

FEATURES

- Low-Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse-Recovery Time
- Low Reverse Capacitance
- Ultra-Small Surface-Mount Package

MECHANICAL DATA

- Package: SOD123 FL
- Package Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- Polarity: Cathode Band



Marking: **S4**



VOLTAGE RANGE

40.0 Volts

CURRENT

0.35Ampere

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SD103AWL	UNITS
Maximum Recurrent Peak Reverse Voltage	40	V
Maximum RMS Voltage	28	V
Maximum DC Blocking Voltage	40	V
Maximum Average Forward Rectified Current See Fig. 1	0.35	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	2	A
Maximum Instantaneous Forward Voltage at 0.2A	0.6	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	0.05 8	mA mA
Typical Junction Capacitance (Note1)	20	pF
Typical Thermal Resistance R _{JA} (Note 2)	400	°C/W
Operating Temperature Range T _J	-65 — +125	°C
Storage Temperature Range T _{STG}	-65 — +150	°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL Forward Current Derating Curve

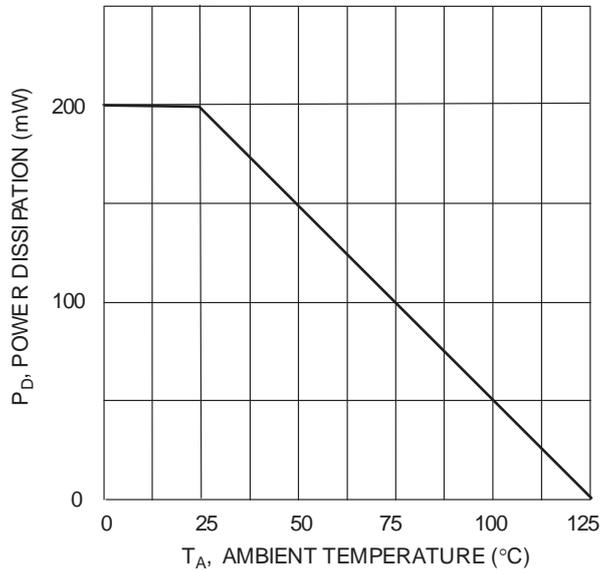


Fig. 2 Typical Forward Characteristics

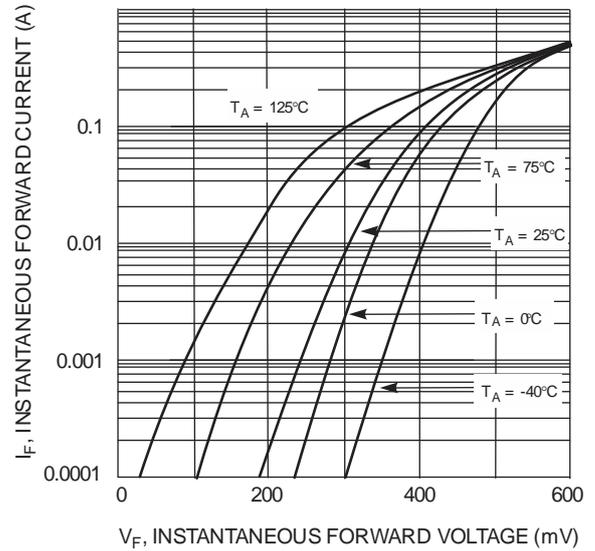


Fig. 3 Typical Reverse Characteristics

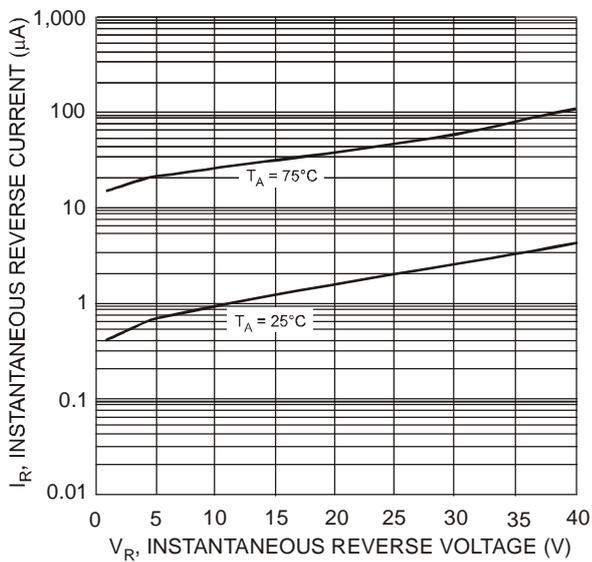
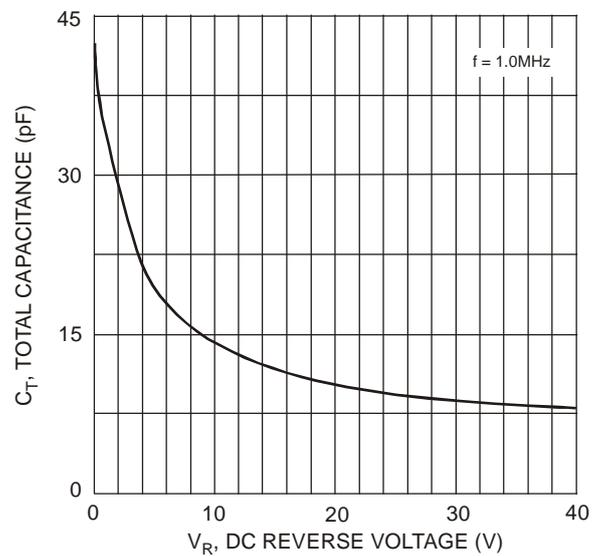
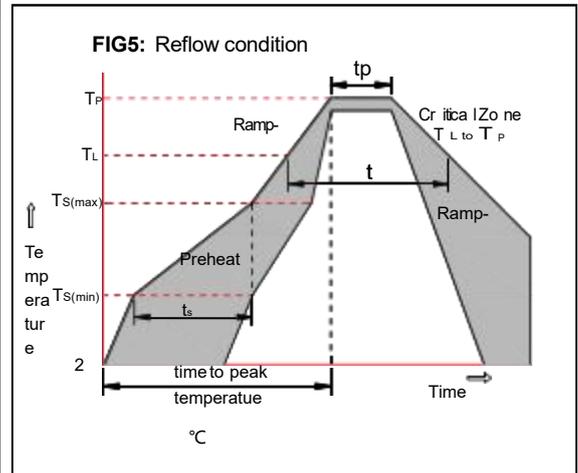


Fig. 4 Total Capacitance vs. Reverse Voltage



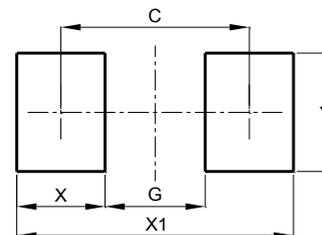
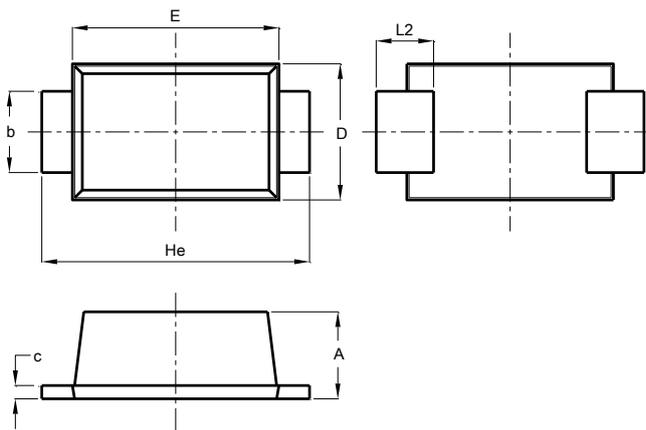
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SOD123FL



SOD123FL		
Dim	Min	Max
A	1.00	1.20
b	0.80	1.10
c	0.12	0.20
D	1.75	1.95
E	2.60	2.90
He	3.55	3.80
L2	0.50	0.85
All Dimensions in mm		

Dimensions	Value (in mm)
C	3.25
G	2.00
X	1.25
X1	4.50
Y	1.50

Tape & reel specification

Tape		Symbol	Dimension (mm)		
		P0	4.00±0.20		
		P1	4.00±0.20		
		P2	2.00±0.20		
		D0	1.55±0.15		
		D1	1.00±0.20		
		E	1.75±0.20		
		F	3.50±0.25		
		W	8.00±0.20		
		A0	1.85±0.20		
		B0	3.95±0.20		
		K0	1.30±0.20		
		T	0.21±0.10		
		7" Reel		D2	178.0±5.0
				D3	55.0Min.
D4	10.0±2.5				
W1	11.5±2.5				
Quantity: 3000PCS					