



DWS2421NS ESD Protection Diode

Feature

- Bi-directional ESD protection of one line
- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 24V
- Junction Capacitance: 4.3pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 15kV$ contact $\pm 20kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 2.5A (8/20 μs)

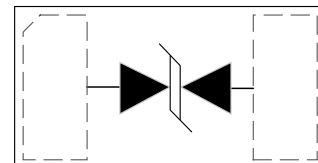
Application

- Digital Cameras
- Personal Digital Assistants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Laptop Computers

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
DWS2421NS	DFN0603-2L		10000 Tape & Reel	7 inches



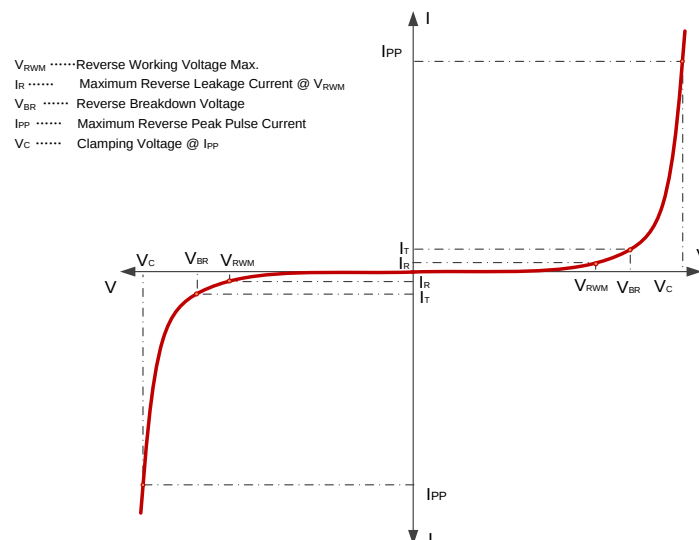
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p=8/20\mu\text{s}$) (note1)	I_{pp}	2.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
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 specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	26.7			V
Reverse Leakage Current	I_R	$V_{RWM}=24\text{V}, T=25^{\circ}\text{C}$			1.0	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu\text{s}$		2.5		A
Clamping Voltage	V_C	$I_{PP}=2.5\text{A}, t_p=8/20\mu\text{s}$		39		V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		4.3		pF

Electrical Parameters



Note1: 8/20 μs pulse waveform.



