

## SOD-523 Surface Mount Schottky Barrier Rectifier

### Features

- $V_R=40V$
- $I_{F(AV)}=0.2A$
- Power Dissipation of 150mW
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

### Applications

For use in low voltage high frequency circuit signals.

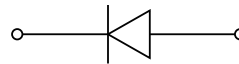
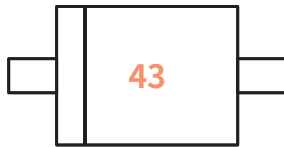
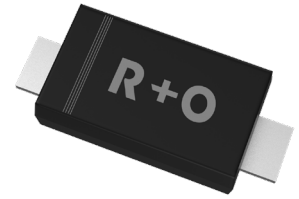
### Mechanical Data

- 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



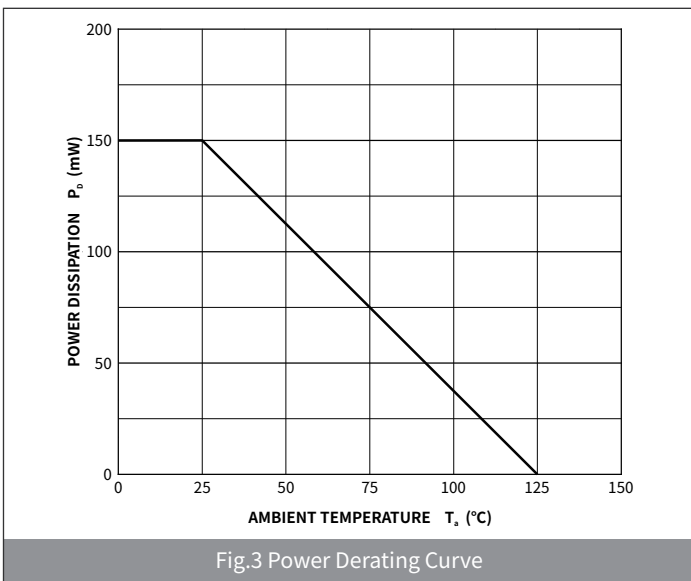
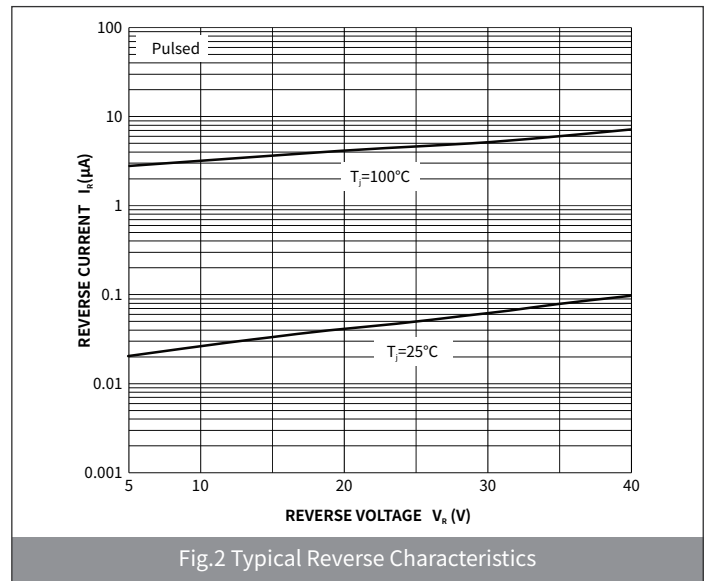
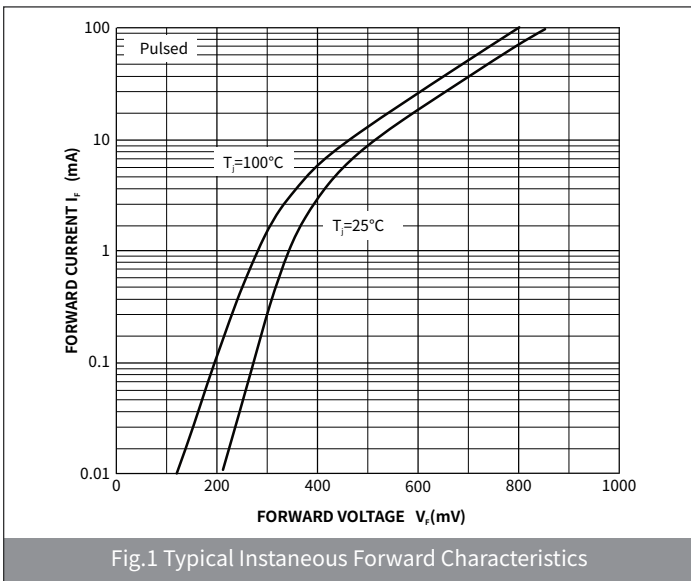
### Maximum Ratings (Ta=25°C Unless otherwise specified)

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	0.6
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	$I_F=1.0\text{mA}$	$V_F$	V	—	—	0.38
	$I_F=40\text{mA}$			—	—	1.0
Maximum reverse current	$V_R=30\text{V}$	$I_R$	nA	—	—	200
Capacitance between terminals	$V_R=0\text{V}, f=1.0\text{MHz}$	$C_T$	pF	—	—	4
Reverse recovery time	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \times I_R$ $R_L=100\Omega$	$t_{rr}$	nS	—	—	5
Reverse breakdown voltage	$I_R=100\mu\text{A}$	$V_R$	V	40	—	—

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

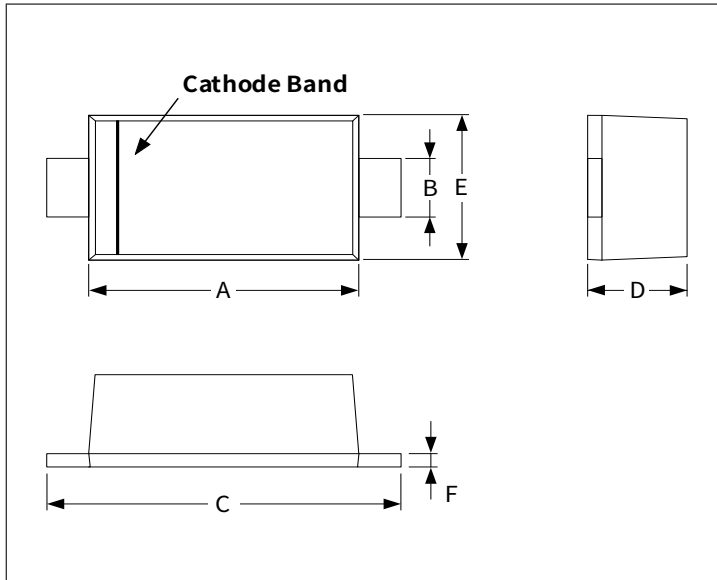


## ● Ordering Information

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

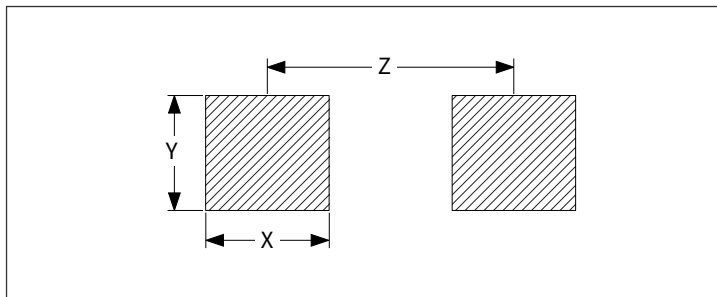
## ● Package Outline Dimensions (SOD-523)

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



## ● 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



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