

# 3.0 Amp SURFACE MOUNT PLASTIC SILICON DIODES

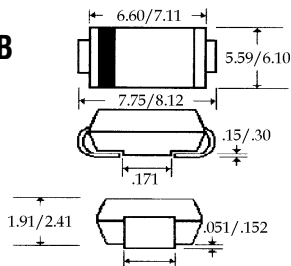
**SMC31 ... 310 Series**

## Description



## Mechanical Dimensions

DO-214AB  
(SMC)



(Dimensions in mm)

## Features

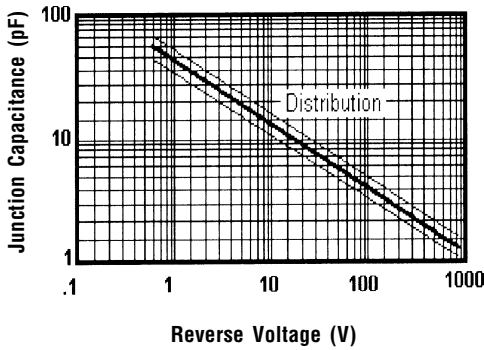
- LOW COST
- HIGH CURRENT CAPABILITY
- HIGH SURGE CAPABILITY
- LOW FORWARD VOLTAGE WITH LOW LEAKAGE CURRENT
- MEETS UL SPECIFICATION 94V-0

| <i>SMC31 . . . 310 Series</i>                                      |                        |                 |       |       |       |        | Units      |
|--|------------------------|-----------------|-------|-------|-------|--------|------------|
| Maximum Ratings  | SMC31                  | SMC32           | SMC34 | SMC36 | SMC38 | SMC310 |            |
| Peak Repetitive Reverse Voltage... $V_{RRM}$                       | 100                    | 200             | 400   | 600   | 800   | 1000   | Volts      |
| RMS Reverse Voltage... $V_{R(rms)}$                                | 70                     | 140             | 280   | 420   | 560   | 700    | Volts      |
| DC Blocking Voltage... $V_{DC}$                                    | 100                    | 200             | 400   | 600   | 800   | 1000   | Volts      |
| Average Forward Rectified Current... $I_{F(av)}$                   | ..... 3.0 .....        |                 |       |       |       |        | Amps       |
| Non-Repetitive Peak Forward Surge Current... $I_{FSM}$             | ..... 200 .....        |                 |       |       |       |        | Amps       |
| Operating & Storage Temperature Range... $T_J, T_{STRG}$           | ..... -65 to 175 ..... |                 |       |       |       |        | °C         |
| <b>Electrical Characteristics</b>                                  |                        |                 |       |       |       |        |            |
| Maximum Forward Voltage @ 3.0 A... $V_f$                           | ..... 1.1 .....        |                 |       |       |       |        | Volts      |
| Maximum DC Reverse Current... $I_R$<br>@ Rated DC Blocking Voltage | $T_C = 25^\circ C$     | ..... 5.0 ..... |       |       |       |        | $\mu$ Amps |
|  | $T_C = 75^\circ C$     | ..... 100 ..... |       |       |       |        | $\mu$ Amps |
| Typical Junction Capacitance... $C_j$ (Note 1)                     | ..... 50 .....         |                 |       |       |       |        | pF         |
| Typical Thermal Resistance... $R_{\theta JC}$                      | ..... 28 .....         |                 |       |       |       |        | °C / W     |

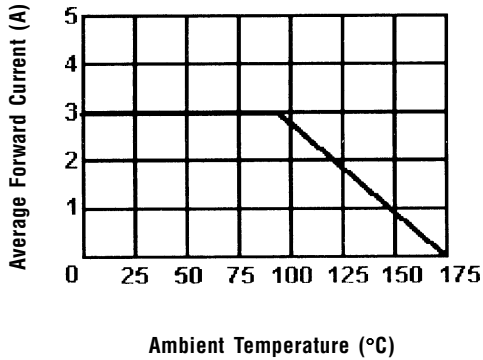
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**SMC31 ...310 Series**

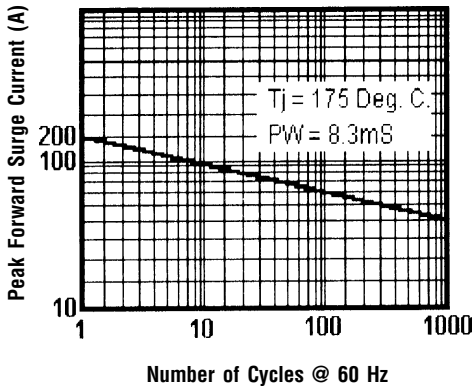
**Typical Junction Capacitance**



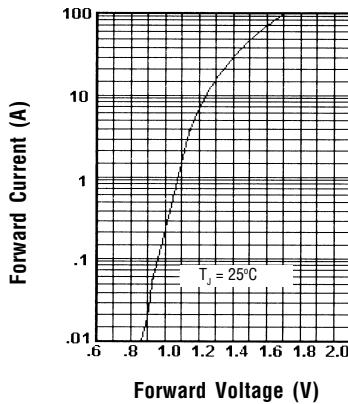
**Forward Current Derating Curve**



**Peak Forward Surge Current**



**Typical Instantaneous Forward Characteristics**



Ratings at 25 Deg. 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. Measured @ 1 MHz and applied reverse voltage of 4.0V.