

SM5817 THRU SM5819

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

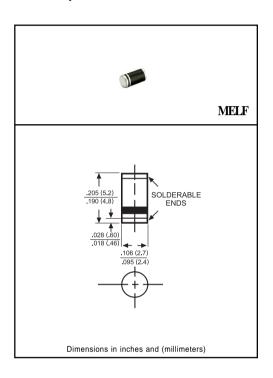
## VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

#### **FEATURES**

- \* Fast switching
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.015 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.



### MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	SM5817	SM5818	SM5819	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	Volts
Maximum RMS Voltage	VRMS	14	21	28	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	Volts
Maximum Average Forward Rectified Current at TA=90°C	lo	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM		Amps		
Typical Thermal Resistance (Note) 1	RθJA	80			°C/W
Typical Junction Capacitance (Note 2)	CJ	110			pF
Storage Operating Temperature Range	TJ, TSTG	-65 to + 125			°C

#### ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SM5817	SM5818	SM5819	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		VF	.45	.55	.60	Volts
Maximum Forward Voltage at 3.1A DC		VF	.75	.875	.90	Volts
Maximum Average Reverse Current at	@TA = 25°C	lo.	1.0			- mAmps
Rated DC Blocking Voltage	@Ta = 100°C	- IR				

NOTES: 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (SM5817 THRU SM5819)

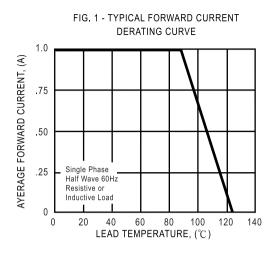


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS INSTANTANEOUS FORWARD CURRENT, (A) SM5817 10 SM5818 TJ = 25℃ Pulse Width = 300uS 1% Duty Cycle .1 .3 .5 .7 .9 1.3 1.5 1.9 2.1 1.1 1.7 INSTANTANEOUS FORWARD VOLTAGE, (V)

INSTANTANEOUS REVERSE CURRENT (mA) T.i = 125°C 10 1.0 TJ = 75℃ 0.1

TJ = 25℃

80

100

120

140

FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

100

.01

.001

10

20

40

60

PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

