



DWC1825NS ESD Protection Diode

Feature

- Bi-directional ESD protection of one line
- 56Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 18V
- Junction Capacitance: 0.6pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 15kV$ contact $\pm 18kV$ air
- IEC 61000-4-5 (Lightning) 7A ($8/20\mu s$)

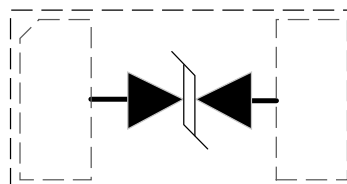
Application

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Mechanical Data

- Package:DFN0603-2L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWC1825NS	DFN0603-2L		10000 Tape & Reel	7 inches

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

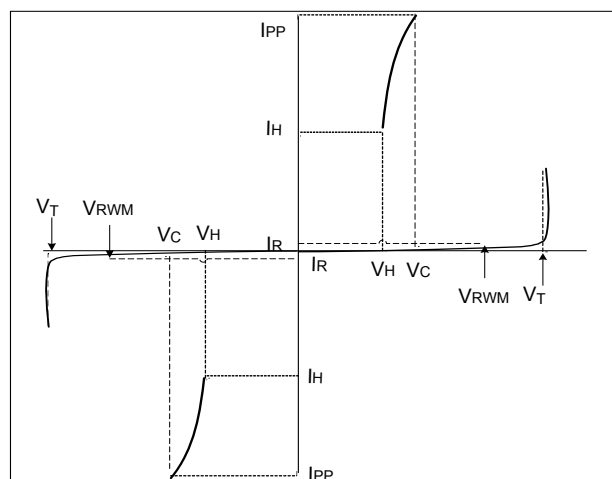
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	56	Watts
Peak Pulse Current ($t_p = 8/20\mu\text{s}$) (note1)	I_{pp}	7	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	18	kV
ESD per IEC 61000-4-2 (Contact)		15	
Lead Soldering Temperature	T_L	260(10seconds)	$^\circ\text{C}$
Junction Temperature	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 noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				18.0	V
Holding Voltage	V_H	$I_T = I_H$		2.5		V
Holding Current	I_H		35			mA
Reverse Leakage Current	I_R	$V_{RWM} = 18\text{V}, T = 25^\circ\text{C}$			500	nA
Clamping Voltage	V_C	$I_{PP} = 7\text{A}, t_p = 8/20\mu\text{s}$			8	V
Trigger Voltage	V_T			22		V
Junction Capacitance	C_j	$V_R = 0\text{V}, f = 1\text{MHz}$		0.6		pF

Electrical Parameters

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_T	Trigger voltage
I_T	Test Current
V_H	Holding voltage
I_H	Holding Current





