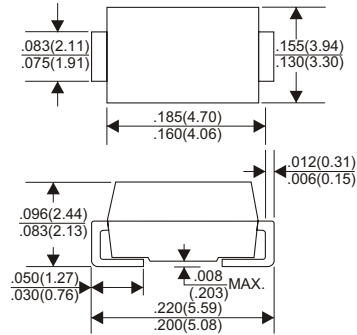


A suffix of "-C" specifies halogen & lead-free

**DO-214AA (SMB)**

**FEATURES**

- . RoHS Compliant Product
- . Low forward voltage drop
- . High current capability
- . High reliability
- . High surge current capability
- . Epitaxial construction



Dimensions in inches and (millimeters)

**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: 0.70 grams

**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	SM820B	SM840B	SM860B	SM8100B	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	8.0			A	
Peak Forward Surge Current, 8.3 ms single half Sine-wave superimposed on rated load (JEDEC method)	150			A	
Maximum Instantaneous Forward Voltage at 8.0A	0.58		0.69	0.83	V
Maximum DC Reverse Current Ta=25	0.3		0.15	0.05	mA
At Rated DC Blocking Voltage Ta=100	45		22.5	7.5	
Typical Junction Capacitance (Note 1)	250				pF
Typical Thermal Resistance RθJC (Note 2)	35				°C / W
Operating Temperature Range T <sub>J</sub>	-50 ~ +150				°C
Storage Temperature Range T <sub>STG</sub>	-65 ~ +175				°C

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 (SM820B THRU SM8100B)**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

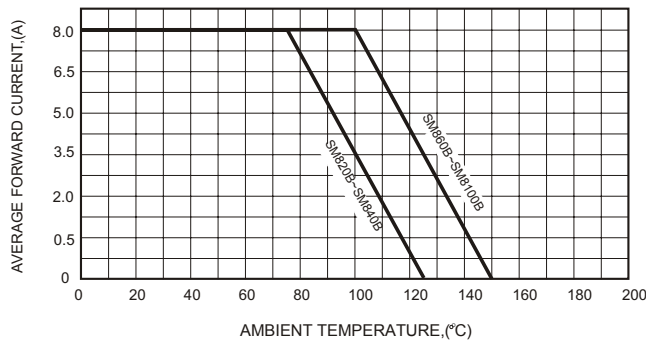


FIG.2-TYPICAL FORWARD CHARACTERISTICS

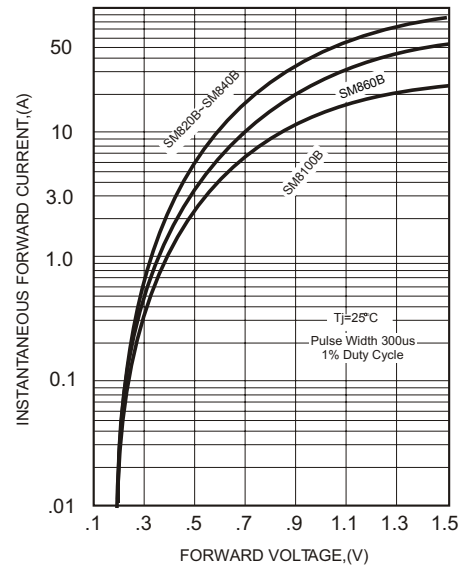


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

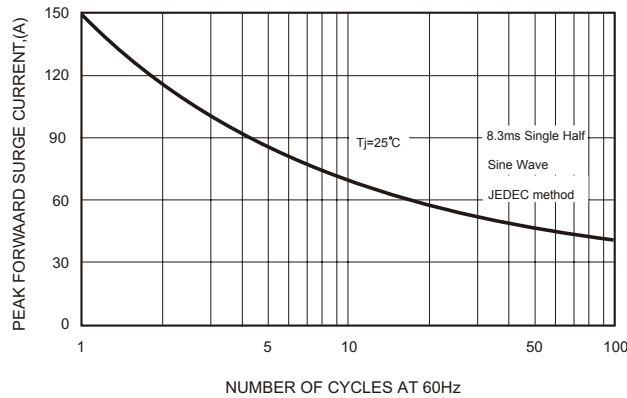


FIG.4-TYPICAL JUNCTION CAPACITANCE

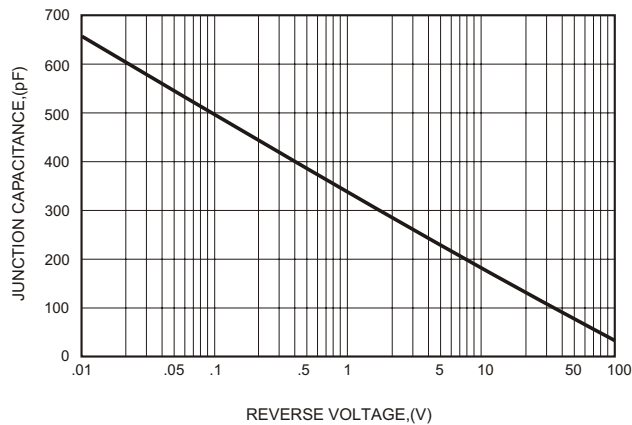


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

