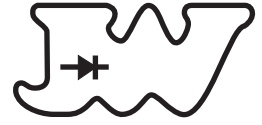


# SM320B THRU SM3100B



3.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS



## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

## 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: 0.093 grams

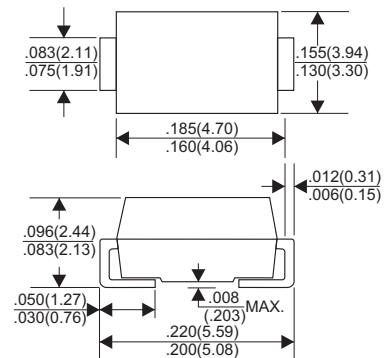
## VOLTAGE RANGE

20 to 100 Volts

## CURRENT

3.0 Ampere

### DO-214AA(SMB)



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                                                                                           | SM320B     | SM330B | SM340B | SM350B | SM360B | SM380B | SM390B | SM3100B | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|--------|--------|--------|--------|--------|--------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20         | 30     | 40     | 50     | 60     | 80     | 90     | 100     | V     |
| Maximum RMS Voltage                                                                                   | 14         | 21     | 28     | 35     | 42     | 56     | 63     | 70      | V     |
| Maximum DC Blocking Voltage                                                                           | 20         | 30     | 40     | 50     | 60     | 80     | 90     | 100     | V     |
| Maximum Average Forward Rectified Current<br>At T <sub>L</sub> =100°C                                 | 3.0        |        |        |        |        |        |        |         | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 100        |        |        |        |        |        |        |         | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                         | 0.55       |        |        | 0.75   |        | 0.85   |        |         | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 2.0        |        |        |        |        |        |        |         | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 20         |        |        |        |        |        |        |         | mA    |
| Typical Junction Capacitance (Note1)                                                                  | 300        |        |        |        |        |        |        |         | pF    |
| Typical Thermal Resistance R <sub>JL</sub> (Note 2)                                                   | 10         |        |        |        |        |        |        |         | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                            | -65 — +125 |        |        |        |        |        |        |         | °C    |
| Storage Temperature Range T <sub>STG</sub>                                                            | -65 — +150 |        |        |        |        |        |        |         | °C    |

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead.

## RATING AND CHARACTERISTIC CURVES (SM320B THRU SM3100B)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

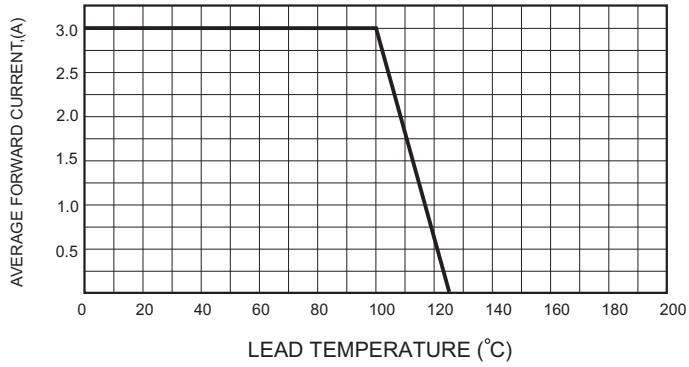


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

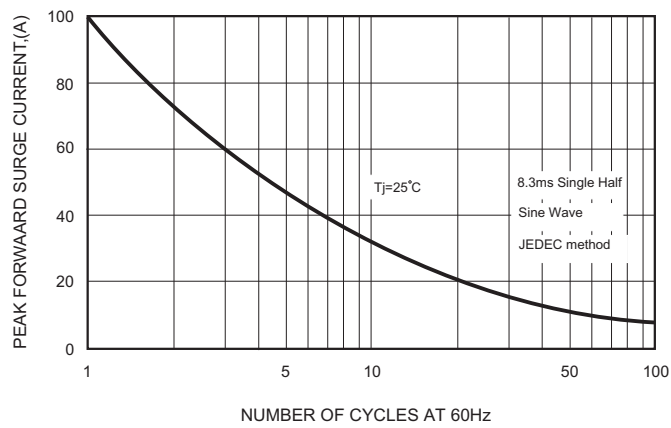


FIG.4-TYPICAL JUNCTION CAPACITANCE

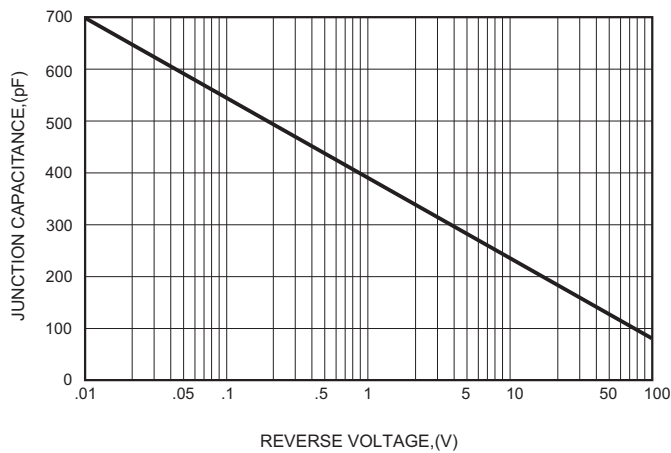


FIG.2-TYPICAL FORWARD CHARACTERISTICS

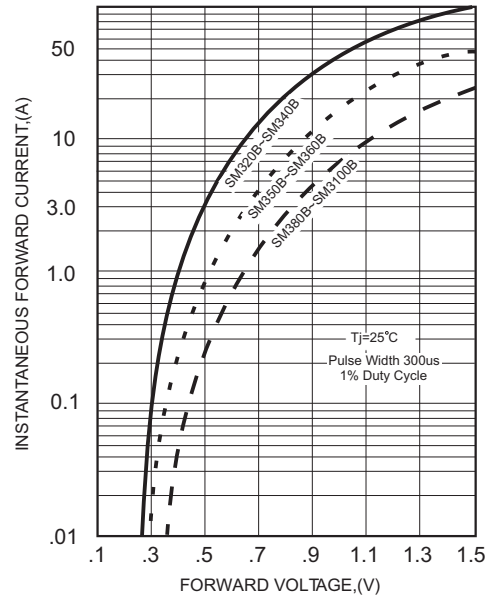


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

