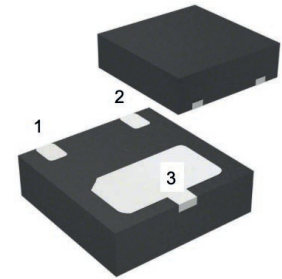


## Features

- 6800W peak pulse power (8/20μs)
- Low leakage: nA level
- Operating voltage: 18V
- Ultra low clamping voltage
- One power line protects
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge: ±30kV
  - Contact discharge: ±30kV
  - IEC 61000-4-5 (Lightning) 170A (8/20μs)
- RoHS Compliant



DFN2020-3L



Schematic Diagram

## Applications

- Power management
- Industrial application
- Power supply protection

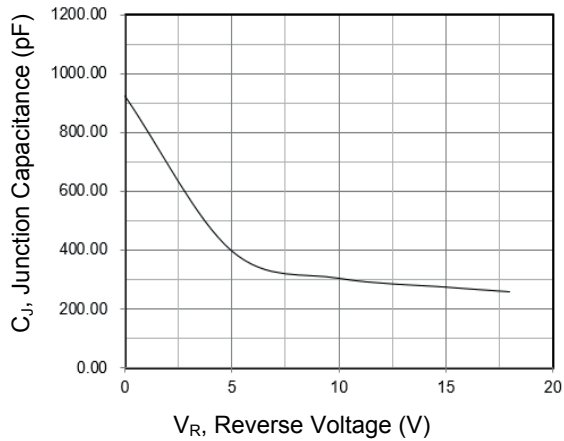
## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P <sub>pk</sub>	6800	W
Peak Pulse Current (8/20μs)	I <sub>pp</sub>	170	A
ESD Per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD Per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

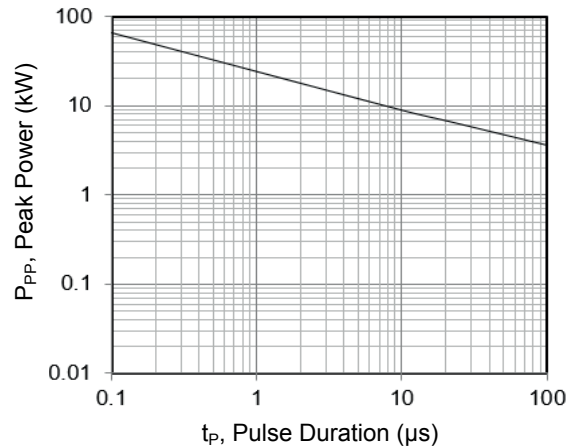
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>	-	-	-	18	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	20	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =18V	-	-	0.5	μA
Clamping Voltage	V <sub>C</sub>	I <sub>pp</sub> =20A (8 x 20μs pulse)	-	-	25	V
		I <sub>pp</sub> =170A (8 x 20μs pulse)	-	-	40	
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, F=1MHz	-	950	-	pF

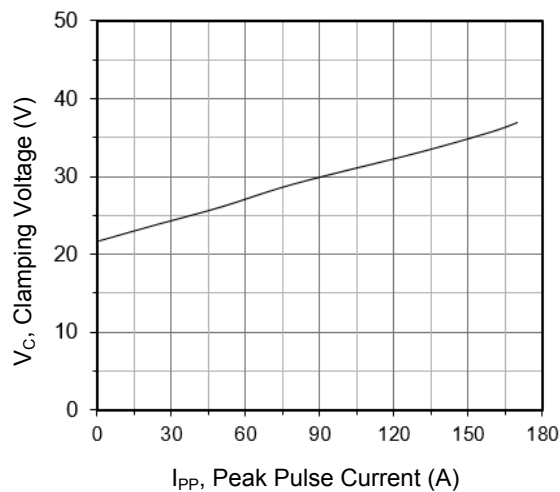
**Typical Characteristic Curves**



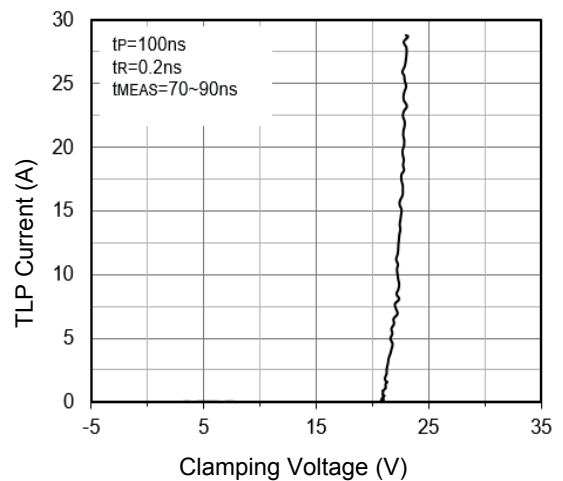
**Figure 1. Junction Capacitance vs. Reverse Voltage**



