

## **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  
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## Features

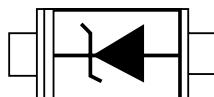
- Halogen free available upon request by adding suffix "-HF"
- For sensitive ESD protection
- Excellent clamping capability
- Low leakage
- ESD rating of class 3(>16KV)per Human Body Mode
- Fast response ,response time less than 1ns.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction &StorageTemperature: -55°C to +150°C

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		±15 ±8	KV
ESD Voltage per human body mode		16	KV
Peak Pulse Power(8/20us)	Ppp	100	w

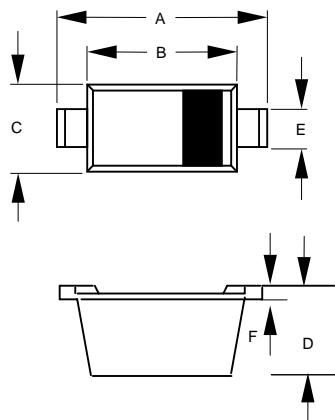
## Pin Configuration-Top View



**ESD5V0D9**

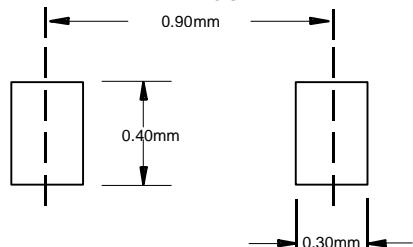
**ESD Protection  
Device**

**SOD-923**



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

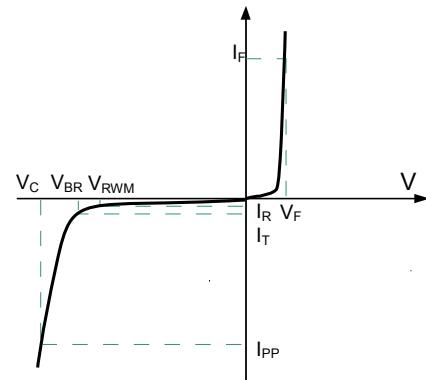


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## Micro Commercial Components

### 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°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		$\text{pF}$
Junction Capacitance	$C_j$	$V_R = 2.5\text{V}$ $f = 1\text{MHz}$	22	30		$\text{pF}$

### Typical Characteristics

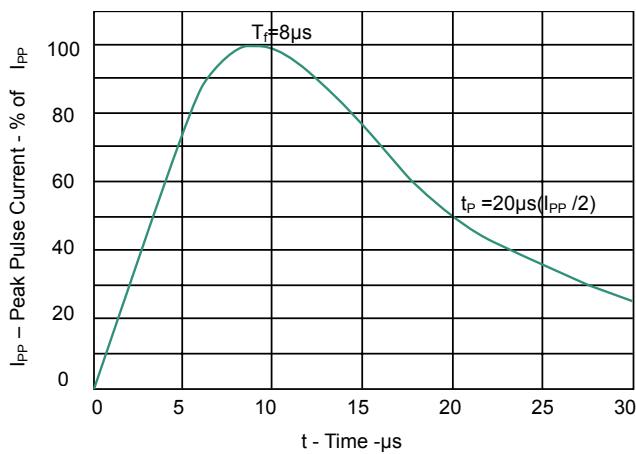


Fig 1.Pulse Waveform

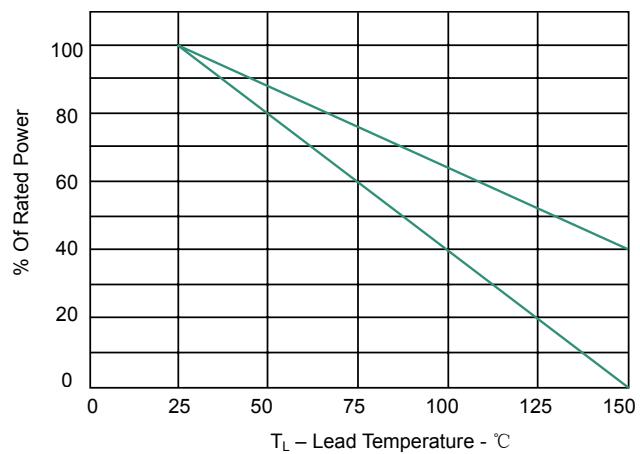


Fig 2.Power Derating Curve



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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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