

SOD-523 Surface Mount Schottky Barrier Rectifier

Features

- $V_R=40V$
- $I_{F(AV)}=0.2A$
- Power Dissipation of 150mW
- High Current Capability
- Low Forward Voltage Drop
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

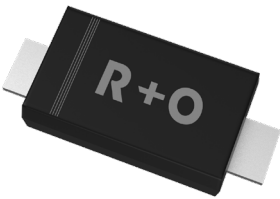
Mechanical Data

- 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
40 V
Forward Current
0.2 Ampere

SOD-523



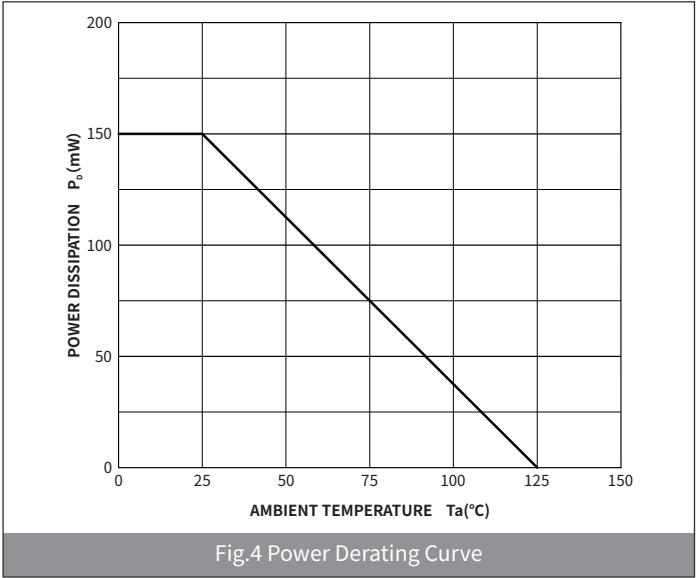
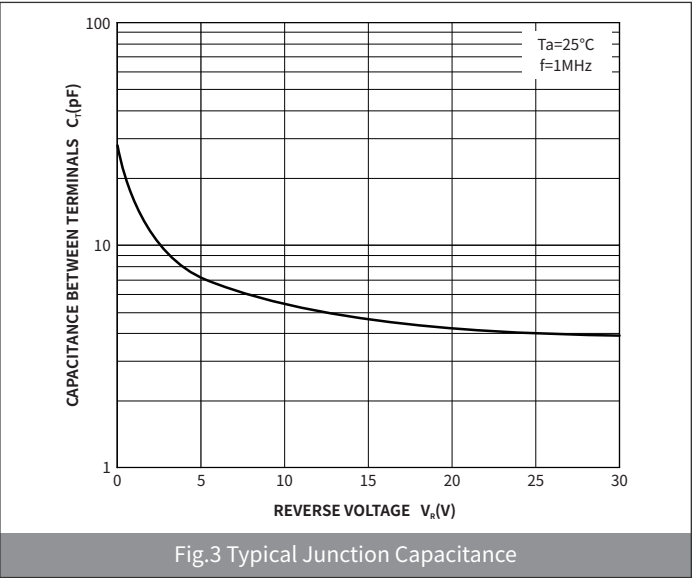
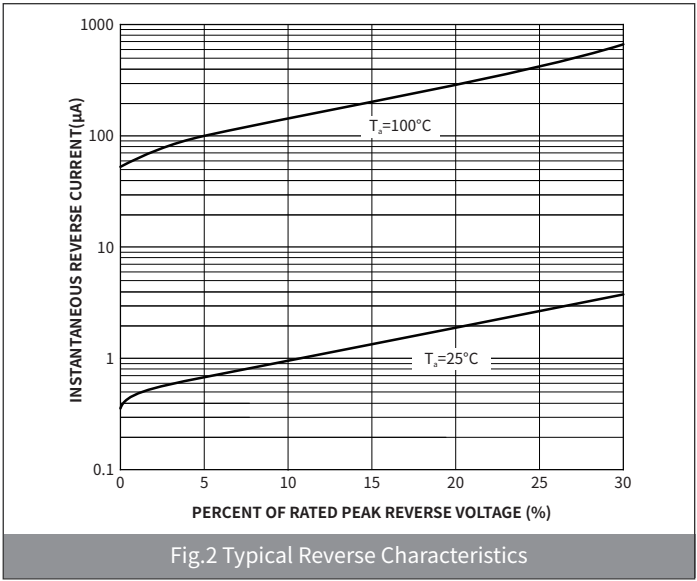
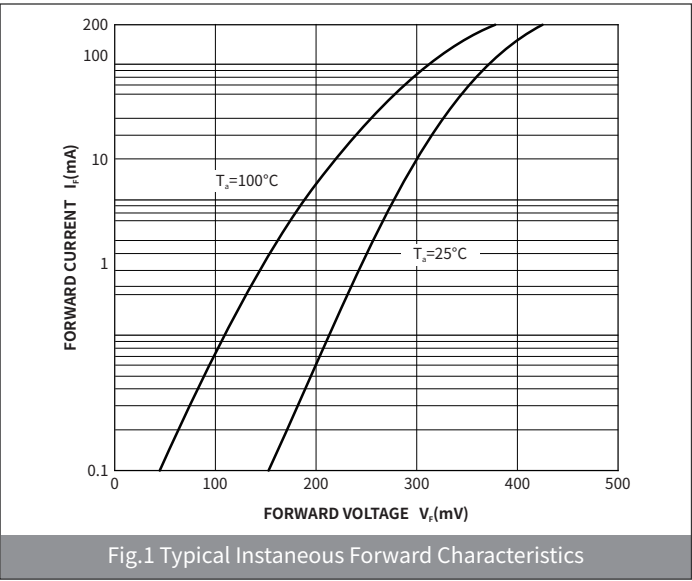
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	40
Maximum RMS Voltage	V_{RMS}	V	28
Maximum DC blocking voltage	V_{DC}	V	40
Maximum average forward rectified current	$I_{F(AV)}$	A	0.2
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	1.0
Power Dissipation	P_D	mW	150
Junction Temperature	T_j	°C	125
Storage temperature range	T_{STG}	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	667

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	$I_F=10\text{mA}$	V_F	V	0.16	—	0.30
	$I_F=100\text{mA}$			0.31	—	0.45
	$I_F=200\text{mA}$			0.41	—	0.54
Maximum reverse current	$V_R=10\text{V}$	I_R	μA	—	—	20
	$V_R=40\text{V}$			—	—	90

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



RB521S-40

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● 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	0.25	0.35	0.010	0.014
C	1.50	1.70	0.059	0.067
D	0.50	0.70	0.020	0.027
E	0.70	0.90	0.027	0.035
F	0.05	0.20	0.002	0.008

The diagram shows three views of the SOD-523 package: a top view, a side view, and a cross-sectional view. Dimensions are labeled as follows: A is the width, B is the height of the cathode band, C is the length, D is the width of the leads, E is the height of the package, and F is the thickness of the package. A Cathode Band is indicated on the top surface.

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.55	0.65	0.022	0.026
Y	0.65	0.75	0.026	0.029
Z	1.37	1.47	0.054	0.058

The diagram shows the suggested pad layout for the SOD-523 package. It consists of two rectangular pads. Dimension X is the width of the pads, Y is the height of the pads, and Z is the distance between the pads.