



DWNC5D3V1BA-Q ESD Protection Diode

Feature

- Bi-directional ESD protection of one line
- 90W Peak pulse Power (8/20us)
- Working voltage: 3.3V
- Junction Capacitance: 15pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 25\text{kV}$ contact $\pm 25\text{kV}$ air
- IEC 61000-4-5 (Lightning) 10A (8/20 μs)

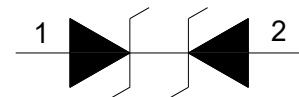
Application

- Cellular handsets and accessories
- Portable digital assistants
- Notebooks & handhelds
- Digital cameras
- MP3 players
- Peripherals

Mechanical Data

- Package: SOD-523
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWNC5D3V1BA-Q	SOD-523		3000 pcs	7 inches



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

Parameter	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	P_{PK}	-	90	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I_{PP}		10	A
ESD (IEC61000-4-2 air discharge) @ 25°C	V_{ESD}	-	Q25	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	V_{ESD}	-	Q25	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	$^{\circ}\text{C}$

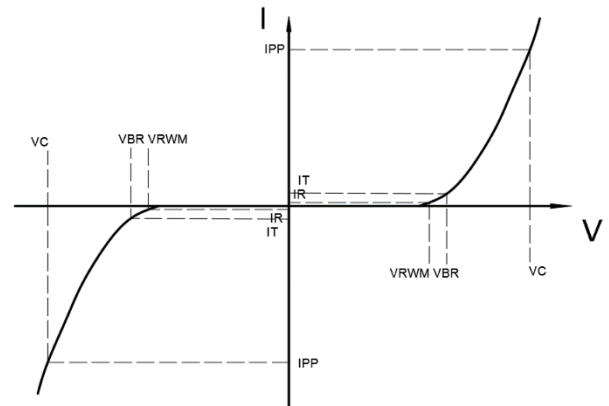
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	3.8			V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$			1	μA
Holding Voltage	V_C	$I_{PP}=1\text{A}; t_p=8/20\mu\text{s}$		4.5	6	V
Clamping Voltage	V_C	$I_{PP}=10\text{A}; t_p=8/20\mu\text{s}$		7	9	V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		15	20	pF

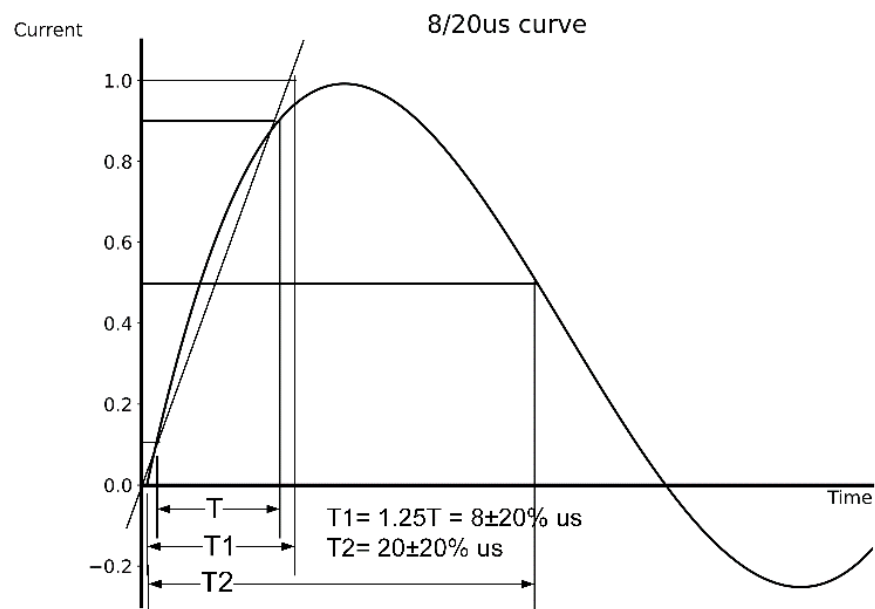


Electrical Parameters

Symbol	Parameter
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

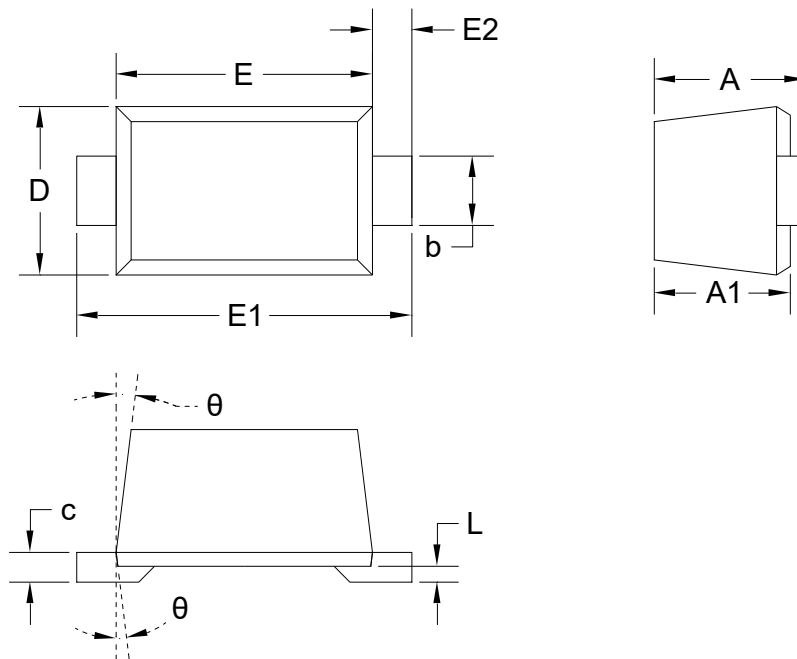


Typical Characteristics





SOD-523 Outline Drawing



Units in millimeters

Unit	A	A1	b	c	D	E	E1	E2	L	θ
Min.	0.58	0.50	0.28	0.08	0.75	1.10	1.50	0.20 REF.	0.01	7° REF.
Max.	0.68	0.70	0.38	0.15	0.85	1.30	1.70		0.07	