



DATA SHEET

SEMICONDUCTOR

SF1AS THRU SF1JS

SURFACE MOUNT REVERSE VOLTAGE - 50 to 600 Volts
SUPER FAST RECTIFIERS FORWARD CURRENT - 1.0 Ampere

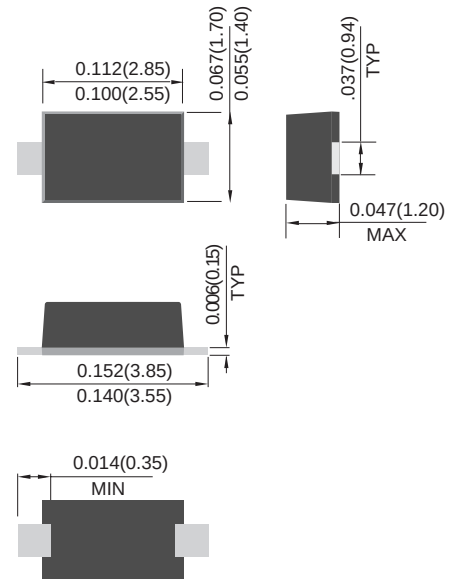
 : Halogen Free

 : Pb Free

FEATURES

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SOD-123S Unit:inch(mm)



MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.01 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

	SYMBOLS	SF1AS	SF1BS	SF1CS	SF1DS	SF1ES	SF1GS	SF1JS	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current, at TL=120°C	Volts	1.0							Amps
Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load(JEDEC method)	IFSM	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	VF	0.95				1.25		1.7	Volts
Maximum DC Reverse Current TA=25 °C	IR	5.0							uA
At Rated DC Blocking Voltage TA=100 °C		100							
Maximum Reverse Recovery Time (Note 1)	TRR	35.0							nS
Typical Junction capacitance (Note 2)	Cj	10.0							pF
Typical Thermal Resistance (Note 3)	RθJA	35							°C /W
Operating and Storage Temperature Range	TSTG	-55to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, Irr=0.25A
2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm² (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES

SF1AS THRU SF1JS

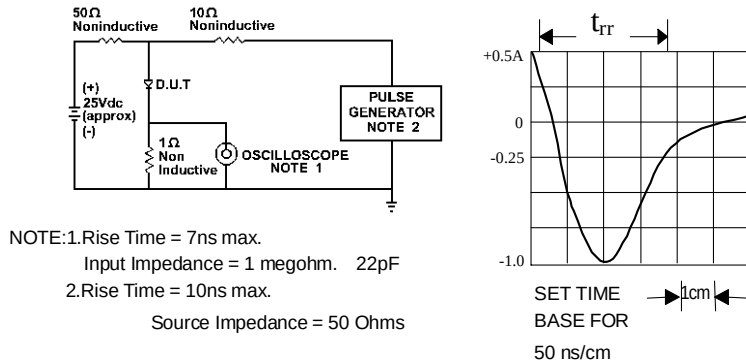


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

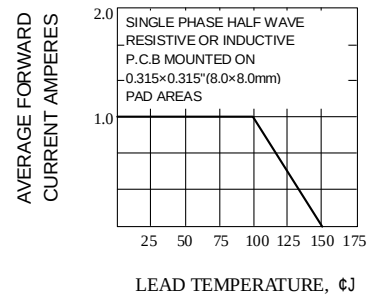


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

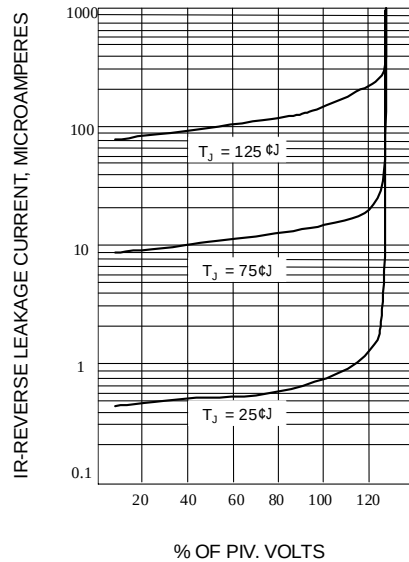


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

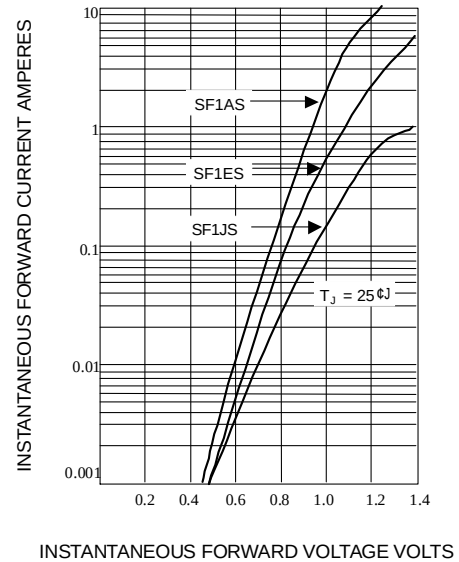


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

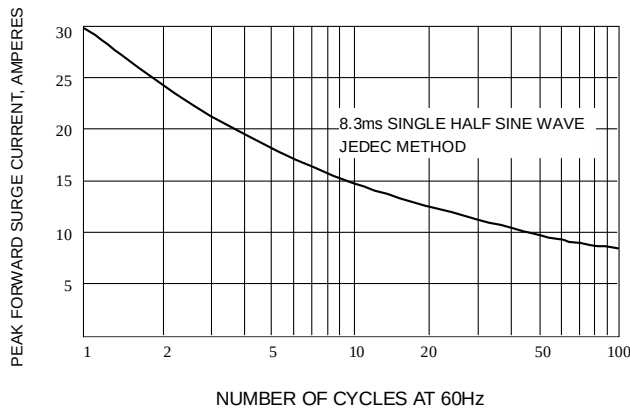


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

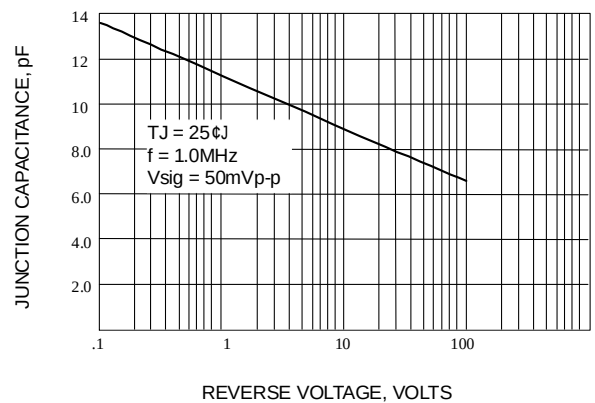


Fig. 6-TYPICAL JUNCTION CAPACITANCE

MOUNTING PAD LAYOUT

SOD-123S Unit: inch (mm)

