F | FTB4F<br>-15F | FTB6F<br>-15F | FTB8F<br>-15F | FTB10F<br>-15F | Units |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 100           | 200           | 400           | 600           | 800           | 1000           | V     |
| RMS Reverse Voltage                                                                                                   | V <sub>RMS</sub>                                       | 70            | 140           | 280           | 420           | 560           | 700            | V     |
| Average Forward Output Current @ T <sub>A</sub> =50°C                                                                 | I <sub>F(AV)</sub>                                     | 1.5           |               |               |               |               |                | A     |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 50            |               |               |               |               |                | A     |

**Electrical Characteristics @ $T_A=25^{\circ}\text{C}$  unless otherwise specified**

| Characteristic                                                                                                          | Symbol                     | FTB1F<br>-15F | FTB2F<br>-15F | FTB4F<br>-15F | FTB6F<br>-15F | FTB8F<br>-15F | FTB10F<br>-15F | Units         |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| Forward voltage per element @ $I_F=1.5\text{A}$                                                                         | $V_F$                      | 1.3           |               |               |               |               |                | V             |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A = 25^{\circ}\text{C}$<br>$T_A = 125^{\circ}\text{C}$ | $I_R$                      | 5<br>100      |               |               |               |               |                | $\mu\text{A}$ |
| Typical Junction Capacitance (Note 1)                                                                                   | $C_J$                      | 25            |               |               |               |               |                | pF            |
| Maximum Reverse Recovery Time (Note 3)                                                                                  | $T_{rr}$<br>$T_{rr(TYP.)}$ | 500<br>300    |               |               |               |               |                | ns            |

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

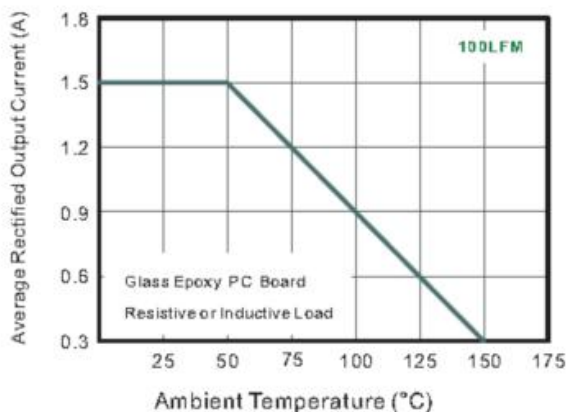
**Thermal-Mechanical Specifications @ $T_A=25^{\circ}\text{C}$  unless otherwise specified**

| Characteristic                          | Symbol          | FTB1F<br>-15F | FTB2F<br>-15F | FTB4F<br>-15F | FTB6F<br>-15F | FTB8F<br>-15F | FTB10F<br>-15F | Units                       |
|-----------------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------------------|
| Typical Thermal Resistance (Note 2)     | $R_{\theta JA}$ | 80            |               |               |               |               |                | $^{\circ}\text{C}/\text{W}$ |
| Operating and storage temperature range | $T_J, T_{STG}$  | -55 to +150   |               |               |               |               |                | $^{\circ}\text{C}$          |

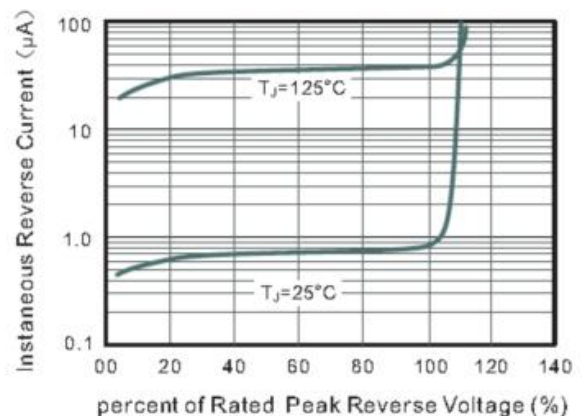
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on glass epoxy PC board with  $4 \times (5 \times 5\text{mm}^2)$  copper pad.  
3. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $IRR=0.25\text{A}$

