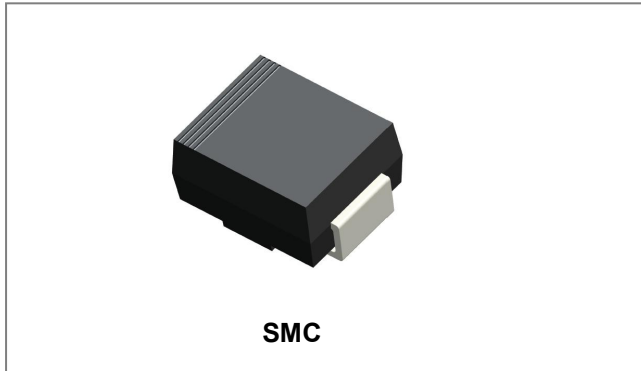


## S5AC THRU S5MC SURFACE MOUNT GLASS PASSIVATED RECTIFIER



### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: SMC molded plastic
- Lead: Solder Plated , Solderable Per MIL-STD 750 ,Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.21 grams

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

| Characteristics                                                                                                    | Symbol                                                 | S5AC        | S5BC | S5DC | S5GC | S5JC | S5KC | S5MC | Units |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------|------|------|------|------|------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                             | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| Maximum RMS voltage                                                                                                | V <sub>RMS</sub>                                       | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V     |
| Average Rectified Output Current @T <sub>L</sub> = 75°C                                                            | I <sub>O</sub>                                         | 5.0         |      |      |      |      |      |      | A     |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 100         |      |      |      |      |      |      | A     |
| Forward Voltage @ I <sub>F</sub> = 5.0 A                                                                           | V <sub>F</sub>                                         | 1.15        |      |      |      |      |      |      | V     |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                | I <sub>RM</sub>                                        | 10<br>250   |      |      |      |      |      |      | μA    |
| Typical Junction Capacitance(Note2)                                                                                | C <sub>J</sub>                                         | 40          |      |      |      |      |      |      | pF    |
| Typical Thermal Resistance Junction to Lead (Note 3)                                                               | R <sub>θJL</sub>                                       | 10          |      |      |      |      |      |      | °C/W  |
| Operating and Storage Temperature Range                                                                            | T <sub>J</sub> ,T <sub>STG</sub>                       | -65 to +150 |      |      |      |      |      |      | °C    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on P.C.B. with 8.0mm<sup>2</sup> land areas.

