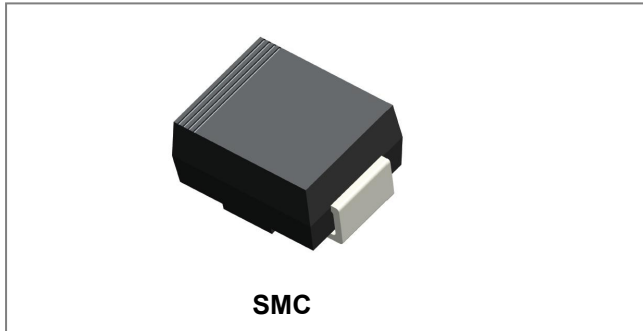


S8MC STANDARD RECTIFIER



Features

- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Low Power Loss
- Plastic Case Material has UL Flammability Classification Rating 94V-0
- Terminals finish: 100% Pure Tin
- This is a Halogen 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
- Terminals: Solder Plated , Solderable Per MIL-STD 750 ,Method 2026
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams

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 | S8MC | Units |
|--|--------------------|-------------|-----------------------------|
| Maximum Peak Repetitive Reverse Voltage Maximum DC Blocking Voltage | V_{RRM} V_R | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 700 | |
| Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length @ $T_L = 75^{\circ}\text{C}$ | $I(AV)$ | 8.0 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 210 | A |
| Maximum Instantaneous Forward Voltage @ $I_F = 8.0\text{A}$ | V_F | 0.985 | V |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 10 250 | μA |
| Typical Junction Capacitance (Note 1) | C_j | 48 | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 44 | $^{\circ}\text{C}/\text{W}$ |
| Operating Storage Temperature Range | T_{STG} | -55 to +150 | $^{\circ}\text{C}$ |
| Operating Junction Temperature | T_J | -55 to +150 | $^{\circ}\text{C}$ |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Mount on Cu pad size 16mm x 16mm on PCB.

