



### 1. Features

SOD-323

- Small surface mounting type
- High Reliability
- Low  $I_R$



### 2. Mechanical Data

- Case:Molded Plastic,SOD-323.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking: S9.
- Marking:marked on body.

### 3. Maximum Ratings

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

Characteristic	Symbol	Limit	Unit
Continuous Forward Current	$I_O$	0.1	A
Peak Reverse Voltage	$V_{RM}$	45	V
Peak Forward Surge Current (8.3 ms)	$I_{FSM}$	1	A
DC Reverse Voltage	$V_R$	40	V
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_J$	-40 to+125	°C
Storage Temperature Range	$T_{stg}$	-40 to+125	°C

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

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Forward Voltage	$V_F$	$I_F = 10\text{mA}$	-	-	0.45	V
Reverse Current	$I_R$	$V_R=10\text{V}$	-	-	1	$\mu\text{A}$
Capacitance Between Terminals	$C_T$	$V_R = 10\text{V}, f = 1\text{MHz}$	-	6	-	pF
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	45	-	-	V

Note: ESD sensitive product handling required.



### 5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

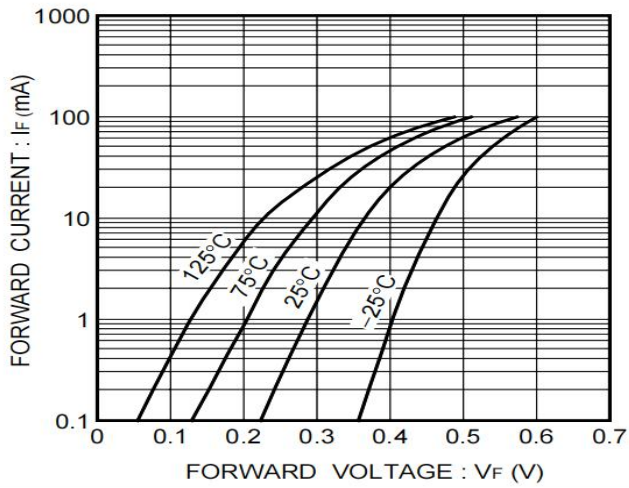


Fig.2 Reverse Characteristics