**Ratings and Characteristics Curves**

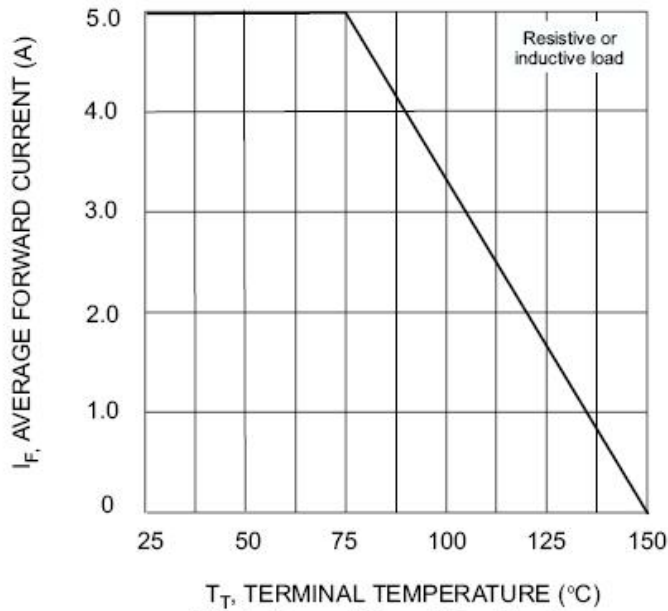


Fig. 1 Forward Current Derating Curve

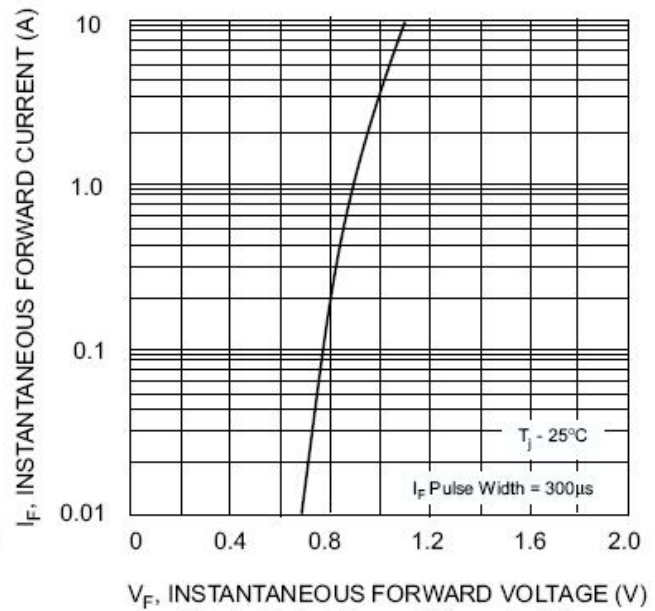


Fig. 2 Typical Forward Characteristics

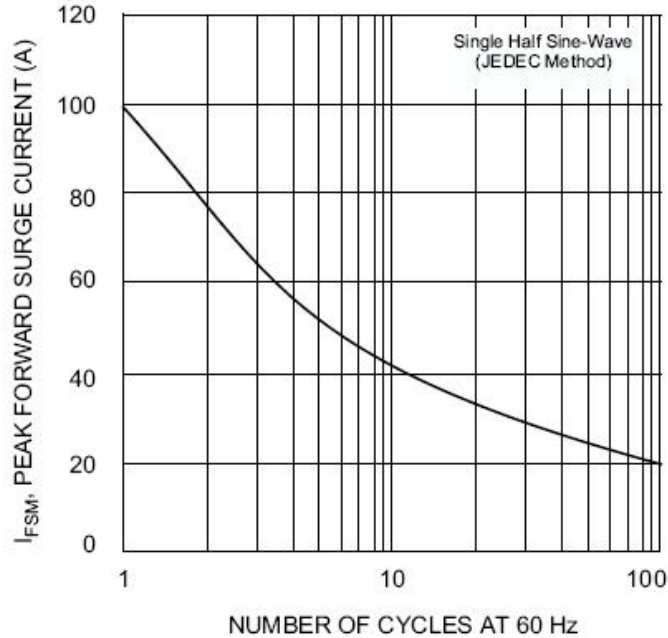


Fig. 3 Forward Surge Current Derating Curve

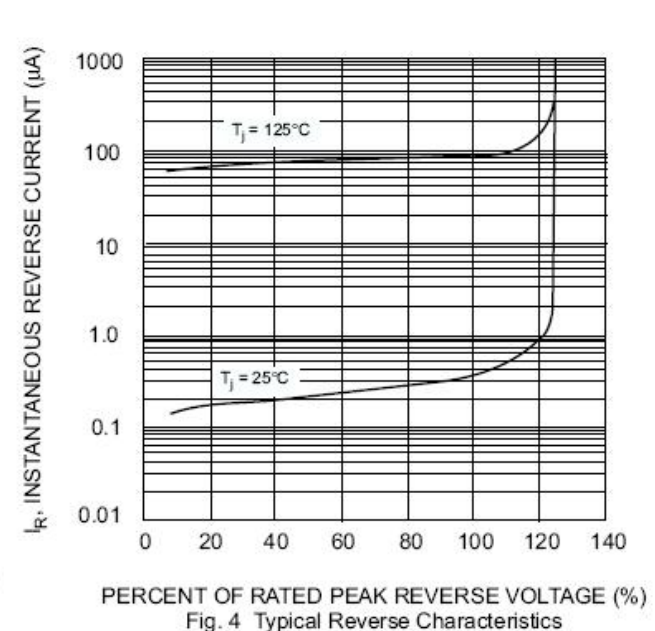
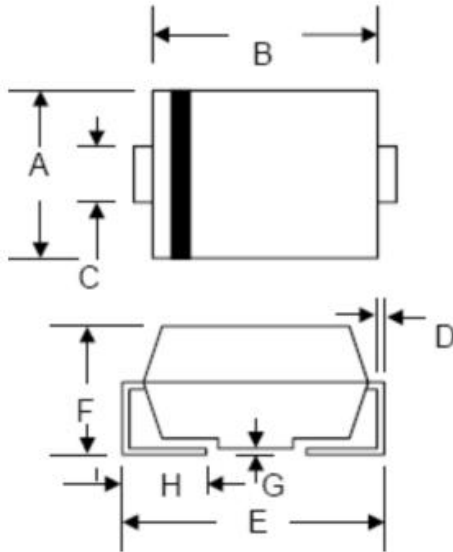


Fig. 4 Typical Reverse Characteristics

## Mechanical Dimensions SMC



| SYMBOL | Millimeters |       | Inches |       |
|--------|-------------|-------|--------|-------|
|        | Min.        | Max.  | Min.   | Max.  |
| A      | 5.59        | 6.22  | 0.220  | 0.245 |
| B      | 6.60        | 7.11  | 0.260  | 0.280 |
| C      | 2.90        | 3.20  | 0.114  | 0.126 |
| D      | 0.152       | 0.305 | 0.006  | 0.012 |
| E      | 7.75        | 8.13  | 0.305  | 0.320 |
| F      | 2.00        | 2.62  | 0.079  | 0.103 |
| G      | -           | 0.203 | -      | 0.008 |
| H      | 0.76        | 1.52  | 0.030  | 0.060 |

## Ordering Information

| Device    | Package          | Shipping       |
|-----------|------------------|----------------|
| S5AC-S5MC | SMC<br>(Pb-Free) | 3000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

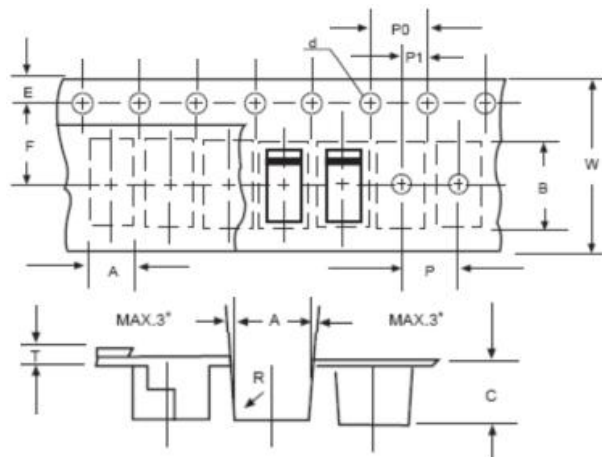


Where XXXXX is YYWWL

S5AC = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

## Carrier Tape Specification SMC



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A      | 5.90        | 6.10  |
| B      | 8.20        | 8.40  |
| C      | 2.40        | 2.60  |
| d      | 1.40        | 1.60  |
| E      | 1.40        | 1.60  |
| F      | 7.60        | 7.70  |
| P      | 7.90        | 8.10  |
| P0     | 3.90        | 4.10  |
| P1     | 3.90        | 4.10  |
| T      | -           | 0.600 |
| W      | 15.80       | 16.20 |

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