**Ratings and Characteristics Curves**

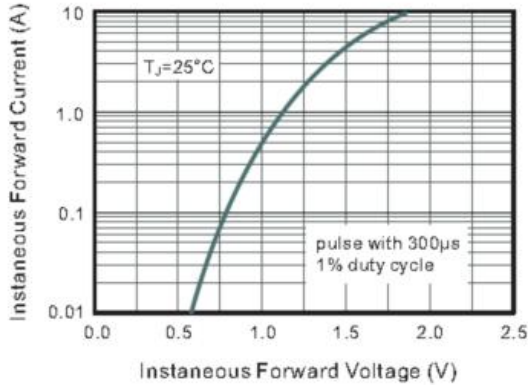
**Fig.1 Average Rectified Output Current Derating Curve**



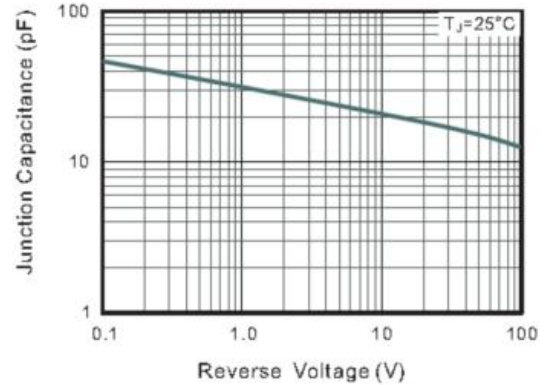
**Fig.2 Typical Reverse Characteristics**



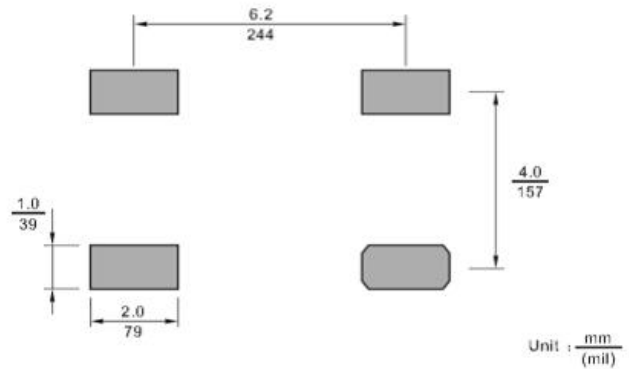
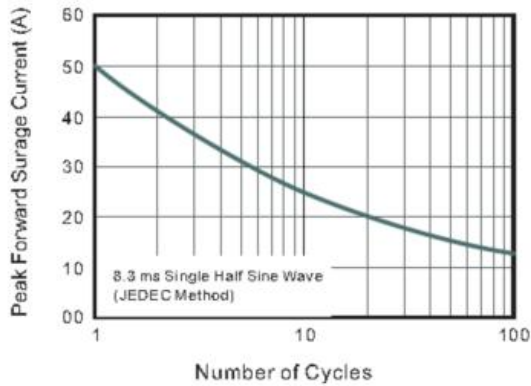
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



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



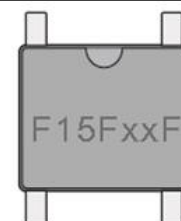
## Ordering Information

| Device                          | Package | Plating | Shipping       |
|---------------------------------|---------|---------|----------------|
| FTB1F-15F<br>THRU<br>FTB10F-15F | ABF     | Pure Sn | 5000pcs / reel |

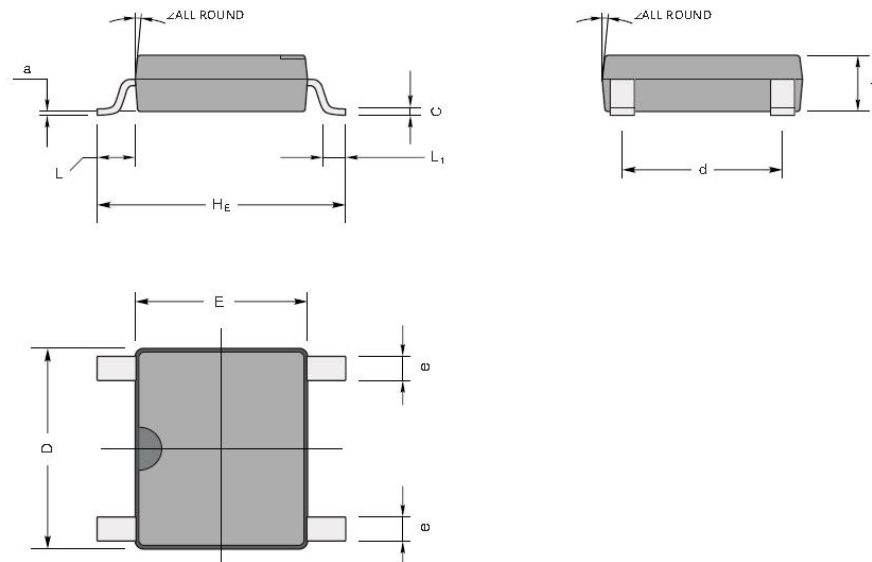
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

| Type number | Marking code |
|-------------|--------------|
| FTB1F-15F   | F15F1F       |
| FTB2F-15F   | F15 F2F      |
| FTB4F-15F   | F15F4F       |
| FTB6F-15F   | F15F6F       |
| FTB8F-15F   | F15F8F       |
| FTB10F-15F  | F15F10F      |

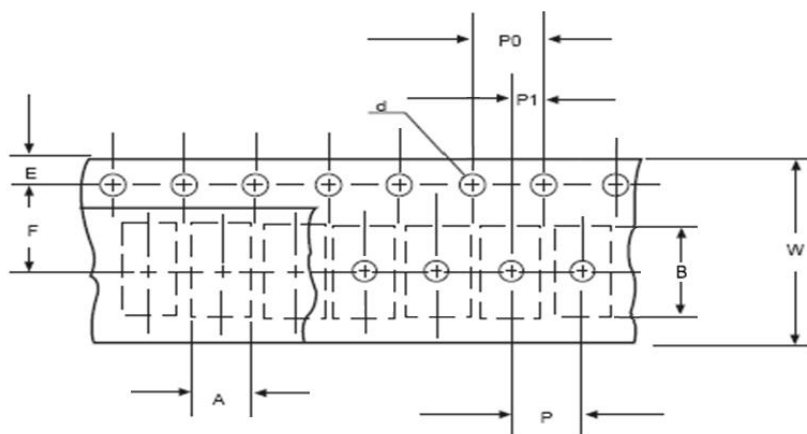


**Mechanical Dimensions ABF(Inches/Millimeters)**



| UNIT |     | A   | C    | D   | E   | H <sub>E</sub> | d   | e   | L    | L <sub>1</sub> | a   | ∠  |
|------|-----|-----|------|-----|-----|----------------|-----|-----|------|----------------|-----|----|
| mm   | max | 1.2 | 0.22 | 5.2 | 4.5 | 6.4            | 4.2 | 0.7 | 0.95 | 0.6            | 0.2 | 7° |
|      | min | 1.0 | 0.15 | 4.9 | 4.2 | 6.0            | 3.8 | 0.5 |      |                |     |    |
| mil  | max | 47  | 8.7  | 205 | 177 | 252            | 165 | 28  | 37   | 24             | 4   |    |
|      | min | 39  | 5.9  | 193 | 166 | 236            | 150 | 20  |      |                |     |    |

**Carrier Tape Specification ABF**



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A      | 5.00        | 5.40  |
| B      | 6.40        | 6.80  |
| d      | 1.40        | 1.60  |
| E      | 1.40        | 1.60  |
| F      | 5.55        | 5.75  |
| P      | 3.90        | 4.10  |
| P0     | 3.90        | 4.10  |
| P1     | 1.90        | 2.10  |
| W      | 11.50       | 12.50 |

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