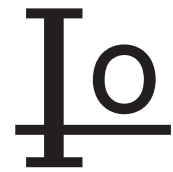


# SM5820B THRU SM5822B



## 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

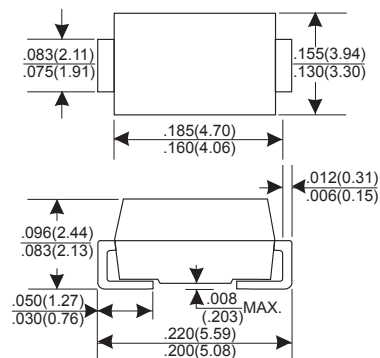
### VOLTAGE RANGE

20 to 40 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                                                                                        | SM5820B    | SM5821B | SM5822B | UNITS |
|----------------------------------------------------------------------------------------------------|------------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | 20         | 30      | 40      | V     |
| Maximum RMS Voltage                                                                                | 14         | 21      | 28      | V     |
| Maximum DC Blocking Voltage                                                                        | 20         | 30      | 40      | V     |
| Maximum Average Forward Rectified Current                                                          | 3.0        |         |         | A     |
| See Fig. 1                                                                                         |            |         |         |       |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 80         |         |         | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                      | 0.475      | 0.500   | 0.525   | 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 RθJA (Note 2)                                                           | 17         |         |         | °C/W  |
| Operating Temperature Range Tj                                                                     | -65 — +125 |         |         | °C    |
| Storage Temperature Range Tstg                                                                     | -65 — +150 |         |         | °C    |

#### NOTES:

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

## RATING AND CHARACTERISTIC CURVES (SM5820B THRU SM5822B)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

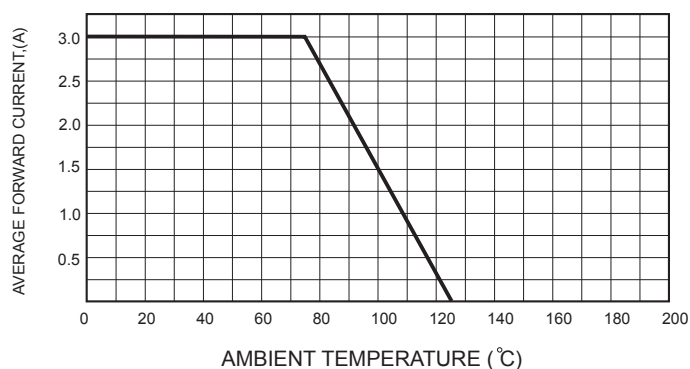


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

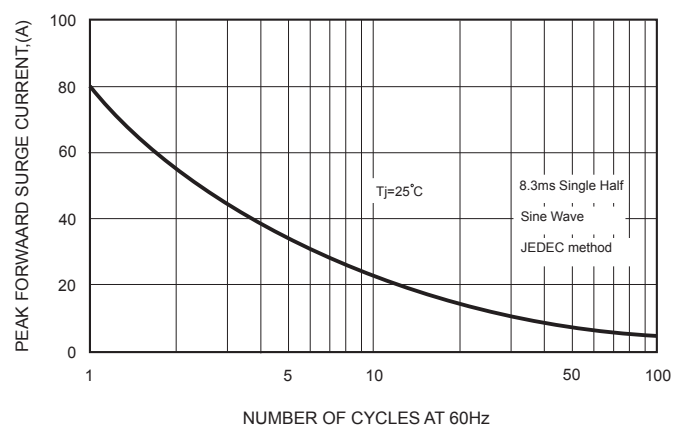


FIG.4-TYPICAL JUNCTION CAPACITANCE

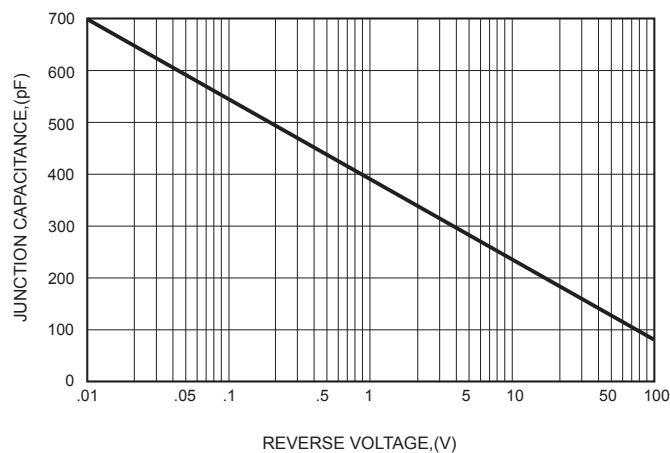


FIG.2-TYPICAL FORWARD CHARACTERISTICS

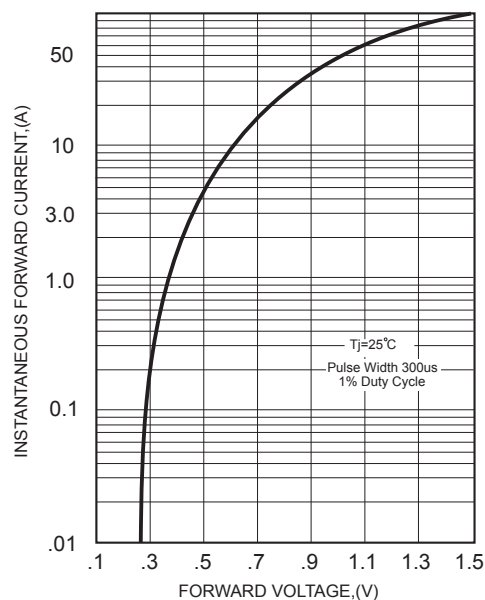


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

