

# SM120M THRU SM1100M



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: 0.040 grams

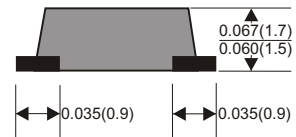
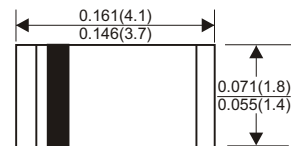
## VOLTAGE RANGE

20 to 100 Volts

## CURRENT

1.0 Ampere

### SOD-123



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	SM120M	SM130M	SM140M	SM150M	SM160M	SM180M	SM190M	SM1100M	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	90	100	V
Maximum RMS Voltage	14	21	28	35	42	56	63	70	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	90	100	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)	30								A
Maximum Instantaneous Forward Voltage at 1.0A	0.55		0.70		0.85				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25°C				0.5				mA
	Ta=100°C				10				mA
Typical Junction Capacitance (Note1)	120								pF
Typical Thermal Resistance R <sub>JA</sub> (Note 2)	98								°C/W
Operating Temperature Range T <sub>J</sub>	-65 — +125				-65 — +150				°C
Storage Temperature Range T <sub>STG</sub>	-65 — +150								°C
Marking Code	12	13	14	15	16	18	19	10	

### NOTES:

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

## RATING AND CHARACTERISTIC CURVES (SM120M THRU SM1100M)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

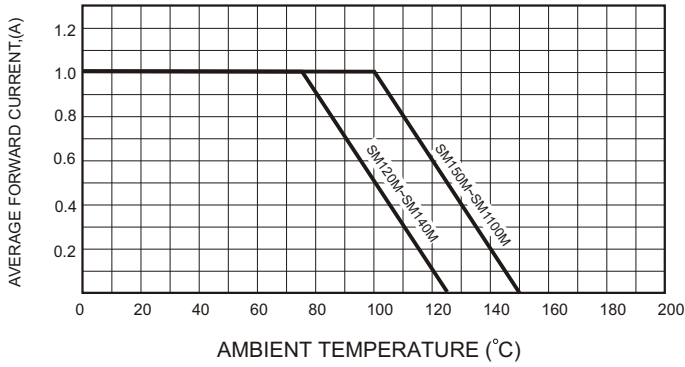


FIG.2-TYPICAL FORWARD CHARACTERISTICS

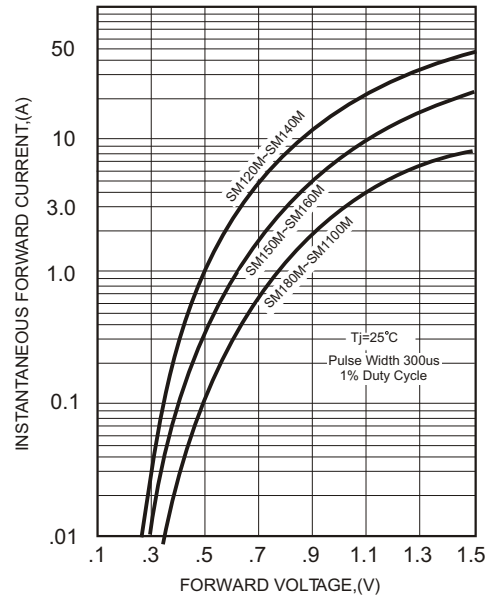


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

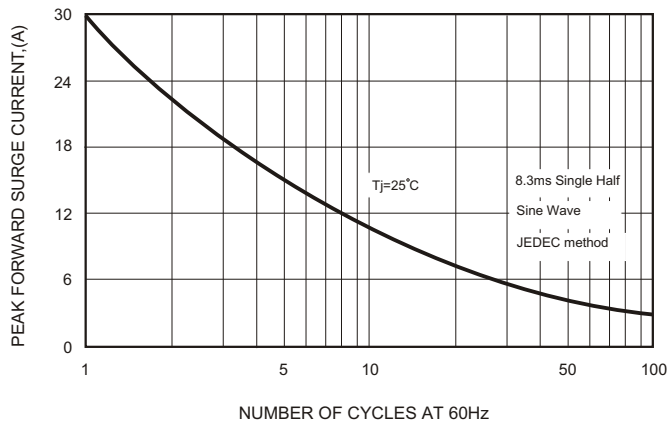


FIG.4-TYPICAL JUNCTION CAPACITANCE

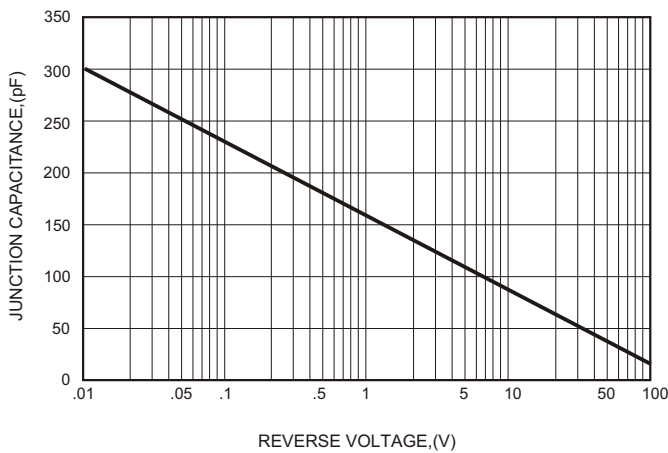


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

