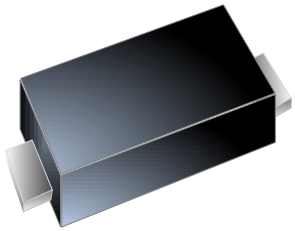
WE05D9-B

Transient Voltage Suppressor

Features

- Small Body Outline Dimensions: 0.039″ x 0.024″(1.0 mm x 0.60 mm)
- Low Body Height: 0.016″ (0.40 mm) Max
- 100 Watts peak pulse power (t_p = 8/20μs)
- Protects one line
- Replacement for MLV(0402)
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Solid-state silicon-avalanche technology



SOD-923

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **Cable Discharge Event（CDE）**

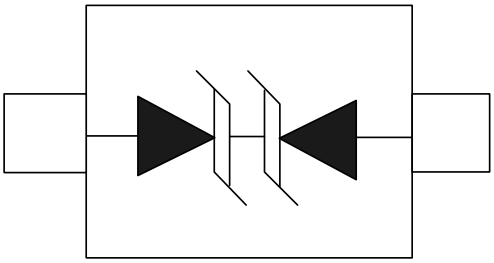
Mechanical Characteristics

- JEDEC SOD-923 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS/WEEE Compliant

Applications

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

Schematic & PIN Configuration

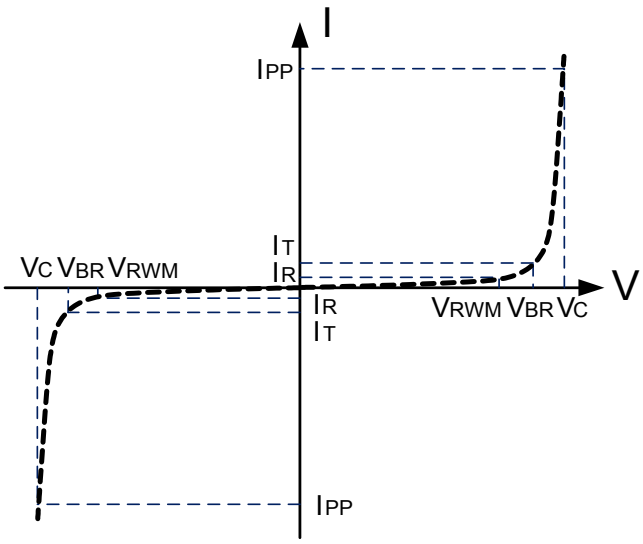


SOD-923 (Top View)

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power (t_p =8/20μs)	P_{PP}	100	Watts
Maximum Peak Pulse Current (t_p=8/20μs)	I_{PP}	6.5	A
Operating Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Parameters (T=25℃)

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

WE05D9-B						
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℃			1	μA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20μs			10.5	V
Clamping Voltage	V_C	I_{PP}=6.5A, t_p=8/20μs		13.5	15	V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		10		pF

