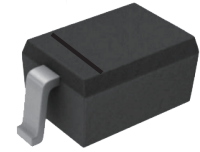


FEATURES

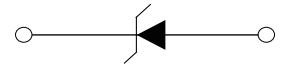
- | High Current Capability
- | Low Forward Voltage Drop



SOD-123

MECHANICAL DATA

- | SOD-123 Small Outline Plastic Package
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A = 25°C)

Parameter	Symbol	SD103AW	SD103BW	SD103CW	Unit
Marking		S4	S5	S6	
Peak Repetitive Reverse Voltage	V _{RRM}	40	30	20	V
RMS Reverse Voltage	V _{R(RMS)}	28	21	14	V
Maximum DC blocking voltage	V _{DC}	40	30	20	V
Maximum average forward rectified current	I _{FM}	350			mA
Peak forward surge current 8.3 ms single half sine-wave	I _{FSM}	2			A
Power Dissipation	P _D	400			mW
typical thermal resistance	R _{θJA}	250			°C/W
Operating junction temperature	T _J	125			°C
Storage temperature range	T _{STG}	-50+150			°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter		Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Maximum forward voltage		V _F	I _F =20mA			0.370	V	
			I _F =200mA			0.600	V	
Reverse breakdown voltage		V _R	I _R =100uA			40	V	
						30	V	
						20	V	
Reverse Leakage Current		I _R				5.0	μA	
								V _R =30V
								V _R =10V
Type junction capacitance		C _J	V _R =0V, f=1MHz		50		pF	
Reverse Recovery Time		T _{RR}	I _F =I _R =200mA, R _L =100Ω I _{RR} =0.1×I _R		10		nS	

CHARACTERISTIC CURVES

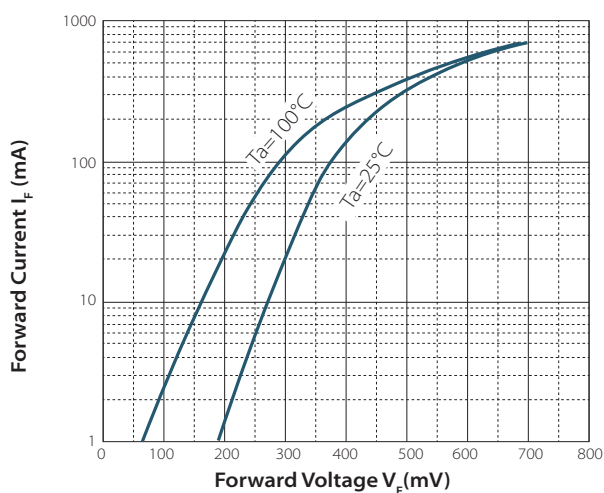
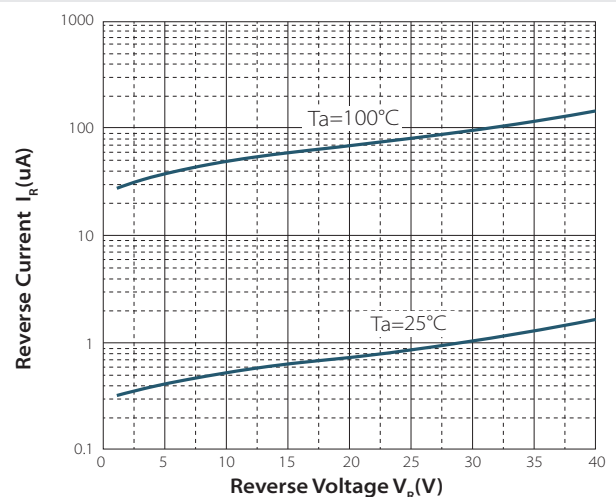
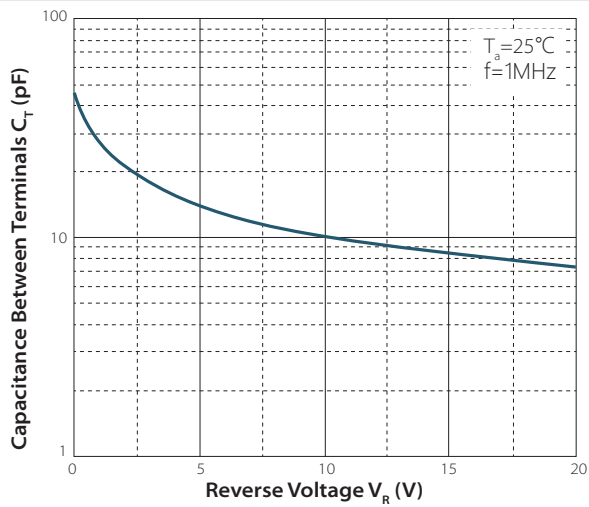
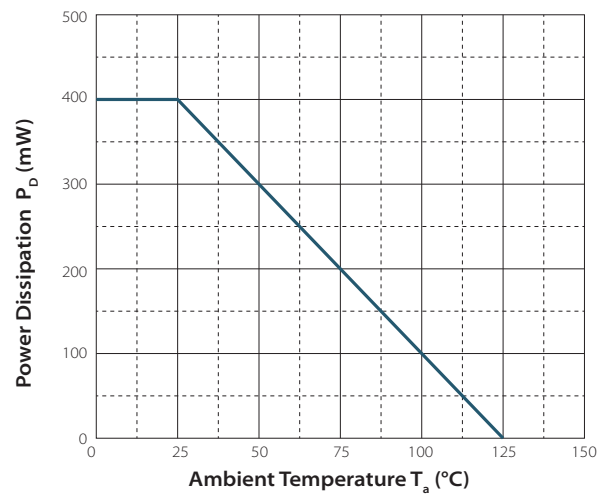
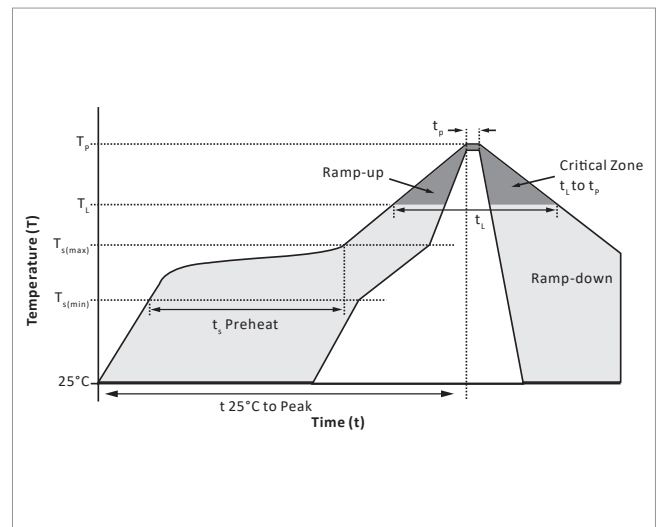
Fig.1 Forward Characteristics

