

# 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

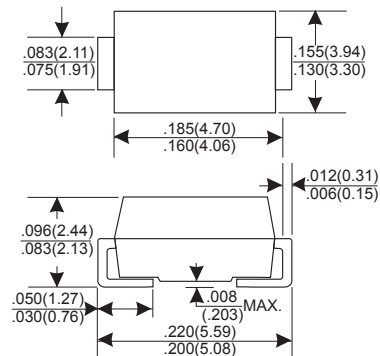
## VOLTAGE RANGE

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				
See Fig. 1	3.0			A
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 Ta=25°C	2.0			mA
at Rated DC Blocking Voltage 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

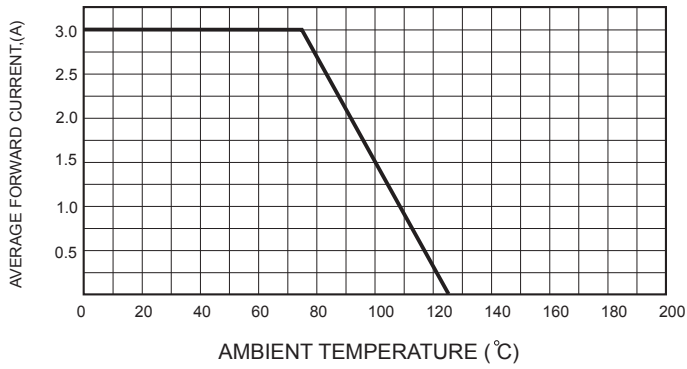


FIG.2-TYPICAL FORWARD CHARACTERISTICS

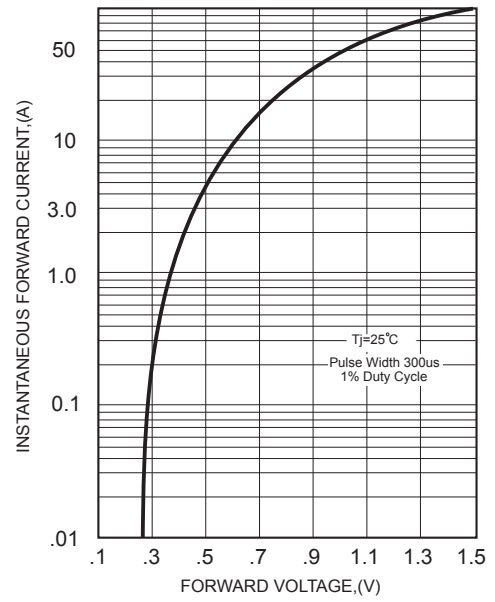


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

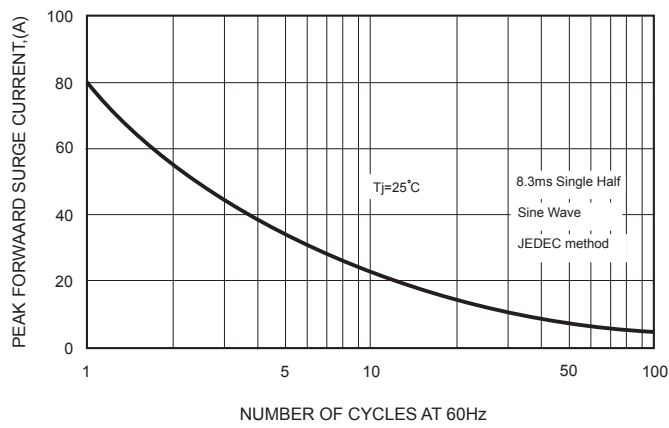


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

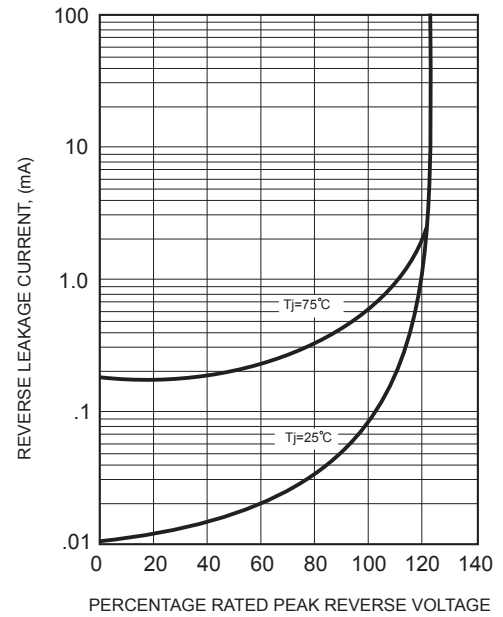


FIG.4-TYPICAL JUNCTION CAPACITANCE

