

## Silicon Bridge Rectifiers

## FTBF20K - FTBF20M

### Features

- Glass passivated junction
- High surge current capability
- Saves space on printed circuit boards
- High-temp soldering guaranteed: 260°C @ 10s.
- RoHS compliant with Halogen-free



### Mechanical Data

- Case: TBF molded plastic
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Polarity indicator: As marked on body

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

| Parameter                                                  | Symbol            | FTBF20K | FTBF20M | Unit             |
|------------------------------------------------------------|-------------------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage                            | V <sub>RRM</sub>  | 800     | 1000    | V                |
| RMS Reverse Voltage                                        | V <sub>RMS</sub>  | 560     | 700     | V                |
| DC Blocking Voltage                                        | V <sub>DC</sub>   | 800     | 1000    | V                |
| Average Forward Output Current                             | I <sub>F_AV</sub> | 2.0     |         | A                |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine wave | I <sub>FSM</sub>  | 50      |         | A                |
| I <sup>2</sup> t Rating for fusing                         | I <sup>2</sup> t  | 10.4    |         | A <sup>2</sup> s |

### Thermal Characteristics

| Parameter                             | Symbol           | FTBF20K    | FTBF20M | Unit |
|---------------------------------------|------------------|------------|---------|------|
| Typical Thermal Resistance per leg *1 | R <sub>ΘJA</sub> | 45         |         | °C/W |
|                                       | R <sub>ΘJC</sub> | 17         |         |      |
|                                       | R <sub>ΘJL</sub> | 10         |         |      |
| Operating Junction Temperature Range  | T <sub>J</sub>   | -55 ~ +150 |         | °C   |
| Storage Temperature Range             | T <sub>STG</sub> | -55 ~ +150 |         | °C   |

Note \*1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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

| Parameter                     | Symbol         | Test Condition                                                        |                        | Typ. | Max. | Unit |
|-------------------------------|----------------|-----------------------------------------------------------------------|------------------------|------|------|------|
| Instantaneous Forward Voltage | V <sub>F</sub> | I <sub>F</sub> =2.0A Per Diode                                        |                        | -    | 1.3  | V    |
| Reverse Current               | I <sub>R</sub> | Rated V <sub>R</sub> ,                                                | @T <sub>A</sub> =25°C  | -    | 5.0  | μA   |
|                               |                | Per Diode                                                             | @T <sub>A</sub> =125°C | -    | 200  |      |
| Reverse Recovery Time         | trr            | I <sub>F</sub> =0.5A, I <sub>RM</sub> =1A, I <sub>R(REC)</sub> =0.25A |                        | -    | 500  | ns   |

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### Ratings and Characteristics Curves (@T<sub>A</sub> = 25°C unless otherwise noted)

