

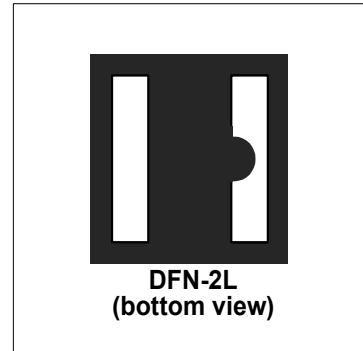


## Features

- 6600 Watts Peak Power ( $t_p = 8/20\mu s$ )
- Fast Response time: Typically  $< 1ns$
- Excellent Clamping Capability
- Low Inductance
- Low profile package

## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 30kV$  (air),  $\pm 30kV$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 300A (8/20 $\mu s$ )



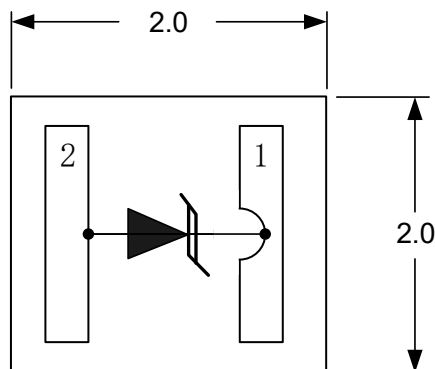
## Mechanical Characteristics

- DFN-2L package
- Molding compound flammability rating: UL 94V-0
- Marking : Making Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

## Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computer & Consumer Electronics
- Industrial Electronics
- Microcontroller Input Protection

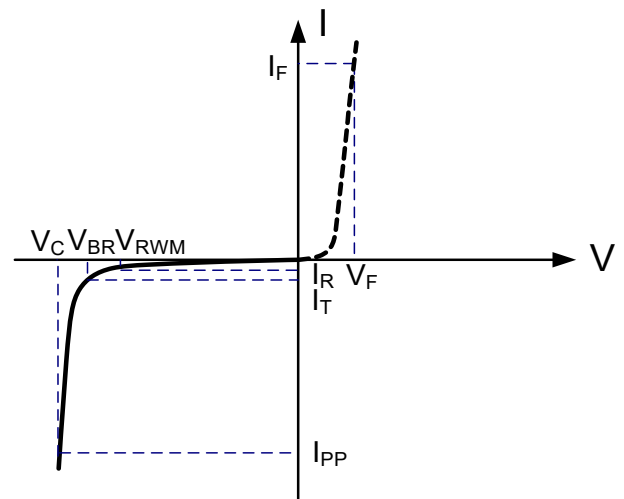
## PIN Configuration



<b>Absolute Maximum Rating</b>			
Rating	Symbol	Value	Units
Lead Soldering Temperature	$T_L$	260(10sec)	$^{\circ}\text{C}$
Operating Temperature	$T_J$	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	6600	Watts
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{PP}$	300	A

### Electrical Parameters (T=25 $^{\circ}\text{C}$ )

Symbol	Parameter
$I_{PP}$	Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



### Electrical Characteristics

<b>DW4.5P4NC-S</b>						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				4.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	5		7	V
Reverse Leakage Current	$I_R$	$V_{RWM}=4.5\text{V}, T=25^{\circ}\text{C}$			500	nA
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu\text{s}$			300	A
Clamping Voltage <sup>1</sup>	$V_C$	$V_S=100\text{V}, I_{PP}=52\text{A}, t_p=8/20\mu\text{s}$		10	12	V
Clamping Voltage <sup>1</sup>	$V_C$	$V_S=300\text{V}, I_{PP}=158\text{A}, t_p=8/20\mu\text{s}$		14.5	16	V
Clamping Voltage <sup>1</sup>	$V_C$	$V_S=500\text{V}, I_{PP}=272\text{A}, t_p=8/20\mu\text{s}$		20	23	V
Clamping Voltage <sup>1</sup>	$V_C$	$V_S=550\text{V}, I_{PP}=300\text{A}, t_p=8/20\mu\text{s}$		21.5	25	V
Junction Capacitance	$C_j$	$V_R=0\text{V}, f=1\text{MHz}$		2400		pF

