

SOD-523 Fast Switching Diodes

Features

- $V_R=100V$
- $I_{F(AV)}=150mA$
- Power Dissipation of 150mW
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

Mechanical Data

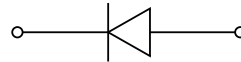
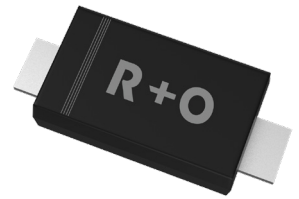
- Case: SOD-523
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
100 V

Forward Current
0.15 Ampere

SOD-523



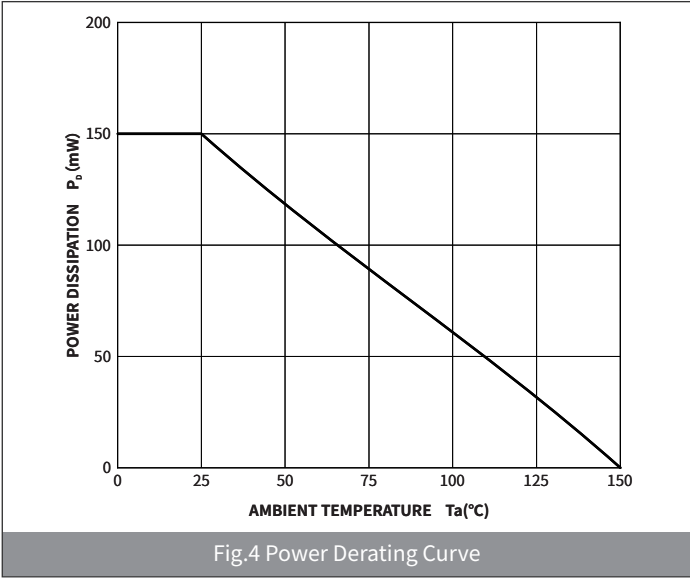
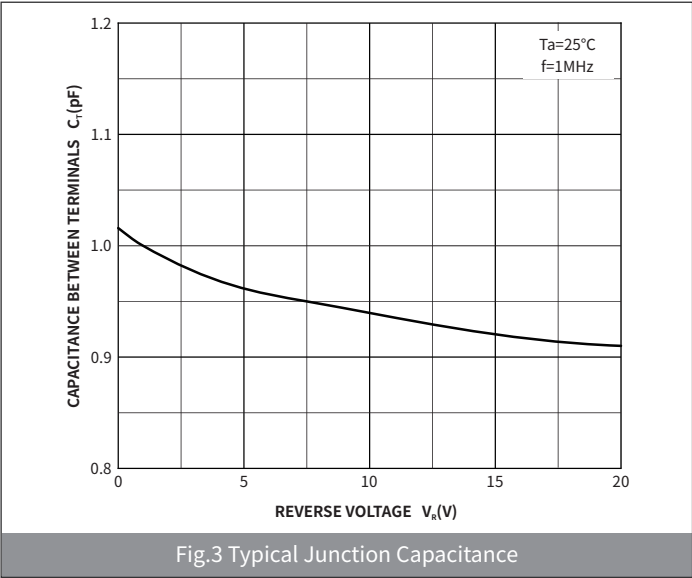
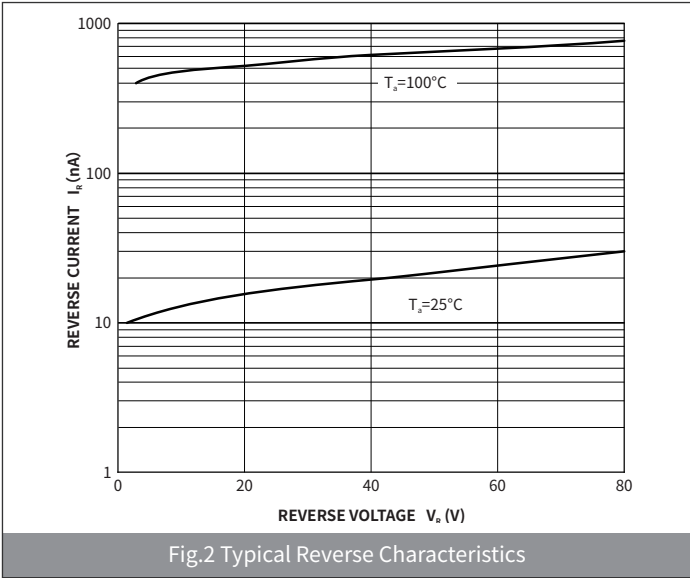
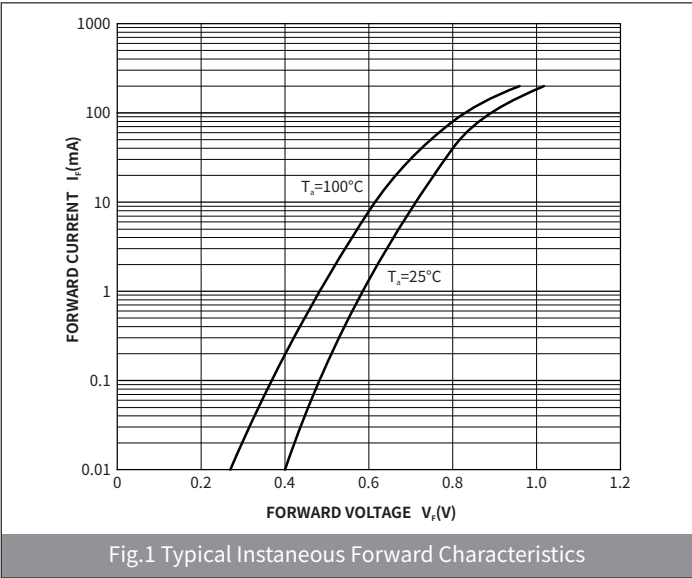
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	100
Maximum RMS Voltage	V_{RMS}	V	75
Reverse Breakdown voltage @ $I_R=100\mu A$	$V_{(BR)R}$	V	100
Maximum Average Forward Rectified Current	$I_{F(AV)}$	mA	150
Repetitive peak forward current	I_{FRM}	mA	300
Non-Repetitive Peak forward surge current @ $t_p=1.0\mu s$	I_{FSM}	A	2.0
Non-Repetitive Peak forward surge current @ $t_p=1.0s$			1.0
Power Dissipation	P_d	mW	150
Storage temperature	T_{stg}	°C	-55 ~ +150
Junction temperature	T_j	°C	-55 ~ +150
Typical thermal resistance	$R_{\theta J-A}$	°C /W	833

