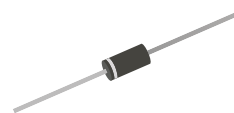


# SR302-G Thru. SR308-G

Forward current: 3.0A

Reverse voltage: 20 to 80V

RoHS Device

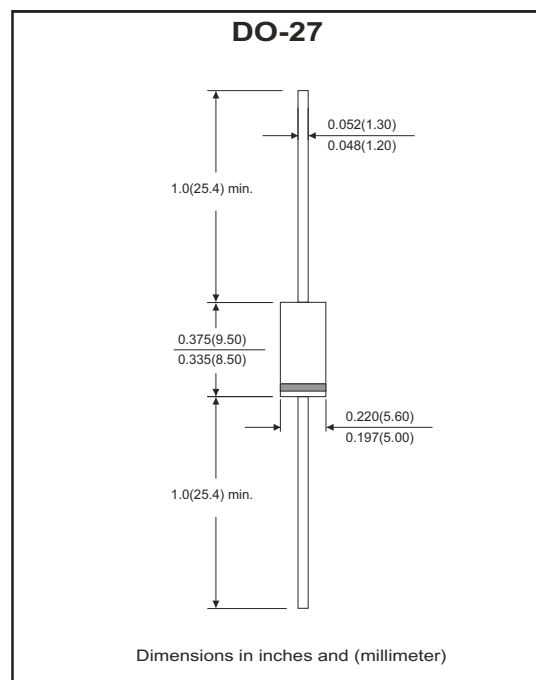


## Features

- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length at 5lbs (2.3kg) tension.

## Mechanical Data

- Case: transfer molded plastic.
- Epoxy: UL94V-0 rate flame retardant.
- Polarity: color band denoted cathode end.
- Lead: plastic axial lead, solderable per MIL-STD-202E, method 208C.
- Mounting position: any.
- Weight: 1.19 grams.



## Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.

Single phase, half wave, 60Hz, resistive or inductive loaded.

For capacitive load, derate current by 20% .

| Parameter                                                                                                                                       | Symbol           | SR302<br>-G | SR303<br>-G | SR304<br>-G | SR305<br>-G | SR306<br>-G | SR308<br>-G | Unit |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| Maximum repetitive peak reverse voltage                                                                                                         | V <sub>RRM</sub> | 20          | 30          | 40          | 50          | 60          | 80          | V    |
| Maximum RMS voltage                                                                                                                             | V <sub>RMS</sub> | 14          | 21          | 28          | 35          | 42          | 57          | V    |
| Maximum DC blocking voltage                                                                                                                     | V <sub>DC</sub>  | 20          | 30          | 40          | 50          | 60          | 80          | V    |
| Maximum average forward<br>rectified current, 0.375"<br>(9.5mm) lead length at<br>TL=75 °C (SR302-G ~ SR304-G)<br>TL=100 °C (SR305-G ~ SR308-G) | I <sub>AV</sub>  | 3.0         |             |             |             |             |             | A    |
| Peak forward surge current, 8.3ms single half sine-<br>wave, superimposed on rated load (JEDEC method)                                          | I <sub>FSM</sub> | 150         |             |             |             |             |             | A    |
| Maximum instantaneous forward voltage at I <sub>F</sub> =3A                                                                                     | V <sub>F</sub>   | 0.55        |             |             | 0.75        |             | 0.80        | V    |
| Maximum DC reverse current<br>at rated DC blocking voltage (Note 1)<br>T <sub>A</sub> =25 °C<br>T <sub>A</sub> =100 °C                          | I <sub>R</sub>   | 3.0<br>30   |             |             |             |             |             | mA   |
| Typical junction capacitance (Note 2)                                                                                                           | C <sub>J</sub>   | 200         |             |             |             |             |             | pF   |
| Typical thermal resistance (Note 3)                                                                                                             | R <sub>θJA</sub> | 40          |             |             |             |             |             | °C/W |
| Operating junction temperature range                                                                                                            | T <sub>J</sub>   | -65 ~ +125  |             |             | -65 ~ +150  |             |             | °C   |
| Storage temperature range                                                                                                                       | T <sub>STG</sub> | -65 ~ +150  |             |             |             |             |             | °C   |

Note:

1. Test pulse: 300μS pulse width, 1% duty cycle.

2. Measured at 1MHz and applied reverse voltage of 4.0V.

3. Thermal resistance from junction to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 2.5"x2.5"(63.5x63.5mm) copper pads.

