

## Transient Voltage Suppressors for ESD Protection

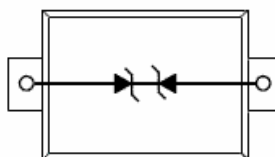
### FEATURES:

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 60 Watts @ 8 x 20 $\mu$ s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection

### Circuit Diagram & Pin Configuration:



SOD-923



### DEVICE MARKING AND ORDERING INFORMATION

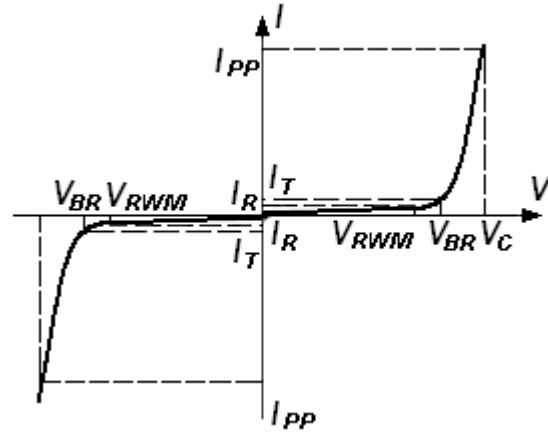
Device	Marking	Shipping
TESDN051BD92	C	8000/Tape&Reel

### Absolute Ratings (T<sub>amb</sub>=25°C )

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20 $\mu$ s)	60	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s	260	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +155	°C
T <sub>op</sub>	Operating Temperature Range	-40 to +125	°C
T <sub>j</sub>	Maximum junction temperature		
	IEC61000-4-2 (ESD)	air discharge contact discharge	$\pm 15$ $\pm 8$ KV

### 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 @ $I_T$



### Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Device	$V_{RWM}$ (V)	$I_{R1}(\mu A)$ @ $V_{RWM}$	$I_{R2}(\mu A)$ @ $V_R=3.5V$	$V_{BR}$ (V) @ $I_T$ (Note 1)	$I_T$ mA	$V_C$ (V) @ Max $I_{PP}^*$	$I_{PP}$ (A)*	$P_{PK}$ (W)*	C (pF)
	Max	Max	Max	Min		Max	Max	Max	Typ
TESDN051BD92	5.0	0.5	0.3	5.6	1.0	16	4	60	15

\*Surge current waveform per Figure 1.

1.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of 25°C.

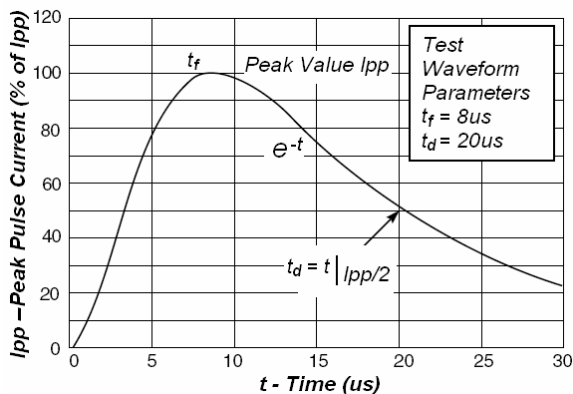


Fig1. Pulse Waveform

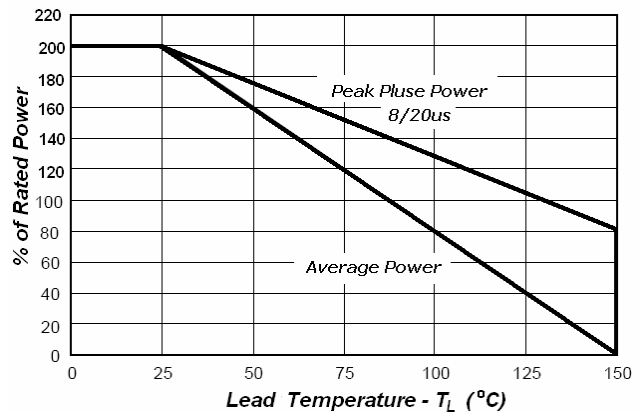
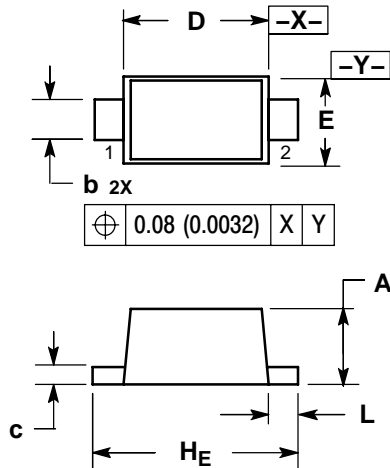


Fig2. Power Derating Curve

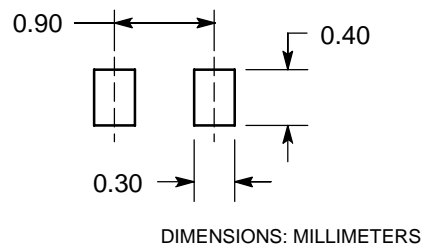
### SOD-923



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: MILLIMETERS.
  3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

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	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

### SOLDERING FOOTPRINT\*



DIMENSIONS: MILLIMETERS

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