



1. Features

SOD-123

- For Use in Low Voltage, High Frequency inverters,voltage Free Wheeling, and Polarity Protection Applications



2. Mechanical Data

- Case:Molded Plastic,SOD-123.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:H0
- Mounting Position : Any.



3. Maximum Ratings

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

Characteristic	Symbol	Value	Unit
DC reverse voltage	V_R	30	V
Mean rectifying current	I_O	1	A
Peak Forward Surge Current (at $t_p \leq 8.3$ ms)	I_{FSM}	22	A
Junction Temperature Range	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	$I_F = 1\text{A}$	-	-	0.42	V
Reverse Current	I_R	$V_R = 30\text{V}$	-	-	1	mA



5. Rating And Characteristic Curves

Fig.1 $I_F - V_F$

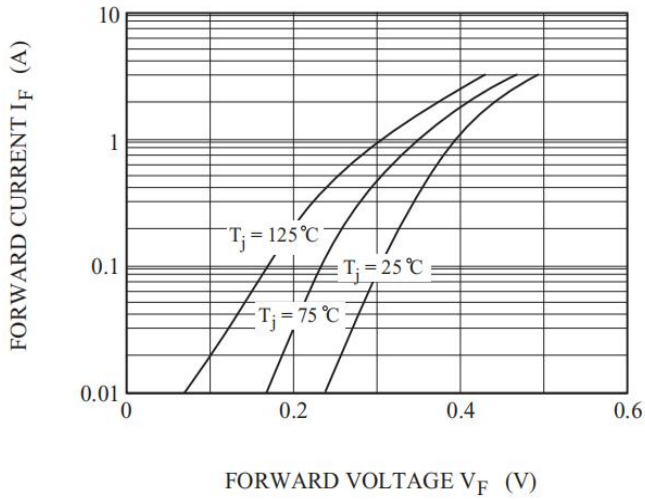


Fig.2 $P_{F(AV)} - I_{F(AV)}$

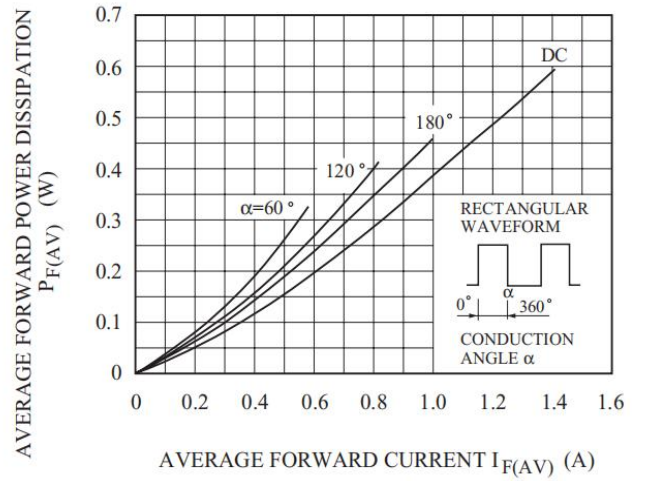


Fig.3 SURGE FORWARD CURRENT (NON - REPETITIVE)

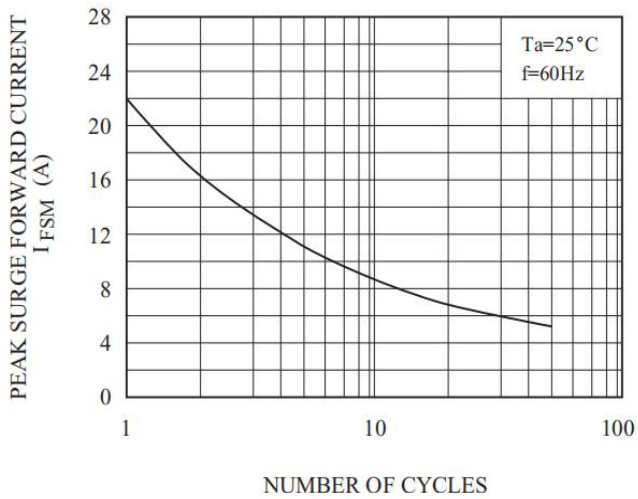
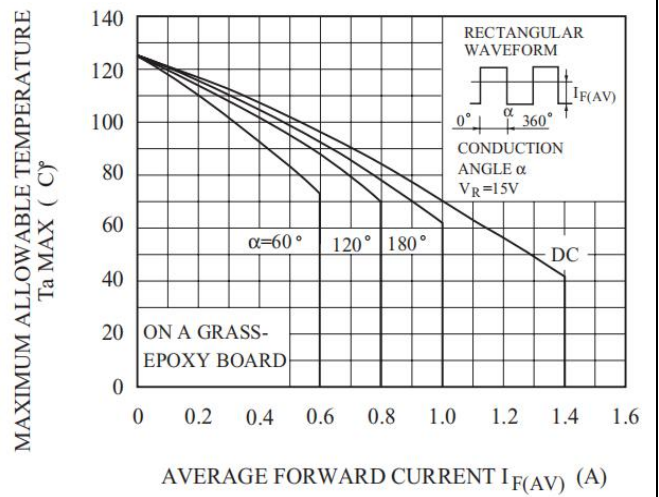
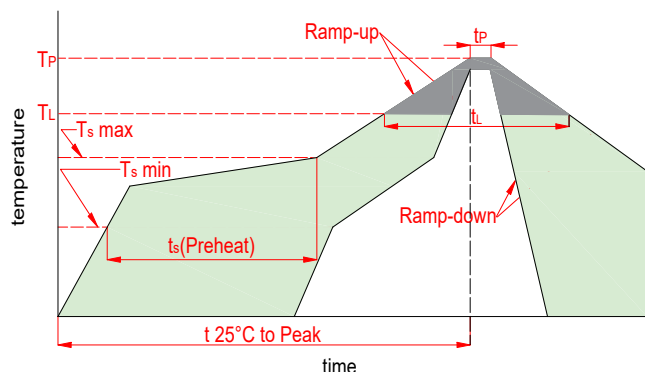


Fig.4 $T_a - I_{F(AV)}$



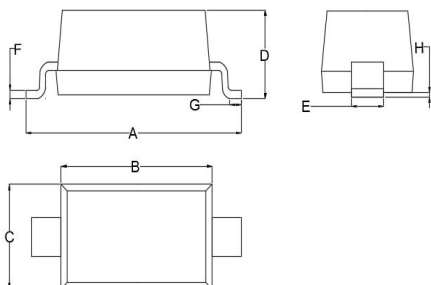


6. Soldering Parameters



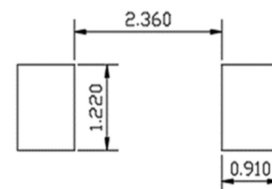
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150°C
	Temp. max(T_s (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_s (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp.(T_L)(Liquidus)	217°C
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)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

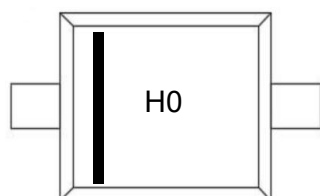


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.136	0.152	3.450	3.850
B	0.100	0.110	2.550	2.800
C	0.059	0.067	1.500	1.700
D	0.035	0.049	0.900	1.250
E	0.018	0.028	0.450	0.700
F	0.004	0.006	0.090	0.150
G	0.008	0.020	0.200	0.500
H	0.000	0.004	0.010	0.100

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Type	Tape Width (mm)	Quantity(pcs)
SOD-123	SMFB13W	8	3000



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