## RATING AND CHARACTERISTIC CURVES (SR302-G Thru. SR308-G)

Fig.1 Typical Forward Current Derating Curve

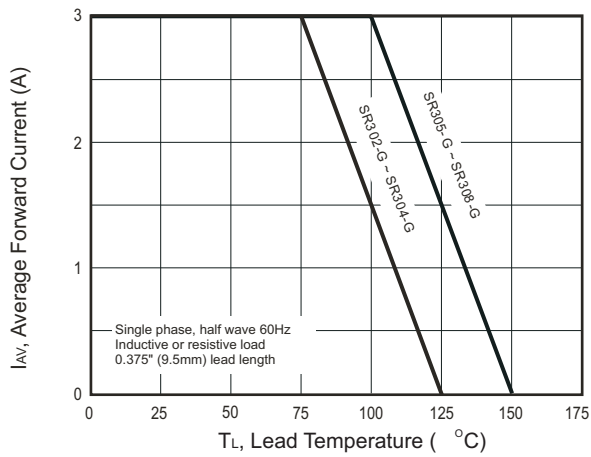


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

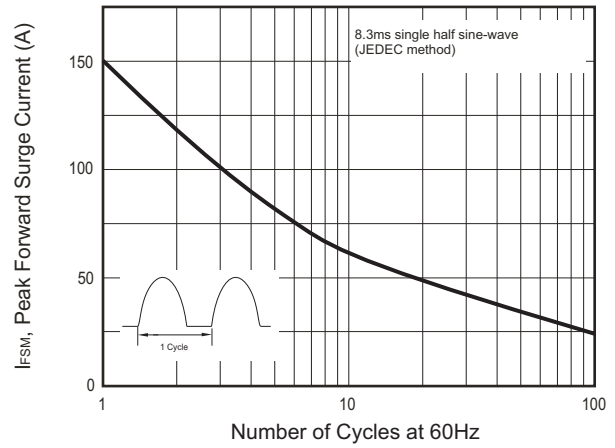


Fig.3 Typical Instantaneous Forward Characteristics

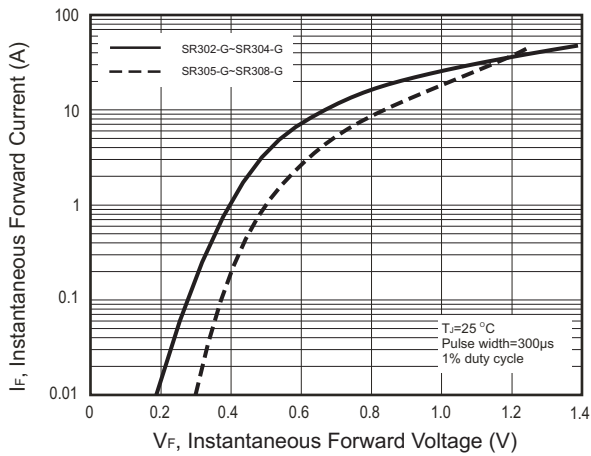


Fig.4 Typical Reverse Characteristics

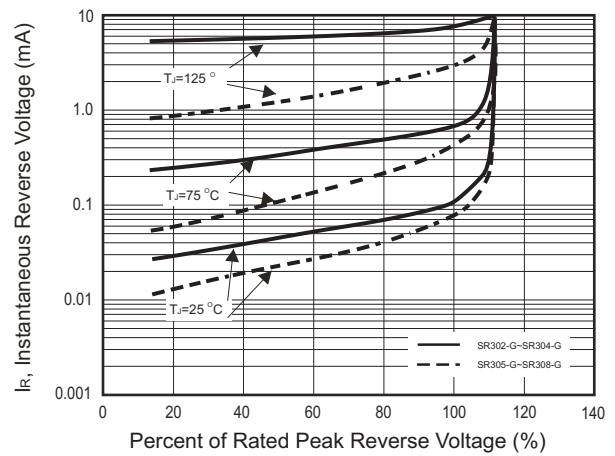


Fig.5 Typical Junction Capacitance

