

# SM5817 THRU SM5819



1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS



## FEATURES

- \* Low forward voltage drop
- \* Low leakage current
- \* High reliability

## 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: 0.015 grams

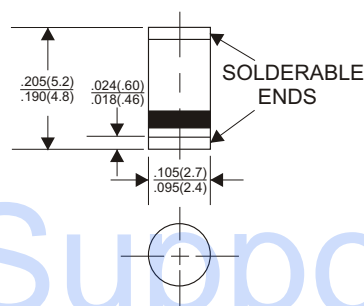
## VOLTAGE RANGE

20 to 40 Volts

## CURRENT

1.0 Ampere

SM-1



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	SM5817	SM5818	SM5819	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking Voltage	20	30	40	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at Ta=90°C		1.0		A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		25		A
Maximum Instantaneous Forward Voltage at 1.0A	0.45	0.55	0.60	V
Maximum DC Reverse Current Ta=25°C		1.0		mA
at Rated DC Blocking Voltage Ta=100°C		10		mA
Typical Junction Capacitance (Note 1)		110		pF
Typical Thermal Resistance R <sub>JA</sub> (Note 2)		80		°C/W
Operating Temperature Range T <sub>J</sub>		-65 — +125		°C
Storage Temperature Range T <sub>STG</sub>		-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 (SM5817 THRU SM5819)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

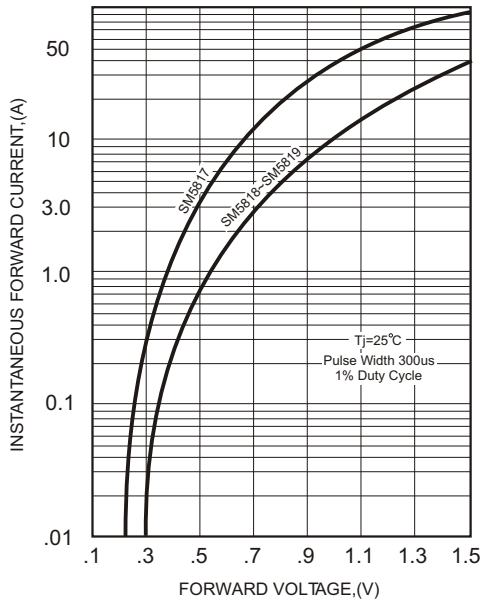


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

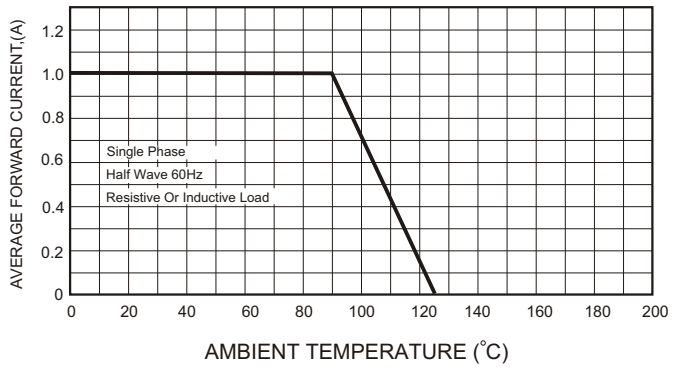


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

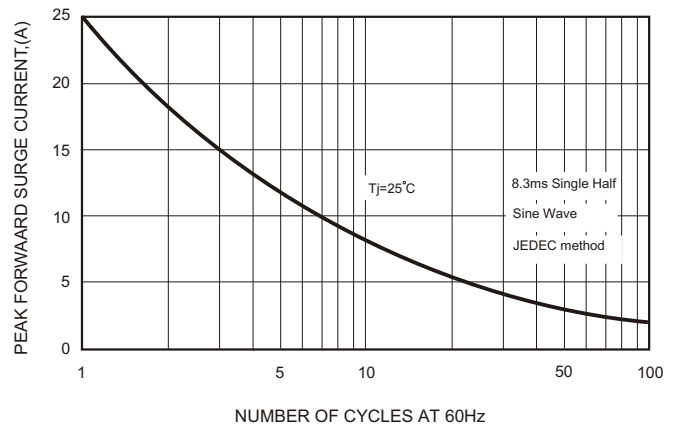


FIG.3 - TYPICAL REVERSE CHARACTERISTICS



FIG.5-TYPICAL JUNCTION CAPACITANCE

