Features

Ultra low leakage: nA level
Operating voltage: 24V
Low clamping voltage
Complies with following standards:
IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
IEC61000-4-4 (EFT) 40A (5/50ns)
IEC61000-4-5 (Lightning) 9A (8/20μs)
RoHS Compliant

Applications

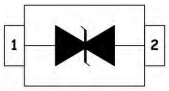
USB 2.0 power and data line
Set-top box and digital TV
Digital video interface (DVI)
Notebook Computers
SIM Ports
10/100 Ethernet

Mechanical Data

Package: SOD-323
Lead Finish: Lead Free
UL Flammability Classification Rating 94V-0

24B





SOD-323

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	320	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	Kv
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

Electrical Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				24	V
VBR	Reverse Breakdown Voltage	IT = 1mA	26.7			V
IR	Reverse Leakage Current	VRWM = 24V			0.5	μA
VC	Clamping Voltage	IPP = 1 A (8/20μs)			40	V
VC	Clamping Voltage	IPP = 9 A (8/20μs)			43	V
CJ	Capacitance	VR = 0V, f = 1MHz		25		pF

RATING AND CHARACTERISTIC CURVES

Fig1. 8/20μs Pulse Waveform

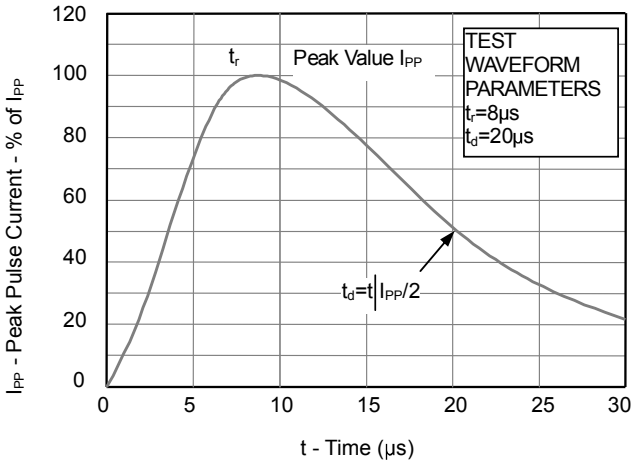


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

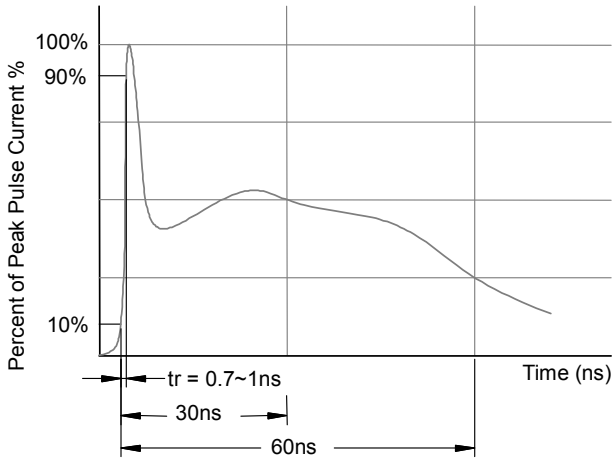
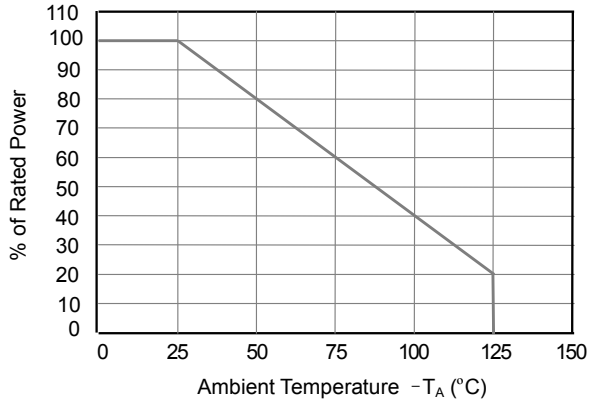


