

SOD-123 Surface Mount Schottky Barrier Rectifier

● Features

- $V_R=30V$
- $I_{F(AV)}=1A$
- Power Dissipation of 350mW
- For use in low voltage, high frequency inverters
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage

30 V

Forward Current

1.0 Ampere

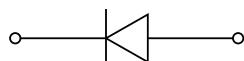
● Applications

For use in low voltage high frequency circuit signals.

● Mechanical Data

- Case: SOD-123
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



● 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	1.0
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30
Power Dissipation	P_D	mW	350
Junction Temperature	T_j	°C	125
Storage temperature range	T_{STG}	°C	-55 ~ +150
Typical thermal resistance	$R_{\theta JA}$	°C /W	222



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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	I _F =0.5A	V _F	V	—	—	0.46
	I _F =1.0A			—	—	0.48
Maximum reverse current	V _R =15V	I _R	mA	—	—	0.02
	V _R =30V			—	—	0.05

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

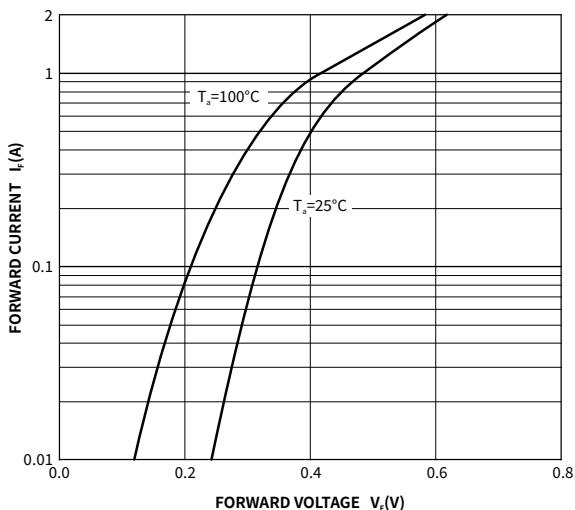


Fig.1 Typical Instantaneous Forward Characteristics

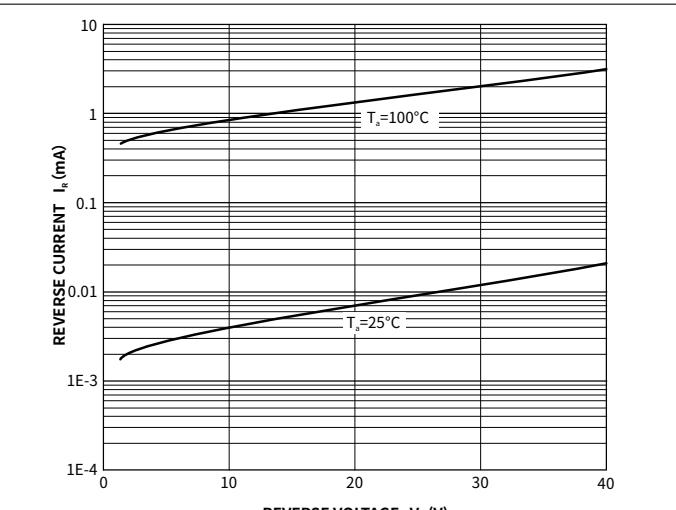


Fig.2 Typical Reverse Characteristics

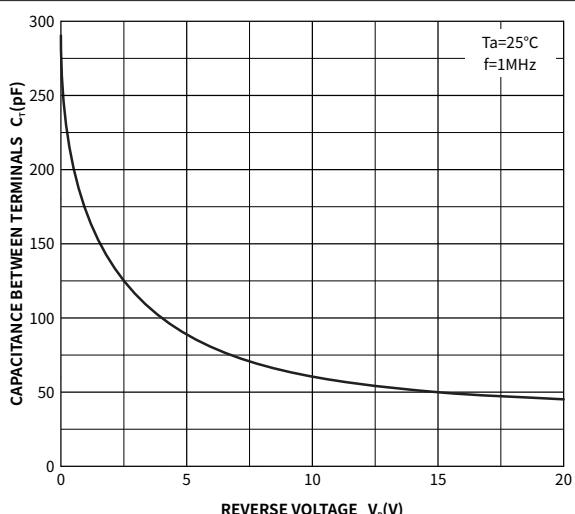


Fig.3 Typical Junction Capacitance

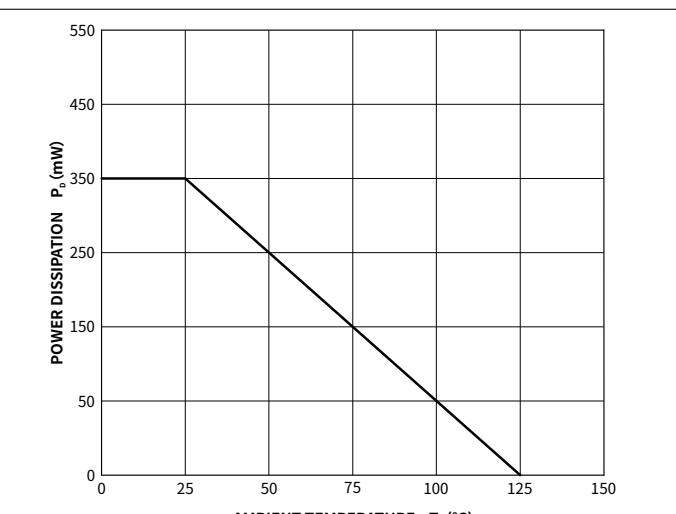
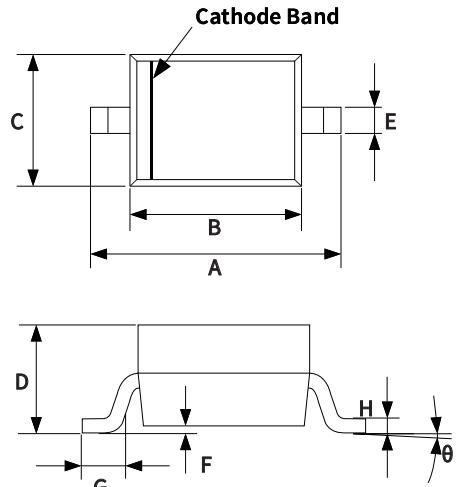


Fig.4 Power Derating Curve

● Ordering Information

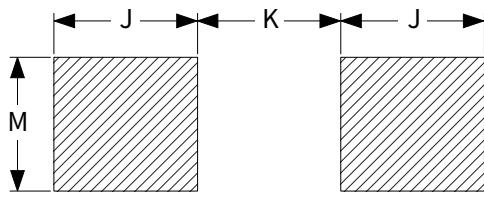
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123	R1	0.012	3000	45000	180000	7"

● Package Outline Dimensions (SOD-123)



The diagram illustrates the physical dimensions of the SOD-123 package. The top view shows the overall width (A), height (C), and cathode band thickness (E). The side cross-section shows the lead thickness (F), lead height (G), lead pitch (H), and lead angle (θ).

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.055	0.071
D	0.95	1.35	0.140	0.152
E	0.51	0.71	0.037	0.053
F	-	0.15	-	0.006
G	0.15	0.45	0.006	0.008
H	0.08	0.25	0.003	0.010
θ	-	8°	-	8°



The diagram shows the lead spacing between two leads. The distance between the centers of the two leads is J. The total lead length is K. The total height of the leads is M.

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.91	-	0.036	-
K	-	2.36	-	0.092
M	1.22	-	0.048	-