

## SOD-523 Surface Mount Schottky Barrier Rectifier

### ● Features

- $V_R=30V$
- $I_{F(AV)}=0.2A$
- Power Dissipation of 150mW
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

**Reverse Voltage**  
30 V  
**Forward Current**  
0.2 Ampere

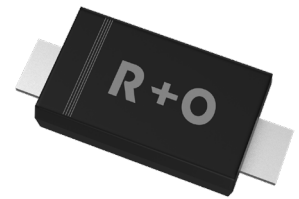
### ● Applications

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

SOD-523



### ● Function Diagram



### ● 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	$I_{F(AV)}$	A	0.2
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	A	0.6
Power Dissipation	$P_D$	mW	150
Junction Temperature	$T_j$	°C	125
Storage temperature range	$T_{STG}$	°C	-50 ~+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 <sub>F</sub> =0.1mA	V <sub>F</sub>	mV	—	—	240
	I <sub>F</sub> =1.0mA			—	—	320
	I <sub>F</sub> =10mA			—	—	400
	I <sub>F</sub> =30mA			—	—	500
	I <sub>F</sub> =100mA			—	—	1000
Maximum reverse current	V <sub>R</sub> =25V	I <sub>R</sub>	μA	—	—	2.0
Reverse voltage	I <sub>R</sub> =100μA	V <sub>(BR)</sub>	V	30	—	—
Type junction capacitance	V <sub>R</sub> =1V, f=1.0MHz	C <sub>j</sub>	pF	—	—	10
Reverse Recovery Time	I <sub>F</sub> =10mA, V <sub>R</sub> =6V, I <sub>R</sub> =10mA	T <sub>rr</sub>	nS	—	—	5

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

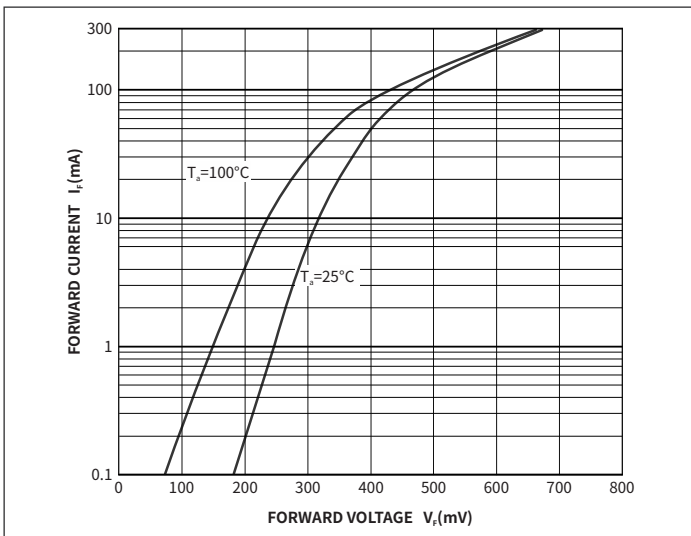


Fig.1 Typical Instantaneous Forward Characteristics

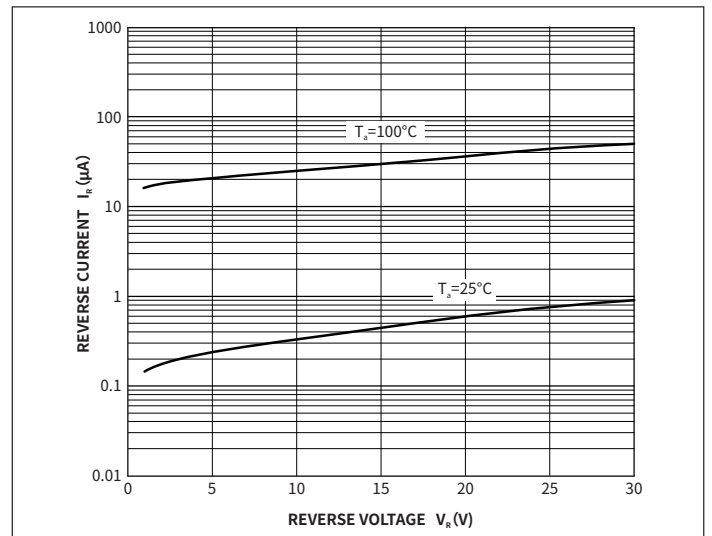


Fig.2 Typical Reverse Characteristics

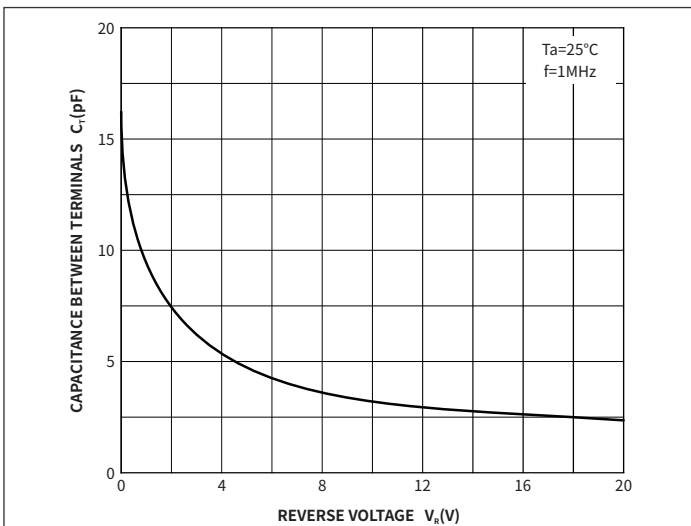


Fig.3 Typical Junction Capacitance

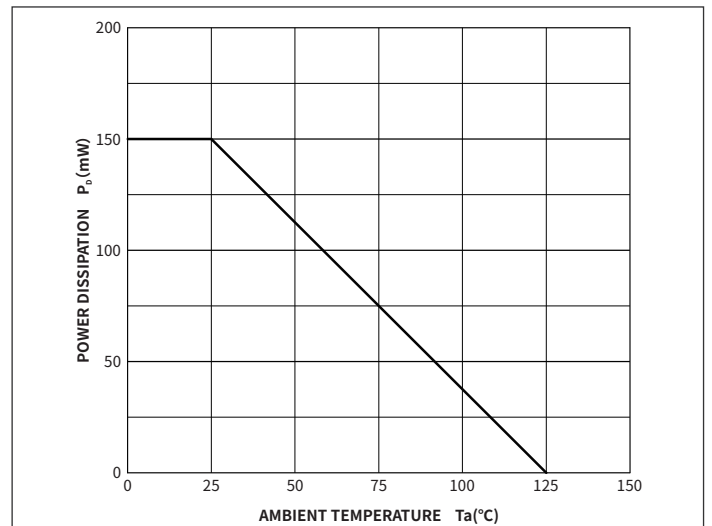


Fig.4 Power Derating Curve

## ● 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

## ● 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