



DWLC9D5V1U-Q ESD Protection Diode

Feature

- Uni-directional ESD protection of one line
- 45Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 0.5pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 20kV$ air
- IEC 61000-4-5 (Lightning) 3.5A (8/20 μs)

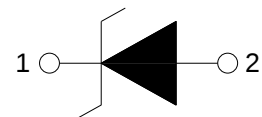
Application

- Cellular handsets and accessories
- Portable Digital Assistants
- Notebooks & Handhelds
- Digital Cameras
- MP3 Players
- 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
DWLC9D5V1U-Q	SOD-923		8000 pcs	7 inches



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

Parameter	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)	P_{PK}	-	45	W
Peak pulse current ($t_p=8/20\mu\text{s}$)	I_{PP}		3.5	A
ESD (IEC61000-4-2 air discharge)	V_{ESD}	-	± 20	kV
ESD (IEC61000-4-2 contact discharge)	V_{ESD}	-	± 20	kV
Junction temperature	T_J	-	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

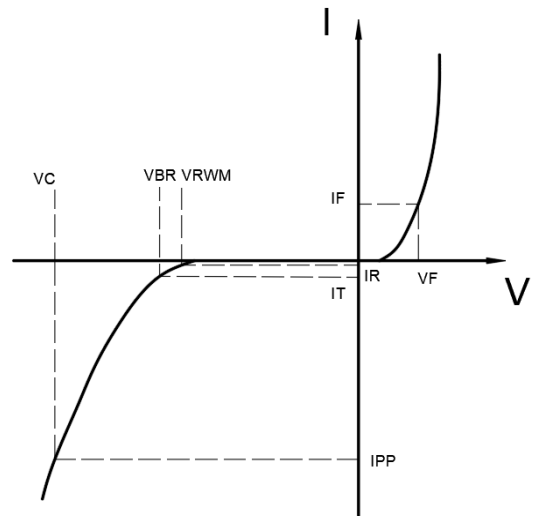
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	5.5			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		8	10	V
Clamping Voltage	V_C	$I_{PP}=3.5\text{A}$; $t_p=8/20\mu\text{s}$		10	12	V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		0.5	0.7	pF

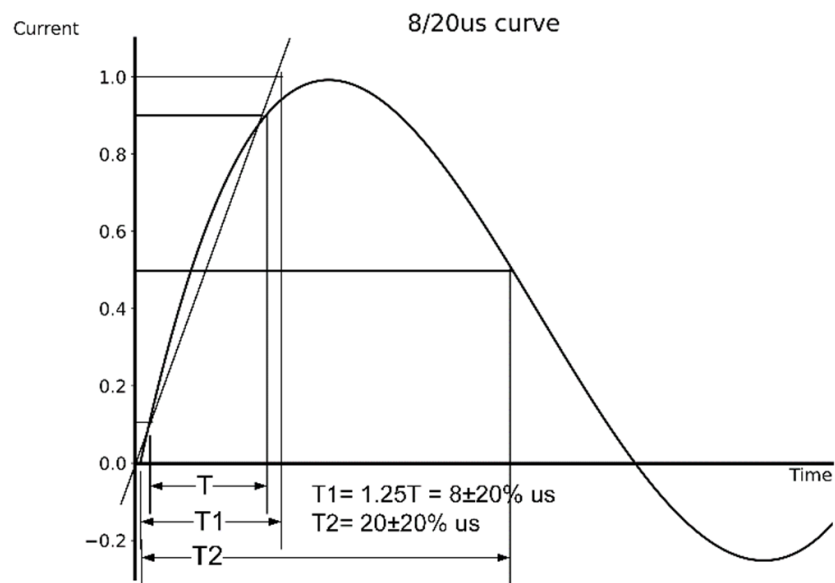


Electrical Parameters

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F

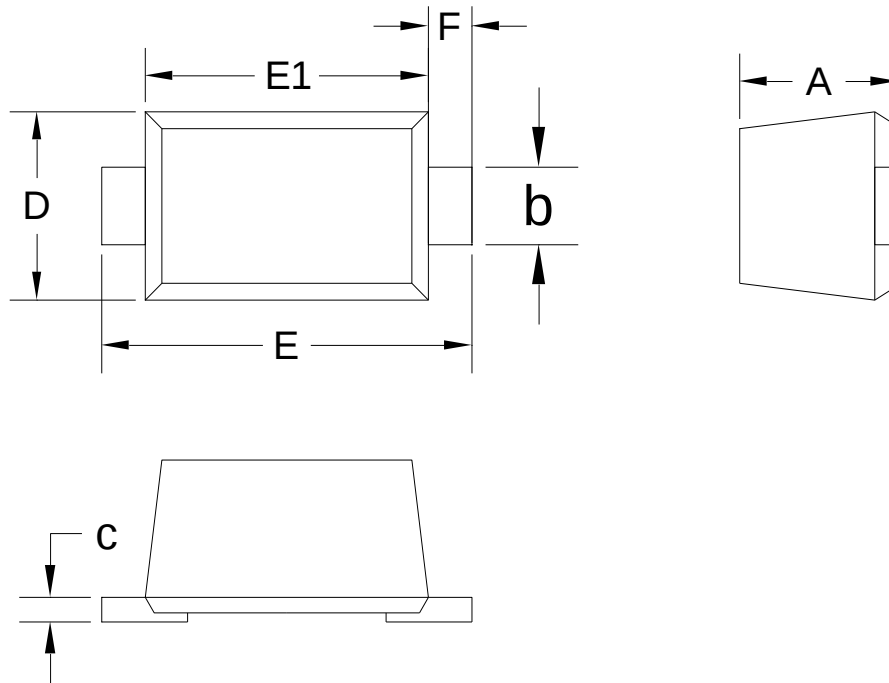


Typical Characteristics





SOD-923 Outline Drawing



COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER							
SYMBOL	MIN	MID	MAX	SYMBOL	MIN	MID	MAX
A	0.360	0.400	0.440	E	0.950	1.025	1.100
b	0.150	0.200	0.250	E1	0.750	0.800	0.850
C	0.070	0.120	0.170	F	0.050	0.100	0.150
D	0.550	0.600	0.650				