

## 1.Features

- Plastic Package has Underwriters Laboratory
- Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed : 250°C/10 seconds at terminals

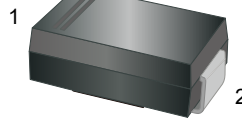
## 2.Mechanical Data

- Case: JEDEC SMC(DO-214AB) molded plastic body
- Polarity : Color band denotes cathode end
- Terminals : Solder Plate, solderable per MIL-STD-750, Method 2026
- Weight : 0.003 ounce, 0.093 gram

## 3.Pinning information

| Pin | Symbol | Description |
|-----|--------|-------------|
| 1   | C      | Cathode     |
| 2   | A      | Anode       |

SMC





#### 4. Maximum Ratings And Electrical Characteristics

| Parameter                                                                                          |                       | Symbol             | SS 32C     | SS 33C | SS 34C | SS 35C     | SS 36C | SS 39C | SS 310C | SS 315C | SS 320C | Unit |
|----------------------------------------------------------------------------------------------------|-----------------------|--------------------|------------|--------|--------|------------|--------|--------|---------|---------|---------|------|
| Maximum repetitive peak reverse voltage                                                            |                       | V <sub>RRM</sub>   | 20         | 30     | 40     | 50         | 60     | 90     | 100     | 150     | 200     | V    |
| Maximum RMS voltage                                                                                |                       | V <sub>RMS</sub>   | 14         | 21     | 28     | 35         | 42     | 63     | 70      | 105     | 140     | V    |
| Maximum DC blocking voltage                                                                        |                       | V <sub>DC</sub>    | 20         | 30     | 40     | 50         | 60     | 90     | 100     | 150     | 200     | V    |
| Maximum Average Forward Rectified Current                                                          |                       | I <sub>F(AV)</sub> | 3          |        |        |            |        |        |         |         |         | A    |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) |                       | I <sub>FSM</sub>   | 100        |        |        | 70         |        |        |         |         |         | A    |
| Maximum Instantaneous Forward Voltage (Note 1) @ 3.0A                                              | T <sub>A</sub> =25°C  | V <sub>F</sub>     | 0.5        |        |        | 0.75       |        | 0.85   |         | 0.95    |         | V    |
|                                                                                                    | T <sub>A</sub> =100°C |                    | 0.4        |        |        | 0.65       |        | 0.70   |         | 0.80    |         |      |
| Maximum Reverse Current @ Rated V <sub>R</sub>                                                     | T <sub>A</sub> =25°C  | I <sub>R</sub>     | 0.5        |        |        |            | 0.1    |        |         |         | mA      |      |
|                                                                                                    | T <sub>A</sub> =100°C |                    | 10         |        | 5      |            | 2      |        |         |         |         |      |
|                                                                                                    | T <sub>A</sub> =125°C |                    | 1          |        |        |            | 0.5    |        |         |         |         |      |
| Typical Thermal Resistance                                                                         |                       | R <sub>θJL</sub>   | 17         |        |        |            |        |        |         |         |         | °C/W |
|                                                                                                    |                       | R <sub>θJA</sub>   | 55         |        |        |            |        |        |         |         |         | °C/W |
| Junction temperature range                                                                         |                       | T <sub>J</sub>     | -55 to 125 |        |        | -55 to 150 |        |        |         |         |         | °C   |
| Storage temperature range                                                                          |                       | T <sub>STG</sub>   | -55 to 150 |        |        |            |        |        |         |         |         | °C   |

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Notes:

1. Pulse Test with PW=300 usec, 1% Duty Cycle.



## 5. Typical characteristic

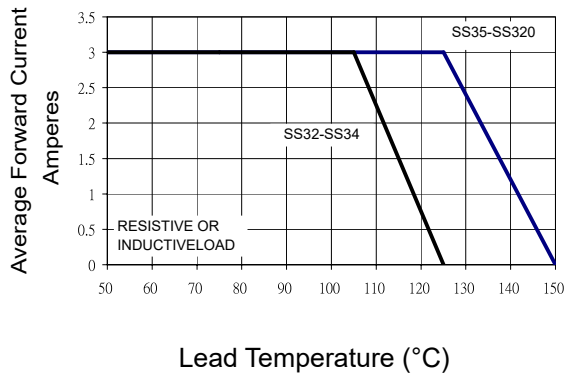


Figure 1: Forward Current Derating Curve

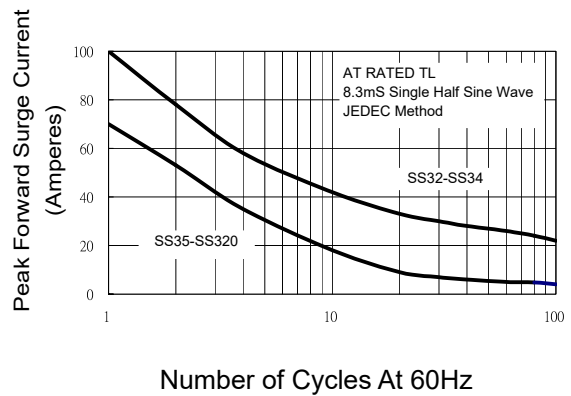


Figure 2: Maximum Non-repetitive Peak Forward Surge Current

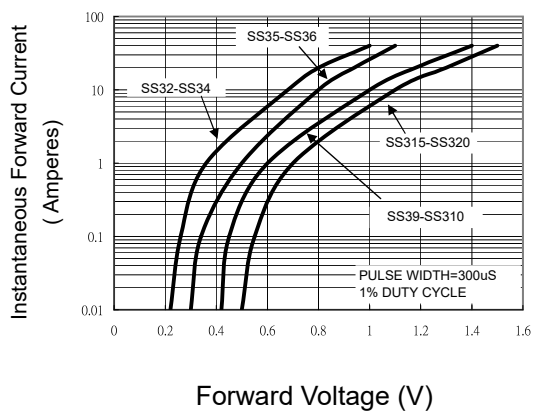


Figure 3: Typical Forward Characteristics

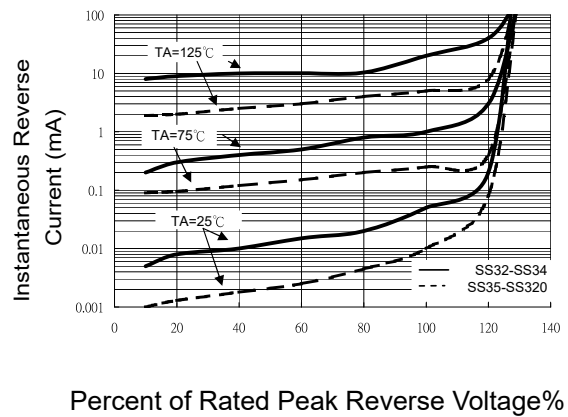


Figure 4: Typical Reverse Characteristics

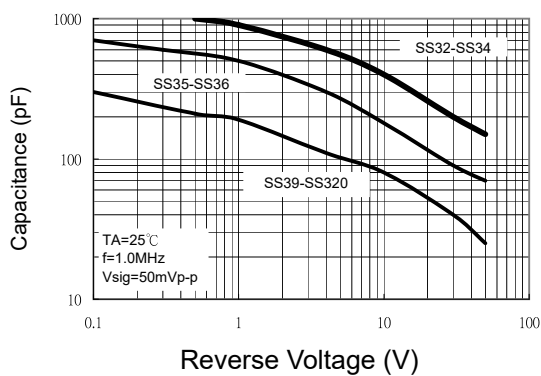


Figure 5: Typical Junction Capacitance

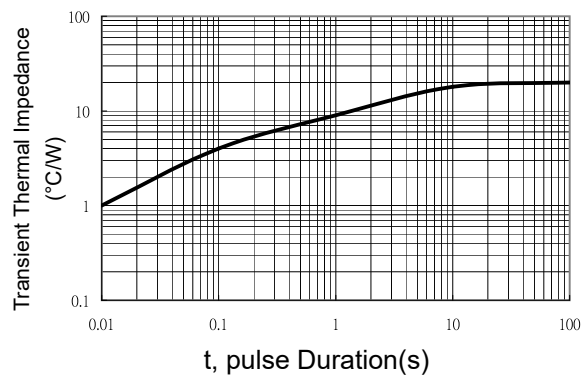
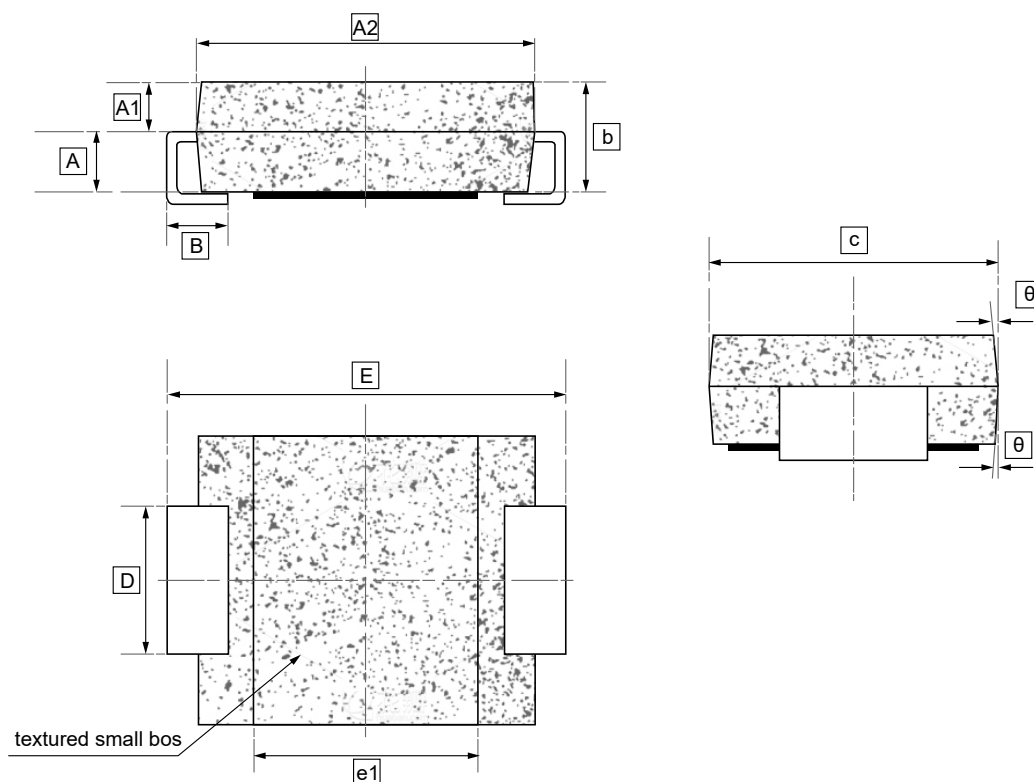


Figure 6: Typical Transient Thermal Impedance



## 6.SMC Package Outline Dimensions

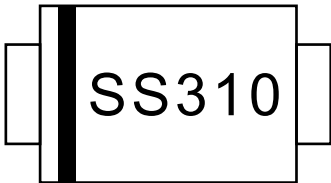


### DIMENSIONS (mm are the original dimensions)

| Symbol | A    | A1   | A2   | B    | b    | c    | D    | E    | e1   | $\theta$ |
|--------|------|------|------|------|------|------|------|------|------|----------|
| Min    | 1.17 | 0.97 | 6.80 | 1.00 | 2.25 | 5.80 | 2.98 | 7.90 | 4.40 | 0°       |
| Max    | 1.23 | 1.03 | 6.90 | 1.40 | 2.35 | 5.90 | 3.02 | 8.10 | 4.60 | 6°       |



7 .Ordering information



| Order Code | Marking | Package | Base QTY | Delivery Mode |
|------------|---------|---------|----------|---------------|
| UMW SS32C  | SS32    | SMC     | 3000     | Tape and reel |
| UMW SS33C  | SS33    | SMC     | 3000     | Tape and reel |
| UMW SS34C  | SS34    | SMC     | 3000     | Tape and reel |
| UMW SS35C  | SS35    | SMC     | 3000     | Tape and reel |
| UMW SS36C  | SS36    | SMC     | 3000     | Tape and reel |
| UMW SS39C  | SS39    | SMC     | 3000     | Tape and reel |
| UMW SS310C | SS310   | SMC     | 3000     | Tape and reel |
| UMW SS315C | SS315   | SMC     | 3000     | Tape and reel |
| UMW SS320C | SS320   | SMC     | 3000     | Tape and reel |



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