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

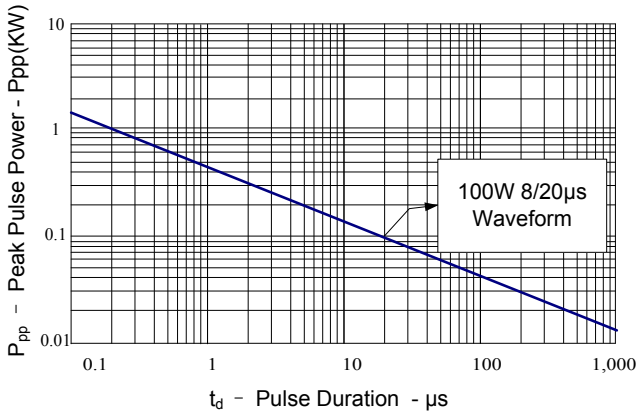


Figure 2: Power Derating Curve

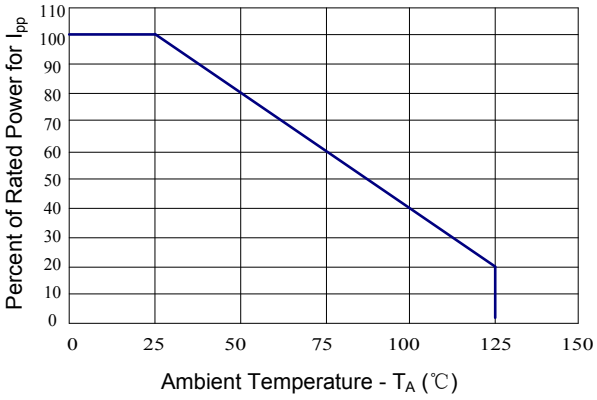


Figure 3: Clamping Voltage vs. Peak Pulse Current

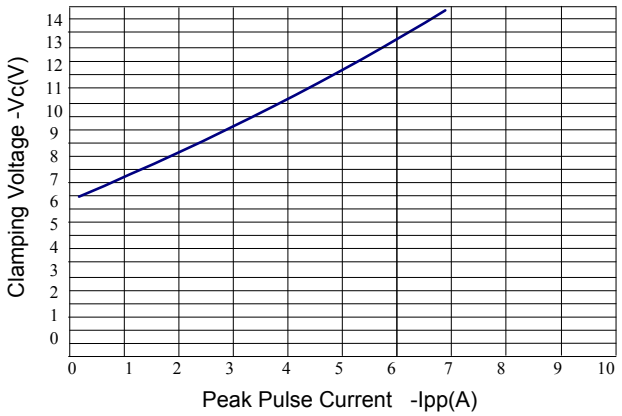


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

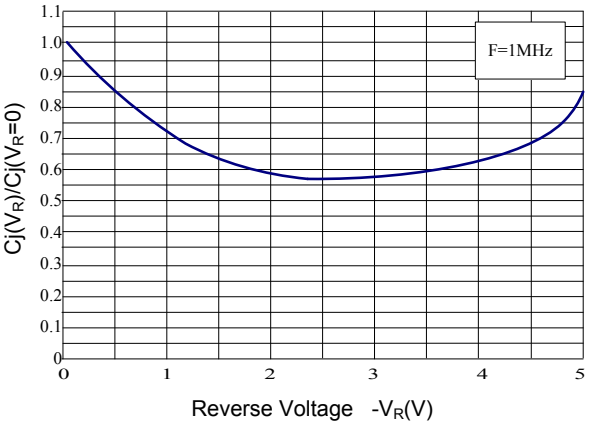


Figure 5: Pulse Waveform

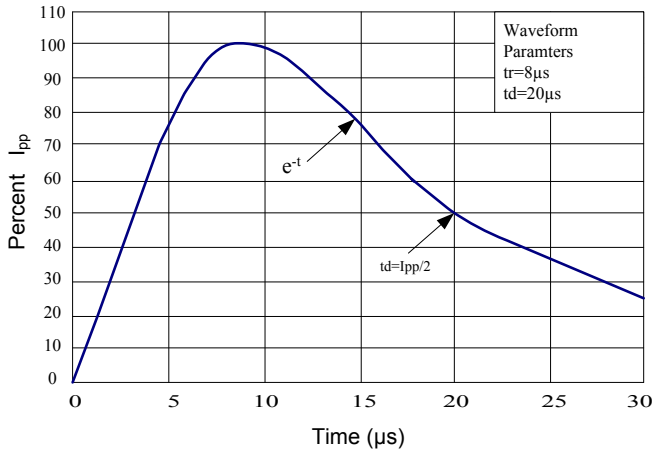
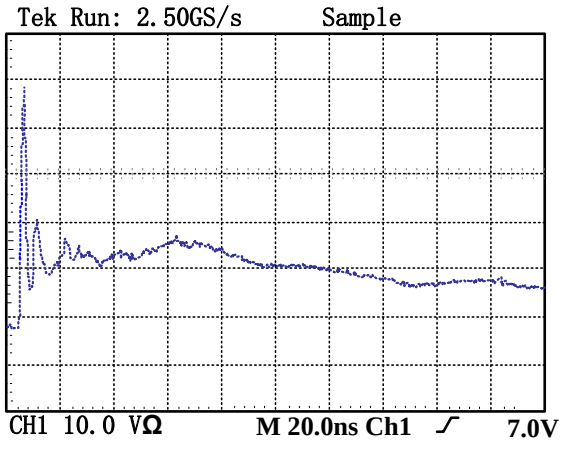
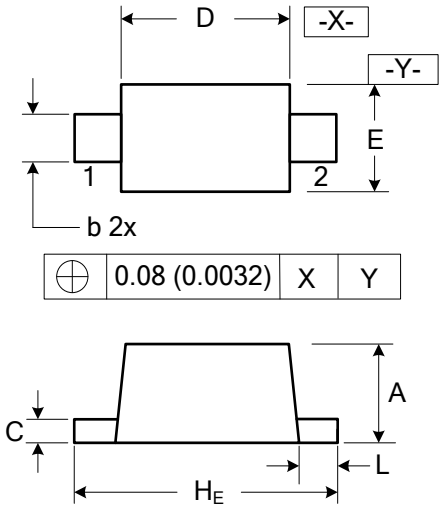


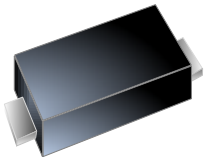
Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-923

PACKAGE OUTLINE

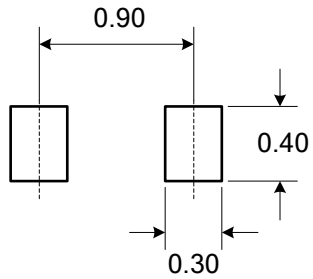




SOD-923

DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.36	0.43	0.014	0.017
b	0.15	0.25	0.006	0.010
C	0.07	0.17	0.003	0.007
D	0.75	0.85	0.030	0.033
E	0.55	0.65	0.026	0.028
H_E	0.95	1.05	0.037	0.041
L	0.05	0.15	0.002	0.006



DIMENSIONS: MILLIMETERS

Notes

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	WE05D9-B
Marking Code	5B