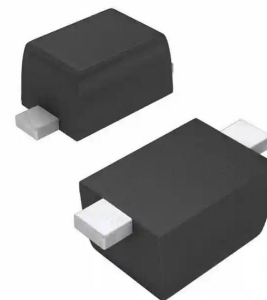




1. Features

- Extremely small surface mounting type
- High reliability

SOD523



2. Mechanical Data

- Case: Molded Plastic, SOD-523.
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking: A
- Marking: marked on body.

3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	90	V
DC Blocking Voltage	V_R	80	V
Forward Continuous Current	I_F	100	mA
Peak Forward Current	I_{FM}	225	mA
Non-Repetitive Peak Forward Current @ t=1s	I_{FSM}	0.5	A
Junction Temperature	T_J	-55 to +150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

4. Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameters	Symbol	Condition	Min	TYP	Max	Unit
Forward Voltage	V_F	$I_F = 100\text{mA}$	-	-	1.2	V
Reverse Current	I_R	$V_R = 80\text{V}$	-	-	0.1	μA
Capacitance between terminals	C_T	$V_R = 0.5\text{V}, f = 1\text{MHz}$	-	-	3	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \cdot I_R, R_L = 100\Omega$	-	-	4	ns



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

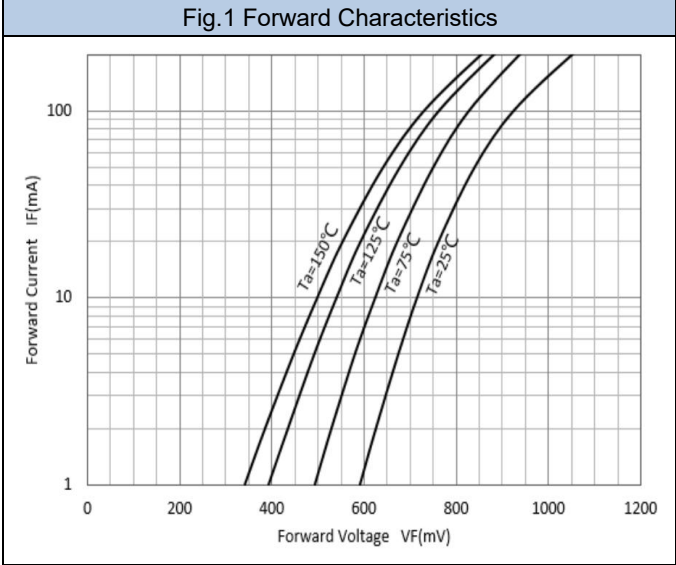


Fig.2 Reverse Characteristics

