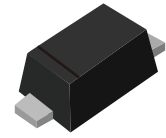


FEATURES

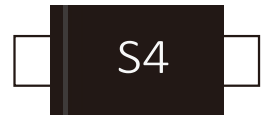
- | High Current Capability
- | Low Forward Voltage Drop



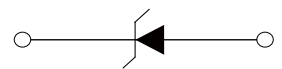
SOD-523

MECHANICAL DATA

- | SOD-523 Small Outline Plastic Package
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any



Marking



Schematic Symbol

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Maximum DC blocking voltage	V _{DC}	40	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	150	mW
typical thermal resistance	R _{θJA}	667	°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 =1mA		0.27		V
		I _F =5mA		0.32		V
		I _F =20mA			0.37	V
		I _F =200mA			0.60	V
Reverse breakdown voltage	V _R	I _R =100uA	40			V
Reverse Leakage Current	I _R	V _R =30V			5	μA
		V _R =20V			2	μA
		V _R =10V			1	μA
Total capacitance	C _{tot}	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

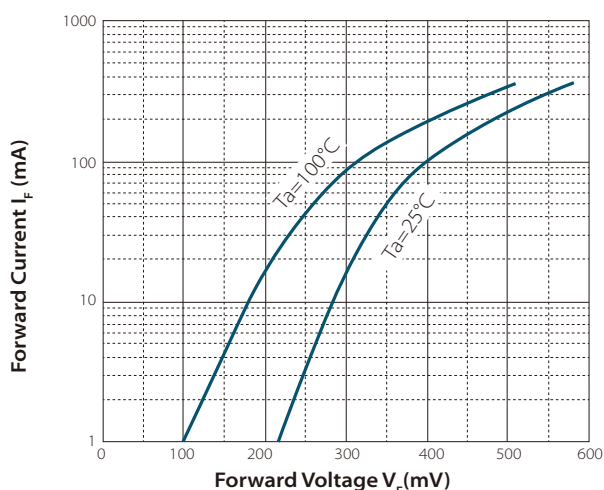
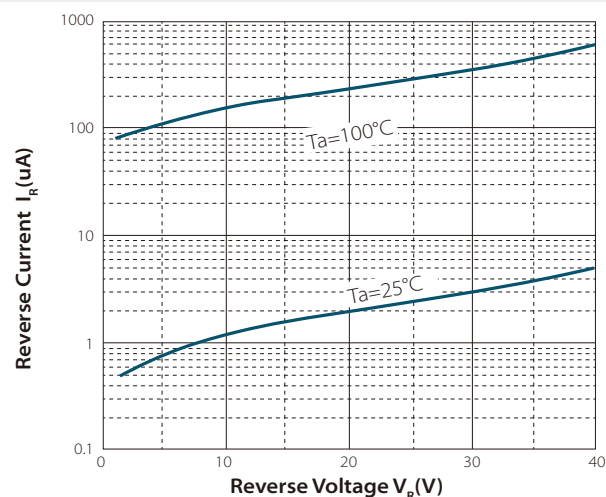
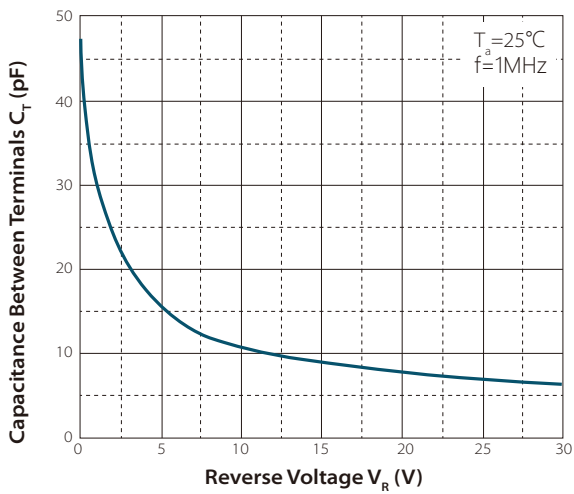
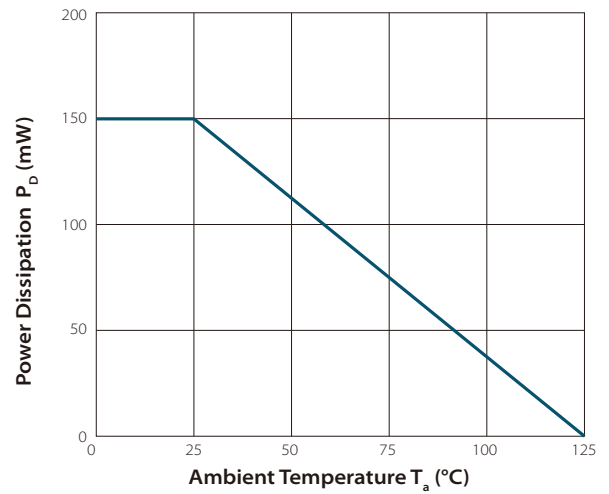
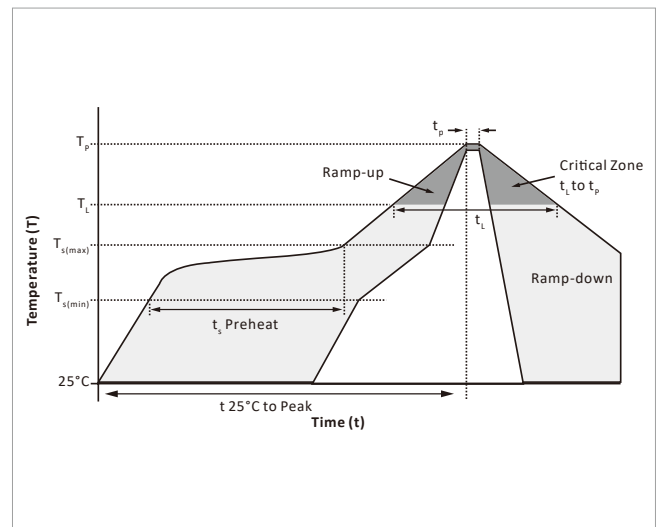
Fig.1 Forward Characteristics

