

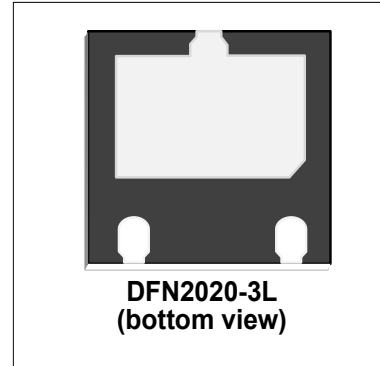


## Features

- 4000 Watts Peak Power ( $t_p = 8/20\mu s$ )
- Fast Response time: Typically  $< 1ns$
- Excellent Clamping Capability
- Low Leakage Current
- Working Voltages: 4.5V

## 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) 250A (8/20 $\mu s$ )



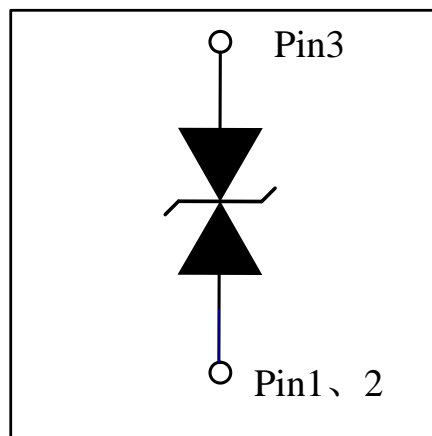
## Mechanical Characteristics

- DFN2020-3L 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

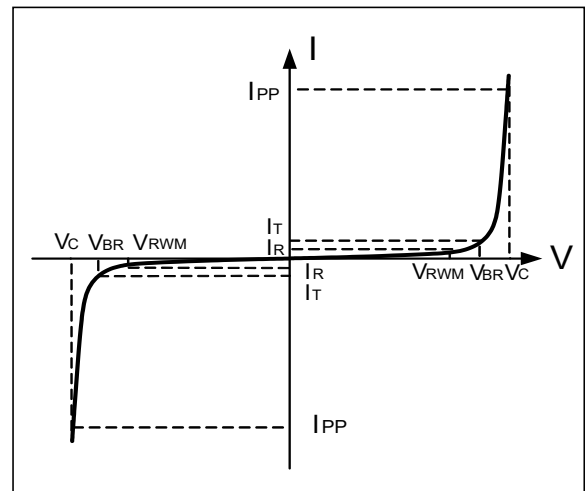
## PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	4000	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	250	A
Lead Soldering Temperature	$T_L$	260(10sec)	$^{\circ}C$
Operating Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

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

Symbol	Parameter
$I_{PP}$	Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Reverse Stand-Off Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



### Electrical Characteristics

DW4.5P4N3-B-S						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				4.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	4.6			V
Reverse Leakage Current	$I_R$	$V_{RWM}=4.5V, T=25^{\circ}C$			500	nA
Peak Pulse Current <sup>1</sup>	$I_{PP}$	$t_p=8/20\mu s$			250	A
Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP}=50A, t_p=8/20\mu s$		8	10	V
Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP}=150A, t_p=8/20\mu s$		10	13	V
Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP}=250A, t_p=8/20\mu s$		12	15	V
Junction Capacitance <sup>1</sup>	$C_j$	$V_R = 0V, f = 1MHz$		400	450	pF

