

Features

- Small Body Outline Dimensions:
0.039" x 0.024" (1.0 mm x 0.60 mm)
- Low Body Height: 0.016" (0.40mm) Max
- Protects one line
- Working Voltage: 5 V
- Low Leakage Current
- Response Time is Typically < 1 ns



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)

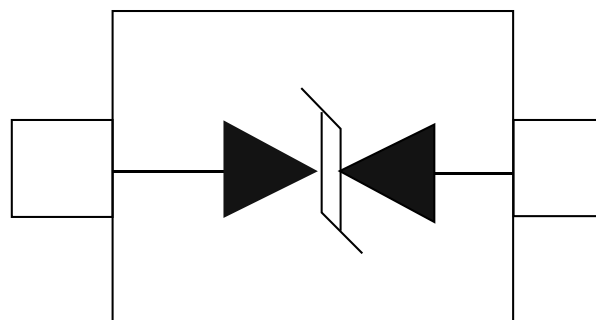
Mechanical Characteristics

- JEDEC SOD-923 package
- Molding compound flammability rating:
UL 94V-0
- Marking : Marking Code
- RoHS Compliant

Applications

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

Schematic & PIN Configuration

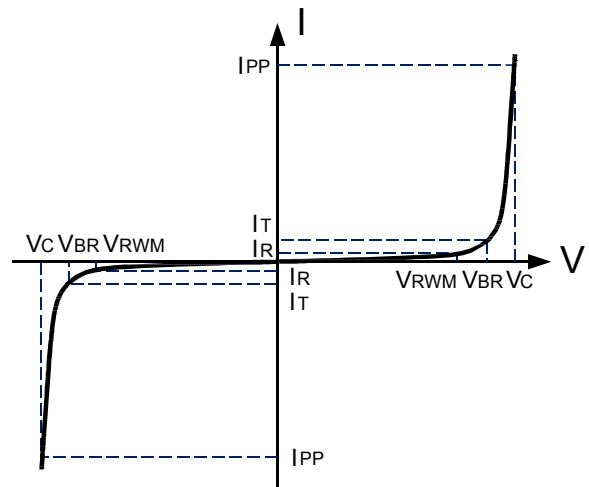


SOD-923 (Top View)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	100	Watts
Peak Forward Voltage ($I_F = 1A, t_p=8/20\mu s$)	V_{FP}	1.5	V
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

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
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

BSD9C051V						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			5	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9.5	V
Clamping Voltage	V_C	$I_{PP}=5.0A, t_p=8/20\mu s$		13.5	15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		15		pF

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

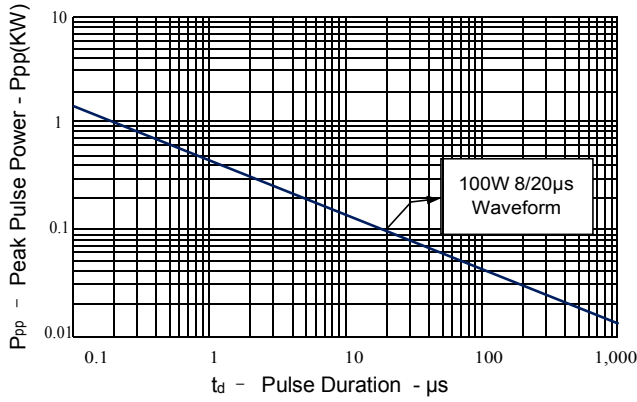


Figure 2: Power Derating Curve

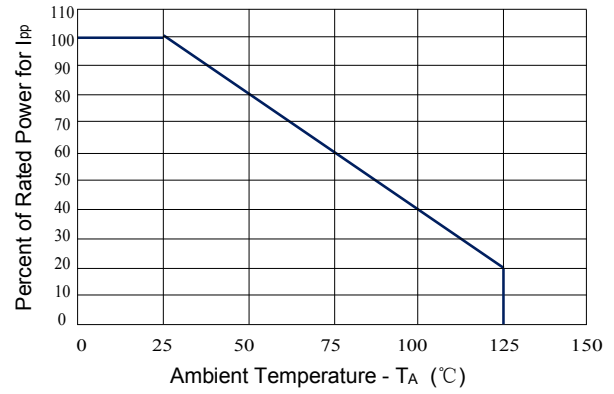


Figure 3: Clamping Voltage vs. Peak Pulse Current

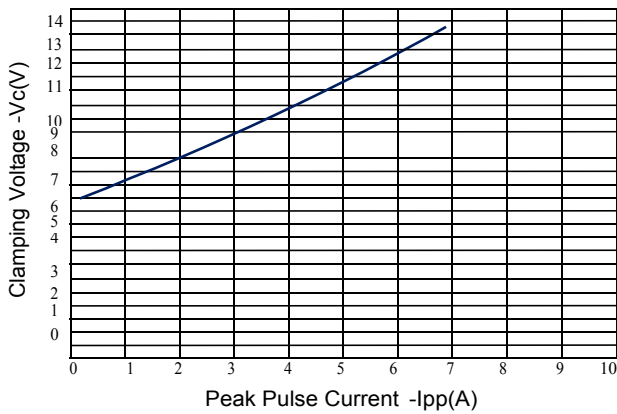


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

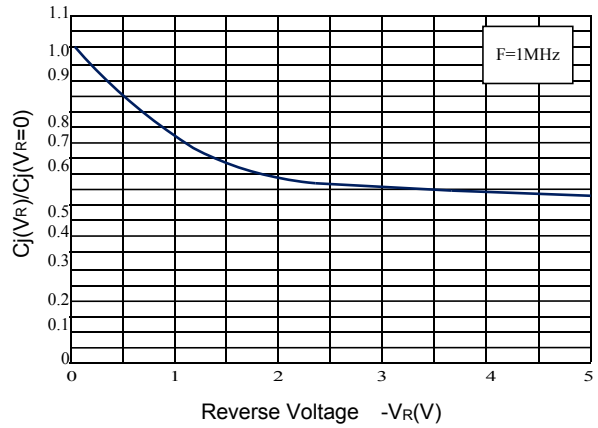


Figure 5: Pulse Waveform

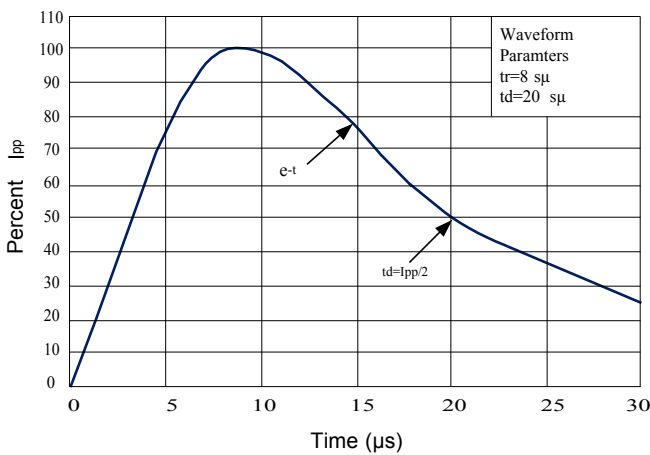
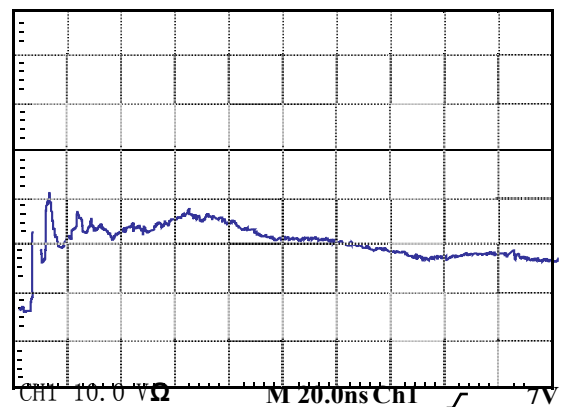


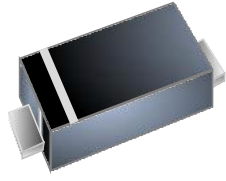
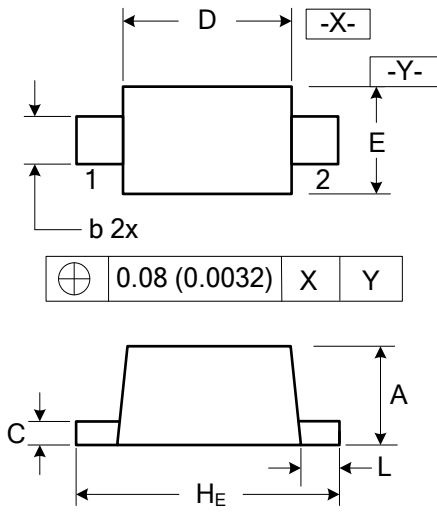
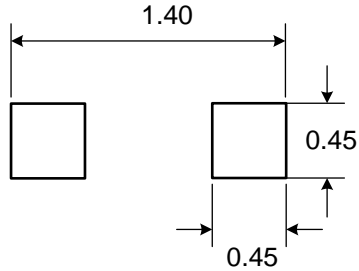
Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)

Tek Run: 2.50GS/s


Sample



Outline Drawing – SOD-923

PACKAGE OUTLINE		 SOD-923																																															
		<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>0.39</td> <td>0.45</td> <td>0.015</td> <td>0.018</td> </tr> <tr> <td>b</td> <td>0.15</td> <td>0.30</td> <td>0.006</td> <td>0.012</td> </tr> <tr> <td>C</td> <td>0.06</td> <td>0.20</td> <td>0.002</td> <td>0.008</td> </tr> <tr> <td>D</td> <td>0.70</td> <td>0.90</td> <td>0.028</td> <td>0.035</td> </tr> <tr> <td>E</td> <td>0.55</td> <td>0.65</td> <td>0.026</td> <td>0.028</td> </tr> <tr> <td>H_E</td> <td>0.90</td> <td>1.10</td> <td>0.035</td> <td>0.043</td> </tr> <tr> <td>L</td> <td>0.05</td> <td>0.15</td> <td>0.002</td> <td>0.006</td> </tr> </tbody> </table>				SYMBOL	MILLIMETER		INCHES		MIN	MAX	MIN	MAX	A	0.39	0.45	0.015	0.018	b	0.15	0.30	0.006	0.012	C	0.06	0.20	0.002	0.008	D	0.70	0.90	0.028	0.035	E	0.55	0.65	0.026	0.028	H _E	0.90	1.10	0.035	0.043	L	0.05	0.15	0.002	0.006
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 <p style="text-align: center;">DIMENSIONS: MILLIMETERS</p>		<p>Notes</p> <ol style="list-style-type: none"> 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982. 2. CONTROLLING DIMENSION: MILLIMETERS. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL. 																																															

Marking Codes

Part Number	BSD9C051V
Marking Code	 C=Specific Device Code E=Month Code

Package Information

Qty: 8k/Reel

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