Fig. 1 Forward Current Derating Curve

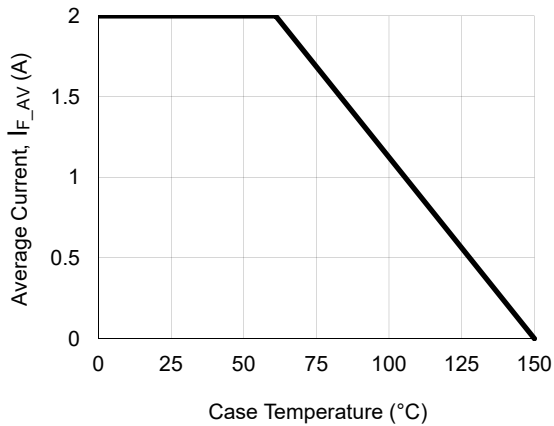


Fig. 2 Surge Current Derating Curve

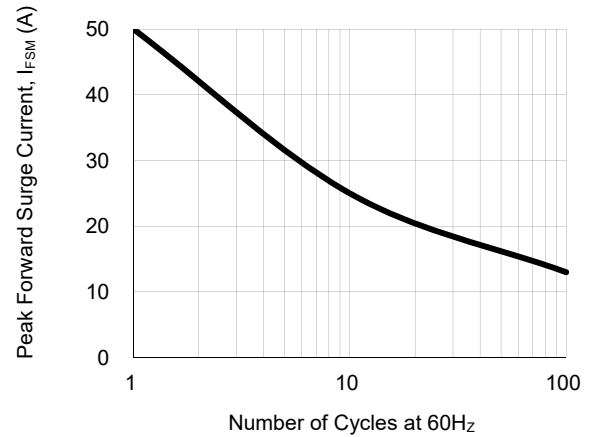


Fig. 3 Typical Forward Voltage Characteristics

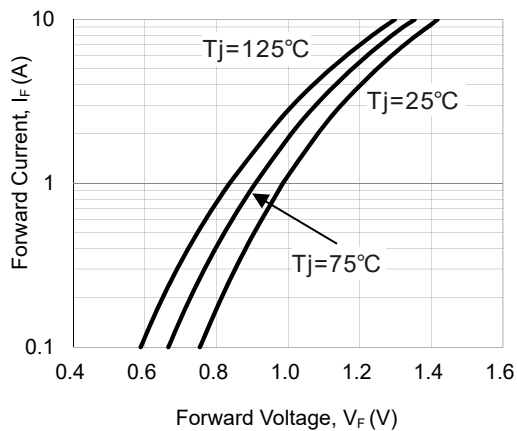
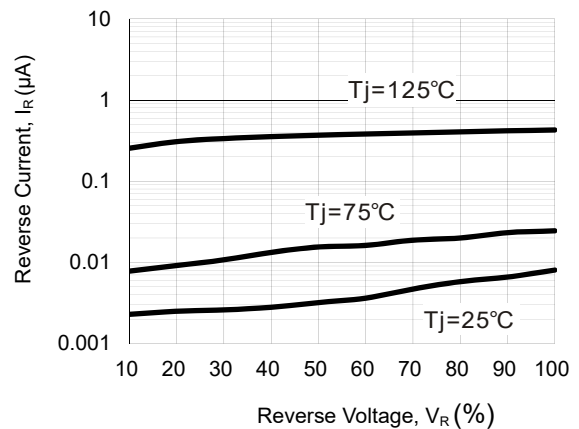


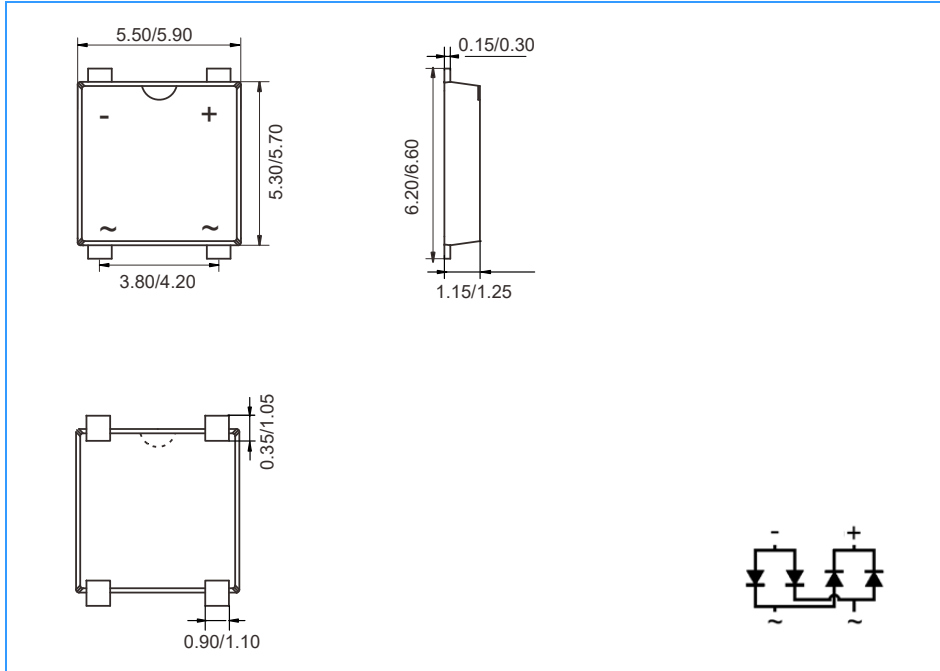
Fig. 4 Typical Reverse Characteristics



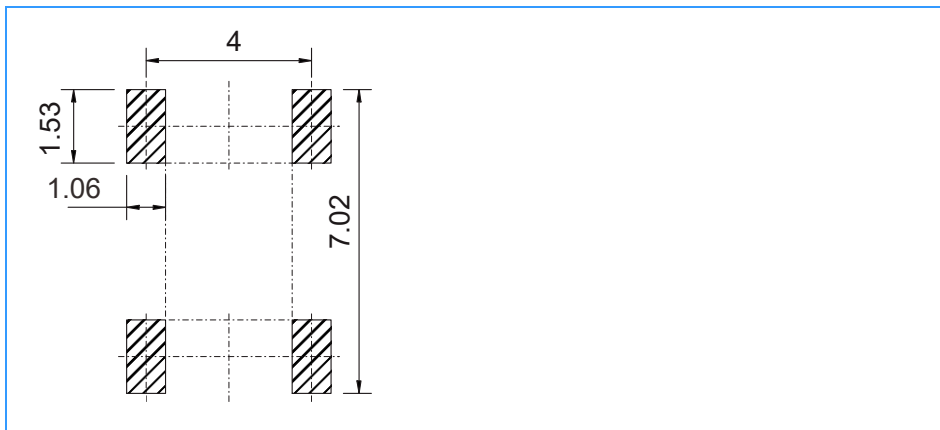
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### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



### Ordering Information

| Part Number | Marking | Package | Shipping Quantity  |
|-------------|---------|---------|--------------------|
| FTBF20K     | FTBF20K | TBF     | 5000 / Tape & Reel |
| FTBF20M     | FTBF20M | TBF     | 5000 / Tape & Reel |