



### 1. Features

- Extremely small surface mounting type
- High reliability

SOD-323



### 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:R9
- Marking:marked on body.

### 3. Maximum Ratings

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

Characteristic	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	25	V
Reverse Voltage	$V_R$	20	V
Average Forward Current	$I_O$	300	mA
Peak Forward Current	$I_{FM}$	700	mA
Power Dissipation	$P_D$	100	mW
Operating Temperature Range	$T_j$	125	°C
Operating And Storage Temperature Range	$T_{stg}$	-55 to+125	°C

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

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Forward Voltage	$V_F$	$I_F = 300\text{mA}$	-	-	0.45	V
Leakage current	$I_R$	$V_R = 20\text{V}$	-	-	50	$\mu\text{A}$
Total capacitance	$C_{tot}$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	46	-	pF



### 5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

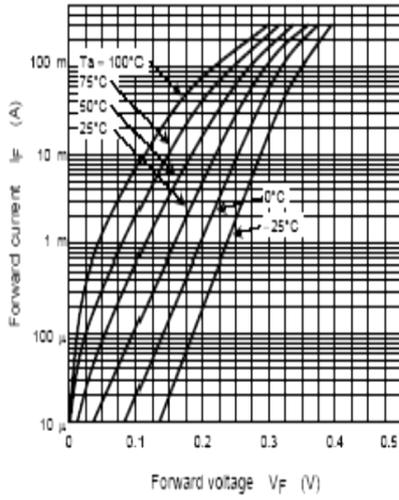


Fig.2 Reverse Characteristics

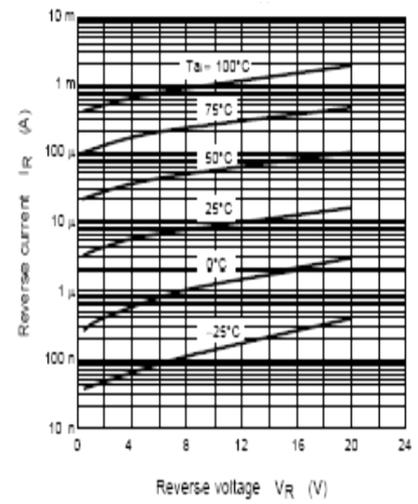


Fig.3 Capacitance Characteristics

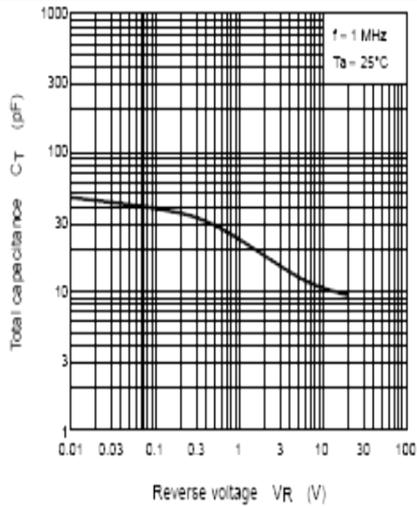
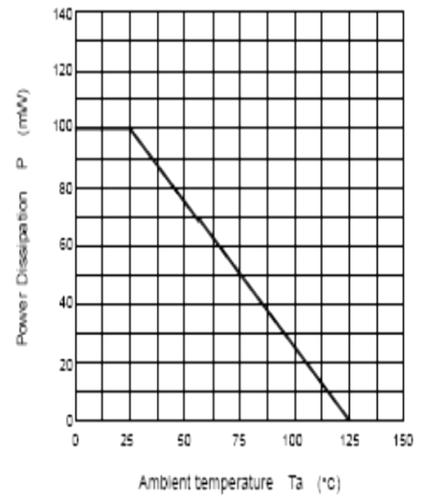
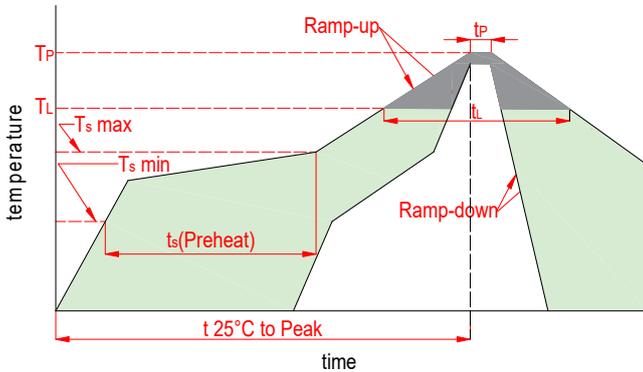


Fig.4 Power Derating Curve



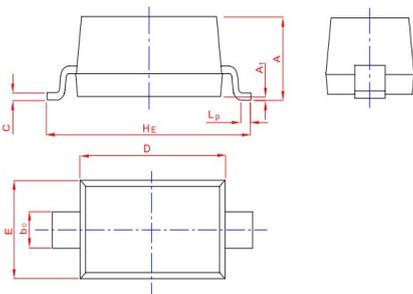


### 6. Soldering Parameters



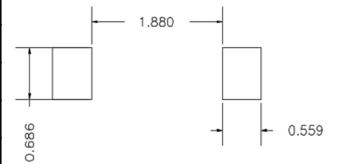
Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150°C
	Temp. max( $T_s$ (min))	200°C
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3°C/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3°C/s max
Reflow	Temp. ( $T_L$ )(Liquidus)	217°C
	Temp. ( $t_L$ )(Liquidus)	60~150s
Peak Temp. ( $T_P$ )		260 <sup>+0/-5</sup> °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

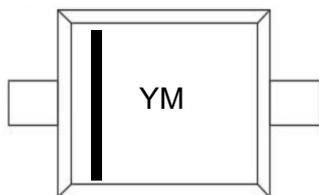


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.047	0.800	1.200
bp	0.010	0.016	0.250	0.400
C	0.003	0.006	0.080	0.150
D	0.063	0.071	1.600	1.800
E	0.045	0.055	1.150	1.400
$H_E$	0.091	0.110	2.300	2.800
A1	0.000	0.004	0.010	0.100
$L_P$	0.008	0.020	0.200	0.500

Mounting PAD Layout



### 8. Part Marking System



### 9. Package Information

Package	Type	Marking Code	Tape Width (mm)	Quantity(pcs)
SOD-323	1SS404WS	YM	8	3000



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