

Features

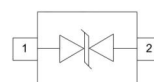
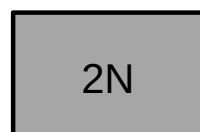
250W peak pulse power (8/20μs)
Protects one data or power line
Ultra low leakage: nA level
Operating voltage: 36V
Ultra low clamping voltage
Complies with following standards:
– IEC 61000-4-2 (ESD) immunity test
 Air discharge: ±30kV
 Contact discharge: ±30kV
– IEC61000-4-4 (Lightning) 4 A (8/20ns)

Mechanical Data

Package: SOD-323
Lead Finish: Matte Tin
Case Material: "Green" Molding Compound
UL Flammability Classification Rating 94V-0
Moisture Sensitivity: Level 3 per J-STD-020
Terminal Connections: See Diagram Below

Applications

Cellular Handsets and Accessories
Personal Digital Assistants
Notebooks and Handhelds
Portable Instrumentation
Peripherals
Pagers Peripherals
Desktop and Servers



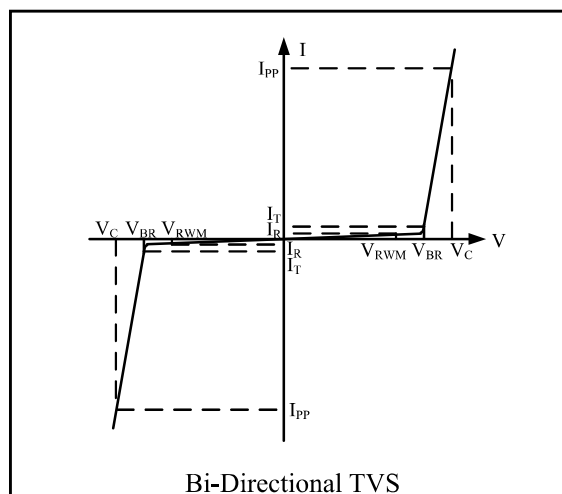
SOD-323

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	250	W
Peak Pulse Current (8/20μs)	IPP	4	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	–55 to +125	°C
Storage Temperature Range	Tstg	–55 to +150	°C

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				36	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA (Pin1-Pin2)}$	40			V
Reverse Leakage Current	I_R	$V_{RWM} = 36\text{ V}$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{ A (8 x 20}\mu\text{s pulse)}$ (Pin1-Pin2)		41		V
Clamping Voltage	V_C	$I_{PP} = 4\text{ A (8 x 20}\mu\text{s pulse)}$ (Pin1-Pin2)		60		V
Junction Capacitance	C_J	$V_R = 0\text{V, } f = 1\text{MHz}$ (Pin1-Pin2)			10	pF

