SOD-523 Surface Mount Schottky Barrier Rectifier

Features

- V_R=10V
- $I_{F(AV)}$=0.1A
- Power Dissipation of 150mW
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
10 V
Forward Current
0.1 Ampere

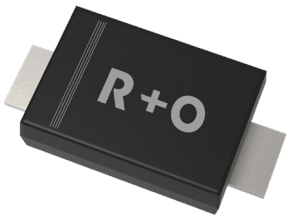
Applications

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	10
Maximum RMS Voltage	V_{RMS}	V	7
Maximum DC blocking voltage	V_{DC}	V	10
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	-40 ~+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=1.0mA	V_F	V	—	0.18	—
	I_F=5.0mA			—	—	0.3
	I_F=100mA			—	—	0.5
Maximum reverse current	V_R=10V	I_R	μA	—	—	20
Reverse voltage	I_R=100μA	$V_{(BR)}$	V	10	—	—
Capacitance between terminals	V_R =0V, f = 1.0MHz	C_T	pF	—	—	40

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

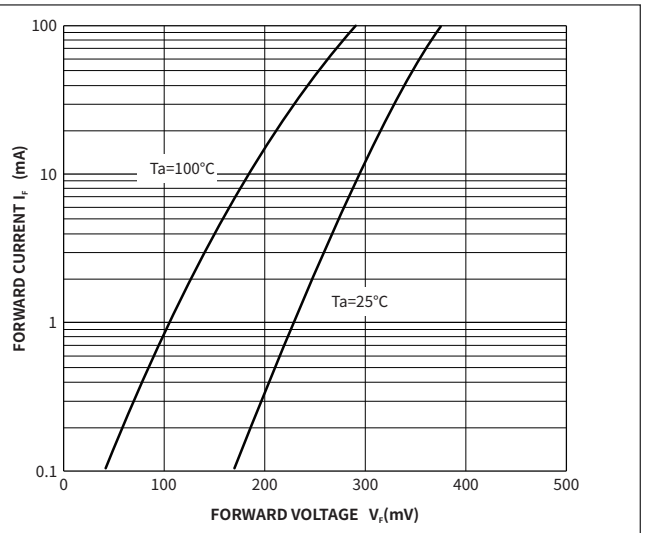


Fig.1 Typical Instaneous Forward Characteristics

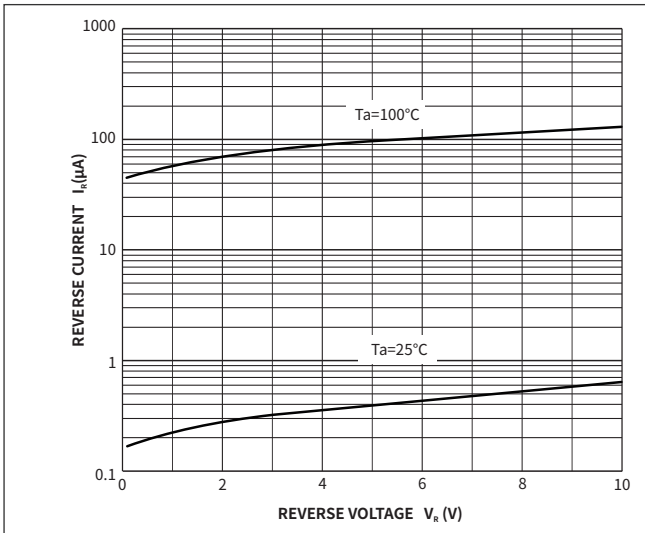


Fig.2 Typical Reverse Characteristics

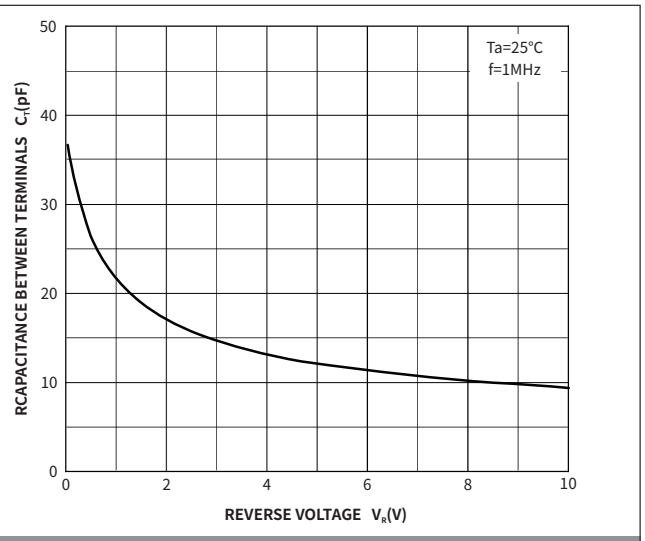


Fig.3 Typical Junction Capacitance

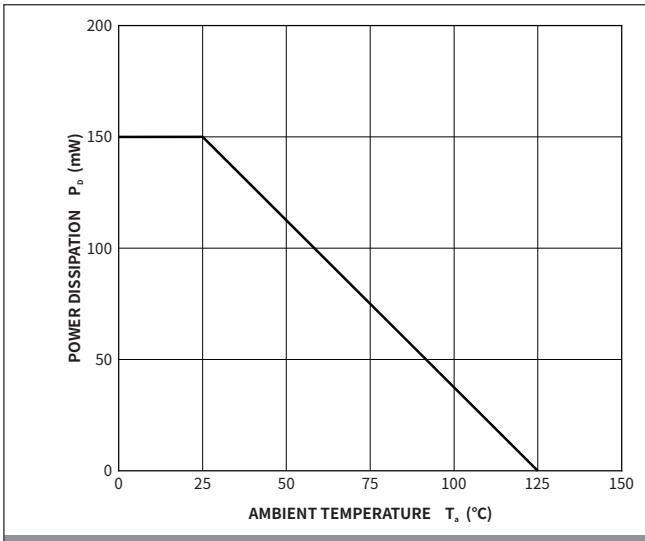
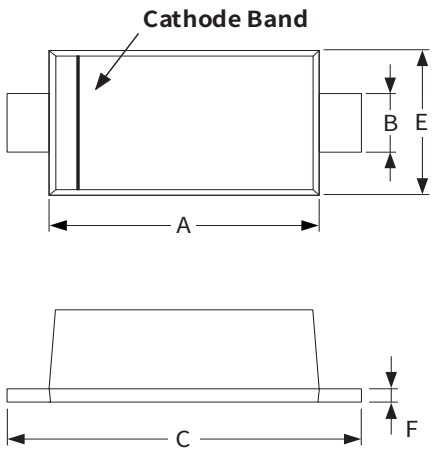


Fig.4 Power Derating Curve

Ordering Information

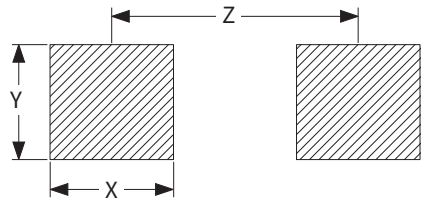
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-523	R1	0.002	3000	45000	180000	7"

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