

# 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

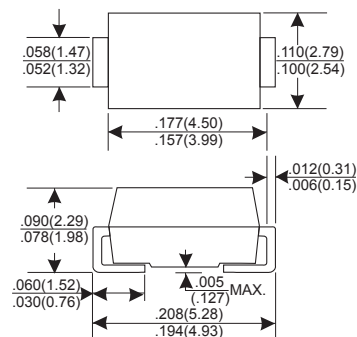
## VOLTAGE RANGE

20 to 60 Volts

## CURRENT

1.0 Ampere

### DO-214AC(SMA)



## 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 Ta=25°C   | 1.0        |        |        |            |        | mA    |
| at Rated DC Blocking Voltage Ta=100°C  | 10         |        |        |            |        | mA    |
| Typical Junction Capacitance (Note1)   | 110        |        |        |            |        | pF    |
| Typical Thermal Resistance RθJA (Note 2)   | 50         |        |        |            |        | °C/W  |
| Operating Temperature Range Tj   | -65 — +125 |        |        | -65 — +150 |        | °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 (SM120A THRU SM160A)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

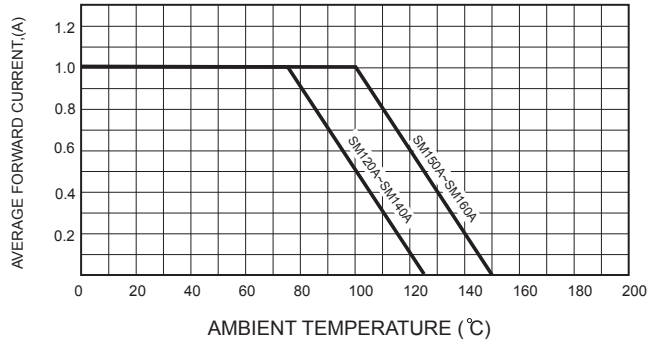


FIG.2-TYPICAL FORWARD CHARACTERISTICS

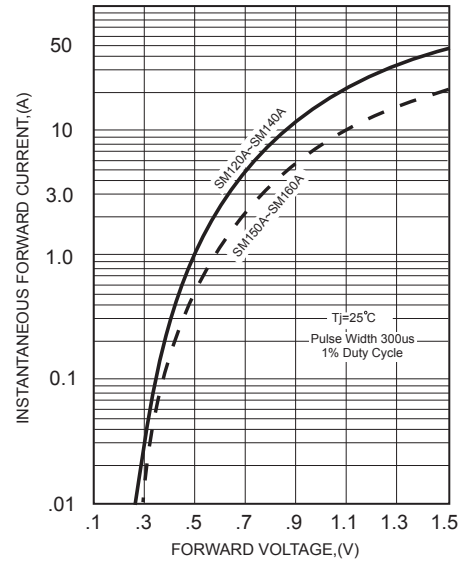


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

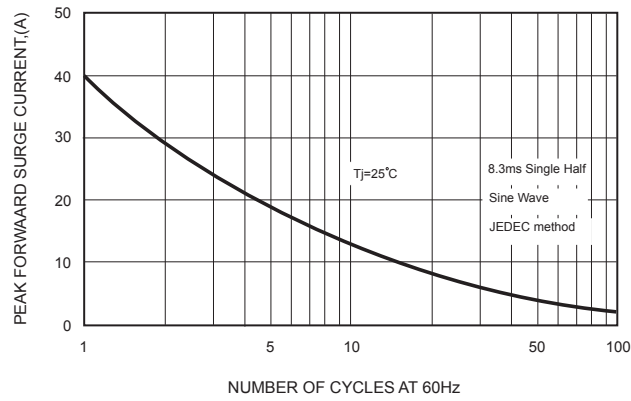


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

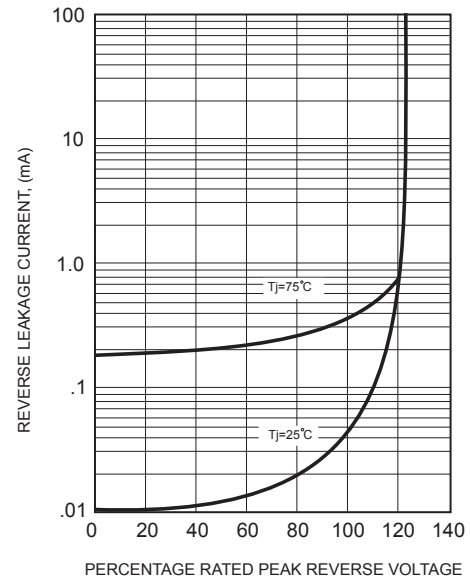


FIG.4-TYPICAL JUNCTION CAPACITANCE

