

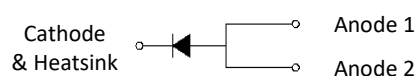
## 3A 150V Surface Mount Schottky Barrier Diode

### Features

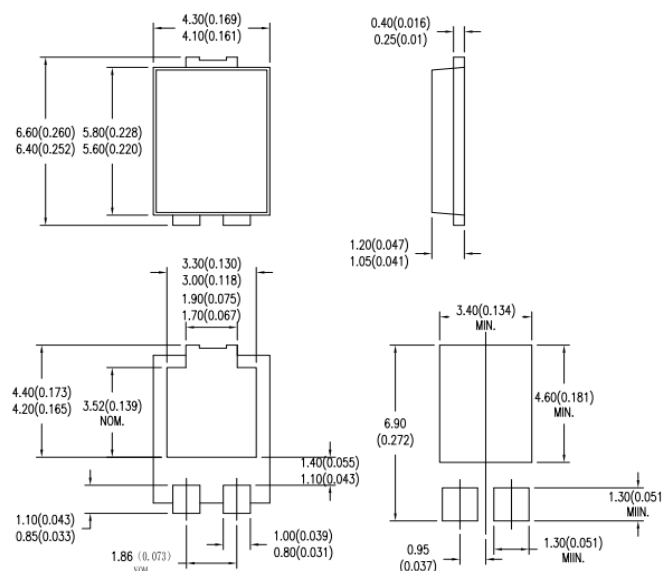
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- Ideal for automated placement
- High forward surge capability
- Compliant with RoHS standards, halogen-free

### Mechanical Data

- Case: TO-277B
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any



### TO-277B



### Maximum Ratings and Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                                                                                     |                     |                        | Symbol             | SP3150       | Unit |
|-----------------------------------------------------------------------------------------------|---------------------|------------------------|--------------------|--------------|------|
| Maximum repetitive peak reverse voltage                                                       |                     |                        | V <sub>RRM</sub>   | 150          | V    |
| Maximum average forward rectified current                                                     |                     |                        | I <sub>F(AV)</sub> | 3            | A    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode |                     |                        | I <sub>FSM</sub>   | 100          | A    |
| Maximum instantaneous forward voltage per diode (Note 1)                                      | I <sub>F</sub> = 3A | T <sub>J</sub> = 25°C  | V <sub>F</sub>     | 0.82         | V    |
|                                                                                               | I <sub>F</sub> = 3A | T <sub>J</sub> = 125°C |                    | 0.72         |      |
| Maximum instantaneous reverse current per diode at rated reverse voltage                      |                     | T <sub>J</sub> = 25°C  | I <sub>R</sub>     | 5            | μA   |
|                                                                                               |                     | T <sub>J</sub> = 125°C |                    | 0.2          | mA   |
| Typical thermal resistance                                                                    |                     |                        | R <sub>θJL</sub>   | 11           | °C/W |
| Operating temperature range                                                                   |                     |                        | T <sub>J</sub>     | - 55 to +175 | °C   |
| Storage temperature range                                                                     |                     |                        | T <sub>STG</sub>   | - 55 to +175 | °C   |