RATING AND CHARACTERISTIC CURVES

Fig1. 8/20 μ s Pulse Waveform

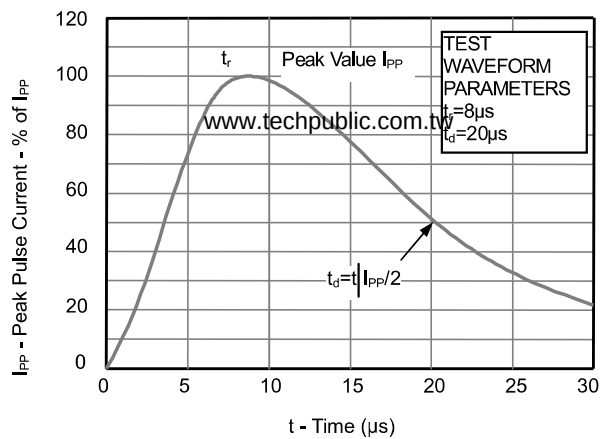


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

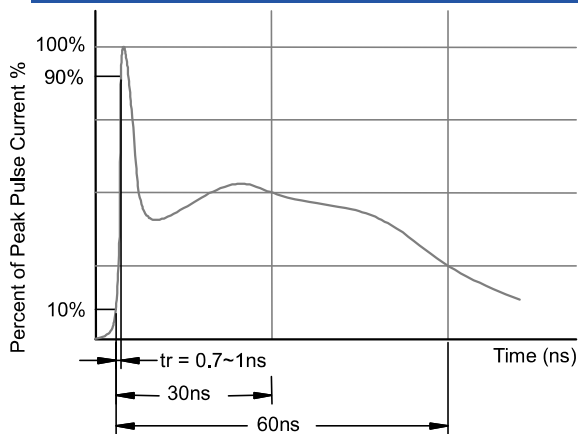
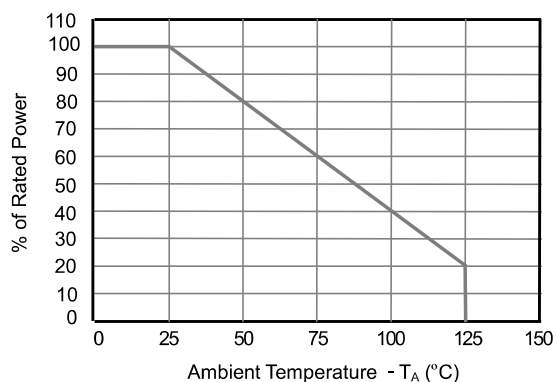
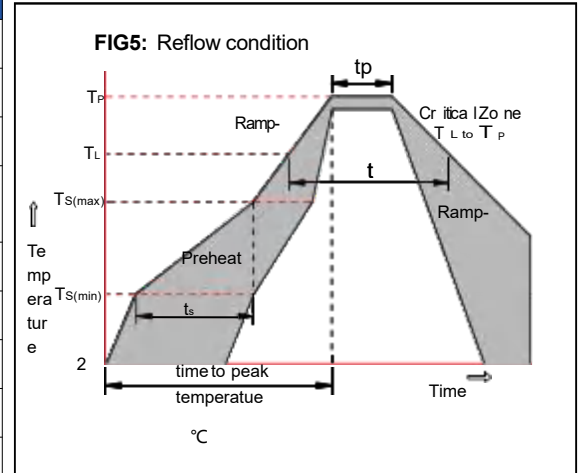


Fig3. Power Derating Curve



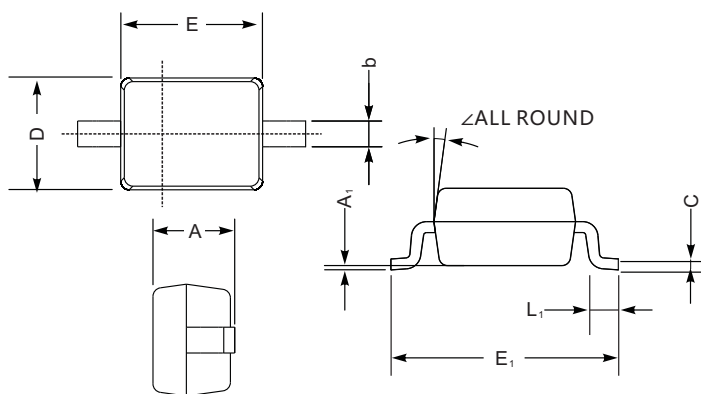
Soldering parameters

Reflow Condition		Pb-Free assembly (see as 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



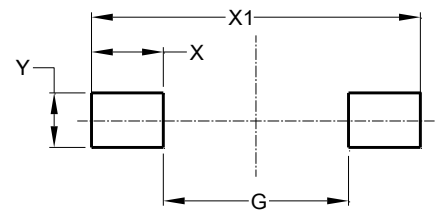
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

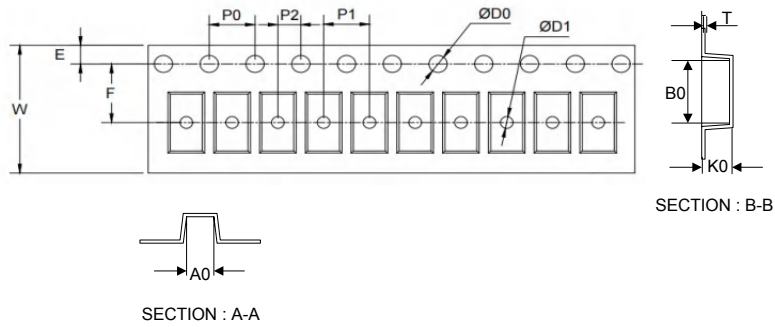
UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



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

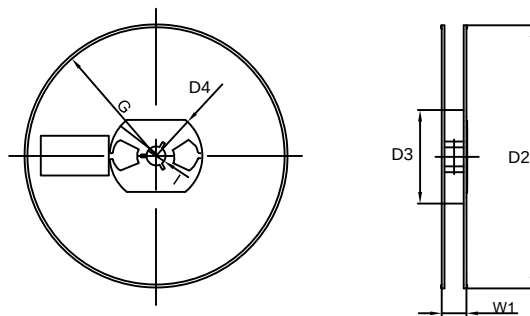
Tape & reel specification

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
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

7" Reel



Quantity: 3000PCS