

## SUPER FAST RECTIFIERS

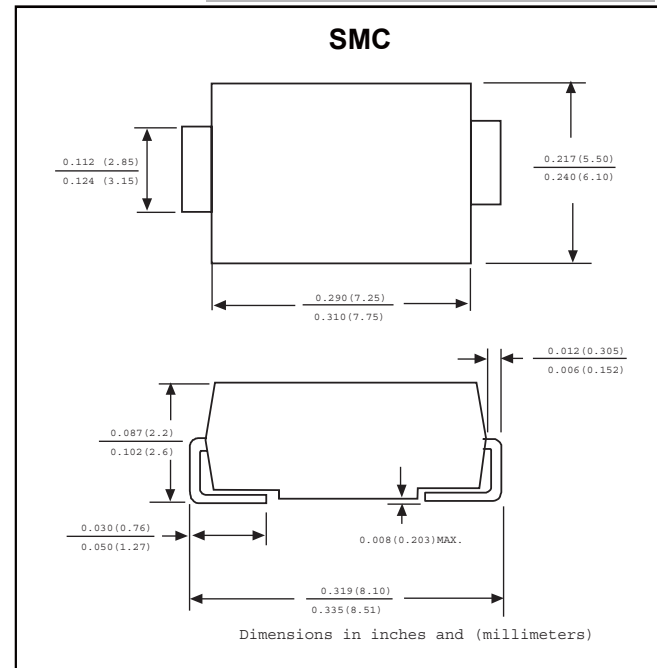
VOLTAGE RANGE: 50--- 1000 V  
CURRENT: 3.0 A

### FEATURES

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- For surface mounted applications
- Fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:  
250 °C / 10 seconds at terminals

### MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

|   | SYMBOLS                           | RS3A        | RS3B | RS3D | RS3G | RS3J | RS3K | RS3M | UNITS |
|---|-----------------------------------|-------------|------|------|------|------|------|------|-------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                  | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | VOLTS |
| Maximum RMS voltage   | V <sub>RMS</sub>                  | 35          | 70   | 140  | 280  | 420  | 560  | 700  | VOLTS |
| Maximum DC blocking voltage   | V <sub>DC</sub>                   | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | VOLTS |
| Maximum average forward rectified current at T <sub>L</sub> =90 °C                                  | I <sub>AV</sub>                   | 3.0         |      |      |      |      |      |      | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 100.0       |      |      |      |      |      |      | Amps  |
| Maximum instantaneous forward voltage at 3.0A   | V <sub>F</sub>                    | 1.3         |      |      |      |      |      |      | Volt  |
| Maximum DC reverse current<br>T <sub>A</sub> =25 °C at rated DC blocking voltage                    | I <sub>R</sub>                    | 5.0<br>50.0 |      |      |      |      |      |      | µA    |
| Maximum reverse recovery time<br>T <sub>A</sub> =100 °C (NOTE 1)                                    | t <sub>r</sub>                    | 150         |      |      |      | 250  | 500  |      | ns    |
| Typical junction capacitance (NOTE 2)   | C <sub>J</sub>                    | 150.0       |      |      |      |      |      |      | pF    |
| Typical thermal resistance (NOTE 3)   | R <sub>gJA</sub>                  | 20.0        |      |      |      |      |      |      | °C/W  |
| Operating junction and storage temperature range  | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 |      |      |      |      |      |      | °C    |

**Note:** 1. Reverse recovery condition

I<sub>F</sub>=0.5A as shown, t<sub>r</sub>=100ns and applied reverse voltage of 4.0V D.C.

3. P.C.B. mounted with 0.6x0.6" (16x16mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

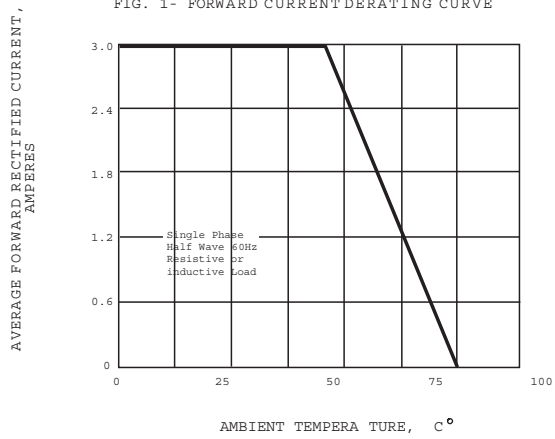


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

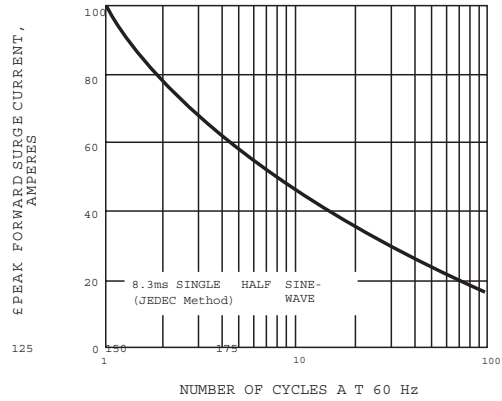


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

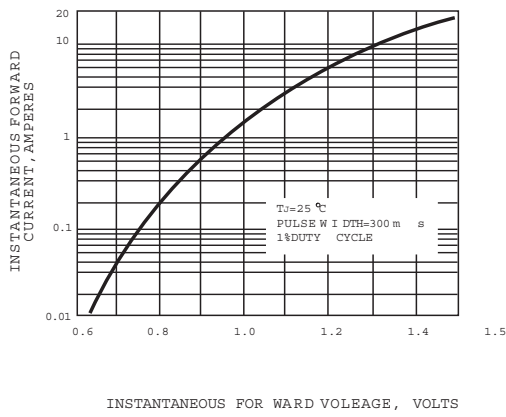


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

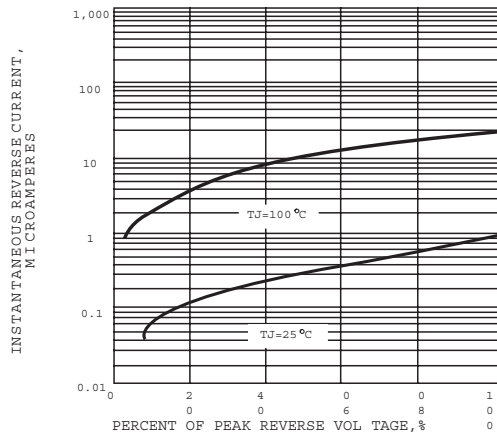


FIG. 5-TYPICAL JUNCTION CAPACITANCE

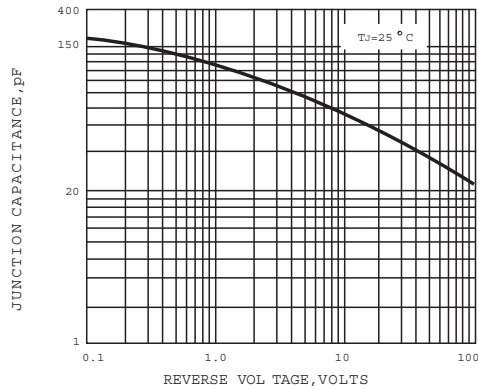


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