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum instantaneous forward voltage	$I_F=1.0\text{mA}$	V_F	V	—	—	0.715
	$I_F=10\text{mA}$			—	—	0.855
	$I_F=50\text{mA}$			—	—	1.0
	$I_F=150\text{mA}$			—	—	1.25
Reverse Leakage Current	$V_R=20\text{V}$	I_{R1}	nA	—	—	25
	$V_R=75\text{V}$	I_{R2}	μA	—	—	1.0
Total capacitance	$V_R=0\text{V}, f=1\text{MHz}$	C_T	pF	—	—	2.0
Maximum reverse recovery time	$I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R, R_L=100\Omega$	T_{rr}	ns	—	—	4.0

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

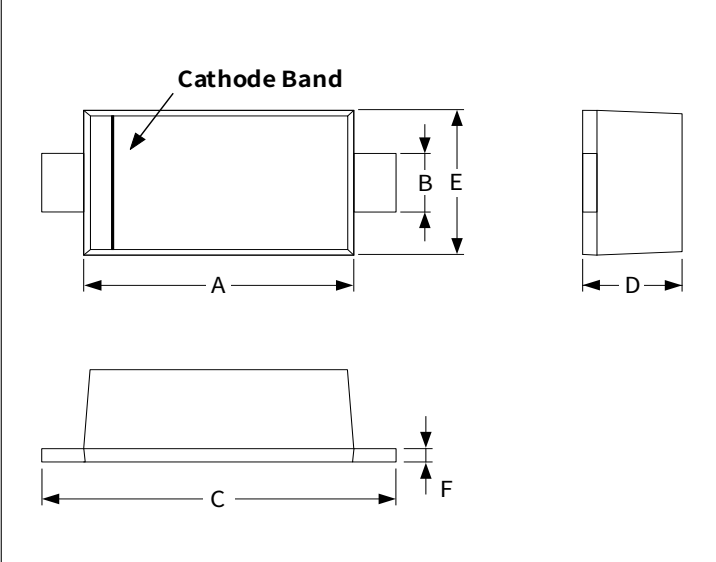


● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-523	R1	0.002	3000	45000	180000	7"

● Package Outline Dimensions (SOD-523)

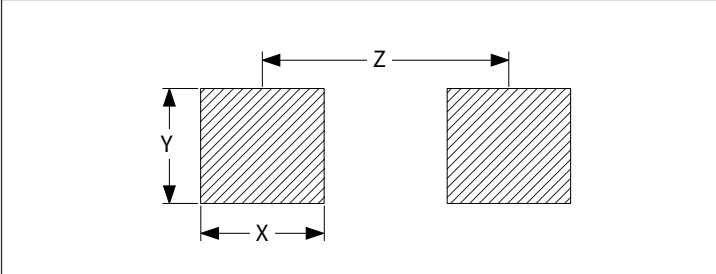
Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.043	0.051
B	0.500	0.700	0.020	0.028
C	0.250	0.350	0.010	0.014
D	0.080	0.150	0.003	0.006
E	0.750	0.850	0.030	0.033
F	1.100	1.300	0.043	0.051



The diagram illustrates the physical dimensions of the SOD-523 package. It includes a top view showing the cathode band, a side view, and a cross-sectional view. Dimensions are labeled as follows: A (body length), B (body width), C (lead length), D (lead thickness), E (body height), and F (lead height). The cathode band is indicated on the top view.

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.55	0.65	0.022	0.026
Y	1.05	1.15	0.041	0.045
Z	0.75	0.85	0.030	0.033



The diagram shows the suggested pad layout for the SOD-523 package. It includes a top view of the package with dimensions X (pad width), Y (pad length), and Z (pad spacing) indicated. The pads are shown as shaded rectangles.