



## ESD3V3D9B

## ESD Protection Device

### Features

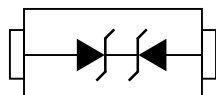
- Bidirectional configurations
- 80W peak pulse power per line(tp=8/20us)
- Low clamping voltage
- Replacement for MLV(0402)
- IEC 61000-4-2 level 4 ESD protection
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

- Operating Junction & Storage Temperature: -55°C to +150°C

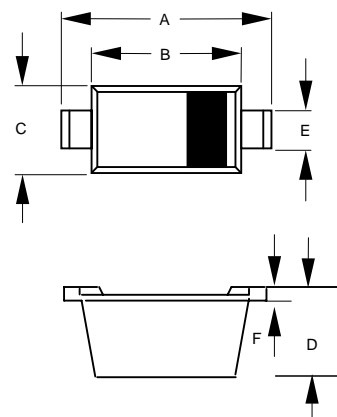
Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		$\pm 30$ $\pm 30$	KV
IEC61000-4-4(EFT)(5/50ns)		40	A
Unidirectional Peak Pulse Power	Ppp	80	W

### Pin Configuration



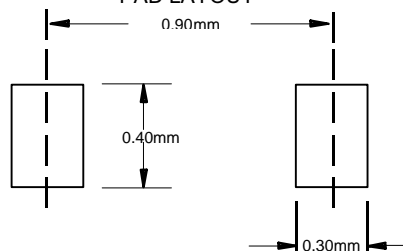
Marking: 3B

### SOD-923



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.037	.041	0.95	1.05	
B	.030	.033	0.75	0.85	
C	.022	.026	0.55	0.65	
D	.014	.017	0.36	0.43	
E	.006	.010	0.15	0.25	
F	.003	.007	0.07	0.17	

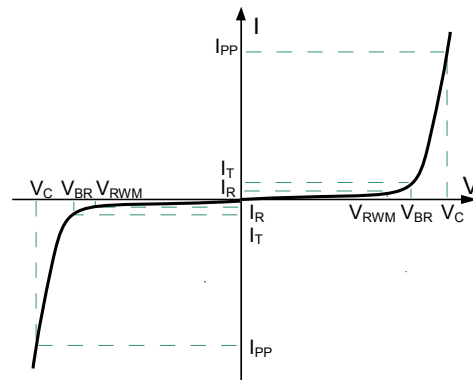
#### SUGGESTED SOLDER PAD LAYOUT



# ESD3V3D9B

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C_J$	Junction Capacitance
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



**Electrical characteristics per line@25 °C ( unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Voltage	$V_{RWM}$				3.3	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	4.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3\text{V}$			1.0	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}$			8.0	V
Total Capacitance	$C_{tot}$	$V_R = 0\text{V}$ $f = 1\text{MHz}$		8		pF

## Typical Characteristics

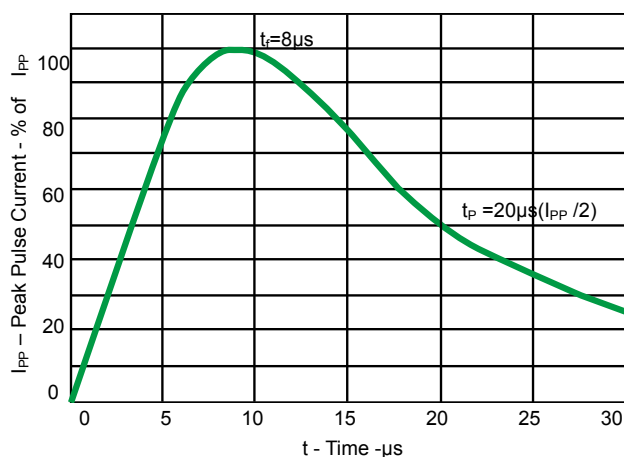


Fig 1.Pulse Waveform

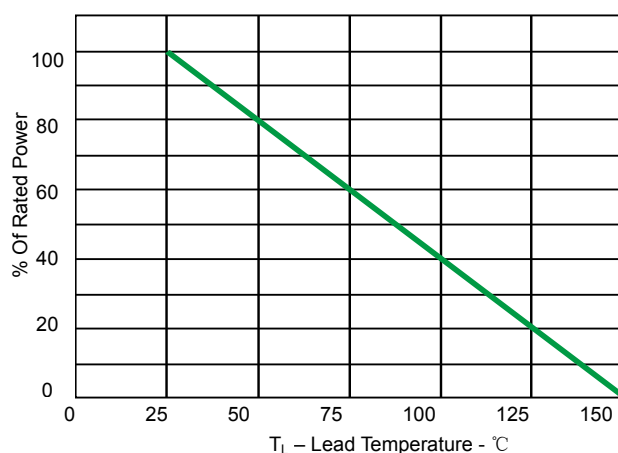


Fig 2.Power Derating Curve

## Typical Characteristics

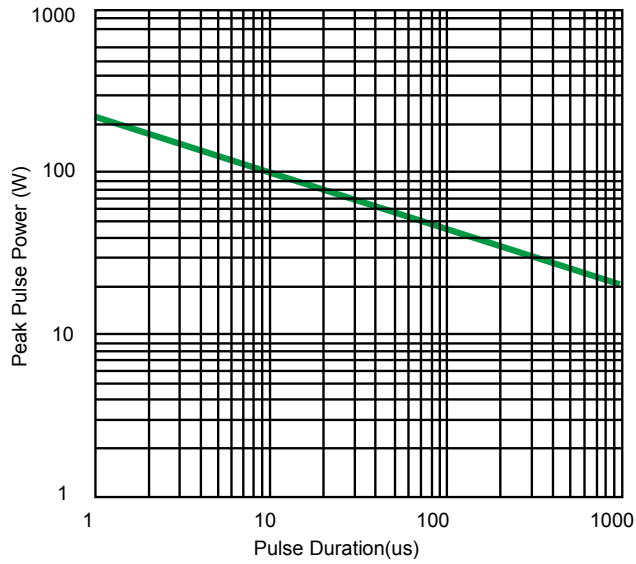


Fig 3. Non Repetitive Peak Pulse Power vs. Pulse time

## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

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