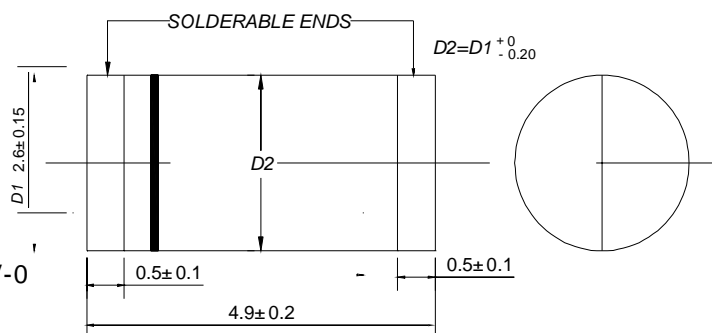


## SM5817-SM5819

**VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere**

### Features

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94 V-0



### Mechanical data

- ◇ Case: JEDEC DO-213AB, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.0046 ounces, 0.116 grams
- ◇ Mounting position: Any



Dimensions in millimeters

### 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	Io	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	25			Amps
Typical Thermal Resistance (Note) 1	RqJA	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 Rated DC Blocking Voltage	@ TA= 25 <sup>o</sup> C	IR	1.0			mAmps
	@ TA= 100 <sup>o</sup> C		10			

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

FIG.1-FORWARD CURRENT DERATING CURVE

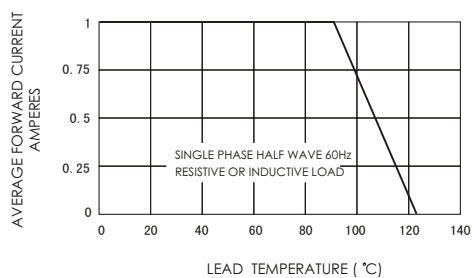


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

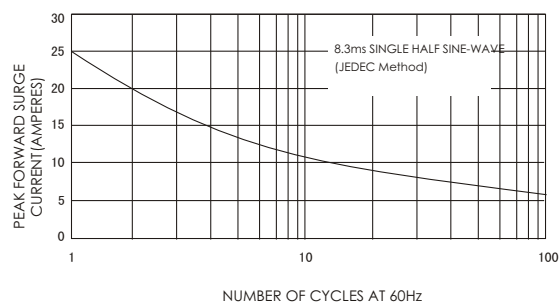


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

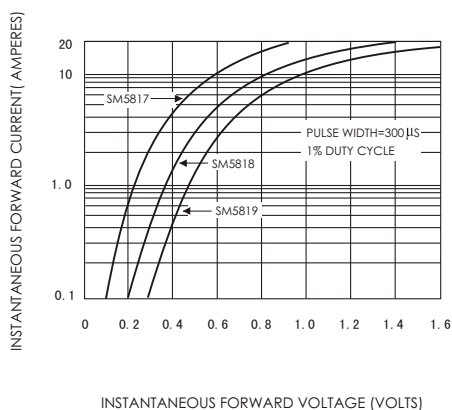


FIG.4-TYPICAL REVERSE CHARACTERISTICS

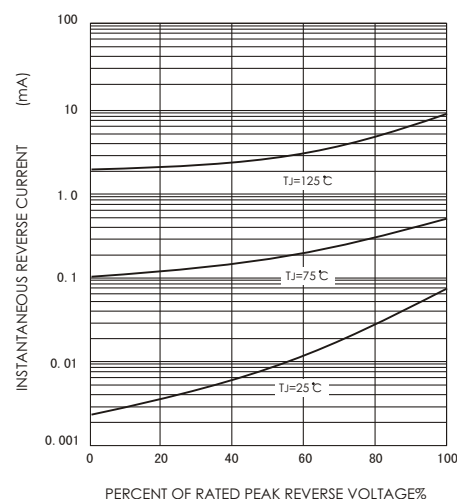
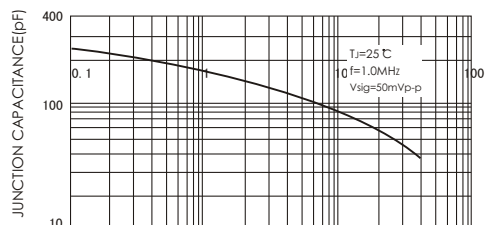


FIG.5-TYPICAL JUNCTION CAPACITANCE



## SM5817-SM5819

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