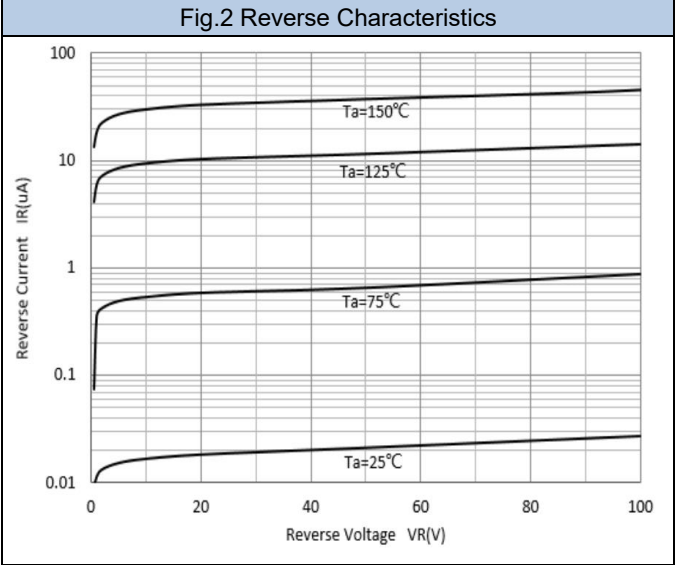
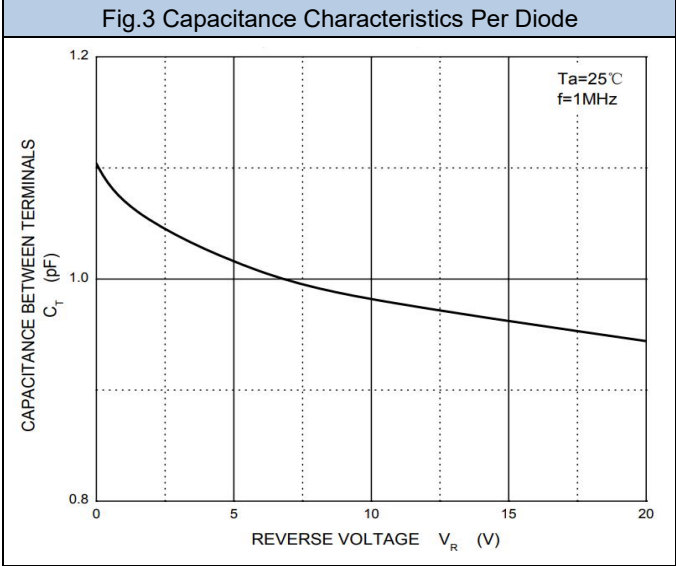
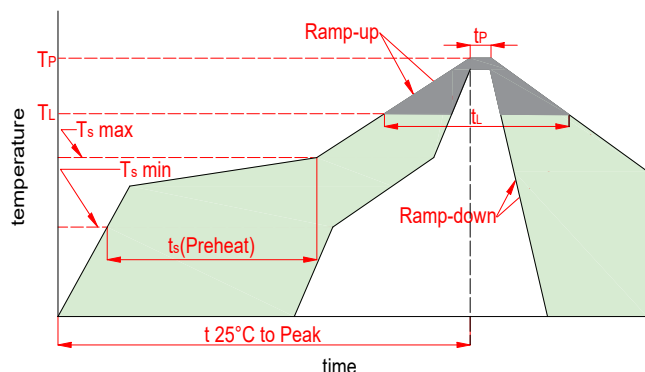


Fig.3 Capacitance Characteristics Per Diode



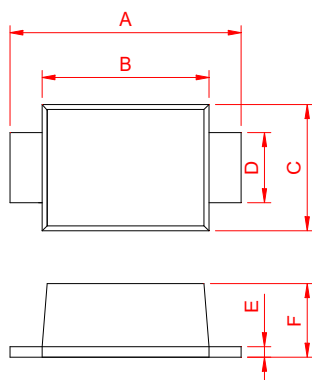


6. Soldering Parameters



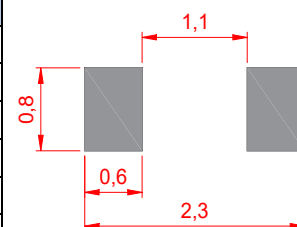
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150°C
	Temp. max(T_s (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_s (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp.(T_L)(Liquidus)	217°C
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260 ^{+0/-5} °C
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6°C/s max
Time 25°C to peak Tempe.(T_p)		8 minutes max
Do not exceed		260°C

7. Dimensions

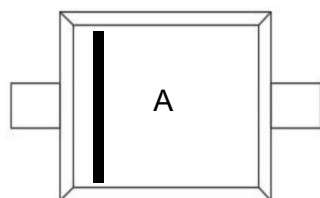


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.059	0.067	1.50	1.70
B	0.043	0.051	1.10	1.30
C	0.030	0.033	0.75	0.85
D	0.010	0.016	0.25	0.40
E	0.003	0.006	0.08	0.15
F	0.020	0.030	0.51	0.77

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Type	Tape Width (mm)	Quantity(pcs)
SOD523	1SS400	8	3000



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