



DWSLC05D9CE-Q ESD Protection Diode

Feature

- Bi-directional ESD protection of one line
- 80Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 6pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)

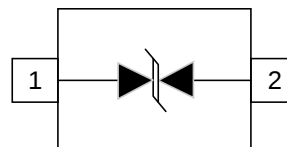
Application

- Microprocessor based equipment
- Handheld portable applications
- Power line on PCB protection
- Notebooks,Desktops,and Servers
- Portable Electronics
- Pagers Peripherals

Mechanical Data

- Package: SOD-923
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWSLC05D9CE-Q	SOD-923		8000 pcs	7 inches



Absolute Maximum Rating ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

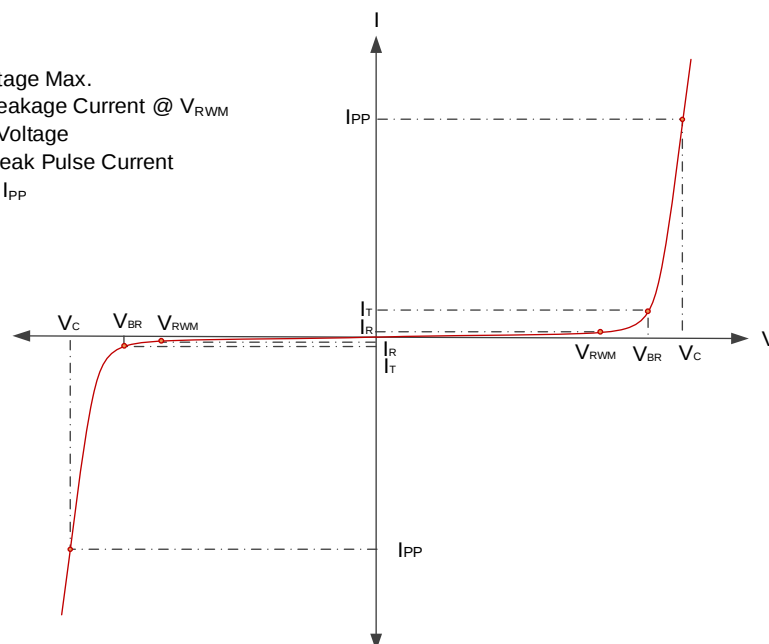
Parameter	Symbol	Value	Units
Reverse Voltage	P_{PP}	80	Watts
Peak Pluse Current($t_p=8/20\mu\text{s}$)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	KV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
OperatingTemperature	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to + 125	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Voltage	V_{RWM}		-5		5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$, $T=25^{\circ}\text{C}$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=6\text{A}$, $t_p=8/20\mu\text{s}$			13	V
Junction Capacitance	C_j	$V_R=0\text{V}$, $f=1\text{MHz}$ pin1/pin2 to pin3		6	8	pF

Electrical Parameters

- V_{RWM} Reverse Working Voltage Max.
 I_R Maximum Reverse Leakage Current @ V_{RWM}
 V_{BR} Reverse Breakdown Voltage
 I_{PP} Maximum Reverse Peak Pulse Current
 V_C Clamping Voltage @ I_{PP}





Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

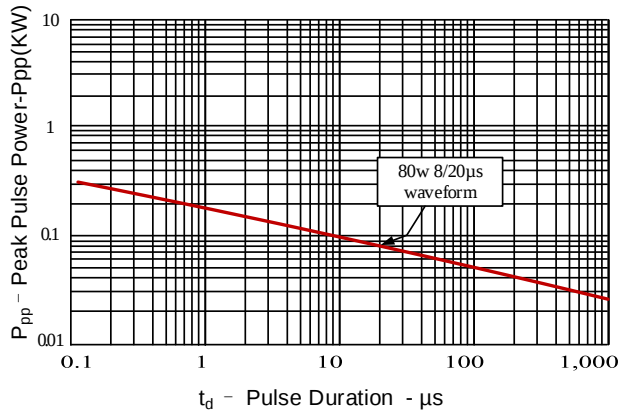


Figure 2: Power Derating Curve

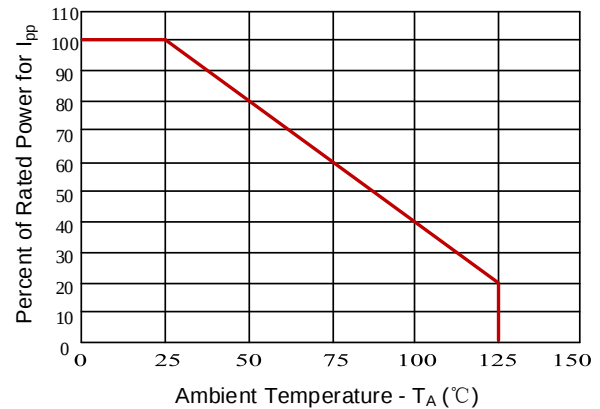


Figure3: Pulse Waveform

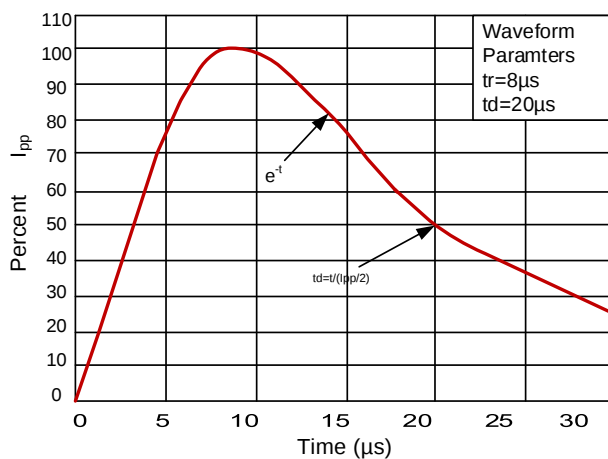


Figure 4: Clamping Voltage vs. Ipp

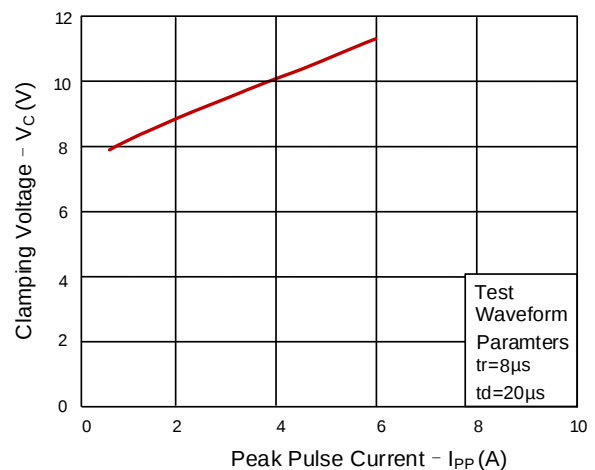


Figure5: +8kV positive pulse

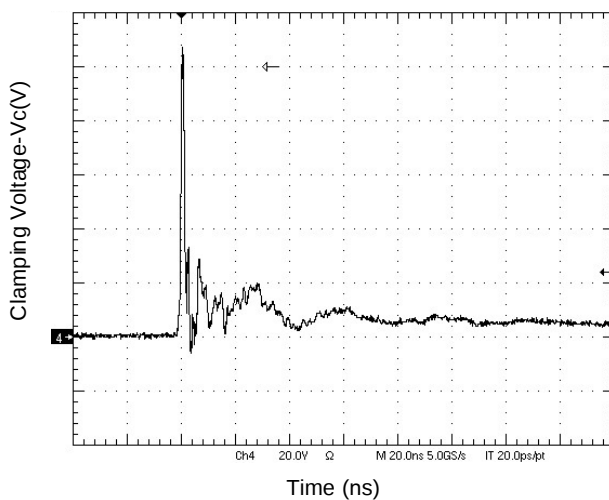
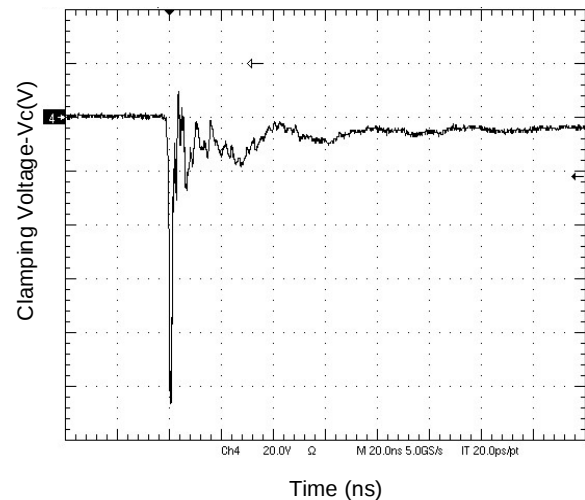
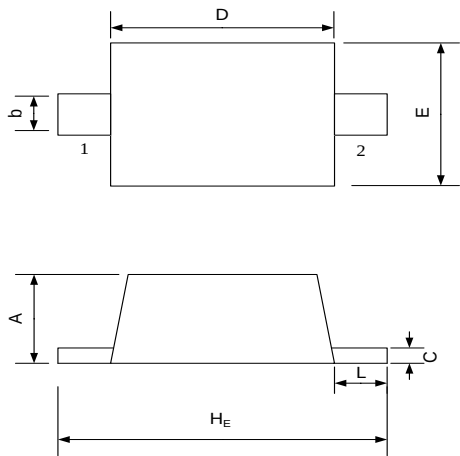


Figure6:-8kV negative pulse





SOD-923 Outline Drawing



Common Dimension				
Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	0.35	0.43	0.014	0.0172
b	0.15	0.25	0.006	0.010
C	0.07	0.17	0.0028	0.0068
D	0.75	0.85	0.030	0.034
E	0.55	0.65	0.022	0.026
H _E	0.90	1.10	0.036	0.044
L	0.05	0.15	0.002	0.006