



## Features

- Small Body Outline Dimensions:  
0.063" x 0.032" (1.6x0.8 mm)
- Low Body Height: 0.024" (0.6 mm) nom
- IEC 61000-4-2 Level 4 Protection
- Bidirectional ESD protection of one I/O line
- Ultra low capacitance: typically 1.5pF
- Low clamping voltage
- Working voltage: 5V
- Low leakage current: typically 5 nA
- Solid-state silicon-avalanche technology



## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

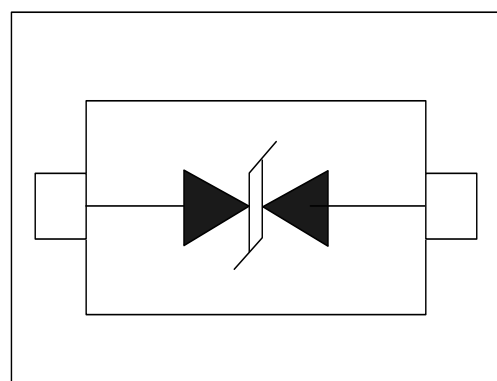
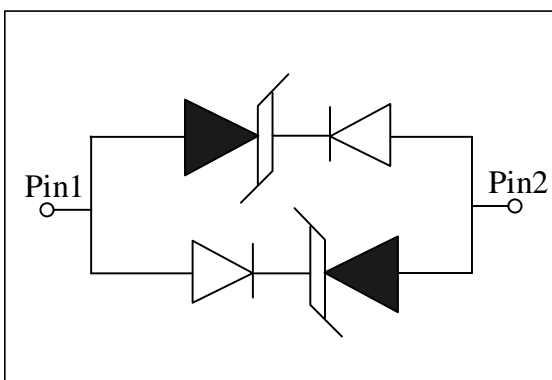
## Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating:  
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

## Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

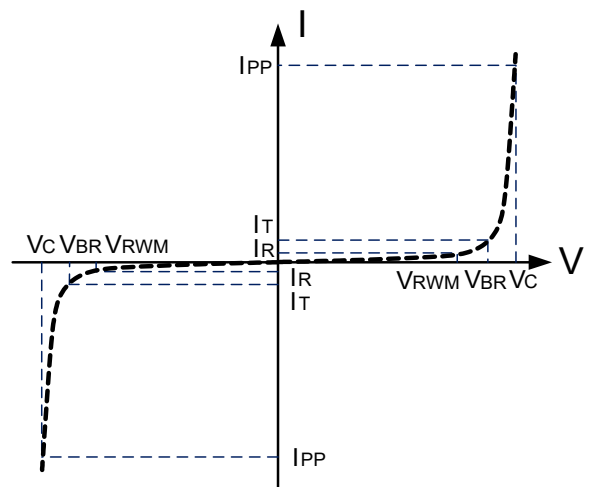
## Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Electrostatic discharge Voltage (See Note1 ,2)	V <sub>ESD</sub>	8KV (contact)	volts
		15KV (air)	
Operating Temperature	T <sub>J</sub>	-55 to + 150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

### Electrical Parameters (T=25°C)

Symbol	Parameter
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>PP</sub>	Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>T</sub>	Test Current



### Electrical Characteristics

DW05D5LC-B-E						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.0			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V, T=25°C			1	μA
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> = 0V, f = 1MHz		1.5	2.5	pF
Clamping Voltage ( See Note3)	V <sub>C</sub>	8KV (contact )	See Figure3			V

**Note1:** ESD Pulse Waveform according to IEC 61000-4-2, See Table1 and Figure1

**Note2:** ESD test Setup see Figure2.

**Note3:** The clamping Voltage data is taken with a 100x attenuator.

## Typical Characteristics

Table 1: IEC 61000-4-2 Spec.

IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

Figure 1: IEC61000-4-2 Waveform

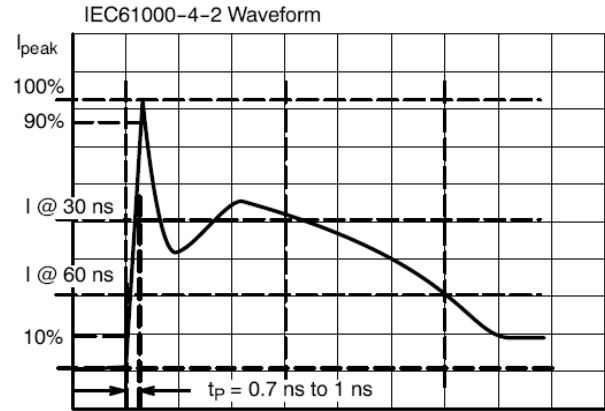


Figure 2: ESD Test Setup

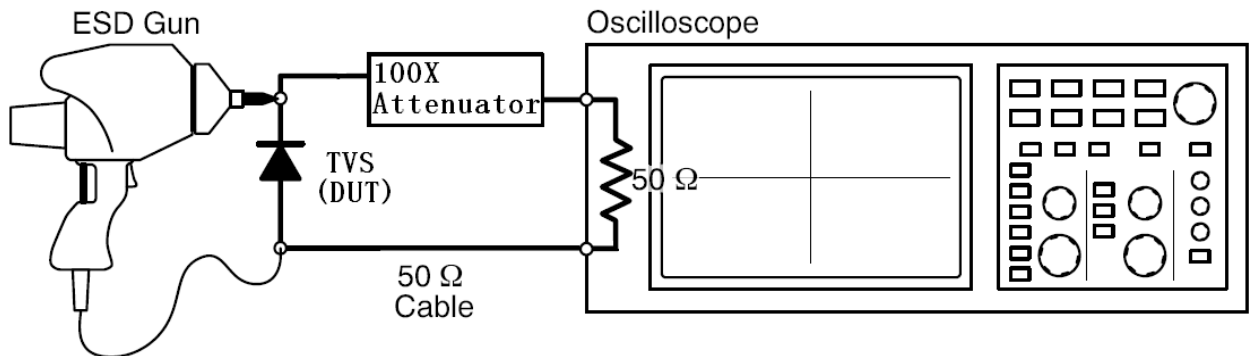
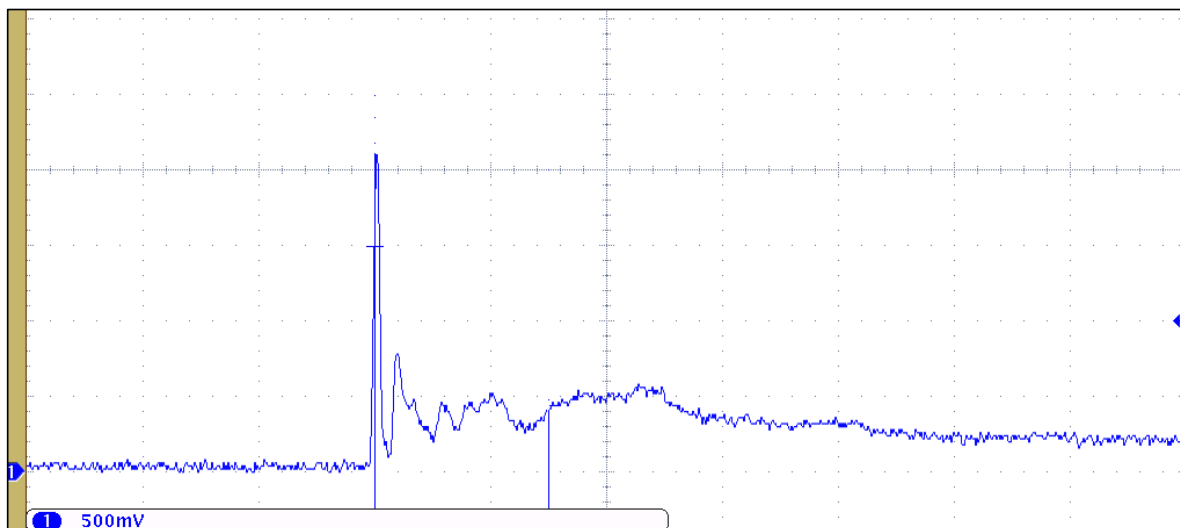
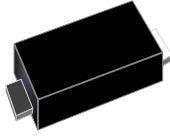


Figure 3: ESD Clamping( 8kV Contact per IEC 61000-4-2)



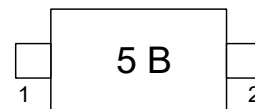


### Outline Drawing – SOD-523

<p style="text-align: center;"><b>PACKAGE OUTLINE</b></p> <p style="text-align: center;"> <table border="1"> <tr> <td><math>\oplus</math></td> <td>0.08 (0.0032)</td> <td>X</td> <td>Y</td> </tr> </table> </p>	$\oplus$	0.08 (0.0032)	X	Y	<div style="text-align: center;">   <b>SOD-523</b> </div> <p style="text-align: center;"><b>DIMENSIONS</b></p> <table border="1"> <thead> <tr> <th rowspan="2">SYMBOL</th> <th colspan="2">MILLIMETER</th> <th colspan="2">INCHES</th> </tr> <tr> <th>MIN</th> <th>MAX</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.50</td> <td>0.70</td> <td>0.020</td> <td>0.028</td> </tr> <tr> <td>b</td> <td>0.25</td> <td>0.35</td> <td>0.010</td> <td>0.014</td> </tr> <tr> <td>C</td> <td>0.07</td> <td>0.20</td> <td>0.0028</td> <td>0.0079</td> </tr> <tr> <td>D</td> <td>1.10</td> <td>1.30</td> <td>0.043</td> <td>0.051</td> </tr> <tr> <td>E</td> <td>0.70</td> <td>0.90</td> <td>0.028</td> <td>0.035</td> </tr> <tr> <td>H<sub>E</sub></td> <td>1.50</td> <td>1.70</td> <td>0.059</td> <td>0.067</td> </tr> <tr> <td>L</td> <td>0.15</td> <td>0.25</td> <td>0.006</td> <td>0.010</td> </tr> </tbody> </table>	SYMBOL	MILLIMETER		INCHES		MIN	MAX	MIN	MAX	A	0.50	0.70	0.020	0.028	b	0.25	0.35	0.010	0.014	C	0.07	0.20	0.0028	0.0079	D	1.10	1.30	0.043	0.051	E	0.70	0.90	0.028	0.035	H <sub>E</sub>	1.50	1.70	0.059	0.067	L	0.15	0.25	0.006	0.010
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<p style="text-align: center;">DIMENSIONS: MILLIMETERS</p>	<p><b>Notes</b></p> <ol style="list-style-type: none"> <li>Controlling Dimensions in Millimeters.</li> <li>Dimensions are exclusive of mold flash and metal burrs.</li> </ol>																																																

### Marking Codes

Part Number	DW05D5LC-B-E
Marking Code	5B



### Package Information

Qty: 5k/Reel