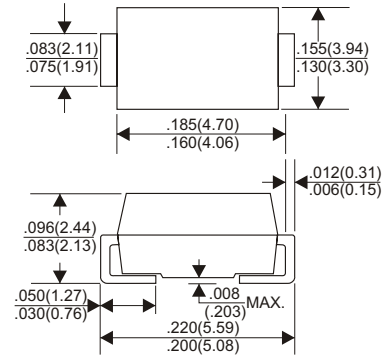


A suffix of "-C" specifies halogen & lead-free

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 _J	-50 ~ +150				°C
Storage Temperature Range T _{STG}	-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

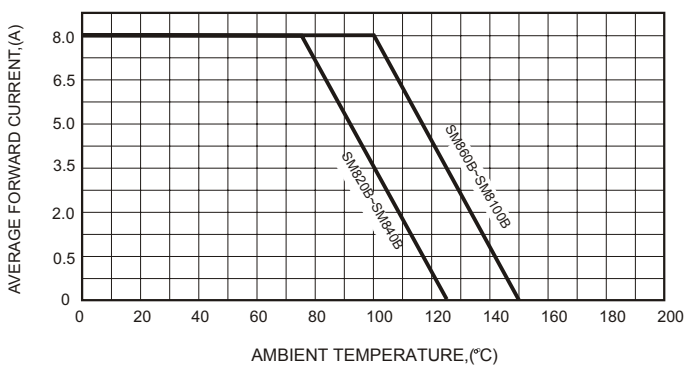


FIG.2-TYPICAL FORWARD CHARACTERISTICS

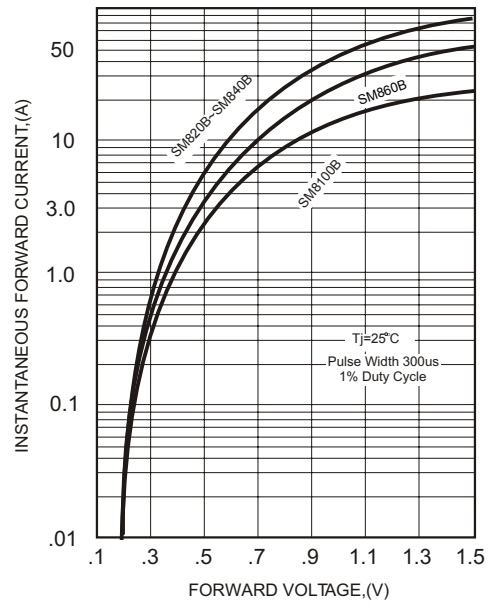


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

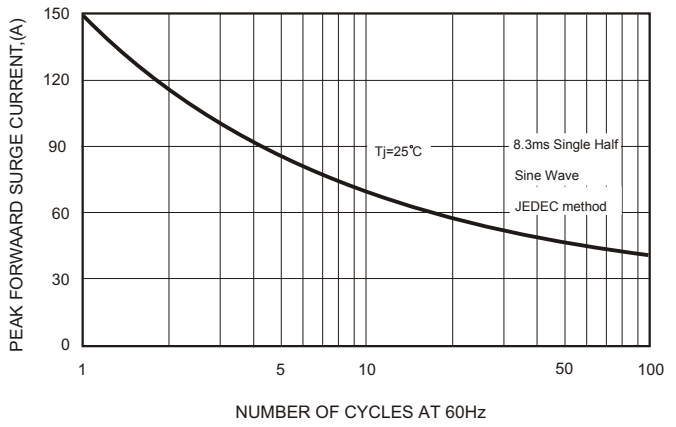


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

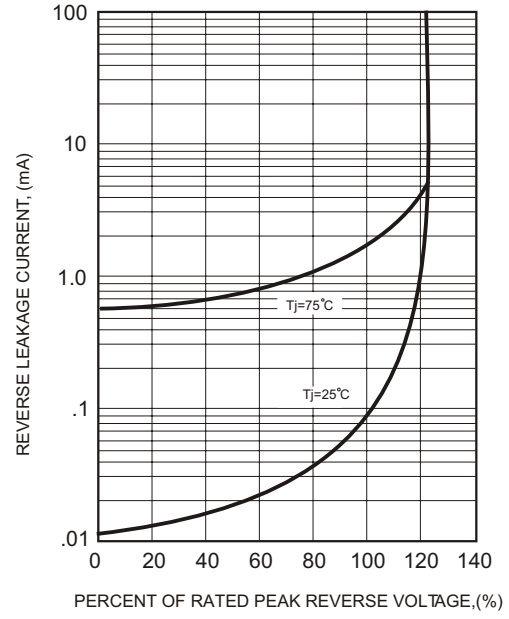


FIG.4-TYPICAL JUNCTION CAPACITANCE

