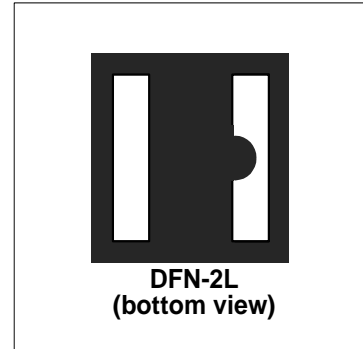


### Features

- 3600 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) 110A (8/20 $\mu s$ )



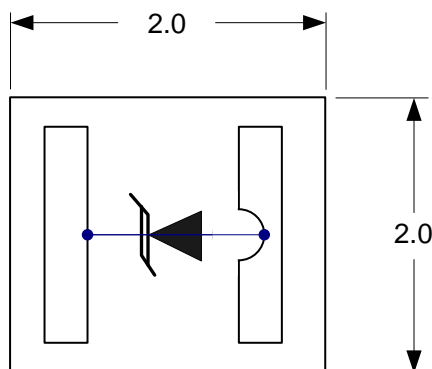
### Mechanical Characteristics

- 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

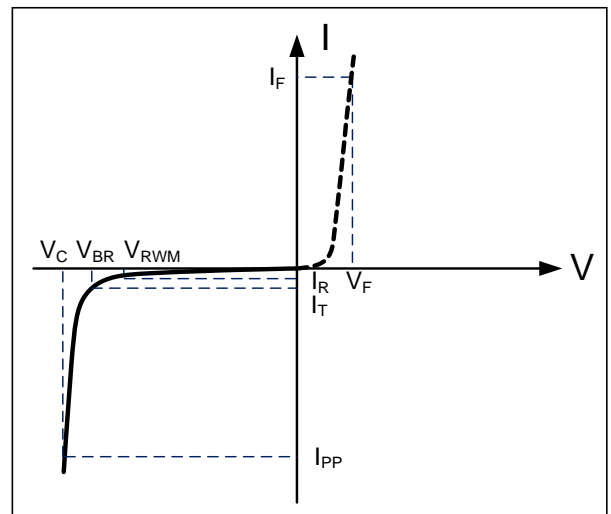
### PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Lead Soldering Temperature	$T_L$	260(10sec)	°C
Operating Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	3600	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	110	A

Electrical Parameters (T=25°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

DW12P4N-S						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				12	V
Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13		16	V
Reverse Leakage Current	$I_R$	$V_{RWM}=12V$ $T=25^\circ C$			200	nA
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			110	A
Clamping Voltage	$V_C$	$I_{PP}=110A, t_p=8/20\mu s$			30	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		530	540	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

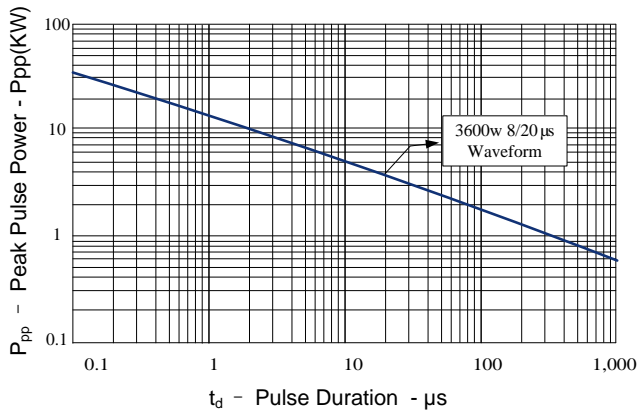


Figure 2: Power Derating Curve

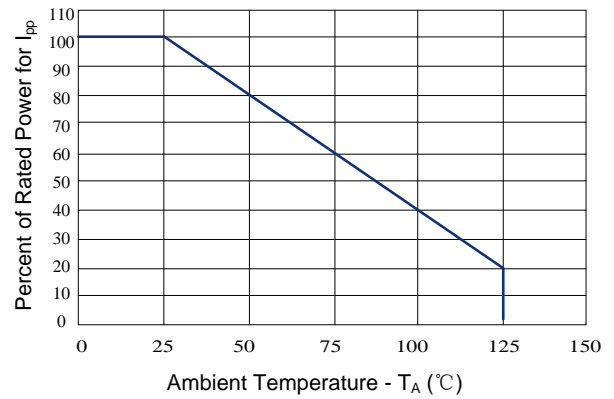


Figure 3: Clamping Voltage vs. Peak Pulse Current

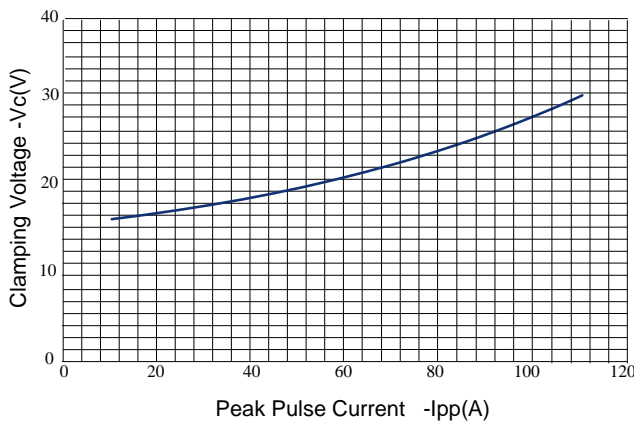


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

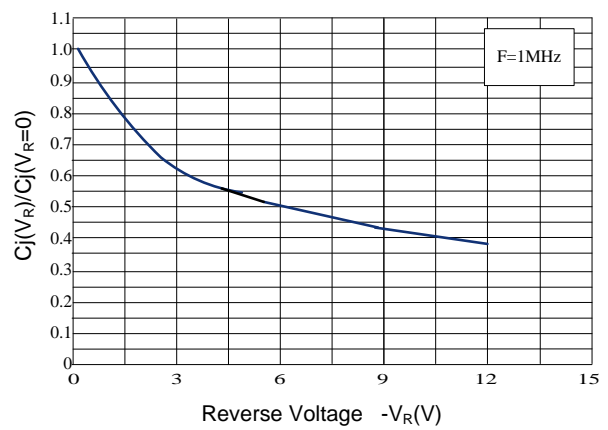
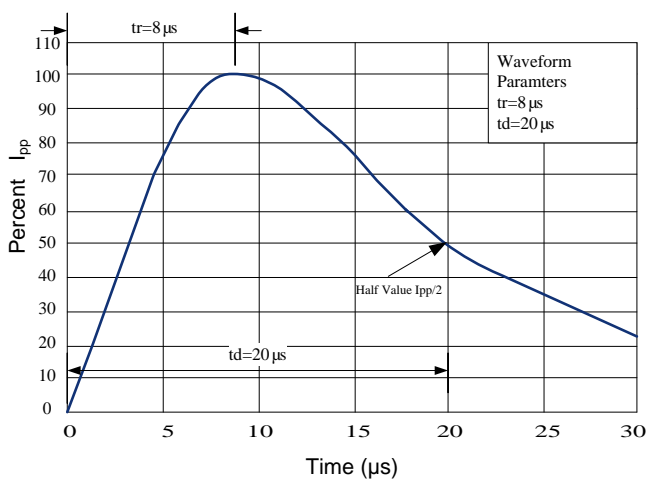


Figure 5: 8/20μs Pulse Waveform



Outline Drawing –DFN-2L

**PACKAGE OUTLINE**

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

**DIMENSIONS**

SYMBOL	MIL IMETER		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.

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

Marking Codes

Part Number	DW12P4N-S
Marking Code	N12A

Package Information

Qty: 3k/Reel