**Note1:**  $V_S$ : Surge Test Voltage ( $t_p=8/20\mu\text{s}$ ).



### Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

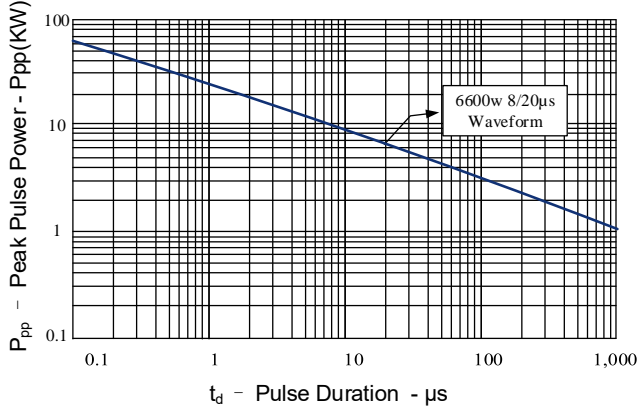


Figure 2: Power Derating Curve

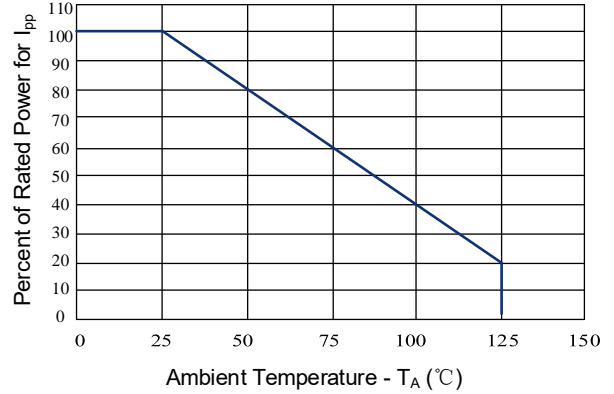


Figure 3: Clamping Voltage vs. Peak Pulse Current

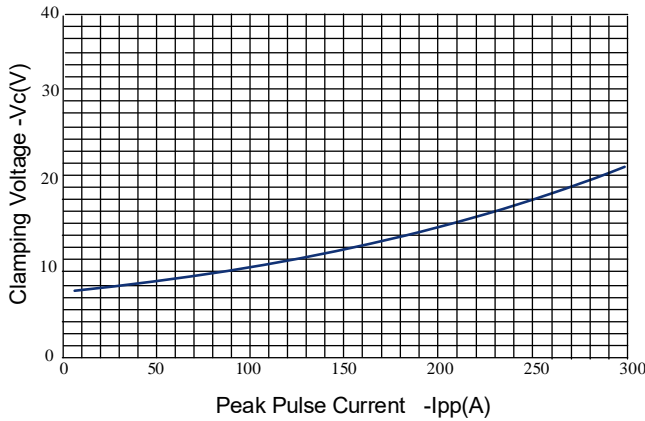


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

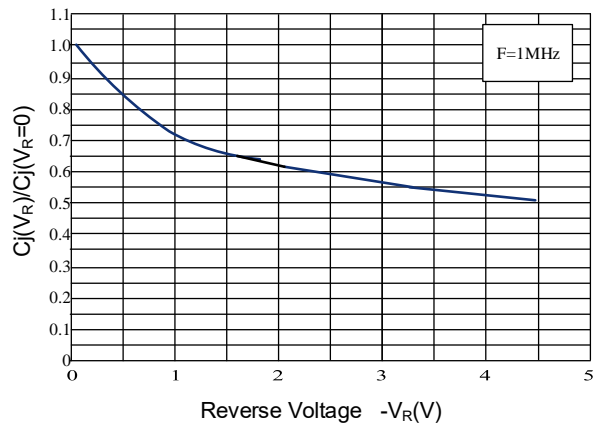
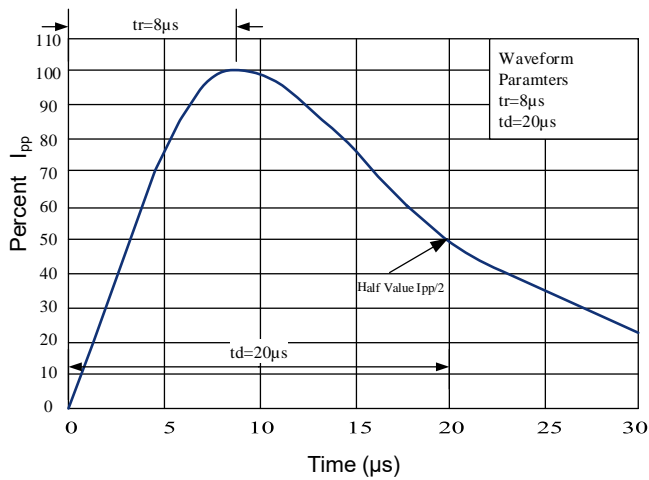


Figure 5: 8/20μs Pulse Waveform





Outline Drawing –DFN-2L

**PACKAGE OUTLINE**

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DIMENSIONS		
DIM	INCHES	MILLIMETERS
P	0.026TYP	1.20 TYP
X	0.016	0.40
Y	0.063	1.60
R	0.01	0.25

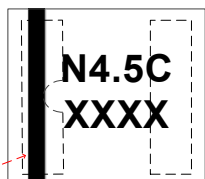
**DFN-2L  
(bottom view)**

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.45	0.55	0.017	0.021
A1	0.00	0.02	0.000	0.001
D	1.90	2.10	0.075	0.083
E	1.90	2.10	0.075	0.083
R	0.20	0.30	0.008	0.012
b	1.55	1.65	0.061	0.065
e	1.20BSC		0.047 BSC.	
L	0.35	0.45	0.014	0.018

**Notes**

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes



Package Information

Qty:3k/Reel