

Silicon Bridge Rectifiers

TDF10M

Features

- Glass passivated junction
- High surge current capability
- Saves space on printed circuit boards
- High temperature soldering guaranteed:
260°C/10 seconds



Mechanical Data

- Case: Molded plastic body RoHS-compliant
- 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)

| Characteristic | Symbol | TDF10M | Units |
|--|--|--------|------------------|
| Peak repetitive reverse voltage | V _{RRM} | 1000 | V |
| RMS reverse voltage | V _{RMS} | 700 | V |
| DC blocking voltage | V _{DC} | 1000 | V |
| Maximum average forward output current | I _{F(AV)} | 1.0 | A |
| Peak forward surge current, 8.3ms single half-sine-wave | @T _J = 25°C I _{FSM} | 30 | A |
| I ² t Rating for fusing | @T _J = 25°C I ² t | 3.7 | A ² s |

Thermal Characteristics

| Parameter | Symbol | TDF10M | Units |
|--|------------------|-----------------|-------|
| Typical thermal resistance per leg (Note 1) | R _{θJA} | 50 | °C/W |
| | R _{θJC} | 10 | |
| Operating junction temperature range | T _J | - 55 ---- + 150 | °C |
| Storage temperature range | T _{STG} | - 55 ---- + 150 | °C |

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

Silicon Bridge Rectifiers**TDF10M****Electrical Characteristics** (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | | Typ. | Max. | Units |
|---------------------------------------|--------|-----------------------------|---------------------------|------|------|---------------|
| Maximum instantaneous forward voltage | V_F | $I_F=1.0\text{A}$ Per Diode | | -- | 1.05 | V |
| Maximum Reverse current | I_R | Rated V_R , Per Diode | @ $T_A=25^\circ\text{C}$ | -- | 5 | μA |
| | | | @ $T_A=125^\circ\text{C}$ | -- | 100 | |

