

SOD-523 Surface Mount Schottky Barrier Rectifier

Features

- $V_R=40V$
- $I_{F(AV)}=0.35A$
- Low forward voltage drop
- High reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

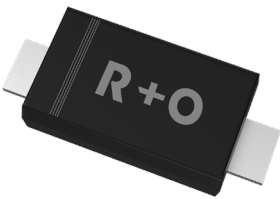
Mechanical Data

- 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
0.35 Ampere

SOD-523



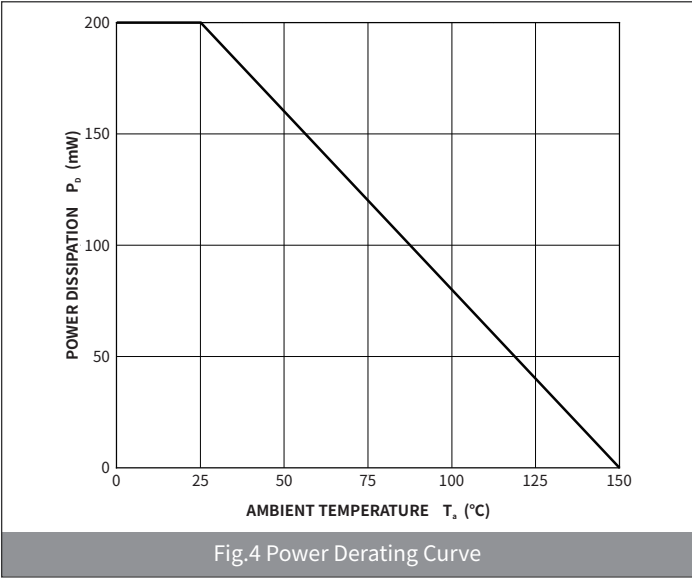
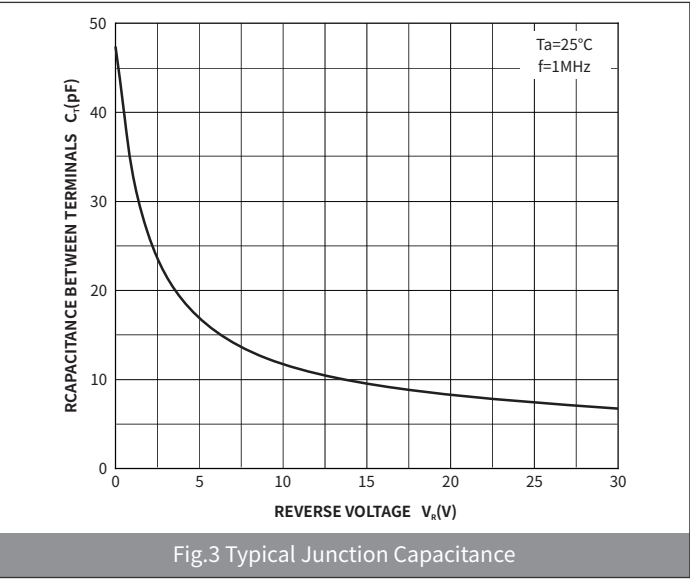
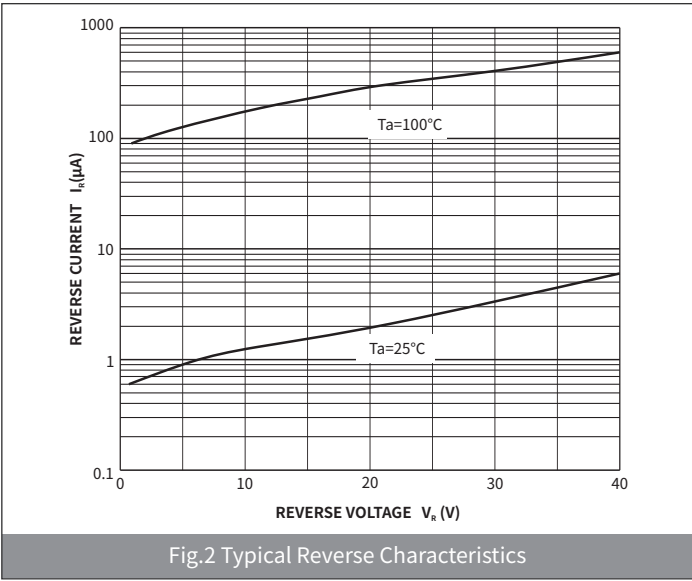
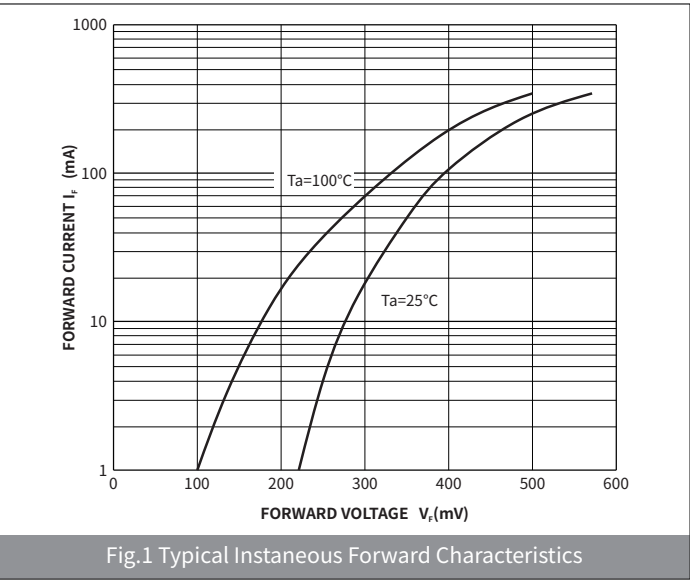
Maximum Ratings (Ta=25°C Unless otherwise specified)

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	0.35
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	1.5
Power Dissipation	P_D	mW	200
Junction Temperature	T_j	°C	125
Storage temperature range	T_{STG}	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	660

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	$I_F=20\text{mA}$	V_F	V	—	—	0.37
	$I_F=200\text{mA}$			—	—	0.6
Maximum reverse current	$V_R=30\text{V}$	I_R	μA	—	—	5.0
Capacitance between terminals	$V_R=4\text{V}, f=1.0\text{MHz}$	C_T	pF	—	50	—
Reverse recovery time	$I_F=I_R=200\text{mA}, I_{rr}=0.1\times I_R$ $R_L=100\Omega$	t_{rr}	nS	—	10	—

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



B5819WT

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. The top view shows dimensions A (width), B (height of the main body), C (total width including leads), D (lead width), and E (total height). A vertical line on the top surface is labeled 'Cathode Band'. The side view shows dimension F (lead thickness). The cross-sectional view shows the package profile.

● 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 two shaded rectangular pads. Dimension X is the width of a single pad, Y is the height, and Z is the center-to-center distance between the two pads.