

# 1N5817SF THRU 1N5819SF



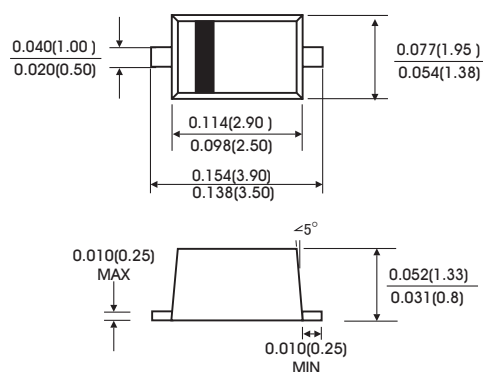
**SCHOTTKY BARRIER RECTIFIER**  
Reverse Voltage 20 to 40 Volts  
Forward Current - 1.0Ampere

## 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"(9.5mm)lead length,5lbs. (2.3kg)tension



## SOD-123FL



Dimensions in inches and (millimeters)

## 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	$V_{RRM}$	20	30	40	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	$V_{RSM}$	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 $T_L=70^\circ C$	$I_{FSM}$	25.0			Amps
Maximum instantaneous forward voltage at 1.0 A(note 1)	$V_F$	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1 A(note 1)	$V_F$	0.750	0.875	0.900	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$I_R$	0.2			mA
		10.0			
Typical junction capacitance(Note 3)	$C_j$	110.0			PF
Typical thermal resistance(Note 2)	$R_{\theta JA}$	82.0			°C/W
	$R_{\theta JL}$	26.0			
Operating junction and storage temperature range	$T_J$ / $T_{STG}$	-65 to +150			°C

Notes: 1.Pulse test: 300  $\mu$ s pulse width,1% duty cycle

2.Thermal resistance (from junction to ambient)Vertical P.C.B. mounted with 1 in. copper pad (Cu area 700 mm<sup>2</sup>).

3.Measured at 1.0MHz and reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES 1N5817SF THRU 1N5819SF

FIG. 1-FORWARD CURRENT DERATING CURVE

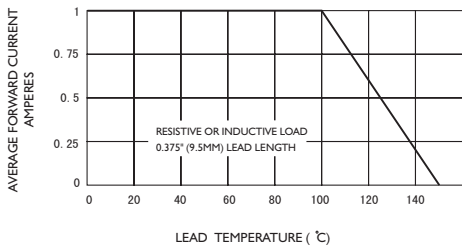


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

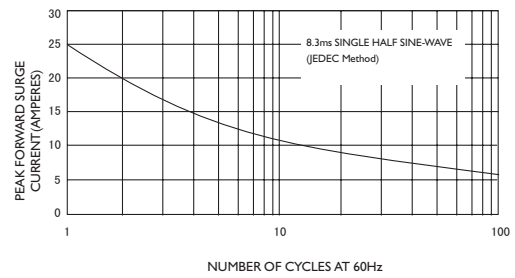


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

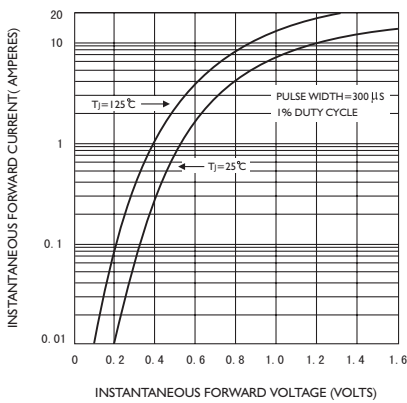


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

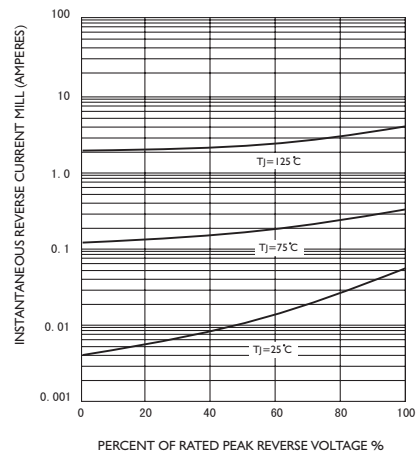


FIG. 5-TYPICAL JUNCTION CAPACITANCE

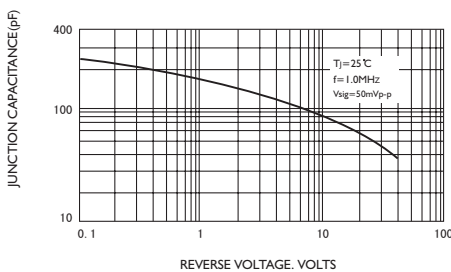


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