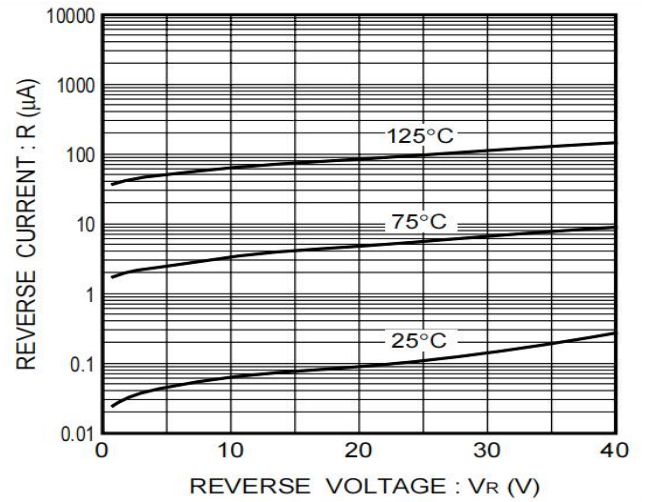


Fig.3 Capacitance Characteristics

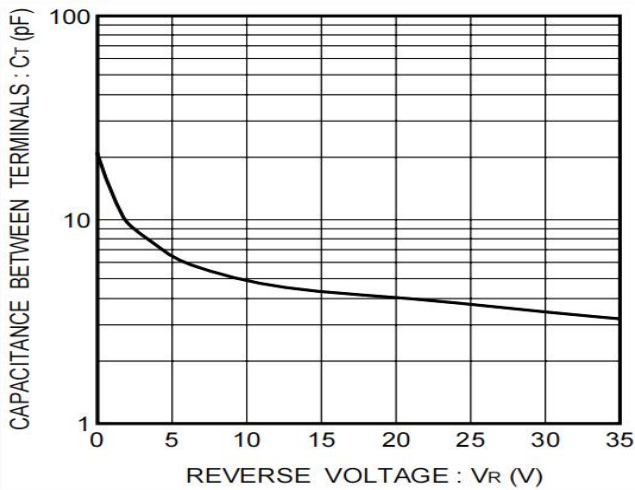
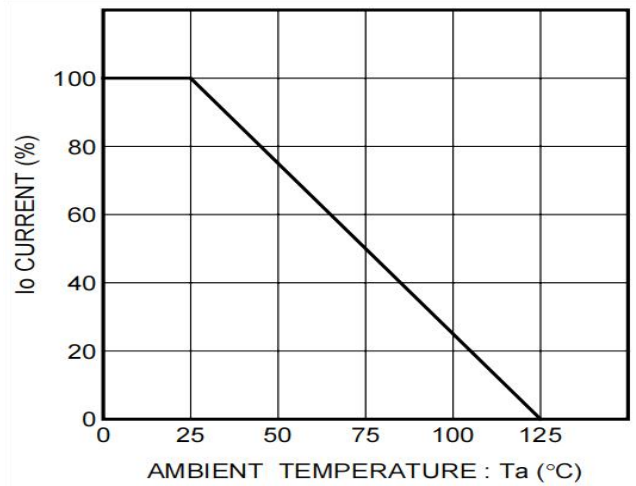
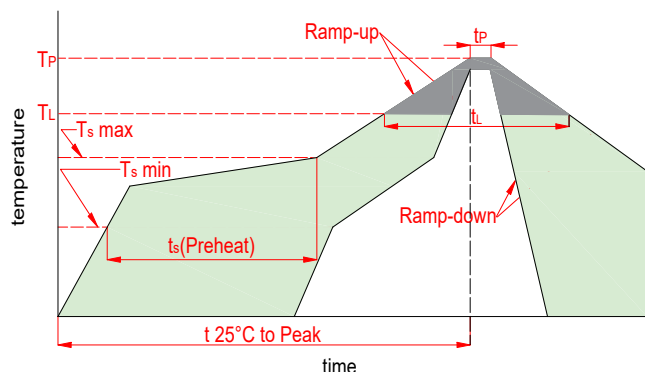


Fig.4 Derating Curve



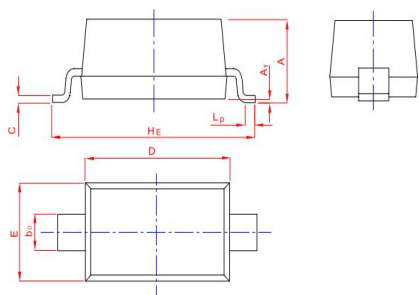


## 6. Soldering Parameters



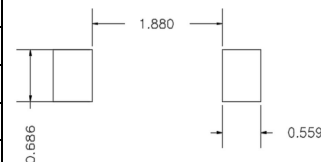
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150℃
	Temp. max( $T_s$ (min))	200℃
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3℃/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3℃/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217℃
	Temp.( $t_L$ )(Liquidus)	60~150s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

## 7. Dimensions

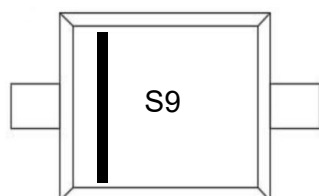


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.047	0.800	1.200
bp	0.010	0.016	0.250	0.400
C	0.003	0.006	0.080	0.150
D	0.063	0.071	1.600	1.800
E	0.045	0.055	1.150	1.400
HE	0.091	0.110	2.300	2.800
A1	0.000	0.004	0.010	0.100
LP	0.008	0.020	0.200	0.500

Mounting PAD Layout



## 8. Part Marking System



## 9. Package Information

Package	Type	Tape Width(mm)	Quantity(pcs)
SOD-323	RB500V-40	8	3000



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