



## SCHOTTKY BARRIER RECTIFIER

**1N5817SF - 1N5819SF**

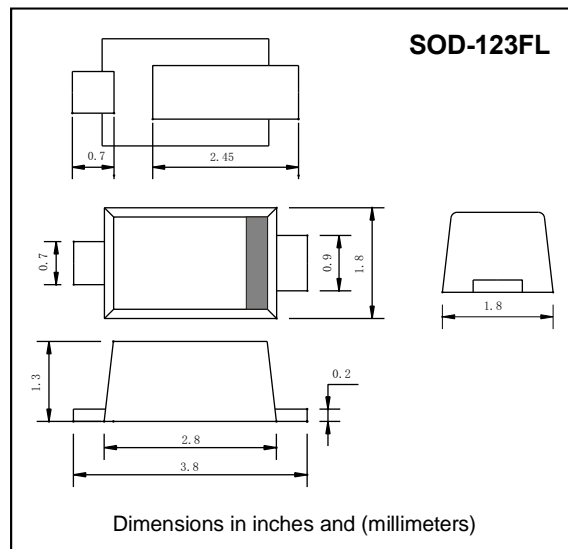
**VOLTAGE RANGE - 20 to 40 V**  
**CURRENT - 1 A**

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling , and polarity protection applications
- High temperature soldering guaranteed:260 °C/10 seconds, at terminals, 0.375" (9.5 mm)lead length , 5lbs (2.3 kg)tension

### MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Lead finish :100% Matte Sn (Tin)
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight:11.7 mg (approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		Symbols	1N5817SF	1N5818SF	1N5819SF	Units
Maximum repetitive 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 non-repetitive peak reverse voltage		VRSM	24	36	48	Volts
Maximum average forward rectified current		I(AV)	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at TL=70 °C		IFSM	25.0			Amps
Maximum instantaneous forward voltage at 1.0 A(note 1 )		VF	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1 A(note 1 )		VF	0.750	0.875	0.900	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1 )	T <sub>A</sub> =25 °C	IR	0.2			mA
	T <sub>A</sub> =100 °C		10.0			
Typical junction capacitance(Note 3)		CJ	110.0			PF
Typical thermal resistance(Note 2)		R θJA R θJL	82.0 26.0			°C/W
Operating junction and storage temperature range		TJ TSTG	-65 to +150			°C

#### Notes:

1. Pulse test: 300 μs pulse width 1% duty cycle
2. Thermal resistance (from junction to ambient) Vertical P.C.B. mounted with 1" copper pad ( Cu area 700 mm<sup>2</sup> )
3. Measured at 1.0 MHz and reverse voltage of 4.0 Volts.



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### RATINGS AND CHARACTERISTIC CURVES 1N5817SF - 1N5819SF

FIG.1-FORWARD CURRENT DERATING CURVE

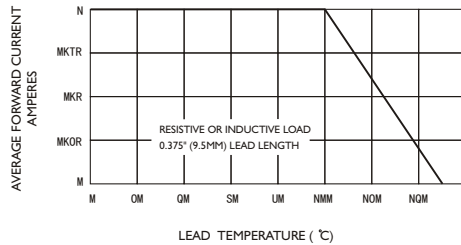


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

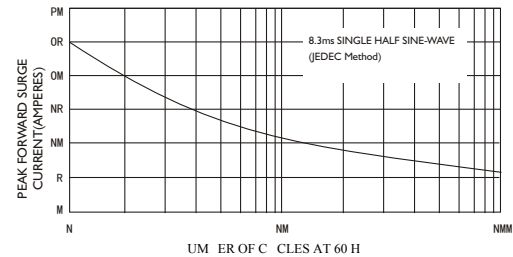


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

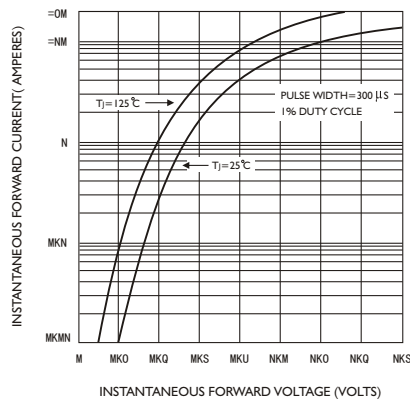


FIG.4-TYPICAL REVERSE CHARACTERISTICS

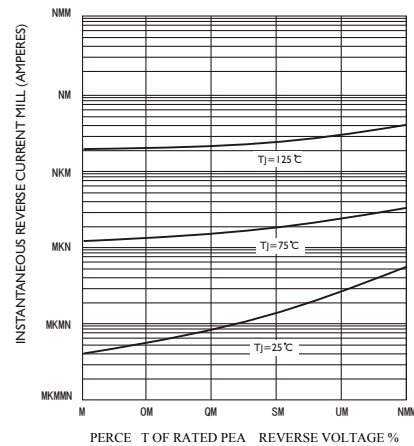


FIG.5-TYPICAL JUNCTION CAPACITANCE

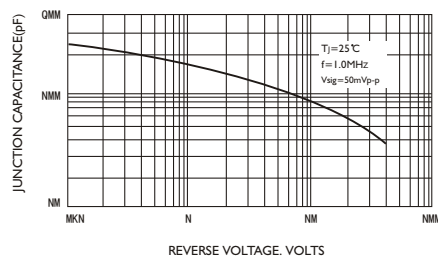


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

