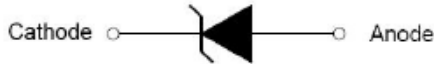


**SMC**



**Features**

- Low reverse leakage
- Glass passivated junction
- High forward surge current capability
- High efficiency operation
- Halogen free and RoHS compliant
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0

**Mechanical Data**

- CASE: SMCJ(DO-214AB) Molded Plastic
- Polarity: Color band denotes cathode end
- Mounting position: ANY
- Weight: 0.009 ounces, 0.25 gram

**Maximum Ratings & Electrical Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.)

| Parameter   | SYMBOLS         | RS3MC       | UNITS          |
|---|-----------------|-------------|----------------|
|   | MARKING         | RS3M        |                |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 1000        | V              |
| Maximum RMS voltage   | $V_{RMS}$       | 700         | V              |
| Maximum DC blocking voltage   | $V_{DC}$        | 1000        | V              |
| Maximum average forward rectified current at $T_L=100\text{ C}$                                 | $I_{(AV)}$      | 3.0         | A              |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load              | $I_{FSM}$       | 100.0       | A              |
| Maximum instantaneous forward voltage at 3.0A   | $V_F$           | 1.30        | V              |
| Maximum DC reverse current $T_A=25\text{ C}$<br>at rated DC blocking voltage $T_A=125\text{ C}$ | $I_R$           | 10<br>500   | $\mu\text{ A}$ |
| Maximum reverse recovery time(Note 1)   | $T_{rr}$        | 500         | ns             |
| Typical junction capacitance (Note2)  | $C_J$           | 60.0        | pF             |
| Typical thermal resistance  | $R_{\theta JA}$ | 80.0        | C/W            |
| Operating junction and storage temperature range  | $T_J, T_{STG}$  | -55 to +150 | C              |

**Note:** 1.Reverse recovery time test condition:  $I_F=0.5A$   $I_R=1.0A$   $I_{rr}=0.25A$   
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**Summary of Packing Options**

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| SMC     | Tape/Reel, 13" reel | 3000             | EIA-481-1         |

## Ratings and Characteristic Curves

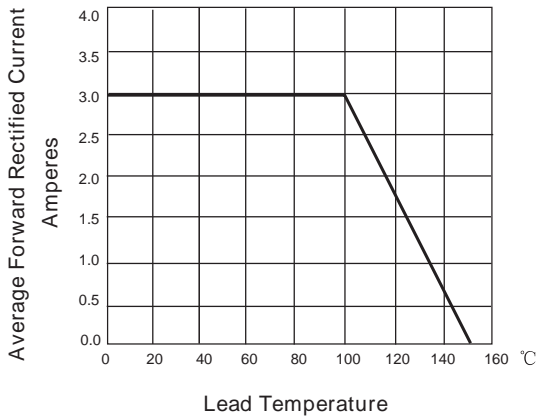


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

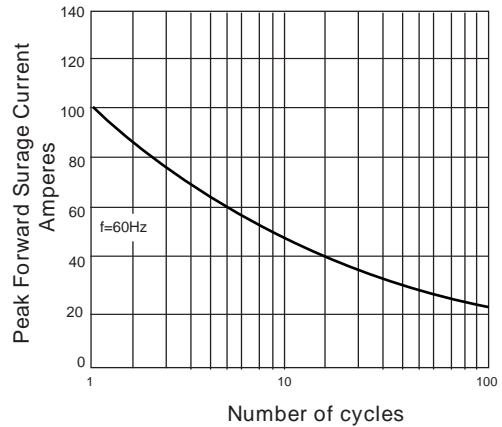


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

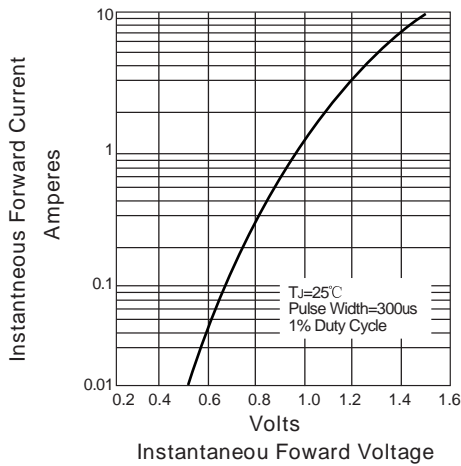


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

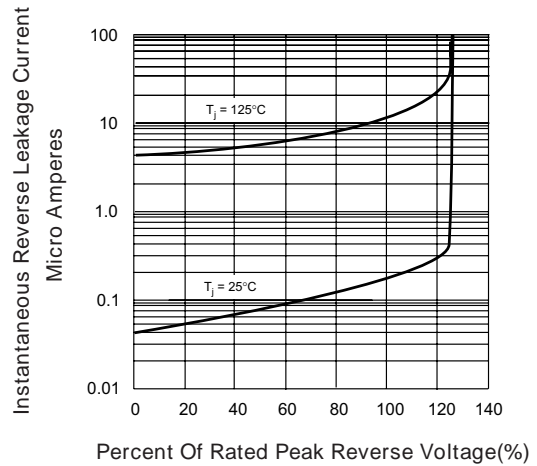


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

## Package Outline Dimensions: SMC(DO-214AB)

| Dim | Millimeters |      | Inches |       |
|-----|-------------|------|--------|-------|
|     | Min         | Max  | Min    | Max   |
| L   | 6.75        | 6.95 | 0.265  | 0.274 |
| D   | 5.75        | 5.95 | 0.226  | 0.234 |
| D1  | 2.9         | 3.1  | 0.114  | 0.122 |
| T   | 7.9         | 8.1  | 0.311  | 0.319 |
| T1  | 1.0         | 1.4  | 0.039  | 0.055 |
| d   | -           | 0.2  | -      | 0.008 |
| H   | 2.45        | 2.65 | 0.096  | 0.104 |
| H1  | 2.3         | 2.5  | 0.09   | 0.098 |