

## Features

- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

## Applications

The device is a single rectifier offering low VF and excellent high temperature stability.

## Mechanical Data

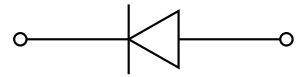
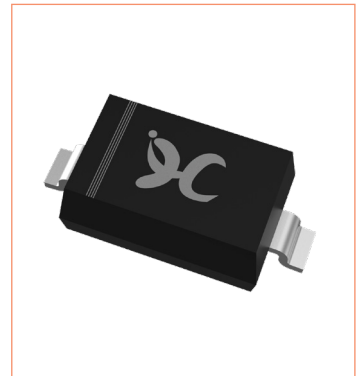
- Case: SOD-123  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

## Maximum Ratings (Ta=25°C Unless otherwise specified)

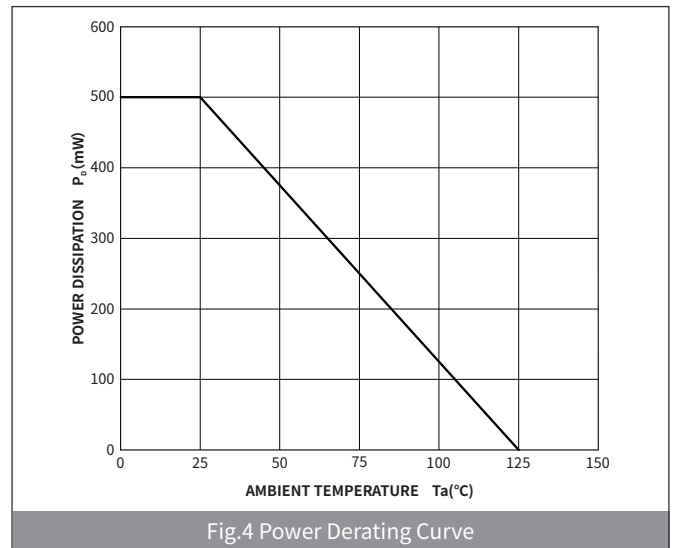
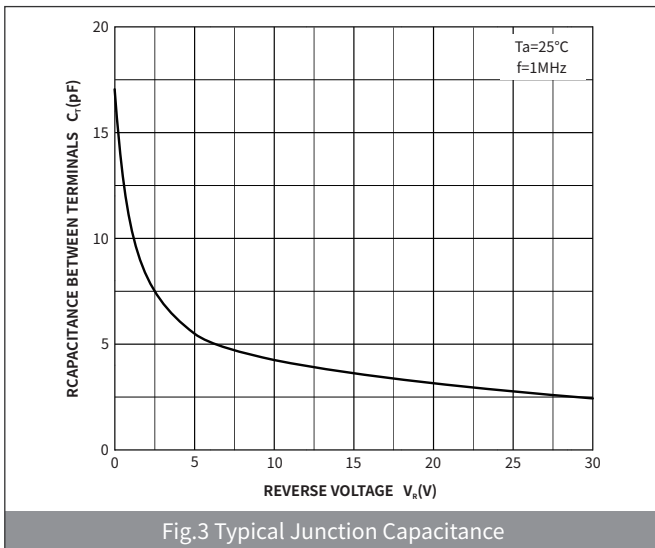
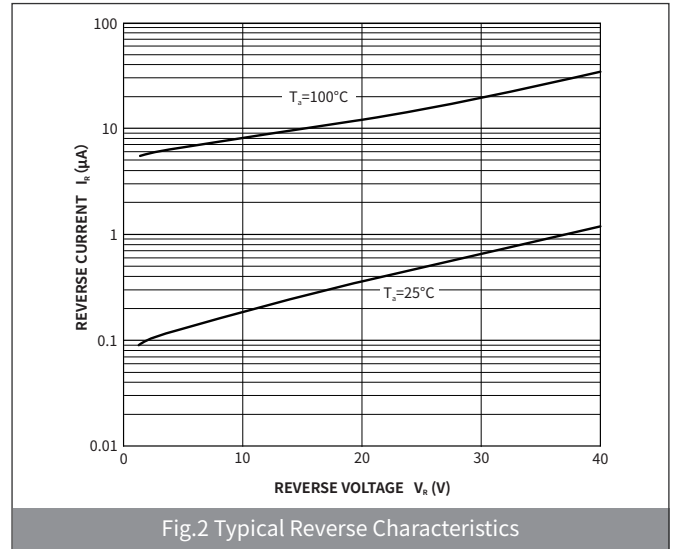
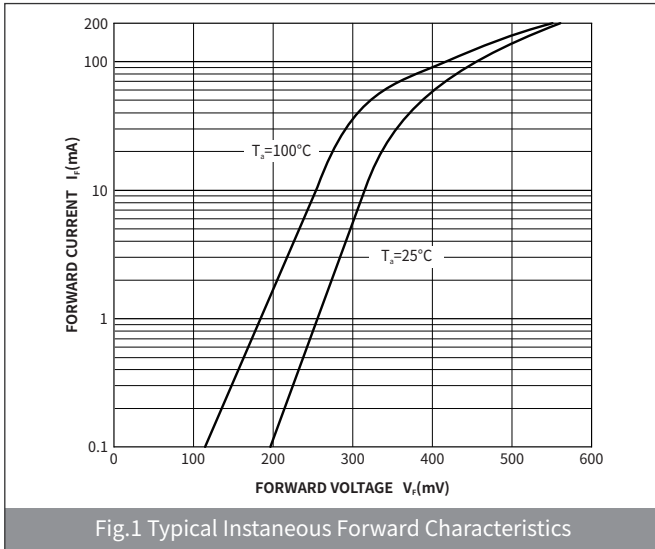
PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	$V_{RRM}$	V	30
Maximum RMS voltage	$V_{RMS}$	V	21
Maximum DC blocking voltage	$V_{DC}$	V	30
Maximum average forward rectified current	$I_{F(AV)}$	mA	200
Repetitive peak forward current	$I_{FRM}$	mA	300
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	mA	600
Power Dissipation	$P_D$	mW	500
Junction Temperature	$T_j$	°C	-55 ~+125
Storage temperature range	$T_{STG}$	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	250

## Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	VALUE
Maximum forward voltage	$I_F = 0.1mA$	$V_{F1}$	mV	240
	$I_F = 1.0mA$	$V_{F2}$		320
	$I_F = 10mA$	$V_{F3}$		400
	$I_F = 30mA$	$V_{F4}$		500
	$I_F = 100mA$	$V_{F5}$		800
Maximum reverse current	$V_R = 25V$	$I_R$	μA	2.0
Capacitance between terminals	$V_R = 1.0V, f = 1MHz$	$C_T$	pF	10

**SOD-123**


► **Ratings And Characteristics Curves** ( $T_a=25^\circ\text{C}$  Unless otherwise specified)



**▶ Ordering Information**

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123	R1	0.012	3000	30000	120000	7"

**▶ Package Outline Dimensions (SOD-123)**

Symbol	Dimensions			
	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	0.055	0.071
D	0.95	1.35	0.140	0.152
E	0.51	0.71	0.037	0.053
F	-	0.15	-	0.006
G	0.15	0.45	0.006	0.008
H	0.08	0.25	0.003	0.010
$\theta$	-	8°	-	8°

**▶ Suggested Pad Layout**

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.91	-	0.036	-
K	-	2.36	-	0.092
M	1.22	-	0.048	-

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