

Silicon Bridge Rectifiers

TB4S - TB10S

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: TBS 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_A = 25°C unless otherwise specified)

| Parameter | Symbol | TB4S | TB6S | TB8S | TB10S | Unit |
|--|-------------------|------|------|------|-------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V _{RMS} | 280 | 420 | 560 | 700 | V |
| DC Blocking Voltage | V _{DC} | 400 | 400 | 800 | 1000 | V |
| Maximum Average Forward Output Current | I _{F_AV} | 1.0 | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine wave | I _{FSM} | 30 | | | | A |
| I ² t Rating for fusing | I ² t | 3.7 | | | | A ² s |

Thermal Characteristics

| Parameter | Symbol | TB4S | TB6S | TB8S | TB10S | Unit |
|---------------------------------------|------------------|------------|------|------|-------|------|
| Typical Thermal Resistance per leg *1 | R _{θJA} | 76 | | | | °C/W |
| | R _{θJC} | 29 | | | | |
| | R _{θJL} | 24 | | | | |
| Operating Junction Temperature Range | T _J | -55 ~ +150 | | | | °C |
| Storage Temperature Range | T _{STG} | -55 ~ +150 | | | | °C |

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

Silicon Bridge Rectifiers

TB4S - TB10S

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

| Parameter | Symbol | Test Condition | Typ. | Max. | Unit | |
|---------------------------------------|--------|-------------------------------|-----------------------------|------|------|---------------|
| Maximum Instantaneous Forward Voltage | V_F | $I_F = 1.0\text{A}$ Per Diode | - | 1.1 | V | |
| Maximum Reverse Current | I_R | Rated V_R , Per Diode | @ $T_A = 25^\circ\text{C}$ | - | 10 | μA |
| | | | @ $T_A = 125^\circ\text{C}$ | - | 200 | |

Silicon Bridge Rectifiers

TB4S - TB10S

Ratings and Characteristic Curves (@ $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

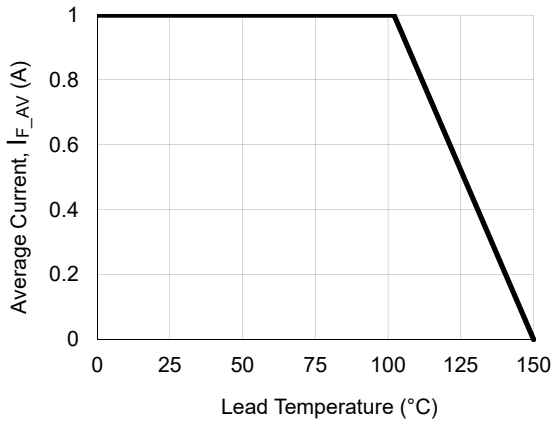


Fig.2 Surge Current Derating Curve

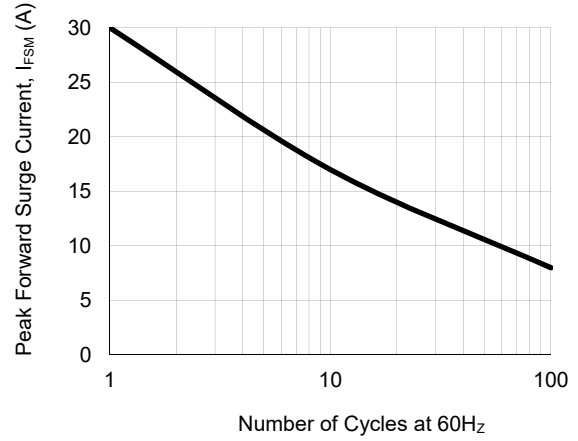


Fig.3 Typical Forward Voltage Characteristics

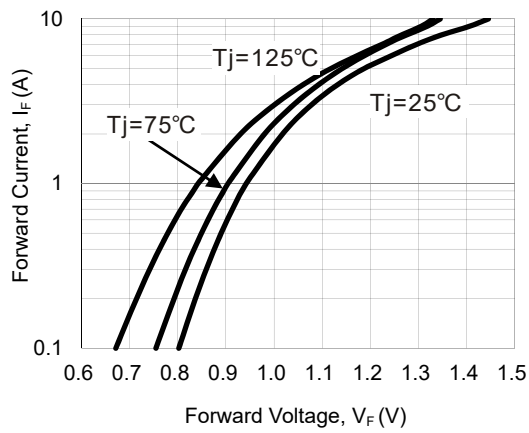
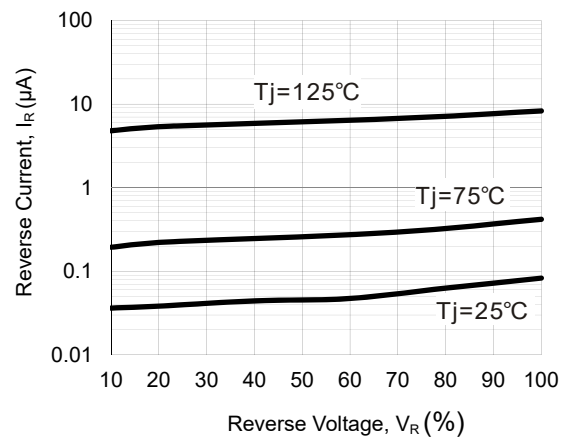