Typical Characteristic

Figure 1: Peak Pulse Power vs. Pulse Time

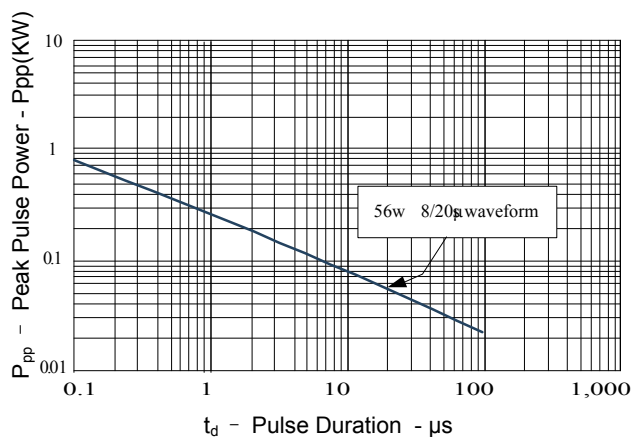


Figure 2: Power Derating Curve

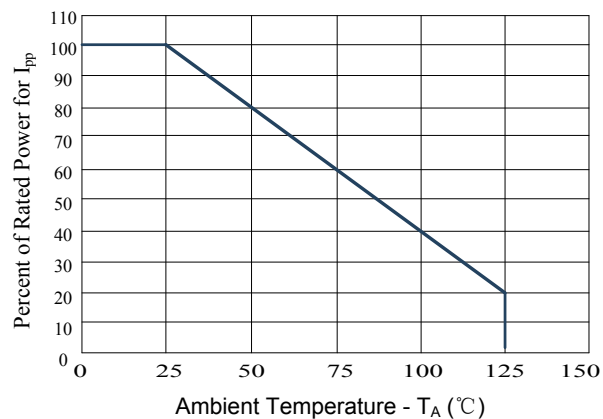


Figure3: Pulse Waveform

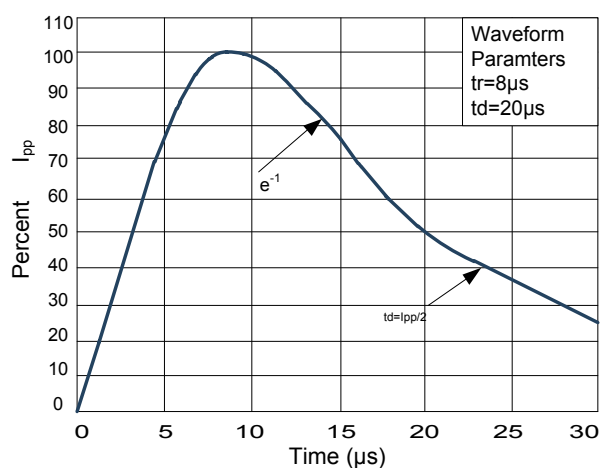


Figure 4: Clamping Voltage vs. Ipp

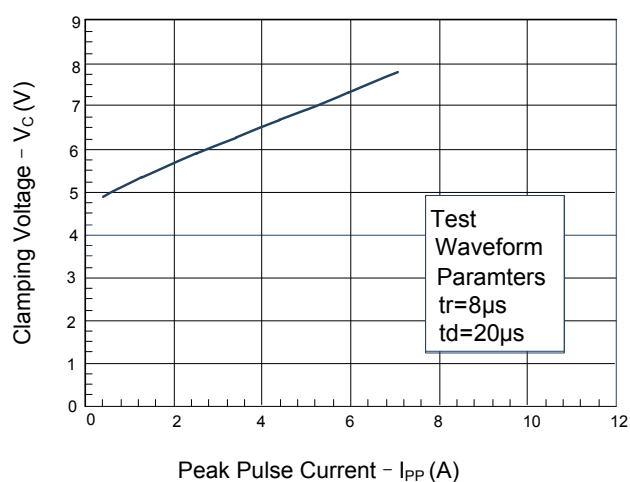


Figure5: Positive Clamping voltage (TLP)

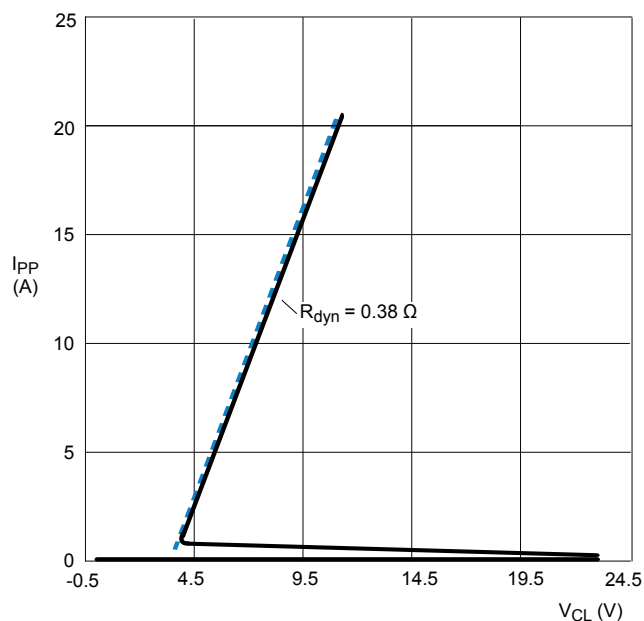
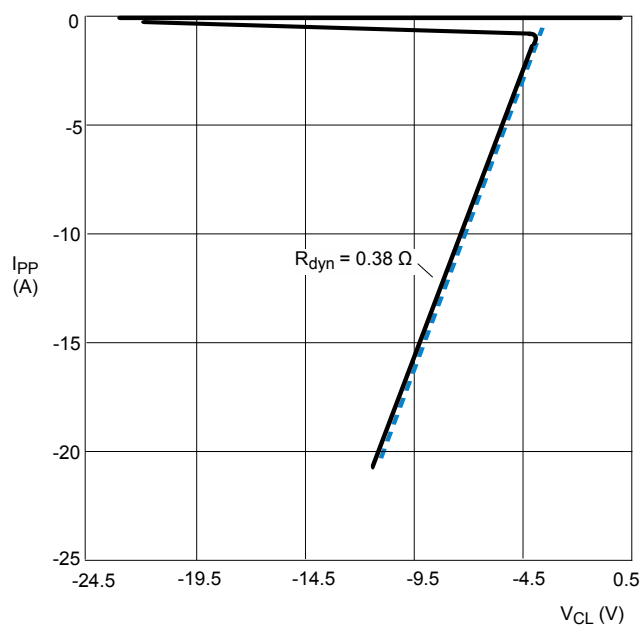
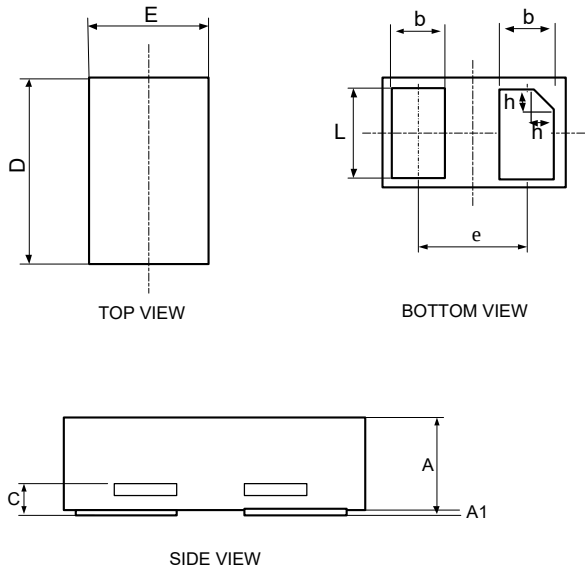


Figure6: Negative Clamping voltage (TLP)





Outline Drawing – DFN0603-2L



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.28	0.30	0.34
A1	0.00	0.02	0.05
C	0.05	0.10	0.15
D	0.55	0.60	0.65
E	0.25	0.30	0.35
e	0.40		
b	0.13	0.19	0.24
L	0.20	0.25	0.30
h	0	0.05	0.10