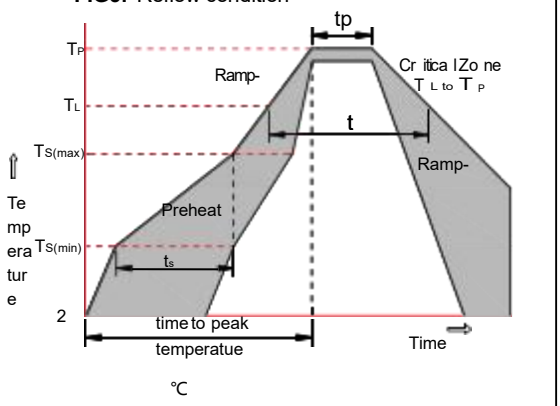
Fig3. Power Derating Curve



Soldering parameters

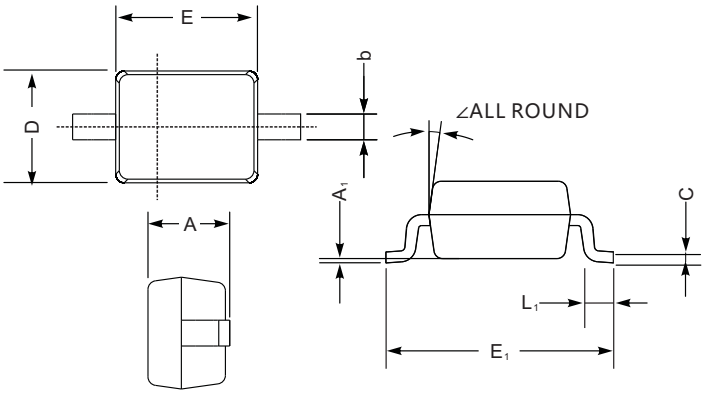
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition



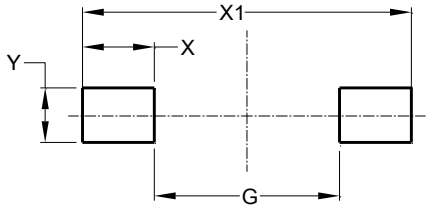
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

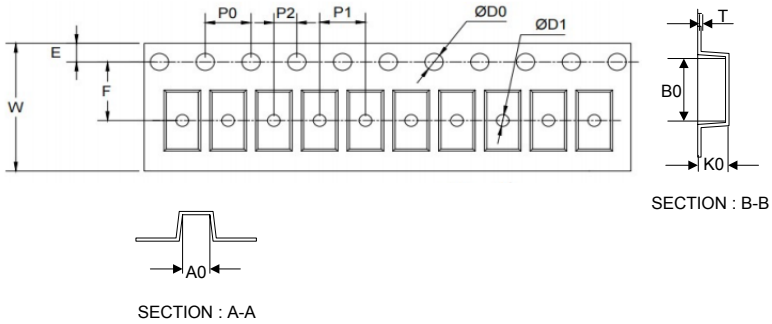
UNIT		A	C	D	E	E_1	b	L_1	A_1	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
G	1.40
X	1.20
X1	3.80
Y	1.00

Tape & rell specification

Tape

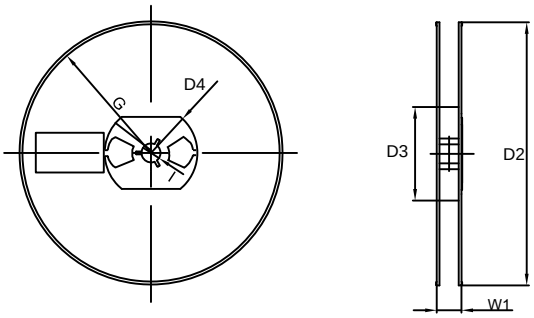


SECTION : A-A

SECTION : B-B

Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.00±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	2.00±0.20
B0	3.25±0.20
K0	1.35±0.20
T	0.23±0.10

7” Reel



D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 3000PCS