

► Features

- Fast Switching Device (TRR <6nS)
- Power Dissipation of 225mW
- High Stability and High Reliability
- Low reverse leakage

► Applications

Small signal switching
Ultra high speed switching application

► 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

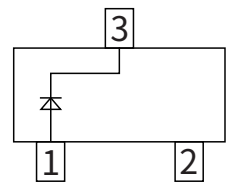
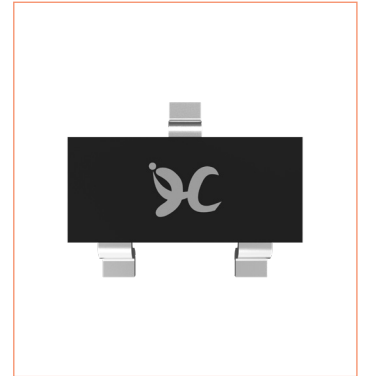
► Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	100
Maximum RMS Voltage	V_{RMS}	V	75
Reverse Breakdown voltage @ $I_R=100\mu A$	$V_{(BR)R}$	V	75
Maximum Average Forward Rectified Current	$I_{F(AV)}$	mA	150
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	2.0
Power Dissipation	P_d	mW	225
Storage temperature	T_{stg}	°C	-55 ~ +150
Junction temperature	T_j	°C	150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	556

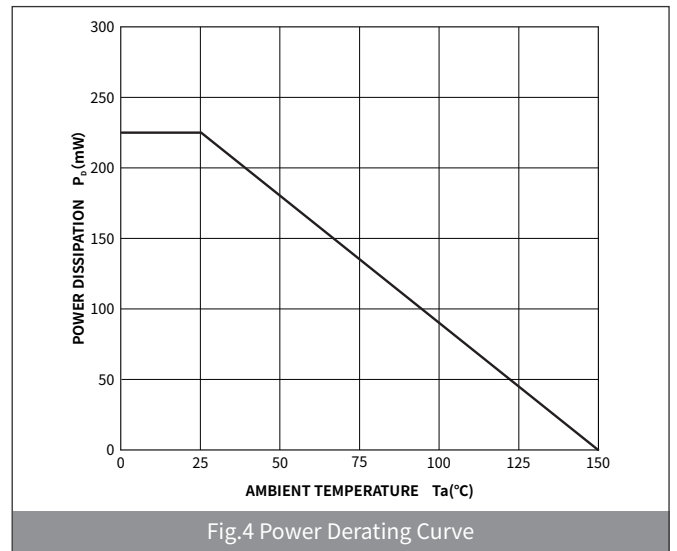
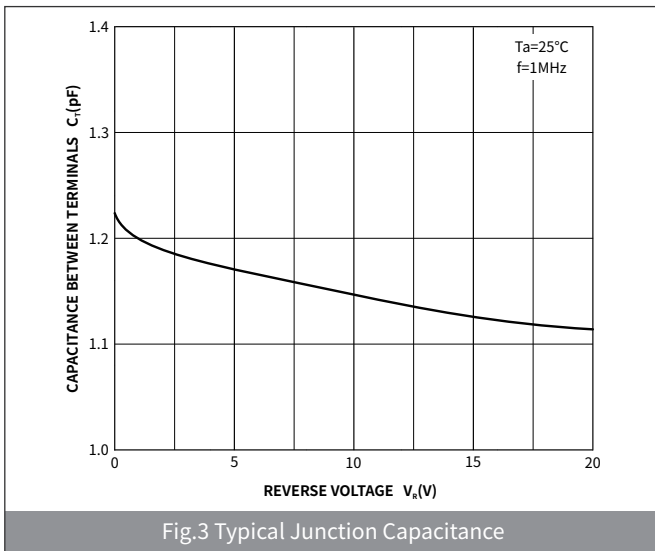
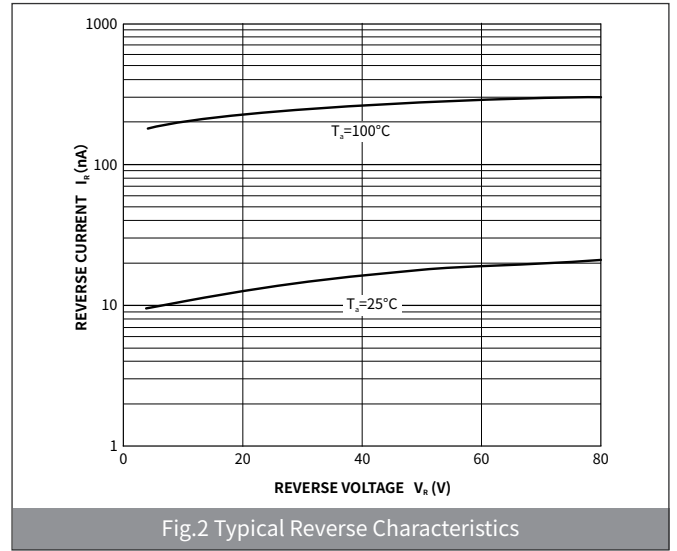
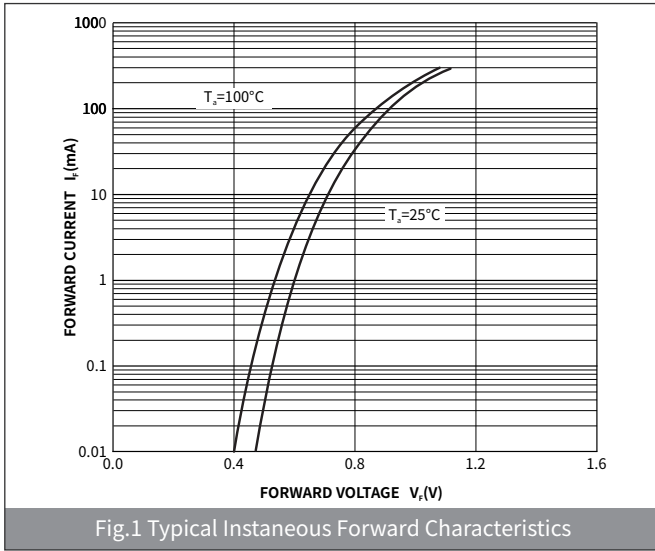
► Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Max
Maximum instantaneous forward voltage	$I_F=1mA$	V_{F1}	V	—	0.715
	$I_F=10mA$	V_{F2}		—	0.855
	$I_F=50mA$	V_{F3}		—	1.00
	$I_F=150mA$	V_{F4}		—	1.25
Reverse Leakage Current	$V_R=75V$	I_R	μA	—	1.0
Total capacitance	$V_R=0V, f=1MHz$	C_T	pF	—	2.0
Maximum reverse recovery time	$I_F=10mA, I_{rr}=0.1 \times I_{R3}, R_L=100\Omega$	T_{rr}	ns	—	6.0

SOT-23



► **Ratings And Characteristics Curves** ($T_a=25^\circ\text{C}$ 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	30000	120000	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	0.80	-	0.031	-
K	-	0.90	-	0.035
M	2.00	-	0.078	-
N	-	1.90	-	0.074