

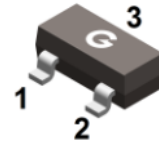
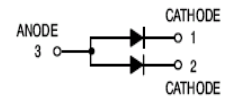
Features

- Low forward voltage
- Small total capacitance
- Fast reverse recovery time
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
1SS181	SOT-23	3000 pcs / Tape & Reel	A3

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	85	V
DC Blocking Voltage	V _R	80	V
Forward Current	I _F	100	mA
Maximum(peak) Forward Current	I _{FM}	300	mA
Peak Forward Surge Current, t _p = 10ms	I _{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	350	mW
Thermal Resistance Junction-to-Air ^{*1}	R _{θJA}	110	°C/W
Thermal Resistance Junction-to-Case ^{*1}	R _{θJC}	50	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	R _{θJL}	55	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	80	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	0.58	-	V
		$I_F = 10\text{mA}$	-	0.71	-	V
		$I_F = 100\text{mA}$	-	0.91	1.20	V
Maximum Peak Reverse Current	I_R	$V_R = 30\text{V}$	-	-	0.1	μA
		$V_R = 80\text{V}$	-	-	0.5	μA
Total Capacitance	C_J	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$	-	1.8	4	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	-	1.6	4	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

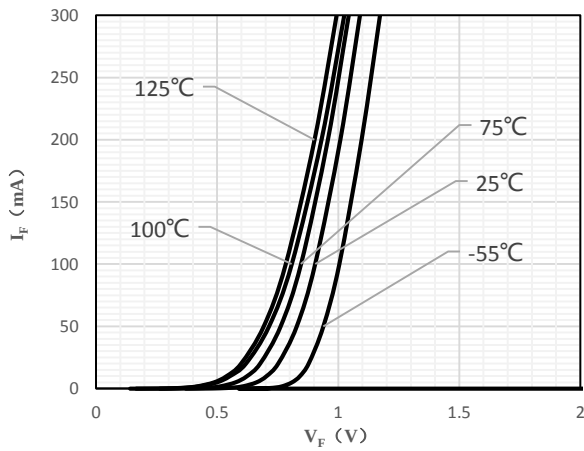


Fig 1 Typical Reverse Characteristic

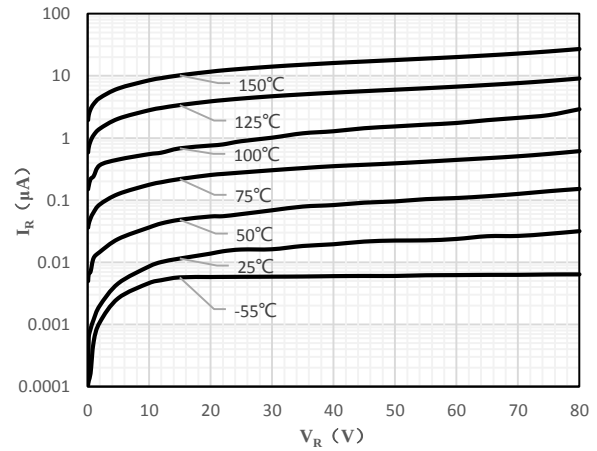


Fig 2 Typical Forward Characteristics

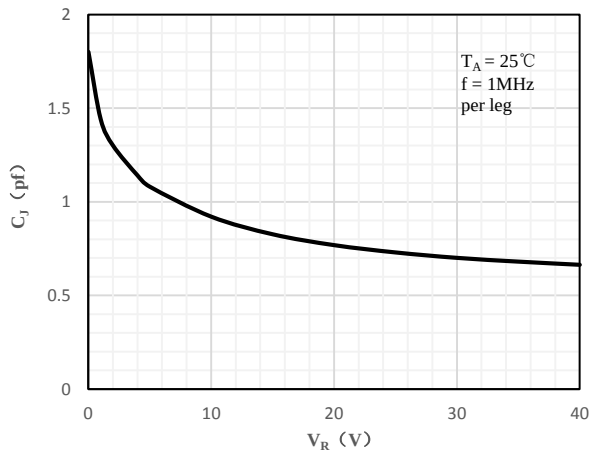


Fig 3 Capacitance vs. Reverse Voltage

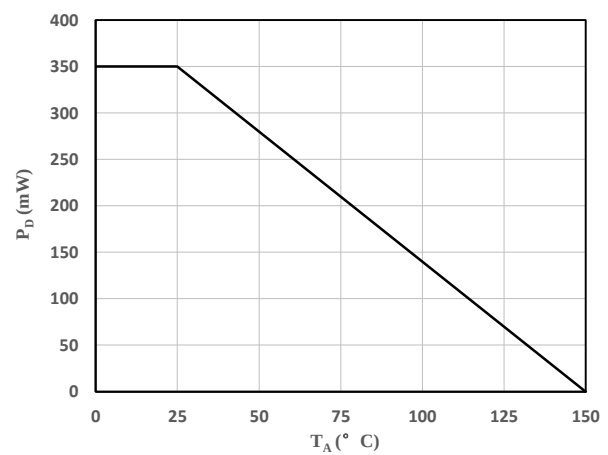


Fig 4 Power Derating Curve

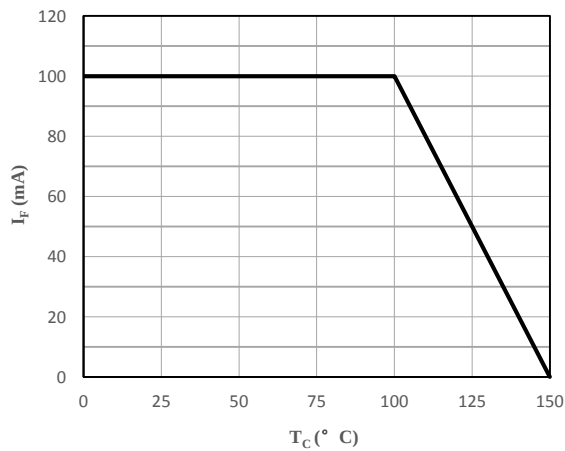
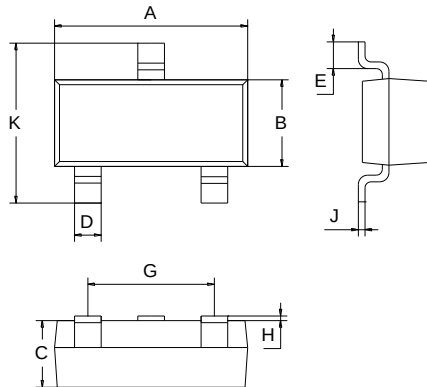


Fig 5 Current Derating

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