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

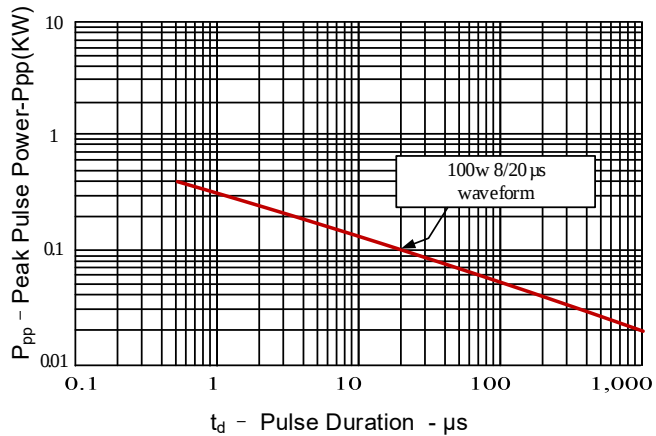


Figure 2: Clamping Voltage vs. I_{pp}

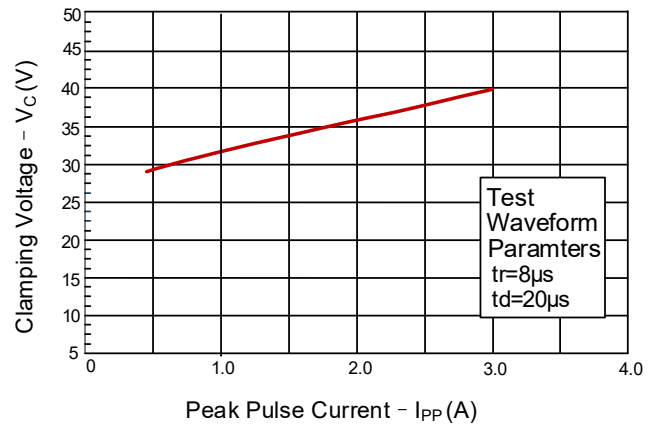


Figure3: Pulse Waveform

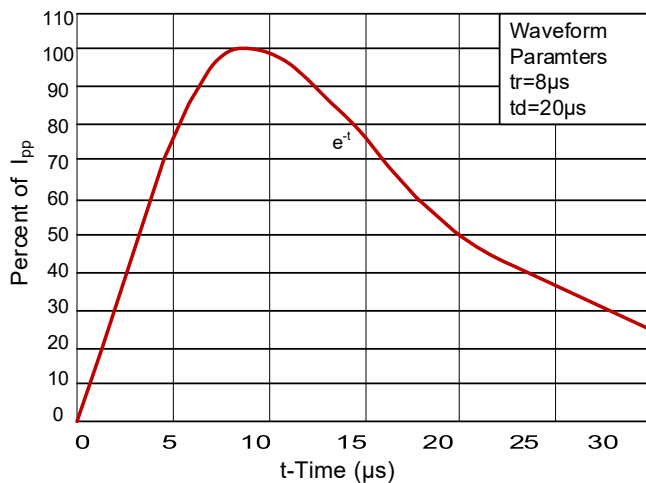
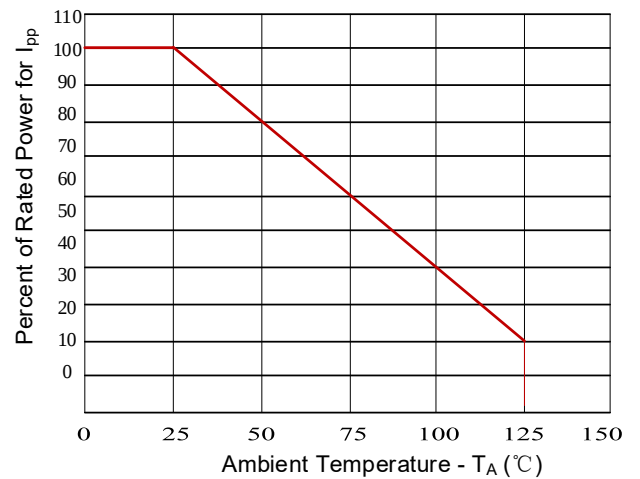
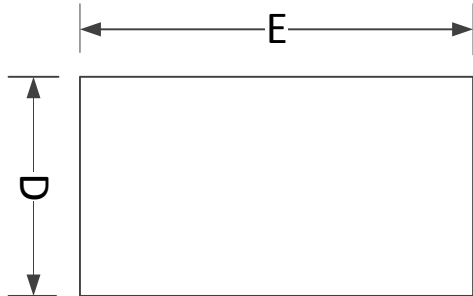


Figure 4: Power Derating Curve

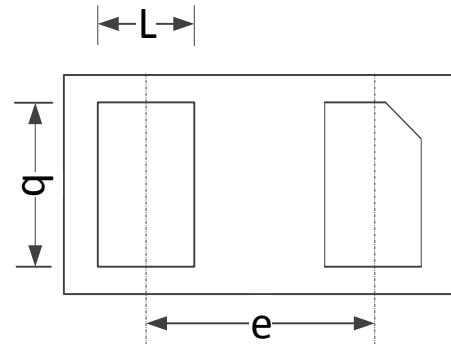




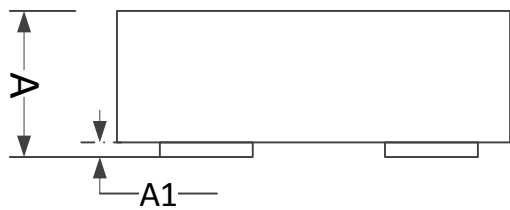
DFN0603-2L Outline Drawing



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN0603		
REF.	MIN.	NOM.	MAX.
A	0.28	0.30	0.34
A1	0.00	0.02	0.05
b	0.21	0.23	0.265
L	0.14		0.24
e	0.40BSC		
D	0.25	0.30	0.35
E	0.55	0.60	0.65