

SM5820B THRU SM5822B

GW

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

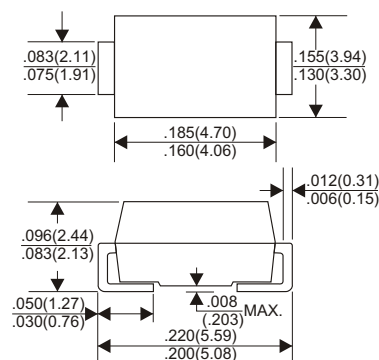
VOLTAGE RANGE

20 to 40 Volts

CURRENT

3.0 Amperes

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 at $T_L=100^{\circ}\text{C}$	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 at Rated DC Blocking Voltage $T_a=25^{\circ}\text{C}$	0.5			mA
$T_a=100^{\circ}\text{C}$	20			mA
Typical Junction Capacitance (Note1)	300			pF
Typical Thermal Resistance $R_{\theta JL}$ (Note 2)	10			$^{\circ}\text{C/W}$
Operating Temperature Range T_j	-65 — $+150$			$^{\circ}\text{C}$
Storage Temperature Range T_{stg}	-65 — $+150$			$^{\circ}\text{C}$

NOTES:

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

RATING AND CHARACTERISTIC CURVES (SM5820B THRU SM5822B)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

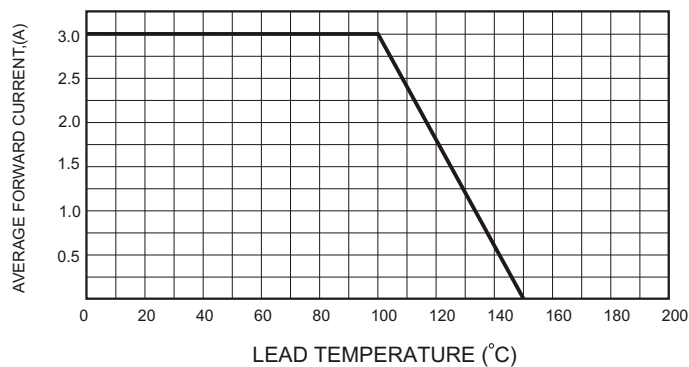


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

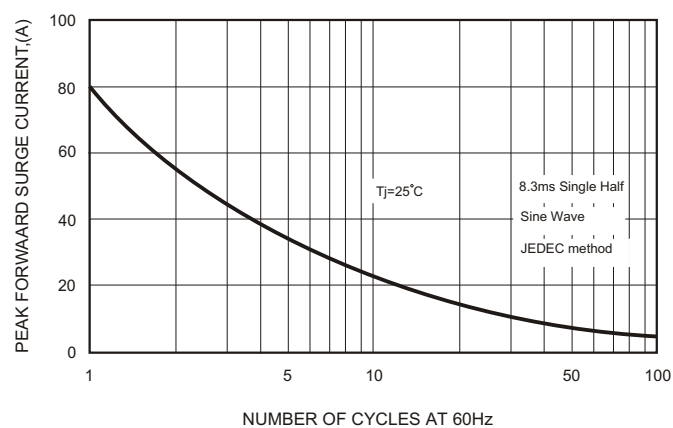


FIG.4-TYPICAL JUNCTION CAPACITANCE

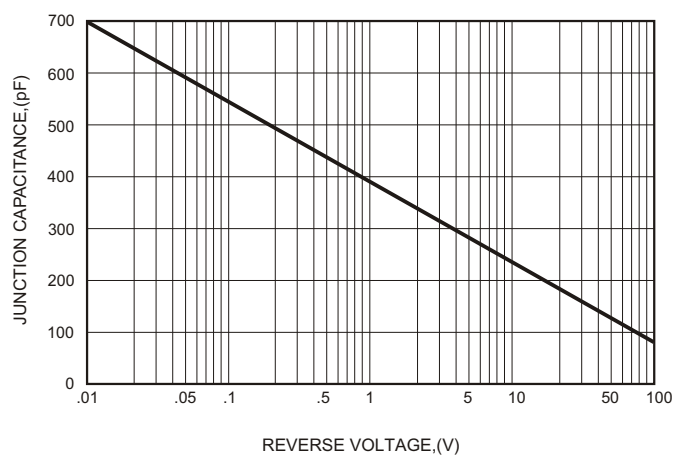


FIG.2-TYPICAL FORWARD CHARACTERISTICS

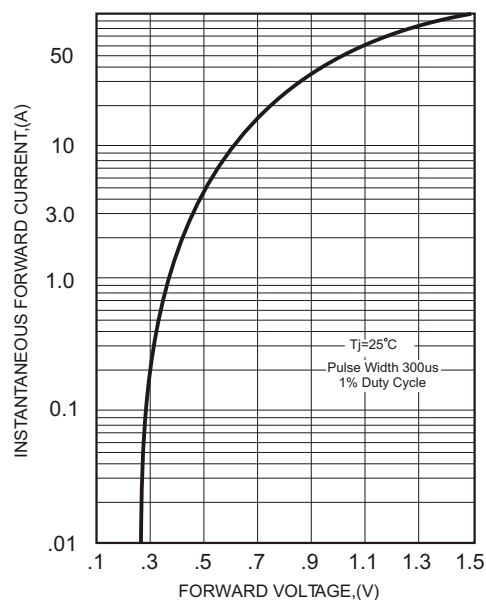


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

