

# Schottky Bridge Rectifiers

## TDFH55S--TDFH56S

### Features

- Metal silicon junction, majority carrier conduction
- High surge capability
- High temperature soldering guaranteed:  
260°C/10 seconds
- High current capability, low forward voltage drop
- Guarding for over voltage protection
- RoHS Compliant



### 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<sub>A</sub> = 25°C unless otherwise specified)

| Characteristic                                             | Symbol             | TDFH55S | TDFH56S | Units |
|------------------------------------------------------------|--------------------|---------|---------|-------|
| Peak repetitive reverse voltage                            | V <sub>RRM</sub>   | 50      | 60      | V     |
| RMS reverse voltage                                        | V <sub>RMS</sub>   | 35      | 42      | V     |
| DC blocking voltage                                        | V <sub>DC</sub>    | 50      | 60      | V     |
| Maximum average forward output current                     | I <sub>F(AV)</sub> | 5.0     |         | A     |
| Peak forward surge current,<br>8.3ms single half-sine-wave | I <sub>FSM</sub>   | 150     |         | A     |

### Thermal Characteristics

| Parameter                                      | Symbol           | TDFH55S         | TDFH56S | Units |
|------------------------------------------------|------------------|-----------------|---------|-------|
| Typical thermal resistance per leg<br>(Note 1) | R <sub>ΘJA</sub> | 50              |         | °C /W |
|                                                | R <sub>ΘJC</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 PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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

| Parameter                                     | Symbol         | Test conditions                     |                        | Typ. | Max. | Units |
|-----------------------------------------------|----------------|-------------------------------------|------------------------|------|------|-------|
| Maximum instantaneous forward voltage(Note 1) | V <sub>F</sub> | I <sub>F</sub> =5.0A<br>Per Diode   | @T <sub>A</sub> =25°C  | --   | 0.75 | V     |
| Maximum Reverse current<br>(Note 2)           | I <sub>R</sub> | Rated V <sub>R</sub> ,<br>Per Diode | @T <sub>J</sub> =25°C  | --   | 500  | μ A   |
|                                               |                |                                     | @T <sub>J</sub> =100°C | --   | 20   | m A   |

Note:

1.Pulse test: 300us pulse width, 1 % duty cycle

2.Pulse test: Pulse width 40ms

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

Fig.1-Forward Current Derating Curve

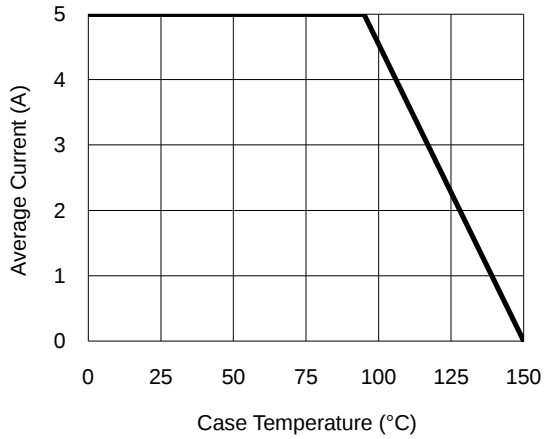


Fig.2- Surge Current Derating Curve

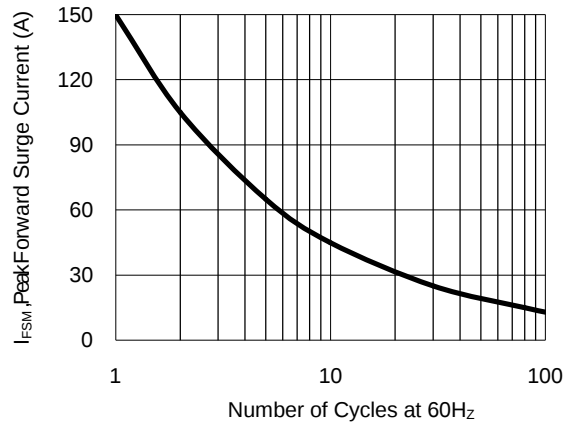


Fig.3- Typical Forward Voltage Characteristic

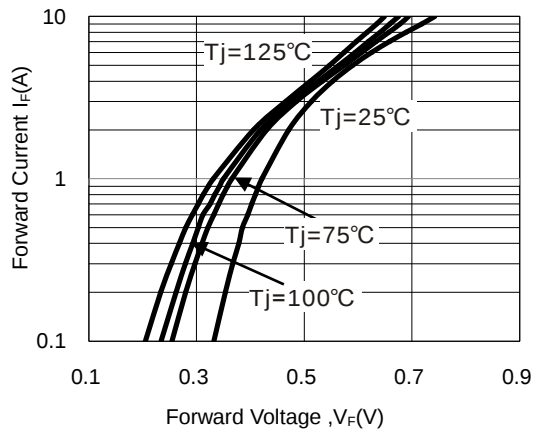
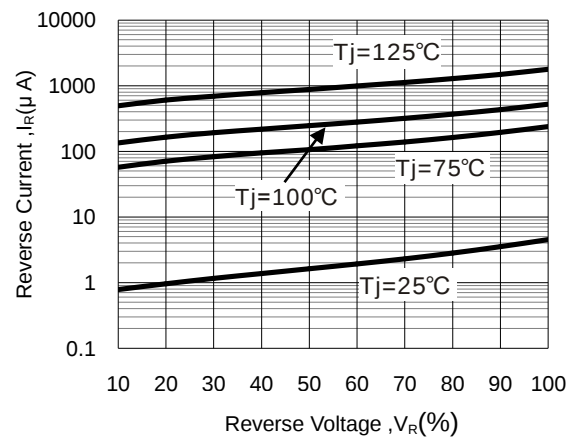


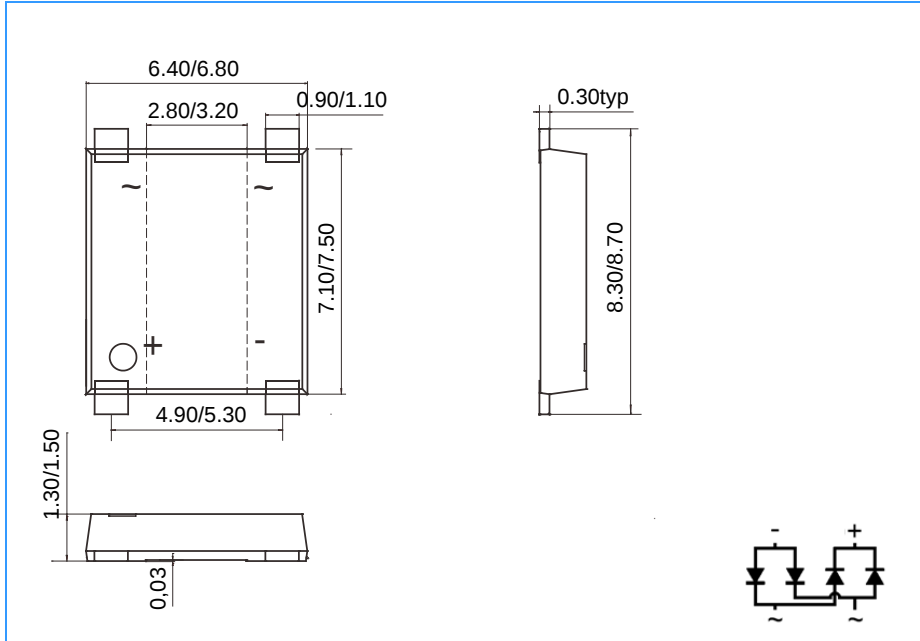
Fig.4- Typical Reverse Characteristic



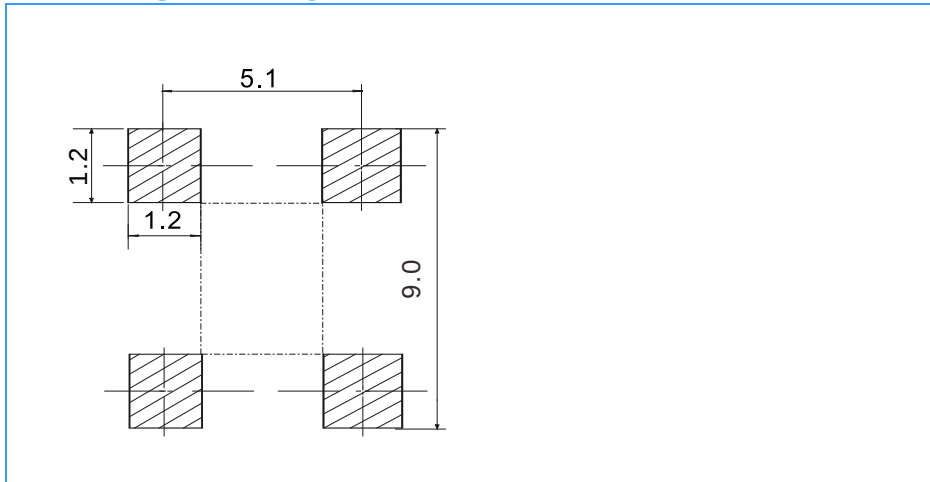
# Schottky Bridge Rectifiers

TDFH55S--TDFH56S

## Package Outline Dimensions(unit:mm)



## Mounting Pad Layout(unit:mm)



## Ordering Information

| Part No. | Marking | Package | Shipping         |
|----------|---------|---------|------------------|
| TDFH55S  | TDFH55S | TDF     | 3000 / Tape&Reel |
| TDFH56S  | TDFH56S | TDF     | 3000 / Tape&Reel |