#### Note:

1. Pulse Test with Pulse Width=300 $\mu\text{s}$ , 1% Duty Cycle



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

FIG.1 FORWARD CURRENT DERATING CURVE

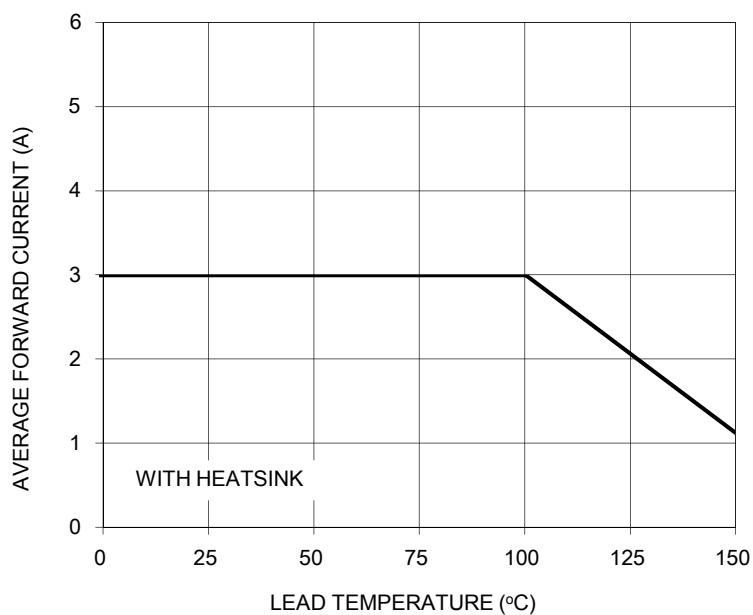


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

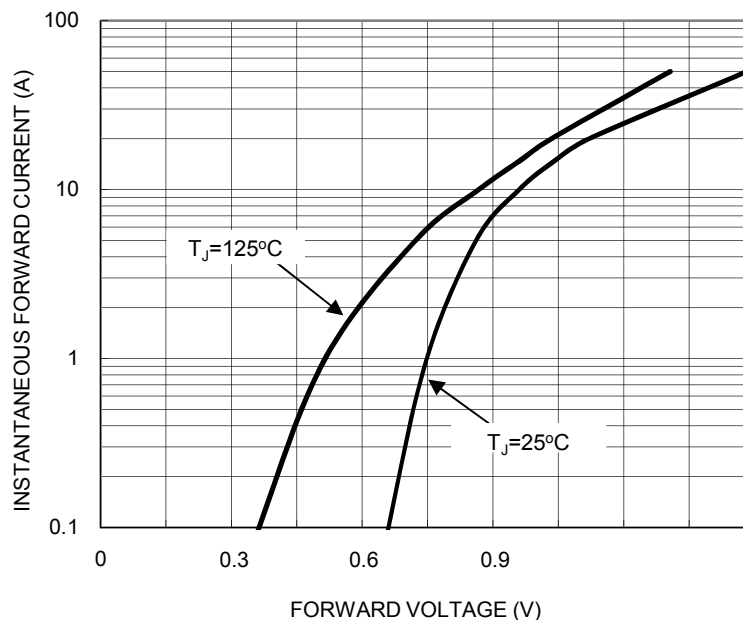


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

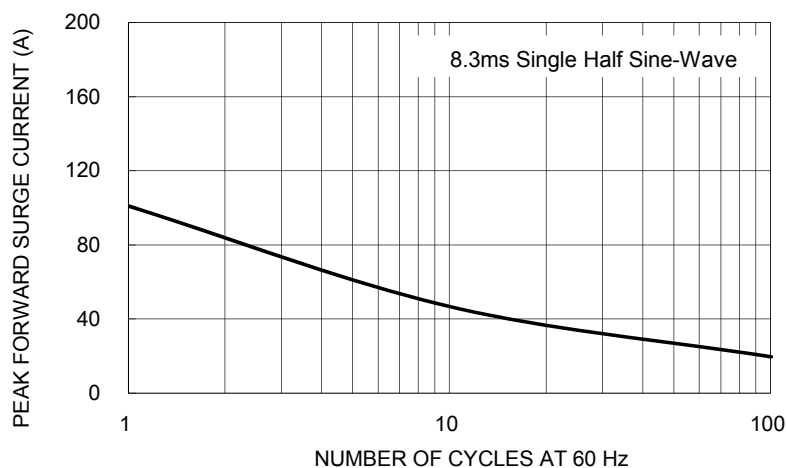


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

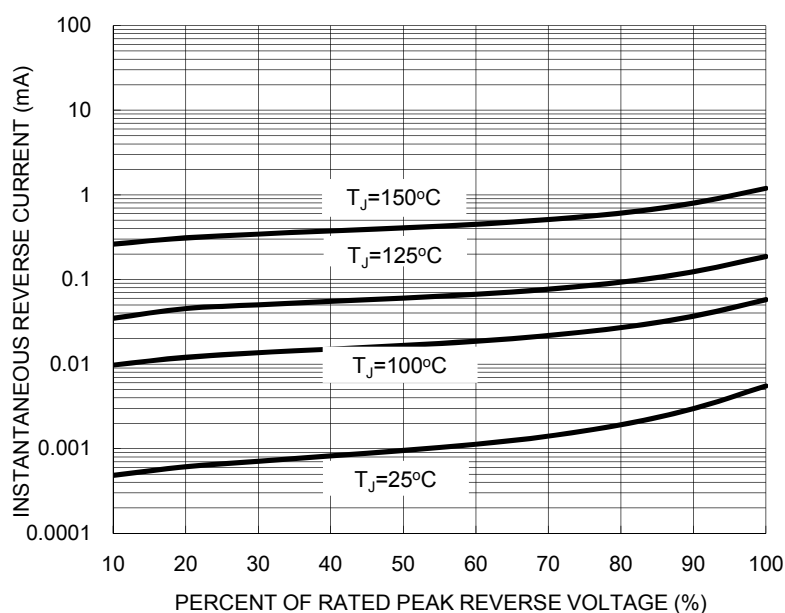


FIG. 5 TYPICAL JUNCTION CAPACITANCE

