

Schottky Barrier Rectifier



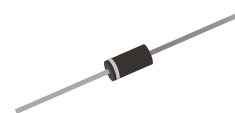
SMD Diodes Specialist

SR302-G Thru. SR308-G

Forward current: 3.0A

Reverse voltage: 20 to 80V

RoHS Device

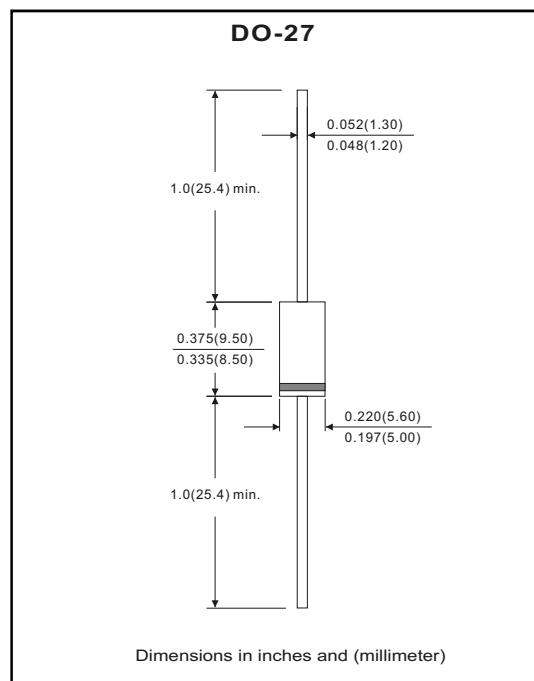


Features

- 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: 0.042 ounce, 1.19 gram.



Maximum Ratings and Electrical Characteristics

Ratings at $T_a=25^\circ\text{C}$ unless otherwise noted.

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

For capacitive load, derate current by 20% .

| Parameter | Symbol | SR302 -G | SR303 -G | SR304 -G | SR305 -G | SR306 -G | SR308 -G | Unit | |
|---|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | V | |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 57 | V | |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | V | |
| Maximum average forward rectified current, 0.375" (9.5mm) lead length at $T_L=75^\circ\text{C}$ (SR302-G ~ SR304-G) $T_L=100^\circ\text{C}$ (SR305-G ~ SR308-G) | I_{AV} | 3.0 | | | | | | A | |
| Peak forward surge current, 8.3ms single half sine-wave, superimposed on rated load (JEDEC method) | I_{FSM} | 150 | | | | | | A | |
| Maximum instantaneous forward voltage at $I_F=3A$ | V_F | 0.55 | | | 0.75 | | 0.80 | V | |
| Maximum DC reverse current at rated DC blocking voltage (Note 1) $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 3.0 30 | | | | | | mA | |
| Typical junction capacitance (Note 2) | C_J | 200 | | | | | | pF | |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ | 40 | | | | | | $^\circ\text{C}/\text{W}$ | |
| Operating junction temperature range | T_J | -65 ~ +125 | | | -65 ~ +150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -65 ~ +150 | | | | | | $^\circ\text{C}$ | |

Note:

1. Test pulse: 300 μs 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.

REV:A

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

Fig.1 Typical Forward Current Derating Curve

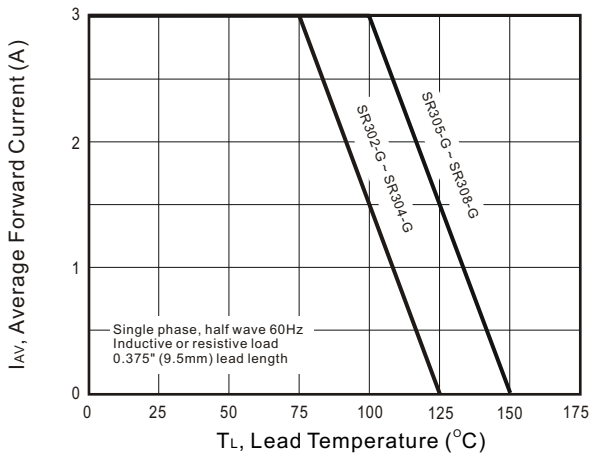


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

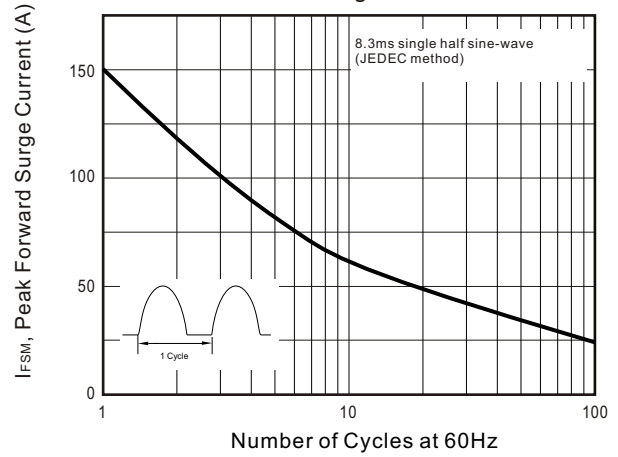


Fig.3 Typical Instantaneous Forward Characteristics

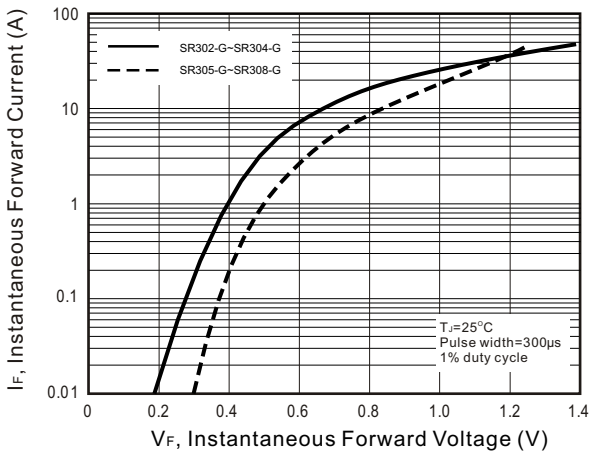


Fig.4 Typical Reverse Characteristics

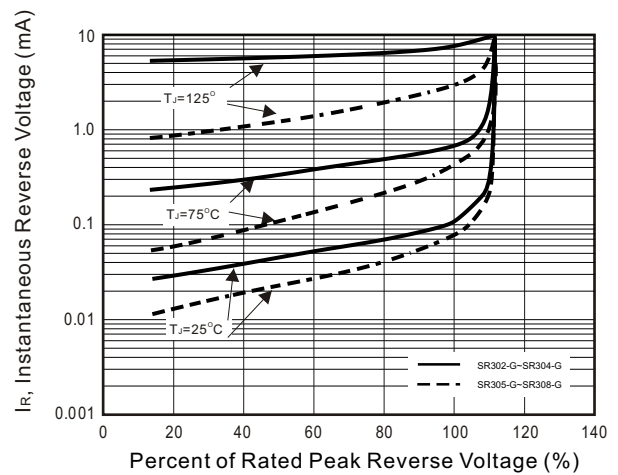


Fig.5 Typical Junction Capacitance