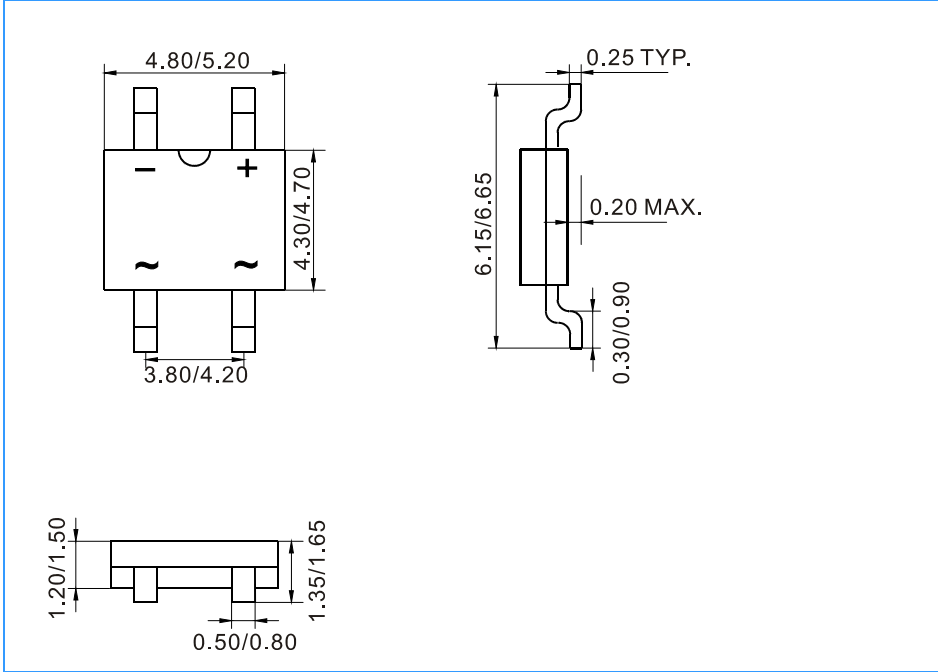
Fig.4 Typical Reverse Characteristics



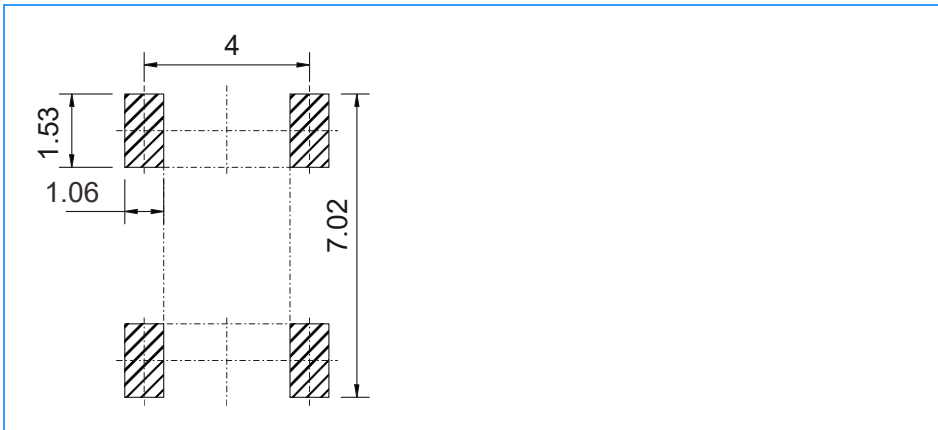
Silicon Bridge Rectifiers

TB4S - TB10S

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

| Part Number | Marking | Package | Shipping Quantity |
|-------------|---------|---------|--------------------|
| TB4S | TB4S | TBS | 4000 / Tape & Reel |
| TB6S | TB6S | TBS | 4000 / Tape & Reel |
| TB8S | TB8S | TBS | 4000 / Tape & Reel |
| TB10S | TB10S | TBS | 4000 / Tape & Reel |