

## Excellent Integrated System Limited

Stocking Distributor

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[Micro Commercial Components \(MCC\)](#)  
[ESD5V0D9-TP](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

**M.C.C.**

Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
Chatsworth, CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

## Features

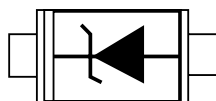
- Halogen free available upon request by adding suffix "-HF"
- For sensitive ESD protection
- Excellent clamping capability
- Low leakage
- ESD rating of class 3(>16KV)per Human Body Mode
- Fast response ,response time less than 1ns.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. 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		$\pm 15$ $\pm 8$	KV
ESD Voltage per human body mode		16	KV
Peak Pulse Power(8/20us)	Ppp	100	w

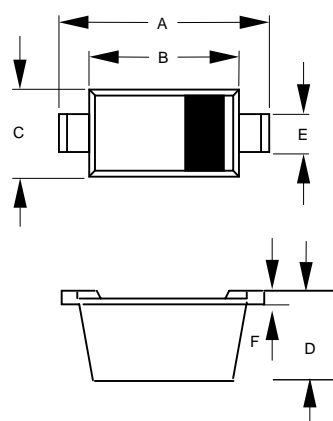
## Pin Configuration-Top View



**ESD5V0D9**

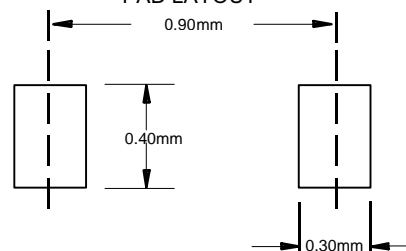
## ESD Protection Device

**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



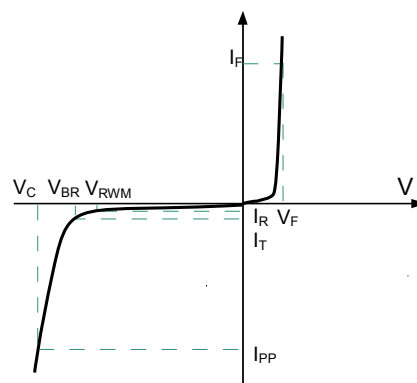
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**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

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
C	Capacitance @ $V_R=0$ and $f=1\text{MHz}$



**Electrical characteristics per line @  $25^\circ\text{C}$  ( unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6	6.8	7.2	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}$		0.005	1	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=10\text{mA}$		0.8		V
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$ $t_P = 8/20\mu\text{S}$			9.0	V
Clamping Voltage	$V_C$	$I_{PP}=5\text{A}$ $t_P = 8/20\mu\text{S}$			11.0	V
Junction Capacitance	$C_j$	$V_R=0\text{V}$ $f = 1\text{MHz}$		30	40	pF
Junction Capacitance	$C_j$	$V_R=2.5\text{V}$ $f = 1\text{MHz}$		22	30	pF

## Typical Characteristics

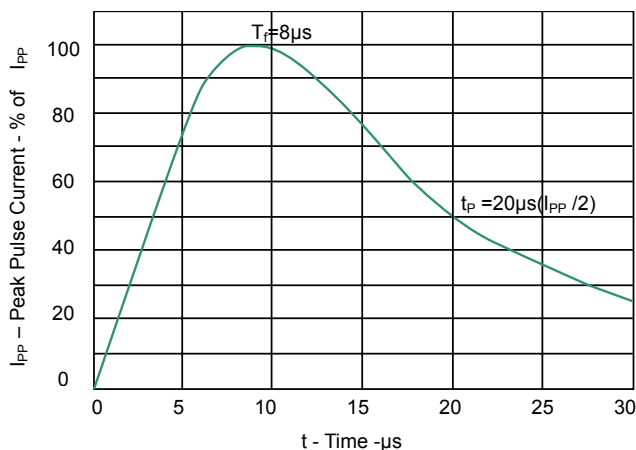


Fig 1.Pulse Waveform

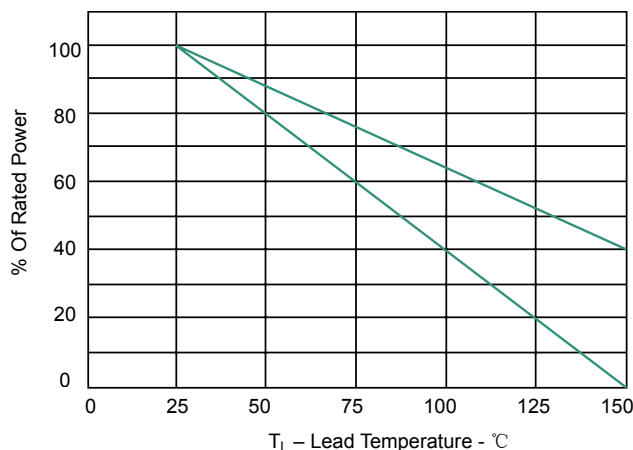


Fig 2.Power Derating Curve



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## Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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