

Features

Miniaturized packaging size suitable for high-density applications:

nom 0.066" x 0.049" (1.7x1.25mm)

Low Clamping Voltage: $V_C=18V@I_{PP}=160A$

Reverse Working (Stand-off) Voltage: 4.5 V

Low Leakage

Response Time is Typically < 1 ns

IEC61000-4-2 Level 4 ESD Protection



Applications

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

TVs and monitors

Blu-ray and DVD recorders players

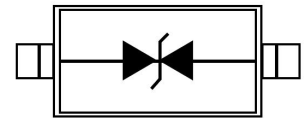
Notebooks, main board graphic cards and ports

Set-top boxes and game consoles

Peripherals



SOD323-2L



Schematic Diagram

Absolute Maximum Rating

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact		±30	kV
Peak Power Per 8 x 20µs Waveform	P_{PK}	2800	W
Junction Temperature Range	T_J	-40 to +85	°C
Storage Temperature Range	T_{stg}	-55 to +150	
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	°C

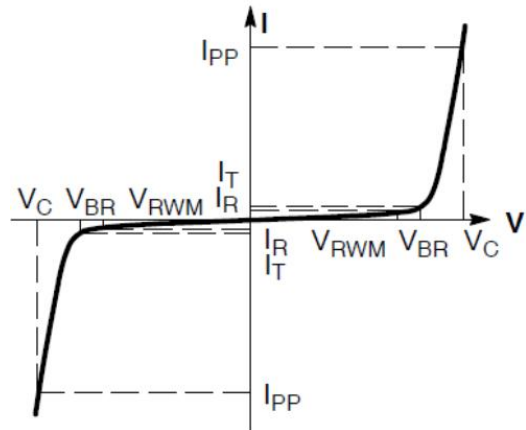
Note: FR-5 = 1.0*0.75*0.062inch (25.4*19.05*1.58mm).

Electrical Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				4.5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.6		6.0	V
Reverse Leakage Current	I_R	$V_{RWM}=4.5V$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=40A$ $t_p=8/20\mu s$			8	V
		$I_{PP}=160A$ $t_p=8/20\mu s$			18	
Junction Capacitance	C_J	$V_R=0V$, $f = 1MHz$			480	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



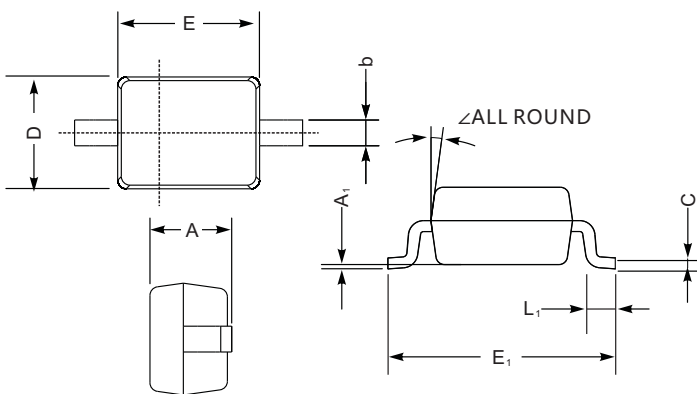
Soldering parameters

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



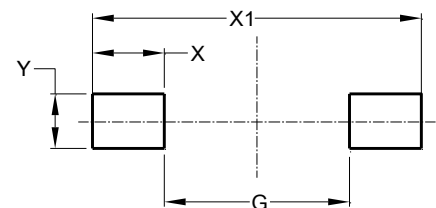
Package Dimensions & Suggested Pad Layout

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 & reel 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		
		<p>7" Reel</p>		D2	177.0±5.0
				D3	55Min.
D4	R24.6±2.0				
G	R82.0±2.0				
I	13.0±2.0				
<p>Quantity: 3000PCS</p>		W1	10.20±3.0		