**Note1:** Measured from pin 1 and pin 2 to pin 3.

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

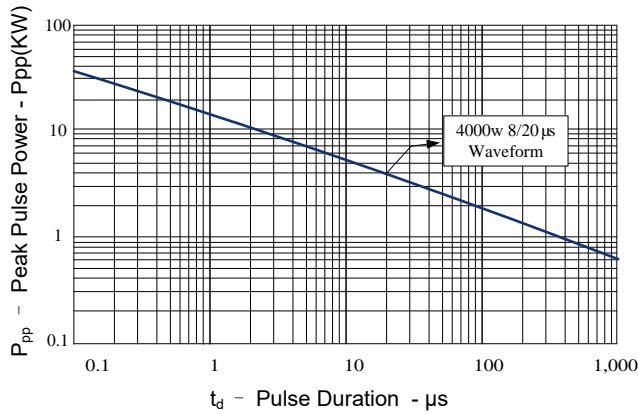


Figure 2: Power Derating Curve

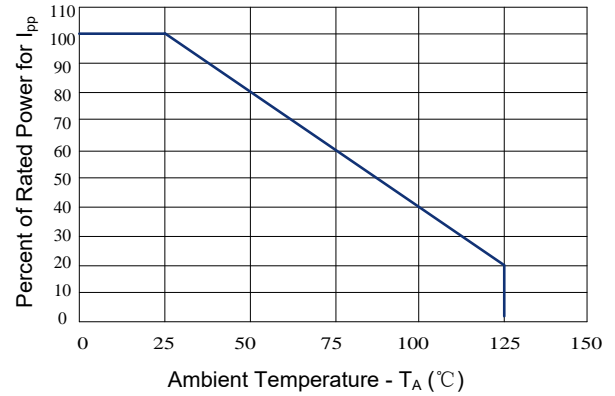


Figure 3: Clamping Voltage vs. Peak Pulse Current

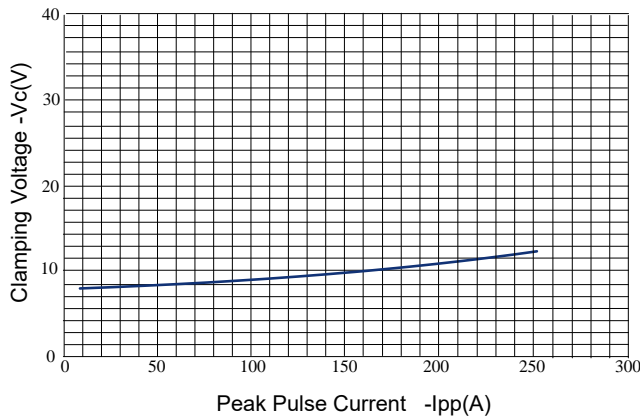


