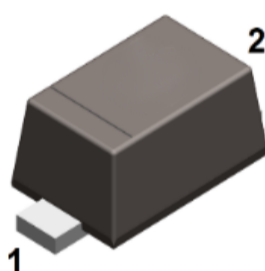


Features

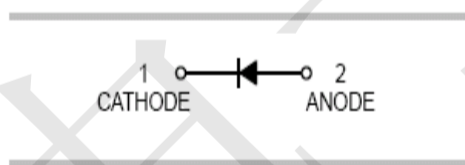
- Fast speed switching
- High conductance
- RoHS compliant with Halogen-free

Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-523



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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Working Peak Reverse Voltage	V_{RWM}	85	V
DC Blocking Voltage	V_R	85	V
RMS Reverse Voltage	$V_{R(RMS)}$	60	V
Forward Current	I_F	155	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Peak Forward Surge Current, 1 μ s Single Half-sine-wave	I_{FSM}	4	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I_{FSM}	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I_{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ($T_A = 25^\circ\text{C}$)	P_D	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	280	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	190	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	200	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	85	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 25\text{V}$	-	-	30	nA
		$V_R = 75\text{V}$	-	-	2	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	1.5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 20Z copper

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

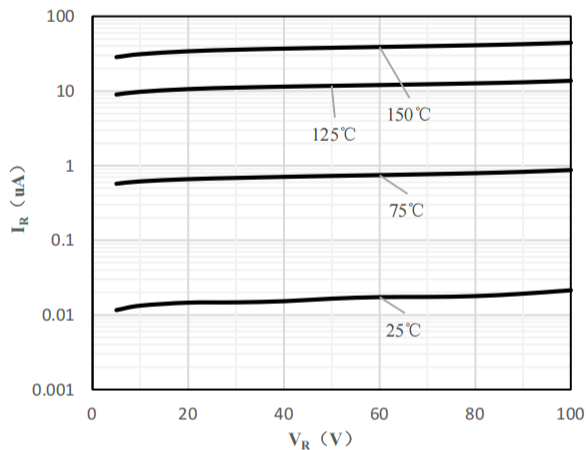


Fig 1 Typical Reverse Characteristic

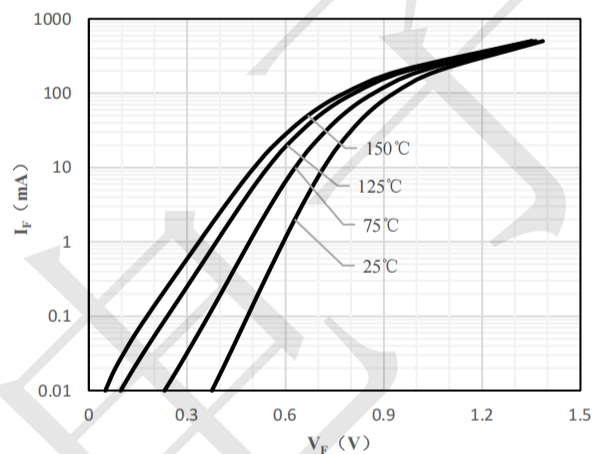


Fig 2 Typical Forward Characteristics

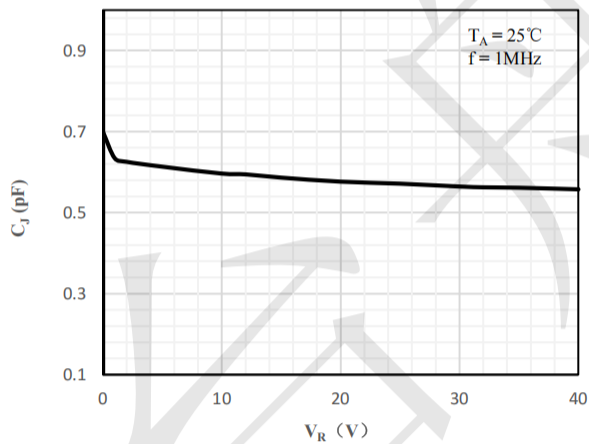


Fig 3 Capacitance vs. Reverse Voltage

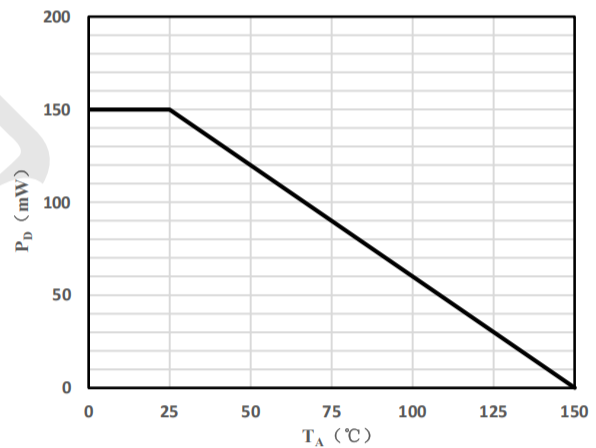
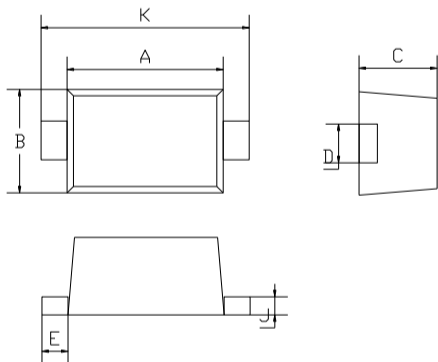


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523

