



1. Features

SOD-323

- For surface mounted applications
- Low forward voltage drop ($V_F=0.37V$ Typ. @ 0.1A)
- Guard ring for transient and ESD protection



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: RF.
- Marking:marked on body.



3. Maximum Ratings

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

Characteristic	Symbol	Limit	Unit
Average Forward Rectified Current	$I_{F(AV)}$	0.5	A
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Peak Forward Surge Current (8.3 ms)	I_{FSM}	2	A
DC Reverse Voltage	V_R	30	V
Power Dissipation	P_{tot}	235	mW
Thermal Resistance Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	426	°C/W
Junction Temperature	T_J	-65to+150	°C
Storage Temperature Range	T_{stg}	-65to+150	°C

(1) inch square pad size (1X0.5 inch for each lead) on FR4 board

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

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Forward Voltage	V_F	$I_F = 100mA$	-	-	0.375	V
		$I_F = 500mA$	-	-	0.5	
Reverse Current	I_R	$V_R=15V$	-	-	80	μA
		$V_R=20V$	-	-	100	
		$V_R=30V$	-	-	130	
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 500\mu A$	30	-	-	V



5. Rating And Characteristic Curves

Fig.1 Forward Characteristics

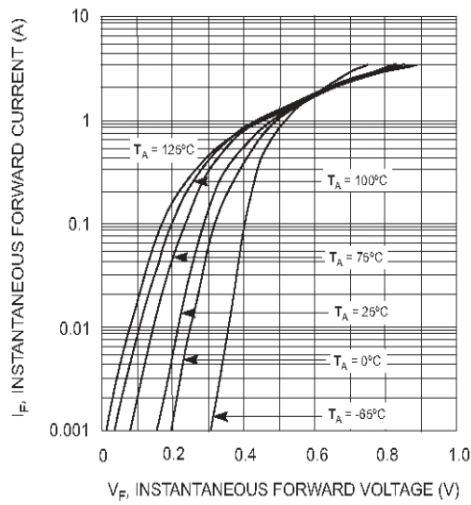


Fig.2 Reverse Characteristics

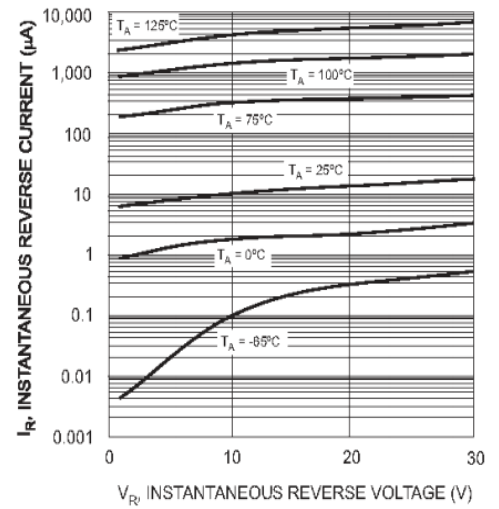


Fig.3 Capacitance Characteristics

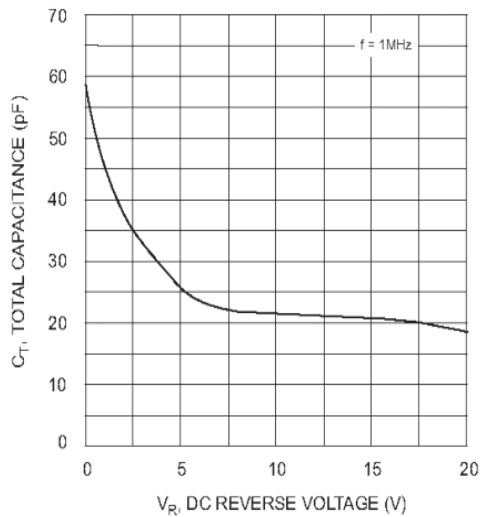


Fig.4 Derating Curve

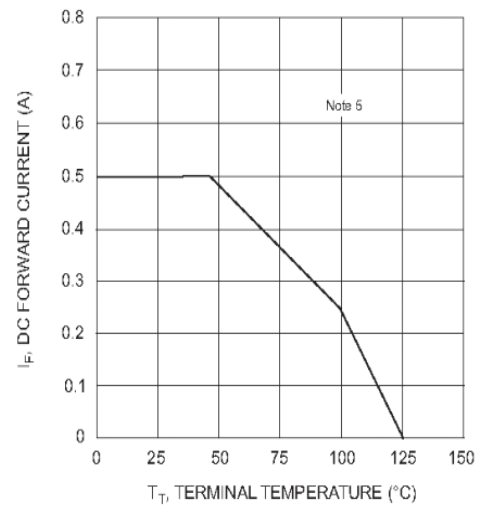
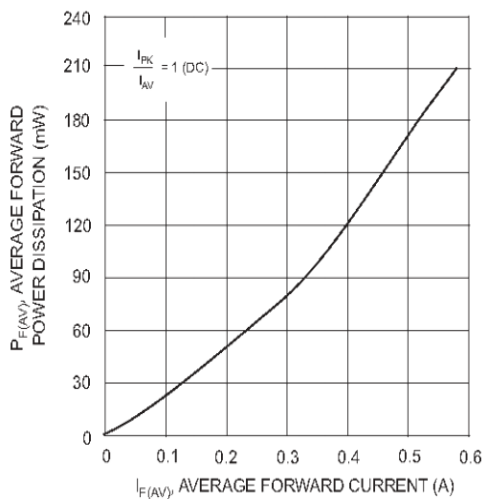
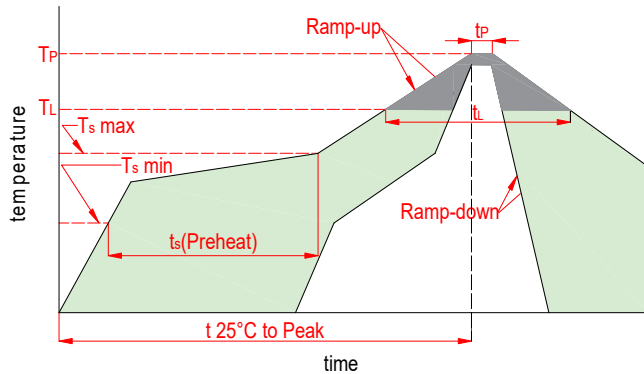


Fig.3 Typical Forward Dissipation



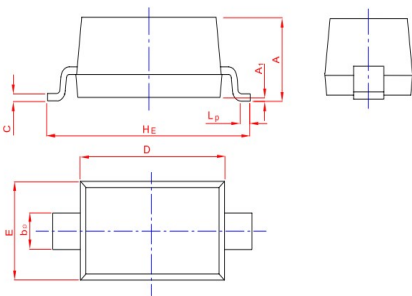


6. Soldering Parameters



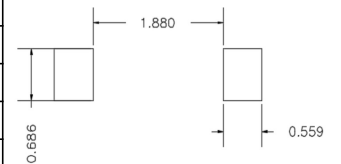
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150℃
	Temp. max(T_s (min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_s (max) to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260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

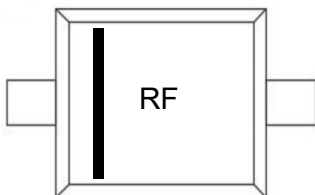


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.047	0.800	1.200
bp	0.010	0.016	0.250	0.400
C	0.003	0.006	0.080	0.150
D	0.063	0.071	1.600	1.800
E	0.045	0.055	1.150	1.400
H_E	0.091	0.110	2.300	2.800
A1	0.000	0.004	0.010	0.100
L_P	0.008	0.020	0.200	0.500

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Type	Marking Code	Tape Width (mm)	Quantity(pcs)
SOD-323	MBR0530WS	RF	8	3000



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