

## SOD-123 Surface Mount Schottky Barrier Rectifier

### Features

- $V_R=30V$
- $I_{F(AV)}=0.2A$
- Power Dissipation of 500mW
- High Current Capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

### Applications

For use in low voltage high frequency circuit signals.

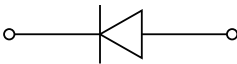
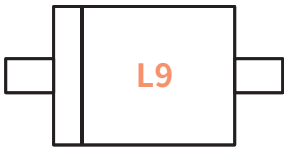
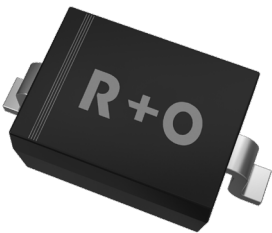
### Mechanical Data

- Case: SOD-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

Reverse Voltage  
30 V  
Forward Current  
0.2 Ampere

SOD-123



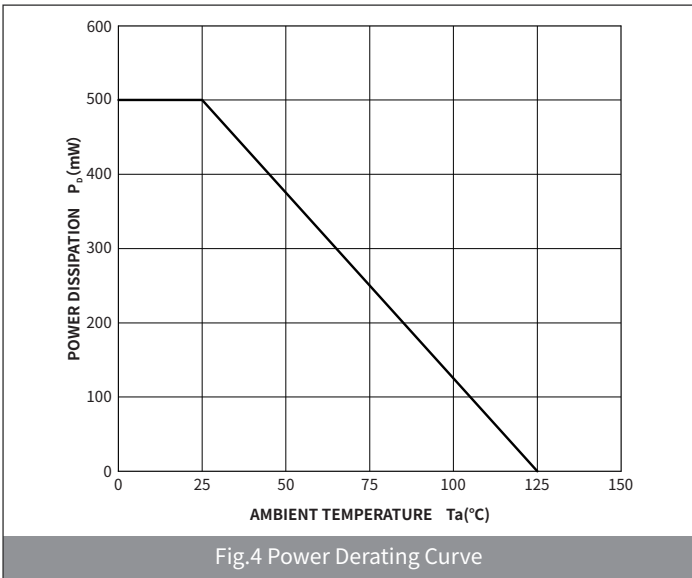
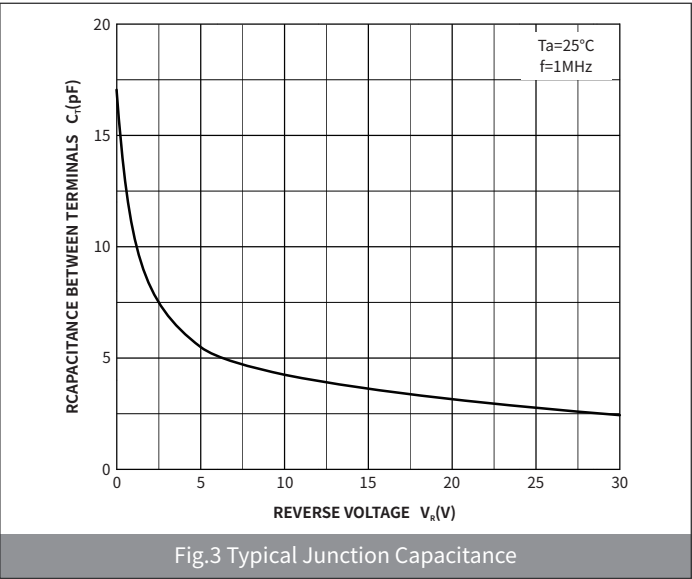
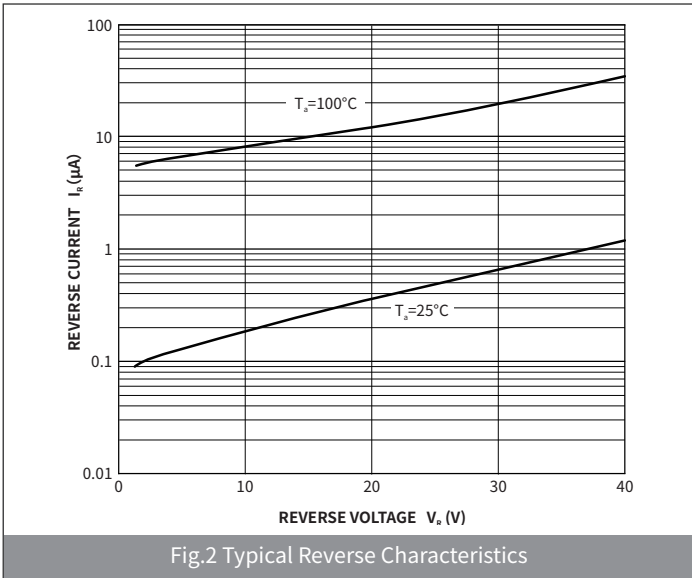
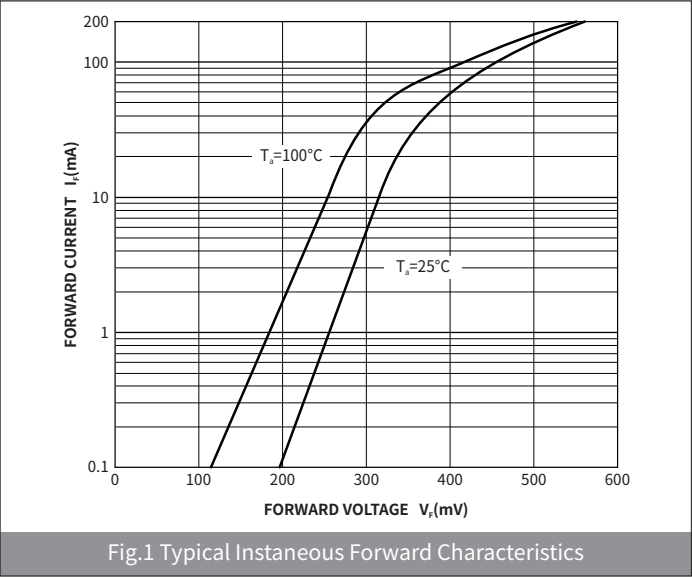
### Maximum Ratings (Ta=25°C Unless otherwise specified)

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	$I_{F(AV)}$	mA	200
Repetitive peak forward current	$I_{FRM}$	mA	300
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	$I_{FSM}$	mA	600
Power Dissipation	$P_D$	mW	500
Junction temperature	$T_j$	°C	-55-+150
Storage temperature range	$T_{STG}$	°C	-55-+150
Typical thermal resistance	$R_{\theta J-A}$	°C /W	250

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	$I_F = 0.1\text{mA}$	$V_F$	mV	—	—	240
	$I_F = 1.0\text{mA}$			—	—	320
	$I_F = 10\text{mA}$			—	—	400
	$I_F = 30\text{mA}$			—	—	500
	$I_F = 100\text{mA}$			—	—	800
Maximum reverse current	$V_R = 25\text{V}$	$I_R$	uA	—	—	2.0
Capacitance between terminals	$V_R = 1.0\text{V}, f = 1\text{MHz}$	$C_T$	pF	—	—	10

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



# BAT54W

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

## ● 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)

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°

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