Fig.2 Reverse Characteristics


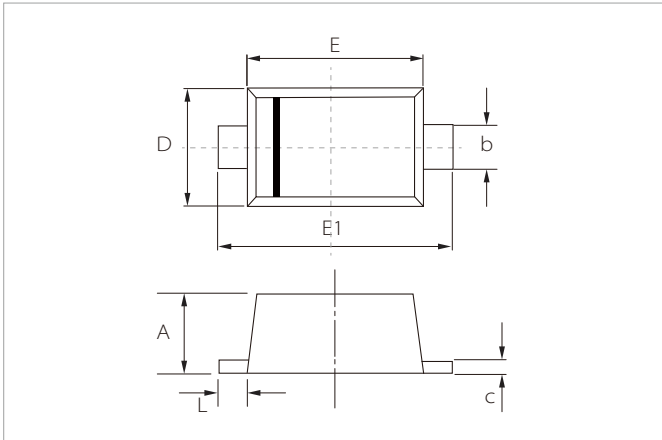
Fig.3 Capacitance Characteristics

Fig.4 Power Derating Curve


SOLDERING PARAMETERS

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

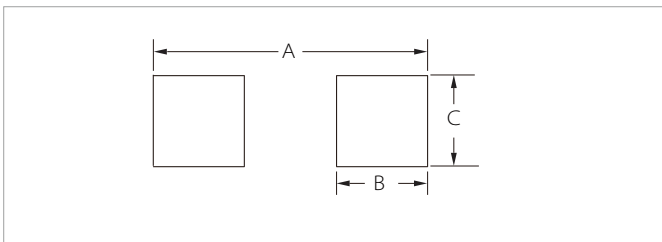


SOD-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.80	0.020	0.031
b	0.25	0.35	0.010	0.014
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Min.	Min.
A	2.00	0.0787
B	0.60	0.0236
C	0.70	0.0276

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SD103AX	SOD-523	3000PCS	7"

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

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