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

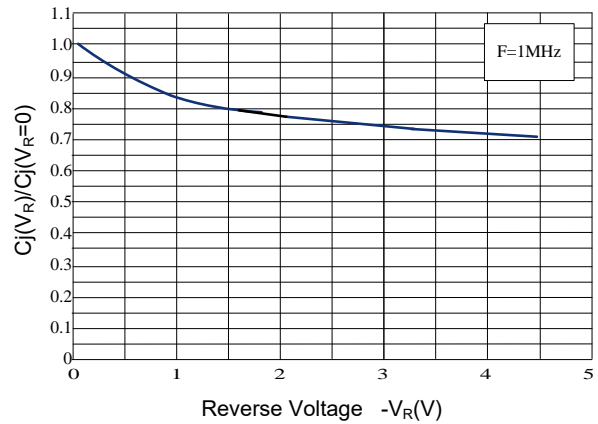
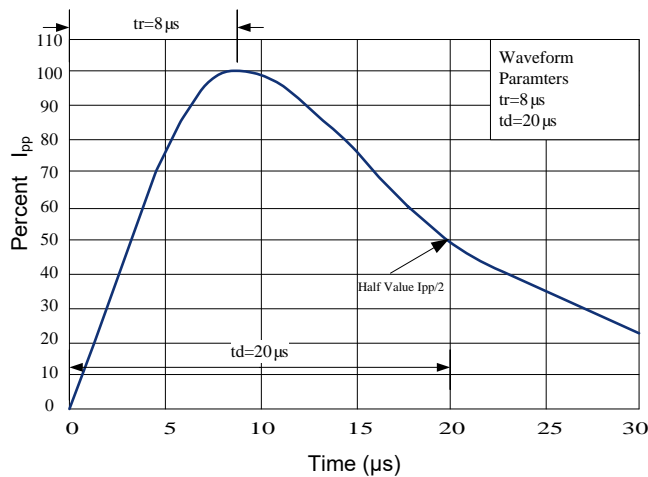
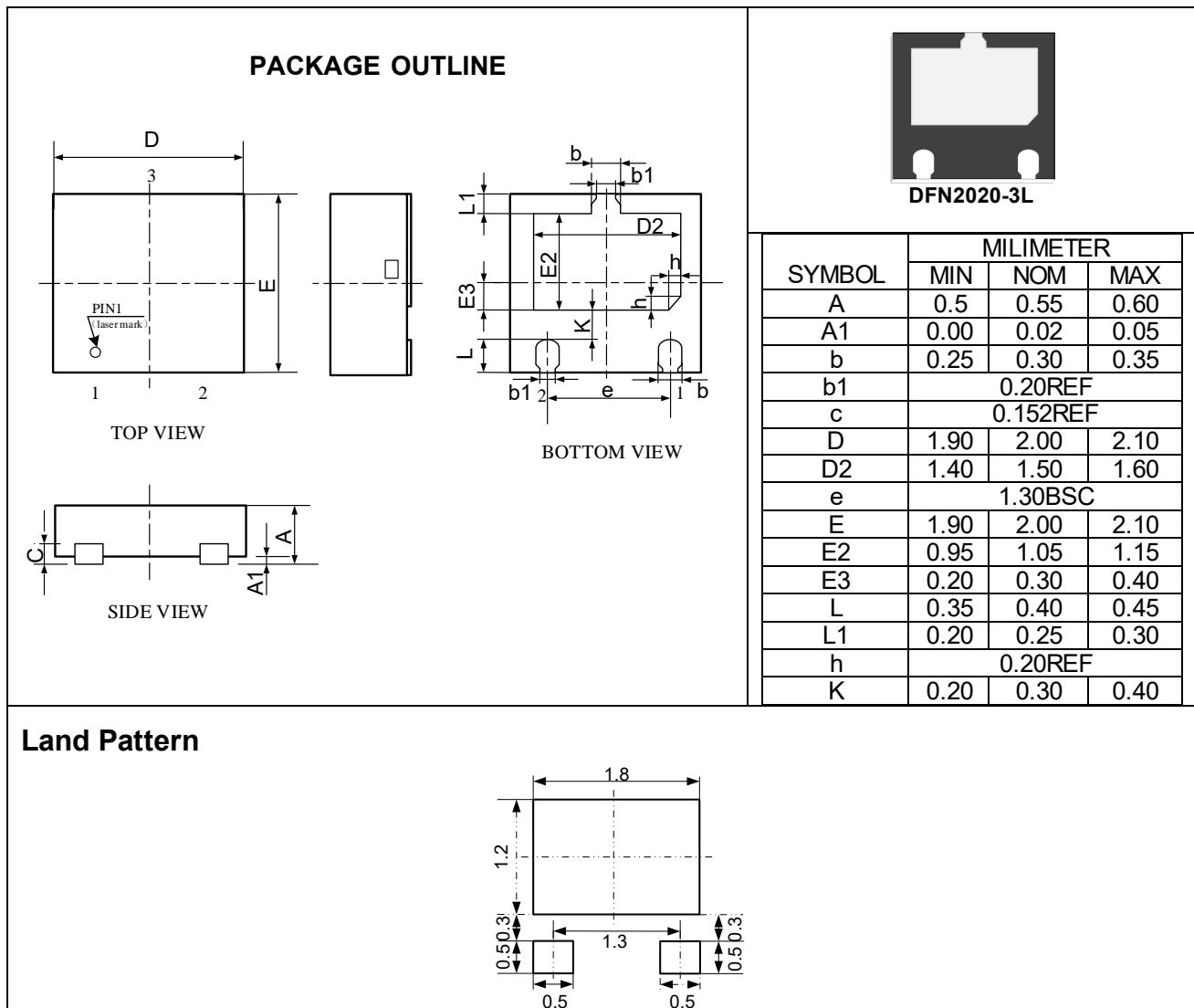


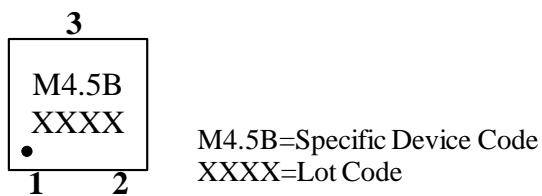
Figure 5: 8/20 $\mu s$  Pulse Waveform



## Outline Drawing –DFN2020-3L



## Marking Codes



## Package Information

Qty: 3k/Reel