

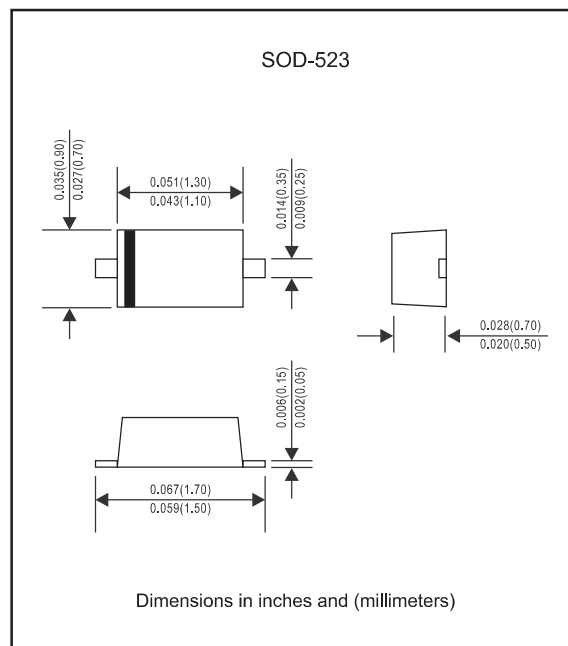
Features

- Ultra small plastic SMD package
- High continuous reverse voltage: 300V
- Repetitive peak forward current: 250 mA
- High switching speed: max. 50ns
- Compliant to Halogen-free

Mechanical data

- Case: SOD-523
- Molding Compound: UL 94-V0 rated flame retardant.
- Terminals: Matte tin-plated leads; solderable Per MIL-STD-202, Method 208

Package outline



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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	300	V
DC Blocking Voltage	V _R	300	V
Continuous Forward Current	I _F	250	mA
Peak Forward Surge Current, t _p = 1μs	I _{FSM}	4.5	A
Peak Forward Surge Current, t _p = 8.3ms		2	A
Repetitive Forward Current, t _p = 1ms	I _{FRM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _L = 25°C) *1	P _D	500	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	350	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	230	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	250	°C/W
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	300	-	-	V
Forward Voltage	V_F	$I_F = 100\text{mA}$	-	-	1.10	V
Maximum Peak Reverse Current	I_R	$V_R = 250\text{V}, T_J = 25^\circ\text{C}$	-	-	0.15	μA
		$V_R = 250\text{V}, T_J = 150^\circ\text{C}$	-	-	100	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 30\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	50	ns

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

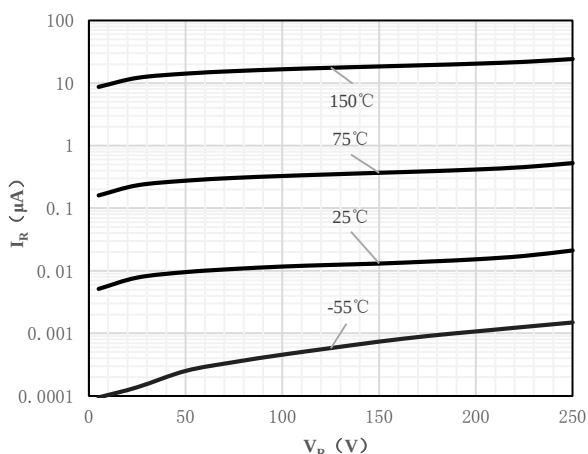


Fig 1 Typical Reverse Characteristic

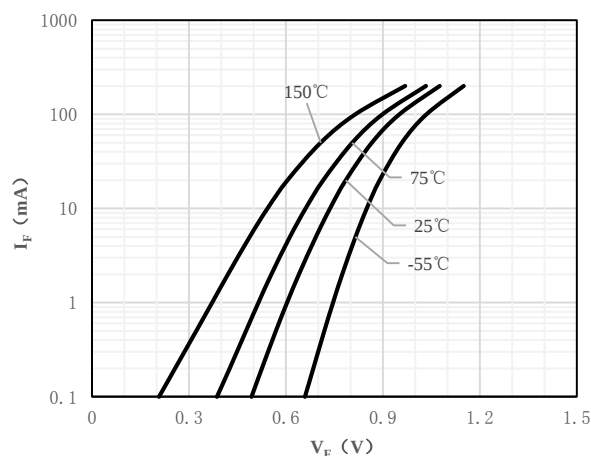


Fig 2 Typical Forward Characteristics

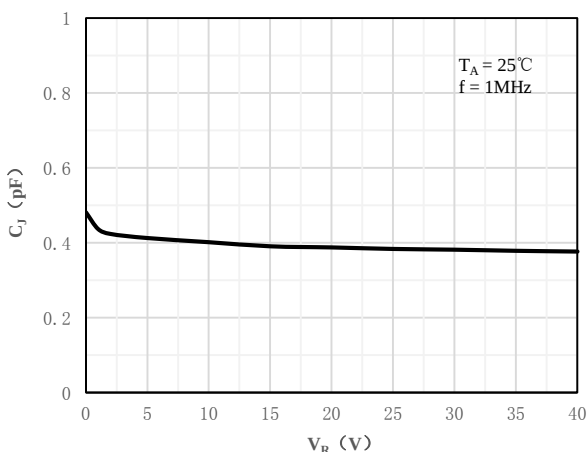


Fig 3 Capacitance vs. Reverse Voltage

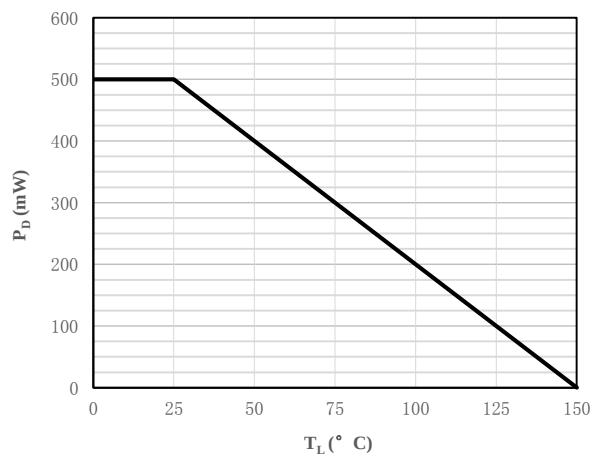


Fig 4 Forward Current Derating Curve

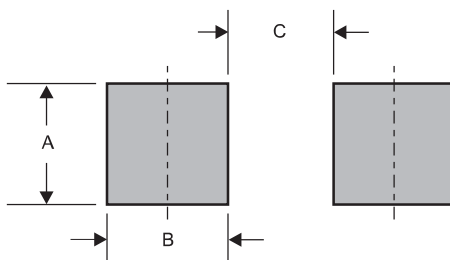
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
BAS521	L4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-523	0.016(0.40)	0.016(0.40)	0.039(1.00)