

**SM5817 THRU SM5819**

1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**FEATURES**

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

**MECHANICAL DATA**

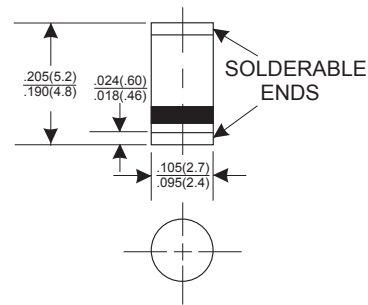
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.015 grams
- \* Both normal and Pb free product are available:
- \* Normal: 80~95%Sn, 5~20%Pb
- \* Pb free: 99 Sn above can meet Rohs environment substance directive request

**VOLTAGE RANGE**

20 to 40 Volts

**CURRENT**

1.0 Ampere

**DO-213AB**

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				A
See Fig. 2	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 at Rated DC Blocking Voltage	500			uA
Typical Junction Capacitance (Note1)	110			pF
Typical Thermal Resistance R <sub>θJA</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

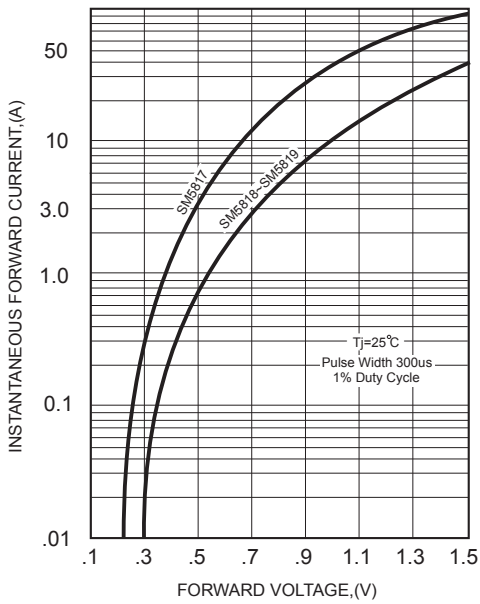


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

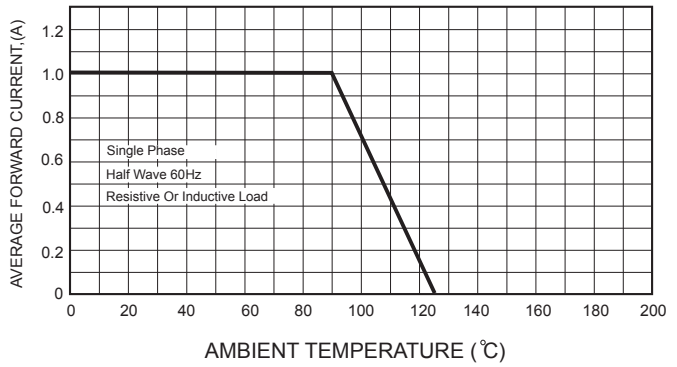


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

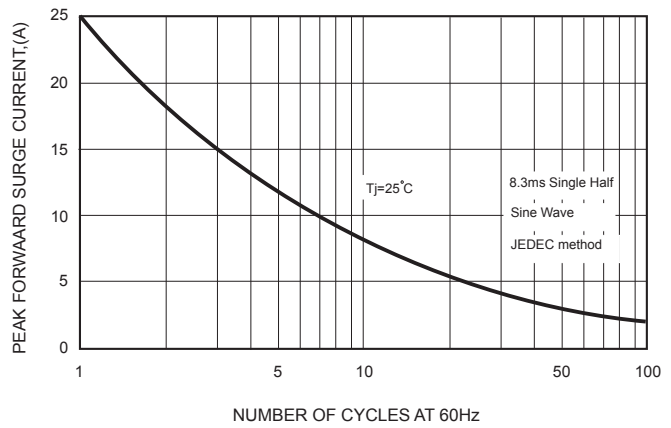


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

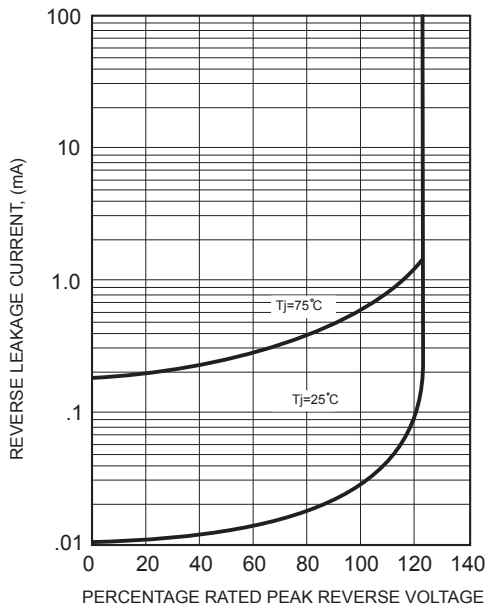


FIG.5-TYPICAL JUNCTION CAPACITANCE