Fig.2 Reverse Characteristics


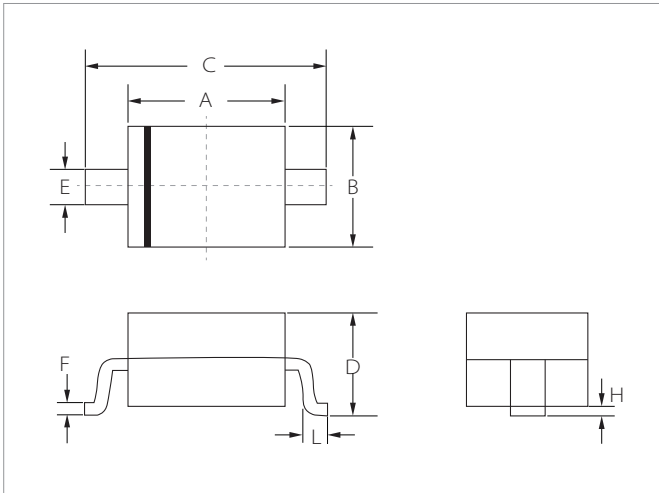
Fig.3 Capacitance Characteristics

Fig.4 Power Derating Curve


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

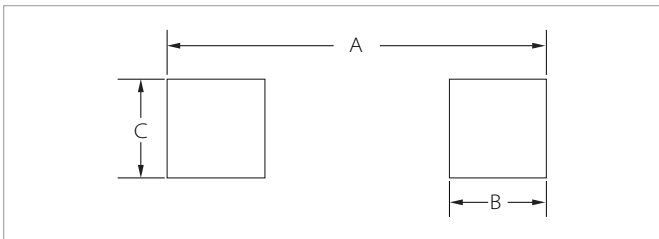


SOD-123 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	2.80	0.102	0.110
B	1.50	1.70	0.059	0.067
C	3.55	3.85	0.140	0.152
D	1.05	1.25	0.041	0.049
E	0.45	0.65	0.018	0.026
F	0.08	0.15	0.003	0.006
H	0.00	0.10	0.000	0.004
L	0.25	0.45	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.30	0.157	0.169
B	0.75	0.85	0.030	0.033
C	0.95	1.05	0.037	0.041

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SD103AW/BW/CW	SOD-123	3000PCS	7"

To find your local partner within Semiwell's website : www.semiwell.com.cn

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