Features

Miniaturized packaging size suitable for high-density applications:

nom 0.066″ x 0.049″ (1.7x1.25mm)

Low Clamping Voltage:V_C=16V@I_{PP}=130A

Reverse Working (Stand-off) Voltage:4.5 V

Low Leakage

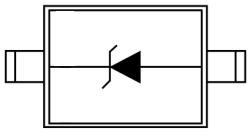
Response Time is Typically < 1 ns

IEC61000-4-2 Level 4 ESD Protection





SOD-323(Pb-Free)



Schematic Diagram

Applications

Smartphones, tablet computers,
Mobile Internet Devices (MID) and portable devices

TVs and monitors

Blu-ray and DVD recorders players

Notebooks, main board graphic cards and ports

Set-top boxes and game consoles

Peripherals

Absolute Maximum Rating

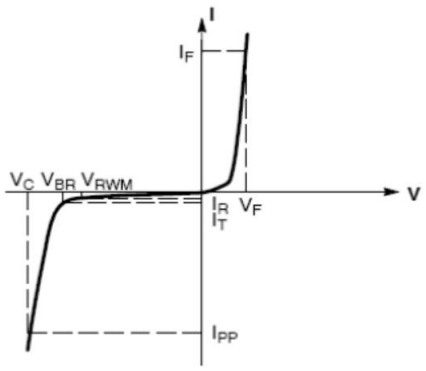
Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact		±30	kV
Peak Power Per 8 x 20μs Waveform	P_{PK}	2080	kV
Junction Temperature Range	T_J	-40 to +85	W
Storage Temperature Range	T_{stg}	-55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				4.5	V
Forward Voltage	V_F	I_F=10mA			1.1	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	5		7	V
Reverse Leakage Current	I_R	V_{RWM}=4.5V			0.5	uA
Clamping Voltage	V_C	I_{PP}=45A tp=8/20us			12	V
		I_{PP}=130A tp=8/20us			16	
Junction Capacitance	C_J	V_R=0V, f = 1MHz			1200	pF

Electrical Parameter

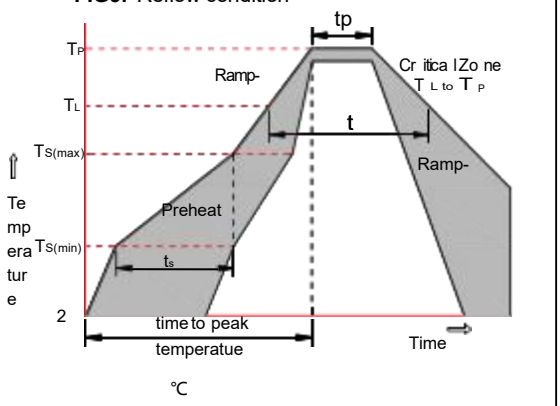
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
P_{PK}	Peak Power Dissipation
C	Max. Capacitance @ V_R = 0 and freq.=1 MHz



Soldering parameters

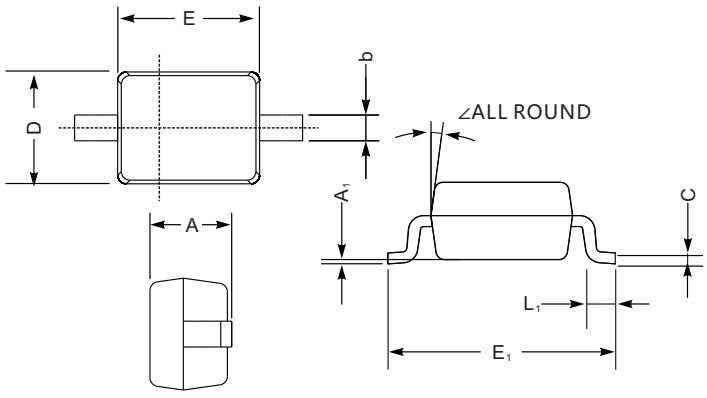
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid 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



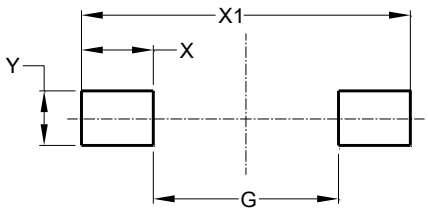
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

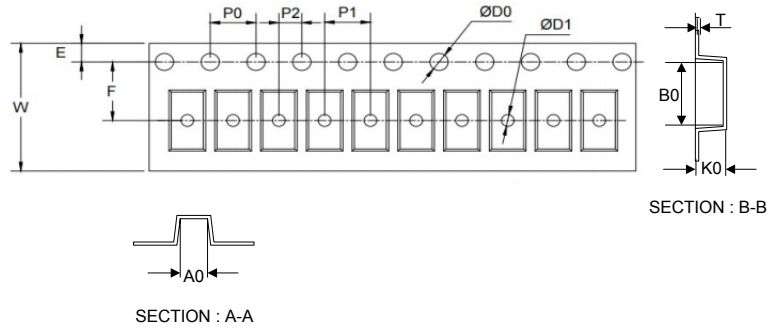
UNIT		A	C	D	E	E_1	b	L_1	A_1	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



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

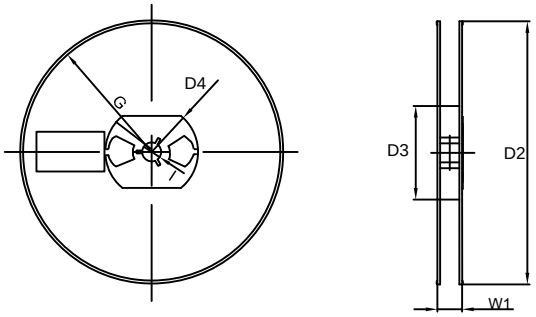
Tape & rell specification

Tape



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