DWSLC1221NS ESD Protection Diode

Feature

- Bi-directional ESD protection of one line
- 150Watts peak pulse power (tp = 8/20μs)
- Working voltage: 12V
- Junction Capacitance: 4pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-5 (Lightning) 6A (8/20μs)
- IEC61000-4-4(EFT) 40A (5/50ns)

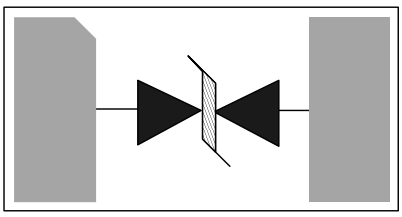
Application

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

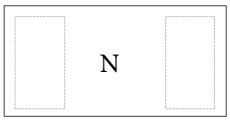
Mechanical Data

- 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
DWSLC1221NS	DFN0603-2L		10000 Tape & Reel	7 inches

Absolute Maximum Rating (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	150	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	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)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

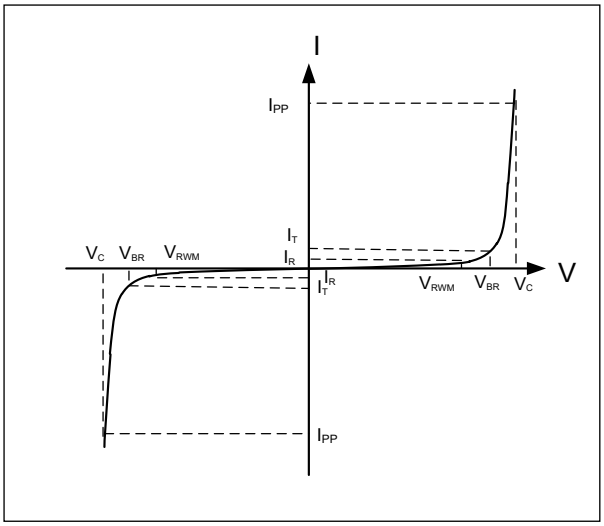
Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				12.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	13.3			V
Reverse Leakage Current	I_R	V_{RWM}=12V,T=25℃			0.5	μA
Clamping Voltage	V_C	I_{PP}=6A,t_p=8/20μs		25		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		4.0	5.0	pF

Electrical Parameters (T_A = 25°C unless otherwise noted)

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_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Note: 8/20μs pulse waveform.



Typical Characteristic

Figure 1: Peak Pulse Power vs. Pulse Time

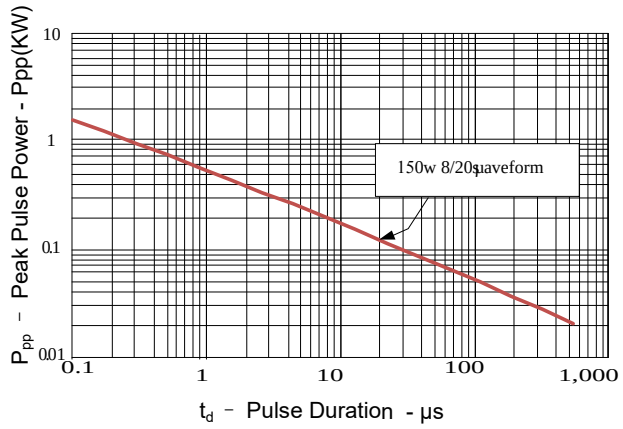


Figure 2: Power Derating Curve

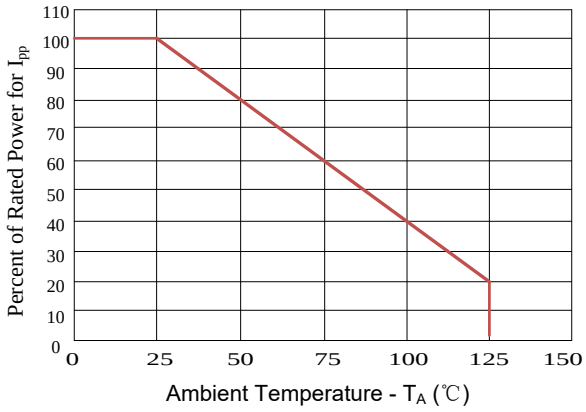


Figure3: Pulse Waveform

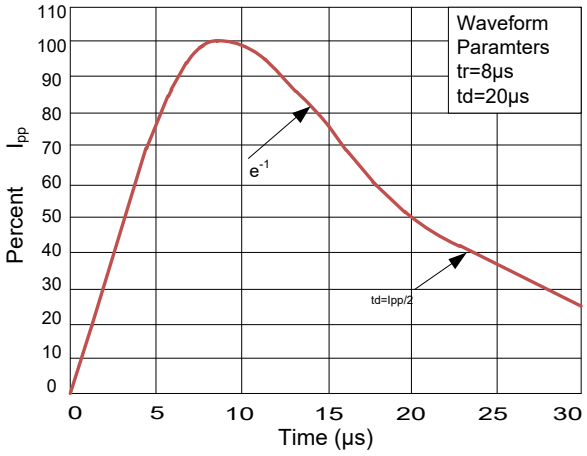
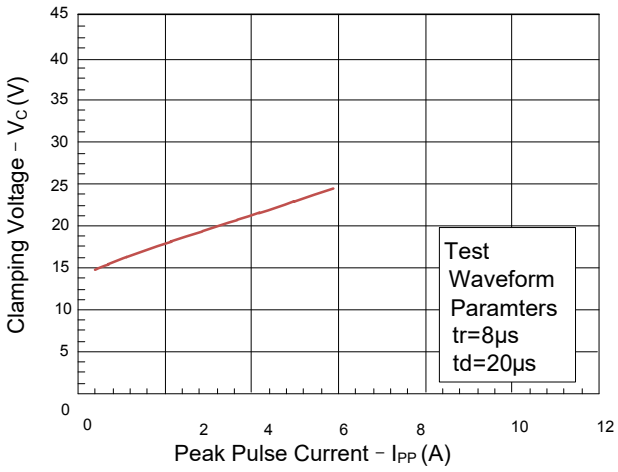
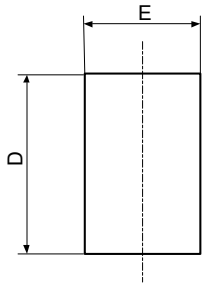


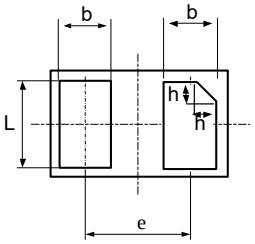
Figure 4: Clamping Voltage vs.Ipp



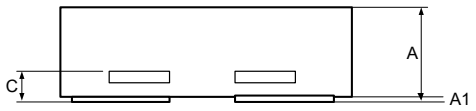
Outline Drawing – DFN0603-2L



TOP VIEW



BOTTOM VIEW



SIDE VIEW

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