

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

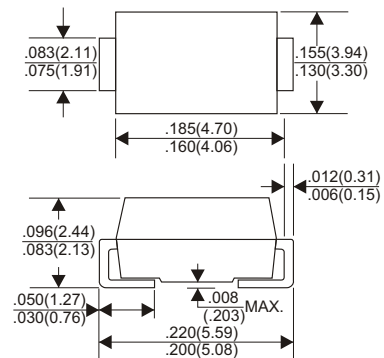
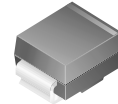
**DO-214AA (SMB)**

**FEATURES**

- . Low forward voltage drop
- . High current capability
- . High reliability
- . High surge current capability
- . Epitaxial construction
- . Lead Free Product

**MECHANICAL DATA**

- . Case: Molded plastic
- . Epoxy: UL 94V-0 rate flame retardant
- . Metallurgically bonded construction
- . Polarity: Color band denotes cathode end
- . Mounting position: Any
- . Weight: 0.102 grams



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                        | SM520B     | SM540B | SM560B | SM5100B | UNITS |
|----------------------------------------------------------------------------------------------------|------------|--------|--------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | 20         | 40     | 60     | 100     | V     |
| Working Peak Reverse Voltage                                                                       | 20         | 40     | 60     | 100     | V     |
| Maximum DC Blocking Voltage                                                                        | 20         | 40     | 60     | 100     | V     |
| Maximum Average Forward Rectified Current, See Fig. 1                                              | 5.0 A      |        |        |         |       |
| Peak Forward Surge Current, 8.3 mS single half Sine-wave superimposed on rated load (JEDEC method) | 125 A      |        |        |         |       |
| Maximum Instantaneous Forward Voltage at 5.0A                                                      | 0.55       |        | 0.65   | 0.83    | V     |
| Maximum DC Reverse Current Ta=25 °C                                                                | 0.2        |        | 0.1    | 0.05    | mA    |
| At Rated DC Blocking Voltage Ta=100 °C                                                             | 30         |        | 15     | 7.5     |       |
| Typical Junction Capacitance (Note 1)                                                              | 380        |        |        |         | pF    |
| Typical Thermal Resistance RθJC (Note 2)                                                           | 10         |        |        |         | / W   |
| Operating Temperature Range T <sub>J</sub>                                                         | -50 ~ +150 |        |        |         |       |
| Storage Temperature Range T <sub>STG</sub>                                                         | -65 ~ +175 |        |        |         |       |

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

● **RATING AND CHARACTERISTIC CURVES (SM520B THRU SM5100B)**

FIG .1-TYPICAL FORWARD CURRENT DERATING CURVE

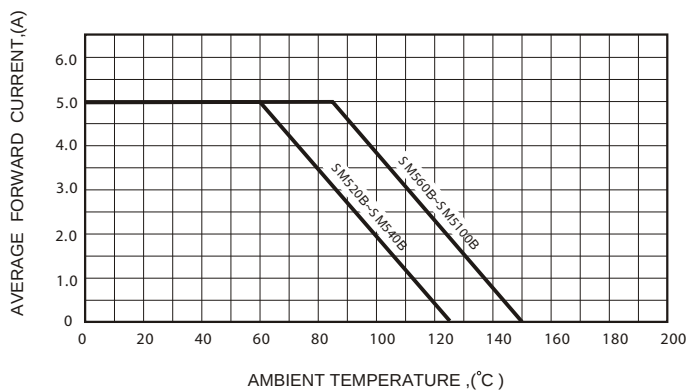


FIG .2-TYPICAL FORWARD CHARACTERISTICS

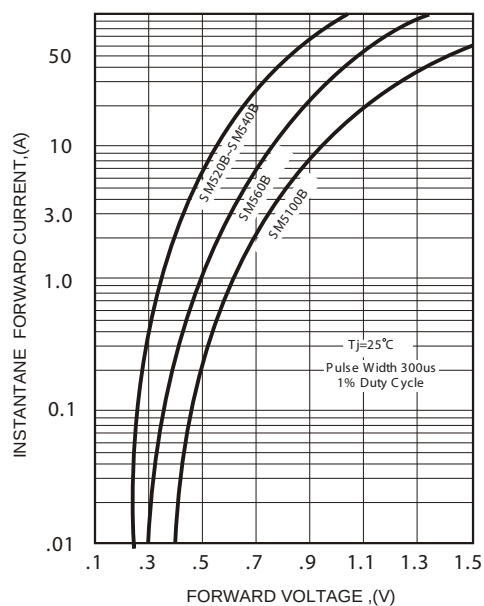


FIG .3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

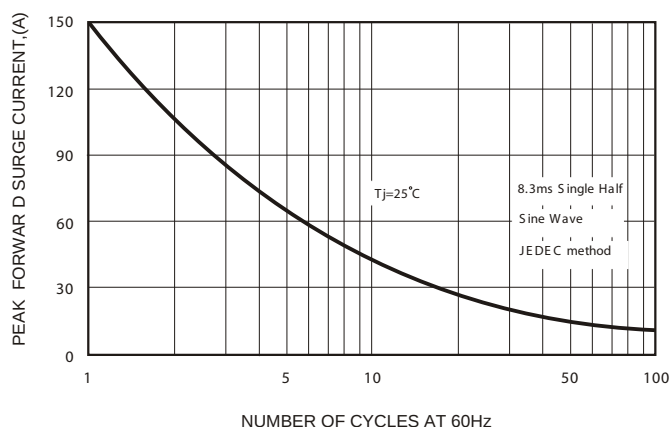


FIG .4-TYPICAL JUNCTION CAPACITANCE

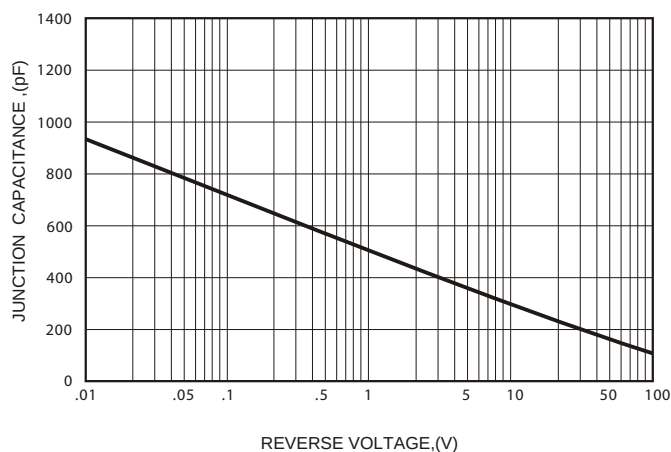


FIG .5 - TYPICAL REVERSE CHARACTERISTICS

