

# SM120A THRU SM160A

1.0 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: 0.063 grams

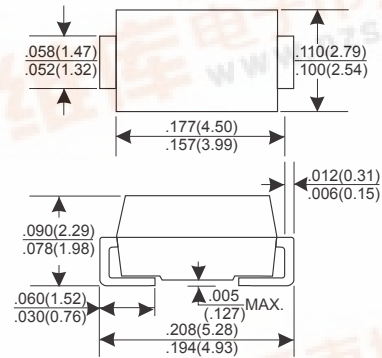
## VOLTAGE RANGE

20 to 60 Volts

## CURRENT

1.0 Ampere

### DO-214AC(SMA)



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	SM120A	SM130A	SM140A	SM150A	SM160A	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	V
Maximum RMS Voltage	14	21	28	35	42	V
Maximum DC Blocking Voltage	20	30	40	50	60	V
Maximum Average Forward Rectified Current						
See Fig. 1	1.0					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	40					A
Maximum Instantaneous Forward Voltage at 1.0A	0.55		0.70			V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	1.0					mA
at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$	10					mA
Typical Junction Capacitance (Note1)	110					pF
Typical Thermal Resistance R $\theta$ JA (Note 2)	50					°C/W
Operating Temperature Range T $_j$	-65 — +125			-65 — +150		°C
Storage Temperature Range T $_{stg}$	-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 (SM120A THRU SM160A)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

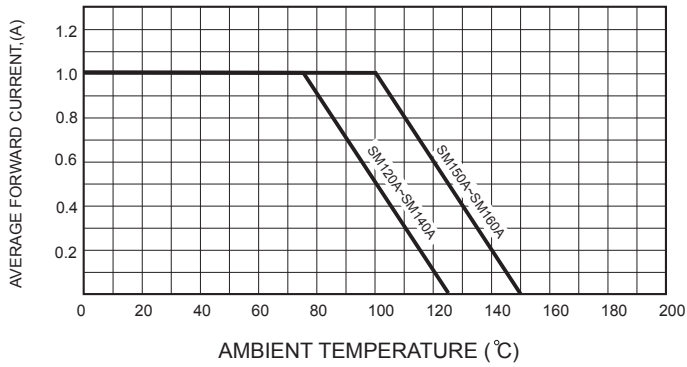


FIG.2-TYPICAL FORWARD CHARACTERISTICS

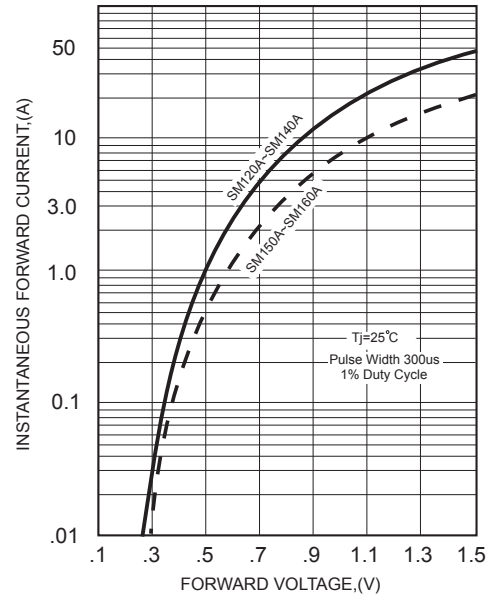


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

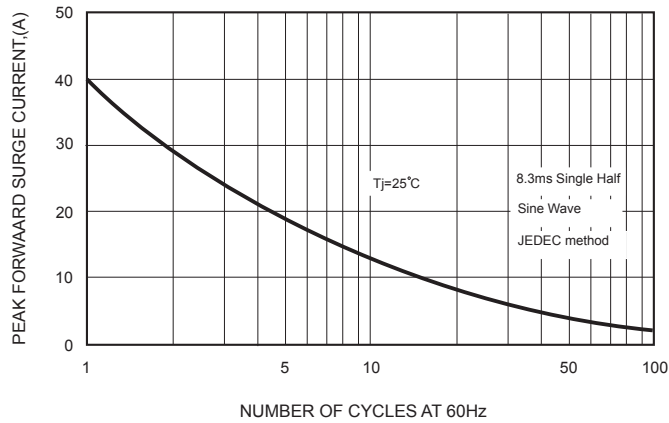


FIG.4-TYPICAL JUNCTION CAPACITANCE

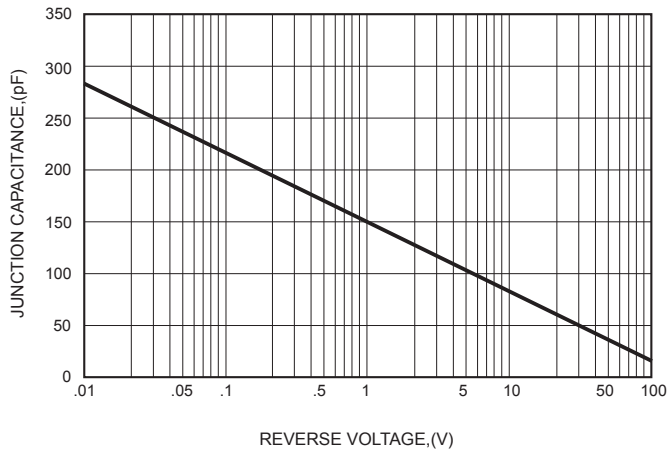


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

