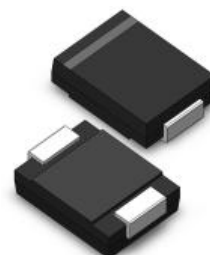


**VOLTAGE RANGE: 50V-1000 V**

**CURRENT: 3.0 A**

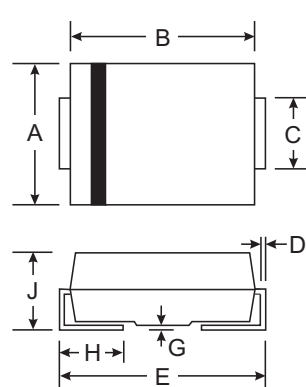


### Features

- Glass Passivated Die Construction
- Fast Recovery Time for High Efficiency  
Low Forward Voltage Drop and High Current Capability
- Ideally Suited for Automatic Assembly
- Plastic Material: UL Flammability
- Classification Rating 94V-0

### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



| SMC(DO-214AB)        |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 5.59 | 6.22 |
| B                    | 6.60 | 7.11 |
| C                    | 2.75 | 3.18 |
| D                    | 0.15 | 0.31 |
| E                    | 7.75 | 8.13 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

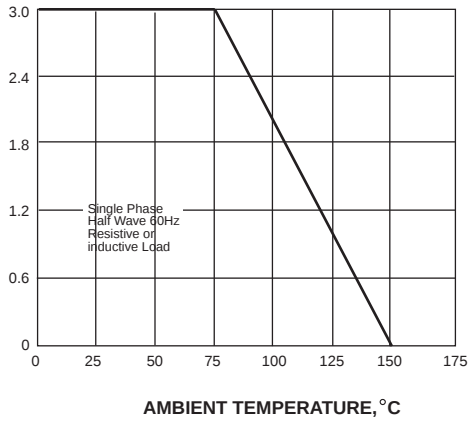
| Characteristic                                                                                                  | Symbol                            | RS3AC        | RS3BC | RS3DC | RS3GC | RS3JC | RS3KC | RS3MC | Unit |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|-------|-------|-------|-------|-------|-------|------|
| Maximum repetitive peak reverse voltage                                                                         | V <sub>RRM</sub>                  | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum RMS voltage                                                                                             | V <sub>RMS</sub>                  | 35           | 70    | 140   | 280   | 420   | 560   | 700   | V    |
| Maximum DC blocking voltage                                                                                     | V <sub>DC</sub>                   | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum average forward rectified current at T <sub>L</sub> =75°C                                               | I <sub>(AV)</sub>                 | 3.0          |       |       |       |       |       |       | A    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)             | I <sub>FSM</sub>                  | 100.0        |       |       |       |       |       |       | A    |
| Maximum instantaneous forward voltage at 3.0A                                                                   | V <sub>F</sub>                    | 1.3          |       |       |       |       |       |       | V    |
| Maximum DC reverse current      T <sub>A</sub> =25°C<br>at rated DC blocking voltage      T <sub>A</sub> =100°C | I <sub>R</sub>                    | 5.0<br>100.0 |       |       |       |       |       |       | μA   |
| Maximum reverse recovery time      (NOTE 1)                                                                     | t <sub>rr</sub>                   | 150          |       |       |       | 250   | 500   |       | ns   |
| Typical junction capacitance (NOTE 2)                                                                           | C <sub>J</sub>                    | 60.0         |       |       |       |       |       |       | pF   |
| Typical thermal resistance (NOTE 3)                                                                             | R <sub>θJA</sub>                  | 50.0         |       |       |       |       |       |       | °C/W |
| Operating junction and storage temperature range                                                                | T <sub>J</sub> , T <sub>STG</sub> | -50 to +150  |       |       |       |       |       |       | °C   |

**Note:** 1.Reverse recovery condition I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A  
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

## RATINGS AND CHARACTERISTIC CURVES RS3AC THRU RS3MC

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

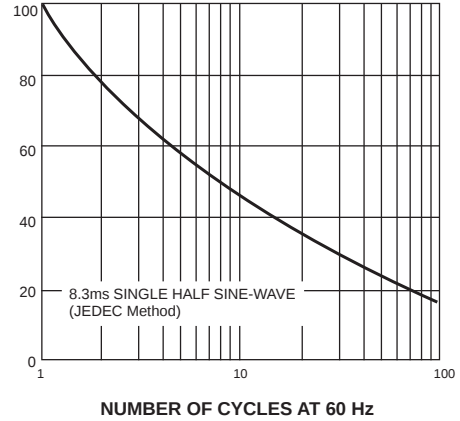


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

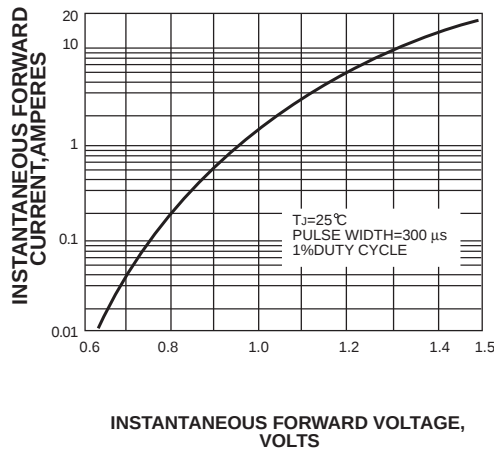


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

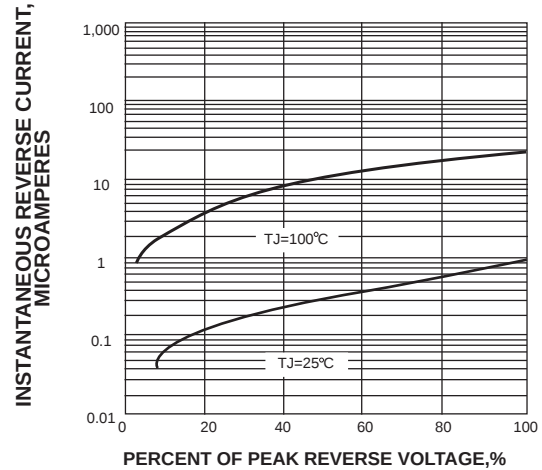


FIG. 5-TYPICAL JUNCTION CAPACITANCE

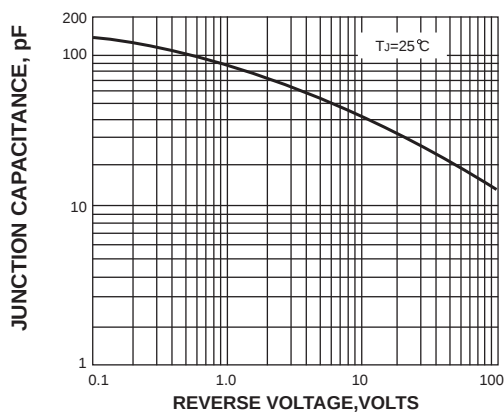


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

