



DWNC5D5V1BA-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: 15pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
- IEC 61000-4-5 (Lightning) 8A (8/20 μs)

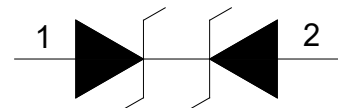
Application

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

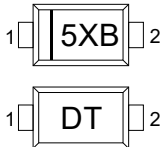
Mechanical Data

- 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
DWNC5D5V1BA-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}	-	80	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I_{PP}		8	A
ESD (IEC61000-4-2 air discharge) @ 25°C	V_{ESD}	-	± 25	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	V_{ESD}	-	± 25	kV
Junction temperature	T_J	-	125	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	85	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

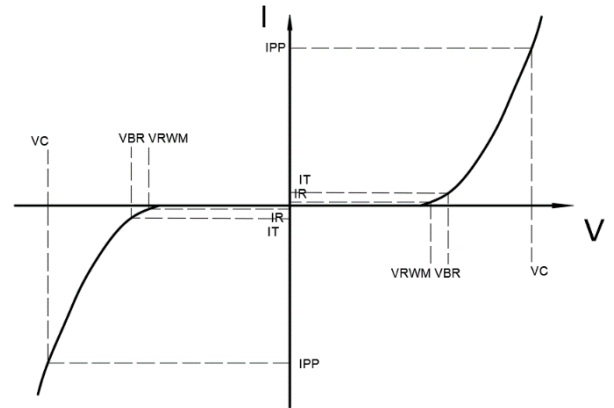
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	5.8			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		6		V
Clamping Voltage	V_C	$I_{PP}=8\text{A}$; $t_p=8/20\mu\text{s}$		10		V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		15		pF

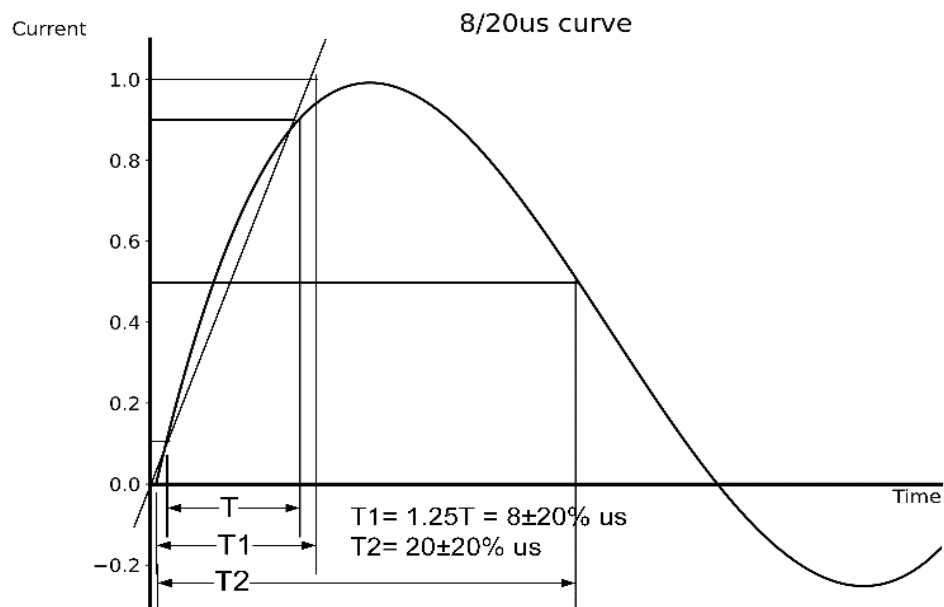


Electrical Parameters

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

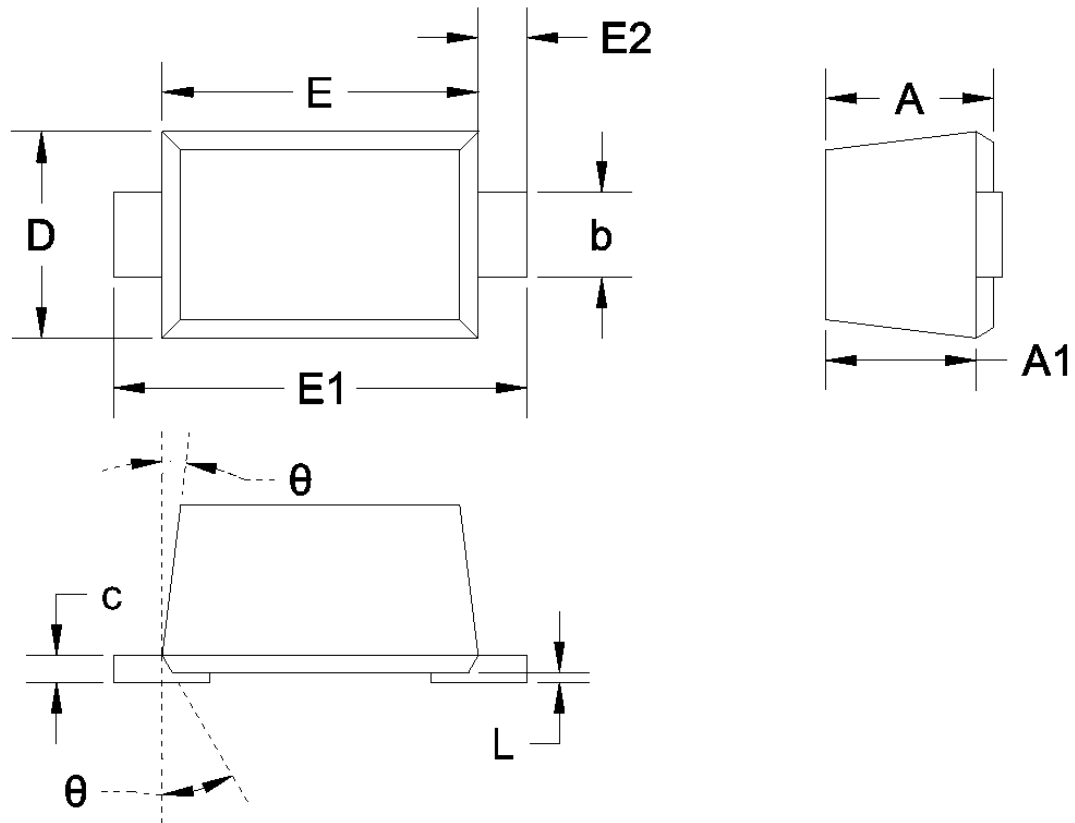


Typical Characteristics





SOD-523 Outline Drawing



Unit	A	A1	b	c	D	E	E1	E2	L	θ
Max.	0.77	0.70	0.35	0.15	0.85	1.30	1.70	0.20	0.07	7°
Min.	0.51	0.50	0.25	0.08	0.75	1.10	1.50	REF.	0.01	REF.