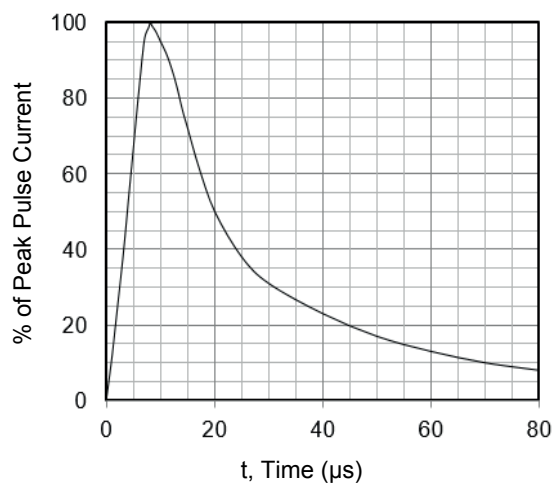
**Figure 2. Peak Pulse Power vs. Pulse Time**



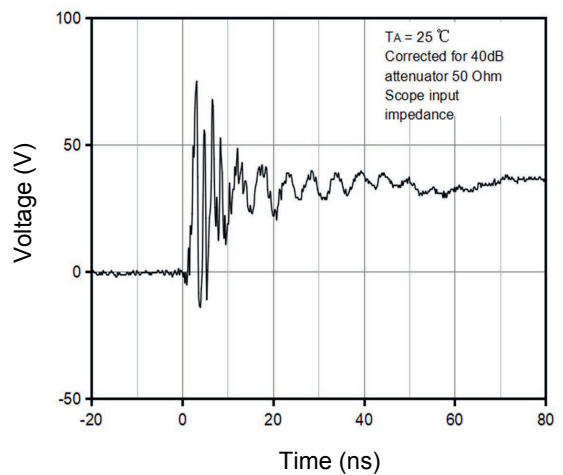
**Figure 3. Clamping Voltage vs. Peak Pulse Current**



**Figure 4. TLP Measurement**

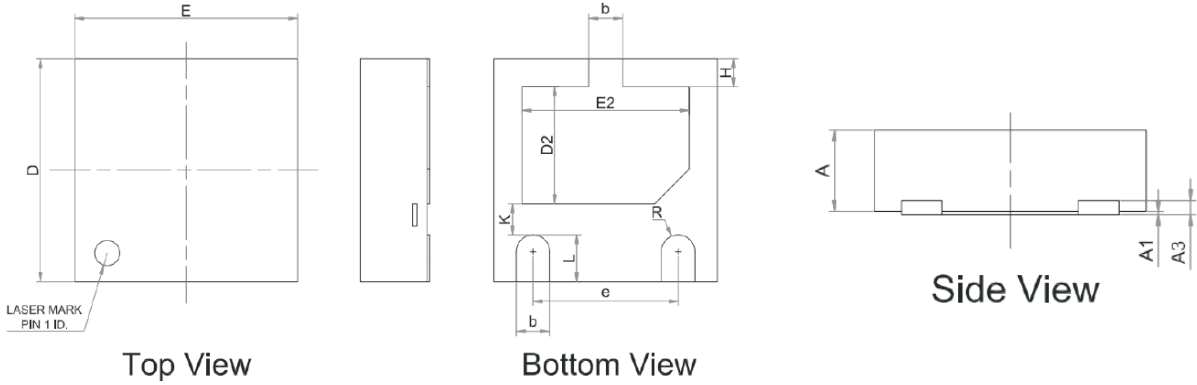


**Figure 5. 8 X 20 $\mu$ s Pulse Waveform**



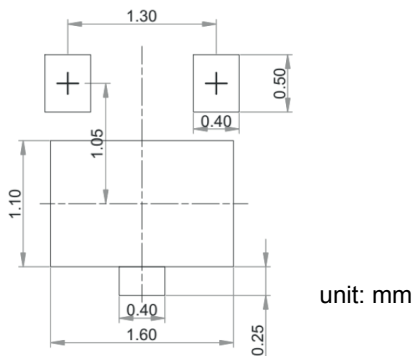
**Figure 6. ESD Clamping Voltage**  
**8kV Contact per IEC61000-4-2**

**Package Outline Dimensions (DFN2020-3L)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.55	0.65	0.022	0.026
A1	0.00	0.05	0.000	0.132
A3	0.10 REF		0.004 REF	
b	0.25	0.35	0.010	0.014
D	1.90	2.10	0.075	0.083
E	1.90	2.10	0.075	0.083
D2	0.95	1.15	0.037	0.045
E2	1.40	1.60	0.055	0.192
e	1.20	1.40	0.047	0.055
H	0.20	0.30	0.008	0.012
K	0.20	0.40	0.008	0.016
L	0.35	0.45	0.014	0.018
R	0.13	-	0.005	-

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
GSEPP18U9500	DFN2020-3L	18A	Tape & Reel	3,000 pcs / Reel