1N5817SF THRU 1N5819SF

SEMICONDUCTOR

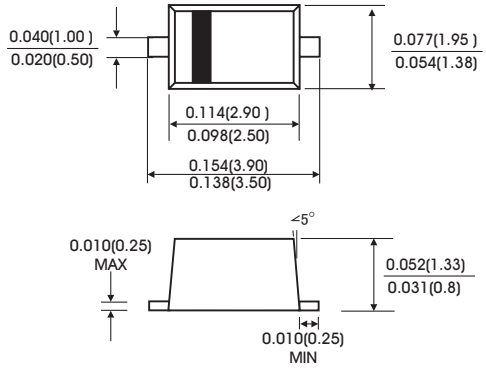
SCHOTTKY BARRIER RECTIFIER

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 ℃		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)	T_A=25℃	I_R	0.2			mA
	T_A=100℃		10.0			
Typical junction capacitance(Note 3)		C_J	110.0			pF
Typical thermal resistance(Note 2)		$R_{\theta JA}$ $R_{\theta JL}$	82.0 26.0			℃/W
Operating junction and storage temperature range		$T_J T_{STG}$	-65 to +150			℃

Notes: 1.Pulse test: 300 μ 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 mm2).

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

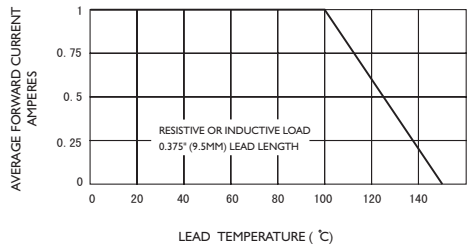


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

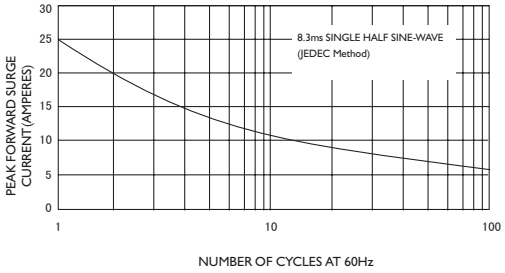


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

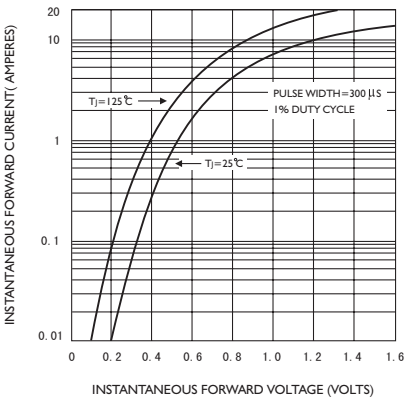


FIG.4-TYPICAL REVERSE CHARACTERISTICS

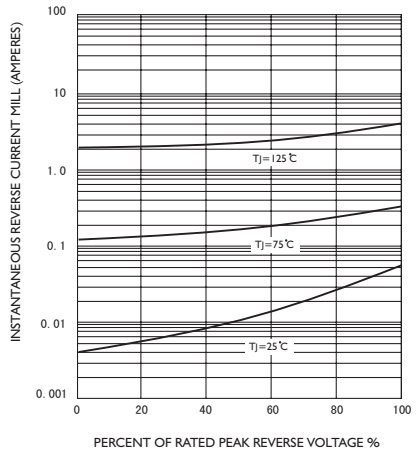


FIG.5-TYPICAL JUNCTION CAPACITANCE

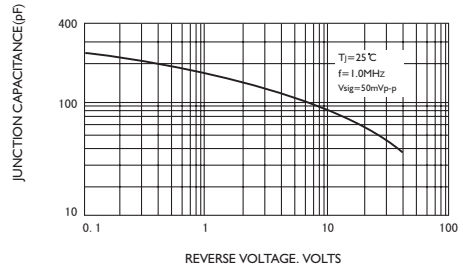


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE