# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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**Micro Commercial Components** 



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

### Features

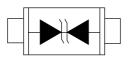
- Halogen free available upon request by adding suffix "-HF"
- For sensitive ESD protection .
- Excellent clamping capability •
- Low leakage .
- ESD rating of class 3(>16KV)per Human Body Mode .
- Fast response ,response time less than 1ns.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS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

### Maximum Ratings

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

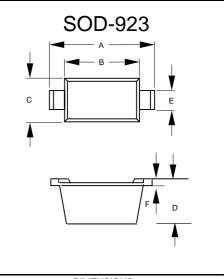
| Parameter                       |         | Symbol | Limits  | unit |
|---------------------------------|---------|--------|---------|------|
| IEC61000-4-2(ESD)               | Air     |        | ±15     |      |
|                                 | Contact |        | $\pm$ 8 | ΚV   |
| ESD Voltage per human body mode |         |        | 16      | K٧   |
| Peak Pulse Power(8/20us)        |         | Ррр    | 80      | W    |

#### **Pin Configuration-Top View**

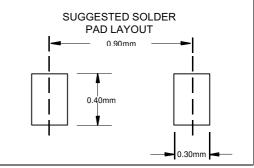


## ESD5V0D9B

## **ESD** Protection **Device**



| DIMENSIONS |         |      |            |      |  |  |
|------------|---------|------|------------|------|--|--|
| DIM        | INC     | HES  | Μ          | NOTE |  |  |
|            | MIN MAX |      | AX MIN MAX |      |  |  |
| Α          | .037    | .041 | 0.95       | 1.05 |  |  |
| В          | .030    | .033 | 0.75       | 0.85 |  |  |
| С          | .022    | .026 | 0.55       | 0.65 |  |  |
| D          | .014    | .017 | 0.36       | 0.43 |  |  |
| Е          | .006    | .010 | 0.15       | 0.25 |  |  |
| F          | .003    | .007 | 0.07       | 0.17 |  |  |



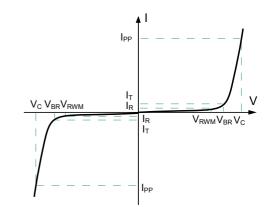
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ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

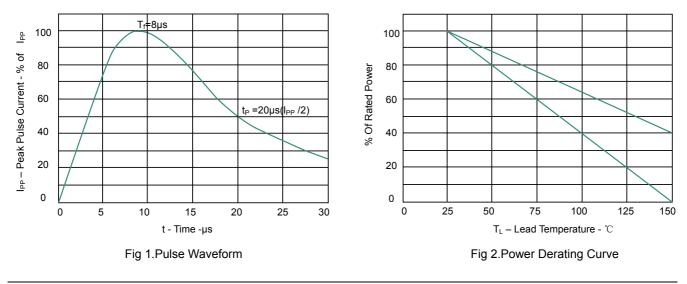
| Symbol           | Parameter                                     |  |  |
|------------------|---|--|--|
| I <sub>PP</sub>  | Maximum Reverse Peak Pulse Current            |  |  |
| Vc               | Clamping Voltage @ IPP                        |  |  |
| V <sub>RWM</sub> | V <sub>RWM</sub> Working Peak Reverse Voltage |  |  |
| I <sub>R</sub>   | Maximum Reverse Leakage Current @ $V_{RWM}$   |  |  |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>            |  |  |
| IT               | Test Current                                  |  |  |
| С                | Capacitance $@V_R=0$ and f =1MHz              |  |  |



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

| Parameter               | Symbol           | Conditions                  | Min. | Тур. | Max. | Units |
|-------------------------|------------------|-----------------------------|------|------|------|-------|
| Working Voltage         | V <sub>RWM</sub> |                             |      |      | 5    | V     |
| Breakdown Voltage       | V <sub>BR</sub>  | I <sub>t</sub> =1mA         | 5.6  | 6.7  | 7.8  | V     |
| Reverse Leakage Current | I <sub>R</sub>   | V <sub>RWM</sub> =5V        |      |      | 1    | μA    |
| Junction Capacitance    | Cj               | V <sub>R</sub> =0V f = 1MHz |      | 15   |      | pF    |

#### **Typical Characteristics**



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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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