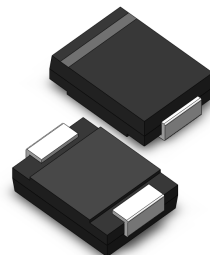


**VOLTAGE RANGE: 50 - 1000V**

**CURRENT: 3.0 A**

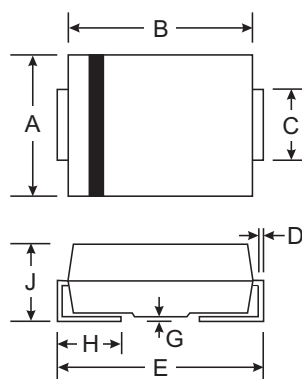


### Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Super fast recovery time

### Mechanical Data

- Case : SMC (DO-214AB), Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.21 gram



| 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 $T_A = 25^\circ\text{C}$ unless otherwise specified

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

| Characteristic                                                                                          | Symbol             | SS3A          | SS3B | SS3C | SS3D | SS3E | SS3G | SS3J | SS3K | SS3M | Unit  |
|---------------------------------------------------------------------------------------------------------|--------------------|---------------|------|------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>   | 50            | 100  | 150  | 200  | 300  | 400  | 600  | 800  | 1000 | Volts |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>   | 35            | 70   | 105  | 140  | 210  | 280  | 420  | 560  | 700  | Volts |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>    | 50            | 100  | 150  | 200  | 300  | 400  | 600  | 800  | 1000 | Volts |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length      Ta = 55 °C                            | I <sub>F(AV)</sub> | 3.0           |      |      |      |      |      |      |      |      | Amps. |
| Peak Forward Surge Current,<br>8.3ms Single half sine wave<br>Superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 125           |      |      |      |      |      |      |      |      | Amps. |
| Maximum Peak Forward Voltage at I <sub>F</sub> = 3.0 Amps.                                              | V <sub>F</sub>     | 0.95          |      |      | 1.4  |      |      | 1.7  |      |      | Volts |
| Maximum DC Reverse Current      Ta = 25 °C                                                              | I <sub>R</sub>     | 5             |      |      |      |      |      |      |      |      | μA    |
| at Rated DC Blocking Voltage      Ta = 100 °C                                                           | I <sub>R(H)</sub>  | 50            |      |      |      |      |      |      |      |      | μA    |
| Maximum Reverse Recovery Time ( Note 1 )                                                                | T <sub>rr</sub>    | 35            |      |      |      |      |      |      |      |      | ns    |
| Typical Junction Capacitance ( Note 2 )                                                                 | C <sub>J</sub>     | 50            |      |      |      |      |      |      |      |      | pf    |
| Junction Temperature Range                                                                              | T <sub>J</sub>     | - 65 to + 150 |      |      |      |      |      |      |      |      | °C    |
| Storage Temperature Range                                                                               | T <sub>STG</sub>   | - 65 to + 150 |      |      |      |      |      |      |      |      | °C    |

#### Notes :

( 1 ) Reverse Recovery Test Conditions :  $I_F = 0.5$  A,  $I_R = 1.0$  A,  $I_{rr} = 0.25$  A.

( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

## RATING AND CHARACTERISTIC CURVES ( SS3A - SS3M )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

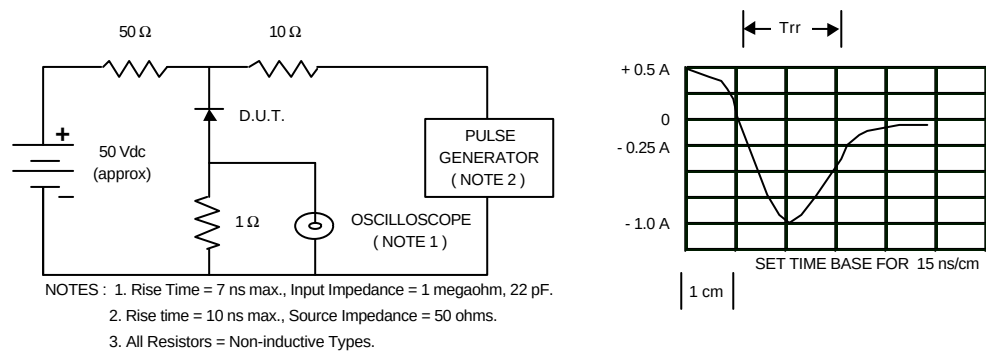


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

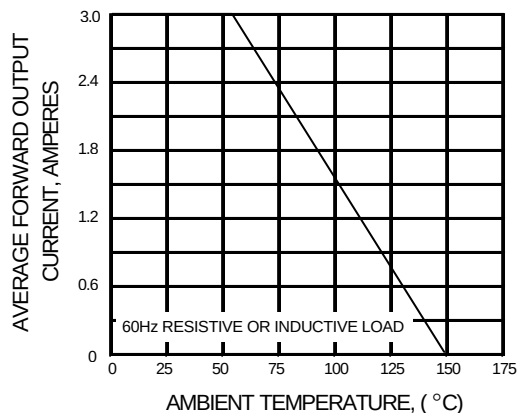


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

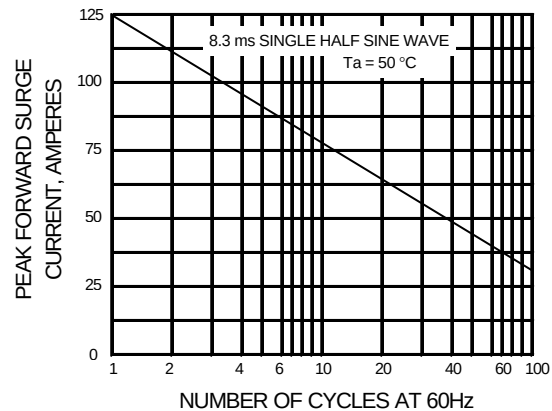


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

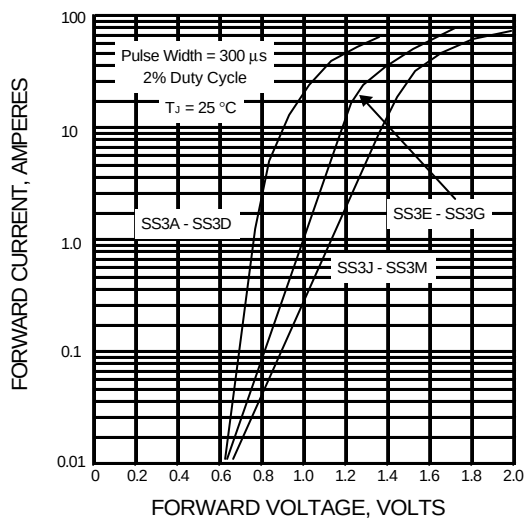


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

