

## SOT-23 Surface Mount Schottky Barrier Rectifier

### Features

- $V_R$  40V
- $I_{F(AV)}$  0.5A
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

**Reverse Voltage**  
40 V

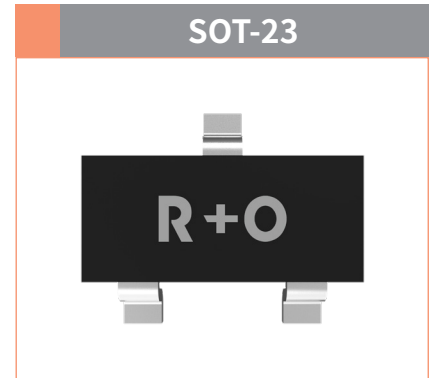
**Forward Current**  
0.5 Ampere

### Applications

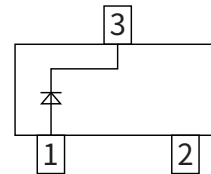
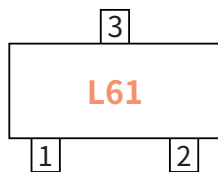
These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

### Mechanical Data

- Case: SOT-23  
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



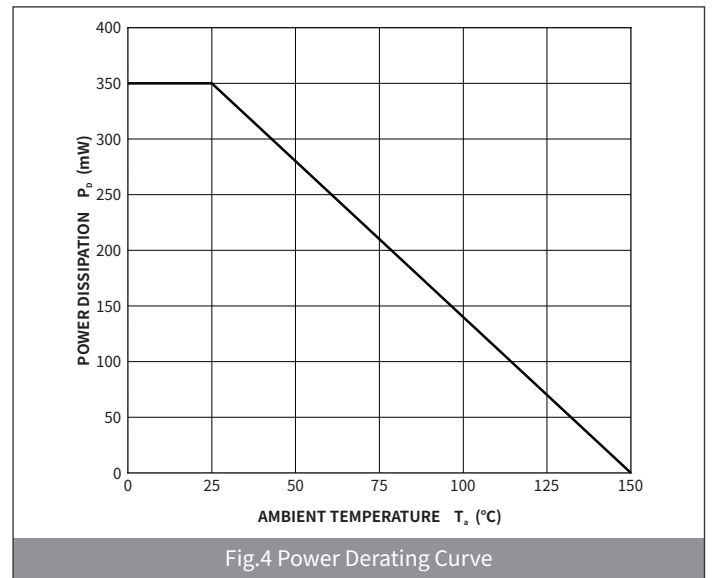
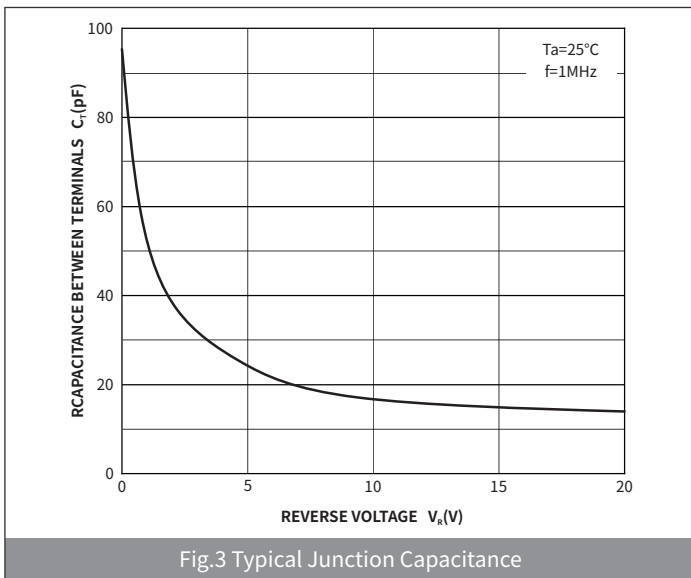
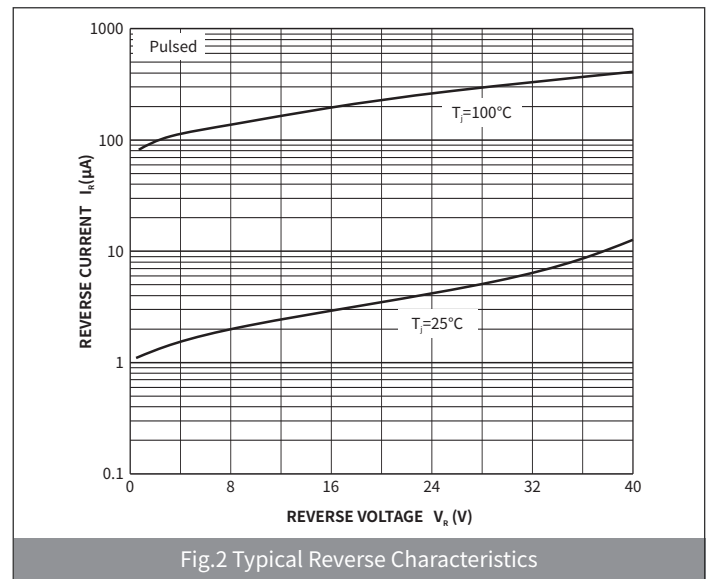
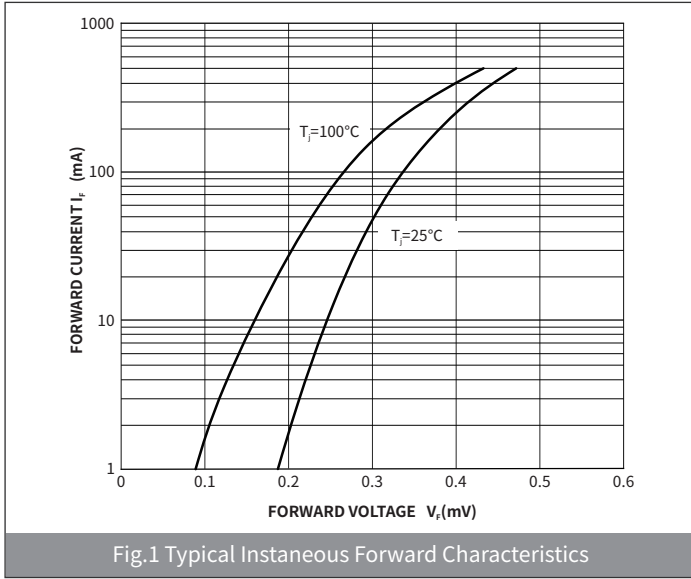
### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	$V_{RRM}$	V	40
Maximum RMS voltage	$V_{RMS}$	V	28
Maximum DC blocking voltage	$V_{DC}$	V	40
Maximum average forward rectified current	$I_{F(AV)}$	mA	500
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	A	2.0
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	286

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Typ	Max
Maximum forward voltage	$I_F = 500\text{mA}$	$V_F$	mV	—	—	550
Maximum reverse current	$V_R = 35\text{V}$	$I_R$	$\mu\text{A}$	—	—	100
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
SOT-23	R1	0.008	3000	45000	180000	7"

## ● Package Outline Dimensions (SOT-23)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	-	0.10	-	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.10	0.20	0.004	0.008
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.550REF		0.022REF	
L1	0.30	0.50	0.012	0.020
θ	-	8°	-	8°

## ● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.75	0.85	0.030	0.033
K	0.85	0.95	0.033	0.037
M	1.95	2.05	0.077	0.081
N	1.85	1.95	0.073	0.077

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