

Features

- Low operating voltage: 3.3V
- Ultra low capacitance: 90pF
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- 2-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically $< 1\text{ ns}$

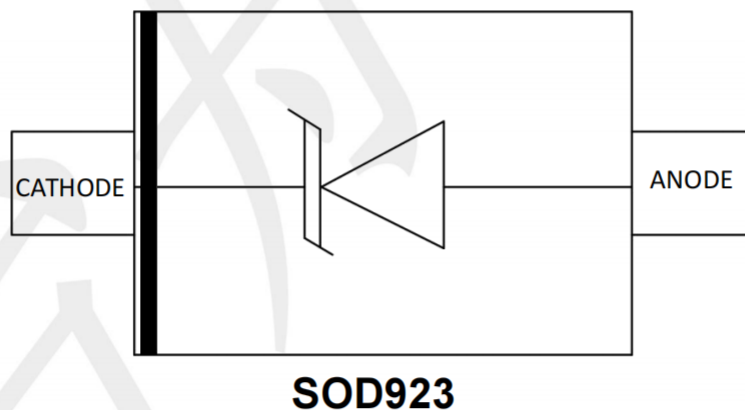
Mechanical Characteristics

- Package: SOD923(0402)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Peripherals

Dimensions and Pin Configuration



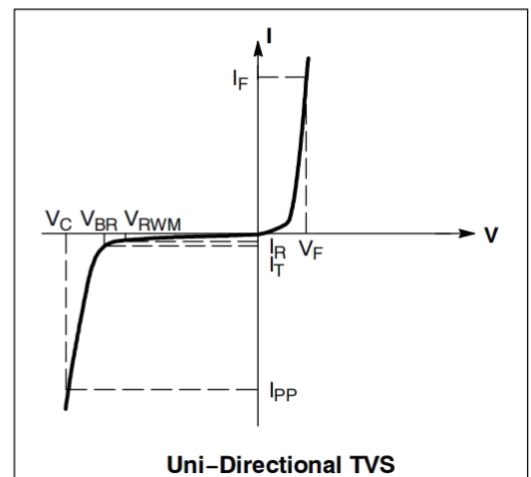
Absolute Maximum Ratings ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	200	W
IEC 61000-4-2 Spec Current at 60 ns (A)	Ipp	14	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	± 30 ± 30	KV
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM	--	--	3.3	V	
Breakdown Voltage	VBR	5	5.5	--	V	$I_T = 1\text{mA}$
Reverse Leakage Current	IR	--	--	2.5	μA	$VRWM = 3.3\text{V}$
Forward voltage	VF	--	0.8	1.2	V	$I_F = 10\text{mA}$
Clamping Voltage	VC	--	14	18	V	$I_{pp} = 14\text{A}$ (8x 20 μs pulse)
Junction Capacitance	CJ	--	90	--	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1.0\text{MHz}$



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

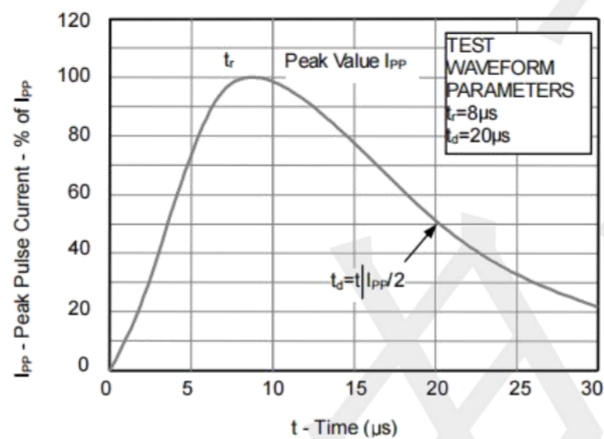


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

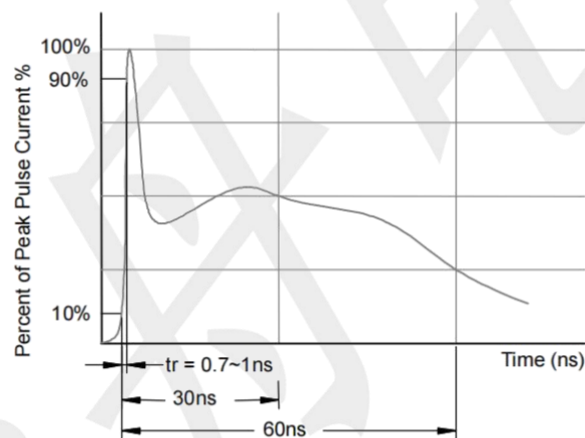
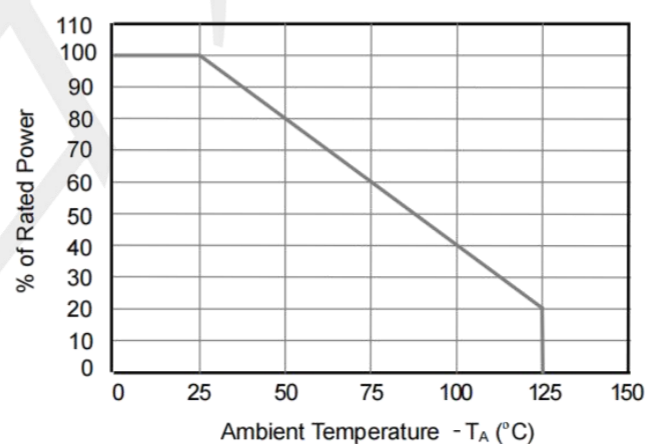
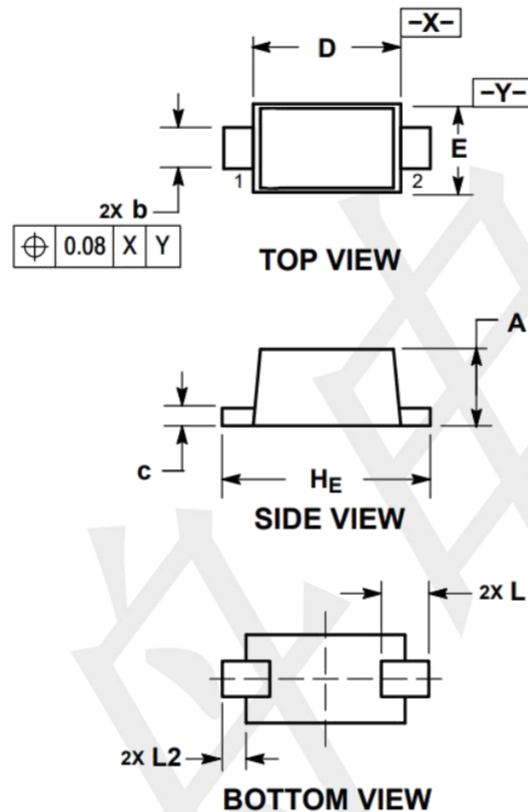


Fig3. Power Derating Curve



Package Outline & Dimensions

SOD923 (0402)



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H _E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.19 REF			0.007 REF		
L2	0.05	0.10	0.15	0.002	0.004	0.006

Mounting Pad Layout (unit: mm)