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

Fig.1-Forward Current Derating Curve

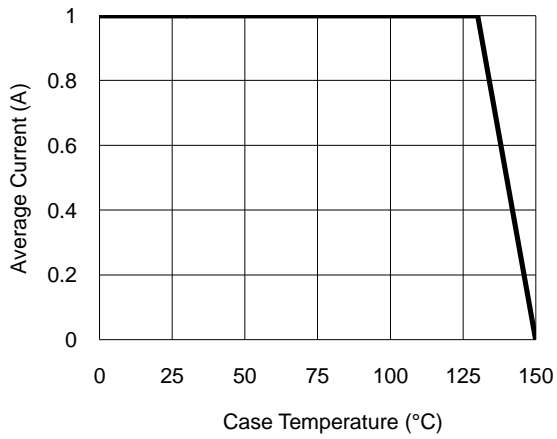


Fig.2- Surge Current Derating Curve

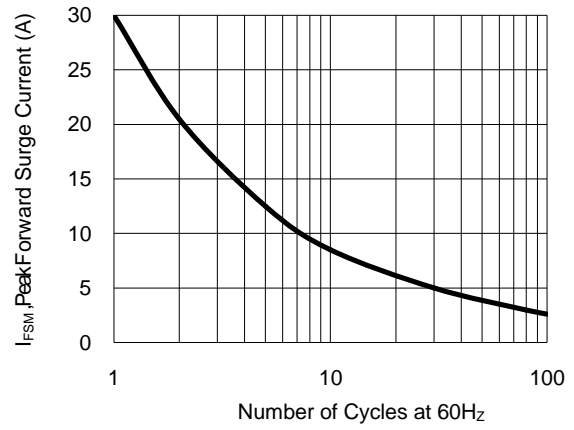


Fig.3- Typical Forward Voltage Characteristic

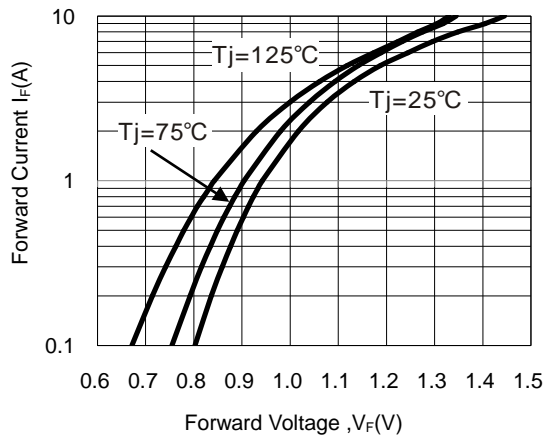
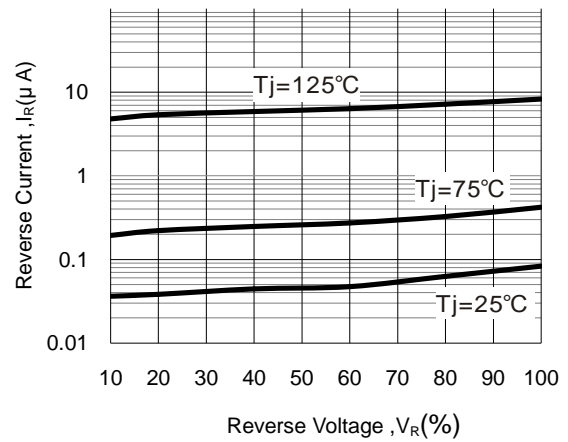


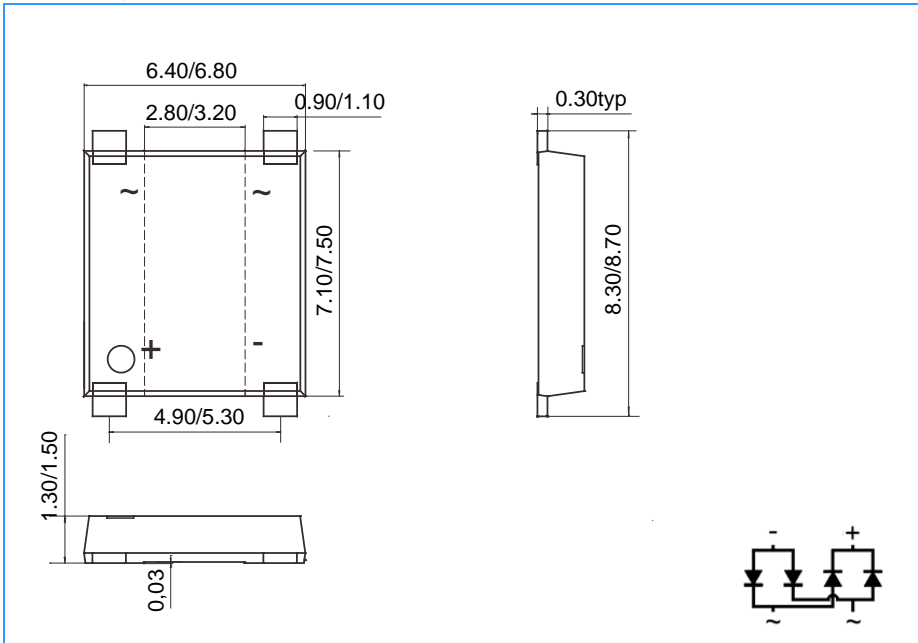
Fig.4- Typical Reverse Characteristic



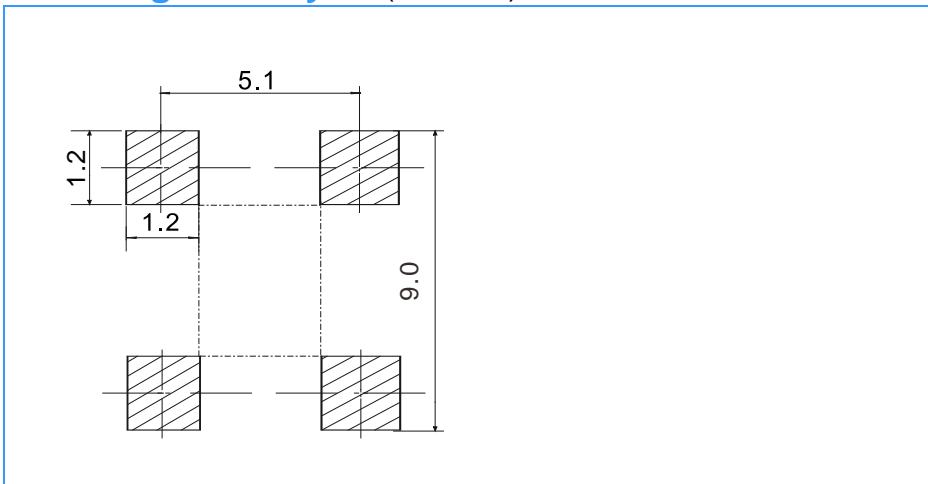
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

| Part No. | Marking | Package | Shipping |
|----------|---------|---------|----------------|
| TDF10M | TDF10M | TDF | 3000/Tape&Reel |