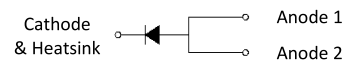


### FEATURES

- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- High forward surge capability
- Ideal for automated placement
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-277B



### MECHANICAL DATA

**Case:** TO-277B

Molding compound meets UL 94 V-0 flammability rating

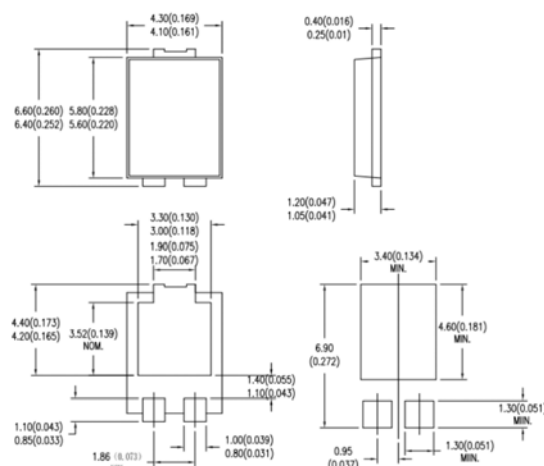
Moisture sensitivity level: level 1, per J-STD-020

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.095g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)  |                      |                        |                    |              |      |
|-----------------------------------------------------------------------------------------------|----------------------|------------------------|--------------------|--------------|------|
| PARAMETER                                                                                     |                      |                        | SYMBOL             | SP10300L     | UNIT |
| Maximum repetitive peak reverse voltage                                                       |                      |                        | V <sub>RRM</sub>   | 300          | V    |
| Maximum average forward rectified current                                                     |                      |                        | I <sub>F(AV)</sub> | 10           | A    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode |                      |                        | I <sub>FSM</sub>   | 150          | A    |
| Maximum instantaneous forward voltage per diode (Note 1)                                      | I <sub>F</sub> = 10A | T <sub>J</sub> = 25°C  | V <sub>F</sub>     | 0.96         | V    |
|                                                                                               | I <sub>F</sub> = 10A | T <sub>J</sub> = 125°C |                    | 0.92         |      |
| Maximum instantaneous reverse current per diode at rated reverse voltage                      |                      | T <sub>J</sub> = 25°C  | I <sub>R</sub>     | 2            | μA   |
|                                                                                               |                      | T <sub>J</sub> = 125°C |                    | 0.5          | mA   |
| Typical thermal resistance                                                                    |                      |                        | R <sub>θJL</sub>   | 3.0          | °C/W |
| Operating temperature range                                                                   |                      |                        | T <sub>J</sub>     | - 55 to +150 | °C   |
| Storage temperature range                                                                     |                      |                        | T <sub>STG</sub>   | - 55 to +150 | °C   |

Note 1: Pulse Test with Pulse Width=300μs, 1% Duty Cycle

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1 FORWARD CURRENT DERATING CURVE

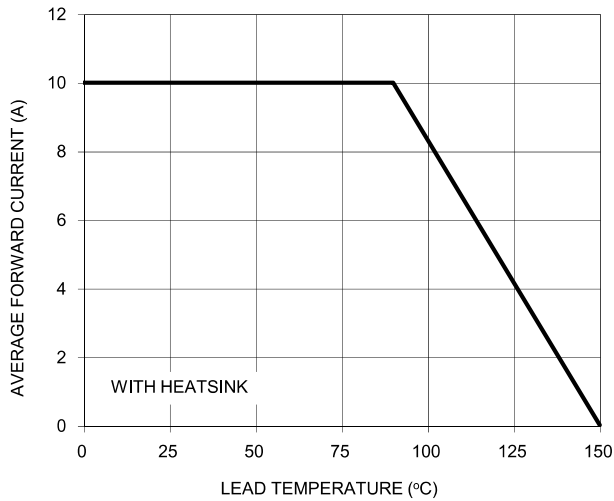


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

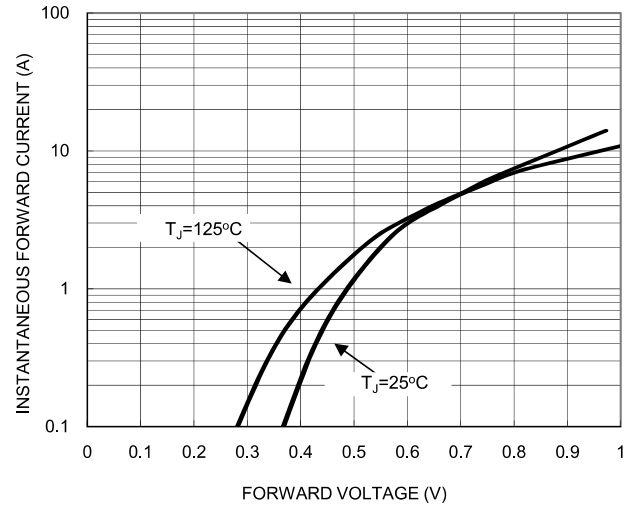


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

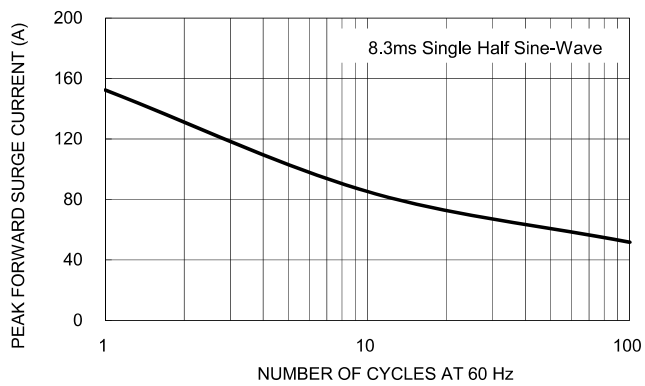


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