Ratings and Characteristics Curves

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

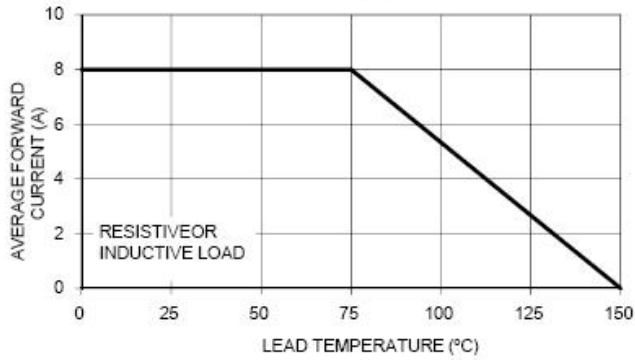


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

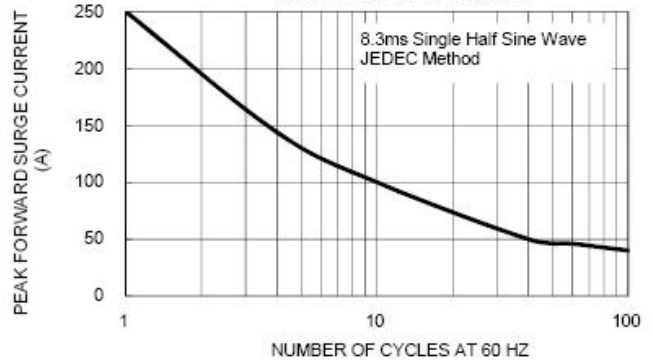


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

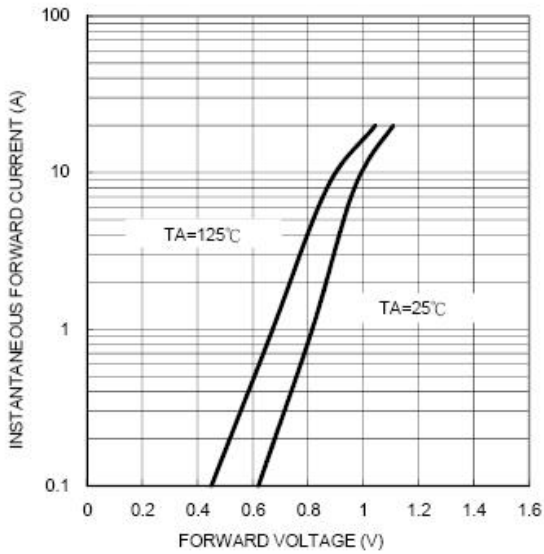
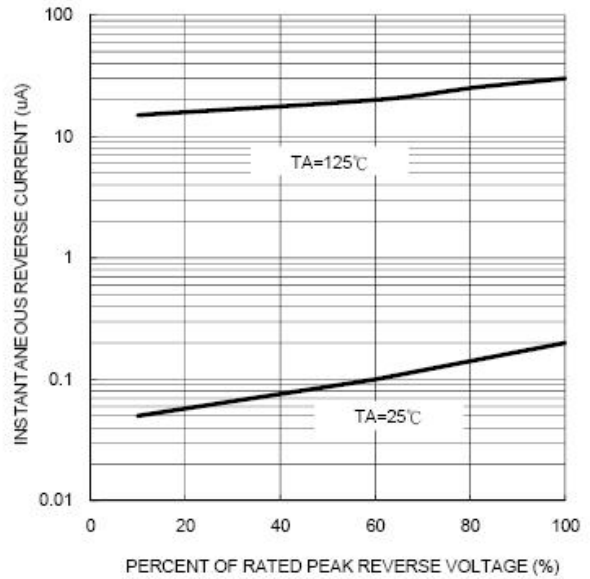
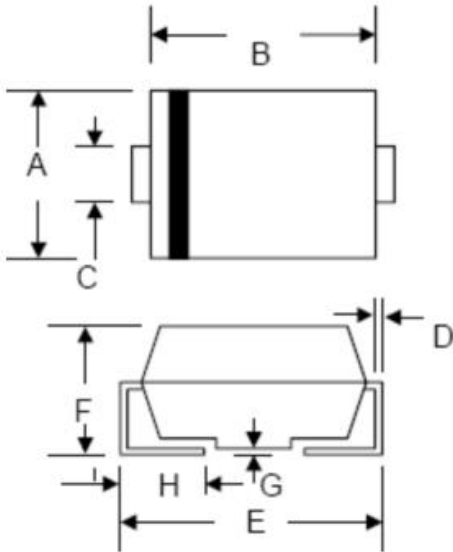


FIG. 4- TYPICAL REVERSE CHARACTERISTICS



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 | 8.25 | 0.305 | 0.325 |
| F | 2.00 | 2.95 | 0.079 | 0.116 |
| G | - | 0.203 | - | 0.008 |
| H | 0.76 | 1.52 | 0.030 | 0.060 |

Ordering Information

| Device | Package | Shipping |
|--------|---------------|----------------|
| S8MC | SMC (Pb-Free) | 3000pcs / reel |
| S8MCTR | SMC (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

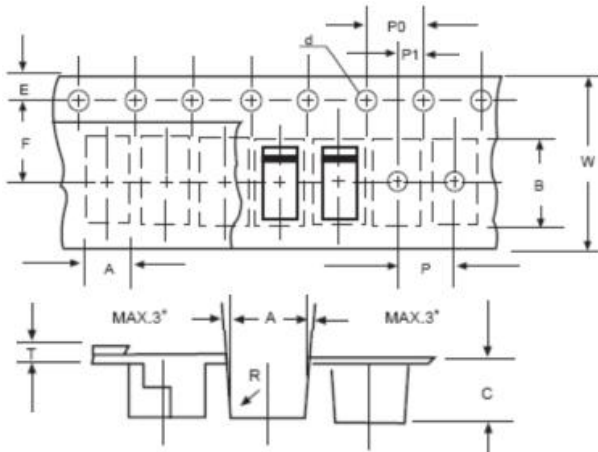


Where XXXXX is YYWWL

S8MC = 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 |



S8MC

Technical Data
Data Sheet N2055, Rev.A



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