

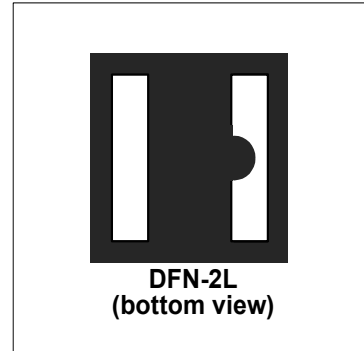


## Features

- 6000 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) 200A (8/20 $\mu s$ )



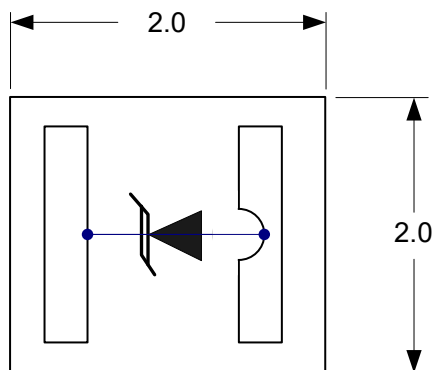
## Mechanical Characteristics

- 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

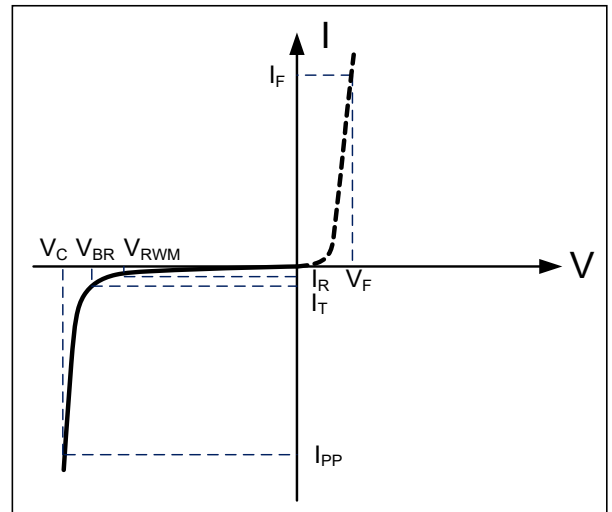
## PIN Configuration



| Absolute Maximum Rating                      |           |              |                    |
|--|-----------|--------------|--------------------|
| Rating                                       | Symbol    | Value        | Units              |
| Lead Soldering Temperature                   | $T_L$     | 260(10sec)   | $^{\circ}\text{C}$ |
| Operating Temperature                        | $T_J$     | -55 to + 125 | $^{\circ}\text{C}$ |
| Storage Temperature                          | $T_{STG}$ | -55 to +150  | $^{\circ}\text{C}$ |
| Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )   | $P_{PP}$  | 6000         | Watts              |
| Peak Pulse Current ( $t_p=8/20\mu\text{s}$ ) | $I_{PP}$  | 200          | 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

| DW07P4N-S                 |           |  |         |         |         |       |
|---------------------------|-----------|--|---------|---------|---------|-------|
| Parameter                 | Symbol    | Conditions                                   | Minimum | Typical | Maximum | Units |
| Reverse Stand-Off Voltage | $V_{RWM}$ |  |         |         | 7       | V     |
| Breakdown Voltage         | $V_{BR}$  | $I_T=1\text{mA}$                             | 8       |         | 10      | V     |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=7\text{V}$ $T=25^{\circ}\text{C}$   |         |         | 200     | nA    |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu\text{s}$                        |         |         | 200     | A     |
| Clamping Voltage          | $V_C$     | $I_{PP}=200\text{A}$ , $t_p=8/20\mu\text{s}$ |         |         | 30      | V     |
| Junction Capacitance      | $C_j$     | $V_R = 0\text{V}$ , $f = 1\text{MHz}$        |         | 990     | 1000    | pF    |



### Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

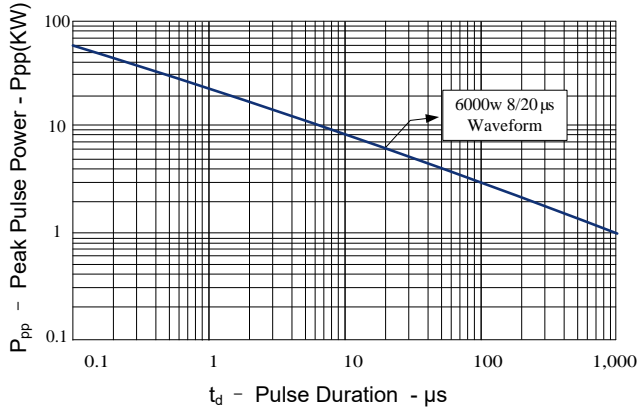


Figure 2: Power Derating Curve

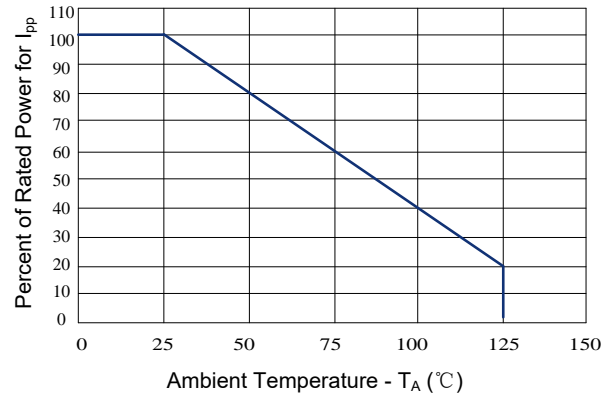


Figure 3: Clamping Voltage vs. Peak Pulse Current

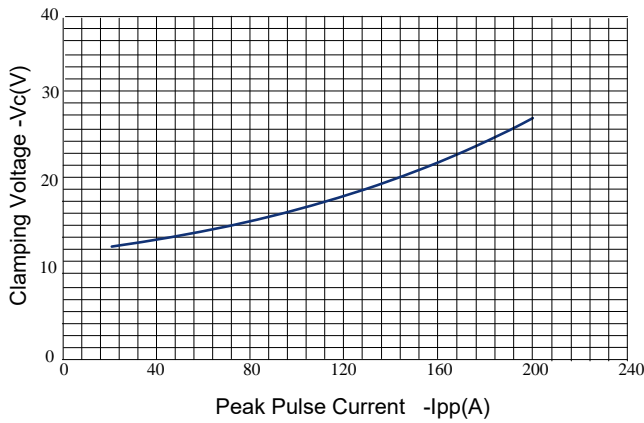


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

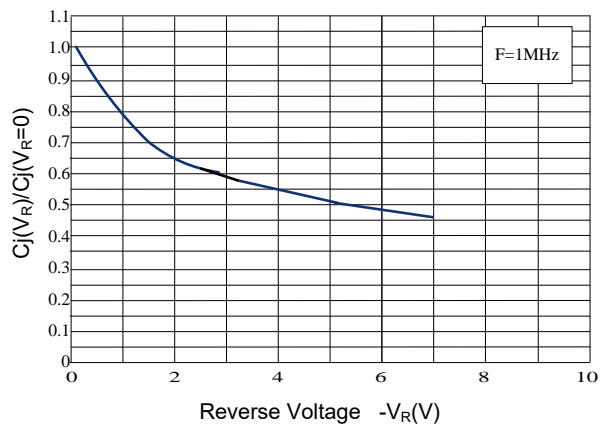
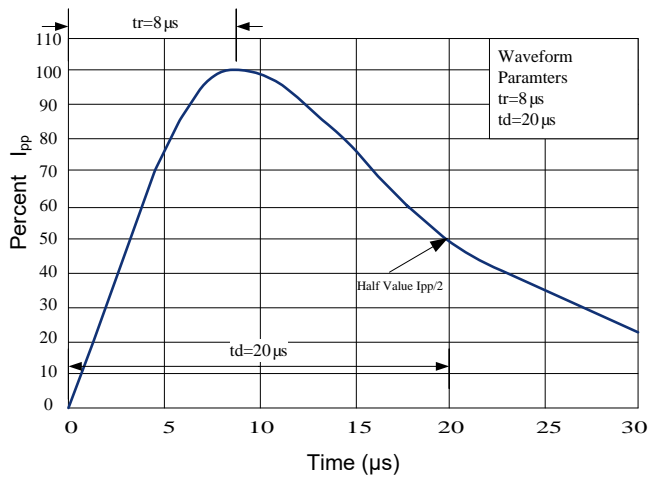


Figure 5: 8/20μs Pulse Waveform





Outline Drawing –DFN-2L

**PACKAGE OUTLINE**

**PACKAGE OUTLINE**

TOP VIEW

BOTTOM VIEW

SIDE VIEW

**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 |

| 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        |

**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

|              |           |
|--------------|-----------|
| Part Number  | DW07P4N-S |
| Marking Code | N07A      |

Package Information

Qty: 3k/Reel