

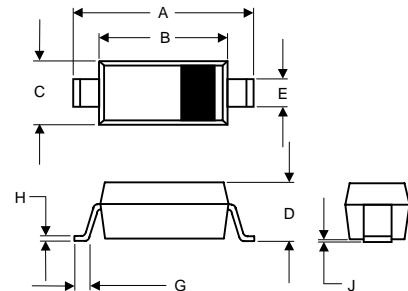
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

SOD-123

### ● FEATURES

- Fast switching speed
- Ultra-Small surface mount package
- For general purpose switching applications
- High conductance
- Also available in lead free version



### ● MECHANICAL DATA

- Case: SOD-123, Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.004 grams

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.550	0.071
D	—	1.35	—	0.053
E	0.30	0.78	0.120	0.031
G	0.15	—	0.006	—
H	—	0.25	—	0.001
J	—	0.15	—	0.006

Marking: T6, T4

### ● MAXIMUM RATINGS

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	SYMBOL	VALUE	UNITS
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 $\mu$ s @ t = 1.0 s	$I_{FSM}$	2.0	A
		1.0	
Power Dissipation (Note 1)	$P_D$	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	°C / W
Operating and Storage Temperature Range	$T_J, T_{STG}$	- 65 ~ + 150	°C

## ● ELECTRICAL CHARACTERISTICS (Ta=25°C)

TYPE NUMBER	SYMBOL	Min.	Max.	UNITS	Test Condition
Reverse Breakdown Voltage	$V_{RM}$	75	-	V	$I_R = 1.0\mu A$
Forward Voltage (Note 2)	$V_{FM}$	-	0.715 0.855 1.0 1.25	V	$I_F = 1.0mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$
Peak Reverse Current (Note 2)	$I_{RM}$	-	1.0 50 30 25	$\mu A$ $\mu A$ $\mu A$ nA	$V_R = 75V$ $V_R = 75V, T_J = 150^\circ C$ $V_R = 25V, T_J = 150^\circ C$ $V_R = 20V$
Total Capacitance	$C_T$	-	2.0	pF	$V_R = 0, f = 1.0MHz$
Reverse Recovery Time	$t_{rr}$	-	4.0	ns	$I_F = I_R = 10mA,$ $I_{tr} = 0.1 \times I_R, R_L = 100\Omega$

NOTES:

1. Part mounted on FR-4 PC board with recommended pad layout,
2. Short duration test pulse used to minimize self-heating effect.

## ● RATING AND CHARACTERISTIC CURVES

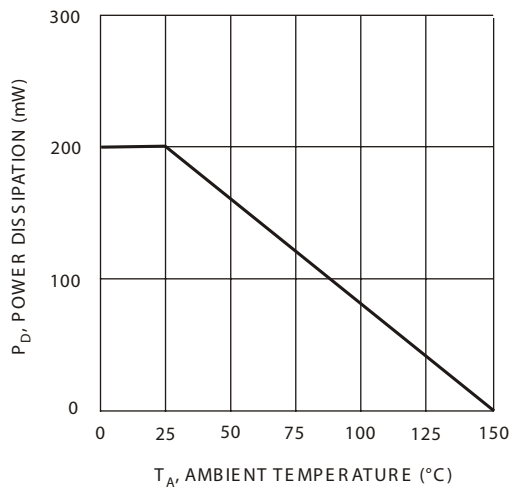


Fig. 1 Power Derating Curve

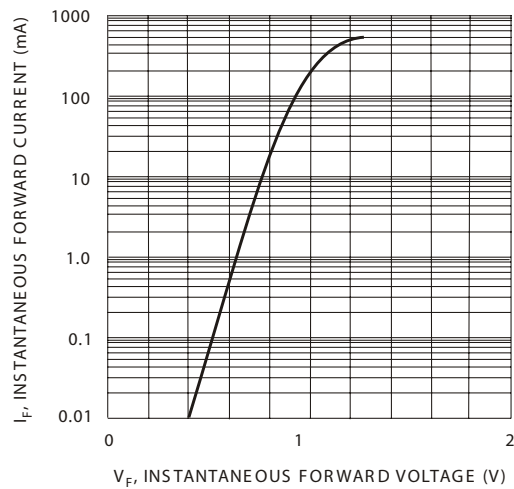


Fig. 2 Forward Characteristics

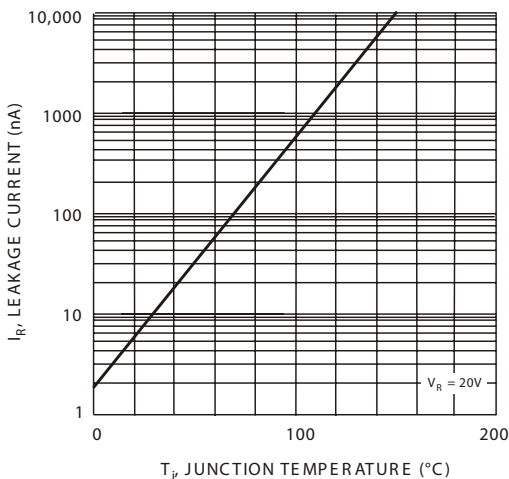


Fig. 3 Leakage Current vs Junction Temperature